

| 1 SITE ID NO | | | | | | | | | | OAHIP INVENTORY | | | | | | | | | | Office of Archeology and Historic Preservation Department of the Interior, Washington, D.C. 20240 | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|
| 2 Classification BRIDGES, TRESTLES, AND AQUEDUCTS: | | | | | | | | | | 3 PRIORITY | | | | | | | | | | 4 DANGER OF DEMOLITION? (SPECIFY THREAT) <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN <i>Transportation: Bridges & Tunnels</i> | | | | | | | | | |
| Cable Stay | | | | | | | | | | 5 DATE 1957 | | | | | | | | | | 6 GOVT SOURCE OF THREAT OWNER ADMIN | | | | | | | | | |
| 8 NAME(S) OF STRUCTURE Cable Stay Bridge | | | | | | | | | | 13226 | | | | | | | | | | 7 OWNER/ADMIN Benton County | | | | | | | | | |
| 10 STATE COUNTY | | | | | | | | | | COUNTY NAME | | | | | | | | | | CITY/VICINITY | | | | | | | | | |
| W A | | | | | | | | | | 0 0 3 | | | | | | | | | | Benton | | | | | | | | | |
| 11 SITE ADDRESS (STREET & NO.) | | | | | | | | | | 12 EXISTING SURVEYS | | | | | | | | | | 13 SPECIAL FEATURES (DESCRIBE BELOW) | | | | | | | | | |
| | | | | | | | | | | <input type="checkbox"/> NR <input type="checkbox"/> NHL <input type="checkbox"/> HABS <input type="checkbox"/> HAER-I <input type="checkbox"/> HAER <input type="checkbox"/> NPS <input type="checkbox"/> CL6 <input type="checkbox"/> CONF <input type="checkbox"/> STATE <input type="checkbox"/> COUNTY <input type="checkbox"/> LOCAL <input type="checkbox"/> OTHER | | | | | | | | | | <input type="checkbox"/> INTERIOR INTACT <input type="checkbox"/> EXTERIOR INTACT <input type="checkbox"/> ENVIRONS INTACT | | | | | | | | | |
| 14 UTM ZONE | | | | | | | | | | EASTING | | | | | | | | | | NORTHING | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 CONDITION | | | | | | | | | | 70 <input type="checkbox"/> EXCELLENT | | | | | | | | | | 71 <input type="checkbox"/> GOOD | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 INVENTORIED BY | | | | | | | | | | AFFILIATION | | | | | | | | | | DATE | | | | | | | | | |
| Lisa Soderberg | | | | | | | | | | HAER/Washington State Bridge Inventory | | | | | | | | | | 1979-80 | | | | | | | | | |
| 17 DESCRIPTION AND BACKGROUND HISTORY, INCLUDING CONSTRUCTION DATE(S), HISTORICAL DATE(S), PHYSICAL DIMENSIONS, MATERIALS, EXTANT EQUIPMENT, AND IMPORTANT BUILDERS, ENGINEERS, ETC. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>The Kiona-Benton City Bridge was designed for Benton County by Homer M. Hadley in 1957. It was built at the same time that the Germans began developing the cable-stayed bridge. Steel tubes filled with concrete were used in place of stay cables. Everett McKellar of Chelan, Washington constructed the bridge at a cost of \$192,259.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------------|--|--|--|--|--|--|--|--|--|
| 18 ORIGINAL USE Bridge | | | | | | | | | | PRESENT USE Bridge | | | | | | | | | | ADAPTIVE USE | | | | | | | | | | (CONT OVER) | | | | | | | | | |
| 19 REFERENCES—HISTORICAL REFERENCES, PERSONAL CONTACTS, AND/OR OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bill Newman, "Northwest pioneers in design of floating and cable-stay bridges," <u>Journal of Commerce</u> , December 20, 1975. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 URBAN AREA 50,000 POP OR MORE? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | | | | 21 HCAS Region N W | | | | | | | | | | 22 PUBLIC ACCESSIBILITY <input type="checkbox"/> YES LIMITED <input type="checkbox"/> YES UNLIMITED <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN | | | | | | | | | | 23 EDITOR INDEXER | | | | | | | | | |
| 24 LOCATED IN AN HISTORIC DISTRICT? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | | | | NAME | | | | | | | | | | DISTRICT ID NO | | | | | | | | | | | | | | | | | | | |



3

1

Detail of Connection.



3

5

Looking south.



3

6

side elevation, looking east.



3

2

Looking North.



3

3

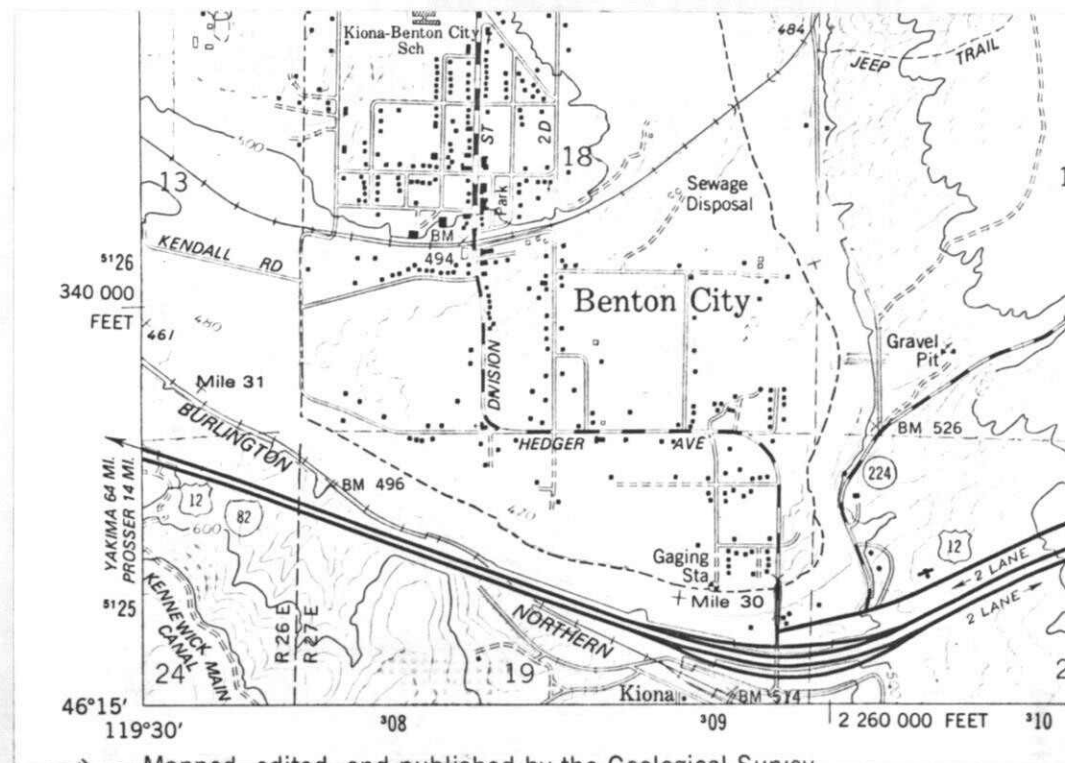
Looking North.



