

United States Department of the Interior  
National Park Service



RECEIVED  
SEP 27 1994  
OHF

National Register of Historic Places  
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Dinkey Creek Bridge  
other names/site number Fresno County Bridge No. 42C-04, (Caltrans assigned No.)

2. Location

street & number On abandoned spur road off Dinkey Creek Road  not for publication.  
city or town Dinkey Creek Village, Sierra National Forest  vicinity  
state California code CA county Fresno code 019 zip code 936640

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this  nomination  request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property  meets  does not meet the National Register criteria. I recommend that this property be considered significant  nationally  statewide  locally. ( See continuation sheet for additional comments.)  
\* see cover letter from Evan DeBlouis \*  
Signature of certifying official/Title \_\_\_\_\_ Date \_\_\_\_\_  
State of Federal agency and bureau \_\_\_\_\_

In my opinion, the property  meets  does not meet the National Register criteria. ( See continuation sheet for additional comments.)  
[Signature] 2/21/95  
Signature of certifying official/Title \_\_\_\_\_ Date \_\_\_\_\_  
California Office of Historic Preservation  
State or Federal agency and bureau \_\_\_\_\_

4. National Park Service Certification

I hereby certify that the property is:  
 entered in the National Register.  See continuation sheet.  
 determined eligible for the National Register  See continuation sheet.  
 determined not eligible for the National Register.  
 removed from the National Register.  
 other, (explain): \_\_\_\_\_  
Signature of the Keeper [Signature] Date of Action 9/5/96

Dinkey Creek Bridge

Name of Property

Fresno County, California

County and State

5. Classification

Ownership of Property (Check as many boxes as apply)

Category of Property (Check only one box)

Number of Resources within Property (Do not include previously listed resources in the count.)

- private, public-local, public-State, public-Federal

- building(s), district, site, structure, object

Table with 2 columns: Contributing, Noncontributing. Rows for buildings, sites, structures, objects, Total.

See continuation sheet.

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.)

Number of contributing resources previously listed in the National Register

N/A

None

6. Function or Use

Historic Functions (Enter categories from instructions)

Current Functions (Enter categories from instructions)

TRANSPORTATION/ vehicular related

TRANSPORTATION/ pedestrian related

7. Description

Architectural Classification (Enter categories from instructions)

Materials (Enter categories from instructions)

OTHER: Timber Bowstring Arch-Truss

foundation CONCRETE

walls N/A

roof N/A

other, Truss and Deck- WOOD

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

Attached

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations  
(Mark "x" in all the boxes that apply.)

Property is:

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or grave.
- D a cemetery.
- E a reconstructed building, object, or structure.
- F a commemorative property.
- G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance

(Enter categories from instructions)

ENGINEERING

Period of Significance

1938

Significant Dates

1938- Bridge constructed

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

May, T.K/US Forest Service-CCC

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.) Attached.

Previous documentation on file (NPS):

Primary location of additional data:

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # \_\_\_\_\_
- recorded by Historic American Engineering Record # \_\_\_\_\_

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository:

Files of the Sierra National Forest

1600 Tollhouse Rd., Clovis, CA 93611

Dinkey Creek Bridge  
Name of Property

Fresno County, California  
County and State

**10. Geographical Data**

Acreeage of Property 0.08 Acre

**UTM References**

(Place additional UTM references on a continuation sheet.)

1 

1	1	3	0	8	5	6	0	4	1	0	4	3	2	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

  
Zone Easting Northing

3 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

  
Zone Easting Northing

2 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

4 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

See continuation sheet

**Verbal Boundary Description**

(Describe the boundaries of the property on a continuation sheet.)

**Boundary Justification**

(Explain why the boundaries were selected on a continuation sheet.)

**11. Form Prepared By**

name/title Donald W. Alden- Consulting Bridge Engineer/Historian

organization self employed date August 12, 1994

street & number 6809 Raldina Court telephone (916) 489-8196

city or town Carmichael state CA zip code 95608

**Additional Documentation**

Submit the following items with the completed form:

**Continuation Sheets**

**Maps**

A USGS map (7.5 or 15 minute series) indicating the property's location.

A Sketch map for historic districts and properties having large acreage or numerous resources.

**Photographs**

Representative black and white photographs of the property.

**Additional Items**

(Check with the SHPO or FPO for any additional items)

**Property Owner**

(Complete this item at the request of SHPO or FPO.)

name \_\_\_\_\_

street & number \_\_\_\_\_ telephone \_\_\_\_\_

city or town \_\_\_\_\_ state \_\_\_\_\_ zip code \_\_\_\_\_

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

United States Department of the Interior  
National Park Service

# National Register of Historic Places Continuation Sheet

Section number 5 & 10 Page 1

---

Dinkey Creek Bridge  
Fresno County, California

## 5 - CLASSIFICATION

Ownership of Property- The bridge and surrounding land are Federal public property and are administered by the Kings River Ranger District of the Sierra National Forest, U.S. Forest Service, U.S. Department of Agriculture. The headquarters of the Sierra National Forest is 1600 Tollhouse Road, Clovis, CA 93611-0532.

