NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

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NAT. REGISTER OF HISTORIC PLACES
NATIONAL PARK SERVICE

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 Caddo Lake Bridge

other names/site number Mooringsport Bridge

2. Location

street & number La. Hwy. 538 N/A ☐ not for publication

city or town Mooringsport N/A ☐ vicinity

state Louisiana code LA county Caddo code 017 zip code 71060

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.)

Jon Fricker 9/9/96
Signature of certifying official/Title Jonathan Fricker, Deputy SHPO, Dept of Culture, Recreation and Tourism — 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 commenting 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

Edson H. Beall 10-16-96

Caddo Lake Bridge
Name of Property

Caddo Parish, LA
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	
		buildings
		sites
1		structures
		objects
1	0	Total

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

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

Transportation/road-related

Current Functions
(Enter categories from instructions)

vacant/not in use

7. Description

Architectural Classification
(Enter categories from instructions)

other: vertical lift bridge

Materials
(Enter categories from instructions)

foundation concrete
walls N/A
roof N/A
other steel

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

The Caddo Lake Bridge (1914) is a vertical lift single lane vehicular bridge carrying Louisiana 538 over Caddo Lake at the small community of Mooringsport. It is constructed of riveted L shaped steel members. Despite the loss of certain elements of the lifting mechanisms, the bridge easily conveys its historic appearance.

The Caddo Lake Bridge was built under authority of the Caddo Parish police jury to replace a ferry. It was constructed by Midland Bridge Company of Kansas City, Missouri and designed by the noted bridge engineer, James Alexander Low Waddell. The bridge's design allowed one of the spans to lift in a vertical direction to allow tall oil equipment to pass through, especially Gulf Oil Company's pile drivers. During these years, the region was experiencing a major oil boom, with Caddo Lake dotted with oil wells. In a general sense the construction of the bridge represents the rampant development attending the Caddo Field oil boom.

The 575 foot bridge traverses Caddo Lake in a generally north-south direction with a total of seven spans resting upon concrete piers. The third span from the south shore is equipped to lift for marine traffic to pass beneath. This span corresponds to the lake's main channel. All of the spans are of the through truss type and feature a repetitive pattern of diagonal and vertical braces. The lift span is slightly wider than the others (95 versus 80 feet) with a superstructure roughly square in profile. At each end is a slender tower consisting of a single chord on each side and diagonal webbing. The towers are braced by a shallow overhead truss formed of two chords and diagonal webbing.

There were two components to the bridge's lifting capability. One was a system of counterweights and pulleys which made it easier to lift the span. These worked in a similar fashion to window sashes with counterweights. The other was a system consisting of a crank, winches, pulleys and cables which actually lifted the span.

The counterweight system worked as follows: Cables ascending from an eye in each corner of the lift span were threaded though four massive pulleys at the top of the towers. These were attached to a pair of coffin-shaped counterweights. This system, which made it possible to elevate the span with a relatively small amount of force, survives with the exception of the counterweights.

The lifting mechanism worked as follows: When a boat approached, the bridge keeper operated a massive manual crank (now lost) which was connected to a system of gears in the

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center of the span. As the keeper cranked, he ascended with the span. The gear system was connected to a pair of winches, one on each side of the span's center. These in turn were connected with cables (now lost) which fitted through massive pulleys at the edges of the span and ascended to the top of the towers. One assumes that the cables fed through a second set of pulleys at the top of the towers. This part of the system, however, has been lost, and its original configuration is not clear from a surviving early photograph.

Assessment of Integrity:

To recapitulate, the following elements of the bridge no longer survive: the manual crank device, the cables, the counterweights, and presumably a second set of pulleys at the top of the towers. Also, originally the bridge had a wooden deck. It is now asphalt. Finally, highway type guard rails have been attached to the insides of the through trusses.

Despite the loss of some elements of the actual lifting mechanism, the structure easily conveys its identity as a vertical lift bridge and retains the overwhelming majority of its original character defining fabric. As a one-of-a-kind, very distinctive bridge within Louisiana, it is a strong candidate for Register listing.

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.)

- [X] **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.
- [X] **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 N/A
(Mark "x" in all the boxes that apply.)

Property is:

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

Areas of Significance
(Enter categories from instructions)

engineering
transportation

Period of Significance

1914

Significant Dates

1914

Significant Person
(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Engineer: Waddell & Harrington
Builder: Midland Bridge Co., Kansas City

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): N/A

- [ ] 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:

- [X] State Historic Preservation Office
- [ ] Other State agency
- [ ] Federal agency
- [ ] Local government
- [ ] University
- [ ] Other

Name of repository:

_____

Caddo Lake Bridge
Name of Property

Caddo Parish, LA
County and State

10. Geographical Data

Acreage of Property less than an acre

UTM References
(Place additional UTM references on a continuation sheet.)

