

BOEUF RIVER BRIDGE  
(Bridge Recall No. 027160)  
Carries Louisiana Highway 132 (LA 132) over Boeuf River  
Rayville  
Richland Parish  
Louisiana

HAER No. LA-42

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service  
U.S. Department of the Interior  
1849 C Street, NW  
Washington, DC 20240

**HISTORIC AMERICAN ENGINEERING RECORD**  
**BOEUF RIVER BRIDGE**  
**(Bridge Recall No. 027160)**

**HAER No. LA-42**

**Location:** Carries Louisiana Highway 132 (LA 132) over Boeuf River in the town of Rayville, Richland Parish, Louisiana.

The Boeuf River Bridge (Bridge Recall No. 027160) is located at latitude 32.301493 north, longitude -91.941299 west.<sup>1</sup> The coordinate represents the center of the bridge. It was obtained in 2016 by plotting its location in Google Earth. The location has no restriction on its release to the public.

**Present Owner:** State of Louisiana.

**Present Use:** Vehicular traffic.

**Significance:** The Boeuf River Bridge is significant as an example of a distinctive truss type. The bridge's significant design is its Camelback through truss, characterized by vertical members in compression and diagonals in tension with a crossbar system in the central panel and a five-sloped polygonal top chord. The bridge was constructed to a Louisiana Highway Commission (LHC) standard plan. Originally built in 1926 at D'Arbonne Bayou in Union Parish, the bridge was relocated to its present location in 1966. This bridge exhibits replacement substructure and approach spans, altered portal bracing and replacement guardrail, and some altered connections, resulting in a minor loss of integrity. Despite these alterations the bridge still conveys the significant design features of a Camelback through truss. This bridge was determined eligible for listing in the National Register of Historic Places (National Register) in 2013 under *Criterion C: Design/Engineering* at the state level of significance.<sup>2</sup>

**Historian(s):** Katie Kaliszewski, Cultural Resource Specialist, and Robert M. Frame, Senior Cultural Resource Specialist; Mead & Hunt, Inc. (Mead & Hunt); 2017.

**Project Information:** The documentation was prepared as mitigation to fulfill Stipulation IX.5 of the *Programmatic Agreement Among the Federal Highway Administration, the Louisiana Department of Transportation and Development, the Advisory Council of Historic Preservation, and the Louisiana State Historic Preservation Office Regarding Management of Historic Bridges in Louisiana*, dated August 18, 2015, and executed September 21, 2015. The Louisiana Department of Transportation and Development (LADOTD) retained Mead & Hunt to prepare this document. It was prepared by cultural resources specialist Katie Kaliszewski and senior cultural resource specialist Robert M. Frame of Mead & Hunt. Dietrich Floeter completed the photography.

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<sup>1</sup> The bridge is also known as Structure No. 05428421300071.

<sup>2</sup> Mead & Hunt, Inc., *National Register Eligibility Determination Report: Pre-1971 Louisiana Highway Bridges* (prepared for the Louisiana Department of Transportation and Development, September 2013).

## Part I. Historical Information

### A. Physical History:

- 1. Date(s) of construction:** 1926, 1966 (moved to current location).
- 2. Engineer:** Truss span: Louisiana Highway Commission. Approach spans: Louisiana Department of Highways.
- 3. Builder/Contractor/Supplier:** 1926 – Unknown. 1966 – Division Forces, Louisiana Department of Highways.
- 4. Original plans and construction:** Copies of the original 1926 plan sheets are available in the General Files room at the LADOTD's Baton Rouge headquarters. The 1926 plan sheets indicate the bridge was designed by the LHC with the main truss span constructed according to the LHC's "Standard Plan for 140' Riveted Truss, B-2-56, revised."<sup>3</sup> The microfilm copies of shop drawings included in the plan set are of very poor quality; specific information on the truss fabricator or contractor on these sheets is illegible.
- 5. Alterations and additions:** In 1966 the bridge was moved from its original location, carrying LA 33 over the Bayou D'Arbonne in Union Parish, to the present location. At that time the truss was reassembled and new concrete approach spans and timber-pile bents were constructed. Some of the bridge's original rivets were replaced with bolts during reassembly and the portal bracing was raised. A new guardrail was installed on the bridge.

