

HISTORIC PROPERTY SURVEY REPORT**1. UNDERTAKING DESCRIPTION AND LOCATION**

District	County	Route	Kilometer Post/Post Mile	Expenditure Authorization
01	HUM	254	K.P. 1.29-69.36/P.M. 0.80-43.10	430600

Description: The California Department of Transportation (Caltrans), District 1/North Region, proposes to upgrade four bridges along State Route (SR) 254 in Humboldt County, California (Figures 1 and 2a-c). The proposed project involves the following four bridges:

Ohman Creek Bridge (Br. #04-0007), K.P. 1.42/P.M. 0.88
 Elk Creek Bridge (Br. #04-0008), K.P. 16.78/P.M. 10.43
 Bridge Creek Bridge (Br. #04-0009), K.P. 17.80/P.M. 10.80
 Bear Creek Bridge (Br. #04-0012), K.P. 69.23/P.M. 43.02

The four bridges included in this project were identified in the Structure Replacement and Improvement Needs (STRAIN) Report as needing a rail upgrade. Proposed work consists of reconstructing bridge overhangs, upgrading existing bridge rails, upgrading existing guardrail and terminal sections, and placing crash cushions. The proposed bridge railing will be a modified Type 80 Railing. The new railings will increase existing 0.30 m (1.00 ft) shoulder widths along the bridges by 0.38 to 0.84 m (1.25-2.75 ft).

The proposed does not involve any subsurface excavation or ground disturbance. All work will be performed from the existing bridge deck and any staging areas will be confined to the existing right-of-way (Figures 3a-d). The existing right-of-way through almost all bridge locations is 15.24 m (50.00 ft) from the highway centerline. The right-of-way at the southwestern end of Bridge Creek Bridge and at the northwestern end of Ohman Creek Bridge extends to about 44.20 m (145.00 ft) from the highway centerline.

This project involves both federal and state funding and is, therefore, subject to review under the January 2004 *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federally-Aided Highway Program in California* (PA).

2. AREA OF POTENTIAL EFFECTS (APE)

Description: The Area of Potential Effects (APE) was established through consultation between Richard Mullen (Caltrans Project Manager) and Jeff Haney (Caltrans Professionally Qualified Staff) on March 28, 2012 (Figures 3a-d). The APE, which follows guidelines of Attachment 3 of the PA, encompasses the area within which direct and indirect effects associated with the proposed highway project could cause alterations in the character or use of any historic property, if present. The APE includes portions of the existing right-of-way at each of the four bridges.

HISTORIC PROPERTY SURVEY REPORT**3. CONSULTING PARTIES/PUBLIC PARTICIPATION**

- Local Historical Society/Historic Preservation Group:
- Native American Group(s):
 - Mr. Hawk Rosales, Executive Director, Inter-Tribal Sinkyone Wilderness Council
 - Mr. Louis Hoalgin, Chairperson, Wailaki Tribe, Inc.
 - Ms. Rhonda Hardy, Secretary, Eel River Nation of Sovereign Wailaki
 - Ms. Stephanie Britton, Natural Resources Department, Round Valley Reservation/Covela Indian Community
 - Mr. Nick Angeloff, Tribal Historic Preservation Officer, Rohnerville Rancheria
 - Ms. Briannon Fraley, THPO, Wiyot Tribe
 - Ms. Janet Eidness, THPO, Blue Lakes Rancheria
 - Ms. Helene Rouvier, THPO, Wiyot Tribe
- Local Government Preservation Office/Planning Department:
- Public Information Meetings:
- Other: California State Parks

Results: Representatives of local Native American groups were contacted regarding any issues of concern related to the proposed project. These contacts, which were derived from (1) an updated list of Native American contacts provided by the Native American Heritage Commission and (2) established contacts provided by the District 1 Designated Native American Coordinator, consisted of letters (dated May 4, 2010 and March 15, 2011) and a series of follow-up phone calls (Attachment 4). None of the contacts were aware of any sites within any of the bridge locations, but most requested notification if anything is found within the project areas.

Caltrans staff consulted with Mr. Greg Collins, Associate State Archaeologist for California State Parks, North Coast Redwoods District, prior to the field survey because the proposed project (as originally designed) included Temporary Construction Easements that extended onto State Parks land. Per State Parks requirements, Caltrans archaeologists completed an *Application and Permit to Conduct Archaeological Investigations/Collections* (DPR 412a) before the field study.

4. SUMMARY OF IDENTIFICATION EFFORTS

- | | |
|--|----------------------------------|
| <input checked="" type="checkbox"/> National Register of Historic Places | Year: 1979 & supplements to date |
| <input checked="" type="checkbox"/> State Historic Resources Commission | Year: 1980 & supplements to date |
| <input checked="" type="checkbox"/> California Inventory of Historic Resources | Year: 1976 & supplements to date |
| <input checked="" type="checkbox"/> California Historical Landmarks | Year: 1995 & supplements to date |
| <input checked="" type="checkbox"/> California Points of Historical Interest | Year: 1992 & supplements to date |
| <input checked="" type="checkbox"/> Archaeological Site Records [Name(s) of Institution(s)]:
North Coastal Information Center | Date: 05-29-09 |

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- Native American Heritage Commission: Date: 04-21-09
□ Other:

Results: The records search area was delineated to identify all recorded archaeological sites and previous studies conducted within 0.40 km (0.25 mile) of the project area at each bridge. The records search revealed that areas surrounding two bridges (Bridge and Elk Creek) were previously surveyed, while the other two bridge locations are not within any previous survey limits. A number of previous studies in the general vicinity of the four bridges did not identify any archaeological sites or other cultural resources. The one exception is the Ohman Creek Bridge, which was recorded as a cultural resource itself in 2001 and assigned a Primary Number (P-12-00350-H).

Far Western Anthropological Research Group, Inc. (Far Western), under contract with Caltrans, recently studied SR 254 as part of a cultural resources inventory for District 01 rural conventional highways. This inventory, which is being conducted as part of the Transportation Enhancement Act (TEA) planning project, included an intensive pedestrian survey of the existing right-of-way between K.P. 0.00 to 74.88 (P.M. 0.00-46.53). The survey, which was completed in 2009, did not identify any cultural resources.

A record search of the sacred lands file of the Native American Heritage Commission did not indicate the presence of Native American cultural resources in the vicinity.

5. PROPERTIES IDENTIFIED

- Joan Fine, who meets the Professionally Qualified Staff Standards in Attachment 1 of the PA as an Architectural Historian, reviewed the project's APE and confirmed that the only other properties present within the APE meet the criteria for Attachment 4 of the PA (**Properties Exempt from Evaluation**).
- **Bridges listed as Category 5** in the Caltrans Historic Highway Bridge Inventory (Attachment 3).
- As assigned by FHWA, **Caltrans** has **determined** the following properties within the Project APE are **not eligible** for inclusion in the National Register of Historic Place (Attachment 2):

Avenue of the Giants. SR 254, which is also called Avenue of the Giants, is a two-lane highway that passes through the Humboldt Redwoods State Park. The highway is approximately 51.50 km (32.00 miles) in length. SR 254 begins about 10.46 km (6.50 miles) north of the town of Garberville, where it splits from U.S. Highway 101, and ends about 8.85 km (5.50 miles) south of the town of Scotia, where it reconnects to U.S. Highway 101. SR 254 was originally part of the Redwood Highway (initially designated as SR 1), which connected the cities of San Francisco and Eureka. The section of

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highway that is now designated as SR 254 was completed by 1920 and continued to be improved until WWII. Improvements included straightening the alignment and widening lanes. The improved roadway surface consisted of oiled, crushed gravel. The highway designation was changed from SR 1 to U.S. Highway 101 in the 1930s. U.S. Highway 101 was upgraded to freeway standards in the 1960s and it was at this time that the current alignment of SR 254 was bypassed by a new freeway alignment to the west.

The design characteristics of SR 254 are typical of two-lane highways throughout California. The road is not distinctive for its design qualities and it does not represent important innovations in highway design or construction, either in its original construction or subsequent improvements (Criterion C). The Redwood Highway was the means of accessing the redwood groves during the 1920s when the Save-the-Redwoods League worked to create a string of redwood parks along the highway, but the road itself is not the significant property associated with any events important in history (Criterion A). Furthermore, the highway lacks integrity relative to the period of significance of the Save-the-Redwoods League and the creation of redwood parks. Avenue of the Giants does not meet National Register Criterion B. The highway has no association with important individuals in its original design and construction, or its subsequent maintenance and improvement. In addition, the highway has no direct, significant association with individuals who played an important role in the establishment of Humboldt Redwoods State Park.

6. ATTACHMENTS

- Project Vicinity, Project Location, and Area of Potential Effects Maps (Figures 1, 2a-c, 3a-d).
- Archaeological Survey Report (ASR): *Archaeological Survey Report for a Proposed Bridge Upgrade/Replacement Project along State Route 254, Humboldt County, California, 01-HUM-254, K.P. 1.29-69.36/P.M. 0.80-43.10, EA 01-430600*; by Jeff Haney, Peer reviewed by Erin Dwyer, PQS: Principle Investigator—Prehistoric Archaeology, March 2012 (Attachment 1).
- Historic Resources Evaluation Report (HRER): *Historic Resources Evaluation Report for a Proposed Bridge Upgrade/Replacement Project along State Route 254, Humboldt County, California, 01-HUM-254, K.P. 1.29-69.36/P.M. 0.80-43.10, EA 01-430600*; by Joan Fine and Andrew York, Peer reviewed by Gail St. John PQS: Principle Investigator—Prehistoric Archaeology, March 2012 (Attachment 2).
- Archaeological Excavation Report (CARIDAP, XPI, PII, PIII):
- California Historic Bridge Inventory Print-Out Sheet: (Attachment 3).
- Other: Consultation Log (Attachment 4).

HISTORIC PROPERTY SURVEY REPORT**7. FINDINGS-HPSR to SHPO**

- As assigned by FHWA, Caltrans has determined that there are properties evaluated as a result of the project that are **not eligible** for inclusion in the National Register of Historic Places within the Project APE. Under Section 106 PA Stipulation VIII.C, Caltrans requests SHPO's concurrence in this determination.
- As assigned by FHWA, Caltrans has determined a Finding of **No Historic Properties Affected**, according to Section 106 PA Stipulation IX.A and 36 CFR 800.4(d)(1), is appropriate for this undertaking.

8. FINDINGS FOR STATE-OWNED PROPERTIES

- Caltrans has evaluated and determined that the following **State-owned buildings and structures** within the Project APE **do NOT meet National Register and/or California Historical Landmark** eligibility criteria: Avenue of the Giants (SR 254).

9. CEQA IMPACT FINDINGS

- Caltrans has determined a **finding of no impact** is appropriate because there are no historical resources within the Project Area limits, or there are no impacts to historical resource(s), pursuant to CEQA Guidelines §15064.5(b)(3).

10. HPSR PREPARATION AND DEPARTMENT APPROVAL

Prepared by: Jeff Haney 4-2-12
 Jeff Haney
 Principal Investigator – Prehistoric Archaeology Date

Reviewed for Approval by: Erin Dwyer 4-2-12
 Erin Dwyer
 Principal Investigator – Prehistoric Archaeology Date

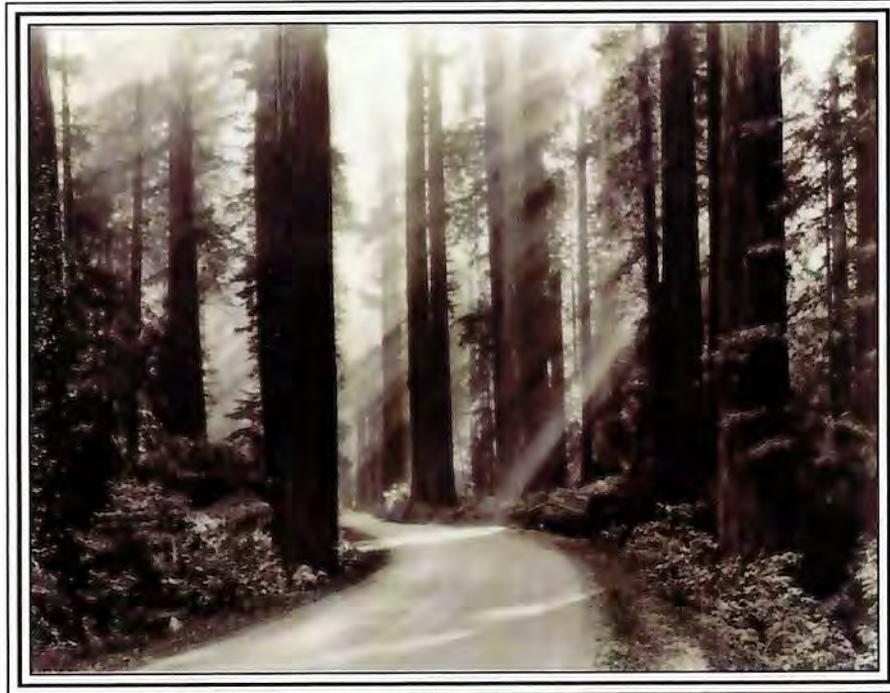
Approved by: Sandra Rosas 4-4-12
 Sandra Rosas, Chief
 Environmental Management, M2 Branch Date

Environmental Management, M2 Branch
 Caltrans District 03/North Region
 703 B Street
 Marysville, CA 95901

ATTACHMENT 2

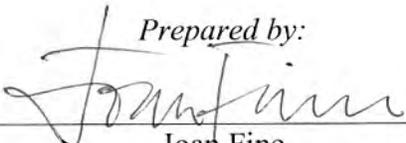
Historic Resources Evaluation Report

**HISTORICAL RESOURCES EVALUATION REPORT
FOR A
BRIDGE UPGRADE PROJECT,
STATE ROUTE 254, HUMBOLDT COUNTY, CALIFORNIA**



01-HUM-254, PM 0.88, 10.43, 10.80, 43.02, EA 01-430600

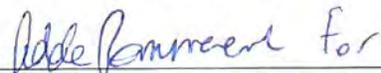
Prepared by:



Joan Fine

PQS: Principal Architectural Historian
Office of Environmental Management, S1
Caltrans, District 3

Approved by:



Sandra Rosas, Chief
Office of Environmental Management, M2
Caltrans, District 3

March 2012

SUMMARY OF FINDINGS

The California Department of Transportation (Caltrans), in conjunction with the Federal Highway Administration (FHWA), proposes to upgrade four bridges between post miles (PM) 0.88 and 43.02 on State Route (SR) 254 in Humboldt County (Attachment 1, Figures 1 and 2). The four bridges are: Elk Creek Bridge (bridge number 04-0008, PM 10.43), Bear Creek Bridge (bridge number 04-0012, PM 43.02), Bridge Creek Bridge (bridge number 04-0009, PM 10.80), and Ohman Creek Bridge (bridge number 04-0007, PM 0.88). All construction will take place within Caltrans right-of-way.

