

FLAGGING, FENCING AND SIGNAGE PLAN

INTRODUCTION

This Flagging, Fencing, and Signage Plan describes the methods that will be used in the field to delineate Project features and sensitive environmental resources areas and warnings during Project construction. This plan was developed in compliance with **APMs BIO-2, BIO-26, CUL-1, REC-3, REC-4 and TRAN-1**. These methods are intended to ensure that ground disturbance is limited to previously approved areas; ensure project personnel stay on approved access routes and within approved work areas; and establish Project notifications (i.e., warning signs, speed limit, and sensitive areas). The measures described in this plan are an integral part of the environmental compliance program for avoiding and minimizing impacts to sensitive resources.

PURPOSE

The purpose of this plan is to provide information on the field markings (i.e., flagging, staking, fencing, and signage) that will be used to identify approved Project work areas, as well as sensitive resource areas where construction is to be excluded. No federal, state, or local laws, rules, or regulations specifically address flagging and fencing protocols for construction projects. This plan serves as an informational guide on access restrictions and safety precautions to all individuals that will have access to the Project right-of-way. It will help to avoid adverse impacts to the environment, human health and safety, and property that could potentially result from the activities associated with the construction of the Project. Several of the mitigation measures found in the Applicant Proposed Measures and Mitigation Monitoring requirements require adequate field marking of sensitive resource areas to avoid or reduce impacts. Flagging or fencing requirements are included within several mitigation measures to help minimize the amount of ground disturbance and protect vegetative cover and habitat, water quality, cultural resources, and special-status species, and to minimize the spread of invasive weeds.

DEMARCATING PROJECT FACILITIES & RESOURCES

Work areas will be clearly marked with fencing, staking, flagging, or another appropriate material. All project personnel and equipment will be confined to delineated work areas. In the event that work must occur outside of the work area, approval from lead and other agencies with jurisdiction over the property will be obtained prior to the commencement of activities. This will be completed in accordance with **APM BIO-26** and this plan. Prior to construction, the Contractor shall work with the Environmental Monitors, including the Project Biologist to mark all work boundaries and flag all sensitive resource areas. This effort will establish the work boundaries for the project and all personnel.

Liberties' Environmental Monitor will be responsible for all environmental and sensitive resource area temporary signage. Liberties' Contractor will be responsible for all associated exclusion and work zone flagging and fencing.

Standard survey flags and stakes will be installed before the start of Project construction. Structure sites (e.g., pole locations and anchor points) will be marked by Owner and identified with both hubs and survey staking prior to construction. The Contractor will assume control of these survey points during flagging of the work areas. Designated Project access roads, spur roads, parking areas, and pullout areas will be marked with survey lath and signage to facilitate flow of travel to and from the right-of-way. Additionally, signage at these locations will also include notification of no access by the public (See Travel and Access Plan). Wire stringing/pulling sites and material yards will be demarcated, as necessary, to indicate the limits of the approved work area. The construction contractor(s) will stake the boundaries of the maximum area needed for work areas and will provide the dimensions to the on-site Liberty Monitoring Representative to include those boundaries in their final restoration report. The delineated work areas will not exceed the approved dimensions for Project facilities as shown on the project mapping. In the event work outside the approved work area is required, the construction contractor(s) will coordinate with the Liberty Monitoring Representative in accordance with the CPUC developed Mitigation, Monitoring, Compliance, and Reporting Program (**MMCRP**).

Staging areas and helicopter fly yards, wire stringing areas, and material yards will be demarcated to indicate the limits of the approved work area. These demarcations will be marked with survey lath and ribbon, or construction fencing, as determined appropriate by the Environmental Monitors.

ENVIRONMENTAL EXCLUSION AREAS

Signs, flags, and fencing will be used to delineate and protect sensitive environmental resources in the vicinity of construction activities. No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate limits of survey or construction activity. A system of standardized and simplified exclusion markings will be used to reduce potential confusion during construction, and to minimize the risk of highlighting types of sensitive resources that could be targeted by vandals (e.g., if exclusions around archaeological sites were marked differently than those around sensitive natural resource areas, the sites would be at a higher risk of unauthorized artifact collecting or other disturbance). Exclusion areas will be set up to protect these areas, but the specifics of the sensitive environmental resource (i.e., biological, cultural, or paleontological resources) will not be disclosed to the construction contractor(s).

