

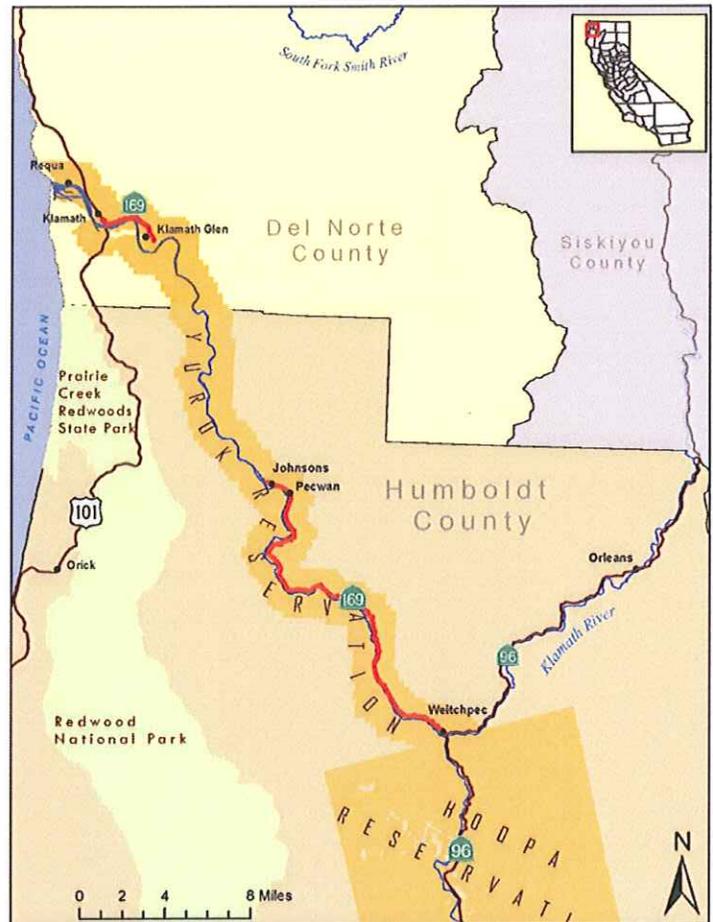
TRANSPORTATION CONCEPT REPORT

ROUTE 169 CORRIDOR

01-DN-PM R0.0/8.5
01-HUM-PM 0.0/33.8

All information in this Transportation Concept Report is subject to change as conditions change and new information is obtained.

I approve this Transportation Concept Report as an analysis and conceptual guide for development decisions.



Approval Recommended:

Cheryl S. Willis 11/10/10
Cheryl S. Willis Date
Deputy District Director
Planning/Local Assistance

Approval Recommended:

Matt Brady 11/10/10
Matt Brady Date
Deputy Director
Program/Project Management

Approved:

Charles Fielder Nov 15, 2010
Charles Fielder Date
Director, District 1

November 2010



Statement of Planning Intent

The Transportation Concept Report (TCR) is a planning document, prepared by the System Planning Division, which describes the Department of Transportation's (Caltrans) conceptual improvement options and management strategies for a given transportation route or corridor. System Planning is Caltrans' long-range transportation planning branch which operates under such legislation as California Government Code §65086, as well as a variety of federal mandates including 49 USC 5304, 23 USC 134 and 23 USC 135, all of which have to do with planning for the transportation needs of the citizens of California. Considering reasonable financial constraints and projected travel demand over a 20-year planning period, the TCR considers transportation facility needs for each route or corridor. Long-term or "Ultimate" concepts – concepts that extend beyond the 20-year planning period – may be discussed to identify and support long-term needs that may not be feasible within the 20-year planning period.

The TCR is a tool for implementing interregional and statewide continuity of the State's Transportation network, and will be updated as needed as conditions change or new information is obtained.

Purpose of the Transportation Concept Report

The objective of the TCR is to have local, regional, state and Tribal consensus on route or corridor concepts, improvement goals and strategies. TCRs are prepared by District staff, in cooperation with local/regional agencies and Tribal governments.

Assumptions

The following assumptions form the basis for development of Transportation Concept Reports:

1. The improvement concept of State highways in the District is generally based on functional classification.
2. State highways with improvement concepts must have realistic concept levels of service. Concept levels of service are not established on State highways that will only be maintained (since improvements would not be made to address level of service concerns).
3. Level of service calculations (LOS) are based on the 2000 Highway Capacity Manual.
4. Determinations of future level of service for State highways in District 1 are based in part upon Statewide and regional forecasts of State highway travel developed by Caltrans.
5. Transportation Concepts generally apply to an entire route or corridor, unless there are overriding considerations (e.g., a major change in function along the route or feasibility concerns).
6. Major projects will be developed to meet design standards acceptable to the Federal Highway Administration in order to receive Federal funding for projects. Otherwise, a "design exception" must be secured during the project development process.
7. Safety and operational improvement projects will be pursued on an on-going basis in order to be responsive to safety and operational concerns as they are identified.
8. Projects under construction and projects programmed for construction were assumed to be complete in analyzing future operating conditions.
9. Environmental documents are not required for Transportation Concept Reports. Individual improvement projects identified in Transportation Concept Reports will follow established environmental processes when development is proposed, as required by law.

Table of Contents

Statement of Planning Intent	i
• Purpose of the Transportation Concept Report & Assumptions	
Executive Summary	1
I. Existing Route	3
• Route Description	
• Route Purpose	
• Route Segmentation & Existing Facilities	
• Existing Land Use	
II. Operating Conditions	5
• Map 1: Present & Future Operating Conditions	
III. Environmental Conditions	6
• Endangered, Threatened and Rare Species	
• Environmentally Sensitive Areas	
• Cultural & Historical Resources	
IV. Route Concerns	6
V. Route Planning	7
• Coordination with Local, Regional and Tribal Planning & Special Studies	
VI. Route Concepts	8
• Facility Concept, Level of Service Concept & Alternative Concepts Considered	
VII. Route Management Strategies	10
• Maintenance & Rehabilitation Strategy	
• Safety & Operational Improvement Strategy	
• Access Management Strategy	
• Goods Movement Strategy	
• Livable Communities/Context Sensitive Solutions Strategy	
VIII. Right-of-Way Considerations & Needs	12
IX. Multi-Modal Considerations: Transit & Non-Motorized	13
X. Programmed & Identified Improvements	14
• Projects Identified in 2004 Route 169 Needs Assessment Study	
• Projects Programmed in 2008 SHOPP	
• Improvements Required to Achieve the 20-Year Route Concept	
• Map 2: Programmed Projects in 2006 SHOPP & Improvements Identified in the 2004 Route 169 Needs Assessment but not yet programmed	
XI. Appendices	
A - Works Referenced	17
B - 2004 Caltrans 169 Feasibility Study Project Location Sheets	18
C - Funding Sources	19
D - Listed Species from CA Natural Diversity Database (DFG)	20



EXECUTIVE SUMMARY
TRANSPORTATION CONCEPT REPORT ROUTE 169
(01-DN-PM R0.0/8.5 and 01-HUM-PM 0.0/33.8)

Route Description

Route 169 is located entirely within the boundaries of the Yurok Reservation. The route follows the northerly side of the Klamath River for 42-miles; from Route 101 at the community of Klamath to Route 96 at the community of Weitchpec. An 18-mile long section of Route 169 has not been constructed, resulting in a 3.5 mile long stub route from Route 101 at the community of Klamath to the community of Klamath Glen in Del Norte County, and a nearly 21 mile long stub route from the community of Wautec to Route 96 at the community of Weitchpec in Humboldt County. The route is functionally classified as a rural major collector, and is used mainly for access to schools, emergency services, employment, mail and fuel delivery, access to traditional cultural areas, property access, and commercial purposes.

Route 169 in Del Norte County is a 2-lane highway, with a minimum width of 24 feet. In Humboldt County, approximately one-half of the route is 16-feet wide or less, and functions as a one-lane highway. Traffic volumes range from 960 to 1,900 Annual Average Daily Traffic (AADT) on the Del Norte County portion of the route, and from 350 to 400 AADT on the Humboldt County portion of the route. A map of the route with current operating conditions is provided on page 5.

Route Planning

In 2004, the Department of Transportation (Caltrans), in cooperation with the Yurok Tribe, completed the "Route 169 Needs Assessment Study," a report to identify and prioritize safety-based improvement locations on Route 169. Based on the findings of this study, Caltrans secured safety program funding from the State Highway Operation and Protection Program (SHOPP) and High Risk Rural Roads (HR3) to install guardrail and widen several locations on Route 169 in Humboldt County. In addition to identifying safety-based improvements, the study also identified and scoped long-term safety and operational improvements, as well as capacity increasing projects in support of the Yurok Tribe's goal of upgrading Route 169 to current standards on the Humboldt end and connecting Route 169 to Route 101 within Del Norte County in the north. The Route is included in the Yurok Tribe's BIA Indian Reservation Roads inventory.

Programmed Improvements

The 2008 State Highway Operation and Protection Program (SHOPP) includes projects to replace four bridges, as well as road widening and guardrail installation at several locations on Route 169 in Humboldt County. Supplemental funding from the High Risk Rural Roads (HR3) fund was used on the Weitchpec Curve project. A map with locations of programmed improvements is provided on page 17. No projects for Route 169 were included in the 2008 State Transportation Improvement Program (STIP) and one (1) in the 06-07/07-08 SHOPP Minor A Program (Weitchpec Curve, 1_HUM-169-PM 33.5/33.8).



Environmental Conditions

Environmental considerations include Route 169's proximity to the Klamath River, a Wild and Scenic River, and associated water quality concerns. The preservation and protection of cultural and historical resources are also a concern, as are the protection of plant and animal species.

Route Concepts

The 20-year concept for Route 169 is a 2-lane conventional highway on its existing alignment. Where non-maintenance projects occur along constructed segments of the route, the roadway will be upgraded to the standard width of 32 feet where feasible, but no narrower than 20-feet in width.

The Yurok Tribe's long-term goals include upgrading Route 169 in Humboldt County to current standards, and completing the 18-mile long unconstructed segment to connect both ends. While Caltrans supports the Yurok Tribe's long-term improvement goals for Route 169, completion of the route to connect the Del Norte and Humboldt County portions of Route 169 does not appear to be financially or environmentally feasible within a 20-year planning horizon. Therefore, these goals were not selected for the 20-year route concept. However, if existing constraints are overcome, Caltrans supports this as a long-term or "ultimate" concept for this route.



TRANSPORTATION CONCEPT REPORT ROUTE 169 (01-DN-PM R0.0/8.5 and 01-HUM-PM 0.0/33.8)

I. EXISTING ROUTE

This section provides the background of the corridor as well as the existing conditions of the facility and surrounding land use.

Route Description

Route 169 is located entirely within the boundaries of the Yurok Reservation. The constructed portions of the route follow the northerly side of the Klamath River for 42 miles; from Route 101 at the community of Klamath to Route 96 at the community of Weitchpec. An 18-mile long section of Route 169 has not been constructed, resulting in a 3.5 mile long stub route from Route 101 at the community of Klamath to the community of Klamath Glen in Del Norte County, and a nearly 21 mile long stub route from the community of Waitec to Route 96 at the community of Weitchpec in Humboldt County. The developed portion of the road is functionally classified as a rural major collector.



Route 169 is a one-lane facility for the majority of the route. Caltrans 2006.

Route Purpose

Route 169 is functionally classified as a rural major collector. It functions as the primary route serving the Yurok Reservation. Route 169 is used by the Yurok Tribal community and others for access to schools, emergency services, employment, mail and fuel delivery, access to traditional cultural sites, and commercial purposes. It also provides access to property adjacent to the route, and is used for recreational (generally sport fishing access) and timber production purposes. The Route also provides integral access to current and potential economic development ventures for the Yurok Tribal government, small businesses and prospective housing developments.

