

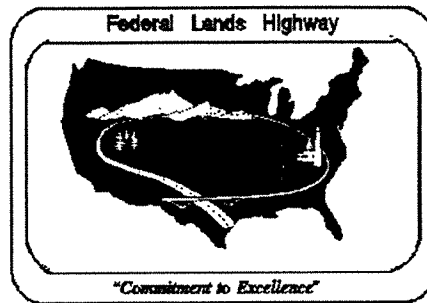
# RECONNAISSANCE AND SCOPING REPORT

CALIFORNIA FOREST HIGHWAY 223

FALLEN LEAF ROAD

LAKE TAHOE BASIN MANAGEMENT UNIT

EL DORADO COUNTY



PREPARED BY:

FEDERAL HIGHWAY ADMINISTRATION

CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DENVER, COLORADO

DRAFT - OCTOBER 13, 1993



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# INTRODUCTION

This Reconnaissance and Scoping Report for California Forest Highway (FH) 233, Fallen Leaf Road, has been prepared as a guide for the Public Lands Highway (PLH) agencies, which includes the U.S. Forest Service (USFS), the California Department of Transportation (Caltrans), and the Federal Highway Administration (FHWA).

Reconnaissance and scoping are accomplished to determine the:

- Condition of the existing highway.
- Purpose and need for improvements.
- Recommended level of improvements.
- Limits of the proposed project.
- Viability of the proposed project.

FH 223 has been tentatively included in the California PLH program for improvements for the past several years. This report should help the PLH agencies determine whether or not the project continues in the program and, if so, when it should be scheduled for improvements. The report also serves as a starting point for project development activities, assuming the project continues in the program.



# FOREST HIGHWAY RECONNAISSANCE REPORT

## ROUTE AND PROJECT INFORMATION

**State:** California.

**County:** El Dorado.

**National Forest:** Lake Tahoe Basin Management Unit.

**Forest Highway Route Number and Name:** FH 223, Fallen Leaf Road.

**Project Location:** The north terminus of FH 223 is located about 0.5 mile west of Camp Richardson, which is located several miles west of South Lake Tahoe. FH 223 begins at SH 89 and extends south to the junction with Forest Development Road (FDR) 12N14, Tahoe Mountain-Angora Ridge Road.

**Project Length:** 2.0 miles.

**System Owner and Maintaining Authority:** El Dorado County.

## PROJECT RECONNAISSANCE AND SCOPING ACTIVITIES

**Purpose of Reconnaissance:** FH 223 was recommended for reconnaissance and scoping at the 1991 California PLH program meeting. An interagency reconnaissance team held a field review July 6, 1992 and an office discussion July 7. The purpose was to objectively evaluate the condition of FH 223 and to make recommendations for improvements.

**Report Objectives and Format:** Prior to the review, generic Forest Highway Reconnaissance Report forms were sent to the cooperating agencies. These forms were filled out by the agencies either prior to the review, at the review, or after the review. The information presented herein is the result of the interagency effort. Items in this report indicated in **bold** represent questions or topics on the report form that required answers or comments by the reconnaissance team. The information supplied by the team is shown in normal weight text.

**Reconnaissance Team:** The following people were present at the July 6 field review and/or the July 7 office discussion: Rich Harris--USFS, Regional Office; Mike Heckendorn and Ken Karkula--USFS, Lake Tahoe Basin Management Unit, Forest Supervisor's Office; Dave Thompson and Tom Halverson--El Dorado County; Bob Munsell, Bill Bird, Larry Klockenteger, and Jerry Stephens--FHWA; Jim Lawrence--Tahoe Regional Planning Agency; Catherine Shoen and John Short--Lahontan Regional Water Quality Control Board. Caltrans did not have representation.

**Primary Contacts:** The following people have been designated as contacts for project development activities subsequent to the reconnaissance and scoping effort:

**USFS FOREST CONTACT:**

Ms. Sara E. Baldwin  
Forest Engineer  
Lake Tahoe Basin Management Unit  
870 Emerald Bay Road, Suite 1  
South Lake Tahoe, CA 96150  
916-573-2600, ext. 675

**EL DORADO COUNTY CONTACT:**

Mr. Dave Thompson  
El Dorado County Department  
of Transportation  
1121 Shakori Drive  
Meyers, CA 96155  
916-573-3180

**USFS REGION CONTACT:**

Mr. Richard Harris  
Transportation Development  
and Operations  
Forest Service, Region 5  
2245 Morello Avenue  
Pleasant Hill, CA 94523  
510-825-9800

**CALTRANS CONTACT:**

Mr. Randy Steen  
Local Streets and Roads  
California Department of  
Transportation  
P.O. Box 942874  
Sacramento, CA 94274-0001  
916-653-4370

**FHWA CONTACT:**

Mr. Rick West  
Design Project Manager  
Central Federal Lands  
Highway Division  
Federal Highway Administration  
P.O. Box 25246  
Lakewood, CO 80225  
303-969-5914

**ROUTE INFORMATION**

**Functional Classification:** Rural collector.

**Preliminary Traffic Data:** The USFS estimates the current average daily traffic to be 975. A detailed traffic survey, monitored by the USFS, is ongoing. This study should accurately depict current traffic at several key points throughout the project. The results are expected by late 1993.

**Accident History:** Six motor vehicle accidents, one involving injuries, were recorded from 1989 through 1991. No areas of accident concentration are evident.

**Travel Speed:** There is no posted speed limit. Several curves have 25 mph advisory speeds.



**Elevation:** The route rises from an elevation of 6,274 at the north end to 6,502 at the south end of the project.

**Connecting Roads:** Note: Milepost (MP) 0.0 is at SH 89, at the north end of the project.

<u>Milepost</u>	<u>Direction</u>	<u>Connecting Road Description</u>
0.15	Right	FDR 13N10, Fallen Leaf Campground access.
0.35	Right	Campground access.
0.40	Right	Campground access.
0.5	Right	FDR 13N10, Fallen Leaf Campground, main entrance.
0.6	Left	FDR 13N81, minor approach road.
0.8	Left	FDR 12N03Y, back road to Tahoe Mountain Group Campground.
1.2	Right	Lake access road.
1.3	Right	FDR 12N12Y, lake access road.
2.0	Left	FDR 12N14, Tahoe Mountain-Angora Ridge Road.
2.0	Right	Continuation of Fallen Leaf Road (not designated as FH 223).

**Winter Maintenance:** The highway is snowplowed in the winter.

## EVALUATION OF THE EXISTING HIGHWAY

**Type of Surfacing, Dimensions, and Condition:** The asphalt pavement throughout the 2.0 miles is in poor condition. It is severely cracked and potholed, is ravelled at the edges, and has poorly defined template (normal crown and superelevation) attributes. The surface varies in width from about 18 feet for the first 0.5 mile to 14 to 18 feet for the southerly 1.5 miles.

**Horizontal Alignment Problems:** No major problem areas are evident--only minor inconsistencies.

**Vertical Alignment Problems:** In many areas, the roadway is at or below the grade of the adjacent ground, preventing effective roadway and roadside drainage.

**Operational Problems:** The entire route has operational problems, but the southerly 1.5 miles is especially inadequate because of the narrowness of the road. This is barely a two-lane section, and vehicles must utilize intermittent wide spots in the road to facilitate two-way travel.

**Intersection Problems:** FH 223 begins at a four-legged intersection with SH 89. This intersection has operational and potential safety problems. FH 223 traverses to the south of the intersection; access to Kiva Beach is to the north. Sight distance to the west on SH 89 is somewhat limited due to a slight crest. Also, a second intersection, a few hundred feet west of the main intersection, exists and causes operational problems for both intersections. This second intersection serves the USFS Visitors Center north of SH 89. Neither intersection has auxiliary turning lanes.

**Maintenance Problems:** Throughout the route:

- Drainage problems, i.e., inadequate cross drains, inadequate ditch capacity, and subsurface water.
- Breakup, potholing, and edge ravelling of the asphalt pavement, as a result of inadequate structural capacity and a narrow pavement width.
- Difficulty with snowplowing.
- Trees immediately adjacent to the roadway edge.

**Bridges and Large Culverts (type, size and condition):** None.

**Rights-of-Way Widths:** El Dorado County has a 40-foot right-of-way (20 feet each side of centerline) through private property from MP 1.85 to MP 2.0. From MP 0.0 to MP 1.85 it is assumed the county has prescriptive rights (maintained edge-of-road to edge-of-road). Except for a few hundred feet, this 1.85-mile section crosses USFS land. A small portion around MP 1.2 to MP 1.3 appears to cross or border private land.