### B. Historical Context:

#### *Historical background*

As early as 1909 the State of Louisiana began a road construction initiative under Governor Jared Sanders. This initiative included the extension of state aid to parishes for "systematic" road construction and led to the creation of the State Highway Department, the predecessor to the Louisiana Highway Commission. An early State Highway Department biennial report covering 1916 to 1918 stated that the main duty of the State Highway Department was to "furnish plans, estimates and specifications for the construction of roads, bridges, and culverts."<sup>4</sup>

A new Louisiana state constitution was ratified in 1921 and required the state legislature to provide for the building of bridges over navigable streams, using current means of revenue; and under Act 95 the LHC

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<sup>3</sup> Louisiana Highway Commission, "General Plan of Bridge over D'Arbonne Bayou," 1926, as-built plans, available in the General Files office, Louisiana Department of Transportation and Development, Baton Rouge, La.

<sup>4</sup> Mead & Hunt, Inc., *Historic Context for Louisiana Bridges* (prepared for the Louisiana Department of Transportation and Development, December 2013), 11.

was formed. The new organization was divided into five units, including the Construction Department, which was responsible for the design of highways and bridges and their construction. The LHC's Bridge Department originally operated the agency's Construction Department and quickly set to work hiring young engineers to help develop bridge plans. The department's staffing grew through the 1920s and it prepared a large number of standard plans for timber, concrete, and steel structures, including the standard plan that was used for the Boeuf River Bridge, as well as designing special plans for specific projects. During this period, the LHC was responsible for many of the state's bridges, including the preparation of plans and specifications, as well as construction supervision as the state centralized control.<sup>5</sup>

After the reorganization of the LHC into the Louisiana Department of Highways (LDH) in the 1940s, there was limited construction due to the war effort. However, after World War II Louisiana entered an era of booming industry due to the new businesses attracted by the state's rich natural resources. The LDH biennial reports from the 1950s and the 1960s tell a clear story of rapid growth and exponential expansion after the pause of the war years. Economic growth and government funding combined to not only increase investment on a grand scale, but to also improve and expand the roadways and bridges statement.<sup>6</sup>

#### *Original construction at D'Arbonne Bayou*

In 1924 the LHC began to plan a new state route: LA 44 between Ruston in Lincoln Parish and Farmerville in Union Parish. Executed under project numbers 433-A and 433-B, the new route was undertaken between 1924 and 1926. The route would cross D'Arbonne Bayou just south of the city of Farmerville, requiring construction of a bridge. The proposed bridge was a 140'-0" standard steel through truss on wood-pile bents. Built in 1926, the D'Arbonne Bayou Bridge, which replaced a toll ferry, was called out as one "of the more important bridges completed during the past two years."<sup>7</sup>

#### *New bridge construction at D'Arbonne Bayou*

In 1957 the state legislature approved \$1 million for the construction of an artificial lake between Union and Lincoln Parishes, near the site of the D'Arbonne Bayou Bridge.<sup>8</sup> It was created by the impoundment of the D'Arbonne Bayou, Corney Bayou, and Middle Fork Bayou and the flooding of over 15,000 acres of farmland, and would be called Lake D'Arbonne. As the project commenced, the artificial lake's depth was determined to be approximately 80', which required the construction of a higher roadway and bridge to cross the new waterway.<sup>9</sup> The new bridge was constructed approximately 400' south of the original 1926

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<sup>5</sup> Mead & Hunt, Inc., *Historic Context for Louisiana Bridges*, 14, 16-17.

<sup>6</sup> Mead & Hunt, Inc., *Historic Context for Louisiana Bridges*, 24, 26.

<sup>7</sup> Louisiana Highway Commission, *Biennial Report of the Louisiana Highway Commission of the State of Louisiana, 1924-1926* (Baton Rouge, La.: Louisiana Highway Commission, 1926), 41, 142.

<sup>8</sup> "Once Upon a time..." *D'Arbonne Life*, September 19, 2013, <https://lakedarbonnelife.com/2013/09/19/once-upon-a-time/> (accessed August 18, 2016).

<sup>9</sup> "Level of D'Arbonne Lake Will be Set at 80 Feet," *The Ruston Leader*, October 6, 1960.

bridge and was a “concrete I-beam slab.”<sup>10</sup> When announcing the plans for the new bridge, J.C. Howard of the Fifth District Highway Board boasted, “We feel that the construction of this new bridge is a vital necessity to the great program being developed in the D’Arbonne Lake Area...the old structure has become obsolete and hazardous to the ever-increasing flow of traffic.”<sup>11</sup> The 1926 bridge was disassembled and the structural steel members were salvaged and stored by LDH. The new bridge was completed in July 1963 and Lake D’Arbonne opened shortly after.<sup>12</sup>