Route Segmentation & Existing Facilities

Data for highway analysis is typically gathered by segments defined by post mile. System Planning has divided each highway into segments that share similar characteristics for the purpose of detailed analysis. Table 1 summarizes the segmentation and existing facility characteristics for Route 169.



TABLE 1: Route Segmentation & Existing Facilities

SEG #	POST MILE	DESCRIPTION	Existing Facility
1	DN-169-R0.0/3.5	Route 101 to Klamath Glen	2 Lane-Conventional
2	DN-169-3.5/8.5	Klamath Glen to Humboldt County Line (Unconstructed)	Unconstructed
3	HUM-169-0.0/13.2	Humboldt County Line to Wautec (Unconstructed)	Unconstructed
4	HUM-169-13.2/23.7	Wautec to Ke'pel Road	1 Lane-Conventional
5	HUM-169-23.7/30.0	Ke'pel Road to Martins Ferry	1 Lane-Conventional (brief sections of 2 Lane-Conventional)
6	HUM-169-30.0/33.8	Martins Ferry to Weitchpec	1 Lane-Conventional (brief sections of 2 Lane-Conventional)

Functional Classification:	Rural Major Collector
Eligible for Federal Funding:	Yes
Eligible for State Scenic Highway Designation:	No
Subsystem of Highways for Extra Legal Loads (SHELL):	No
Surface Transportation Assistance Act STAA Trucks Allowed:	No
Strategic Highway Network:	No
National Highway System:	No
Interregional Road System:	No
Public Airports Served:	Andy McBeth (General Aviation)
Rail Service:	None
Intercity Bus Service:	Yes
Intersecting State Highway Routes:	State Highways 101 & 96
Significant Intersecting Local Routes:	Bald Hills Road (County)
Park and Ride Lots	None

Existing Land Use

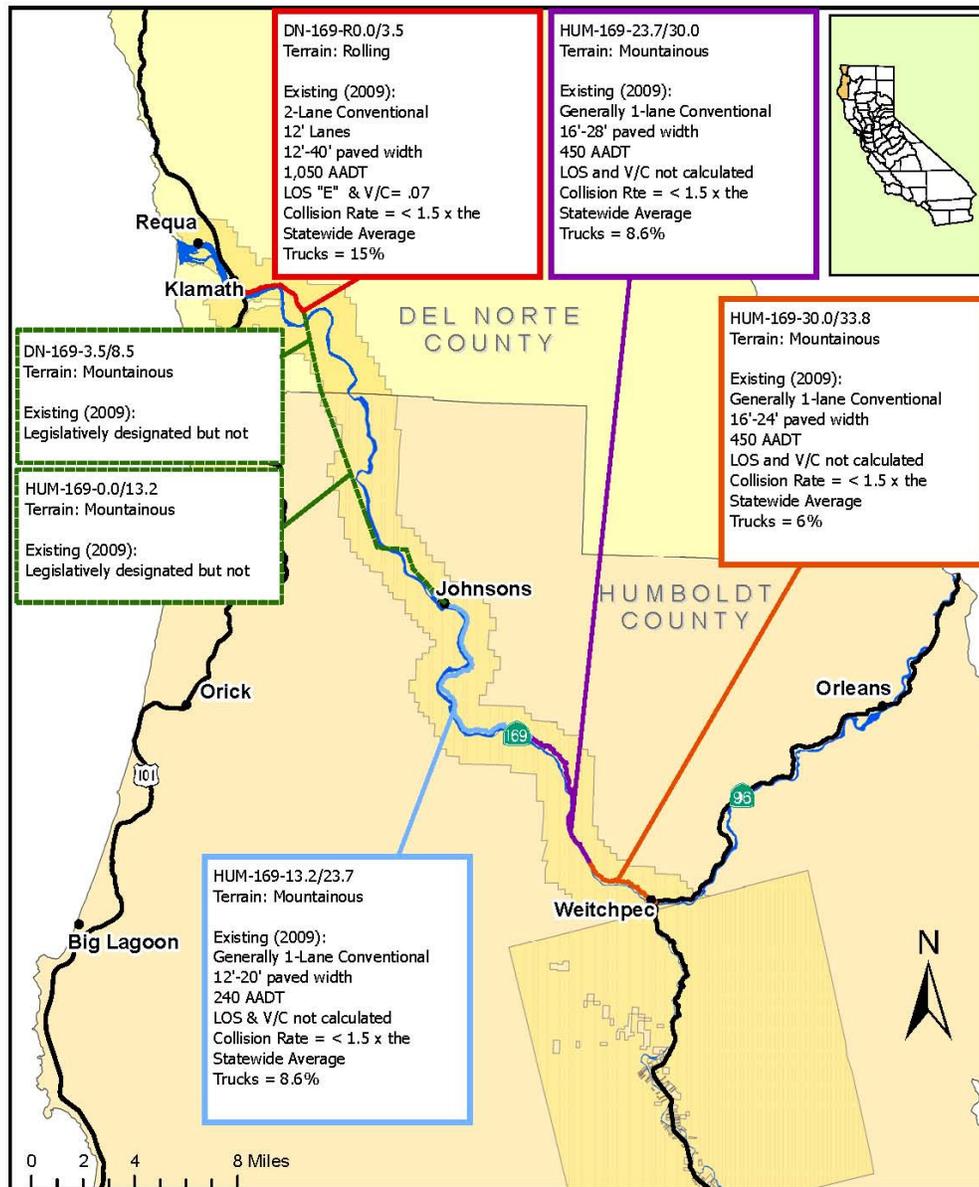
Land use adjacent to Route 169 is a mixture of timberland, open space, and low density rural residential. Higher density residential uses exist within a few very small communities along the route. In the 2004 "Route 169 Needs Assessment Study", Yurok Tribal Planning & Community Development Department staff indicated that additional development is expected, and this is likely to increase future traffic more than the currently projected rate of less than 1% per year. As an example of periodic peak increases, the Route is heavily used during particular periods throughout the year for traditional cultural ceremonies, events and activities including a variety of ceremonial dances.



II. OPERATING CONDITIONS

Traffic volume ranges, level of service, volume to capacity ratios for both existing and anticipated future conditions, and existing safety information for Route 169 are shown on Map 1: Present & Future Operating Conditions on page 5.

Map 1:
Present & Future Operating Conditions
Route 169





III. ENVIRONMENTAL CONDITIONS

Route 169 generally follows the north bank of the Klamath River through mountainous terrain. Adjacent vegetation primarily consists of Douglas fir, tanoak, madrone, as well as redwood in the Del Norte segments of the route.

Endangered, Threatened and Rare Species

According to the California Natural Diversity Database, several species exist in the vicinity of Route 169 that have various endangered, threatened, or rare status. See Appendix D for a general listing by USGS Quad map. All of these species are not necessarily found within the immediate vicinity of the route.



Route 169 follows the bank of the Klamath River. Caltrans

Environmentally Sensitive Areas

The Klamath River, a federally designated recreational Wild and Scenic River, provides important stream and riparian habitat. Several sensitive species are associated with the Klamath River and its tributaries, including a variety of federally listed plant and animal species. Soil stability is a factor of concern along many areas of Route 169 as slides or slipouts could potentially impact water quality, as well as result in delays and/or road closures.

Archaeological & Cultural Resources

Archaeological and culturally significant sites are present at many locations along Route 169 in both Del Norte and Humboldt Counties. When culturally or archeologically significant resources are identified within project limits, review by the Yurok Tribal Heritage Preservation Officer (THPO) and cultural committee will be required.

IV. ROUTE CONCERNS

Level of Service (LOS)

A segment is considered to be a "level of service" concern if the concept level of service (LOS) will not be achieved under present or future traffic conditions, or the segment operates at capacity during peak hour. LOS concerns indicate the need for capacity increasing and/or operational improvements.

LOS for DN-169-PM R0.0/3.5 is LOS "C" and is projected to remain at LOS "C" with anticipated 20-year traffic growth. LOS could not be calculated for the HUM-169-PM 13.2/33.8 segment, as this segment is essentially one-lane, and there is no methodology



available for calculating one-lane LOS. Following Highway Capacity Manual criteria for LOS, two-lane highways with average travel speeds less than 40 mph are automatically designated at an "E" level of service based on the low average travel speeds that can be maintained on the facility.

Safety and Operations Concerns

Caltrans utilizes a systematic approach to investigate locations of safety concerns. On a quarterly basis, Caltrans District staff receives a Traffic Accident Surveillance and Analysis System (TASAS) Table C report, which identifies collision concentration locations on State Highways. TASAS is a database that contains highway classification data, traffic volumes, and collision data from the Statewide Integrated Records System (SWITRS) database that is maintained by the California Highway Patrol. The Table C report identifies intersections and highway segments with collision histories showing statistical significance. Caltrans District staff investigates the identified locations to determine what, if any, improvements are needed to address a safety concern that may be funded under the Safety (010) Program. The Safety (010) Program is described as a Collision Severity Reduction Program that funds improvements such as guardrails.

However, anecdotal evidence suggests that numerous collisions often go unreported, especially in remote rural areas with limited access to telephones and law enforcement coverage. This lower level of incident reporting is a concern as it directly impacts the District's ability to obtain data regarding safety issues along the route. If a particular location has had frequent collisions, but these collisions go unreported (and thus are not entered into the district's database), that location will not appear to be in need of safety improvements. While district staff recognizes anecdotal evidence as valid, this method of collecting safety data makes confirmation and documentation problematic, particularly for funding under the Safety 010 Program.

As an option to evaluate locations for funding under the Safety 010 Program, Caltrans District staff developed a methodology for considering the anecdotal evidence in operational projects, with a safety basis. The 2004 "Route 169 Needs Assessment Study" identified and prioritized safety-based improvement locations on Route 169 using expanded criteria including collision history, sight distance, total paved width and likely consequences of driver error. Based on these findings, Caltrans has pursued safety program funding under the Safety 015 Program, Collision Severity Reduction Program, to install guardrail and widen several locations with restricted sight distance within Humboldt County. These improvements are identified on pages 14 and 15. Additional projects identified but not prioritized through the Needs Assessment Study are listed on page 14. Potential funding sources for improvements are provided in Appendix C.

V. ROUTE PLANNING

Coordination with Local, Regional and Tribal Planning & Special Studies:

The 2004 "Route 169 Needs Assessment Study," identified and prioritized improvement locations on Route 169. This study was initiated at the request of the Yurok Tribe for Caltrans to consider safety-based improvements (improvements intended to reduce the number and severity of collisions based on collision history, as well as anecdotal evidence) on Route 169 in



Humboldt County. The study was completed by Caltrans and Tribal staff in cooperation with a Technical Advisory Committee (composed of Caltrans, Yurok Tribal, and Regional Transportation Representatives), and under the direction of a Steering Committee (Caltrans and Yurok Tribe Management). Needs identified included safety-based operational improvements, as well as the Yurok Tribe's long term improvement goals for the route, which include upgrading existing Route 169 in Humboldt County and connecting Route 169 in Humboldt County to either Route 101, or the Del Norte portion of Route 169.

Both the Del Norte Local Transportation Commission (DNLTC) and the Humboldt County Association of Governments (HCAOG) were included in the development and given the opportunity to comment on draft products for the Route 169 Needs Assessment Study. HCAOG and DNLTC acknowledged the Yurok Tribe's improvement goals for Route 169 in their Regional Transportation Plans. Further, HCAOG has established Regional Improvement Program funding targets to allow the Yurok Tribe to program State Transportation Improvement Program funds.