The proposed project would be constructed using federal funds; therefore, cultural studies must comply with the terms of the January 2004 *Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 PA).

The project consists of modification of four bridges that occur on Avenue of Giants, which was formerly part of U.S. 101. The bridges in question were individually rated Category 5, not eligible for the National Register of Historic Places (NRHP), in the 2010 updated Caltrans Bridge inventory; however, they are part of a larger resource (Avenue of the Giants) that had not previously been evaluated for listing in the NRHP. Caltrans staff evaluated Avenue of the Giants as a whole for this effort; the Area of Potential Effects (APE) for the proposed project, however, includes only the areas surrounding the four bridges that would be directly affected by project activities (Attachment 1, Figure 3a-d). As a result of the current study, Caltrans has determined that the linear resource, Avenue of the Giants, is not eligible for listing in the NRHP. The resource was also evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and determined not to be a historical resource for the purposes of CEQA. No evidence of historical archaeological or other built environment resources exists within the APE for the proposed project.

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ATTACHMENTS

- 1. Figures
- 2. DPR 523 Inventory Forms
- 4. Bridge Inventory Sheet

PROJECT DESCRIPTION

The California Department of Transportation (Caltrans), in conjunction with the Federal Highway Administration (FHWA), proposes to upgrade the following four bridges between post miles (PM) 0.88 and 43.02 on State Route (SR) 254 in Humboldt County (Attachment 1, Figures 1 and 2):

- Ohman Creek Bridge (bridge number 04-0007) at PM 0.88
- Elk Creek Bridge (bridge number 04-0008) at PM 10.43
- Bridge Creek Bridge (bridge number 04-0009) at PM 10.80
- Bear Creek Bridge (bridge number 04-0012) PM 43.02

The proposed project would be constructed using federal funds; therefore, cultural studies must comply with the terms of the January 2004 *Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 PA).

The proposed work will consist of reconstructing bridge overhangs, upgrading existing bridge rails, upgrading existing guardrail and terminal sections, and placing crash cushions*. All work will be performed from the existing bridge deck. Construction is anticipated in the year 2015. All work will take place within the existing Caltrans right-of-way (Figures 3a-d). The existing right-of-way through almost all bridge locations is 15.24 m (50.00 ft) from the highway centerline. The right-of-way at the southwestern end of Bridge Creek Bridge and the northwestern end of Ohman Creek Bridge extends to about 44.20 m (145.00 ft) from the highway centerline.

The proposed bridge railing will be a modified Type 80 Railing. The new bridge railing will increase existing shoulder widths as follows.

Structure	Existing Shoulder Width (ft)	New Shoulder Width (ft)
Ohman Creek	1.0	2.75
Elk Creek	1.0	2.0
Bridge Creek	1.0	1.25
Bear Creek	1.0	2.0

*Crash Cushion Locations

Structure	Corner	Total
Ohman Creek	NE (1) SW (1) SE (1)	3
Elk Creek	All Corners	4
Bridge Creek	NW (1)	1
Bear Creek	NE (1)	1

RESEARCH METHODS

Cultural resources staff conducted archival research at the California State Library, Sacramento; Caltrans History Library, Sacramento; California State Parks Archives, Sacramento; Caltrans Cultural Resource Library, Sacramento; Caltrans digital resources available on the Department's intranet site, including bridge information and as-built plans; and U.C. Berkeley Earth Sciences (Map) Library.

Caltrans staff received a records search on May 29, 2009, from the California Historical Resources Information System (CHRIS), North Coastal Information Center (NCIC) in Klamath, California. The records search area was delineated to identify all recorded archaeological sites and previous studies conducted within 0.40 km (0.25 mile) of the project area at each bridge. The records search revealed that areas surrounding two bridges (Bridge and Elk Creek) were previously surveyed, while the other two bridge locations are not within any previous survey limits. A number of previous studies in the general vicinity of the four bridges did not identify any archaeological sites or other cultural resources. The one exception is the Ohman Creek Bridge, which was recorded as a cultural resource itself in 2001 and assigned a Primary Number (P-12-00350-H).

Far Western Anthropological Research Group, Inc. (Far Western), under contract with Caltrans, recorded SR 254 as part of a cultural resources inventory for District 01 rural conventional highways. This inventory, which was conducted as part of the Transportation Enhancement Act (TEA) planning project, included an intensive pedestrian survey of the existing right-of-way on SR 254 between P.M. 0.00-46.53. The survey, completed in 2009, identified, but did not evaluate, historic era cultural resources.

As a matter of course, staff also consulted the following lists:

- National Register of Historic Places, 1979 and updates
- California Register of Historical Resources, 1990 and updates
- California Inventory of Historical Resources, 1976 and updates

- California Historical Landmarks, 1990 and updates
- California Points of Historical Interest, 1992 and updates

HISTORICAL OVERVIEW

State Route (SR) 254 in Humboldt County, also known as Avenue of the Giants, is a two-lane highway approximately 32 miles in length. It begins about 6.5 miles north of Garberville, where it splits from U.S. Highway 101, and ends about 5.5 miles south of Scotia, where it reconnects to Highway 101. The SR 254 alignment was part of Highway 101 until it was bypassed by a new Highway 101 segment in the early 1960s. The old route was retained as a scenic highway, named Avenue of the Giants.

CONSTRUCTION HISTORY OF AVENUE OF THE GIANTS

The California Department of Highways was established in the last decade of the 19th century and charged with creating a statewide network of highways. Prior to that time, counties and cities had sole responsibility for the construction of roads and bridges in California (Owens 1991, 45-47). The newly established Department of Highways acquired some existing roads from the counties and began construction of new roads, but progress was slow. Railroads were generally a faster and more comfortable means of transportation between cities.

The growth of automobile ownership in the first decades of the 20th century led to increasing advocacy for better roads. In 1910, California voters approved the sale of \$18 million in bonds for acquisition of right-of-way and construction of highways (Owens 1991, 48-49). Construction of the state highway system began in earnest at that time. Subsequent bond acts, and the imposition of a state tax on gasoline in 1923, continued and accelerated the state's highway building program.

The Redwood Highway was one of the original highways planned for construction with the 1910 bond funds. This highway would connect southern Marin County, with its ferry access to San Francisco, to the inland cities of Sonoma and Mendocino Counties, and continue north from Willits to Eureka.

Although overland travel between Willits and Eureka was possible before the close of the 19th century, travel from San Francisco to Eureka and other cities and towns along the Northern California coast was generally quicker and easier by ship. Smaller boats connected the coastal towns with inland settlements along the Russian and Eel Rivers (Cook and Hawk 1997, 58). The earliest stage road connecting Willits and Eureka headed west from Garberville to Briceland, then turned north to Ferndale and on to Eureka, avoiding much of the canyon of the South Fork

of the Eel River, where the current Highway 101 and Avenue of the Giants are located (Robinson 1964, 9-10). A later road from Garberville north to Phillippsville was begun in 1881, and eventually extended through the river canyon in the same approximate location as the current Avenue of the Giants (Cook and Hawk 1997, 56; Lentell 1898). Portions of the alignment of this 19th century wagon road shifted from year to year, in response to damage caused by flooding and landslides.

Construction of the Redwood Highway (originally designated State Route 1) began on the southerly portion of the route, in Marin, Sonoma, and Mendocino Counties. Plans for extending the highway along the South Fork of the Eel River were drawn up in 1914. That portion of the highway that is now designated Avenue of the Giants was completed by 1920 (Haselwood 1931, 17). As originally designed, the unpaved highway had a width of 16 feet in some areas and 18 feet in others, with the sharpest curves having a radius of 100 feet or less. Bridge structures over creeks were mostly timber trestles (Drinkhall 1932, 18; Robinson 1964, 17). Although minimal by later standards, the 1914 highway was a substantial improvement over the older wagon road, having a more uniform surface, fewer curves, and larger radius curves.

Portions of the Redwood Highway were constructed by prisoners from San Quentin, housed in temporary labor camps along the route. The California legislature passed a convict labor law in 1915, authorizing the use of prison labor for road construction. The Department of Highways employed prison labor in remote areas where it would have been difficult to find enough free labor, particularly during World War I when many young, able-bodied men were serving in the military. There were prison labor camps along the Redwood Highway in Mendocino and Del Norte Counties from 1915 into the 1920s. It is possible that prison labor contributed to the original construction of Avenue of the Giants, but evidence for prison labor in specific locations is lacking (California Highway Commission 1918, 20-21, 104-109; California Highway Commission 1926, 143-48).

The first improvements to the highway came with two contracts for widening issued in late 1921 and early 1922 (California Highway Commission 1924, 178). Plans for this work are not extant, but there is some overlap in the areas covered by the two contracts, suggesting that they were for "spot" improvements in specific locations rather than continuous widening of the entire roadway.

Additional improvements came in the late 1920s and continued to World War II. In 1929, the Department of Highways awarded a contract for improvements to a three-mile long segment extending from Fish Creek to just north of Miranda (approximate current PM 4 to 7). By this time, automobile and truck traffic would have been far greater than on the original, pre-1920 highway. The highway alignment was straightened by reducing the number of curves and enlarging the radius of curves. The work reduced the total length of the highway by 0.3 miles, about ten percent of the former length of this segment. Curves on the improved portion of the highway were much more gradual than on the original alignment, having a minimum radius of

400 feet. The highway was also widened to 28 feet, with two ten-foot lanes and four-foot shoulders (Haselwood 1931, 17-18; Caltrans 1929 as-built plans). The improved roadway surface consisted of oiled, crushed gravel. Although this was not yet a paved road in the modern sense, the oiled gravel surface would have considerably reduced the amount of traffic-induced dust compared to the original dirt road.

Improvements similar to those carried out in 1929 were undertaken on other segments of the highway through the 1930s and into the early 1940s, making the alignment straighter and increasing the lane widths to ten or 11 feet. Shoulder widths varied, depending on the presence of trees adjacent to the roadway. Several of these contracts included substantial realignment of the highway, leaving bypassed segments for use as local roads. Rather than carrying out these improvements through contracts extending continuously along the highway, the segments chosen for upgrading were those with the most winding alignments and those with the worst roadway surfaces (Haselwood 1931, 17). As a result, on the eve of World War II the highway consisted of a series of segments of varying width, alignment standards, and surface quality. Also in the 1930s, the highway designation was changed from State Route 1 to U.S. Highway 101.

In 1931, the Division of Highways replaced the bridge over the South Fork of the Eel River at Dyerville, where the highway crosses from the east side of the South Fork to the west side of the Eel. As noted on page 3 of Attachment 2, this bridge originally had a steel truss superstructure. Four more bridges were constructed on the highway in 1939-40, replacing the original timber creek crossings with wider and stronger concrete slab and T-beam structures.

At the time of the 1930s improvements, the typical pavement striping consisted of a single, solid line dividing the two lanes, with no striping at the outer edge of the lanes. Guardrails were constructed of timber posts and rails, similar to the railings on the Ohman Creek and Bear Creek bridges (see photos on pages 6 and 11 of Attachment 2). None of these early timber guardrails survive to the present, except for the railings of those two bridges.

The Biennial Reports of the California Division of Highways included maps depicting the state highways and their various roadway surfaces. The map in the 1938 report shows just three short segments of what is now Avenue of the Giants as paved. Each segment is approximately two miles long. The remaining portions of the highway are depicted as “oiled gravel, gravel, or oiled earth.” The first map to depict the entire highway as paved is in the 1954 report, although it is possible that earlier maps were not thoroughly updated and that more of the paving was carried out somewhat earlier. By the early 1950s, the highway had acquired its present alignment and most of its current form and appearance, with continuous paving and modern lane widths.

Avenue of the Giants saw very little alteration after World War II, other than the construction of several bridges. Most of the construction contracts since 1945 have been for repair of storm damage and landslides, drainage improvements, and the repair or replacement of culverts.

Reflective markers were added to the pavement in the early 1970s.

The current bridge over Greenlaw Creek, near the northern end of the highway, dates to 1959. Two bridges were constructed in the early 1960s as part of the new Highway 101 segment that bypassed the old highway. One of these carries Avenue of the Giants over Highway 101, and the other carries the newer Highway 101 segment over Avenue of the Giants. There is a modern interchange where Highway 101 crosses over Avenue of the Giants at approximate PM 12.3, with entrance and exit ramps connecting Avenue of the Giants to the U.S. 101 freeway. The bridge over the South Fork of the Eel River, originally built in 1931, was altered in 1966, with a new concrete girder superstructure replacing the original steel truss (see photo 15 on page 10 of Attachment 2). More recently, two concrete slab sidehill viaducts were constructed in 1989 and 1995.

Planning began in the early 1950s to upgrade much of the Redwood Highway (Highway 101) to freeway standards, with controlled access and two lanes in each direction, separated by a center median. Trucks largely replaced railroads for hauling timber in the postwar period, and many of the small logging railroads ceased operation. The existing highway was inadequate for the increasing size and number of logging trucks (Robinson 1964, 32 and 14).

In spite of the growing traffic problem, there was considerable opposition to widening the existing highway in areas running through or adjacent to Humboldt Redwoods State Park, due to the number of redwood trees that would need to be removed. The redwood groves were, and continue to be, a major tourist attraction, important to the local economy. Local governments and advocates for preservation of the redwood groves recommended that an entirely new segment of Highway 101 be built on a new alignment. The Division of Highways agreed to the bypass proposal, and construction began in 1957 (Robinson 1964, 17-21).

