NATIONAL REGISTER DETERMINATION OF ELIGIBILITY:

HISTORIC TRUSS BRIDGES IN CALIFORNIA
(THEMATIC)

Determined eligible on December 24, 1985

by the KEEPER of the National Register of Historic Places

(With subsequent determinations by the Keeper on January 9, 1986 and January 13, 1986)

Request for Determination of Eligibility for Inclusion in the National Register of Historic Places

1. Agency Requesting Determination:
U.S. Department of Transportation:
Federal Highway Administration
Attn: Bruce Cannon
California Division Administrator
P.O. Box 1915
Sacramento, CA 95809

2. Properties: Historic Truss Bridges in California

3. LOCATION: This thematic request for determination of eligibility concerns 72 historic truss bridges located throughout the State of California. Location -- by county, nearest city, highway, feature intersected, and UTM Coordinates -- is identified for each structure in the attached "Truss Bridge Rating Sheets."

4. CLASSIFICATION: The classification for this determination of eligibility is "thematic group." Each individual bridge is classified as a "structure."

5. OWNERSHIP:

BRIDGE NUMBER: 26C-8; 26C-11

County of Amador
108 Court Street
Jackson, California 95642

BRIDGE NUMBER: 12C-8

County of Butte
7 County Center Drive
Oroville, California 95965

BRIDGE NUMBER: 30C-16

County of Calaveras
Government Center
891 Mountain Ranch Road
San Andreas, California 95249

BRIDGE NUMBER: 15C-8

County of Colusa
546 Jay Street
Colusa, California 95932

BRIDGE NUMBER: 25C-4; 25C-25

County of El Dorado
360 Fair Lane
Placerville, California 95667

BRIDGE NUMBER: 42C-551

County of Fresno
4499 E. Kings Canyon Road
Fresno, California 93702

BRIDGE NUMBER: 53C-61

Port of Los Angeles
P.O. Box 151
San Pedro, California 90733

BRIDGE NUMBER: 53C-735; 53C-736; 53C-738; 53C-741

City of Glendale
City Hall
613 E. Broadway
Glendale, California 91205

BRIDGE NUMBER: 10C-46; 10C-109

County of Mendocino
Courthouse
Lake Mendocino Drive
Ukiah, California 95482

BRIDGE NUMBER: 39C-3; 39C-13

County of Merced
715 J Street
P.O. Box 1391
Merced, California 95340

BRIDGE NUMBER: 44C-7

County of Monterey
312 E. Alisal Street
Salinas, California 93902

BRIDGE NUMBER: 17C-1; 17C-6; 17C-20; 17C-24; 17C-30

County of Nevada
Courthouse
415 Pine Street
Nevada City, California 95959

BRIDGE NUMBER: 9C-1; 9C-3; 9C-42

County of Plumas
Road Department Office
Route 1, Box 279
Quincy, California 95971

BRIDGE NUMBER: 24C-1; 24C-9; 24C-22; 24C-38; 24C-80

County of Sacramento
County Administration Building
Room 304
827-7th Street
Sacramento, California 95814

BRIDGE NUMBER: 54C-68; 54C-368

County of San Bernardino
825 E. Third Street
San Bernardino, California 92415

BRIDGE NUMBER: 57C-416

City of San Diego
City Administration Building
Community Concourse
San Diego, California 92101

BRIDGE NUMBER: 34C-25; 34C-27

County of San Francisco
City Hall, Room 260
400 Van Ness Avenue
San Francisco, California 94102

BRIDGE NUMBER: 29C-108

County of San Joaquin
1810 E. Hazelton
P.O. Box 1810
Stockton, California 95201

BRIDGE NUMBER: 49C-190; 49C-196

County of San Luis Obispo
207 County Government Center
San Luis Obispo, California 93408

BRIDGE NUMBER: 36C-127

City of Santa Cruz
City Hall
Santa Cruz, California 95060

BRIDGE NUMBER: 2C-21; 2C-41; 2C-80

County of Siskiyou
Courthouse
305 Butte Street
Yreka, California 96097

BRIDGE NUMBER: 20C-5; 20C-65; 20C-155; 20C-224

County of Sonoma
Room 117A
575 Administration Drive
Santa Rosa, California 95401

BRIDGE NUMBER: 38C-5; 38C-168; 38C-9999

County of Stanislaus
1100 H Street
Modesto, California 95354

BRIDGE NUMBER; 8C-14; 8C-47; 8C-85

County of Tehama
9380 San Benita Avenue
Gerber, California 96035

BRIDGE NUMBER: 5C-32

County of Trinity
P.O. Box AY
Weaverville, California 96093

BRIDGE NUMBER: 52C-53

County of Ventura
800 South Victoria Avenue
Ventura, California 93009

BRIDGE NUMBER: 16C-6

County of Yuba
Courthouse
215 5th Street
Marysville,California 95901

BRIDGE NUMBER: 1-06; 2-13; 9-02; 9-03; 9-04; 9-09; 9-15; 12-38; 23-15L; 24-51; 24-53; 29-45; 29-49; 33-25; 49-106

State of California
Department of Transportation
1120 N Street
Sacramento, California 95814

BRIDGE NUMBER: 36C-61

Paradise Park
211 Keystone Way
Santa Cruz,California 95060

6. REPRESENTATION IN EXISTING SURVEYS. Bridges in this thematic group were identified as part of a larger effort to evaluate historic bridges in California, generally referred to as "The California Bridge Survey." This survey, funded by the Federal Highway Administration and implemented by the California Department of Transportation, is described in detail in Section 7 below. It is intended that significant examples of other bridge types, such as reinforced concrete arches, will be treated in separate thematic group determinations or individually.

7. DESCRIPTION

This request for determination of eligibility concerns 72 California truss bridges.* Each individually meets criteria for listing in the National Register of Historic Places. Collectively, they illustrate the range of dates of construction, methods of construction, and uses to which truss bridges have been put in more than a century of California history.

These trusses are located throughout California, in a variety of topographical and cultural settings: from the verdant Coast Range of northwestern California to the southeastern California deserts; from remote wilderness areas to densely urban areas in San Francisco, Los Angeles, and San Diego.

As to their physical attributes the structures are united by the fact that they are all truss bridges, i.e. bridges whose superstructures are of "web construction so arrayed that the frame is divided into a series of triangular figures with its component straight members primarily stressed axially only."[1]

The popular image of a truss[2] is that of a nineteenth or early twentieth century railroad or railroad-type bridge. In this imagery, the typical structure is a fixed, simple span in a common early configuration, such as a Pratt or Parker. Technically speaking, however, the term, "truss," can apply to any bridge that utilizes the abovementioned triangulated structural system, and can refer to continuous spans, cantilevered spans, movable bridges, and other bridge types. While the majority of these 72 structures conform to popular imagery, other types are included as well.

Survey Methods

These 72 structures were identified and evaluated as part of a larger survey of historic bridges in California. This ongoing survey is being funded by the Federal Highway Administration (FHWA) and conducted by professional cultural resource staff of the California Department of Transportation (Caltrans). The staff of the California State Historic Preservation Officer (SHPO) was involved in review of this work at various stages in the process. Principals in the inventory are: John Snyder, Chief Architectural Historian, Caltrans, Stephen Mikesell, historian, Caltrans, and Diane Pierzinski, Environmental Planner, Caltrans.