## 10 - GEOGRAPHICAL DATA

Verbal Boundary Description- The boundary is about 95 feet long and 35 feet wide which encompasses only the bridge as shown on the sketch map of the immediate site which is included as Attachment #2.

Boundary Justification- The boundaries are the bridge itself. It is the only item of historic interest in the immediate vicinity.

United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation SheetSection number 7 Page 1Dinkey Creek Bridge  
Fresno County, California

## NARRATIVE DESCRIPTION

The Dinkey Creek Bridge is a single span timber truss of a unique bowstring-arch type constructed in 1938 as a highway bridge to carry McKinley Grove Road over Dinkey Creek. Its diagonal truss members are sloped toward the abutments in a Pratt truss configuration. The bridge spans 90 feet between unreinforced concrete abutment foundations. With trusses spaced 25'-2" apart, the bridge provides a 20 foot roadway width between timber wheelguard curbs.

The bridge is located over Dinkey Creek, a perennial creek, at an elevation of about 5,680 feet in the small recreational community of Dinkey Creek. The site is in a beautiful wooded valley not far from stands of giant Sequoia redwood trees of the McKinley and other groves on the western slopes of the Sierra Nevada Mountains about 42 straight-line miles east of Fresno, California.

The bridge was built in 1938 by the U.S. Forest Service, using Civilian Conservation Corps labor, to serve the increasing needs of recreational and commercial traffic; timber harvest and summer cattle grazing. It was closed to vehicular traffic in 1965 due to rot in the timber decking and in portions of some stringers and has served as a pedestrian only bridge since then. Vehicular traffic is now carried on a newer bridge about 0.35 mile downstream built in 1956.

The use of bowstring arch-trusses (see Attachment #4), although fairly common for more lightly loaded roof trusses, is somewhat rare for timber bridges. The designer of Dinkey Creek Bridge, Mr. T. K. May, believed it to be the only bridge of this type in California at the time it was built. During the Caltrans inventory survey of potentially historic bridges which was completed in 1987, no timber bridges of this type were found. This bridge was not included in that inventory because it no longer carried traffic and was no longer on a public highway. Because of its unique design, the West Coast Lumberman's Association (WCLA) had Mr. May build a model of the bridge for display at the U.S. Forestry Laboratory in Richmond, California.<sup>1</sup>

United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation SheetSection number 7 Page 2Dinkey Creek Bridge  
Fresno County, CA

The design is also historically significant because it was among the first in America to utilize metal devices embedded in the joints between timbers to increase the strength of bolted connections. The split-ring type (see Attachment #5) were used. The use of these devices made it feasible to use timber for all the new members in bowstring-type trusses because they enabled the spliced joints in the vertical members and lower chord to carry the large tensile forces. In earlier timber bridges, such as most covered bridges, metal rods rather than timbers were used for members subject to large tensile forces because of weakness in the timber joint designs then in use. These devices had been previously used in Europe and after undergoing tests by the Forest Products Laboratory of the Department of Agriculture to determine the best types for American woods and construction methods, their manufacture and use began in the United States. T.K. May, when employed by the California Division of Highways, designed the first bridge in the U.S. to utilize these timber connecting devices; the 1935 Dolan Creek Bridge on the Carmel-San Simeon Highway.<sup>4</sup> This bridge has since been demolished thus leaving the Dinkey Creek Bridge as quite possibly the oldest surviving timber bridge in the U.S. with timber connecting devices. The type of connectors used at Dinkey Creek consist of steel rings which fit into precut matching circular grooves which are cut into the abutting faces of timbers concentric to each bolt hole. The use of these devices has continued into present times for heavily loaded timber structures.

Mr T.K. "Tank" May was a bridge engineer who specialized in the design of timber bridges for the California Division of Highways (now called Caltrans) until he left this position in 1937 to accept a similar position with the West Coast Lumbermen's Association (WCLA) of Seattle, Washington.<sup>2&7</sup> The WCLA was a trade association whose mission was to promote the use of timber by increasing its reliability through strict grading rules and by developing and recommending typical designs and details for timber structures for use by engineers and architects.

Some researchers<sup>1</sup> have reported that the bridge was designed by T.K. May when he was employed by the California Division of

## National Register of Historic Places Continuation Sheet

Section number 7 Page 3

---

Dinkey Creek Bridge  
Fresno County, CA.

Highways and constructed in 1934. Other records, including those in Caltrans files, indicate that May designed the bridge when employed by the WCLA and that construction was completed in 1938.<sup>5</sup> This researcher believes that the 1938 date of construction is correct and that Mr. May designed the bridge as an employee of the Division of Highways. The original plans of the truss span are reported to be conserved at the Smithsonian Institution.<sup>1</sup> The confusion about who employed May at the time the bridge was designed was probably created by a booklet, "Highway Structures of Douglas Fir"<sup>8</sup>, published by the WCLA in which details of the design were shown on sheets with WCLA title blocks. However, these sheets are dated 1939 indicating that they were copied from the original plans after the bridge had been built. Furthermore, the WCLA was not in the business of providing professional engineering services while the Division of Highways often provided such services to other public agencies. The original plans for the concrete abutments, which are nearly always built first were prepared by Edgar C. Smith, the Fresno County Surveyor, and are dated June 1938. This further establishes that construction was probably accomplished during the summer of 1938 rather than in 1934.