3

4

Looking South.



U.S.G.S. Map, Benton City, 1974
Scale 1:24,000

United States Department of the Interior
National Park Service

National Register of Historic Places
Registration Form

BN 1260

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 instruction. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter or computer, to complete all items.

1. Name of Property

historic name: Benton City - Kiona Bridge

other names/site number: Bridge Number 225/1

2. Location

street and number: State Route 225 over Yakima River

N/A not for publication

city or town: Between Benton City and Kiona

X vicinity

state: Washington

county: Benton County

zip code:

3. State/Federal/Tribal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this X 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
X meets does not meet the National Register criteria. I recommend that this property be considered significant
nationally X statewide locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

State or Federal agency or Tribal Government

In my opinion, the property meets does not meet the National Register criteria (See continuation sheet for additional
comments.)

Signature of certifying official/Title

Date

State or Federal agency or Tribal Government

4. National Park Service Certification

I hereby certify that the property is:

Signature of the Keeper

Date of Action

- ☐ 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)

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.) | | |
|---|--|---|-----------------|------------|
| | | Contributing | Noncontributing | |
| private | building(s) | | | buildings |
| public-local | district | | | sites |
| X public-State | site | | | structures |
| public-Federal | X structure | 1 | | objects |
| | object | | | |
| | | 1 | 0 | Total |

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

Bridges and Tunnels Built in Washington State,
1951 to 1960

**Number of contributing resources previously listed
in the National Register**

N/A

6. Function or Use

| Historic Functions (Enter categories from instructions) | Current Functions (Enter categories from instructions) |
|---|--|
| Transportation | Transportation |
| Historic Subfunctions (Enter subcategories from instructions) | Current Subfunctions (Enter subcategories from instructions) |
| Road-Related | Road-Related |

7. Description

| Architectural Classification (Enter categories from instructions) | Materials (Enter categories from instructions) |
|--|---|
| No Style | Foundation Concrete |
| | Other Steel |

Narrative Description

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

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 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
Transportation

Period of Significance

1955-1957

Significant Dates

1957

Significant Person

(Complete if criterion B is marked above)

N/A

Cultural Affiliation**Architect/Builder**

Homer M. Hadley, Designer
Everett McKellar, Builder

9. Major Bibliographical References

Bibliography

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

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

☐ See continuation sheet for additional
HABS/HAER documentation.

Primary location of additional data:

- ☒ State Historic Preservation Office
- ☒ Other State Agency (Repository Name: WSDOT)

10. Geographical Data

Acreage of Property: 1.00

UTM References

(Place additional UTM references on a continuation sheet.)

| | | | | | | | |
|---|------|---------|----------|---|------|---------|----------|
| 1 | 11 | 309295 | 5124938 | 3 | | | |
| | Zone | Easting | Northing | | Zone | Easting | Northing |
| 2 | 11 | 309295 | 5124877 | 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: Oscar R. "Bob" George, Bridge Engineer

organization: Washington State Department of Transportation / Environmental Affairs Office

date: 6/30/2001

street & number: PO Box 47332

telephone: (360) 570-6639

city or town: Olympia

state: Washington

zip code: 98504-7332

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 the SHPO or FPO.)

name: Washington State Department Of Transportation

street & number: PO Box 47300

telephone: 360-705-7000

city or town: Olympia

state: Washington

zip code: 98504-7300

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 Program Center, National Park Service, 1849 C Street NW, Washington DC 20240; and the Office of Management and Budget, Paperwork Reduction Projects (1024-0018), Washington, DC 20503.

US GOVERNMENT PRINTING OFFICE : 1993 O - 350-416 QL 3

**United States Department of the Interior
National Park Service****National Register of Historic Places
Continuation Sheet**

Section number 7. Narrative Description

Page 1 of 1

Completed in 1957, the bridge carries State Route 225 (SR 225) across the Yakima River between the small towns of Benton City on the north, and Kiona on the south. The two towns lie just to the west of Washington's Tri-Cities area. Benton City, a cluster of homes and schools, is situated on a high bench where the Yakima River bends sharply to the north. Smaller Kiona, across the river, retains well-tended homes but no commercial enterprises.(1)

SR 225 provides a north/south connection between SR 240, carrying traffic southeast through the U.S. Department of Energy's Hanford Reservation to Richland, and Interstate 82, just south of the river.

The 400-foot long bridge consists of a 170-foot main span flanked at each end by two spans (measuring 54 feet and 53 feet) and an 8-foot cantilever at the bridge end. The main span is made up of a central 60-foot long "suspended span," supported by 55-foot long cantilever sections. At the bridge ends, a concrete slab sits on the end of the 8-foot cantilever to provide a transition to the roadway approach. The bridge carries one lane of traffic in each direction within a curb-to-curb width of 26 feet, plus two 3 foot-6 inch sidewalks.

With the exception of the "suspended span," the 34 foot 6 inch wide bridge spans are reinforced concrete, with a 3 foot 3 inch deep cross-section, consisting of a hollow box girder under each sidewalk, and two central tee-girders. Girder flanges provide a 6-inch thick roadway slab. The superstructure is continuous between the bridge end and the end of the "suspended span." Transverse crossbeams are provided at each pier and at cantilever ends, while transverse diaphragms are provided at the center of each span and at the center of the 55-foot cantilevers. The 60-foot long "suspended span" consists of 5 rolled steel wide-flange girders, with transverse cross-frames at the third points, supporting a 6-inch thick reinforced concrete roadway slab.

All piers are reinforced concrete. Each main span pier consists of two hexagonal columns, 30 foot 6 inches center-to-center, connected by a 1-foot thick full height wall, founded on a spread footing and topped by a 4 foot 5 inch deep and 4-foot wide cap. A tapered concrete tower is supported on the cap, above each column, and extends about 28 feet above the roadway. A rectangular steel box strut, built from four steel plates extends over the roadway between towers to provide transverse stability. A rolled steel wide-flanged vertical column is embedded within each tower and acts compositely with the concrete in carrying applied loads. Inclined tie or "stay" members extend parallel to the bridge, from a location near the top of each tower, to an anchorage within the exterior box girder of each of the adjacent concrete spans. The "stays" are box sections constructed by welding steel plates to each side of a rolled wide-flange steel beam. Interior voids of the "stays" are filled with vermiculate concrete. The top of the "stays" have a riveted connection with the steel column within each tower. The "back stays" anchor to the approach spans just above the adjacent pier. The "fore stays" anchor just 6 feet back from the tip of the 55-foot cantilever to provide support for the suspended span.

Full-width concrete walls, founded on spread footings, provide support for the short cantilever span and first approach span at each end of the bridge. Piers shared by the two interior approach spans are full-width concrete walls on footings founded on multiple pre-stressed concrete piles.