Selection of this thematic group involved three basic steps: identification, documentation, and evaluation.

*One structure, the San Francisco-Oakland Bay Bridge, is a truss bridge in its eastern spans only. The remainder of the structure includes suspension spans, a tunnel, and steel and concrete girder approaches. The entire structure is included in this thematic request, as the bridge has historically functioned as a single, integrated transportation link.

Identification At the outset of the California bridge survey, Caltrans, FHWA, and SHPO staff agreed that trusses were as a group historically sensitive, i.e. more likely than other bridge types to be historically significant. Recognizing this, the decision was made to inventory every known highway truss bridge in the state.

Identification was made easier by the existence of a computerized log of all state and local highway bridges, maintained by the Office of Structures Maintenance at Caltrans. Bridges on the log are listed by structural type. The truss survey population is a printout of truss bridges from this log. This population was diminished by excluding pedestrian, industrial, and railroad crossings and other truss structures that do not actually carry highway traffic.

Documentation Essential data was gathered for each of the 432 trusses identified through this process. Essential data included: builder (fabricator of truss members); contractors (erector of truss bridge); designer; date of construction; location of plans (if any); documented relocation or structural modification; function of original highway route and significance to local and state transportation networks. Important archives consulted include: structures document library at Caltrans, which contains plans for nearly all state bridges and most local bridges; state construction contracts; county and city public works records; county board of supervisors minutes and county clerk records; and archives of local historical societies and museums. Thees data were computerized to facilitate easy retrieval and sorting by salient attributes.

Evaluation In consultation, Caltrans, FHWA, and the California SHPO agreed to utilize a quantitative evaluation system to help determine eligibility for the 432 truss structures. A large body of literature discusses the use of quantitative methods in the evaluation of historic resources, particularly with respect to historic residences, commercial structures and bridges.[3] Caltrans staff studied and tested several such systems, focusing upon those dealing specifically with historic bridges.

In consultation with FHWA and the California SHPO, Caltrans staff developed an evaluation framework that was based in large part upon an earlier system used by the Ohio Department of Transportation.[4] The Ohio system was modified, however, to reflect special circumstances in California and to correct perceived shortcomings in that earlier effort. The California system differs from the Ohio system in its treatment of integrity as defined by National Register eligibility criteria, significance of bridge designer, date of construction, design aesthetics and in several other areas. In making these modifications, Caltrans staff adapted some of the methods used by

the Oregon Department of Transportation in its bridge survey [5] and by San Francisco Heritage in its survey and evaluation of commercial structures in San Francisco.[6]

The mechanism for the California truss evaluation system is depicted below. Each variable represents an element of bridge design or historical use which can define significance. The weighting system, i.e. the points assigned to each variable, serves two purposes: to transform ordinal into integer ratings, and to distinguish between variables as to relative importance.

Evaluation system

1. DATE OF CONSTRUCTION

Date	Points Assigned
Pre-1900	20
1900-1909	16
1910-1919	12
1920-1929	8
1930-1937	4
1937-1945	0
Post-1945	-20

2. BUILDER/DESIGNER

Major example of significant builder or designer	12
Minor example of significant builder or designer	6
Not associated with significant builder or designer, or unknown	0

3. NUMBER OF SPANS

1	0
2	2
3	4
4	6
5+	8

4. LENGTH OF SPAN (In Feet)

Pony,<60; through<125; deck<150	0
Pony,60-80; through, 125-150	4
Pony,>80; through>150; deck,>150	8
Half-through (all)	

5. SPECIAL FEATURES

Pin-Connected	4
Iron	4
Decorative features (Major)	4
(Minor)	2

6. AESTHETICS

Structural	
Excellent	5
Good	4
Fair	2
Poor	0

Setting	
Excellent	5
Good	4
Fair	2
Poor	0

7. TRANSPORTATION SIGNIFICANCE/ HISTORICAL ASSOCIATIONS

National	10
State	7
Local	3
None, unknown	0

8. SURVIVING NUMBERS (Rarity)

1	20
2	19
...	...
20	1
>20	0

9. INTEGRITY

Location, Setting	
Excellent	0
Good	-3
Fair	-6
Poor	-9
Design, Materials, Workmanship	
Excellent	0
Good	-3
Fair	-6
Poor	-9
Feeling, Association	
Excellent	0
Good	-1

One should bear in mind that a quantitative system of this sort produces indicators, not indices, of significance. One can conclude with assurance that bridges with very high scores are quite significant, while those with very low scores are not significant. One may also discover a reliable significance threshold, a cut-off that separates significant from insignificant structures. In this system, for example, the cut-off appears to be about 43 points.

With any such system, however, quantitative analysis must be checked against expert opinion. With this system, for example, "length of span" is taken as a measure of the engineering difficulty involved in the span. For most bridges in the inventory, 150 feet is a reasonable test of a significant span. This same measure, however, cannot adequately value the immense engineering achievement involved in such great spans as the San Francisco-Oakland Bay Bridge or the Carquinez Straits Bridge, where individual spans greatly exceed 1000 feet.

To ensure that such extraordinary circumstances were taken into account and ensure that standards were applied consistently, the quantitative evaluations were double-checked, using more traditional, intuitive methods.

In conclusion, the 72 structures involved in this request for determination of eligibility are included as the result of a comprehensive inventory and a thorough analysis, using innovative quantitative techniques as well as traditional evaluation methods.

Summary of findings

Diversity is the notable quality of the 72 structures included in this thematic group. These structures represent all phases in California transportation history and in the history of bridge engineering since the latter half of the nineteenth century. These matters are discussed in greater detail in Section 8 below.

The diversity of these structures is illustrated in the Tables 1-3. In general, the group is distributed evenly by period of construction. The notable exception here is the underrepresentation of structures from the 1920s, a slow period in the construction of truss bridges in California.

The Pratt truss is the most common type within this thematic group, as with the total survey population. Table 2, however, illustrates that the trend over time was away from the use of the Pratt and other common nineteenth century truss forms, and toward more specialized uses for truss spans, such as bascule, swing, and long-span cantilever bridges.

The American Bridge Company is by far the best represented of the various bridge fabrication firms, having built nearly one in four of the bridges in this thematic group. The trend over

TABLE 1

TRUSS ATTRIBUTES

Date of Construction			Roadway Type		Length of Main Span	
Pre-1900	14	(19%)	Through	48	100'	12
1900-1909	15	(21%)	Pony	15	100-150'	26
1910-1919	19	(27%)	Deck	8	151-300'	27
1920-1929	8	(11%)	Half-thru	1	301-1000'	5
1930-1937	16	(22%)			1000'	2

TABLE 2

TRUSS TYPES, BY DATE

	TYPE							
Date	Pratt	PaPetit	Parker	3-Hinge Arch	Bascule	Swing	Cantilever	Other
1900	6	2	0	0	0	0	0	6
1900-1909	6	1	0	2	0	1	0	5
1910-1919	7	2	4	0	1	2	0	3
1920-1929	0	1	1	0	4	0	2	0
1930-1937	0	0	1	3	1	1	2	8
	19	6	6	5	6	4	4	22

TABLE 3

TRUSS BRIDGE BUILDERS, BY DATE

	Builder		
		Out of State	
	Early Calif. Builders*	American Bridge Co.	Other Early Out-of-State**
Pre-1900	6	0	3
1900-1909	5	4	1
1910-1919	3	6	4
1920-1929	0	5	0
1930-1937	0	1	0
	13	16	7

*San Francisco Bridge Co.; Cotton Bros.; Judson Manufacturing Co.; Dyer Bros.-Golden West; Pacific Bridge (Construction) Co.; Thomson Bridge Co.; Mervy-Elwell Co.; Dundon Bridge Co.

