

# **AGENDA**

## **TRI-COUNTY TECHNICAL ADVISORY COMMITTEE**

**Friday, April 8, 2022**

**10:00 A.M.**

**Join Zoom Meeting:**

**<https://us02web.zoom.us/j/5375128983>**

Dial by phone: 669 900 6833

Meeting ID: 537 512 8983

For further information on any of the agenda items please contact the Amador County Planning Department at (209) 223-6380 or email [planning@amadorgov.org](mailto:planning@amadorgov.org). Off-agenda items must be approved by the Tri-County Technical Advisory Committee pursuant to Section 54956.5 of the Government Code.

- A. Call to Order
- B. Approve Agenda
- C. Correspondence
- D. Minutes: March 11, 2022
- E. Public Matters: Informational items and persons wishing to address the Committee regarding non-agenda items
- F. Agenda Items:

ITEM 1: Discussion and possible recommendations regarding the Carson Transportation Management Systems Project on State Routes 88, 89 and 4 in Amador, El Dorado and Alpine Counties.

G. Adjournment until the next regularly scheduled meeting May 13, 2022.

**SUMMARY MINUTES**  
**TRI-COUNTY TECHNICAL ADVISORY COMMITTEE**  
**Friday, March 11, 2022**  
**10:00 A.M.**  
**VIRTUAL MEETING**

**Meeting link:** <https://us02web.zoom.us/j/5375128983>

**Call in phone number:** +1 669 900 6833; **Meeting ID:** 537 512 8983

**A. Call to Order:**

The meeting was called to order by Chuck Beatty at 10:05 am. Members present were:

Alpine County, Larry Shoemaker and Candace Stowell; Amador County, Chuck Beatty.

**B. Approval of Agenda:**

On a motion by Larry Shoemaker and second by Chuck Beatty the agenda was approved as published.

**C. Correspondence:** Any correspondence received prior to publication of the agenda has been included with the packet. No other correspondence was received.

**D. Minutes:** December 10, 2021

On a motion by Chuck Beatty and a second by Brendan Ferry, the minutes from December 10, 2021 were approved.

**E. Public Matters not on the Agenda:** Dolan Beckel requested that Tri-TAC include a discussion of community and stakeholder concerns regarding development of Unit 6 of the Palisades Subdivision.

**F. Agenda Items:**

**ITEM 1:** Review and possible recommendation to the Amador County Planning Commission of an application for a variance to the front yard setback requirement to allow construction of a new home. The request is for a reduction from the required setback of 25' to 14'-7" to the house itself, and from 25' to 6'-0" to the front deck at the main floor.

Applicants: Ted & Martina Baggett

Location: 33889 Fremont Road, Kirkwood

APN: 026-172-013

Chuck Beatty introduced the item and Joel Baumgardner, project architect, provided details regarding the need for the variance and explained how the proposed dwelling would be situated on the parcel.

A general discussion regarding snow storage needs, utility impacts, and project aesthetics followed.

Upon a motion by Brendan Ferry, seconded by Candace Stowell, the Committee unanimously recommended approval of the variance to the Amador County Planning Commission.

ITEM 2: Review and discussion of draft Kirkwood Tree Ordinance amendments for alignment with Firewise Community goals and PRC 4291 defensible space requirements.

Chuck Beatty introduced the item, and the Committee reviewed the draft changes with input from the public. Discussion focused on expanding the exemptions for removing trees without the need for permits for defensible space management, hazardous trees, and utility easements. The need for verifying defensible space pruning and tree removal, retaining a penalty process and optional performance bonding.

A refined draft based on the discussion will be included with the March agenda.

G. Adjournment: The meeting was adjourned at 11:58. The next regularly scheduled meeting is March 11, 2022, at 10:00 am.

# **Carson Transportation Management Systems**

Along State Routes 88, 89, and 4 in Amador, El Dorado, and Alpine  
Counties

10-AMA, ED, ALP-88, 89, 4-PM Varies

Project Number 1018000275

## **Initial Study with Proposed Negative Declaration**

**Volume 1 of 2**



Prepared by the  
State of California Department of Transportation

**November 2021**





## General Information About This Document

### ***What's in this document:***

The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project in Amador, El Dorado, and Alpine Counties in California. The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

### ***What you should do:***

- Please read the document. Additional copies of the document and the related technical studies are available for review at the Caltrans District 10 office at 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205; Amador County Library at 530 Sutter Street, Jackson, California 95642; El Dorado County Library South Lake Tahoe Branch at 1000 Rufus Allen Boulevard, South Lake Tahoe, California 96150; and Alpine County Library at 270 Laramie Street Markleeville, California 96120.
- Tell us what you think. If you have any comments regarding the proposed project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: C. Scott Guidi, Senior Environmental Planner, District 10 Environmental Division, California Department of Transportation, 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205. Submit comments via email to: [Scott.Guidi@dot.ca.gov](mailto:Scott.Guidi@dot.ca.gov).
- Submit comments by the deadline: March 28, 2022.

### ***What happens next:***

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

Printing this document: To save paper, this document has been set up for two-sided printing (to print the front and back of a page). Blank pages occur where needed throughout the document to maintain proper layout of the chapters and appendices.

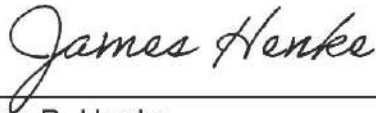
For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: C. Scott Guidi, Senior Environmental Planner, District 10 Environmental Division, 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205; 209-479-1839 (Voice), or use the California Relay Service 1-800-735-2929 (Teletype to Voice), 1-800-735-2922 (Voice to Teletype), 1-800-855-3000 (Spanish Teletype to Voice and Voice to Teletype), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

The installation of various transportation management systems on State Routes 88, 89, and 4 at various post miles in Amador, El Dorado, and Alpine Counties

**INITIAL STUDY  
with Proposed Negative Declaration**

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA  
Department of Transportation



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James P. Henke  
Office Chief, District 10 Environmental  
California Department of Transportation  
CEQA Lead Agency

11/23/2021

---

Date

The following individual can be contacted for more information about this document:

C. Scott Guidi, Senior Environmental Planner; 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205; 209-479-1839





**DRAFT**  
**Proposed Negative Declaration**

Pursuant to: Division 13, Public Resources Code

**District-County-Route-Post Mile:** 10-AMA, ED, ALP-88, 89, 4-PM Varies  
**EA/Project Number:** EA 10-1G020 and Project Number 1018000275

**Project Description**

The California Department of Transportation (Caltrans) proposes to install traffic management systems and roadside safety improvements in and around the Kirkwood and Carson Pass area at 13 various locations in Amador, El Dorado, and Alpine Counties on State Routes 88, 89, and 4.

**Determination**

An Initial Study has been prepared by Caltrans, District 10.

On the basis of this study, it is determined that the proposed action will not have a significant effect on the environment for the following reasons:

The project would have no effect on air quality, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, and wildfire.

The project would have no significant effect on aesthetics, agriculture and forest resources, biological resources, greenhouse gas emissions, and utilities and service systems.

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James P. Henke  
Office Chief, District 10 Environmental  
Environmental North  
California Department of Transportation

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Date



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# **Chapter 1**      Proposed Project

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## **1.1 Introduction**

The California Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (known as CEQA) and the lead agency under the National Environmental Policy Act (known as NEPA).

The proposed project would install various transportation management systems and roadside safety improvements at 13 locations in the Kirkwood and Carson Pass area. This area includes Amador, El Dorado, and Alpine Counties on State Routes 88, 89, and 4. Table 1.1 includes more detail regarding the project locations, and Table 1.2 describes the proposed work for each location for the project.

The transportation management systems and roadside safety improvements that would be included in this project are:

- Changeable Message Sign: a large electronic sign structure with changeable messages used to alert the traveling public.
- Streetlight: a light mounted on a pole used to illuminate the highway.
- Video Detection Systems: a system of cameras and loop detectors that detect car movement on the state highway system to monitor traffic and highway conditions.
- Closed-Circuit Television Systems: a television system in which signals are not publicly distributed but are monitored for surveillance and security purposes.
- Road Weather Information System: a weather information system along the road consisting of automatic weather stations in the field, a communication system for data transfer, and central systems to collect field data for environmental sensitive stations.
- Highway Advisory Radios: low-powered, noncommercial radio stations used to broadcast information to the traveling public.
- Extinguishable Message Sign: a moveable sign with fixed messages to alert the traveling public.
- Maintenance Vehicle Pullouts: a parking area along the side of the highway for maintenance vehicles to tend to transportation management systems.
- Midwest Guardrail Systems: railing used as a barrier along the edge of the road.



**Table 1.1 Project Locations**

| Location | County    | State Route | Post Mile |
|----------|-----------|-------------|-----------|
| 1        | Amador    | 88          | R38.24    |
| 2        | Amador    | 88          | 53.99     |
| 3        | Amador    | 88          | 54.07     |
| 4        | Amador    | 88          | R65.95    |
| 5        | Amador    | 88          | 71.27     |
| 6        | Alpine    | 88          | 2.00      |
| 7        | Alpine    | 88          | 2.3       |
| 8        | El Dorado | 89          | 8.39      |
| 9        | Alpine    | 88          | 13.34     |
| 10       | Alpine    | 88          | 18.86     |
| 11       | Alpine    | 88          | 24.94     |
| 12       | Alpine    | 89          | 14.59     |
| 13       | Alpine    | 4           | R0.84     |

**Table 1.2 Proposed Work for Each Location**

| Location | Proposed Project Work                                                                                                                                                                                                                                   |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | One video detection system, one closed-circuit television system, and one maintenance vehicle pullout.                                                                                                                                                  |
| 2        | One streetlight                                                                                                                                                                                                                                         |
| 3        | One changeable message sign, one video detection system, one closed-circuit television system, one road weather information system, one highway advisory radio, two extinguishable message signs, and one maintenance vehicle pullout.                  |
| 4        | One changeable message sign, one video detection system, one closed-circuit television system, one road weather information system, one highway advisory radio, two extinguishable message signs, one maintenance vehicle pullout, and one streetlight. |
| 5        | One changeable message sign, one video detection system, one closed-circuit television system, one road weather information system, one highway advisory radio, two extinguishable message signs, and one maintenance vehicle pullout.                  |
| 6        | One road weather information system                                                                                                                                                                                                                     |
| 7        | One video detection system                                                                                                                                                                                                                              |
| 8        | One video detection system, one closed-circuit television system, one highway advisory radio, one extinguishable message sign, and one maintenance vehicle pullout.                                                                                     |
| 9        | One changeable message sign, one video detection system, one closed-circuit television system, one road weather information system, one highway advisory radio, two extinguishable message signs, and one maintenance vehicle pullout.                  |
| 10       | One changeable message sign, one video detection system, one closed-circuit television system, one road weather information system, one highway advisory radio, two extinguishable message signs, and one maintenance vehicle pullout.                  |
| 11       | One closed-circuit television system, one highway advisory radio, and two extinguishable message signs.                                                                                                                                                 |
| 12       | One changeable message sign, one video detection system, one closed-circuit television system, one road weather information system, one highway advisory radio, and two extinguishable message signs.                                                   |
| 13       | One changeable message sign, one video detection system, one closed-circuit television system, one road weather information system, one highway advisory radio, two extinguishable message signs, and one maintenance vehicle pullout.                  |

The Kirkwood and Carson Pass area is a year-round mountain destination located along the Sierra Crest in the Eldorado National Forest. The census-designated town of Kirkwood is accessible by State Route 88 and experiences severe weather conditions throughout the winter months. These annual weather patterns create challenging conditions for motorists where avalanche control and chain control operations are common in the area. Caltrans has received numerous complaints from travelers, residents, Caltrans Maintenance, the California Highway Patrol, and local officials regarding winter highway traffic. Limited cell phone and radio coverage, icy road conditions, and traffic congestion are typical factors that make severe weather conditions in the Kirkwood and Carson Pass area challenging for motorists. Transportation management systems in the area would help alleviate some of these issues.

## **1.2 Purpose and Need**

### **1.2.1 Purpose**

The purpose of the project is to improve roadway mobility and efficiency by addressing the effects of recurrent severe weather conditions on traffic through the strategic deployment of various transportation management systems on State Routes 88, 89, and 4.

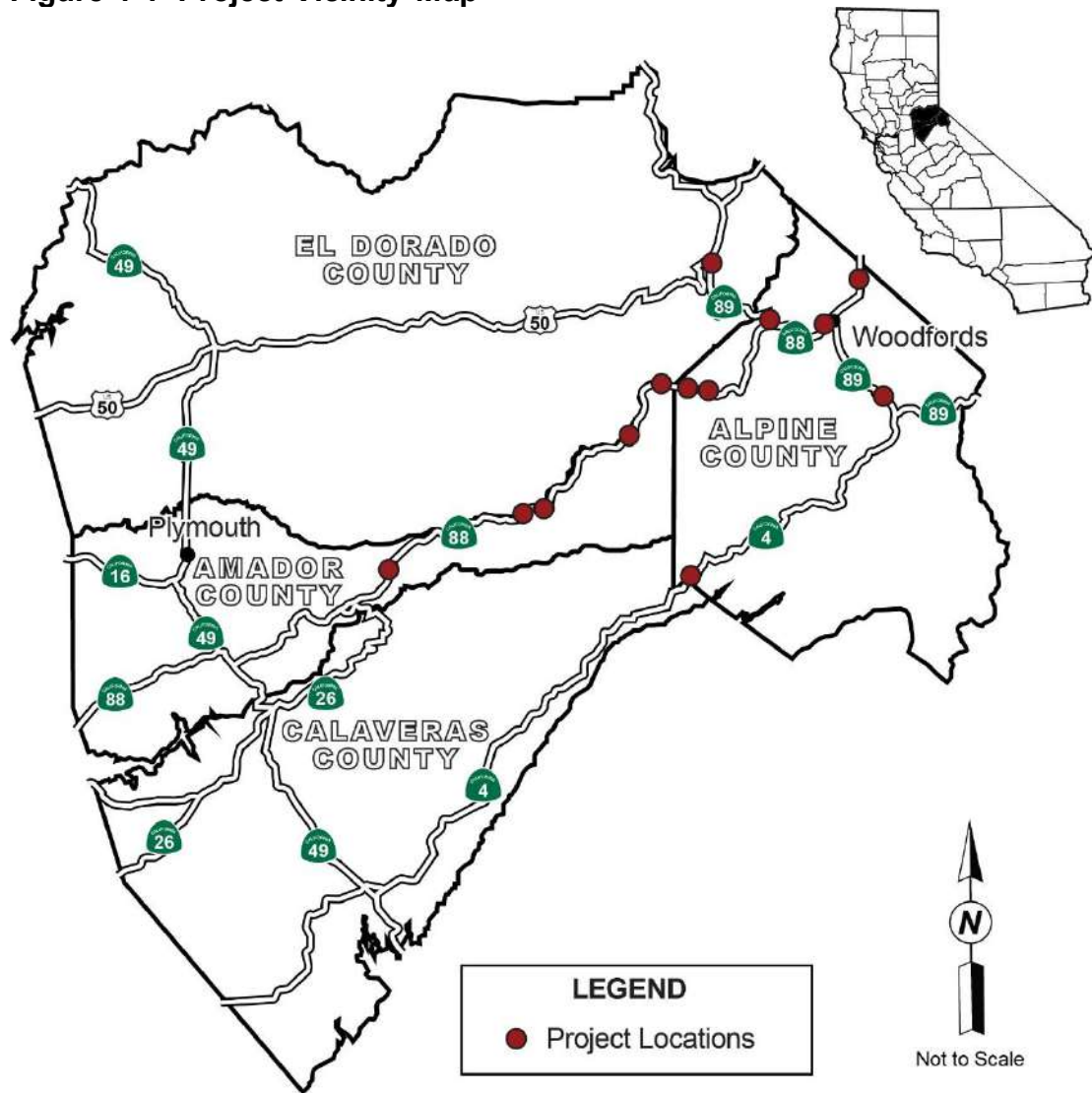
### **1.2.2 Need**

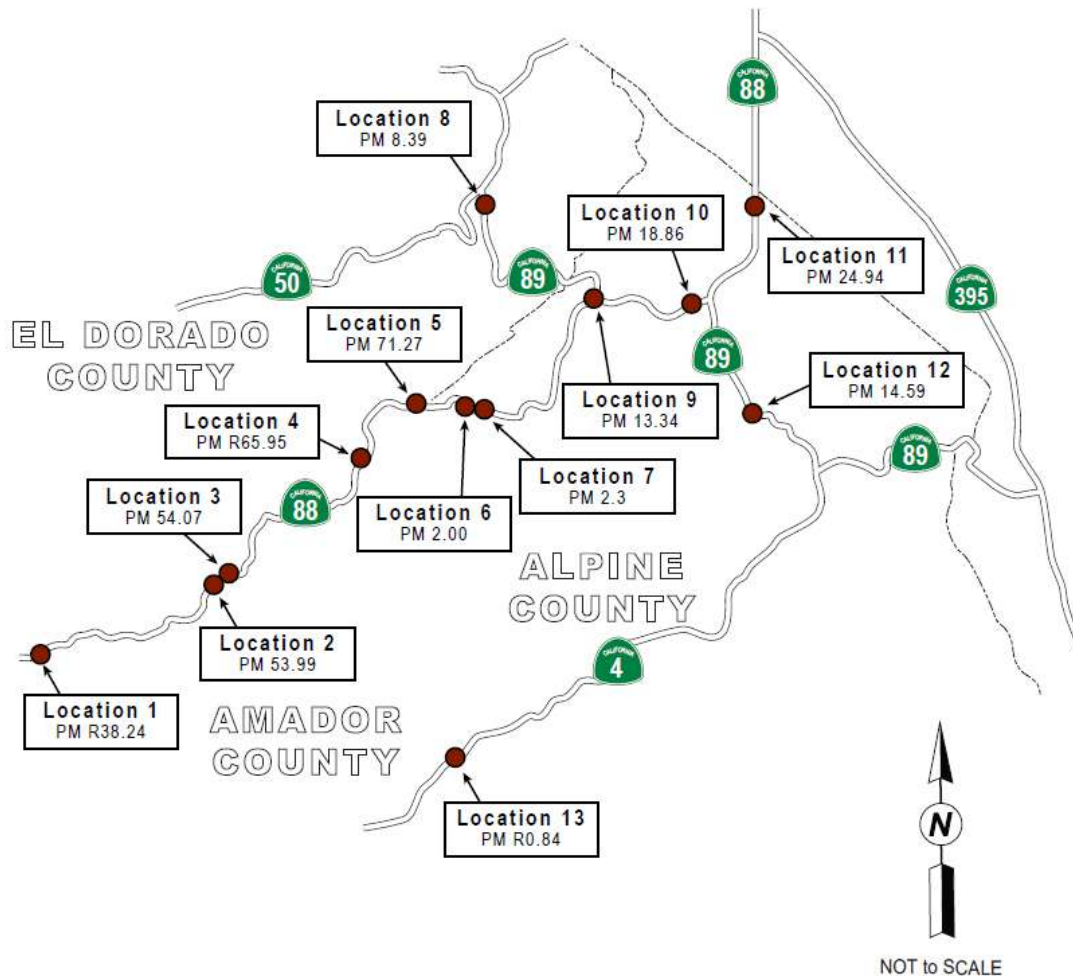
There is a need to inform motorists traveling through the Kirkwood and Carson Pass area of weather and traffic conditions that can affect their travel.

## **1.3 Project Description**

Caltrans proposes to install traffic management systems and roadside safety improvements in and around the Kirkwood and Carson Pass area at 13 various locations in Amador, El Dorado, and Alpine Counties on State Routes 88, 89, and 4. The scope of work would include changeable message signs, streetlights, video detection systems, closed-circuit television systems, road weather information systems, highway advisory radios, extinguishable message signs, maintenance vehicle pullouts, and midwest guardrail systems. Two permanent easements are expected to be acquired through the U.S. Forest Service for locations 2 and 6. Location 2 would acquire 0.063 acre for lighting, and Location 6 would acquire 0.158 acre for buried conduit. Construction would involve night work, work off the pavement, excavating, grading, trenching, and vegetation and tree removal. Figure 1-1 shows the project vicinity map for the project, and Figure 1-2 show the project location map.

**Figure 1-1 Project Vicinity Map**



**Figure 1-2 Project Location Map**

## 1.4 Project Alternatives

This section describes the proposed project alternatives developed to meet the purpose and need of the project while avoiding and/or minimizing environmental impacts. Under consideration for the project are a build alternative and a no-build alternative.

### 1.4.1 Build Alternatives

The build alternative would install various transportation management systems and roadside safety improvements at 13 locations in the Kirkwood and Carson Pass area. This area includes Amador, El Dorado, and Alpine Counties on State Routes 88, 89, and 4. The proposed transportation management systems and roadside safety improvements would be built in the following ways:

### ***Changeable Message Signs***

The post of the changeable message signs would be mounted with a cast-in-drilled-hole foundation, which would involve a reinforced concrete cast into holes drilled into the ground. Concrete would be pumped into the hole with a reinforced cage used to provide stability. Controller cabinets, used for changeable message sign control, would also be installed up the road from the signs. Installing the cabinets would require excavating and trenching the roadway or shoulder for the placement of hardware to provide power.

### ***Vehicle Detection Systems***

Vehicle detection systems would require shallow excavation of the roadbed and nearby road shoulder. The systems are typically placed beneath the pavement of the roadbed and are activated by a change in the magnetic field when a car passes over.

### ***Closed-Circuit Television***

Closed-circuit television systems would be installed on proposed or existing changeable message signs. Connections between the closed-circuit television system and controller cabinet would likely require excavating or trenching the roadway and shoulder for the placement of hardware and to provide power service.

### ***Road Weather Information System***

The proposed road weather information system stations would be installed on proposed or existing changeable message signs. This system would also require a connection to a controller cabinet, which would require excavating or trenching the roadway shoulder for the placement of hardware and to provide power service. Electrical service points within an existing Caltrans right-of-way would be used.

### ***Highway Advisory Radio and Extinguishable Message Signs***

The traveling public is notified of the highway advisory radio stations by the placement of the notification on extinguishable message signs. The installation of posts for extinguishable message signs would be similar to the above changeable message signs. Highway advisory radio stations also include the installation of transmitters and antennae, which would require a connection to power sources. Connections between the highway advisory radio system and a controller cabinet would require shoulder excavation or trenching for the placement of hardware and to provide a power source. Electrical service points within an existing Caltrans right-of-way would be used.

### ***Maintenance Vehicle Pullout and Midwest Guardrail Systems***

Installing maintenance vehicle pullouts would require grading, leveling the ground, and paving unpaved shoulder areas next to the existing paved

highway shoulders. Midwest guardrail systems would replace the existing guardrail at the maintenance vehicle pullout locations.

### **Streetlights**

The installation of posts for streetlights would be similar to the installation of changeable message signs. Connections between the streetlights and electrical connection points would likely require roadway or shoulder excavation or trenching for the placement of hardware and to provide power service. Electrical points within an existing Caltrans right-of-way would be used.

This project contains several standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are listed later in this chapter under “Standard Measures and Best Management Practices Included in All Alternatives.”

#### **1.4.2 No-Build (No-Action) Alternative**

The proposed project areas identified for transportation management systems and roadside safety improvements would remain untouched under the no-build alternative. Communication would remain difficult, and traffic would continue in the Kirkwood and Carson Pass areas during severe weather conditions.

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

**AQ 1**—Caltrans Standard Specifications Section 14-9.02, Air Pollution Control

**AQ 2**—Caltrans Standard Specifications Section 10-5, Dust Control

**BIO 7**—Nesting Bird Avoidance: Limited Operation Period

**BIO 8**—Nesting Bird Avoidance: Preconstruction Surveys During Nesting Season

**BIO 9**—Nesting Bird Avoidance: Avoid Active Nests

**GHG 1**—Reduce construction waste and maximize the use of recycling materials (reduces the consumption of raw materials, reduces landfill waste, and encourages cost savings).

**GHG 2**—Incorporate measures to reduce consumption of potable water.

**GHG 3**—Maintain equipment in proper tune and working condition.

**GHG 4**—Use the right size equipment for the job.

**GHG 5**—Existing project features (example being guardrail, light standards, subbase granular material, or native material that meets Caltrans specifications or incorporation into new work) will be recycled or reused onsite to the extent feasible.

**GHG 6**—Earthwork Balance: Reduce the need for transport of earthen materials by balancing cut and fill quantities.

**HW 1**—The Caltrans Standard Special Provision pertaining to Earth Material Containing Lead, Section 7-1.02K(6)(j)(iii) shall be added to the construction contract. A lead compliance plan is required.

**NQ 1**—Caltrans Standard Special Provisions Section 14-8.02, Noise Control.

**NQ 2**—All equipment would have sound-control devices that are no less effective than those provided on the original equipment. No equipment would have an unmuffled exhaust.

**NQ 3**—Use construction methods and equipment that would provide the lowest level of noise and ground vibration impact, such as alternative low-pile installation methods.

**NQ 4**—Turn off idling equipment when not in use.

**WQ 1**—Caltrans Standard Specifications Section 13-1, Water Pollution Control, would be added to the construction contract. The contractor must abide by Best Management Practices and address all potential water quality impacts that may occur during construction.

## **1.6 Discussion of the NEPA Categorical Exclusion**

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation supporting a Categorical Exclusion determination will be prepared 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 U.S. National Marine Fisheries Service and the U.S. Fish and Wildlife Service—that is, species protected by the Federal Endangered Species Act).



## **1.7 Permits and Approvals Needed**

No permits, licenses, agreements, and certifications are required for project construction.



## Chapter 2 CEQA Evaluation

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### 2.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant with Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A No Impact answer reflects this determination. The questions in this 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 and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below.

“No Impact” determinations in each section are based on the scope, description, and location of the proposed project as well as the appropriate technical report (bound separately in Volume 2), and no further discussion is included in this document.

#### 2.1.1 Aesthetics

Considering the information in the Scenic Resource Evaluation Memorandum dated August 12, 2021, the following significance determinations have been made:

Except as provided in Public Resources Code Section 21099:

| Question—Would the project:                                                                                                                              | CEQA Significance Determinations for Aesthetics |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| a) Have a substantial adverse effect on a scenic vista?                                                                                                  | Less Than Significant Impact                    |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | Less Than Significant Impact                    |

| Question—Would the project:                                                                                                                                                                                                                                                                                                                                                   | CEQA Significance Determinations for Aesthetics |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| 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? | <b>Less Than Significant Impact</b>             |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?                                                                                                                                                                                                                                                         | <b>No Impact</b>                                |

### ***Affected Environment***

The proposed project takes place within several officially designated scenic highways—State Routes 88, 89, and 4. The project area's landscape is mountainous, with mainly rural forests, meadows, and open fields.

### ***Environmental Consequences***

The proposed project would involve tree and vegetation removal. The project would also incorporate transportation management systems that are unnatural to the scenic surroundings. Since transportation management systems are common features within State Routes 88, 89, and 4, any visual impacts would be temporary.

### ***Avoidance, Minimization, and/or Mitigation Measures***

The following avoidance and minimization measures would be implemented to minimize the impacts on aesthetic resources.

**VIS 1**—Minimal tree and vegetation removal to avoid cumulative impacts throughout the routes.

**VIS 2**—Controller cabinets should be painted in an earth tone color to help them blend into their surroundings.

**VIS 3**—Upgraded Midwest Guardrail Systems would require the use of Natina Stain to reduce glare and to help blend the new guardrail system into the existing environment and protect the scenic quality of the routes.

## **2.1.2 Agriculture and Forest Resources**

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural

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

Considering the information in the Amador County General Plan, El Dorado County General Plan, Alpine County General Plan, and the Caltrans Geographic Information System Library dated August 27, 2021, the following significance determinations have been made:

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

### ***Affected Environment***

The proposed project would take place in Amador, El Dorado, and Alpine Counties along State Routes 88, 89, and 4. The project locations have a land use designation as open forest, general forest, and open recreation.

### ***Environmental Consequences***

The proposed project would take place in U.S. Forest Service land and publicly owned lands. Project work would include tree and vegetation removal.

### ***Avoidance, Minimization, and/or Mitigation Measures***

The following minimization measure would be implemented to minimize the impacts on forest resources.

**VIS 1**—Minimal tree and vegetation removal to avoid cumulative impacts throughout the routes.

### **2.1.3 Air Quality**

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

Considering the information in the Air Quality Memorandum dated December 19, 2020, the following significance determinations have been made:

| <b>Question—Would the project:</b>                                                                                                                                                                | <b>CEQA Significance Determinations for Air Quality</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan?                                                                                                                   | <b>No Impact</b>                                        |
| b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | <b>No Impact</b>                                        |
| c) Expose sensitive receptors to substantial pollutant concentrations?                                                                                                                            | <b>No Impact</b>                                        |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?                                                                                 | <b>No Impact</b>                                        |

### 2.1.4 Biological Resources

Considering the information in the Natural Environment Study (Minimal Impacts) dated September 21, 2021, the following significance determinations have been made:

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

#### ***Affected Environment***

The 13 project locations are in a rural, forested area of Amador, El Dorado, and Alpine Counties. Within the project area, surveys conducted by the

biologist noted potential waters of the U.S. and potential waters of the State of California. Examples of these protected waters would be a wet meadow or a culvert carrying an intermittent stream. Surveys also detected invasive plant species and suitable habitat, such as trees and shrubs, for nesting migratory birds, including raptors, next to the project area.

### ***Environmental Consequences***

The project scope is the installation or replacement of traffic management systems and roadside safety improvements. Construction would involve night work, work off the pavement, excavating, grading, trenching, and vegetation and tree removal.

Per Caltrans Standard Plans, all electrical conduit runs are installed 10 feet away from the edge of the pavement, including along the edge of pavement or under paved shoulder areas if it is required to avoid sensitive areas.

### ***State or Federally Protected Wetlands***

All potential waters of the U.S. and potential waters of the State of California would be designated as “Environmentally Sensitive Areas” (BIO 1) in the project plans and specifications and delineated in the field during construction using high-visibility markers. Permanent and temporary impacts to potential waters of the U.S. and potential waters of the State of California would be avoided by restricting all auguring, trenching, or other excavation activities to the edge of the shoulder at Locations 5, 7, 10, and 13. No project work is proposed that may affect the intermittent stream next to Location 7.

Because project work would avoid sensitive biological areas, the project would not require a Clean Water Act Section 404 permit, a Clean Water Act Section 401 certification, or a California Fish and Game Code Section 1600-1616 Agreement.

### ***Invasive Species***

Although existing roadside areas would be temporarily disturbed, the proposed project would not break “new ground,” creating an environment potentially available for new infestations. The seeds or spores of invasive weeds (referred to as propagules in the below measures BIO 4, BIO 5, and BIO 6) originating from invasive plant species within the project Environmental Study Limits could be transported to uninfested areas within the project Environmental Study Limits, or outside of the project vicinity. It is also recognized that disturbed roadside areas are significant sources of noxious and invasive weed material.

### ***Common Wildlife and Terrestrial Habitat Connectivity***

The proposed project would not impact sensitive biological habitats. However, several project locations (5, 7, 10, and 13) are next to forests, meadows,



pastures, and riparian areas known to be potential habitat for sensitive migratory bird species (BIO 7, BIO 8, and BIO 9).

***Avoidance, Minimization, and/or Mitigation Measures***

The following avoidance and minimization measures would be implemented to minimize the impacts on biological resources. Additional details on these measures and associated Best Management Practices can be found in Chapter 4 of the Natural Environment Study (Minimal Impacts).

***BIO 1—Environmentally Sensitive Area Designation***

Additional direct and indirect impacts to sensitive biological resources throughout the project area would be avoided or minimized by designating “Environmentally Sensitive Areas.” All areas outside of the proposed construction footprint shall be considered as Environmentally Sensitive Areas, as well as any areas determined by a qualified biologist during project planning or during preconstruction surveys to qualify for Environmentally Sensitive Area designation.

Environmentally Sensitive Area information would be shown on contract plans and discussed in Section 14-1.02 of the Caltrans 2018 Standard Specifications or any Standard Special Provisions in Section 14-1.02. Environmentally Sensitive Area provisions may include but would not be limited to the use of temporary, orange fencing or other high-visibility marking to identify the proposed limit of work in areas next to sensitive resources or to locate and exclude sensitive resources from potential construction impacts. Contractor encroachment into Environmentally Sensitive Areas would be prohibited, and immediate work stoppage and notification to the Caltrans Resident Engineer would be required if an Environmentally Sensitive Area is breached. Environmentally Sensitive Area provisions would be implemented as the first order of work and remain in place until all construction activities are complete.

***BIO 2—Designated Biologist***

A Designated Biologist or Biologists shall be onsite during any activities that have the potential to affect sensitive biological resources. The Designated Biologist or Biologists would monitor regulated species and habitats, ensure that construction activities do not result in the unintended take of regulated species or disturbances to regulated habitats, and ensure that construction activities comply with any permits, licenses, agreements, or contracts.

Additionally, the Designated Biologist or Biologists would immediately notify the Caltrans Resident Engineer of any take of regulated species, disturbances to regulated habitats, or breaches of Environmentally Sensitive Areas, and would prepare, submit, and sign notifications and reports.

The Designated Biologist or Biologists that perform specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task, and regulatory agency approval would be required before Caltrans accepts the title of Designated Biologist.

The Designated Biologist or Biologists for the proposed project may be Department-Supplied Biologists (Caltrans biologists or consultant biologists under Task Order contracts to Caltrans) or may be Contractor-Supplied Biologists. If Contractor-Supplied Biologists are used as Designated Biologists, provisions of the Contractor-Supplied Biologists would be discussed in Section 14-6.03D (1-3) of the Caltrans 2018 Standard Specifications or any Standard Special Provisions in Section 14-6.03D (1-3) that will specify the qualifications, responsibilities, and submittals of Contractor-Supplied Biologists.

Before project construction, the Contractor-Supplied Biologists would prepare a Natural Resources Protection Program within seven days of contract approval per Caltrans Standard Specifications or Standard Special Provisions under Section 14-6.03D (2) of the Caltrans 2018 Standard Specifications. The Natural Resources Protection Program would describe the measures and schedules for protecting biological resources and regulatory compliance and must be approved by Caltrans before construction activities start.

*BIO 3—Restore and Revegetate Temporarily Disturbed Areas Onsite*

Disturbed areas within the construction limits would be graded to minimize surface erosion and siltation into receiving waters. Disturbed areas would be recontoured to as close to the pre-project condition as possible and would be stabilized as soon as feasible (and no later than October 15 of each construction season) to avoid erosion during subsequent storms and runoff.

Permanent erosion control seeding would be performed at all disturbed sites by hydroseeding throughout construction as each site is completed, with all sites seeded by the completion of construction activities.

*BIO 4—Weed-Free Construction Equipment and Vehicles*

To minimize the potential for the transport of weed propagules to the action area from sources outside of the project area, construction equipment and vehicles are recommended to be cleaned and washed at the contractor's facilities before arrival at the construction site. Any vehicle or equipment cleaning that occurs onsite during construction activities shall conform with Caltrans 2018 Standard Specifications or any Special Conditions under Section 13-4.03E(3) and Section NS-08 (Vehicle and Equipment Cleaning) of the Caltrans 2017 Construction Site Best Management Practices Manual, which requires the contractor to contain and dispose of any waste resulting from vehicle or equipment cleaning.

*BIO 5—Weed Control During Construction*

To minimize the potential for spreading weed propagules originating from within the project Environmental Study Limits during construction activities, including initial vegetation clearing and at onsite revegetation areas, weed control would be accomplished per Caltrans 2018 Standard Specifications or Standard Special Provisions under Section 20-1.03C(3). The use of herbicides for weed control activities would be discouraged but may be considered on a case-by-case basis, depending upon the weed species, the extent of the infestation, or any regulatory restrictions.

*BIO 6—Weed-Free Erosion Control and Revegetation Treatments*

To minimize the risk of introducing weed propagules to the action area from sources outside of the project area, only locally adapted plant species appropriate for the project area would be used in any erosion control or revegetation seed mix or stock. A Caltrans biologist would consult with a Caltrans Landscape Architect to develop appropriate seed and planting palettes for use in revegetation and/or erosion control applications. Any compost, mulch, tackifier, fiber, straw, duff, topsoil, erosion control products, or seed must meet Caltrans 2018 Standard Specifications or any Standard Special Provisions under Section 21-2.02 for these materials. Any hydroseed used for revegetation activities must also be certified weed-free as per Caltrans 2018 Standard Specifications Section 21-2.02F.

*BIO 7—Nesting Bird Avoidance: Limited Operation Period*

Performing ground disturbance, vegetation removal, or other construction activities within nesting bird habitat during the non-nesting season (between October 1 and January 31) would not require preconstruction surveys or nesting bird avoidance measures.

*BIO 8—Nesting Bird Avoidance: Preconstruction Surveys During Nesting Season*

If ground disturbance, vegetation removal, or other construction activities are scheduled during the nesting season (February 1 to September 30) of protected raptors and migratory birds, a qualified biologist shall conduct a focused survey for active nests of such birds within 15 days before the beginning of project-related activities. If a lapse in project-related work of 15 days or longer occurs, another survey would be required before the work can start again. Additionally, consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife may also be required before the work can start again. Preconstruction surveys for nesting migratory birds and raptors shall be specified under Caltrans 2018 Standard Specifications and/or Standard Special Provisions Section 14-6.03A (Species Protection) and/or Section 14-6.03(B) (Bird Protection).

**BIO 9—Nesting Bird Avoidance: Avoid Active Nests**

If active nests are found, a protective no-work buffer would be established, and Caltrans shall consult with the U.S. Fish and Wildlife Service regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918 and with the California Department of Fish and Wildlife to comply with provisions of the California Fish and Game Code.

If the Designated Biologist or Biologists detect nesting migratory birds or nesting raptors during the preconstruction survey, an appropriate no-work buffer would need to be established around the nest. No work would start within the buffer until authorization is received from the Caltrans Resident Engineer. Appropriate no-work buffer distances for specific bird species such as raptors at a protective radius of 300 feet and other migratory birds at a protective radius of 100 feet.

Protective buffer radii for nesting migratory birds and raptors shall be specified under Caltrans 2018 Standard Specifications and/or Standard Special Provisions Section 14-6.03(A) (Species Protection) and/or Section 14-6.03(B) (Bird Protection). If construction or other project-related activities that may cause nest destruction, nest abandonment, or forced fledging of migratory birds are necessary, a qualified biologist would be required to monitor the nest site to ensure that protective radii are maintained.

Wetlands and Other Waters of the U.S.: No permanent or temporary effects are expected to occur to potential waters of the U.S. or potential waters of the State of California. Therefore, no compensatory mitigation for these resources is proposed.

**2.1.5 Cultural Resources**

Considering the information in the Historic Property Survey Report dated September 2, 2021, the following significance determinations have been made:

| Question—Would the project:                                                                                          | CEQA Significance Determinations for Cultural Resources |
|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?      | <b>No Impact</b>                                        |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | <b>No Impact</b>                                        |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries?                              | <b>No Impact</b>                                        |

### 2.1.6 Energy

Considering the proposed project's scope and expected duration of the project, the following significance determinations have been made:

| <b>Question—Would the project:</b>                                                                                                                                               | <b>CEQA Significance Determinations for Energy</b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation? | <b>No Impact</b>                                   |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?                                                                                    | <b>No Impact</b>                                   |

### 2.1.7 Geology and Soils

Considering the information in the California Department of Conservation Regulatory Map Portal, the following significance determinations have been made:

| <b>Question—Would the project:</b>                                                                                                                                                                                                                                                                                                                                                                                           | <b>CEQA Significance Determinations for Geology and Soils</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:<br><br>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. | <b>No Impact</b>                                              |
| ii) Strong seismic ground shaking?                                                                                                                                                                                                                                                                                                                                                                                           | <b>No Impact</b>                                              |
| iii) Seismic-related ground failure, including liquefaction?                                                                                                                                                                                                                                                                                                                                                                 | <b>No Impact</b>                                              |
| iv) Landslides?                                                                                                                                                                                                                                                                                                                                                                                                              | <b>No Impact</b>                                              |
| b) Result in substantial soil erosion or the loss of topsoil?                                                                                                                                                                                                                                                                                                                                                                | <b>No Impact</b>                                              |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?                                                                                                                                                                                         | <b>No Impact</b>                                              |

| Question—Would the project:                                                                                                                                                        | CEQA Significance Determinations for Geology and Soils |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?                                   | No Impact                                              |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | No Impact                                              |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?                                                                            | No Impact                                              |

### 2.1.8 Greenhouse Gas Emissions

Considering the information in the Climate Change and Greenhouse Gas Memorandum dated August 21, 2021, the following significance determinations have been made:

| Question—Would the project:                                                                                                      | CEQA Significance Determinations for Greenhouse Gas Emissions |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?      | Less Than Significant Impact                                  |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | No Impact                                                     |

### ***Affected Environment***

The 13 project locations are in a rural, forested area of Amador, El Dorado, and Alpine Counties. The proposed project would install various transportation management systems and roadside safety improvements. The Amador County General Plan, El Dorado County Regional Transportation Plan, and Alpine County General Plan address climate change and greenhouse gases in the project area.

### ***Environmental Consequences***

The project would not increase operational greenhouse gas emissions. Temporary carbon dioxide emissions generated from construction equipment were estimated using the Caltrans Construction Emission Tool. The estimated carbon dioxide emissions for the project would be about 971 tons during 180 working days.

### **Avoidance, Minimization, and/or Mitigation Measures**

The following minimization measures would be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project:

**GHG 1**—Reduce construction waste and maximize the use of recycling materials (reduces the consumption of raw materials, reduces landfill waste, and encourages cost savings).

**GHG 2**—Incorporate measures to reduce consumption of potable water.

**GHG 3**—Maintain equipment in proper tune and working condition.

**GHG 4**—Use the right size equipment for the job.

**GHG 5**—Existing project features (example: metal beam guardrail, light standards, subbase granular material, or native material that meets Caltrans specifications or incorporation into new work) would be recycled or reused onsite to the extent feasible.

**GHG 6**—Earthwork Balance: Reduce the need for transport of earthen materials by balancing cut and fill quantities.

### **2.1.9 Hazards and Hazardous Materials**

Considering the information in the Initial Site Assessment dated December 8, 2020, the following significance determinations have been made:

| <b>Question—Would the project:</b>                                                                                                                                                              | <b>CEQA Significance Determinations for Hazards and Hazardous Materials</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?                                                         | <b>No Impact</b>                                                            |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <b>No Impact</b>                                                            |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?                                        | <b>No Impact</b>                                                            |

| <b>Question—Would the project:</b>                                                                                                                                                                                                                                                | <b>CEQA Significance Determinations<br/>for Hazards and Hazardous<br/>Materials</b> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?                                                    | <b>No Impact</b>                                                                    |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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? | <b>No Impact</b>                                                                    |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?                                                                                                                                                         | <b>No Impact</b>                                                                    |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?                                                                                                                                           | <b>No Impact</b>                                                                    |

### 2.1.10 Hydrology and Water Quality

Considering the information in the Water Compliance Memorandum dated September 29, 2020, the following significance determinations have been made:

| <b>Question—Would the project:</b>                                                                                                                                                    | <b>CEQA Significance Determinations<br/>for Hydrology and Water Quality</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?                                       | <b>No Impact</b>                                                            |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | <b>No Impact</b>                                                            |



| <b>Question—Would the project:</b>                                                                                                                                                                                                                                                              | <b>CEQA Significance Determinations for Hydrology and Water Quality</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:<br><br>(i) result in substantial erosion or siltation onsite or offsite; | <b>No Impact</b>                                                        |
| (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;                                                                                                                                                                  | <b>No Impact</b>                                                        |
| (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                                                                                                     | <b>No Impact</b>                                                        |
| (iv) impede or redirect flood flows?                                                                                                                                                                                                                                                            | <b>No Impact</b>                                                        |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?                                                                                                                                                                                             | <b>No Impact</b>                                                        |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?                                                                                                                                                                         | <b>No Impact</b>                                                        |

### 2.1.11 Land Use and Planning

Considering the information in the Amador County General Plan, El Dorado County General Plan, and Alpine County General Plan, the following significance determinations have been made:

| <b>Question—Would the project:</b>                                                                                                                                                     | <b>CEQA Significance Determinations for Land Use and Planning</b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| a) Physically divide an established community?                                                                                                                                         | <b>No Impact</b>                                                  |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | <b>No Impact</b>                                                  |

### 2.1.12 Mineral Resources

Considering the information in the U.S. Geological Survey: Mineral Resources Online Spatial Data, the following significance determinations have been made:

| Question—Would the project:                                                                                                                                           | CEQA Significance Determinations for Mineral Resources |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?                                | No Impact                                              |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | No Impact                                              |

### 2.1.13 Noise

Considering the information in the Noise Compliance Memorandum dated December 7, 2020, the following significance determinations have been made:

| Question—Would the project result in:                                                                                                                                                                                                                                                                   | CEQA Significance Determinations for Noise |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?                                                       | No Impact                                  |
| b) Generation of excessive groundborne vibration or groundborne noise levels?                                                                                                                                                                                                                           | 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 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | No Impact                                  |

### 2.1.14 Population and Housing

Considering the information in the Caltrans Environmental Geographic Information System Library, the following significance determinations have been made:

| <b>Question—Would the project:</b>                                                                                                                                                                                  | <b>CEQA Significance Determinations for Population and Housing</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <b>No Impact</b>                                                   |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?                                                                                     | <b>No Impact</b>                                                   |

### 2.1.15 Public Services

Considering the information in the Amador County, El Dorado County, and Alpine County General Plans, the following significance determinations have been made:

| <b>Question:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>CEQA Significance Determinations for Public Services</b> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 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:<br><br>Fire protection? | <b>No Impact</b>                                            |
| Police protection?                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>No Impact</b>                                            |
| Schools?                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>No Impact</b>                                            |
| Parks?                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>No Impact</b>                                            |

| <b>Question:</b>         | <b>CEQA Significance Determinations<br/>for Public Services</b> |
|--------------------------|-----------------------------------------------------------------|
| Other public facilities? | <b>No Impact</b>                                                |

### 2.1.16 Recreation

Considering the project would only install various transportation management systems and roadside safety improvements, the following significance determinations have been made:

| <b>Question—Would the project:</b>                                                                                                                                                                             | <b>CEQA Significance Determinations<br/>for Recreation</b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| 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>No Impact</b>                                           |
| 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?                        | <b>No Impact</b>                                           |

### 2.1.17 Transportation

Considering the information in the Amador County, El Dorado County, and Alpine County General Plans, the following significance determinations have been made:

| <b>Question—Would the project:</b>                                                                                                                               | <b>CEQA Significance<br/>Determinations for Transportation</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?         | <b>No Impact</b>                                               |
| b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?                                                                            | <b>No Impact</b>                                               |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <b>No Impact</b>                                               |

| <b>Question—Would the project:</b>        | <b>CEQA Significance Determinations for Transportation</b> |
|-------------------------------------------|------------------------------------------------------------|
| d) Result in inadequate emergency access? | <b>No Impact</b>                                           |

### 2.1.18 Tribal Cultural Resources

Considering the information in the Historic Property Survey Report dated September 2, 2021, the following significance determinations have been made:

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

| <b>Question:</b>                                                                                                                                                                                                                                                                                                                                                                                                         | <b>CEQA Significance Determinations for Tribal Cultural Resources</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or                                                                                                                                                                                                                           | <b>No Impact</b>                                                      |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <b>No Impact</b>                                                      |

### 2.1.19 Utilities and Service Systems

Considering the information in the Amador County, El Dorado County, and Alpine County General Plans, and considering the current project scope, the following significance determinations have been made:

| Question—Would the project:                                                                                                                                                                                                                                                         | CEQA Significance Determinations for Utilities and Service Systems |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| 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? | <b>Less Than Significant Impact</b>                                |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?                                                                                                                           | <b>No Impact</b>                                                   |
| c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?                                                   | <b>No Impact</b>                                                   |
| d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?                                                                                             | <b>No Impact</b>                                                   |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?                                                                                                                                                                  | <b>No Impact</b>                                                   |

### ***Affected Environment***

The 13 project locations are in a rural, forested area of Amador, El Dorado, and Alpine Counties. The proposed project would install various transportation management systems and roadside safety improvements.

### ***Environmental Consequences***

The overall project scope includes the installation of traffic management systems. Most of the systems installed would require a connection to a power source; this would involve roadway or shoulder excavation and trenching for the placement of hardware and to provide a power source. Electrical service points within an existing Caltrans right-of-way would be used. Trenching for electrical conduit—a tube used to protect electrical wiring—would be about 18 inches deep and 2 inches wider than the outside diameter of the conduit but would not exceed 6 inches in width.

Per Caltrans Standard Plans, all electrical conduit runs are installed within 10 feet away from the edge of pavement, including along the edge of pavement or under paved shoulder areas if it is required to avoid sensitive areas.

The standard measures outlined in Section 1.5 of this document would be included in the project.

### ***Avoidance, Minimization, and/or Mitigation Measures***

With the incorporation of the standard measures outlined in Section 1.5 of this document, the addition of new electric power to the project areas would have a less than significant impact on the environment. Project-specific avoidance, minimization, and/or mitigation measures would not be required.

#### **2.1.20 Wildfire**

Considering the information in the California Fire Hazard Severity Zone Map and given the scope of the project, the following significance determinations have been made:

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

| <b>Question—Would the project:</b>                                                                                                                                                                                                                                 | <b>CEQA Significance Determinations for Wildfire</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan?                                                                                                                                                                           | <b>No Impact</b>                                     |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?                                                        | <b>No Impact</b>                                     |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | <b>No Impact</b>                                     |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?                                                                            | <b>No Impact</b>                                     |

### 2.1.21 Mandatory Findings of Significance

| Question:                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CEQA Significance Determinations for 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? | <b>Less Than Significant Impact</b>                                     |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?                                                                                                                                       | <b>No Impact</b>                                                        |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?                                                                                                                                                                                                                                                                                                                                          | <b>No Impact</b>                                                        |

#### ***Affected Environment***

The project would affect environmental resources in the vicinity of State Routes 88, 89, and 4 at various post miles in Amador, El Dorado, and Alpine Counties. However, the scope of work is limited, consisting primarily of traffic management information systems and roadside safety improvements, which would occur mainly within the shoulders of the paved roadway. Other work would be performed in a limited footprint.

#### ***Environmental Consequences***

The project may impact aesthetics, agriculture and forest resources, biological resources, greenhouse gas emissions, and utilities and service systems, but; with the implementation of avoidance and minimization measures discussed in chapter 2, the effects would be less than significant.

#### ***Avoidance, Minimization, and/or Mitigation Measures***

With the implementation of avoidance and minimization measures, the project would have a less than significant impact on the environment. All other



impacts would be minimized through the implementation of Caltrans Best Management Practices, Standard Specifications, and Standard Special Provisions. Therefore, the project would not have a significant impact on species, habitat, or any other natural or historical resource.



# Appendix A Title VI Policy Statement

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STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

## DEPARTMENT OF TRANSPORTATION

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Making Conservation  
a California Way of Life.

August 2020

### NON-DISCRIMINATION POLICY STATEMENT

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

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

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

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page:  
<https://dot.ca.gov/programs/civil-rights/title-vi>.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14<sup>th</sup> Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at <[Title.VI@dot.ca.gov](mailto:Title.VI@dot.ca.gov)>.

*Original signed by*  
Toks Omishakin  
Director

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



## **List of Technical Studies Bound Separately (Volume 2)**

Air Quality Memorandum

Biology Natural Environment Study (Minimal Impacts)

Climate Change and Greenhouse Gas Memorandum

Cultural Historic Property Survey Report

Floodplain Evaluation

Hazardous Waste Initial Site Assessment

Noise Study Memorandum

Water Quality Memorandum

Scenic Resource Evaluation/Visual Assessment

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to:

C. Scott Guidi  
District 10 Environmental Division  
California Department of Transportation  
1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205

Or send your request via email to: [Scott.Guidi@dot.ca.gov](mailto:Scott.Guidi@dot.ca.gov)

Or call: 209-479-1839

Please provide the following information in your request:

Project title: Carson Transportation Management Systems

General location information: State Routes 88, 89, and 4 at various post miles in Amador, El Dorado, and Alpine Counties

District number-county code-route-post mile: 10-AMA, ED, ALP-88, 89, 4-PM Varies

Project ID number: 1018000275

# **Carson Transportation Management Systems**

Along State Routes 88, 89, and 4 in Amador, El Dorado, and Alpine  
Counties

10-AMA, ED, ALP-88, 89, 4-PM Varies  
Project Number 1018000275

## **Technical Studies**

**Volume 2 of 2**



Prepared by the  
State of California Department of Transportation

**March 2022**



## **List of Technical Studies**

### **1. Air**

- Air Quality Memorandum

### **2. Biology**

- Natural Environment Study (Minimal Impacts)

### **3. Climate Change and Greenhouse Gas**

- Climate Change and Greenhouse Gas Analysis

### **4. Cultural**

- Historic Property Survey Report

### **5. Floodplain**

- Floodplain Evaluation

### **6. Hazardous Waste**

- Initial Site Assessment

### **7. Noise**

- Noise Study Memorandum

### **8. Water**

- Water Quality Memorandum

### **9. Visual**

- Scenic Resource Evaluation/Visual Assessment

# **Air**

## Air Quality Memorandum



## Memorandum

*Making Conservation a  
California Way of Life!*

**To: KAYLA LOPEZ**  
Environmental Planner  
Northern San Joaquin Valley Management Branch 2

**Date:** December 19, 2020  
**File:** 10-1G020  
1018000275  
ALP/EL-4,88, 89  
PM 2.0/25.0

**From: KEN ROMERO, P.E.**  
Senior Transportation Engineer, Central Region  
Environmental Engineering Branch



**Subject: CARSON TMS**

### Project Description

The California Department of Transportation proposes to install various Transportation Management System (TMS) elements and Roadside Safety Improvements in and around the Kirkwood/Carson area.

Work will take place at 13 various locations in El Dorado County on State Route (SR) 4, Amador County on SR-88, and Alpine County on SR-89 at various locations.

### Purpose and Need

The purpose of the project is to improve roadway mobility and efficiency by addressing the effects of recurrent severe weather conditions on traffic through strategic deployment of various TMS elements on SR 4, 88, and 89.

There is a need to inform motorists traveling through the Kirkwood/Carson area of weather and traffic conditions that can affect their travel.

### Transportation Conformity

The Federal Clean Air Act requires that all transportation plans and programs pass the air quality conformity test. This process involves forecasting future vehicle emissions of air pollutants to determine whether the amount of future vehicle pollution resulting from the plan or program would be within the allowable limit for motor vehicle emissions.

Alpine County is under the jurisdiction of the Amador Air District. Alpine County is unclassified/attainment for the Federal 8-hour Ozone and Particulate Matter (PM) 2.5 standards and unclassified for the Federal PM 10 standard.

Alpine County is unclassified for the State Ozone standard, nonattainment for the State PM 10 standard, and attainment for the State PM 2.5 standard.

Amador and El Dorado Counties are in the Mountain Counties Air Basin. Amador County and El Dorado Counties are under the jurisdiction of the Amador Air District and El Dorado Air Quality Management District, respectively. Amador and EL Dorado Counties are in nonattainment for the Federal 8-hour Ozone standard, unclassified for the Federal PM 10 standard, and unclassified/attainment for the Federal PM 2.5 standard.

Alpine, Amador and El Dorado Counties are not in violation of any National Ambient Air Quality Standards (NAAQS) and therefore are exempt from conformity.

Construction GHG climate change emissions were estimated at 971 tons per 180 working days.

This project is not expected to cause any operational effects on air pollutants.

During construction, the proposed project will generate air pollutants. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction progresses. Dust and odors during construction could cause occasional annoyance and complaints from residence along the State right-of-way.

Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section 14-9.02 "Air Pollution Control" and Section 10-5 "Dust Control," require the contractor to comply with the air pollution control rules, ordinances, and regulations and statutes that apply to work performed under the contract, including those provided in Government Code § 11017.

Operational climate change emissions do not need to be estimated because the project is not capacity increasing.

Please contact Maya Hildebrand at (559) 445-6426 if you have questions concerning this memo.

# Transportation Air Quality Conformity Findings Checklist

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                           |                                        |                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------|----------------------------------------------------------|
| <b>Project Name:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Carson TMS                                                |                                        |                                                          |
| <b>Dist-Co-Rte-PM:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10-ALP-EL-48-88-89-PM 2.0/25.0                            | <b>EA:</b>                             | 10-1G020                                                 |
| <b>Step 1.</b> Is the project located in a nonattainment or maintenance area for ozone, nitrogen dioxide, carbon monoxide (CO), PM <sub>2.5</sub> , or PM <sub>10</sub> per EPA's <a href="#">Green Book</a> listing of non-attainment areas?<br><input type="checkbox"/> If no, go to Step 17. <b>Transportation conformity does not apply to the project.</b>                                                                                                                                                                                                                                                                                            |                                                           |                                        |                                                          |
| <b>Federal-Aid No.:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> If yes, go to Step 2. |                                        |                                                          |
| <b>Document Type:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> 23 USC 326 CE         | <input type="checkbox"/> 23 USC 327 CE | <input type="checkbox"/> EA <input type="checkbox"/> EIS |
| <b>Step 2.</b> Is the project exempt from conformity per <a href="#">40 CFR 93.126</a> or <a href="#">40 CFR 93.128</a><br><input checked="" type="checkbox"/> If yes, go to Step 17. <b>The project is exempt from all project-level conformity requirements (40 CFR 93.126 or 128)</b> (check one box below and identify the project type, if applicable).<br><input checked="" type="checkbox"/> 40 CFR 93.126 Project type: <a href="#">Project is in an area that is not in violation of National Ambient Air Quality Standards (NAAQS)</a><br><input type="checkbox"/> 40 CFR 93.128<br><input type="checkbox"/> If no, go to Step 3.                |                                                           |                                        |                                                          |
| <b>Step 3.</b> Is the project exempt from regional conformity per <a href="#">40 CFR 93.127</a><br><input type="checkbox"/> If yes, go to Step 8. <b>The project is exempt from regional conformity requirements (40 CFR 93.127)</b> (identify the project type). Project type: <a href="#">Reconstructing bridges (no additional travel lanes)</a><br><input type="checkbox"/> If no, go to Step 4.                                                                                                                                                                                                                                                       |                                                           |                                        |                                                          |
| <b>Step 4.</b> Is the project located in a region with a currently conforming RTP and TIP?<br><input type="checkbox"/> If yes, <b>the project is included in a currently conforming RTP and TIP per 40 CFR 93.115. The project's design and scope have not changed significantly from what was assumed in RTP conformity analysis (40 CFR 93.115[b])</b> Go to Step 8.<br><input type="checkbox"/> If no and the project is located in an isolated rural area, go to Step 5.<br><input type="checkbox"/> If no and the project is not located in an isolated rural area, STOP and do not proceed until a conforming RTP and TIP are adopted.               |                                                           |                                        |                                                          |
| <b>Step 5.</b> For isolated rural areas, is the project regionally significant per 40 CFR 93.101, based on review by Interagency Consultation?<br><input type="checkbox"/> If yes, go to Step 6.<br><input type="checkbox"/> If no, go to Step 8. <b>The project, located in an isolated rural area, is not regionally significant and does not require a regional emissions analysis (40 CFR 93.101 and 93.109[1]).</b>                                                                                                                                                                                                                                   |                                                           |                                        |                                                          |
| <b>Step 6.</b> Is the project included in another regional conformity analysis that meets the isolated rural area analysis requirements per 40 CFR 93.109, including Interagency Consultation and public involvement?<br><input type="checkbox"/> If yes, go to Step 8. <b>The project, located in an isolated rural area, has met its regional analysis requirements through inclusion in a previously-approved regional conformity analysis that meets current requirements (40 CFR 93.109[1]).</b><br><input type="checkbox"/> If no, go to Step 7.                                                                                                     |                                                           |                                        |                                                          |
| <b>Step 7.</b> The project, located in an isolated rural area, requires a separate regional emissions analysis.<br><input type="checkbox"/> <b>Regional emissions analysis for regionally significant project, located in an isolated rural area, is complete. Regional conformity analysis was conducted that includes the project and reasonably foreseeable regionally significant projects for at least 20 years. Interagency Consultation and public participation were conducted. Based on the analysis, the interim or emission budget conformity tests applicable to the area are met (40 CFR 93.109[1] and 95.105).<sup>1</sup></b> Go to Step 8. |                                                           |                                        |                                                          |
| <b>Step 8.</b> Is the project located in a CO nonattainment or maintenance area?<br><input type="checkbox"/> If no, go to Step 9. <b>CO conformity analysis is not required.</b><br><input type="checkbox"/> If yes, <b>hot-spot analysis requirements for CO per the <a href="#">CO Protocol</a> (or per EPA's modeling guidance, CAL3QHCR can be used with EMFAC emission factors<sup>2</sup>) have been met. Project will not cause or contribute to a new localized CO violation (40 CFR 93.116 and 93.123)<sup>3</sup>.</b> Go to Step 9.                                                                                                             |                                                           |                                        |                                                          |

<sup>1</sup> The analysis must support this conclusion before going to the next step.

<sup>2</sup> Use of the CO Protocol is strongly recommended due to its use of screening methods to minimize the need for modeling. When modeling is needed, the Protocol simplifies the modeling approach. Use of CAL3QHCR must follow U.S. EPA's latest CO hot spot guidance, using EMFAC instead of MOVES; see: <http://www.epa.gov/otaq/stateresources/transconf/projectlevel-hotspot.htm#co-hotspot>.

<sup>3</sup> As of October 1, 2007, there are no CO nonattainment areas in California. Therefore, the requirements to not worsen existing violations and to reduce/eliminate existing violations do not apply.

**Step 9.** Is the project located in a PM10 and/or a PM2.5 nonattainment or maintenance area?

- ☐ If no, go to Step 13. **PM2.5/PM10 conformity analysis is not required.**  
☐ If yes, go to Step 10.

**Step 10.** Is the project considered to be a Project of Air Quality Concern (POAQC), as described in EPA's [Transportation Conformity Guidance](#) for PM 10 and PM 2.5?

- ☐ If no, **the project is not a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Analysis Guidance. Interagency Consultation concurred with this determination on [redacted].** Go to Step 12.  
☐ If yes, go to Step 11.

**Step 11.** The project is a POAQC.

- ☐ **The project is a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123, and EPA's Hot-Spot Guidance. Interagency Consultation concurred with this determination on [redacted]. Detailed PM hot-spot analysis, consistent with 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Guidance, shows that the project would not cause or contribute to, or worsen, any new localized violation of PM10 and/or PM2.5 standards.** Go to Step 12.

**Step 12.** Does the approved PM SIP include any PM10 and/or PM2.5 control measures that apply to the project, and has a written commitment been made as part of the air quality analysis to implement the identified SIP control measures? [Control measures can be found in the applicable Federal Register notice at: <https://www.epa.gov/state-and-local-transportation/conformity-adequacy-review-region-9#ca>]

- ☐ If yes, **a written commitment is made to implement the identified SIP control measures for PM10 and/or PM2.5 through construction or operation of this project (40 CFR 93.117).** Go to Step 14.  
☐ If no, go to Step 13.

**Step 13a.** Have project-level mitigation or control measures for CO, PM10, and/or PM2.5, included as part of the project's design concept and scope, been identified as a condition of the RTP or TIP conformity determination? AND/OR

**Step 13b.** Are project-level mitigation or control measures for CO, PM10, and/or PM2.5 included in the project's NEPA document?

AND

**Step 13c** (applies only if Step 13a and/or 13b are answered "yes"). Has a written commitment been made as part of the air quality analysis to implement the identified measures?

- ☐ If yes to 13a and/or 13b and 13c, **a written commitment is made to implement the identified mitigation or control measures for CO, PM10, and/or PM2.5 through construction or operation of this project. These mitigation or control measures are identified in the project's NEPA document and/or as conditions of the RTP or TIP conformity determination<sup>1</sup> (40 CFR 93.125(a)).** Go to Step 14.  
☐ If no, go to Step 14

**Step 14.** Does the project qualify for a 771.117(c)(22), (c)(23), (c)(26), (c)(27), or (c)(28)<sup>4</sup> Categorical Exclusion pursuant to 23 USC 326 and is an Air Quality Conformity Analysis required to document any analysis required by Steps 1 through 13 of this form?<sup>5</sup>

- ☐ If yes, then Caltrans prepares the Air Quality Conformity Analysis and makes the conformity determination. No FHWA involvement is required. See the [AQCA Annotated Outline](#). Go to Step 17.  
☐ If no, go to Step 15.

**Step 15.** Does the project qualify for any Categorical Exclusion pursuant to 23 USC 326 (including 771.117(c)(22), (c)(23), (c)(26), (c)(27), or (c)(28) when NO Air Quality Conformity Analysis is required)?

- ☐ If yes, then no FHWA involvement is required and Caltrans makes the conformity determination through its signature on the CE form. **An Air Quality Conformity Analysis (AQCA) is not needed.** Go to Step 17.  
☐ If no, go to Step 16.

**Step 16.** Does the project require preparation of a Categorical Exclusion, EA, or EIS pursuant to 23 USC 327?

- ☐ If yes, then Caltrans submits a conformity determination to FHWA for FHWA's conformity determination. **An AQCA is needed.** See the [AQCA Annotated Outline](#).

Date of FHWA air quality conformity determination: [redacted]

Go to Step 17.

**Step 17. STOP as all air quality conformity requirements have been met.**

**Signature:**



**Printed Name:**

Maya Hildebrand

Associate Environmental Planner- Air Quality

**Date:**

December 21, 2020

<sup>4</sup> Please note that certain activities covered by these categorical exclusions may require that Caltrans prepare an Air Quality Conformity Analysis rather than documenting the conformity determination with the Senior Environmental Planner's signature on the Categorical Exclusion form.

<sup>5</sup> Please note that for ALL projects the project file must include evidence that one of the three following situation applies: 1) Conformity does not apply to the project area; or 2) The project is exempt from all conformity analysis requirements; or 3) The project is subject to project-level conformity analysis (and possibly regional conformity analysis) and meets the criteria for a conformity determination. The project file must include all supporting documentation and this checklist.

# **Biology**

Natural Environment Study  
(minimal impacts)

**Natural Environment Study  
Minimal Impacts**

**10-1G020**

**Carson Area Traffic Management Systems Project  
State Highways 4, 88, and 89 in  
Alpine, Amador, and El Dorado Counties**



STATE OF CALIFORNIA  
Department of Transportation

**SEPTEMBER 2021**

**Natural Environment Study  
Minimal Impacts**

**10-1G020**

**Carson Area Traffic Management Systems Project  
State Highways 4, 88, and 89 in  
Alpine, Amador, and El Dorado Counties**

STATE OF CALIFORNIA  
Department of Transportation

Prepared By: Jason Meigs Date: 20SEP2021  
Jason Meigs, Associate Aquatic Resource Biologist  
Northern San Joaquin Valley Biology Branch  
Caltrans District 10  
916-454-9094

Recommended for  
Approval By: Nancy Lemos Date: 9/21/2021  
Nancy Lemos, Environmental Planner- Natural Sciences  
Northern San Joaquin Valley Biology Branch  
Caltrans District 10  
209-479-8750

Approved By: James Henke Date: 9/21/2021  
James P. Henke, Branch Chief  
Northern San Joaquin Valley Biology Branch  
Caltrans District 10  
209-471-3941

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## **1. Introduction**

### **1.1 Project History**

The Kirkwood/Carson area is a year-round mountain destination located along the Sierra Crest in the El Dorado National Forest. The town of Kirkwood is accessible by State Route 88 and experiences severe weather conditions throughout the winter months. These annual weather patterns create challenging conditions for motorists where avalanche control and chain control operations are common to the area. Caltrans has received numerous complaints from travelers, residents, Caltrans Maintenance, the California Highway Patrol, and local officials regarding winter highway traffic. Limited cell phone and radio coverage, icy road conditions, and traffic queuing are typical factors that make severe weather conditions in the Kirkwood/Carson area challenging for motorists. A transportation management system for the area would help alleviate these issues.