**Fences:** There is a post-and-pole fence at the Fallen Leaf Campground entrance. A barbed-wire fence exists on the right between MP 1.1 and MP 1.2. There is a gate at MP 1.9 that can be used to temporarily close Fallen Leaf Road.

**Soils, Materials, and Slope Stability:** Major materials and slope stability problems for the route are not evident. The soils appear to have reasonably good soil support values.

## PURPOSE AND NEED FOR IMPROVEMENTS

Describe the primary need for improvement of this route (project), i.e., forest resource management, capacity, safety, structural deficiency, travel corridor demand, system continuity, economic need, etc.: FH 223 functions as a rural collector highway and provides access to over 15,000 acres of national forest and private lands, Fallen Leaf Lake, the Angora Lakes, the Desolation Wilderness, five USFS summer home tracts, the 206-site Fallen Leaf Campground, two smaller campgrounds near Lily Lake, several trailheads, two lodges, and numerous private homes.

The highway is nearing the end of its serviceable life. Due to traffic, age, and poor drainage, the existing pavement is rapidly deteriorating. The surfaced width is too narrow, which contributes to pavement failure at the roadway edge. Basic roadway geometry (roadway crown, superelevation, etc.) is generally not acceptable. Several horizontal and/or vertical inconsistencies exist. The narrow 14- to 18-foot paved width does not allow the efficient flow of traffic. A diverse mix of traffic (passenger cars, pickups with campers, recreational vehicles, service trucks, bicycles, and pedestrians) is present, resulting in numerous traffic conflicts. Because the highway has reached a point of obsolescence, safety, operational, and maintenance problems are becoming much more evident and difficult to deal with.

The present road is not adequate for current traffic. Without improvements, the highway cannot satisfy future traffic demands, USFS land and resource management objectives, and El Dorado County maintenance capabilities.

**Describe secondary needs for improvement of this route (project):** FH 223 is an important administrative route for the USFS, linking much of the southern part of the Lake Tahoe Basin Management Unit with the Supervisor's Office in South Lake Tahoe.

Improvements to FH 223 would provide an opportunity to implement USFS Best Management Practices (BMPs) in the highway corridor and the Fallen Leaf Management Area.

**Current and potential resource development influenced by the improvement of this route (project):** The USFS plans to utilize FH 223 to haul salvage timber that has resulted from recent pine-bark beetle infestations. It is anticipated that approximately 25 million-board-feet of timber will be hauled over the highway within the next ten years. An improved FH 223 would be required to better facilitate this operation.

**Current and potential recreation development influenced by the improvement of the route (project):** FH 223 provides access to one of the largest and most heavily used recreation areas in the Lake Tahoe area. Improvement of the road would sustain existing recreational activities. Additional recreational opportunities may result from the construction of the Fallen Leaf Trailhead and parking area, near Fallen Leaf Campground, and the construction of a winter-use parking area near SH 89. These improvements are not expected to significantly increase recreational visitation but would redirect use away from the south end of Fallen Leaf Lake.

A section of the Pope-Baldwin Bike Trail (a National Recreation Trail) is scheduled for construction in the near future. The trail will cross FH 223 somewhere near the north end of the highway. An opportunity exists to tie bicycle use in the Fallen Leaf area, particularly in or near Fallen Leaf Campground, into this bike trail system.

**Forest management requirements influenced by the improvement of this route (project):** The project would be in conformance with the Lake Tahoe Basin Management Unit--Land and Resource Management Plan (Forest Plan).

## REGULATORY PROJECT SELECTION CRITERIA

How would the improvement of this route (project) aid in the development, utilization, protection, and administration of the national forest system (NFS) and its renewable resources? The project would engender improved use, protection, and administration of the national forest and existing developments and would facilitate better access into this well established and very popular recreation area.

How would the improvement of this route (project) aid in the enhancement of economic development at the local, regional, and national level? It is not anticipated that this project would enhance further economic development of the area. The project would sustain existing development.

How would the improvement of this route (project) aid in the continuity of the transportation network serving the NFS and its dependent communities? The project would perpetuate and enhance the existing system. Better access to Angora Ridge and the Desolation Wilderness would result.

How would the improvement of this route (project) aid in the mobility of the transportation network and the goods and services provided? The project would provide a safer, easier access for the delivery of goods and services. It would increase the mobility of recreation users, summer home permittees, and private land and home owners in the area.

How would the improvement of this route (project) aid in the improvement of the transportation network for economy of operation and maintenance and the safety of its users? Improvement of the highway would enrich the safety and enjoyment of the driving experience for recreationists, tourists, forest visitors, and local residents. County road maintenance costs would be significantly reduced.

How would the improvement of this route (project) aid in the protection and enhancement of the rural environment associated with the NFS and its renewable resources? The project would enable the USFS to protect the existing rural environment of the area. In several areas, environmental degradation is occurring along the existing road. The project would expedite the correction or mitigation of many of these problems.

## SOCIAL AND ECONOMIC CONSIDERATIONS

**Public requests for the route (project):** There is public support for the project but also public opposition. Many Fallen Leaf Lake residents see the project as threatening their privacy. They also feel the project would encourage greater public access to the south end of Fallen Leaf Lake, an area that is already heavily congested.

Very likely the majority of the Angora Highlands residents would perceive the project as beneficial if better access could be provided to Angora Ridge, access that would divert traffic from roads and streets through their subdivision. Suggestions have come from Angora Highlands to expand the scope of the project

to include a section of FDR 12N14, Tahoe Mountain-Angora Ridge Road. This road is currently not designated as part of the forest highway but could be added.

A great deal of public scrutiny should be expected. A considerable amount of time and effort by the involved agencies would be necessary to ensure the public's concerns are properly addressed and, whenever possible, incorporated into the plans for the improvement of FH 223. Public involvement meetings would be essential for providing a positive interchange of ideas between the public and the PLH agencies. The most opportune time for these meetings would be in the summer, when most of the seasonal residents and forest visitors are in the project area.

**Political requests for the route (project):** El Dorado County has expressed a great deal of interest in the project. A joint Forest Highway Project Proposal was prepared and endorsed in 1990 by the county, Caltrans, and the USFS (see Appendix C).

**Economic impact as a result of the improvement of the route (project):** There may be economic benefits to the two lodges in the project area. Timber haul costs would be reduced.

**Potential public and private development as a result of the improvement of the route (project):** No additional private development is expected as a result of this project. The only public development would be the addition of several parking areas and trailheads to meet current and anticipated future demands and to better distribute recreation usage of Fallen Leaf Lake.

## ENVIRONMENTAL CONSIDERATIONS

**Involvement with Cultural Resources:** A cultural resource survey is needed before cultural resource involvement is known.

**Involvement with Wetlands and Riparian Areas:** The project does not cross any major drainages. However, involvement with wetlands and riparian areas is likely near MP 1.3, where there is a large meadow on the west side of the existing road.

**Involvement with Water Quality:** Not known at this time. The project is in a stream influence zone, as defined by the Tahoe Regional Planning Agency.

**Involvement with Air Quality:** FH 223 lies within the Lake Tahoe air quality basin. The basin is classified as a moderate-1 carbon monoxide non-attainment area ( $\geq 9.1 \leq 12.7$  ppm). The proposed project does not add lanes (capacity) but would need to be included in the Federal Statewide Transportation Improvement Plan (FSTIP) if improvements are made.

**Involvement with threatened and/or endangered species:** The project is close to, if not within, a bald eagle nesting habitat area. A thorough wildlife and biological review needs to be accomplished to determine if there are other involved plant and animal species.

**Involvement with hazardous waste:** None known.

**Involvement with Section 4(f) and Section 6(f) recreation and historic lands:**  
No involvement is known.

**Names, addresses, and telephone numbers of the potential cooperating agencies:**

**General Resource Information:** Lake Tahoe Basin Management Unit  
Forest Supervisor's Office  
870 Emerald Bay Road  
South Lake Tahoe, CA 96158  
916-573-2600

**Water Quality:** Mr. John Short  
Lahontan Regional Water  
Quality Control Board  
2092 Lake Tahoe Boulevard  
South Lake Tahoe, CA 96158  
916-544-3481

**Air Quality, Noise, and Land Use:** Mr. Jim Lawrence  
Tahoe Regional Planning Agency  
P.O. Box 1038  
Zephyr Cove, NV 89448  
702-588-4547

**Wildlife: and Fisheries:** Mr. Daniel Hinz  
Associate Wildlife Biologist  
California Department of Fish and Game  
1701 Nimbus Road, Suite A  
Rancho Cordova, CA 95670  
916-355-7010

Mr. Gail C. Kobetich  
Field Supervisor  
U.S. Fish and Wildlife Service  
2800 Cottage Way, Room E-1823  
Sacramento, CA 95826-1843  
Attention: Ms. Peggy Kohl  
916-978-4866

**Wetlands:** Mr. Tom Coe  
Chief Unit One  
U.S. Army, Corps of Engineers  
650 Capitol Mall, Room, 6540  
Sacramento, CA 95841  
Attention: Ms. Karen Schaffer  
916-557-5100

## OTHER CONSIDERATIONS

Land Ownership (miles): USFS: 1.85 miles. Private: 0.15 mile.

