

State of California
Business, Transportation & Housing Agency
Department of Transportation

ENVIRONMENTAL MATTERS

02-Sha/Tri-299, PM 0.0/R7.4; 72.0/72.2
Action Item

Prepared by:
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Chief
Division of Environmental Analysis

CTC Meeting: July 18, 2002

Reference No.: 2.2a.

Original Signed By:
ROBERT L. GARCIA
Chief Financial Officer
July 1, 2002

SUMMARY - NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT
ROUTE 299 IN SHASTA AND TRINITY COUNTIES AT BUCKHORN GRADE

02-Sha/Tri-299, PM 0.0/R7.4; 72.0/72.2

Buckhorn Grade in Shasta and Trinity Counties from approximately .5 mile west of the Shasta/Trinity County line to approximately 7.5 mile east of the Shasta/Trinity County line.

Proposed Action:

Realign Buckhorn Grade

Programming:

The project was programmed in the 1998 State Transportation Improvement Program (STIP) for Project Approval and Environmental Documentation. Future funding for project design, right of way and construction will be programmed later pending completion of the environmental clearance.

Alternatives Being Considered:

- No-Build
- Alternative A: realign east of existing SR 299 from Shasta/Trinity County line then realign to the north of existing SR 299 east of Trail Gulch
- Alternative B: realign east of existing SR 299 and Willow Creek, crosses Willow Creek on a bridge, realign east of Greenhorn Mine, re-crosses Willow Creek, then north of existing SR 299 to near Crystal Creek Road.

- Alternative C: realign east of existing SR 299 and Willow Creek, crosses Willow Creek on a box culvert or embankment, realign through the east side of Bear Gulch, recrosses Willow Creek, then north of existing SR 299 to near Crystal Creek Road.

Potential Significant Environmental Effects:

- Scenic vistas
- Special Status plant and animal species
- Cultural resources
- Planned land use and growth
- Hazardous materials (Greenhorn Mine)

Proposed Measures to Minimize Harm:

- Design to minimize harm
- Adopt mitigation measures to avoid/minimize harm to special status plant and animal species
- Adopt mitigation measures to avoid/minimize harm to cultural resources

Attachment

NOTICE OF PREPARATION

TO: California Transportation Commission
1120 N Street, Room 2221 (MS-52)
Sacramento, CA 95814

FROM: California Dept. of Transportation
(Lead Agency)
2800 Gateway Oaks Dr., Suite 100
Sacramento, CA 95833

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report/Statement
[References: Division 13, Public Resources Code, Section 21080.4 (State);
40 C.F.R. 1501.7 and 1508.22 (Federal)]

This is to inform you that the California Department of Transportation in cooperation with the FHWA will be the Lead Agency and will prepare an EIR/EIS for the project described below. Your participation as a responsible/cooperating agency is requested in the preparation and review of this document.

We need to know the applicable permit and environmental review requirements of your agency and the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR/EIS prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are included in the attached materials.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

An agency scoping meeting for this project is scheduled for May 30, 2002, from 9 AM to 12 PM at Simpson College in Redding (2211 College View Drive, Labaume-Rudat Room).

Please send your response and direct any comments or questions regarding this project to:

Cher Daniels, Chief
Office of Environmental Management, S-1
Caltrans District 3 Sacramento Office
2800 Gateway Oaks Dr., Suite 100
Sacramento, Ca 95833

ATTN: Ken Lastufka, Associate Environmental Planner
(916) 274-5826 or via e-mail at ken_Lastufka@dot.ca.gov

Please note that as of June 1, 2002, our new address will be 2389 Gateway Oaks, Sacramento, CA 95833

We will need the name for a contact person in your agency.

Date: May 9, 2002

Signature: Cher Daniels
Title: Branch Chief, S-1

Project Description

Caltrans and FHWA in partnership with Shasta, Trinity, and Humboldt Counties have proposed to realign the Buckhorn Grade portion of Highway 299 to improve the safety and efficiency of the highway. The proposed project limits extends approximately 0.8 kilometers (km) (0.5 miles) west of the Shasta-Trinity County line to approximately 12.1 km (7.5 miles) east of the Shasta-Trinity County line, near the boundary of the Whiskeytown-Shasta-Trinity National Recreation Area. For the purposes of the environmental studies, the limits of the work will be from approximately 3.4 km (2.1 miles) west of the Shasta-Trinity County line (PM 70.2) to approximately 49 meters (160 feet) west of the intersection of State Route (SR) 299 and Trinity Mountain Road (PM 8.5) (Figure 1). The existing SR 299 corridor within these limits consists of a two-lane highway with limited passing lanes at various locations. The road closely follows the extremely rugged terrain forming a steep, twisted alignment with a design speed of 40 kilometers per hour (25 mph).