The bypass has a roadway width of 60 feet, including four lanes, a center divider, and outside shoulders. Although this new segment of Highway 101 passes through state park lands, its alignment was carefully considered to minimize the number of redwoods to be removed and to avoid the oldest and largest specimens. Most of the trees removed within Humboldt Redwoods State Park were less than 30 inches in diameter, with the largest up to six feet in diameter (Benedict 1962, 4; Robinson 1964, 19). With the completion of the bypass in the early 1960s, the older highway became primarily a scenic route for tourists in addition to serving local traffic. Most of the through traffic, including logging trucks, now uses Highway 101; some forms of truck traffic continue to use the older highway to serve the communities along the route. When the bypass was completed, the Division of Highways suggested turning over the old road to the State Department of Parks. The Department of Parks declined the offer, however, largely because of the cost of maintaining the road. The bypassed segment of Highway 101, retained by the Division of Highways, then became State Route 254, Avenue of the Giants (Robinson 1964, 21).

HUMBOLDT REDWOODS STATE PARK HISTORY

Humboldt Redwoods State Park (HRSP), the third largest park in the State Park System and home to the famed Rockefeller Forest, exists today largely in part because three men from San Francisco set out on a road trip in 1917 to see the redwoods. When John C. Merriam, Madison Grant, and Henry Fairfield Osborn witnessed the destruction of the magnificent redwoods, they were inspired to start the movement to save the remaining stands of virgin forest. Less than one year after their visit to the area now known as HRSP, these men founded Save the Redwoods League (SRL). In 1921, only three years after the League's creation, HRSP was put on the map.

On August 6th 1921, the Colonel Raynal C. Bolling Memorial Grove was dedicated and so began, as it was known then, HRSP. Though SRL is given credit for the formation of the park, the redwood park idea actually started locally as the residents of Humboldt County were also becoming alarmed by the quick demise of the ancient trees. In 1907, Albert Etter, a prominent local horticulturalist, suggested to then Secretary of the Eureka Chamber of Commerce, George Kellogg, that trees be set aside for a park somewhere near the town of Eureka. A redwood park committee was formed and included the locally well-known activist, Laura Mahan Perrott. Talk of the formation of a redwood park spread and the Humboldt County Federation of Women's Clubs became involved. In 1919 they formed the Humboldt County Women's Save the Redwoods League and joined forces with the national chapter in passing the Redwoods Preservation Bill (SB 80) in 1921.

In addition to funding the first acquisitions in HRSP, SB 80 also enabled the acquisition of the first groves in Standish Hickey State Recreation Area, Prairie Creek Redwoods State Park, Del Norte Coast Redwoods State Park and Richardson Grove State Park. The magnificent redwood groves known as Dyerville Flats, however, still needed to be saved. In 1928 the citizens of California passed the State Park Bond Act which did two very important things: formed the California State Park System and provided for matching funds, meaning the State would match dollar for dollar any donation put forth to purchase lands for the newly created State Park System.

In the summer of 1926, a well-connected Newton B. Drury (secretary of SRL) invited the Rockefeller family up to the northern California redwoods and arranged for a lavish lunch to be had in the Dyerville Flats. John D. Rockefeller must have had an impressive meal because less than a year later he presented SRL with a check for \$1,000,000 to purchase the grove. With matching funds from the State of California and another generous million dollar donation in 1929 by the Rockefellers, the 9,335 acres of Dyerville Flats was purchase from the Pacific Lumber Company in 1931. Initially, J.D. Rockefeller did not want the forest named after his family, so until 1951 it was known as the Bull Creek-Dyerville Forest. Today, it is known as the Rockefeller Forest and is the heart of HRSP.

Throughout the next few decades, HRSP grew and formal campgrounds were built. The first campground built by the state in 1922 was at William's Grove, named after the employee who built it. At one time, William's Grove was the park headquarters and had 100 campsites and 25 picnic sites. After the formation of the State Park System in 1928 and the acquisition of more property, the park headquarters moved to Dyerville. Also located at Dyerville was a California Conservation Corps camp. The men from that camp are responsible for building many structures in HRSP that still stand today.

During the Great Depression, new acquisitions slowed but the park staff continued to map out their plans for the future. After World War II there was a dramatic increase in park visitation, resulting in more acquisitions and a larger park staff. Unfortunately, the end of WWII also marked the beginning of a logging boom in Humboldt County like never seen before. SRL and California State Parks scrambled to acquire lands before the timber companies got a hold of them first.

The catastrophic flood of 1955 temporarily brought logging to a halt, but only fueled the fire to acquire more lands in the now ravaged Bull Creek watershed. Then, only nine years later, another even more devastating floor tore through the region in 1964. Many local residents, who had resisted selling their property to the park after the 1955 flood, reconsidered and sold out. The park needed to acquire all of the lands in the Bull Creek watershed if the Rockefeller Forest was to be saved. By the 1970s HRSP had expanded to approximately 25,000 acres, which included the damaged watershed. For many years HRSP staff has worked to restore Bull Creek and its many tributaries. Rehabilitation projects in the Bull Creek watershed are on-going and many have been very successful. Visiting Rockefeller Forest today, it is hard to imagine the destruction that existed only sixty years ago.

Today, HRSP and SRL continue to work together in their preservation efforts. Of the approximately 53,000 acres of park land protected within the boundaries of HRSP, approximately 31,500 acres have been acquired as a direct result of work done and money raised by SRL. The park and SRL are also working in conjunction to replant acquired lands that were previously logged. To date, the reforestation program has planted many thousands of trees and continues to raise seedlings for future projects both in HRSP and other state parks.

HRSP attracts close to a million visitors each year and offers a wide variety of outdoor experiences. Some visitors stay in one of the four developed campgrounds, others choose to hike, bike, or horseback ride on the more than 100 miles of trails, while others may stay for a picnic and a swim in the cool waters of the South Fork Eel River. Traveling along Avenue of the Giants, many more visitors experience the grandeur of the redwoods from the comfort of their vehicles, similar to the first experience of the three conservationists from San Francisco back in 1917.

Whether walking among the giant redwoods or driving in a car, it's easy to understand what inspired the founders of SRL to have the wisdom and determination to fight for the preservation of HRSP. Because of their efforts and the efforts of many other like-minded individuals, future generations will be able to enjoy, learn, and continue to be inspired by the diversity and beauty of California's largest redwood state park.

FIELD METHODS

On July 7 & 8, 2011, Andy Hope and Janice Calpo, Caltrans PQS: Principal Architectural Historians, conducted a field review of the proposed project, as well as a survey of the linear resource, SR 254, Avenue of the Giants (Attachment 2, pages 25 through 33). During the field review, photos and notes were taken of the entire linear resource which includes the roadway itself, the highway right of way or easement, bridges, culverts, signs, one rest area, and features such as guardrails and retaining walls.

DESCRIPTION OF CULTURAL RESOURCES

The only resources within the APE are four bridges and one road. The four bridges are individually rated Category 5 structures, not eligible for the NRHP, however, they are part of a larger resource (Avenue of the Giants) that is evaluated in this report. One road, SR 254 (Avenue of the Giants), runs through the discontinuous APE and retains sufficient integrity to warrant evaluation. Avenue of the Giants includes the roadway itself, the highway right-of-way or easement, bridges, culverts, signs, one rest area, and features such as guardrails and retaining walls. The formal evaluation can be found in Attachment 2, State of California DPR forms.

FINDINGS AND CONCLUSIONS

None of the resources within the APE for the proposed project are listed in the National Register. The four bridges, Elk Creek Bridge (bridge number 04-0008), Bear Creek Bridge (bridge number 04-0012), Bridge Creek Bridge (bridge number 04-0009), and Ohman Creek Bridge (bridge number 04-0007), within the APE for the proposed project were individually rated Category 5, not eligible for the NRHP in the 2010 updated Caltrans Bridge Inventory.

The following property has been determined *not eligible* for inclusion in the National Register as a result of this study and *is not a historical resource* under CEQA per CEQA Guidelines §15064.5:

Name	Address/Location	Community	OHP Status Code	Map Ref. #
Avenue of the Giants	SR 254, PM 0.0/43.5	State Route 254	6	DPR forms pages 25-33

Pursuant to CEQA Guidelines §15064.5(a)(1)-(4) and Public Resources Code §5024, Caltrans staff has determined that the state-owned SR 254, Avenue of the Giants, is not eligible for listing in the National Register of Historic Places or the California Register of Historical Resources and is not a historical resource under CEQA.

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On-line resources:

Avenue of the Giants

<http://www.aveofthegiants.com/>

Humboldt Redwoods State Park

<http://humboldtreedwoods.org/>

Save the Redwoods League

<http://www.savetheredwoods.org/league/timeline.shtml>

Personal Communication:

Greg Collins. Associate State Archaeologist, California State Parks, North Coast Redwoods District. 5 July 2011.

PREPARER'S QUALIFICATIONS

Joan Fine has a Bachelor of Arts degree in Environmental Studies (Natural Resources Management emphasis) from the University of California at Santa Barbara, and a Master of Arts degree in History from California State University, Sacramento. Ms. Fine has 11 years experience conducting historic architectural studies. Ms. Fine has been an Associate Environmental Planner (Architectural History) with Caltrans, District 3, for 11 years and is qualified under the terms of the Section 106 PA as a Principal Architectural Historian.

ATTACHMENT 2

**State of California
Department of Parks and Recreation
Historical Resource Inventory Forms
(DPR 523)**

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #: _____
 HRI # _____
 Trinomial _____
 NRHP Status Code: _____
 Other Listings _____
 Review Code _____ Reviewer _____ Date _____

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*Resource Name or #: Avenue of the Giants
 Map Reference No.:

- P1. Other Identifier: State Route 254, Humboldt-254
- *P2. Location: Not for Publication Unrestricted *a. County Humboldt
 *b. USGS 7.5' Quad: Miranda, Myers Flat, Weott, Redcrest, and Scotia Date: 1969-70
 c. Address City Vicinity of Garberville to vicinity of Scotia Zip
 *d. UTM:
 *e. Other Locational Data: Begins in Township 3S, Range 4E, northwest ¼ of Section 30 (Miranda quad).
 Ends in Township 1N, Range 1E, northeast ¼ of Section 26 (Scotia quad).

*P3a. Description:
 State Route 254 (SR-254) in Humboldt County, also known as the Avenue of the Giants, is a two-lane highway approximately 32 miles in length. It begins about 6.5 miles north of Garberville, where it splits from U.S. Highway 101, and ends about 5.5 miles south of Scotia, where it reconnects to Highway 101. The SR-254 alignment was part of Highway 101 until it was bypassed by a new Highway 101 segment in the early 1960s. The old route was retained as a scenic highway, named the Avenue of the Giants.
 (See continuation sheet, page 2.)

- *P3b. Resource Attributes: HP-37: Highway
- *P4. Resources Present: Building Structure Object Site District Element of District Other



Photo 1: Avenue of the Giants (State Route 254) at Phillipsville, near postmile 2.6

- P5b. Description of Photo:
 Looking north
 Photos 1-25 taken
 July 7, 2011
- *P6. Date Constructed/Age and Sources: Historic
 1914-present
- *P7. Owner and Address:
 State of California
 Dept. of Transportation
- *P8. Recorded by:
 Andrew Hope
 Caltrans
- *P9. Date Recorded: July 2011
- *P10. Type of Survey:
 Intensive

*P11. Report Citation: Historic Property Survey Report for the project to replace four bridges on State Route 254 in Humboldt County. California Department of Transportation, 2011.

*Attachments: Building, Structure & Object Record Continuation Sheets Location Maps

P3a. Description (continued from page 1):

The postmile designations along the Avenue of the Giants proceed from zero at the south end to just past postmile 24. The designation then skips to postmile 39 and proceeds to the north end of the route at postmile 46.53. This is why some of the bridges and other features along the route are at postmile designations between 39 and 46.53, even though the entire route is only 32 miles in length.

The Avenue of the Giants closely parallels Highway 101 for its entire length. The two highways are generally less than ¼-mile apart, and are greater than ½-mile apart in only a few places. The highway also closely parallels the Eel River and its South Fork. The route runs along the east side of the South Fork from its beginning to postmile 20.64, where it crosses over to the west side of the Eel. The route continues along the west side of the river for the remainder of its length. The road is relatively flat and varies from just under 100 feet above sea level to just over 400 feet above sea level. Much of the route is within Humboldt Redwoods State Park, and was named the Avenue of the Giants for the groves of redwood trees that it passes through. In addition to providing access to various state park facilities, the Avenue of the Giants connects several small settlements. Proceeding from south to north, these include Phillipsville, Miranda, Myers Flat, Burlington, Weott, and Redcrest.

The roadway consists of 11-foot wide lanes with pavement striping (a double yellow centerline with white outer lane stripes) and reflective markers. In some areas, the route traverses relatively open land, while most of the route is through dense redwood groves with only a narrow slot of sky visible directly above the roadway. (See photo 1 on page 1 and photo 2 on page 4.) Highway signs, including speed limit, warning, and other signs, are typical of state highways. Paved or unpaved shoulders vary from a few feet in some areas to no shoulders over much of the length of the route. Within the dense redwood groves, in many locations there are redwoods right at the edge of the travel lane. (See photo 3 on page 4.) In some cases, metal beam guardrail has been placed between the roadway and roadside trees, while in other cases individual trees have been cut back to allow room for the roadway. (See photos 4 and 5 on page 5.) There are numerous other segments of metal beam guardrail where the roadway is along the edge of steep slopes.

Ten bridges carry or cross over the Avenue of the Giants. Six of these carry the route over watercourses, and one carries the route over U.S. Highway 101. Two bridge structures are sidehill viaducts, located on cross-slopes where the roadway is partially supported by a bridge structure. One bridge carries U.S. Highway 101 over the route. The ten bridges are listed and described below, in order from south to north:

- Bridge 04-0007 carries the Avenue of the Giants over Ohman Creek at postmile 0.88. It is a concrete T-beam structure, built in 1939. The railing consists of a single wood rail attached to square wood posts. (See photos 6 and 7 on page 6.)
- Bridge 04-0008 carries the Avenue of the Giants over Elk Creek at postmile 10.43. It is a concrete slab structure, built in 1939. The railing is concrete, with closely spaced posts supporting a single top rail. (See photos 8 and 9 on page 7.)
- Bridge 04-0009 carries the Avenue of the Giants over Bridge Creek at postmile 10.8. It is a concrete T-beam structure, built in 1939-40. The wood railing is an unusual design, consisting of thick vertical posts and slightly smaller diagonal posts forming a series of "v" shapes, with a single top rail. (See photos 10 to 13 on pages 8 and 9.) As shown in the photos, portions of the railing have been replaced as necessary by Caltrans maintenance staff, but the original railing design has been maintained.
- Bridge 04-0292 is a sidehill viaduct at postmile 11.83. It is a concrete slab structure, built in 1989.

