

United States Department of the Interior
National Park Service

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 National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any 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 certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property



historic name Hospital Bridge

other names/site number Downieville Steel Bridge; Downie River Bridge

2. Location

street & number Upper Main Street over the Downie River

n/a

 not for publication

city or town Downieville

n/a

 vicinity

state California code CA county Sierra code 091 zip code 95936

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 at the following level(s) of significance:
___ national ___ statewide ___ local

Signature of certifying official/Title _____ Date _____

State or Federal agency/bureau or Tribal Government _____

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official _____ Date _____

Title _____ State or Federal agency/bureau or Tribal Government _____

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register ___ determined eligible for the National Register

___ determined not eligible for the National Register ___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper _____ Date of Action _____

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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

Contributing	Noncontributing	
		buildings
		district
		site
1	0	structure
		object
1	0	Total

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

Historic Highway Bridges in California MPS

0

6. Function or Use

Historic Functions
 (Enter categories from instructions.)

Current Functions
 (Enter categories from instructions.)

Transportation: Road related

Bridge

7. Description

Architectural Classification
 (Enter categories from instructions.)

Materials
 (Enter categories from instructions.)

Steel, pin connected, through Pratt truss

foundation: Concrete and stone
 walls: Steel

 roof: n/a
 other: Steel structure
Wooden roadbed

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Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

The Hospital Bridge, also known as the Downieville Steel Bridge, built in 1908 across the Downie River near its confluence with Pauley Creek, is rare surviving example of a steel pin-connected truss bridge that was once common throughout California. 100 feet long and 12 feet wide with timber stringers and decking, this bridge is a simple but striking example of Pratt truss bridge design, exhibiting a very high degree of historic integrity.

Narrative Description

The Hospital Bridge is a 100 foot long through Pratt truss bridge spanning the Downie River east-west between Upper Main Street and Lavazzola Road. The bridge is constructed of riveted steel box members connected with lacing bars. The lower chords and stringers are steel I-beams. The top chords are C-channel members held together with lacing bars and topped by flat sheet steel. The end posts are C-channel members held together with lacing bars and topped by flat sheet steel. Verticals are C-channel held together with lacing bars, except for the outermost verticals, which have a base of C-channel members held together with lacing bars, topped by two steel rods attached with pins to the C-channels and the connection between the end posts and top chords. Struts are L-shaped structural steel. Top and bottom lateral bracing is flat structural steel, and each diagonal consists of two flat structural steel bars. The center two trusses have cross-diagonal members of steel rods connected via turnbuckles. Additional steel rods and steel bars are connected horizontally parallel to the lower chord, via large bolts at the base of each vertical, providing a common connection point for verticals and diagonals, mounted atop each floor beam by a U-shaped bolt and sections of C-channel. The roadway deck is wooden, with a lower layer of beams tangent to the road surface and two rows of four wooden beams parallel with the road surface. Guardrails consisting of two steel L-girders attached with interlaced lacing bars are located on either side of the bridge roadway, with chain-link fence affixed in front of the guardrails on either side of the roadway. The bridge is supported by board-formed concrete abutments on either side. The remains of earlier bridge abutments, consisting of irregular stone secured in place with concrete mortar, is visible behind the bridge abutments along the canyon wall. A water pipe runs along the southern side of the bridge, attached to the floor beams.

The Hospital Bridge today carries only pedestrian traffic but was once the only access to the historic settlements and mining country upstream from the gold rush community of Downieville. In the wake of the 1937 flood (see Section 8) it was the only intact bridge in the community until repairs could be made. The bridge was removed from service for vehicular traffic in 1980 with the construction of a nearby concrete structure designed to handle the traffic of loaded logging trucks.

Once common throughout California, a relatively small number of steel, pin-connected, through truss highway bridges survive today within the state. Additionally, this bridge is a rare example of California bridges constructed by the Western Bridge and Construction Company of Omaha, Nebraska. The bridge shares structural similarities with other California products of Western Bridge and Construction, including the use of riveted steel box members connected by lacing bars, and guardrails of interlaced steel lacing bars. Two other known California examples by the same company sharing these features are the Old Fair Oaks Bridge, a Pennsylvania Petit through truss bridge completed in 1907, and the Rancho Murieta Bridge, a Parker through truss span built in 1908.