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number 8. Narrative Statement of Significance

Page 1 of 2

The Benton City-Kiona Bridge is eligible for listing in the National Register of Historic Places under Criterion A for its association with bridge building in Washington in the 1950s as per the "Bridges and Tunnels Built in Washington State, 1951-1960" MPD. It is also eligible under Criterion C for its type, period, materials and method of construction. The bridge meets the threshold for eligibility established by Criteria Consideration G for properties not yet 50 years old for its exceptional engineering significance.

The significant engineering features of this bridge are its use of towers and inclined ties or "stays" to support a span suspended between two long span sections cantilevering from a main pier, and its innovative use of both concrete and steel components in the design. In their December 21, 1955, "Preliminary Layout" for the bridge, the designers, Hadley and Hadley, Consulting Engineers, from Seattle, called their bridge a "Tied-Cantilever Type." This bridge was the first of its type in Washington, and remains the only one like this in the state.

Use of the towers and inclined "stays" enabled the designers to use an extremely shallow cross section for the superstructure of the bridge. A conventional concrete or steel girder bridge would have provided a depth/span ratio in the range of 1/15 to 1/25.(2) The Hadley bridge provided a 170-foot span across the river with a 3 foot-3 inch deep section, for a depth/span ratio of 1/52.3. This was an extraordinary engineering achievement for the 1950s.

Use of the pioneering "Tied-Cantilever" design enabled Hadley to provide a longer and shallower span and a very aesthetically pleasing crossing of the river. The longer span moved the main piers back out of the deeper section of the river, while the shallow section provided required clearance above the river's record flood stage.

Historical Context:

On October 3, 1955, the Benton County Board of County Commissioners entered into an agreement with Homer M. Hadley, representing the Seattle consulting engineering firm of Hadley and Hadley, for preparation of plans and specifications for a bridge crossing the Yakima River between Benton City and Kiona.(3)

The bridge was to replace an earlier crossing of the river. After a study of several alternate sites, it was decided to locate the bridge 625 feet downstream and to the east of the existing bridge, a few hundred feet north of what were then Secondary State Highway 3 and U.S. Highway 410.(4) The bridge was to be constructed to provide clearance above the high water elevation experienced at that location in a record flood in 1933.

Design plans and specifications were prepared by Hadley and approved on August 13, 1956 by Dale E. Bean, Benton County Road Engineer. A contract for construction of the bridge was advertised by the county and awarded on September 17, 1956, to contractor Everett McKellar of Chelan, Washington, for a contract cost of just over \$186,000 (5) Construction was completed in June 1957. The bridge has had no known alterations since construction.

On May 21, 1991, jurisdiction for the highway was transferred to the state and the route was designated as State Highway 225. This action was taken because the route provides a cross-connection between interstate and state highways, and because it provides access to the U.S. Department of Energy facilities at the Hanford Reservation (6)

Engineering Context:

The Benton City-Kiona Bridge was an American prototype for what would later be called cable-stayed bridges. At least two earlier examples of the type existed in the remote rain forests of the Olympic Peninsula, but were probably unknown to engineers of the day. Hadley and Hadley may have known of those two log cable-stayed bridges constructed in 1950 and

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section number 8. Narrative Statement of Significance

Page 2 of 2

1952 over the Quinault River on the Quinault Indian Reservation. Neither of those bridges was designed by a professional engineer. They were built by a logging company superintendent, with no formal training in structural theory. The later of the two bridges, called the Chow Chow Bridge, was listed in the National Register of Historic Places and served logging truck traffic until the late 1980s.

Engineers had begun developing cable-stayed bridges in Germany in the late 1930s. In 1938, the German engineer, Professor F. Dischinger, began studies on cable-stayed bridges. However, it was not until 1955, that a contractor who had collaborated with Professor Dischinger, succeeded in getting acceptance for construction in Sweden of the first modern cable-stayed bridge in the world, the Stroemsund Bridge.⁽⁷⁾ Conceptually the German/Swedish and Hadley designs are similar. Hadley and Hadley used steel box sections, however, rather than cables, for the "stays."

The first modern cable-stayed bridge in North America, having a 450-foot main span, was built at Sitka Harbor, Alaska in 1972. In 1979, the first modern cable-stayed bridge built in Washington, having a main span of 970 feet, opened to carry traffic across the Columbia River between the cities of Pasco and Kennewick.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section number 9. Major Bibliographical References

Page 0 of 0

(1) Ruth Kirk and Carmela Alexander, Exploring Washington's Past- A Road Guide to History, University of Washington Press, Revised 1995, p. 168.

(2) Bridge Design Manual, Section 2 4, Washington State Department of Transportation, Olympia. August 1998.

(3) Resolution for County Road Project No. 274, Benton County, Washington, October 3, 1955.

(4) Homer M. Hadley, "Report on Location of New Benton City-Kiona Bridge," December 28, 1955.

(5) Notice of Award of Public Works Project, Benton County, Washington, September 24, 1956.

(6) Report, "Road Jurisdiction Legislation- As Signed into Law May 21, 1991", Washington State DOT, Olympia, 1991.

(7) Fritz Leonhardt and Wilhelm Zellner, "Cable-stayed Bridges: Report on latest developments." Canadian Structural Engineering Conference, 1970.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section number 10. Geographical Data

Page 1 of 1

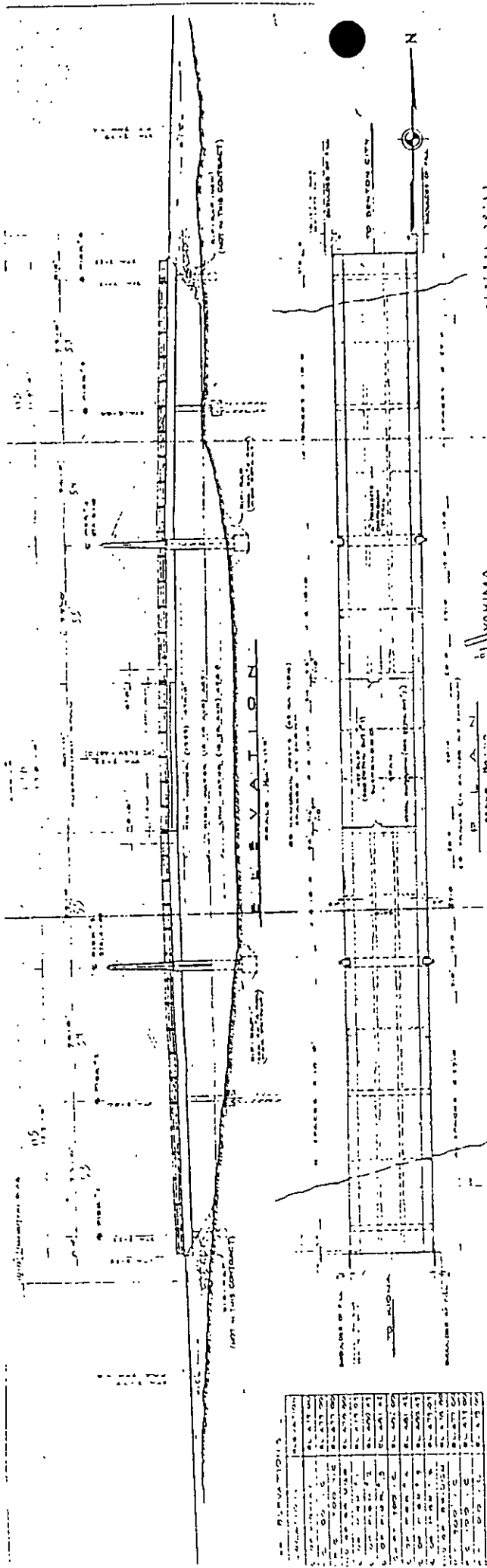
Verbal Boundary Description

Longitudinal Boundaries: Extend to the pavement seats at either end of the bridge.