Approximate Number of Private Parcels: 1 (parcel number 021-241-011)

Right-of-Way Acquisition By: El Dorado County.

Utility No. 1: Sierra Pacific  
933 Elosie Street  
South Lake Tahoe, CA 96158  
916-541-2040

Utility No. 2: South Tahoe Public Utility District  
1275 Meadow Crest Avenue  
South Lake Tahoe, CA 96158  
916-544-6474

Utility No. 3: Pacific Bell  
1-800-642-2444 (Cable Locator)

Utility Adjustment By: El Dorado County.

**Probable Permits:** Grading permit--Tahoe Regional Planning Agency; National Pollution Discharge Elimination Permit--Lahontan Regional Water Quality Control Board; Section 404 Permit--Corps of Engineers. Highway encroachment permit--Caltrans.

**Potential Aggregate and Borrow Sources and Waste Areas:** All borrow material, aggregate, or other rock sources are located out of the Lake Tahoe Basin. Possible suppliers are: Bings Material (702-265-3641) in Minden, Nevada; or Teichert Aggregates (916-587-3811) in Truckee, California.

Possible asphalt sources include: Teichert Aggregate; or Tahoe Asphalt in South Lake Tahoe, California (916-541-0133).

Disposal of waste materials must be done outside of the basin; however, there is a refuse company in the area, South Tahoe Refuse Company (916-541-5105).

**Surveying and Mapping:** Aerial surveying and mapping techniques should be utilized for the project. Because of the fairly heavy tree and brush cover, a significant amount of ground survey supplementation would be required. The existing roadway template (edges of road, ditch line, top of cut or fill, etc.) should be accurately defined. This would also be of benefit in evaluating existing land use and proposed land capability criteria.

## RECOMMENDED IMPROVEMENTS

**Recommended Construction Type:** Reconstruction.

**Recommended Design Criteria:** Based on the preliminary (and limited) data available, the topographic and environmental conditions present, and the stringent restrictions expected in the Lake Tahoe Basin, the following design criteria are recommended:

- Design speed: 25 to 30 mph.
- Maximum gradient: 8 percent.
- Lane width: 11 feet, with applicable curve widening.
- Shoulder width: 1 to 2 feet.
- Surfacing width: 24 to 26 feet, with applicable curve widening.
- Surfacing type: Asphalt pavement.
- Surfacing foreslope ratio: 4:1.

Except for the shoulder width, the recommendations meet the guidelines set forth by the American Association of State Highway and Transportation Officials (AASHTO) Policy on Geometric Design of Highways and Streets. The minimum AASHTO shoulder width for a collector highway with a design hourly volume (DHV) greater than 100 is six feet. It is anticipated that the present DHV is in excess of 100. A design exception to the AASHTO guideline must be demonstrated and justified if a shoulder width less than six feet is selected. Final design criteria may be different than the above recommendations but cannot be selected until later. Before final design criteria are determined, the following items must be considered:

- Design traffic volumes and composition of traffic.
- Accident information.
- Purpose and need for the proposed improvement.
- Public input and the desires of the public,
- The desires of the cooperating agencies.
- Scenic roadway values.
- The significance of pedestrian and bicycle traffic.
- Environmental considerations.
- Construction and maintenance costs.



During project development, it is recommended that two roadway width alternatives be studied to determine pro and cons and relative impacts. These should include:

- 11-foot travel lanes plus 1-foot shoulders (24-foot surface width, plus applicable curve widening).
- 11-foot travel lanes plus 2-foot shoulders (26-foot surface width, plus applicable curve widening).

**Alternatives for Improvements:** Several alternatives exist for the improvement of FH 223. The following should be considered:

- Reconstruct the entire 2.0-mile length of FH 223 from SH 89 to FDR 12N14, Tahoe Mountain-Angora Ridge Road.
- Reconstruct only the first 0.5-mile portion from SH 89 to FDR 13N10, the main entrance to Fallen Leaf Campground.
- Reconstruct only the first 0.7 to 1.3-mile portion from SH 89 to a point where the Fallen Leaf Trailhead parking area would be located.
- Reconstruct the 2.0-mile length plus the first 0.4-mile portion of FDR 12N14 leading to Angora Ridge. This alternative would also include the reconfiguration of two intersections, one involving the road continuing to the south end of Fallen Leaf Lake; the other involving the road continuing to the Angora Highlands subdivision in South Lake Tahoe. With these reconfigurations, the main flow of traffic would be from FH 223 to FDR 12N14 to Angora Ridge. Right angle turns would be required from FH 223 or FDR 12N14 to proceed towards the south end of the lake or to Angora Highlands. Details of the possible intersection reconfigurations are shown in Appendix A.
- Reconstruct the first 0.5- to 1.3-mile portion; leave the next 0.7- to 1.5-mile portion in its present condition; and reconfigure the aforementioned intersections.

Other improvement possibilities are likely to be suggested during the public involvement and project development process. These may include radical departures from the existing roadway system, or they may include nuances to the above alternatives.

**Design Considerations:** The route should be designed with forest visitors and local residents in mind and should be as unobtrusive as possible. A key issue with the public, the USFS, and the various resource agencies is that improvements minimize the width of construction activities. It is suggested that the highway implement special means to ensure that a high quality, low impact, safe, functional, and visually stimulating product results.

The highway should be designed to minimize, as much as possible, the resulting "footprint." Ditches should be no wider than is necessary for hydraulic

considerations. Cut and fill slopes should be steepened, commensurate with good roadside safety requirements, esthetics, slope stability considerations, and revegetation requirements. Cut slope rounding should be held to a width which provides a reasonable transition from new cut slopes to natural terrain and prevents the development of root overhang. The clearing of trees and brush should be no wider than is required for constructing and maintaining the highway.

The use of concrete curb and gutter with culvert drop inlets and a storm sewer system should be considered for portions of the project, particularly the first 0.7 mile, where the terrain is very flat. This curb-and-gutter section would accomplish several objectives: 1) Positive drainage control measures could be implemented. 2) A well defined edge of roadway would result. 3) Driving and/or parking off the paved surface would be deterred.

In lieu of, or perhaps to supplement the use of concrete curb and gutter would be a roadway section utilizing asphalt paved ditches, concrete dikes, and culvert drop inlets. This may be applicable for sections of the south portion of the project, where a sidehill location predominates. Other sections of the project should utilize a "conventional" typical section incorporating graded ditches. Typical cross-section details are presented in Appendix D.

The existing curvilinear alignment should be retained with improvements made to the horizontal and vertical alignments for safety, operational, and esthetic purposes only. It is anticipated that most of the present roadway would be incorporated within the limits of the proposed roadway reconstruction.

Special care and innovative design should be exercised to avoid wetland/riparian encroachment. If avoidance of some of these areas is not possible, proper mitigation measures must be taken.

**Land Capability Criteria:** Provisions for reconstructing FH 223 must be reviewed by the Tahoe Regional Planning Agency to ensure that land capability criteria have been met. Close coordination with this agency would be required during project development.

**Water Quality Control:** Close coordination must be maintained with the Lahontan Regional Water Quality Control Board to ensure conformance with policy and regulations concerning water discharge from the project area. Sediment basins, erosion control devices, and other water quality control measures most likely would be required.

**Guardrail:** Very little, if any, guardrail appears to be warranted. If guardrail is used, it should be included only where absolutely necessary, i.e., in areas where potential run-off-the-road accidents is high and where serious injury would result.

**Bikeway:** Current and projected bicycle and pedestrian usage in the project area should be determined. If warranted, an independent 8-foot wide bikeway should be considered for portions of the project. It is possible that a bikeway may be beneficial in the Fallen Leaf Campground area, connecting to the proposed Baldwin-Pope Bike Trail, the USFS Visitors Center, and the shoreline of Lake Tahoe. Other portions of the project may also have bikeway considerations

because of the narrow 1- to 2-foot recommended shoulder width. An alternative to an independent bikeway, of course, would be to provide 4-foot shoulders.