#### **1.1.1 Project Purpose and Need**

The purpose of the project is to improve roadway mobility and efficiency by addressing the effects of recurrent severe weather conditions on traffic through strategic deployment of various Transportation Management System elements on State Routes 4, 88, and 89.

There is a need to inform motorists traveling through the Kirkwood/Carson area of weather and traffic conditions that can affect their travel.

### **1.2 Project Description and Locations**

The California Department of Transportation is proposing to install various Transportation Management System elements and Roadside Safety Improvements in and around the Kirkwood/Carson area at 13 various location in Amador, El Dorado, and Alpine counties on State Routes 4, 88, and 89 (**Table 1, Figure 1: Project Vicinity, Figure 2: Project Locations**). The following work is proposed:

- Install seven new Changeable Message Signs (CMS)
- Install seven new Vehicle Detection System (VDS) and modify five existing VDS
- Install ten new Closed-Circuit Televisions (CCTV)
- Install eight new Road Weather Information System (RWIS)
- Install nine new Highway Advisory Radio (HAR)
- Install 17 new Extinguishable Message Signs (EMS)
- Construct nine new Maintenance Vehicle Pullouts (MVP)

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

Transportation Management System elements and Roadside Safety Improvements activities will occur at the following locations (**Table 1**):

**Table 1: Project Locations and Scope**

| Location | Co  | Rte | Post mile | Dir  | Location                        | C<br>M<br>S | V<br>D<br>S | C<br>C<br>T<br>V | R<br>W<br>I<br>S | H<br>A<br>R | E<br>M<br>S | M<br>V<br>P | Street Light |
|----------|-----|-----|-----------|------|---------------------------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|--------------|
| 1        | AMA | 88  | R38.24    | EB   | Existing CMS                    |             | 1           | 1                |                  |             |             | 1           |              |
| 2        | AMA | 88  | 53.99     | -    | Peddler Hill MS                 |             |             |                  |                  |             |             |             | 1            |
| 3        | AMA | 88  | 54.11     | EB   | East of Peddler Hill MS         | 1           | 1           | 1                | 1                | 1           | 2           | 1           |              |
| 4        | AMA | 88  | R65.95    | EB   | Silver Lake east of Carson Road | 1           | 1           | 1                | 1                | 1           | 2           | 1           | 1            |
| 5        | AMA | 88  | 71.27     | WB   | Kirkwood Meadow Drive           | 1           | 1           | 1                | 1                | 1           | 2           | 1           |              |
| 6        | ALP | 88  | 2.00      | -    | Caple Lake MS                   |             |             |                  | 1                |             |             |             |              |
| 7        | ALP | 88  | 2.30      | Both | Caples Lake                     | 1           |             |                  |                  |             |             |             |              |
| 8        | ELD | 89  | 8.39      | SB   | Existing CMS                    |             | 1           | 1                |                  | 1           | 1           | 1           |              |
| 9        | ALP | 88  | 13.34     | WB   | West of Jct 89                  | 1           | 1           | 1                | 1                | 1           | 2           | 1           |              |
| 10       | ALP | 88  | 18.86     | SB   | West of Woodfords MS            | 1           | 1           | 1                | 1                | 1           | 2           | 1           |              |
| 11       | ALP | 88  | 24.94     | SB   | Existing CMS                    |             |             | 1                |                  | 1           | 2           |             |              |
| 12       | ALP | 89  | 14.59     | SB   | South of Laramie Street         | 1           | 1           | 1                | 1                | 1           | 2           | 1           |              |
| 13       | ALP | 4   | R0.84     | NB   | East of Bear Valley Road        | 1           | 1           | 1                | 1                | 1           | 2           | 1           |              |

### 1.2.2 Construction Scenario

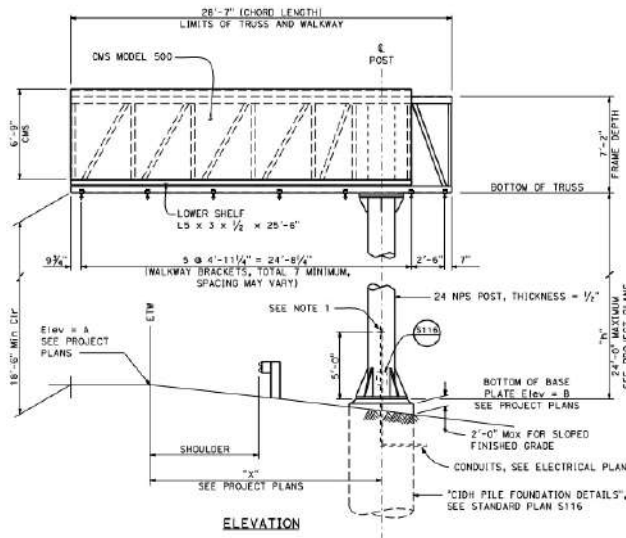
The California Department of Transportation is proposing to install various Transportation Management System elements and Roadside Safety Improvements in and around the Kirkwood/Carson area:

#### Changeable Message Signs (CMS)

According to *Caltrans Changeable Message Sign Guidelines (April 2021)*, permanent Changeable Message Signs are installed to the right of the traveled way is preferred because it allows maintenance personnel to use shoulder closures during inspection or repair.

The message posts would be mounted on a “cast-in-drilled-hole” foundation. Cast-in-drilled-hole piles are made of reinforced concrete cast into holes drilled in the ground to a specified tip elevation. The drilling auger mounted on a portable (truck- or tracked vehicle-mounted) drilling rig is the most commonly used drilling tool for drilling holes for cast-in-drilled-hole foundations. As the auger moves down the hole, the drilling action of the flights forces the drill cuttings up and out of the hole, resulting in material that must be shoveled away from the drilled hole. Concrete is pumped into the hole while the auger is withdrawn and a reinforcement cage is pushed or vibrated into the newly poured pile.

# **10-1G020 Carson Area Traffic Management Systems Project Natural Environment Study (Minimal Impacts)**



**Diagram1: Caltrans 2018 Standard Plan CMS**

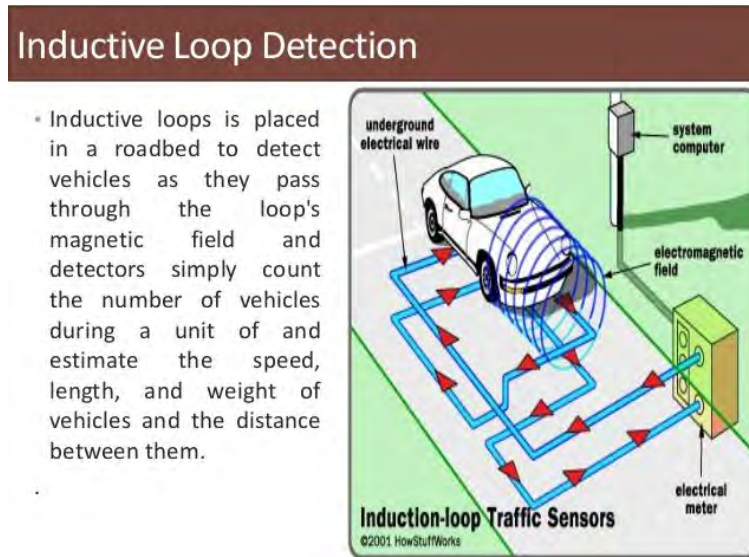
According to the Caltrans guidelines, the controller cabinets should be located at least 40-60 feet upstream from the sign to allow good visibility for testing. New electrical controller cabinets will be installed on new Portland concrete foundations and may require concrete pads as per Caltrans 2018 Standard Plans. Standard Plan electrical controller cabinet foundations range from 1'6"- to 2'4"-deep, 2'- to 6' wide, and 1'6"- 3'6" long, depending on cabinet type. Some cabinet types also require a raised concrete pad installed in front of the cabinet foundation of 4"-deep, and up to 9'9" wide and 4'2" long. Installation of new concrete pads for cabinet installation are expected to require roadway and/or shoulder excavation to construct a form and a will require a concrete pour.

Connections between the Changeable Message Signs and cabinet are likely to require roadway and/or shoulder excavation and/or trenching for the placement of hardware and to provide power service. Electrical service points within existing Caltrans right-of-way (R/W) will be utilized. Trenching for electrical conduit is typically approximately 18 inches in depth and 2 inches wider than the conduit's outside diameter but not exceeding 6 inches in width. As per Caltrans Standard Plans, all electrical conduit runs are installed within 10 feet away from the edge of pavement, including along the edge of pavement or under paved shoulder areas if it is required to avoid sensitive areas.

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

Vehicle Detection Systems (VDS)

Inductive loop detectors are used for traffic detection at freeway mainlines, entrance ramps, and exit ramps to gather the speed, volume, and occupancy data necessary to monitor freeway performance and establish metering rates or coordinated signal timing. Inductive loop sensors are typically placed beneath the pavement of the roadbed and are activated by a change in the magnetic field when a vehicle passes over (**Diagram 2**). Repair or installation of inductive loops typically require shallow excavation of the roadbed and adjacent shoulder.



**Diagram 2: Inductive Loop Vehicle Detection System**

Closed Circuit Television (CCTV)

Proposed Closed Circuit Television systems installation will be installed on existing or proposed structures. At Locations 1, 3, 4, 5, 8, 9, 10, 11, 12, and 13, Closed Circuit Television systems components will be installed on existing or proposed Changeable Message Signs.

Connections between the Closed-Circuit Television system and cabinet are likely to require roadway and/or shoulder excavation and/or trenching for the placement of hardware and to provide power service. Electrical service points within existing Caltrans right-of-way will be utilized.

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Roadside Weather Information System (RWIS)**

A Road Weather Information System comprises automatic weather stations in the field, a communication system for data transfer, and central systems to collect field data from numerous stations. These stations measure real-time atmospheric parameters, pavement conditions, water level conditions, and visibility. Central Road Weather Information System hardware and software are used to process observations to develop “now-casts” or forecasts and display or disseminate road weather information in a format that can be easily interpreted by a manager. Road Weather Information System data are used by road operators and maintainers to support decision making. Real-time Road Weather Information System data is also used by Automated Warning Systems (AWS). Sensors typically include thermometer, anemometer, wind vane, visibility sensor, and rain gauge.

The proposed Road Weather Information System stations will be installed on existing or proposed structures. At Locations 3, 4, 5, 8, 9, 10, 12, and 13, Road Weather Information System components will be installed on existing or proposed Changeable Message Signs. At Location 6, Road Weather Information System will be installed on the existing Maintenance Station tower.

Connections between the Road Weather Information System and a cabinet or other connection points are likely to require roadway and/or shoulder excavation and/or trenching for the placement of hardware and to provide power service. Electrical service points within existing Caltrans right-of-way will be utilized.

**Highway Advisory Radio (HAR)**

Highway Advisory Radio stations are licensed low-powered non-commercial radio stations, used to broadcast information to the public, including for motorists regarding travel, destinations of interest, and situations of imminent danger and emergencies. Programming normally consists of continuously repeated pre-recorded messages. Installation of HAR stations include the installation of signage with flashing beacons as well as the installation of transmitters and antennae and connections to power sources.

Posts for Extinguishable Message Signs would be mounted on a cast-in-drilled-hole foundation as described above and would require the operation of a portable auger drill rig within or adjacent to the highway shoulder. Connections between the Highway Advisory Radio system and a cabinet or other connection points are likely to require roadway and/or shoulder excavation and/or trenching for the placement of hardware and to provide power service. Electrical service points within existing Caltrans right-of-way will be utilized.

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Extinguishable Message Signs (EMS)**

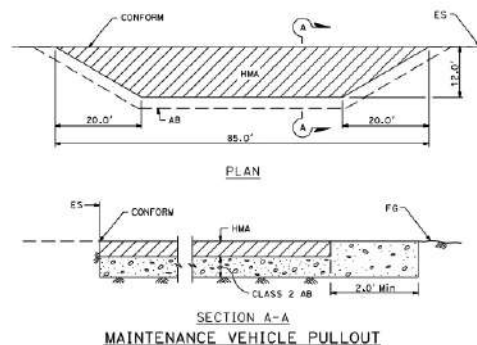
An Extinguishable Message Sign is used to display a fixed message such as TUNE RADIO TO 1610 AM or ALL TRUCKS EXIT AT SCALES. Another type of Extinguishable Message Sign is a roadside sign which displays fixed messages with flashing beacons to draw attention to the activated sign. Posts for Extinguishable Message Signs would be mounted on a cast-in-drilled-hole foundation as described above and would require the operation of a portable auger drill rig within or adjacent to the highway shoulder. Connections between the Highway Advisory Radio **system** and a cabinet or other connection points are likely to require roadway and/or shoulder excavation and/or trenching for the placement of hardware and to provide power service. Electrical service points within existing Caltrans right-of-way will be utilized.



**Photos 1 and 2  
Example Extinguishable Message Signs**

**Maintenance Vehicle Pullouts (MVP)**

Installation of the Maintenance Vehicle Pullouts will require grading and paving of currently unpaved shoulder areas adjacent to the existing paved highway shoulders (**Diagram 3**).



**Diagram 3: Caltrans 2015 Standard Plan MVP**

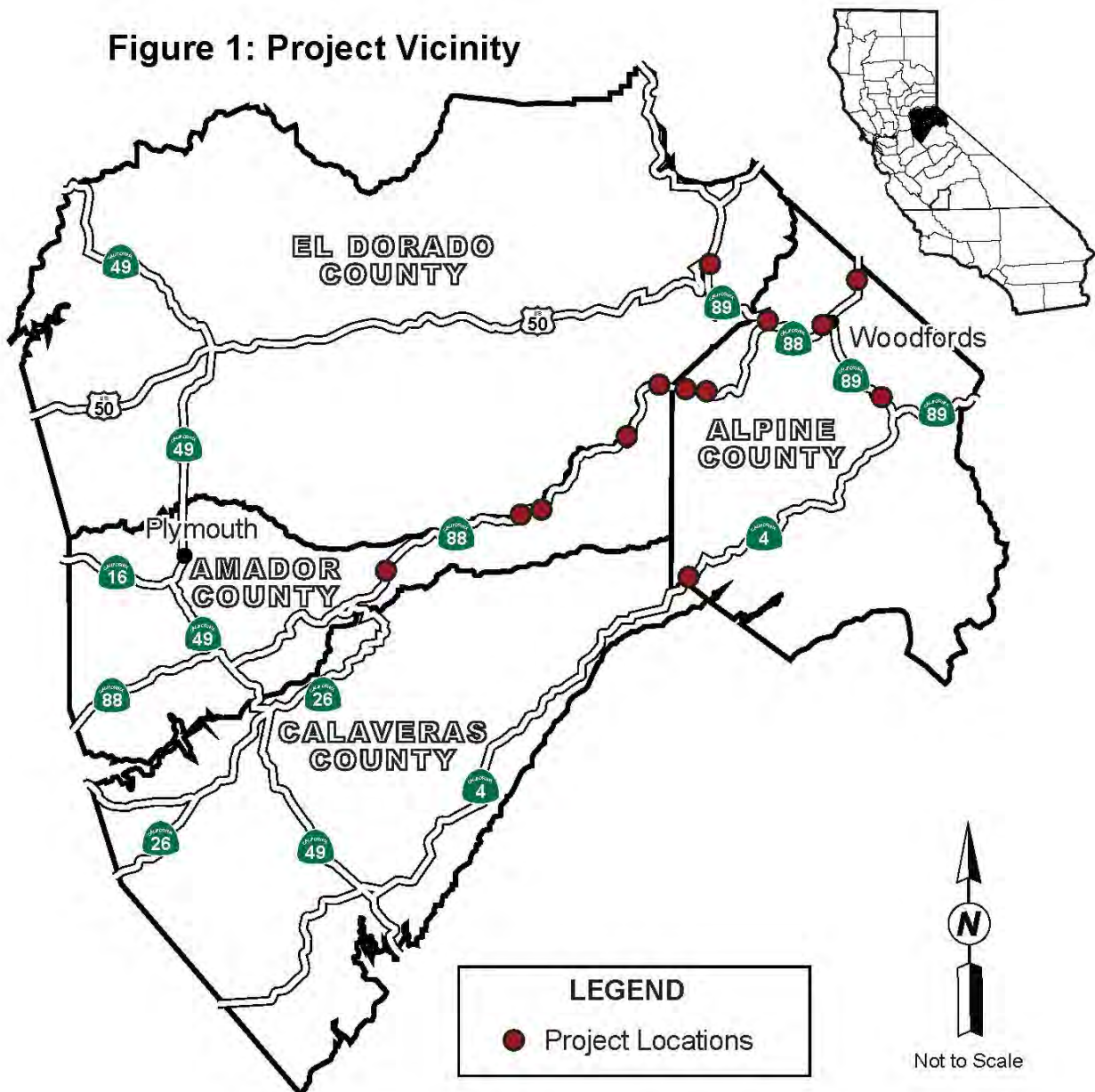


10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)

Streetlights

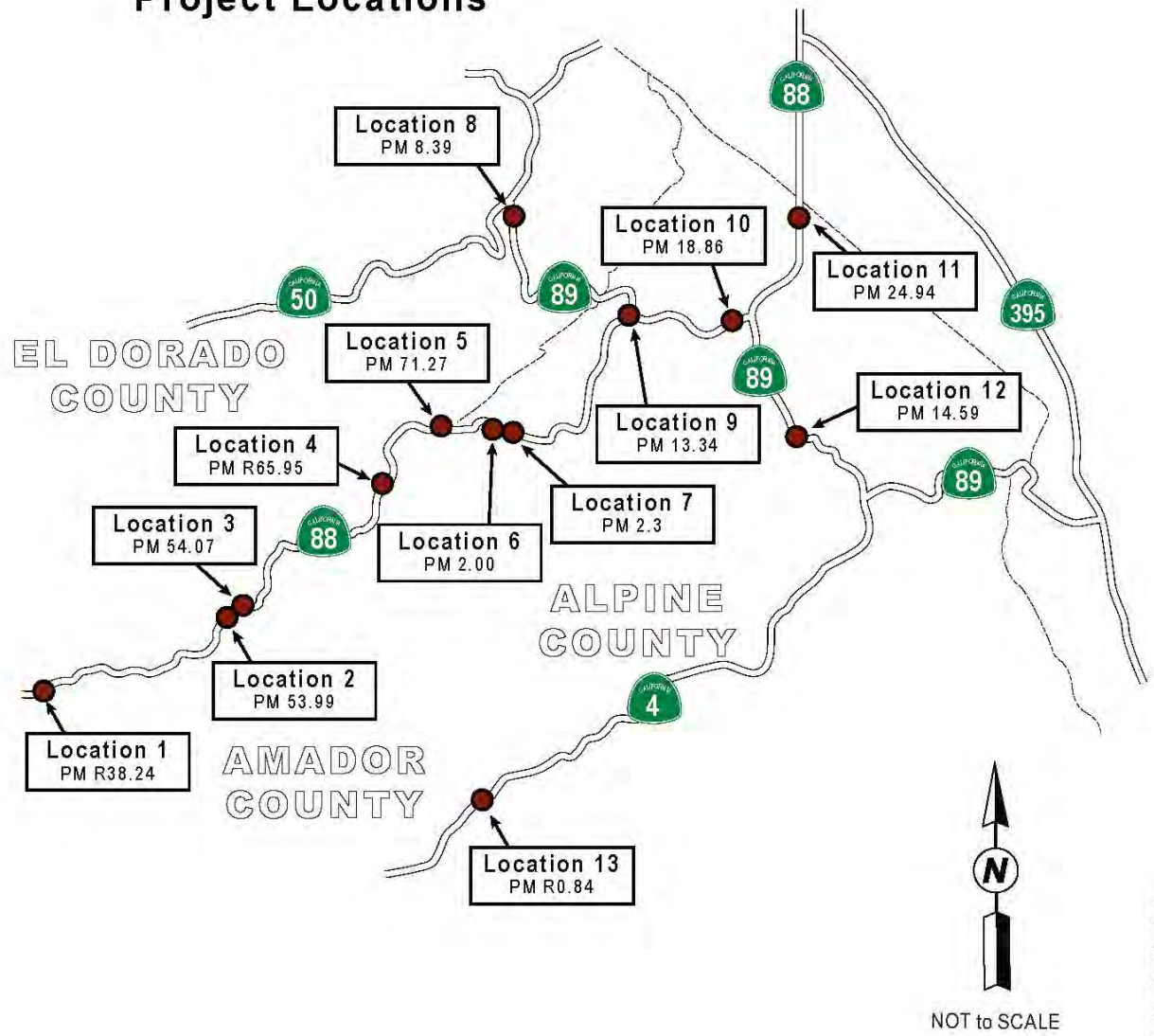
Streetlights would be mounted on a cast-in-drilled-hole foundation as described above and would require the operation of a portable auger drill rig within or adjacent to the highway shoulder. Connections between the streetlights and electrical connection points are likely to require roadway and/or shoulder excavation and/or trenching for the placement of hardware and to provide power service. Electrical service points within existing Caltrans right-of-way will be utilized.

**Figure 1: Project Vicinity**





**Figure 2:  
Project Locations**



## **2. Study Methods**

### **2.1 Regulatory Requirements**

In order to comply with the provisions of various state and federal environmental statutes and executive orders, the potential impacts to natural resources of the project area were investigated and documented. Field surveys within the project Environmental Study Limits were conducted to assess existing natural resources and potential impacts. Specifically, surveyors identified 1) habitat types; 2) potential waters of the United States and Waters of the State of California including wetlands; 3) factors indicating the potential for special-status species; 4) special-status species present; 5) potential problems for the study and 6) established baseline conditions of biological resources.

The following table outlines the applicable laws, ordinances, regional and local plans and their associated objectives, and summarizes Caltrans' consultation with the appropriate resource agencies to ensure that the proposed project is not in conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, regional or state habitat conservation plan, any local or regional ordinance or policy or any state or federal laws (**Table 2**):

**Table 2: Summary of Project Compliance with State and Federal Laws, Ordinances, and Regulations**

| <b>Agency</b>                              | <b>Authority</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Requirements/Compliance</b>                                                                                                                                                                       | <b>Permit/Consultation Required?</b>                                                                                                                                                                                                    |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| California Department of Fish and Wildlife | California Endangered Species Act of 1984; California Fish and Game Code Sections 2050 - 2098. Requires consultation with California Department of Fish and Wildlife for projects that could affect a state-listed threatened or endangered species. Section 2080 of California Endangered Species Act prohibits "take" of any of these species. The take of state-listed species incidental to otherwise lawful activities requires a permit, pursuant to Section 2081(b) of California Endangered Species Act                       | If California Endangered Species Act-listed species may potentially be affected by project activities, the project proponent shall consult with the California Department of Fish and Wildlife.      | None. Project would not result in take of California Endangered Species Act listed species.                                                                                                                                             |
| California Department of Fish and Wildlife | Native Plant Protection Act of 1977; California Fish and Game Code Sections 1900 et seq. California Native Plant Protection Act directs California Department of Fish and Wildlife to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in the State." The California Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. | If California Native Plant Protection Act-listed species may potentially be affected by project activities, the project proponent shall consult with the California Department of Fish and Wildlife. | None. Federal Endangered Species Act, California Endangered Species Act, and California Native Plant Society plant species were considered as part of environmental review and are not expected to be affected by the proposed project. |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 2, Continued**

| <b>Agency</b>                              | <b>Authority</b>                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Requirements/Compliance</b>                                                                                                                                                                                    | <b>Permit/Consultation Required?</b>                                                                                                                            |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| California Department of Fish and Wildlife | California Fish and Game Code Section 3503, Section 3513, and Section 355 – 357. CDFG No taking or possessing of the nests or eggs of birds                                                                                                                                                                                                                                                                              | If removal of trees/vegetation occurs during the nesting season (Feb 1 – September 30) pre-construction surveys needed to verify absence of nesting birds                                                         | Consult with California Department of Fish and Wildlife and United States Fish and Wildlife Service if nests are detected and would be affected by the project. |
| California Department of Fish and Wildlife | California Fish and Game Code Section 3511 and Section 5050. CDFG No taking of birds, reptiles, or amphibians listed as fully protected                                                                                                                                                                                                                                                                                  | No fully protected species can be taken                                                                                                                                                                           | None. No fully protected species would be affected by the project                                                                                               |
| California Department of Fish and Wildlife | California Fish and Game Codes Section 1600 – 1616. Section 1600 of the Fish and Game Code requires any project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of a stream or use materials from a streambed to notify California Department of Fish and Wildlife before beginning the project.                                                           | If work in stream environments or riparian habitat areas are proposed within the project area, then applicant shall consult with California Department of Fish and Wildlife to determine permitting requirements. | No. Proposed project would not impact aquatic, wetland, or riparian waters of the State.                                                                        |
| California Department of Fish and Wildlife | State Fish and Game Code Section 3513 - Adoption of Migratory Bird Treaty Act. Adopts the federal Migratory Bird Treaty Act's provisions, so that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act; as with Migratory Bird Treaty Act, this state code offers no mechanism for obtaining an incidental take permit for the loss of nongame, migratory birds. | If removal of trees/vegetation occurs during the nesting season (February 1 – September 30) pre-construction surveys needed to verify absence of nesting migratory birds.                                         | Consult with California Department of Fish and Wildlife and United States Fish and Wildlife Service if nests are detected and would be affected by the project. |
| California Department of Fish and Wildlife | State Fish and Game Code Section 3503.5 - Protection of Raptors. Unlawful to take, possess, or destroy any birds-of-prey in the orders Falconiformes (hawks) or Strigiformes (owls). This statute does not provide for the issuance of any type of incidental take permit.                                                                                                                                               | If removal of trees or vegetation occurs during the nesting season (February 1 – September 30) pre-construction surveys needed to verify absence of nesting raptors.                                              | Consult with California Department of Fish and Wildlife if nests are detected and would be affected by the project.                                             |
| Regional Water Quality Control Board       | Clean Water Act of 1977; Section 401 Water Quality Certification. Requires state certification from Regional Water Quality Control Board that federal permits allowing discharge of dredged or fill material into waters of the United States will not violate federal and state water quality standards.                                                                                                                | If any construction activities would result in any discharge into waters of the State of California, the applicant shall consult with Regional Water Quality Control Board to determine permitting requirements.  | No. Proposed project would not impact aquatic, wetland, or riparian waters of the State of California.                                                          |
| Regional Water Quality Control Board       | California Water Code, Division 7 - Porter-Cologne Water Quality Control Act. Establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution.                                                                                                           | If any construction activities would result in any discharge into waters of the State of California, the applicant shall consult with Regional Water Quality Control Board to determine permitting requirements.  | No. Proposed project would not impact aquatic, wetland, or riparian waters of the State of California.                                                          |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 2, Continued**

| <b>Agency</b>                           | <b>Authority</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Requirements/Compliance</b>                                                                                                                                                                                                                                                                                              | <b>Permit/Consultation Required?</b>                                                                                                                            |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| United States Fish and Wildlife Service | Federal Endangered Species Act of 1973; 16 USC Section 1531 et seq.; 50 Code of Federal Regulations Parts 17 and 222. Section 9 of the Federal Endangered Species Act and federal regulations prohibit the “take” of federally-listed species, which is defined as killing, harming, or harassment of such species. Take can also include habitat modification or degradation that affect essential behavioral patterns such as breeding, feeding, or sheltering, and therefore indirectly cause injury or death to the listed species. | If Federal Endangered Species Act-listed species may potentially be affected by project activities, the project proponent shall consult with the United States Fish and Wildlife Service as per Section 7 of the Federal Endangered Species Act                                                                             | No. Federal Endangered Species Act-listed species administered by United States Fish and Wildlife Service will not be affected by the project.                  |
| United States Fish and Wildlife Service | <i>Migratory Bird Treaty Act; 16 USC Sections 703 - 711; 50 Code of Federal Regulations Subchapter B. United States Fish and Wildlife Service Protection of migratory birds. The Migratory Bird Treaty Act makes it unlawful to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird.</i>                                                                                                                                                                                                               | If removal of trees occurs during the nesting season (February 1 – September 30)) pre-construction surveys needed to verify absence of nesting migratory birds                                                                                                                                                              | Consult with California Department of Fish and Wildlife and United States Fish and Wildlife Service if nests are detected and would be affected by the project. |
| National Marine Fisheries Service       | Federal Endangered Species Act of 1973; 16 USC Section 1531 et seq.; 50 Code of Federal Regulations Parts 17 and 222. Section 9 of the Federal Endangered Species Act and federal regulations prohibit the “take” of federally-listed species, which is defined as killing, harming, or harassment of such species. Take can also include habitat modification or degradation that affect essential behavioral patterns such as breeding, feeding, or sheltering, and therefore indirectly cause injury or death to the listed species. | If Federal Endangered Species Act-listed species administered by National Marine Fisheries Service (federally-listed anadromous salmonids) may potentially be affected by project activities, the applicant shall consult with the National Marine Fisheries Service as per Section 7 of the Federal Endangered Species Act | None. Federal Endangered Species Act-listed species administered by National Marine Fisheries Service would not be affected by the project.                     |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 2, Continued**

| <b>Agency</b>                             | <b>Authority</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Requirements/Compliance</b>                                                                                                                                                                                                   | <b>Permit/Consultation Required?</b>                                                                                                                   |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| United States Army Corps of Engineers     | Clean Water Act of 1977; 33 USC Section 1251 – 1376, 30 Code of Federal Regulations Section 330.5(a)(26). Protection of wetlands and waters of the United States. Section 404 of the Clean Water Act requires a permit prior to any activity that involves any discharge of dredged or fill material into “Waters of the United States”. Nearly all surface waters and wetlands in California meet the criteria for Waters of the United States, including ephemeral streams and seasonal lakes and wetlands. Activities that require a permit under Section 404 include placing fill or riprap, grading, mechanized land clearing, and dredging. Any activity that results in the deposit of fill material within the “Ordinary High Water Mark” of Waters of the United States usually requires a permit, even if the area is dry at the time the activity takes place. | If any construction activities would result in any discharge into waters of the United States, the applicant shall consult with United States Army Corps of Engineers to determine permitting requirements.                      | No. Proposed project would not impact potential waters of the United States                                                                            |
| United States Army Corps of Engineers     | Rivers and Harbors Act – Section 10 of the Rivers and Harbors Act requires a permit for creating obstructions (including excavation and fill activities) to the navigable capacity of waters of the United States Navigable waters are defined as those subject to the ebb and flow of the tide and susceptible to use in their natural condition or by reasonable improvements as means to transport interstate or foreign commerce. The United States Army Corps of Engineers grants or denies permits based on the effects on navigation.                                                                                                                                                                                                                                                                                                                              | If any construction activities would result in any discharge into designated navigable waters of the United States, the applicant shall consult with United States Army Corps of Engineers to determine permitting requirements. | None. Proposed project would not affect designated “navigable” waters of the United States.                                                            |
| Federal Highways Administration/ Caltrans | CA State Senate Concurrent Resolution No. 17 –Requests state agencies having land use planning duties and responsibilities to assess and determine the effects of their decisions or actions within any oak woodlands containing blue, Engelmann, valley, or coast live oak. The measure requests those state agencies to preserve and protect native oak woodlands to the maximum extent feasible or provide replacement plantings where designated oak species are removed from oak woodlands.                                                                                                                                                                                                                                                                                                                                                                          | If any construction activities would result in the removal of blue, Engelmann, valley, or coast live oaks, the state agency will provide replacement plantings where designated oak species are removed from oak woodlands.      | None. Proposed project is not expected to result in the removal of oak trees from oak woodlands.                                                       |
| Federal Highways Administration/ Caltrans | Executive order 13112 - Requires federal agencies to expand and coordinate their efforts to combat the introduction and spread of plants and animals not native to the United States.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Environmental documentation will include a discussion of the invasive species present within the project limits, their status, and measures taken to prevent the spread or infestation of invasive species.                      | None. Noxious weed risk assessment was conducted for the proposed project. Project shall comply with invasive weed measures proposed in this document. |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 2, Continued**

| <b>Agency</b>                             | <b>Authority</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Requirements/Compliance</b>                                                                                                                                                                              | <b>Permit/Consultation Required?</b>                                                                                                                                                                                         |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Federal Highways Administration/ Caltrans | Executive order 13751 – Amends Federal Executive Order 13112 which requires federal agencies to expand and coordinate their efforts to combat the introduction and spread of plants and animals not native to the United States. The Federal Executive Order incorporates considerations of human and environmental health, climate change, technological innovation, and other emerging priorities into Federal efforts to address invasive species; and strengthens coordinated, cost-efficient Federal action.                                                                                                                                                                             | Environmental documentation will include a discussion of the invasive species present within the project limits, their status, and measures taken to prevent the spread or infestation of invasive species. | None. Noxious weed risk assessment was conducted for the proposed project. Project shall comply with invasive weed measures proposed in this document.                                                                       |
| Federal Highways Administration/ Caltrans | Federal Executive Order 11990 Protection of Wetlands - This Federal Executive Order establishes a National policy to avoid adverse effects on wetlands whenever there is a practicable alternative. On Federally funded projects, effects on wetlands must be identified in the environmental document. Alternatives that avoid wetlands must be considered. If wetland effects cannot be avoided, then all practicable measures to minimize harm must be included. This must be documented in a specific Wetlands Only Practicable Alternative Finding in the final environmental document. An additional requirement is to provide early public involvement in projects affecting wetlands. | If any construction activities would result in any discharge into wetland waters of the United States, the applicant shall document                                                                         | None. Project effects to potential wetlands will be identified in this document and in the project environmental document. All practicable measures to minimize harm to wetlands were considered during project development. |
| Federal Highways Administration/ Caltrans | National Wild and Scenic Rivers Act - Designated river segments possessing outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Act prohibits Federal agencies from undertaking activities that would adversely affect the values for which the river was designated.                                                                                                                                                                | If designated river segments may be potentially affected by project activities, the applicant shall avoid undertaking activities that would adversely affect the values for which the river was designated. | None. Proposed project would not affect designated Wild and Scenic river segments.                                                                                                                                           |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 2, Continued**

| Agency                            | Authority                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Requirements/Compliance                                                                                                                                                                                | Permit/Consultation Required?                                                                    |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| National Marine Fisheries Service | Marine Mammals Protection Act - This act establishes a Federal responsibility to conserve marine mammals with management vested in the Department of Interior and the Department of Commerce. With certain specified exceptions, the Act establishes a moratorium on the taking and importation of marine mammals as well as products taken from them and establishes procedures for waiving the moratorium and transferring management responsibility to the States.                                                                                                                                                                                          | If marine mammals administered by National Marine Fisheries Service may potentially be affected by project activities, the applicant shall consult with the National Marine Fisheries Service.         | None. Project would not affect marine mammals administered by National Marine Fisheries Service. |
| National Marine Fisheries Service | Magnuson-Stevens Fishery Conservation and Management Act- Established guidelines to assist the Regional Fishery Management Councils and the Secretary of Commerce in the description and identification of Essential Fish Habitat in fishery management plans, the identification of adverse effects to Essential Fish Habitat, and the identification of actions required to conserve and enhance Essential Fish Habitat. The regulations detail procedures the Secretary other federal agencies, and the Councils will use to coordinate, consult, or provide recommendations on federal and state actions that may adversely affect Essential Fish Habitat. | If Essential Fish Habitat administered by National Marine Fisheries Service may potentially be affected by project activities, the applicant shall consult with the National Marine Fisheries Service. | None. Project would affect Essential Fish Habitat.                                               |

## 2.2 Studies Required

### 2.2.1 Literature Search

The following existing information was reviewed as part of the environmental review process:

- United States Geologic Service 7.5-minute topographic maps (Caldor, Tamarack, Caples Lake, Markleeville, Peddler Hill, Freel Peak and Woodfords)
- Natural Resources Conservation Service Web Soil Survey:  
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
- “Hydric Soils of the United States” list  
(<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>)
- National Wetland Inventory (<http://www.fws.gov/wetlands/Data/Mapper.html>)
- California Natural Diversity Database Record Searches and Geographical Information Systems Data – Referencing the Caldor, Tamarack, Caples Lake, Markleeville, Peddler Hill, Freel Peak and Woodfords 7.5-minute United States Geologic Service quadrangle, downloaded on September 14, 2021 (**Attachment 1**).
- United States Fish and Wildlife Information for Planning and Consultation (IPaC) list, Provided by United States Fish and Wildlife Service on September 14, 2021 (**Attachment 1**).
- National Oceanic and Atmospheric Administration – National Marine Fisheries List, Referencing the Caldor, Tamarack, Caples Lake, Markleeville, Peddler Hill, Freel Peak and Woodfords 7.5-minute United States Geologic Service quadrangle, downloaded on September 14, 2021 (**Attachment 1**).
- United States Forest Service Region 4 (Humboldt-Toiyabe National Forest) and Region 5 (El Dorado and Tahoe National Forests) Sensitive Species Lists
- California Department of Fish and Wildlife Biogeographical Observation Information System Database
- California Department of Fish and Wildlife Special Animals List
- Google Earth Imagery
- Environmental Systems Research Institute, Inc. Imagery
- California Native Plant Society Inventory record searches referencing the Caldor, Tamarack, Caples Lake, Markleeville, Peddler Hill, Freel Peak and Woodfords 7.5-minute United States Geologic Survey quadrangle, downloaded on September 14, 2021
- National Marine Fisheries Service Essential Fish Habitat Mapper, Accessed on September 14, 2021 (<http://www.habitat.noaa.gov/protection/efh/efhmapper/>).
- California Invasive Plant Council’s “Invasive Plant Inventory (<https://www.cal-ipc.org/plants/inventory/>)”.



### 2.2.2 Survey Methods

#### Waters of the United States - Wetlands

Field work was conducted in January 2021 to preliminarily identify areas potentially qualifying as wetland waters of the United States within the project Environmental Study Limits according to the methodology set forth in the *1987 Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0) 2010* from the United States Army Corps of Engineers. A positive determination for wetlands would require the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Hydric soils would be determined by the methodology set forth in the *Field Indicators of Hydric Soils in the United States, Version 6.0* (2006) from the United States Department of Agriculture Natural Resource Conservation Service. Preliminary determinations of the jurisdictional status of delineated wetlands was based on 85 Federal Register 22250 (April 21, 2020), discussed below.

Preliminary identification of potentially jurisdictional wetlands was primarily noted in the field on project layouts and aerial photography and later digitized to ArcGIS format. Copies of wetland delineation datasheets are provided in **Attachment 2**.

Locations of drainages or other surface water bodies within the project area were noted on field maps. All water bodies found, including potential wetlands and other special aquatic sites as well as potential "other waters" of the United States (OWUS) were evaluated to determine if they qualified as WUS based upon the definition provided in "Clean Water Rule: Definition of "Waters of the United States"; Final Rule Federal Register, Vol. 80, No. 124, Monday, June 29, 2015":

- Traditional Navigable waters (33 Code of Federal Regulations [CFR] Part 329; List of Navigable Waters of the U.S in California at: [http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/ca\\_waterways.html](http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/ca_waterways.html))
- Interstate waters
- Territorial Seas
- Impoundments of Jurisdictional Waters
- "Tributaries", defined as "waters that are characterized by the presence of physical indicators of flow--bed and banks and ordinary high water mark--and that contribute flow directly or indirectly to a traditional navigable water, an interstate water, or the territorial seas.
- "Adjacent Waters", defined as "bordering, contiguous, or *neighboring*, including waters separated from other "waters of the United States" by constructed dikes or barriers, natural river berms, beach dunes and the like. Further, waters that connect segments of, or are at the head of, a stream or river are "adjacent" to that stream or river. "Adjacent waters" include wetlands, ponds, lakes, oxbows, impoundments, and similar water features.

"Neighboring", for the purposes of determining adjacency is further defined as:

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- 1) Waters located in whole or in part within 100 feet of the ordinary high-water mark of a traditional navigable water, interstate water, the territorial seas, an impoundment of a jurisdictional water, or a tributary, as defined in the rule.
- 2) Waters located in whole or in part in the 100-year floodplain and that are within 1,500 feet of the ordinary high-water mark of a traditional navigable water, interstate water, the territorial seas, an impoundment, or a tributary, as defined in the rule ("floodplain waters").
- 3) Waters located in whole or in part within 1,500 feet of the high tide line of a traditional navigable water or the territorial seas and waters located within 1,500 feet of the ordinary high-water mark of the Great Lakes.

"Case Specific Significant Nexus", waters that are not jurisdictional by rule but are subject to case-specific analysis to determine if a significant nexus exists and the water is a "water of the United States", including:

- 1) Western vernal pools in California.
- 2) Waters within the 100-year floodplain of a traditional navigable water, interstate water, or the territorial seas and waters within 4,000 feet of the high tide line or the ordinary high-water mark of a traditional navigable water, interstate water, the territorial seas, impoundments, or covered tributary.

General characteristics were noted, including the position of the ordinary high-water mark, and the presence or lack of bed and bank, hydrophytic or riparian vegetation, or hydric soils.

The position of the ordinary high-water mark was determined according to the methodology described in the United States Army Corps of Engineers' 2005 Regulatory Guidance Letter ("Ordinary High Water Mark Identification") for perennial stream systems and as described in the United States Army Corps of Engineers' 2014 *"A Guide to Ordinary High Water Mark Delineation for Non-Perennial Streams in the Western Mountain, Valley and Coast Region of the Western United States"* for intermittent or ephemeral streams. Indicators of the position of the ordinary high-water mark, such as a natural scour line impressed on the bank, shelving, changes in the character of soil, changes in vegetation, the presence of plant litter and debris, and water staining on rocks, boulders, and culvert systems within the stream channel, and position of the active floodplain were noted in the field. Areas that lacked criteria for qualification of "waters of the United States" or that lacked indicators of an ordinary high-water mark were determined to be potentially non-jurisdictional.

Preliminary identification of potentially jurisdictional other waters of the United States were primarily noted in the field on project layouts and aerial photography and later digitized to ArcGIS format.

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Waters of the State of California (Non-Federal)

Locations of drainages or other surface water bodies within the project Environmental Study Limits were noted on field maps. For the purposes of providing California Fish and Game Code Section 1600 Lake and Streambed Alteration Agreement and Clean Water Act Section 401 Water Quality Certification notifications, all water bodies found were evaluated to determine if they qualified as waters of the State of California based upon the following criteria:

- All federally jurisdictional wetlands and other waters, as described above in Section 2.2.2 also qualify as waters of the State of California.
- For the purposes of providing a Notification to the California Department of Fish and Wildlife for a Streambed Alteration Agreement under Section 1600-1616 of the California Fish and Game Code, jurisdiction at streams, lakes, and ponds considered as “other waters” of the United States extends beyond the ordinary high-water mark to the top of bank or to the greatest lateral extent of riparian vegetation, whichever is greater. “Top of bank” means a boundary where a majority of normal discharges and channel forming activities takes place. The top of bank boundary will contain the active stream channel, active floodplain, and their associated banks.
- For the purposes of providing a Notification to the California Regional Water Quality Control Board for Certification under Clean Water Act Section 401 or for a Waste Discharge Requirements Permit under the California Porter-Cologne Act, jurisdiction includes Waters of the State of California jurisdiction includes isolated wetlands, wetlands created by modification of another waters of the State, artificial wetlands that meet specific criteria, wetlands lacking vegetation, and wetlands with bare substrates. California Code of Regulations Chapter 23 Section 3831 specifically excludes detention, retention, infiltration or stormwater treatment wetlands, stock ponds, crop irrigation and flooded rice fields as qualifying as waters of the State of California. California Regional Water Quality Control Board jurisdiction at streams, lakes, and ponds considered as “other waters” of the United States was assumed to extend beyond the ordinary high-water mark to the top of bank.

Vegetation and Special-Status Plants

Botanical surveys generally followed the California Department of Fish and Wildlife’s 2018 *“Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Natural Communities”*. Research was conducted prior to field surveys to determine the vegetation communities in the project area and the associated specific plants. This research involved database searches for rare plant and habitat occurrences, review of published and unpublished material, and contact with knowledgeable individuals. Emphasis was placed on the special-status species that may occur, and botanical surveys were conducted in a manner that would locate any special-status or locally significant plants or plant communities that may be present.

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Field surveys were conducted to determine and map the vegetative communities in the project Environmental Study Limits, to provide an inventory of plant species present within Environmental Study Limits, and to determine the presence of special-status plant species or communities. Vegetative communities were classified as stated in **Section 3.1.3** of this document. (Vegetation Communities and Land Uses). Vegetation communities were recorded in the field on aerial photographs of the project site, and later digitized and transferred to a Geographical Information System database.

**Wildlife and Wildlife Habitat**

Research was conducted prior to field surveys to determine the vegetation communities in the project area and their potential as habitat for wildlife species. This research involved database searches for sensitive animal and habitat occurrences, review of published and unpublished material, and contact with knowledgeable individuals. All accessible areas within the project Environmental Study Limits were surveyed for signs or sighting of wildlife species, and each sighting was recorded in field notes or on project aerial photography, or with the use of a Global Positioning System device, and occurrences of special-status wildlife resources were later transferred to a Geographical Information System database. In addition to performing inventory level wildlife surveys, focused survey emphasis was placed on the special-status species that may occur. Field surveys for sensitive wildlife species used resource-agency approved protocol methods where appropriate.

Surveys for aquatic wildlife were conducted using the visual-encounter methodology. The survey was conducted by walking along the entire length of a creek or stream within the Environmental Study Limits while repeatedly scanning for aquatic wildlife with binoculars. Surveyors began by first working along the entire shoreline, then by entering the water if necessary (taking care that no egg masses, root-balls, overhanging banks, and stream-side vegetation would be disturbed), and visually scanning all shoreline areas and all aquatic habitats. Because the survey was intended only to document the presence of sensitive aquatic wildlife, data such as water temperature, pH and conductivity were not collected. The results of aquatic wildlife surveys were documented in the field on aerial photography or with the use of a Global Positioning System device.

Inventory-level field surveys for fisheries resources within potentially fish-bearing waters within the project Environmental Study Limits were not conducted. Information pertaining to the use of the potentially fish-bearing waters within the project Environmental Study Limits and federal Action Area and their tributaries by anadromous salmonids was provided by the California Department of Fish and Wildlife and the National Marine Fisheries Service.

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### **2.3 Personnel and Survey Dates**

The project Environmental Study Limits was surveyed by Caltrans biologists on the following dates (**Table 3**):

**Table 3:  
Survey Dates and Personnel**

| <b>Survey Date</b> | <b>Personnel</b>           | <b>Survey Activities</b>                                                       |
|--------------------|----------------------------|--------------------------------------------------------------------------------|
| July 7, 2021       | Jason Meigs, Andrew Taylor | General biological inventory, preliminary investigation of hydrologic features |
| September 1, 2021  | Jason Meigs, Andrew Taylor | General biological inventory, preliminary investigation of hydrologic features |

### **2.4 Agency Coordination and Professional Contacts**

A United States Fish and Wildlife Service Information for Planning and Consultation List for the project was downloaded from the United States Fish and Wildlife Service on September 14, 2021 (**Attachment 1**).

A National Marine Fisheries Service List referencing the Caldor, Tamarack, Caples Lake, Markleeville, Peddler Hill, Freel Peak and Woodfords 7.5-minute United States Geologic Survey quadrangles was downloaded on September 14, 2021 (**Attachment 1**).

A California Natural Diversity Database list of sensitive species referencing the Caldor, Tamarack, Caples Lake, Markleeville, Peddler Hill, Freel Peak and Woodfords United States Geologic Survey quadrangles was downloaded on September 14, 2021 (**Attachment 1**).

The National Marine Fisheries Service Essential Fish Habitat Mapper (<http://www.habitat.noaa.gov/protection/efh/efhmapper/>) was accessed on September 14, 2021.

### **2.5 Limitations That May Influence Results**

It is assumed that permanent and temporary impacts to sensitive habitats including potential waters of the United States and potential waters of the State of California will be avoided by restricting all auguring, trenching, or other excavation activities to within the edge of shoulder at Locations 5, 7, 10, and 13. No project work is proposed that may affect the intermittent stream adjacent to Location 7.

If this assumption changes, the project will require re-evaluation for potential to affect sensitive natural resources.

### 3. Results: Environmental Setting

#### 3.1 Description of the Existing Physical and Biological Conditions

##### 3.1.1 Study Area – Environmental Study Limits and Federal Action Area

The project Environmental Study Limits encompasses all areas determined by Caltrans Engineering, Construction, and Environmental staff as all areas to be affected directly or indirectly by the project including areas required for the placement and construction of project features, and areas required for the access, operation, storage, and staging of construction equipment and personnel.

The Environmental Study Limits boundaries for the 13 proposed Carson Traffic Management Systems Project locations are depicted in **Figure 2** and in **Attachment 2**. The acreage of each of the Environmental Study Limits for the Carson Traffic Management Systems Project is summarized below (**Table 4**). Because the Environmental Study Limits encompasses all areas expected to be used to conduct construction activities, the Environmental Study Limits may be considered as the proposed project's direct impact area or project "footprint". All field studies described below in **Section 2.2.2** of this document occurred within or directly adjacent to the project Environmental Study Limits.

The "Action Area" for the purposes of Federal Endangered Species Act Section 7 consultation is defined by regulation as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 Code of Federal Regulations Section 402.02). This analysis is not limited to the "footprint" of the action nor is it limited by the federal agency's authority. Rather, it is a biological determination of the *reach of the proposed action on Federal Endangered Species Act-listed species*. The Action Area includes all areas to be affected directly or indirectly by the project, a geographical determination of the reach of the action on the landscape. The Action Area will be considered as the same area for the purposes of federal agency consultation, including for the purposes of Clean Water Act Section 404 permitting, Essential Fish Habitat Consultation under the Magnuson Stevens Fisheries Conservation Act, and Federal Endangered Species Act Section 7 Consultation.

The Action Area for the Carson Traffic Management Systems Project will be considered the same as the project Environmental Study Limits because it represents the potential reach of the federal action, and encompasses areas of potential indirect effects that are beyond the project's proposed construction footprint. The term "Environmental Study Limits" will be used in this document to describe all areas to be affected directly or indirectly by the federal action.

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**Table 4:  
Project Environmental Study Limits Area**

| <b>Location</b> | <b>Environmental Study<br/>Limits Area<br/>(Square Feet)</b> |
|-----------------|--------------------------------------------------------------|
| 1               | 67,978.96                                                    |
| 1 Staging Area  | 12,723.35                                                    |
| 2               | 3,706.55                                                     |
| 3               | 27,108.26                                                    |
| 3 Staging Area  | 4,086.40                                                     |
| 4               | 85,262.46                                                    |
| 5               | 93,284.69                                                    |
| 5 Staging Area  | 3,867.73                                                     |
| 6               | 11,111.21                                                    |
| 7               | 3,856.33                                                     |
| 8               | 25,822.12                                                    |
| 9               | 708,860.98                                                   |
| 10              | 66,462.03                                                    |
| 11              | 57,428.15                                                    |
| 12              | 47,924.80                                                    |
| 12 Staging Area | 4,765.25                                                     |
| 13              | 106,485.00                                                   |
| <b>Total:</b>   | <b>1,330,734.27 square feet<br/>(30.55 acres)</b>            |

### **3.1.2 Physical Conditions**

#### Climate

The proposed Carson Area Traffic management Systems Project is located within the California Sierra Nevada province.

The Carson Valley has dry summers that are warm at the lower elevations and cool at the higher elevations and cold winters during which there are occasional spells of severe cold weather. The average annual precipitation, mostly in the form of snow, ranges from about 7 inches on the valley floor to about 30 inches in the mountains.

In the Lake Tahoe basin, the median number of frost-free days (32 degrees F) ranges from 21 days at Hagan's Meadow to 100 days at Echo Peak. The median number of freeze-free days (-2 degrees C) ranges from 48 days at Hagan's Meadow to 141 days at Tahoe City. In winter, the average temperature is 30.8 degrees F and the average daily minimum temperature is 20.4 degrees. The average seasonal snowfall is 169.3 inches at Tahoe City. In summer, the average temperature is 58.6 degrees and the average daily maximum temperature is 74.6 degrees. The highest recorded temperature, which occurred at Tahoe City on August 15, 1933, is 94 degrees.

#### Topography and Physiography

The proposed Carson Area Traffic management Systems Project is located on the western and eastern slopes of the California Sierra Nevada province. The project areas are dominated by volcanic and granitic mountain ridges and valleys as well as streams that flow in V-shaped canyons. The elevation in the Environmental Study Limits ranges from 4,200 (Location 1) to 7,900 (Location 6) feet above mean sea level.

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Soils

Soil associations in the Carson Area Traffic management Systems Project Environmental Study Limits are derived from volcanic and granitic parent material. A list of soil series and soil series maps of the project areas are provided in **Attachment 3**.

Hydrology

According to the California Interagency Watershed Map of 1999 (updated May 2004, "calw221"), the project location falls within the following watershed units (**Figure 3: Project Area Watershed Units**):

- Upper Mokelumne (HUC-8 180-40-012)
- Upper Cosumnes (HUC-8 180-40-013)
- South Fork American (HUC-8 180-20-129)
- Lake Tahoe Basin (HUC-8 160-50-101)
- Upper Carson (HUC-8 160-50-201)
- Upper Stanislaus (HUC-8 180-40-010)

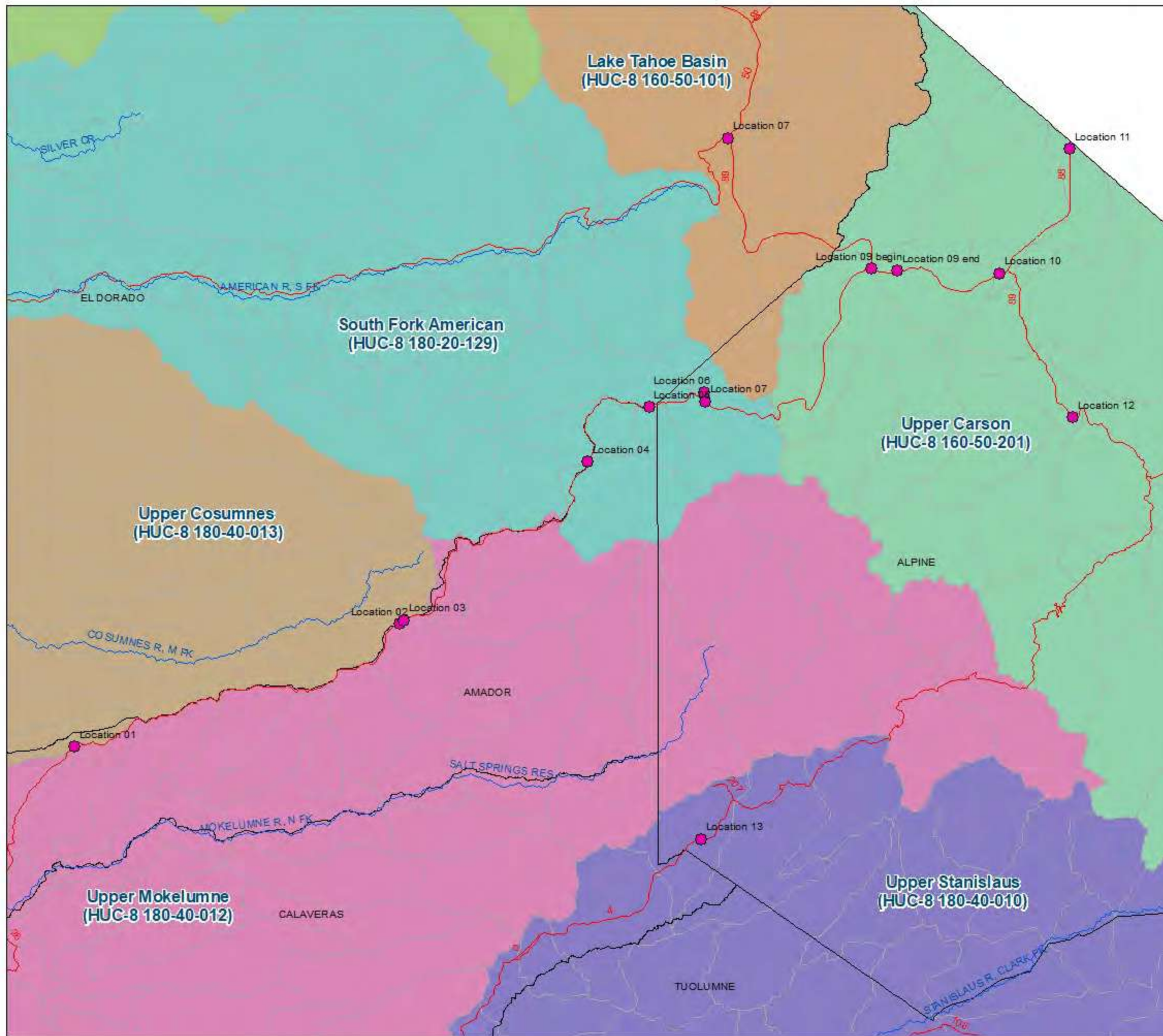
**3.1.3 Biological Conditions**

Vegetation Communities and Land Use

The following vegetation communities were recorded within and adjacent to the project Environmental Study Limits (Mayer and Laudenslayer, Jr. "A Guide to Wildlife Habitats of California". 1988):

*Sierran Mixed Conifer*: The Sierran mixed conifer habitat is an assemblage of conifer and hardwood species that forms a multilayered forest. Five conifers and one hardwood typify the mixed conifer forest white fir, Douglas-fir, ponderosa pine, sugar pine, incense-cedar, and California black oak. White fir tends to be the most ubiquitous species (though most often a minor overstory component) because it tolerates shade and has the ability to survive long periods of suppression in brush fields. Douglas-fir dominates the species mix in the north but is absent south of the Merced River. Ponderosa pine dominates at lower elevations and on south slopes. Jeffrey pine commonly replaces ponderosa pine at high elevations, on cold sites, or on ultramafic soils. Red fir is a minor associate at the highest elevations. Sugar pine is found throughout the mixed conifer type. Black oak is a minor, but widespread, component in mixed conifer stands. Though black oak does best on open sites, it is maintained under adverse conditions such as shade, ridge tops, and south slopes where conifers may regenerate in its shade. Deer-brush, manzanita, chinquapin, tan oak, bitter cherry, squaw-carpet, mountain whitethorn, gooseberry, rose, and mountain misery are common shrub species in the mixed conifer understory.





**Figure 3:**  
**Project Area Watershed Units**  
**California Interagency**  
**Watershed Map of 1999**  
**10-1G020 AMA-ALP-ELD VAR**  
**Carson Area Traffic Management Systems Project**  
**State Highways 4, 88, and 89 in**  
**Alpine, Amador, and El Dorado Counties**

### LEGEND

- Project Locations
- Major Rivers
- State Highways
- California Counties
- Upper Carson Watershed
- Upper Stanislaus Watershed
- Lake Tahoe Basin Watershed
- Upper Mokelumne Watershed
- Upper Cosumnes Watershed
- South Fork American Watershed

Datum: North American Datum 1983  
 Projection: California State Plane, Zone 3  
 Map Prepared on September 17, 2021 By  
 Jason Meigs, Associate Environmental Planner - NS  
 California Department of Transportation, District 10



1:240,000  
 1 inch = 20,000 feet



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*Lodgepole Pine:* Lodgepole pine typically forms open stands of similarly sized specimens in association with few other species and with a sparse understory. Lodgepole pine overwhelmingly dominates the habitat. Occasional associates include aspen and mountain hemlock. The understory may be virtually absent, consisting of scattered shrubs and herbs, or a rich herbaceous layer at meadow margins. Many lodgepole stands are associated with meadow edges and streams, where the understory consists of grasses, forbs, and sedges.

*East Side Pine:* The eastside pine habitat is characterized by short to moderate height (65-115 feet tall) pine trees at maturity. Ponderosa pine is the dominant tree with less representation by Jeffrey pine, lodgepole pine, white fir, incense-cedar, Douglas-fir, and western juniper. Undergrowth varies depending on site conditions, but typically may include one or more of the following shrubs: big sagebrush, antelope bitterbrush, manzanita, ceanothus, rubber rabbitbrush, mountain mahogany, cream bush ocean-spray and mountain snowberry. Prominent herbaceous plants include mule ears, arrow-leaf balsamroot, Idaho fescue, pinegrass, blue-bunch wheatgrass and bottlebrush squirrel-tail.

*Montane Riparian:* The vegetation of montane riparian zones is quite variable and often structurally diverse. Usually, the montane riparian zone occurs as a narrow, often dense grove of broad-leaved, winter deciduous trees up to 100 feet tall with a sparse understory. At high elevations, montane riparian vegetation may not be well developed or may occur in the shrub stage only. In the Sierra Nevada, characteristic species include thin-leaf alder, aspen, black cottonwood, dogwood, wild azalea, and willow.

*Wet Meadow:* Wet Meadows at all elevations generally have a simple structure consisting of a layer of herbaceous plants. Shrub or tree layers are usually absent or very sparse; they may, however, be an important feature of the meadow edge. Species may differ, but several genera are common to Wet Meadows throughout the State. They include *Agrostis sp.*, *Carex sp.*, *Danthonia sp.*, *Juncus sp.*, *Salix sp.*, and *Scirpus sp.* Important grass and grass-like species include thingrass, abrupt-beak sedge, beaked sedge, Nebraska sedge, tufted hairgrass, needle spike-rush, few-flowered spike-rush, common spike-rush, baltic rush, Nevada rush, iris-leaf rush, pullup muhly, and paniced bulrush. Important forbs include Anderson aster, Jeffrey shooting-star, trailing Saint John's wort, hairy pepperwort, primrose monkeyflower, western cowbane, American bistort, cows clover, and small white violet.

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*Pasture:* Pasture vegetation is a mix of perennial grasses and legumes that normally provide 100 percent canopy closure. Height of vegetation varies, according to season and livestock stocking levels, from a few inches to two or more feet on fertile soils before grazing. Old or poorly drained pastures may have patches of weeds in excess of two feet in height. The mix of grasses and legumes varies according to management practices such as seed mixture, fertilization, soil type, irrigation, weed control, and the type of livestock on the pasture. Plant species seeded in pastures also vary with geographic area. Many California farmers include irrigated pasture in their crop rotation system.

Common Wildlife

The project vicinity may be expected to support common migratory birds and wildlife species associated with mid- to high-elevation coniferous forests, meadows, stream zones and pastures. Common animals that may be found in these zones include the dark-eyed junco, mountain chickadee, Steller's jay, hermit thrush, western gray squirrel, Douglas squirrel, mule deer, and American black bear, and golden-mantled ground squirrel, among many others.

Invasive Species

The California Department of Fish and Wildlife's Invasive Species Program considers invasive species as organisms (plants, animals, or microbes) that are not native to an environment, and once introduced, they establish, quickly reproduce and spread, and cause harm to the environment, economy, or human health.

Invasive plant species include species designated as federal noxious weeds by the U.S. Department of Agriculture, species listed by the California Department of Food and Agriculture, and invasive plants identified by the California Invasive Plants Council. Invasive plants displace native species, change ecosystem processes, alter plant community structure, and lower wildlife habitat quality. Road, highway, and related construction projects are some of the principal dispersal pathways for invasive plants and their propagules. These species were assessed as part of the project planning effort to develop measures to avoid or minimize the introduction and/or spread of invasive plant species.

The California department of fish and wildlife invasive species program website was reviewed for invasive animal species known to occur at mid- to high-elevations in the Sierra Nevada range. These species were assessed as part of the project planning effort to develop measures to avoid or minimize the introduction and/or spread of invasive animal species.



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Terrestrial Habitat Connectivity

Habitat connectivity provides paths for movement across the landscape and is important for species to find food, cover and mates. Habitat connectivity can be achieved through the identification and conservation of corridors, specific movement paths. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Individual corridor width may vary depending on the species, type of corridor, and scale of analysis. Some species may use the corridor to move through (passage species) and some species may live in the corridor (corridor dwellers). Barriers to habitat connectivity include roads, development, and habitat conversion. Roads can result in high levels of mortality for some species. Development and habitat conversion can also impede movement across the landscape.

Geographical Information System data from the California Essential Habitat Connectivity Project were queried from the California Department of Fish and Wildlife Biogeographic Information Observation System Database to identify if the Environmental Study Limits or Action Area is located within any areas identified as "Natural Landscape Blocks (large areas greater than 2,000 acres)" that support native biodiversity or "Essential Connectivity Areas (areas essential for ecological connectivity between natural landscape blocks)". Although the Essential Connectivity Areas were mapped based on coarse ecological condition indicators, rather than the needs of particular species, Essential Connectivity Areas are expected to serve the majority of species in each region.

The project Environmental Study Limits do not specifically fall within any areas identified by the California Essential Habitat Connectivity Project as Natural Landscape Blocks or Essential Connectivity Areas although Natural Landscape Blocks and "Natural Lands – Small (less than 2,000 acres in size)" occur adjacent to the Environmental Study Limits at many project locations. The purpose of the Natural Landscape Block map is to focus attention on large areas important to maintaining ecological integrity at the broadest scale. Natural areas excluded from this broad-brush Essential Connectivity Network can therefore not be "written off" as unimportant to connectivity conservation.

The highway system, local roads, and adjacent land uses including recreational development (roads, structures, fences, etc.) represent significant barriers to regional terrestrial wildlife movement for some species. Some existing highway structures including bridges, and culverts, can facilitate terrestrial and aquatic wildlife movement. The project was assessed as part of the project planning effort to determine if the proposed project may result in adverse impacts to terrestrial wildlife habitat connectivity and develop measures to avoid or minimize adverse project effects on terrestrial wildlife habitat connectivity.

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Fish Passage Issues

California Senate Bill 857 requires Caltrans to prepare an annual report to the Legislature describing the status of the Caltrans' progress in locating, assessing, and remediating barriers to fish passage; requires Caltrans to complete assessments of potential barriers to anadromous fish prior to commencing any project using state or federal transportation funds; and requires Caltrans to submit these assessments to the California Department of Fish and Wildlife to be added to the CALFISH database. The bill requires projects to be constructed without presenting barriers to fish passage. In the context of Senate Bill 857, "fish passage" means the ability of an *anadromous* fish to access appropriate habitat at all points in its life cycle, including spawning and rearing.

The project is located beyond the range of anadromous fish species. Although the project does not propose any drainage or in-stream channel work, the project was assessed as part of the project planning effort to determine if the proposed project may result in adverse impacts to non-anadromous fish passage and develop measures to avoid or minimize adverse project effects on non-anadromous fish passage.