- Lateral Boundaries: Boundaries extend to the edges of the structure.

Verbal Boundary Justification

The boundaries include all main structural elements of the bridge.

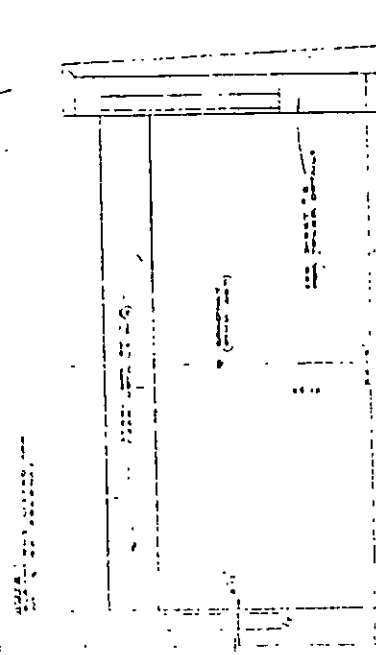
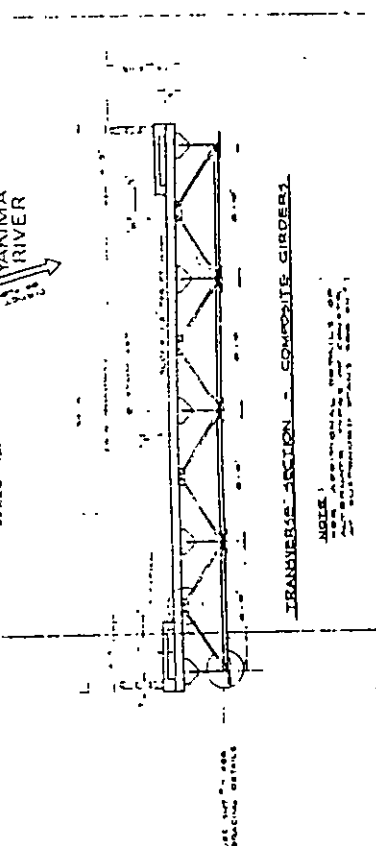


THE BRIDGE, AND APPROACH SHALL BE IN ACCORDANCE WITH THE
 REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR BRIDGES,
 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED APRIL
 1948.

ALL BRIDGES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:
 DEAD LOAD - SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS
 LIVE LOAD - SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS
 WIND LOAD - SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS
 ICE LOAD - SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS
 SEISMIC LOAD - SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

THE BRIDGE SHALL BE DESIGNED FOR THE FOLLOWING SPANS:
 SPAN 1 - 100.00 FT.
 SPAN 2 - 100.00 FT.
 SPAN 3 - 100.00 FT.
 SPAN 4 - 100.00 FT.
 SPAN 5 - 100.00 FT.
 SPAN 6 - 100.00 FT.
 SPAN 7 - 100.00 FT.
 SPAN 8 - 100.00 FT.
 SPAN 9 - 100.00 FT.
 SPAN 10 - 100.00 FT.

ALL BRIDGES SHALL BE DESIGNED FOR THE FOLLOWING SPANS:
 SPAN 1 - 100.00 FT.
 SPAN 2 - 100.00 FT.
 SPAN 3 - 100.00 FT.
 SPAN 4 - 100.00 FT.
 SPAN 5 - 100.00 FT.
 SPAN 6 - 100.00 FT.
 SPAN 7 - 100.00 FT.
 SPAN 8 - 100.00 FT.
 SPAN 9 - 100.00 FT.
 SPAN 10 - 100.00 FT.



DESIGNED BY: W. H. HARRIS

CHECKED BY: W. H. HARRIS

DATE: 10/1/48

PROJECT: BRIDGE OVER YAKIMA RIVER

SHEET NO. 1

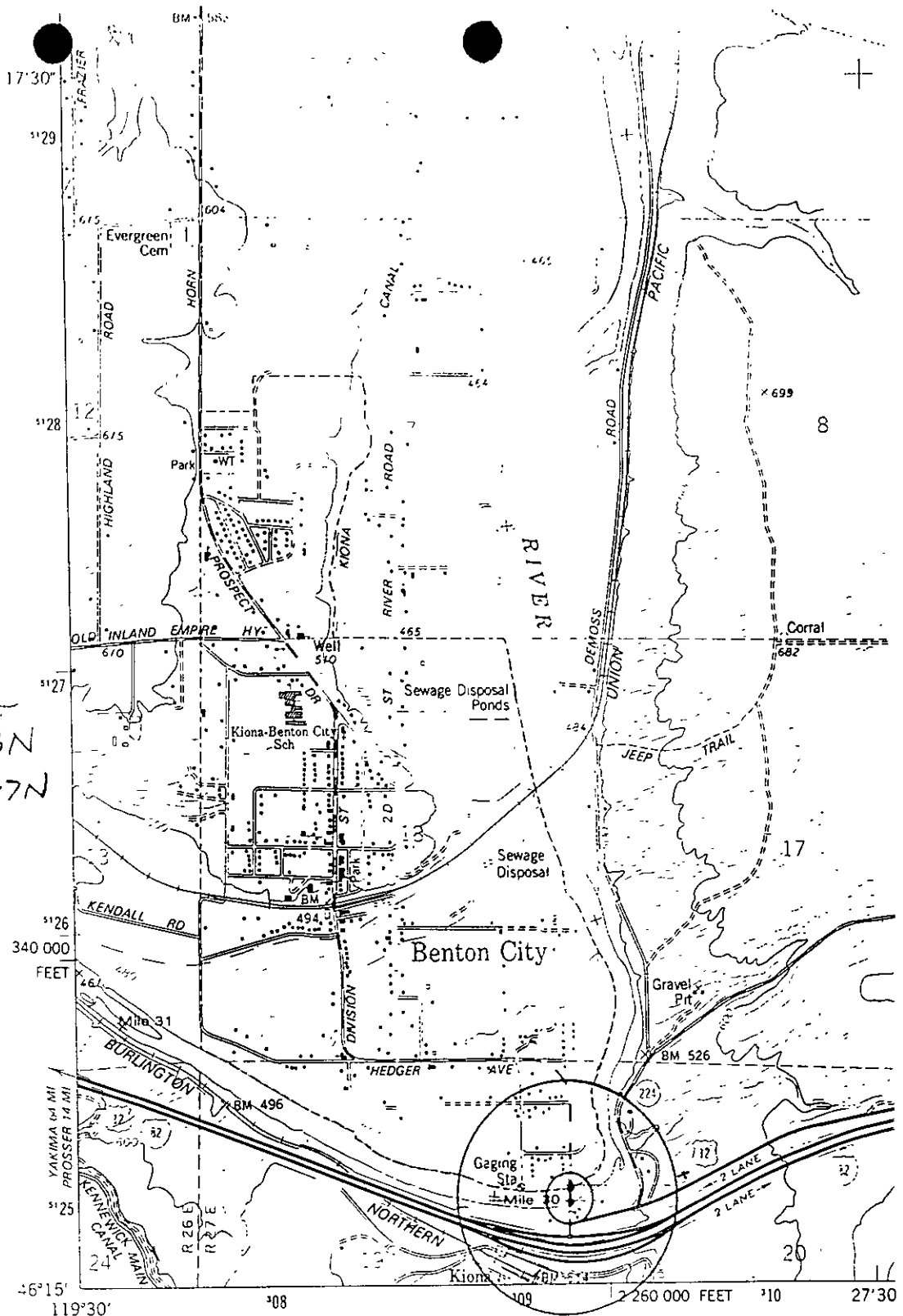
APPROACH CONSTRUCTION FOR SO SUSPENDED BRIDGE