**Parking Areas:** Parking areas at the Fallen Leaf Trailhead and the winter-use facility near SH 89 may be included under this project. Funding should be determined by the PLH agencies--either PLH or USFS capital improvement funds. The USFS has not finalized the location or design of the parking areas but will during the project development process. Provisions may be necessary for an equestrian crossing at or near the Fallen Leaf Trailhead.

**Right-of-Way:** A small amount of additional right-of-way in the private land area would be required for reconstruction. The county has a narrow 40-foot right-of-way, but this is too narrow for reconstruction.

**Intersection With SH 89:** Significant improvements should be considered at this intersection, including:

- The addition of right and left turn lanes on SH 89.
- The lowering of the profile several feet on SH 89 west of the intersection to improve sight distance over the existing crest.
- The elimination of the intersection on SH 89 to the USFS Visitors Center. The road to the Visitors Center should be realigned so that it intersects the road leading to Kiva Beach, not SH 89.

Improvements to this intersection should be closely coordinated with Caltrans. It is not known if Caltrans has plans in the near future for improvements on SH 89. The intersection work could be included under a Caltrans initiative or with the proposed work on FH 223.

**Metric Units:** The Federal Government is mandated to design and construct all projects in metric units in 1996 and beyond. When developed, this project would use metric units. To avoid confusion, "soft conversions" from English to metric units have not been used in this report. A few representative equivalents applicable to the project are:

English Units	Metric Units
1 mile	1.6 km
25 to 35 mph	40 to 55 km/h
11 feet	3.30 m
1 to 2 feet	0.30 to 0.60 m
24 to 26 feet	7.30 to 7.90 m

**Construction Estimate (class "C"):** The estimated cost, in 1993 dollars, for reconstructing the 2.0 miles is \$2,500,000. This includes the construction cost only and does not include preliminary engineering, right-of-way acquisition, utility adjustment or relocation, or construction engineering costs.

## VIABILITY OF THE PROJECT

**Project Viability:** The existing highway is inadequate for current and future traffic demands. There is a strong purpose and need for improvement of FH 223, and the reconstruction of FH 223 to an acceptable standard would seem to be desirable. There appears to be a good level of support by the cooperating agencies.

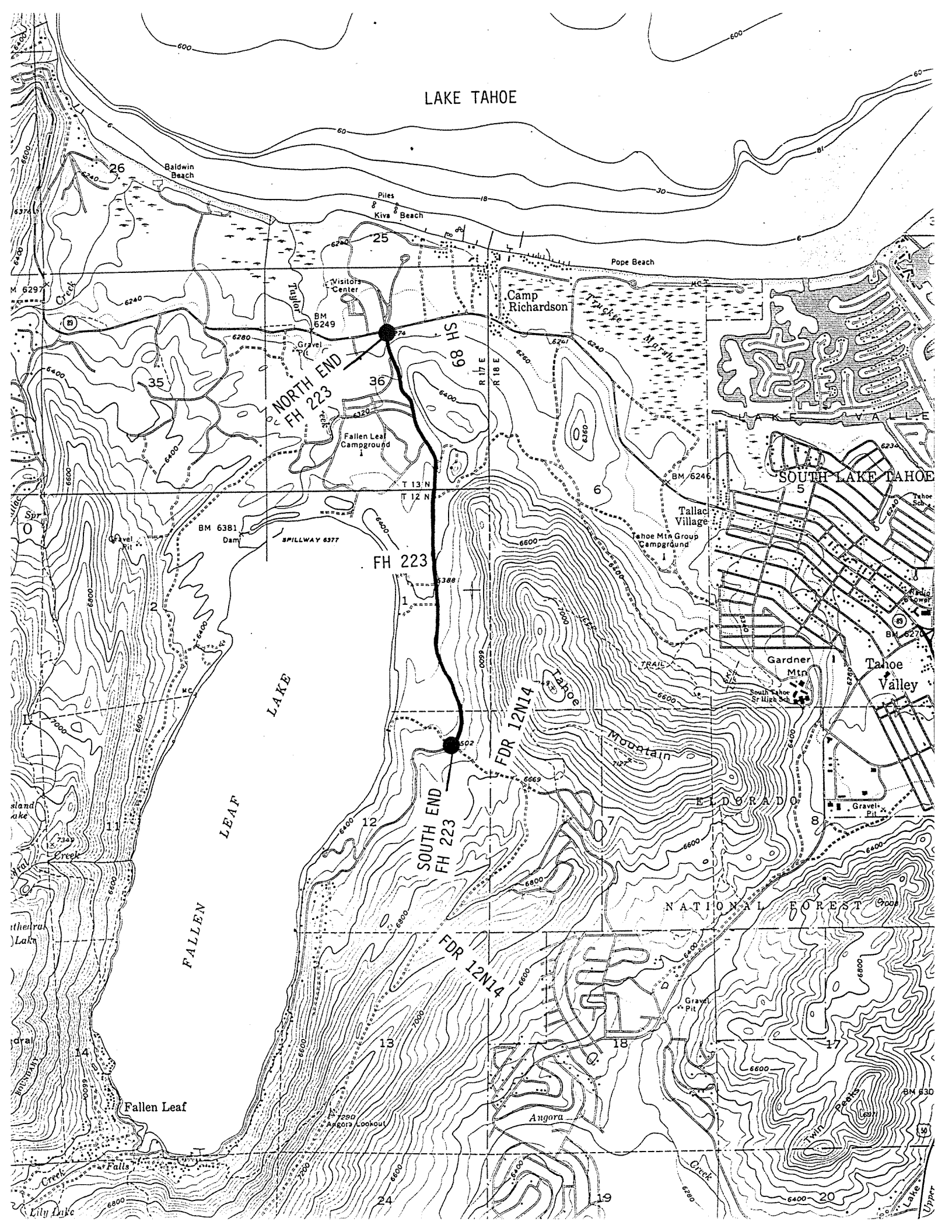
FH 223 has been tentatively included in the California PLH program for the past several years. The PLH agencies should further consider the route and should validate whether or not it continues in the program and, if so, what year it should be scheduled for improvements.

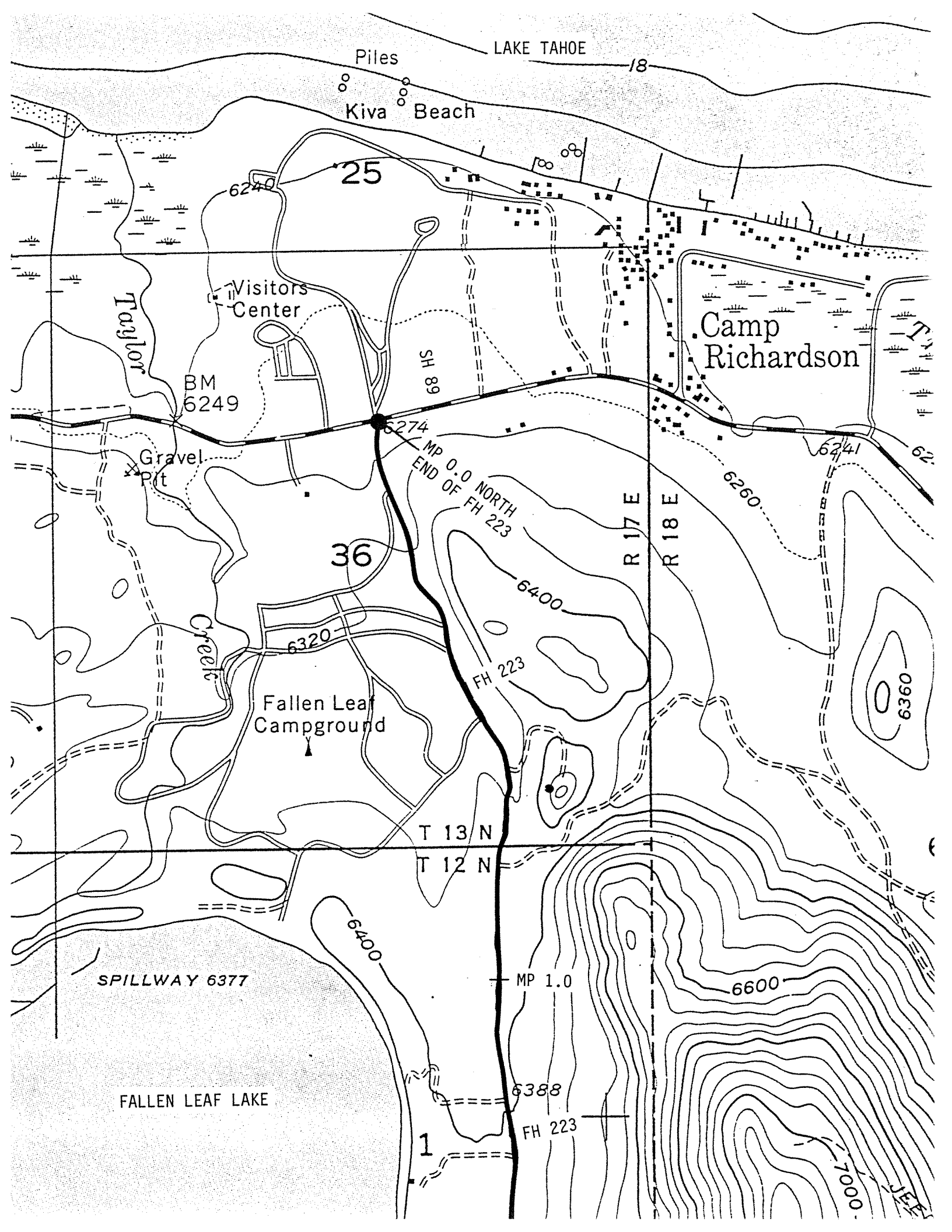
**Project Development Schedule:** A minimum of four years would be required to develop a project for reconstruction.