**Phoenix Bridge Co.; Joliet Bridge Co.; Western Bridge Co.; Canton Bridge Co.; Henderson Bridge Co.

time can be detected in the figures in Table 3. Most nineteenth century trusses were built by pioneer California-based companies, and these firms remained active through the early decades of the twentieth century. A handful of well-known out-of-state bridge companies were also able to compete for bridge contracts in California. By 1920, however, most California and out-of-state bridge companies had gone out of business or into other metal-working activities, driven out by the market power of the American Bridge Company and by a decline in the number of truss bridges being erected.

Table 1 offers a summary of the structural attributes of these bridges. The vast majority are simple-span, through trusses. Individual spans rarely exceed 300 feet, although the exceptions to this rule are of interest. Five of seven were built after 1925, three of these being cantilevers, one a trussed three-hinge arch and one swing. Among the early long-span structures, one is a precocious 1893 Pennsylvania Petit, the other a 1906 swing bridge, each of which has been moved from its original location.

Relationship to Properties Listed in or Determined Eligible for Listing in the National Register of Historic Places

The 72 properties included in this thematic group consist of truss bridges that meet the National Register eligibility criteria but which are not currently listed in or determined eligible for listing in the National Register of Historic Places.

These bridges are complemented by 7 California truss bridges listed in the National register and 18 California trusses that have been determined eligible for National Register listing. Listed and eligible bridges are the following:

LISTED IN NATIONAL REGISTER

Name	Number	County	River
Knights Ferry Bridge (Part of Knights Ferry Historic District)	38C-22	Stanislaus	Stanislaus
Felton Covered Bridge	36C-39	Santa Cruz	San Lorenzo
Tower Bridge	22-21	Yolo	Sacramento
Bridgeport		Nevada	So. Fk. Yuba
Oregon Creek	16C-17	Yuba	Oregon Creek
Wawona Bridge (Listed with "Bridges Across Merced River" nomination)	40C-9	Mariposa	Merced
Glen Cyn. Bridge	36C-4	Santa Cruz	Branciforte

DETERMINED ELIGIBLE FOR NATIONAL REGISTER

Name	Number	County	River
Basso Ferry Bridge	38-61	Stanislaus	Tuolumne
I Street Bridge	22C-153	Yolo	Sacramento
Table Mt. Bridge	12C-200	Butte	Feather
Cache Creek Bridge	14C-24	Lake	Cache Creek
Nelson Creek Bridge	9C-5	Plumas	Nelson Creek
Center St. Bridge	52C-4	Ventura	Piru Creek
Honeydew Cr Bridge	4C-67	Humboldt	Honeydew Cr.
Needlam Crossing	11C-32	Glenn	Stony Cr.
Shelley Br.	2C-34	Siskiyou	Shasta R.
Battle Creek Br.	2C-18	Siskiyou	Battle Cr.
Honcut Bridge	16C-9	Yuba	Natchez Creek
	4-50	Humboldt	S.Fk. Trinity
Sweetwater Bridge	57-111	San Diego	Sweetwater
Pacheco Br.	37C-531	Santa Clara	Pacheco Cr.
Chualar Bridge	44C-21	Monterey	Salinas
Tule River Br.	46-10	Tulare	Tule River
Newton Bridge	17C-12	Nevada	Deer Creek
Five Mile Rd. Bridge	26C-2	Amador	Sutter Creek

8. STATEMENT OF SIGNIFICANCE

Summary.

The central theme of this request for determination of eligibility is the evolution of the truss bridge as a link in the California highway system. With respect to the putative State History Plan, truss bridges relate to the larger theme of transportation and the subtheme of highway bridges. With respect to National Register eligibility criteria, these trusses are significant under Criterion A, as important elements in the development of a highway transportation system, and under Criterion C, as distinctive examples of types, periods, and methods of construction, as works of master builders and designers, and as structures that possess high artistic value. Applicable "areas of significance," as identified in 36CFR63 guidelines and on National Register of Historic Places inventory forms, are engineering and transportation.

To establish significance for these structures, this request for determination of eligibility will survey briefly the history of the truss bridge in California, and conclude with a discussion of the 72 eligible structures under five specific elements of the National Register eligibility criteria: period of construction; works of masters; methods of construction; association with historical events and patterns, specifically transportation significance; and artistic merit.

History of Truss Bridges in California

Admitted to the Union in 1850, the State of California developed and matured along with the American truss building industry. One finds on California highways examples of all phases of truss bridge design, from the pioneering truss types of the 1840s, to the bold long-span cantilevers of the 1920s, to the movable truss spans of the early- to mid-twentieth century. The history of California trusses is an intertwining of three threads -- the technological history of truss design; the political and administrative history of public road building agencies in California; and the economic and social development of California into the most populous state in the Union.

In California as elsewhere, the nineteenth century truss bridge was chiefly a railroad bridge. California counties built few bridges before 1880 [1] and it was not until the automobile age of the early twentieth century that substantial numbers of highway bridges were constructed by public agencies. Not surprisingly, such highway truss bridges as exist from the nineteenth century are essentially railroad-type structures.

This thematic group includes 14 nineteenth century trusses. These, along with 10 others already listed in or determined eligible for listing in the National Register, give a picture of

the types of trusses constructed during this period. These can be classified in three basic groups: covered bridges, most originally built as toll road bridges; metal railroad trusses converted to highway use; and metal trusses originally built by counties for highway use. These structures are clustered in remote areas of the Coast Range mountains or in the foothills of the Sierra Nevada.

The majority of nineteenth century metal trusses were built by California-based bridge building companies. California supported more than a dozen such companies, although these "bridge companies" appear to have been much less specialized than their eastern counterparts. Virtually all known California bridge builders were diversified metal fabricators, in most cases specializing in products other than bridges. The Dyer Brothers-Golden West Iron Works, for example, specialized in bank vaults and metal roofing material but built bridges as well, two of which are included in this thematic group.[2] The San Francisco Bridge Company, despite its name, was chiefly involved in fabricating mining equipment.[3] The Dundon Bridge Company, with one bridge in this inventory, was also involved in manufacturing brewery equipment.[4] The Judson Manufacturing Company, with several representatives in this thematic group, was heavily involved in making agricultural implements. The Pacific Bridge Company and its successor, the Pacific Construction Company, was involved in major building construction,[5] including the San Francisco Ferry Building.[6] The Thomson Bridge Company was best known for its harbor work.

Perhaps because bridge building was often a sideline for these firms, nineteenth century trusses by California manufacturers tend to be quite conservative, using popular truss types developed elsewhere.[7] In bridges as in architecture, it would be well into the twentieth century before California designers would develop a distinctive regional "style."