The existing bridge is a steel, pin-connected, through Pratt truss, a common design for highway bridges in the late 19th and early 20th centuries. A Pratt truss includes vertical members and diagonals that slope down towards the center. The Pratt Truss was invented in 1844 by Thomas and Caleb Pratt. This truss is practical for use with spans up to 250 feet and was a common configuration for railroad bridges as truss bridges moved from wood to metal. They are statically determinate bridges, which lend themselves well to long spans.

The truss is 100 feet long with a 12-foot-wide roadbed and timber stringers and decking. As was the custom at the time, the bridge was designed by the County Surveyor, in this case, George F. Taylor. The contract for the bridge was awarded to the Western Bridge and Construction Company who initially completed the bridge in 1908. Due to deficiencies in construction, Sierra County ordered the company to make corrections and the bridge was not put into service until 1910.

The bridge has maintained an extraordinarily high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. All structural members are original, and the bridge retains its original wooden deck.

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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 old or achieving significance within the past 50 years.

Areas of Significance

(Enter categories from instructions.)

Architecture

Transportation

Period of Significance

1908-1937

Significant Dates

1908 initial bridge construction

1910 existing bridge completed

1937 Downieville Flood

Significant Person

(Complete only if Criterion B is marked above.)

Cultural Affiliation

Architect/Builder

Western Bridge & Construction Company,

Omaha, NB – Builder

Taylor, George F, Sierra County Surveyor/Designer

Period of Significance (justification)

The bridge was first constructed in 1908 but completed in 1910. In 1937 the bridge was the only intact connection across the Downie River in the wake of a catastrophic flood that destroyed or damaged the town's other bridges.

Criteria Considerations (explanation, if necessary)

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Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance and applicable criteria.)

The Hospital Bridge, also known as Downieville Steel Bridge, is significant under Criterion A at the local level of significance for its association with the development of the community of Downieville and its role as the sole surviving bridge in the wake of the catastrophic 1937 Downieville flood. It is also eligible under Criterion C as a distinct and rare example of the Pratt truss bridge type, and the engineering work of the Western Bridge and Construction Company. The period of significance is 1908-1937, from initial construction until the 1937 Downieville flood.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

Criterion A: Development of Downieville

Hospital Bridge is a bridge connection integral to the town of Downieville, the historic Sierra County seat, and for eight decades provided the only vehicular access into the mining, timber, and ranching country above Downieville. The bridge was initially known as the Downieville Steel Bridge, as it was the first steel bridge in Downieville (all previous bridges were wooden.) The bridge, designed locally, was built under the direction of the Western Bridge and Construction Company of Omaha, Nebraska. Western Bridge and Construction produced many bridges in the Midwestern United States, but California examples are exceptionally rare. Two surviving Northern California examples are the Fair Oaks Bridge (National Register listed) and the Rancho Murieta Bridge. In addition to providing for traffic needs for eight decades, the bridge survived a number of floods that destroyed similar local bridges downstream within this mountain community. Today, the bridge provides for pedestrian traffic and mountain bikers, as the bridge connects the popular mountain bike trails to their terminus in Downieville.

The 1937 Downieville Flood

In 1937, Downieville had a total of five bridges. The easternmost (and farthest upstream on the Downie River) was the Hospital Bridge, originally called the Downieville Steel Bridge (due to its status as the town's first steel truss bridge) constructed in 1908. Next was the Hansen Bridge, a Pratt pony truss bridge completed in 1936. Third was a concrete arch bridge constructed by the State of California to carry traffic on Highway 49. Just downstream of the highway bridge was the Jersey Bridge, a wooden bridge constructed in 1875, and the Durgan Bridge, just downstream of where the Downie River met the Yuba, constructed in 1881. Aside from the highway bridge, all were constructed as single-lane bridges by the county government.

On December 10, 1937, major storms sent a torrent of water through Downieville via both rivers. Nearly ten years had passed since the last high water, and an enormous amount of debris was swept into the river by the storm. State highway crews, aware of the storm's danger, stood by to clear debris from the bridges, but as the river rose to the point where the highway bridge's arches were underwater, clearing debris became impossible. The storm passed mostly under the Hospital Bridge and damaged the footings of the Hansen Bridge. The Highway 49 concrete arch bridge, unlike the truss bridges, had several pillars that extended into the river, and once road crews could no longer reach the bridge, debris collected on the piers and blocked the passage of water through the arches. The temporary dam brought the water level high enough to send the river through the streets of Downieville, lifting homes from their foundations and sending them floating downstream. The highway bridge could not withstand the pressure of the water and debris for long, and collapsed after approximately 30 minutes. The catastrophic break-through of water and debris caused more damage to the buildings of Downieville, and utterly destroyed the two wooden bridges downstream from the highway bridge, the Jersey and Durgan Bridges.