The trusses were constructed of Douglas fir treated with a creosote preservative while the deck planking was untreated Douglas fir.<sup>5</sup> The use of preservative probably explains the unusually long survival of the trusses which had no protective covering. The timbers were precut and the trusses test assembled by the Colletti Construction Company of San Rafael, then taken apart and trucked to the bridge site for erection and assembly by a Civilian Conservation Corps (CCC) crew. The abutments (footings) were constructed of unreinforced Portland cement concrete placed by the Cyclopean method (cobblestones added by hand as the wet mix was placed in the forms). This was a common technique used to reduce the amount of cement required when the cost of cement was high relative to the cost of labor. It is now rarely used in this country.

The bridge was part of a project initiated to improve the accessibility of a large mountainous area rich in timber and

United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation SheetSection number 7 Page 4

---

Dinkey Creek Bridge  
Fresno County, CA

recreational resources. This project included forty-one miles of new road from the San Joaquin River to Dinkey which was to be built and maintained by Fresno County providing the Forest Service would construct a fifteen mile extension from Dinkey Creek to Long Meadow.<sup>1</sup> Although photos indicate that recreational campers using automobiles reached as far into the Sierra as Dinkey Meadows over early wagon roads as early as 1919, the recreational potential of the Dinkey Creek area was not fully realized until after this project was completed.

This bridge construction project exemplifies the many public works projects funded by the federal government during the economic depression of the 1930's to relieve unemployment. Designs were tailored to utilize available local manpower in labor intensive projects. In this case, the bridge was designed so that it could be erected and assembled primarily with hand-tools by relatively unskilled trainees from nearby CCC camps at Rush Creek and Oak Flat.<sup>1&3</sup>

The present condition of the bridge is very good considering that the trusses have not been covered with a protective roof. The unusually good apparent condition (please note that no core drilling was done to check for core rot) of the timber truss members after 56 years of exposure can be attributed to the preservative treatment which Mr. May specified. All of the 3x12" untreated timber decking, wheelguards, railings and most of the 4x15" longitudinal stringers in the end panels (those adjacent to the ends of the bridge) had developed serious rot and in 1988 were replaced with preservative treated timbers. Replacement timbers of the same dimensions as the originals were used so as not to compromise the historic integrity of the bridge. Also in 1988, a concrete erosion protection wall was placed in the streambed in front of the west abutment to stop the erosion which was threatening to undermine the footing. This wall is not easily visible and does not affect the appearance of the bridge.

The site of the bridge is in an area which has experienced an interesting historic chronology which is well documented in Reference 1. It began about 1800 when early Spanish explorers, Gabriel Moraga and others, penetrated inland from the coast to explore the San Joaquin Valley. This was followed in turn by fir trappers, then by gold prospectors and miners following the 1848

United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation SheetSection number 7 Page 5Narrative Concluded  
Dinkey Creek Bridge  
Fresno County, CA

discovery of gold in California. Then came sheep and cattle ranchers from the valley seeking summer range for their animals and by the 1930's timber harvesting and sawmills came into full swing. With accessibility by automobile, recreational activities dramatically increased for cabin builders, campers, hikers, fishermen, etc. Located near the bridge are Camp Fresno, a municipally operated summer camp for residents of the City of Fresno, the YMCA camp, Mar-Y-Mac, and the Girl Scout camp, El-O-Win.

The name "Dinkey" by which the creek, lake, meadow and nearby mountain peak are known originated from a dog by that name. Two versions of how this occurred have been recorded. One version, as recorded by Farquhar<sup>9</sup>, has it that in 1863 a party of four hunters and their small dog, Dinkey, had a fight with a grizzly bear. The dog was injured and the men, Joe Medley, Marion Medley, Joe Folsom and Al Yarborough, then named the place and the creek Dinkey. The other version is attributed to the recollections of Frank Dusy. Dusy was an early sheep rancher and gold prospector in the area and built the first cabin at Dinkey Meadow. He reported that in 1863 he was saved from an attacking bear by his small dog, Dinkey, who grabbed the bear by the hind leg giving Dusy time to reach his rifle and dispatch the bear. Unfortunately Dinkey was killed in the struggle, so Dusy named the area for the dog.