Three powerful forces combined around 1900 to change the design and construction of truss bridges in California. First, the organization of the American Bridge Company as a subsidiary of U.S. Steel created a national firm capable of overcoming the natural advantages enjoyed by California-based builders. American Bridge at the time of its organization controlled fifty percent of America's bridge fabricating capacity[8] and would soon dominate truss fabrication throughout the United States. Of the extant trusses in California for which the builder is known, American Bridge was responsible for 25 percent of those built between 1900 and 1910, 37 percent of those built between 1911 and 1920, and 45 percent of those built in the 1920s. By the 1930s, this percentage began to diminish, likely because the number of truss bridges was so small that national competition was not economical.

In a second development, after 1900 county surveyors, and later state bridge designers, played more active roles in bridge

design. Where nineteenth century trusses were commonly designed as well as built by bridge companies, twentieth century bridges were almost always designed by public officials or private consultants for public officials.

Third, after 1900 the truss fell into disfavor among county, city and state bridge designers for use in cities or sensitive rural areas. The truss was anathema to City Beautiful advocates like Charles Mulford Robinson, who in 1909 advised the City of Los Angeles that existing trusses were "about as ugly as they can be. As these are replaced, handsome structures should be substituted."[9] This "handsome" bridge was almost always a reinforced concrete arch. Even in rural Santa Clara County, the county surveyor recommended the concrete arch over the truss because it could be made "in harmony with the locality."[10]

These three developments, coupled with a large increase in the number of bridges being built, changed the role of the truss bridge. The typical truss after 1900 was designed by a county surveyor to standard American Bridge Company specifications, and was located across a major crossing in a remote area. Further, the truss occupied a decreasing proportion of the total number of bridges being built. By the 1930s, the truss was used very rarely for "ordinary" spans -- fixed bridges of small to moderate length.

Trusses continued to be used, however, for extraordinary situations, and a large proportion of trusses in this thematic group are of an extraordinary character. Examples of such special-purpose trusses are swing bridges, bascules, and long-span cantilevers. Trusses of this sort are exceptional in their engineering achievements and in their contribution to transportation history; they span crossings that call for extraordinary engineering solutions.

Four swing bridges are included in this thematic group, built between 1906 and 1931. All are located along the shipping channels of San Joaquin and Sacramento County and played key roles in providing concurrent land and water transportation in this topographically difficult area.

Six bascule bridges are included in this thematic group. Like swing bridges, bascules are significant for their technological complexity and for their role in facilitating concurrent land and water transportation in key areas of the state. Two are located in the port area of San Francisco, three along shipping channels in Sacramento County, and one in the harbor area of Los Angeles. While ranging in date from 1916 to 1933, all were designed by Joseph Strauss, the internationally-recognized bridge designer who resided in California after 1921.

Finally, the 1927 cantilever span across the Carquinez Straits and the 1937 San Francisco-Oakland Bay Bridge are highly significant in both engineering and transportation history. As the first major span across an arm of the San Francisco bay

system, the Carquinez Straits Bridge was recognized in 1927 by Dean Charles Delreth of the University of California School of Engineering as "the beginning of an era of local bridge building and traffic expansion around San Francisco. The Carquinez bridge will make our people realize what it means to link metropolitan communities by great bridges."[11] The bridge was also accorded international recognition for reviving the long-span cantilever bridge form, which had fallen into disfavor fifteen years earlier with the collapse of the Quebec bridge and major redesign of the Queensborough cantilever span.[12] With twin spans of 1100 feet, the Carquinez bridge was surpassed in length only by the Queensborough bridge, the second Quebec cantilever, and the Firth of Forth bridge.[13]

Dean Delreth's comments regarding the effect of completion of the Carquinez Bridge were prophetic, for during the 1930s Calfornians were preoccupied with the task of spanning San Francisco Bay. The crowning achievements of this effort were the Golden Gate Bridge and the San Francisco-Oakland Bay Bridge. Each is a truss in some respects, in that the deck of the Golden Gate suspension spans are stiffened by trusses. For the purpose of this thematic group, however, only the Bay Bridge eastern spans are treated as trusses. And great trusses they are -- 52 spans for a total length of 11,327 feet, with a central cantilever span of 1400 feet. Superlatives of every sort apply to this structure -- longest high bridge in the world, most expensive bridge ever built at the time, among the largest truss spans in the world.[14]

In addition to specialized uses, California engineers also experimented with specialized truss designs. Notable in this regard are two small spans in the San Joaquin Valley (38C-168 and 42C-551) built in the 1910s which combine the truss form with reinforced concrete materials. Also notable are four Vierendeel trusses designed by the Los Angeles District of the Corps of Engineers. These were the first Vierendeels built in the United States, are the only such trusses in California, and may be the only extant Vierendeels in the United States.[15] The Maple Canyon bridge in San Diego, designed in 1931 by John C. Shaw, formerly City Engineer in Los Angeles, is not a new form but is an unusually decorative truss and and unusually successful attempt to make the truss conform with 1930s standards for a beautiful urban bridge.

Recognizing these general trends in the history of the California truss bridge, we can assess the significance of these bridge in the following five specific areas.

Period of Significance

The structures in this thematic group illustrate the full range of periods of construction for California truss bridges. Applicable periods of significance roughly approximate decennial milestones in the twentieth century: pre-1900, the significance of which is discussed above; 1900-1909, the formative period for bridge design by county officials and a period of ascendancy for

the American Bridge Company; 1910-1919, the early years for the bridge design section of the California Highway Commission (later Division of Highways, now Department of Transportation) and a consolidation period for local officials; 1920-1929, a period of great expansion in the state and local road network but also a period of decline in truss construction; 1930-1937, a period in which countercyclical public works expenditures resulted in some of the most dramatic bridge design in California history. Of the 72 structures in this group, 14 date to the pre-1900 period, 15 to the period 1900-1909, 19 to the 1910-1919 period, 8 to the 1920-29 period, and 16 to the 1930s.

To some extent, every structure typifies the period in which it was constructed. Certain structures in this group, however, can be seen as distinctively tied to their times. The Orestimba Creek Bridge (38C-9999), for example, embodies most elements of nineteenth century truss design --iron materials, pin connection, use of now rare truss forms. The nearby concrete encased truss (38C-168) typifies the experimentation among many California engineers in a period of ascendancy for reinforced concrete design. The several Feather River trusses, built by convict labor in the 1930s, typify much of highway and bridge construction methods during that period.

Works of Masters

In evaluating this diverse group of truss bridges, one must take into account the contribution of both the bridge builder and bridge designer. With nineteenth century bridges, the two were generally the same. During the twentieth century, particularly as truss bridges are built across the most challenging crossings, the role of the bridge designer becomes crucial and distinct from that of the fabrication or erection form.

A variety of early bridge building companies are represented in this thematic group, including most of the pioneer California firms. Among California firms, Cotton Bros. and the Pacific Bridge (Construction) Co. are best represented with four structures each. The San Francisco Bridge Company and the Judson Manufacturing Company are each represented by two examples. The Mervy-Elwell, Dundon Bridge Company, Thomson Bridge Company, and Dyer Bros.-Golden West Iron Works are represented by one bridge each, in most cases the sole remaining example of the work of these pioneering firms. Among out-of-state firms, the American Bridge Company is, of course, best-represented, having built sixteen of structures in this thematic group. The Phoenix Bridge Company is represented by four structures, comprising all known Phoenix bridges on California highways.