With Downieville devastated by the flood and cut off from the rest of the state, several groups responded immediately to the community's crisis. The American Red Cross was mobilized to provide food, clothing and bedding. A California Conservation Corps camp was established to clear flood debris in the wake of the storm. The Lord Shoto Douglas Chapter of E Clampus Vitus declared a proclamation of emergency and mobilized their membership to assist the citizens of Downieville, providing food and material assistance, and obtaining the name of every child in Downieville and delivering each a Christmas present.

Bridge design in the 20th century, and selection of bridge types, was influenced by "City Beautiful" design. In 1909, Charles Mulford Robinson reported that the city of Los Angeles should substitute more aesthetically pleasing concrete arch bridges

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for the utilitarian but unattractive truss bridges used at river crossings. California Highway Commission designers like Harlan D. Miller and his successor Charles E. Andrew both insisted that California highway bridges should be beautiful as well as practical, following Robinson's dictates regarding bridge materials. Their work established the tradition of the concrete highway bridge in California. When the California Division of Highways constructed their bridge across the Downie River in 1936, they followed this tradition. Many of these California bridges still stand today. Examples span the state, from Los Angeles' network of concrete river crossings and the Diestelhorst Bridge in Redding. Unfortunately, the aesthetics of the Highway 49 bridge did not match up to the force of the 1937 flood, with disastrous consequences for the mountain community.

When Sierra County officials selected designs to replace the Jersey and Durgan Bridge in 1938, county engineer George Taylor designed two steel truss bridges, rather than concrete spans, to replace the wooden bridges. Both bridges were constructed by the Judson Pacific Company of San Francisco, who specialized in truss bridge construction well after most California engineering firms had abandoned truss bridge design for more contemporary styles. Taylor also chose to repair the damaged Hansen Bridge and retain the Hospital Bridge, whose unfashionable steel trusses had survived the disastrous 1937 flood. By the end of 1938, the town of Downieville was again connected by its four traditional single-lane bridges, all of steel truss design. The California Division of Highways rerouted Highway 49 temporarily over the Jersey Bridge as a temporary expedient until a new highway bridge could be constructed to replace the fallen 1936 bridge. As of 2012, no replacement bridge has been constructed, and the temporary expedient of the Jersey Bridge still carries Highway 49 through the city. As the only intact bridge in the wake of the flood, the survival of the Hospital Bridge influenced the subsequent construction of steel truss bridges due to their inherent strength and suitability to local conditions.

Criterion C: Distinct Characteristics of Type

The Hospital Bridge meets the registration requirements of the Historic Highway Bridges in California Multiple Property Submission for Criterion C because it illustrates the special skills of California bridge designers and builders in adapting steel, pin-connected, through Pratt truss spans to differing road construction challenges. Bridge historian Carroll Pursell of the University of California, Santa Barbara, conducted a study of the bridge in May 1980 and concluded that the Downieville Steel Bridge was eligible for inclusion on the National Register of Historic Places. Mr. Pursell wrote that 'it embodies the distinctive characteristics of the steel truss highway bridge which was once common throughout California. The bridge has maintained a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. The bridge is relatively old, unchanged, and rare. It also makes a contribution to the rural atmosphere of Downieville.' The bridge is still fully intact and essentially unchanged since Mr. Pursell's observations 32 years ago.

The work of the Western Bridge and Construction Company, based in Omaha, Nebraska, is relatively common in the Midwestern United States, but the company created few bridges in California. Two examples exist in Sacramento County, but they are Pettit and Parker trusses, while the Hospital Bridge is a Pratt truss. The design and style of the Pratt truss required follow-up by the bridge builder to address deficiencies in the original construction, but the resulting bridge was of sufficient strength and capacity to influence later bridge design in Sierra County. The 1935 Hansen Bridge was constructed as a Pratt truss, and both replacements for the bridges lost in the 1937 flood used truss designs rather than more contemporary designs, in imitation of the earlier Hospital Bridge, whose materials and design facilitated its survival during a disaster that destroyed less sturdy structures.