The proposed project would construct a new two-lane alignment, with truck climbing lanes, standard shoulders, 80 kilometers per hour (50 mph) design speed, and maximum 7 percent grade (mainly near Buckhorn Summit). Possible alignment variations include bridges, viaducts, and a possible tunnel at the Buckhorn Summit. The replaced SR 299 alignment would be relinquished or reclaimed (all or part).

SR 299 is the principal arterial between Interstate 5 and Highway 101 and is designated as a high emphasis route in the Interregional Roadway System. SR 299 has major economic importance to the region as it provides access to a vast recreational area and links the upper Sacramento Valley with the deepwater port in Eureka. The project portion of the highway, the Buckhorn Grade, represents the only obstacle preventing national truck network legally sized trucks and oversize permit loads from utilizing this direct access to the coast.

The Buckhorn Grade portion of SR 299 was constructed between 1923 and 1931. The Buckhorn Grade begins at the Trinity County line and ends at kilometer post 11.9 (post mile 7.4) in Shasta County. Long lines of vehicles often form behind slow moving trucks climbing the predominately 5.5% grade. The current roadway is narrow with limited passing lanes and few areas for emergency parking. The narrow twisting road limits emergency response times to incidents (accidents or storm events). Average daily traffic volumes are expected to increase in the next 20 years from 3,800 to 5,700. This increase in traffic will result in significantly longer delays to the traveling public.

Purpose and Need

The purpose of the project is four fold:

1. Improve roadway operations, including safety, reliability and delay;
2. Decrease maintenance costs;
3. Improve economic viability; and
4. Reduce environmental impacts.

The proposed project is needed in order to respond to a number of deficiencies that exist on the current facility. SR 299 is a major east/west route that begins at the California/Nevada State Line and extends approximately 490 kilometers (300 miles) to U.S. 101 near Arcata. SR 299 serves as a major recreation route and links the Redding community with I-5 along the coast. SR 299 begins in California at the state line in Modoc County. The route continues westward toward Redding, crossing portions of Modoc, Lassen, and Shasta counties and servicing various rural communities, including Alturas, Adin, Bieber, McArthur, Burney, and Round Mountain. From Redding, SR 299 continues west toward the coast through Shasta, Trinity, and Humboldt counties and the communities of Douglas City, Weaverville, Willow Creek, and Arcata.

The primary need for the project is to improve roadway operations by improving the ability of motorists and trucks in negotiating Buckhorn Grade portion of SR 299. The existing design of this segment of SR 299 (narrow lanes, inadequate or no shoulders, steep grades, curvilinear alignment, lack of passing opportunities, deficient clear recovery zone (poor sight distance), 25 mph design speed, level of service "D" at peak and "C" surrounding peak, no emergency parking, and encroachment of California legal trucks over centerline) has resulted in a serious safety problem. The collision rate for the Buckhorn Grade is 1.5 times higher and fatality rates 2.7 times higher than similar facilities.

The secondary reason is to decrease Caltrans maintenance cost. This segment of SR 299 costs three times more to maintain than similar routes for various reasons, including icing due to excessive shady areas, limited access for maintenance crews during storms, inadequate snow storage areas, inadequate rock catchment areas, and deficient drainage systems.

The third reason is to improve economic viability of the area by eliminating barriers to the efficient movement of goods and services. Exclusion of Surface Transportation Assistance Act (STAA) sized trucks (national truck network legally sized trucks), frequent winter closures, long delays during road work, and lack of alternative routes impedes the movement of goods and services over the Buckhorn Grade. This also affects emergency response times and access, and driver comfort (motion sickness). Travel time over this portion of SR 299 is unreliable and can vary anytime of the day.

The fourth reason is to minimize potential environmental impacts. There is excessive erosion from existing cut slopes and embankments.