NOTE: BRIDGE IS DESIGNED FOR A DESIGN SPEED OF 40 MPH.

APPROACH CONSTRUCTION FOR SO SUSPENDED BRIDGE

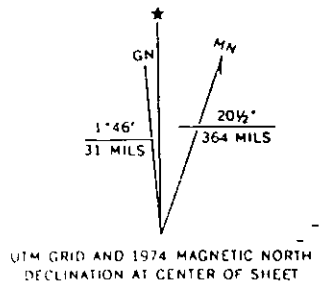
NOTE: BRIDGE IS DESIGNED FOR A DESIGN SPEED OF 40 MPH.

P24H01 - 2 11 309295E 5124938N
 11 309295E 5124977N



WHITSTRAIN NEI
 2016 11 MI

Mapped, edited, and published by the Geological Survey
 Control by USGS and NOS/NOAA
 Topography by photogrammetric methods from aerial
 photographs taken 1973. Field checked 1974
 Projection and 10,000-foot grid ticks: Washington coordinate
 system, south zone (Lambert conformal conic)
 1000-metre Universal Transverse Mercator grid ticks,
 zone 11, shown in blue 1927 North American datum
 Fine red dashed lines indicate selected fence and field lines
 where generally visible on aerial photographs
 This information is unchecked



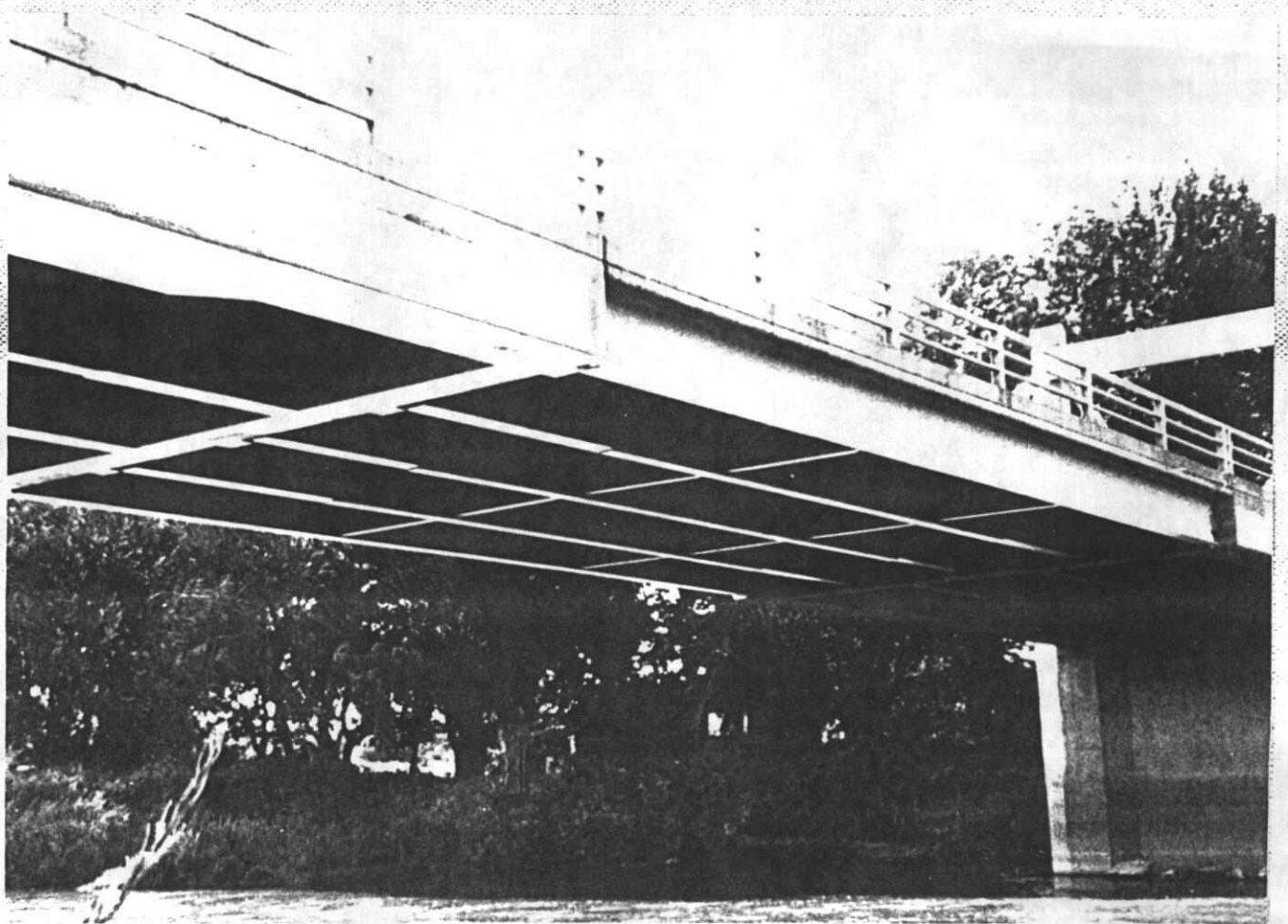
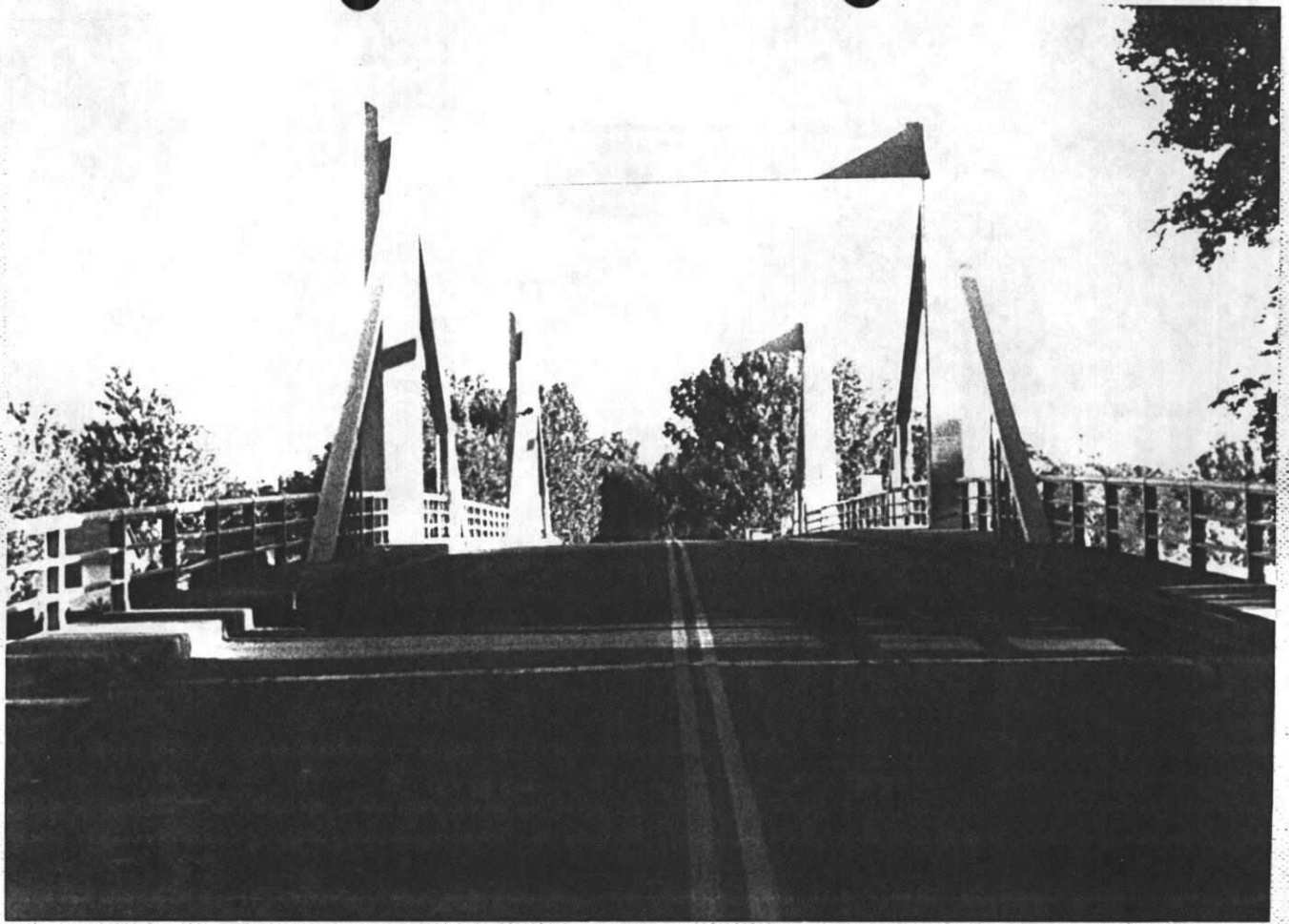