	Zone	Easting	Northing
1	15	410200	3617820
2			
3			
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 Assisted by Darren Guin

name/title National Register staff

organization Division of Historic Preservation date May 1996

street & number P. O. Box 44247 telephone 504-342-8160

city or town Baton Rouge state LA zip code 70804

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 Caddo Parish Parks & Recreation

street & number 8012 Blanchard Furrh Road telephone 318-929-2806

city or town Shreveport state LA zip code 71107

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

The Caddo Lake Bridge is of state significance in the area of engineering as a rare surviving example of a recognized historic bridge type. It is Louisiana's sole surviving historic steel through truss vertical lift bridge. It is also of state significance in the area of transportation as one of Louisiana's very earliest bridges.

A bridge survey prepared by the Louisiana Department of Transportation and Development for the state system reveals that the Caddo Lake Bridge is the only historic example of its type in Louisiana. DOTD's records further demonstrate that there are no other historic examples on the various parish systems. Had it not been for a recent concerted effort by local citizens, the Caddo Lake Bridge would not have survived. Deemed unsafe for further vehicular use, it was slated for removal and a new bridge was to be built. Locals launched a crusade to save the bridge, with the result that it now stands alongside the new bridge and has a secure future. Caddo Parish agreed to accept responsibility for the structure and plans to open it for pedestrian use.

The bridge's significance must also be assessed within the overall history of bridge construction in Louisiana. The use of bridges as the principal form of traversing waterways came to the state comparatively late. Louisiana is not like, for example, an eastern state where one finds a long and rich heritage of bridge construction, including wooden covered bridges, Victorian decorative cast iron bridges, and heavy railroad bridges styled in a manner resembling Roman viaducts. Indeed, Louisiana was dependent upon ferries well into the twentieth century. The great majority of older bridges in the state date from the late 1920s or later. Thus the construction of a bridge over Caddo Lake as early as 1914 should be regarded as a pioneering effort in the state's transportation history.

Biographical Sketch on John Alexander Low Waddell
(as excerpted from National Register form on Linn Creek Bridge, Missouri)

John Alexander Low Waddell (1854-1938), a native of Canada, received a degree as Civil Engineer in 1875 from Rensselaer Polytechnic Institute. In the same year he worked as a draftsman for the Marine Department at Ottawa, Canada, and, in 1876 and 1877, served as an engineer with the Canadian Pacific Railroad. In 1878, Waddell returned to Rensselaer and spent two years on the faculty. Between 1880 and 1882, he worked as Chief Engineer for Raymond Campbell Bridge Builder of Council Bluffs, Iowa, and received a Masters in

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Engineering from McGill University of Montreal, Canada. In 1908, this same institution awarded him a doctorate in engineering.

In 1882, Waddell accepted a position as professor of civil engineering at the Imperial University of Tokyo. For his service, the Japanese Emperor awarded him the Knight's Cross of the Order of the Rising Sun in 1885. In 1886, he returned to the United States. The following year he established a practice in Kansas City, Missouri as a bridge designer and consultant, and for the next half century, was "one of the best known bridge engineers in the United States" (*Dictionary of American Biography).*

According to the *Dictionary of American Biography*, "In his bridge work Waddell was noted for his boldness in innovation combined with a careful attention to detail." He designed bridges in the Unites States, Japan, Canada, Mexico, Russia, China and New Zealand. Waddell was also a prolific writer. His 1916 two-volume *Bridge Engineering* became the standard work on the subject.

The Caddo Lake Bridge is one of two Waddell designed bridges in Louisiana, the other being the KCS Railroad Bridge in nearby Shreveport (NR).

BIBLIOGRAPHY

Louisiana Department of Transportation and Development Bridge Survey.

DeLony, Eric. Letter to Vincent Pizzolato, Louisiana DOTD, July 24, 1991. Mr. DeLony is the Chief of the Historic American Engineering Record, National Park Service.