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### 3.2 Regional Species and Habitats and Natural Communities of Concern

A list of sensitive plant and animal species and sensitive habitats potentially occurring within the project vicinity was developed based on information compiled from the United States Fish and Wildlife Service, California Department of Fish and Wildlife California Natural Diversity Database (“California Natural Diversity Database” Rarefind, 2021: Valley Springs Geologic Survey quadrangle; see California Natural Diversity Database map **Figure 4 – California Natural Diversity Database Occurrences**), the California Native Plant Society (Electronic Inventory, 2016), and from the current literature. A list of sensitive species and habitats considered as part of this evaluation is included in **Table 5**. Expanded discussions are provided in **Chapter 4** of this document for sensitive species or habitats that have been recorded within the general vicinity of the project Environmental Study Limits and Action Area or for those resources which may be affected by the project.

**Table 5: Sensitive Plant and Animal Species and  
Sensitive Habitats Considered for Environmental Review**

| Scientific Name                                      | Common Name                                           | Status                                | Habitat and Range                                                                                                                                                                            | Potential to Be Affected by Project                                                                                                                      |
|------------------------------------------------------|-------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Habitats</b>                                      |                                                       |                                       |                                                                                                                                                                                              |                                                                                                                                                          |
|                                                      | Essential Fish Habitat – Chinook Salmon               | Magnusson-Stevens Fisheries Act       |                                                                                                                                                                                              | None. Project activities will avoid activities in aquatic habitat.                                                                                       |
|                                                      | Central Valley Drainage Resident Rainbow Trout Stream | California Natural Diversity Database |                                                                                                                                                                                              | None. Project activities will avoid activities in aquatic habitat.                                                                                       |
|                                                      | Sphagnum Bog                                          | California Natural Diversity Database |                                                                                                                                                                                              | None. Project activities will avoid activities in aquatic and wetland habitat.                                                                           |
| <b>Plants</b>                                        |                                                       |                                       |                                                                                                                                                                                              |                                                                                                                                                          |
| <i>Allium tribracteatum</i>                          | three-bracted onion                                   | California Native Plant Society 1B.2  | TUO and CAL Counties. Chaparral, lower montane coniferous forest, upper montane coniferous forest / volcanic; elevation 4,000-9,850 feet. Perennial herb (bulbiferous), blooms April-August. | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Antennaria arcuata</i>                            | Meadow pussy-toes                                     | Forest Service Sensitive              | Blaine County, Idaho; Elko County, Nevada; and Fremont County, Wyoming                                                                                                                       | None. This species does not occur in California.                                                                                                         |
| <i>Asclepias eastwoodiana</i>                        | Eastwood milkweed                                     | Forest Service Sensitive              | Occurs in Nevada                                                                                                                                                                             | None. This species does not occur in California.                                                                                                         |
| <i>Astragalus lentiginosus</i> var. <i>latus</i>     | Broad-pod freckled milkvetch                          | Forest Service Sensitive              | Occurs in Nevada                                                                                                                                                                             | None. This species does not occur in California.                                                                                                         |
| <i>Astragalus robbinsii</i> var. <i>occidentalis</i> | Lamoille Canyon milkvetch                             | Forest Service Sensitive              | Endemic to the Ruby Mountains of Nevada.                                                                                                                                                     | None. This species does not occur in California.                                                                                                         |
| <i>Astragalus uncialis</i>                           | Currant milkvetch                                     | Forest Service Sensitive              | A regional endemic known from only two areas, one in Nevada and one in Utah.                                                                                                                 | None. This species does not occur in California.                                                                                                         |

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Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>                                      | <b>Common Name</b>               | <b>Status</b>                              | <b>Habitat and Range</b>                                                                                                                                                                                                                                                    | <b>Potential to Be Affected by Project</b>                                                                                                                               |
|-------------------------------------------------------------|----------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Boechnera</i><br>(=Arabis)<br><i>falcatoria</i>          | Grouse Creek<br>rockcress        | Forest<br>Service<br>Sensitive             | Endemic to Utah                                                                                                                                                                                                                                                             | None. This species does<br>not occur in California.                                                                                                                      |
| <i>Botrychium</i><br><i>ascendens</i>                       | upswept moonwort                 | California<br>Native Plant<br>Society 2B.3 | BUT, ELD Counties, Lower<br>montane coniferous forest<br>(mesic); elevation 4,900-6,000<br>feet. Perennial herb<br>(rhizomatous), fertile July-August.                                                                                                                      | None. No occurrences<br>recorded within one mile of<br>any project locations.<br>Project activities will not<br>occur in habitat capable of<br>supporting this species.  |
| <i>Botrychium</i><br><i>crenulatum</i>                      | scalloped<br>moonwort            | California<br>Native Plant<br>Society 2B.2 | BUT, COL, LA, MNO,MOD, SBD,<br>THE, and TUL Counties. Bogs<br>and fens, lower montane<br>coniferous forest, meadows and<br>seeps, marshes and swamps<br>(freshwater); elevation 14,900-<br>10,750 feet. Perennial herb<br>(rhizomatous), fertile June-July.                 | None. No occurrences<br>recorded within one mile of<br>any project locations.<br>Project activities will not<br>occur in habitat capable of<br>supporting this species.  |
| <i>Botrychium</i><br><i>minganense</i>                      | Mingan moonwort                  | California<br>Native Plant<br>Society 2B.2 | BUT, FRE, NEV,TEH Counties.<br>Lower montane coniferous forest<br>(mesic); elevation 4,900-6,000<br>feet. Perennial herb<br>(rhizomatous), fertile July-August                                                                                                              | None. No occurrences<br>recorded within one mile of<br>any project locations.<br>Project activities will not<br>occur in habitat capable of<br>supporting this species.. |
| <i>Calochortus</i><br><i>clavatus</i> var. <i>avivus</i>    | Pleasant Valley<br>mariposa-lily | California<br>Native Plant<br>Society 1B.2 | AMA, ELD, MPS Counties. Lower<br>montane coniferous forest.<br>Josephine silt loam and volcanic);<br>elevation 1,000-5,900 feet.<br>Perennial herb (bulbiferous),<br>blooms May-July.                                                                                       | None. No occurrences<br>recorded within one mile of<br>any project locations.<br>Project activities will not<br>occur in habitat capable of<br>supporting this species.. |
| <i>Carex hystericina</i>                                    | porcupine sedge                  | California<br>Native Plant<br>Society 2B.1 | Marshes and swamps<br>(streambanks); elevation 2,000<br>feet. Perennial herb<br>(rhizomatous), blooms June.                                                                                                                                                                 | None. No occurrences<br>recorded within one mile of<br>any project locations.<br>Project activities will not<br>occur in habitat capable of<br>supporting this species.  |
| <i>Carex limosa</i>                                         | mud sedge                        | California<br>Native Plant<br>Society 2B.2 | BUT, ELD, FRE, LAS, PLU, SIS,<br>TUO Counties. Bogs and fens,<br>lower montane coniferous forest,<br>meadows and seeps, marshes<br>and swamps, upper montane<br>coniferous forest; elevation 3,900-<br>12,100 feet. Perennial herb<br>(rhizomatous), blooms June-<br>August | None. No occurrences<br>recorded within one mile of<br>any project locations.<br>Project activities will not<br>occur in habitat capable of<br>supporting this species.  |
| <i>Carex scirpoidea</i><br>ssp.<br><i>pseudoscirpoidea</i>  | western single-<br>spiked sedge  | California<br>Native Plant<br>Society 2B.2 | INY, MNO Counties. Alpine<br>boulder and rock field, meadows<br>and seeps, subalpine coniferous<br>forest (rocky) / mesic, often<br>carbonate; elevation 3,400—<br>12,100 feet. Perennial herb<br>(rhizomatous), blooms July-<br>September.                                 | None. No occurrences<br>recorded within one mile of<br>any project locations.<br>Project activities will not<br>occur in habitat capable of<br>supporting this species.  |
| <i>Chaenactis</i><br><i>douglasii</i> var.<br><i>alpina</i> | alpine dusty<br>maidens          | California<br>Native Plant<br>Society 2B.3 | ALP, ELD, INY, SIS, TUO<br>Counties. Alpine boulder and rock<br>field (granitic); elevation 9,850-<br>13,100 feet. Perennial herb,<br>blooms July-September.                                                                                                                | None. No occurrences<br>recorded within one mile of<br>any project locations.<br>Project activities will not<br>occur in habitat capable of<br>supporting this species.  |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>                           | <b>Common Name</b>            | <b>Status</b>                        | <b>Habitat and Range</b>                                                                                                                                                                                                             | <b>Potential to Be Affected by Project</b>                                                                                                               |
|--------------------------------------------------|-------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Claytonia megarhiza</i>                       | fell-fields claytonia         | California Native Plant Society 2B.3 | ALP, MNO, MOD, MPA, NEV, TUO Counties. Alpine boulder and rock field, subalpine coniferous forest (rocky or gravelly); elevation 8,530-10,800 feet. Perennial herb, blooms July-August.                                              | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Crepis runcinata</i>                          | fiddleleaf hawkbeard          | California Native Plant Society 2B.2 | INY, LAS, MNO, NEV Counties. Mojavean desert scrub, pinyon and juniper woodland / mesic, alkaline; elevation 4,100-4,750 feet. Perennial herb, blooms May-July.                                                                      | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Cryptantha crymophila</i>                     | subalpine cryptantha          | California Native Plant Society 1B.3 | ALP, MNO, TUO Counties. Subalpine coniferous forest (volcanic, rocky); elevation 8,500-10,500 feet. Perennial herb, blooms July-August.                                                                                              | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Diplacus pulchellus</i>                       | yellow-lip pansy monkeyflower | California Native Plant Society 1B.2 | Cal, MPA, TUO Counties. Lower montane coniferous forest, meadows and seeps / vernally mesic; elevation 1,950-6,550 feet. Annual herb, blooms May-July.                                                                               | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Draba asterophora</i> var. <i>asterophora</i> | Tahoe draba                   | California Native Plant Society 1B.2 | ALP, ELD, MNO, TUO Counties. Alpine boulder and rock field, subalpine coniferous forest; elevation 8,200-11,500 feet. Perennial herb, blooms July-August.                                                                            | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Draba pennellii</i>                           | Pennel Draba                  | Forest Service Sensitive             | Known from White Pine County in east-central Nevada.                                                                                                                                                                                 | None. This species does not occur in California.                                                                                                         |
| <i>Elymus scribneri</i>                          | Scribner's wheat grass        | California Native Plant Society 2B.3 | MNO, NEV Counties. Alpine boulder and rock field; elevation 9,500-13,780 feet. Perennial herb, blooms July-August.                                                                                                                   | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Epilobium howellii</i>                        | subalpine fireweed            | California Native Plant Society 4.3  | FRE, MNO, SIE Counties. Meadows and seeps, subalpine coniferous forest / mesic; elevation 6,550-8,850 feet. Perennial herb (stoloniferous), blooms July-August                                                                       | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Epilobium palustre</i>                        | marsh willowherb              | California Native Plant Society 2B.3 | ELD and PLU Counties. Bogs and fens, meadows and seeps (mesic); elevation 7,200 feet. Perennial herb (rhizomatous), blooms July-August. Known in California only from Grass Lake (El Dorado County) and Willow Lake (Plumas County). | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Erigeron cavernensis</i>                      | Snake Mountain daisy          | Forest Service Sensitive             | Endemic to Nevada                                                                                                                                                                                                                    | None. This species does not occur in California.                                                                                                         |
| <i>Eriogonum douglasii</i> var. <i>elkoense</i>  | Sunflower Flat buckwheat      | Forest Service Sensitive             | Known only from the Sunflower Flat area northeast of Wild Horse State Park in northwestern Elko County, Nevada..                                                                                                                     | None. This species does not occur in California.                                                                                                         |



**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>                           | <b>Common Name</b>         | <b>Status</b>                        | <b>Habitat and Range</b>                                                                                                                                       | <b>Potential to Be Affected by Project</b>                                                                                                               |
|--------------------------------------------------|----------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Eriogonum luteolum</i> var. <i>saltuarium</i> | Jack's wild buckwheat      | California Native Plant Society 1B.2 | ALP and TUO Counties. Grows on granitic sand, elevation 5,570-7,870 feet. Perennial, blooms July-September                                                     | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Erythranthe carsonensis</i>                   | Carson Valley monkeyflower | California Native Plant Society 1B.1 | ALP County. Coarse granite soils in sagebrush/bitterbrush scrub, elevation 4,600-5,180 feet. Annual, blooms April- June.                                       | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Helodium blandowii</i>                        | Blandow's bog moss         | California Native Plant Society 2B.3 | Meadows and seeps, subalpine coniferous forest / damp soil; elevation 6,550-8,850 feet.. Moss                                                                  | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Jamesia tetrapetala</i>                       | Basin Jamesia              | Forest Service Sensitive             | Known from the Grant, Highland, and Snake ranges in eastern Nevada and the House Range in western Utah.                                                        | None. This species does not occur in California.                                                                                                         |
| <i>Lathyrus grimesii</i>                         | Grimes pea                 | Forest Service Sensitive             | Endemic to Nevada                                                                                                                                              | None. This species does not occur in California.                                                                                                         |
| <i>Lewisia maguirei</i>                          | Maguire Lewisia            | Forest Service Sensitive             | Endemic to Nye County, Nevada                                                                                                                                  | None. This species does not occur in California.                                                                                                         |
| <i>Lomatium stebbinsii</i>                       | Stebbins' lomatium         | California Native Plant Society 1B.1 | AM, CAL, TUO Counties. Chaparral, lower montane coniferous forest / gravelly, volcanic clay; elevation 4,100-6,400 feet. Perennial herb, blooms March-May.     | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Meesia triquetra</i>                          | three-ranked hump moss     | California Native Plant Society 4.2  | BUT, ELD, FRE, HUM, PLU, SIS, TUL Counties. Bogs and fens, meadows and seeps, upper montane coniferous forest (mesic) / soil; elevation 4,250-8,200 feet. Moss | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Peltigera gowardii</i>                        | western waterfan lichen    | California Native Plant Society 4.2  | Along Sierra Nevada Crest in California. Grows at or below water level in clear, permanent, unshaded alpine or subalpine streams. Lichen.                      | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Penstemon moriahensis</i>                     | Mount Moriah penstemon     | Forest Service Sensitive             | Known from White Pine County, Nevada.                                                                                                                          | None. This species does not occur in California.                                                                                                         |
| <i>Penstemon pudicus</i>                         | Bashful penstemon          | Forest Service Sensitive             | Endemic to Kawich Range, Nye County, Nevada                                                                                                                    | None. This species does not occur in California.                                                                                                         |
| <i>Penstemon rhizomatosus</i>                    | Rhizome beardtongue        | Forest Service Sensitive             | Endemic to Schell Creek Range of White Pine County, Nevada                                                                                                     | None. This species does not occur in California.                                                                                                         |
| <i>Phacelia minutissima</i>                      | Small-flower Phacelia      | Forest Service Sensitive             | Washington,, Oregon, Idaho, Nevada                                                                                                                             | None. This species does not occur in California.                                                                                                         |
| <i>Poa abbreviata</i> ssp. <i>marshii</i>        | Marsh's bluegrass          | Forest Service Sensitive             | Alpine habitats. Known sites widely scattered in eastern California, eastern Nevada, and Idaho.                                                                | None. Project activities will not occur in habitat capable of supporting this species.                                                                   |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>                                | <b>Common Name</b>          | <b>Status</b>                        | <b>Habitat and Range</b>                                                                                                                                                            | <b>Potential to Be Affected by Project</b>                                                                                                               |
|-------------------------------------------------------|-----------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Pinus albicaulis</i>                               | whitebark pine              | Federal Candidate                    | Whitebark pine communities occur at tree line in the Sierra Nevada and Cascade Range.                                                                                               | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Potamogeton praelongus</i>                         | white-stemmed pondweed      | California Native Plant Society 2B.3 | LAS, PLU, SHA, SIE Counties. Marshes and swamps (deep water, lakes); elevation 5,900-9,850 feet. Perennial herb (rhizomatous, aquatic), blooms July-August.                         | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Potamogeton robbinsii</i>                          | Robbins' pondweed           | California Native Plant Society 2B.3 | ALP, INY, LAS, MAAD, NEV, SIE, SIS, TUO Counties. Marshes and swamps (deep water, lakes); elevation 5,200-10,800 feet. Perennial herb (rhizomatous, aquatic), blooms July-August    | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Potentilla johnstonii</i>                          | Sagebrush cinquefoil        | Forest Service Sensitive             | Quinn Canyon Range, Nye County Nevada.                                                                                                                                              | None. This species does not occur in California.                                                                                                         |
| <i>Primula capillaris</i>                             | Ruby Mountain primrose      | Forest Service Sensitive             | Ruby Mountains, Elko County, Nevada.                                                                                                                                                | None. This species does not occur in California.                                                                                                         |
| <i>Primula cusickiana</i> var. <i>nevadensis</i>      | Nevada primrose             | Forest Service Sensitive             | Great basin habitats in Oregon, Nevada, Idaho, Utah.                                                                                                                                | None. This species does not occur in California.                                                                                                         |
| <i>Schoenoplectus subterminalis</i>                   | water bulrush               | California Native Plant Society 2B.3 | BUT, DN, ELD, HUM, PLU, SHA, TEH, Counties. Bogs and fens, marshes and swamps (montane lake margins); elevation 2,450-7,380 feet. Perennial herb (rhizomatous), blooms July-August. | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Utricularia ochroleuca</i>                         | cream-flowered bladderwort  | California Native Plant Society 2B.2 | Meadows and seeps (mesic), marshes and swamps (lake margins); elevation 4,700-5,000 feet. Perennial herb (stoloniferous), blooms June-July.                                         | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |
| <i>Silene nachlingerae</i>                            | Nachlinger Silene           | Forest Service Sensitive             | Alpine limestone ridges and slopes. Nevada and Utah.                                                                                                                                | None. This species does not occur in California.                                                                                                         |
| <i>Sphaeralcea caespitosa</i> var. <i>williamsiae</i> | Railroad Valley globemallow | Forest Service Sensitive             | Nye County, Nevada.                                                                                                                                                                 | None. This species does not occur in California.                                                                                                         |
| <i>Trifolium andinum</i> var. <i>podocephalum</i>     | Currant Summit clover       | Forest Service Sensitive             | White Pine Range in northeastern Nye County and the Ely Range in northwestern Lincoln County, Nevada.                                                                               | None. This species does not occur in California.                                                                                                         |
| <i>Trifolium leibergii</i>                            | Leiberg's clover            | Forest Service Sensitive             | Volcanic soils, Oregon and Nevada.                                                                                                                                                  | None. This species does not occur in California.                                                                                                         |
| <i>Viola lithion</i>                                  | Lithion violet              | Forest Service Sensitive             | White Pine Range in Nevada and the Pilot Range straddling the Nevada-Utah border.                                                                                                   | None. This species does not occur in California.                                                                                                         |
| <i>Viola purpurea</i> ssp. <i>aurea</i>               | golden violet               | California Native Plant Society 2B.2 | KRN, MNO, SBD, SD, SIE Counties. Great Basin scrub, pinyon and juniper woodland / sandy; elevation 3,280-5,900 feet. Perennial herb, blooms April-June.                             | None. No occurrences recorded within one mile of any project locations. Project activities will not occur in habitat capable of supporting this species. |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>              | <b>Common Name</b>         | <b>Status</b>                                        | <b>Habitat and Range</b>                                                                                                                                                                                                                                         | <b>Potential to Be Affected by Project</b>                                                                                                                                  |
|-------------------------------------|----------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Invertebrates</b>                |                            |                                                      |                                                                                                                                                                                                                                                                  |                                                                                                                                                                             |
| <i>Bombus morrisoni</i>             | Morrison bumble bee        | California Natural Diversity Database                | From the Sierra-Cascade ranges eastward across the intermountain west. Food plant genera include Cirsium, Cleome, Helianthus, Lupinus, Chrysothamnus, and Melilotus.                                                                                             |                                                                                                                                                                             |
| <i>Bombus occidentalis</i>          | western bumble bee         | California Candidate, Forest Service Sensitive       | Once common and widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.                                                                                                                                           |                                                                                                                                                                             |
| <i>Desmona bethula</i>              | amphibious caddisfly       | California Natural Diversity Database                | Mostly small, first order streams in open, wet meadows. Also found in beaver ponds and second order streams.                                                                                                                                                     | None. Project activities will not occur in aquatic habitat capable of supporting this species.                                                                              |
| <i>Euphydryas editha monoensis</i>  | Mono checkerspot butterfly | California Natural Diversity Database                | This species occurs along the eastern slope of the Sierra Nevada from Bishop, California to Washoe Valley, Nevada. Pinon-juniper woodland, meadows, mountain slopes, riparian corridors, relatively wet meadows and pine forests from 1600-2100 m. in elevation. |                                                                                                                                                                             |
| <i>Speyeria nokomis carsonensis</i> | Carson Valley silverspot   | California Natural Diversity Database                | Wet meadows along the eastern base of the Carson Range from southern Washoe Co., Nevada to northern Alpine Co., California.                                                                                                                                      |                                                                                                                                                                             |
| <b>Fish</b>                         |                            |                                                      |                                                                                                                                                                                                                                                                  |                                                                                                                                                                             |
| <i>Catostomus platyrhynchus</i>     | mountain sucker            | California Special Concern                           | Restricted to the Lahontan drainage system. Generally occupy pool-like habitats. Abundance greatest in areas with dense cover.                                                                                                                                   | None. Project activities will not occur in aquatic habitat capable of supporting this species.                                                                              |
| <i>Entosphenus tridentatus</i>      | Pacific lamprey            | Forest Service Sensitive                             | North Pacific: Bering Sea coasts of Asia and Alaska southward to the Yuhutu River, Hokkaido, northern Japan and Punta Canoas, central Baja California, Mexico.                                                                                                   | None. Project activities will not occur in aquatic habitat capable of supporting this species                                                                               |
| <i>Hypomesus transpacificus</i>     | Delta smelt                | Federal Threatened                                   | Sacramento-San Joaquin delta. Seasonally in Suisun bay, Carquinez strait and San Pablo bay. Seldom found at salinities > 10 parts per thousand. Most often at salinities < 2 parts per thousand.                                                                 | None. Project Environmental Study Limits are outside of the range of this species. Project activities will not occur in aquatic habitat capable of supporting this species. |
| <i>Gilia bicolor pectinifer</i>     | Lahontan tui chub          | Forest Service Sensitive                             | Lake Tahoe and Pyramid Lake, Nevada, which are connected to each other by the Truckee River and in nearby Walker Lake, Nevada.                                                                                                                                   | None. Project activities will not occur in aquatic habitat capable of supporting this species                                                                               |
| <i>Mylopharodon conocephalus</i>    | hardhead                   | Forest Service Sensitive, California Special Concern | Sacramento-San Joaquin and Russian River drainages in California.                                                                                                                                                                                                | None. Project activities will not occur in aquatic habitat capable of supporting this species                                                                               |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>                    | <b>Common Name</b>                                     | <b>Status</b>                                  | <b>Habitat and Range</b>                                                                                                                                                                                                                                                                                                                                                                                | <b>Potential to Be Affected by Project</b>                                                                                                                                  |
|-------------------------------------------|--------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Oncorhynchus clarkii henshawi</i>      | Lahontan cutthroat trout                               | Federal Threatened                             | Historically in all accessible cold waters of the Lahontan Basin in a wide variety of water temps and conditions. Cannot tolerate presence of other salmonids. Requires gravel riffles in streams for spawning.                                                                                                                                                                                         | None. Project activities will not occur in aquatic habitat capable of supporting this species.                                                                              |
| <i>Oncorhynchus clarkii utah</i>          | Bonneville cutthroat trout                             | Forest Service Sensitive                       | Native to tributaries of the Great Salt Lake and Sevier Lake. Most of the fish's current and historic range is in Utah, but they are also found in Idaho, Wyoming, and Nevada.                                                                                                                                                                                                                          | None. Species does not occur in California.                                                                                                                                 |
| <i>Oncorhynchus mykiss irideus</i>        | steelhead - Central Valley Distinct Population Segment | Federal Threatened, California Special Concern | Populations in the Sacramento and San Joaquin rivers and their tributaries.                                                                                                                                                                                                                                                                                                                             | None. Project Environmental Study Limits are outside of the range of this species. Project activities will not occur in aquatic habitat capable of supporting this species. |
| <i>Prosopium williamsoni</i>              | mountain whitefish                                     | California Special Concern                     | Mountain streams and lakes, favoring clear cold water and large deep pools. current range in California includes the Lower, Little, and Upper Truckee, East Fork Carson, and East and West Walker river drainages on the east side of the Sierra Nevada, and perhaps the West Fork Carson River. They can also be found in natural lakes, including Tahoe, Independence, Cascade, and Fallen Leaf lakes | None. Project activities will not occur in aquatic habitat capable of supporting this species.                                                                              |
| <i>Salvelinus confluentus</i>             | Columbia river bull trout                              | Federal Threatened, Forest Service Sensitive   | Cold, clear waters of the high mountains and coastal rivers of northwestern North America, including Yukon, British Columbia, Washington, Oregon, Idaho, and western Montana, as well as the Jarbidge River of northern Nevada. The historical range of bull trout also included northern California, but they are likely extirpated                                                                    | None. Species does not occur in California.                                                                                                                                 |
| <b>Amphibians</b>                         |                                                        |                                                |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                             |
| <i>Ambystoma macrodactylum sigillatum</i> | southern long-toed salamander                          | California Special Concern                     | High elevation meadows and lakes in the Sierra Nevada, Cascade, and Klamath mountains. Aquatic larvae occur in ponds and lakes. Outside of breeding season adults are terrestrial and associated with underground burrows of mammals and moist areas under logs and rocks.                                                                                                                              | None. Project activities will not occur in aquatic or adjacent upland habitat capable of supporting this species.                                                           |
| <i>Anyraxus canorus</i>                   | Yosemite toad                                          | Federal Threatened, Forest Service Sensitive   | Vicinity of wet meadows in central High Sierra, 6,400 to 11,300 feet in elevation. Primarily montane wet meadows; also in seasonal ponds associated with lodgepole pine and subalpine conifer forest.                                                                                                                                                                                                   | None. Project activities will not occur in aquatic or adjacent upland habitat capable of supporting this species.                                                           |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>           | <b>Common Name</b>               | <b>Status</b>                                                               | <b>Habitat and Range</b>                                                                                                                                                                                                          | <b>Potential to Be Affected by Project</b>                                                                                                                                                      |
|----------------------------------|----------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Rana boylei</i>               | foothill yellow-legged frog      | California Endangered, California Special Concern, Forest Service Sensitive | Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.                           | None. Project activities will not occur in aquatic or adjacent upland habitat capable of supporting this species.                                                                               |
| <i>Rana draytonii</i>            |                                  | Federal Threatened, California Special Concern                              | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Must have access to estivation habitat. | None. Project Environmental Study Limits are outside of the range of this species. Project activities will not occur in aquatic or adjacent upland habitat capable of supporting this species.  |
| <i>Rana lutiventris</i>          | Columbia spotted frog            | Forest Service Sensitive                                                    | Lakes, ponds, slow-moving streams and marshes. Alaska and parts of British Columbia to Washington, Idaho, and parts of Wyoming, Nevada, and Utah.                                                                                 | None. Species does not occur in California.                                                                                                                                                     |
| <i>Rana sierrae</i>              | Sierra Nevada yellow-legged frog | Federal Endangered, California Threatened                                   | Always encountered within a few feet of water. Tadpoles may require 2 - 4 years to complete their aquatic development.                                                                                                            | None. Project activities will not occur in aquatic or adjacent upland habitat capable of supporting this species.                                                                               |
| <b>Reptiles</b>                  |                                  |                                                                             |                                                                                                                                                                                                                                   |                                                                                                                                                                                                 |
| <i>Emmys marmorata</i>           | Western pond turtle              | California Special Concern, Forest Service Sensitive                        |                                                                                                                                                                                                                                   | None. Project Environmental Study Limits are outside of the range of this species. Project activities will not occur in aquatic or adjacent upland habitat capable of supporting this species.  |
| <b>Birds</b>                     |                                  |                                                                             |                                                                                                                                                                                                                                   |                                                                                                                                                                                                 |
| <i>Accipiter gentilis</i>        | northern goshawk                 | California Special Concern, Forest Service Sensitive                        | Within, and in vicinity of, coniferous forest. Uses old nests and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.                 | None. Project will not result in the loss of mature trees capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors.    |
| <i>Centrocercus urophasianus</i> | Greater sage grouse              | Forest Service Sensitive                                                    | Sagebrush country in the western United States and southern Alberta and Saskatchewan, Canada                                                                                                                                      | None. Project will not result in impacts to sagebrush habitat capable of supporting this species. Project will adhere to avoidance measures for nesting migratory birds and raptors.            |
| <i>Coccyzus americanus</i>       | Western yellow-billed cuckoo     | Federal Threatened, Forest Service Sensitive                                | Dense riparian thickets.                                                                                                                                                                                                          | None. Project will not result in impacts to riparian habitat capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors. |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>          | <b>Common Name</b>      | <b>Status</b>                                        | <b>Habitat and Range</b>                                                                                                                                                                        | <b>Potential to Be Affected by Project</b>                                                                                                                                                           |
|---------------------------------|-------------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Cypseloides niger</i>        | black swift             | California Special Concern                           | Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.                                                              | None. Project will not result in the disturbance of cliff habitat capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors. |
| <i>Emoidonax trallii</i>        | Willow flycatcher       | Federal Endangered, Forest Service Sensitive         | Deciduous thickets, especially willows and often near water.                                                                                                                                    | None. Project will not result in impacts to riparian habitat capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors.      |
| <i>Falco peregrinus</i>         | Peregrine falcon        | California Fully Protected, Forest Service Sensitive | Nests in a scrape, normally on cliff edges.                                                                                                                                                     | None. Project will not result in impacts to cliff habitat capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors.         |
| <i>Haliaeetus leucocephalus</i> | Bald eagle              | Forest Service Sensitive                             | Requires old-growth and mature stands of coniferous or hardwood trees for perching, roosting, and nesting.                                                                                      | None. Project will not result in impacts to mature trees capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors.          |
| <i>Oreortyx pictus</i>          | Mountain quail          | Forest Service Sensitive                             | Nests in a simple scrape concealed in vegetation, often at the base of a tree or shrub, usually close to water.                                                                                 | None. Project will not result in impacts to habitat capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors.               |
| <i>Otus flammueolus</i>         | Flammulated owl         | Forest Service Sensitive                             | Montane forests. Nests in tree cavities.                                                                                                                                                        | None. Project will not result in impacts to habitat capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors.               |
| <i>Picoides arcticus</i>        | black-backed woodpecker | California Natural Diversity Database                | Coniferous forests in the Sierra Nevada and Cascades to the Siskiyou Mountains. Recently burned coniferous forest, areas with dense standing dead trees, and less commonly in unburned forests. | None. Project will not result in the loss of mature trees capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors.         |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>                      | <b>Common Name</b>            | <b>Status</b>                         | <b>Habitat and Range</b>                                                                                                                                                                                                                        | <b>Potential to Be Affected by Project</b>                                                                                                                                                   |
|---------------------------------------------|-------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Picoides tridactylus</i>                 | Three toed woodpecker         | Forest Service Sensitive              | Coniferous forests. Nests in a cavity in a dead conifer or sometimes a live tree or pole.                                                                                                                                                       | None. Project will not result in the loss of mature trees capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors. |
| <i>Strix nebulosa</i>                       | great gray owl                | California Endangered                 | Resident of mixed conifer or red fir forest habitat, in or on edge of meadows. Requires large diameter snags in a forest with high canopy closure, which provide a cool sub-canopy microclimate.                                                | None. Project will not result in the loss of mature trees capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors. |
| <i>Strix occidentalis occidentalis</i>      | California spotted owl        | Forest Service Sensitive              | Forests with high canopy cover, with a multi-layered canopy, old decadent trees, a high number of large trees, and coarse downed woody debris. Nests are most often cavities, but spotted owls can also use broken top trees or platform nests. | None. Project will not result in impacts to mature trees capable of supporting nesting for this species. Project will adhere to avoidance measures for nesting migratory birds and raptors.  |
| <i>Tympanuchus phasianellus columbianus</i> | Columbia sharp tailed grouse  | Forest Service Sensitive              | Sagebrush-bunchgrass prairies, meadow-steppe, mountain shrub, and riparian zones. Nests under a grass clump or shrub.                                                                                                                           | None. Project will not result in impacts to sagebrush habitat capable of supporting nesting for this species.                                                                                |
|                                             | nesting migratory birds       | Migratory Bird Treaty Act             |                                                                                                                                                                                                                                                 | None. Project will adhere to avoidance measures for nesting migratory birds and raptors.                                                                                                     |
| <b>Mammals</b>                              |                               |                                       |                                                                                                                                                                                                                                                 |                                                                                                                                                                                              |
| <i>Aplodontia rufa californica</i>          | Sierra Nevada mountain beaver | California Special Concern            | Dense growth of small deciduous trees and shrubs, wet soil, and abundance of forbs in the Sierra Nevada and east slope. Needs dense understory for food and cover. Burrows into soft soil. Needs abundant supply of water.                      | None. Project will not affect habitat capable of supporting this species.                                                                                                                    |
| <i>Antrozous pallidus</i>                   | Pallid bat                    | Forest Service Sensitive              | Roosts are most commonly rock crevices but buildings, bridges, live trees and snags                                                                                                                                                             | None. Project will not affect habitat capable of supporting roosting this species.                                                                                                           |
| <i>Brachylagus idahoensis</i>               | Pygmy rabbit                  | Forest Service Sensitive              | Areas on deep soils with tall, dense sagebrush.                                                                                                                                                                                                 | None. Project will not affect habitat capable of supporting this species.                                                                                                                    |
| <i>Corynorhinus townsendii</i>              | Townsend's big eared bat      | Forest Service Sensitive              | Requires large cavities for roosting; these may include abandoned buildings and mines, caves, and basal cavities of trees.                                                                                                                      | None. Project will not affect habitat capable of supporting roosting for this species.                                                                                                       |
| <i>Erethizon dorsatum</i>                   | North American porcupine      | California Natural Diversity Database | Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.                                                                                                    | None. Project will not affect habitat capable of supporting this species.                                                                                                                    |

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>               | <b>Common Name</b>              | <b>Status</b>                                                                  | <b>Habitat and Range</b>                                                                                                                                                                                                                 | <b>Potential to Be Affected by Project</b>                                                   |
|--------------------------------------|---------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <i>Euderma maculatum</i>             | Spotted bat                     | California Special Concern, Forest Service Sensitive                           | Roosts in small cracks in cliffs and stone outcrops                                                                                                                                                                                      | None. Project will not affect habitat capable of supporting roosting for this species.       |
| <i>Gulo gulo</i>                     | California wolverine            | Federal Proposed Threatened, California Threatened, California Fully Protected | Found in the north coast mountains and the Sierra Nevada. Found in a wide variety of high elevation habitats. Needs water source. Uses caves, logs, burrows for cover and den area. Hunts in more open areas. Can travel long distances. | None. Project will not affect habitat capable of supporting this species.                    |
| <i>Lasionycteris noctivagans</i>     | silver-haired bat               | California Natural Diversity Database                                          | Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.                                                                                                              | None. Project will not affect habitat that supports roosting for this species.               |
| <i>Lasiurus cinereus</i>             | hoary bat                       | California Natural Diversity Database                                          | Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.                                                                                                                                              | None. Project will not affect habitat supports roosting for this species.                    |
| <i>Lepus townsendii townsendii</i>   | western white-tailed jackrabbit | California Special Concern                                                     | Sagebrush, subalpine conifer, juniper, alpine dwarf shrub and perennial grassland. Open areas with scattered shrubs and exposed flat-topped hills with open stands of trees, brush and herbaceous understory.                            | None. Project will not affect habitat capable of supporting this species.                    |
| <i>Martes caurina sierrae</i>        | Sierra marten                   | California Natural Diversity Database                                          | Mixed evergreen forests with more than 40% crown closure along Sierra Nevada and Cascade mountains. Needs variety of different-aged stands, particularly old-growth conifers and snags which provide cavities for dens/nests.            | None. Project will not affect habitat capable of supporting this species.                    |
| <i>Myotis thysanodes</i>             | fringed myotis                  | California Natural Diversity Database                                          | Uses caves, mines, buildings or crevices for maternity colonies and roosts.                                                                                                                                                              | None. Project will not affect habitat or structures that supports roosting for this species. |
| <i>Myotis volans</i>                 | long-legged myotis              | California Natural Diversity Database                                          | Trees are important day roosts; caves and mines are night roosts. Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.                                                                     | None. Project will not affect habitat or structures that supports roosting for this species. |
| <i>Ochotona princeps schisticeps</i> | gray-headed pika                | California Natural Diversity Database                                          | Mountainous areas, generally at higher elevations, often above the treeline up to the limit of vegetation. Talus slopes, occasionally on mine tailings. Prefers talus-meadow interface.                                                  | None. Project will not affect habitat capable of supporting this species.                    |



**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Table 5, Continued**

| <b>Scientific Name</b>       | <b>Common Name</b>                          | <b>Status</b>                                                         | <b>Habitat and Range</b>                                                                                                                                                                                                                                                            | <b>Potential to Be Affected by Project</b>                                              |
|------------------------------|---------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <i>Ovis canadensis</i>       | Bighorn sheep                               |                                                                       | The Sierra Nevada bighorn sheep occurs in Tuolumne, Mono, Fresno, Inyo, and Tulare counties in California. They inhabit open upland, montane, and alpine habitats with rocky areas along the eastern slope of the Sierra Nevada from about 4,000 feet to approximately 14,500 feet. | None. Project will not affect habitat capable of supporting this species.               |
| <i>Pekania pennanti</i>      | fisher - West Coast DPS                     | Federal Endangered, California Threatened, California Special Concern | Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning.                                                                                            | None. Project will not affect habitat capable of supporting this species.               |
| <i>Taxidea taxus</i>         | American badger                             | California Special Concern                                            | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Preys on burrowing rodents. Digs burrows.                                                                                                                                    | None. Project will not affect habitat capable of supporting this species.               |
| <i>Vulpes vulpes necator</i> | Sierra Nevada red fox                       | Federal Proposed Threatened, California Threatened                    | Historically found from the Cascades down to the Sierra Nevada. Found in a variety of habitats from wet meadows to forested areas. Use dense vegetation and rocky areas for cover and den sites. Prefer forests interspersed with meadows or alpine fell-fields.                    | None. Project will not affect habitat capable of supporting this species.               |
|                              | Bats - Structures and tree-roosting species | California Special Concern                                            | Structures and mature trees.                                                                                                                                                                                                                                                        | None. Project will not affect habitat capable of supporting roosting for these species. |

**California Endangered:** Endangered under the California Endangered Species Act; **California Threatened:** Threatened under the California Endangered Species Act; **California Candidate:** Candidate for California Endangered Species Act listing; **California Rare:** Not presently threatened with extinction, it is in such small numbers that it may become endangered if its present environment worsens; **California Special Concern:** animals protected under California Environmental Quality Act or the Natural Communities Conservation Planning Act; **California Fully Protected:** Species protected under Fish and Game Code Sections 3511, 4700, 5050 and 5515. **California Fish Species of Special Concern:** Fish species known to spawn in California's inland waters, that are not already listed under either federal or state endangered species acts (or both), are experiencing, or formerly experienced, population declines or range retractions that, if continued, could qualify them for listing as threatened or endangered status, or have naturally small populations exhibiting high susceptibility to risk from stressors that, if realized, could lead to declines that would qualify them for listing as threatened or endangered; **California Natural Diversity Database:** Species that have no formal listing or protection status but appear in the California Natural Diversity Database due to their conservation status ranking. **California Watch List:** "Watch List" ranking by California Department of Fish and Wildlife **Federal Endangered:** Endangered under the Federal Endangered Species Act; **Federal Threatened:** Threatened under the Federal Endangered Species Act; **Federal Proposed Endangered:** Proposed Endangered under the Federal Endangered Species Act; **Federal Proposed Threatened:** Proposed Threatened under the Federal Endangered Species Act; **Federal Experimental:** Experimental non-essential population in accordance with section 10(j) of the Federal Endangered Species Act ([78 Federal Register 79622](#)); **Migratory Bird Treaty Act:** Birds protected under the Migratory Bird Treaty Act. **Magnusson-Stevens Fisheries Act:** Designated "Essential Fish Habitat" Protected under the Magnusson-Stevens Fisheries Management Act, **Forest Service Sensitive:** Forest Service Sensitive

**Rare Plant Ranks - California Native Plant Society List 1B:** California Native Plant Society list of plants rare, threatened or endangered in California **California Native Plant Society List 2:** California native Plant Society list of plants rare, threatened or endangered in California, but more common elsewhere. **California Native Plant Society List 3:** California native Plant Society list of plants about which there is a need for more information- a review list. **CNPS List 4:** California native Plant Society list of plants of limited distribution- a watch list. **Rare Plant Threat Ranks (California Native Plant Society):** **0.1-**Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat); **0.2-**Fairly threatened in California (20-80 percent occurrences threatened / moderate degree and immediacy of threat); **0.3-**Not very threatened in California (<20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known)

## 10-1G020 Carson Area Traffic Management Systems Project Natural Environment Study (Minimal Impacts)

The potential for sensitive biological resources to be affected by the proposed project are defined as follows:

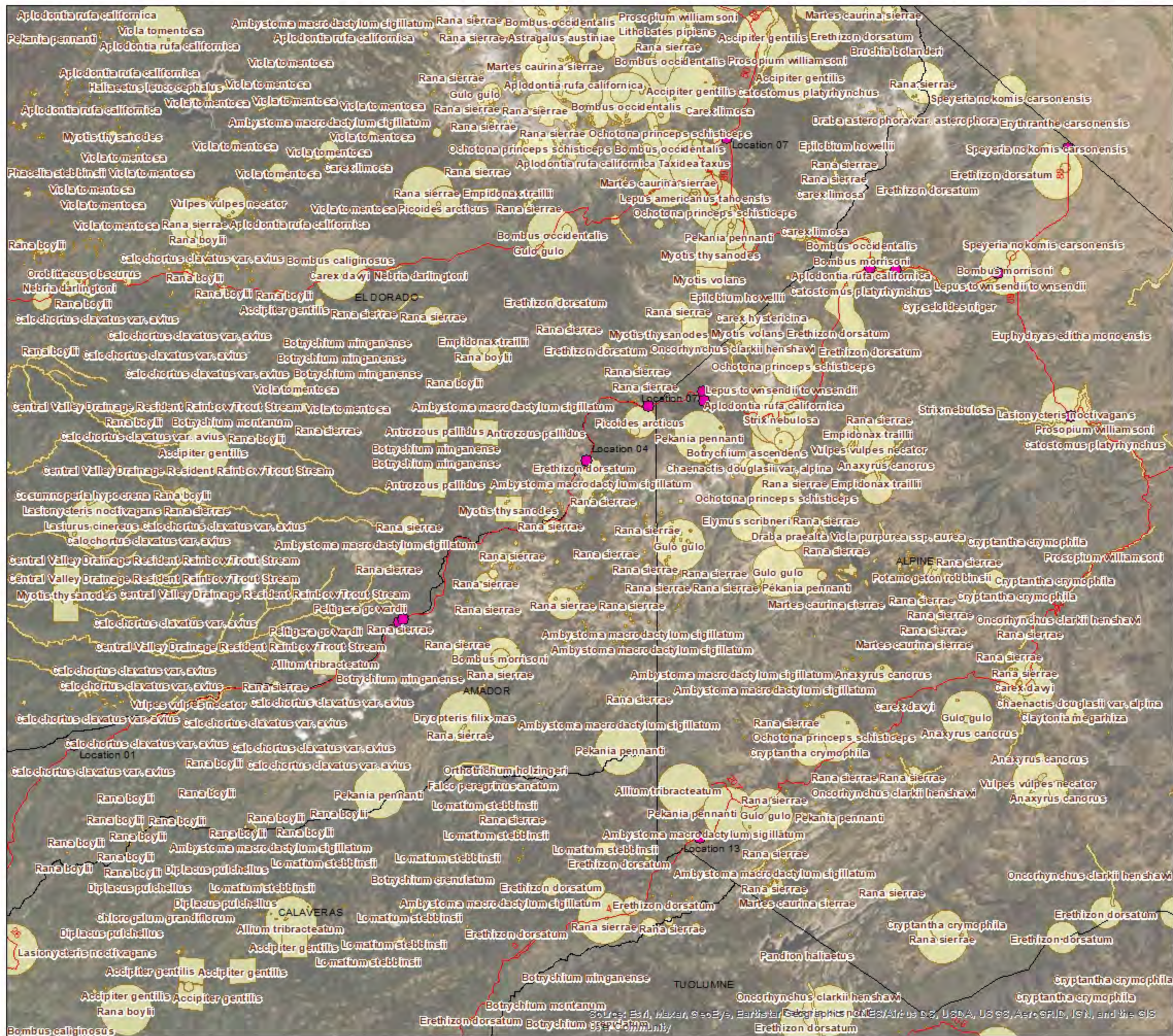
**None** = No possibility of direct or indirect impacts to the species, species habitat, or resource due to one or more of the following: 1) the range of the species or resource is outside of the project Environmental Study Limits; 2) appropriate surveys indicate that the species or resource does not occur within the Environmental Study Limits; 3) there is no appropriate habitat to support the species or resource within or directly adjacent to the Environmental Study Limits; and/or 4) the proposed project activities or activity type would not affect the species, species habitat, or resource.

**Low** = Low possibility of direct or indirect impacts to the species or resource. The range of the species or resource overlaps with the project Environmental Study Limits and potentially suitable habitat may be present or is likely to be present within or directly adjacent to the project Environmental Study Limits. However, the species or resource is not likely to be affected by the proposed project due to one or more of the following: 1) the species or resource is not likely to occur within the Environmental Study Limits due to disturbance or environmental constraints or the species or resource is not otherwise likely to occur but cannot be entirely ruled out as absent from the Environmental Study Limits based on occurrence of nearby records, survey timing, and/or survey accessibility; 2) the proposed project activities or activity type is not expected to affect the species, species habitat, or resource; and/or 3) avoidance measures can be feasibly implemented to prevent impacts to the species, species habitat, or resource during the proposed project activities.

**Moderate** = Moderate possibility of direct or indirect impacts to the species, species habitat, or resource. The range of species or resource overlaps with the project Environmental Study Limits and potentially suitable habitat may be present or is present within or directly adjacent to the project Environmental Study Limits. The species or resource has been observed, recorded, or is otherwise likely to occur within or adjacent to the Environmental Study Limits, or has been recorded nearby in similar habitats as occur within the project Environmental Study Limits. The proposed project activities have some potential to result in impacts to the species, species habitat, or resource due to one or more of the following: 1) the species or resource may occur within the Environmental Study Limits but was not observed because of survey timing, survey accessibility, and/or other limitations; 2) it is unknown if the species will occupy the affected area at the time of construction; 3) avoidance and/or minimization measures can be feasibly implemented to prevent and/or reduce impacts to the species, species habitat, or resource during the proposed project activities; and/or 4) the proposed project activities or activity type is expected to result in *only* indirect impacts to the species, species habitat, or resource.

**High** = The species, species habitat, or resource has been observed or documented within the Environmental Study Limits and is expected to be directly impacted (permanently or temporarily) by proposed project activities. Minimization and compensation measures may be implemented, however, no measures can be feasibly implemented to completely avoid the species or resource during the proposed project activities.





**Figure 4:**  
**California Natural Diversity Database Occurrences**  
**10-1G020 AMA-ALP-ELD VAR**  
**Carson Area Traffic Management Systems Project**  
**State Highways 4, 88, and 89 in**  
**Alpine, Amador, and El Dorado Counties**

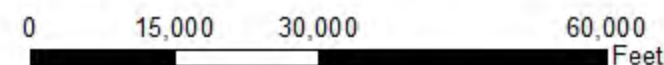


Datum: North American Datum 1983  
 Projection: California State Plane, Zone 3  
 Map Prepared on September 17, 2021 By  
 Jason Meigs, Associate Environmental Planner - NS  
 California Department of Transportation, District 10

Aerial Photography  
 ESRI "World Basemap"  
 This Photo Taken on July 30, 2020



1:240,000  
 1 inch = 20,000 feet





## **4. Results: Biological Resources, Discussion of Impacts, and Mitigation**

### **4.1 Waters of the United States and Waters of the State of California – Wetlands and “Other Waters”**

At the federal level, the Clean Water Act (33 United States Code 1344), is the primary law regulating wetlands and surface waters. Section 404 of the Clean Water Act establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation’s waters would be significantly degraded. The Section 404 permit program is run by the United States Army Corps of Engineers with oversight by the United States Environmental Protection Agency.

At the state level, wetlands and waters are regulated primarily by the California State Water Resources Control Board, the Regional Water Quality Control Boards, and the California Department of Fish and Wildlife. The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements. In compliance with Section 401 of the Clean Water Act, the Regional Water Quality Control Boards also issue water quality certifications for activities which may result in a discharge to waters of the United States. Sections 1600 through 1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify California Department of Fish and Wildlife before beginning construction.

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

#### **4.1.1 Survey Results**

Waters potentially qualifying as waters of the United States and/or waters of the State of California were observed at the following project locations (**Table 6**).

**Table 6  
Potential Waters of the United States and Waters of the State of California  
In Project Environmental Study Limits**

| <b>Project Location</b>                                                                      | <b>Feature Type(s)</b>         | <b>Potential Jurisdiction</b>                                                                                                                                                     | <b>Notes</b>                                                                                                                 |
|----------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Location 5 - Kirkwood Meadow</b>                                                          | Potential Wetland (Wet Meadow) | <ul style="list-style-type: none"> <li>- Clean Water Act Section 404</li> <li>- Clean Water Act Section 401</li> </ul>                                                            | Wet meadow at toe of highway embankment at all quadrants of the Kirkwood Road intersection.                                  |
| <b>Location 7 - East of Caples Lake Station Road (Outside of Environmental Study Limits)</b> | Intermittent Creek             | <ul style="list-style-type: none"> <li>- Clean Water Act Section 404</li> <li>- Clean Water Act Section 401</li> <li>- California Fish and Game Code Section 1600-1616</li> </ul> | Culvert carrying intermittent stream is located 20 feet west of project limits, east of Caples Lake Maintenance Station Road |
| <b>Location 9 - Hope Valley</b>                                                              | Potential Wetland (Wet Meadow) | <ul style="list-style-type: none"> <li>- Clean Water Act Section 404</li> <li>- Clean Water Act Section 401</li> </ul>                                                            | Wet meadow at toe of highway embankment, both sides of the highway, 2 segments, east of highway 89 junction.                 |
| <b>Location 10 - Woodfords</b>                                                               | Potential Wetland (Wet Meadow) | <ul style="list-style-type: none"> <li>- Clean Water Act Section 404</li> <li>- Clean Water Act Section 401</li> </ul>                                                            | Wet meadow at toe of highway embankment, south side of highway.                                                              |
| <b>Location 13 - Bear Valley</b>                                                             | Potential Wetland (Wet Meadow) | <ul style="list-style-type: none"> <li>- Clean Water Act Section 404</li> <li>- Clean Water Act Section 401</li> </ul>                                                            | Wet meadow at toe of highway embankment/shoulder, both sides of highway                                                      |

#### **4.1.2 Project Impacts**

The overall project scope includes the construction of message posts mounted on “cast-in-drilled-hole” foundations, concrete pad foundations for controller cabinets, installation of traffic management elements existing or proposed structures, shallow excavation of the roadbed and roadway and/or shoulder excavation and/or trenching for the placement of hardware and to provide power service.

Electrical service points within existing Caltrans right-of-way (R/W) will be utilized. Trenching for electrical conduit is typically approximately 18 inches in depth and 2 inches wider than the conduit's outside diameter but not exceeding 6 inches in width.

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

As per Caltrans Standard Plans, all electrical conduit runs are installed within 10 feet away from the edge of pavement, including along the edge of pavement or under paved shoulder areas if it is required to avoid sensitive areas.

All potential United States and potential waters of the State of California will be designated as “Environmentally Sensitive Areas” in project plans and specifications and delineated in the field during construction using high-visibility markers (**Figure 5: Proposed Environmentally Sensitive Areas**). Permanent and temporary impacts to potential waters of the United States and potential waters of the State of California will be avoided by restricting all auguring, trenching, or other excavation activities to within the edge of shoulder at Locations 5, 7, 10, and 13. No project work is proposed that may affect the intermittent stream adjacent to Location 7.

The project will not require a Clean Water Act Section 404 permit, a Clean Water Act Section 401 certification, or a California Fish and Game Code Section 1600-1616 Agreement.

**4.1.3 Avoidance and Minimization Efforts/Compensatory Mitigation**

*Environmentally Sensitive Area Designation:* Additional direct and indirect impacts to sensitive biological resources throughout the project area would be avoided or minimized by designating “Environmentally Sensitive Areas”. All areas outside of the proposed construction footprint shall be considered as Environmentally Sensitive Areas, as well as any areas determined by a qualified biologist during project planning or during pre-construction surveys to qualify for Environmentally Sensitive Area designation.

Environmentally Sensitive Area information will be shown on contract plans and discussed in Section 14-1.02 of the Caltrans 2018 Standard Specifications or any Special Provisions in Section 14-1.02. Environmentally Sensitive Area provisions may include, but are not necessarily limited to, the use of temporary orange fencing or other high-visibility marking to identify the proposed limit of work in areas adjacent sensitive resources or to locate and exclude sensitive resources from potential construction impacts. Contractor encroachment into Environmentally Sensitive Areas will be prohibited and immediate work stoppage and notification to the Caltrans Resident Engineer is required if an Environmentally Sensitive Area is breached. Environmentally Sensitive Area provisions will be implemented as a first order of work and remain in place until all construction activities are complete.

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

*Designated Biologist:* A Designated Biologist or biologists shall be on-site during any activities that have the potential to affect sensitive biological resources. The Designated Biologist will monitor regulated species and habitats, ensure that construction activities do not result in the un-intended take of regulated species or disturbances to regulated habitats, will ensure that construction activities comply with any permits, licenses, agreements, or contracts, will immediately notify the Caltrans Resident Engineer or of any take of regulated species, disturbances to regulated habitats, or breaches of Environmentally Sensitive Areas, and would prepare, submit, and sign notifications and reports. A Designated Biologist who performs specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task and regulatory agency approval will be required prior to Caltrans' acceptance of the Designated Biologist.

The Designated Biologists for the proposed project may be "Department-supplied" biologists (Caltrans biologists or consultant biologists under Task Order contracts to Caltrans) or may be "Contractor-Supplied Biologists". If Contractor-Supplied Biologists are used as Designated Biologists, Contractor-Supplied Biologists provisions would be discussed in Section 14-6.03D(1-3) of the Caltrans 2018 Standard Specifications or any Special Provisions in Section 14-6.03D(1-3) that will specify Contractor-Supplied Biologists qualifications, responsibilities, and submittals. Prior to project construction, the Contractor-Supplied Biologists would prepare a "Natural Resources Protection Program" within 7 days of contract approval as per Standard or Special Provisions under Section 14-6.03D(2) of the Caltrans 2018 Standard Specifications. The Natural Resources Protection Program would describe the measures and schedules for protecting biological resources and regulatory compliance and must be approved by Caltrans prior to the onset of construction activities.

*Containment Measures / Construction Site Best Management Practices:* In order contain construction related material and prevent debris and pollutants from entering receiving waters and to reduce the potential for discharge to receiving waters, the Contractor shall follow all applicable guidelines and requirements in Section 13, Water Quality of the Caltrans 2018 Standard Specifications or any Special Provisions in Section 13 regarding water pollution control and general specifications for preventing, controlling, and abating water pollution in streams, waterways, and other bodies of water.

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

The project design team may specify “Best Management Practices” to be utilized during construction in addition to, or in place of, other temporary measures selected by the Contractor. Project specific Best Management Practices will address (among other things):

- Spill Prevention and Control (*Caltrans 2017 BMP Manual WM-4*)
- Material Management (Material Delivery, Use, Storage, and Stockpiles; *Caltrans 2017 BMP Manual WM-1 through WM-4*)
- Waste Management (Solid, Hazardous, Concrete, Sanitary/Septic Wastes, Contaminated Soils; *Caltrans 2017 BMP Manual W-M5 through WM-10*)
- Vehicle and Equipment Cleaning, Fueling, and Maintenance (*Caltrans 2017 BMP Manual NS-8 through NS-10*)
- Paving, Sealing, Sawing, Grooving and Grinding Activities (*Caltrans 2017 BMP Manual NS-3*)
- Concrete Curing and Finishing (*Caltrans 2017 BMP Manual NS-12*)
- Temporary Soil Stabilization (*Caltrans 2017 BMP Manual SS-1 through SS-10*)
- Temporary Sediment Control (*Caltrans 2017 BMP Manual SC-1 through SC-10*)
- Temporary Tracking Control (*Caltrans 2017 BMP Manual TC-1 through TC-3*)
- Temporary Concrete Washouts (*Caltrans 2017 BMP Manual WM-8*)
- Illicit Connection/Illegal Discharge Detection and Reporting (*Caltrans 2017 BMP Manual NS-6*)

Further water pollution control information and guidance for contractors is provided in the following Caltrans Manuals:

- Stormwater Pollution Prevention Plan and Water Pollution Control Program Preparation Manual (Caltrans, 2011)
- Construction Site Best Management Practices Manual (Caltrans, 2017)
- Construction Site Monitoring Program Manual (Caltrans, 2013)

Prior to construction, the Contractor would be required to submit either a Water Pollution Control Plan or a Stormwater Pollution Prevention Plan, as appropriate. The Caltrans Resident Engineer and Construction Team would review and approve the Water Pollution Control Plan or Stormwater Pollution Prevention Plan, within 7 to 15 days of contract approval. A Spill Prevention and Control Plan would be developed by the contractor as a component of the Water Pollution Control Plan or Stormwater Pollution Prevention Plan. Specific Best Management Practices options will be considered, evaluated, and dependent on factors such as field conditions, changes to construction strategies, and regulatory requirements in order to protect the beneficial uses of receiving waters. Best Management Practices options will be based on the best conventional and best available technology. Caltrans staff and the Contractor are required to perform routine inspections of the construction area to verify that field Best Management Practices are properly implemented, maintained, and are operating effectively and as designed.



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*Restore and Revegetate Temporarily Disturbed Areas Onsite:* Disturbed areas within the construction limits will be graded to minimize surface erosion and siltation into receiving waters. Disturbed areas will be re-contoured to as close to pre-project condition as possible and will be stabilized as soon as feasible as (and no later than October 15th of each construction season) to avoid erosion during subsequent storms and runoff. Permanent erosion control seeding will be performed at all disturbed sites by hydro-seeding over the course of construction as each site is completed, with all sites seeded by the completion of construction activities.

*Compensatory Mitigation – Wetlands and Other Waters of the United States:* No permanent or temporary effects are expected to occur to potential waters of the United States or potential waters of the State of California. Therefore, no compensatory mitigation for these resources is proposed.

#### **4.2 Special Status Plant Species**

A list of special-status plant species considered as part of this evaluation is included in **Table 5** in **Section 3.2** of this document. “Special-status” plant species include species that are federal or state-listed species, California “rare” plant species, or plant species protected by the California Native Plant Protection Act.

##### **4.2.1 Survey Results**

None of the sensitive plant species considered for environmental review were detected during botanical surveys conducted within the Environmental Study Limits or are expected to occur within the project Environmental Study Limits.

##### **4.2.2 Project Impacts**

Due to the project area being outside the range of the special-status plant species considered for environmental review, the lack of suitable habitat or habitat components in the project area, the lack of detection during recent Caltrans surveys or because the project would not harm individuals or alter the species’ habitat, it is Caltrans’ determination that the proposed project will have “no affect” on federally or state-listed species, California “rare” plant species, or plant species protected by the California Native Plant Protection Act.

##### **4.2.3 Avoidance and Minimization Efforts/Compensatory Mitigation**

Because no special-status plant species considered as part of this evaluation would be adversely impacted by the proposed Carson Area Traffic Management Systems Project, no measures are proposed to avoid, minimize, or compensate impacts to sensitive plant species.





Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Figure 5:**  
**Proposed Environmentally**  
**Sensitive Areas**

**Sheet 1:**  
**LOCATION 5**  
**Kirkwood Meadow**

**10-1G020 AMA-ALP-ELD VAR**  
**Carson Area Traffic Management Systems Project**  
**State Highways 4, 88, and 89 in**  
**Alpine, Amador, and El Dorado Counties**

**LEGEND**

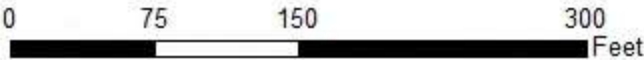
-  Environmental Study Limits
-  Proposed ESA Fencing

Datum: North American Datum 1983  
Projection: California State Plane, Zone 3  
Map Prepared on September 17, 2021 By  
Jason Meigs, Associate Environmental Planner - NS  
California Department of Transportation, District 10

Aerial Photography  
ESRI "World Basemap"  
This Photo Taken on July 30, 2020



1:1,200  
1 inch = 100 feet







**Figure 5:**  
**Proposed Environmentally**  
**Sensitive Areas**

**Sheet 1:**  
**LOCATION 7**  
**East of Caples Lake Station Road**

**10-1G020 AMA-ALP-ELD VAR**  
**Carson Area Traffic Management Systems Project**  
**State Highways 4, 88, and 89 in**  
**Alpine, Amador, and El Dorado Counties**

**LEGEND**

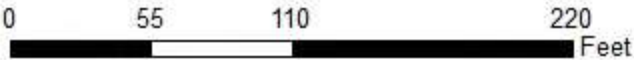
-  Environmental Study Limits
-  Proposed ESA Fencing

Datum: North American Datum 1983  
Projection: California State Plane, Zone 3  
Map Prepared on September 17, 2021 By  
Jason Meigs, Associate Environmental Planner - NS  
California Department of Transportation, District 10

Aerial Photography  
ESRI "World Basemap"  
This Photo Taken on July 30, 2020



1:900  
1 inch = 75 feet







**Figure 5:**  
**Proposed Environmentally**  
**Sensitive Areas**

**LOCATION 9 - SEGMENT 1**  
**Hope Valley**

**10-1G020 AMA-ALP-ELD VAR**  
**Carson Area Traffic Management Systems Project**  
**State Highways 4, 88, and 89 in**  
**Alpine, Amador, and El Dorado Counties**

### **LEGEND**

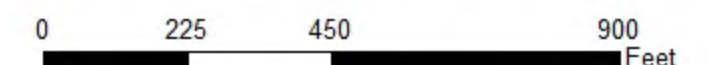
-  Environmental Study Limits
-  Proposed ESA Fencing

Datum: North American Datum 1983  
Projection: California State Plane, Zone 3  
Map Prepared on September 17, 2021 By  
Jason Meigs, Associate Environmental Planner - NS  
California Department of Transportation, District 10

Aerial Photography  
ESRI "World Basemap"  
This Photo Taken on July 30, 2020



1:3,600  
1 inch = 300 feet







**Figure 5:**  
**Proposed Environmentally**  
**Sensitive Areas**

**LOCATION 9 - SEGMENT 2**  
**Hope Valley**

**10-1G020 AMA-ALP-ELD VAR**  
**Carson Area Traffic Management Systems Project**  
**State Highways 4, 88, and 89 in**  
**Alpine, Amador, and El Dorado Counties**

**LEGEND**

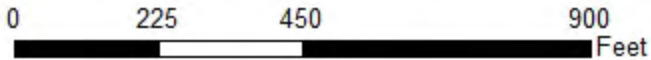
-  Environmental Study Limits
-  Proposed ESA Fencing

Datum: North American Datum 1983  
Projection: California State Plane, Zone 3  
Map Prepared on September 17, 2021 By  
Jason Meigs, Associate Environmental Planner - NS  
California Department of Transportation, District 10

Aerial Photography  
ESRI "World Basemap"  
This Photo Taken on July 30, 2020



1:3,600  
1 inch = 300 feet







Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Figure 5:**  
**Proposed Environmentally**  
**Sensitive Areas**

**LOCATION 10**  
**Woodfords**

**10-1G020 AMA-ALP-ELD VAR**  
**Carson Area Traffic Management Systems Project**  
**State Highways 4, 88, and 89 in**  
**Alpine, Amador, and El Dorado Counties**

**LEGEND**

-  Environmental Study Limits
-  Proposed ESA Fencing

Datum: North American Datum 1983  
Projection: California State Plane, Zone 3  
Map Prepared on September 17, 2021 By  
Jason Meigs, Associate Environmental Planner - NS  
California Department of Transportation, District 10

Aerial Photography  
ESRI "World Basemap"  
This Photo Taken on July 30, 2020



1:900  
1 inch = 75 feet







Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Figure 5:**  
**Proposed Environmentally**  
**Sensitive Areas**

**LOCATION 13**  
**Bear Valley**

**10-1G020 AMA-ALP-ELD VAR**  
**Carson Area Traffic Management Systems Project**  
**State Highways 4, 88, and 89 in**  
**Alpine, Amador, and El Dorado Counties**

**LEGEND**

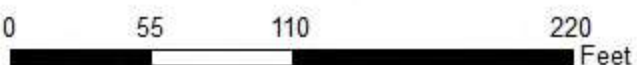
-  Environmental Study Limits
-  Proposed ESA Fencing

Datum: North American Datum 1983  
Projection: California State Plane, Zone 3  
Map Prepared on September 17, 2021 By  
Jason Meigs, Associate Environmental Planner - NS  
California Department of Transportation, District 10

Aerial Photography  
ESRI "World Basemap"  
This Photo Taken on July 30, 2020



1:900  
1 inch = 75 feet



### 4.3 Invasive Species

Federal Executive Orders 13112 and 13751 requires federal agencies to combat the introduction or spread of invasive species in the United States. The Federal Executive Order 13751 defines invasive species as *"with regard to a particular ecosystem, a non-native organism whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal, or plant health."* The Federal Highways Administration guidance issued August 10, 1999 directs the use of the state's invasive species list, currently maintained by the California Invasive Plant Council, to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

#### 4.3.1 Survey Results

Invasive plant species considered in this document are annual grasses and forbs considered as components of the common ruderal vegetation occurring along mountainous disturbed roadside and non-landscaped areas in the project Environmental Study Limits and include species rated by California Invasive Plant Council as plants of "limited" or "moderate" invasiveness. Because it is infeasible to treat/remove or to exclude these species from construction activities, no attempt was made to map these species.

The California Department of Fish and Wildlife Invasive Species Program website was reviewed for invasive animal species known to occur at high-elevation sites in the Sierra Nevada. No invasive animals were identified from the California Department of Fish and Wildlife Invasive Species Program website that are expected to occur in the project Environmental Study Limits.

#### 4.3.2 Project Impacts

Invasive plants crowd out crops, rangeland forage, or vegetation restoration areas and can be low in nutrition or even toxic to livestock. Invasive plants can blanket waterways, trails, and scenic landscapes and can significantly degrade wildlife habitat. Nationally, invasive species are the second-greatest threat to endangered species, after habitat destruction. Invasive ornamentals increase fire fuel loads and are dangerous near homes and some invasive plants consume enormous quantities of water. Federal Executive Order 13117 requires a noxious weed risk assessment for any ground disturbing activities in order to prevent the spread of the weeds into the surrounding area.