Among bridge designers, J.B. Strauss is best represented with six structures, all bascules. Strauss is best known in California and elsewhere for his design of the Golden Gate Bridge, already determined eligible for listing in the National Register of Historic Places.

Two key bridges in this thematic group represent the collaborative efforts of several prominent bridge designers. The 192[illegible] Carquinez Straits Bridge was principally the work of D.B. Steinman, but his work was guided by an advisory board headed by Charles Delreth, Dean of the College of Engineering at the University of California. The San Francisco-Oakland Bay Bridge is generally attributed to Charles Purcell, but Purcell was guided by a distinguished Engineering Board that included Dean Delreth, Ralph Modjeska, and H.J. Brunnier.[15]

Association with Historical Events

To some extent, each bridge can be seen as important for the transportation function it serves. A significant bridge in this regard in one that has facilitated or is associated with major developments in the communities it serves.

This thematic group includes numerous bridges that are significant to transportation history in California, at the local, state, or national level. While this transportation historical significance is often secondary to engineering considerations, with certain bridges transportation significance is the principal reason for inclusion in this group. The examples below illustrate this latter group.

The most instructive examples in this regard are four structures (9-2, 9-3, 9-9, and 9-15) along State Highway 70, the so-called "Feather River Highway." The Feather River Highway was the first all weather route across the Sierra Nevada. Owing to its transportation significance as well as the enormous engineering challenges posed by the terrain, this route was designated a Historic Civil Engineering Landmark by the American Society of Civil Engineers.[17] While these four structures are not individually distinguished when compared to similar types of structures statewide, as key links in a significant route, they are of considerable importance.

The San Francisco-Oakland Bay Bridge, a structure of national significance for its engineering achievements, is arguably most significant for its contribution to the transportation network of the San Francisco Bay area and as a lynchpin of Interstate 80. It is today nearly impossible to imagine the social and economic structure of the Bay Area in the absence of this structure.

At the local level, numerous bridges in this group made distinctive historical contributions. Particularly important in this regard are movable spans -- bascules as well as swing bridges -- in the harbors of San Francisco and Los Angeles and along the shipping channels of the Sacramento and San Joaquin river system.

Artistic Merit

Historical and modern descriptions of truss bridges often remark upon their frankly utilitarian design. As discussed above, early

twentieth century bridge designers pointed to this quality as a reason to abandon the truss in favor of more explicitly architectonic concrete arch. In its discussion of historic bridges nationally, the Transportation Research Board characterized most trusses as "blatantly functional structure(s)".[18]

This is not to say that trusses are without artistic merit; their beauty is judged by individual tastes and preferences. Artistic merit one of of many considerations taken into account in deciding upon the components of this thematic group.

With a few bridges, artistic merit was a deciding factor. The First Avenue Bridge, a trussed three-hinge arch in San Diego (57C-416) is included as a very successful attempt by an experienced urban bridge engineer to design a truss that conformed with prevailing aesthetic standards for urban bridges. The designer was John C. Shaw, at one time city engineer in Los Angeles and one of the leading exponents of handsome urban bridges, usually in reinforced concrete. Bridge 17C-1, also a three-hinge arch, represents a very successful attempt to integrate a truss bridge into a sensitive rural environment. Bridge 29C-106, in addition to being the oldest highway swing bridge in California, is distinctive for the use of decorative metal detailing to soften the massing and scale of this necessarily monumental structure.

FOOTNOTES

SECTION 7.

1. U.S. Department of Transportation, Federal Highway Administration, Bridge Inspector's Training Manual 70, Washington, D.C. 1979, p. G-43.

2. A good popular treatment of historic trusses is David Weitzman, Traces of the Past: A Field Guide to Industrial Archaeology (New York, Charles Scribner's Sons, 1980).

3. The evolution of quantitative evaluation techniques, which were first applied to historic residences, is discussed in Michael C. Corbett, Splendid Survivors: San Francisco's Downtown Architectural Heritage (San Francisco, California Living Books, 1979). Quantitative bridge evaluation techniques are summarized in Transportation Research Board, "Historic Bridges: Criteria for Decision Making," Washington, D.C. 1983.

4. Ohio Department of Transportation, The Ohio Historic Bridge Inventory and Preservation Plan, 1983.

5. Oregon Department of Transportation, "(Draft) Historic Bridges of Oregon," 1984.

6. Corbett, op. cit.

SECTION 8

1. Paul Bryan Israel, "Spanning the Golden State: A History of Highway Bridges in California" (M.A. Thesis, University of California, Santa Barbara, 1980).

2.San Francisco, The Imperial City (San Francisco, Mercantile Illustrating Co., 1899).

3. Ibid., p. 77.

4. Industries of San Francisco, California (San Francisco, Cosmopolitan Publishing Co., 1889).

5. Imperial City, p. 55.

6. San Francisco Chronicle, April 23, 1909.

7. Harold Kirker, California's Architectural Frontier: Style and Tradition in the Nineteenth Century (Santa Barbara, Peregrine Press, 1973).

8. Victor C. Darnell, A Directory of American Bridge-Building Companies, 1840-1900, Society for Industrial Archaeology, Occasional Publication No. 2, Washington, D.C. 1984.

9. Charles Mulford Robinson, The City Beautiful, Report of the Los Angeles Municipal Art Commission, 1909, p. 10.

10. J.G. McMillan, "Reinforced Concrete Bridges for County Roads," The Architect and Engineer of California, June 9, 1909, p. 64.

11. Charles Delreth, Jr. "The Carquinez Straits Steel Span," The Architect and Engineer, April, 1927, p. 65.

12. David Plowden, Bridges: The Spans of North America (New York, W.W. North & Co., 1974), pp. 243-4.

13. Engineering News-Record, December 24, 1925.

14. John W. Snyder, "An Evaluation of the San Francisco - Oakland Bay Bridge in Connection 4-SF-I280 Transfer Concept," California Department of Transportation, August 11, 1983.

15. The rarity of the Vierendeel truss form is discussed in Carl W. Condit, American Building: Materials and Techniques from the Beginnings of the Colonial Settlement to the Present (Chicago, University of Chicago Press, 1968), and in Elizabeth B. Mock, The Architecture of Bridges (New York, Museum of Modern Art, 1949).

16. California Highways and Public Works, October, 1931, pp. 12-13.

17. John W. Snyder, "An Evaluation of the Feather River Highway," California Department of Transportation, February, 1983.

18. Transportation Research Board, op. cit., p. 4.

9. BIBLIOGRAPHY

Lawrence N. Bigelow, "Fifty-Year Development of Steel Truss Bridges," Journal of the Construction Division, American Society of Civil Engineers (June, 1975), pp. 239-58.

Archibald Black, The Story of Bridges (New York, Whittlesey House, 1936).

"Bridges -- A Special Issue",Society for Industrial Archaeology Newsletter, Vol. 8, Nos. 1-2, January-March, 1979.

T. Allen Comp and Donald Jackson, "Bridge Truss Types: A Guide to Dating and Identifying," History News, Vol. 32, No. 5, May, 1975.

Carl W. Condit, American Building: Materials and Techniques from the Beginnings of the Colonial Settlement to the Present (Chicago, University of Chicago Press, 1968).