FLAGGING

Survey flagging (i.e., surveyor's ribbon tied to wooden stakes, metal posts (no rebar to be used for staking), or vegetation) will typically be used to delineate the limits of work areas such as material yards, disturbance limits (i.e., boundaries of the right-of-way), wire stringing sites, access roads, etc., unless existing fencing or other features clearly indicate the limits of the area. Survey flagging may be used to demarcate sensitive resource locations situated a safe distance from planned construction activities, but generally will not be used to define resource exclusion areas close to planned construction activities, due to concerns about the visibility and stability of flagging during construction.

The Environmental Monitor, as needed, will determine whether flagging or fencing (as described below) is the appropriate protective device for a given location. Flagging color will conform to the requirements of Tables H-1 and H-2.

Flagging Colors

Table H-1 provides the standard ribbon colors that will be used by the Vegetation Contractor. Table H-2 provides the standard ribbon colors that will be used by the Environmental Monitors and Line Construction Contractor.

Table H-1: Vegetation Management Flagging Colors	
Flag Color	Flagging Designation
Orange	Truck road
Yellow	Skid road - or - CalTrans ROW on edge of highway
Red	Property boundary
Pink ("TIMBER HARVEST BOUNDARY" in black letters)	THP boundary
Blue and white candy stripe	Watercourse lake protection zone
Blue	Class III Watercourse centerline
Black and yellow candy stripe or Pink	Silviculture prescription (designates conversion area)
Orange and white candy stripe "SPECIAL TREATMENT ZONE" in black letters	Special treatment zone

Table H-2: Line Route Flagging Colors	
Flag Color	Flagging Designation
Orange	Avoidance Area - Sensitive Resource - undisclosed
White	Proposed Structure Locations
White	Anchors

FENCING

To delineate the limits of construction, a combination of one or more of the following fencing materials will be installed by the construction contractor(s):

- Rope (0.25-inch diameter in yellow or orange coloring)
- Plastic or fabric tape
- Construction fencing (plastic orange or red mesh at least 24 inches wide and at least 18 inches off the ground, to address travel by small animals)

Roping with periodic marking by exclusionary signs or lengths of tape is a highly visible and effective exclusion device. Roping, tape, and safety fence will be installed using metal posts for increased durability.

Specific to sensitive resources, it is anticipated that the materials will be installed at the margins of the sensitive resource (including any required buffers). If a buffer zone encroaches into the work area, only the portions that overlap with the work area will be delineated and signed as an exclusion zone.

SIGNAGE

Signs will be used to help identify Project features, such as access roads and certain Project facilities. Signs will be a minimum of 8.5 inches by 11 inches on laminated (7 mil or greater) white/color paper for protection from the elements. Signs will be installed

on metal posts, wooden stakes, or attached to exclusion fencing/roping, as appropriate. Background colors will vary to enhance sign recognition from a distance. Table H-3 provides some standards for marking Project features that will be needed during construction. Signs for sensitive resource areas will be oriented for visibility from both directions of likely travel.

Table H-3: Sign Standards for Project Features			
Feature	Color	Sign Text	Comments
Speed Limit Signs - In accordance with APM AQ-7	White	Speed Limit 15 MPH Strictly Enforced	Signs to be located on all unpaved roads, including overland travel routes
Direction sign	White	Structure xxx Ahead	Signs to be located along the approved project access road and points of intersection; intended to provide direction on travel ways
Sensitive Environmental Resource	Orange	Sensitive Resource Area - KEEP OUT	Signs to be installed as needed in addition to exclusion fencing and flagging
Area Temporarily Closed to Construction due to Special Status Resource Seasonal Exclusion Period	Orange	Sensitive Resource Area - KEEP OUT	Signs to be installed as needed at logical points of entry up to the exclusion zone
Invasive Weed Cleaning Station	Orange	Weed Cleaning Station	Signs to be installed at each station entry point
Top Soil Stock Piling	Orange	Top Soil Stockpile	Signs to be placed at each pile, clearly visible from nearest travel route or structure location
Unapproved Access Road, Closed Roads	Orange	DO NOT ENTER	Signs to be located at juncture of approved access roads
Blasting Area	Orange	Caution - Blasting	Signs to be located at appropriate points to warn public and workers of blasting activities

Environmental Monitor shall ensure that all necessary signage is in place at each trail crossing to allow for sufficient space between hikers and active work. In the event that signage is missing, Contractor shall notify Environmental Monitor.