APPENDIX A  
ROUTE MAPS

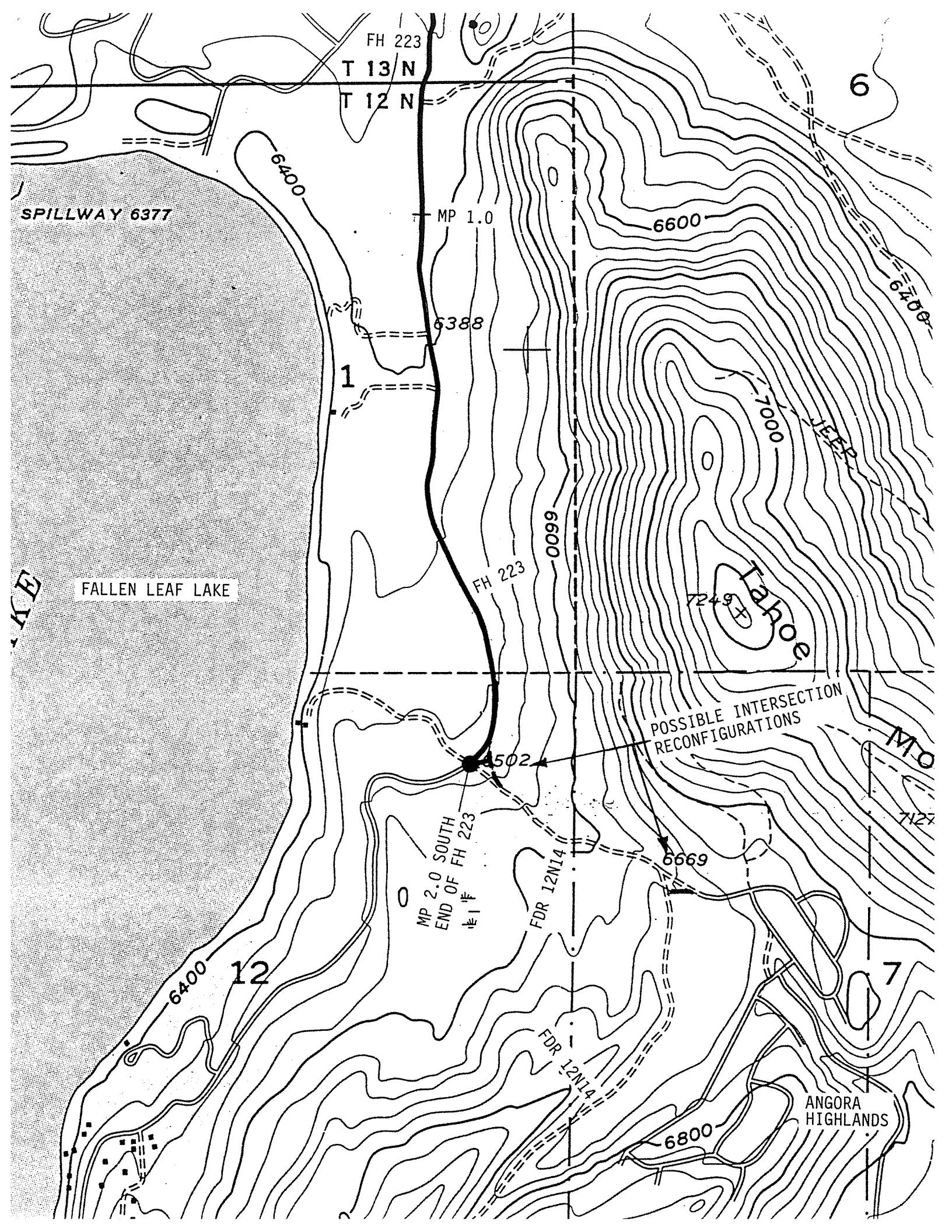


LAKE TAHOE











APPENDIX C  
FOREST HIGHWAY NOMINATION  
AND PROPOSAL





UNITED STATES  
DEPARTMENT OF  
AGRICULTURE

FOREST  
SERVICE

PACIFIC  
SOUTHWEST  
REGION

REGIONAL OFFICE  
630 SANSOME STREET  
SAN FRANCISCO, CA 94111

REPLY TO: 7740

DATE: APR 15 1991

Mr. Jerry L. Budwig, Division Engineer  
Federal Highway Administration  
Central Federal Lands Highway Division  
P. O. Box 25246  
Denver, CO 80225

Reference HPC-16, letter dated February 22


Dear Mr. Budwig:

We wish to nominate Fallen Leaf Road for designation as a Forest Highway pursuant to 23 CFR, Part 660.105. This route is located in El Dorado County on National Forest lands under the administration of the Lake Tahoe Basin Management Unit. The route begins at State Highway 89 (T12N, R17E, Sec. 36) and traverses westerly a distance of two miles to Tahoe Mountain Road (T12N, R17E, Sec. 12).

This project was one of the candidates viewed on May 24, 1990, during the annual Forest Highway tour and is discussed in your letter of February 22 on page 4. The nomination is also supported by Caltrans.

The Forest Highway Project Proposal is enclosed and provides additional detailed information.

Sincerely

  
RICHARD G. DELEISSEGUES  
Director, Engineering

Enclosure



Caring for the Land and Serving People

FS-6200-28 (7-82)

DEPARTMENT OF TRANSPORTATION  
District 3  
P.O. Box 911  
Marysville, CA 95901  
TDD Telephone 916-741-4509  
Telephone 916-671-2905

June 18, 1990

03 - General  
Local Sts. & Rds.  
Forest Highway  
Proposal

U. S. Forest Service  
Lake Tahoe Basin  
Management Unit  
Attention Mr. Michael Heckendorn  
P. O. Box 731002  
South Lake Tahoe, CA 95731

Dear Sir:

As per your request of June 11, 1990, attached is your fully executed Forest Highway Proposal for Fallen Leaf Lake Road. We have also attached a location map to indicate its location.

We have kept a copy for our files, and submitted one to our Headquarters Local Streets and Roads Branch.

In the future any correspondence pertaining to Forest Highway or Public Lands Funds projects should be addressed to Mr. Palmer Haug, Caltrans District 3, Local Streets and Roads Engineer, Attention Mr. Wilbur Wright, P. O. Box 911, Marysville, California 95901 or telephone (916) 671-2905.

Very truly yours,

*Wilbur C Wright*

*for* P. D. Haug  
District Local Streets & Roads Engineer

Attachment

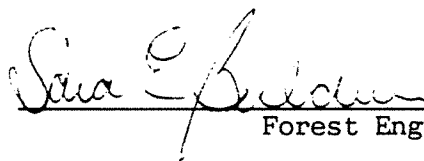
WCW:jfs  
cc: Bill Stewart, OLS&R-Hdqts. (w/attach.)