United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation SheetSection number 8 Page 1Dinkey Creek Bridge  
Fresno County, CA

## STATEMENT OF SIGNIFICANCE

The Dinkey Creek Bridge, built in 1938, is an excellent example and one of the few extant of the many timber truss bridges built in California during the depression period of the 1930's. According to its designer, T.K. May, who was an engineer who specialized in the design of timber structures, it was the first bowstring arch-truss type (see Attachment 4) to be built in California. It was also one of the first timber structures to be built in the United States to utilize steel split-ring timber connecting devices. These devices increase the tension capacity of joints in timber structures, thus making it possible to design structures such as the Dinkey Creek Bridge without using metal rods for the main tension members of the truss. This bridge is also representative of the many labor intensive public works projects constructed with Civilian Conservation Corps labor under the Federal Government's program to relieve unemployment of that era and to increase the accessibility of wilderness areas for recreational and commercial benefit. The Dinkey Creek Bridge was a component of a joint Fresno County-US Forest Service highway project which increased the accessibility of a large forested area on the western slopes of the Sierra Nevada Mountains in central California. The bridge carried vehicular traffic until 1965 when it was closed to all but pedestrian traffic due to rot in the timber deck system. In 1988 the deck planking and many timber stringers were replaced with timbers which matched the original but it continues to serve only pedestrian and bicycle traffic. Vehicular traffic is carried on a newer 1956 steel bridge which is downstream and out of sight of the older bridge. The bridge possesses integrity of location, design, setting, materials, workmanship, feeling and association and embodies the distinctive characteristics of a type, period and method of construction and has long been considered an important historic resource by the local community. It meets the National Register Criterion C for listing in the National Register of Historic Places in the area of Engineering.

In 1988 considerable restoration work was done as necessary to return this bridge to its current very good condition. This

United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation SheetSection number 8 Page 2Dinkey Creek Bridge  
Fresno County, CA

work, which is described in Section 7, was all done in such a way that the historic characteristics of the bridge were not appreciably affected.

A few more bowstring arch-truss timber bridges were built in California following the Dinkey Bridge. An example, and one of the very few if not the only other survivor, is the 1951 West Walker River Bridge on Cunningham Lane near Coleville in Mono County. This bridge advanced bridge technology another notch by the use of uniformly curved glued laminated timbers for the upper chords of the trusses.

The successful use of split-ring timber connectors on this bridge contributed to their adoption as a standard for use by the engineering profession. They continue to be used to this day for heavily loaded timber structures.

The building of this bridge was a significant factor in the development of the community of Dinkey Creek including the surrounding summer camps and cabins. And it has retained it's cultural affiliation with them. It is a favorite place for walkers and bikers to visit and for young fishermen to fish beneath. It is featured on postcards, tee shirts and hats sold to campers and tourists at the lone Dinkey store. The bridge was described in the 1971 Sunset travel book, "Back Roads of California", as a site worth visiting. The bridge helps convey a sense of local community identity, in part, because of its unique architectural characteristics and local history.

Mr. T.K. "Tank" May, the designer, was well respected as a specialist in the design of timber structures. Although he could be considered to be a "Master" because of unique nature of his work, he was probably not the equal of the many true giants of bridge engineering of his generation. He was employed by the Bridge Department of the California Division of Highways where he designed many timber structures, including a 180 foot long 1935 timber arch over Dolan Creek on the San Simeon Highway,

United States Department of the Interior  
National Park Service

National Register of Historic Places  
Continuation Sheet

Section number 8 Page 3

---

Dinkey Creek Bkridge  
Fresno County, CA

(US 1).<sup>4</sup> This bridge has since been removed and was possibly the first in the United States to utilize metal joint connectors; a technology which was pioneered by the California Division of Highways and Mr. May. In 1937 May took a similar position with the West Coast Lumberman's Association (WCLA) in Seattle.<sup>2&7</sup> He later moved with the WCLA to Portland, OR and continued after the WCLA became the Western Wood Products Association. The majority of the drawings in Reference No.8 were prepared by Mr. May. He died in Portland on July 26, 1985.<sup>7</sup>

Several previous researchers have concluded that the Dinkey Creek Bridge is eligible for listing on the National Register of Historic Places under Criterion C. Two examples are documented in the the June 10, 1988 letter by Paul A. Rich, Sierra National Forest Resource and Planning Officer, and the June 23, 1988 response by Kathryn Gualtieri, State Historic Preservation Officer. These are included as Attachments 6 and 7.

United States Department of the Interior  
National Park ServiceNational Register of Historic Places  
Continuation SheetSection number 9 Page 1Dinkey Creek Bridge  
Fresno County, California