In accordance with **APM REC-03**, signs advising recreationists of construction activities and directing them to alternative trails or bikeways will be posted at all trail access points or in locations as determined through coordination with the respective jurisdictional agencies. Signage describing the closures shall be posted at trail access points one week prior to closures, shall remain posted during the entire closure period, and shall be removed upon completion of construction.

In accordance with **APM REC-04**, where helicopters will be used for construction, signage advising equestrians of the schedule for helicopter use will be posted at all equestrian trail-access points within the vicinity of the flight paths one week prior to helicopter activity. These signs will be checked and maintained daily until helicopter operation in the area ceases.

In accordance with **APM REC-07**, signage will be installed along any overland travel ways to minimize the possibility of establishing new recreational paths (both motorized and non-motorized). Additionally, Environmental Monitor shall provide way finding signage to direct non-motorized use, and using restoration plantings to screen temporary access ways that are no longer used, can also be employed.

In accordance with **APM CUL-1**, signage will be placed on the markers identifying the exclusion zone and stating that construction vehicles, equipment, and personnel are not permitted in the exclusion zone.

In accordance with **APM TRAN-1**, signage shall also be used for traffic control measures (flagging methods, signage, reduced speeds in work zones, parking restrictions) and for provision for maintaining safe pedestrian and bicycle travel (e.g., signage to direct pedestrians and bicyclists to safe routes around construction areas). Note that Contractor is responsible for all Traffic Control signage. Contractor shall work with Environmental Monitor to ensure no signage is overlooked.

All signage will include reference to the project and owner. Two “typical” signs are included as Attachment A for reference and as a guideline for all signage.

INSTALLATION, MONITORING, MAINTENANCE, AND REMOVAL OF FLAGGING, FENCING, AND SIGNAGE

The success of this Flagging, Fencing, and Signage Plan hinges on the proper installation, monitoring, and maintenance of protective devices. The construction contractor(s) or his designated surveying contractor(s) will be responsible for the installation and maintenance of the field marking of construction features (e.g., poles/structures, work area boundaries, anchors, exclusion areas, etc.) with the exception of the first round of structure staking which will be provided by Owner. These markings will be installed in advance of construction activities in the area, maintained during the course of construction, as necessary, and removed during cleanup activities.

Environmental exclusion fencing for general inventory purposes and to denote exclusionary zones will be installed by Flagging and Fencing Crew(s), along with the assistance of appropriate project biologist as necessary. These environmental exclusions will be installed prior to the start of construction within a work area. Resources Specialists will be consulted if there is uncertainty as to the type or location of needed exclusion devices for botanical, wildlife, wetlands, springs, streams, or archaeological sites.

Routine monitoring by the Contractor will include an ongoing assessment of the need for replacement or repair of exclusionary flagging or fencing. Maintenance needs related to exclusionary devices will either be corrected at the time of observation by either the Contractor, Owner Reps and Inspection Team, or agency representatives. If maintenance of an exclusionary device is needed within an active construction area, corrective action will be taken within 1 workday. Maintenance of signs, flagging, and fencing within dormant areas will be implemented as necessary. Upon completion of construction activities, and following cleanup and/or reclamation, all staking and flagging will be removed and disposed of by the construction contractor(s).

**TYPICAL SIGNAGE LAYOUT
ATTACHMENT A**



650 TRANSMISSION LINE UPGRADE PROJECT

**NO
REFUELING**



650 TRANSMISSION LINE UPGRADE PROJECT

**SENSITIVE
RESOURCE
AREA
KEEP
OUT**