LAL594

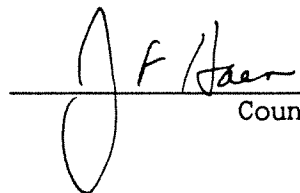
National Forest LTBMU  
Caltrans District \_\_\_\_\_  
County El Dorado

FOREST HIGHWAY  
PROJECT PROPOSAL  
FH # \_\_\_\_\_

THIS PROJECT IS JOINTLY SUBMITTED BY:

 Sara E. Baldwin Sara E. Baldwin 5/2/90  
Forest Engineer

 \_\_\_\_\_ 6/12/90  
Caltrans, District Local Assistance Engineer

 J. F. Haer P.E. 40357  
County Engineer

FOREST HIGHWAY PROGRAMMATIC DATA

1. Give a brief description of the project.

Include: a) Location description and location map.  
b) Geographic relationship to the National Forest and Forest

Highway Number.

A. From State Hwy 89 (T12N, R17E, SEC. 36) to Tahoe Mountain Road (T12N, R17E, SEC. 12) a distance of 2.0 miles.

B. This county road serves some 15,000 acres of forest & private lands, 5 Forest Service summerhome tracts, a 206 site Forest Service Campground, Fallen Leaf Lake, Glen Alpine Trailhead, Fallen Leaf Lodge and numerous private homes.

2. What is the estimated cost of the project?

\$350,000 (includes survey, design, minor realignment sub base and A.C. surface.)

3. Is the project divisible into logical subprojects? Give a brief description and the cost estimates.

Yes, From State Hwy 89m to Forest Road #12N12Y a distance of 1.3 miles. and from Forest Road 12N12Y to Tahoe Mtn. Road a distance of 0.7 miles.

4. Have the following been finalized or partially completed? (By whom? When?):

- Environmental documents? No, An EA using the NEPA Process will have to be completed and approved prior to final design.

- Rights-of-way? Not necessary as entire project is on land managed by the USDA, Forest Service.

- Plans and specifications? No, Project is in the beginning stages of planning at this time.



5. What other agencies are participating in the project? In what way? What interagency coordination has been initiated in preparing this proposal? Are other sources of funding available for all or a portion of the project? What sources? How much?

We have talked with El Dorado County and they have indicated a extreme interest in this project. We have held a meeting with county representatives to help prepare this document.

Supplemental funding was discussed with the county but no decision was made as to how much would be available.

6. Are there extenuating factors which influence the timing of the project?

- a) Statement of Urgency
- b) Local Priority
- c) Consequence of Delay

A. This road provides access to one of the largest and most heavily used recreation areas in the Lake Tahoe area with service to a 206 site forest service campground and trailhead. Due to the deteriorating nature of the existing surface, potholing and pavement edge break down the likelihood of accidents and subsequent tort claims increases yearly.

B. El Dorado County has indicated a great deal of interest in getting this road widened and resurfaced.

C. Increasing traffic, bicyclists, campers, joggers, hikers and logging traffic using this road may increase the likelihood of an accident.

#### FOREST HIGHWAY PROJECT SELECTION CRITERIA

1. The development, utilization, protection, and administration of the National Forest System and its renewable resources.

Using available data or estimates:

a) What percent of the traffic is attributable to National Forest timber? Is it anticipated that this percentage will substantially change? To what? Why?

The Lake Tahoe Basin does not have a heavy timber program, however 4 years of drought has caused a substancial increase in our timber harvesting program. It is estimated that approximately 8% of the LTBMU salvage timber will be hauled over this road in the next 5 years.

b) What percent of the traffic is attributable to National Forest recreation? Is it anticipated that this percentage will substantially change? To what? Why?

The recreation sites mentioned account for approximately 70% of the total use with day use, fishing, bicycling, jogging, boating and winter sports accounting for approximately 20%.

c) What percent of the traffic is attributable to other goods and services associated with the National Forest Service? Is it anticipated that this percentage will substantially change? To what? Why?

Summerhome use generates approximately 10% of the total traffic use on this road.

d) In what other ways is this project important to the administration and protection of National Forest System lands?

Emergency traffic, such as ambulances and fire trucks are hindered in their efforts to provide fast life saving services to cabin owners, summerhome permittees and recreationist in these areas due to the existing road conditions.

2. The enhancement of economic development at the local, Regional, and National level.

a) Will the project result in increased returns to the treasury? What amount (discounted over 20 years at 4 percent)?

It is anticipated that with or without these improvements visitors will continue to use the road to access the recreation experiences that this area provides.

b) Does the project add to local community or Regional stability? In what way?

No, for the same reasons stated in a above.

3. The continuity of the transportation network serving the National Forest Service and its dependent communities.

By definition, a Forest Highway connects National Forest resources to a safe and adequate highway. Projects should be aimed at removing physical restrictions (high costs or times, weight limitations, etc.) from these connecting links.

a) What are the current or anticipated restrictions on this link that are significant to dependent communities, and how will the project improve or remove them?

Narrow travelway along with blind curves and trees next to the road edge make it difficult for on coming vehicles to get by one another and hinders emergency vehicle access. Project will allow for free flowing traffic in both directions

b) What are the current or anticipated restrictions on this link that are significant to dependent communities, and how will the project improve or remove them?

Public services such as garbage pick-up, propane delivery and construction material deliveries are restricted in the size of loads & time necessary for deliveries because of the narrow deteriorating roadway

c) Will the project provide a uniform geometric standard for a logical length of roadway? Explain.

Yes, Project will improve a heavily used lane and a half county road that has no paved turnouts, poor drainage & site distance and pot holed surface.

4. The mobility of the users of the transportation network and the goods and services provided.

a) How will the project enhance the flow of National Forest goods?

It will provide faster safer flow of goods through National Forest Lands.

b) Will the mobility of those who utilize National Forest-related services be enhanced by this project? In what way?

Yes, Improvement of this road will increase the mobility of the recreation users and summerhome permittees between Fallen Leaf Lake and State Hwy 89.

5. The improvement of the transportation network for economy of operation and maintenance and the safety of its users.

a) Will the project alter operating and maintenance costs across this link of the network? How? To what degree?

Improved drainage will reduce erosion and the roadway flooding will be stopped. New pavement and the wider road will reduce the need for pot hole patching. Snow removal will also be improved.

b) Will the project result in increased safety to users? In what way? Are these conclusions based on actual accident statistics?

A review of reported accidents from 1987 to 1989 show only one (1) accident. However, during the summer months a dangerous situation exists because of the heavy volume of automobile, bicycle and foot traffic on this narrow road.

Over the years, the snow removal equipment has been damaged when hitting rocks that have come up through the road and on the shoulder. This all adds to the expense of the snow removal process.

6. The protection and enhancement of the rural environment associated with the National Forest System and its renewable resources.

a) Will the project protect/enhance the rural environment? In what manner? (This may include mitigation of current adverse environmental effects.)

Installation of sediment basins, infiltration trenches and roadside ditches will help mitigate the degradation of water quality in the area.

b) What environmental documents would be required to complete the project?

EA following the NEPA process.