## BIBLIOGRAPHY

1. Johnson, Ann, A Review of the Historic Resources of the Dinkey Creek Hydroelectric Project, prepared for the Kings River Conservation District in Fresno, California by Theodoratus Cultural Research, Inc., of Fair Oaks, Calif., Ann Hagerman Johnson, Ph.D., Principal Investigator, November 1982.
2. Notes from a personal interview with Ralph Hutchinson, a retired Caltrans bridge engineer and co-worker of T.K. May, by D.W. Alden, November 1989, retained in files of D.W. Alden.
3. LaJeunesse, R.M. and LaJeunesse, U.M., Cultural Overview of Historic Structures in the Dinkey Creek Hydroelectric Project Area, 1980.
4. Mitchell, Stewart, New Type Timber Arch Bridge Spans Dolan Creek Gorge on Coast Highway, California Highways and Public Works, February 1935, a magazine published by the California Division of Highways.
5. Bridge Maintenance Book for Bridge 42C-04, Dinkey Creek Bridge, as compiled by and retained in the files of the Division of Structures of the California Dept. of Transportation.
6. Finch, James Kip, The Story of Engineering, Anchor Books, Doubleday & Co. Inc., Garden City, New York, 1960.
7. Notes from personal telephone (503-224 3930) conversation with Diana Sprague, Librarian/Historian of the Western Wood Products Association (successor to the West Coast Lumberman's Assn.) of Portland OR., on August 2 & 3, 1994 by D.W. Alden and retained in the files of D.W. Alden.
8. Highway Structures of Douglas Fir, a booklet published by the West Coast Lumberman's Assn. about 1948.
9. Farquhar, Francis, Place Names of the High Sierra, 1948.

United States Department of the Interior  
National Park Service

**National Register of Historic Places  
Continuation Sheet**

Section number \_\_\_\_\_ Page 1 ADDITIONAL DOCUMENTATION

---

Dinkey Creek Bridge  
Fresno County, California

**ATTACHMENTS**

1. Topographic Map, Dinkey Creek U.S.G.S. 7.5 Minute.
2. Sketch map of bridge site.
3. Photos, archival quality.
4. HAER Truss Identification Sheet.
5. WCLA Timber Connector Identification Sheet.
6. Rich, Paul A., letter of June 10, 1988.
7. Gualtieri, Kathryn, letter of June 23, 1988



11°05  
 11°04  
 11°03  
 11°02  
 11°01  
 2'30"  
 2'00"  
 1'30"  
 1'00"  
 0'30"  
 0'00"  
 (NELSON MTM.)  
 2168 MUSE  
 BLACK ROCK STATION 20 MI.

← Dinkey Creek Bridge  
 UTM Reference:  
 11/308560/4104320

Attachment No. 1  
 Dinkey Creek Bridge  
 Fresno County, California

# SITE MAP 05-15-54-443

LAST RESORT TIMBER SALE  
SIERRA NATIONAL FOREST  
KINGS RIVER RANGER DISTRICT

Verified and updated by  
D. W. Alden 7/27/94

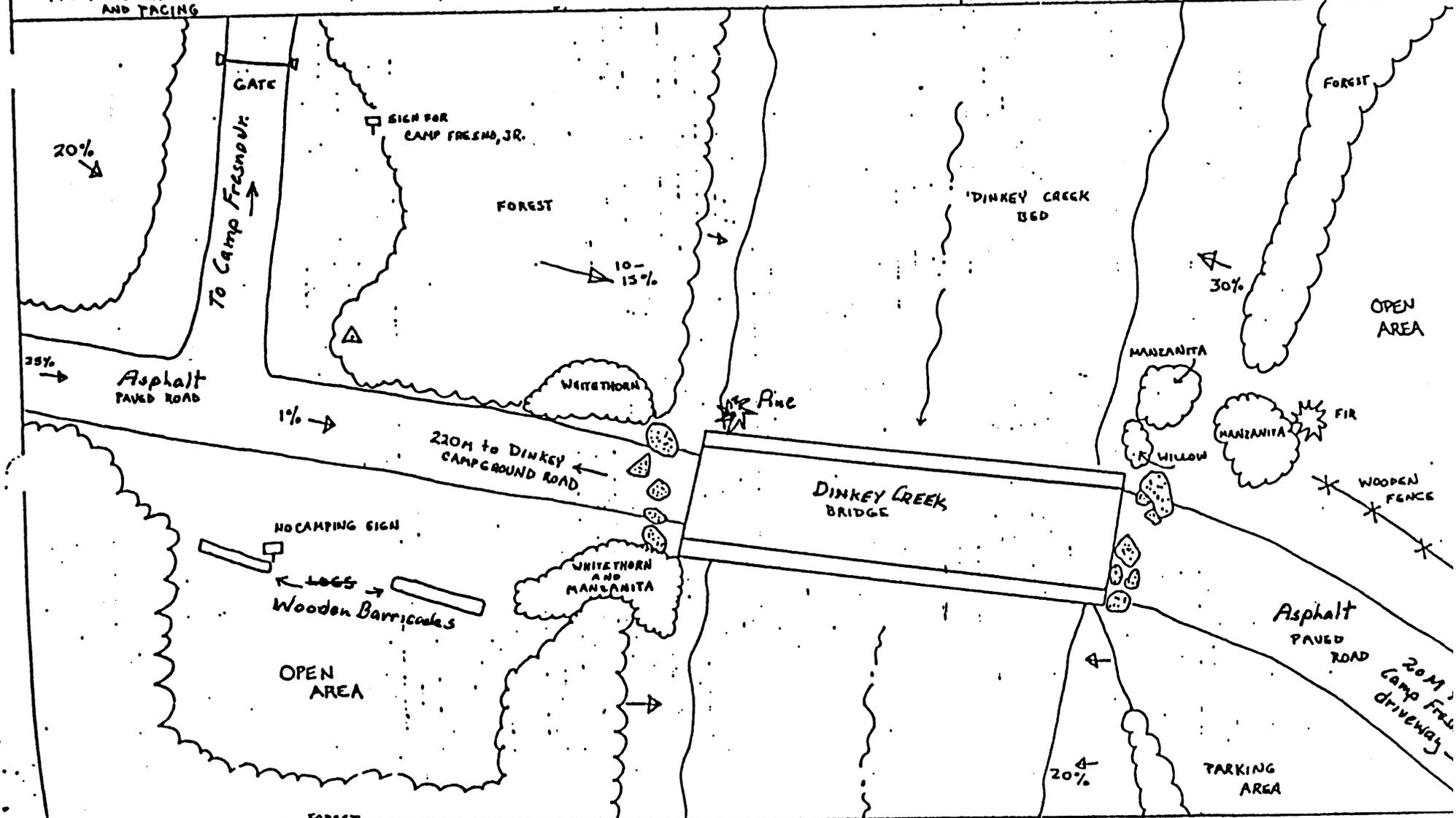
- KEY:
- △ DATUM - 50" DBH JEFFREY PINE
  - ⊙ BOULDER (TO BLOCK VEHICULAR TRAFFIC)
  - DOWNSLOPE
  - ~ PERENNIAL CREEK