VI. ROUTE CONCEPTS

The corridor concept serves as a planning policy for route improvements over the 20-year planning horizon. It functions to protect the State's investment in Route 169, while recognizing financial and environmental constraints, which will not allow the programming of extensive improvements for all State highways.

The long-term or "ultimate" concept is a corridor concept that extends beyond the 20-year planning period. The ultimate concept is included in order to identify and support improvements that will be required to achieve the ultimate concept, but which may not be feasible within the 20-year planning period due to various constraints.

Facility Concept

The concept for Route 169 is a 2-lane conventional highway on its existing alignment. Where non-maintenance projects occur along constructed segments of the route, the roadway will be upgraded to the standard width of 32 feet where feasible, but no narrower than 20-feet in width.



Level of Service is impacted by the low speeds required on this narrow roadway. Caltrans 2006.

The Yurok Tribe's long-term goals include upgrading Route 169 in Humboldt County to current standards, and completing the 18-mile long unconstructed segments of the route or creating a new connection with Route 101. While Caltrans supports the Yurok Tribe's long-term improvement goals for Route 169, completion of the route to connect the Del Norte and Humboldt County segments does not appear to be financially or environmentally feasible within this document's 20-year planning horizon. Therefore, these goals were not selected for the 20-year route concept. However, Caltrans supports this as an ultimate concept, while recognizing the significant environmental and funding constraints that will need to be overcome in order for it to be achieved.

Level of Service Concept

<h1 style="text-align: center;">LEVELS OF SERVICE</h1> <h2 style="text-align: center;">for Multi-Lane Highways</h2>			
Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		60	Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. No delays
B		60	Traffic flows freely, but drivers have slightly less freedom to maneuver. No delays
C		60	Density becomes noticeable with ability to maneuver limited by other vehicles. Minimal delays
D		57	Speed and ability to maneuver is severely restricted by increasing density of vehicles. Minimal delays
E		55	Unstable traffic flow. Speeds vary greatly and are unpredictable. Minimal delays
F		<55	Traffic flow is unstable, with brief periods of movement followed by forced stops. Significant delays

Source: 2000 HCM, Exhibit 21-3, Speed-Flow Curves with LOS Criteria for Multi-Lane Highways

No concept level of service has been selected for Route 169. Concept LOS targets are not established on State highways that will only be maintained (since improvements would not be made to address LOS concerns). Although improvements are planned for Route 169, they primarily address safety concerns and incrementally upgrading Route 169 in Humboldt County to a two-lane facility.



Alternative Concepts Considered

Alternative 20-year concepts were identified in the 2004 "Route 169 Needs Assessment" prepared by Caltrans staff in conjunction with the Yurok Tribal Council. The report identified and prioritized improvement locations on Route 169, and scoped long-term improvements to the route which would extend beyond the 20-year planning horizon. Cost/benefit analysis, facility design, environmental considerations, and funding feasibility were used as criteria in selecting the chosen alternative.

One 20-year concept alternative was considered as follows:

Upgrade Route 169 to current standards, and extend the existing Route to connect with either Route 101 or Route 169 in Del Norte County.

Much of Route 169 is immediately adjacent to the Klamath River, a Wild and Scenic River. Large cuts, embankments, and retaining walls have the potential to threaten water quality and create visual impacts. Major improvements to Route 169, including construction of the complete route as legislatively designated, would likely be controversial due to potentially significant impacts to environmental and cultural resources.

Based on preliminary cost estimates completed in the 2004 "Route 169 Needs Assessment", it would cost \$140 million to upgrade the existing Route 169 in Humboldt County to a 30-mile per hour alignment with 12-foot lanes and 2-foot shoulders. Extending Route 169 to Route 101 near the Humboldt-Del Norte County line would cost an additional \$200 million for a similar two-lane facility.

Such improvements are not feasible within the 20-year planning horizon based on current funding and environmental constraints. Therefore, this alternative concept was not selected as the 20-year Corridor Concept for Route 169, however, this alternative has the support of Caltrans as an ultimate concept for Route 169.

VII. ROUTE MANAGEMENT STRATEGIES

This section describes specific strategies developed to achieve and maintain the corridor concepts described in the previous section.

Maintenance and Rehabilitation Strategy

Route 169 will be maintained as necessary at its present width and existing alignment. Portions of the route may be rehabilitated on an exception basis, when maintaining the facility would be less cost effective than rehabilitating it.

Annual vegetation removal to preserve sight distance is generally feasible. Due to cultural uses of these plants, it is required that staff consult with Native plant gatherers prior to removal.



Safety and Operational Improvement Strategy

Additional safety-based and operational improvements will continue to be developed at spot locations as necessary.

Access Management Strategy

Access management is the control of each point of access on the public roadway network, both private and public, for the purpose of limiting roadway conflict, thereby improving safety and performance. Access management strategies may include minimizing the overall number of access points and traffic signals, selecting the best access locations, requiring auxiliary turn lanes, and /or implementing turn restrictions. In general, whenever possible, access points should be consolidated and/or minimized.

While some access openings may have less than desirable sight distance, access management is generally not a concern along most of Route 169. Further, with little change in land use anticipated, access management is not likely to become a future concern.

Goods Movement Strategy

Route 169 is one of three (Route 101, 96, 169) all-weather routes serving the Yurok Reservation and the Klamath River Valley (down river from Weitchpec). It is used to transport food and other essential supplies to communities along this corridor, and to transport goods to market.

Although truck traffic volumes on this Route are relatively low, logging trucks are known to use this narrow highway. Goods movement emphasis is on route safety and reliability.

Livable Communities/Context Sensitivity Strategy

Caltrans uses Context Sensitive Solutions (CSS) to plan, design, maintain and operate its transportation system in a way that reflects community values and enhances its surrounding environment while meeting transportation safety, maintenance, and performance goals. The application of CSS is especially important in areas where a State route passes through a community.



K – Rail enhanced with art completed by the tribal community. Caltrans 2006.

CSS calls for the interdisciplinary collaboration of technical professionals, local community interest groups, landowners, facility users, the general public, and other stakeholders who will live and work near or use the facility. It is through the CSS process and team approach that Caltrans can gain an understanding and appreciation of community, aesthetic, and environmental values and incorporate or address



these throughout the initiation, development and implementation of our projects. Consistent with CSS policy, Caltrans will actively involve the Tribe as a partner in the development of all projects on the route to ensure that cultural and environmental concerns and other community values are properly addressed.

Key elements of the Route 169 context include its location entirely within the Yurok Tribal boundary, the proximity of 169 to the Klamath River and associated environmental and cultural sensitivity. Prominent examples of CSS along this route include the integration of art completed by the community on Caltrans' K-Rail and symbology on the back of standard road signs along Route 169 and the Yurok Friendship design on concrete barrier rails.

Several highways in District 1 travel through Native American Reservations. In an effort to enhance tribal participation in the planning of these routes, the District has spearheaded the Tribal Corridor Management Plan in collaboration with the Mineta Transportation Institute. The Tribal Corridor Management Plan encourages the utilization of tribal symbols, native plantings, and other features that highlight Native American culture along existing transportation and downtown plans, establishing an awareness of the unique tribal cultures and a sense of place. Additionally, the plan will guide future route planning, construction and maintenance activities along routes that pass through Tribal land.

VIII. Right of Way Considerations

Right of Way Needs

Right of way along Route 169 is generally prescriptive; i.e., the open and notorious use of the land which is not owned by the user but has been accepted by the fee owners over some prescribed period of time. Projects that require any widening beyond existing prescriptive areas will call for the acquisition of the additional right of way which is needed to construct and maintain such improvements. Any additional right of way needed within the project limits would be acquired from adjoining property owners, which can be a considerably difficult and time-consuming task requiring cooperation with the Bureau of Indian Affairs and the Yurok Tribal government.

Relocation or placement of utilities on State right of way will require an encroachment permit and will be handled on a case-by-case basis.

Corridor Preservation and Adoption, Rescission and Relinquishment are not discussed in this section as they are not applicable to Route 169.

IX. Multi-Modal Considerations

Transit

Currently, there are transit services provided to the region by Klamath Trinity Non-Emergency Transportation (KTNET), a non-profit organization. These services are provided as a partnership between the Yurok Tribe and KTNET. The Yurok Tribe is a recipient of the multi-year Federal Highway Administration's Federal Transit Authority Tribal Transit grant that has extended transit services that were previously non-existent in this region. The service provides a critical link



between the communities of Willow Creek, Weitchpec, Wauteck and Orleans with stops along Route 169.

The Tribe has also received a National Scenic Byways Program planning grant to assess the feasibility of developing a Yurok Scenic Byways program of its own. Additionally, the Yurok Tribe has recently been awarded the Paul S. Sarbanes Transit in the Parks feasibility award to study the viability of a river taxi system utilizing the Klamath River, State Route 169, Bald Hills Road and US Highway 101.

Non-Motorized (Bicyclists & Pedestrians)

Shoulders and lanes on Route 169 are generally narrow and not well suited to non-motorized traffic. Widening completed in conjunction with safety-based operational improvements will likely improve conditions for non-motorized traffic. No other non-motorized improvements are anticipated. However, if specific needs and funding sources are identified by the regional or other agencies/Tribes, Caltrans will work with them to improve pedestrian and bicycle facilities on Route 169.

Bicyclists are allowed on all state highways within District 1, and improvements to accommodate bicyclists will be made when feasible. The Humboldt and Del Norte Bikeway Plans do not include plans for bicycle facilities along Route 169. Identified improvements are required to be included in these plans in order to be eligible for Bicycle Transportation Account funds.

Pedestrian traffic is primarily concentrated in the communities, in particular, Klamath and Klamath Glen, the most densely populated communities along Route 169. The Draft Yurok Tribal Transportation Plan indicates community interest for pedestrian facilities along the Del Norte section of Route 169 to provide non-motorized access between the communities of Klamath and Klamath Glen. Specifically, the plan calls for shoulders to be widened to a minimum of 4-feet when the roadway is scheduled for rehabilitation.

In addition to pedestrian traffic directly on Route 169, a network of pedestrian trails exists within and near the Yurok Reservation. According to the "2006 Draft Yurok Tribal Transportation Plan", the Tribe is currently working on developing a Yurok Tribal Park System, which includes construction and restoration of select trail networks. Although the Tribal Park will not extend to Route 169, a network of trails still surrounds the route.

Other Modes

High Occupancy Vehicle (HOV) lanes and other modes of transportation (rail/air) were not discussed in this section as they are not applicable to Route 169.

X. Programmed & Identified Improvements

No capacity increasing improvements for Route 169 are programmed in the 2008 State Transportation Improvement Program (STIP). However, where non-maintenance projects occur along the route, the roadway will be upgraded to a standard width of 32 feet when feasible, but no narrower than 20 feet in width. Table 3 on page 14 lists and Map 2, on page 16 displays projects programmed in the 2008 State Highways Operation and Protection Program (SHOPP).