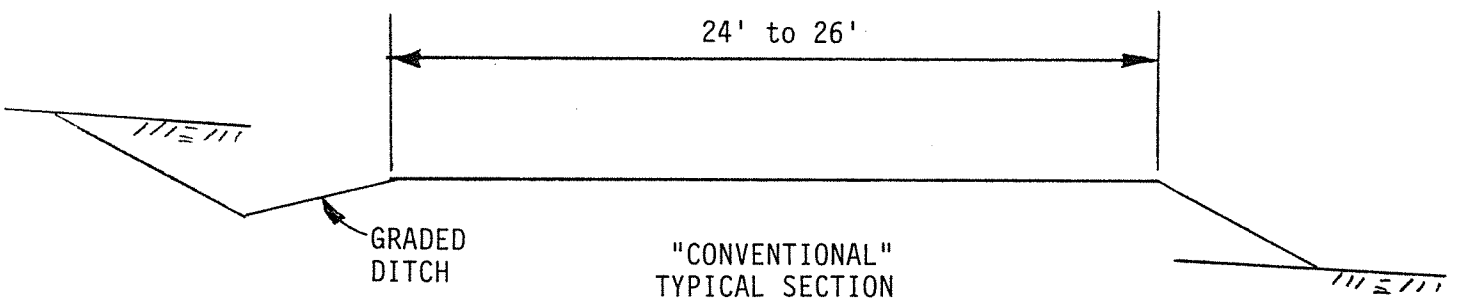
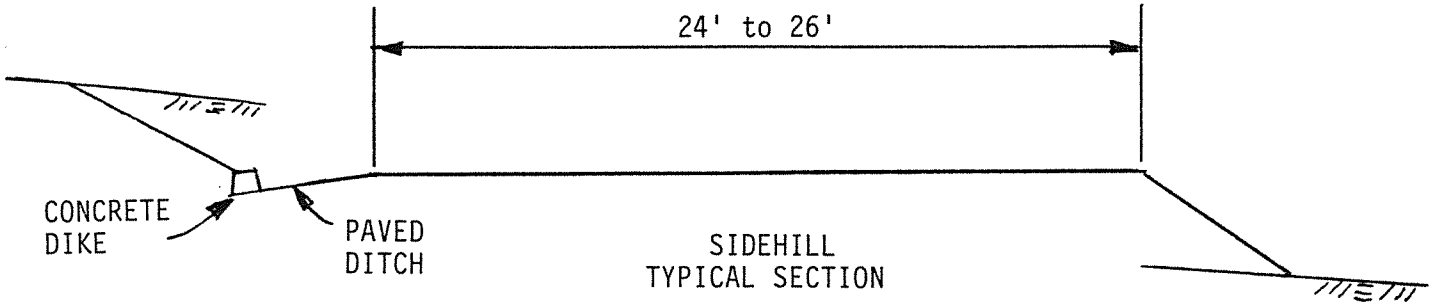
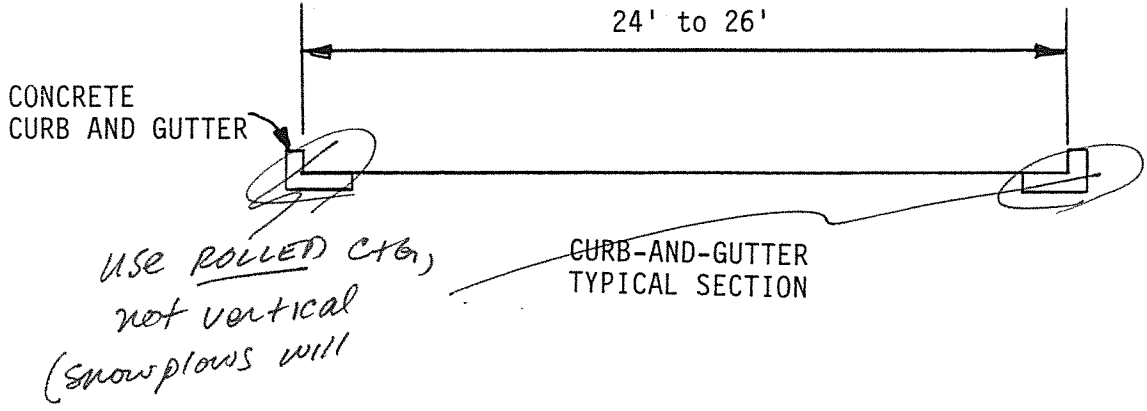




APPENDIX D  
TYPICAL CROSS-SECTION DETAILS









APPENDIX E  
MANAGEMENT AREA DIRECTION  
FALLEN LEAF



## Management Area Direction

**FALLEN LEAF**

9,176 Gross Acres	6,970 National Forest System Acres
TRPA Plan Areas: 126-130 and 144-5, and part of 143	Miles of Lake Tahoe Shoreline: 3.0 Total
Unsuitable Timber Lands: All Acres	2.7 USFS 0.3 Private

I. Description

The Fallen Leaf Management Area consists of the Glen Alpine, Taylor, and Tallac Creek drainages outside of Desolation Wilderness, plus the Angora Lakes Basin and the Tahoe Mountain area just west of the City of South Lake Tahoe. It is a very diverse area with sandy beaches on Lake Tahoe, lakes, marshes, granitic cliffs, glacial moraines, and productive forests. The Taylor Creek Wetlands will be studied to determine the suitability of designating them as a Special Interest Area.

This is the most intensively used developed recreation area on national forest land in the basin. Located within it are Pope, Baldwin, and Kiva beaches; Camp Richardson Resort; the Visitor Center; Fallen Leaf Campground; two organization camps; and several summer home tracts. There are also several wilderness trailheads and substantial dispersed recreation. The Washoe Tribe is planning to construct a cultural center near Taylor Creek. Other facilities are used for Forest Service employee housing and administrative uses.

This area is rich in cultural resources. In addition to several extensive prehistoric sites and the archaeological remains of the luxury, turn-of-the-century Tallac Hotel, there are two historic resorts -- Camp Richardson and Glen Alpine; the historic Angora fire lookout; and the Baldwin, Pope and Valhalla Estates which have been listed on the National Register of Historic Places. This plan establishes the Tallac Historic Special Interest Area, which includes the land from the eastern boundary of Valhalla west to Tallac Point, and from the shore of Lake Tahoe south to Highway 89. This area which includes the three estates, the Tallac Hotel site, and a large prehistoric site, will be managed with an emphasis on preserving and interpreting the historic resources for public enjoyment.

The land adjacent to Desolation was included in the Pyramid roadless area which was released for nonwilderness uses by the California Wilderness Act of 1984.

II. Issues, Concerns, and Opportunities

1. This management area has extensive areas suitable for expansion of developed recreation facilities near Highway 89. Utilities are available and water-oriented attractions are near. The Forest Service owns capacity in the STPUD sewer plant to support recreation development.

## LTBMU Forest Plan

2. Fallen Leaf Lake provides a quality recreation experience for the public. At present, however, the access is quite limited. The only boat launch on the lake is at the southern end, requiring travel on a single lane road past private residences. Likewise, opportunities to view the lake are limited from the roadway. Consequently, the private, southern end of the lake is heavily congested, while the public northern end is lightly used. Recent studies by the Forest Service (Fallen Leaf Lake - A Recreation Study for Forest Service, 1981) met with mixed reaction from the residents, who tended to oppose any increase in public use of the lake.
3. The intensity of recreation use in the area requires a large amount of parking area. On heavy use days parking is often inadequate at the most popular sites. Some of the existing parking is poorly developed, is located on environmentally sensitive sites that would be difficult to improve, and/or is currently accessed by roads that are not to standard and require traveling through congested areas. Opportunity exists in this area to encourage use and expand the existing bus service to the area.
4. The forests in this management area have been experiencing a severe outbreak of both Jeffrey pine bark beetle and the mountain pine beetle. The primary reason for the infestations appears to be physiological stress brought about by many years of overstocking, reinforced by other factors such as mistletoe, root disease, Elytroderma disease, road construction, drought, and water table fluctuations. A Jeffrey pine beetle suppression project was initiated in 1983, and the area is being treated in accordance with the South Shore Vegetation Treatment Plan, 1984, in an attempt to reduce the impacts of these infestations. The long term strategy is to improve stand conditions for their aesthetic, recreation, watershed, and wildlife values and to protect public safety and to minimize fire hazard.
5. There are several conflicts and opportunities regarding wildlife and sensitive plants. Cross country skiing and other recreation use around Taylor Creek can be disruptive to the wintering bald eagle populations. There may be some area near Fallen Leaf Lake suitable for eagle nesting. The beach areas are suitable habitat for Rorippa subumbellata, a sensitive plant, which is located in places where it is easily disturbed by beach users and by beach cleaning equipment. Some sites are currently fenced to protect them from disturbance, but this also reduces the valuable beach area. There are several areas of lodgepole pine encroachment in meadows where removal would enhance riparian wildlife habitat.
6. There are many historic structures which are expensive to maintain, but add greatly to the recreational and interpretive experiences available in the area. The Baldwin, Pope, and Valhalla Estates have recently been listed on the National Register of Historic Places, and other buildings such as Glen Alpine Springs Resort, Angora Lookout, the Old Mill, and the Frederick's House, which have not been evaluated, may also be of historic significance. These buildings provide government housing, administrative office space, storage, and work space as well as recreational and interpretive opportunities. These uses must be balanced with preserving and maintaining the historic values of the properties.

III. Resource Management Emphasis

Management emphasis will be upon enhancing recreation opportunities and cultural resource values. New sites will be constructed and existing ones will be maintained. Public access to prime locations such as Fallen Leaf Lake will be improved. There will also be a strong emphasis on vegetation management to protect the diverse forest environment for recreation and aesthetic enjoyment.

This direction is essentially a continuation of current management except that recreation may be expanded through site construction. New construction had been temporarily restrained in 1980 pending completion of this plan.

The desired future condition is healthy, diverse vegetation with scattered developed sites and dispersed recreation areas.