Adverse impacts to terrestrial native vegetation or vegetation communities within the project area due to an increase in noxious weed spread as a result of the proposed project are possible, but are not likely due to the fact that project construction activities will take place mainly in open, disturbed areas and within approximately 10 feet of the edge of pavement along roadway shoulders and embankments that currently promote the growth of non-native species and are currently occupied by potentially invasive weeds.



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Although existing roadside areas will be temporarily disturbed, the proposed project will not break “new ground” potentially available for new infestations. It is also possible that weed propagules originating from within the project Environmental Study Limits could be transported to un-infested areas within the project Environmental Study Limits or to outside of the project vicinity. It is also recognized that disturbed roadside areas are significant sources of noxious and invasive weed material. The potential for the project to cause an increase in adverse impacts to upland native vegetation or vegetation communities, or urban landscape vegetation within the project will be further reduced by implementing avoidance strategies and design features for reducing the spread of invasive and noxious weeds as described in **Section 4.3.1.3**.

The proposed project would not result in the increase of aquatic or terrestrial habitat available for potential colonization by invasive animal species. Adverse impacts to aquatic habitat and native aquatic plant and animal species within the project area due to an introduction or spread of invasive animal species a result of the proposed project would be avoided or minimized implementing measures for reducing the spread of invasive animal species as described in **Section 4.3.1.3**.

**4.3.3 Avoidance and Minimization Efforts/Compensatory Mitigation**

*Weed Free Construction Equipment and Vehicles:* To minimize the potential for the transport of weed propagules to the Action Area from sources outside of the project area, construction equipment and vehicles are recommended to be cleaned and washed at the contractor’s facilities prior to arrival to the construction site. Any vehicle or equipment cleaning that occurs on-site during construction activities shall conform with Caltrans 2018 Standard Specifications or any Special Conditions under Section 13-4.03E(3) and Section NS-08 (Vehicle and Equipment Cleaning) of the Caltrans 2017 Construction Site Best Management Practices Manual which require the contractor to contain and dispose of any waste resulting from vehicle or equipment cleaning.

*Weed Control During Construction:* To minimize the potential for spreading weed propagules originating from within the project Environmental Study Limits during the course of construction activities, including initial vegetation clearing and at onsite revegetation areas, weed control would be accomplished in accordance with Caltrans 2018 Standard Specifications or Special Provisions under Section 20-1.03C(3). The use of herbicides for weed control activities would be discouraged but may be considered on a case-by-case basis depending upon the weed species, the extent of infestation, or any regulatory restrictions.

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*Weed Free Erosion Control and Revegetation Treatments:* To minimize the risk of introducing weed propagules to the Action Area from sources outside of the project area, only locally adapted plant species appropriate for the project area will be used in any erosion control or revegetation seed mix or stock. The Caltrans Biologist will consult with the Caltrans Landscape Architect to develop appropriate seed and planting palettes for use in revegetation and/or erosion control applications. Any compost, mulch, tackifier, fiber, straw, duff, topsoil, erosion control products, or seed must meet Caltrans 2018 Standard Specification or any Special Provisions under Section 21-2.02 for these materials. Any hydro-seed used for revegetation activities must also be certified weed-free as per Caltrans 2018 Standard Specifications Section 21-2.02F.

#### **4.4 Special Status Animal Species**

A list of special-status animal species considered as part of this evaluation is included in **Table 5** in Section 3.2 of this document. “Special-status” animal species include species that are federal or state-listed species, California “rare” plant species, or plant species protected by the California Native Plant Protection Act.

##### **4.4.1 Survey Results**

None of the sensitive animal species considered for environmental review were detected during surveys conducted within the Environmental Study Limits.

Forest, meadow, pasture, and riparian area within and adjacent to the project Environmental Study Limits are potential habitat for the following sensitive animal species:

**Northern goshawk, Morrison bumblebee, western bumblebee, Carson Valley silverspot, monarch butterfly, California wolverine, Sierra Nevada mountain beaver, tree-roosting bats, Sierra marten, fisher, North American porcupine, western white-tailed jackrabbit, black backed woodpecker, great grey owl, Sierra Nevada red fox, Yosemite toad, migratory birds**

Habitat for the following animal species is not available within the immediate vicinity of the project Environmental Study Limits:

**Carson wandering skipper, southern long-toed salamander, mountain sucker, delta smelt, black swift, amphibious caddisfly, Mono checkerspot butterfly, gray-headed pika, Lahontan cutthroat trout, mountain whitefish, foothill yellow-legged frog, California red-legged frog, American badger**

#### 4.4.2 Project Impacts

Because habitat for these species does not exist within or adjacent to the project Environmental Study Limits or because the project Environmental Study Limits are outside of the known range of these species, it is Caltrans' determination that the proposed project will have "no affect" on the following federally or state-listed species, California "fully protected species", or California Species of Concern. The project is not expected to result in "take" (as defined by Federal Endangered Species Act Section 3 or by California Fish and Game Code Section 86) of the following special-status animal species:

**Carson wandering skipper, southern long-toed salamander, mountain sucker, delta smelt, black swift, amphibious caddisfly, Mono checkerspot butterfly, gray-headed pika, Lahontan cutthroat trout, mountain whitefish, foothill yellow-legged frog, California red-legged frog, American badger**

Because of the lack of detection during recent Caltrans surveys or because the project would not harm individuals or alter the species' habitat, it is Caltrans' determination that the proposed project will have "no affect" on the following federally or state-listed species, California "fully protected species", or California Species of Concern. The project is not expected to result in "take" (as defined by Federal Endangered Species Act Section 3 or by California Fish and Game Code Section 86) of the following special-status animal species:

**Northern goshawk, Morrison bumblebee, western bumblebee, Carson Valley silverspot, monarch butterfly, California wolverine, Sierra Nevada mountain beaver, tree-roosting bats, Sierra marten, fisher, North American porcupine, western white-tailed jackrabbit, black backed woodpecker, great grey owl, Sierra Nevada red fox, Yosemite toad, migratory birds**

#### 4.4.3 Avoidance and Minimization Efforts/Compensatory Mitigation

*Environmentally Sensitive Area Designation* – As described in Section 4.1.3

*Designated Biologist* – As described in Section 4.1.3

*Containment Measures / Construction Site Best Management Practices* – As described in Section 4.1.3

*Restore and Revegetate Temporarily Disturbed Areas Onsite: Disturbed* – As described in Section 4.1.3

#### 4.5 Common Fish and Wildlife

*Migratory Birds* - The Migratory Bird Treaty Act makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in Section 50 of the Code of Federal Regulations Part 10, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 Code of Federal Regulations 21). Several species of migratory birds could potentially nest on the ground or within shrubs and trees within the project Environmental Study Limits.

*Fish Passage* - California Senate Bill 857 requires Caltrans to prepare an annual report to the Legislature describing the status of the Caltrans' progress in locating, assessing, and remediating barriers to fish passage; requires Caltrans to complete assessments of potential barriers to anadromous fish prior to commencing any project using state or federal transportation funds; and requires Caltrans to submit these assessments to the California Department of Fish and Wildlife to be added to the CALFISH database.

*Migratory Birds* - The Migratory Bird Treaty Act makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in Section 50 of the Code of Federal Regulations Part 10, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 Code of Federal Regulations 21). Several species of migratory birds could potentially nest on the ground or within shrubs and trees within the project Environmental Study Limits.

*Common Wildlife and Terrestrial Habitat Connectivity* - The project was assessed as part of the project planning effort to determine if the proposed project may result in adverse impacts to terrestrial wildlife habitat connectivity and develop measures to avoid or minimize adverse project effects on terrestrial wildlife habitat connectivity.

##### 4.5.1 Survey Results

*Migratory Birds* - Suitable nesting habitat for migratory birds, including raptors, occurs within the Environmental Study Limits and migratory birds and/or raptors may be expected to attempt to nest in appropriate habitats including, but not limited to, the ground and vegetation, between February 1<sup>st</sup> and September 30<sup>th</sup>. The potential to encounter nesting migratory birds between February 1 and September 30 within the Project Environmental Study Limits is *moderate*.

*Fish Passage* – No aquatic areas capable of supporting fish species were recorded within the project Environmental Study Limits. No waters designated as “Essential Fish Habitat” by the National Marine Fisheries Service occur within the project Environmental Study Limits.

*Common Wildlife and Terrestrial Habitat Connectivity* - Habitat for common wildlife species occurs within and adjacent to the project Environmental Study Limits. Physical features potentially representing barriers to terrestrial wildlife within and adjacent to the Environmental Study Limits were noted during field studies and background research. The highway system, local roads, and adjacent land uses including recreational development (roads, structures, fences, etc.) represent significant barriers to regional terrestrial wildlife movement for some species.

#### **4.5.2 Project Impacts**

*Migratory Birds* – Suitable nesting habitat for migratory birds, including raptors, occurs within and adjacent to the Environmental Study Limits and migratory birds and/or raptors may be expected to attempt to nest in appropriate habitats including, but not limited to, trees, shrubs, or on the ground between February 1<sup>st</sup> and September 30<sup>th</sup>. The project proposes construction activities (ground disturbance) that are potentially in conflict with nesting migratory birds or raptors.

With the implementation of avoidance measures outlined in **Section 4.5.3** of this document, the proposed construction activities are not expected to result in the “take” of any migratory birds or their active nests, as defined by the Migratory Bird Treaty Act.

*Fish Passage* – No aquatic areas capable of supporting fish species were recorded within the project Environmental Study Limits. The project does not propose any drainage work. Therefore, the project will not result in adverse impacts to fish species or result in the construction of any features potentially limiting fish passage within the Environmental Study Limits.

*Common Wildlife and Terrestrial Habitat Connectivity* – The scope of work for the proposed Carson Area Traffic Management Systems project is generally limited to roadway and near-roadway construction. The project would result in disturbances to the paved roadway and adjacent shoulder and embankment areas with approximately 10-20 feet of the paved roadway and within the State Highway right-of-way. Project construction activities would therefore avoid disturbance of natural vegetation communities and habitats supporting common wildlife species.

The proposed construction activities are not expected to result in the “take” (as defined by Section 86 of the California Fish and Game Code) of common wildlife species.

Furthermore, the overall project scope includes the construction of message posts mounted on “cast-in-drilled-hole” foundations, concrete pad foundations for controller cabinets, installation of traffic management elements existing or proposed structures, shallow excavation of the roadbed and roadway and/or shoulder excavation and/or trenching for the placement of hardware and to provide power service. None of the proposed project features are expected to result in any additional adverse effects on the ability for terrestrial wildlife to pass through the project Environmental Study Limits.

#### **4.5.3 Avoidance and Minimization/Compensatory Mitigation**

*Environmentally Sensitive Area Designation* – As described in Section 4.1.3

*Designated Biologist* – As described in Section 4.1.3

*Containment Measures / Construction Site Best Management Practices* – As described in Section 4.1.3

*Restore and Revegetate Temporarily Disturbed Areas Onsite: Disturbed* – As described in Section 4.1.3

*Nesting Bird Avoidance – Limited Operation Period:* Performing ground-disturbance, vegetation removal, or other construction activities within nesting bird habitat during the non-nesting season (between October 1<sup>st</sup> and January 31<sup>st</sup>) would not require pre-construction surveys or nesting bird avoidance measures.

*Nesting Bird Avoidance – Pre-Construction Surveys During Nesting Season:* If ground-disturbance, vegetation removal, or other construction activities are scheduled during the nesting season of protected raptors and migratory birds (February 1<sup>st</sup> to September 30<sup>th</sup>), a focused survey for active nests of such birds shall be conducted by a qualified biologist within 15 days prior to the beginning to project-related activities. If a lapse in project related work of 15 days or longer occurs, another survey and, if required, consultation with United States Fish and Wildlife Service and California Department of Fish and Wildlife will be required before the work can be reinitiated. Pre-construction surveys for nesting migratory birds and raptors shall be specified under Caltrans 2018 Standard Specification and/or Standard Special Provision 14-6.03A (Species Protection) and/or 14-6.03(B) (Bird Protection).

*Nesting Bird Avoidance – Avoid Active Nests:* If active nests are found, a protective no-work buffer will be established (Table 18) and Caltrans shall consult with United States Fish and Wildlife Service regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918 and with California Department of Fish and Wildlife to comply with provisions of the Fish and Game Code of California.



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If nesting migratory birds or nesting raptors are detected by the Designated Biologist during the pre-construction survey, the appropriate no-work buffer will need be established around the nest. No work will commence within the buffer until authorization is received from the Resident Engineer. Appropriate no-work buffer distances for specific bird species are listed below:

Stop all work within a radius of any active migratory bird nest as noted in the table below (**Table 9**):

**Table 9:  
Recommended Protective Buffer Radii for  
Migratory Bird Species Nests**

| Species               | Protective radius<br>(feet) |
|-----------------------|-----------------------------|
| Raptors               | 300                         |
| Other Migratory Birds | 100                         |

Protective buffer radii for nesting migratory birds and raptors shall be specified under Caltrans 2018 Standard Specification and/or Standard Special Provision 14-6.03A (Species Protection) and/or 14-6.03(B) (Bird Protection).

If construction or other project related activities which may potentially cause nest destruction, nest abandonment or forced fledging of migratory birds are necessary, monitoring of the nest site by a qualified biologist will be required to ensure that protective radii are maintained.

## 5. References

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**10-1G020 Carson Area Traffic Management Systems Project  
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**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Attachment 1:  
Species Lists**



## Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



**Query Criteria:** Quad<span style='color:Red'> IS </span>(Caldor (3812054)<span style='color:Red'> OR </span>Tamarack (3812041)<span style='color:Red'> OR </span>Peddler Hill (3812053)<span style='color:Red'> OR </span>Caples Lake (3812061)<span style='color:Red'> OR </span>Freel Peak (3811978)<span style='color:Red'> OR </span>Woodfords (3811977)<span style='color:Red'> OR </span>Markleeville (3811967))

| Species                                                                                                               | Element Code | Federal Status | State Status         | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|-----------------------------------------------------------------------------------------------------------------------|--------------|----------------|----------------------|-------------|------------|--------------------------------|
| <i>Accipiter gentilis</i><br>northern goshawk                                                                         | ABNKC12060   | None           | None                 | G5          | S3         | SSC                            |
| <i>Allium tribracteatum</i><br>three-bracted onion                                                                    | PMLIL022D0   | None           | None                 | G2          | S2         | 1B.2                           |
| <i>Ambystoma macrodactylum sigillatum</i><br>southern long-toed salamander                                            | AAAAA01085   | None           | None                 | G5T4        | S3         | SSC                            |
| <i>Apodontia rufa californica</i><br>Sierra Nevada mountain beaver                                                    | AMAF01013    | None           | None                 | G5T3T4      | S2S3       | SSC                            |
| <i>Bombus morrisoni</i><br>Morrison bumble bee                                                                        | IIHYM24460   | None           | None                 | G4G5        | S1S2       |                                |
| <i>Bombus occidentalis</i><br>western bumble bee                                                                      | IIHYM24250   | None           | Candidate Endangered | G2G3        | S1         |                                |
| <i>Botrychium ascendens</i><br>upswept moonwort                                                                       | PPOPH010S0   | None           | None                 | G3G4        | S2         | 2B.3                           |
| <i>Botrychium crenulatum</i><br>scalloped moonwort                                                                    | PPOPH010L0   | None           | None                 | G4          | S3         | 2B.2                           |
| <i>Botrychium minganense</i><br>Mingan moonwort                                                                       | PPOPH010R0   | None           | None                 | G4G5        | S3         | 2B.2                           |
| <i>Calochortus clavatus</i> var. <i>avius</i><br>Pleasant Valley mariposa-lily                                        | PMLIL0D095   | None           | None                 | G4T2        | S2         | 1B.2                           |
| <i>Carex hystericina</i><br>porcupine sedge                                                                           | PMCYP036D0   | None           | None                 | G5          | S2         | 2B.1                           |
| <i>Carex limosa</i><br>mud sedge                                                                                      | PMCYP037K0   | None           | None                 | G5          | S3         | 2B.2                           |
| <i>Carex scirpoidea</i> ssp. <i>pseudoscirpoidea</i><br>western single-spiked sedge                                   | PMCYP03C85   | None           | None                 | G5T4        | S2         | 2B.2                           |
| <i>Catostomus platyrhynchus</i><br>mountain sucker                                                                    | AFCJC02160   | None           | None                 | G5          | S3         | SSC                            |
| <i>Central Valley Drainage Resident Rainbow Trout Stream</i><br>Central Valley Drainage Resident Rainbow Trout Stream | CARA2421CA   | None           | None                 | GNR         | SNR        |                                |
| <i>Chaenactis douglasii</i> var. <i>alpina</i><br>alpine dusty maidens                                                | PDAST20065   | None           | None                 | G5T5        | S2         | 2B.3                           |
| <i>Claytonia megarhiza</i><br>fell-fields claytonia                                                                   | PDPOR030A0   | None           | None                 | G5          | S2         | 2B.3                           |
| <i>Crepis runcinata</i><br>fiddleleaf hawksbeard                                                                      | PDAST2R0K0   | None           | None                 | G5          | S3         | 2B.2                           |



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



| Species                                                                          | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|----------------------------------------------------------------------------------|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <b><i>Cryptantha crymophila</i></b><br>subalpine cryptantha                      | PDBOR0A0R0   | None           | None         | G3          | S3         | 1B.3                           |
| <b><i>Cypseloides niger</i></b><br>black swift                                   | ABNUA01010   | None           | None         | G4          | S2         | SSC                            |
| <b><i>Desmona bethula</i></b><br>amphibious caddisfly                            | IITRI77010   | None           | None         | G2G3        | S2S3       |                                |
| <b><i>Diplacus pulchellus</i></b><br>yellow-lip pansy monkeyflower               | PDSCR1B280   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Draba asterophora</i> var. <i>asterophora</i></b><br>Tahoe draba           | PDBRA110D1   | None           | None         | G2T2?       | S2?        | 1B.2                           |
| <b><i>Elodium blandowii</i></b><br>Blandow's bog moss                            | NBMUS3C011   | None           | None         | G4          | S2         | 2B.3                           |
| <b><i>Elymus scribneri</i></b><br>Scribner's wheat grass                         | PMPOA2H170   | None           | None         | G5          | S3         | 2B.3                           |
| <b><i>Epilobium howellii</i></b><br>subalpine fireweed                           | PDONA06180   | None           | None         | G4          | S4         | 4.3                            |
| <b><i>Epilobium palustre</i></b><br>marsh willowherb                             | PDONA060R0   | None           | None         | G5          | S2         | 2B.3                           |
| <b><i>Erethizon dorsatum</i></b><br>North American porcupine                     | AMAFJ01010   | None           | None         | G5          | S3         |                                |
| <b><i>Eriogonum luteolum</i> var. <i>saltuarium</i></b><br>Jack's wild buckwheat | PDPGN083S4   | None           | None         | G5T1        | S1         | 1B.2                           |
| <b><i>Erythranthe carsonensis</i></b><br>Carson Valley monkeyflower              | PDPHR01020   | None           | None         | G2          | S1         | 1B.1                           |
| <b><i>Euphydryas editha monoensis</i></b><br>Mono checkerspot butterfly          | IILEPK405G   | None           | None         | G5T2T3      | S1S2       |                                |
| <b><i>Gulo gulo</i></b><br>California wolverine                                  | AMAJF03010   | None           | Threatened   | G4          | S1         | FP                             |
| <b><i>Lasionycteris noctivagans</i></b><br>silver-haired bat                     | AMACC02010   | None           | None         | G3G4        | S3S4       |                                |
| <b><i>Lasiurus cinereus</i></b><br>hoary bat                                     | AMACC05030   | None           | None         | G3G4        | S4         |                                |
| <b><i>Lepus townsendii townsendii</i></b><br>western white-tailed jackrabbit     | AMAE03041    | None           | None         | G5T5        | S3?        | SSC                            |
| <b><i>Lomatium stebbinsii</i></b><br>Stebbins' lomatium                          | PDAP1B1V0    | None           | None         | G2          | S2         | 1B.1                           |
| <b><i>Martes caurina sierrae</i></b><br>Sierra marten                            | AMAJF01014   | None           | None         | G4G5T3      | S3         |                                |
| <b><i>Meesia triquetra</i></b><br>three-ranked hump moss                         | NBMUS4L020   | None           | None         | G5          | S4         | 4.2                            |
| <b><i>Myotis thysanodes</i></b><br>fringed myotis                                | AMACC01090   | None           | None         | G4          | S3         |                                |





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



| Species                                                                 | Element Code | Federal Status      | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|-------------------------------------------------------------------------|--------------|---------------------|--------------|-------------|------------|--------------------------------|
| <b><i>Myotis volans</i></b><br>long-legged myotis                       | AMACC01110   | None                | None         | G4G5        | S3         |                                |
| <b><i>Ochotona princeps schisticeps</i></b><br>gray-headed pika         | AMAEA0102L   | None                | None         | G5T4        | S2S4       |                                |
| <b><i>Oncorhynchus clarkii henshawi</i></b><br>Lahontan cutthroat trout | AFCHA02081   | Threatened          | None         | G5T3        | S1         |                                |
| <b><i>Pekania pennanti</i></b><br>Fisher                                | AMAJF01020   | None                | None         | G5          | S2S3       | SSC                            |
| <b><i>Peltigera gowardii</i></b><br>western waterfan lichen             | NLVER00460   | None                | None         | G4?         | S3         | 4.2                            |
| <b><i>Picoides arcticus</i></b><br>black-backed woodpecker              | ABNYF07090   | None                | None         | G5          | S2         |                                |
| <b><i>Potamogeton praelongus</i></b><br>white-stemmed pondweed          | PMPOT030V0   | None                | None         | G5          | S2         | 2B.3                           |
| <b><i>Potamogeton robbinsii</i></b><br>Robbins' pondweed                | PMPOT030Z0   | None                | None         | G5          | S3         | 2B.3                           |
| <b><i>Prosopium williamsoni</i></b><br>mountain whitefish               | AFCHA03060   | None                | None         | G5          | S3         | SSC                            |
| <b><i>Rana boylei</i></b><br>foothill yellow-legged frog                | AAABH01050   | None                | Endangered   | G3          | S3         | SSC                            |
| <b><i>Rana draytonii</i></b><br>California red-legged frog              | AAABH01022   | Threatened          | None         | G2G3        | S2S3       | SSC                            |
| <b><i>Rana sierrae</i></b><br>Sierra Nevada yellow-legged frog          | AAABH01340   | Endangered          | Threatened   | G1          | S1         | WL                             |
| <b><i>Schoenoplectus subterminalis</i></b><br>water bulrush             | PMCYP0Q1G0   | None                | None         | G4G5        | S3         | 2B.3                           |
| <b><i>Speyeria nokomis carsonensis</i></b><br>Carson Valley silverspot  | IILEPJ6056   | None                | None         | G3T1T2      | S1         |                                |
| <b><i>Sphagnum Bog</i></b><br>Sphagnum Bog                              | CTT51110CA   | None                | None         | G3          | S1.2       |                                |
| <b><i>Strix nebulosa</i></b><br>great gray owl                          | ABNSB12040   | None                | Endangered   | G5          | S1         |                                |
| <b><i>Taxidea taxus</i></b><br>American badger                          | AMAJF04010   | None                | None         | G5          | S3         | SSC                            |
| <b><i>Utricularia ochroleuca</i></b><br>cream-flowered bladderwort      | PDLNT020E0   | None                | None         | G4G5        | S1         | 2B.2                           |
| <b><i>Viola purpurea ssp. aurea</i></b><br>golden violet                | PDVIO04420   | None                | None         | G5T2        | S2         | 2B.2                           |
| <b><i>Vulpes vulpes necator</i></b><br>Sierra Nevada red fox            | AMAJA03012   | Proposed Endangered | Threatened   | G5T1T2      | S1         |                                |

Record Count: 59

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Alpine, Amador, and El Dorado counties, California



## Local offices

Reno Fish And Wildlife Office

☎ (775) 861-6300

📠 (775) 861-6301

1340 Financial Boulevard, Suite 234  
Reno, NV 89502-7147

<http://www.fws.gov/reno/>

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [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.

The following species are potentially affected by activities in this location:

## Amphibians

NAME

STATUS

California Red-legged Frog *Rana draytonii* Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<http://ecos.fws.gov/ecp/species/2891>

Sierra Nevada Yellow-legged Frog *Rana sierrae* Endangered

Wherever found

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

<http://ecos.fws.gov/ecp/species/9529>

Yosemite Toad *Anaxyrus canorus* Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<http://ecos.fws.gov/ecp/species/7255>

## Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus*

Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<http://ecos.fws.gov/ecp/species/321>

Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi*

Threatened

Wherever found

No critical habitat has been designated for this species.

<http://ecos.fws.gov/ecp/species/3964>

## Insects

NAME

STATUS

Carson Wandering Skipper *Pseudocopaeodes eunus obscurus*

Endangered

Wherever found

No critical habitat has been designated for this species.

<http://ecos.fws.gov/ecp/species/674>

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<http://ecos.fws.gov/ecp/species/9743>

## Conifers and Cycads



NAME

STATUS

Whitebark Pine *Pinus albicaulis*

Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

<http://ecos.fws.gov/ecp/species/1748>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME

TYPE

Sierra Nevada Yellow-legged Frog *Rana sierrae*

Final

<http://ecos.fws.gov/ecp/species/9529#crithab>

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the



Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

**Bald Eagle** *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<http://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Aug 31

**Black Swift** *Cypseloides niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<http://ecos.fws.gov/ecp/species/8878>

Breeds Jun 15 to Sep 10

**Black-throated Gray Warbler** *Dendroica nigrescens*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds May 1 to Jul 20

**Cassin's Finch** *Carpodacus cassinii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<http://ecos.fws.gov/ecp/species/9462>

Breeds May 15 to Jul 15

**Clark's Grebe** *Aechmophorus clarkii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jun 1 to Aug 31

**Evening Grosbeak** *Coccothraustes vespertinus*

Breeds May 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

**Golden Eagle** *Aquila chrysaetos*

Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<http://ecos.fws.gov/ecp/species/1680>

**Lewis's Woodpecker** *Melanerpes lewis*

Breeds Apr 20 to Sep 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<http://ecos.fws.gov/ecp/species/9408>

**Long-eared Owl** *asio otus*

Breeds Mar 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<http://ecos.fws.gov/ecp/species/3631>

**Oak Titmouse** *Baeolophus inornatus*

Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<http://ecos.fws.gov/ecp/species/9656>

**Olive-sided Flycatcher** *Contopus cooperi*

Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<http://ecos.fws.gov/ecp/species/3914>

**Pinyon Jay** *Gymnorhinus cyanocephalus*

Breeds Feb 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<http://ecos.fws.gov/ecp/species/9420>

**Willet** *Tringa semipalmata*

Breeds Apr 20 to Aug 5

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

## Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

## Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

## Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

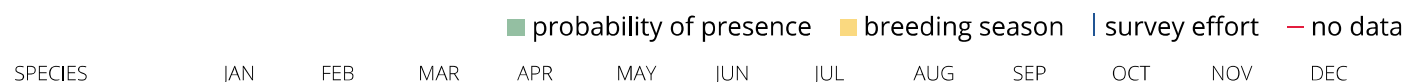
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

## No Data (—)

A week is marked as having no data if there were no survey events for that week.

## Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

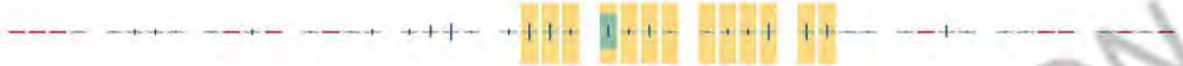




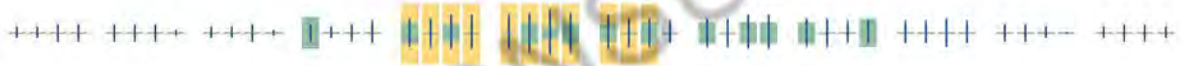
Bald Eagle  
Non-BCC  
Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



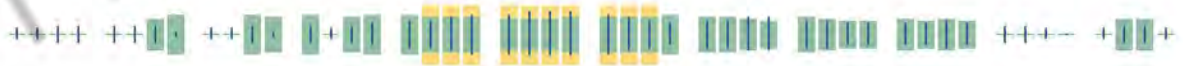
Black Swift  
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Black-throated Gray Warbler  
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Cassin's Finch  
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Clark's Grebe  
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Evening Grosbeak  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental USA  
and Alaska.)



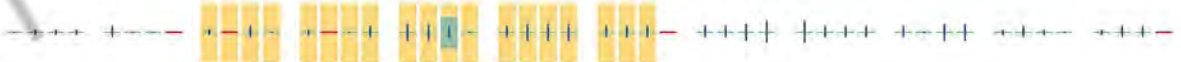
Golden Eagle  
Non-BCC  
Vulnerable (This is  
not a Bird of  
Conservation  
Concern (BCC) in  
this area, but  
warrants attention  
because of the  
Eagle Act or for  
potential  
susceptibilities in  
offshore areas  
from certain types  
of development or  
activities.)



Lewis's  
Woodpecker  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental USA  
and Alaska.)



Long-eared Owl  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental USA  
and Alaska.)



Oak Titmouse  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental USA  
and Alaska.)



Olive-sided  
Flycatcher  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental USA  
and Alaska.)



Pinyon Jay  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental USA  
and Alaska.)



SPECIES

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Willet  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental USA  
and Alaska.)



**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#), and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.



Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

## What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

## Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## Facilities

### Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

## Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

## Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

10-1G020 ALP TMS Project  
NMFS Lists 28SEP2020

Quad Name **Caldor**  
Quad Number **38120-E4**

**ESA Anadromous Fish**

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

**ESA Anadromous Fish Critical Habitat**

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

**ESA Marine Invertebrates**

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

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**ESA Sea Turtles**

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

**ESA Whales**

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

**ESA Pinnipeds**

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

**Essential Fish Habitat**

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

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**

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

MMPA Cetaceans -  
MMPA Pinnipeds -



10-1G020 ALP TMS Project  
NMFS Lists 28SEP2020

Quad Name **Peddler Hill**  
Quad Number **38120-E3**

**ESA Anadromous Fish**

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

**ESA Anadromous Fish Critical Habitat**

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

**ESA Marine Invertebrates**

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

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -



**10-1G020 ALP TMS Project  
NMFS Lists 28SEP2020**

**ESA Sea Turtles**

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

**ESA Whales**

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

**ESA Pinnipeds**

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

**Essential Fish Habitat**

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

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**

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

MMPA Cetaceans -  
MMPA Pinnipeds -

10-1G020 ALP TMS Project  
NMFS Lists 28SEP2020

Quad Name **Caples Lake**  
Quad Number **38120-F1**

**ESA Anadromous Fish**

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

**ESA Anadromous Fish Critical Habitat**

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

**ESA Marine Invertebrates**

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

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**10-1G020 ALP TMS Project  
NMFS Lists 28SEP2020**

**ESA Sea Turtles**

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

**ESA Whales**

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

**ESA Pinnipeds**

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

**Essential Fish Habitat**

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

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**

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

MMPA Cetaceans -  
MMPA Pinnipeds -

10-1G020 ALP TMS Project  
NMFS Lists 28SEP2020

Quad Name **Tamarack**

Quad Number **38120-D1**

**ESA Anadromous Fish**

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

**ESA Anadromous Fish Critical Habitat**

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

**ESA Marine Invertebrates**

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

**ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

**10-1G020 ALP TMS Project  
NMFS Lists 28SEP2020**

**ESA Sea Turtles**

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

**ESA Whales**

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

**ESA Pinnipeds**

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

**Essential Fish Habitat**

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

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**

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

MMPA Cetaceans -  
MMPA Pinnipeds -

## INTERMOUNTAIN REGION (R4) THREATENED, ENDANGERED, PROPOSED, AND, SENSITIVE SPECIES

## June 2016

### KNOWN / SUSPECTED DISTRIBUTION BY FOREST

[illegible]



| ENDANGERED                                                                                  | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|---------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Sockeye salmon, (Snake River0 11/20/91<br><i>Oncorhynchus nerka</i> (CH 12/28/98)           |     |     |     |     | +   |     |     |     |     | +   | +   | X   |     |     |     |     |
| Razorback sucker 10/23/91<br><i>Xyrauchen texanus</i> (ED 11/22/91)                         | o   |     | o   |     |     | o   | o   |     | o   |     |     |     |     |     | o   | o   |
| Sturgeon, pallid<br><i>Scaphirhynchus albus</i>                                             |     |     | o   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <b>PLANTS</b>                                                                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| San Rafael cactus<br><i>Pediocactus despainii</i>                                           |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |
| Clay phacelia 09/28/78<br><i>Phacelia argillacea</i>                                        |     |     |     |     |     |     |     |     | ?   |     |     |     |     |     | X   |     |
| THREATENED                                                                                  | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
| <b>MAMMALS</b>                                                                              |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Canada lynx 4/15/00<br><i>Lynx canadensis</i>                                               | X   | X   | X   |     |     |     |     |     |     | X   |     | X   | X   |     | ?   | ?   |
| Grizzly bear 9/21/2009<br><i>Ursus arctos horribilis</i>                                    |     |     | X   |     |     |     |     |     |     |     |     |     | X   |     |     |     |
| Gray wolf (Wyoming Rocky Mountain DPS 10J<br>Experimental Population)<br><i>Canis lupus</i> |     |     | X   | X   |     |     |     |     |     |     |     |     | X   |     |     | X   |
| Utah prairie dog 6/04/73<br><i>Cynomys parvidens</i>                                        |     |     |     |     |     | X   | X   |     |     |     |     |     |     |     |     |     |
| Northern Idaho ground squirrel 3/24/00<br><i>Spermophilus brunneus</i>                      |     | X   |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| <b>BIRDS</b>                                                                                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Mexican spotted owl 3/16/93<br><i>Strix occidentalis lucida</i> (ED 4/15/93)                |     |     |     |     |     | X   | X   |     | X   |     |     |     |     |     |     |     |
| Yellow-billed cuckoo 11/03/2014<br><i>Coccyzus americanus</i>                               | X   | X   | X   |     | ?   | ?   | ?   | X   | X   | X   | ?   | X   | X   | X   | X   | X   |
| <b>REPTILES AND AMPHIBIANS</b>                                                              |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Desert tortoise 8/04/89<br><i>Gopherus agassizii</i>                                        |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Yosemite toad 6/30/2014<br><i>Anaxyrus canorus</i>                                          |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| <b>FISH</b>                                                                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Steelhead trout (Snake River summer)<br><i>Oncorhynchus mykiss</i>                          |     | X   |     |     | X   |     |     |     |     | X   | X   | X   |     |     |     |     |
|                                                                                             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

x=known species/habitat; ?=suspected/potential habitat; \*=wild/naturally reproducing; +=migration; o=offsite; r= reintroduced populations; ED=Effective dates

| THREATENED                                                                                           | ASH        | BOI        | B-T        | CAR        | CHA        | DIX        | FIS        | HUM        | M-L        | PAY        | SAL        | SAW        | TAR        | TOI        | UIN        | W-C        |
|------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Chinook salmon, Snake River sprg/smr<br><i>Oncorhynchus tshawytscha</i> 4/22/92 (ED 5/22/92)         |            | X          |            |            | X          |            |            |            |            | X          | X          | X          |            |            |            |            |
| Chinook salmon, Snake River fall<br><i>Oncorhynchus tshawytscha</i> 4/22/92 (ED 5/22/92)             |            |            |            |            |            |            |            |            |            | X          |            |            |            |            |            |            |
| Greenback cutthroat trout<br><i>Oncorhynchus clarki stomia</i>                                       |            |            |            |            |            |            |            |            | X          |            |            |            |            |            |            |            |
| Railroad Valley springfish 3/31/86<br><i>Crenichthys nevadae</i>                                     |            |            |            |            |            |            |            |            |            |            |            |            |            | X          |            |            |
| Lahontan cutthroat trout 10/13/70<br><i>Oncorhynchus clarki henshawi</i>                             |            |            |            |            |            |            |            | X          |            |            |            |            |            | X          |            |            |
| Columbia River bull trout 6/10/98<br><i>Salvelinus confluentus</i>                                   |            | X          |            |            | X          |            |            | X          |            | X          | X          | X          |            |            |            |            |
| Paiute cutthroat trout 3/11/67<br><i>Oncorhynchus clarki seleniris</i>                               |            |            |            |            |            |            |            |            |            |            |            |            |            | X          |            |            |
| <b>PLANTS</b>                                                                                        |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Deseret milkvetch 10/20/99<br><i>Astragalus desereticus</i>                                          |            |            |            |            |            |            |            |            | ?          |            |            |            |            |            | ?          |            |
| Heliotrope milkvetch 11/6/87<br><i>Astragalus limnocharis</i> var. <i>montii</i> (A. <i>montii</i> ) |            |            |            |            |            |            |            |            | X          |            |            |            |            |            |            |            |
| Slick-spot peppergrass 10/08/09<br><i>Lepidium papilliferum</i>                                      |            | ?          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Winkler cactus<br><i>Pediocactus winkleri</i>                                                        |            |            |            |            |            |            |            |            | ?          |            |            |            |            |            |            |            |
| Maguire's primrose 8/21/85<br><i>Primula cusickiana</i> var. <i>maguirei</i> (P. <i>maguirei</i> )   |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | X          |
| Last chance townsendia 8/21/85<br><i>Townsendia aprica</i>                                           |            |            |            |            |            | X          | X          |            |            |            |            |            |            |            |            |            |
| Ute ladies' tresses orchid 1/17/92<br><i>Spiranthes diluvialis</i> (2/18/92)                         |            | ?          |            | ?          | ?          |            | ?          |            |            |            | ?          | ?          | X          |            | X          | ?          |
| Webber ivesia 7/3/2014<br><i>Ivesia webberi</i>                                                      |            |            |            |            |            |            |            |            |            |            |            |            |            | X          |            |            |
| <b>PROPOSED</b>                                                                                      | <b>ASH</b> | <b>BOI</b> | <b>B-T</b> | <b>CAR</b> | <b>CHA</b> | <b>DIX</b> | <b>FIS</b> | <b>HUM</b> | <b>M-L</b> | <b>PAY</b> | <b>SAL</b> | <b>SAW</b> | <b>TAR</b> | <b>TOI</b> | <b>UIN</b> | <b>W-C</b> |
| North American wolverine<br><i>Gulo gulo</i> (luscus)                                                | X          | X          | X          | X          | X          |            |            |            |            | X          | X          | X          | X          | X          |            | X          |

| CANDIDATE                                             | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|-------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Sierra Nevada red fox<br><i>Vulpes vulpes necator</i> |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Whitebark Pine<br><i>Pinus albicaulis</i>             |     | X   | X   |     | X   |     |     | X   |     | X   | X   | X   | X   | X   |     |     |

| SENSITIVE                                                                                                                                                                                                                       | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>MAMMALS</b>                                                                                                                                                                                                                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Bighorn Sheep <i>Ovis canadensis</i> - Includes Rocky Mountain bighorn sheep ( <i>O. c. canadensis</i> ), California bighorn sheep ( <i>O. c. californiana</i> ), and desert bighorn sheep ( <i>O. c. nelsoni</i> ) (7/29/2009) | X   | X   | X   |     | X   |     | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Gray wolf (Rocky Mountain DPS)<br><i>Canis lupus</i>                                                                                                                                                                            |     | X   |     | X   | X   |     |     |     |     | X   | X   | X   | X   |     |     | X   |
| Pygmy rabbit<br><i>Brachylagus idahoensis</i>                                                                                                                                                                                   |     |     |     | X   | X   | X   | X   | X   |     |     | X   | X   | X   | X   |     |     |
| Spotted bat<br><i>Euderma maculatum</i>                                                                                                                                                                                         | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | ?   | X   | X   | X   |
| Fisher<br><i>Martes pennanti</i>                                                                                                                                                                                                |     | X   | X   |     | X   |     |     |     |     | X   | X   | X   | ?   |     | X   |     |
| Southern Idaho Ground Squirrel<br><i>Spermophilus brunneus endemicus</i>                                                                                                                                                        |     | X   |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Townsend's Western Big-Eared Bat<br><i>Corynorhinus townsendii townsendii</i>                                                                                                                                                   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| <b>BIRDS</b>                                                                                                                                                                                                                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Bald eagle<br><i>Haliaeetus leucocephalus</i>                                                                                                                                                                                   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Boreal owl<br><i>Aegolius funereus</i>                                                                                                                                                                                          | X   | X   | X   | X   | X   |     |     |     |     | X   | X   | X   | X   |     |     | X   |
| Greater sage-grouse<br><i>Centrocercus urophasianus</i>                                                                                                                                                                         | X   | X   | X   | X   | X   | X   | X   | X   | X   | ?   | X   | X   | X   | X   | X   | X   |
| Greater sage-grouse Bi-State DPS<br><i>Centrocercus urophasianus</i>                                                                                                                                                            |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Trumpeter swan<br><i>Cygnus buccinator</i>                                                                                                                                                                                      |     |     | X   | X   |     |     |     |     |     |     |     |     | X   |     |     |     |
| Peregrine falcon 3/20/84<br><i>Falco peregrinus anatum</i>                                                                                                                                                                      | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Common loon<br><i>Gavia immer</i>                                                                                                                                                                                               |     | X   | X   |     | +   |     |     |     |     | ?   | +   | X   | X   |     |     |     |
| Harlequin duck<br><i>Histrionicus histrionicus</i>                                                                                                                                                                              |     |     | X   | X   | ?+  |     |     |     |     | X   | ?+  |     | X   |     |     |     |
| Mountain quail<br><i>Oreortyx pictus</i>                                                                                                                                                                                        |     | X   |     |     |     |     |     | X   |     | X   |     | X   |     | X   |     |     |
| Flammulated owl<br><i>Otus flammeolus</i>                                                                                                                                                                                       | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |

x=known species/habitat; ?=suspected/potential habitat; \*=wild/naturally reproducing; +=migration; o=offsite; r= reintroduced populations; ED=Effective dates

| SENSITIVE                                                                    | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| White-headed woodpecker<br><i>Picoides albolarvatus</i>                      |     | X   |     |     |     |     |     |     |     | X   |     | X   |     | X   |     |     |
| Three-toed woodpecker<br><i>Picoides tridactylus</i>                         | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Great gray owl<br><i>Strix nebulosa</i>                                      | X   | X   | X   | X   | X   |     |     |     |     | X   | X   | X   | X   | X   |     | X   |
| California spotted owl<br><i>Strix occidentalis occidentalis</i>             |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Columbian sharp-tailed grouse<br><i>Tympanuchus phasianellus columbianus</i> |     | X   |     | X   |     |     |     | X   |     | X   |     | X   | X   |     |     | X   |
| Northern goshawk<br><i>Accipiter gentilis</i>                                | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| <b>REPTILES AND AMPHIBIANS</b>                                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Columbia spotted frog<br><i>Rana luteiventris</i>                            | ?   | X   | X   | X   | X   |     |     | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Boreal Toad<br><i>Bufo boreas</i>                                            | X   |     | X   | X   |     | X   | X   |     | X   |     |     |     | X   |     | X   | X   |
| <b>FISH</b>                                                                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Wood River sculpin<br><i>Cottus leiopomus</i>                                |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |
| Westslope cutthroat trout<br><i>Oncorhynchus clarki lewisi</i>               |     | X   | X   |     | X   |     |     |     |     | X   | X   | X   |     |     |     |     |
| Colorado River cutthroat trout<br><i>Oncorhynchus clarki pleuriticus</i>     | X   |     | X   |     |     | X   | X   |     | X   |     |     |     |     |     | X   | X   |
| Bonneville cutthroat trout<br><i>Oncorhynchus clarki utah</i>                |     |     | X   | X   |     | X   | X   | X   | X   |     |     |     |     |     | X   | X   |
| Yellowstone cutthroat trout<br><i>Oncorhynchus clarki bouvieri</i>           |     |     | X   | X   |     |     |     |     |     |     |     | X   | X   |     |     |     |
| Northern Leatherside Chub<br><i>Lepidomeda copei</i>                         |     |     | X   | X   |     |     |     |     |     |     |     | X   | X   |     |     | X   |
| Southern Leatherside Chub<br><i>Lepidomeda aliciae</i>                       |     |     |     |     |     | X   | X   |     | X   |     |     |     |     |     | X   |     |
| Big Lost River Whitefish<br><i>Prosopium williamsoni</i>                     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |
| <b>INSECTS</b>                                                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Spring Mountain Checkerspot<br><i>Chlosyne acastus robusta</i>               |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Dark Blue                                                                    |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |

| SENSITIVE                                                                                    | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|----------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <i>Euphilotes ancilla purpurea</i>                                                           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Morand's Checkerspot<br><i>Euphydryas anicia morandi</i>                                     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| <b>PLANTS</b>                                                                                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Pink agoseris<br><i>Agoseris lackschewitzii</i>                                              |     |     | X   |     |     |     |     |     |     |     | X   |     | X   |     |     |     |
| Wonderland Alice flower<br><i>Aliciella (=Gilia) caespitosa</i>                              |     |     |     |     |     | X   | X   |     |     |     |     |     |     |     |     |     |
| Chatterley Onion<br><i>Allium geyeri</i> var. <i>chatterleyi</i>                             |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Swamp onion<br><i>Allium madidum</i>                                                         |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Tolmie's onion<br><i>Allium tolmiei</i> var. <i>persimile</i>                                |     | X   |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Candystick<br><i>Allotropa virgata</i>                                                       |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Sweet-flowered rock jasmine<br><i>Androsace chamaejasme</i> ssp. <i>carinata</i>             |     |     | X   |     |     |     |     |     | X   |     |     |     | X   |     |     |     |
| Charleston angelica<br><i>Angelica scabrida</i>                                              |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Wheeler's angelica<br><i>Angelica wheeleri</i>                                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   | X   |
| Meadow pussytoes<br><i>Antennaria arcuata</i>                                                |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Charleston pussytoes<br><i>Antennaria soliceps</i>                                           |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Link Trail columbine<br><i>Aquilegia flavescens</i> var. <i>rubicunda</i>                    |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Graham columbine<br><i>Aquilegia grahamii</i>                                                | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Rosy King's sandwort<br><i>Arenaria kingii</i> ssp. <i>rosea</i>                             |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Petiolate wormwood<br><i>Artemisia campestris</i> ssp. <i>borealis</i> var. <i>petiolata</i> | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Eastwood milkweed<br><i>Asclepias eastwoodiana</i>                                           |     |     |     |     |     |     |     | X   |     |     |     |     |     | X   |     |     |
| Clokey milkvetch<br><i>Astragalus aequalis</i>                                               |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |



| SENSITIVE                                                                         | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|-----------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lost River milkvetch<br><i>Astragalus amnis-amissi</i>                            |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |
| Goose Creek milkvetch<br><i>Astragalus anserinus</i>                              |     |     |     |     |     |     |     |     |     |     |     | ?   |     |     |     |     |
| Lemhi milkvetch<br><i>Astragalus aquilonius</i>                                   |     |     |     |     | X   |     |     |     |     |     |     | ?   |     |     |     |     |
| Bicknell milkvetch<br><i>Astragalus consobrinus</i>                               |     |     |     |     |     |     | X   |     | ?   |     |     |     |     |     |     |     |
| Meadow milkvetch<br><i>Astragalus diversifolius</i> var. <i>diversifolius</i>     |     |     | X   |     | X   |     |     |     |     |     |     |     | X   |     |     |     |
| Dana milkvetch<br><i>Astragalus henrimontanensis</i>                              |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Isely's milkvetch<br><i>Astragalus iselyi</i>                                     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Starvling milkvetch<br><i>Astragalus jejunus</i> var. <i>jejunus</i>              |     |     | X   | X   |     |     |     |     |     |     |     |     |     |     |     |     |
| Long Valley milkvetch<br><i>Astragalus johannis-howellii</i>                      |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Broad-pod freckled milkvetch<br><i>Astragalus lentiginosus</i> var. <i>latus</i>  |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Navajo Lake milkvetch<br><i>Astragalus limnocharis</i> var. <i>limnocharis</i>    |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Table Cliff milkvetch<br><i>Astragalus limnocharis</i> var. <i>tabulaeus</i>      |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Lee Canyon milkvetch<br><i>Astragalus oophorus</i> var. <i>clokeyanus</i>         |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Lavin's egg milkvetch<br><i>Astragalus oophorus</i> var. <i>lavinii</i>           |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Payson's milkvetch<br><i>Astragalus paysonii</i>                                  |     |     | X   |     |     |     |     |     |     | X   |     |     | ?   |     |     |     |
| Spring Mountain milkvetch<br><i>Astragalus remotus</i>                            |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Lamoille Canyon milkvetch<br><i>Astragalus robbinsii</i> var. <i>occidentalis</i> |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Toquima milkvetch<br><i>Astragalus toquimanus</i>                                 |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Currant milkvetch<br><i>Astragalus uncialis</i>                                   |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |

| SENSITIVE                                                                                 | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|-------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| White Cloud milkvetch<br><i>Astragalus vexilliflexus</i> var. <i>nubilus</i>              |     |     |     |     | X   |     |     |     |     | X   |     | X   |     |     |     |     |
| Guard milkvetch<br><i>Astragalus zionis</i> var. <i>vigulus</i>                           |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Bodie Hills rockcress<br><i>Boechera</i> (=Arabis) <i>bodiensis</i>                       |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Grouse Creek rockcress<br><i>Boechera</i> (=Arabis) <i>falcatoria</i>                     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Spring Mountains rockcress<br><i>Boechera</i> (=Arabis) <i>nevadensis</i>                 |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Washoe tall rockcress<br><i>Boechera</i> (=Arabis) <i>rectissima</i> var. <i>simulans</i> |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Galena Creek rockcress<br><i>Boechera</i> (=Arabis) <i>rigidissima</i> var. <i>demota</i> |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Ophir rockcress<br><i>Boechera</i> (=Arabis) <i>ophira</i>                                |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Tiehm rockcress<br><i>Boechera</i> (=Arabis) <i>tiehmii</i>                               |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Upswept moonwort<br><i>Botrychium ascendens</i>                                           |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Dainty moonwort<br><i>Botrychium crenulatum</i>                                           | X   |     |     |     |     |     |     |     |     |     |     |     | X   | X   | X   |     |
| Slender moonwort<br><i>Botrychium lineare</i>                                             | X   |     |     |     |     |     |     | ?   |     | ?   |     | X   |     | X   | ?   | X   |
| Paradox moonwort<br><i>Botrychium paradoxum</i>                                           |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Little grape fern<br><i>Botrychium simplex</i>                                            |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |
| Moosewort<br><i>Botrychium tunux</i>                                                      |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Beautiful Bryum<br><i>Bryum calobryoides</i>                                              |     | X   |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |
| Cascade reedgrass<br><i>Calamagrostis tweedyi</i>                                         |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Cusick camas<br><i>Camassia cusickii</i>                                                  |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Seaside sedge<br><i>Carex incurviformis</i>                                               |     |     | X   |     | X   |     |     |     |     |     |     |     |     |     |     |     |

x=known species/habitat; ?=suspected/potential habitat; \*=wild/naturally reproducing; +=migration; o=offsite; r= reintroduced populations; ED=Effective dates

| SENSITIVE                                                                                       | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|-------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Black and purple sedge<br><i>Carex luzulina</i> var. <i>atropurpurea</i>                        |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Tioga Pass sedge<br><i>Carex tiogana</i>                                                        |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Aquarius paintbrush<br><i>Castilleja aquariensis</i>                                            |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Christ's Indian paintbrush<br><i>Castilleja christii</i>                                        |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |
| Tushar paintbrush<br><i>Castilleja parvula</i> var. <i>parvula</i>                              |     |     |     |     |     | X   | X   |     |     |     |     |     |     |     |     |     |
| Reveal paintbrush<br><i>Castilleja parvula</i> var. <i>revealii</i>                             |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Centennial rabbitbrush<br><i>Chrysothamnus parryi</i> ssp. <i>montanus</i>                      |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |
| Flexible alpine collomia<br><i>Collomia debilis</i> var. <i>camporum</i>                        |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |
| Wasatch fitweed<br><i>Corydalis caseana</i> spp. <i>brachycarpa</i>                             |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   | X   |
| Creutzfeldt-flower cryptanth<br><i>Cryptantha creutzfeldtii</i>                                 |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Yellow-white catseye<br><i>Cryptantha ochroleuca</i>                                            |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Bodie Hills draba<br><i>Cusickiella quadricostata</i>                                           |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Pinnate spring-parsley<br><i>Cymopterus beckii</i>                                              |     |     |     |     |     | X   |     |     | X   |     |     |     |     |     |     |     |
| Davis' wavewing<br><i>Cymopterus davisii</i>                                                    |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |
| Douglas' biscuitroot<br><i>Cymopterus douglassii</i>                                            |     |     |     |     | X   |     |     |     |     |     | X   | X   |     |     |     |     |
| Goodrich biscuitroot<br><i>Cymopterus goodrichii</i>                                            |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Cedar Breaks biscuitroot<br><i>Cymopterus minimus</i>                                           |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Brownie ladyslipper<br><i>Cypripedium fasciculatum</i>                                          | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |
| Lesser yellow Lady's slipper<br><i>Cypripedium parviflorum</i> ( <i>Cypripedium calceolus</i> ) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |

| SENSITIVE                                                                              | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|----------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <i>var. parviflorum</i> )                                                              |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Wyoming tansymustard<br><i>Descurainia torulosa</i>                                    |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Wasatch shooting star<br><i>Dodecatheon utahense</i>                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |
| Idaho douglasia<br><i>Douglasia idahoensis</i>                                         |     | X   |     |     |     |     |     |     |     | ?   |     | ?   |     |     |     |     |
| Abajo peak draba<br><i>Draba abajoensis</i>                                            |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Arid draba<br><i>Draba arida</i>                                                       |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Star draba<br><i>Draba asterophora</i> var. <i>asterophora</i>                         |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Wasatch Draba<br><i>Draba brachystylis</i>                                             |     |     |     |     |     |     |     |     |     |     |     |     |     | X   | ?   | X   |
| Burke's draba<br><i>Draba burkei</i>                                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |
| Rockcress draba<br><i>Draba globosa</i> (=D. <i>densifolia</i> var. <i>apiculata</i> ) | X   |     | X   |     | X   |     |     |     |     |     |     | X   |     |     | X   | X   |
| Jaeger draba<br><i>Draba jaegeri</i>                                                   |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Maguire draba<br><i>Draba maguirei</i>                                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |
| Serpentine draba<br><i>Draba oreibata</i> var. <i>serpentina</i>                       |     |     |     |     |     |     |     | ?   |     |     |     |     |     | X   |     |     |
| Charleston draba<br><i>Draba paucifructa</i>                                           |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Pennell draba<br><i>Draba pennellii</i>                                                |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Mt. Belknap draba<br><i>Draba ramulosa</i>                                             |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |
| Santaquin draba<br><i>Draba santaquinensis</i>                                         |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |
| Creeping draba<br><i>Draba sobolifera</i>                                              |     |     |     |     |     | X   | X   |     |     |     |     |     |     |     |     |     |
| Stanley's whitlow-grass<br><i>Draba trichocarpa</i>                                    |     |     |     |     | X   |     |     |     |     |     |     | X   |     |     |     |     |
| Nevada willowherb                                                                      |     |     |     |     |     |     | X   |     |     |     |     |     |     | X   |     |     |

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| SENSITIVE                                                                                                            | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|----------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <i>Epilobium nevadense</i>                                                                                           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Spring Mountain goldenweed<br><i>Ericameria compacta</i> (=Haplopappus compactus)                                    |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Pine Valley goldenweed<br><i>Ericameria crispa</i> (=Haplopappus crispus)                                            |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Narrow-leaf goldenweed<br><i>Ericameria discoidea</i> var. <i>linearis</i><br>(=Haplopappus macronema var. linearis) |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Abajo daisy<br><i>Erigeron abajoensis</i>                                                                            |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Carrington daisy<br><i>Erigeron carringtonae</i>                                                                     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Snake Mountain erigeron<br><i>Erigeron cavernensis</i>                                                               |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Cronquist daisy<br><i>Erigeron cronquistii</i>                                                                       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |
| Garrett's fleabane<br><i>Erigeron garrettii</i>                                                                      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   | X   |
| Kachina daisy<br><i>Erigeron kachinensis</i>                                                                         |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Woolly daisy<br><i>Erigeron lanatus</i>                                                                              |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Maguire daisy<br><i>Erigeron maguirei</i>                                                                            |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |
| LaSal daisy<br><i>Erigeron mancus</i>                                                                                |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Untermann daisy<br><i>Erigeron untermannii</i>                                                                       | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Widtsoe buckwheat<br><i>Eriogonum aretioides</i>                                                                     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Elsinore buckwheat<br><i>Eriogonum batemanii</i> var. <i>ostlundii</i>                                               |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |
| Desert buckwheat<br><i>Eriogonum brevicaulum</i> var. <i>desertorum</i>                                              |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |
| Welsh buckwheat<br><i>Eriogonum capistratum</i> var. <i>welshii</i>                                                  |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |
| Sunflower Flat buckwheat                                                                                             |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |

| SENSITIVE                                                                                            | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <i>Eriogonum douglasii</i> var. <i>elkoense</i>                                                      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Toiyabe buckwheat<br><i>Eriogonum esmeraldense</i> var. <i>toiyabense</i>                            |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Clokey buckwheat<br><i>Eriogonum heermannii</i> var. <i>clokeyi</i>                                  |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Lewis's buckwheat<br><i>Eriogonum lewisii</i>                                                        |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Logan buckwheat<br><i>Eriogonum loganum</i> (=E. <i>brevicaule</i> var. <i>loganum</i> )             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |
| Guardian buckwheat<br><i>Eriogonum meledonum</i>                                                     |     |     |     |     | X   |     |     |     |     |     |     | X   |     |     |     |     |
| Altered andesite buckwheat<br><i>Eriogonum robustum</i>                                              |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Clokey greasebush<br><i>Glossopetalon clokeyi</i>                                                    |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Smooth dwarf greasebrush<br><i>Glossopetalon pungens</i> var. <i>glabra</i><br>(=G. <i>pungens</i> ) |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Puzzling halimolobos<br><i>Halimolobos perplexa</i> var. <i>perplexa</i>                             |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Canyon sweetvetch<br><i>Hedysarum occidentale</i> var. <i>canone</i>                                 |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Jones goldenaster<br><i>Heterotheca jonesii</i>                                                      |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Sierra Valley ivesia<br><i>Ivesia aperta</i> var. <i>aperta</i>                                      |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Dog Valley ivesia<br><i>Ivesia aperta</i> var. <i>canina</i>                                         |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Charleston ivesia<br><i>Ivesia cryptocaulis</i>                                                      |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Jaeger ivesia<br><i>Ivesia jaegeri</i>                                                               |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Plumas ivesia<br><i>Ivesia sericoleuca</i>                                                           |     |     |     |     |     |     |     |     |     |     |     |     |     | ?   |     |     |
| Utah ivesia<br><i>Ivesia utahensis</i>                                                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   | X   |
| Wasatch jamesia                                                                                      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   | X   |

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| SENSITIVE                                                                                         | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|---------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <i>Jamesia americana</i> var. <i>macrocalyx</i>                                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Zion jamesia<br><i>Jamesia americana</i> var. <i>zionis</i>                                       |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Basin jamesia<br><i>Jamesia tetrapetala</i>                                                       |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Grimes lathyrus<br><i>Lathyrus grimesii</i>                                                       |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Wasatch pepperwort<br><i>Lepidium montanum</i> var. <i>alpinum</i>                                |     |     |     |     |     |     |     |     |     |     |     |     |     |     | ?   | X   |
| Neeses' peppergrass<br><i>Lepidium montanum</i> var. <i>neeseae</i>                               |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Hazel's prickly phlox<br><i>Leptodactylon pungens</i> ssp. <i>hazeliae</i>                        |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Garrett bladderpod<br><i>Lesquerella garrettii</i>                                                |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   | X   |
| Hitchcock bladderpod<br><i>Lesquerella hitchcockii</i> var. <i>hitchcockii</i>                    |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Payson bladderpod<br><i>Lesquerella paysonii</i>                                                  |     |     | X   | X   |     |     |     |     |     |     |     |     | X   |     |     |     |
| Maguire lewisia<br><i>Lewisia maguirei</i>                                                        |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Sacajawea's bitterroot<br><i>Lewisia sacajaweaana</i>                                             |     | X   |     |     | X   |     |     |     |     | X   | X   | ?   |     |     |     |     |
| Canyonlands lomatium<br><i>Lomatium latilobum</i>                                                 |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Three-ranked hump-moss<br><i>Meesia triquetra</i>                                                 |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Goodrich stickleaf<br><i>Mentzelia goodrichii</i>                                                 | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Bank monkeyflower<br><i>Mimulus clivicola</i>                                                     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Fish Lake naiad<br><i>Najas caespitosa</i>                                                        |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |
| Idaho pennycress<br><i>Noccaea idahoensis</i> var. <i>aileeniae</i> (= <i>Thlaspi aileeniae</i> ) |     |     |     |     | X   |     |     |     |     |     |     | X   |     |     |     |     |
| Shevock rockmoss<br><i>Orthotrichum shevockii</i>                                                 |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |

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|---------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Spjut's brittle-moss<br><i>Orthotrichum spjutii</i>                       |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Challis crazyweed<br><i>Oxytropis besseyi</i> var. <i>salmonensis</i>     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |
| Beaver Mountain groundsel<br><i>Packera</i> (=Senecio) <i>castoreus</i>   |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |
| Podunk groundsel<br><i>Packera</i> (=Senecio) <i>malmstenii</i>           |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Arctic poppy<br><i>Papaver radiculatum</i> var. <i>pygmaeum</i>           | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |
| Naked-stemmed parrya<br><i>Parrya nudicaulis</i>                          |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Paria breadroot<br><i>Pediomelum pariense</i>                             |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Stemless beardtongue<br><i>Penstemon acaulis</i> var. <i>acaulis</i>      | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Dune penstemon<br><i>Penstemon arenarius</i>                              |     |     |     |     |     |     |     |     |     |     |     |     |     | ?   |     |     |
| Red Canyon beardtongue<br><i>Penstemon bracteatus</i>                     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Cache beardtongue<br><i>Penstemon compactus</i>                           |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     | X   |
| Elegant penstemon<br><i>Penstemon concinnus</i>                           |     |     |     |     |     |     |     | ?   |     |     |     |     |     |     |     |     |
| Idaho penstemon<br><i>Penstemon idahoensis</i>                            |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |
| Charleston beardtongue<br><i>Penstemon leiophyllus</i> var. <i>keckii</i> |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Lemhi penstemon<br><i>Penstemon lemhiensis</i>                            |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |
| Mt. Moriah penstemon<br><i>Penstemon moriahensis</i>                      |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Little penstemon<br><i>Penstemon parvus</i>                               |     |     |     |     |     | X   | X   |     |     |     |     |     |     |     |     |     |
| Pinyon penstemon<br><i>Penstemon pinorum</i>                              |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Bashful penstemon<br><i>Penstemon pudicus</i>                             |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |

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| SENSITIVE                                                          | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|--------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Rhizome beardtongue<br><i>Penstemon rhizomatosus</i>               |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Wassuk beardtongue<br><i>Penstemon rubicundus</i>                  |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Jaeger beardtongue<br><i>Penstemon thompsoniae ssp. jaegeri</i>    |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Ward beardtongue<br><i>Penstemon wardii</i>                        |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |
| Inconspicuous phacelia<br><i>Phacelia inconspicua</i>              |     |     |     |     |     |     |     | ?   |     |     |     |     |     |     |     |     |
| Small-flower phacelia<br><i>Phacelia minutissima</i>               |     | X   |     |     |     |     |     | X   |     |     |     | ?   |     |     |     |     |
| Mono phacelia<br><i>Phacelia monoensis</i>                         |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Salmon twin bladderpod<br><i>Physaria didymocarpa var. lyrata</i>  |     |     |     |     |     |     |     |     |     |     | X   |     | X   |     |     |     |
| Creeping twinpod<br><i>Physaria integrifolia v. monticola</i>      |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Whitebark Pine<br><i>Pinus albicaulis</i>                          |     | X   | X   |     | X   |     |     | X   |     | X   | X   | X   | X   | X   |     |     |
| Altered andesite popcorn flower<br><i>Plagiobothrys glomeratus</i> |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Marsh's bluegrass<br><i>Poa abbreviata ssp. marshii</i>            |     |     |     |     | X   |     |     | X   |     |     | X   | X   |     | X   |     |     |
| White Mountain skypilot<br><i>Polemonium chartaceum</i>            |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Williams combleaf<br><i>Polyctenium williamsii</i>                 |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Angell cinquefoil<br><i>Potentilla angelliae</i>                   |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Cottam cinquefoil<br><i>Potentilla cottamii</i>                    |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     | X   |
| Sagebrush cinquefoil<br><i>Potentilla johnstonii</i>               |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Alkali primrose<br><i>Primula alcalina</i>                         |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |
| Ruby Mountain primrose<br><i>Primula capillaris</i>                |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |

| SENSITIVE                                                                                        | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|--------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Nevada primrose<br><i>Primula cusickiana</i> var. <i>nevadensis</i><br>(= <i>P. nevadensis</i> ) |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Greenland primrose<br><i>Primula egaliksensis</i>                                                |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Bugleg goldenweed<br><i>Pyrocoma</i> (= <i>Haplopappus</i> ) <i>insecticruris</i>                |     | X   |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |
| Radiate goldenweed<br><i>Pyrocoma radiata</i> (= <i>Haplopappus radiatus</i> )                   |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Bartons' blackberry<br><i>Rubus bartonianus</i>                                                  |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Arizona willow<br><i>Salix arizonica</i>                                                         |     |     |     |     |     | X   | X   |     | X   |     |     |     |     |     |     |     |
| Weber's saussurea<br><i>Saussurea weberi</i>                                                     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Tobias' saxifrage<br><i>Saxifraga bryophora</i> var. <i>tobiasiae</i>                            |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Tolmie's saxifrage<br><i>Saxifraga tolmiei</i> var. <i>ledifolia</i>                             |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Musinea groundsel<br><i>Senecio musiniensis</i>                                                  |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |
| Mono ragwort<br><i>Senecio pattersonensis</i>                                                    |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Clokey silene<br><i>Silene clokeyi</i>                                                           |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Nachlinger silene<br><i>Silene nachlingerae</i>                                                  |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Maguire campion<br><i>Silene petersonii</i>                                                      |     |     |     |     |     | X   | ?   |     | X   |     |     |     |     |     |     |     |
| Railroad Valley globemallow<br><i>Sphaeralcea caespitosa</i> var. <i>williamsiae</i>             |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Rock-tansy<br><i>Sphaeromeria capitata</i>                                                       |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |
| Low sphaeromeria<br><i>Sphaeromeria compacta</i>                                                 |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Masonic Mountain jewelflower<br><i>Streptanthus oliganthus</i>                                   |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Soft aster                                                                                       |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |

x=known species/habitat; ?=suspected/potential habitat; \*=wild/naturally reproducing; +=migration; o=offsite; r= reintroduced populations; ED=Effective dates

| SENSITIVE                                                                            | ASH | BOI | B-T | CAR | CHA | DIX | FIS | HUM | M-L | PAY | SAL | SAW | TAR | TOI | UIN | W-C |
|--------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <i>Symphyotrichum molle</i> (=Aster mollis)                                          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Charleston kittentails<br><i>Synthyris ranunculina</i>                               |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Caespitose greenthread<br><i>Thelesperma caespitosum</i>                             | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Uinta green thread<br><i>Thelesperma pubescens</i>                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |
| Bicknell thelesperma<br><i>Thelesperma subnudum</i> var. <i>alpinum</i>              |     |     |     |     |     | X   | X   |     |     |     |     |     |     |     |     |     |
| Wavy-leaf thelypody<br><i>Thelypodium repandum</i>                                   |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |
| Alpine goldenweed<br><i>Tonestus</i> (=Haplopappus) <i>alpinus</i>                   |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Barneby woody aster<br><i>Tonestus</i> (=Aster) <i>kingii</i> var. <i>barnebyana</i> |     |     |     |     |     |     | X   |     |     |     |     |     |     |     | X   |     |
| Sevier townsendia<br><i>Townsendia jonesii</i> var. <i>lutea</i>                     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |
| Charleston ground daisy<br><i>Townsendia jonesii</i> var. <i>tumulosa</i>            |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Short-slyle tofieldia<br><i>Triantha occidentalis</i> ssp. <i>brevistyla</i>         |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |
| Currant Summit clover<br><i>Trifolium andinum</i> var. <i>podocephalum</i>           |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Leiberg's clover<br><i>Trifolium leibergii</i>                                       |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Rollins clover<br><i>Trifolium macilentum</i> var. <i>rollinsii</i>                  |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Charleston violet<br><i>Viola charlestonensis</i>                                    |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |
| Smith violet<br><i>Viola franksmithii</i>                                            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |
| Lithion violet<br><i>Viola lithion</i>                                               |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |
| Idaho range lichen<br><i>Xanthoparmelia idahoensis</i>                               |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |

ASH - Ashley

BOI - Boise

B-T - Bridger-Teton

CAR - Caribou

CHA - Challis

DIX - Dixie

FIS - Fishlake

HUM - Humboldt

M-L - Manti-LaSal

PAY - Payette

SAL - Salmon

SAW - Sawtooth

TAR - Targhee

TOI - Toiyabe

UIN - Uinta

W-C - Wasatch-Cache

**KEY:**

X = known distribution species and/or habitat

? = suspected or potential habitat

\* = wild and naturally reproducing stocks

+ = migration corridors only

o = offsite impacts (e.g. downstream)

r = reintroduced Central Idaho &amp; Yellowstone populations, covered under ESA Section 10(j), and declared experimental non-essential populations, and thus are treated like "proposed" species

## = no longer meet "sensitive" criteria (personal communication with Forest botanists and Dr. Duane Atwood), but no official list revision yet

Dates are dates the Final Rule was published in the *Federal Register*;

ED = Effective dates are about 30 days later if not listed.