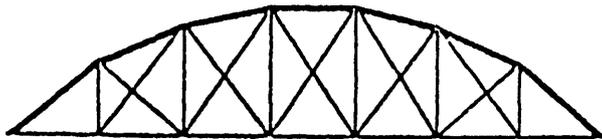


SCALE  
10 METERS

MAP MADE WITH HANDHELD COMPASS  
AND FACING

L. Popelish 7/02/82





### BOWSTRING ARCH-TRUSS

1840 - LATE 19TH CENTURY

A TIED ARCH WITH THE DIAGONALS SERVING AS BRACING AND THE VERTICALS SUPPORTING THE DECK.

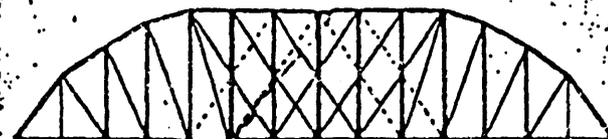
LENGTH: 70-175 FEET  
21-50 METERS



### CAMELBACK WITH SUBDIVIDED PANELS LATE 19TH - EARLY 20TH CENTURY

A PENNSYLVANIA TRUSS WITH A POLYGONAL TOP CHORD OF EXACTLY FIVE SLOPES

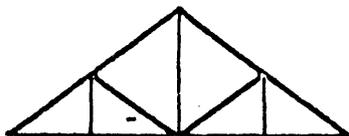
LENGTH: 100-300 FEET  
30-90 METERS



### SCHWEDLER LATE 19TH CENTURY

A DOUBLE INTERSECTION PRATT POSITIONED AT THE CENTER OF A PARKER

LENGTH: 100-300 FEET  
30-90 METERS

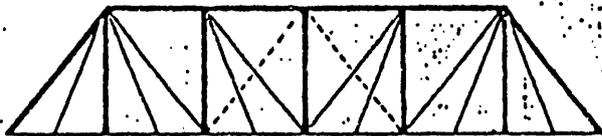


### WADDELL "A" TRUSS

LATE 19TH - EARLY 20TH CENTURY

EXPANDED VERSION OF THE KING POST TRUSS. USUALLY MADE OF METAL

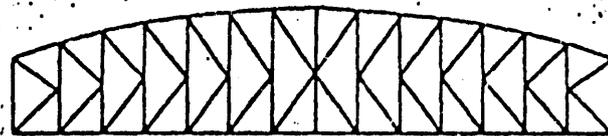
LENGTH: 25-75 FEET  
8-23 METERS



### KELLOGG LATE 19TH CENTURY

A VARIATION ON THE PRATT WITH ADDITIONAL DIAGONALS, RUNNING FROM UPPER CHORD PANEL POINTS TO THE CENTER OF THE LOWER CHORDS

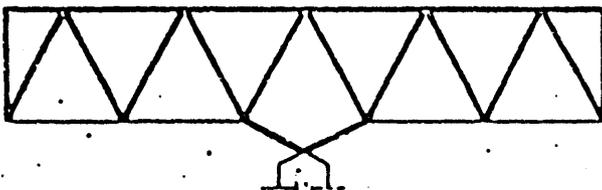
LENGTH: 75-150 FEET  
23-30 METERS



### K-TRUSS EARLY 20TH CENTURY

SO CALLED BECAUSE OF THE DISTINCTIVE OUTLINE OF THE STRUCTURAL MEMBERS

LENGTH: 200-800 FEET  
60-240 METERS



### WICHERT

1932 - MID-LATE 20TH CENTURY

CHARACTERIZED BY A PIN CONNECTED RHOMBOIDAL STRUCTURAL ARRANGEMENT OVER THE PIERS. TRUSS IS CONTINUOUS OVER PIERS.