TABLE 2: Projects Identified in Route 169 Needs Assessment Study

Priority	County	Project Location	Description
1*	HUM	PM 20.55 (Programmed PM 20.47/20.61)	Cut to widen & guard rail
2*	HUM	PM 22.63 (Programmed 20.63/20.64)	Cut to widen & guard rail
3*	HUM	PM 22.72 to 22.77 (Programmed PM 22.74/22.76)	Cut to widen & guard rail
4*	HUM	PM 22.97 (Programmed PM 22.89/22.95)	Cut to widen & guard rail
5*	HUM	PM 22.50 (Programmed 22.48/22.51)	Cut to widen & guard rail
6*	HUM	PM 23.30 (Programmed 23.28/23.32)	Cut to widen & guard rail
7*	HUM	PM 13.70 (Programmed 13.69/13.71)	Fill to widen & guard rail
8*	HUM	PM 33.76 (Programmed 33.76/33.77)	Guard rail
9	HUM	Various	Clearing for sight distance
10	HUM	PM 22.31	Pass-by**
11 (tie) *	HUM	PM 19.00 (Programmed PM 18.96/19.04)	Cut to widen & guard rail
11 (tie)	HUM	PM 19.13	Cut to widen
12 (tie)	HUM	PM 14.81	Pass-by**
12 (tie)	HUM	PM 15.98	Pass-by**
12 (tie)	HUM	PM 18.25	Pass-by**
12 (tie)	HUM	PM 20.78	Pass-by**
12 (tie)	HUM	PM 27.79	Pass-by**
13 (tie)	HUM	PM 18.10	Cut to widen
13 (tie)	HUM	PM 14.36	Drainage/Safety
14 (tie)	HUM	PM 17.68	Cut to widen
14 (tie)	HUM	PM 17.77	Cut to widen

* A project incorporating all of the asterisked locations has been initiated by Caltrans (EA 45090).

** Pass-by: Widening to allow opposing vehicles to pass each other.

TABLE 3: Projects Programmed

County	EA	Postmile (Begin/End)	Project Description	Est. Cost (Millions)	Est. Completion	Funding Program
HUM	45090	13.6/33.8	Install MBGR/ Widen Various Locations***	5.6	10/2012 FY 14/15	SHOPP-Major HR3
HUM	47830	18.0/19.8	Wall Failure Repair (Storm Damage)	2.6	2/2011	SHOPP-Major
HUM	47850	20.5/32.9	8 Locations Storm Repair	1.48	12/2010	SHOPP-Major
HUM	36460	22.2/30.2	169 Bridges	12.0	1/2012	SHOPP-Major
HUM	47820	26.4/26.6	Roadway Slipout	1.1	10/2010	SHOPP-Major
HUM	43050	33.5/33.8	Weitchpec Curve	0.50	9/2014	SHOPP - Minor
HUM	47450	28.6/33.3	Storm Damage Repair	0.6	Completed 11/2007	SHOPP - Major

*** Identified and prioritized in 2004 Route 169 Needs Assessment Study.

TABLE 4: Projects Identified in the 2004 Route 169 Needs Assessment Study but Not Yet Programmed (Shown in 2010 Dollars)

Priority	County	Project Location	Description	Estimated Construction Cost (2004 Dollars)
9	HUM	Various	Clearing for sight distance	\$76,000
10	HUM	PM 22.31	Pass-by**	\$31,000
11 (tie)	HUM	PM 19.13	Cut to widen	\$255,000
12 (tie)	HUM	PM 14.81	Pass-by**	\$61,000
12 (tie)	HUM	PM 15.98	Pass-by**	\$41,000
12 (tie)	HUM	PM 18.25	Pass-by**	\$31,000
12 (tie)	HUM	PM 20.78	Pass-by**	\$41,000



12 (tie)	HUM	PM 27.79	Pass-by**	\$31,000
13 (tie)	HUM	PM 18.10	Cut to widen	\$357,000
13 (tie)	HUM	PM 14.36	Drainage/Safety	\$51,000
14 (tie)	HUM	PM 17.68	Cut to widen	\$143,000
14 (tie)	HUM	PM 17.77	Cut to widen	\$714,000
Total (2010 Dollars)				\$1,832,000

Improvements Required to Achieve the Ultimate Concept

A preliminary design study was performed as part of the 2004 Route Needs Assessment Study to estimate the cost to upgrade existing Route 169 in Humboldt County to a 30-mile per hour design speed with two 12-foot lanes and 2-foot paved shoulders. The estimated cost was approximately \$110 million for construction, and approximately \$30 million for support costs (preliminary engineering, environmental document, design, construction engineering). Right of way support costs were included in this estimate, however no estimate for right of way costs was made.

TABLE 5: Realign and Widen Route 169 in Humboldt County (Estimated Construction Cost by Segment in 2010 Dollars)

Location	Postmiles	Length (Miles)	Construction Cost (millions)
Wautec to Pecwan Creek	13.2/14.50	1.1	\$5.6
Pecwan Creek to Ke'pel Creek	14.5/22.39	7.3	\$36.1
Ke'pel Creek to Mawah Creek	22.39/25.0	2.2	\$16.2
Mawah Creek to Miners Creek	22.5/27.02	1.8	\$14.7
Miners Creek to Rube Ranch Creek	27.02/28.51	1.4	\$6.9
Rube Ranch Creek to Rock Chute Creek	28.51/29.96	1.4	\$6.7
Rock Chute Creek to Route 96	29.96/33.84	3.5	\$25.6

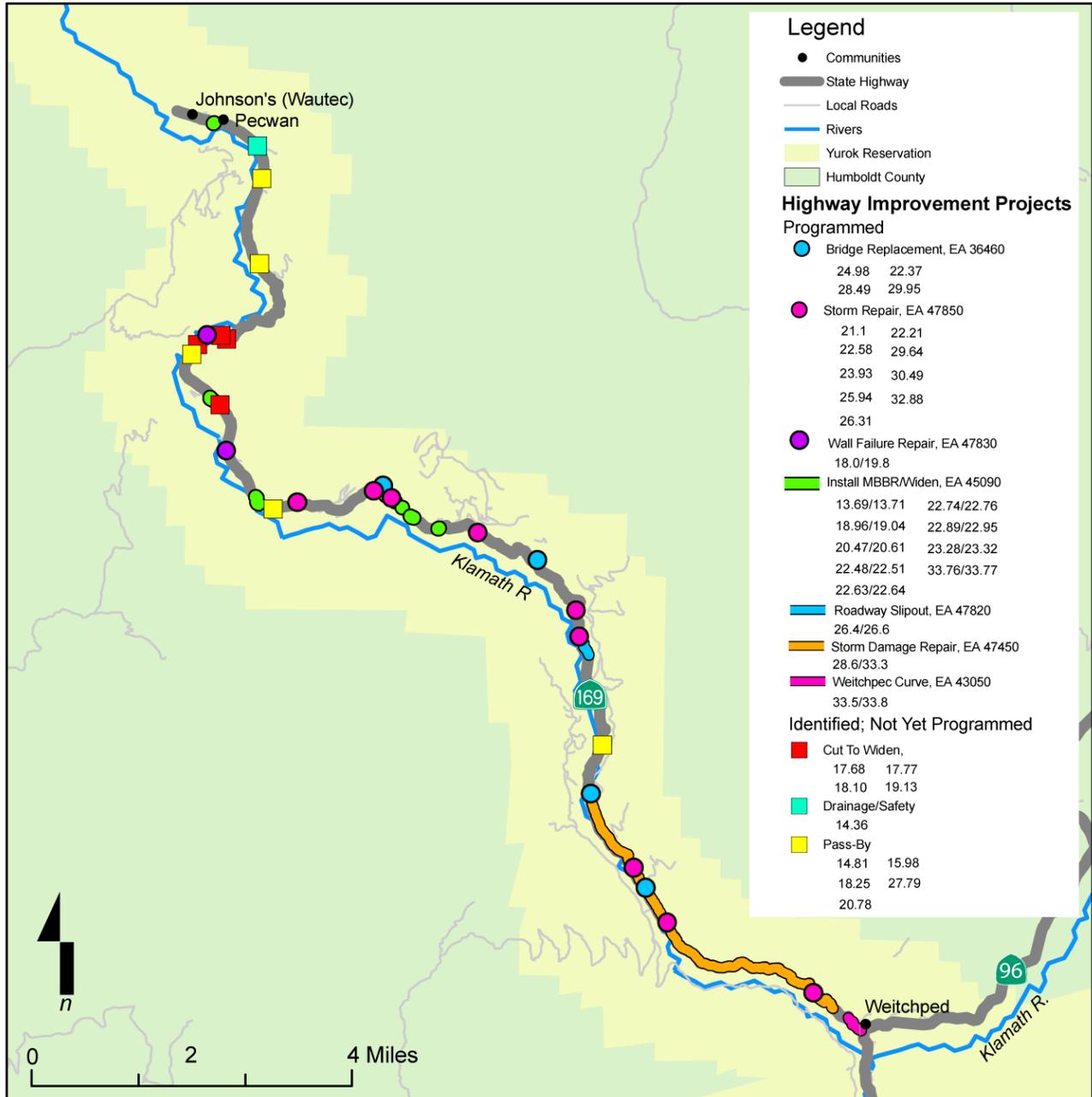
A preliminary design study was performed as part of the 2004 Route Needs Assessment Study to estimate the cost to connect Route 169 to Route 101. The alignment examined was based upon a modified route alternative studied by Caltrans in the 1970s, and connected Route 169 to Route 101 at the Redwood National Park Bypass. This alignment followed the Klamath River to Ah-Pah Creek, then followed the North Fork of Ah-Pah Creek to Route 101. This alignment includes a new 13-mile long, 2-lane facility with a design speed of 30-miles per hour. It was estimated that the cost of constructing this connecting facility would be approximately \$200 million.

Potential Funding Sources for Identified Improvements

A list of Planning funding sources is provided in Appendix C.



Map 2 Projects Programmed in 2008 SHOPP and Improvements Identified in the 2004 Route 169 Needs Assessment Study but Not Yet Programmed





Appendix A

Works Referenced

1. State of California. California Department of Transportation District 1 and Yurok Tribal Council. Route 169 Needs Assessment Study. August 2004.
2. Data for Map 1 were compiled from the 2004 Traffic Volumes on the California State Highway System, 2001 State Highway Inventory, 2006 District 1 Growth Factors, TASAS Table B Report for Route 169, and the 2002 California State Highway Log. References for these documents are provided below.
3. State of California. Department of Fish and Game. California Natural Diversity Database. Accessed July 20, 2006. <<http://www.dfg.ca.gov/whdab/html/cnddb.html>>.
4. State of California. California Department of Transportation. Route Concept Report Guidelines. 1987. <<http://onramp.dot.ca.gov/hq/tpp/files/pdf/RCR1987Guidelines.pdf>>
5. Humboldt County. Humboldt County Association of Governments. 2008 Regional Transportation Plan. 2008.
6. Del Norte County. Del Norte County Local Transportation Commission. Del Norte County 2007 Regional Transportation Plan Update. June 2002. <http://www.dnltc.org/planningdocs/RTP_2007.pdf>
7. Humboldt County. Humboldt County Association of Governments. 2004 Humboldt County Regional Bicycle Transportation Plan. <<http://www.hcaog.net/docs/RBT.2004/TOC.htm>>
8. Del Norte County & Crescent City. Del Norte County Local Transportation Commission. 2007 Bicycle Facilities Plan. June 2007. <http://www.dnltc.org/planningdocs/Bicycle_Facilities_Plan_2007.pdf>
9. Yurok Tribe. Planning Department. Yurok Tribal Transportation Plan. 2006.
10. State of California. California Department of Transportation. 2009 State Highway Operation and Protection Program (SHOPP). Sept. 2008.
11. Caltrans District 1. Office of System & Community Planning. 2006 Growth Factors. April 2006.
12. Caltrans District 1. Office of Traffic Safety. TASAS Table B Report for Route 169. June 2005.
13. State of California. Business, Transportation and Housing Agency and Department of Transportation. 2007 Traffic Volumes on the California State Highway System. June 2008.
14. State of California. California Department of Transportation. State Highway Inventory. 2001.
15. State of California. California Department of Transportation. 2002 California State Highway Log - District 1. 2002.
16. CA DFG Natural Diversity Database (2010)