Benton City - Kiona Bridge

#225/1

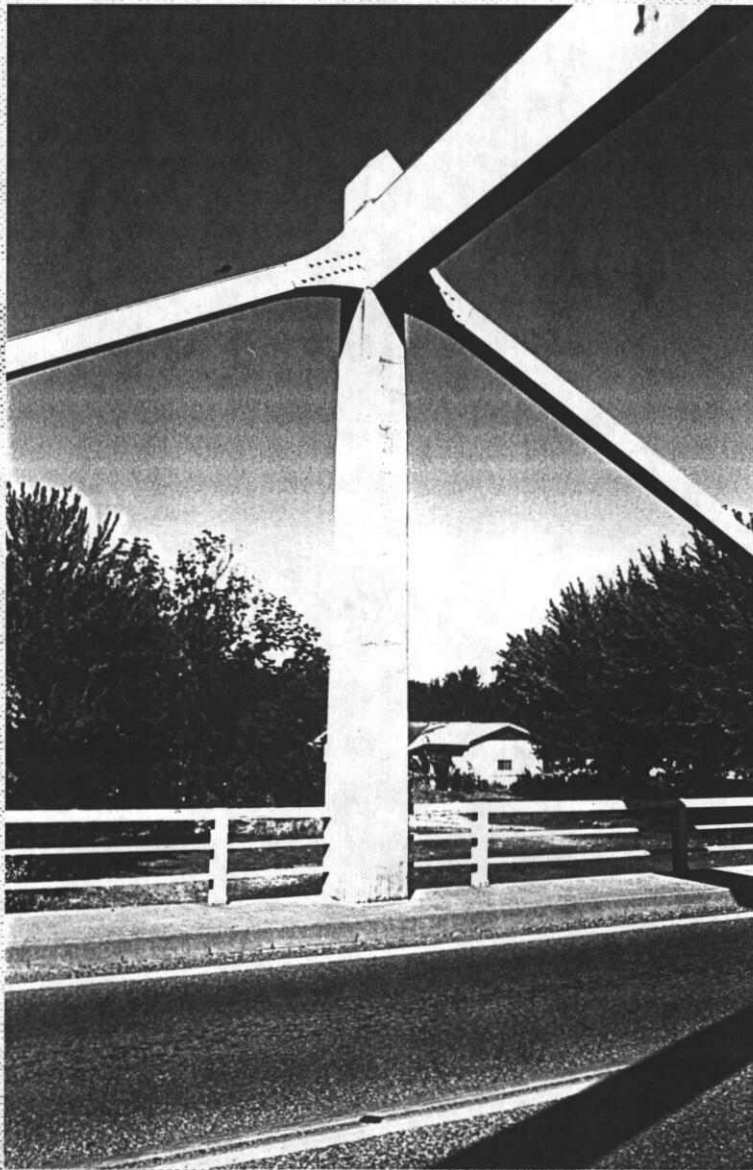
Benton Co, WA

Photographer unknown



Benton City - Kiona Bridge
#225/1
Benton Co., WA
Photographer Unknown

Benton City - Kiona Bridge
#225/1
Benton Co, WA
Photographer unknown



Benton City - Kiona Bridge
#225/1