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* Date: August 2011

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- Bridge 04-0124 carries U.S. Highway 101 over the Avenue of the Giants near postmile 12.3. It is a concrete T-beam structure, built in 1962. (See photo 14 on page 9.)
- Bridge 04-0298 is a sidehill viaduct at postmile 17.8. It is a concrete slab structure, built in 1995.
- Bridge 04-0114 carries the Avenue of the Giants over U.S. Highway 101 at postmile 19.94. It is a concrete box-girder structure, built in 1961.
- Bridge 04-0010 carries the Avenue of the Giants over the South Fork of the Eel River at postmile 20.64. The original bridge was a metal truss structure, built in 1931. In 1966, the superstructure was replaced with the present concrete girder structure. The original concrete bridge piers were retained and extended in the 1966 alterations. (See photos 15 and 16 on page 10.)
- Bridge 04-0012 carries the Avenue of the Giants over Bear Creek at postmile 43.02. It is a concrete T-beam structure, built in 1939. The railing consists of a single wood rail attached to square wood posts. (See photos 17 and 18 on page 11.)
- Bridge 04-0171 carries the Avenue of the Giants over Greenlaw Creek at postmile 46.12. It is a concrete T-beam structure, built in 1959, with a modern concrete and metal railing.

There is one rest area on the Avenue of the Giants, at postmile 2.9. It includes a paved parking area, a small sign, and a portable toilet. The edge of pavement along the highway and at the driveway is lined with low, square wood posts. (See photo 19 on page 12.) Similar wood posts line five roadside pullouts along the route. These are located northbound at postmiles 6.9, 7.7, and 18.0, and southbound at postmiles 15.0 and 43.9. (See photo 20 on page 12.) There are numerous other roadside pullouts along the route that do not have these wood posts.

Since its original construction, the highway has been improved, widened, and straightened, with some segments reconstructed on entirely new alignments. Many of these alterations were undertaken as safety and capacity improvements, in response to the ever-increasing size, weight, and speed of motor vehicles. Other alterations, including short realignments, were initiated as repairs or reconstruction after damaging storms, floods, or landslides. In a few areas, segments of earlier alignments that have been bypassed remain in place as local roads or as roads or trails within the state park. Other bypassed segments have reverted to the natural landscape over the years and are no longer visible. One segment that remains as a local road is Spring Canyon Lane, between postmiles 2.8 and 3.2, which was originally part of the route but was bypassed in 1937. (See photos 21-23 on pages 13 and 14.) The pre-1937 roadway was as narrow as 16 feet in some areas and unpaved. Photos 22 and 23 give some sense of what the route would have looked like in the pre-World War II period. Another segment that was bypassed in 1937 is now a park road in the Nelson Grove area, between postmiles 11.3 and 12.0. It is now blocked where it meets the current SR-254 alignment at the north end, but remains open as a narrow paved road at the south end. (See photos 24 and 25 on page 15.)



Photo 2: View of the highway through the redwood forest, showing trees close to the edge of pavement and a narrow slot of open sky directly above the highway.



Photo 3: Redwood trees adjacent to the edge of pavement on both sides of the highway.

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Photo 4: Modern, metal-beam guardrail where a redwood tree is near the edge of pavement.



Photo 5: Redwood tree showing damage or cut-back on the side facing the highway.



Photo 6: Ohman Creek Bridge (Bridge 04-0007) at postmile 0.88, built in 1939. Looking north.



Photo 7: Ohman Creek Bridge, curb and railing detail. Looking northeast.



Photo 8: Elk Creek Bridge (Bridge 04-0008) at postmile 10.43, built in 1939-40. Looking north.



Photo 9: Elk Creek Bridge, curb and railing detail. Looking northeast.



Photo 10: Bridge Creek Bridge (Bridge 04-0009) at postmile 10.8, built in 1939-40.
Looking northwest.



Photo 11: Bridge Creek Bridge, curb and railing detail. Looking north.



Photo 12: Bridge Creek Bridge. Detail of older, weathered post.



Photo 13: Bridge Creek Bridge. Detail of recently replaced post.



Photo 14: Highway 101 crossing over SR-254 (Bridge 04-0124) at approximate postmile 12.3, built in 1962. Looking northeast.

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* Date: August 2011

Continuation Update



Photo 15: Eel River Bridge (Bridge 04-0010) at postmile 20.64. Looking south, from beneath the north end of the Highway 101 bridge. The piers date to 1931, while the pier extensions and superstructure date to 1966.



Photo 16: Eel River Bridge. Looking south, from beneath the north end of the Highway 101 bridge.



Photo 17: Bear Creek Bridge (Bridge 04-0012) at postmile 43.02, built in 1939. Looking south.



Photo 18: Bear Creek Bridge, curb and railing detail. Looking east.

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* Date: August 2011

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Photo 19: Rest area north of Phillipsville, approximate postmile 2.9. Looking east.
The edge of pavement is bordered by low, square wood posts.



Photo 20: Roadside pullout bordered by square wood posts, adjacent
to the northbound lane at approximate postmile 6.9. Looking south.



Photo 21: Southerly junction of the Avenue of the Giants and Spring Canyon Lane, approximate postmile 2.8. Spring Canyon Lane is an older alignment of the highway, bypassed in 1937. Looking northeast.

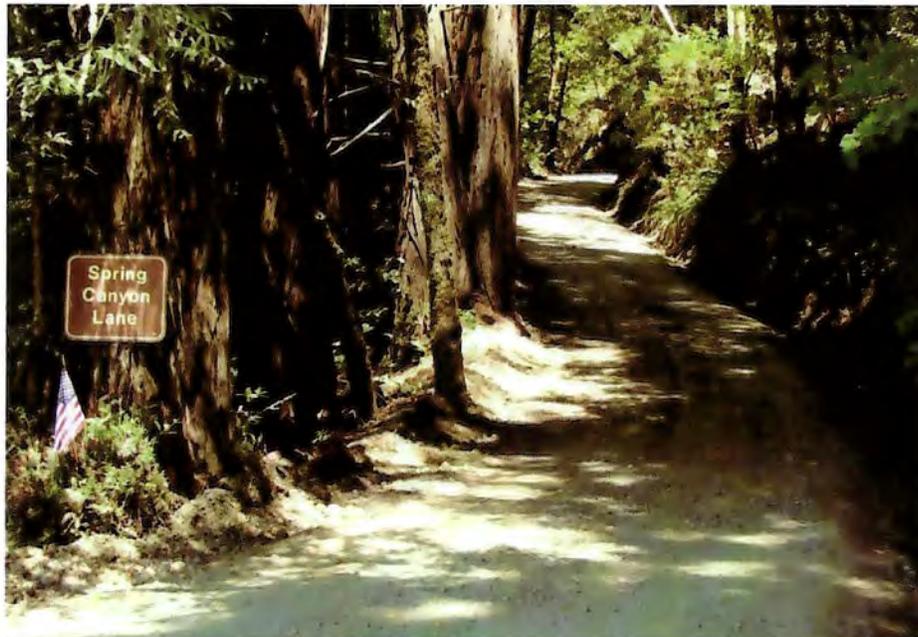


Photo 22: Spring Canyon Lane, near the southerly junction of the Avenue of the Giants. Looking northeast.

* Recorded by: Andrew Hope, Caltrans

* Date: August 2011

Continuation Update



Photo 23: Spring Canyon Lane, near the northerly junction of the Avenue of the Giants, approximate postmile 3.2. Looking east.



Photo 24: Older highway alignment bypassed in 1937, at approximate postmile 11.25.
Looking east.



Photo 25: Older highway alignment bypassed in 1937, at approximate postmile 12.0.
Looking northeast. The bypassed alignment is now an access road into the state park.

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 16 of 33

*NRHP Status Code:

*Resource Name or #: Avenue of the Giants
Map Reference No.:

- B1. **Historic Name:** Redwood Highway; State Route 1; U.S. Highway 101.
- B2. **Common Name:** State Route 254; Avenue of the Giants
- B3. **Original Use:** State highway
- B4. **Present Use:** State highway
- *B5. **Architectural Style:** N/A
- *B6. **Construction History:** See continuation sheet, page 17.

*B7. **Moved?** No Yes Unknown **Date:** **Original Location:**

*B8. **Related Features:**

The Avenue of the Giants includes the roadway itself, the highway right-of-way or easement, bridges, culverts, signs, one rest area, and features such as guardrails and retaining walls.

- B9a. **Architect:** **b. Builder:**
- *B10. **Significance: Theme:** **Area:**
- Period of Significance:** **Property Type:** **Applicable Criteria:**

National Register criterion B:

The Avenue of the Giants does not meet National Register criterion B. The highway has no association with important individuals in its original design and construction, or its subsequent maintenance and improvement. The highway has no direct, significant association with important individuals who lived or worked along the route, or who were prominent in the establishment or growth of any of the settlements along the route. In addition, the highway has no direct, significant association with individuals who played an important role in the establishment of Humboldt Redwoods State Park.

National Register criterion C:

The Avenue of the Giants does not meet National Register criterion C. The original construction of the highway posed many challenges because of its isolated location and the need to remove some enormous trees. However, construction of this portion of the Redwood Highway (State Route 1, and later U.S. Highway 101) was probably less of an engineering and construction challenge than some of the other mountain, desert, and coastal highways that began construction in the same period. The Avenue of the Giants does not represent important innovations in highway design or construction, either in its original construction or subsequent improvements.

(See continuation sheet, page 22.)

- B11. **Additional Resource Attributes:**
- *B12. **References:**
See continuation sheet, page 23.

B13. **Remarks:**

B14. **Evaluator:** Andrew Hope, Caltrans
Date of Evaluation: September 2011

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

See Location Maps, pages 25-33

B6. Construction History of the Avenue of the Giants (continued from page 16):

The California Department of Highways was established in the last decade of the 19th century and charged with creating a statewide network of highways. Prior to that time, counties and cities had sole responsibility for the construction of roads and bridges in California. [Owens: 45-47] The newly established Department of Highways acquired some existing roads from the counties and began construction of new roads, but progress was slow. Railroads were generally a faster and more comfortable means of transportation between cities.

The growth of automobile ownership in the first decades of the 20th century led to increasing advocacy for better roads. In 1910, California voters approved the sale of \$18 million in bonds for acquisition of right-of-way and construction of highways. [Owens: 48-49] Construction of the state highway system began in earnest at that time. Subsequent bond acts, and the imposition of a state tax on gasoline in 1923, continued and accelerated the state's highway building program.

The Redwood Highway was one of the original highways planned for construction with the 1910 bond funds. This highway would connect southern Marin County, with its ferry access to San Francisco, to the inland cities of Sonoma and Mendocino Counties, and continue north from Willits to Eureka.

Although overland travel between Willits and Eureka was possible before the close of the 19th century, travel from San Francisco to Eureka and other cities and towns along the Northern California coast was generally quicker and easier by ship. Smaller boats connected the coastal towns with inland settlements along the Russian and Eel Rivers. [Cook: 58] The earliest stage road connecting Willits and Eureka headed west from Garberville to Briceland, then turned north to Ferndale and on to Eureka, avoiding much of the canyon of the South Fork of the Eel River, where the current Highway 101 and Avenue of the Giants are located. [Robinson, May-June 1964: 9-10] A later road from Garberville north to Phillipsville was begun in 1881, and eventually extended through the river canyon in the same approximate location as the current Avenue of the Giants. [Cook: 56; Lentell] Portions of the alignment of this 19th century wagon road shifted from year to year, in response to damage caused by flooding and landslides.

Construction of the Redwood Highway (originally designated State Route 1) began on the southerly portion of the route, in Marin, Sonoma and Mendocino Counties. Plans for extending the highway along the South Fork of the Eel River were drawn up in 1914. That portion of the highway that is now designated the Avenue of the Giants was completed by 1920. [Haselwood, 1931: 17] As originally designed, the unpaved highway had a width of 16 feet in some areas and 18 feet in others, with the sharpest curves having a radius of 100 feet or less. Bridge structures over creeks were mostly timber trestles. [Drinkhall: 18; Robinson, Sep-Oct 1964: 17] Although minimal by later standards, the 1914 highway was a substantial improvement over the older wagon road, having a more uniform surface, fewer curves, and larger radius curves.