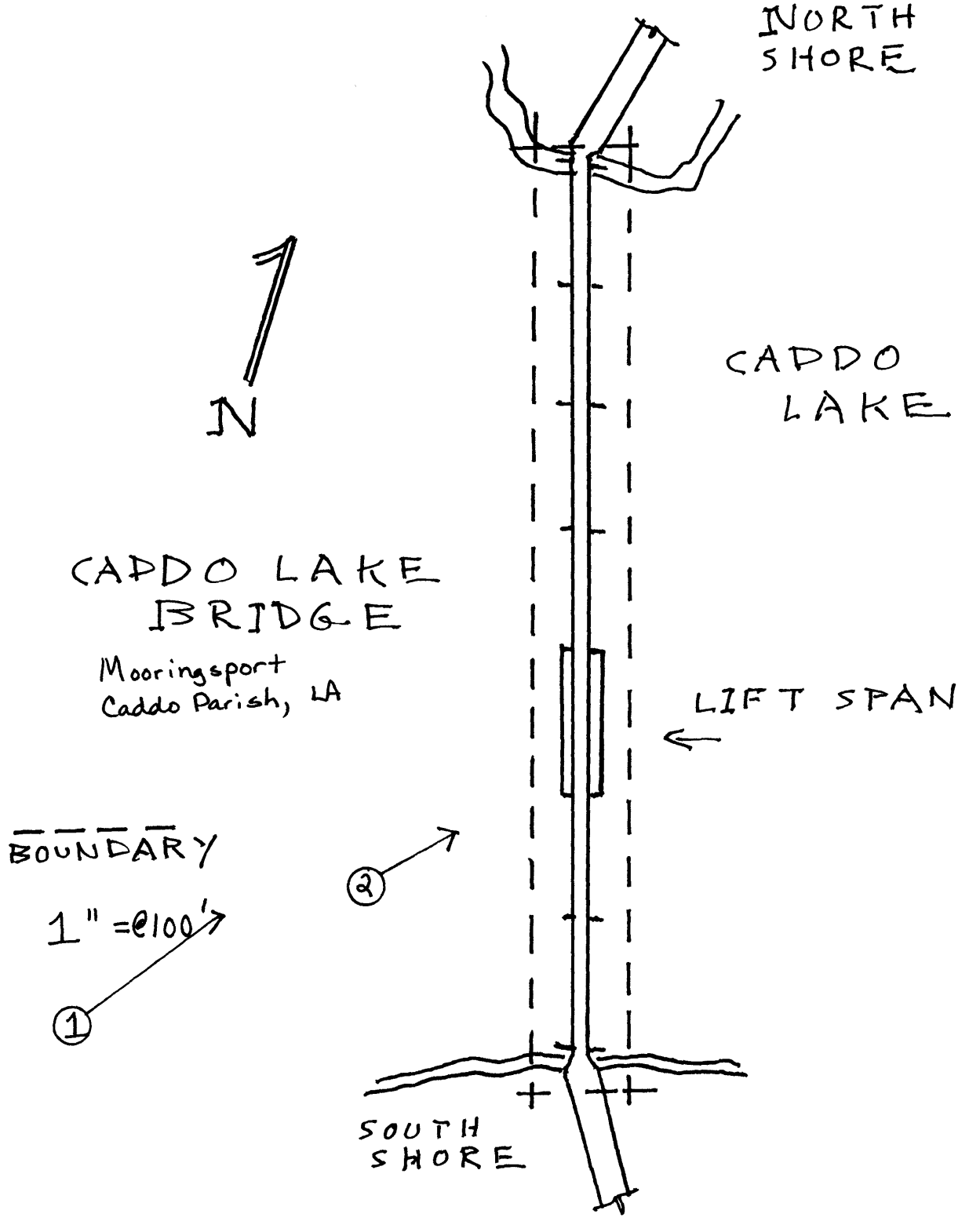
Caddo Lake Bridge plaque providing particulars relating to construction. Now on display at Mooringsport Museum.

Early photos of Caddo Lake Bridge, on display at Mooringsport Museum, copies in Louisiana Division of Historic Preservation National Register file.

Hauck, George F. W. and Gilleard, Gerald Lee. National Register Nomination Form, Waddell "A" Truss Bridge (Linn Creek Bridge), Platte County, Missouri. Revised and edited by Steve Mitchell and Beverly Fleming. This nomination form was useful for background information on J. A. L. Waddell.

Boundary Description: Please refer to attached sketch map.

Justification: Boundaries were drawn to discretely encompass the nominated resource -- the seven span Caddo Lake Bridge.


NORTH SHORE
N
CADDO LAKE
CADDO LAKE BRIDGE
Mooringsport
Caddo Parish, LA
LIFT SPAN
BOUNDARY
1" = @100'
1
2
SOUTH SHORE