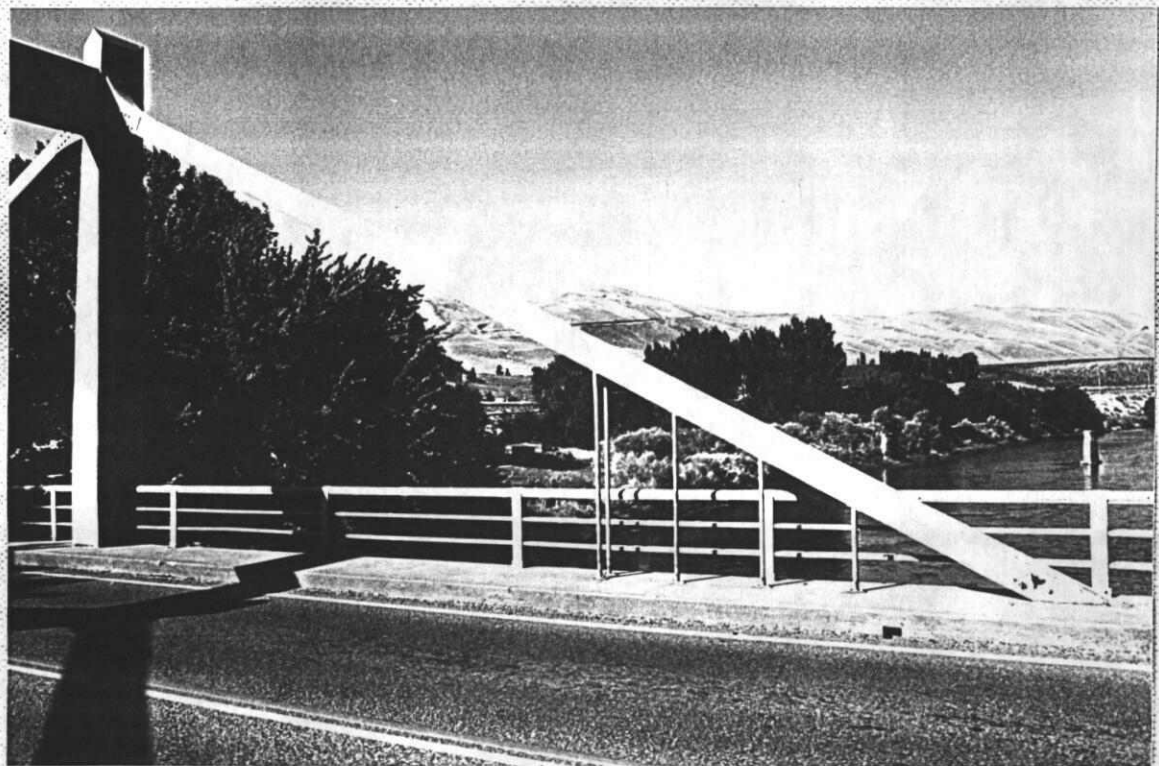
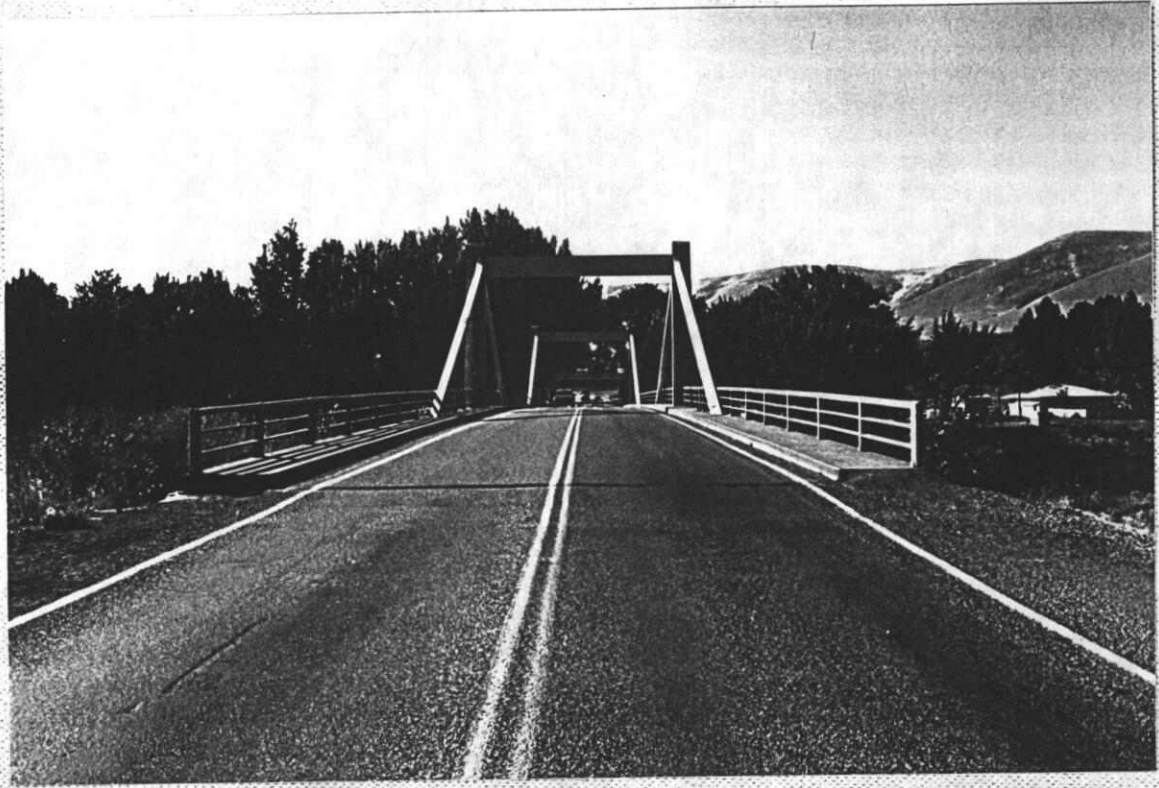
Benton City, Benton County, WA

C. Holstine, Photographer

Deck tower & Supports, view to west

8/2001

41927 00472 111144



Benton City- Kiona Bridge
225/1

Benton City, Benton County, WA
C. Holstine, Photographer
Deck view to S.

