

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

# National Register of Historic Places Continuation Sheet

Section number \_\_\_\_\_ Page \_\_\_\_\_

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## SUPPLEMENTARY LISTING RECORD

**NRIS Reference Number: 97000737**

**Date Listed: 7/15/97**

**Rio Felix Bridge at Hagerman  
Property Name**

**Chaves  
County**

**NM  
State**

Historic Highway Bridges of NM  
**Multiple Name**

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**This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.**

*Beth Boland*  
**Signature of the Keeper**

7/22/97  
**Date of Action**

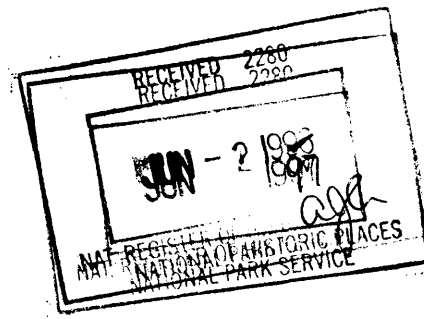
=====  
**Amended Items in Nomination:**

Although the historic context in the cover documentation covers a period extending until 1965, the period of significance for this bridge is its date of construction. The period of significance is 1926. This was confirmed by Mary Ann Anders of the NM SHPO.

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**DISTRIBUTION:**

- National Register property file**
- Nominating Authority (without nomination attachment)**



737

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

1. Name of Property

historic name Rio Felix Bridge at Hagerman

other names/site number NMSHTD # 357

2. Location

street & number 20 yds. E of NM 2, 1 M. N of Hagerman  not for publication

city or town Hagerman  vicinity

state New Mexico code NM county Chaves code 005 zip code 88232

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this  nomination  request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property  meets  does not meet the National Register criteria. I recommend that this property be considered significant  nationally  statewide  locally. ( See continuation sheet for additional comments.)

Lyn Sebastian SHPO 5-28-97  
Signature of certifying official/Title Date

State of Federal agency and bureau

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

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register.  See continuation sheet.
- determined eligible for the National Register  See continuation sheet.
- determined not eligible for the National Register.
- removed from the National Register.
- other, (explain:)

Signature of the Keeper

Date of Action

Beth Boland

7/15/97

Name of Property

County and State

5. Classification

Ownership of Property

(Check as many boxes as apply)

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

Category of Property

(Check only one box)

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

Number of Resources within Property

(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	Total

Name of related multiple property listing

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

Highway Bridge Construction in NM

Number of contributing resources previously listed in the National Register

N/A

6. Function or Use

Historic Functions

(Enter categories from instructions)

Transportation: road-related

Current Functions

(Enter categories from instructions)

not in use

7. Description

Architectural Classification

(Enter categories from instructions)

Pratt through truss

Materials

(Enter categories from instructions)

foundation concrete

walls steel

roof

other concrete

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

**Areas of Significance**

(Enter categories from instructions)

transportation

engineering

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Period of Significance**

1926-1965

\_\_\_\_\_

\_\_\_\_\_

**Significant Dates**

1926

\_\_\_\_\_

\_\_\_\_\_

**Significant Person**

(Complete if Criterion B is marked above)

\_\_\_\_\_

**Cultural Affiliation**

\_\_\_\_\_

\_\_\_\_\_

**Architect/Builder**

William S. Henderson

\_\_\_\_\_

**Narrative Statement of Significance**

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

**9. Major Bibliographical References**

**Bibliography**

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

**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 # \_\_\_\_\_

**Primary location of additional data:**

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

Name of repository:

\_\_\_\_\_

Rio Felix Bridge at Hagerman

Chaves, NM

Name of Property

County and State

10. Geographical Data

Acreage of Property less than one acre

UTM References

(Place additional UTM references on a continuation sheet.)

1 1 3 5 6 1 9 6 0 3 6 6 5 8 9 0
Zone Easting Northing

3 Zone Easting Northing
4 Zone Easting Northing

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 David Kammer, Ph.D.

organization contract historian date Dec., 1996

street & number 521 Aliso Dr. NE telephone (505) 266-0586

city or town Albuquerque state NM zip code 87108

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

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

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

Photographs

Representative black and white photographs of the property.

Additional items

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

Property Owner

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

name

street & number telephone

city or town state zip code

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

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

United States Department of the Interior  
National Park Service

National Register of Historic Places  
Continuation Sheet

Section 7,8 Page 1

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Rio Felix Bridge at Hagerman  
Chaves County, NM

Description

The Rio Felix Bridge, located on the former alignment of NM 2 immediately east of the bridge that is a portion of the present alignment, lies one mile north of Hagerman. The bridge is a three-span steel structure fabricated by the Boardman Company of Oklahoma City in 1926. The substructure consists of two concrete abutments and two concrete piers. Earth-fill approaches lead to the bridge.