IV. Management Area Prescriptions

<u>Prescription</u>	<u>Acres</u>
1 - Developed Recreation	1,730
3 - Unroaded Recreation	1,490
5 - Intensive Dispersed Recreation	635
7 - Administrative Site	30
8 - Wetlands Management	660
10- Timber Stand Maintenance	1,350
11- Reduced Timber	1,075

V. Management Area Standards and Guidelines

Forestwide standards and guidelines apply. The following direction supplements them:

<u>Practice</u>	<u>Standard and Guideline</u>
1- Recreation and VIS Site Construction	Increase recreation capacity by the following amounts: Camp Richardson Campground 770 PAOT Fallen Leaf Boat Launch 43 PAOT Fallen Leaf Picnic/Vista 72 PAOT
2- Dispersed Recreation Construction	Expand capacity beyond the present level of use at trailhead parking sites to: Angora Ridge Winter 15 PAOT Mt Tallac 48 PAOT Glen Alpine 50 PAOT  Consider opportunities for use of public transit, or other alternatives, before constructing or reconstructing parking sites.
3- Private Sector Recreation	Proposed new development will include: Washoe Cultural Center 118 PAOT New organization camp 360 PAOT

Manage Camp Richardson Resort under the terms of the decision notice dated May 28, 1982.

Plan the future use of the recreation residences prior to the expiration of their permits. The permits at Spring Creek, Alpine Falls, Stanford, and Fallen Leaf Lodge tracts expire in 2001. Those at Lily Lake, Fish Hatchery, Angora Lakes, and part of Fallen Leaf tract expire in 1991.

Because of the high cost and environmental effects of sewerage in the remote, fragile area, the unsewered tracts will not be connected to the STPUD system. If sewerage should someday be required, and if alternate technological solutions are unacceptable, residences in those affected tracts will be terminated. Enforce the conditions of the existing waiver.

Electrical service will not be extended to Lot 6 of Fish Hatchery Tract because it is so remote from other development.

Manage Camp Richardson Corral under terms of the special use permit. Work with the permittee to develop a plan for shared management and maintenance of the trails used by the permittee.

5- Developed Recreation Site  
Operation and Maintenance

Implement the plan for the Tallac Historic Site approved in 1980, to provide for public use and enjoyment, while preserving the historically significant aspects of the estates. Where it doesn't conflict with public access the structures and grounds will be made available for a variety of adaptive uses to help generate restoration and maintenance funds. Valhalla's main house will be used as a community resource, managed by the Tahoe Tallac Association, to accommodate non-profit cultural and educational events, ceremonies, performances, meetings or exhibits appropriate to its scale and harmonious with the ambient atmosphere desired for the complex. Encourage the Tahoe Tallac Association to evaluate the feasibility of converting the boathouse into a small community theater. Begin restoring and refurbishing the Pope main house and kitchen to portray an interpretive example of a



1920's summer resort at Lake Tahoe in such a manner that it may also be used for a variety of adaptive uses. The outbuildings may be used for interpretation, public demonstration and exhibition, storage, office space, bathrooms, or barracks. The Baldwin/McGonagle Estate main house will contain the Tallac Museum, collections curation, and office and work space for interpretive and museum specialists. The outbuildings will be used for educational, interpretive, historical, residential, facilities maintenance or storage purposes.

Visitor information and interpretive services in this area will be focused at the Lake Tahoe Visitor Center and will include programs and activities throughout the area. The environmental education program will be expanded to year round.

Maintain the existing parking at Pope and Baldwin beaches for the duration of this plan. Consider opportunities for use of shuttle service that might lead to a reduction in parking on the barrier beach.

7- Dispersed Recreation-  
Summer

Vehicle use will be limited to Forest Service system roads, subject to other closures. No OHV routes or trails will be designated in this management area. Camping will be prohibited except in developed campgrounds and designated dispersed campsites.

8- Dispersed Recreation-  
Winter

This management area is open to over-the-snow vehicles except north of Highway 89; at Angora Lakes; from Fallen Leaf Road west to South Lake Tahoe and north of Tahoe Mountain; and west of Lily Lake. No outfitter guide permits for winter motorized use will be issued.

10- Cultural Resource Management

Protect the Washoe Cemetery from damage that could occur as a result of intensive recreation use and other activities.

Complete National Register Nominations for Glen Alpine Springs Resort, Camp Richardson, and Angora Lookout. Evaluate the significance of Fredericks House, the Old Mill, the prehistoric sites, and the Tallac Resort site. Manage these sites and the three estates in a manner appropriate to their historic significance through

recordation, research, interpretation, restoration, preservation and/or appropriate levels of maintenance. Work with cooperating associations such as the Tahoe Tallac Association, the Lake Tahoe Historical Society, and the Historic Preservation of Glen Alpine Springs Incorporated to accomplish necessary work on these buildings.

Assist the Washoe Tribe in reestablishing their ties with the Lake Tahoe area.

Preserve the Washoe cultural resource values along Taylor Creek, for 1/2 mile south of Highway 89, for potential interpretation.

12- Nonstructural Wildlife  
Habitat Management

Manage the bald eagle winter forage area at Taylor Creek for low human disturbance from mid-October to February. Maintain large dominant trees and snags for perching, especially those near water.

Evaluate the suitability of the two storied stands near Fallen Leaf Lake for bald eagle nest sites.

Restrict recreation use in the Pope and Baldwin wildlife sanctuaries during goose nesting season.

16- Structural Wildlife  
Habitat Management

Implement the Pope Marsh Management Prescription, approved on September 17, 1982, which calls for installation of nesting islands or platforms and other devices to enhance waterfowl habitat. Develop similar plans for Taylor Creek and Baldwin marshes.

17- Structural Fish  
Habitat Management

Seek modifications in the MOU with the Fallen Leaf Protection Association on regulation of Fallen Leaf Lake outflow if monitoring indicates that proper conditions are not being maintained in Taylor Creek for Kokanee salmon spawning and egg and fry survival and habitat for brown trout.

Maintain the fish barrier between Taylor Creek and Fallen Leaf Lake to prevent transmittal to Lake Tahoe of a whirling disease caused by Myxosoma cerebralis parasite prevalent in Fallen Leaf Lake.

18- T & E Species  
Habitat Management

Continue management efforts to protect existing and potential habitat of Rorippa subumbellata on the lakeshore. Prohibit

mechanical raking and cleaning of the beaches on these habitat sites.

32- Water Use Management

Consider the long term effects on the marsh ecosystem before approving any discharge of water into Pope Marsh from the Tahoe Keys treatment plant.

35- Land and Resource Planning

The Tallac Historic Site would be designated a Special Interest Area and Taylor Creek Wetlands would be evaluated for future SIA designation in this planning period.

49- Facilities Construction/  
Reconstruction

Enlarge the Baldwin employee mobile home park.

50- Facilities Operation  
and Maintenance

Manage the reservoir at Fallen Leaf Lake to fulfill four objectives. In descending order, the objectives are: 1) abide by rules set forth in our Memorandum of Understanding with the Fallen Leaf Protection Association, 3/6/72; 2) provide for instream flow in Taylor Creek; 3) provide for flood protection; and 4) provide for other specific water levels desired by the protection association. No objective of lower order will be met until the higher ones are fulfilled.

Supporting documents are:

EA for Low Water Management 5/3/81; Minimum Flow needs for Taylor Creek 6/81; Hydrologic Analysis and Operating Plan for Fallen Leaf Lake 6/81.

VI. Proposed Resolution of Issues and Concerns

1. This area will continue to be high priority for developed and dispersed recreation; however, it will be scaled down from past plans.
2. Plans for improving public access to the northern end of Fallen Leaf Lake will be done at the project level. One goal of such a project will be to reduce traffic impacts on the southern end of the Fallen Leaf road.
3. Trailhead and other parking areas will be designed and constructed based upon project level plans. In some situations, they may be relocated to more suitable sites. Studies will be made to best determine how to effectively utilize public transportation and other alternatives to the automobile to serve the area.
4. Conflicts between recreation, wildlife and sensitive plants will be continuously evaluated to assure compatibility. Rorippa communities will be protected. It is recognized, however, that there is no way to completely protect all potential habitat without closing the beaches.

## LTBMU Forest Plan

5. Develop cultural resource management plans for the three estates, Camp Richardson, and Glen Alpine Springs Resort through a formal agreement between the State Historic Preservation Officer, the Advisory Council on Historic Preservation and the Forest Service. Involve interested members of the public in the development of these agreements. Where necessary, amend Camp Richardson's operating permit to ensure protection of the historic values inherent in the resort. Encourage creative approaches to rehabilitating and maintaining the historic structures.

### VII. Specific Monitoring and Evaluation Requirements

Potential eagle nesting sites will be monitored to see if any are being occupied.