#### *Repurposed as the Boeuf River Bridge*

In 1955 the locally maintained LA 132 in Richland Parish was turned over to the State. The previous bridge crossing the Boeuf River was evaluated, determined to be in poor condition, and recommended for replacement. Correspondence from this period recommended that an older truss bridge from Girard, Richland Parish be used for the crossing, but the plan was not adopted.<sup>13</sup> The replacement of the Boeuf River Bridge was delayed until 1963, when plans to reuse an existing steel truss were drawn up. The bridge previous crossing Bayou D’Arbonne was identified as “most applicable for this site.”<sup>14</sup>

Work was planned for 1965 and was estimated to cost \$83,735 under State Project No. 842-13-03. Construction included the relocation of the D’Arbonne Bayou steel truss, the construction of eleven 19'-0" precast concrete spans and two I-beam approach spans adjacent to the truss, and clearing the right-of-way and constructing the earth and gravel approaches.<sup>15</sup> The bridge was constructed west of the existing bridge to avoid flooding issues.<sup>16</sup>

Local residents of Richland Parish were not happy with the “new” bridge and expressed their concern to the LDH. Some were upset that the original plan to use the Girard Bridge was not adopted. Others believed the new bridge did not meet current codes. Prominent Louisiana Senator Russell B. Long even became involved in efforts to determine the bridge’s safety. In a letter to Senator Long, LDH Director A.L. Stewart stated:

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<sup>10</sup> “D’Arbonne Bridge Pact To Be Let in January,” *The Ruston Leader*, January 12, 1961.

<sup>11</sup> “D’Arbonne Bridge Pact to be Let in January.”

<sup>12</sup> “D’Arbonne Bridge to Be Opened,” *The Ruston Leader*, July 30, 1963.

<sup>13</sup> J.H. Drank, District Engineer, Louisiana Department of Highways, Letter to Mr. R.H. Vaughn regarding Boeuf River Bridge – Buckner, August 2, 1956, available in the General Files room, Louisiana Department of Transportation and Development, Baton Rouge, La.

<sup>14</sup> George P. Forman, District Engineer, Louisiana Department of Highways, Letter to Mr. T. W. Parish attention Mr. C.J. Russell, May 10, 1963, available in the General Files room, Louisiana Department of Transportation and Development, Baton Rouge, La.

<sup>15</sup> Louisiana Department of Highways, Project 842-13-03, Form 582, available in the General Files room, Louisiana Department of Transportation and Development, Baton Rouge, La.

<sup>16</sup> Guy P. Stubbs, Jr., Letter to Mr. Moses R. Carter, regarding State Project No. 842-13-03, January 19, 1965, available in the General Files room, Louisiana Department of Transportation and Development, Baton Rouge, La.; Louisiana Department of Highways, Form No. 2044, “Notice of Completion,” available in the General Files room, Louisiana Department of Transportation and Development, Baton Rouge, La.

The new bridge is a salvaged steel span which was removed from a highway in...Union Parish. The Department's engineers determined that the span, when salvaged, was of sufficient value and in condition...for re-erection on some of the State's minor roads having low traffic count...The Department realizes that the new bridge leaves much to be desired; however, it will accommodate two-way traffic, modern farm machinery and carry legal loads.<sup>17</sup>

The bridge relocation and reassembly was completed in September 1966 and remains in place today.<sup>18</sup>

### *Engineering background*

The Boeuf River Bridge is an example of a Camelback through truss. Truss bridges became common in the U.S. in the mid-nineteenth century and were used beginning in Louisiana in the late nineteenth century. In design, a truss bridge has a superstructure that features parallel built-up panels that use diagonal and vertical members to support deck loads. The truss can be constructed of either wood or metal, with wood trusses used earlier than metal. Bridge members are joined with plates and fasteners: pins, rivets, or bolts in early examples. There are three basic arrangements of trusses in relationship to the deck—pony (or low), through (or high or overhead), and deck—and a wide variety of truss configurations. The Boeuf River Bridge is a through truss bridge, which requires a full-depth truss with lateral bracing between parallel top chords of the two trusses.<sup>19</sup>

Prior to the development of the LHC, parishes, cities, or toll bridge companies erected truss bridges over waterways. Beginning in the 1920s the LHC constructed new steel through and pony trusses based on standard plans. The truss was a common bridge form throughout the state as variations on truss types were easily adapted to specific site conditions. Their popularity can be expressed by the number of standard plans that were developed by the LHC in the early twentieth century. The earliest known standard plan for a truss bridge is a 1917 design for a 48'-0" timber truss span. Over the course of the 1920s the LHC produced a number of standard plans for both pony and through trusses that included different variations in type, length, and deck width. Standard truss plans developed by the LHC included Warren, Pratt, Parker, and Camelback configurations. The plans were typically for spans 100'-0" to 400'-0" in length. The last known truss standard plan is a 1946 design for a 320'-0" long Camelback span (no examples are extant). The State continued to revise existing truss plan sets until the 1960s. The Boeuf River Bridge was constructed from an LHC standard plan for a 140'-0" riveted truss.