LENGTH: 400-1000 FEET  
122-305 METERS

# TRUSSES

A STUDY BY THE

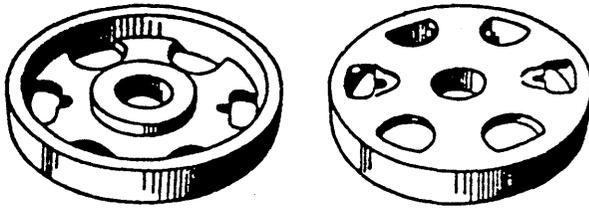
## HISTORIC AMERICAN ENGINEERING RECORD

- BOLLER, ALFRED P. PRACTICAL TREATISE ON THE CONSTRUCTION OF IRON HIGHWAY BRIDGES. NEW YORK: JOHN WILEY & SONS, 1887.
  - COOPER, THEODORE. AMERICAN RAIL ROAD BRIDGES. ASCE TRANSACTIONS, NO. 916 VOL. XI (JULY 1889): 1-50
  - FIELD, A. TEST BOOK ON ROADS AND BRIDGES: PART II, GRAPHIC STATICS. NEW YORK: JOHN WILEY & SONS, 1917
  - BOWMAN, M.L. AND SUTHERLAND, M.E. STRUCTURAL THEORY. NEW YORK: JOHN WILEY & SONS, 1958.
  - SHEDD, THOMAS C. STRUCTURAL STEEL DESIGN. NEW YORK: JOHN WILEY & SONS, 1939
  - COMMITTEE ON HISTORY AND HERITAGE OF AMERICAN CIVIL ENGINEERING, ED. AMERICAN WOODEN BRIDGES. ASCE HISTORICAL PUBLICATION NO. 4. NEW YORK: ASCE, 1974.
  - 1865-1932 VOLS. 1, 2 CHARLOTTE'SVILLE: VIRGINIA HIGHWAY AND TRANSPORTATION RESEARCH COUNCIL, 1978.
  - STEINMAN, DAVID B. THE WICHERT TRUSS. NEW YORK: VAN NOSTRAND, 1932.
  - CONDIT, CARL W. AMERICAN BUILDING ART. NEW YORK: OXFORD UNIVERSITY PRESS, 1966.
  - JACOBY, HENRY S. AND MERRIAMAN, MANSYORK: PRAEGER PUBLISHERS, 1970.
  - HOPKINS, N.J. A SPAN OF BRIDGES. NEW YORK: PRAEGER PUBLISHERS, 1970.
  - TYRRELL, HENRY GRATTAN. HISTORY OF BRIDGE ENGINEERING. CHICAGO: H.G. TYRRELL, 1911.
  - WADDELL, J.A.L. BRIDGE ENGINEERING VOL. I. NEW YORK: JOHN WILEY & SONS, 1916.
- DEVELOPED BY: T. ALLAN CAMP • DONALD C. JACKSON • ARNOLD DAVID JONZ'S APPRECIATION TO: CHARLES T.G. LOONEY • ROBERT M. WIGEL • ERIC M. DALBY

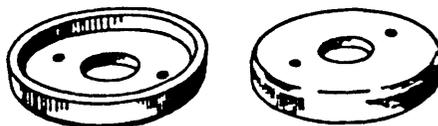
1976

**TIMBER CONNECTORS CONT'D**

**TYPES OF TECO TIMBER CONNECTORS**



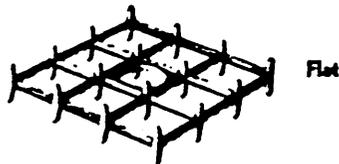
Front Back  
**Malleable Iron**



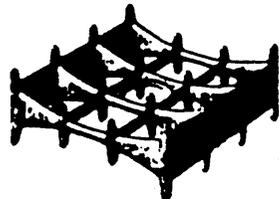
Front Back  
**Pressed-Steel**

**SHEAR-PLATES**

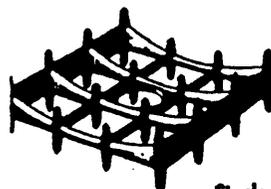
These plates when installed lie flush with the timber surface. They are used as "units" in pairs for timber-to-timber joints with two plates placed back to back, or singly in timber-to-metal joints with the plate placed with its back toward the metal. The plates fit into pre-cut grooves in the timber faces.



Flat



Double Curve



Single Curve

**SPIKE-GRIDS**

Manufactured from malleable cast iron: Used primarily in pier and trestle construction between either flat or curved surfaces. They are embedded into the wood surfaces by means of pressure.