Portions of the Redwood Highway were constructed by prisoners from San Quentin, housed in temporary labor camps along the route. The California legislature passed a convict labor law in 1915, authorizing the use of prison labor for road construction. The Department of Highways employed prison labor in remote areas where it would have been difficult to find enough free labor, particularly during World War I when many young, able-bodied men were serving in the military. There were prison labor camps along the Redwood Highway in Mendocino and Del Norte Counties from 1915 into the 1920s. It is possible that prison labor contributed to the original construction of the Avenue of the Giants, but evidence for prison labor in specific locations is lacking. [California Highway Commission, 1918: 20-21, 104-109; California Highway Commission, 1926: 143-48]

* Recorded by: Andrew Hope, Caltrans

* Date: August 2011

■ Continuation □ Update

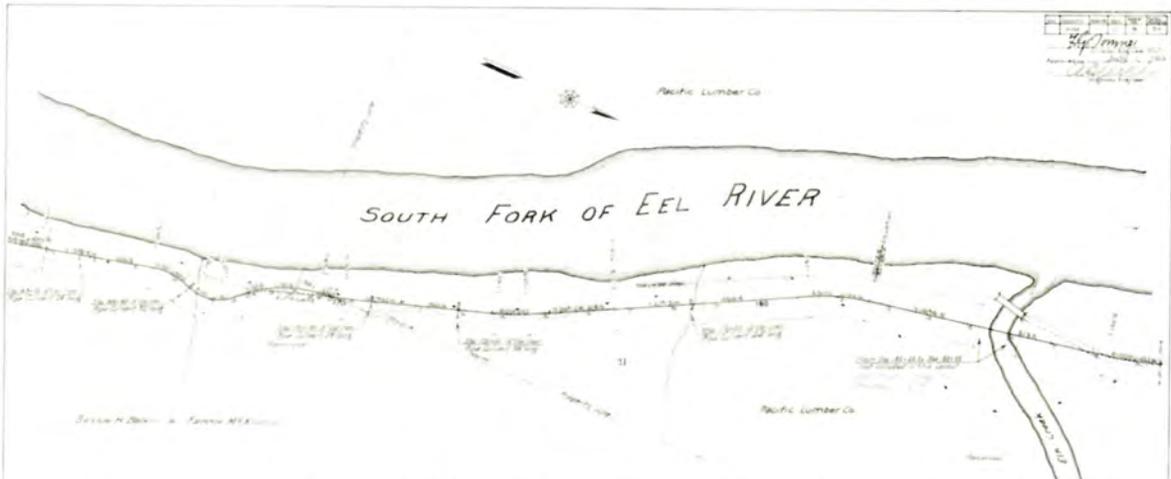


Figure 1: A sheet from the original highway plans of 1914 depicts the proposed highway alignment just south of Elk Creek, covering the approximate current postmiles 10.0 to 10.5. The double dotted line indicates the earlier and more winding wagon road, which crosses Elk Creek slightly to the west of the later state highway. The bold line shows the centerline of the planned state highway, within the uniform width of the highway easement. The sharp curve on the planned alignment, shown at far left, has a radius of just 100 feet.



Photo 26: The original wagon road through the redwood forest in Humboldt County, ca. 1913. [Caltrans Library and History Center, Sacramento]



Photo 27: The new state highway, probably late 1920s. [Caltrans Library and History Center, Sacramento]

* Recorded by: Andrew Hope, Caltrans

* Date: August 2011

■ Continuation □ Update

The first improvements to the highway came with two contracts for widening issued in late 1921 and early 1922. [California Highway Commission, 1924: 178] Plans for this work are not extant, but there is some overlap in the areas covered by the two contracts, suggesting that they were for “spot” improvements in specific locations rather than continuous widening of the entire roadway.

Additional improvements came in the late 1920s and continued to World War II. In 1929, the Department of Highways awarded a contract for improvements to a three-mile long segment extending from Fish Creek to just north of Miranda (approximate current postmiles 4 to 7). By this time, automobile and truck traffic would have been far greater than on the original, pre-1920 highway. The highway alignment was straightened by reducing the number of curves and enlarging the radius of curves. The work reduced the total length of the highway by 0.3 miles, about ten percent of the former length of this segment. Curves on the improved portion of the highway were much more gradual than on the original alignment, having a minimum radius of 400 feet. The highway was also widened to 28 feet, with two ten-foot lanes and four-foot shoulders. [Haselwood, 17-18; 1929 as-built plans] The improved roadway surface consisted of oiled, crushed gravel. Although this was not yet a paved road in the modern sense, the oiled gravel surface would have considerably reduced the amount of traffic-induced dust compared to the original dirt road.



Figure 2: A sheet from the 1929 contract plans showing a segment of the highway south of Miranda, covering the approximate current postmiles 5.4 to 5.7. The double dotted line shows a particularly winding segment of the original highway as constructed beginning in 1914. The bold line shows the centerline of the new and much straighter alignment.

Improvements similar to those carried out in 1929 were undertaken on other segments of the highway through the 1930s and into the early 1940s, making the alignment straighter and increasing the lane widths to ten or 11 feet. Shoulder widths varied, depending on the presence of trees adjacent to the roadway. Several of these contracts included substantial realignment of the highway, leaving bypassed segments for use as local roads. Rather than carrying out these improvements through contracts extending continuously along the highway, the segments chosen for upgrading were those with the most winding alignments and those with the worst roadway surfaces. [Haselwood: 17] As a result, on the eve of World War II the highway consisted of a series of segments of varying width, alignment standards, and surface quality. Also in the 1930s, the highway designation was changed from State Route 1 to U.S. Highway 101.

In 1931, the Division of Highways replaced the bridge over the South Fork of the Eel River at Dyerville, where the highway crosses from the east side of the South Fork to the west side of the Eel. As noted above (page 3), this bridge originally had a steel truss superstructure. Four more bridges were constructed on the highway in 1939-40, replacing the original timber creek crossings with wider and stronger concrete slab and T-beam structures.

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At the time of the 1930s improvements, the typical pavement striping consisted of a single, solid line dividing the two lanes, with no striping at the outer edge of the lanes. Guardrails were constructed of timber posts and rails, similar to the railings on the Ohman Creek and Bear Creek bridges (see photos on pages 6 and 11). None of these early timber guardrails survive to the present, except for the railings of those two bridges.

The Biennial Reports of the California Division of Highways included maps depicting the state highways and their various roadway surfaces. The map in the 1938 report shows just three short segments of what is now the Avenue of the Giants as paved. Each segment is approximately two miles long. The remaining portions of the highway are depicted as “oiled gravel, gravel, or oiled earth.” The first map to depict the entire highway as paved is in the 1954 report, although it is possible that earlier maps were not thoroughly updated and that more of the paving was carried out somewhat earlier. By the early 1950s, the highway had acquired its present alignment and most of its current form and appearance, with continuous paving and modern lane widths.



Photo 28: This ca. 1940 photograph, taken near current postmile 22, shows the highway much as it looks today. The roadway is paved and the width is close to or equal to the current highway width. Later changes include more extensive lane striping and the addition of reflective pavement markers.

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The Avenue of the Giants saw very little alteration after World War II, other than the construction of several bridges. Most of the construction contracts since 1945 have been for repair of storm damage and landslides, drainage improvements, and the repair or replacement of culverts. Reflective markers were added to the pavement in the early 1970s.

The current bridge over Greenlaw Creek, near the northern end of the highway, dates to 1959. Two bridges were constructed in the early 1960s as part of the new Highway 101 segment that bypassed the old highway. One of these carries the Avenue of the Giants over Highway 101, and one carries the newer Highway 101 segment over the Avenue of the Giants. There is a modern interchange where Highway 101 crosses over the Avenue of the Giants at approximate postmile 12.3, with entrance and exit ramps connecting the Avenue of the Giants to the U.S.-101 freeway. The bridge over the South Fork of the Eel River, originally built in 1931, was altered in 1966, with a new concrete girder superstructure replacing the original steel truss (see photo 15 on page 10). More recently, two concrete slab sidehill viaducts were constructed in 1989 and 1995.

Planning began in the early 1950s to upgrade much of the Redwood Highway (Highway 101) to freeway standards, with controlled access and two lanes in each direction, separated by a center median. Trucks largely replaced railroads for hauling timber in the postwar period, and many of the small logging railroads ceased operation. The existing highway was inadequate for the increasing size and number of logging trucks. [Robinson, July-August 1964: 32, and September-October 1964: 14]

In spite of the growing traffic problem, there was considerable opposition to widening the existing highway in areas running through or adjacent to Humboldt Redwoods State Park, due to the number of redwood trees that would need to be removed. The redwood groves were, and continue to be, a major tourist attraction, important to the local economy. Local governments and advocates for preservation of the redwood groves recommended that an entirely new segment of Highway 101 be built on a new alignment. The Division of Highways agreed to the bypass proposal, and construction began in 1957. [Robinson, September-October 1964: 17-21]

The bypass has a roadway width of 60 feet, including four lanes, a center divider, and outside shoulders. Although this new segment of Highway 101 passes through state park lands, its alignment was carefully considered to minimize the number of redwoods to be removed and to avoid the oldest and largest specimens. Most of the trees removed within Humboldt Redwoods State Park were less than 30 inches in diameter, with the largest up to six feet in diameter. [Benedict: 4; Robinson, September-October 1964: 19] With the completion of the bypass in the early 1960s, the older highway became primarily a scenic route for tourists in addition to serving local traffic. Most of the through traffic, including logging trucks, now use Highway 101, although some forms of truck traffic continue to use the older highway to serve the communities along the route. When the bypass was completed, the Division of Highways suggested turning over the old road to the State Department of Parks. The Department of Parks declined the offer, however, largely because of the cost of maintaining the road. The bypassed segment of Highway 101, retained by the Division of Highways, then became State Route 254, the Avenue of the Giants. [Robinson, September-October 1964: 21]

B10. Significance (continued from page 16):

The design characteristics of the Avenue of the Giants are typical of two-lane highways throughout California. The highway has tighter curves than many other state highways because there have been few improvements since completion of the Highway 101 bypass in the early 1960s. However, the highway has modern lane widths, paving, striping, reflective markers, and signs. The few remaining historic features, such as wood posts defining pullouts and wood bridge railings, appear intermittently along the highway, along with modern features such as metal guardrails and bridges of recent construction. No segment of the highway possesses a consistent historical appearance or retention of more than a few incidental historic design features. The Avenue of the Giants is not distinctive for its design qualities, but for its spectacular setting amid the redwood groves.

National Register criterion A

The Avenue of the Giants may meet National Register criterion A for its association with the initial construction of the state highway system beginning in the second decade of the twentieth century. As originally constructed beginning in 1914, the Avenue of the Giants was part of the much longer Redwood Highway, extending from Sausalito to Eureka and on to Crescent City and Oregon. Much of this route (now U.S. Highway 101) has been expanded to a divided highway or freeway. The Avenue of the Giants represents the longest segment that remains a two-lane highway. However, the Avenue of the Giants has been widened, straightened, paved, and otherwise improved to the point that it bears no resemblance to the 16-foot to 18-foot wide unpaved road that existed from 1914 into the 1930s. The present highway possesses only integrity of location and setting relative to that early period, with the caveat that integrity of location does not mean that the present highway retains its historic alignment. The original alignment was much more winding and had much tighter curves, as shown in figure 2 on page 18.

Tourism is an important part of the local economy throughout the redwood region of Mendocino, Humboldt, and Del Norte Counties. Tourist attractions include drive-through trees and other novel uses of redwood trees or redwood logs, and shops that sell large-scale wood carvings. There are also tourist attractions not directly related to the redwood forests, such as Confusion Hill between Leggett and Piercy in Mendocino County. These properties are widely dispersed along U.S. Highway 101 from Willits to the Oregon border, rather than being concentrated along the 32-mile route of the Avenue of the Giants. Also, these tourist properties are of uncertain age and integrity. The Avenue of the Giants is not eligible for National Register listing as a contributing "spine" connecting these various tourist properties, since only a small number of tourist properties in the redwood region are accessed from this highway.

Similarly, the road itself is not a contributor to any potential historic district made up of buildings within the various small towns along the route. Any such district would primarily be made up of buildings, and the highway would not contribute to its historic character. The Avenue of the Giants generally has paved shoulders of standard width within these towns, and therefore lacks the distinctive character of the segments that pass through the redwood groves.

Features associated with the Redwood Highway (including Highway 101 in Mendocino, Humboldt, and Del Norte Counties) are documented in the Historic American Engineering Record (HAER) as *Redwood National & State Parks Roads, California Coast from Crescent City to Trinidad, Crescent City Vicinity, Del Norte, CA*. In spite of the title, this documentation includes properties and highway features located as far south as Willits in Mendocino County. This significance statement notes that:

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The significance of the Redwood Highway is not simply that of a picturesque thoroughfare, although in the 1920s, parts of it, like the Avenue of the Giants, were identified as exceptional motoring experiences. Its evolution and the early preservation of the landscape is the essence of a rising U.S. conservation movement, at the core of which was the Save-the-Redwoods League, whose work resulted in a string of state parks connected to the road. In contrast to the mission of park preservationists and philanthropists, local and regional interest also marked the highway from the 1920s onward as a premier tourist destination and advocated for its interests.

The photographs included in the HAER documentation include views of several bridges and segments of the Redwood Highway, as well as the Willits arch over Highway 101 (with its message, "Gateway to the Redwoods"), drive-through trees and other roadside attractions, roadside buildings, and views of the coastal landscape from the highway. Not all of these features are historic, and the landscape views are generally scenic rather than cultural landscapes. The Redwood Highway is used as an organizing device or armature for documenting features related to the redwood region. While the highway provides access to the redwood forests, it is a modern freeway that is not eligible for National Register listing. Even the Avenue of the Giants retains integrity only to the post-WWII period.

The HAER documentation includes a lengthy discussion of the Save-the-Redwoods League. The League was founded in 1919, primarily by a group of wealthy men who not only advocated for the preservation of the redwood groves, but acquired redwood forest property with the intent of deeding it to the state or federal governments for the establishment of parks. The legacy of the Save-the-Redwoods League is the state parks in the redwood region, including Humboldt Redwoods (established in 1927) Richardson Grove, and Jedediah Smith state parks. The Redwood Highway was the means of accessing the redwood groves, but the road itself is not the significant property associated with these historical events. Furthermore, the Redwood Highway (including the Avenue of the Giants) lacks integrity relative to the period of significance of the Save-the-Redwoods League and the creation of the redwood parks.

The Avenue of the Giants has served as a popular tourist drive since the pre-WWII period, and particularly within the last 50 years, since the completion of the Highway 101 bypass in the early 1960s. It is important for its scenic values rather than as an historic property. The Avenue of the Giants is not eligible for listing in the National Register of Historic Places and is not an historical resource for the purpose of compliance with the California Environmental Quality Act (CEQA).

B12. References (continued from page 16):

"Avenue of the Giants Parkway Opened on Highway 101," *California Highways and Public Works*, Sept.-Oct. 1960, 70.

Benedict, H.W. "Dean Creek to Miranda," *California Highways and Public Works*, Mar.-Apr. 1966, 16-19.