8/2001

HITEM 00472 NNN4H

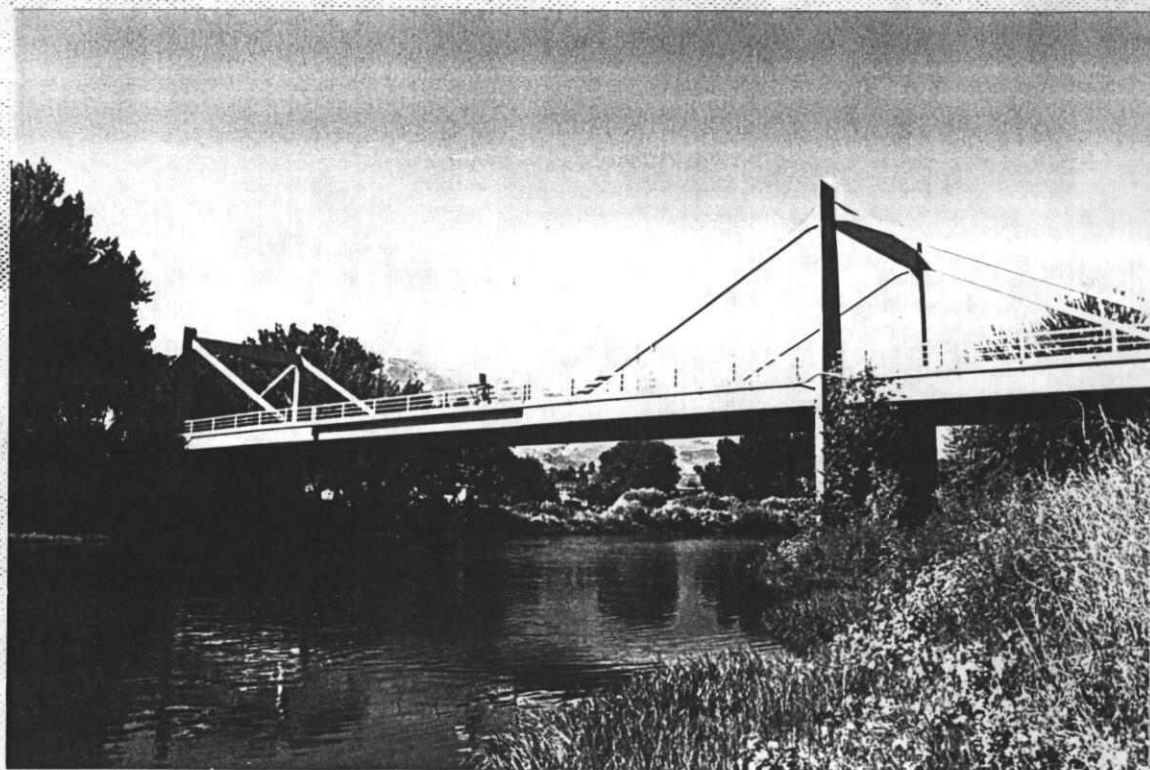
Benton City- Kiona Bridge
225/1

Benton City, Benton County, WA
C. Holstine, Photographer

Deck railing; tower supports, view to SW

8/2001

HITEM 00472 NNN4H



Benton City - Kiona Bridge
225/1

Benton City, Benton County, WA
C. Holstine, Photographer
Oblique view of east elevation to SW

8/2001

HIMEM 00472 NNN4H

Benton City - Kiona Bridge
Benton City, Benton County, WA
#225/1
C. Holstine, Photographer
Elevation view to SW 8/2001

HIMEM 00472 NNN4H



Historic Property Inventory Report

Location

Field Site No. DAHP No. BN01260

Historic Name: Kiona - Benton City Bridge

Common Name: Cable Stay Bridge

Property Address: Benton City, WA

Comments:

Tax No./Parcel No.

Plat/Block/Lot

Acreage

Supplemental Map(s)

| Township/Range/EW | Section | 1/4 Sec | 1/4 1/4 Sec | County | Quadrangle |
|-------------------|---------|---------|-------------|--------|------------|
| T09R27E | | | | Benton | |

Coordinate Reference

Easting: #Error

Northing: #Error

Projection: Washington State Plane South

Datum: HARN (feet)



Historic Property Inventory Report

Identification

Survey Name: LEGACY DATA Date Recorded: 01/01/1979

Field Recorder:

Owner's Name:

Owner Address:

City: State: Zip:

Classification:

Resource Status: Comments:

State Register

Within a District?

Contributing?

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

Description

Historic Use: Current Use:

Plan: Stories: Structural System:

Changes to Plan: Changes to Interior:

Changes to Original Cladding: Changes to Windows:

Changes to Other:

Other (specify):

Style: Cladding: Roof Type: Roof Material:

Foundation: Form/Type:

Narrative

| Study Unit | Other |
|-----------------------|------------|
| Date of Construction: | Builder: |
| | Engineer: |
| | Architect: |

Property appears to meet criteria for the National Register of Historic Places:

Property is located in a potential historic district (National and/or local):

Property potentially contributes to a historic district (National and/or local):



Historic Property Inventory Report

Statement of
Significance:

Description of
Physical
Appearance:

Major
Bibliographic
References:



Historic Property Inventory Report

Photos



Historic Property Inventory Report

Identification

Survey Name: LEGACY DATA Date Recorded: 01/01/1900

Field Recorder:

Owner's Name:

Owner Address:

City: State: Zip:

Classification:

Resource Status: Comments:

Within a District?

Contributing?

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

Description

Historic Use: Current Use:

Plan: Stories: Structural System:

Changes to Plan: Changes to Interior:

Changes to Original Cladding: Changes to Windows:

Changes to Other:

Other (specify):

Style: Cladding: Roof Type: Roof Material:

Foundation: Form/Type:

Narrative

| Study Unit | Other |
|-----------------------|------------|
| Date of Construction: | Builder: |
| | Engineer: |
| | Architect: |

Property appears to meet criteria for the National Register of Historic Places:

Property is located in a potential historic district (National and/or local):

Property potentially contributes to a historic district (National and/or local):

Statement of Significance:



Historic Property Inventory Report

Description of

Physical

Appearance:

Major

Bibliographic

References:



Historic Property Inventory Report

Photos

Historic Name: Benton City-Kiona Bridge

Address: State Route 225 Over Yakima River

City: Benton City

County: Benton

[Download nomination form](#)

Historic Use: Transportation

Style: None

Built: 1957

Architect: Hadley, Homer M.

Builder: Mckellar, Everett

Smithsonian Number: 45BN01260

Date Listed: 1/25/2002

Listing Status: WHR

Classification: STR

Resource Count: 1

Area of Significance: Engineering

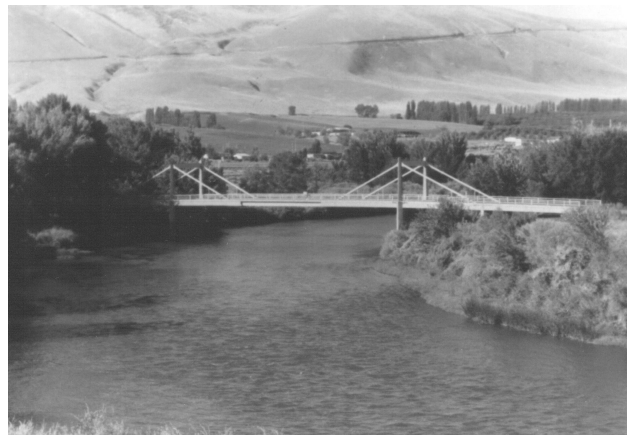
Level of Significance: State

Listing Criteria:

Statement of Significance

Designed by noted engineer, Homer Hadley, the Benton City and Kiona Bridge is unique as the only one of its type in the state. The bridge uses two concrete towers and inclined ties to support a span which is suspended between two long span sections cantilevering from the main pier. This design is called a Tied-Cantilever Type.

Photos



Historic Register Report