***This list was compiled from the following sources:****R-4 Vertebrate Sensitive Species List* (August 13, 1990)*R-4 Sensitive Plant List* (April 29, 1994)*Endangered and Threatened Wildlife and Plants*, USDA-U.S. Fish & Wildlife Service (August 20, 1994)*Northern Goshawk - Listed as a Sensitive Species in R4* (October 31, 1991)*Miscellaneous Federal Registers*

# USDA Forest Service, Pacific Southwest Region

# Sensitive Animal Species by Forest

6/30/2013; Updated 9/9/2013

| Scientific Name                                     | Common Name                              | Angeles | Cleveland | Eldorado | Inyo | Klamath | Lassen | Los Padres | Mendocino | Modoc | Plumas | San Bernardino | Sequoia | Shasta-Trinity | Sierra | Six Rivers | Stanislaus | Tahoe | Lake Tahoe Basin |
|-----------------------------------------------------|------------------------------------------|---------|-----------|----------|------|---------|--------|------------|-----------|-------|--------|----------------|---------|----------------|--------|------------|------------|-------|------------------|
| <b>BIRDS (12)</b>                                   |                                          |         |           |          |      |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Accipiter gentilis</i>                           | Northern goshawk                         | X       |           | X        | X    | X       | X      | X          | X         | X     | X      | X              | X       | X              | X      | X          | X          | X     | X                |
| <i>Campylorhynchus brunneicapillus sandiegensis</i> | San Diego cactus wren                    |         | X         |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Centrocercus urophasianus</i>                    | Greater sage-grouse                      |         |           |          | X    |         |        |            |           | X     |        |                |         |                |        |            |            |       |                  |
| <i>Coccyzus americanus occidentalis</i>             | Western yellow-billed cuckoo             | X       | X         |          | X    |         |        |            |           |       |        | X              | X       |                |        | X          |            |       |                  |
| <i>Coturnicops noveboracensis</i>                   | Yellow rail                              |         |           |          |      |         | X      |            |           |       |        |                |         | X              |        |            |            |       |                  |
| <i>Empidonax traillii</i>                           | Willow flycatcher                        |         |           | X        | X    | X       | X      | X          | X         |       | X      | X              | X       | X              | X      |            | X          | X     | X                |
| <i>Grus canadensis tabida</i>                       | Greater sandhill crane                   |         |           |          |      | X       | X      |            |           | X     | X      |                |         |                |        |            |            | X     |                  |
| <i>Haliaeetus leucocephalus</i>                     | Bald eagle                               | X       | X         | X        | X    | X       | X      | X          | X         | X     | X      | X              | X       | X              | X      | X          | X          | X     | X                |
| <i>Pelicanus occidentalis</i>                       | Brown pelican                            |         | X         |          |      |         |        | X          |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Strix nebulosa</i>                               | Great gray owl                           |         |           | X        | X    | X       | X      |            |           | X     | X      |                | X       |                | X      |            | X          | X     | X                |
| <i>Strix occidentalis occidentalis</i>              | California spotted owl                   | X       | X         | X        | X    |         | X      | X          |           | X     | X      | X              | X       |                | X      |            | X          | X     | X                |
| <i>Vireo vicinior</i>                               | Gray vireo                               | X       | X         |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <b>MAMMALS (13)</b>                                 |                                          |         |           |          |      |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Antrozous pallidus</i>                           | Pallid bat                               | X       | X         | X        | X    | X       | X      | X          | X         | X     | X      | X              | X       | X              | X      | X          | X          | X     | X                |
| <i>Brachylagus idahoensis</i>                       | Pygmy rabbit                             |         |           |          | X    |         |        |            |           | X     |        |                |         |                |        |            |            |       |                  |
| <i>Corynorhinus townsendii</i>                      | Townsend's big-eared bat                 | X       | X         | X        | X    | X       | X      | X          | X         | X     | X      | X              | X       | X              | X      | X          | X          | X     | X                |
| <i>Glaucomys sabrinus californicus</i>              | San Bernardino flying squirrel           |         |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Gulo gulo luscus</i>                             | North American wolverine                 |         |           | X        | X    | X       | X      |            | X         | X     | X      |                | X       | X              | X      | X          | X          | X     | X                |
| <i>Martes caurina</i>                               | Pacific marten                           |         |           | X        | X    | X       | X      |            | X         | X     | X      |                | X       | X              | X      | X          | X          | X     | X                |
| <i>Pekania pennanti</i>                             | Fisher                                   |         |           | X        | X    | X       | X      |            | X         |       | X      |                | X       | X              | X      | X          | X          | X     |                  |
| <i>Myotis thysanodes</i>                            | Fringed myotis                           | X       | X         | X        | X    | X       | X      | X          | X         | X     | X      | X              | X       | X              | X      | X          | X          | X     | X                |
| <i>Ovis canadensis nelsoni</i>                      | San Gabriel Mountains bighorn sheep      | X       |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Perognathus alticola alticola</i>                | White-eared pocket mouse                 |         |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Perognathus alticola inexpectatus</i>            | Tehachapi pocket mouse                   | X       |           |          |      |         |        | X          |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Tamias speciosus callipeplus</i>                 | Mount Pinos lodgepole chipmunk           |         |           |          |      |         |        | X          |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Vulpes vulpes necator</i>                        | Sierra Nevada red fox                    |         |           |          | ?    |         | X      |            |           |       |        |                |         |                |        |            | X          |       |                  |
| <b>AMPHIBIANS (21)</b>                              |                                          |         |           |          |      |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Anaxyrus canorus</i>                             | Yosemite toad                            |         |           | X        | X    |         |        |            |           |       |        |                |         |                | X      |            | X          |       |                  |
| <i>Anaxyrus exsul</i>                               | Black toad                               |         |           |          | X    |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Batrachoseps bramei</i>                          | Fairview slender salamander              |         |           |          |      |         |        |            |           |       |        |                | X       |                |        |            |            |       |                  |
| <i>Batrachoseps campi</i>                           | Inyo Mountain salamander                 |         |           |          | X    |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Batrachoseps gabrieli</i>                        | San Gabriel Mountains slender salamander | X       |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Batrachoseps incognitus</i>                      | San Simeon slender salamander            |         |           |          |      |         |        | X          |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Batrachoseps minor</i>                           | Lesser slender salamander                |         |           |          |      |         |        | X          |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Batrachoseps regius</i>                          | Kings River slender salamander           |         |           |          |      |         |        |            |           |       |        |                |         |                | X      |            |            |       |                  |
| <i>Batrachoseps relictus</i>                        | Relictual slender salamander             |         |           |          |      |         |        |            |           |       |        |                | X       |                |        |            |            |       |                  |
| <i>Batrachoseps simatus</i>                         | Kern Canyon slender salamander           |         |           |          |      |         |        |            |           |       |        |                | X       |                |        |            |            |       |                  |
| <i>Ensatina eschscholtzii croceater</i>             | Yellow-blotched salamander               | X       |           |          |      |         |        | X          |           |       |        |                | X       |                |        |            |            |       |                  |
| <i>Ensatina eschscholtzii klauberi</i>              | Large-blotched salamander                |         | X         |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |

| Scientific Name                               | Common Name                                      | Angeles | Cleveland | Eldorado | Inyo | Klamath | Lassen | Los Padres | Mendocino | Modoc | Plumas | San Bernardino | Sequoia | Shasta-Trinity | Sierra | Six Rivers | Stanislaus | Tahoe | Lake Tahoe Basin |
|-----------------------------------------------|--------------------------------------------------|---------|-----------|----------|------|---------|--------|------------|-----------|-------|--------|----------------|---------|----------------|--------|------------|------------|-------|------------------|
| <i>Hydromantes brunus</i>                     | Limestone salamander                             |         |           |          |      |         |        |            |           |       |        |                |         |                | X      |            | X          |       |                  |
| <i>Hydromantes shastae</i>                    | Shasta salamander                                |         |           |          |      |         |        |            |           |       |        |                |         | X              |        |            |            |       |                  |
| <i>Plethodon stormi</i>                       | Siskiyou Mountain salamander                     |         |           |          |      | X       |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Rana aurora aurora</i>                     | Northern red-legged frog                         |         |           |          |      |         |        |            |           |       |        |                |         | X              |        | X          |            |       |                  |
| <i>Rana boylei</i>                            | Foothill yellow-legged frog                      |         |           | X        |      | X       | X      | X          | X         |       | X      |                | X       | X              | X      | X          | X          | X     |                  |
| <i>Rana cascadae</i>                          | Cascade frog                                     |         |           |          |      | X       | X      |            |           |       |        |                |         | X              |        |            |            |       |                  |
| <i>Rana muscosa</i>                           | Mountain yellow-legged frog: Southern Sierra DPS |         |           |          | X    |         |        |            |           |       |        |                | X       |                |        |            |            |       |                  |
| <i>Rana sierrae</i>                           | Sierra Nevada yellow-legged frog                 |         |           | X        | X    |         | X      |            |           |       | X      |                |         |                | X      |            | X          | X     | X                |
| <i>Rhyacotriton variegatus</i>                | Southern torrent salamander                      |         |           |          |      | X       |        |            |           |       |        |                |         | X              |        | X          |            |       |                  |
| <b>REPTILES (12)</b>                          |                                                  |         |           |          |      |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Emys marmorata</i>                         | Western pond turtle                              | X       | X         | X        |      | X       | X      | X          | X         | X     | X      | X              | X       | X              | X      | X          | X          | X     |                  |
| <i>Anniella pulchra</i>                       | California legless lizard                        | X       | X         |          |      |         |        | X          |           |       |        | X              | X       |                |        |            |            |       |                  |
| <i>Aspidoscelis hyperythra</i>                | Orange-throated whiptail                         |         | X         |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Charina umbratica</i>                      | Southern rubber boa                              |         |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Crotalus ruber ruber</i>                   | Red diamond rattlesnake                          |         | X         |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Diadophis punctatus modestus</i>           | San Bernardino ringneck snake                    | X       |           |          |      |         |        | X          |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Diadophis punctatus similis</i>            | San Diego ringneck snake                         |         | X         |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Elgaria panamintina</i>                    | Panamint alligator lizard                        |         |           |          | X    |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Lampropeltis zonata parvirubra</i>         | San Bernardino Mountain kingsnake                | X       |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Lampropeltis zonata pulchra</i>            | San Diego Mountain kingsnake                     |         | X         |          |      |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Lichanura orcutti</i>                      | Coastal rosy boa or 3-lined boa                  | X       | X         |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Thamnophis hammondi</i>                    | Two-striped garter snake                         | X       | X         |          |      |         |        | X          |           |       |        | X              |         |                |        |            |            |       |                  |
| <b>INVERTEBRATES, TERRESTRIAL (24)</b>        |                                                  |         |           |          |      |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Bombus occidentalis</i>                    | Western bumble bee                               |         |           | X        |      | X       | X      |            |           | X     | X      |                |         | X              |        | X          |            | X     | X                |
| <i>Danaus plexippus</i>                       | Monarch butterfly                                |         |           |          |      |         |        | X          |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Euphilotes baueri (battoides) vernalis</i> | Vernal blue butterfly                            |         |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Euphilotes enoptes cryptorufes</i>         | Pratt's blue butterfly                           |         |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Euphilotes enoptes nr. Dammersi</i>        | Dammer's blue butterfly                          |         |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Euphydryas editha bingi</i>                | Bing's checkerspot butterfly                     |         |           |          |      |         |        |            |           | X     |        |                |         |                |        |            |            |       |                  |
| <i>Euphydryas editha ehrlichi</i>             | Ehrlich's checkerspot butterfly                  |         |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Euphydryas editha karinae</i>              | Karin's checkerspot butterfly                    |         |           |          |      |         |        |            | X         |       |        |                |         |                |        |            |            |       |                  |
| <i>Euphydryas editha monoensis</i>            | Mono Lake checkerspot butterfly                  |         |           |          | X    |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Glaucopsyche piasus nr. sagittegera</i>    | Arrowhead blue butterfly                         |         |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Hermelyceana hermes</i>                    | Hermes copper butterfly                          |         | X         |          |      |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Incisalia mossii hidakupa</i>              | San Gabriel Mountains elfin                      |         |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Monadenia troglodytes troglodytes</i>      | Shasta sideband snail                            |         |           |          |      |         |        |            |           |       |        |                |         | X              |        |            |            |       |                  |
| <i>Monadenia troglodytes wintu</i>            | Wintu sideband snail                             |         |           |          |      |         |        |            |           |       |        |                |         | X              |        |            |            |       |                  |
| <i>Plebejus saepiolus aureolus</i>            | San Gabriel Mountains blue butterfly             | X       |           |          |      |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Plebulina emigdonis</i>                    | San Emigdio blue butterfly                       | X       |           |          | X    |         |        |            |           |       |        | X              |         |                |        |            |            |       |                  |
| <i>Polites mardon</i>                         | Mardon skipper                                   |         |           |          |      |         |        |            |           |       |        |                |         |                |        | X          |            |       |                  |
| <i>Rothelix warnerfontis</i>                  | Warner Spring shoulderband snail                 |         | X         |          |      |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |
| <i>Speyeria egleis tehachapina</i>            | Tehachapi fritillary butterfly                   |         |           |          |      |         |        |            |           |       |        |                | X       |                |        |            |            |       |                  |
| <i>Speyeria nokomis apacheana</i>             | Apache silverspot butterfly                      |         |           |          | X    |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |



| Scientific Name                               | Common Name                                | Angeles   | Cleveland | Eldorado  | Inyo      | Klamath   | Lassen    | Los Padres | Mendocino | Modoc     | Plumas    | San Bernardino | Sequoia   | Shasta-Trinity | Sierra    | Six Rivers | Stanislaus | Tahoe     | Lake Tahoe Basin |
|-----------------------------------------------|--------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|----------------|-----------|----------------|-----------|------------|------------|-----------|------------------|
| <i>Trilobopsis roperi</i>                     | Shasta chaparral snail                     |           |           |           |           |           |           |            |           |           |           |                |           | X              |           |            |            |           |                  |
| <i>Trilobopsis tehamana</i>                   | Tehama chaparral snail                     |           |           |           |           | X         |           |            |           |           |           |                |           | X              |           |            |            |           |                  |
| <i>Vespericola pressleyi</i>                  | Big Bar hesperian snail                    |           |           |           |           |           |           |            |           |           |           |                |           | X              |           |            |            |           |                  |
| <i>Vespericola shasta</i>                     | Shasta hesperian snail                     |           |           |           |           |           | X         |            |           |           |           |                |           | X              |           |            |            |           |                  |
| <b>INVERTEBRATES, AQUATIC - Mollusks (13)</b> |                                            |           |           |           |           |           |           |            |           |           |           |                |           |                |           |            |            |           |                  |
| <i>Anodonta californiensis</i>                | California floater (freshwater mussel)     |           |           |           |           |           | X         |            |           | X         |           |                |           | X              |           | X          |            | X         |                  |
| <i>Fluminicola seminalis</i>                  | Nugget pebblesnail                         |           |           |           |           |           | X         |            |           |           |           |                |           | X              |           |            |            |           |                  |
| <i>Helisoma newberryi newberryi</i>           | Great Basin rams-horn (snail)              |           |           |           |           |           | X         |            |           |           |           |                |           |                |           |            |            | X         | X                |
| <i>Juga (Calibasis) acutifilosa</i>           | Topaz juga (snail)                         |           |           |           |           |           | X         |            |           | X         |           |                |           |                |           |            |            |           |                  |
| <i>Juga chacei</i>                            | Chace juga (snail)                         |           |           |           |           |           |           |            |           |           |           |                |           |                |           | X          |            |           |                  |
| <i>Juga nigrina</i>                           | Black juga (snail)                         |           |           |           |           |           | X         |            |           | X         |           |                |           | X              |           |            |            | X         |                  |
| <i>Juga (Calibasis) occata</i>                | Scalloped juga (snail)                     |           |           |           |           |           | X         |            |           |           |           |                |           | X              |           |            |            |           |                  |
| <i>Lanx patelloides</i>                       | Kneecap lanx (limpet)                      |           |           |           |           |           | X         |            |           |           |           |                |           | X              |           |            |            |           |                  |
| <i>Pisidium (Cyclocalyx) ultramontanum</i>    | Montane peaclam                            |           |           |           |           |           | X         |            |           |           |           |                |           | X              |           |            |            |           |                  |
| <i>Pristinicola hemphilli</i>                 | Pristine springsnail                       |           |           |           |           |           |           |            |           |           |           |                |           |                |           | X          |            |           |                  |
| <i>Pyrgulopsis lasseni</i>                    | Willow Creek pyrg (springsnail)            |           |           |           |           |           |           |            |           | X         |           |                |           |                |           |            |            |           |                  |
| <i>Pyrgulopsis owensensis</i>                 | Owen's Valley springsnail                  |           |           |           | X         |           |           |            |           |           |           |                |           |                |           |            |            |           |                  |
| <i>Pyrgulopsis wongi</i>                      | Wong's springsnail                         |           |           |           | X         |           |           |            |           |           |           |                |           |                |           |            |            |           |                  |
| <b>FISHES (22)</b>                            |                                            |           |           |           |           |           |           |            |           |           |           |                |           |                |           |            |            |           |                  |
| <i>Catostomus occidentalis lacusanseinus</i>  | Goose Lake sucker                          |           |           |           |           |           |           |            |           | X         |           |                |           |                |           |            |            |           |                  |
| <i>Entosphenus similis</i>                    | Klamath River lamprey                      |           |           |           |           | X         |           |            |           |           |           |                |           |                |           |            |            |           |                  |
| <i>Entosphenus tridentatus</i>                | Pacific lamprey                            |           |           | X         |           | X         | X         | X          | X         | X         |           |                |           | X              |           | X          |            |           |                  |
| <i>Gila bicolor pectinifer</i>                | Lahontan Lake tui chub                     |           |           |           |           |           |           |            |           |           |           |                |           |                |           |            |            | X         | X                |
| <i>Gila bicolor thalassina</i>                | Goose Lake tui chub                        |           |           |           |           |           |           |            |           | X         |           |                |           |                |           |            |            |           |                  |
| <i>Gila orcutti</i>                           | Arroyo chub                                | X         | X         |           |           |           |           | X          |           |           |           | X              |           |                |           |            |            |           |                  |
| <i>Lampetra hubbsi</i>                        | Kern brook lamprey                         |           |           |           |           |           |           |            |           |           |           |                | X         |                | X         |            |            |           |                  |
| <i>Lampetra richardsoni</i>                   | Western brook lamprey                      |           |           |           |           | X         |           |            | X         |           |           |                |           |                |           | X          |            |           |                  |
| <i>Lampetra tridentata</i> ssp.               | Goose Lake lamprey                         |           |           |           |           |           |           |            |           | X         |           |                |           |                |           |            |            |           |                  |
| <i>Lavinia exilicauda chi</i>                 | Clear Lake hitch                           |           |           |           |           |           |           |            | X         |           |           |                |           |                |           |            |            |           |                  |
| <i>Mylopharodon conocephalus</i>              | Hardhead                                   |           |           | X         |           |           | X         |            | X         | X         | X         |                | X         | X              | X         |            | X          | X         |                  |
| <i>Oncorhynchus clarkii</i>                   | Coastal run cutthroat trout                |           |           |           |           |           |           |            |           |           |           |                |           |                |           | X          |            |           |                  |
| <i>Oncorhynchus mykiss</i>                    | Steelhead - Klamath Mountains Province ESU |           |           |           |           | X         |           |            |           |           |           |                |           | X              |           | X          |            |           |                  |
| <i>Oncorhynchus mykiss aguabonita</i>         | California golden trout                    |           |           |           | X         |           |           |            |           |           |           |                | X         |                |           |            |            |           |                  |
| <i>Oncorhynchus mykiss aquilarum</i> (pop 5)  | Eagle Lake rainbow trout                   |           |           |           |           |           | X         |            |           |           |           |                |           |                |           |            |            |           |                  |
| <i>Oncorhynchus mykiss gilberti</i>           | Kern River rainbow trout                   |           |           |           |           |           |           |            |           |           |           |                | X         |                |           |            |            |           |                  |
| <i>Oncorhynchus mykiss</i> pop 4              | Warner Valley redband trout                |           |           |           |           |           |           |            |           | X         |           |                |           |                |           |            |            |           |                  |
| <i>Oncorhynchus mykiss</i> pop 6              | Goose Lake redband trout                   |           |           |           |           |           | X         |            |           | X         |           |                |           |                |           |            |            |           |                  |
| <i>Oncorhynchus mykiss</i> pop 7              | McCloud River redband trout                |           |           |           |           |           |           |            |           |           |           |                |           | X              |           |            |            |           |                  |
| <i>Oncorhynchus tshawytscha</i>               | Upper Klamath-Trinity chinook ESU          |           |           |           |           | X         |           |            |           |           |           |                |           | X              |           | X          |            |           |                  |
| <i>Oncorhynchus tshawytscha</i> ssp.          | SONCC Chinook salmon                       |           |           |           |           |           |           |            |           |           |           |                |           |                |           | X          |            |           |                  |
| <i>Rhinichthys osculus</i> ssp 8              | Santa Ana speckled dace                    | X         | X         |           |           |           |           |            |           |           |           | X              |           |                |           |            |            |           |                  |
| <b>R5 Total Sensitive Animals = 124</b>       | Total # Sensitive Animals per Forest       | <b>22</b> | <b>22</b> | <b>18</b> | <b>27</b> | <b>23</b> | <b>32</b> | <b>21</b>  | <b>16</b> | <b>26</b> | <b>17</b> | <b>36</b>      | <b>25</b> | <b>34</b>      | <b>19</b> | <b>24</b>  | <b>18</b>  | <b>21</b> | <b>14</b>        |
|                                               |                                            | ANG       | CLE       | ELD       | INY       | KNF       | LAS       | LP         | MEN       | MOD       | PLU       | SB             | SEQ       | S-T            | SIE       | 6R         | STAN       | TAH       | LTB              |

| Scientific Name | Common Name | Anges | Cleveland | Eldorado | Inyo | Klamath | Lassen | Los Padres | Mendocino | Modoc | Plumas | San Bernardino | Sequoia | Shasta-Trinity | Sierra | Six Rivers | Stanislaus | Tahoe | Lake Tahoe Basin |
|-----------------|-------------|-------|-----------|----------|------|---------|--------|------------|-----------|-------|--------|----------------|---------|----------------|--------|------------|------------|-------|------------------|
|                 |             |       |           |          |      |         |        |            |           |       |        |                |         |                |        |            |            |       |                  |

*Note: Common names may not always meet official standards used by various scientific organizations, but have been edited for document consistency. Only the first letter of the common name has been capitalized unless referring to a personal or geographic name.*

**10-1G020 Carson Area Traffic Management Systems Project  
Natural Environment Study (Minimal Impacts)**

**Attachment 2:  
Project Preliminary Plans**

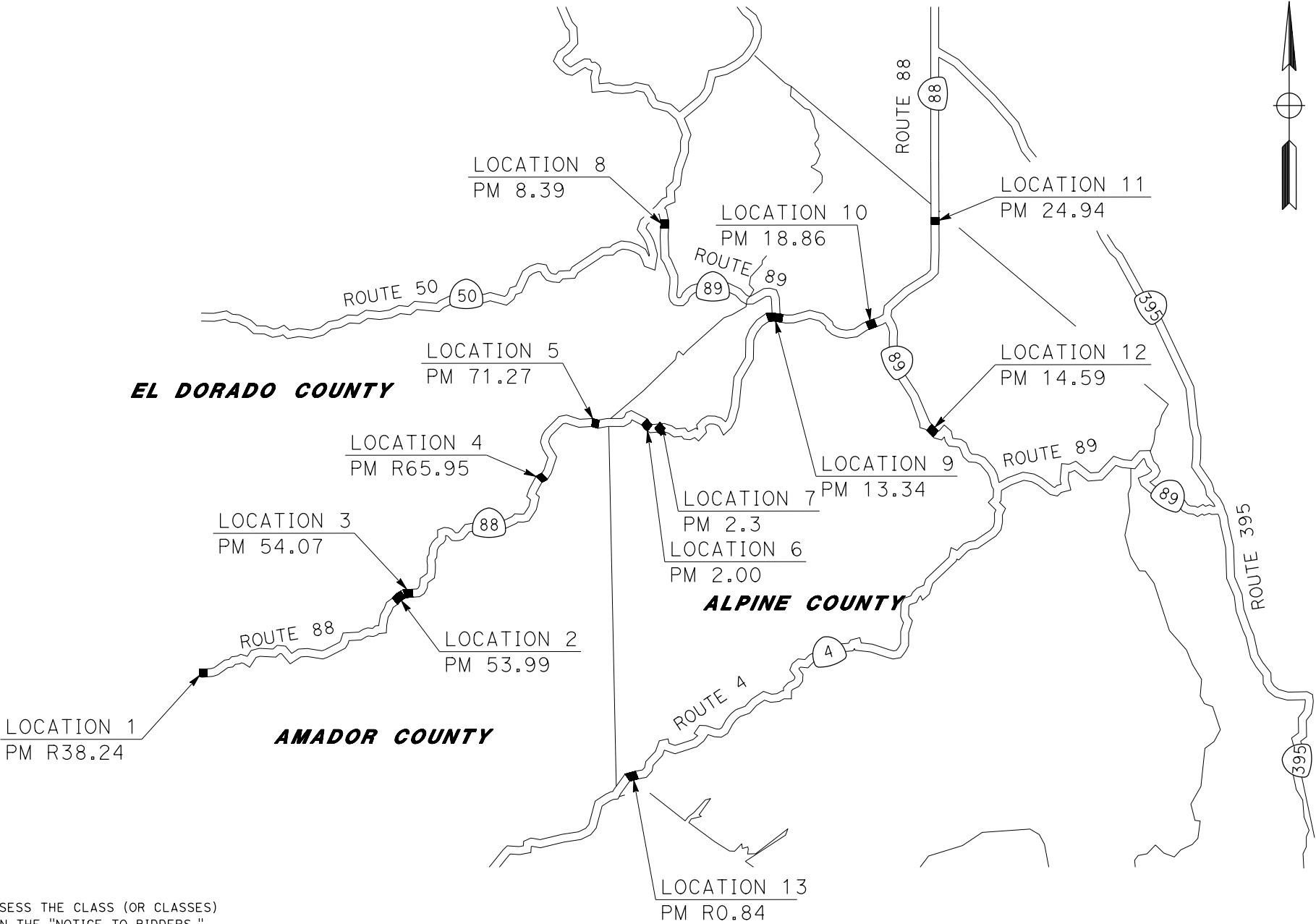
INDEX OF PLANS

SHEET No. DESCRIPTION

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY  
IN AMADOR, EL DORADO AND ALPINE COUNTIES  
ON STATE ROUTES 4, 88 & 89 AT VARIOUS LOCATIONS

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

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018



PROJECT ENGINEER  
REGISTERED CIVIL ENGINEER

DATE

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.



|              |            |
|--------------|------------|
| CONTRACT No. | 10-1G0204  |
| PROJECT ID   | 1018000275 |

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









LEGEND:



POTENTIAL STAGING AREA

|                                                                                                                                                            |        |       |                                                                                             |              |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|---------------------------------------------------------------------------------------------|--------------|-----------------|
| Dist                                                                                                                                                       | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT                                                                 | SHEET<br>No. | TOTAL<br>SHEETS |
|                                                                                                                                                            |        |       |                                                                                             |              |                 |
| REGISTERED CIVIL ENGINEER                                                                                                                                  |        |       | DATE                                                                                        |              |                 |
| PLANS APPROVAL DATE                                                                                                                                        |        |       |                                                                                             |              |                 |
| THE STATE OF CALIFORNIA OR ITS OFFICERS<br>OR AGENTS SHALL NOT BE RESPONSIBLE FOR<br>THE ACCURACY OR COMPLETENESS OF SCANNED<br>COPIES OF THIS PLAN SHEET. |        |       | REGISTERED PROFESSIONAL ENGINEER<br>No. _____<br>Exp. _____<br>CIVIL<br>STATE OF CALIFORNIA |              |                 |



LOCATION 1 - STAGING AREA

EXHIBITS-(1B)

APPROX. SCALE: 1" = 30'



LEGEND:



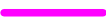
PROPOSED CABINET LOCATION



EXISTING POWER SOURCE

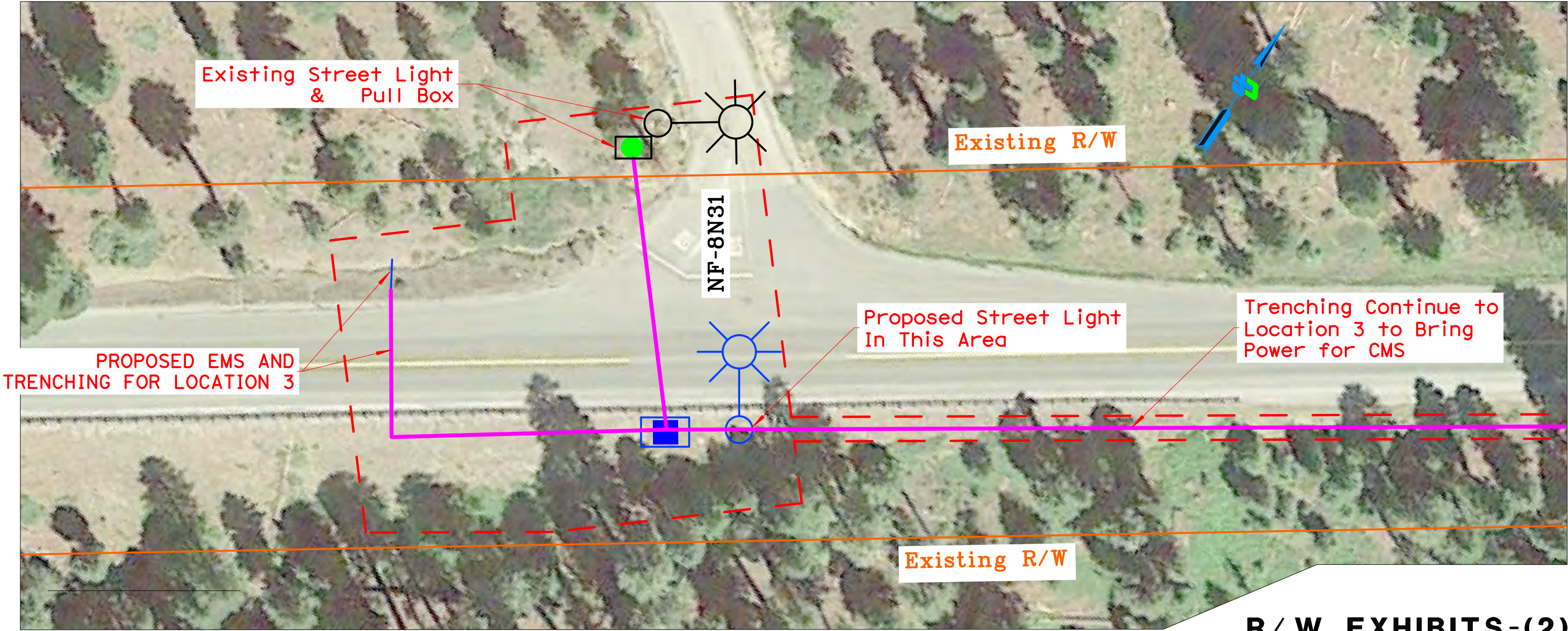


AREA OF POTENTIAL ENVIRONMENTAL IMPACT (INCLUDING  
TRENCHING, VEGETATION REMOVAL, GEOTECHNICAL DRILLING



PROPOSED TRENCHING (EXACT LOCATION WILL BE DETERMINED DURING CONSTRUCTION).  
OTHER TRENCHING WITH UNKNOW LOCATION (NOT SHOWN IN THIS DRAWING) IS LOCATED  
WITHIN THE AREA OF POTENTIAL ENVIRONMENTAL IMPACT.

|                                                                                                                                                            |        |       |                              |              |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|------------------------------|--------------|-----------------|
| Dist                                                                                                                                                       | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT  | SHEET<br>No. | TOTAL<br>SHEETS |
|                                                                                                                                                            |        |       |                              |              |                 |
| REGISTERED CIVIL ENGINEER                                                                                                                                  |        |       | DATE                         |              |                 |
| PLANS APPROVAL DATE                                                                                                                                        |        |       |                              |              |                 |
| THE STATE OF CALIFORNIA OR ITS OFFICERS<br>OR AGENTS SHALL NOT BE RESPONSIBLE FOR<br>THE ACCURACY OR COMPLETENESS OF SCANNED<br>COPIES OF THIS PLAN SHEET. |        |       | CIVIL<br>STATE OF CALIFORNIA |              |                 |



LOCATION 2  
AMA-88-53.99

**R/ W EXHIBITS-(2)**  
APPROX. SCALE: 1" = 20'







LEGEND:



POTENTIAL STAGING AREA

|                                                                                                                                                            |        |       |                                             |              |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|---------------------------------------------|--------------|-----------------|
| Dist                                                                                                                                                       | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT                 | SHEET<br>No. | TOTAL<br>SHEETS |
|                                                                                                                                                            |        |       |                                             |              |                 |
| REGISTERED CIVIL ENGINEER                                                                                                                                  |        |       | DATE                                        |              |                 |
| PLANS APPROVAL DATE                                                                                                                                        |        |       |                                             |              |                 |
| THE STATE OF CALIFORNIA OR ITS OFFICERS<br>OR AGENTS SHALL NOT BE RESPONSIBLE FOR<br>THE ACCURACY OR COMPLETENESS OF SCANNED<br>COPIES OF THIS PLAN SHEET. |        |       | No.<br>Exp.<br>CIVIL<br>STATE OF CALIFORNIA |              |                 |



STAGING AREA FOR LOCATION 2&3

AMA-88-54.18

EXHIBITS-(3B)

APPROX. SCALE: 1" = 20'









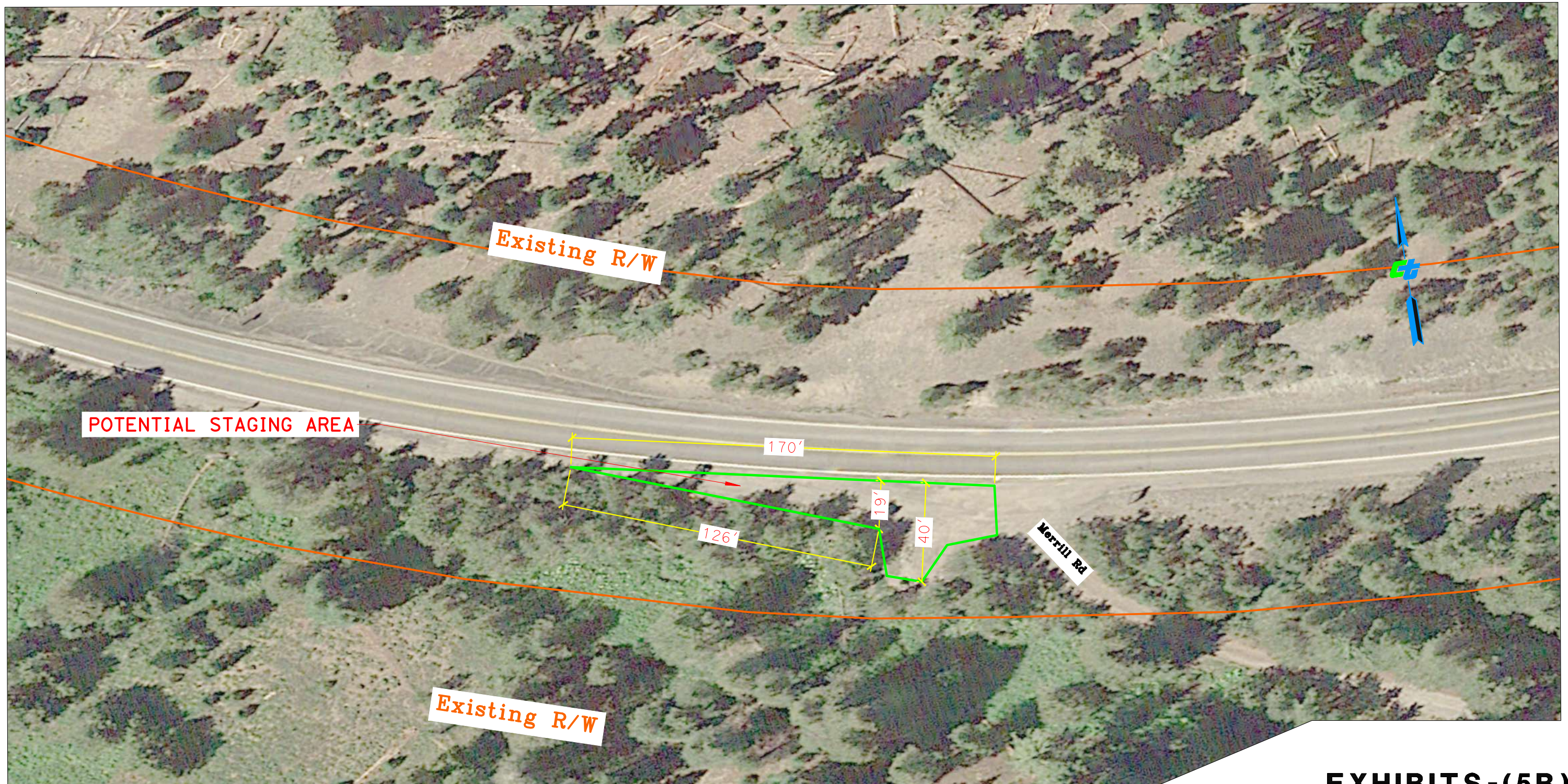


LEGEND:



POTENTIAL STAGING AREA

|                                                                                                                                                            |        |       |                                                                                             |              |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|---------------------------------------------------------------------------------------------|--------------|-----------------|
| Dist                                                                                                                                                       | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT                                                                 | SHEET<br>No. | TOTAL<br>SHEETS |
|                                                                                                                                                            |        |       |                                                                                             |              |                 |
| REGISTERED CIVIL ENGINEER                                                                                                                                  |        |       | DATE                                                                                        |              |                 |
| PLANS APPROVAL DATE                                                                                                                                        |        |       |                                                                                             |              |                 |
| THE STATE OF CALIFORNIA OR ITS OFFICERS<br>OR AGENTS SHALL NOT BE RESPONSIBLE FOR<br>THE ACCURACY OR COMPLETENESS OF SCANNED<br>COPIES OF THIS PLAN SHEET. |        |       | REGISTERED PROFESSIONAL ENGINEER<br>No. _____<br>Exp. _____<br>CIVIL<br>STATE OF CALIFORNIA |              |                 |



POTENTIAL STAGING AREA

Existing R/W

Merrill Rd

Existing R/W

LOCATION 5 - STAGING AREA

EXHIBITS-(5B)

APPROX. SCALE: 1" = 20'

|                                                    |                       |                            |              |
|----------------------------------------------------|-----------------------|----------------------------|--------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-<br>DESIGNED BY | REVISOR BY   |
| <b>Caltrans</b>                                    |                       | CHECKED BY                 | DATE REVISED |

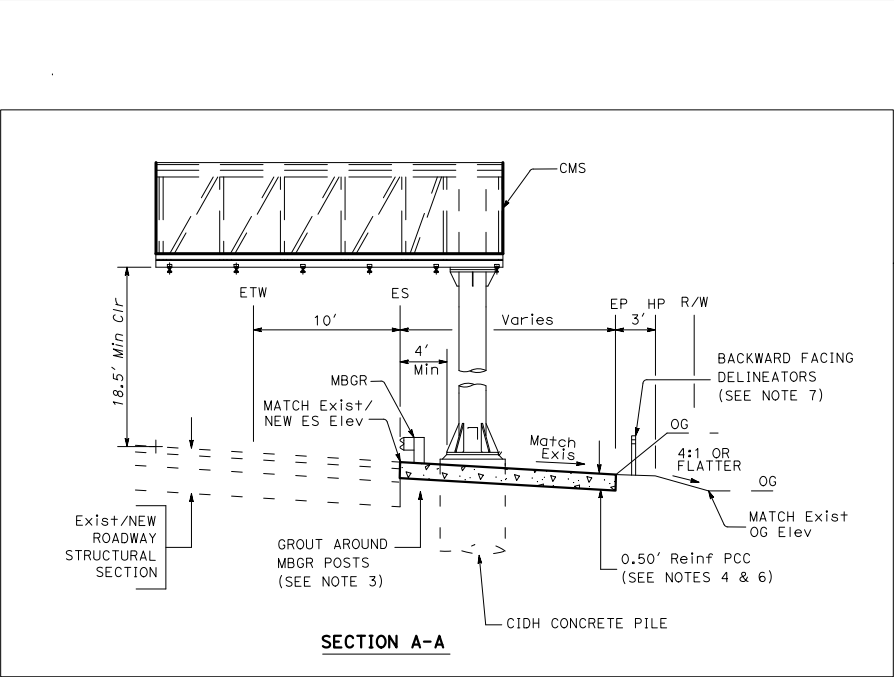






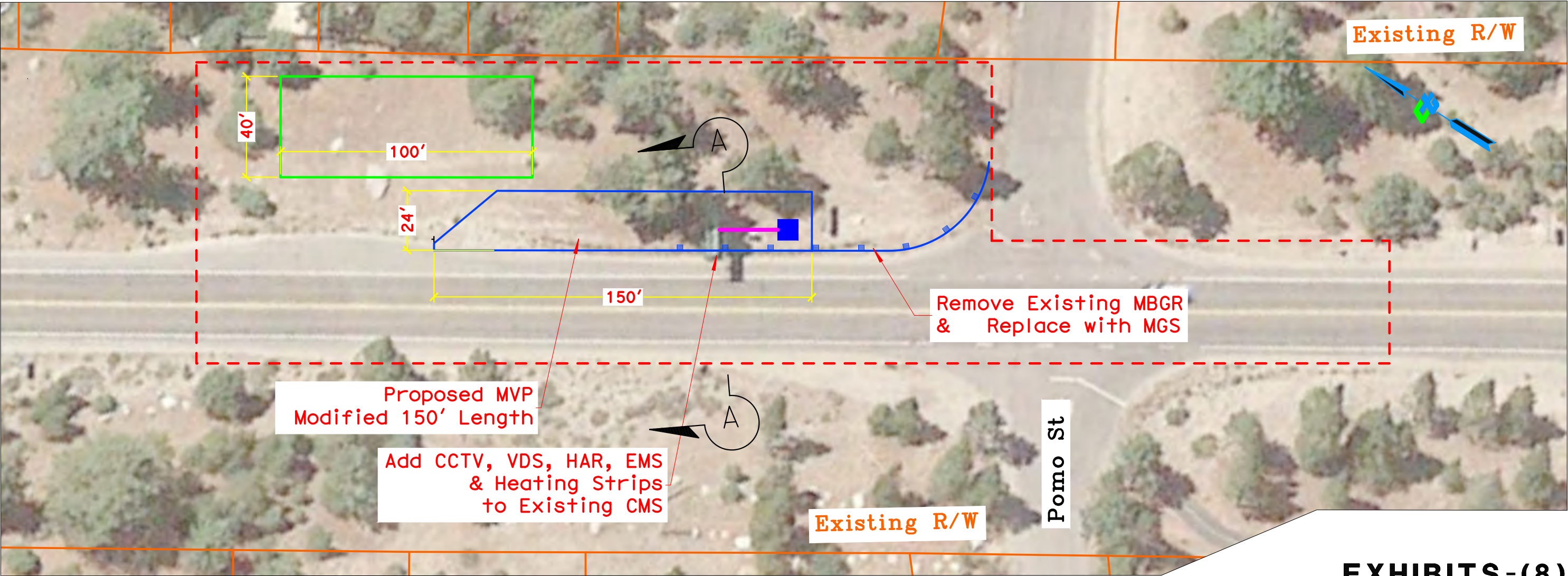






LEGEND:

- PROPOSED CABINET LOCATION
- AREA OF POTENTIAL ENVIRONMENTAL IMPACT (INCLUDING TRENCHING, VEGETATION REMOVAL, GEOTECHNICAL DRILLING FOR CMS FOUNDATION)
- POTENTIAL STAGING AREA
- PROPOSED TRENCHING (EXACT LOCATION WILL BE DETERMINED DURING CONSTRUCTION). OTHER TRENCHING WITH UNKNOW LOCATION (NOT SHOWN IN THIS DRAWING) IS LOCATED WITHIN THE AREA OF POTENTIAL ENVIRONMENTAL IMPACT.



LOCATION 8  
ED-89-8.39

EXHIBITS-(8)  
APPROX. SCALE: 1" = 20'







|                                                    |                       |                            |            |      |            |      |
|----------------------------------------------------|-----------------------|----------------------------|------------|------|------------|------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-<br>DESIGNED BY | REVISOR BY | DATE | REVISOR BY | DATE |
|                                                    |                       |                            |            |      |            |      |
| CALIFORNIA                                         | FUNCTIONAL SUPERVISOR | CHECKED BY                 | REVISOR BY | DATE | REVISOR BY | DATE |
|                                                    |                       |                            |            |      |            |      |

LEGEND:

- PROPOSED TRENCHING
- AREA OF POTENTIAL ENVIRONMENTAL IMPACT (INCLUDING TRENCHING, VEGETATION REMOVAL, GEOTECHNICAL DRILLING FOR THE FOUNDATION OF STREET LIGHTS)

MATCH LINE  
SEE EXHIBIT 9A

|                                                                                                                                                   |        |       |                             |              |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-----------------------------|--------------|-----------------|
| Dist                                                                                                                                              | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT | SHEET<br>No. | TOTAL<br>SHEETS |
|                                                                                                                                                   |        |       |                             |              |                 |
| REGISTERED CIVIL ENGINEER                                                                                                                         |        |       | DATE                        |              |                 |
| 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



LOCATION 9  
TRENCHING FOR POWER TO SAND HOUSE MAINTENANCE STATION

EXHIBITS - (9B)  
APPROX. SCALE: 1"=25'



|                                                    |                       |                        |         |      |
|----------------------------------------------------|-----------------------|------------------------|---------|------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | REVISOR | DATE |
|                                                    |                       |                        |         |      |
| CALIFORNIA                                         | CHECKED BY            | REVISOR                | DATE    | DATE |
|                                                    |                       |                        |         |      |

LEGEND:

PROPOSED TRENCHING



AREA OF POTENTIAL ENVIRONMENTAL IMPACT (INCLUDING TRENCHING, VEGETATION REMOVAL)

|                                                                                                                                                   |        |       |                          |           |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|--------------------------|-----------|--------------|
| DIST                                                                                                                                              | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|                                                                                                                                                   |        |       |                          |           |              |
| REGISTERED CIVIL ENGINEER                                                                                                                         |        |       | DATE                     |           |              |
| PLANS APPROVAL DATE                                                                                                                               |        |       | No. Exp.                 |           |              |
| 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

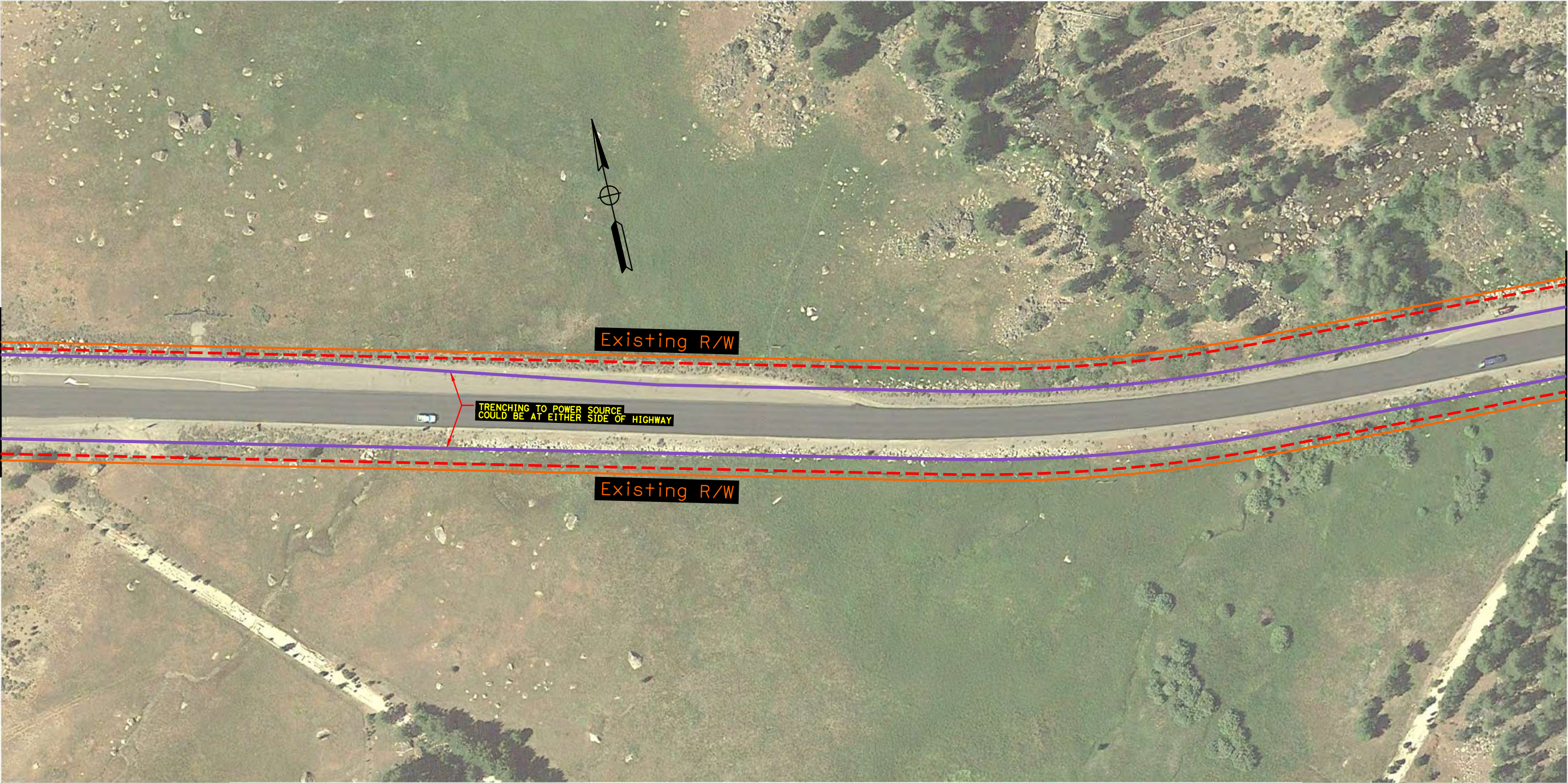
No.

Exp.

CIVIL

STATE OF CALIFORNIA

MATCH LINE SEE EXHIBIT 9A



MATCH LINE SEE EXHIBIT 9D

LOCATION 9  
ALP-88-PM 13.34

EXHIBITS - (9C)  
APPROX. SCALE: 1"=50'



|                                                    |                       |                        |         |      |    |      |
|----------------------------------------------------|-----------------------|------------------------|---------|------|----|------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | REVISOR | DATE | BY | DATE |
|                                                    |                       |                        |         |      |    |      |
| CALIFORNIA                                         | FUNCTIONAL SUPERVISOR | CHECKED BY             | REVISOR | DATE | BY | DATE |
|                                                    |                       |                        |         |      |    |      |

LEGEND:

PROPOSED TRENCHING



AREA OF POTENTIAL ENVIRONMENTAL IMPACT (INCLUDING TRENCHING, VEGETATION REMOVAL)

|                                                                                                                                                   |        |       |                          |           |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|--------------------------|-----------|--------------|
| DIST                                                                                                                                              | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|                                                                                                                                                   |        |       |                          |           |              |
| REGISTERED CIVIL ENGINEER                                                                                                                         |        |       | DATE                     |           |              |
| PLANS APPROVAL DATE                                                                                                                               |        |       |                          |           |              |
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REGISTERED PROFESSIONAL ENGINEER

No.

Exp.

CIVIL

STATE OF CALIFORNIA

MATCH LINE SEE EXHIBIT 9C



MATCH LINE SEE EXHIBIT 9E

LOCATION 9  
ALP-88-PM 13.34

EXHIBITS - (9D)  
APPROX. SCALE: 1"=50'



|                                                    |                       |                        |         |      |
|----------------------------------------------------|-----------------------|------------------------|---------|------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | REVISOR | DATE |
|                                                    |                       |                        |         |      |
| CALTRANS                                           | CHECKED BY            | DESIGNED BY            | REVISOR | DATE |
|                                                    |                       |                        |         |      |

LEGEND:

PROPOSED TRENCHING



AREA OF POTENTIAL ENVIRONMENTAL IMPACT (INCLUDING TRENCHING, VEGETATION REMOVAL)

|                                                                                                                                                   |        |       |                          |           |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|--------------------------|-----------|--------------|
| DIST                                                                                                                                              | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|                                                                                                                                                   |        |       |                          |           |              |
| REGISTERED CIVIL ENGINEER                                                                                                                         |        |       | DATE                     |           |              |
| PLANS APPROVAL DATE                                                                                                                               |        |       |                          |           |              |
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REGISTERED PROFESSIONAL ENGINEER

No.

Exp.

CIVIL

STATE OF CALIFORNIA

MATCH LINE SEE EXHIBIT 9D



MATCH LINE SEE EXHIBIT 9F

LOCATION 9  
ALP-88-PM 13.34

EXHIBITS - (9E)  
APPROX. SCALE: 1"=50'



|                                                    |  |                       |  |                        |  |              |  |  |  |
|----------------------------------------------------|--|-----------------------|--|------------------------|--|--------------|--|--|--|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION |  | FUNCTIONAL SUPERVISOR |  | CALCULATED-DESIGNED BY |  | REVISOR BY   |  |  |  |
| CDOT                                               |  |                       |  | CHECKED BY             |  | DATE REVISED |  |  |  |
|                                                    |  |                       |  |                        |  |              |  |  |  |
|                                                    |  |                       |  |                        |  |              |  |  |  |
|                                                    |  |                       |  |                        |  |              |  |  |  |
|                                                    |  |                       |  |                        |  |              |  |  |  |
|                                                    |  |                       |  |                        |  |              |  |  |  |
|                                                    |  |                       |  |                        |  |              |  |  |  |
|                                                    |  |                       |  |                        |  |              |  |  |  |
|                                                    |  |                       |  |                        |  |              |  |  |  |

LEGEND:



PROPOSED TRENCHING



AREA OF POTENTIAL ENVIRONMENTAL IMPACT (INCLUDING TRENCHING, VEGETATION REMOVAL)



POWER SOURCE (EXISTING CABINET)

|                                                                                                                                                   |        |       |                          |           |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|--------------------------|-----------|--------------|
| DIST                                                                                                                                              | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|                                                                                                                                                   |        |       |                          |           |              |
| REGISTERED CIVIL ENGINEER                                                                                                                         |        |       | DATE                     |           |              |
| PLANS APPROVAL DATE                                                                                                                               |        |       |                          |           |              |
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REGISTERED PROFESSIONAL ENGINEER

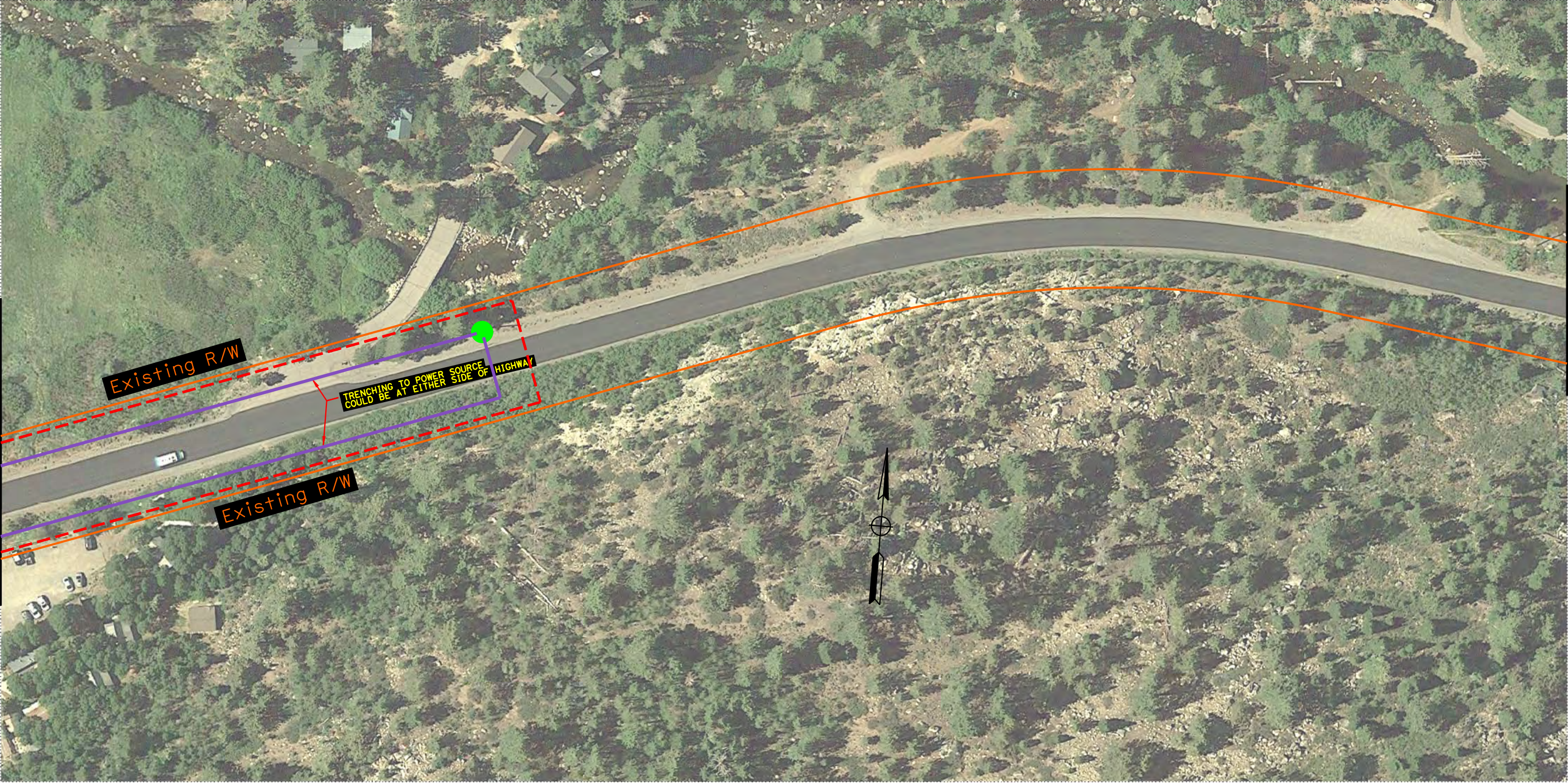
No. \_\_\_\_\_

Exp. \_\_\_\_\_

CIVIL

STATE OF CALIFORNIA

MATCH LINE SEE EXHIBIT 9E



LOCATION 9  
ALP-88-PM 13.34

EXHIBITS - (9F)  
APPROX. SCALE: 1"=50'







LEGEND:



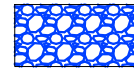
PROPOSED CABINET LOCATION



EXISTING POWER SOURCE



AREA OF POTENTIAL ENVIRONMENTAL IMPACT (INCLUDING  
TRENCHING, VEGETATION REMOVAL, GEOTECHNICAL DRILLING  
FOR CMS FOUNDATION)



GRAVEL



POTENTIAL STAGING AREA



PROPOSED TRENCHING (EXACT LOCATION WILL BE DETERMINED DURING CONSTRUCTION).  
OTHER TRENCHING WITH UNKNOW LOCATION (NOT SHOWN IN THIS DRAWING) IS LOCATED  
WITHIN THE AREA OF POTENTIAL ENVIRONMENTAL IMPACT.

|                                                                                                                                                            |        |       |                             |              |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-----------------------------|--------------|-----------------|
| Dist                                                                                                                                                       | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT | SHEET<br>No. | TOTAL<br>SHEETS |
|                                                                                                                                                            |        |       |                             |              |                 |
| REGISTERED CIVIL ENGINEER                                                                                                                                  |        |       | DATE                        |              |                 |
| PLANS APPROVAL DATE                                                                                                                                        |        |       |                             |              |                 |
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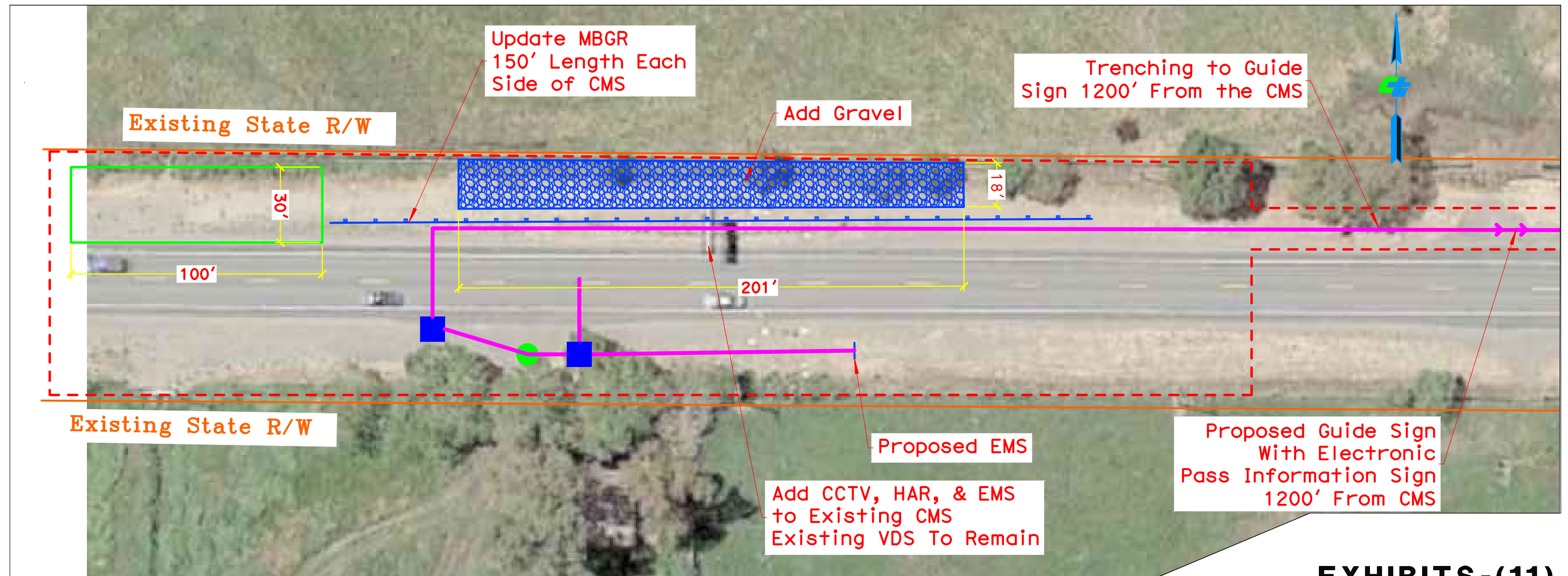
REGISTERED PROFESSIONAL ENGINEER

No. \_\_\_\_\_

Exp. \_\_\_\_\_

CIVIL

STATE OF CALIFORNIA

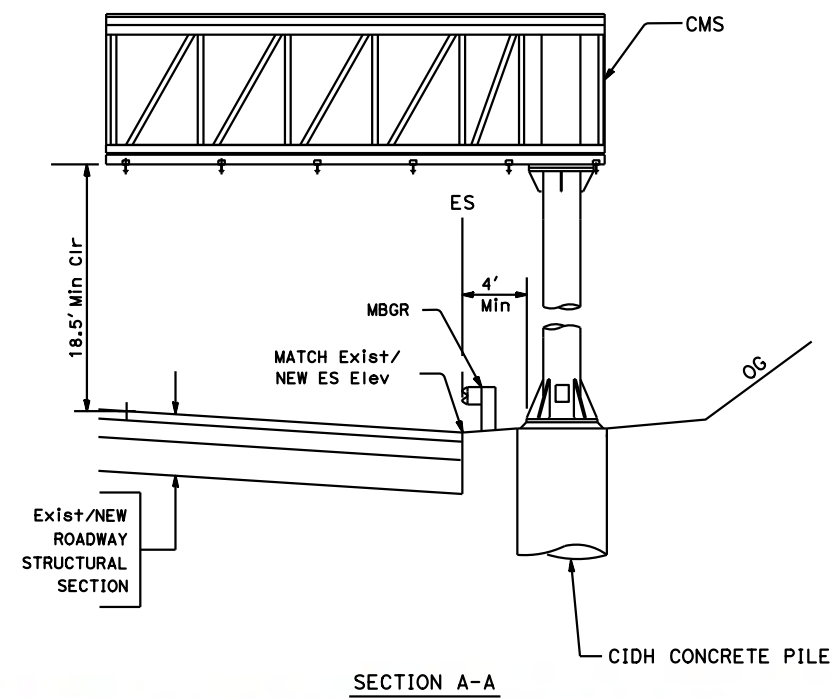


LOCATION 11  
ALP-88-24.94

EXHIBITS-(11)

APPROX. SCALE: 1" = 20'





LEGEND:



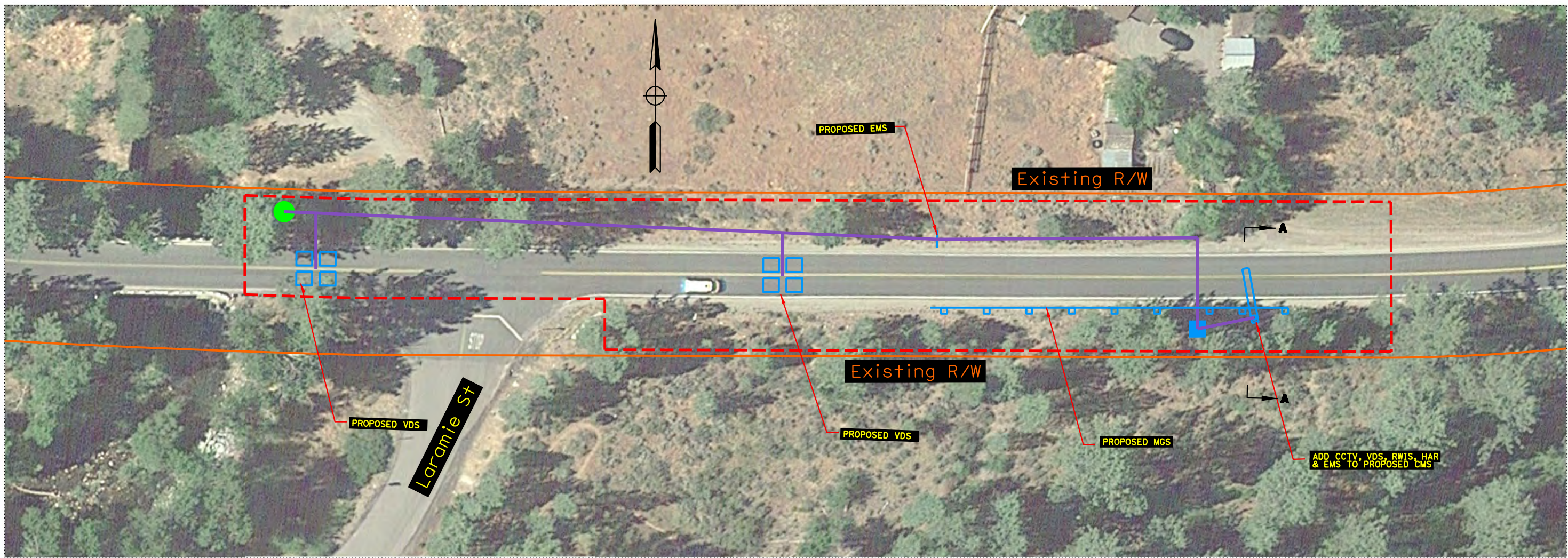
AREA OF POTENTIAL ENVIRONMENTAL IMPACT (INCLUDING TRENCHING, VEGETATION REMOVAL, GEOTECHNICAL DRILLING FOR THE FOUNDATION OF CMS)



PROPOSED CABINET



PROPOSED TRENCHING (EXACT LOCATION WILL BE DETERMINED DURING CONSTRUCTION). OTHER TRENCHING WITH UNKNOWN LOCATION (NOT SHOWN IN THIS DRAWING) IS LOCATED WITHIN THE AREA OF POTENTIAL ENVIRONMENTAL IMPACT.