Route

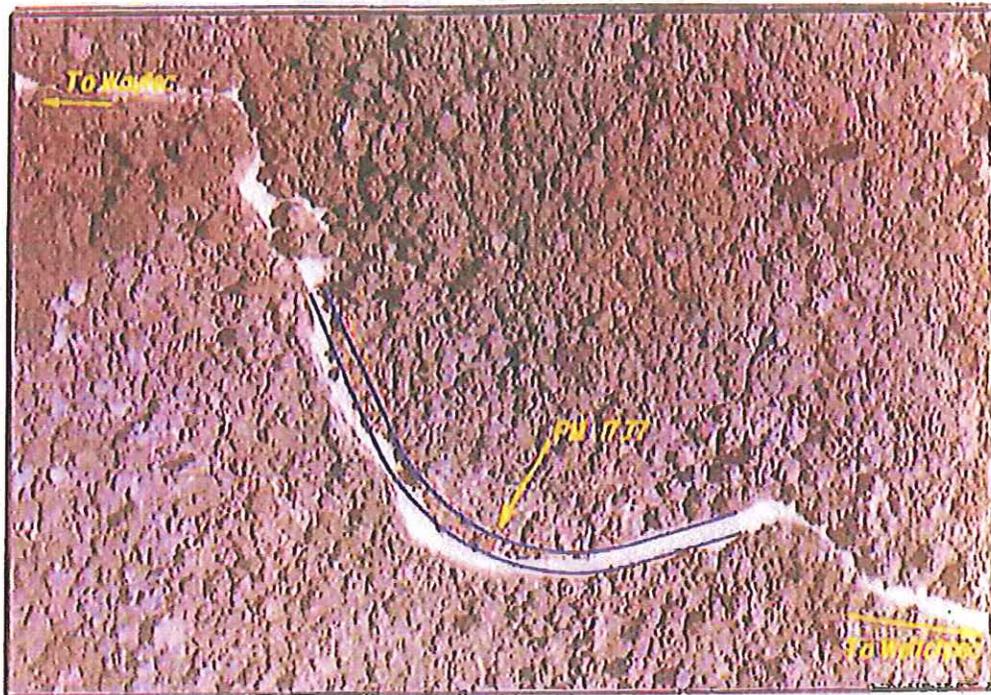


TCR

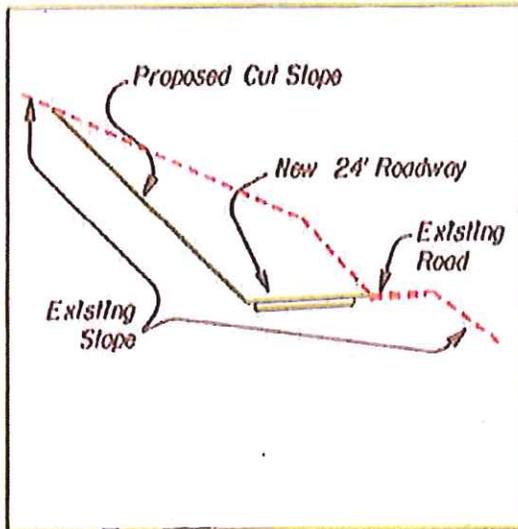
Appendix B

2004 Caltrans 169 Feasibility Study Project Location Sheets

LOCATION FACT SHEET



Location - PM 17.77



Typical Section

LOCATION IDENTIFIED BY

Calltrans Staff based on
sight distance.

EXISTING FACILITIES

Paved Width - 13 feet
Recovery Zone - 1-4 feet
Stopping Sight Distance - 108 feet

SAFETY

Collision History -
TASSAS - 0
Anecdotal - 0
Consequence of error - 3
(1 - Low, 5 - High)

IMPROVEMENTS IDENTIFIED

Description - Cut back slope on north
side roadway to increase roadway
width and stopping sight distance
to 135 ft.

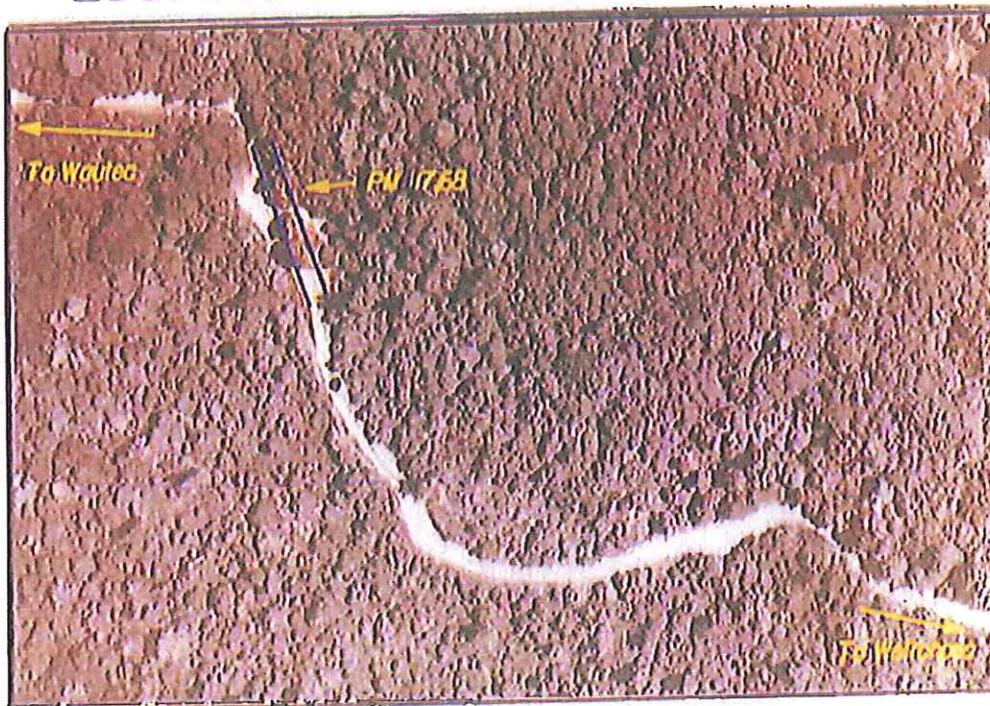
PROJECT ESTIMATED COST

\$700,000 (Construction Only)

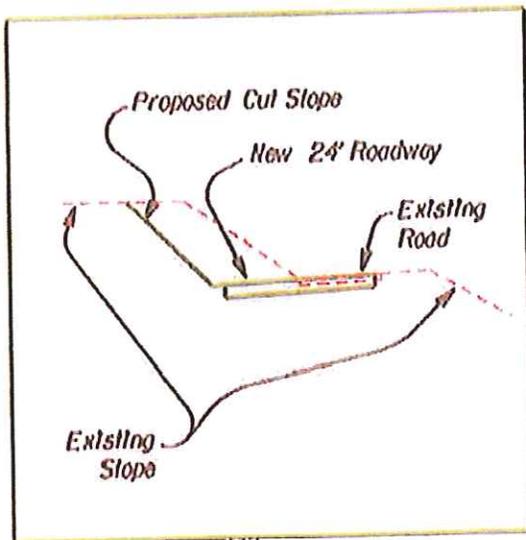
POTENTIAL ENVIRONMENTAL ISSUES

Spotted Owl, Murrelet, Archeological Resources

LOCATION FACT SHEET



Location - PM 17.68



Typical Section

LOCATION IDENTIFIED BY

Caltrans Staff based on
sight distance.

EXISTING FACILITIES

Paved Width - 14 feet
Recovery Zone - 1-12 feet
Stopping Sight Distance - 108 feet

SAFETY

Collision History -
TASSAS - 0
Anecdotal - 0
Consequence of error - 3
(1 - Low, 5 - High)

IMPROVEMENTS IDENTIFIED

Description - Cut back slope on north
side roadway to increase roadway
width and stopping sight distance
to 200 ft.

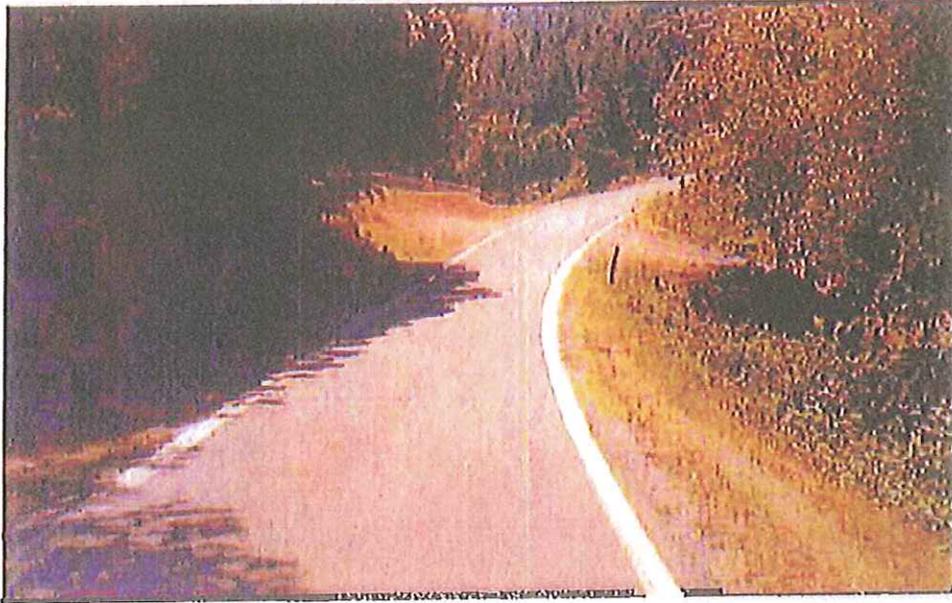
PROJECT ESTIMATED COST

\$140,000 (Construction Only)

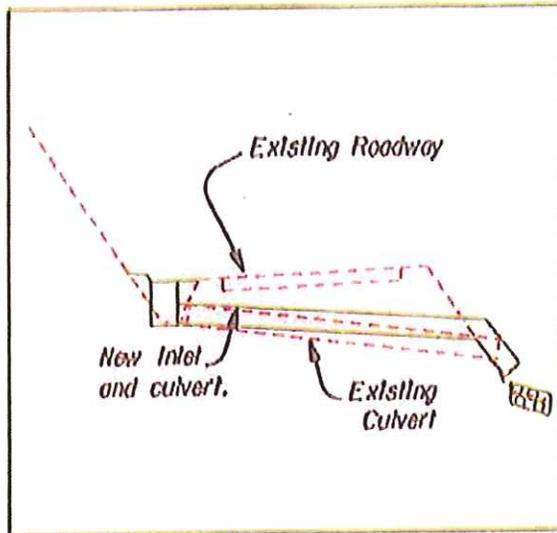
POTENTIAL ENVIRONMENTAL ISSUES

Spotted Owl, Murrelet, Archeological Resources

LOCATION FACT SHEET



Location - PM 14.36



Typical Section

LOCATION IDENTIFIED BY

Tribal Staff based on roadway proximity to Inlet structure.

EXISTING FACILITIES

Paved Width - 12 feet
Recovery Zone - 1-6 feet

SAFETY

Collision History -
TASSAS - 1
Anecdotal - 0
Consequence of error - 2
(1 - Low, 5 - High)

IMPROVEMENTS IDENTIFIED

Description - Replace existing culvert and add traversable Inlet structure.