The bridge is thus eligible under Criterion C, as a distinctive example of type, period, and method of construction. It is also eligible under Criterion A, as an important element in the growth of the Northern California highway system, its contribution to the development of Downieville and the surrounding northern mines are as a tourist destination, and its survival after the catastrophic 1937 Downieville flood with a period of significance of 1908-1937.

Developmental history/additional historic context information (if appropriate)

Downieville's economy has shifted from its historic resource based origins of gold mining and timber production to that of tourism today. Both recreational and historic tourism is the town's draw. Camping, fishing, hunting, hiking, and mountain biking are all pursuits undertaken in this community surrounded by public lands of the Tahoe National Forest. With roots dating to 1848, Downieville remains much of its gold rush charm and is a draw due to its isolation, scenic beauty, and dramatic setting. A number of buildings in town date to the 1850s including that housing a local history museum. And the survival of four one lane bridges add to the unique ambiance of this community that straddles the Yuba and Downie Rivers. From National Geographic's "Guide to Small Town Escapes", in which Downieville is one of four towns

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representing California (along with Catalina, Ojai, and Mendocino), Geoffrey O’Gara writes of Downieville as “A trestle bridge spans the Downie River just above its junction with the North Yuba River, and there, if you any aspiration to continue into Northern California’s high country, you must wait your turn, because the bridge is only wide enough for one lane of traffic. The narrow bridge provides one assurance that Downieville will likely be no more than the very small town it’s always been. There is only a small level area in the vicinity were the rivers join, and the rest of the town anchors precariously on steep, forested canyon walls.” While this quote was written for the one lane 1935 steel bridge spanning the Downie River downstream and carrying state route 49, it, in essence, describes all four surviving one lane bridges in Downieville, believed to be the only community in the state with such a period transportation system.

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

- Lutes, Virginia, “The Great Flood of 1937, Downieville, California,” *The Sierran*, Volume XXXVI, Number 1, Winter 2008.
- Sinnott, James J., *Downieville, Gold town on the Yuba*, 1972
- Sinnott, James J., *A General History of Sierra County*, 1978
- North Fork of Yuba River (Nevada Street) Bridge Improvement Report, JRP Historical Construction Services, Feb 2001
- National Geographic, “Guide to Small Town Escapes”
- Construction documents, County of Sierra, 1935

Previous documentation on file (NPS):

- 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 # _____
- recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other
- Name of repository: _____

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property 1

(Do not include previously listed resource acreage.)

UTM References

(Place additional UTM references on a continuation sheet.)

1	<u>10</u>	<u>687041</u>	<u>4382266</u>	3	<u> </u>	<u> </u>	<u> </u>
	Zone	Easting	Northing		Zone	Easting	Northing
2	<u> </u>	<u> </u>	<u> </u>	4	<u> </u>	<u> </u>	<u> </u>
	Zone	Easting	Northing		Zone	Easting	Northing

Verbal Boundary Description (Describe the boundaries of the property.)

The property is located within the community of Downieville. It is today a pedestrian bridge that connects to Upper Main Street. The bridge is located at latitude 39 34 10.96 N and longitude 120 49 21.00 W.

Boundary Justification (Explain why the boundaries were selected.)

The boundary is the footprint of the existing Hospital Bridge and its approaches.

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11. Form Prepared By

name/title LEE ADAMS
organization COUNTY OF SIERRA date 9 NOVEMBER 2011
street & number PO DRAWER D telephone (530)289-3295
city or town DOWNIEVILLE state CA zip code 95936
e-mail HANGMAN@SIERRACOUNTY.WS

Additional Documentation

Submit the following items with the completed form:

- **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. Key all photographs to this map.
- **Continuation Sheets**
- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Name of Property:
City or Vicinity:
County: State:
Photographer:
Date Photographed:
Description of Photograph(s) and number:

1 of ____.