LOCATION 12  
ALP-89-PM 14.59

EXHIBITS - (12)  
APPROX. SCALE: 1"=25'

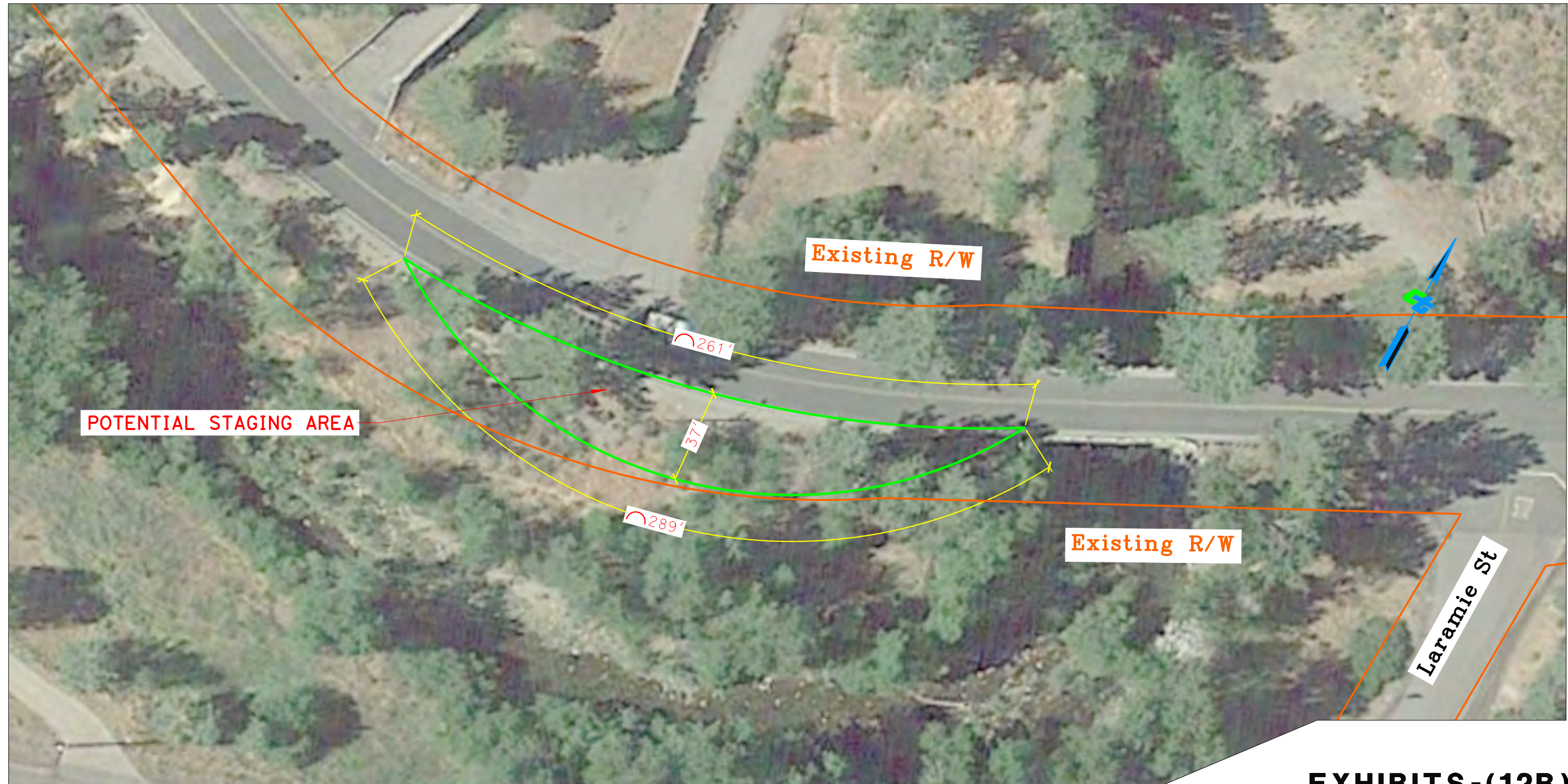


LEGEND:



POTENTIAL STAGING AREA

|                                                                                                                                                            |        |       |                                             |              |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|---------------------------------------------|--------------|-----------------|
| Dist                                                                                                                                                       | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT                 | SHEET<br>No. | TOTAL<br>SHEETS |
|                                                                                                                                                            |        |       |                                             |              |                 |
| REGISTERED CIVIL ENGINEER                                                                                                                                  |        |       | DATE                                        |              |                 |
| PLANS APPROVAL DATE                                                                                                                                        |        |       |                                             |              |                 |
| THE STATE OF CALIFORNIA OR ITS OFFICERS<br>OR AGENTS SHALL NOT BE RESPONSIBLE FOR<br>THE ACCURACY OR COMPLETENESS OF SCANNED<br>COPIES OF THIS PLAN SHEET. |        |       | No.<br>Exp.<br>CIVIL<br>STATE OF CALIFORNIA |              |                 |



POTENTIAL STAGING AREA

Existing R/W

Existing R/W

Laramie St

LOCATION 12 - STAGING AREA

EXHIBITS-(12B)

APPROX. SCALE: 1" = 20'





**Attachment 3:  
Web Soil Survey Results**



# Soil Map—Stanislaus National Forest, California, Parts



**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey

9/16/2021  
Page 1 of 3

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Stanislaus National Forest, California, Parts  
Survey Area Data: Version 13, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 3, 2019—Oct 29, 2019

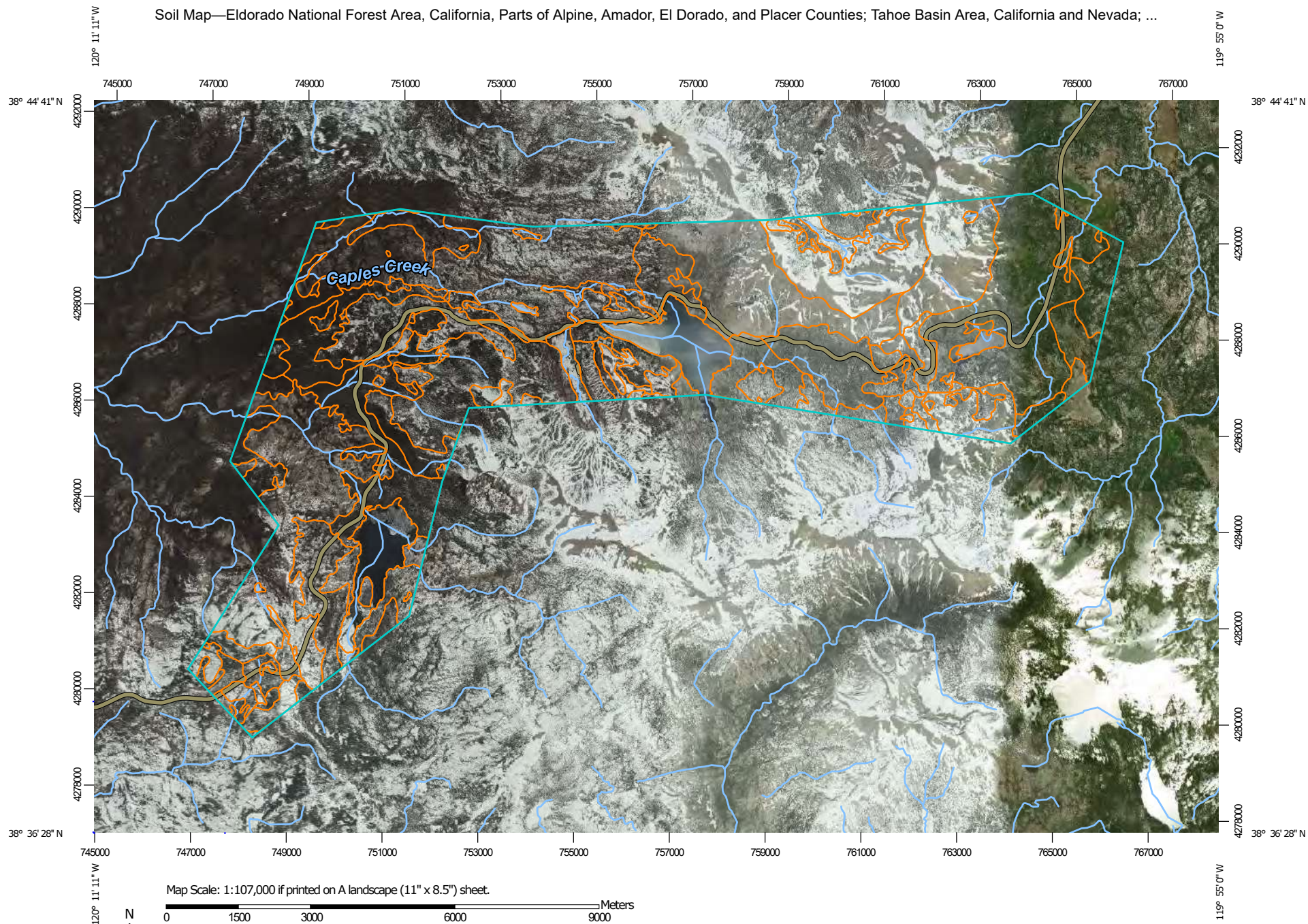
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



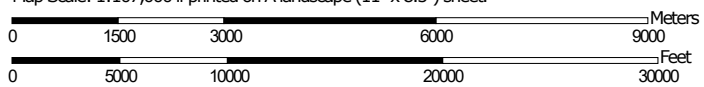
## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                                       | Acres in AOI | Percent of AOI |
|------------------------------------|---------------------------------------------------------------------|--------------|----------------|
| 114                                | Gerle family, bouldery-Rock outcrop complex, 5 to 35 percent slopes | 50.5         | 33.2%          |
| 116                                | Gerle family, deep, 5 to 35 percent slopes                          | 63.6         | 41.8%          |
| 117                                | Gerle family, deep, 35 to 50 percent slopes                         | 1.0          | 0.7%           |
| 165                                | Lithic Cryumbrepts-Rock outcrop complex, 10 to 100 percent slopes   | 3.0          | 2.0%           |
| 183                                | Rock outcrop                                                        | 0.4          | 0.2%           |
| 196                                | Windy family, moderately deep-Deep complex, 35 to 60 percent slopes | 33.7         | 22.1%          |
| <b>Totals for Area of Interest</b> |                                                                     | <b>152.1</b> | <b>100.0%</b>  |

Soil Map—Eldorado National Forest Area, California, Parts of Alpine, Amador, El Dorado, and Placer Counties; Tahoe Basin Area, California and Nevada; ...



Map Scale: 1:107,000 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey

9/16/2021  
Page 1 of 4

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eldorado National Forest Area, California, Parts of Alpine, Amador, El Dorado, and Placer Counties  
Survey Area Data: Version 13, May 29, 2020

Soil Survey Area: Tahoe Basin Area, California and Nevada  
Survey Area Data: Version 15, May 29, 2020

Soil Survey Area: Toiyabe National Forest Area, California  
Survey Area Data: Version 13, May 27, 2020

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 25, 2012—Oct 29, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Map Unit Legend

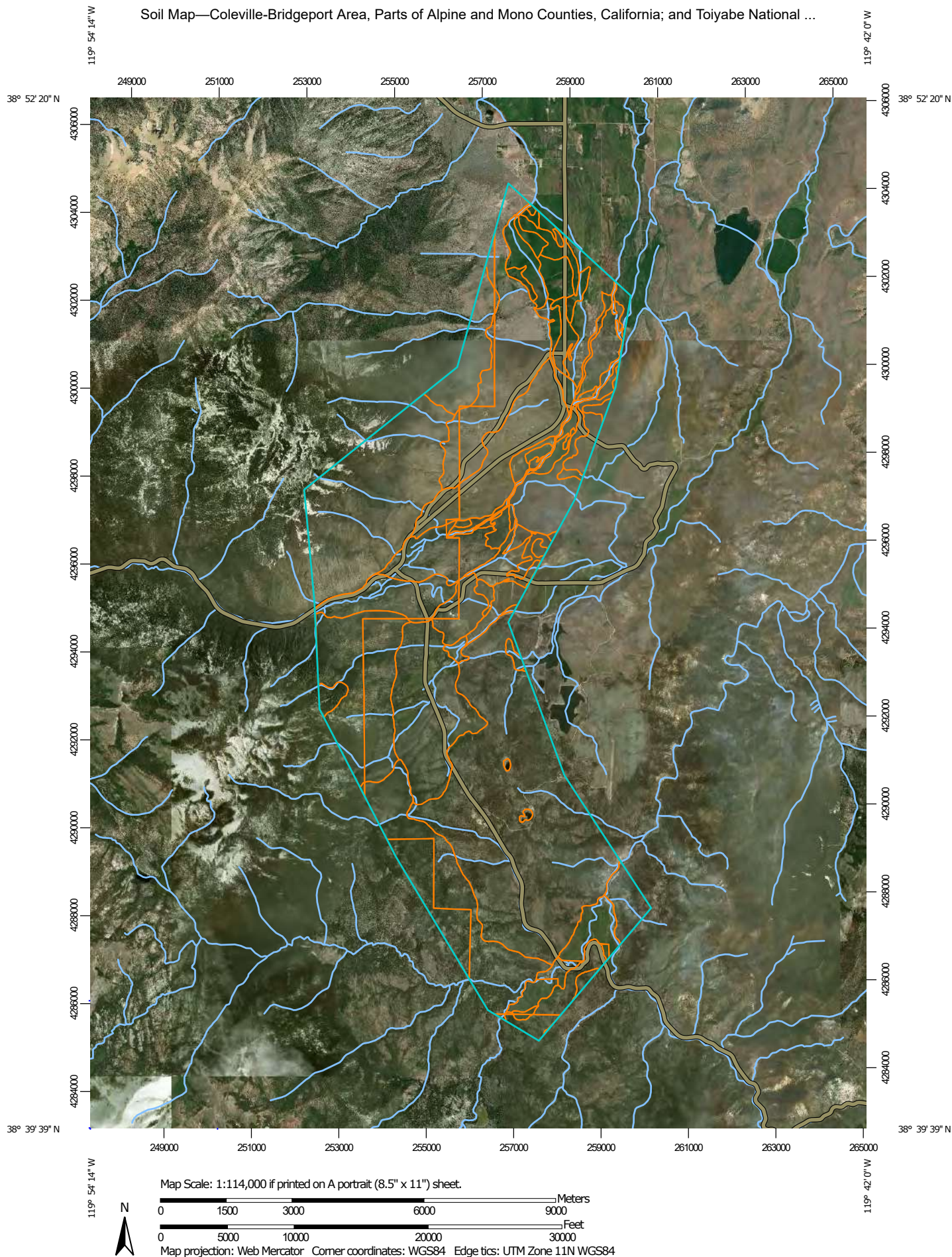
| Map Unit Symbol                       | Map Unit Name                                                                 | Acres in AOI    | Percent of AOI |
|---------------------------------------|-------------------------------------------------------------------------------|-----------------|----------------|
| 100ty                                 | Lithnip-Hawkinspeak-Rock outcrop complex, 30 to 75 percent slopes             | 177.4           | 0.8%           |
| 102                                   | Andic Cryumbrepts-Lithic Cryumbrepts association, 15 to 50 percent slopes     | 2,109.5         | 9.2%           |
| 103                                   | Aquepts, Umbrepts and 0 to 15 percent slopes soils                            | 544.5           | 2.4%           |
| 103ty                                 | Lithnip-Meiss-Hawkinspeak association, 30 to 75 percent slopes                | 1,487.8         | 6.5%           |
| 120                                   | Cryumbrepts association, 5 to 50 percent slopes                               | 2,025.4         | 8.8%           |
| 161                                   | Lithic Cryumbrepts, 15 to 75 percent slopes                                   | 1,645.5         | 7.2%           |
| 162                                   | Lithic Cryumbrepts-Waca association, 5 to 30 percent slopes                   | 145.4           | 0.6%           |
| 164                                   | Lithic Xerumbrepts-Rock outcrop complex, 15 to 75 percent slopes              | 18.7            | 0.1%           |
| 180ty                                 | Shalgran-Rock outcrop complex, 30 to 75 percent slopes                        | 99.3            | 0.4%           |
| 191                                   | Ochrepts-Rock outcrop association, 10 to 40 percent slopes                    | 16.8            | 0.1%           |
| 198                                   | Rock outcrop                                                                  | 5,256.8         | 22.9%          |
| 199                                   | Rock outcrop-Cryumbrepts association, 15 to 75 percent slopes                 | 2,028.8         | 8.8%           |
| 209                                   | Tinker-Tallac-Rock outcrop association, 30 to 75 percent slopes               | 3.1             | 0.0%           |
| 215                                   | Waca-Lithic Cryumbrepts-Cryumbrepts, wet association, 30 to 50 percent slopes | 31.0            | 0.1%           |
| 220                                   | Xerumbrepts-Cryumbrepts, wet association, 5 to 50 percent slopes              | 444.5           | 1.9%           |
| W                                     | Water                                                                         | 1,118.0         | 4.9%           |
| <b>Subtotals for Soil Survey Area</b> |                                                                               | <b>17,152.3</b> | <b>74.7%</b>   |
| <b>Totals for Area of Interest</b>    |                                                                               | <b>22,965.8</b> | <b>100.0%</b>  |



| Map Unit Symbol                       | Map Unit Name                                                               | Acres in AOI    | Percent of AOI |
|---------------------------------------|-----------------------------------------------------------------------------|-----------------|----------------|
| 7191                                  | Rock outcrop, volcanic                                                      | 58.2            | 0.3%           |
| 9001                                  | Bidart complex, 0 to 2 percent slopes                                       | 116.4           | 0.5%           |
| 9101                                  | Callat very gravelly coarse sandy loam, 9 to 30 percent slopes, very stony  | 188.8           | 0.8%           |
| 9102                                  | Callat very gravelly coarse sandy loam, 30 to 50 percent slopes, very stony | 29.9            | 0.1%           |
| 9131                                  | Lithnip-Meiss-Hawkinspeak association, 30 to 75 percent slopes              | 1,010.0         | 4.4%           |
| <b>Subtotals for Soil Survey Area</b> |                                                                             | <b>1,403.3</b>  | <b>6.1%</b>    |
| <b>Totals for Area of Interest</b>    |                                                                             | <b>22,965.8</b> | <b>100.0%</b>  |

| Map Unit Symbol                       | Map Unit Name                                                     | Acres in AOI    | Percent of AOI |
|---------------------------------------|-------------------------------------------------------------------|-----------------|----------------|
| 100                                   | Lithnip-Hawkinspeak-Rock outcrop complex, 30 to 75 percent slopes | 359.2           | 1.6%           |
| 103                                   | Lithnip-Meiss-Hawkinspeak association                             | 866.0           | 3.8%           |
| 160                                   | Hopeval complex, 2 to 8 percent slopes                            | 46.0            | 0.2%           |
| 170                                   | Burnlake-Roadcat association                                      | 2,091.2         | 9.1%           |
| 171                                   | Stumpatil-Morscour association                                    | 91.4            | 0.4%           |
| 180                                   | Shalgran-Rock outcrop complex, 30 to 75 percent slopes            | 137.8           | 0.6%           |
| 190                                   | Hopeval complex, 0 to 2 percent slopes                            | 19.3            | 0.1%           |
| 200                                   | Cavebear-Hopeval complex, 2 to 8 percent slopes                   | 37.1            | 0.2%           |
| 220                                   | Hardtil-Alpineco-Rock outcrop complex, 8 to 30 percent slopes     | 305.2           | 1.3%           |
| 240                                   | Granylith-Hargran-Rock outcrop complex, 8 to 30 percent slopes    | 220.8           | 1.0%           |
| 250                                   | Florand-Lostridge-Fishsnooze association                          | 83.7            | 0.4%           |
| 261                                   | Hawkridge-Lithnip-Hawkinspeak association                         | 59.2            | 0.3%           |
| 999                                   | Water                                                             | 92.3            | 0.4%           |
| <b>Subtotals for Soil Survey Area</b> |                                                                   | <b>4,409.1</b>  | <b>19.2%</b>   |
| <b>Totals for Area of Interest</b>    |                                                                   | <b>22,965.8</b> | <b>100.0%</b>  |

# Soil Map—Coleville-Bridgeport Area, Parts of Alpine and Mono Counties, California; and Toiyabe National ...



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Coleville-Bridgeport Area, Parts of Alpine and Mono Counties, California

Survey Area Data: Version 9, May 27, 2020

Soil Survey Area: Toiyabe National Forest Area, California

Survey Area Data: Version 13, May 27, 2020

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 25, 2012—Oct 26, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Map Unit Legend

| Map Unit Symbol | Map Unit Name                                                         | Acres in AOI | Percent of AOI |
|-----------------|-----------------------------------------------------------------------|--------------|----------------|
| 104             | Nomisurway-Squirdirt association                                      | 505.7        | 2.5%           |
| 105             | Nomisurway-Devada association                                         | 175.0        | 0.9%           |
| 117             | Mindlebaugh loam, 0 to 2 percent slopes                               | 10.0         | 0.0%           |
| 135             | Kimvar peat, 0 to 2 percent slopes                                    | 39.0         | 0.2%           |
| 151             | Brockliss gravelly loamy coarse sand, 0 to 4 percent slopes           | 13.9         | 0.1%           |
| 154             | Brockliss stony loamy sand, 0 to 8 percent slopes                     | 692.9        | 3.5%           |
| 164             | Calpine stony coarse sandy loam, 2 to 8 percent slopes                | 49.1         | 0.2%           |
| 220             | Dresselwet sandy loam, 0 to 2 percent slopes                          | 58.7         | 0.3%           |
| 221             | Dresselwet sandy loam, 2 to 4 percent slopes                          | 372.1        | 1.9%           |
| 260             | Franktown-Rock outcrop complex, 50 to 75 percent slopes               | 11.9         | 0.1%           |
| 311             | Holbrook gravelly fine sandy loam, 4 to 8 percent slopes              | 86.6         | 0.4%           |
| 312             | Holbrook gravelly fine sandy loam, water table, 2 to 4 percent slopes | 152.6        | 0.8%           |
| 491             | Jamescanny loam, 4 to 15 percent slopes                               | 201.4        | 1.0%           |
| 500             | Jubilee loam, 0 to 2 percent slopes                                   | 51.0         | 0.3%           |
| 507             | Jubilee peat, sandy substratum, 0 to 2 percent slopes                 | 11.8         | 0.1%           |
| 550             | Jubilee-Kimmerling complex, 0 to 2 percent slopes                     | 97.6         | 0.5%           |
| 553             | Kimmerling clay loam, 0 to 2 percent slopes                           | 33.7         | 0.2%           |
| 598             | Mottskel very bouldery loamy coarse sand, 4 to 15 percent slopes      | 1,368.7      | 6.8%           |
| 601             | Mottsville loamy coarse sand, 2 to 4 percent slopes                   | 137.6        | 0.7%           |
| 606             | Mottsville loamy sand, 2 to 8 percent slopes                          | 231.7        | 1.2%           |

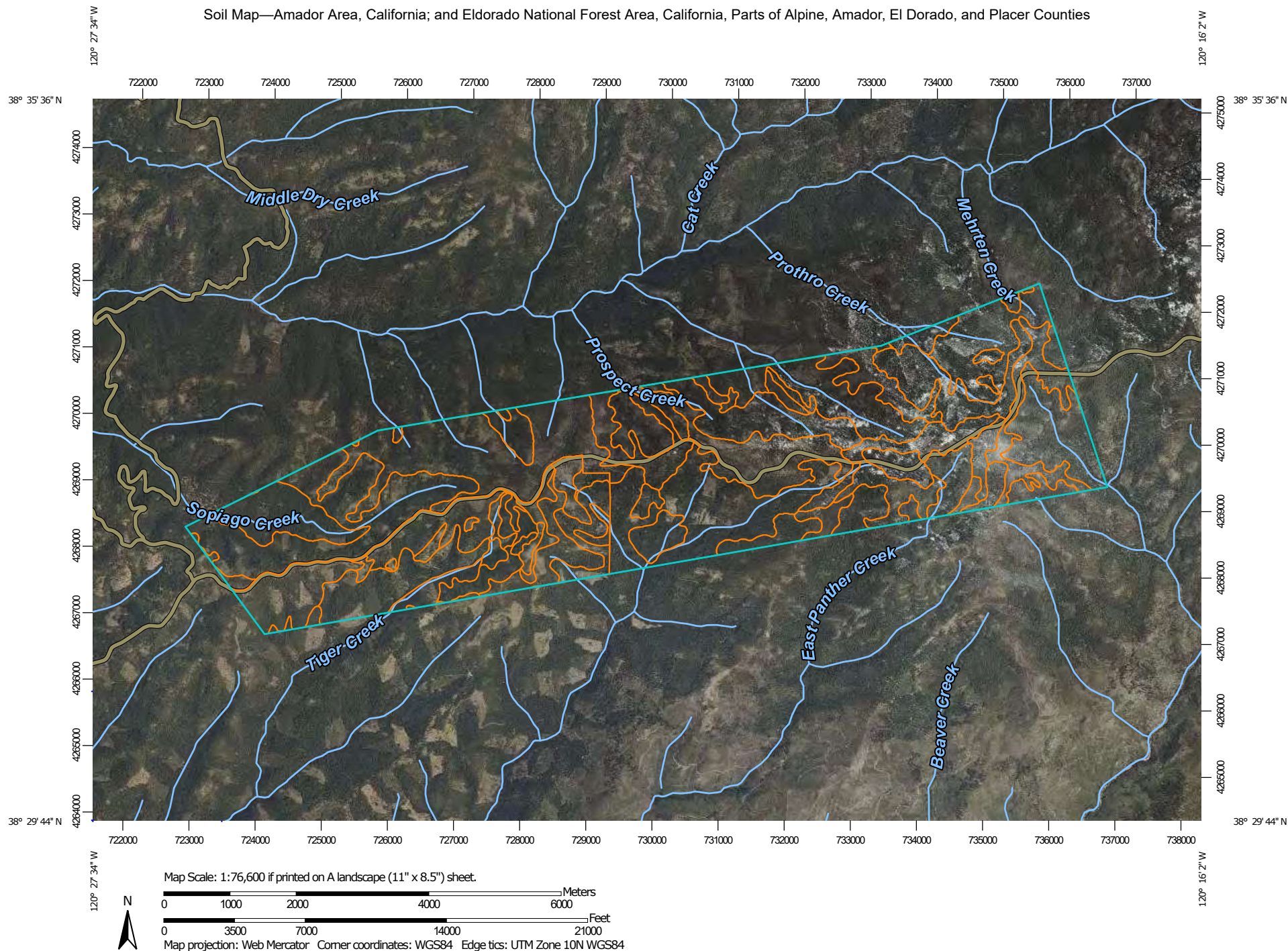
| Map Unit Symbol                       | Map Unit Name                                                     | Acres in AOI    | Percent of AOI |
|---------------------------------------|-------------------------------------------------------------------|-----------------|----------------|
| 620                                   | Oest very bouldery sandy loam, 4 to 8 percent slopes              | 858.6           | 4.3%           |
| 641                                   | Ophir gravelly sandy loam, 0 to 2 percent slopes                  | 234.6           | 1.2%           |
| 642                                   | Ophir gravelly sandy loam, 2 to 8 percent slopes                  | 196.3           | 1.0%           |
| 690                                   | Springmeyer gravelly fine sandy loam, 4 to 15 percent slopes      | 23.9            | 0.1%           |
| 691                                   | Springmeyer loam, 2 to 4 percent slopes                           | 61.1            | 0.3%           |
| 693                                   | Indiano stony fine sandy loam, 4 to 15 percent slopes             | 6.3             | 0.0%           |
| 711                                   | Toiyabe-Corbett-Rock outcrop complex, 30 to 50 percent slopes     | 665.2           | 3.3%           |
| 991                                   | Riverwash                                                         | 94.7            | 0.5%           |
| 992                                   | Access denied                                                     | 373.8           | 1.9%           |
| 999                                   | Water                                                             | 22.4            | 0.1%           |
| 1181                                  | Murain association                                                | 174.6           | 0.9%           |
| 2001                                  | Pinew-Carshal-Loope association                                   | 242.7           | 1.2%           |
| 2002                                  | Pinew-Joecut-Heenlake association                                 | 4,463.2         | 22.2%          |
| 2041                                  | Heenlake-Loope-Chenhig association                                | 207.4           | 1.0%           |
| 3050                                  | Burnlake-Roadcat association                                      | 9.4             | 0.0%           |
| 3080                                  | Joecut-Heenlake association                                       | 1,187.0         | 5.9%           |
| 3090                                  | Chrisflat very gravelly coarse sandy loam, 4 to 15 percent slopes | 11.8            | 0.1%           |
| 5010                                  | Cloudburst-Murian association                                     | 1,310.2         | 6.5%           |
| 9060                                  | Lostpepper loam, 2 to 15 percent slopes                           | 82.6            | 0.4%           |
| <b>Subtotals for Soil Survey Area</b> |                                                                   | <b>14,526.7</b> | <b>72.4%</b>   |
| <b>Totals for Area of Interest</b>    |                                                                   | <b>20,061.7</b> | <b>100.0%</b>  |

| Map Unit Symbol | Map Unit Name                                                    | Acres in AOI | Percent of AOI |
|-----------------|------------------------------------------------------------------|--------------|----------------|
| 120             | Toiyabe-Corbett-Rock outcrop complex, 30 to 50 percent slopes    | 3,010.0      | 15.0%          |
| 130             | Sofgran-Klauspeak-Temo association                               | 81.6         | 0.4%           |
| 150             | Mottskel very bouldery loamy coarse sand, 2 to 15 percent slopes | 335.5        | 1.7%           |

| Map Unit Symbol                       | Map Unit Name                                                           | Acres in AOI    | Percent of AOI |
|---------------------------------------|-------------------------------------------------------------------------|-----------------|----------------|
| 170                                   | Burnlake-Roadcat association                                            | 510.5           | 2.5%           |
| 230                                   | Hawkinspeak-Thiefriidge-<br>Angelwhine association                      | 0.1             | 0.0%           |
| 320                                   | Franktown-Rock outcrop<br>complex, 50 to 75 percent<br>slopes           | 480.2           | 2.4%           |
| 330                                   | Oest very bouldery sandy<br>loam, 4 to 8 percent slopes                 | 168.4           | 0.8%           |
| 381                                   | Joecut-Heenlake association                                             | 454.6           | 2.3%           |
| 390                                   | Heenlake-Loope-Chenhig<br>association                                   | 96.4            | 0.5%           |
| 500                                   | Chrisflat very gravelly coarse<br>sandy loam, 4 to 15 percent<br>slopes | 10.2            | 0.1%           |
| 581                                   | Murain association                                                      | 387.1           | 1.9%           |
| <b>Subtotals for Soil Survey Area</b> |                                                                         | <b>5,534.5</b>  | <b>27.6%</b>   |
| <b>Totals for Area of Interest</b>    |                                                                         | <b>20,061.7</b> | <b>100.0%</b>  |



# Soil Map—Amador Area, California; and Eldorado National Forest Area, California, Parts of Alpine, Amador, El Dorado, and Placer Counties



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:20,000 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Amador Area, California

Survey Area Data: Version 13, May 29, 2020

Soil Survey Area: Eldorado National Forest Area, California,

Parts of Alpine, Amador, El Dorado, and Placer Counties

Survey Area Data: Version 13, May 29, 2020

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 3, 2019—Oct 29, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

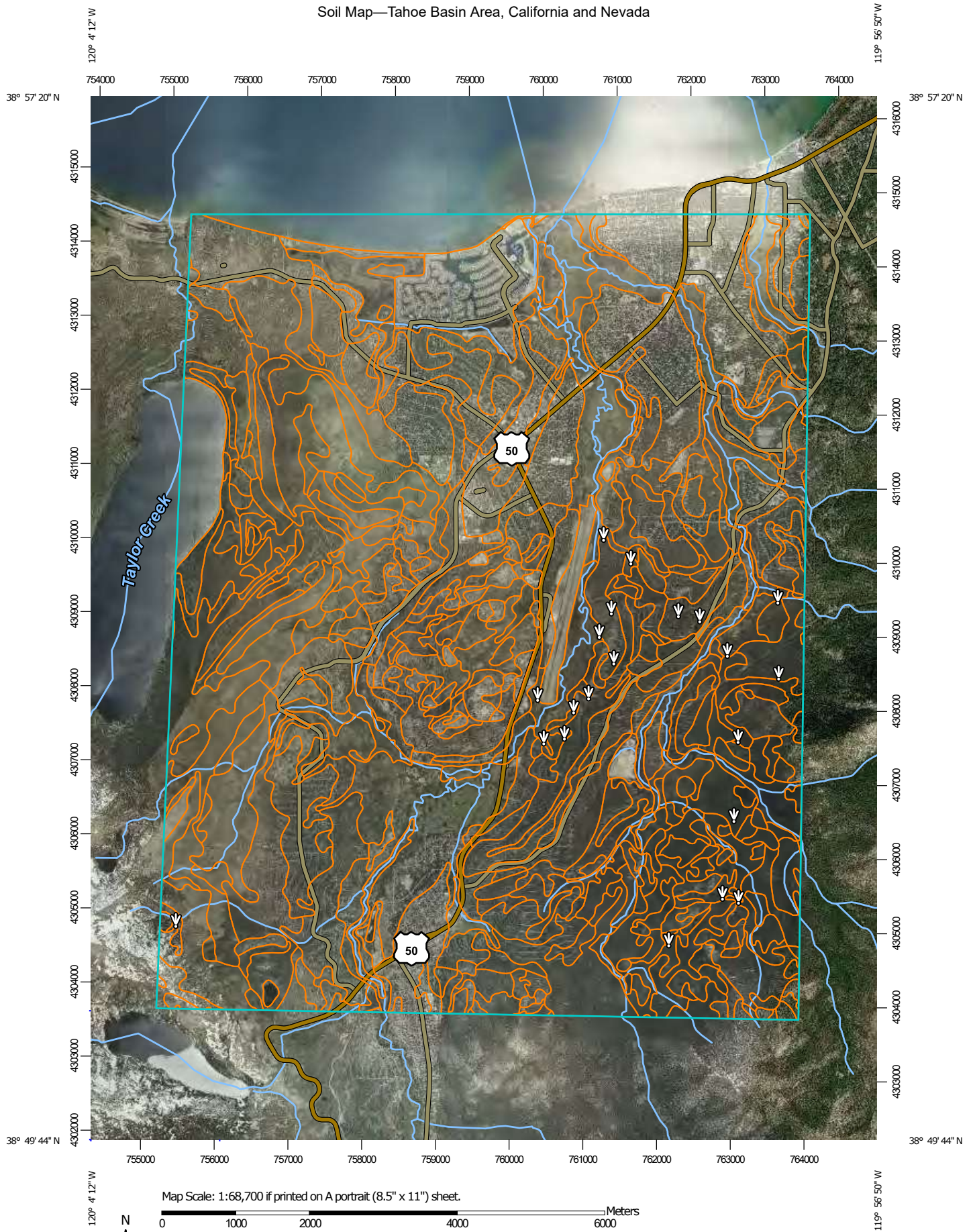
| Map Unit Symbol                       | Map Unit Name                                                       | Acres in AOI   | Percent of AOI |
|---------------------------------------|---------------------------------------------------------------------|----------------|----------------|
| CbE                                   | Cohasset very cobbly loam, 16 to 51 percent slopes                  | 2.7            | 0.0%           |
| CcE                                   | Cohasset very cobbly loam, moderately deep, 16 to 51 percent slopes | 317.0          | 3.6%           |
| HfF                                   | Holland very rocky coarse sandy loam, 51 to 71 percent slopes       | 27.3           | 0.3%           |
| HkE                                   | Holland very rocky coarse sandy loam, deep, 16 to 51 percent slopes | 154.5          | 1.8%           |
| IsE                                   | Iron Mountain very stony loam, 9 to 51 percent slopes               | 75.2           | 0.9%           |
| JsE                                   | Josephine-Maymen complex, 16 to 51 percent slopes                   | 22.7           | 0.3%           |
| MkF                                   | McCarthy very rocky loam, 51 to 71 percent slopes                   | 77.6           | 0.9%           |
| MmE                                   | McCarthy and Jiggs very cobbly loams, 16 to 51 percent slopes       | 224.6          | 2.6%           |
| Mn                                    | Mine tailings and Riverwash                                         | 1.2            | 0.0%           |
| Ro                                    | Rock land                                                           | 11.2           | 0.1%           |
| WcD                                   | Windy cobbly sandy loam, 9 to 16 percent slopes                     | 63.9           | 0.7%           |
| WcE                                   | Windy cobbly sandy loam, 16 to 51 percent slopes                    | 760.8          | 8.7%           |
| <b>Subtotals for Soil Survey Area</b> |                                                                     | <b>1,738.7</b> | <b>19.9%</b>   |
| <b>Totals for Area of Interest</b>    |                                                                     | <b>8,741.7</b> | <b>100.0%</b>  |

| Map Unit Symbol | Map Unit Name                                                      | Acres in AOI | Percent of AOI |
|-----------------|--------------------------------------------------------------------|--------------|----------------|
| 107             | Chaix-Pilliken coarse sandy loam, 5 to 30 percent slopes complex   | 246.5        | 2.8%           |
| 108             | Chaix-Pilliken coarse sandy loams, 30 to 75 percent slopes complex | 702.9        | 8.0%           |
| 112             | Cohasset-McCarthy association, 2 to 30 percent slopes              | 1,167.6      | 13.4%          |
| 113             | Cohasset-McCarthy association, 30 to 50 percent slopes             | 836.4        | 9.6%           |
| 162             | Lithic Cryumbrepts-Waca association, 5 to 30 percent slopes        | 584.9        | 6.7%           |

| Map Unit Symbol                       | Map Unit Name                                                    | Acres in AOI   | Percent of AOI |
|---------------------------------------|------------------------------------------------------------------|----------------|----------------|
| 164                                   | Lithic Xerumbrepts-Rock outcrop complex, 15 to 75 percent slopes | 422.2          | 4.8%           |
| 165                                   | Lumberly gravelly coarse sandy loam, 5 to 30 percent slopes      | 320.7          | 3.7%           |
| 166                                   | Lumberly gravelly coarse sandy loam, 30 to 50 percent slopes     | 14.5           | 0.2%           |
| 175                                   | McCarthy gravelly sandy loam, 2 to 30 percent slopes             | 411.6          | 4.7%           |
| 176                                   | McCarthy gravelly sandy loam, 30 to 50 percent slopes            | 787.4          | 9.0%           |
| 177                                   | McCarthy-Ledmount association, 2 to 30 percent slopes            | 460.9          | 5.3%           |
| 211                                   | Waca cobbly sandy loam, 5 to 30 percent slopes                   | 508.1          | 5.8%           |
| 212                                   | Waca cobbly sandy loam, 30 to 50 percent slopes                  | 537.8          | 6.2%           |
| <b>Subtotals for Soil Survey Area</b> |                                                                  | <b>7,001.6</b> | <b>80.1%</b>   |
| <b>Totals for Area of Interest</b>    |                                                                  | <b>8,741.7</b> | <b>100.0%</b>  |



# Soil Map—Tahoe Basin Area, California and Nevada



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tahoe Basin Area, California and Nevada

Survey Area Data: Version 15, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 26, 2015—Oct 29, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

| Map Unit Symbol | Map Unit Name                                                            | Acres in AOI | Percent of AOI |
|-----------------|--------------------------------------------------------------------------|--------------|----------------|
| 7011            | Beaches                                                                  | 49.0         | 0.2%           |
| 7031            | Pits and dumps                                                           | 188.5        | 0.8%           |
| 7041            | Tahoe complex, 0 to 2 percent slopes                                     | 940.4        | 4.1%           |
| 7042            | Tahoe complex, 0 to 5 percent slopes, gravelly                           | 126.6        | 0.6%           |
| 7043            | Tahoe mucky silt loam, drained, 0 to 5 percent slopes                    | 367.2        | 1.6%           |
| 7051            | Oxyaquic Xerorthents-Water association, 0 to 5 percent slopes            | 533.7        | 2.3%           |
| 7061            | Urban land                                                               | 144.6        | 0.6%           |
| 7071            | Watah peat, 0 to 2 percent slopes                                        | 457.2        | 2.0%           |
| 7231            | Waca very gravelly medial coarse sandy loam, 9 to 30 percent slopes      | 69.0         | 0.3%           |
| 7232            | Waca very gravelly medial coarse sandy loam, 30 to 50 percent slopes     | 74.8         | 0.3%           |
| 7411            | Cagwin-Rock outcrop complex, 5 to 15 percent slopes, extremely stony     | 473.1        | 2.1%           |
| 7412            | Cagwin-Rock outcrop complex, 15 to 30 percent slopes, extremely stony    | 739.3        | 3.2%           |
| 7413            | Cagwin Rock outcrop complex, 30 to 50 percent slopes, extremely stony    | 417.9        | 1.8%           |
| 7414            | Cagwin-Rock outcrop complex, 50 to 70 percent slopes, extremely stony    | 30.7         | 0.1%           |
| 7421            | Cassenai gravelly loamy coarse sand, 5 to 15 percent slopes, very stony  | 461.6        | 2.0%           |
| 7422            | Cassenai gravelly loamy coarse sand, 15 to 30 percent slopes, very stony | 695.0        | 3.0%           |
| 7423            | Cassenai gravelly loamy coarse sand, 30 to 50 percent slopes, very stony | 313.9        | 1.4%           |
| 7424            | Cassenai gravelly loamy coarse sand, 50 to 70 percent slopes, very stony | 20.1         | 0.1%           |

| Map Unit Symbol | Map Unit Name                                                                    | Acres in AOI | Percent of AOI |
|-----------------|----------------------------------------------------------------------------------|--------------|----------------|
| 7426            | Cassenai cobbly loamy coarse sand, moist, 15 to 30 percent slopes, very bouldery | 5.0          | 0.0%           |
| 7427            | Cassenai cobbly loamy coarse sand, moist, 30 to 50 percent slopes, very bouldery | 137.2        | 0.6%           |
| 7428            | Cassenai cobbly loamy coarse sand, moist, 50 to 70 percent slopes, very bouldery | 64.1         | 0.3%           |
| 7431            | Celio loamy coarse sand, 0 to 5 percent slopes                                   | 933.4        | 4.1%           |
| 7441            | Christopher loamy coarse sand, 0 to 9 percent slopes                             | 402.8        | 1.8%           |
| 7442            | Christopher loamy coarse sand, 9 to 30 percent slopes                            | 653.0        | 2.9%           |
| 7443            | Christopher gravelly loamy coarse sand, 9 to 30 percent slopes                   | 265.4        | 1.2%           |
| 7444            | Christopher-Gefo complex, 0 to 5 percent slopes                                  | 2,308.4      | 10.1%          |
| 7451            | Gefo gravelly loamy coarse sand, 2 to 9 percent slopes                           | 447.4        | 2.0%           |
| 7452            | Gefo gravelly loamy coarse sand, 9 to 30 percent slopes                          | 184.5        | 0.8%           |
| 7461            | Jabu coarse sandy loam, 0 to 9 percent slopes                                    | 1,477.2      | 6.5%           |
| 7462            | Jabu coarse sandy loam, 9 to 30 percent slopes                                   | 1,101.3      | 4.8%           |
| 7471            | Marla loamy coarse sand, 0 to 5 percent slopes                                   | 862.4        | 3.8%           |
| 7481            | Meeks gravelly loamy coarse sand, 0 to 5 percent slopes, stony                   | 271.6        | 1.2%           |
| 7482            | Meeks gravelly loamy coarse sand, 5 to 15 percent slopes, stony                  | 356.1        | 1.6%           |
| 7483            | Meeks gravelly loamy coarse sand, 0 to 5 percent slopes, very stony              | 383.9        | 1.7%           |
| 7484            | Meeks gravelly loamy coarse sand, 5 to 15 percent slopes, extremely bouldery     | 283.9        | 1.2%           |
| 7485            | Meeks gravelly loamy coarse sand, 15 to 30 percent slopes, extremely bouldery    | 386.9        | 1.7%           |
| 7486            | Meeks gravelly loamy coarse sand, 30 to 70 percent slopes, extremely bouldery    | 73.1         | 0.3%           |



| Map Unit Symbol | Map Unit Name                                                                       | Acres in AOI | Percent of AOI |
|-----------------|-------------------------------------------------------------------------------------|--------------|----------------|
| 7487            | Meeks gravelly loamy coarse sand, 5 to 15 percent slopes, rubbly                    | 358.0        | 1.6%           |
| 7488            | Meeks gravelly loamy coarse sand, 15 to 30 percent slopes, rubbly                   | 83.1         | 0.4%           |
| 7489            | Meeks gravelly loamy coarse sand, 30 to 70 percent slopes, rubbly                   | 274.6        | 1.2%           |
| 7491            | Oneidas coarse sandy loam, 0 to 5 percent slopes                                    | 304.3        | 1.3%           |
| 7492            | Oneidas coarse sandy loam, 5 to 15 percent slopes                                   | 140.8        | 0.6%           |
| 7500            | Rock outcrop, granitic                                                              | 13.9         | 0.1%           |
| 7501            | Rock Outcrop-Rockbound complex, 5 to 30 percent slopes                              | 2.9          | 0.0%           |
| 7502            | Rock Outcrop-Rockbound complex, 30 to 70 percent slopes                             | 53.7         | 0.2%           |
| 7521            | Tallac gravelly coarse sandy loam, 5 to 15 percent slopes, very stony               | 347.1        | 1.5%           |
| 7522            | Tallac gravelly coarse sandy loam, 15 to 30 percent slopes, very stony              | 892.5        | 3.9%           |
| 7523            | Tallac gravelly coarse sandy loam, 30 to 70 percent slopes, very stony              | 857.6        | 3.7%           |
| 7524            | Tallac gravelly coarse sandy loam, moderately well drained, 0 to 5 percent slopes   | 576.7        | 2.5%           |
| 7525            | Tallac gravelly coarse sandy loam, moderately well drained, 5 to 9 percent slopes   | 599.7        | 2.6%           |
| 7531            | Toem-Rock outcrop complex, 9 to 30 percent slopes                                   | 74.1         | 0.3%           |
| 7532            | Toem-Rock outcrop complex, 30 to 50 percent slopes                                  | 113.2        | 0.5%           |
| 7541            | Ubaj sandy loam, 0 to 9 percent slopes                                              | 665.5        | 2.9%           |
| 9011            | Oxyaquic Cryorthents-Aquic Xerorthents-Tahoe complex, 0 to 15 percent slopes        | 9.4          | 0.0%           |
| 9401            | Dagget very gravelly loamy coarse sand, 15 to 30 percent slopes, extremely bouldery | 26.5         | 0.1%           |

| Map Unit Symbol                    | Map Unit Name                                                                       | Acres in AOI    | Percent of AOI |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------|----------------|
| 9402                               | Dagget very gravelly loamy coarse sand, 30 to 50 percent slopes, extremely bouldery | 29.4            | 0.1%           |
| 9403                               | Dagget very gravelly loamy coarse sand, 50 to 70 percent slopes, extremely bouldery | 38.2            | 0.2%           |
| 9405                               | Dagget very gravelly loamy coarse sand, moist, 15 to 30 percent slopes, rubbly      | 0.6             | 0.0%           |
| 9406                               | Dagget very gravelly loamy coarse sand, moist, 30 to 70 percent slopes, rubbly      | 4.0             | 0.0%           |
| W                                  | Water                                                                               | 710.3           | 3.1%           |
| <b>Totals for Area of Interest</b> |                                                                                     | <b>22,878.1</b> | <b>100.0%</b>  |

# **Climate Change and Greenhouse Gas**

Climate Change and Greenhouse Gas  
Analysis

# Memorandum

**To:** C. SCOTT GUIDI  
BRANCH CHIEF  
NORTHERN SAN JOAQUIN ENVIRONMENTAL MANAGEMENT BRANCH

**Date:** August 31, 2021

**File:** 10-1G020  
AMA, ED, ALP/88,89,4/VARIES

**From:** KAYLA LOPEZ  
ASSOCIATE ENVIRONMENTAL PLANNER  
NORTHERN SAN JOAQUIN ENVIRONMENTAL MANAGEMENT BRANCH

**Subject:** **CLIMATE CHANGE/GREENHOUSE GAS ANALYSIS**

## PROJECT DESCRIPTION

The California Department of Transportation (Caltrans) proposes to install traffic management systems elements and roadside safety improvements in and around the Kirkwood and Carson area at 13 various locations in Amador, El Dorado, and Alpine countries on State Routes 88, 89, and 4.

The 13 proposed project locations would be:

| Location | County    | State Route | Post Mile |
|----------|-----------|-------------|-----------|
| 1        | Amador    | 88          | R38.24    |
| 2        | Amador    | 88          | 53.99     |
| 3        | Amador    | 88          | 54.07     |
| 4        | Amador    | 88          | R65.95    |
| 5        | Amador    | 88          | 71.27     |
| 6        | Alpine    | 88          | 2         |
| 7        | Alpine    | 88          | 2.3       |
| 8        | El Dorado | 89          | 8.39      |
| 9        | Alpine    | 88          | 13.34     |
| 10       | Alpine    | 88          | 18.86     |
| 11       | Alpine    | 88          | 24.94     |
| 12       | Alpine    | 89          | 14.59     |
| 13       | Alpine    | 4           | R0.84     |

The scope of work includes changeable message signs, streetlights, video detection systems, closed circuit television systems, roadway weather information systems, highway advisory radios, extinguishable message signs, and maintenance vehicle pullouts. Right of way acquisition and temporary



construction easements are anticipated. Construction will involve night work, work off the pavement, excavation, grading, trenching, and vegetation and tree removal.

## **Climate Change**

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF<sub>6</sub>), and various hydrofluorocarbons (HFCs). CO<sub>2</sub> is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO<sub>2</sub>.

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

## **Regulatory Setting**

This section outlines federal and state efforts to comprehensively reduce 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.

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

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

The U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) is responsible for setting GHG emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence GHG emissions.

## **State**

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

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80

percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

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

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

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

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

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

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of

GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>e).<sup>i</sup> Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

SB 32, Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030. SB 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands ... is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

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

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

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

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

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual

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



transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

EO N-79-20 (September 2020) establishes goals for 100 percent of in-state sales of new passenger cars and trucks to be zero-emissions vehicles by 2035, that the state transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible, and that 100 percent of medium- and heavy-duty vehicles in the state be zero-emissions by 2045 where feasible.

### **Environmental Setting**

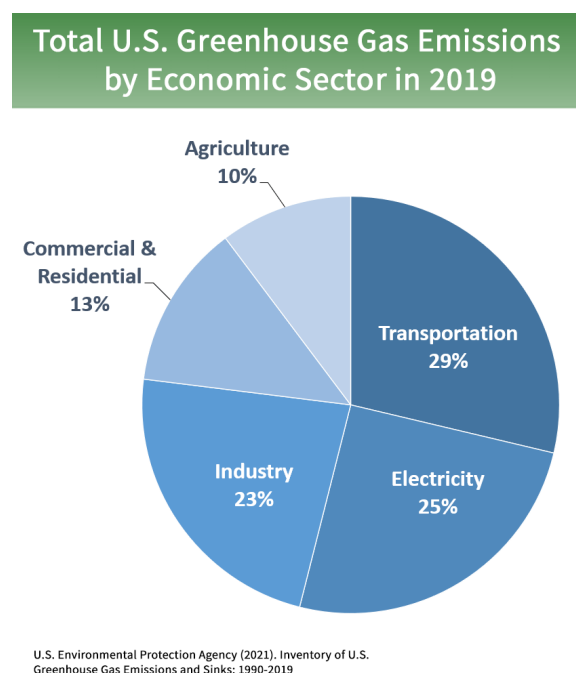
The proposed project has 13 locations on State Routes 88, 89, and 4 in Amador, El Dorado, and Alpine Counties. Set within three different National Forests (Stanislaus National Forest, Toiyabe National Forest, and El Dorado National Forest) the project area is mainly rural with natural resources and a tourism-based economy. State Routes 88, 89, and 4 are considered the regions collector routes by providing access to incorporated communities and major rural residential areas throughout the region. These routes typically carry lower traffic volumes but require lower travel speeds due to sharp curves, narrow shoulders, and unlimited sight distance. These routes can be heavily used during the summer and winter months for recreation and freight movement. Extreme winter conditions and narrow, windy roads can cause slowed traffic congestion. Each county has their own Regional transportation commission that guides the county's transportation development: the Amador County Transportation Commission Regional Transportation Agency, the El Dorado County Transportation Commission, and the Alpine County Local Transportation Commission.

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

### **National GHG Inventory**

The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-

produced sources of GHGs in the United States, reporting emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, perfluorocarbons, SF<sub>6</sub>, and nitrogen trifluoride. It also accounts for emissions of CO<sub>2</sub> that are removed from the atmosphere by “sinks” such as forests, vegetation, and soils that uptake and store CO<sub>2</sub> (carbon sequestration). The 1990-2019 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<sub>2</sub>, 10 percent were CH<sub>4</sub>, and 7 percent were N<sub>2</sub>O; the balance consisted of fluorinated gases. CO<sub>2</sub> emissions in 2019 were 2.2 percent less than in 2018, but 2.8 percent more than in 1990. As shown on Figure 1, the transportation sector accounted for 29 percent of U.S. GHG emissions in 2019 (U.S. EPA 2021a, 2021b).

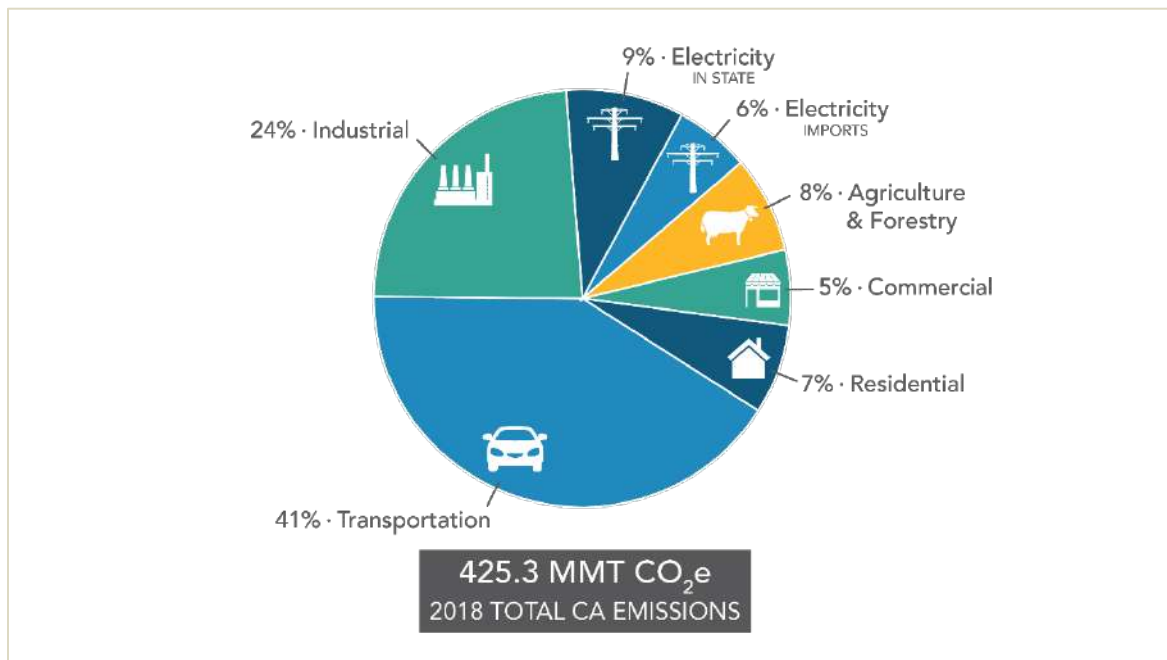


**Figure 1. U.S. 2019 Greenhouse Gas Emissions (Source: U.S. EPA 2021c)**

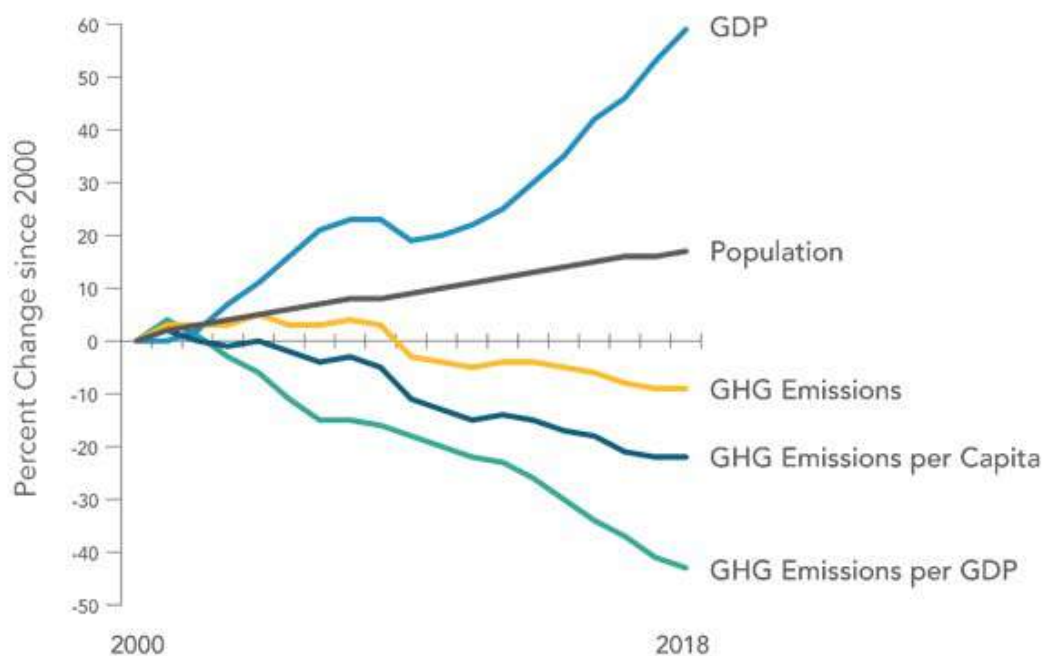
### State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2020 edition of the GHG emissions inventory reported emissions trends from 2000 to 2018. It found total California emissions were 425.3 MMTCO<sub>2</sub>e in 2018, 0.8 MMTCO<sub>2</sub>e higher than 2017 but 6 MMTCO<sub>2</sub>e lower than the statewide 2020 limit of 431 MMT CO<sub>2</sub>e. The transportation sector was responsible for 41 percent of total GHGs. Transportation emissions decreased in 2018 compared to the previous year, which is the first year over year decrease since 2013. Overall

statewide GHG emissions declined from 2000 to 2018 despite growth in population and state economic output (ARB 2020a).



**Figure 2. California 2018 Greenhouse Gas Emissions by Economic Sector**  
(Source: ARB 2020b)



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**Figure 3. Change in California GDP, Population, and GHG Emissions since 2000**  
**(Source: ARB 2020b)**

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

**Regional Plans**

ARB sets regional targets for California's 18 MPOs to use in their Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. El Dorado County has the Sacramento County of Governments act as the Metropolitan Planning Organization for the Western Slope of El Dorado County within the Federal Ozone Non-Attainment Area. The regional reduction target for the Sacramento Area Council of Governments (SACOG) is 16 percent by 2035 (ARB 2019). The SACOG RTP/SCS incorporates the El Dorado County Regional Transportation Plan 2020-2040, which includes the proposed project.

The proposed project is also within the jurisdiction of the Amador and Alpine Transportation Commissions. Alpine and Amador Counties are non-MPO rural regional transportation planning agencies (RTPAs) and therefore not required to prepare a Sustainable Communities Strategy under SB 375. The proposed project is, however, subject to the following Regional Transportation Plans:

- The March 5, 2020, Final Amador County Regional Transportation Plan update identifies alternative strategies to improve air quality and reduce greenhouse gas emissions, such as the use of zero-emission electric vehicles and increased use of mass transit.
- The February 2021, Alpine County Regional Transportation Plan identifies overall goals to improve safety and circulation on State Routes 88, 89, and 4. Air quality and environmental goals and policies include reducing, managing, and eliminating non-essential trips; promoting transportation policies and projects that support a healthy environment and avoiding wildlife habitat when constructing transportation facilities; and ensuring projects contribute to the goal of lowering emissions while providing an effective movement of people and goods.

The mountain basin regions have overlapping air districts that work to improve air quality. Alpine County and El Dorado County are under the jurisdiction of the



Amador Air District. Alpine County is also one of three counties belonging to the Great Basin Unified Air Pollution Control District. Amador and El Dorado County are also under the jurisdiction of the El Dorado Air Quality Management District. All three counties address greenhouse gas emissions and provide a regulatory framework to achieve reductions in statewide emission levels. Greenhouse Gas topics for each county can be found in the following publications:

- Amador County General Plans: Circulation, Safety, and Traffic Elements
- Alpine County General Plans: Complete Streets
- El Dorado County Regional Transportation Plan: Greenhouse Gases and Climate Change
- 

El Dorado County is included in the Sacramento Region Transportation Climate Adaption Plan (SACOG and Civic Spark 2015). Recommended approaches include maintenance and repair policies to improve preparedness and response to severe events.

### **Project Analysis**

GHG emissions from transportation projects can be divided into those produced during operation of the SHS and those produced during construction. The primary GHGs produced by the transportation sector are CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs. CO<sub>2</sub> emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH<sub>4</sub> and N<sub>2</sub>O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (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 improve roadway mobility and efficiency during recurrent severe weather conditions on traffic through the

strategic deployment of various TMS elements on State Route 88, 89, and 4. It will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational greenhouse gas emissions. Because the project would not increase the number of travel lanes on State Routes 88, 89, and 4, no increase in vehicle miles traveled (VMT) would occur as result of project implementation. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

### **Construction Emissions**

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

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

Construction greenhouse gas emissions were calculated using the Department of Transportation's Construction Emissions Tool (CALCET v1.1). The project's construction activities are expected to generate approximately 971 tons of CO<sub>2</sub> during 180 working days.

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

### **CEQA Conclusion**

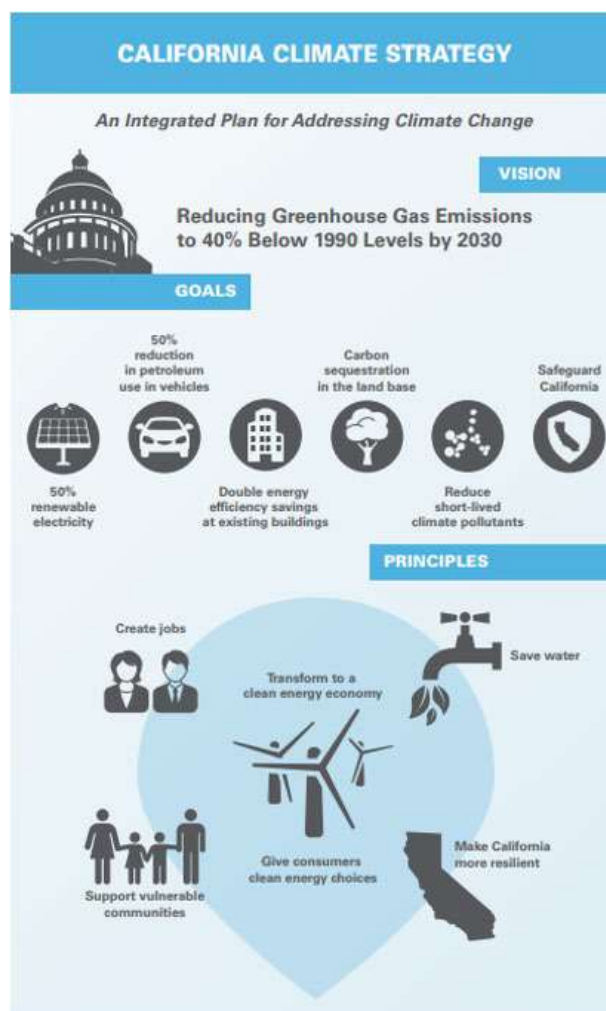
While the proposed project will result in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the 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.