This project is not intended to increase capacity or add additional lanes to SR 299. The intent of the project is to provide improvements that

- Reduce the number and severity of collisions;
- Elevate this portion of SR 299 to current Caltrans standards of roadway design (similar to the segments east and west of the Buckhorn Grade);
- Minimize the cost of maintaining the roadway;
- Eliminate the economic impediment of this segment of SR 299; and

- Reduce the environmental impact of the Buckhorn Grade

These improvements should provide benefits such as reduced costs to society for collisions, fewer hours of travel and delay, less energy consumption, cleaner air, and improved driver comfort. The need for the project is expected to increase over time as traffic volumes along SR 299 increase.

Probable environmental effects

Resource

Potential Impacts/Issues

Aesthetics

- Large cut/fill areas
- Re-vegetation
- Scenic vista

Air Quality

- Local air quality

Biological Resources

- Potential Northern spotted owl habitat
- Invertebrates and “lower” plants (mosses, lichens, etc.) covered under the Northwest Forest Plan
- Special Status plant and animal species
- Wildlife movement

Community Resources

- Residential growth rates
- Population growth rates
- Planned land uses
- Retail (both in Trinity and Shasta Counties)
- Tourism
- Short and long term costs/benefits, per county (construction and operation)
- Access to existing utilities (electric transmission line)
- Timber

Cultural Resources

- Historical and archaeological resources, including structures/houses identified on historic maps, mines, roads (Lewiston Turnpike, Shasta-Weaverville Turnpike Road,), and trails.

Hazardous Materials

- Nearby Green Horn Mine

Infrastructure

- Roads
- Utilities
- Parks
- Schools
- Emergency services

Noise

- Trucks traveling through Weaverville

Slope Stability

- Erosion
- Sediment
- Re-vegetation
- Existing slope instability

Traffic

- Accident rates
- Traffic growth
- Traffic congestion
- Fire suppression
- Emergency response
- Bicycles
- Truck facilities
- Road closures

Water Quality

- Drainage
- De-icing

Environmental Studies

The following environmental studies will be required:

- Air quality
- Biological
- Cultural resource
- Community impact assessment
- Floodplain
- Hazardous materials/waste assessment
- Hydrology/water quality
- Noise
- Traffic
- Visual

Permits

Depending on the environmental impacts, the following permits/approvals may be required:

- 1601 Streambed Alteration Agreement, California Department of Fish and Game
- Sec. 401 Water Quality Certification, Regional Water Quality Control Board
- Sec. 404 Individual Permit, US Army Corps of Engineers
- National Pollutant Discharge Elimination System (NPDES) Permit, State Water Resources Control Board

Environmental Processes

The following environmental processes will be required for completion of the Buckhorn Grade Improvement Project environmental document:

- NEPA/404-Integration Process (Wetland Resources)
- Section 106 Process (Cultural Resources)
- Section 7 Consultation (Biological Resources)

Criteria for Selection of Project Alternatives

Proposed alternatives selected for detail study in the environmental document were selected as a result of a rigorous evaluation process. Selection criteria included:

1. Fewest environmental impacts based on design features and known environmental resources
2. Amount of disturbed area
3. Volume of earthwork
4. Length of new construction
5. Cost of maintenance
6. Amount of exposed slope area
7. Traffic delays, on-going and during construction
8. Travel time improvement

The proposed project alternatives would satisfy the following project objectives:

- Minimize impacts to sensitive biological resources
- Minimize impacts to wetlands and other regulated waters
- Reduce erosion
- Maintain 50 mph design speed
- Allow interstate truck use of this route
- Reduce maintenance costs
- Reduce traffic delays and congestion
- Improve safety and reduce accident rate
- Improve response time and accessibility

- Reduce travel time
- Maintain Level of Service C

Range of Alternatives

Four alternatives have been proposed for detail study in the environmental document: A, B, C, and No-build (Figures 2, 3, and 4).