PROJECT ESTIMATED COST

\$50,000 (Construction Only)

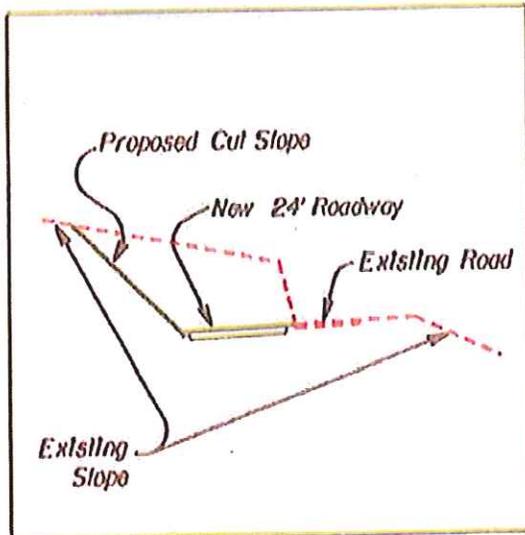
POTENTIAL ENVIRONMENTAL ISSUES

Archeological Resources

LOCATION FACT SHEET



Location - PM 18J0



Typical Section

LOCATION IDENTIFIED BY

Caltrans Staff based on
sight distance.

EXISTING FACILITIES

Paved Width - 14 Feet
Recovery Zone - 2 - 14 feet
Stopping Sight Distance - 104 feet

SAFETY

Collision History -
TASSAS - 0
Anecdotal - 0
Consequence of error - 2
(1 - Low .5 - High)

IMPROVEMENTS IDENTIFIED

Description - Cut back slope on north
side road way to increase roadway
width and stopping sight distance
to 140 ft.

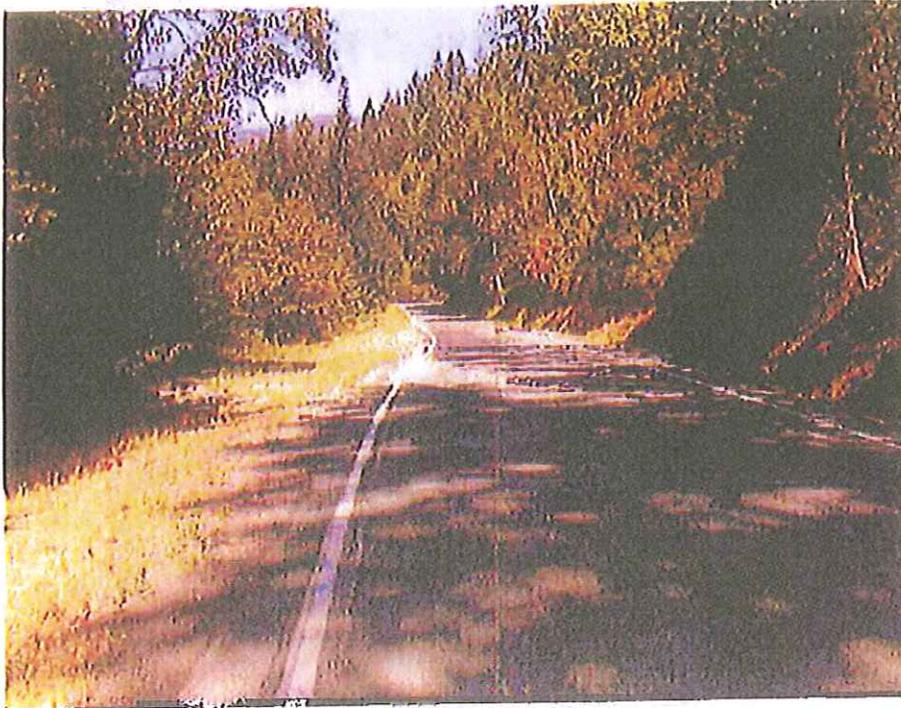
PROJECT ESTIMATED COST

\$350,000 (Construction Only)

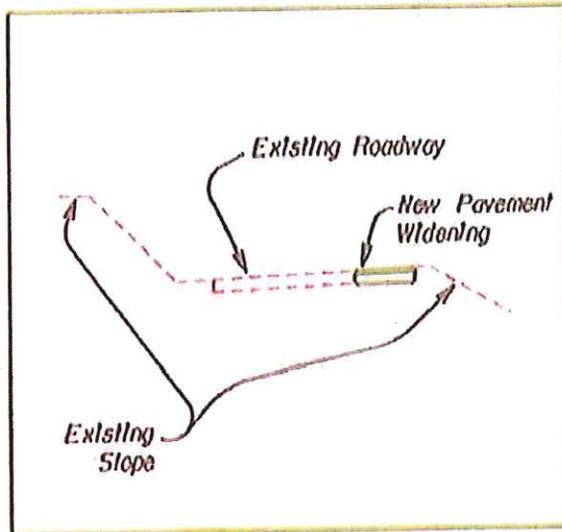
POTENTIAL ENVIRONMENTAL ISSUES

Spotted Owl, Murret, Archeological Resources

LOCATION FACT SHEET



Location - PM 27.79



Typical Section

LOCATION IDENTIFIED BY

Calltrans Staff based on opportunity to widen pavement.

EXISTING FACILITIES

Paved Width - 20 - 22 feet
Recovery Zone - 1 - 16 feet

SAFETY

Collision History -
TASSAS - 0
Anecdotal - 0
Consequence of error - 3
(1 - Low, 5 - High)

IMPROVEMENTS IDENTIFIED

Description - Widen southerly side of roadway 8' to provide a 30' paved width for a distance of 120 feet.

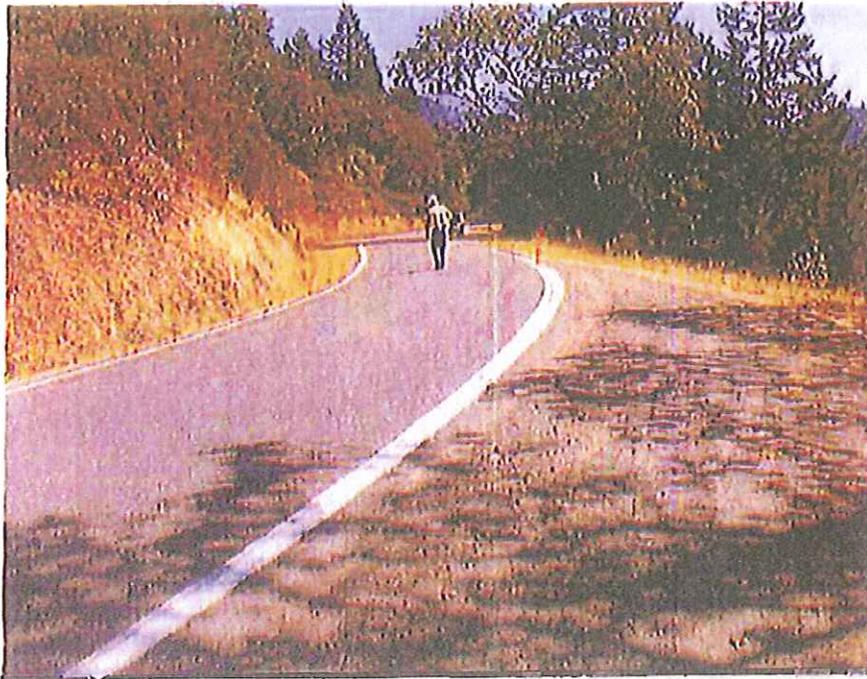
PROJECT ESTIMATED COST

\$30,000 (Construction Only)

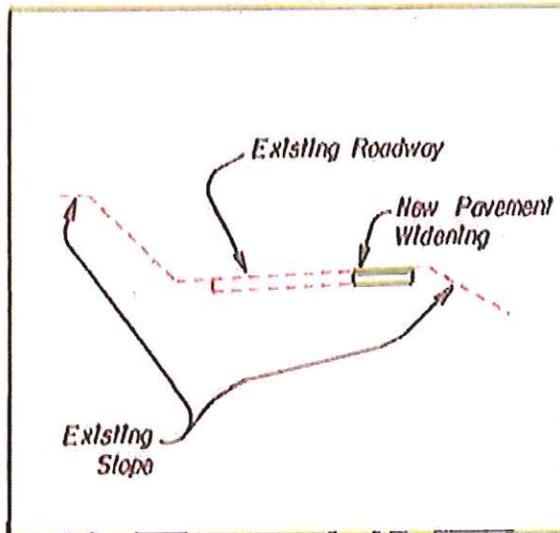
POSSIBLE ENVIRONMENTAL ISSUES

Spotted Owl, Murret, Archeological Resources

LOCATION FACT SHEET



Location - PM 20.78



Typical Section

LOCATION IDENTIFIED BY

Caltrans Staff based on opportunity to widen pavement.

EXISTING FACILITIES

Paved Width - 17- 20 feet
Recovery Zone - 1- 16 feet

SAFETY

Collision History -
TASSAS - 0
Anecdotal - 0
Consequence of error - 2
(1 - Low, .5 - High)

IMPROVEMENTS IDENTIFIED

Description - Widen Southernly side of roadway 4' to 8' to provide a 21' to 28' paved width for a distance of 770 feet.

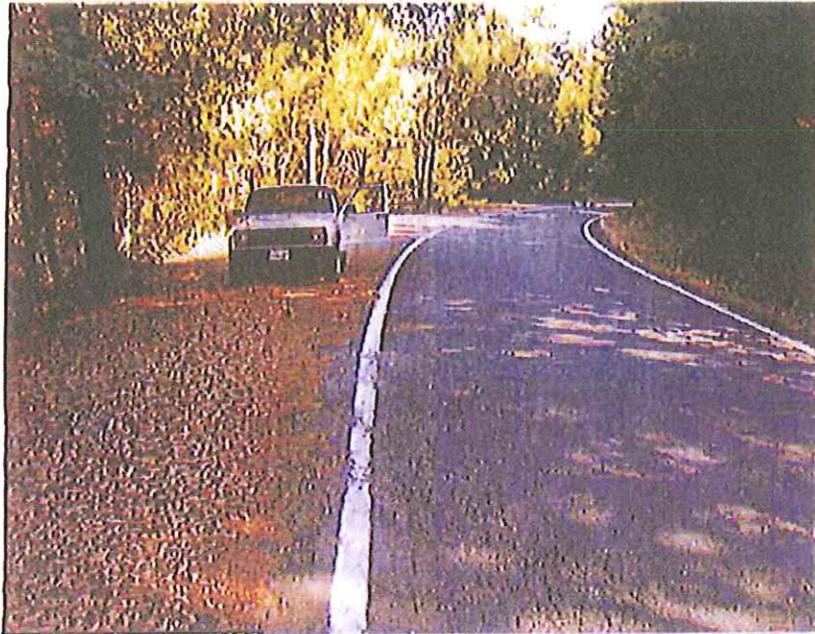
PROJECT ESTIMATED COST

\$40,000 (Construction Only)

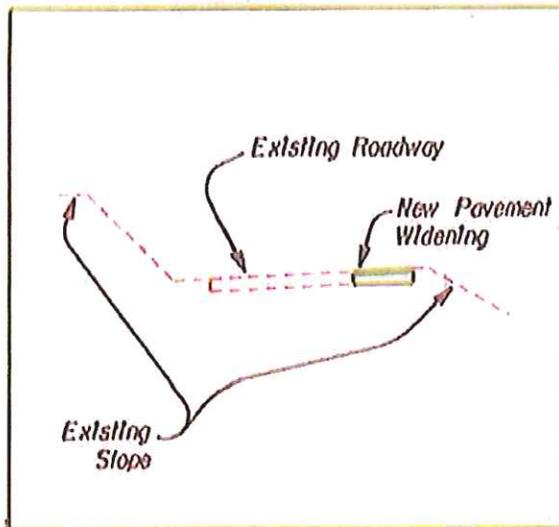
POTENTIAL ENVIRONMENTAL ISSUES

Spotted Owl, Murrelet, Archeological Resources

LOCATION FACT SHEET



Location - PM 18.25



Typical Section

LOCATION IDENTIFIED BY

Caltrans Staff based on opportunity to widen pavement.