## Greenhouse Gas Reduction Strategies

### Statewide Efforts

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



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## **Figure 4. California Climate Strategy**

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 40 percent 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. Each agency is to develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advance the State's carbon neutrality goal and build climate resilience.

### **Caltrans Activities**

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

### **California Transportation Plan**

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 2021).

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP identifies additional strategies.

### ***Caltrans Strategic Management Plan***

The Caltrans Strategic Management Plan 2020–24 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.

### ***Funding and Technical Assistance Programs***

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

### ***Caltrans Policy Directives and Other Initiatives***

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

### ***Project-Level 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-** Reduce construction waste and maximize the use of recycling materials (reduces consumption of raw materials, reduces landfill waste, encourages cost savings).

- **GHG 2-** Incorporate measures to reduce consumption of portable water.
- **GHG 3-** Maintain equipment in proper tune and working condition.
- **GHG 4-** Right size equipment for the job.
- **GHG 5-** Existing project features (e.g., MBGR, light standards, sub-base granular material, or native material that meets Caltrans specifications or incorporation into new work) will be recycled or reused onsite to the extent feasible.
- **GHG 6-** Earthwork balance: Reduce the need for transport of earthen materials by balancing cut and fill quantities.

### **Adaptation**

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

### **Federal Efforts**

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

The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. Ch. 56A § 2921 et seq). The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the “human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways.” Chapter 12, “Transportation,” presents a key discussion of vulnerability assessments. It

notes that “asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime” (USGCRP 2018).

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

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

### **State Efforts**

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

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the “combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities.”
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the “capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience”. Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.

- *Vulnerability* is the “susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt.” Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

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

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

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

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



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

## **Caltrans Adaptation Efforts**

### **Caltrans Vulnerability Assessments**

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

- *Exposure* – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- *Consequence* – Determine what might occur to system assets in terms of loss of use or costs of repair.
- *Prioritization* – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

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

### **Project Adaptation Analysis**

The 2019 Caltrans Climate Change Vulnerability Assessment, District 10 has identified key stressors to that contribute to climate change. These include temperature, precipitation, wildfire, storm surge, and sea level rise.

The scope for this project is install transportation management system elements and roadside safety improvements. The proposed project would not be subject to climate change effects. When analyzing the project scope with the stressors identified by the District 10 assessment, and with the implementation of standard specifications and best management practices, the project would not contribute to or exacerbate the effects to climate change.

### **Sea-Level Rise**

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

### **Floodplains and Precipitation**

According to the March 2021 Preliminary Location Floodplain Study and in review of the National Flood Insurance Rate Map, Caltrans has determined that the proposed project is outside of a 100-year floodplain. However, one effect of a warming climate will be frequent warm rainfall events melting snowpack that would normally persist at higher elevations into mid-summer, inducing higher than normal stream flows. The Caltrans District 10 Climate Change Vulnerability Assessment (Caltrans 2019) projects changes in 100-year storm precipitation depth, a metric used in the design of highway assets. Mapping shows that the project area is subject to up to 15% increase in 100-year storm precipitation through 2085. The project proposes to install transportation management system elements and roadside safety improvements that consist mainly of small electronic and communications equipment. Maintenance vehicle pullouts do not involve new structures or large areas of new impervious surface. The project elements are expected to be resilient to anticipated changes in storm precipitation depths under climate change. Additionally, the project locations are not near any stream crossings or locations subject to stormwater runoff that would be affected by future higher stream flows.

### **Wildfire**

Caltrans has determined the Carson Transportation Management Systems project is not located within or near a very high hazard severity zone; and the proposed scope of the project would not affect any fire hazard severity zones in the area. Current mapping by the California Department of Forestry and Fire Protection shows the project limits are in a Federal Responsibility Area of moderate fire hazard severity, with some portions in or near high fire hazard severity zones. Due to more recent wildfire risk near the project area, Caltrans maintenance has requested the utilization of steel posts in guardrail installations that are situated in areas prone to fire. Metal Beam guardrails will be placed near the base of the changeable message signs. Additionally, maintenance is also following fire protocols to include defensible space around transportation management system elements and keeping vegetation mowed within Caltrans right of way. The District 10 Climate Change Vulnerability Assessment of wildfire risk maps the project limits as exposed roadway in areas of high and very high wildfire concern currently and as time goes on (Caltrans 2019:39).

Proposed project work involves the installation of traffic management system elements and roadside safety improvements. Caltrans has determined the

proposed project would not impair an emergency response plan; not have the potential to exacerbate wildfire risk; not install infrastructure that could exacerbate wildfire risk; nor expose people or structures to wildfire risk. Caltrans 2018 revised Standard Specification 7-1.02M (2) mandates fire prevention procedures, including a fire prevention plan, to avoid accidental fire starts during construction. The project would not be exposed to greater wildfire risk than the area is under current conditions.

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# **Cultural**

## Historic Property Survey Report

**HISTORIC PROPERTY SURVEY REPORT****1. UNDERTAKING DESCRIPTION AND LOCATION**

| District | County     | Route   | Post Mile(s) | EA       | E-FIS Project Number |
|----------|------------|---------|--------------|----------|----------------------|
| 10       | AMA/ALP/ED | 4/88/89 | Various      | 10-1G020 | 1018000275           |

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

The studies for this undertaking were carried out in a manner consistent with Caltrans' regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 PA), as well as under Public Resources Code 5024 and pursuant to the January 2015 *Memorandum of Understanding Between the California Department of Transportation and the California State Historic Preservation Office Regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92, addended 2019* (5024 MOU) as applicable.

**Project Description:**

The California Department of Transportation (Caltrans) is proposing to install various Transportation Management System (TMS) elements and undertake other roadside safety improvements in and around the Kirkwood/Carson area at 13 locations on State Routes (SR) 4, 88, and 89 in Amador (AMA), El Dorado (ED), and Alpine (ALP) counties (Attachment 1, Figures 1-3).

For full project description, see Attachment 2 (ASR) Section 2.

**2. AREA OF POTENTIAL EFFECTS**

In accordance with Section 106 PA Stipulation VIII.A, the Area of Potential Effects (APE) for the project was established in consultation with Laura Cook, (PQS) Principal Investigator (PI) Prehistoric/Co-PI Historical Archaeology, Matthew Walker, (PQS) Architectural Historian, and Navraj Jammu, Project Manager, on August 26, 2021. The APE maps are located in Attachment 1 of this HPSR.

The archaeological APE was established as 15 discontinuous polygons (13 work locations and 2 staging areas) that include portions of the existing state right-of-way and one temporary construction easement (Location 2), along SR 4, 88, and 89 in Amador, Alpine, and El Dorado counties.

The maximum vertical APE for the proposed project is approximately 22 feet (~6.7 meters) for CMS installation and 18 inches (~0.46 meters) for MVP and traffic loops based on the information in the Caltrans 2018 Standard Plans and Specifications.

**HISTORIC PROPERTY SURVEY REPORT****3. CONSULTING PARTIES / PUBLIC PARTICIPATION**☒ Local Government

On October 26, 2020, an email outreach was sent to Debbie Burkett, Director of the County of Alpine Community Development Department, requesting comments regarding the project. No response has been received to date.

On October 26, 2020, an email outreach was sent to the County of Amador County Planning Department, requesting comments regarding the project. No response has been received to date. For full consultation, see Attachment 3 (Architectural History Memo).

☒ Native American Heritage Commission

The Native American Heritage Commission (NAHC) was contacted on September 18, 2020, requesting a search of their Sacred Lands Inventory File and a current Native American contact list. A letter response was received via email from the NAHC on October 15, 2020 from Nancy Gonzalez-Lopez, Staff Services Analyst, which reported a negative record search of their Sacred Lands Inventory. The NAHC response also included a Tribal contact list. See Attachment 2 (ASR, Appendix C) for a copy of the NAHC response letter.

☒ Native American Tribes, Groups and Individuals

On October 16, 2020, AB 52 Project Notification and Initial Section 106 Outreach letters and project location mapping were emailed to the tribes on the NAHC-provided contact list (see Table below). One response was received from the United Auburn Indian Community on November 30, 2020 requesting to consult on the project.

| Contact Person                              | Tribe                                     |
|---------------------------------------------|-------------------------------------------|
| Greyson Coney, Cultural Director            | Tsi Akim Maidu                            |
| Darrel Cruz, Cultural Resources Department  | Washoe Tribe of Nevada and California     |
| Pamela Cubbler, Treasurer                   | Colfax-Todds Valley Consolidated Tribe    |
| Regina Cuellar, Chairperson                 | Shingle Springs Band of Miwok Indians     |
| Adam Dalton, Chairperson                    | Jackson Rancheria Band of Miwuk Indians   |
| Debra Grimes, Cultural Resources Specialist | Calaveras Band of Mi-Wuk Indians          |
| Gloria Grimes, Chairperson                  | Calaveras Band of Mi-Wuk Indians          |
| Lloyd Mathiesen, Chairperson                | Chicken Ranch Rancheria of Me-Wuk Indians |
| Rhonda Pope, Chairperson                    | Buena Vista Rancheria of Me-Wuk Indians   |
| Clyde Prout, Chairperson                    | Colfax-Todds Valley Consolidated Tribe    |



**HISTORIC PROPERTY SURVEY REPORT**

|                              |                                                        |
|------------------------------|--------------------------------------------------------|
| Sara Setchwaelo, Chairperson | Ione Band of Miwok Indians                             |
| Cosme Valdez, Chairperson    | Nashville Enterprise Miwok-Maidu-Nishinam Tribe        |
| Gene Whitehouse, Chairperson | United Auburn Indian Community of the Auburn Rancheria |

On December 16, 2020, Ms. Cook conducted follow up outreach to the rest of the tribes that had not previously responded. No additional responses were received. On April 26 and 27, 2021, Ms. Cook called Darrel Cruz of the Washoe Tribe of Nevada and California, Debra Grimes of the Calaveras Band of Mi-Wuk Indians, and Rollie Fillmore of the Jackson Rancheria, to discuss the need for Extended Phase 1 (XPI) investigation at two of the project locations (Location 9 and 13). On May 5, 2021, Ms. Cook also reached out to the UAIC Tribe regarding the proposed XPI. All four tribes are actively consulting on the project. The Washoe and Calaveras tribes were present for monitoring the XPI efforts. Consultation is ongoing.

See Attachment 2 (ASR, Section 3.2 and Appendix C) for complete consultation details and copies of that correspondence.

☒ Local Historical Society

On October 26, 2020, an email outreach was sent to the Alpine County Historical Society, requesting comments regarding the project. No response has been received to date.

On October 26, 2020, an email outreach was sent to Cathy McGowen, President of the County of Amador Historical Society, requesting comments regarding the project. No response has been received to date. For full consultation, see Attachment 3 (Architectural History Memo).

☒ USDA Forest Service

On February 3, 2021, an initial email outreach was sent to Kalie Crews, the Humboldt-Toiyabe National Forest (HTNF) Carson District Archaeologist, and Kathy Strain, the Stanislaus National Forest Heritage Resource and Tribal Relations Program Manager, regarding the project and the need for XPIs at project locations 9 and 13 (SR 88 on the HTNF and SR 4 on the Stanislaus NF in Alpine County, respectively). See Project ASR (Cook 2021) Appendix D for copies of this email correspondence.

**HISTORIC PROPERTY SURVEY REPORT****4. SUMMARY OF IDENTIFICATION EFFORTS**

- |                                                                                                                                                                                                                           |                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> National Register of Historic Places (NRHP)                                                                                                                                           | <input checked="" type="checkbox"/> California Points of Historical Interest                   |
| <input checked="" type="checkbox"/> California Register of Historical Resources (CRHR)                                                                                                                                    | <input checked="" type="checkbox"/> California Historical Resources Information System (CHRIS) |
| <input checked="" type="checkbox"/> National Historic Landmark (NHL)                                                                                                                                                      | <input checked="" type="checkbox"/> Caltrans Historic Bridge Inventory                         |
| <input checked="" type="checkbox"/> California Historical Landmarks (CHL)                                                                                                                                                 | <input checked="" type="checkbox"/> Caltrans Cultural Resources Database (CCRD)                |
| <input checked="" type="checkbox"/> Other Sources consulted: Extended Phase 1 (XPI) Investigations at project Locations 9 (SR 88, PM 13.3/13.6) and 13 (SR 4, PM 0.8/0.9). See Attachment 4 for XPI Results Letter Report |                                                                                                |

- ☒ Results: Preliminary cultural investigation efforts identified two archaeological resources immediately adjacent to the proposed work area at Location 9 (P-02-000107 and P-02-001177). XPI testing was conducted for Location 9 with negative results. P-02-001177 is up on a rock far above the ROW and does not extend into the APE. P-02-000107 is incorrectly plotted and is not within the APE; subsurface testing confirms this.

Location 13 is located between two extensive prehistoric Native American Village sites that were not within the APE. An XPI was conducted at Location 13 with negative results.

No other cultural sites were identified within the APE for this project.

**5. PROPERTIES IDENTIFIED**

- ☒ Caltrans, in accordance with Section 106 PA Stipulation VIII.C.5 has determined there are cultural resources within the APE that were **previously determined not eligible** for inclusion in the NRHP with SHPO concurrence and those determinations remain valid. Copy of SHPO/Keeper correspondence is attached.
- P-02-001057 (Transmission Line) – Not state owned. Determined not eligible (6Y) on April 4, 2021. See attached SHPO concurrence letter (Attachment 5).

**HISTORIC PROPERTY SURVEY REPORT****6. FINDING FOR THE UNDERTAKING**

- ☒ Caltrans, pursuant to Section 106 PA Stipulation IX.A, has determined a Finding of **No Historic Properties Affected** is appropriate for this undertaking because there are no historic properties within the APE / the following historic properties will not be affected.

**7. CEQA CONSIDERATIONS**

- ☒ Caltrans PQS has determined there are **No Historical Resources** present, as outlined in CEQA Guidelines 15064.5(a).

**8. LIST OF ATTACHED DOCUMENTATION**

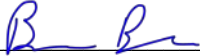
- ☒ Project Vicinity, Location, and APE Maps – Attachment 1
- ☒ Archaeological Survey Report (ASR; Cook 2021) – Attachment 2 (**Confidential**)
- ☒ Architectural History Memo (Walker 2021) – Attachment 3
- ☒ Extended Phase One (XPI) Letter Report– Attachment 4 (**Confidential**)
- ☒ SHPO Concurrence Letter for Ineligibility of P-02-001157 – Attachment 5

**9. HPSR PREPARATION AND CALTRANS APPROVAL**

Prepared by: Laura N. Cook 8/31/2021  
District 10 **Laura Cook, M.A.** Date  
Caltrans PQS, PI Prehistoric/Co-PI Historical Archaeology

Reviewed for  
Approval by: Juliana Bartel 8/31/2021  
District 10 **Juliana Bartel** Date  
Caltrans PQS, Co-PI Prehistoric Archaeology

## HISTORIC PROPERTY SURVEY REPORT

Approval by: 

09/02/21

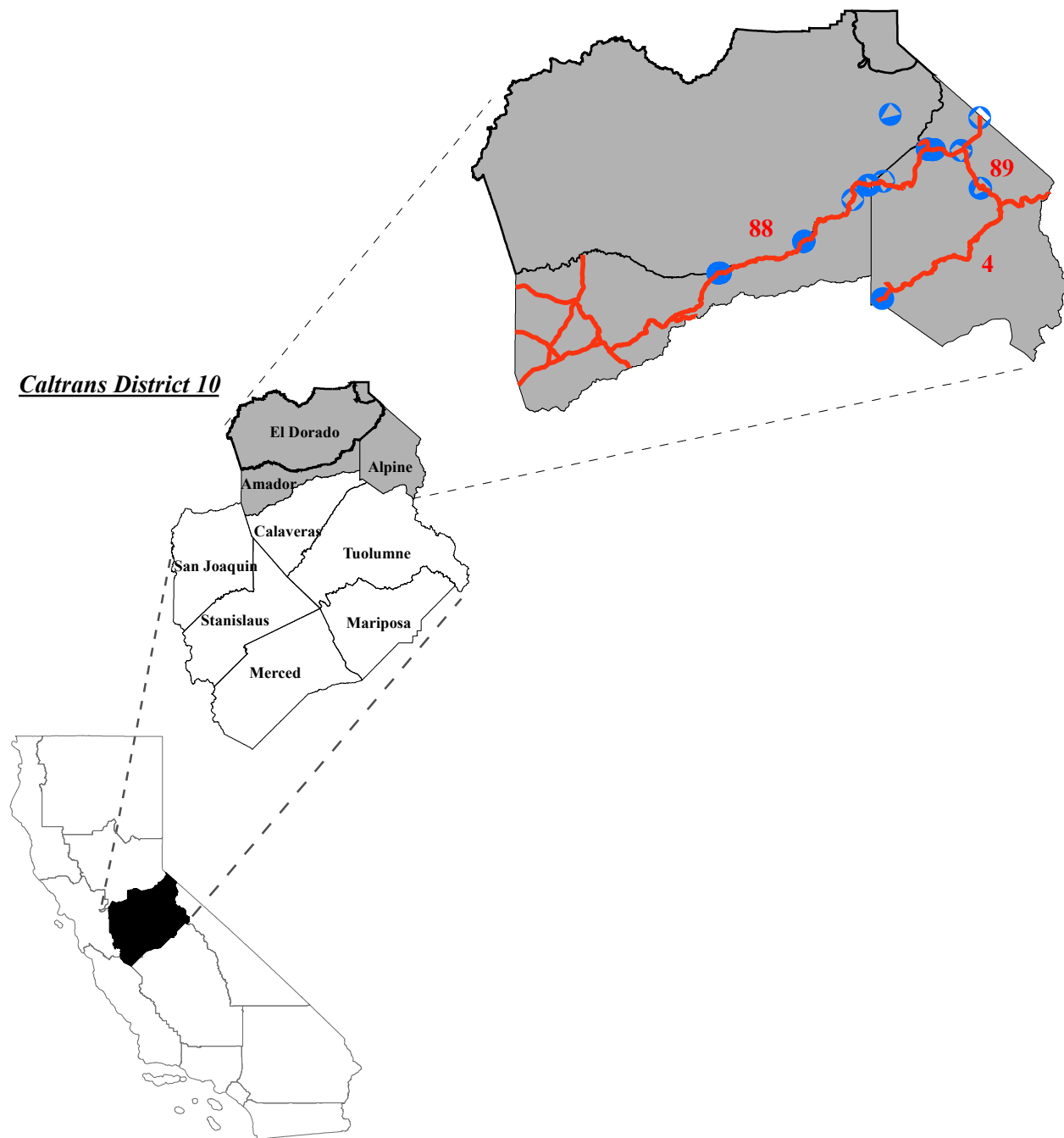
District 10 **Benjamin Broyles**, EBC

Date

Northern San Joaquin Valley Environmental Cultural Branch



# Amador, Alpine, & El Dorado Counties



Scale Accurate to Enlarged Map of County Only



Scale 1:1,500,000

0 5 10 15 20



Miles

0 5 10 15 20

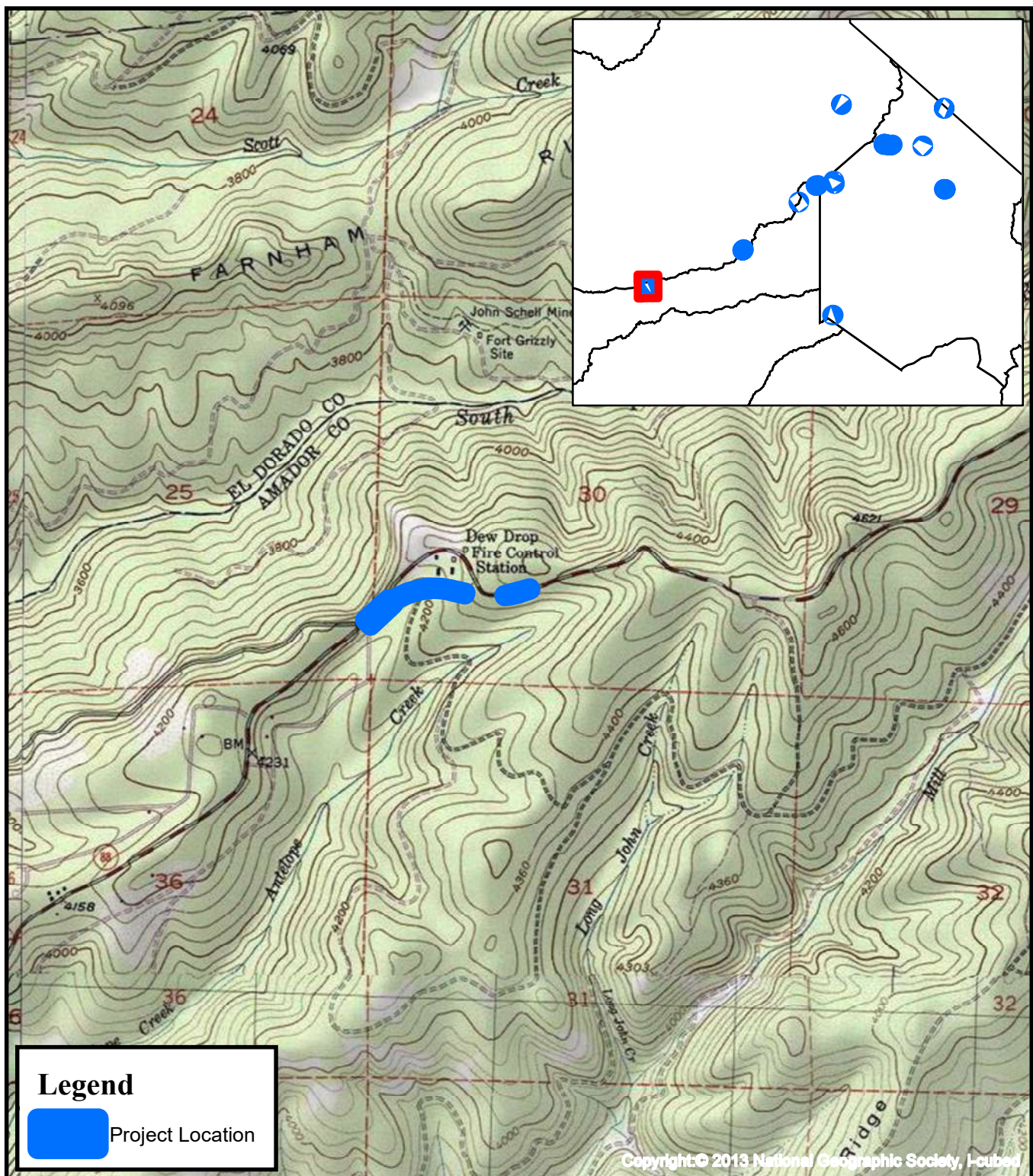


Kilometers



**FIGURE 1**  
**Project Vicinity**

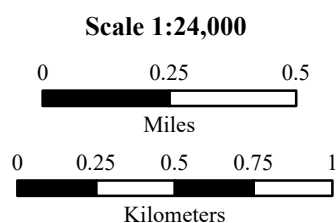
Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275



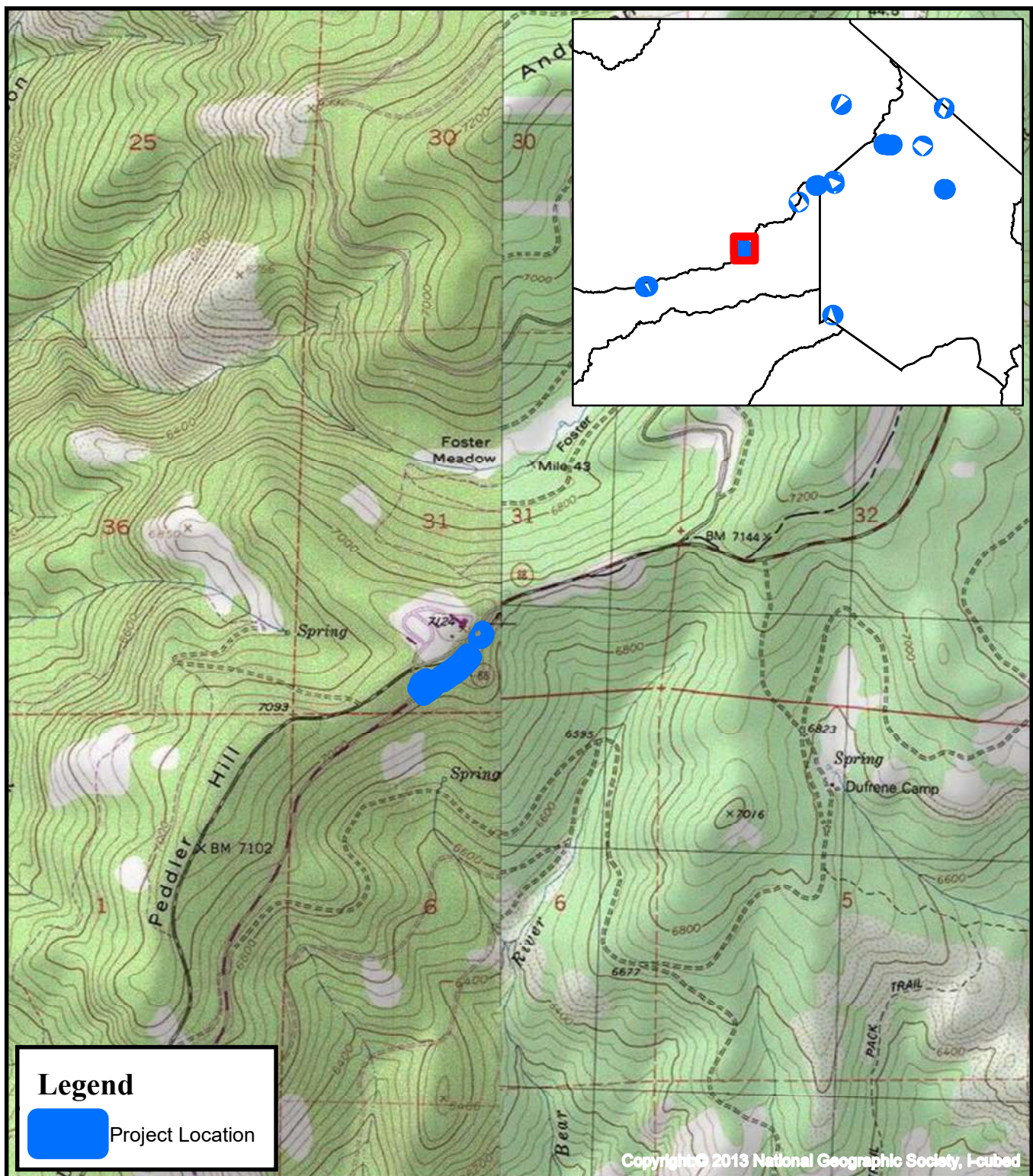
**Figure 2, Location 1  
Project Location Map**

Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Caldor  
T8N R14E - Section 30







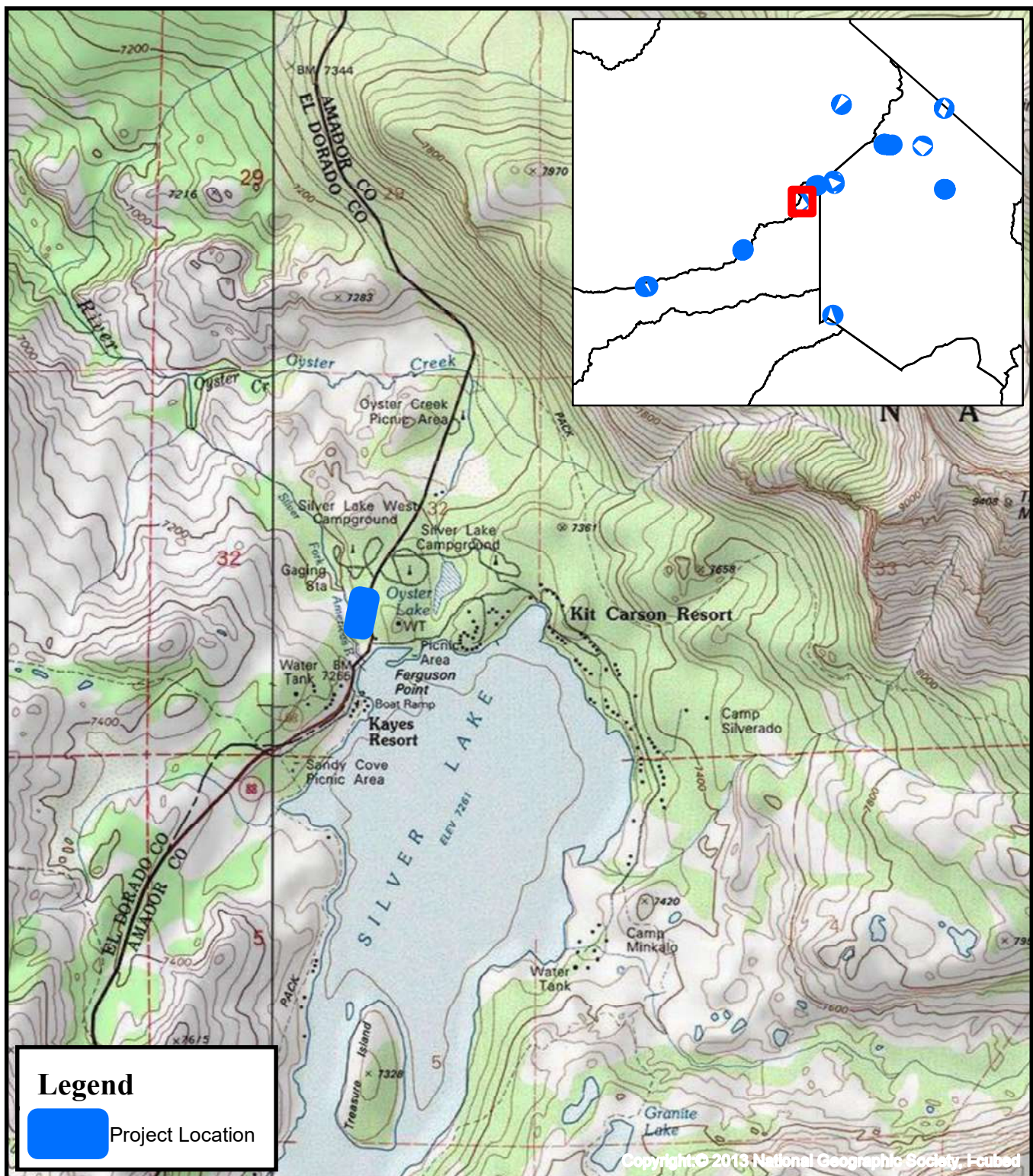
**Figure 2, Locations 2 & 3  
Project Location Map**



Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Peddler Hill  
T9N R15E - Section 31





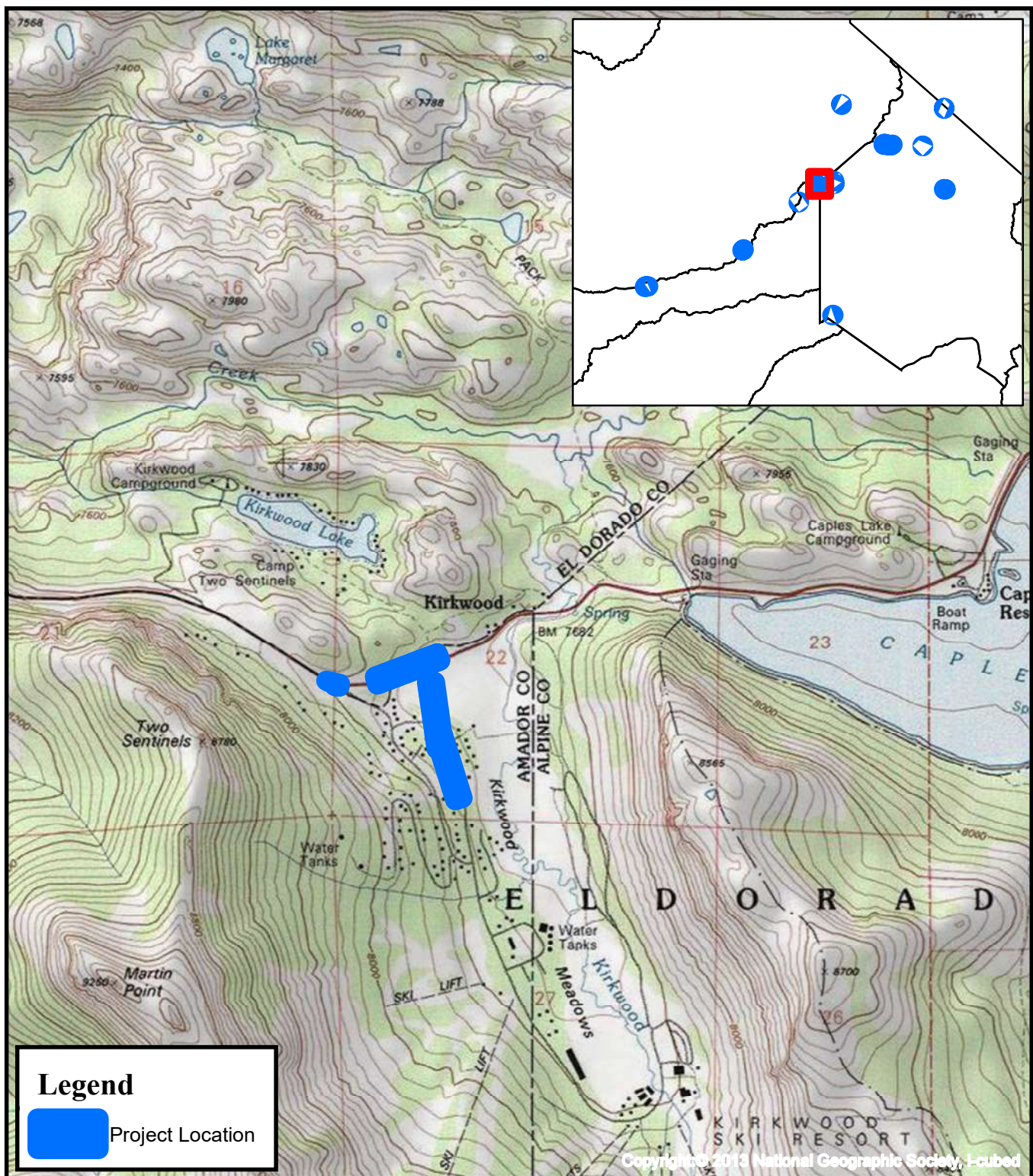
**Figure 2, Location 4  
Project Location Map**

Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Caples Lake  
T10N R17E - Section 32







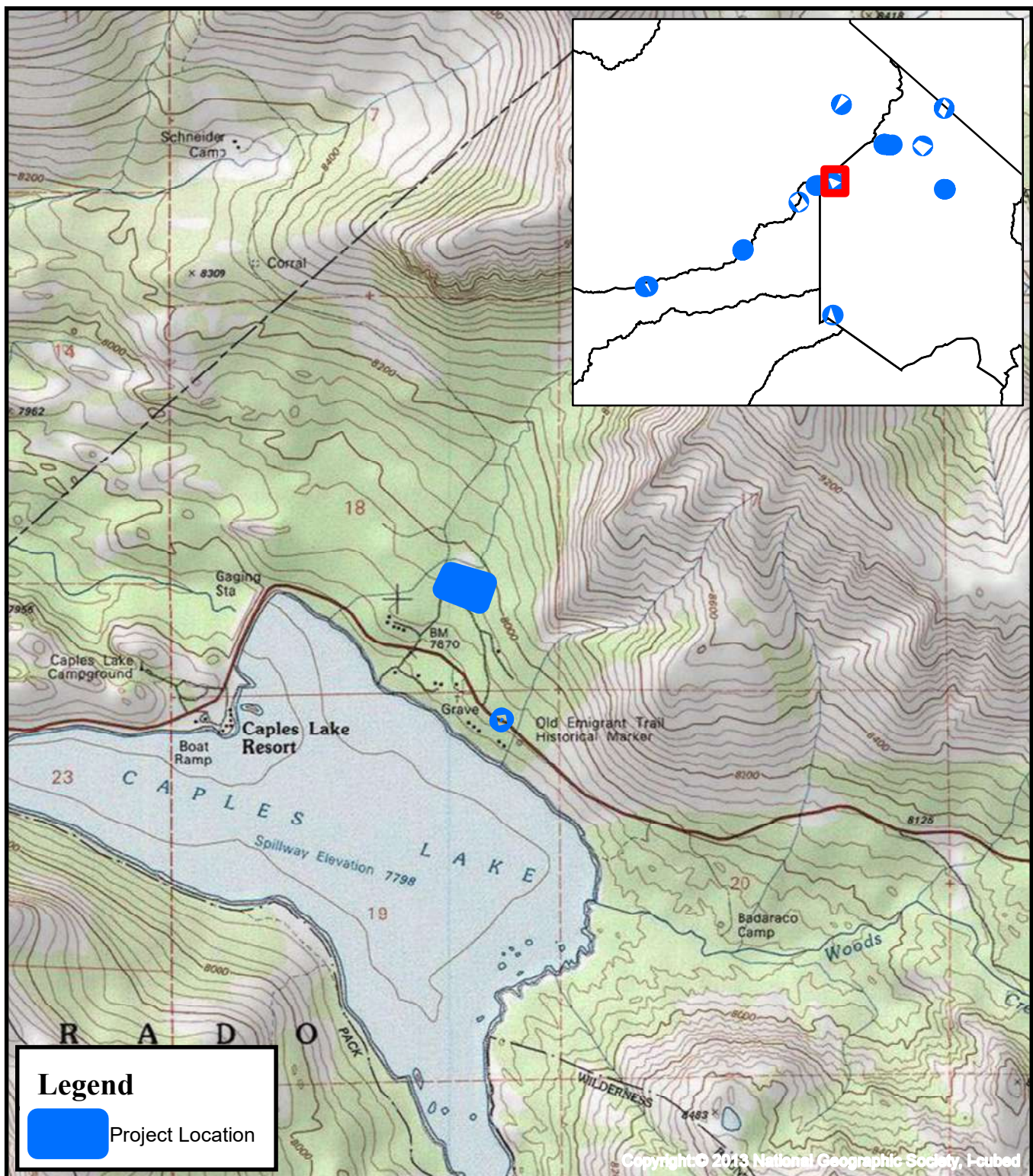
**Figure 2, Location 5  
Project Location Map**



Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Caples Lake  
T10N R17E - Section 22

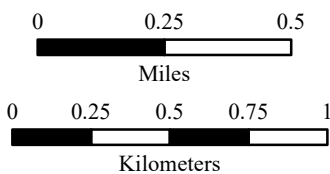




**Figure 2, Locations 6 & 7  
Project Location Map**



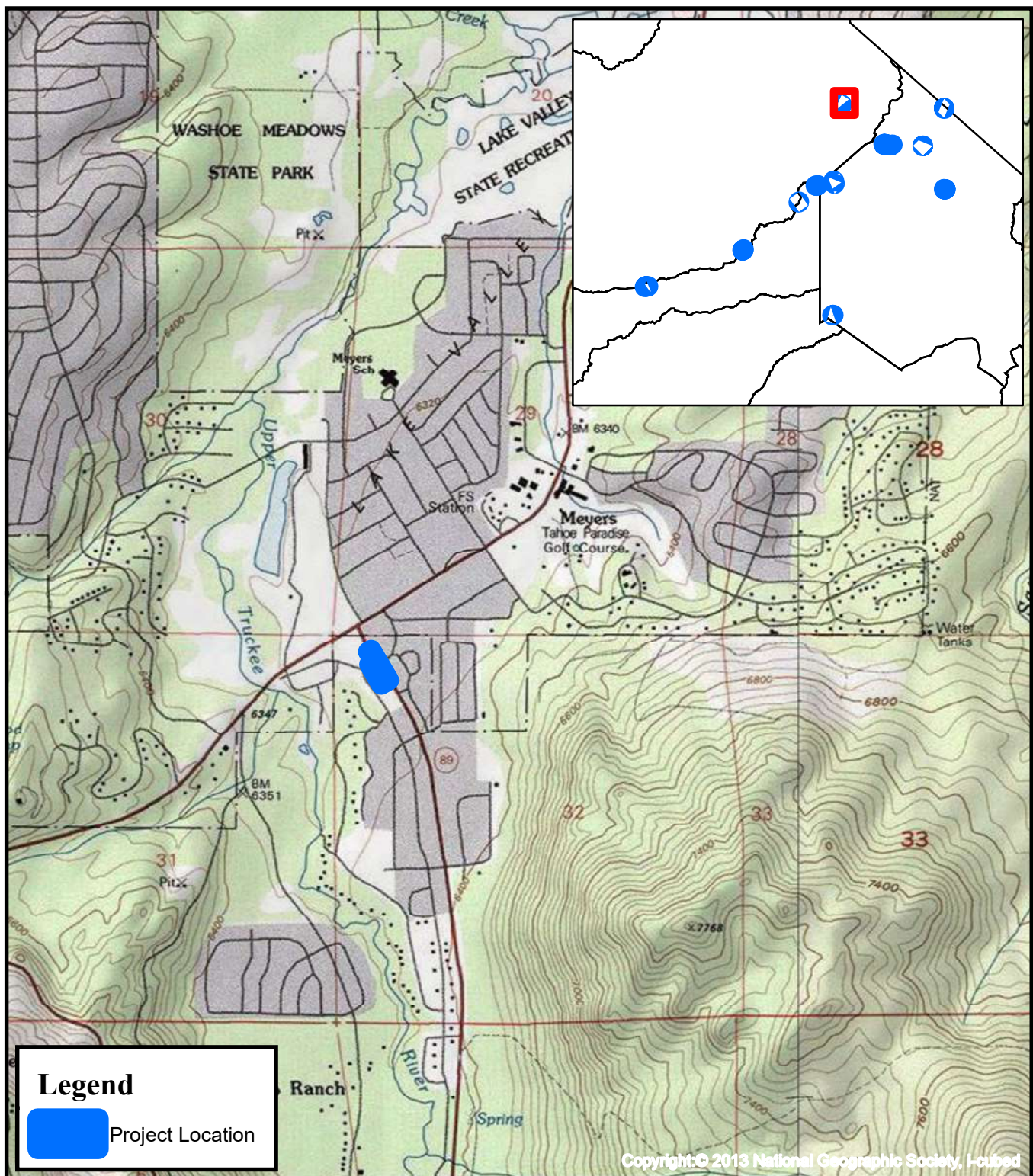
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Carson TMS Project  
 Amador, Alpine, and El Dorado Counties, California  
 10-AMA/ALP/ELD-4/88/89-Various  
 EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Caples Lake  
 T10N R18E - Section 18 & 19





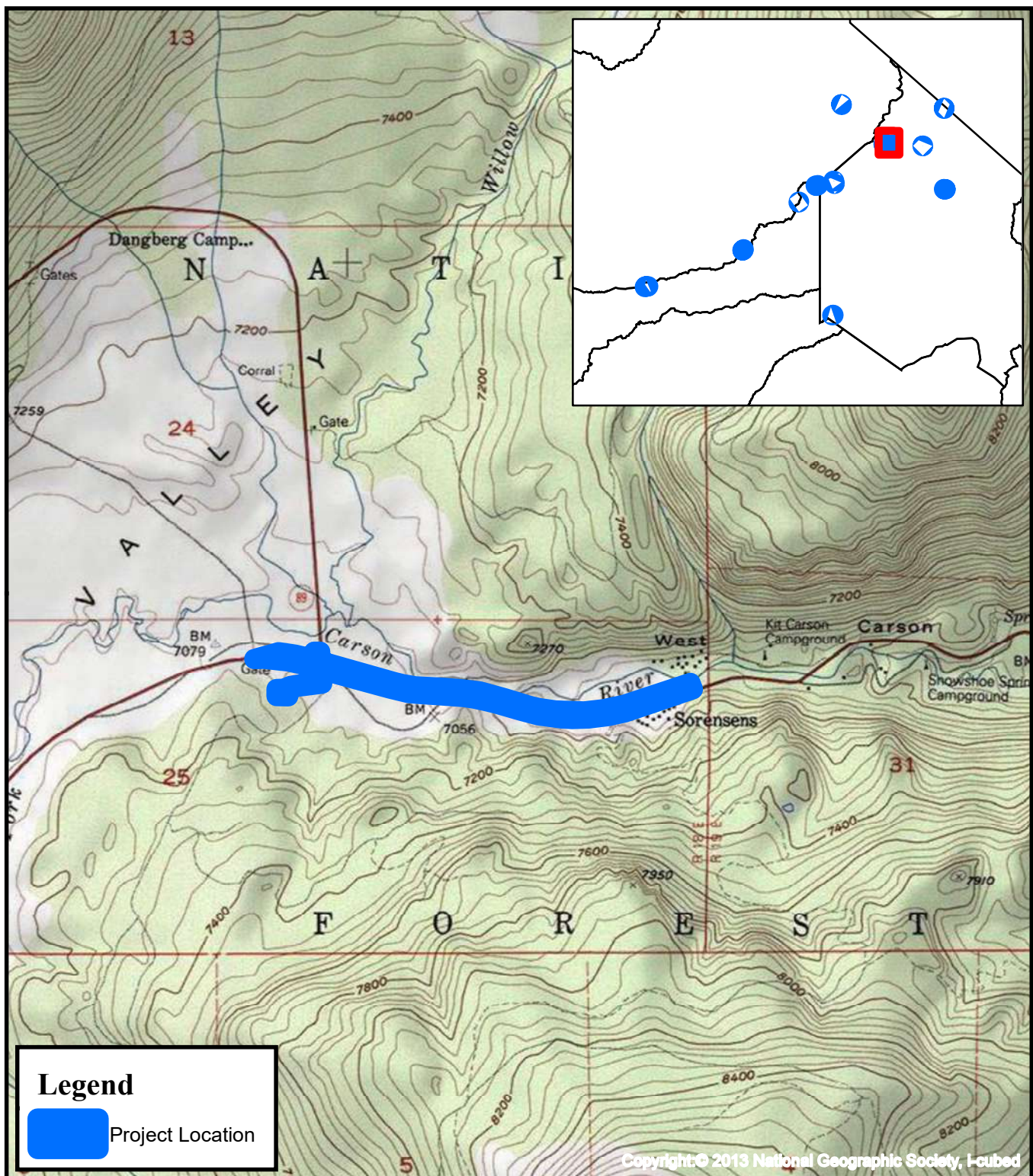
**Figure 2, Location 8  
Project Location Map**

Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275

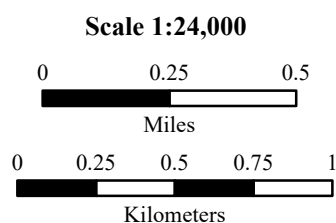
USGS 7.5-Minute Quad: Echo Lake  
T12N R18E - Section 32







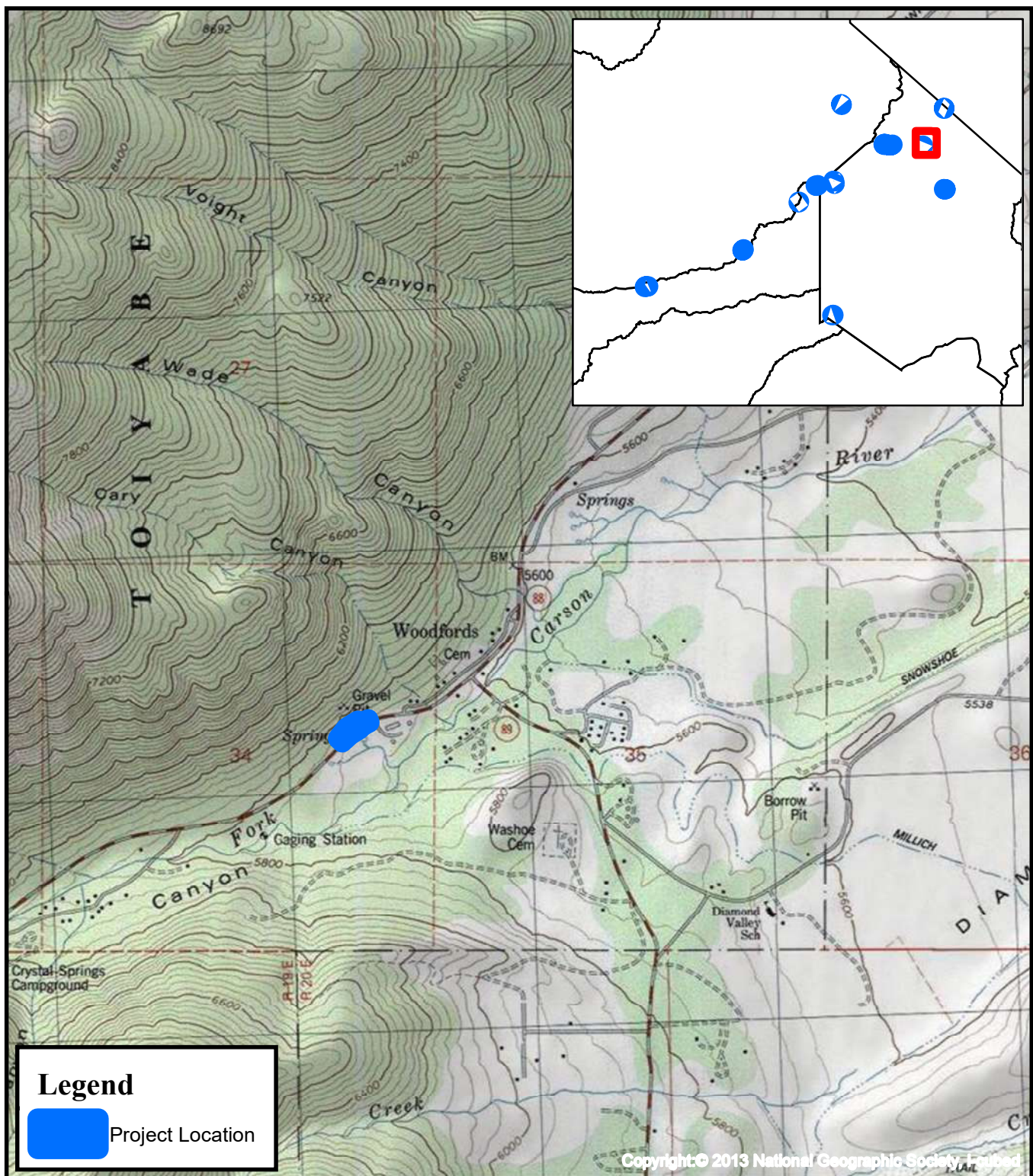
**Figure 2, Location 9  
Project Location Map**



Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Freel Peak  
T11N R18E - Section 25

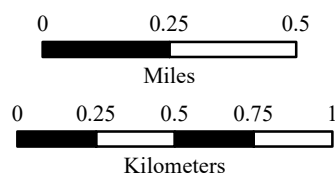




**Figure 2, Location 10  
Project Location Map**



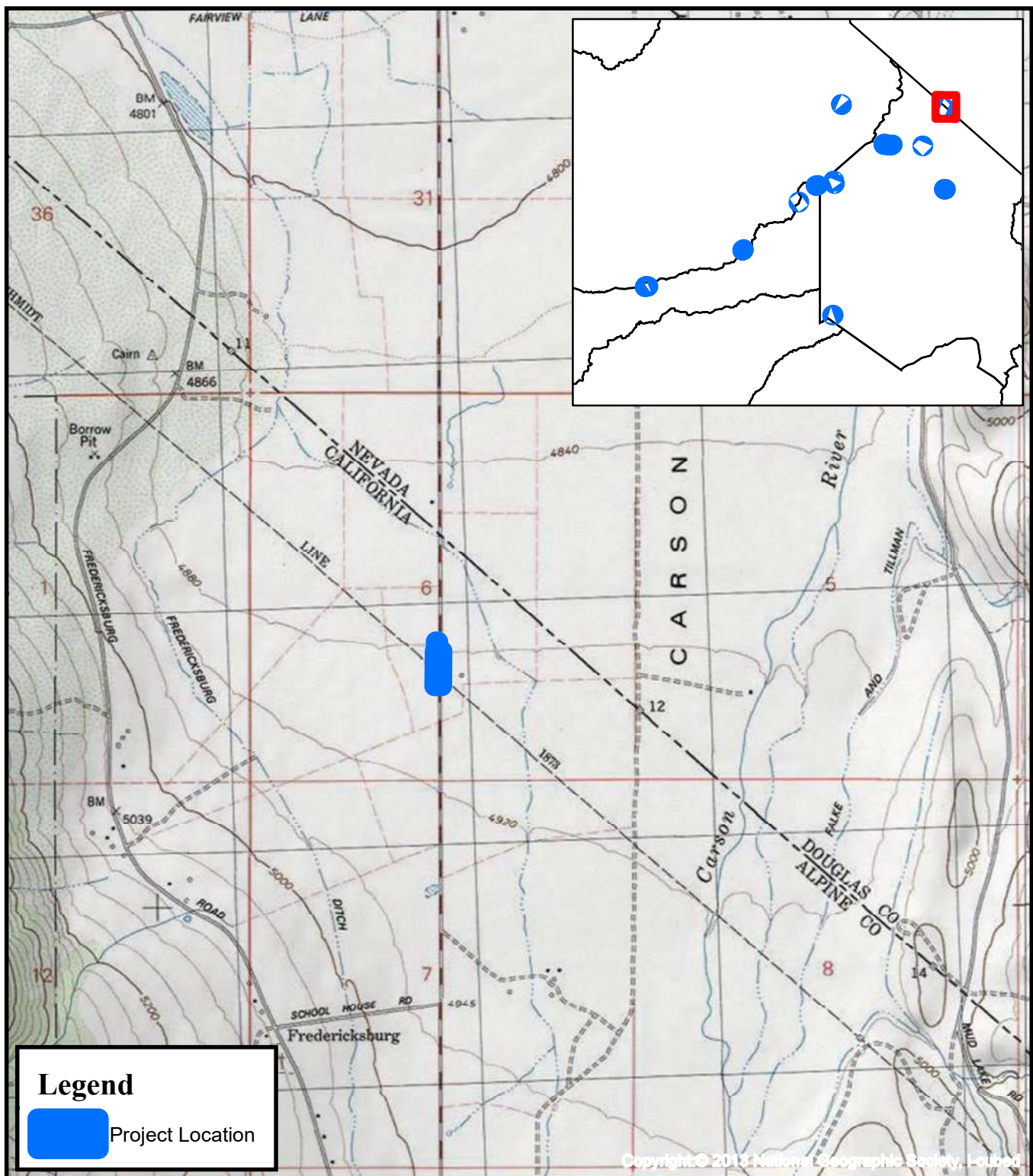
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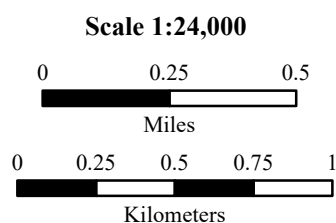
Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Woodfords  
T11N R19E - Section 34





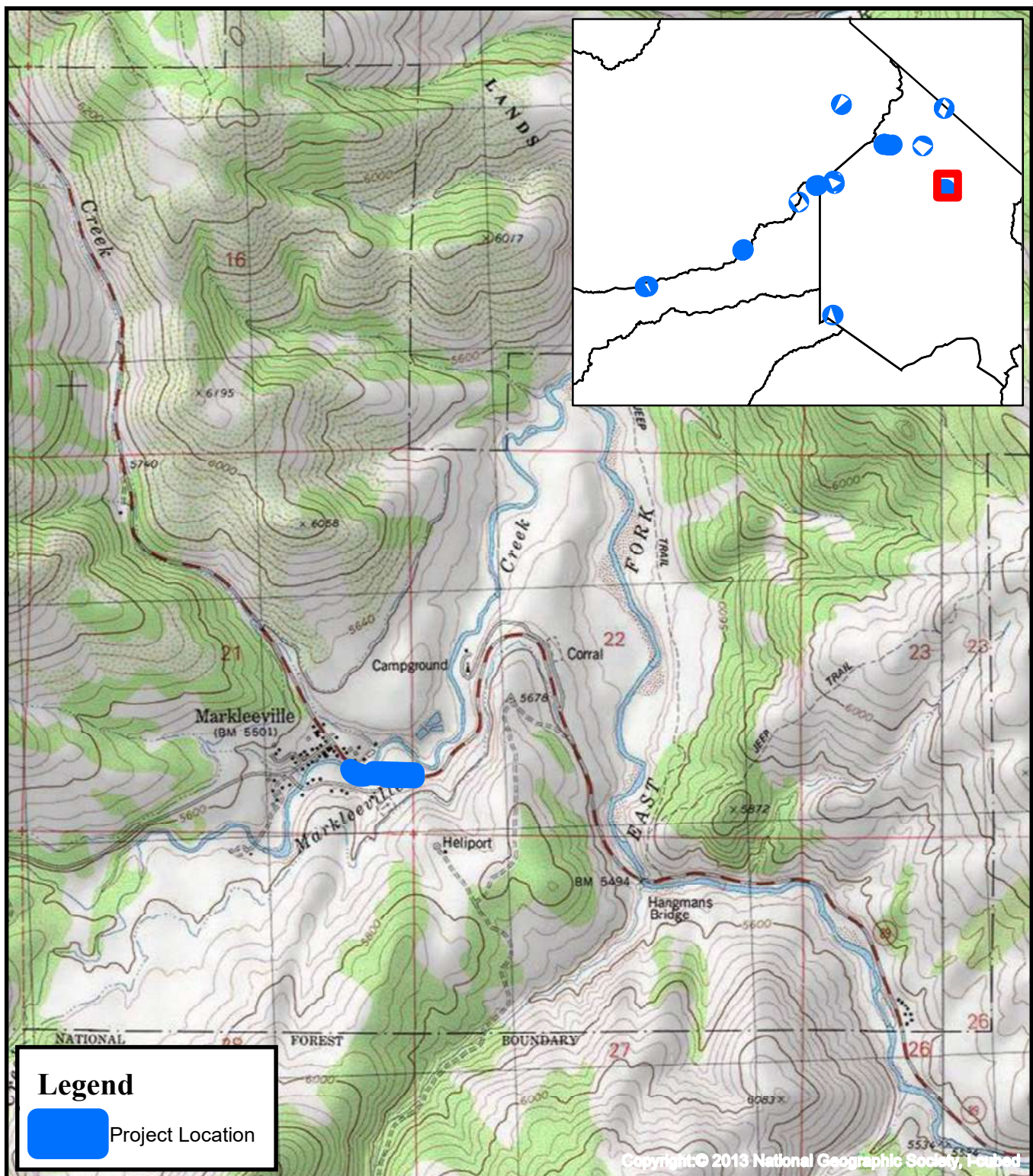
**Figure 2, Location 11  
Project Location Map**



Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
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EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Woodfords  
T11N R20E - Section 6

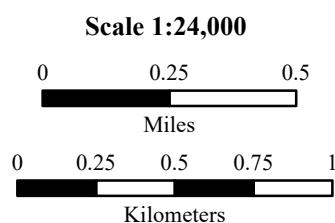




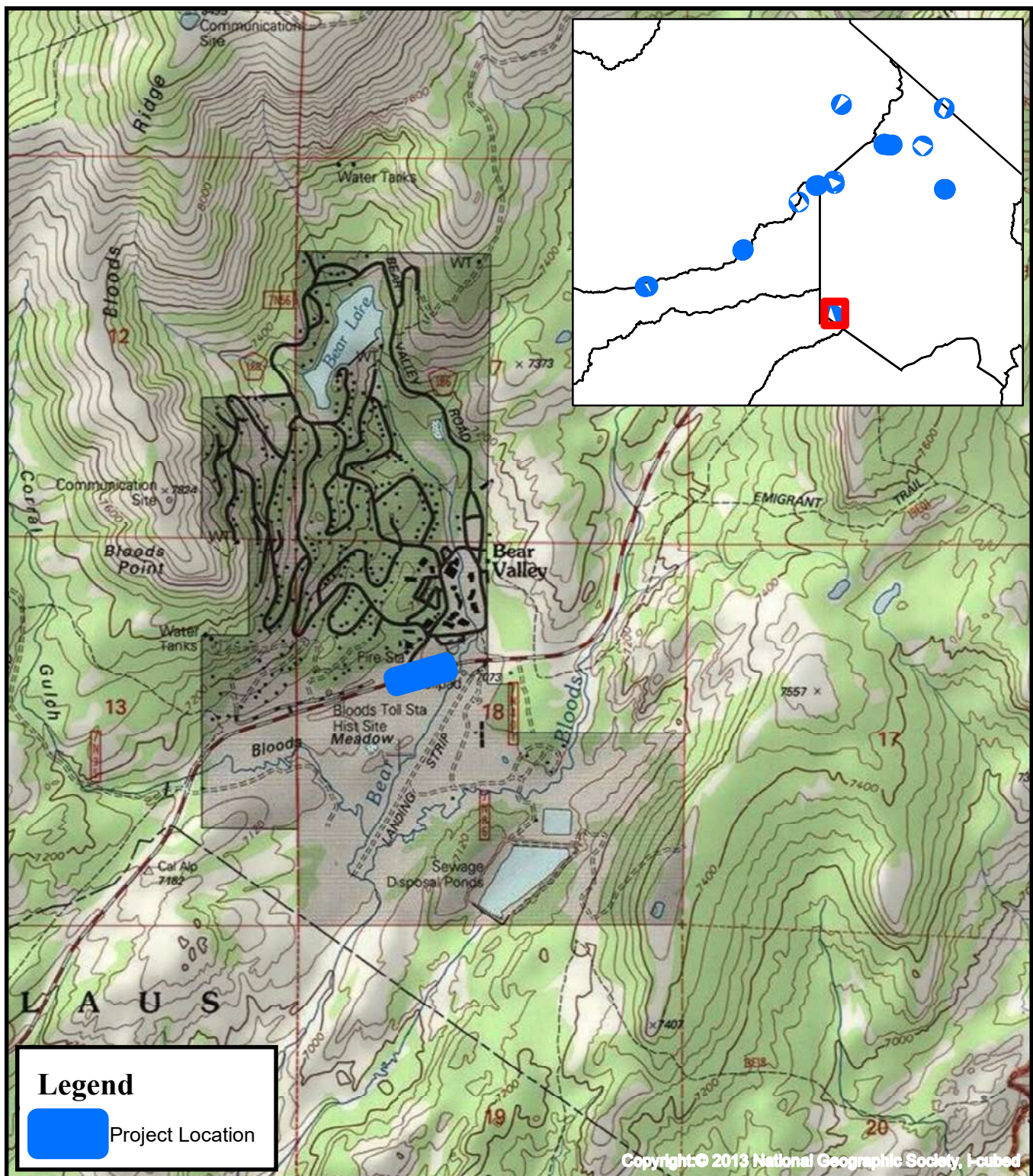
**Figure 2, Location 12  
Project Location Map**

Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Markleeville  
T10N R20E - Section 21



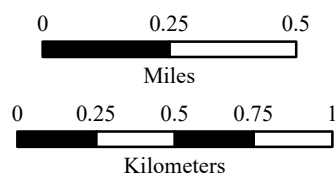




**Figure 2, Location 13  
Project Location Map**



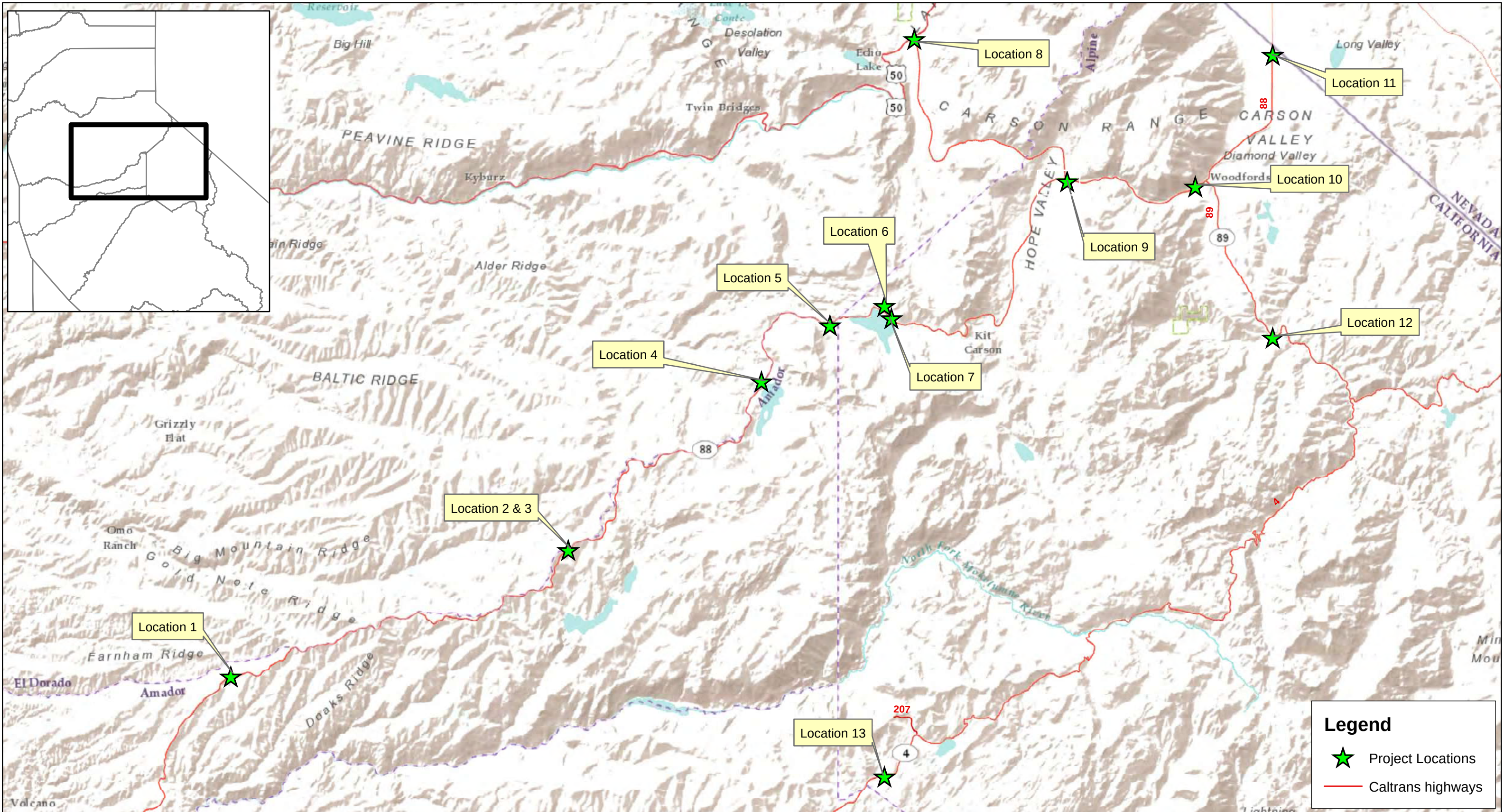
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Carson TMS Project  
Amador, Alpine, and El Dorado Counties, California  
10-AMA/ALP/ELD-4/88/89-Various  
EA: 10-1G020; EFIS: 1018000275