Michael C. Corbett, Splendid Survivors: San Francisco's Downtown Architectural Heritage (San Francisco, California Living Books, 1979).

Victor C. Darnell, A Directory of American Bridge-Building Companies, 1840-1900, Society for Industrial Archaeology, Occasional Publication No. 2, Washington, D.C., 1984.

Charles Delreth, Jr., "The Carquinez Straits Steel Span," The Architect and Engineer, April, 1927, pp. 64-66.

Rebecca Herbst, Idaho Bridge Inventory, Idaho Transportation Commission, 1983.

John S. Hittell, The Commerce and Industries of the Pacific Coast of North America (San Francisco, A.L. Bancroft & Co., 1882).

Historic Civil Engineering Landmarks of San Francisco and Northern California, American Society of Civil Engineers, 1977.

Historic Civil Engineering Landmarks of Sacramento and Northeastern California, American Society of Civil Engineers, 1976.

Historic Civil Engineering Landmarks of Southern California, American Society of Civil Engineers, 1974.

George A. Hool and W.S. Kinne, eds. Movable and Long Span Steel Bridges (New York, McGraw-Hill, 1923).

Paul Bryan Israel, "Spanning the Golden State: A History of Highway Bridges in California', (M.A. Thesis, University of California, Santa Barbara, 1980).

Donald C. Jackson, "Railroads, Truss Bridges, and the Rise of the Civil Engineer," Civil Engineering, October, 1977, pp. 97-101.

Harold Kirker, California's Architectural Frontier: Style and Tradition in the Nineteenth Century (Santa Barbara, Peregrine Press, 1973).

Clancey M. Lewis, "The Strauss Design of Movable Bridges," Southwest Builder and Contractor, August 3, 1913, pp. 8-10.

Gustav Lindenthal, "Bridge Engineering," Engineering News-Record, April 17, 1929, pp. 652-7.

_____, "Some Aspects of Bridge Architecture," Scientific American November, 1921.

Merchants Association of San Francisco, Handbook of Manufacturers in and about San Francisco, California (San Francisco, Merchants Association, 1910).

J.G. McMillan, "Reinforced Concrete Bridges for County Roads," The Architect and Engineer of California, June, 1909, pp. 61-4.

Elizabeth B. Mock, The Architecture of Bridges (New York, The Museum of Modern Art, 1949).

S. Griswold Morley, The Covered Bridges of California (Berkeley, University of California Press, 1938).

Gerald D. Nash, State Government and Economic Development: A History of Administrative Policies, 1849-1933 (Berkeley, University of California Press, 1964).

Ohio Department of Transportation, The Ohio Historic Bridge Inventory and Preservation Plan, 1983.

Oregon Department of Transportation, "(Draft) Historic Bridges of Oregon," 1984.

Frank W. Panhorst, "Century of Bridge Progress," California Highways and Public Works, September, 1950, p. 117.

David Plowden, Bridges: The Spans of North America (New York, W.W. Norton & Co., 1974).

Carroll W. Pursell, Jr., "The Technical Society of the Pacific Coast, 1884-1914," Technology and Culture, October, 1976, pp. 702-17.

Fredric L. Quivik, Historic Bridges in Montana, National Park Service, Washington, D.C., 1982.

Charles Mulford Robinson, The City Beautiful, Report of the Los Angeles Municipal Art Commission, 1909.

David B. Steinman and Sara Ruth Watson, Bridges and Their Builders (New York, Dover Publications, 1941).

Transportation Research Board, "Historic Bridges -- Criteria for Decision Making," Washington, D.C. 1983.

Henry Grattan Tyrrell, "Bridges in Relation to the City Plan," The Architect and Engineer, August, 1913, pp. 83-93.

U.S. Bureau of Public Roads, "Report of a Study of the California Highway System," Washington, D.C., 1920.

U.S. Department of Transportation, Federal Highway Administration, Bridge Inspector's Training Manual 70, Washington, D.C., 1979.

J.A.L. Waddell, Bridge Engineering (New York, John Wiley & Sons, 1916).

Wilbur J. Watson, Bridge Architecture (New York, William Helburn, Inc., 1927).

David Weitzman, Traces of the Past: A Field Guide to Industrial Archaeology (New York, Charles Scribner's Sons, 1980).

Charles S. Whitney, Bridges: A Study in Their Art, Science and Evolution (New York, William Edwin Rudge, 1929).

_____, San Francisco, The Imperial City (San Francisco, Mercantile Illustrating Co., 1899).

_____, The Industries of San Francisco, California (San Francisco, Cosmopolitan Publishing Co., San Francisco, 1889).

10. GEOGRAPHICAL DATA

As mentioned in Item 3 above, the location for each bridge included in this thematic group is identified on the appropriate "Truss Bridge Rating Sheet." In addition, the location is delineated on attached Sections from USGS Quadrangle Sheets.

The precise boundary for each bridge is that defined in the appropriate Bridge Maintenance Report, as maintained by the Office of Structures Maintenance, California Department of Transportation. Except as noted below, the boundaries for each bridge include the width of the structure and its length from abutment to abutment, including piers and other elements of the substructure, the deck, and the superstructure. The boundaries for the San Francisco-Oakland Bay Bridge, which includes several approach spans beyond the abutments as well as a tunnel, are those defined in the attached Bridge Report for that structure.

11. PHOTOGRAPHS

Photographs of bridges included in this Thematic Group are attached to the appropriate Truss Bridge Rating Sheets.

12. Prepared under the supervision of John W. Snyder, Chief Architectural Historian, Caltrans. Text by Stephen D. Mikesell, Caltrans. Compiled by Diane Pierzinski. The address for each:

California Department of Transportation
Division of Project Development
Office of Environmental Analysis
1120 N Street
Sacramento, California 95814

1985 Historic Truss Bridges in California (Thematic)

Correspondence

United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO:
443

JAN 22 1986

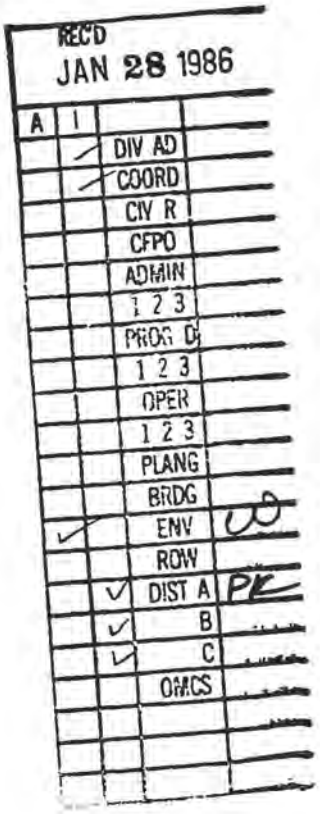
The Director of the National Park Service is pleased to inform you of our determination pursuant to the National Historic Preservation Act, as amended, and Executive Order 11593 in response to your request for a determination of eligibility for inclusion in the National Register of Historic Places. Our determination appears on the enclosed material.

As you know, your request for our professional judgment constitutes a part of the Federal planning process. We urge that this information be integrated into the National Environmental Policy Act analysis and the analysis required under section 4 (f) of the Department of Transportation Act, if this is a transportation project, to bring about the best possible program decisions.