Alternative A

Alternative A is approximately 10.7 kilometers (km) (6.6 miles) in length and has a 5.3% average grade (west bound to the Buckhorn Summit). This alternative begins in Trinity County approximately 0.8 km (0.5 miles) west of Buckhorn Summit and proceeds east to the summit where it diverges from the existing alignment and begins its descent into Shasta County. The alignment continues east between the existing alignment and Willow Creek for approximately 6.4 km (4.0 miles) to Trail Gulch where it crosses over the existing highway with a bridge that could range from 490-550 meters (1,600-1,800 feet) in length and approximately 45 meters (150 feet) in height. The Alternative A then resumes eastward along the north side of existing SR 299 for approximately 4.3 km (2.6 miles) where it conforms to the existing highway near Crystal Creek Road (Figure 2).

Alternative B

Alternative B is approximately 10.5 km (6.5 miles) in length and has a 5.3% average grade (west bound to the summit). This alternative begins in Trinity County approximately 0.6 km (0.4 miles) west of Buckhorn Summit and proceeds east to the summit where it diverges from the existing alignment and begins its descent into Shasta County. The alignment continues east between the existing alignment and Willow Creek for approximately 4.2 km (2.6 miles), where it crosses over Willow Creek with a bridge that could range from 245-300 meters (800-1000 feet) in length and approximately 75 meters (250 feet) in height. The alignment then resumes eastward for approximately 2.0 km (1.2 miles) along the south side of the Greenhorn Mine, turning north through the west side of Bear Gulch and crossing Willow Creek and existing SR 299 with a bridge that could range from 240-275 meters (1,500-1,700 feet) in length and approximately 90 meters (300 feet) in height. The alignment then finishes its eastward journey along the north side of existing SR 299 for approximately 3.7 km (2.3 miles) where it conforms to the existing highway near Crystal Creek Road (Figure 3).

Alternative C

Alternative C is approximately 10.9 km (6.8 miles) in length and has a 5.1% average grade (west bound to the summit). This alternative begins in Trinity County approximately 0.6 km (0.4 miles) west of Buckhorn Summit and proceeds east to the summit where it diverges from the existing alignment and begins its descent into Shasta County. The alignment continues east between the existing alignment and Willow Creek for approximately 3.2 km (2.0 miles) and then crosses over Willow

Creek with either a large embankment and box culvert (approximately 180 meters (600 feet)) or a bridge that could range from 300-365 meters (1,000-1,200 feet) in length and approximately 60 meters (200 feet) in height. The alignment then resumes about 3.5 km (2.2 miles) northeast through the eastside of Bear Gulch where it again crosses Willow Creek and the existing SR 299 with a bridge that could range from 365-425 meters (1,200-1,400 feet) in length and approximately 60 meters (200 feet) in height. The alignment then finishes its eastward journey along the north side of existing SR 299 for approximately 3.6 km (2.2 miles) where it conforms to the existing highway near Crystal Creek Road (Figure 4).

No-Build Alternative

Under the No-Build Alternative, existing conditions along SR 299 would not be changed and the proposed improvements would not be constructed.

NEPA 404-Integration Process for Surface Transportation Projects in California

Transportation projects needing both Federal Highway Administration (FHWA) and/or Federal Transit Administration (FTA) action and an individual permit from the US Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act must follow the NEPA 404-Integration concurrent process.

Project Milestones

Begin Environmental Studies	April 2002
Circulate Project Report and Draft Environmental Document	August 2003
Project Approval and Final Environmental Document	August 2004