EXISTING FACILITIES

Paved Width - 15- 20 feet
Recovery Zone - 1- 16 feet

SAFETY

Collision History -
TASSAS - 0
Anecdotal - 0
Consequence of error - 2
(1 - Low , 5 - High)

IMPROVEMENTS IDENTIFIED

Description - Widen Southernly side of roadway 4' to 15' to provide a 20' to 28' paved width for a distance of 300 feet.

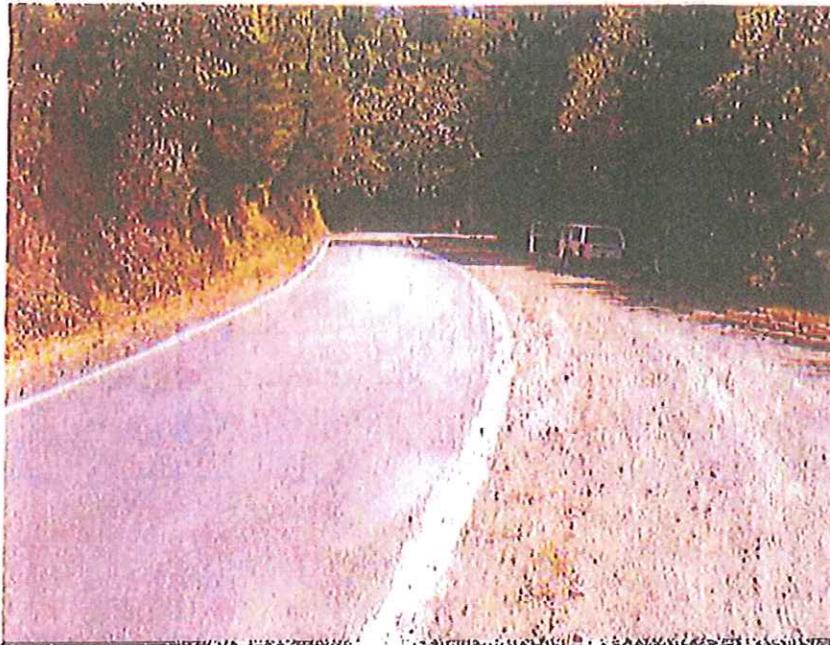
PROJECT ESTIMATED COST

\$30,000 (Construction Only)

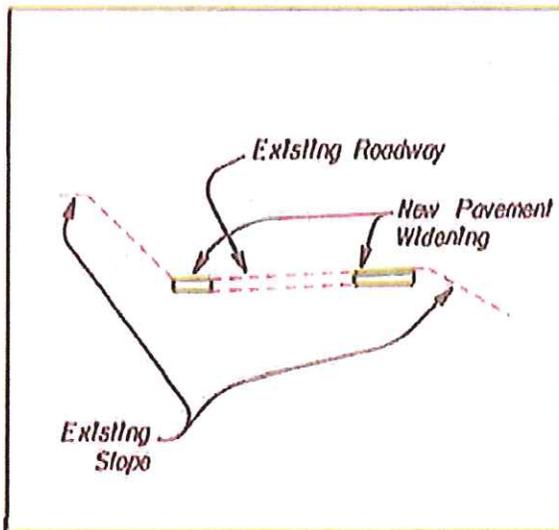
POTENTIAL ENVIRONMENTAL ISSUES

Spotted Owl, Murrelet, Archeological Resources

LOCATION FACT SHEET



Location - PM 15.98



Typical Section

LOCATION IDENTIFIED BY

Caltrans Staff based on opportunity to widen pavement.

EXISTING FACILITIES

Paved Width - 16 feet
Recovery Zone - 1-9 feet

SAFETY

Collision History -
TASSAS - 0
Anecdotal - 0
Consequence of error - 2
(1 - Low, 5 - High)

IMPROVEMENTS IDENTIFIED

Description - Widen Southerly side of roadway 8' to provide a 24' paved width for a distance of 475 feet and widen a 150 foot length on the northerly by 4 to 14 feet.

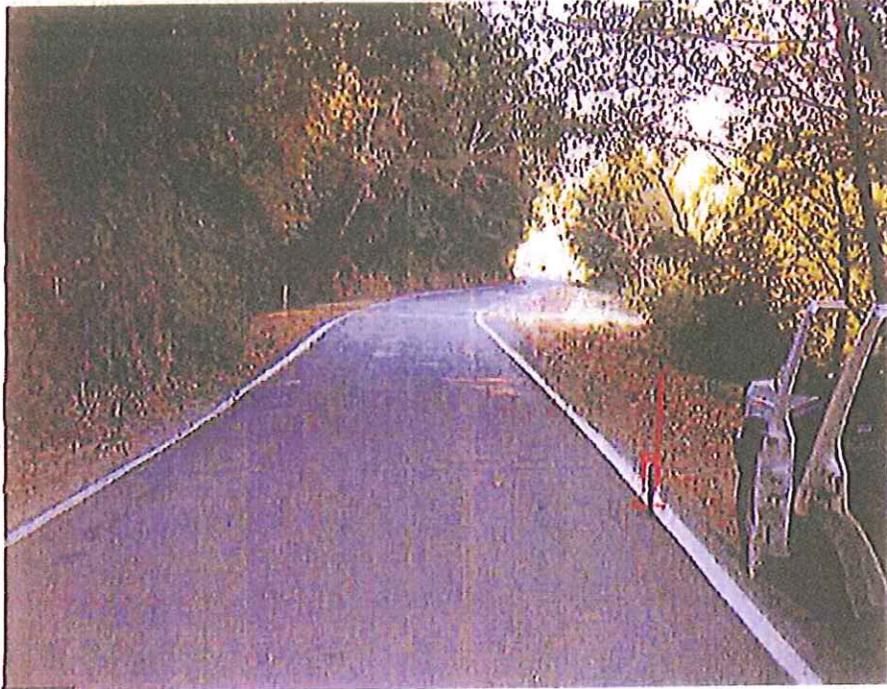
PROJECT ESTIMATED COST

\$40,000 (Construction Only)

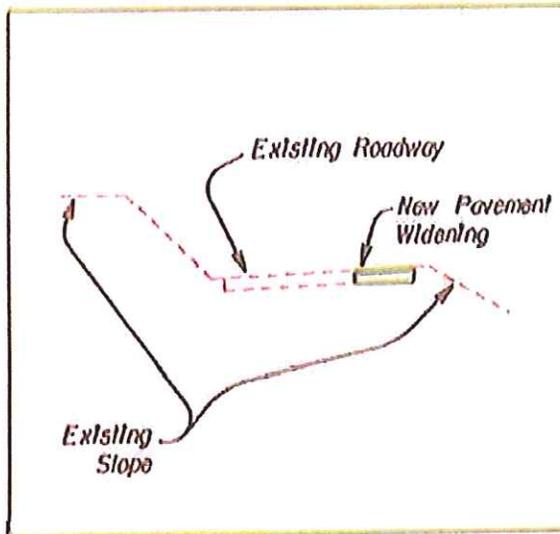
POSSIBLE ENVIRONMENTAL ISSUES

Spotted Owl, Murret, Archeological Resources

LOCATION FACT SHEET



Location - PM 14.81



Typical Section

LOCATION IDENTIFIED BY

Calltrans Staff based on opportunity to widen pavement.

EXISTING FACILITIES

Paved Width - 15 feet
Recovery Zone - 1 - 12 feet

SAFETY

Collision History -
TASSAS - 1
Anecdotal - 0
Consequence of error - 2
(1 - Low, 5 - High)

IMPROVEMENTS IDENTIFIED

Description - Widen Southerly side of roadway 8-9' to provide a 24' paved width for a distance of almost 800 feet.

PROJECT ESTIMATED COST

\$60,000 (Construction Only)

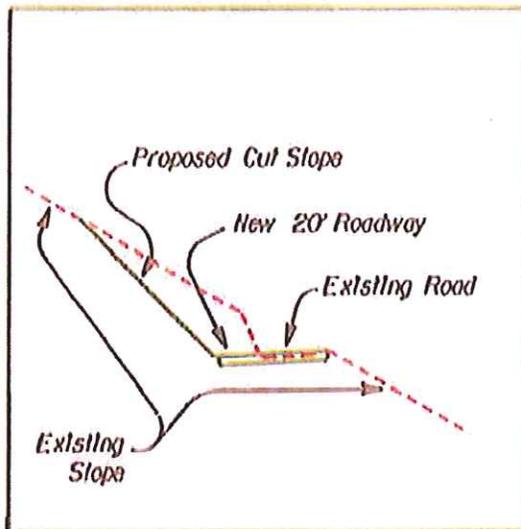
POTENTIAL ENVIRONMENTAL ISSUES

Spotted Owl, Murret, Archeological Resources

LOCATION FACT SHEET



Location - PM 1913



Typical Section

LOCATION IDENTIFIED BY

Caltrans Staff based on sight distance and collision history.

EXISTING FACILITIES

Paved Width - 11 feet
 Recovery Zone - 1 - 4 feet
 Stopping Sight Distance - 135 feet

SAFETY

Collision History -
 TASSAS - 1
 Anecdotal - 0
 Consequence of error - 2
 (1 - Low, 5 - High)

IMPROVEMENTS IDENTIFIED

Description - Cut back slope on north side roadway and widen embankment on south side to increase roadway width and stopping sight distance to 170 ft.

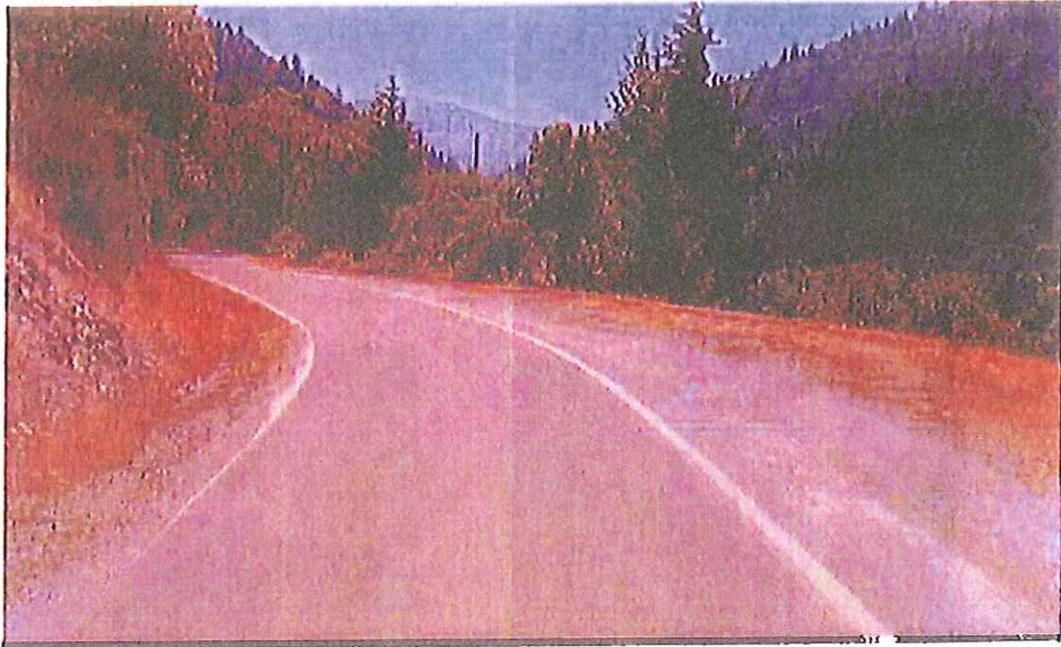
PROJECT ESTIMATED COST

\$250,000 (Construction Only)

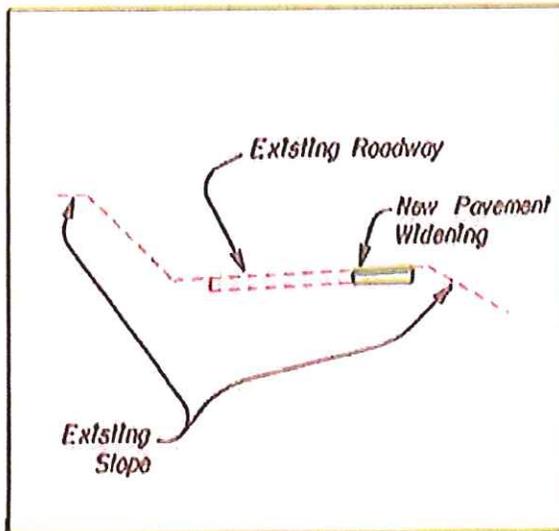
POTENTIAL ENVIRONMENTAL ISSUES

Spotted Owl, Murrelet, Potential Historic Wall

LOCATION FACT SHEET



Location - PM 22.31



Typical Section

LOCATION IDENTIFIED BY

Caltrans Staff based on opportunity to widen pavement.