The Camelback truss, used in the Boeuf River Bridge, is a variation of the Parker truss, which is itself a variation of the Pratt truss. The Pratt truss has a horizontal top chord, parallel with the bottom chord. The Parker truss introduces a polygonal top chord so the truss web is shorter or shallower at the truss ends than at mid-span, reducing weight and materials where the truss depth is less important. At the same time, the many different lengths of verticals and diagonals on different panels required by the variable

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<sup>17</sup> A.L. Stewart, Director, Louisiana Department of Highways, Letter to Senator Russell B. Long, May 26, 1966, available in the General Files room, Louisiana Department of Transportation and Development, Baton Rouge, La.

<sup>18</sup> Louisiana Department of Highways, Form No. 2044, "Notice of Completion."

<sup>19</sup> Mead & Hunt, Inc., *Historic Context for Louisiana Bridges*, 66-67.

depth increased fabrication and erection costs for labor. The lighter overall weight provided by of the polygonal chord offset the increased labor costs for longer spans.<sup>20</sup>

The Camelback is known today as a Parker with exactly five slopes in the top chord, including the endposts. As such, it retains the reduced weight advantage of the shallower end panels of the Parker, but reduces some of the complexity created by changing the slope of the top chord at each panel. Historically, however, the Camelback was not always clearly defined as a Parker with exactly five slopes. In the years before the Boeuf River Bridge construction, at least two classic works in bridge engineering presented different interpretations. In his 1912 edition of *The Design of Highway Bridges*, Milo S. Ketchum identifies the “Camels-back Truss” with the alternate name of “Inclined Pratt” truss and illustrates the type with both a diagram and a photograph showing a Parker truss with a top chord slope change at every panel. In fact, his photograph caption conflates the two, calling the example a “Pratt or Camels-back.” An alternate diagram, featuring exactly five slopes, has a subdivided center panel and is called a “Modified Camels-back Truss.”<sup>21</sup>

A different approach is taken by the internationally recognized engineer J.A.L. Waddell in his definitive two-volume 1916 study, *Bridge Engineering*. Waddell’s diagram of a “Camel-back Truss” has exactly five slopes, but he considers the Camel-back to be one of 15 “antiquated” truss types, including the Fink, Bollman, Howe, Lenticular, Whipple, and nine others. He writes that these types have been tested by the “ordeal of actual use” and “survival of the fittest” and found to be unnecessarily complicated. The survivors “are the simplest of all”—“the Pratt, Petit, Single-Intersection Triangular, Double-Intersection Triangular, and Warren” (the “triangular” types being versions of the Warren). In other words, Waddell determined that, by 1916, the engineering and bridge-building community had largely filtered out a long list of truss variations and ended up with the Pratt, Petit, and Warren as the workhorse truss types for widespread use. In his determination, the Camelback was one of the truss types now “relegated to the history of bridge-building.” Waddell had a few additional comments about the Camel-back in particular, including his surprising personal opinion about its aesthetics (“uncompromisingly ugly”), which he does not explain and which is not expressed in the works of Ketchum or other contemporaries.<sup>22</sup> Interestingly, the Boeuf River Bridge was constructed 10 years after Waddell’s comments.

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<sup>20</sup> Parsons Brinkerhoff and Engineering and Industrial Heritage, *A Context for Common Historic Bridge Types, NCRHP Project 25-25, Task 15* (prepared for the National Cooperative Highway Research Program, the Transportation Research Council and the National Research Council, October 2005), 3-34.

<sup>21</sup> Milo S. Ketchum, *The Design of Highway Bridges* (New York: McGraw-Hill Book Company, 1912), 8-10, see Figures 15, 16, and 20.

<sup>22</sup> J.A.L. Waddell, *Bridge Engineering*, vol. 1 (New York: John Wiley & Sons, Inc., 1916), 468, 477-478, see also Figure 22ee.