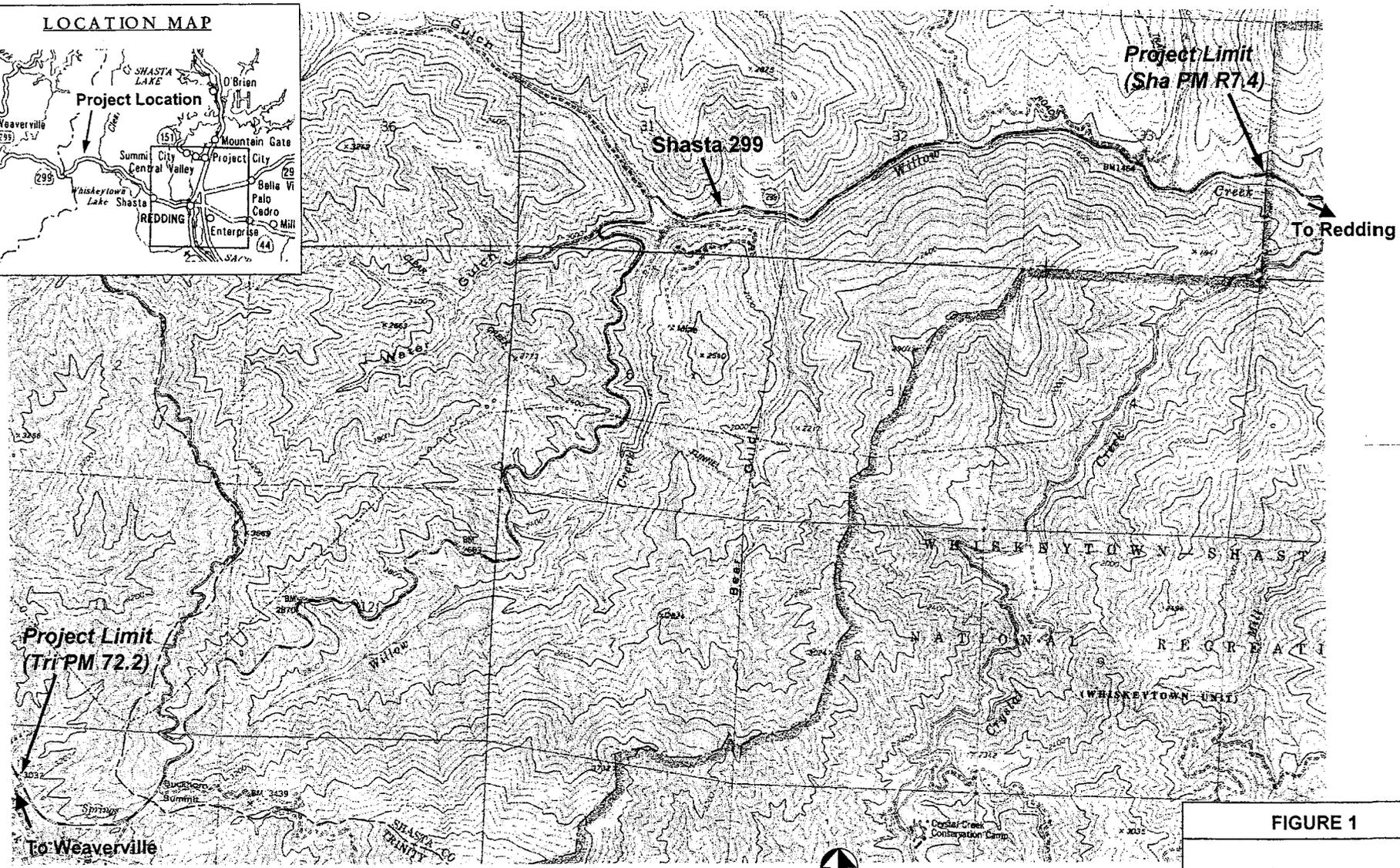
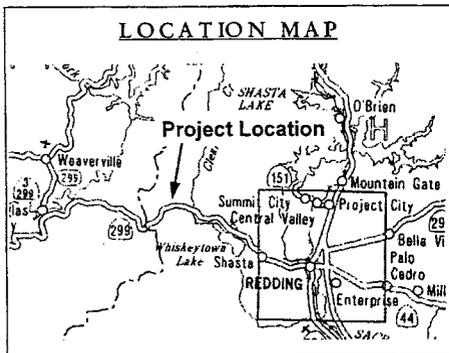