This determination does not serve in any manner as a veto to uses of property, with or without Federal participation or assistance. The responsibility for program planning concerning properties eligible for the National Register lies with the agency or block grant recipient after the Advisory Council on Historic Preservation has had an opportunity to comment.

We are pleased to be of assistance in the consideration of historic resources in the planning process.

Attachment



E.O. 11593

DETERMINATION OF ELIGIBILITY NOTIFICATION
National Register of Historic Places
National Park Service

Project Name: Historic Truss Bridges of California TR

Location: Amador County & others **State:** CA

Request submitted by: DOT/FHWA Bruce E. Cannon

Date Received: 12/11/85 **Additional information received:**

LA

Name of property	SHPO opinion	Eligibility: Secretary of the Interior's opinion	Criteria
✓ Bridge #53C-735 (Glenoaks Blvd. Bridge)	Eligible	Eligible	A,C
✓ Bridge #53C-736 (Geneva Blvd. Bridge)	"	"	"
✓ Bridge #53C-738 (Brand Ave. Bridge)	"	"	"
✓ Bridge #53C-741 (Kenilworth Ave. Bridge)	"	"	"

Keeper of the National Register

Date: 1/13/86

WASO-27

E.O. 11593

DETERMINATION OF ELIGIBILITY NOTIFICATION

National Register of Historic Places

National Park Service

Project Name: Historic Truss Bridges in California TR

Location: Amador County & others **State:** CA

Request submitted by: DOT/FHWA Bruce E. Cannon

Date Received: 12/11/85 **Additional information received:**

Plumas

Name of property	SHPO opinion	Eligibility: Secretary of the Interior's opinion	Criteria
Bridge #9-4 (Tobin Bridge)	Eligible	Eligible	A,C
Bridge #9-2	"	"	"
Bridge #9-3	"	"	"

The above listed bridges are significant representative examples of their type, method and period of construction and reflect historic associations with the history of road transportation in California.

William B Bushong
for **Keeper of the National Register**

Date: 1/9/86

WASO-27

United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO:
413

DEC 27 1985

The Director of the National Park Service is pleased to inform you of our determination pursuant to the National Historic Preservation Act, as amended, and Executive Order 11593 in response to your request for a determination of eligibility for inclusion in the National Register of Historic Places. Our determination appears on the enclosed material.

As you know, your request for our professional judgment constitutes a part of the Federal planning process. We urge that this information be integrated into the National Environmental Policy Act analysis and the analysis required under section 4 (f) of the Department of Transportation Act, if this is a transportation project, to bring about the best possible program decisions.

This determination does not serve in any manner as a veto to uses of property, with or without Federal participation or assistance. The responsibility for program planning concerning properties eligible for the National Register lies with the agency or block grant recipient after the Advisory Council on Historic Preservation has had an opportunity to comment.

We are pleased to be of assistance in the consideration of historic resources in the planning process.

Attachment

E.O. 11593

DETERMINATION OF ELIGIBILITY NOTIFICATION
National Register of Historic Places
National Park Service

Project Name: Historic Truss Bridges in California TR

Location: Amador County & others **State:** CA

Request submitted by: DOT/FHWA Bruce Cannon

Date Received: 12/11/85 **Additional information received:**

36 CFR Part 63.3 Determination

Name of property	Eligibility SHPO opinion	Eligibility Secretary of the Interior's opinion	Criteria
Bridge #:			
1-6 (Hiouchi Bridge)	Eligible	Eligible	
2-13	"	"	
2C-41 (Ash Creek Bridge)	"	"	
2C-21 (Roxbury Bridge)	"	"	
2C-80 (Walker Bridge)	"	"	
2C-85 (Griffin Lane Bridge)	"	"	
5C-32 (Trinity River Bridge)	"	"	
8C-14	"	"	
8C-47	"	"	
9-15	"	"	
9-9	"	"	
9C-1 (Marble Lane Bridge)	"	"	
9C-3 (Mohawk Bridge)	"	"	
9C-42 (Belden Town Bridge)	"	"	
10C-46	"	"	
12C-8 (Honey Run Covered Bridge)	"	"	
10C-109 (Burger Creek Bridge)	"	"	
12-38	"	"	
15C-8	"	"	
16C-6 (Waldo Bridge/ Cabbage Patch Bridge)	"	"	
17C-1 (Gault Bridge/ Anthony House Bridge)	Eligible	Eligible	

for Alice Cromp
Keeper of the National Register
Determined Eligible
Date: December 24, 1985

WASO-27

17C-6 (Edwards Bridge)	Eligible	Eligible
17C-20	"	"
17C-24 (Purdon Bridge)	"	"
17C-30 (Canyon Creek Bridge/Maybert Road Bridge)	"	"
20C-5	"	"
20C-65	"	"
20C-155 (Wohler Bridge)	"	"
20C-224	"	"
23-15L	"	"
24-51 (Isleton Bridge)	"	"
24-53 (Paintersville Bridge)	"	"
24C-9 (Old Fair Oaks Bridge)	"	"
24C-1 (Freeport Bridge)	"	"
24C-22 (Jibboom Street Bridge)	"	"
24C-38 (Slough House Bridge/McCracken Bridge)	"	"
24C-80 (Cosunnes River Bridge at Bridgehouse)	"	"
25C-4 (Coloma Steel Truss Bridge)	"	"
25C-25 (Happy Valley Cut-off Road Bridge)	"	"
26C-8	"	"
26C-11	"	"
29-45 (Old River Bridge)	"	"
29-49	"	"
29C-108 (Bacon Island Road Bridge)	"	"
30C-16	"	"
34C-25 (Third Street Bridge)	"	"
34C-27 (Fourth Street Bridge)	"	"
36C-61 (Paradise Masonic Park Bridge)	"	"
36C-127 (West Cliff Drive Bridge)	"	"
38C-5 (Roberts Ferry Bridge)	"	"
38C-168	"	"
38C-9999	"	"
39C-3 (Merced River Bridge)	"	"
39C-13 (Oakdale Road Bridge)	"	"
42C-551 (Murphy Slough Bridge)	Eligible	Eligible

44C-7 (San Lucas Road Bridge)	Eligible	Eligible
49-106	"	"
49C-190 (Rinconda-Las Pilicitas Bridge)	"	"
49C-196 (Arroyo Grande Bridge)	"	"
52C-53	"	"
53C-61 (Badger Avenue Bascule	"	"
54C-68	"	"
54C-368	"	"
57C-416 (First Avenue Bridge)	"	"
San Francisco-Oakland Bay Bridge	Eligible	Eligible

REQUEST FOR DECISION ON PROPERTIES ACHIEVING SIGNIFICANCE WITHIN THE LAST 50 YEARS

Names of Nominated Properties:	Recommendation:
Historic Truss Bridges of California TR	Eligible A,C

Others (see attached): yes ___ no ___

Explanation of recommendation:

XXX attached to this sheet

_____ attached to individual property evaluation/return sheet

_____ attached to MRA/Theme cover evaluation/return sheet

Additional Comments:

Reviewer: .Bushong

Date: 1/9/86

Review Comments

The four 1937 Glendale Bridges #53C-735,736,738 & 741 are integral components of the Historic Bridges of California TR. They represent an innovative use of an early 20th century bridge type named after its Belgian designer, Arthur Viernedeel, which was commonly built in Europe and Africa. The bridge type, however, is rare in America and reflects the U.S. Corps of Army Engineers' goal of producing a modern, aesthetic and functionally sound solution for roadway connections on the Verdugo Flood Control Project, the nation's first major flood control project undertaken by the agency after passage of the 1936 Flood Control Act.