The bridge employs a Pratt through truss with rigid connections design with each of the three spans measuring 144 feet in length. Each of the spans consists of eight panels measuring 18 feet in length with the top cords and vertical members acting in compression and the bottom chords and diagonal members acting in tension. All of the truss members are riveted to the top and bottom cords. Since the road crosses the Rio Felix at an angle instead of perpendicular to the stream's flow line, the panels of each span are offset, or skewed, one panel length. This skewing permits the spans to rest on the piers which were placed parallel to the flow line to provide increased stability during flooding. The deck, consisting of concrete poured in place, measures 20 feet in width and rests on six steel I-beam stringers. Concrete curbs line the deck, and a steel railing is bolted to the panel members. A 10- inch wide steel gasline pipe is attached to the outer side of the panels on the west side of the structure.

The bridge retains a high degree of integrity of setting, design, materials, workmanship and association with few alterations other than normal upkeep. In 1984 the original bridge was bypassed, but NMSHTD has preserved the bridge, erecting a sign noting its history.

Statement of Significance

Well-preserved and marked by a brown and white historical sign briefly recounting its history, the Rio Feliz Bridge near Hagerman is historically significant for its long association with highway transportation in New Mexico dating to the first decades of statehood. The longest Pratt through truss span with rigid connections in New Mexico, it is also significant as the

United States Department of the Interior  
National Park Service

National Register of Historic Places  
Continuation Sheet

Section 8 Page 2

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Rio Felix Bridge at Hagerman  
Chaves County, NM

Statement of Significance (continued)

oldest and highest rated bridge of its type in the bridge survey of 1987, embodying the design, materials and methods of construction associated with that bridge sub-type.

During the 1920s as the highway department sought to complete the first phase of the state's modern road system by connecting all of the principle communities of the state, it devoted much of its resources to erecting permanent bridges over historically troublesome drainages. From 1925 through 1927, in particular, several large bridge structures were constructed as the department concentrated on "getting the roads through." During this period, NM 2 paralleling the lower Pecos Valley received a number of federal aid projects. Designed to create a safer, more efficient highway for the valley's many farmers and ranchers as well as increasing numbers of tourists visiting nearby Carlsbad Caverns National Park, highway engineers crossed several streams draining into the Pecos River including the Rio Felix.

Since the highway's alignment followed section lines, engineers faced the problem of designing a bridge that followed the sectional alignment but compensated for the oblique angle created by the river's floodplain. William S. Henderson, the project engineer, solved the problem by situating the piers to parallel the flow of the stream in order to minimize potential damage from scouring. He then skewed the panels of the bridge 52 degrees to permit the spans to rest on the piers. The project was also unique in that it marked the first time the highway department used a drill rig to make borings at bridge sites, a process that resulted in greater efficiency and economy in determining locations suitable for supporting pilings and piers.

The decision to use the heavier rigid connection type of Pratt through truss design also marked the highway department's growing recognition that faster and heavier vehicles required bridges to be more stable and have greater load-bearing capacities. Although FAP 108A, which funded the Rio Felix Bridge project, was located on a state, not federal, highway, department officials knew that as the lower Pecos Valley grew as an important agricultural region and that as increased automobile tourism brought motorists to Carlsbad Caverns, NM 2 required more

United States Department of the Interior  
National Park Service

National Register of Historic Places  
Continuation Sheet

Section 8,9,10 Page 3

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Rio Felix Bridge at Hagerman  
Chaves County, NM

Statement of Significance (continued)

modern bridges. When the Boardman Company completed the bridge in late 1926, a photograph of the new structure appeared on the cover of the New Mexico Highway Journal.

The setting of the bridge over the Rio Felix with nearby agricultural and pasture lands conveys a strong feeling of the historic appearance of the bridge. In 1977 the bridge was listed in the New Mexico Register of Cultural Properties.

Bibliography

Klein, F.L. "New Mexico State Highway Department Drill Rig for Making Borings at Bridge Site," New Mexico Highway Journal. Vol. 3, No. 4 (April, 1925), pp. 6, 11.

New Mexico Highway Journal. "Editorial" Vol. 4, No. 8 (August, 1926), pp. 10-11.

Verbal Boundary Description

The property is a polygonal parcel with two sides measuring approximately 432 and two sides measuring approximately 21 feet with the longer sides offset by 18 feet.

Boundary Justification

The boundary includes the bridge's substructure and superstructure which comprise the historic bridge.