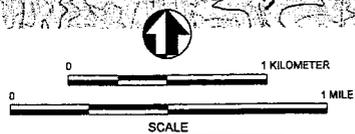
FIGURE 1

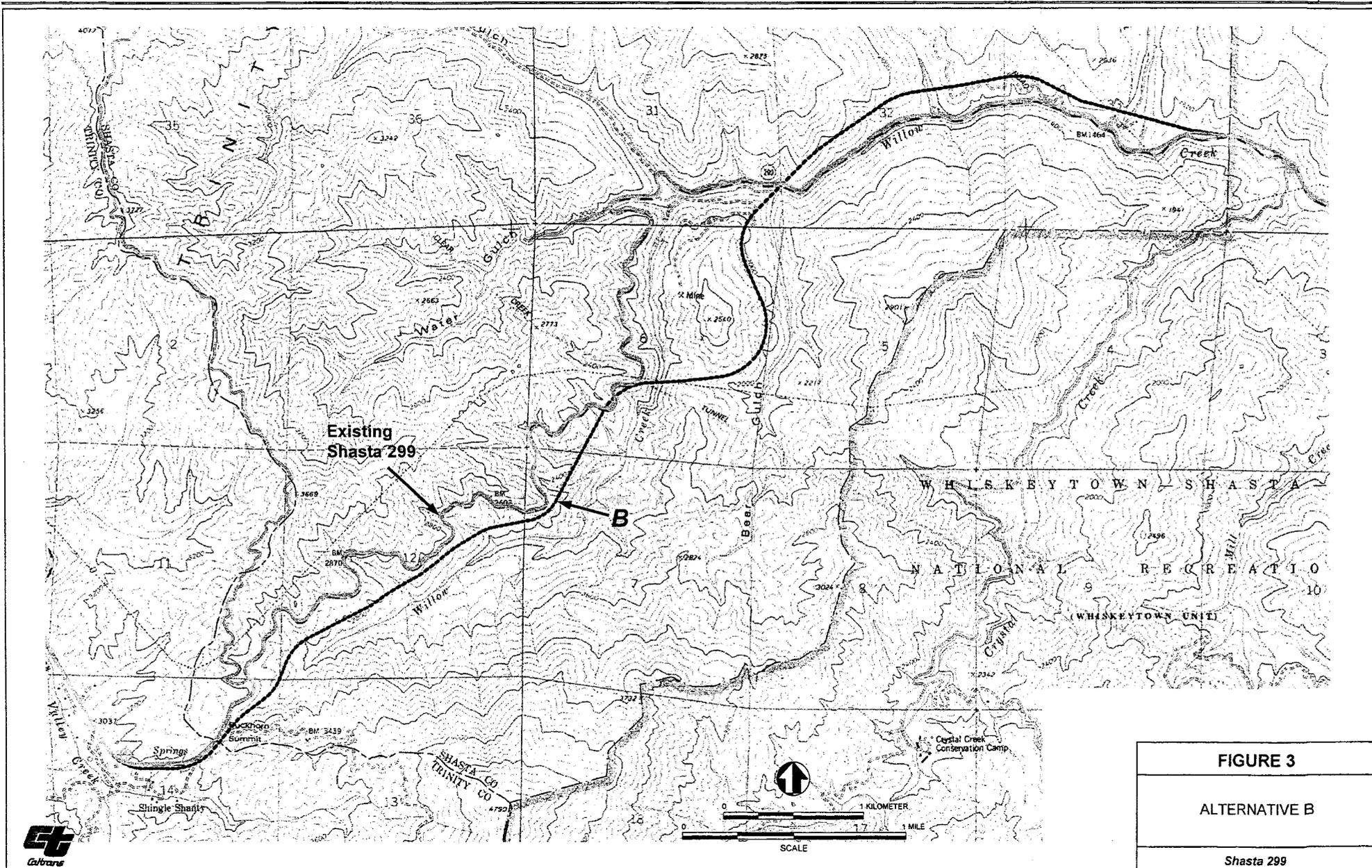
PROJECT LOCATION

Shasta 299



Source: USGS 7 1/2 minute topographic quadrangle: French Gulch CA, 1979.