Property Owner:

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

name County of Sierra (Tim H. Beals, Director of Transportation)
street & number PO Box 98 telephone 530.289.3201
city or town Downieville state CA zip code 95936

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.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18 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 Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

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Figure Log

Figure 1: Site Map showing nominated property and other Downieville bridges

Figure 2: View of bridge damaged in wake of

Figure 3: Historic photo of damaged highway bridge, 1937

Figure 4: Historic photo of damaged highway bridge, 1937

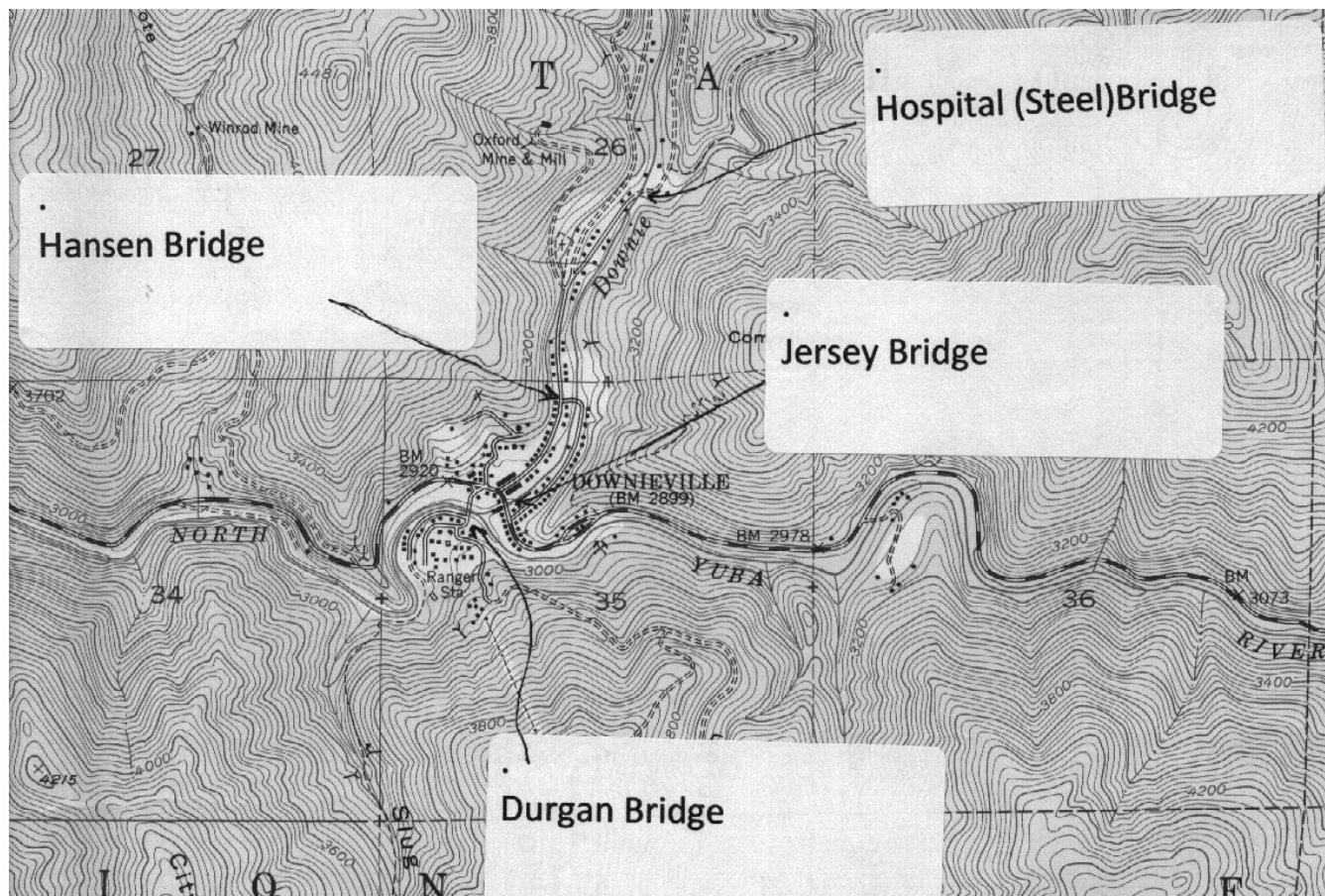


Figure 1. Downieville Site Map

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Figure 2. Historic photo of damaged highway bridge, 1937



Figure 3. Historic photo of damaged highway bridge, 1937