EXISTING FACILITIES

Paved Width - 13 feet
Recovery Zone - 1 - 20 feet

SAFETY

Collision History -
TASSAS - 0
Anecdotal - 0
Consequence of error - 4
(1 - Low, 5 - High)

IMPROVEMENTS IDENTIFIED

Description - Widen Southernly side of roadway 8' to 18' provide a paved passby of about 200 feet long.

PROJECT ESTIMATED COST

\$30,000 (Construction Only)

POSSIBLE ENVIRONMENTAL ISSUES

Spotted Owl, Murret, Archeological Resources

LOCATION FACT SHEET



Locations - Vegetation Removal For Sight Distance

List of potential sites for vegetation removal. Other sites may be identified during project development.

PM 16.30, PM 16.60,
PM 16.73, PM 19.72,
PM 23.43, PM 29.29
PM 30.31, PM 32.01,
PM 32.69, PM 33.09

LOCATION IDENTIFIED BY

Tribal Representatives, Caltrans staff and public.

IMPROVEMENTS IDENTIFIED

Description - Remove vegetation in areas where corner sight distance could be improved by its absence

PROJECT ESTIMATED COST

\$50,000 (Construction Only)

POTENTIAL ENVIRONMENTAL ISSUES

Archaeological Resources, Fauna



Route



TCR

Appendix C

Funding Sources

Planning Funding Sources

Govt. Level	Fund Name	Cycle	Appx. \$ Range	Purpose	Eligible Applicants	Source	Details
LOCAL	LTF - Local Transportation Fund	Annual	\$3 million to County	Admin., regional trans. Planning, public transit, bike & ped.	See TDA law	1/4 cent sales tax in countywide region	State TDA law governs
	STIP / RTIP - State / Reg. Trans Prog	Funds avail. every other yr, programmed over 5 yrs	\$0-18 million	Capital improvements to State Highway system; local street & road rehab.	RTPA	State & Federal gasoline taxes; State truck weight fees	CTC Allocates to RTPAs
	PPM - Planning, Programming & Monitoring	Annual as programmed in 5-yr. RTIP	Varies, \$0-225,000 to date	Manage Regional Transportation Improvement Program (RTIP), other OWP projects	RTPA	2-5% of RIP funds	CTC Allocates to RTPAs
	RPA - Rural Planning Assistance	Annual	\$185,000	State-mandated transportation planning activities, other OWP planning projects	RTPA	State	CTC Allocates to RTPAs
	STA - State Transit Assistance	Annual	\$150,000	Public transit operating or capital projects	See TDA law	Sales taxes on diesel & gasoline	State TDA law governs
	TE - Transportation Enhancements Program	6 years	\$2 million	Enhancements to surface transportation system beyond any required mitigations (12 eligibility categ	Cities and Counties	TEA21 bill and its replacement transportation bill	RTPAs oversee 75%, CT 25%
	STP d(1) - Surface Transportation Program	Annual	\$250-500K	Discretionary uses; surface transportation improvement projects or maintenance		TEA21, STP Section 182.6 d(1)	
	FTA Section 5310 Senior and/or Disabled Transit	Annual	\$4-70,000 per project	Vehicles, equipment	Senior and/or Disabled Transit Providers	Federal Transit Administration	Competitive Grant Program, requires local match
	FTA Section 5311 Regional Apportionment	Annual	\$100-200K per RTPA	Capital or Operating Assistance	Transit Providers	Federal Transit Administration	Regional
	FTA Section 5311 State Discretionary Reserve	Every 3 years	± \$1.5M per cycle	Capital Assistance	Transit Providers	Federal Transit Administration	TBD
TBD	FTA Section 5311(f) - Inter-City Bus	Annual	\$30-400,000 per project	Capital or Operating Assistance	Transit Providers	Federal Transit Administration	Competitive Grant Program, requires local match
	FTA Section 5313(b) - Statewide Transit Planning Studies	Annual	Up to \$300k per project	Transit Planning Studies (Statewide or multi-regional)	RTPA	Federal Transit Administration	Competitive Grant Program, requires local match
	FTA Section 5313(b) - Transit Technical Planning Assistance	Annual	Up to \$80K per project	Transit Studies in rural areas	RTPA	Federal Transit Administration	Competitive Grant Program, requires local match
	FTA Section 5313(b) - Transit Professionals Development	Annual	Up to \$50K per project	Training & Development of transit professionals and studies	RTPA	Federal Transit Administration	Competitive Grant Program, requires local match
	Community-Based Trans Plng / EJ: Context Sensitive Planning Grants	Annual or 2 years	Up to \$300K per project	Local Transportation planning projects	Public and Private Entities	State Highway Account	Competitive Grant Program, requires local match
	FHWA Partnership Planning	Annual	Up to \$300K per project	Planning studies of multi-regional and Statewide significance	RTPA	Federal Highway Administration	Competitive Grant Program, requires local match



Route



TCR

Appendix D

California Natural Diversity Database (DFG) by USGS Quad

Record	QUADNAME	ELMCODE	SCINAME	COMNAME	FEDSTATL	CALSTATL	DFGSTATL	CNPSSLIST
1	Ah Pah Ridge	AAAAD12050	Plethodon elongatus	Del Norte salamander	None	None	SSC	
2	Ah Pah Ridge	AAAAJ01020	Rhyacotriton variegatus	southern torrent salamander	None	None	SSC	
3	Ah Pah Ridge	ABNKC01010	Pandion haliaetus	osprey	None	None	WL	
4	Ah Pah Ridge	ABNKC10010	Haliaeetus leucocephalus	bald eagle	Delisted	Endangere	FP	
5	Ah Pah Ridge	ABNLC11010	Bonasa umbellus	ruffed grouse	None	None	WL	
6	Ah Pah Ridge	AMAFF23030	Arborimus pomio	Sonoma tree vole	None	None	SSC	
7	Ah Pah Ridge	NLLEC5P420	Usnea longissima	long-beard lichen	None	None		
8	Ah Pah Ridge	PDFAB3Z0D0	Thermopsis robusta	robust false lupine	None	None		1B.2
9	Ah Pah Ridge	PDGRO020V0	Ribes laxiflorum	trailing black currant	None	None		4.3
10	Ah Pah Ridge	PDMAL110E0	Sidalcea malachroides	maple-leaved checkerbloom	None	None		4.2
11	Ah Pah Ridge	PDMON05010	Pityopus californica	California pinefoot	None	None		4.2
12	Ah Pah Ridge	PDSAX0N020	Mitella caulescens	leafy-stemmed mitrewort	None	None		4.2
13	Ah Pah Ridge	PDSAX10031	Tiarella trifoliata var. trifoliata	trifoliata laceflower	None	None		3
14	Ah Pah Ridge	PMORC1N060	Listera cordata	heart-leaved twayblade	None	None		4.2

Record	QUADNAME	ELMCODE	SCINAME	COMNAME	FEDSTATL	CALSTATL	DFGSTATL	CNPSSLIST
1	Johnsons	ABNKC01010	Pandion haliaetus	osprey	None	None	WL	
2	Johnsons	ABNKC10010	Haliaeetus leucocephalus	bald eagle	Delisted	Endangere	FP	
3	Johnsons	AFCHB04010	Thaleichthys pacificus	eulachon	Proposed	None	SSC	
4	Johnsons	PDAST0Q040	Arnica cernua	serpentine arnica	None	None		4.3
5	Johnsons	PDFAB0F990	Astragalus umbraticus	Bald Mountain milk-vetch	None	None		2.3
6	Johnsons	PDFAB3Z0C1	Thermopsis gracilis var. gracilis	slender false lupine	None	None		4.3
7	Johnsons	PDFAB3Z0D0	Thermopsis robusta	robust false lupine	None	None		1B.2
8	Johnsons	PDMON05010	Pityopus californica	California pinefoot	None	None		4.2
9	Johnsons	PDORO01010	Boschniakia hookeri	small groundcone	None	None		2.3
10	Johnsons	PDRAN0A020	Coptis laciniata	Oregon goldthread	None	None		2.2
11	Johnsons	PDSAX0N020	Mitella caulescens	leafy-stemmed mitrewort	None	None		4.2
12	Johnsons	PDSAX10031	Tiarella trifoliata var. trifoliata	trifoliata laceflower	None	None		3
13	Johnsons	PMLILOU0C0	Erythronium oregonum	giant fawn lily	None	None		2.2
14	Johnsons	PMLL1A010	Lilium bolanderi	Bolander's lily	None	None		4.2
15	Johnsons	PMORC1N060	Listera cordata	heart-leaved twayblade	None	None		4.2
16	Johnsons	PMPOA4Y080	Pleuropogon refractus	nodding semaphore grass	None	None		4.2

Record	QUADNAME	ELMCODE	SCINAME	COMNAME	FEDSTATL	CALSTATL	DFGSTATL	CNPSSLIST
1	Weitchpec	AAAAJ01020	Rhyacotriton variegatus	southern torrent salamander	None	None	SSC	
2	Weitchpec	ABNLC11010	Bonasa umbellus	ruffed grouse	None	None	WL	
3	Weitchpec	AFCHA0209D	Oncorhynchus mykiss indeus	steelhead - Klamath Mountair	None	None	SSC	
4	Weitchpec	PDFAB0F990	Astragalus umbraticus	Bald Mountain milk-vetch	None	None		2.3
5	Weitchpec	PDMAL110K9	Sidalcea oregana ssp. eximia	coast sidalcea	None	None		1B.2
6	Weitchpec	PDMON05010	Pityopus californica	California pinefoot	None	None		4.2
7	Weitchpec	PDORO01010	Boschniakia hookeri	small groundcone	None	None		2.3
8	Weitchpec	PMORC0Q060	Cyripedium fasciculatum	clustered lady's-slipper	None	None		4.2
9	Weitchpec	PMORC1N060	Listera cordata	heart-leaved twayblade	None	None		4.2
10	Weitchpec	PMORC1X050	Piperia candida	white-flowered rein orchid	None	None		1B.2