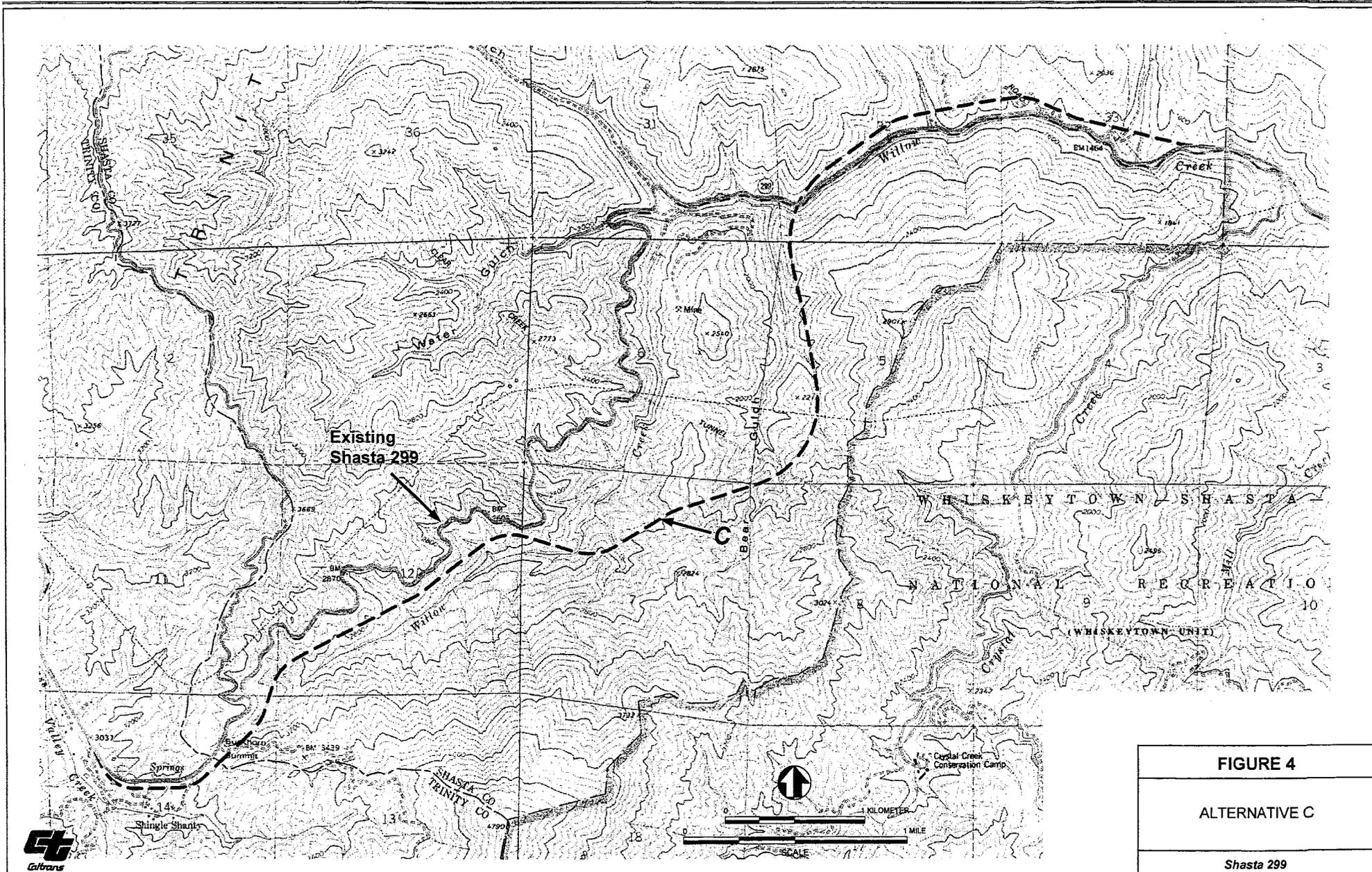


FIGURE 4

ALTERNATIVE C

Shasta 299

Agencies Sent a Copy of the NOP for the Buckhorn Grade Project

State Agencies

- California Department of Fish and Game
- State Lands Commission
- California Department of Parks and Recreation
- Central Valley Regional Water Quality Control Board
- North Coast Regional Water Quality Control Board
- State Historic Preservation Office Shasta County
- Dept. of Forestry & Fire Protection
- Department of Water Resources
- Native American Heritage Commission
- California Highway Patrol
- Air Resources Board
- State Clearinghouse

Federal Agencies

- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service (Sacramento and Arcata offices)
- U.S. Army Corps of Engineers (Sacramento and San Francisco offices)
- National Marine Fisheries Service (Sacramento and Arcata offices)
- U.S. Bureau of Land Management
- National Park Service (for Whiskeytown)
- U.S. Forest Service
- U.S. Soil Conservation Service
- U.S. Bureau of Reclamation

State Clearinghouse

Other Agencies:

- Shasta County Department of Public Works
- Trinity County Planning Department
- Humboldt County Public Works Department
- Shasta County Regional Transportation Planning Agency
- Lewiston Community Services District
- Weaverville Community Services District
- Douglas City Community Services District
- City of Redding
- Western Shasta Resource Conservation District
- Redding Rancheria
- State Clearinghouse