_____. "Redwood Freeway," *California Highways and Public Works*, Jan.-Feb. 1962, 3-7.

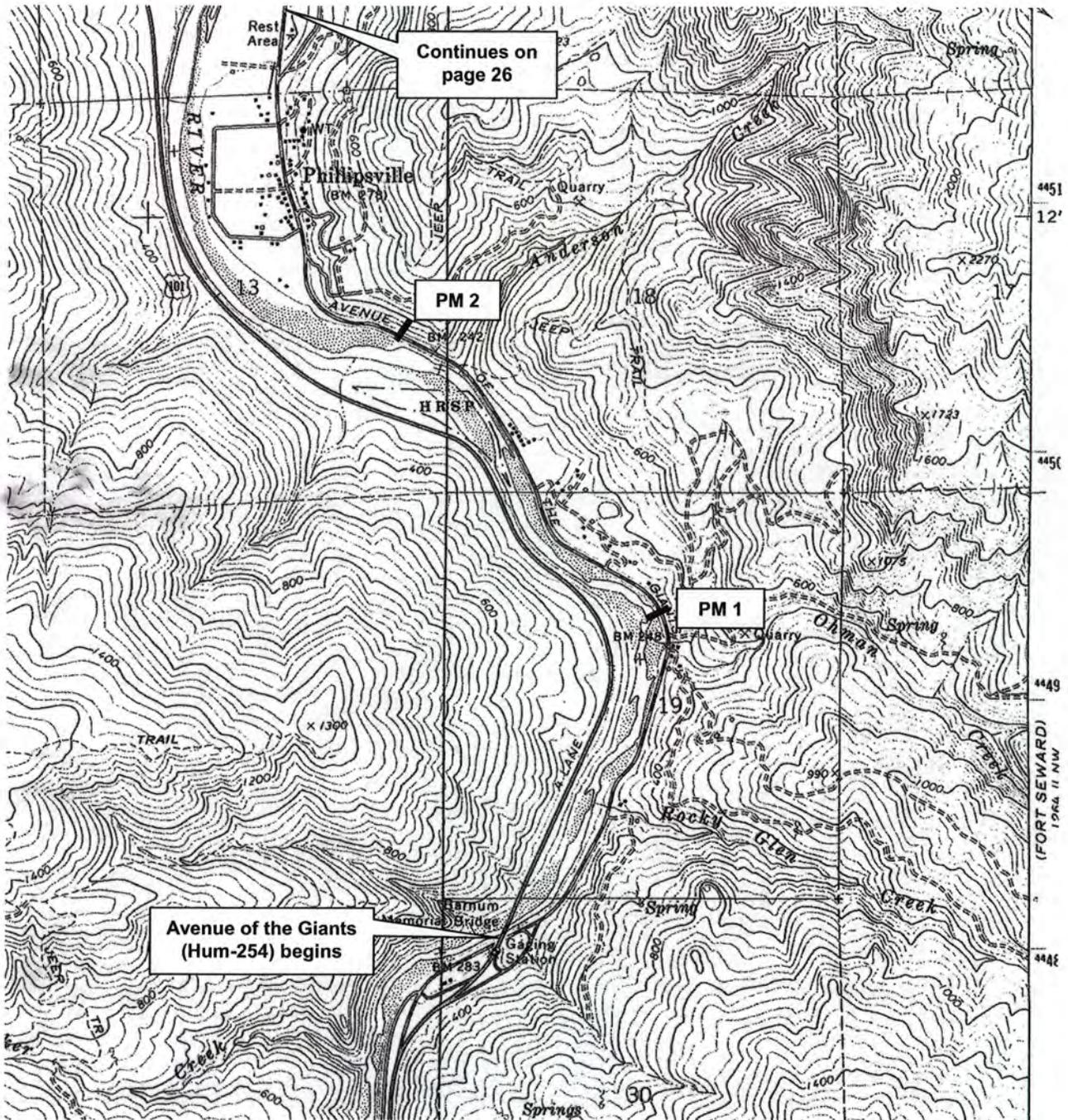
California Department of Transportation. As-built plans for various projects on State Route 254 in Humboldt County, 1914-2010.

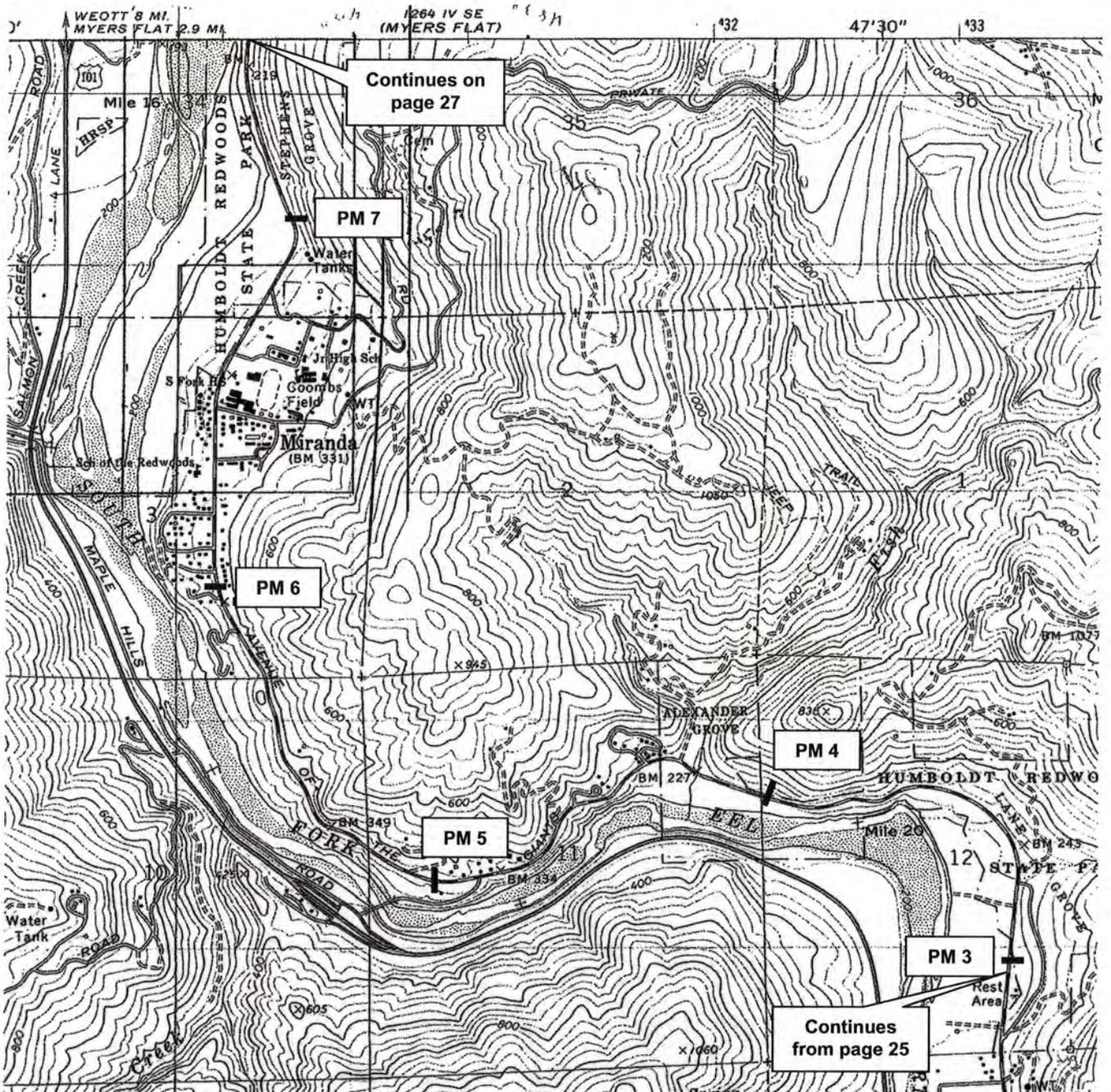
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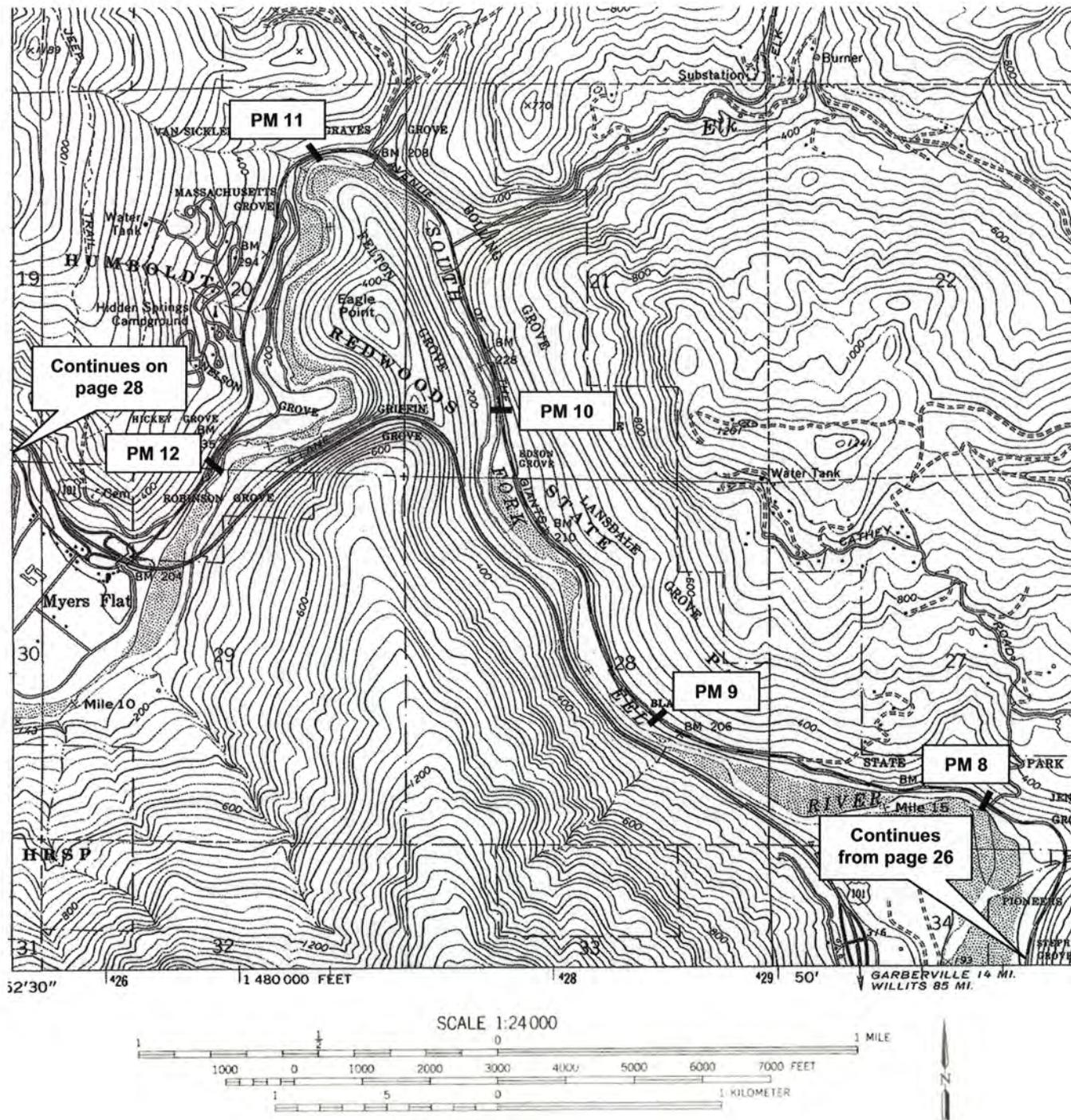
* Date: August 2011

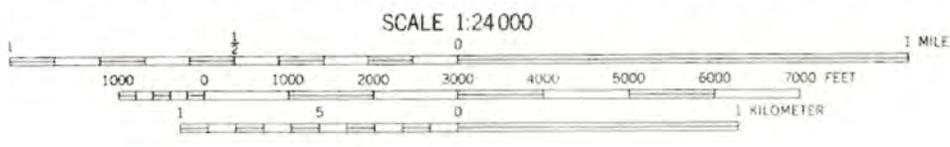
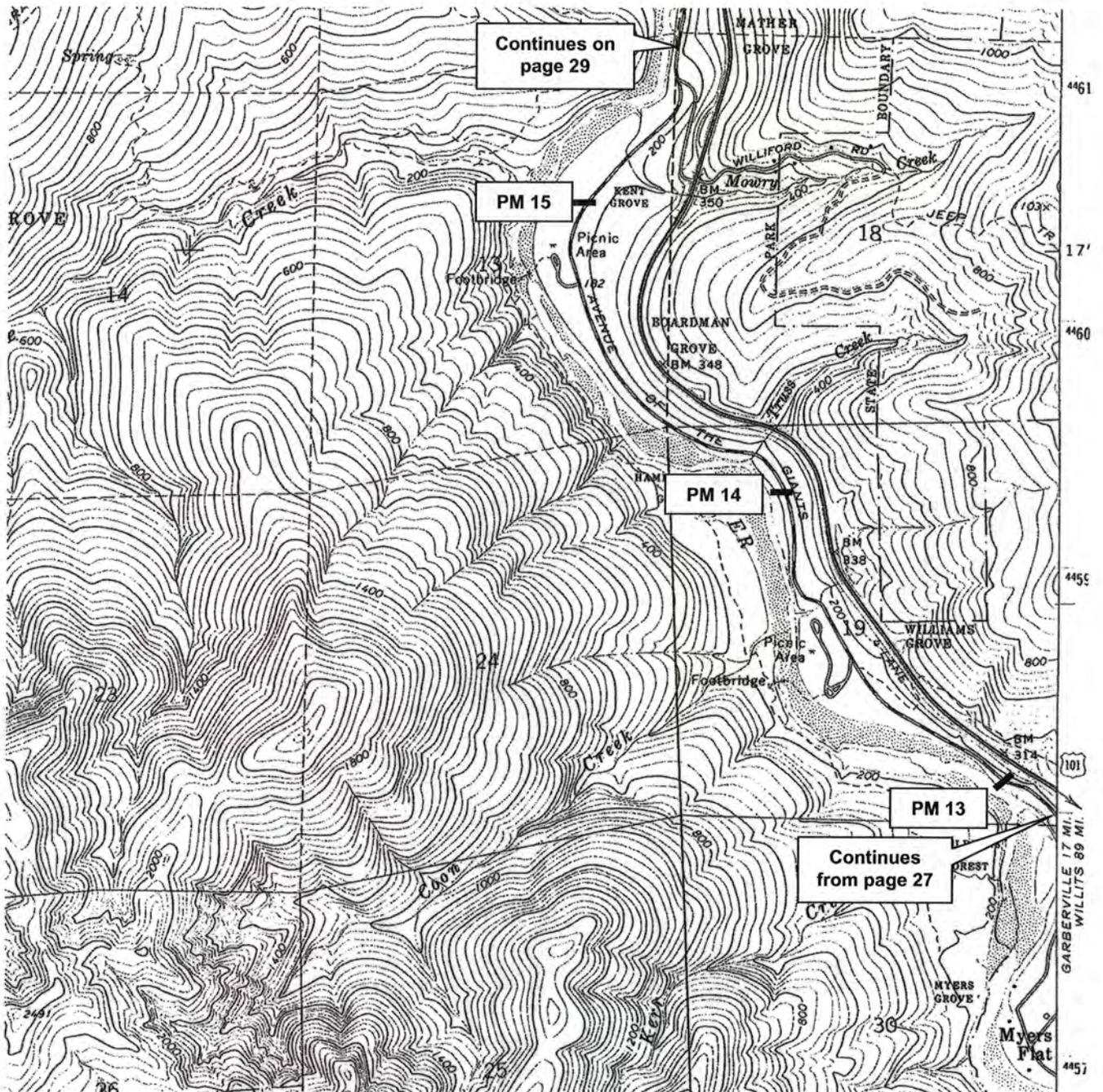
Continuation Update