USGS 7.5-Minute Quad: Tamarack  
T7N R18E - Section 18





**SCALE** 1:270,000

0 14,000 28,000 56,000 Feet

11,000 5,500 0 11,000 Meters



*Laura N. Cook* 08/26/2021  
 Caltrans PQS - Laura Cook Date

*Navraj Jammu* 8/26/2021  
 Caltrans Project Manager - Navraj Jammu Date



**FIGURE 3, Overview Map**  
**Area of Potential Effects Map**

Carson TMS Project  
 10-AMA/ALP/ED-4/88/89; PM Various  
 EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





### Legend

-  APE
-  Proposed Cabinet Location
-  Proposed Guardrail
-  Proposed Trenching
-  Proposed MVP

SCALE 1:1,700

0 87.5 175 350  
Feet

70 35 0 70  
Meters



### FIGURE 3, Map 1 of 18 Area of Potential Effects Map Location 1

SR 88, PM 38.2/38.5, Amador County  
Carson TMS Project  
10-AMA/ALP/ED-4/88/89; PM Various  
EA: 10-1G020; EFIS: 1018000275  
Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

-  APE
-  Proposed Staging

**SCALE 1:1,700**

0 87.5 175 350  
Feet

70 35 0 70  
Meters



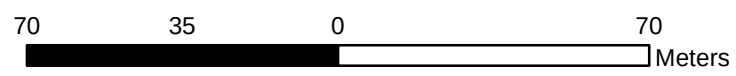
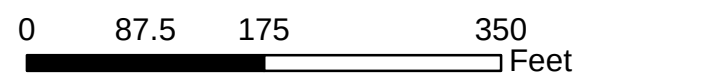
**FIGURE 3, Map 2 of 18**  
**Area of Potential Effects Map**  
**Location 1 Staging Area**  
**SR 88, PM 38.6/38.7, Amador County**  
Carson TMS Project  
10-AMA/ALP/ED-4/88/89; PM Various  
EA: 10-1G020; EFIS: 1018000275  
Created by Caltrans D10 Archaeologist, Laura Cook





- Legend**
- APE
  - TCE
  - Proposed Light Pole
  - Proposed CMS
  - Proposed Cabinet Location
  - Proposed Guardrail
  - Proposed Trenching
  - Proposed Staging
  - Proposed MVP

SCALE 1:1,700



**FIGURE 3, Map 3 of 18**  
**Area of Potential Effects Map**  
**Locations 2 & 3**  
 SR 88, PM 54.0/54.2, Amador County  
 Carson TMS Project  
 10-AMA/ALP/ED-4/88/89; PM Various  
 EA: 10-1G020; EFIS: 1018000275  
 Created by Caltrans D10 Archaeologist, Laura Cook





#### Legend

- APE
- Proposed Light Pole
- Proposed CMS
- Proposed Cabinet Location
- Proposed Guardrail
- Proposed Trenching
- Proposed Staging
- Proposed MVP

SCALE 1:1,700

0 87.5 175 350 Feet

70 35 0 70 Meters



### FIGURE 3, Map 4 of 18 Area of Potential Effects Map

#### Location 4

SR 88, PM 65.9, Amador County

Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

- APE
- Proposed CMS
- Proposed Cabinet Location
- Proposed Guardrail
- Proposed Trenching
- Proposed Staging
- Proposed MVP



**SCALE** 1:1,684

0 87.5 175 350 Feet

70 35 0 70 Meters



**FIGURE 3, Map 5 of 18**

**Area of Potential Effects Map**

**Location 5**

**SR 88, PM 71.0/71.4, Amador County**

Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

- APE
- Proposed Guardrail
- Proposed Trenching
- Proposed MVP



**SCALE 1:1,700**

Feet

Meters



**FIGURE 3, Map 6 of 18**

**Area of Potential Effects Map**

**Location 5 (a)**

**SR 88, PM 71.35, Amador County**

Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





SCALE 1:1,700

0 87.5 175 350 Feet

70 35 0 70 Meters



**FIGURE 3, Map 7 of 18**  
**Area of Potential Effects Map**  
**Location 5 (a) continued**  
**SR 88, PM 71.35, Amador County**  
Carson TMS Project  
10-AMA/ALP/ED-4/88/89; PM Various  
EA: 10-1G020; EFIS: 1018000275  
Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

- APE
- Proposed Cabinet Location
- Proposed Trenching
- Proposed Staging



**SCALE 1:1,700**

0 87.5 175 350 Feet

70 35 0 70 Meters



**FIGURE 3, Map 8 of 18**

**Area of Potential Effects Map**

**Location 6**

**SR 88, PM 2.00, Alpine County**

Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

- APE
- Proposed Trenching
- Proposed Cabinet Location
- Proposed VDS Loops



**SCALE 1:1,700**

0 87.5 175 350 Feet

70 35 0 70 Meters



**FIGURE 3, Map 9 of 18**

**Area of Potential Effects Map**

**Location 7**

**SR 88, PM 2.33, Alpine County**

Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





#### Legend

-  APE
-  Proposed Cabinet Location
-  Proposed Guardrail
-  Proposed Trenching
-  Proposed Staging
-  Proposed MVP

SCALE 1:1,700

0 87.5 175 350  
Feet

70 35 0 70  
Meters



### FIGURE 3, Map 10 of 18 Area of Potential Effects Map Location 8

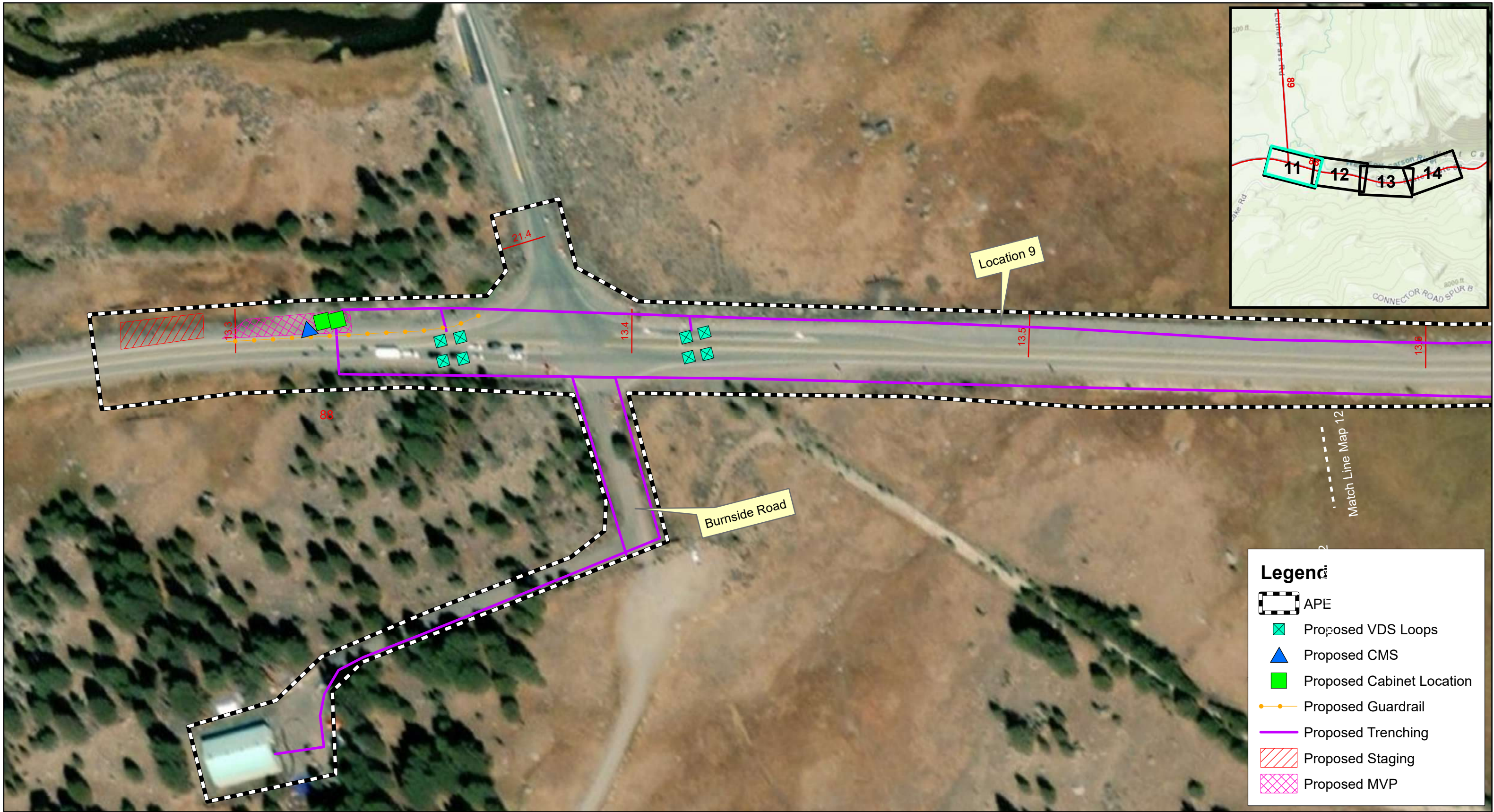
SR 89, PM 8.40, El Dorado County  
Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





SCALE 1:1,700

0 87.5 175 350 Feet

70 35 0 70 Meters



**FIGURE 3, Map 11 of 18**  
**Area of Potential Effects Map**  
**Location 9 (1)**  
**SR 88, PM 13.3/13.6, Alpine County**  
 Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various  
 EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

 APE

 Proposed Trenching

**SCALE 1:1,700**

0 87.5 175 350 Feet

70 35 0 70 Meters





**FIGURE 3, Map 12 of 18**

**Area of Potential Effects Map**

**Location 9 (2)**

**SR 88, PM 13.6/13.9, Alpine County**

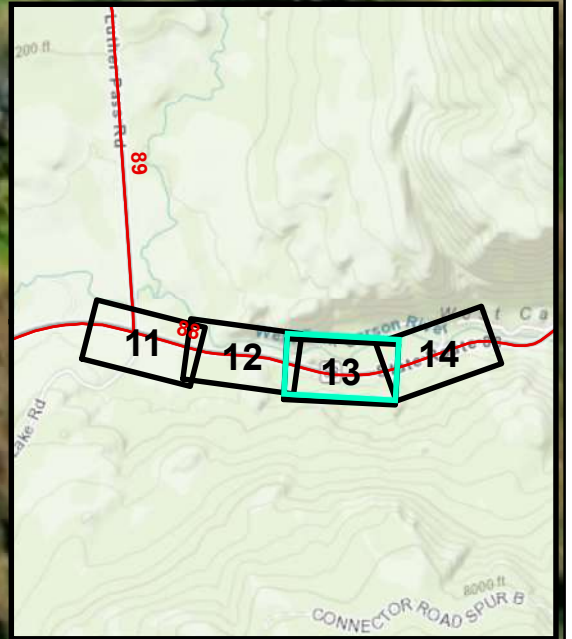
Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

 APE

 Proposed Trenching

**SCALE 1:1,700**

0 87.5 175 350 Feet

70 35 0 70 Meters



**FIGURE 3, Map 13 of 18**

**Area of Potential Effects Map**

**Location 9 (3)**

**SR 88, PM 13.3/13.6, Alpine County**

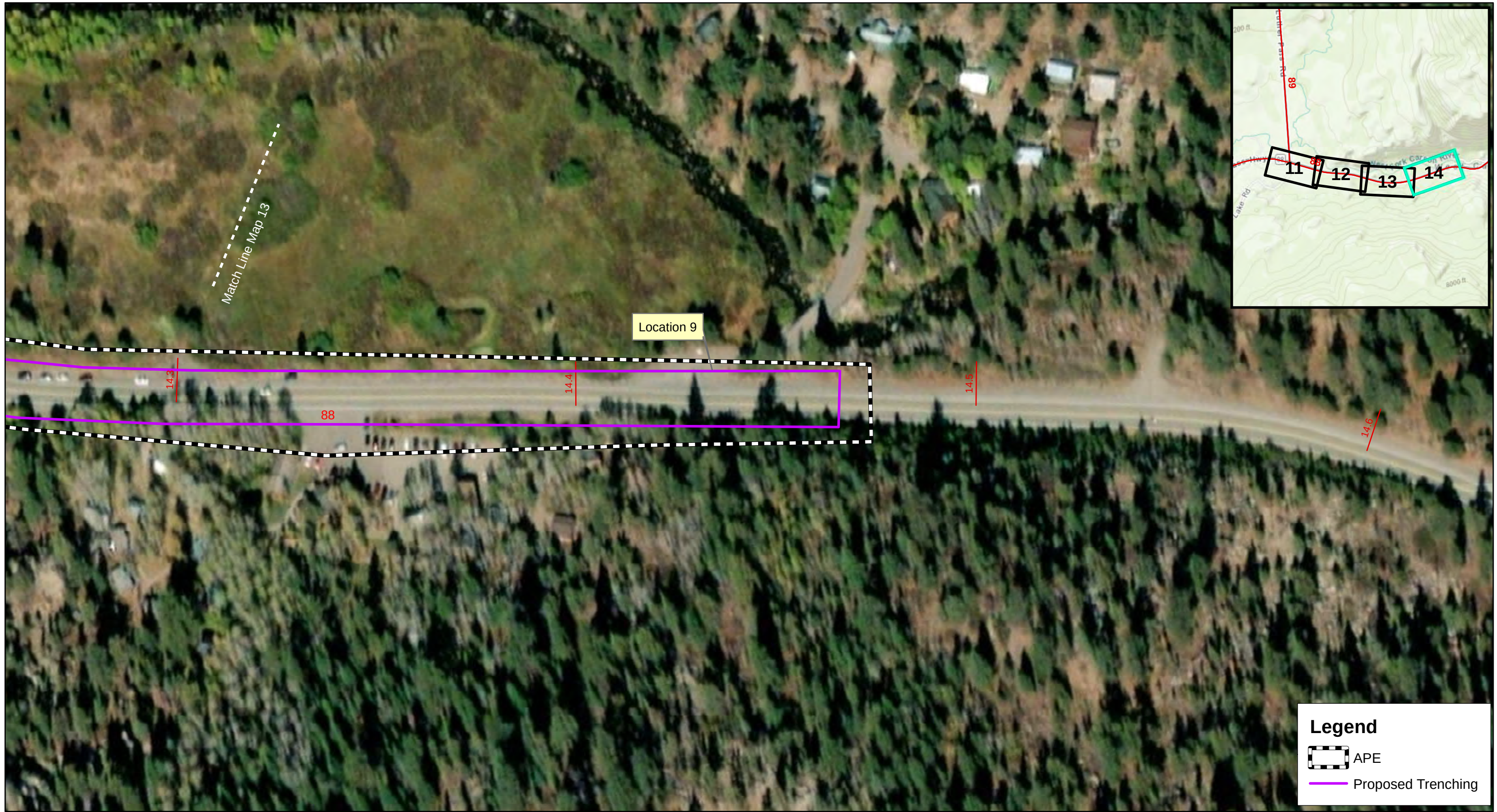
Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

 APE

 Proposed Trenching



**SCALE** 1:1,700

0 87.5 175 350 Feet

70 35 0 70 Meters



**FIGURE 3, Map 14 of 18 Area of Potential Effects Map Location 9 (4)**

**SR 88, PM 14.3/14.5, Alpine County**

Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

- APE
- Proposed CMS
- Proposed Cabinet Location
- Proposed Guardrail
- Proposed Trenching
- Proposed Staging
- Proposed MVP

**SCALE 1:1,700**

0 87.5 175 350 Feet

70 35 0 70 Meters

**FIGURE 3, Map 15 of 18**

**Area of Potential Effects Map**

**Location 10**

**SR 88, PM 19.2, Alpine County**

Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





SCALE 1:1,700

0 87.5 175 350 Feet

70 35 0 70 Meters



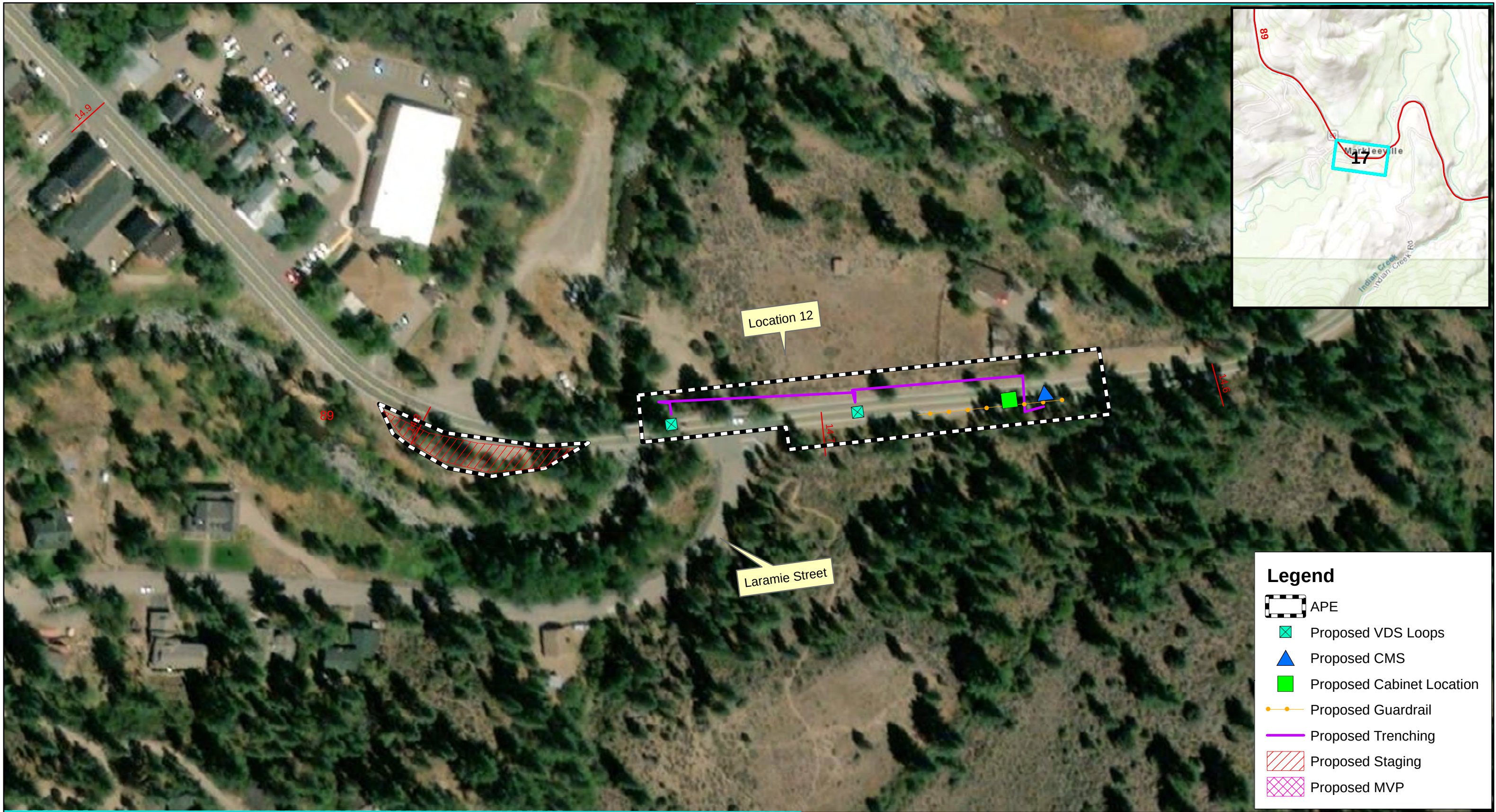
**FIGURE 3, Map 16 of 18**  
**Area of Potential Effects Map**  
**Location 11**  
**SR 88, PM 25.0, Alpine County**  
 Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook





### Legend

- APE
- Proposed VDS Loops
- Proposed CMS
- Proposed Cabinet Location
- Proposed Guardrail
- Proposed Trenching
- Proposed Staging
- Proposed MVP

SCALE 1:1,700

0 87.5 175 350 Feet

70 35 0 70 Meters



**FIGURE 3, Map 17 of 18**  
**Area of Potential Effects Map**  
**Location 12**  
**SR 89, PM 14.6/14.8, Alpine County**  
 Carson TMS Project  
 10-AMA/ALP/ED-4/88/89; PM Various  
 EA: 10-1G020; EFIS: 1018000275  
 Created by Caltrans D10 Archaeologist, Laura Cook





**Legend**

- APE
- Proposed CMS
- Proposed Cabinet Location
- Proposed Guardrail
- Proposed Trenching
- Proposed Staging
- Proposed MVP

SCALE 1:1,700

0 87.5 175 350 Feet

70 35 0 70 Meters



**FIGURE 3, Map 18 of 18**  
**Area of Potential Effects Map**

**Location 13**

**SR 4, PM 0.8/0.9, Alpine County**

Carson TMS Project

10-AMA/ALP/ED-4/88/89; PM Various

EA: 10-1G020; EFIS: 1018000275

Created by Caltrans D10 Archaeologist, Laura Cook



# Memorandum

*Making Conservation  
a California Way of Life.*

To: FILE

Date: June 30, 2021

File: EA: 10-1G020  
ID: 1018000275  
Carson TMS Project  
10-ALP-88  
PM: 2.0/25.0

From: Matthew Walker *Matthew Walker*  
Environmental Planner, PQS Architectural Historian  
Northern San Joaquin Valley Cultural Resources Branch  
Central Region Environmental Division

Subject: **ARCHITECTURAL HISTORY SECTION 106 COMPLIANCE MEMO** for the Carson TMS Project in Alpine, Amador, and El Dorado Counties.

The California Department of Transportation (Caltrans) is proposing a project to install Traffic Management Systems (TMS) elements in and around the Kirkwood/Carson area on State Routes (SR) 4, 88 & 89 in Amador, Alpine, and El Dorado Counties at various locations. The scope of work includes installing seven new Changeable Message Signs (CMS), one street light, nine Video Detection Systems (VDS), ten Closed Circuit Television (CCTV) systems, eight Roadway Weather Information Systems (RWIS), nine Highway Advisory Radio (HAR), ten Extinguishable Message Sign (EMS), and nine Maintenance Vehicle Pullouts (MVP) (Figure 1).

The project proposes two alternatives; a Programmable Project and a No-Build. The Programmable Alternative proposes to install new TMS elements along various spot locations on State Routes (SR) 4, 88, and 89 through Amador, Alpine, and El Dorado Counties. The No-Build Alternative does not meet the purpose and need to address the effects of recurrent severe weather conditions on traffic through strategic deployment of various TMS elements within the project limits.

The architectural history review was performed by Matthew Walker, PQS Architectural Historian. Documentary research for the project included an examination of the Caltrans Cultural Resources Database (CCRD) for evidence of previous inventory efforts and recorded architectural history resources, a review of contemporary and historic aerial photographs, the Caltrans Historic Bridge Inventory, and record searches by Caltrans personnel at the Central California Information Center (CCIC) and North Central California Center (NCIC) (RS# 11542K & AMA-20-27)

According to the CCRD and record searches, there have been fourteen (14) studies conducted within the project area. There are eight (8) recorded built environment resources within the project limit. Six (6) of these built environment resources are within the project APE. The other two (2) built environment resources are within a half mile of the project APE. All built environment resources are ineligible or unevaluated for the National Register of Historic Places. None of these built environment resources will be affected by any project-related activities. No other built environment resources were discovered during the record search or field survey.

Consultation with the local historical societies and local government agencies was initiated through written correspondence dated October 26, 2020 (Attachment 2). Consultation with the Amador County Planning Department, Alpine Community Development Department, and Amador and Alpine County Historical Societies was initiated through written correspondence dated October 26, 2020. A Letter detailing the project, inviting comment and provided project mapping was sent to Ms. Burkett, Community Development Director, Alpine County Community Development Department. A Letter detailing the project, inviting comment and provided project mapping was sent to the Amador County Planning Department. A Letter detailing the project, inviting comment and provided project mapping was sent to Cathy McGowen, President of the Amador County Historical Society. Also, a Letter detailing the project, inviting comment and provided project mapping was sent to the Alpine County Historical Society. As of June 30, 2021, no response has been received from the Amador and Alpine County Historical Societies. As of June 30, 2021, no response has been received by Caltrans concerning the project from the Amador County Planning Department. As of June 30, 2021, no response has been received from the Alpine County Community Development Department.

Based upon the project description, provided project mapping and layouts, and proposed project activities, there is no potential to affect built environment resources. As such no further architectural history review is required unless project plans change to include work not currently identified in the project description or to include additional areas not identified in the project area plans.

Please note that should project plans change to include additional construction activities, locations or identify significant built environment resources within the project area, Section 106 compliance will need to be revisited. Additional construction activities cannot be conducted without reevaluation by a qualified Caltrans Architectural Historian.

June 30, 2021

Page 3

If you have any questions about the content of this memo or project-related items, please contact Mr. Walker at (209) 479-5846 or [Matthew.Walker@dot.ca.gov](mailto:Matthew.Walker@dot.ca.gov).

Enclosures

- (1) Figure 1 – Project Vicinity Map
- (2) Figure 2 – Project Location Map
- (3) Figure 3 – Project Area of Potential Effect Map
- (4) Attachment 2 – Section 106 Consultation.

c: Caltrans District 10 Project Files  
Benjamin Broyles, Branch Chief, Cultural Resources Branch  
Laura Cook, District 10 Historical Resources Coordinator



# **ATTACHMENT 2**

---

Section 106 Consultation

**DEPARTMENT OF TRANSPORTATION****DISTRICT 10**

1976 East Dr. Martin Luther King Jr. Blvd  
Stockton, CA 95206  
PHONE (209) 990-5718  
TTY 711  
www.dot.ca.gov



*Making Conservation a  
California way of life.*

October 26, 2020

Debbie Burkett, Director  
Alpine County Community Development Department  
50 Diamond Valley Road  
Markleeville, CA 96120

EA: 10-1G020  
Project ID: 1018000275  
ALP-88 PM 2.0/25.0

Subject: Carson TMS Project

Ms. Burkett:

The California Department of Transportation (Caltrans) proposes a project to install Traffic Management Systems (TMS) elements in and around the Kirkwood/Carson area on State Routes 4, 88 & 89 in Alpine County at various locations. The scope of work includes installing seven new Changeable Message Signs (CMS), one street light, nine Video Detection Systems (VDS), ten Closed Circuit Television (CCTV) systems, eight Roadway Weather Information Systems (RWIS), nine Highway Advisory Radio (HAR), ten Extinguishable Message Sign (EMS), and nine Maintenance Vehicle Pullouts (MVP).

**Alternative 1:** This alternative proposes to install TMS elements including, seven CMS's, nine VDS's, nine HAR's, and nine MVP pullouts along SR 4, 88, and 89 in Alpine County.

**Alternative 2:** This alternative does not address the needed installation of TMS elements to meet the purpose and need of the project.

Caltrans makes every effort to be responsible stewards of potentially significant cultural resources within the project area. In an effort to fully analyze the potential impacts to any historic properties, Caltrans is seeking comments from community representatives. Caltrans welcomes any information and/or concerns you may have regarding the proposed project, or any other input you might have.

October 26, 2020

Page 2

Thank you for your time and consideration in this matter. If you have any questions or concerns, please contact me at (209) 990-5718 or via e-mail at [matthew.walker@dot.ca.gov](mailto:matthew.walker@dot.ca.gov).

Sincerely,

MATTHEW WALKER  
Architectural Historian  
Northern San Joaquin Valley Cultural Resources Branch  
District 10, Stockton

Enclosed: A Project Location Map



**DEPARTMENT OF TRANSPORTATION****DISTRICT 10**

1976 East Dr. Martin Luther King Jr. Blvd  
Stockton, CA 95206  
PHONE (209) 990-5718  
TTY 711  
www.dot.ca.gov



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October 26, 2020

Amador County Planning Department  
810 Court Street  
Jackson, CA 95642

EA: 10-1G020  
Project ID: 1018000275  
ALP-88 PM 2.0/25.0

Subject: Carson TMS Project

To Whom It May Concern:

The California Department of Transportation (Caltrans) proposes a project to install Traffic Management Systems (TMS) elements in and around the Kirkwood/Carson area on State Route 88 in Amador County at various locations. The scope of work includes installing seven new Changeable Message Signs (CMS), one street light, nine Video Detection Systems (VDS), ten Closed Circuit Television (CCTV) systems, eight Roadway Weather Information Systems (RWIS), nine Highway Advisory Radio (HAR), ten Extinguishable Message Sign (EMS), and nine Maintenance Vehicle Pullouts (MVP).

**Alternative 1:** This alternative proposes to install TMS elements including, seven CMS's, nine VDS's, nine HAR's, and nine MVP pullouts along SR 88 in Amador County.

**Alternative 2:** This alternative does not address the needed installation of TMS elements to meet the purpose and need of the project.

Caltrans makes every effort to be responsible stewards of potentially significant cultural resources within the project area. In an effort to fully analyze the potential impacts to any historic properties, Caltrans is seeking comments from community representatives. Caltrans welcomes any information and/or concerns you may have regarding the proposed project, or any other input you might have.

October 26, 2020

Page 2

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Sincerely,

MATTHEW WALKER  
Architectural Historian  
Northern San Joaquin Valley Cultural Resources Branch  
District 10, Stockton

Enclosed: A Project Location Map

**DEPARTMENT OF TRANSPORTATION****DISTRICT 10**

1976 East Dr. Martin Luther King Jr. Blvd  
Stockton, CA 95206  
PHONE (209) 990-5718  
TTY 711  
www.dot.ca.gov



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October 26, 2020

Alpine County Historical Society  
135 School Street  
Markleeville, CA 96120

EA: 10-1G020  
Project ID: 1018000275  
ALP-88 PM 2.0/25.0

Subject: Carson TMS Project

Members of the Alpine County Historical Society:

The California Department of Transportation (Caltrans) proposes a project to install Traffic Management Systems (TMS) elements in and around the Kirkwood/Carson area on State Routes 4, 88 & 89 in Alpine County at various locations. The scope of work includes installing seven new Changeable Message Signs (CMS), one street light, nine Video Detection Systems (VDS), ten Closed Circuit Television (CCTV) systems, eight Roadway Weather Information Systems (RWIS), nine Highway Advisory Radio (HAR), ten Extinguishable Message Sign (EMS), and nine Maintenance Vehicle Pullouts (MVP).

**Alternative 1:** This alternative proposes to install TMS elements including, seven CMS's, nine VDS's, nine HAR's, and nine MVP pullouts along SR 4, 88, and 89 in Alpine County.

**Alternative 2:** This alternative does not address the needed installation of TMS elements to meet the purpose and need of the project.

Caltrans makes every effort to be responsible stewards of potentially significant cultural resources within the project area. In an effort to fully analyze the potential impacts to any historic properties, Caltrans is seeking comments from community representatives. Caltrans welcomes any information and/or concerns you may have regarding the proposed project, or any other input you might have.



October 26, 2020

Page 2

Thank you for your time and consideration in this matter. If you have any questions or concerns, please contact me at (209) 990-5718 or via e-mail at [matthew.walker@dot.ca.gov](mailto:matthew.walker@dot.ca.gov).

Sincerely,

MATTHEW WALKER  
Architectural Historian  
Northern San Joaquin Valley Cultural Resources Branch  
District 10, Stockton

Enclosed: A Project Location Map

**DEPARTMENT OF TRANSPORTATION****DISTRICT 10**

1976 East Dr. Martin Luther King Jr. Blvd  
Stockton, CA 95206  
PHONE (209) 990-5718  
TTY 711  
www.dot.ca.gov



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California way of life.*

October 26, 2020

Cathy McGowen, President  
Amador County Historical Society  
225 Church Street  
Jackson, CA 95642

EA: 10-1G020  
Project ID: 1018000275  
ALP-88 PM 2.0/25.0

Subject: Carson TMS Project

Dear Ms. McGowen:

The California Department of Transportation (Caltrans) proposes a project to install Traffic Management Systems (TMS) elements in and around the Kirkwood/Carson area on State Route 88 in Amador County at various locations. The scope of work includes installing seven new Changeable Message Signs (CMS), one street light, nine Video Detection Systems (VDS), ten Closed Circuit Television (CCTV) systems, eight Roadway Weather Information Systems (RWIS), nine Highway Advisory Radio (HAR), ten Extinguishable Message Sign (EMS), and nine Maintenance Vehicle Pullouts (MVP).

**Alternative 1:** This alternative proposes to install TMS elements including, seven CMS's, nine VDS's, nine HAR's, and nine MVP pullouts along SR 88 in Amador County.

**Alternative 2:** This alternative does not address the needed installation of TMS elements to meet the purpose and need of the project.

Caltrans makes every effort to be responsible stewards of potentially significant cultural resources within the project area. In an effort to fully analyze the potential impacts to any historic properties, Caltrans is seeking comments from community representatives. Caltrans welcomes any information and/or concerns you may have regarding the proposed project, or any other input you might have.

October 26, 2020

Page 2

Thank you for your time and consideration in this matter. If you have any questions or concerns, please contact me at (209) 990-5718 or via e-mail at [matthew.walker@dot.ca.gov](mailto:matthew.walker@dot.ca.gov).

Sincerely,

MATTHEW WALKER  
Architectural Historian  
Northern San Joaquin Valley Cultural Resources Branch  
District 10, Stockton

Enclosed: A Project Location Map





**DEPARTMENT OF PARKS AND RECREATION  
OFFICE OF HISTORIC PRESERVATION**

Armando Quintero, Director

Julianne Polanco, State Historic Preservation Officer

1725 23rd Street, Suite 100, Sacramento, CA 95816-7100

Telephone: (916) 445-7000

FAX: (916) 445-7053

calshpo.ohp@parks.ca.gov

[www.ohp.parks.ca.gov](http://www.ohp.parks.ca.gov)

August 4, 2021

In reply refer to: USFS\_2021\_0709\_002

VIA ELECTRONIC MAIL

Mr. Matthew Zumstein  
District Ranger, Carson Ranger District  
Humboldt-Toiyabe National Forest  
U.S. Forest Service  
1536 South Carson Street  
Carson City, NV 89701

RE: Section 106 consultation for the proposed Liberty Utilities Muller Line (1296) Pole Replacement Project in the Carson Ranger District, Humboldt-Toiyabe National Forest, Alpine County, California.

Dear Mr. Zumstein:

The United States Forest Service (USFS) is consulting with the State Historic Preservation Officer (SHPO) to comply with Section 106 of the National Historic Preservation Act of 1966 (as amended) and its implementing regulation at 36 CFR Part 800. The USFS is requesting SHPO review and comment on their determinations of eligibility and finding of *no historic properties affected* for the above-referenced undertaking.

The USFS is proposing to allow Liberty Utilities replace two transmission line poles (39950 and 39952) along the Muller 1296 Circuit Transmission Line (Muller Line) segment in Woodford Canyon, Carson Ranger District, Humboldt-Toiyabe National Forest, Alpine County, California. The undertaking will replace two 35-foot poles with two new 45-foot wooden poles. The new pole will be placed within 5 feet of the existing pole while the old pole will be cut off and ground level. The new poles will be flown in via helicopter and the old poles removed via helicopter.

The discontinuous Area of Potential Effects (APE) is approximately 0.5 acres and includes a 30-meter buffer are the two pole locations.

Along with your letter, you submitted the following documentation:

- *Cultural Resources Report for the Liberty Utilities Muller Line (1296) Pole Replacement Project, Highway 88, Alpine County, California.* Prepared by NCE. June 2021.
- *A Cultural Resources Survey for the Liberty Energy Hazard Tree Removal Project, Alpine County, California. Humboldt-Toiyabe National Forest, Report Number. R2012041702195.* Prepared by Far Western Anthropological Research Group, Inc. August 2012.

Efforts to identify historic properties that might be affected by the undertaking included a search of previous surveys and historical documentation, pedestrian survey, and Native American consultation. None of the tribes have expressed concern regarding the undertaking.

The USFS identified one cultural resource within their APE (Table 1).

Table 1. Cultural resource identified within the APE.

| Name                                                                        | Trinomial   | Primary No. | Eligibility Status                          |
|-----------------------------------------------------------------------------|-------------|-------------|---------------------------------------------|
| Muller 1296 Circuit Electrical Transmission Line<br>(FS Site # 04170114854) | CA-ALP-780H | P-02-001057 | Determined <i>not eligible</i> by the USFS. |

The USFS has evaluated the Muller 1296 Circuit Electrical Transmission Line FS Site # 04170114584 (CA-ALP-780H; P-02-001057) under all criteria and determined it is *not eligible* for the National Register of Historic Places (NRHP). Pursuant to 36 CFR 800.4(c)(2), **I concur** that this resource is not eligible individually or as potential contributors to a larger historic district for the NRHP.

The USFS has made a finding of *no historic properties affected* for this undertaking and has requested SHPO review and comment. Pursuant to 36 CFR 800.4(d)(1), **I do not object** to a finding of *no historic properties affected* and have no further comments.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the USFS may have additional future responsibilities for this undertaking under 36 CFR Part 800. If you require further information, please contact Jeffrey Delsescaux at (916) 445-7016 or [Jeffrey.Delsescaux@parks.ca.gov](mailto:Jeffrey.Delsescaux@parks.ca.gov).

Sincerely,



Julianne Polanco  
State Historic Preservation Officer

# **Floodplain**

Floodplain Evaluation



# Memorandum

*Making Conservation a  
California Way of Life!*

**To: KAYLA LOPEZ**  
Environmental Planner  
Northern San Joaquin Valley Management Branch 2

**Date:** March 25, 2021

**File:** 10-AMA-88 PM:98.2/ 71.6  
10-ALP-88 PM:2.0 /25.0  
10-ALP-89 PM:0.0 / 14.7  
10-ALP-4 PM: R0.84/0.84  
EA 10-1G020  
Proj. ID: 1018000275

**From: VENKATA-SUDEEPA ETIKELA**  
Hydraulics, Branch A  
Design III – Central Region Project Development

**Subject:** Preliminary Location Floodplain Study

This is in response to your request dated November 25, 2020, for a preliminary floodplain study for the above referenced project

## Purpose and Scope

The purpose of this study is to identify and evaluate the base floodplain within the limits of this project. There is a one build alternative for this project to rebuild the downslope at the culvert outlet and mitigate future erosion by placing bank revetment. This report will evaluate the impact of the project on the 100-year (base) floodplain of any watercourses affected by this project.

## Project Description

The purpose of the project is to improve roadway mobility and efficiency by addressing the effects of recurrent severe weather conditions on traffic through strategic deployment of various TMS elements on SR 4, 88, and 89.

## Project Background

The California Department of Transportation (Caltrans) is proposing to install various Transportation Management System (TMS) elements and Roadside Safety Improvements in and around the Kirkwood/Carson area at 13 various location in Amador (AMA), El Dorado (ED), and Alpine (ALP) counties on State Routes (SR) 4, 88, and 89.

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To enhance California’s economy and livability”*

### Topography

Amador County is located approximately 45 miles southeast of Sacramento and is considered historic gold country as part of the Sierra Nevada foothills. Elevations range from 250 feet in the western portion of the county to over 9,000 feet in the eastern portion of the county, the tallest portion being Thunder Mountain. Summer seasons are of Mediterranean climate with moderate to high risk of forest fires. The county is bordered on the north and west by the Cosumnes River and on the south by the Mokelumne River. The topography of the County ranges from low foothill to high Sierra Nevada Mountain areas, with elevations ranging from 150 to 9,332 feet National Geodetic Vertical Datum of 1929 (NGVD 29).

Alpine County is a county in Eastern California located within the Sierra Nevada on the state border with Nevada. The county seat and largest community is Markleeville. Elevations range from 1,656ft to 11,464 ft. The average elevation is noted a 6,643ft and highest elevation is 11,464 ft. Summer seasons are of Mediterranean climate with moderate to high risk of forest fires. The state of Nevada borders the county to the east: Mono and Tuolumne counties lie to the south: Amador and Calaveras counties border to the west; and EL Dorado County meets Alpine norther boundary. The main routes in Alpine County are state highway 88,89,4.

### Designated Floodplains

The Flood Insurance Rate Map (FIRM) is used to determine if any portion of the proposed project is in an area that could be subjected to flooding. Community-Panel Numbers 0606320075A, 0606320175A, 0606320100A,0606320225A dated on 11/191987 (See Attachment) show that FEMA maps are not printed and indicates that the project area falls under minimal flood hazard. Which represents areas determined to be outside the SFHA (Special Flood Hazard Area) and higher than the elevation of the 0.2-percent-annual-chance flood. According to our analysis, there will be no longitudinal encroachments on the base floodplain.

### Floodplain Evaluation Summary

After analyzing the proposed project location, it is determined that there are no significant floodplain impacts and no longitudinal encroachment to the base floodplain. Further, Location Hydraulic Study (LSH) is not required at PA&ED phase since the project is outside a 100-year floodplain.

Thank you for giving me the opportunity to work on flood plain analysis for the above referenced project. Should have questions, feel free to contact me at (209) 948-7942.

### **Concurrence:**

SAM WONG, P.E.  
Senior Hydraulic Engineer, Branch A.  
Central Region Project Development.

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**Attachments:**

Flood Insurance Rate Maps (FIRM)

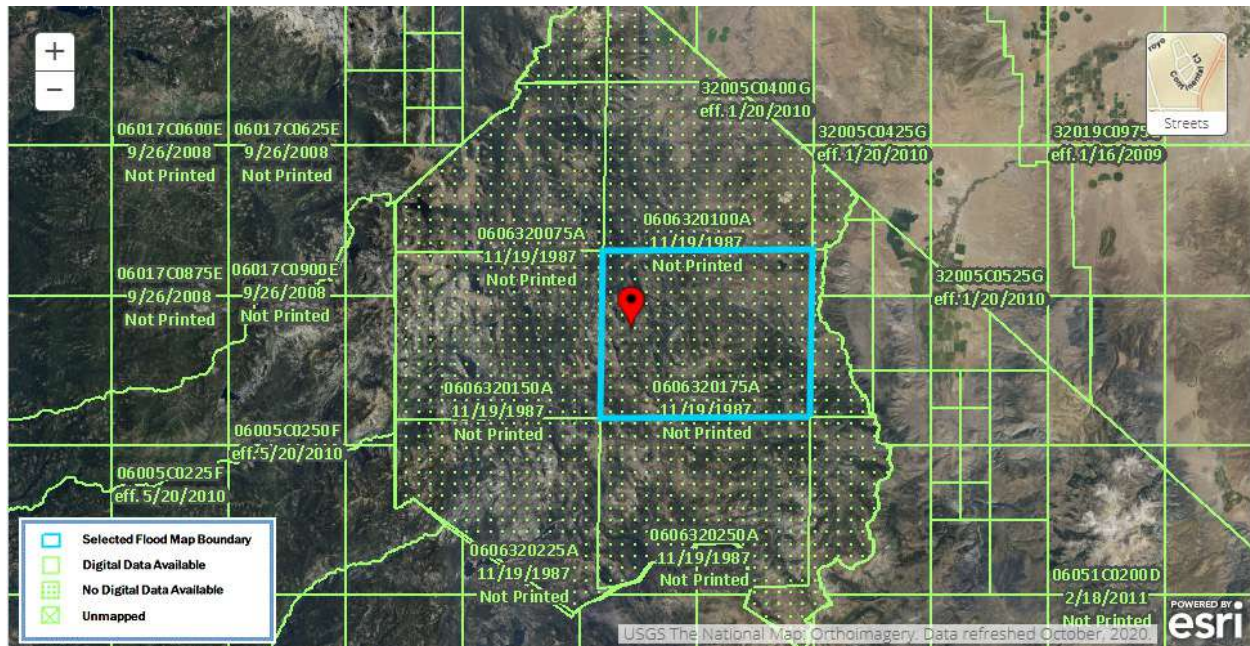


# Flood Insurance Rate Maps (FIRM)

EA 10-1G020  
Proj. ID: 1018000275

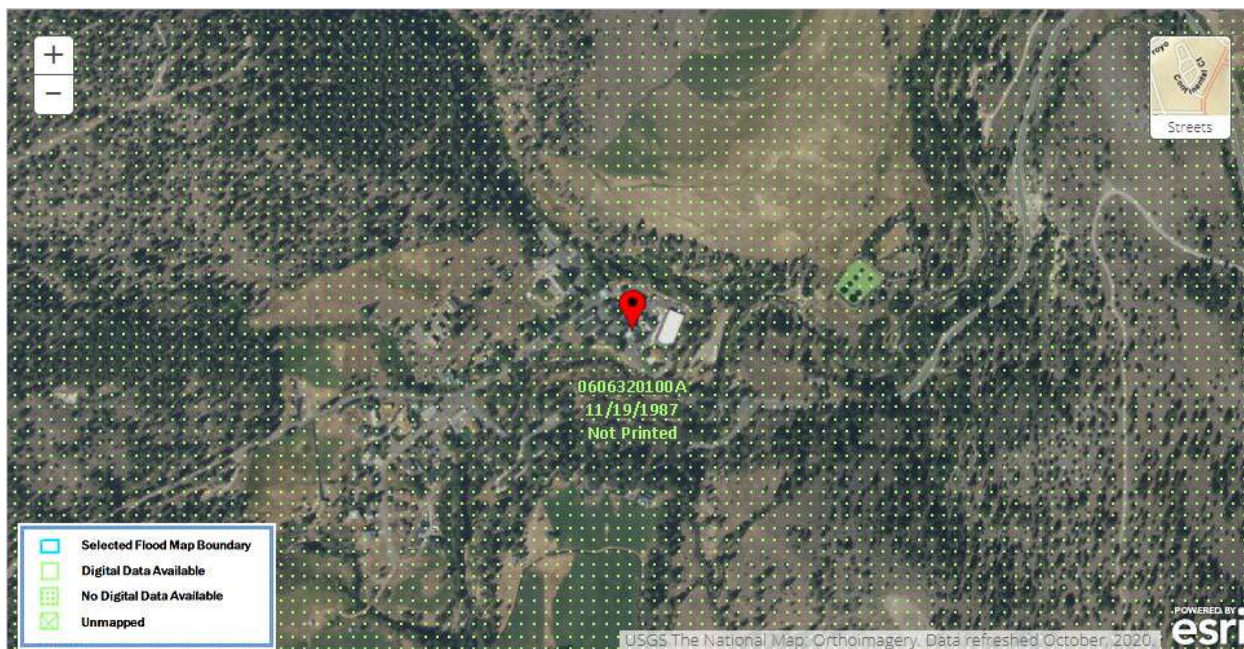


PARCEL 0606320075A: 10-AMA-88 PM: 98.2/ 71.6

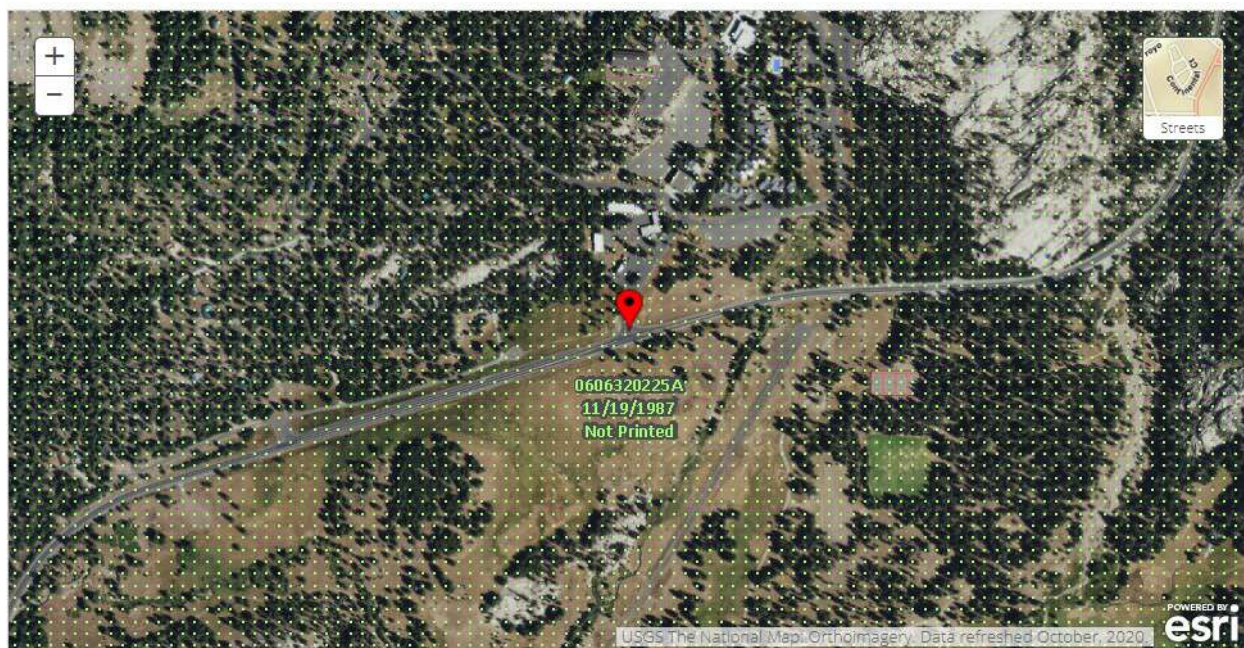


PARCEL 0606320175A: 10-ALP-88 PM: 2.0 /25.0





**PARCEL 0606320100A: 10-ALP-89 PM:0.0 / 14.7**



**PARCEL 0606320225A: 10-ALP-4 PM: R0.84/0.84**

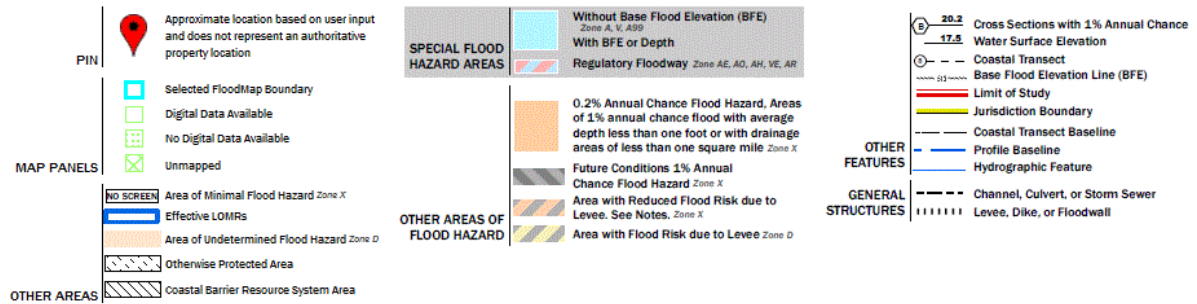


Figure 1:Legend



# **Hazardous Waste**

Initial Site Assessment

# Memorandum

Serious drought.  
Help Save Water!

To: **Kayla Lopez**  
**Associate Environmental Planner**  
**Northern San Joaquin**  
**Management Branch 2**

From: **Jonathan Schlee**  
**Hazardous Waste Specialist**  
**Northern San Joaquin Valley**  
**Environmental Management Branch**

Date: **12/8/2020**

File: **10 – Various - Various**  
PM: **Various**  
EA: **10-1G020**

Subject: Hazardous Waste Initial Site Assessment (ISA) UPDATE, Carson TMS

## **Project Description:**

The California Department of Transportation is proposing to install various Transportation Management System (TMS) elements and Roadside Safety Improvements on SR4, SR88, and SR89 in Amador (AMA), El Dorado (ED), and Alpine (ALP) Counties. The purpose of this project is to improve roadway mobility and efficiency by informing motorists traveling through Kirkwood/Carson area of weather and traffic conditions that can affect their travel.

## **Method:**

Staff has reviewed:

- Departmental Records
- State Water Resources Control Board Geotracker Database
- DTSC Cortese List
- DTSC EnviroStor Database

## **Findings:**

### **Leaking Underground Storage Tanks (LUST):**

There are no open Leaking Underground Storage Tank (LUST) cases within the project area. Therefore, the potential to encounter contaminated soil is considered minimal.

### **Aerially Deposited Lead (ADL):**

There is potential to encounter non-hazardous concentrations of Aerially Deposited Lead (ADL) while working in unpaved areas within the project limits. The Caltrans Standard Special Provision pertaining to Earth Material Containing Lead, 7-1.02K(6)(j)(iii), shall be added to the construction contract. A lead compliance plan is required. Should the scope of work change additional studies may be needed.

*Naturally Occurring Asbestos (NOA):*

The mapping developed for District 10 in 2006, Preliminary Assessment of Areas More Likely to Contain Naturally Occurring Asbestos (NOA) in California Department of Transportation District 10, by Cameron Downey, indicates that it is unlikely to encounter ultramafic rock outcroppings within the project area.

*Asbestos Containing Material (ACM):*

Based on the information provided in the environmental request, there will be no structures involvement with this project. Therefore, the potential to encounter Asbestos Containing Material is considered minimal. Should the scope of work change to impact structures, additional studies may be required.

*Lead Based Paint (LBP):*

Based on the information provided in the environmental request, the project does not propose to impact any painted surfaces. Therefore, the potential to encounter lead based paint is considered minimal. Should the scope of work change to impact any painted surfaces, additional studies may be required.

*Treated Wood Waste (TWW):*

Encountering Treated Wood Waste is not anticipated. Should the scope of work change The Caltrans Standard Special Provision, 14-11.14, which applies to TWW would be required.

*Yellow Striping/Paint:*

Striping removal is not anticipated as part of this project. Should the scope of work change to include striping removal, additional studies may be required.

In the event that the scope of work changes, or you require additional information regarding hazardous waste issues, please contact Jonathan Schlee at (209) 990-5721 or by e-mail at Jonathan.Schlee @dot.ca.gov.



# Noise

## Noise Study Memorandum

# Memorandum

*Making Conservation a  
California Way of Life!*

**To: KAYLA LOPEZ**  
Associate Environmental Planner  
Northern San Joaquin Valley Management Branch

**Date:** December 7, 2020

**File:** 10-1G020  
1018000275  
AMA, ALP, ED  
State Routes-88, 89, 4  
PM: Varies

**From: KEN ROMERO** *Alto Alhabaly For Ken Romero*  
Branch Chief  
Central Region Environmental Engineering Branch

**Subject: NOISE COMPLIANCE STUDY.**

## Objective

The objective of this memorandum is to evaluate the potential noise impacts that may result from implementation of the proposed project and to identify noise abatement and mitigation of the proposed project to comply with State and Federal noise abatement/mitigation requirements. This memorandum has been prepared to comply with Title 23, Code of Federal Regulations, Part 772 (23 CFR 772) "Procedures for Abatement of Highway Traffic Noise" and Caltrans Noise Analysis Protocol.

## Location

13 various location in Amador (AMA), El Dorado (ED), and Alpine (ALP) counties on State Routes (SR) 4, 88, and 89.

## Project Description

The California Department of Transportation (Caltrans) is proposing to install various Transportation Management System (TMS) elements and Roadside Safety Improvements in and around the Kirkwood/Carson area at 13 various location in Amador (AMA), El Dorado (ED), and Alpine (ALP) counties on State Routes (SR) 4, 88, and 89.

## Purpose and Need

The purpose of the project is to improve roadway mobility and efficiency by addressing the effects of recurrent severe weather conditions on traffic through strategic deployment of various TMS elements on SR 4, 88, and 89.

There is a need to inform motorists traveling through the Kirkwood/Carson area of weather and traffic conditions that can affect their travel.

### **Scope of Work:**

The Northern San Joaquin Valley Management Branch initiated a noise study request for the above project. The following sources were reviewed to determine any potential impacts:

- Project history and mapping provided by the generalist.
- Photolog and DHIPP showed the general area within the project limits.
- Caltrans Traffic Noise Analysis Protocol, April 2011.

### **Noise Analysis**

#### Regulatory Setting

The Federal Noise Control Act of 1972 established a requirement that all federal agencies must comply with applicable federal, state, interstate, and local noise control regulations. Under 23CFR772.7 projects are categorized as Type I, Type II, or Type III. These types are defined as follows:

Type I: A proposed Federal or Federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either horizontal or vertical alignment, or increases the number of through-traffic lanes.

Type II: A proposed Federal or Federal-aid project which involves construction of noise abatement on an existing highway with no changes to the highway capacity or alignment.

Type III: A proposed project that does not meet the classification of Type I or Type II.

23CFR772 requires that noise impacts be evaluated for all Type I and Type II projects. Type III projects do not require noise analysis.

#### Project Noise Impacts

Caltrans' Traffic Noise Analysis Protocol (Protocol, 2011), under Section 3, defines a Type I project as a project that involves:

- The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a high-occupancy vehicle (HOV) lane, high-occupancy toll (HOT) lane, bus lane, or truck climbing lane; or
- The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane;
- The construction of a highway on a new location or
- The physical alteration of an existing highway where there is
- either:



- A. Substantial horizontal alteration. A project that halves the distance between the traffic noise source and the closest **receptor** between the existing condition to the future build condition, or
- B. Substantial vertical alteration. A project that removes shielding thereby exposing the line-of-sight between the receptor and the traffic noise source. This is done by altering either the vertical alignment of the highway or the topography between the highway traffic noise source and the receptor; or
  - The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or
  - Restriping existing pavement for the purpose of adding a through traffic lane or an auxiliary lane; or
  - The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza.

The proposed project, as described above, do not introduce a potential for long term noise impacts as described in the Type I projects under section 3 of Caltrans' Traffic Noise Analysis Protocol (Protocol). Therefore, this **is not considered a Type I project**. However, during construction, the project should comply with Caltrans Standard Specification regarding construction noise.

### Equipment Noise Control

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by Caltrans Standard Specifications Section 14-8.02 "Noise Control," which states construction noise resulting from work activities should not exceed 86 dBA at 50 feet from the job site from 9:00 pm to 6:00 am.

Table 1 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 80 to 89 dBA at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

**Table 1 Construction Equipment Noise**

| Equipment       | Maximum Noise Level<br>(dBA at 50 feet) |
|-----------------|-----------------------------------------|
| Scrapers        | 89                                      |
| Bulldozers      | 85                                      |
| Heavy Trucks    | 88                                      |
| Backhoe         | 80                                      |
| Pneumatic Tools | 85                                      |

*Source: Federal Transit Administration 1995*

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14-8.02.

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Furthermore, implementing the following measures would minimize the temporary noise impacts from construction:

- All equipment will have sound-control devices that are no less effective than those provided on the original equipment.

**In view of the proposed project, it is our opinion that no further investigation concerning traffic noise is needed to proceed with the project.**

Questions and concerns about this report should be directed to Allam Alhabaly, Transportation Engineer, at (559) 445-6218.

# **Water**

## Water Quality Memorandum



# Memorandum

*Making Conservation a  
California Way of Life!*

**To: KAYLA LOPEZ**  
Environmental Planner  
Northern San Joaquin Valley Management Branch 2

**Date:** September 29, 2020  
**File:** 10-1G020  
1018000275  
AMA, ALP, ED/ SR 88, 89, 4  
PM Various

**From: KEN ROMERO**  
Branch Chief  
Central Region Environmental Engineering Branch



**Subject: WATER COMPLIANCE MEMORANDUM FOR CARSON TRANSPORTATION  
MANAGEMENT SYSTEM (TMS) PROJECT**

This water compliance memorandum for the subject project was conducted by reviewing project records, maps, and databases to assess potential environmental impacts on water quality.

## **Project Description**

This project proposes to install various Transportation Management System (TMS) elements and Roadside Safety Improvements in and around the Kirkwood/Carson area at 13 various locations in Amador (AMA), El Dorado (ED), and Alpine (ALP) counties on State Routes (SR) 4, 88, and 89.

The purpose of the project is to improve roadway mobility and efficiency by addressing the effects of recurrent severe weather conditions on traffic through strategic deployment of various TMS elements on SR 4, 88, and 89. There is a need to inform motorists traveling through the Kirkwood/Carson area of weather and traffic conditions that can affect their travel.

### **Scope of Work**

The Northern San Joaquin Valley Management Branch 2 initiated a request for a water quality compliance study for the above project. The following sources were searched and reviewed to determine any potential impacts on water quality:

- Project maps and Project Initiation Document (PID)
- Computer accessed Water Quality Planning Tool (<http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx>).

### **Water Quality Assessment**

This project proposes to install various Transportation Management System (TMS) elements and Roadside Safety Improvements in and around the Kirkwood/Carson area at 16 various locations in Amador (AMA), El Dorado (ED), and Alpine (ALP) Counties on State Routes (SR) 4, 88, & 89. The following work is proposed:

- Install seven new Changeable Message Signs (CMS)
- Install seven new Vehicle Detection System (VDS) and modify five existing VDS
- Install 10 new Closed-Circuit Televisions (CCTV)
- Install eight new Road Weather Information System (RWIS)
- Install nine new Highway Advisory Radio (HAR)
- Install 17 new Extinguishable Message Signs (EMS)
- Construct nine new Maintenance Vehicle Pullouts (MVP)

Right-of-way acquisition and temporary construction easements (TECs) are anticipated. In-channel work in waterways, which could result in long-term water quality impacts on surface and groundwater, is not anticipated. Nevertheless, this project has the potential to impact water quality standards and/or waste discharge requirements during construction (temporary impacts) and operation on nearby surface water and groundwater. Although each of the proposed locations is relatively small in scale, grading, excavation and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Three general sources of potential short-term construction-related stormwater pollution associated with the proposed project are 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment.

Generally, routine safety precautions for handling and storing construction materials may effectively mitigate the potential pollution of stormwater by these materials. These same types of common sense, “good housekeeping” procedures can be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes. Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are also common sources of stormwater pollution and soil contamination. Also, grading activities can greatly increase erosion processes. Two general strategies are recommended to prevent construction silt from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed. Secondly, the area should be secured to control offsite migration of pollutants. These Best Management Practices (BMPs) would be required in the

Stormwater Pollution Prevention Plan (SWPPP) to be prepared before the commencement of project construction. When properly designed and implemented, these “good-housekeeping” practices are expected to reduce or eliminate the potential for short-term construction-related impacts.

Per the National Pollution Discharge Elimination System (NPDES) Stormwater Program, the Project will be required to comply with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the Regional Water Quality Control Board (RWQCB) has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement.

The improvement activities should be anticipated and addressed in the Design and Construction phase of the project. Appropriate BMPs should be selected and implemented following the Project Planning and Design Guide. The contractor, as required in Caltrans Standard Specification Section 13-1, must abide by the BMPs at a minimum, and address all potential water quality impacts that may occur during construction.

Any potential impacts (erosion, accidental spills of hazardous material and disruption to natural drainage) must be addressed, eliminated or minimized to the maximum extent practicable during the design and construction phases of the project by incorporating the appropriate permanent and temporary BMPs into the project. Before project initiation, the Caltrans’ Stormwater Unit should be consulted to identify the applicable BMPs for stormwater concerns. If the potential water quality impacts are correctly identified and mitigated through BMPs, then the potential for adverse effects on surface or groundwater quality would be eliminated.

If the project disturbs one acre or more of soil, the following requirements would be required:

1. A Notification of Intent (NOI) is to be submitted to the appropriate Regional Water Quality Control Board at least 30 days prior to the start of construction.
2. A Stormwater Pollution Prevention Plan (SWPPP) is to be prepared and implemented during construction to the satisfaction of the Resident Engineer.
3. A Notice of Termination (NOT) shall be submitted to the Regional Board upon completion of construction and site stabilization. A project will be considered complete when the criteria for final stabilization in the Construction General Permit are met.

If the project disturbs less than one acre of soil, a Water Pollution Control Plan (WPCP) is required to be prepared by the contractor per the Caltrans 2018 Standard Specification Section 13-1 – Water Pollution.

By incorporating proper and accepted engineering practices and BMPs, the proposed project will not have significant impacts to water quality during construction or its operation.



**If the proposed project, it is our opinion that no further investigation concerning water quality is needed to proceed with the project. If the scope of work changes, please request an additional investigation for this project.**

If you have any questions or the scope of work changes, please contact Rogerio Leong at (559) 445-6131 or [rogerio.leong@dot.ca.gov](mailto:rogerio.leong@dot.ca.gov) .

# **Visual**

Scenic Resource Evaluation/  
Visual Assessment

**MEMORANDUM**

**Date:** April 12, 2021  
**File:** ALP, AMA, ED 4, 88, 89 PM Varies  
**EA:** 10-1G020\_

**To :** Kayla Lopez  
Associate Environmental Planner  
District 10, Central Region Environmental

**From** DEPARTMENT OF TRANSPORTATION-District 10  
Landscape Architecture Department  
Robyn Fong Landscape Associate

**Subject :** Scenic Resource Evaluation

The above-referenced project was reviewed for possible scenic resources and to determine whether further visual analysis is needed.

The California Department of Transportation (Caltrans) is proposing to install various Transportation Management System (TMS) elements and Roadside Safety Improvements in and around the Kirkwood/Carson area at 13 various location in Amador (AMA), El Dorado (ED), and Alpine (ALP) counties on State Routes (SR) 4, 88, and 89. The purpose of the project is to improve roadway mobility and efficiency by addressing the effects of recurrent severe weather conditions on traffic through strategic deployment of various TMS elements on SR 4, 88, and 89. There is a need to inform motorists traveling through the Kirkwood/Carson area of weather and traffic conditions that can affect their travel.

The project is within officially designated state scenic highways. In order to not trigger negative effects, every effort should be made to avoid impacts with careful selection of locations of the various TMS elements. It is understood that some tree removal will be unavoidable, but minimization efforts must be made so not to trigger culmative impacts through the routes. The existing density of vegetation beyond those to be removed also help minimize culmative impacts. Cabinets should be painted in an earth tone color to help blend into its surroundings. Additionally, upgrading existing Metal Beam Guardrail Systems(MBGS) to Midwest Guardrail Systems(MGS) will require the use of Natina stain to reduce glare and to help blend the new guardrail system to the existing environment and protect the scenic quality of the routes. Any new TMS element are common features within this route and any visual impact would therefore only be temporary.

On site mitigation will most likely be needed, unless other mitigation arrangements are identified. APE should be considered expanded at feasible locations that can accommodate potential on-site mitigation, while maintaining safe pullout locations for maintaining the site.



As long as minimization efforts are used in the implementation of the proposed project, such as replanting of trees, staining new MGS and painting cabinets in an earth tone color are incorporated as part of the project, we can minimize impacts to the scenic resources on this project.

If you have any questions or concerns, feel free to contact me.

*Robyn Fong*

District 10 Landscape Associate  
Landscape Architecture Branch C  
(209)948-3655  
Robyn.fong@dot.ca.gov

CC:File  
Brad Cole