DOT/FHWA and SHPO both agree that these 1937 structures are eligible for their engineering merit and historical significance. Exceptional significance has been addressed, but the case is not as convincing as it could be due to a heavy reliance on the logic that rarity equates to extraordinary significance. Although the individual statement might be strengthened, the historical essay and survey methodology document that an exacting and highly professional analysis of all California truss bridges has been conducted to produce this request. 462 truss bridges built before 1945 were identified and 72 were sent to the National Register for a determination of eligibility. Of these, only four are less than 50 years old. The four bridges determined eligible by the review are integral to the thematic group and appear to be eligible both as excellent examples of a type and period of bridge technology and as tangible products of the nation's first major flood control project engendered by legislation action.

510.1

CALIFORNIA DIVISION
P.O. Box 1915
Sacramento, California 95809

March 6, 1986

HEV-CA

File: 434.32 ~~430.82~~
Historic Bridge

Mr. Leo J. Trombatore, Director
CALTRANS, 1120 N Street
Sacramento, California 95814

Attention: Federal-aid Branch, Room 3309
for Mr. E. W. Blackmer

Dear Mr. Trombatore:

Enclosed for your files are copies of the December 27, 1985 and January 22, 1986 letters (with attachments) from the United States Department of the Interior responding to the request that the 72 truss bridges presented in the Thematic Request for Determination of Eligibility are eligible for listing on the National Register of Historic Places. Also enclosed is a copy of the letter from the State Historic Preservation Officer that they agree that the 72 structures are eligible.

The imaginative thematic approach for determining eligibility of these historic structures that has been developed by your staff has saved Caltrans, SHPO, and FHWA many many hours of work as well as the expediting of project development. Please extend my congratulations to Messrs. John Snyder, Steve Mikesell, and Miss Diane Pierzinski.

We at FHWA encourage Caltrans to continue with the historic bridge survey to bring it to as fruitfull a conclusion as that accomplished on the truss bridges.

Sincerely yours,

JOHN A. BATES

FOR Bruce E. Cannon
Division Administrator

Enclosures

cc:
Caltrans HQs, Chris Simmons, w/cy encl.
FHWA, D. Eyres, w/cy encl.
FHWA, G. Clinton, w/cy encl.
FHWA, M. Cook, w/cy encl.
FHWA, W. Branch, w/cy encl.
FHWA, D. Bolton, w/cy encl.

DWBranch:jw D.W.B.

STATE OF CALIFORNIA—THE RESOURCES AGENCY GEORGE DEUKMEJIAN, Governor

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
T OFFICE BOX 2390
RAMENTO, CALIFORNIA 95811
(916) 445-8006

SEP 19 1985

REPLY TO: FHWA 850823A

Mr. Bruce E. Cannon
Division Administrator
California Division
Federal Highway Administration
P.O. Box 1915
Sacramento, CA 95809

Dear Mr. Cannon:

Determination of National Register Eligibility: Historic Truss Bridges in California

I am pleased to acknowledge receipt of this important and excellent document. It joins the ranks of a select and distinguished company: comprehensive, theme-oriented California cultural resource identification and evaluation studies that represent the most elegantly simple, sensible and satisfying solution to a major problem in the field of practical cultural resource management.

Congratulations and thanks must be extended to those who had the wisdom and common sense to first advance the notion of doing this study of California bridges, to those who gave it their support and to those who produced it. The pages of this work do not adequately convey the complexity and enormity of the labor behind them. Indeed, they may relay the impression that it was all rather obvious and easy. But to succeed in so deceiving us is surely confirmation of the masterly craftsmanship and probing thought that distinguishes the best from the mediocre in art, science and scholarship.

I am delighted that the Office of Historic Preservation was able to play a role in completing this phase of the overall effort. We look forward to continuing our partnership with FHWA and Caltrans in bringing the work remaining to an equally successful conclusion.

It is therefore my great pleasure to concur in your determination that the seventy-two historic California truss bridges included in this thematic study are eligible for inclusion in the National Register of Historic Places.

If you have any questions or require further assistance, please call Hans Kreutzberg at 322-9621.

Sincerely,

Kathryn Gualtieri

Kathryn Gualtieri
State Historic Preservation Officer

cc: EBlackmer

RECD SEP 20 1985

A	DIV AD	COORD	DIV R	CTIO	ADMIN	PRGM 1 2 3	PRGM 1 2 3	OPER 1 2 3	MAINT 1 2 3	BRDG	ENV	HQW	DIST A	B	C	OMCS
	✓	✓								DFB						

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF TRANSPORTATION
1120 N STREET
SACRAMENTO, CALIFORNIA 95814

(916) 445-9448

JUL 24 1985

A

COSKD
CIV R
CFPO
ADMIN
1 2 3
PROG D
1 2 3
OPER
1 2 3
PLANG
BRDG
EMP
ROW
DIST A
B
C
ENCS

July 22, 1985

Mr. Bruce E. Cannon
Division Administrator
Federal Highway Administration
Sacramento, California

Dear Mr. Cannon:

As part of the ongoing California Bridge Survey, Caltrans has conducted studies which identified 72 truss bridges as having potential for National Register consideration. Caltrans has prepared the attached Thematic Request for Determination of Eligibility based on the studies, and recommends that the identified properties be found eligible. These structures are:

1-6; 2-13; 2C-21; 2C-41; 2C-80; 2C-85; 5C-32; 8C-14; 8C-47; 9-2; 9-3; 9-4; 9-9; 9-15; 9C-1; 9C-3; 9C-42; 10C-46; 10C-109; 12-38; 12C-8; 15C-8; 16C-6; 17C-1; 17C-6; 17C-20; 17C-24; 17C-30; 20C-5; 20C-65; 20C-155; 20C-224; 23-15L; 24-51; 24-53; 24C-1; 24C-9; 24C-22; 24C-38; 24 80; 25C-4; 25C-25; 26C-8; 26C-11; 29-45; 29-49; 29C-108; 30C-16; San Francisco-Oakland Bay Bridge; 34C-25; 34C-27; 36C-61; 36C-127; 38C-5; 38C-168; Orestimba Creek Bridge; 39C-3; 39C-13; 42C-551; 44C-7; 49-106; 49C-190; 49C-196; 52C-53; 53C-61; 53C-735; 53C-736; 53C-738; 53C-741; 54C-68; 54C-368; 57C-416.

The following Federal Highway Administration action is requested:

1. Your determination, in consultation with the State Historic Preservation Officer that the properties listed above appear to meet the criteria of eligibility for listing on the National Register of Historic Places; and

2. Following consultation with the State Historic Preservation Officer, please forward the Request for Determination of Eligibility to the Keeper of the National Register for determination of eligibility.

If you have any questions, please contact John Snyder at 445-9448.

Sincerely,

E. W. BLACKMER, Chief
Environmental Analysis

Attachment

REC'D	JUL 24 1985
RECORDED	