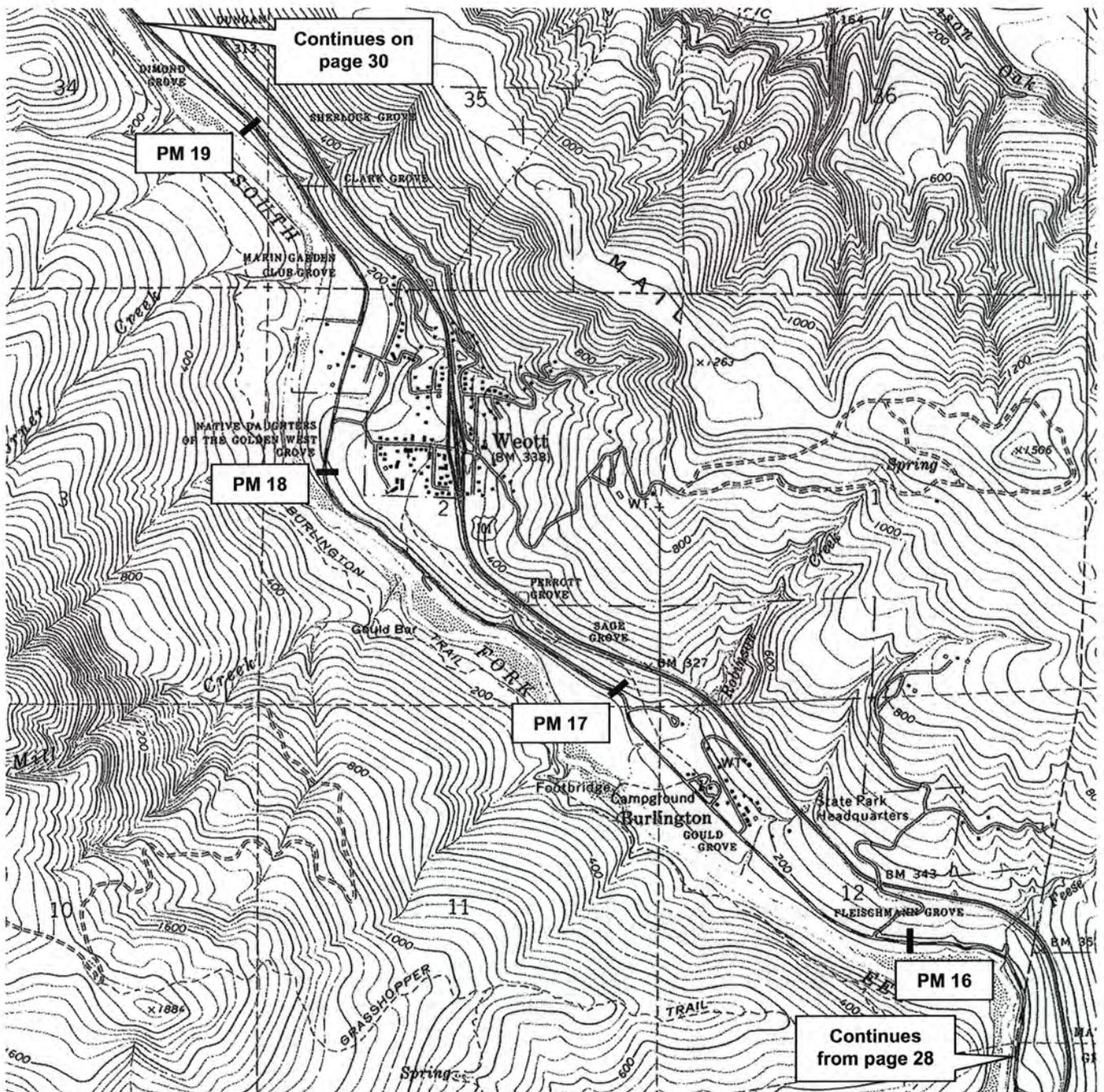
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- Leatherwood, George. "Redwood Freeway," *California Highways and Public Works*, May-June 1956, 25-28+.
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- Robinson, John. "The Redwood Highway. Part I— Early History of Transportation in the Northern Coastal Counties," *California Highways and Public Works*, May-June 1964, 2-11.
- _____. "The Redwood Highway. Part II – Building the Road," *California Highways and Public Works*, July-August 1964, 24-33.
- _____. "The Redwood Highway. Part III – Bringing it up to Modern Standards," *California Highways and Public Works*, September-October 1964, 14-23.
- USGS Quad Maps: Garberville (15') 1916 and 1949; Miranda (7.5') 1970; Myers Flat (7.5') 1969; Redcrest (7.5') 1969; Scotia (15') 1951 and (7.5') 1970; Weott (15') 1916 and 1949, and (7.5') 1969.

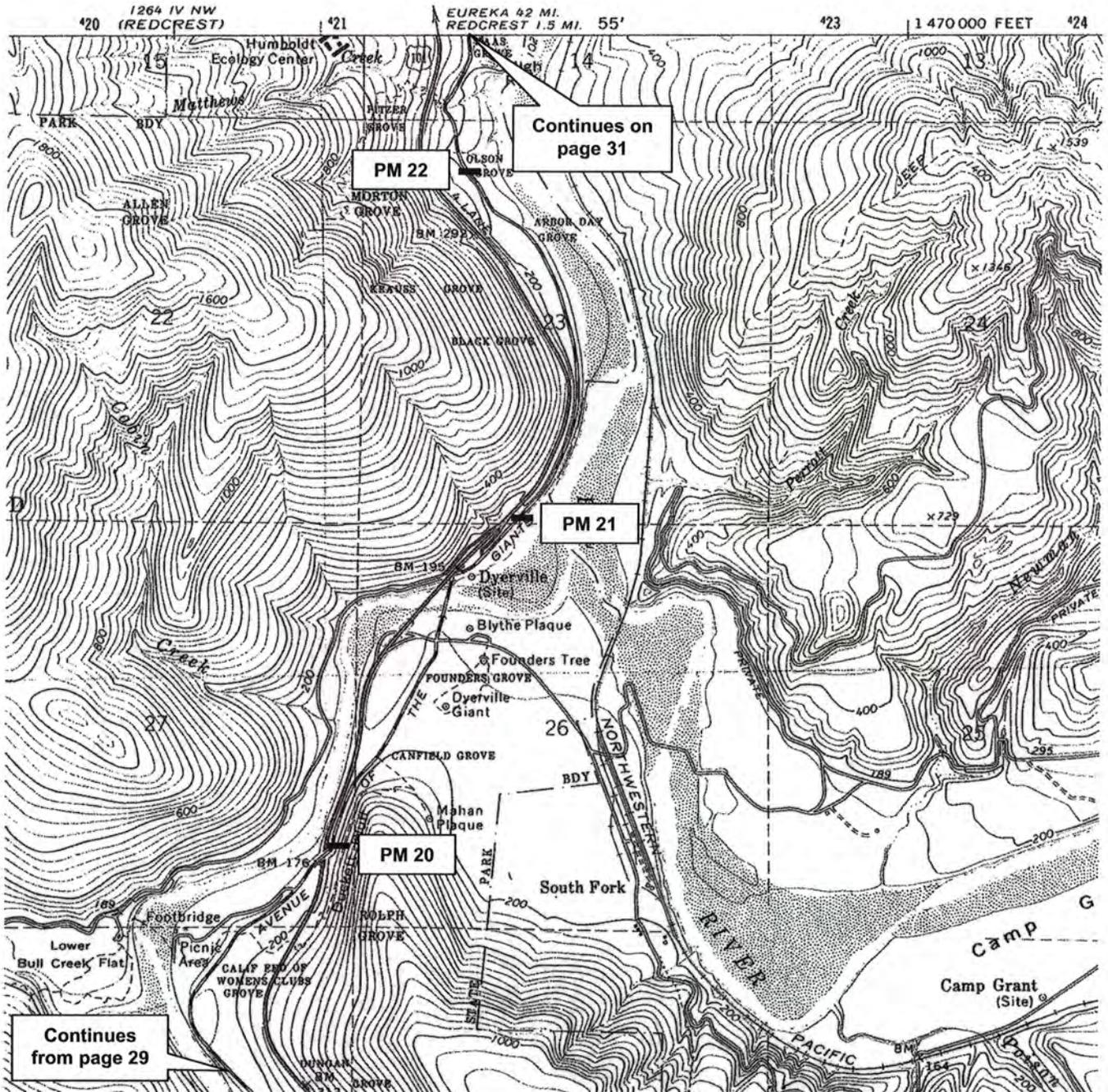


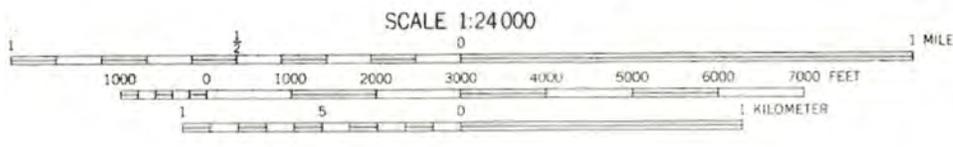
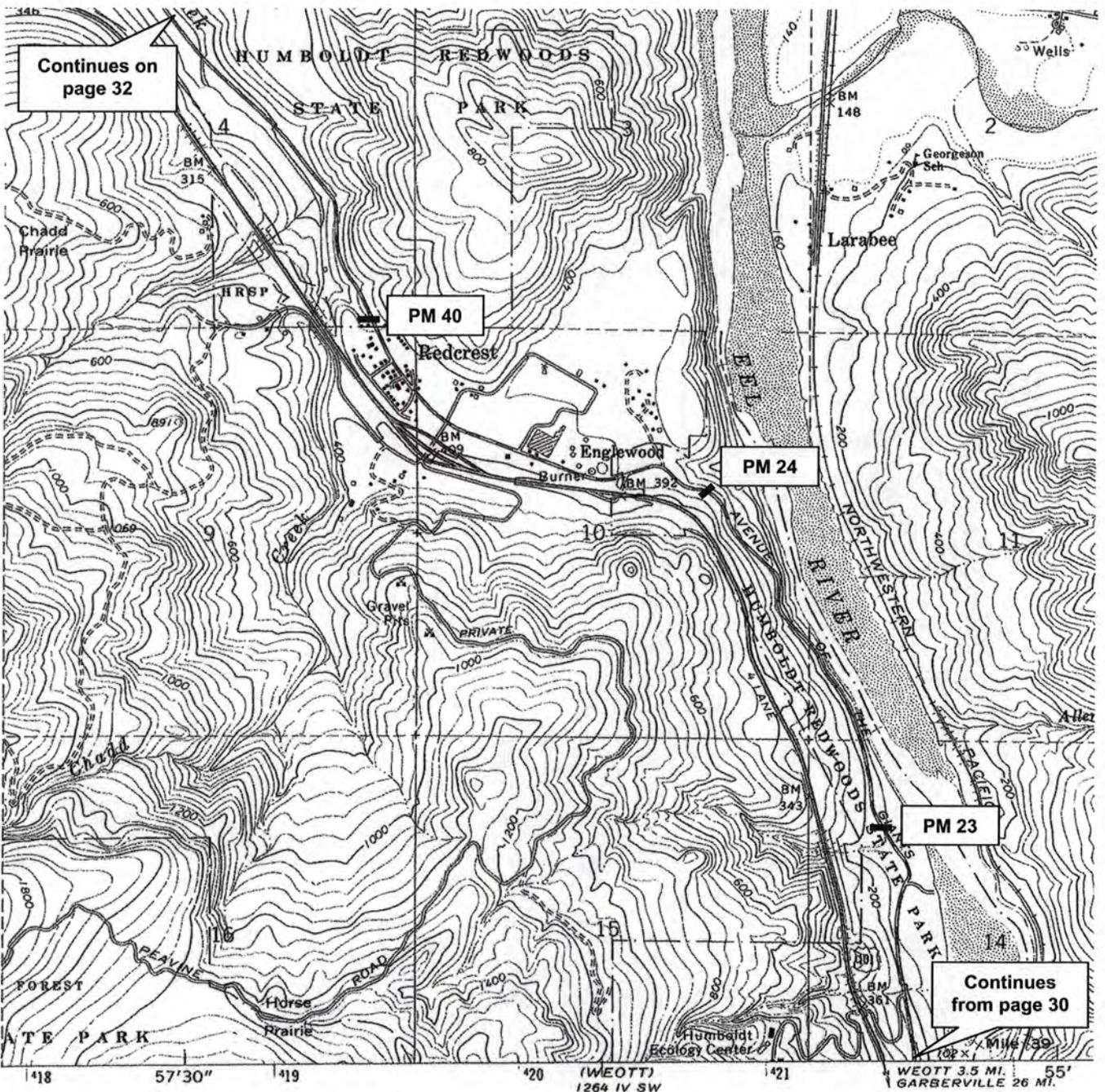