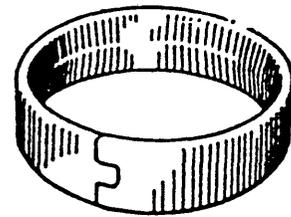
Plain



Flanged

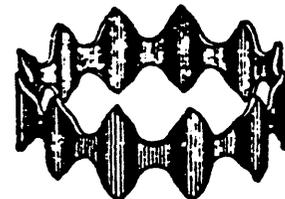
**CLAMPING-PLATES**

Stamped from metal sheets: Used as railroad "tie spacers" between ties and guard timbers to keep the ties properly spaced, or where timbers overlap at right angles. The plain clamping plate with teeth on opposite faces is seated by means of a special block which protects the connector during the driving process. The flanged clamping-plate with teeth on one face only is driven into place with a maul or ram, the connector being protected from damage by a steel cover plate.



**SPLIT-RING**

Manufactured from low carbon steel: Used between two timber faces for heavy construction and fits into pre-cut grooves in the timber faces. The tongue and groove "split" permits simultaneous ring bearing against the core wall and outer wall of the groove into which the ring is placed. The inside bevel and mill edge facilitates installation into and removal from its groove.



**TOOTHED-RING**

Manufactured from low carbon steel: Used between two timber faces for comparatively light construction and embedded into the contact faces of the joint members by means of pressure.

OFFICE OF HISTORIC PRESERVATION

DEPARTMENT OF PARKS AND RECREATION

POST OFFICE BOX 942896  
SACRAMENTO, CALIFORNIA 94296-0001  
(916) 445-8006



JUL 7 7 35 AM '88

Attachment No. 6

USFS880613B  
June 23, 1988

Paul A. Rich, Resources and Planning Officer  
Sierra National Forest  
1130 O Street, Room 3009  
Fresno, CA 93721

Re: Dinkey Truss Bridge project

Dear Mr. Rich:

Thank you for the opportunity to review Archeological Reconnaissance Report No. 05-15-54-5-88, the Dinkey Wood Truss Bridge Maintenance Project.

We are pleased to concur with your finding that the Dinkey Creek Truss Bridge is eligible for the National Register of Historic Places under Criterion C for its rare design as a Bowstring Truss Bridge. The bridge's period of significance is its construction date of 1934, and it is of local significance. The bridge is the only contributor and boundaries are the bridge itself.

In addition, we concur that the proposal to replace rotting wood members in kind, and the adjacent erosion control work, will have no effect on the qualities which make the bridge eligible for the National Register.

Thank you for requesting our review. If you have any questions, please call staff historian Dorene Clement at (916) 322-9600.

Sincerely,

*[Handwritten Signature]*  
Kathryn Gualtieri  
State Historic Preservation Officer

FILE COPY  
SIERRA NATIONAL FOREST

JUL 6, 1988

- ACTION/ INFO
- 1 COPY
- OF SUPPLY
- AD
- REC
- I & E
- RANGE
- TM
- P.M.
- INGR
- ANOS
- M.P.  GREENWAY
- RESOURCES
- OTHER
- DISTRICTS
- CC

cc: DR-KR  
SWAN-PR

REPLY TO: 2360

DATE: JUN 10 1968

Ms. Kathryn Galtieri  
Office of Historic Preservation  
Department of Parks and Recreation  
P.O. Box 942896  
Sacramento, CA 94296-0001

Attachment No. 7  
Dinkey Creek Bridge  
Fresno County, California

Dear Ms. Galtieri:

Enclosed for your review and concurrence of no effect is the Archaeological Reconnaissance Report (ARR No. 05-15-54-5-88) for the Dinkey Wood Truss Bridge Maintenance project. The bridge is recorded as site CA-Fre-1539H. This project has been previously discussed with Ms. Dorene Clement of your staff.

The site has regional as well as local historical significance. The Dinkey Creek Truss Bridge was prefabricated out of Douglas fir and erected using CCC labor in 1934. The bridge was designed by the California Division of Highways and may have been the only bridge of this type (i.e., Bowstring Truss) designed by the State of California. Architecturally, it represents the only example of a truss bridge on Sierra National Forest, and one of the few examples in California on National Forest lands. Although it is not associated with any event of broad historical importance, other than CCC-era construction, the bridge is locally important to summer recreationists. The bridge helps convey a sense of local community identity in part because of its unique architectural characteristics and local history. Based upon its local historical importance, CCC construction, and architectural features, the Dinkey Creek Truss Bridge appears to be eligible for inclusion in the National Register of Historical Places under criteria 36 CFR 60.4(a)(c).

Largely due to health and safety concerns because of numerous rotting deck and a few structural timbers, Sierra National Forest proposes to "replace in kind" deck planking and other decaying components which are hazardous, and stabilize one abutment affected by erosion. Since Sierra National Forest will replace only those timbers which are rotting with like materials, this undertaking will have no effect on the bridge's historical importance. The erosion control work adjacent to the abutment will not effect the bridge.

If you have any questions, please contact Greg Greenway at (209)487-5163.

Sincerely,

*Gregory Greenway*

PAUL A. RICH  
Resources and Planning Officer

enclosure

cc:  
P. PRATT - KR (w/o enc.)  
L. SWAN - RR (w/o enc.)  
R. GONZALEZ (w/o enc.)  
G. GREENWAY (w/o enc.)