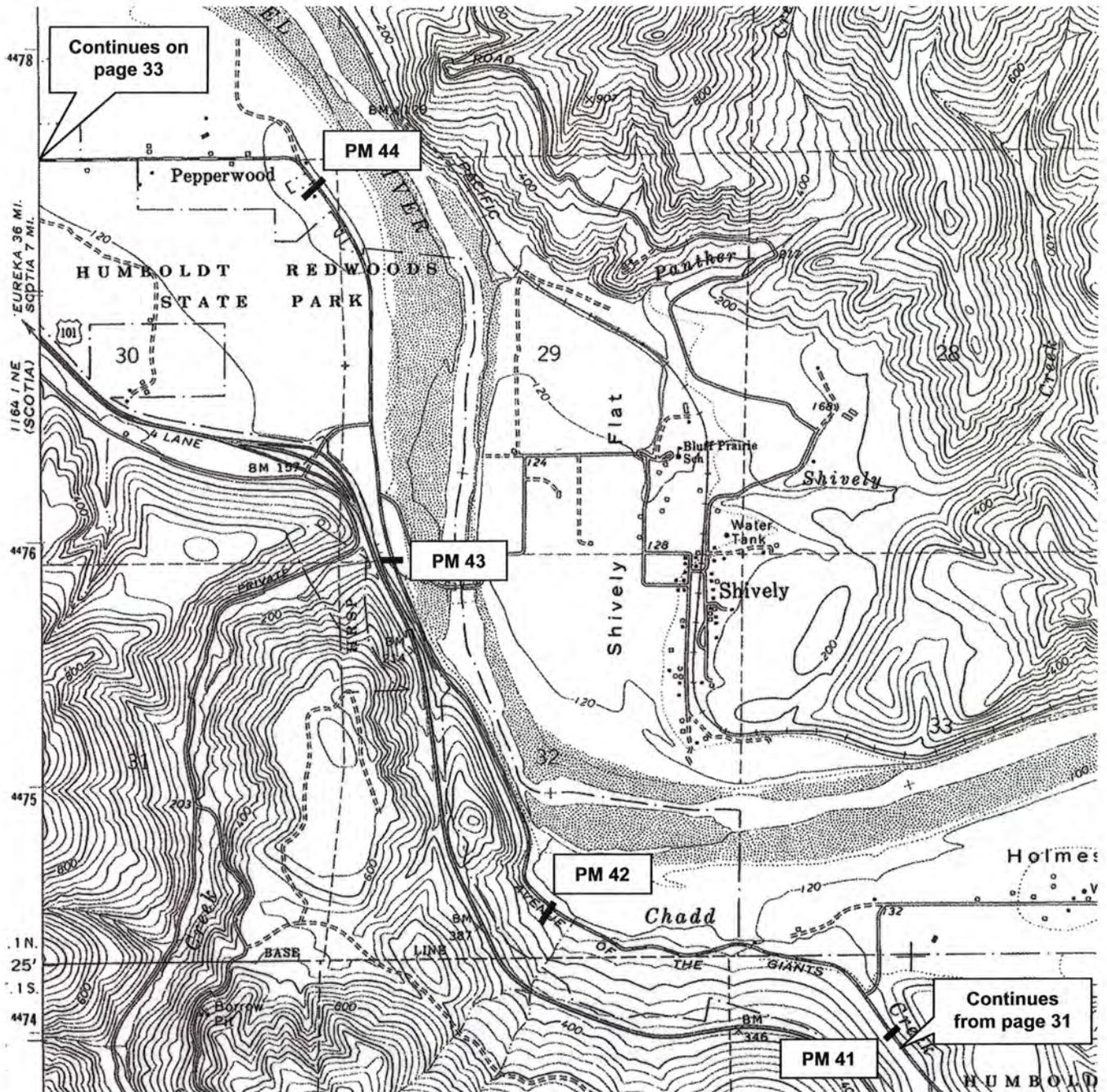


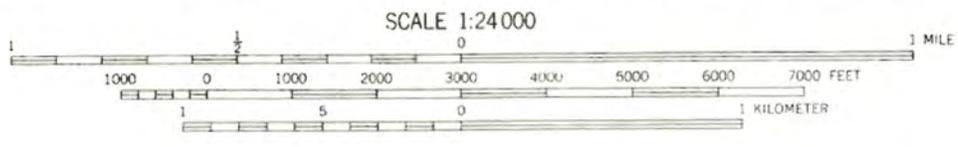
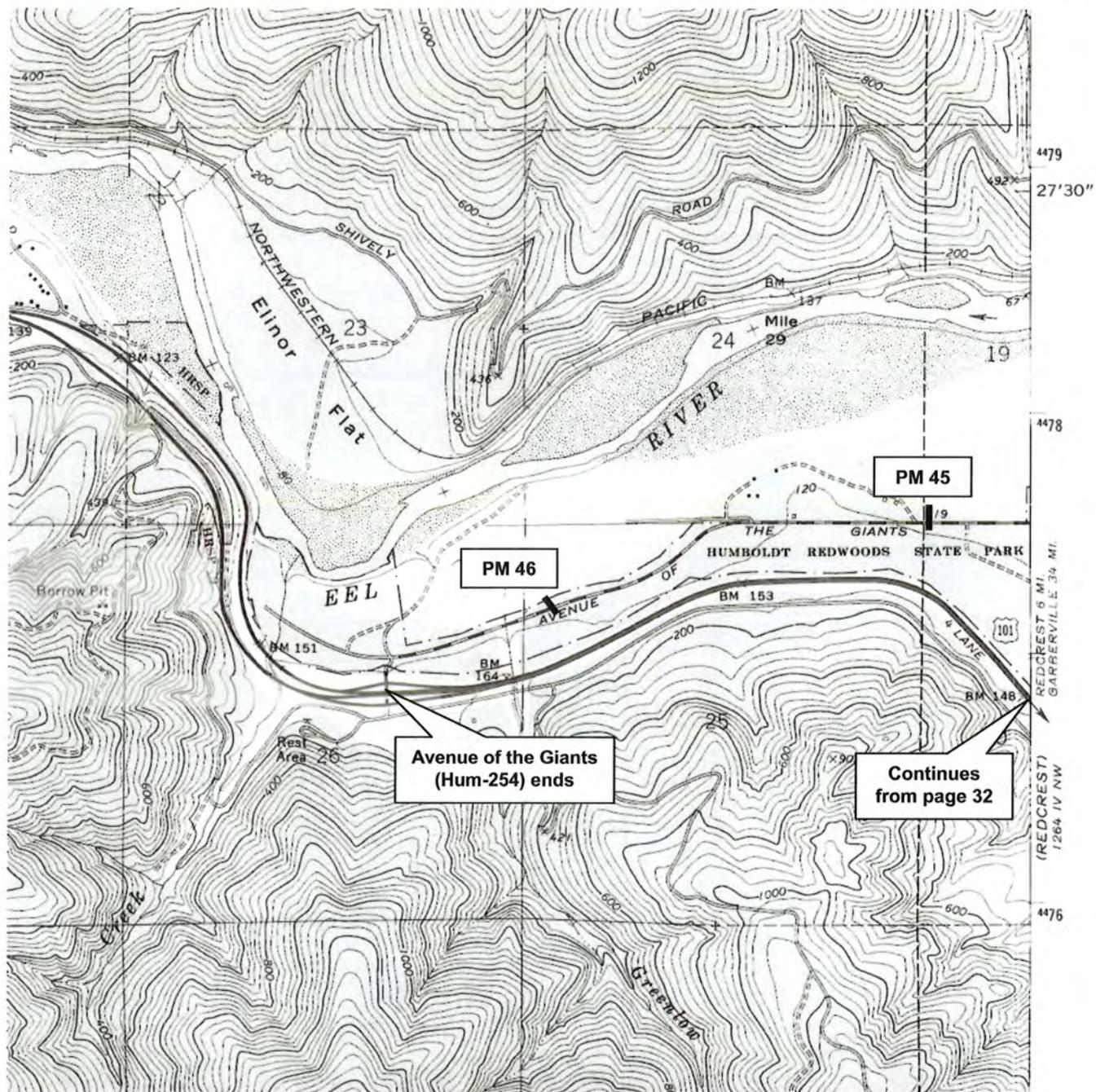












ATTACHMENT 3

Bridge Inventory Sheet

Bridge No.	County	Route	Postmile	Name	City	Year Bld.	NR Status
04 0006	Humboldt	101	14.31	DEAN CREEK		1967	5
04 0006S	Humboldt	101	14.31	DEAN CREEK		1967	5
04 0007	Humboldt	254	0.88	OHMAN CREEK		1939	5
04 0008	Humboldt	254	10.43	ELK CREEK		1939	5
04 0009	Humboldt	254	10.8	BRIDGE CREEK		1939	5
04 0010	Humboldt	254	20.64	SOUTH FORK EEL RIVER		1931	5
04 0012	Humboldt	254	43.02	BEAR CREEK		1939	5
04 0014	Humboldt	101	48.69	EEL RIVER BRIDGE AND OH		1965	5
04 0015	Humboldt	283	0.12	EEL RIVER BOH		1941	5
04 0016L	Humboldt	101	53.97	EEL RIVER	Rio Dell	1974	5
04 0016R	Humboldt	101	53.91	EEL RIVER	Rio Dell	1941	5
04 0017L	Humboldt	101	56.84	VAN DUZEN RIVER		1952	5
04 0017R	Humboldt	101	56.84	VAN DUZEN RIVER		1996	5
04 0020	Humboldt	101	67.87	SALMON CREEK		1957	5
04 0021L	Humboldt	101	74.6	ELK RIVER		1956	5
04 0021R	Humboldt	101	74.6	ELK RIVER		1988	5
04 0022L	Humboldt	101	79.78	EUREKA SLOUGH	Eureka	1943	5
04 0022R	Humboldt	101	79.78	EUREKA SLOUGH	Eureka	1956	5
04 0023L	Humboldt	101	84.5	JACOBY CREEK	Arcata	1920	5
04 0023R	Humboldt	101	84.5	JACOBY CREEK	Arcata	1955	5
04 0024L	Humboldt	101	84.7	GANNON SLOUGH		1996	5
04 0024R	Humboldt	101	84.7	GANNON SLOUGH	Arcata	1955	5
04 0025L	Humboldt	101	89.63	MAD RIVER		1958	5
04 0025R	Humboldt	101	89.63	MAD RIVER		1929	5
04 0026L	Humboldt	101	97.46	LITTLE RIVER		1945	5
04 0026R	Humboldt	101	97.46	LITTLE RIVER		1964	5
04 0027	Humboldt	101	109.17	BIG LAGOON		1958	5
04 0028	Humboldt	101	121.09	REDWOOD CREEK		1988	5
04 0029	Humboldt	101	122.86	PRAIRIE CREEK		1989	5
04 0030	Humboldt	101	124.71	LOST MAN CREEK		1986	5
04 0031L	Humboldt	101	57.36	VAN DUZEN RIVER OVERFLOW		1952	5
04 0031R	Humboldt	101	57.36	VAN DUZEN RIVER OVERFLOW		1952	5
04 0034	Humboldt	101	120.02	REDWOOD CREEK OVERFLOW		1950	5
04 0036L	Humboldt	299	1.56	MAD RIVER		1965	5
04 0036R	Humboldt	299	1.55	MAD RIVER		1948	5
04 0039	Humboldt	101	8.8	E BRNCH S FK EEL RIVER		1968	5
04 0042	Humboldt	299	22.33	REDWOOD CREEK		1965	5
04 0049	Humboldt	255	8.77	ROUTE 255/101 SEPARATION	Arcata	1965	5
04 0050	Humboldt	299	42.95	SOUTH FORK TRINITY RIVER		1988	5

0007 - Reinforced concrete continuous girder

0008 - Reinforced concrete continuous slab w/ cantilever end spans on r.c. cast in place pile bent.

0009 - R.C. girder

0012 - R.C. continuous girder w/ cantilever end spans on r.c. piers w/ precast conc. pile foundations

ATTACHMENT 3

California Historic Bridge Inventory Print-Out Sheet

Bridge No.	County	Route	Postmile	Name	City	Year Bilt	NR Status
04 0006	Humboldt	101	14.31	DEAN CREEK		1967	5
04 0006S	Humboldt	101	14.31	DEAN CREEK		1967	5
04 0007	Humboldt	254	0.88	OHMAN CREEK		1939	5
04 0008	Humboldt	254	10.43	ELK CREEK		1939	5
04 0009	Humboldt	254	10.8	BRIDGE CREEK		1939	5
04 0010	Humboldt	254	20.64	SOUTH FORK EEL RIVER		1931	5
04 0012	Humboldt	254	43.02	BEAR CREEK		1939	5
04 0014	Humboldt	101	48.69	EEL RIVER BRIDGE AND OH		1965	5
04 0015	Humboldt	283	0.12	EEL RIVER BOH		1941	5
04 0016L	Humboldt	101	53.97	EEL RIVER	Rio Dell	1974	5
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04 0024L	Humboldt	101	84.7	GANNON SLOUGH		1996	5
04 0024R	Humboldt	101	84.7	GANNON SLOUGH	Arcata	1955	5
04 0025L	Humboldt	101	89.63	MAD RIVER		1958	5
04 0025R	Humboldt	101	89.63	MAD RIVER		1929	5
04 0026L	Humboldt	101	97.46	LITTLE RIVER		1945	5
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04 0027	Humboldt	101	109.17	BIG LAGOON		1958	5
04 0028	Humboldt	101	121.09	REDWOOD CREEK		1988	5
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04 0030	Humboldt	101	124.71	LOST MAN CREEK		1986	5
04 0031L	Humboldt	101	57.36	VAN DUZEN RIVER OVERFLOW		1952	5
04 0031R	Humboldt	101	57.36	VAN DUZEN RIVER OVERFLOW		1952	5
04 0034	Humboldt	101	120.02	REDWOOD CREEK OVERFLOW		1950	5
04 0036L	Humboldt	299	1.56	MAD RIVER		1965	5
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04 0049	Humboldt	255	8.77	ROUTE 255/101 SEPARATION	Arcata	1965	5
04 0050	Humboldt	299	42.95	SOUTH FORK TRINITY RIVER		1988	5