## Part II. Structural/Design Information

### A. General Statement:

1. **Character:** The Boeuf River Bridge is a Camelback through truss and is a representative example of a through truss in the state of Louisiana.
2. **Condition of fabric:** Good.

**B. Description:** The Boeuf River Bridge is located approximately 20 miles south of the city of Rayville in Richland Parish and carries LA 132 over the Boeuf River. LA 132 extends generally east to west from LA 133 in Richland Parish to LA 17 in Franklin Parish. The Boeuf River Bridge was completed in 1966 and is aligned on an approximate north-south axis. The bridge is composed of a single 140'-0" Camelback through truss main span, originally constructed in 1926, and eleven 19'-0" approach spans constructed in 1966, when the truss was relocated and reconstructed at its present site. It has an overall length of 391'-0" with an out-to-out deck width of 22'-6".

#### *Main span*

The truss has eight panels with an upper chord of exactly five slopes, representing the Camelback truss type. All truss connections originally were riveted, but during the 1965-1966 disassembly and subsequent reassembly rivets were removed from selected connections and replaced by bolts. The upper chord is comprised of channel sections riveted with a cover plate on top and V-lacing on the bottom. The lower chord is comprised of two channels with batten plates on top and bottom. The verticals are riveted back-to-back channels with V-lacing front and back. At least one vertical member has had the V-lacing partially removed and replaced with a welded plate. The diagonals are made of riveted angles with batten plates. The portals and sway bracing are comprised of angles. Most of the lower connections in the sway bracing and portals are bolted, presumably as a result of raising the lower members to increase the vertical clearance above the roadway.

The floor system is comprised of rolled floorbeams that are connected to truss verticals above the lower chords. Five lines of rolled stringers extend between the floorbeams. The cast-in-place, reinforced-concrete deck with integral raised curb is poured on the stringers and paved with bituminous surfacing. Bottom lateral bracing comprised of angles extends between the lower chords below the floorbeams. The main-span expansion bearings are elastomeric pads.

#### *Approach spans*

On each end of the main truss span is a short multi-beam approach span comprised of five rolled stringers. The remaining approach spans are comprised of precast concrete slab panels. Each span has six longitudinal slab panels tied together with transverse rods bolted on the fascia of the outside slabs. The concrete deck and curb are poured on top of the slab panels.

### *Railings*

Railings along each side of the bridge are modern three-beam steel guardrails and continue off the bridge with a W-beam profile at the north and south approaches. The guardrails are mounted on metal I-section posts that are welded to the fascia stringers.

### *Substructure*

The substructure consists of timber pile bents with simple concrete caps. The two bents supporting the main span have a double line of timber piles and larger concrete caps to accommodate the different depths of the main span and the adjacent multi-beam approach spans. End bents appear to be used in place of abutments.

A series of timber pile clusters or dolphins are aligned on both sides of the east river channel to guide vessels in approaching the bridge.

**C. Site Information:** The Boeuf River Bridge spans the Boeuf River in the township of Rayville, Richland Parish, Louisiana. It is located approximately 20 miles south of the city of Rayville. Boeuf River begins as a tributary of the Ouachita River and continues through Louisiana and into Arkansas. At the bridge, the Boeuf River consists of a main channel with a mix of coniferous and deciduous trees lining the banks. The bridge is located in a rural area. The Boeuf River Bridge carries two lanes of vehicular traffic, one in each direction.

## **Part III. Sources of Information**

### **A. Primary Sources:**

*Bridge Inspection Report.* Recall No. 027160. February 28, 2013. Available in Bridge Maintenance and Inspection Division, Louisiana Department of Transportation and Development, Baton Rouge, La.

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“D’Arbonne Bridge to Be Opened.” *The Ruston Leader*, July 30, 1963.

Drank, J.H, District Engineer, Louisiana Department of Highways. “Letter to Mr. R.H. Vaughn regarding Boeuf River Bridge – Buckner.” August 2, 1956. Available in the General Files room, Louisiana Department of Transportation and Development, Baton Rouge, La.

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## **B. Secondary Sources:**

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<https://lakedarbonnelife.com/2013/09/19/once-upon-a-time/> (accessed August 18, 2016).

# HISTORIC AMERICAN ENGINEERING RECORD

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**HAER No. LA-42**

(Bridge Recall No. 027160)

Carries Louisiana Highway 132 (LA 132) over Boeuf River

Rayville

Richland Parish

Louisiana

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Dietrich G. Floeter, photographer, February and March 2016

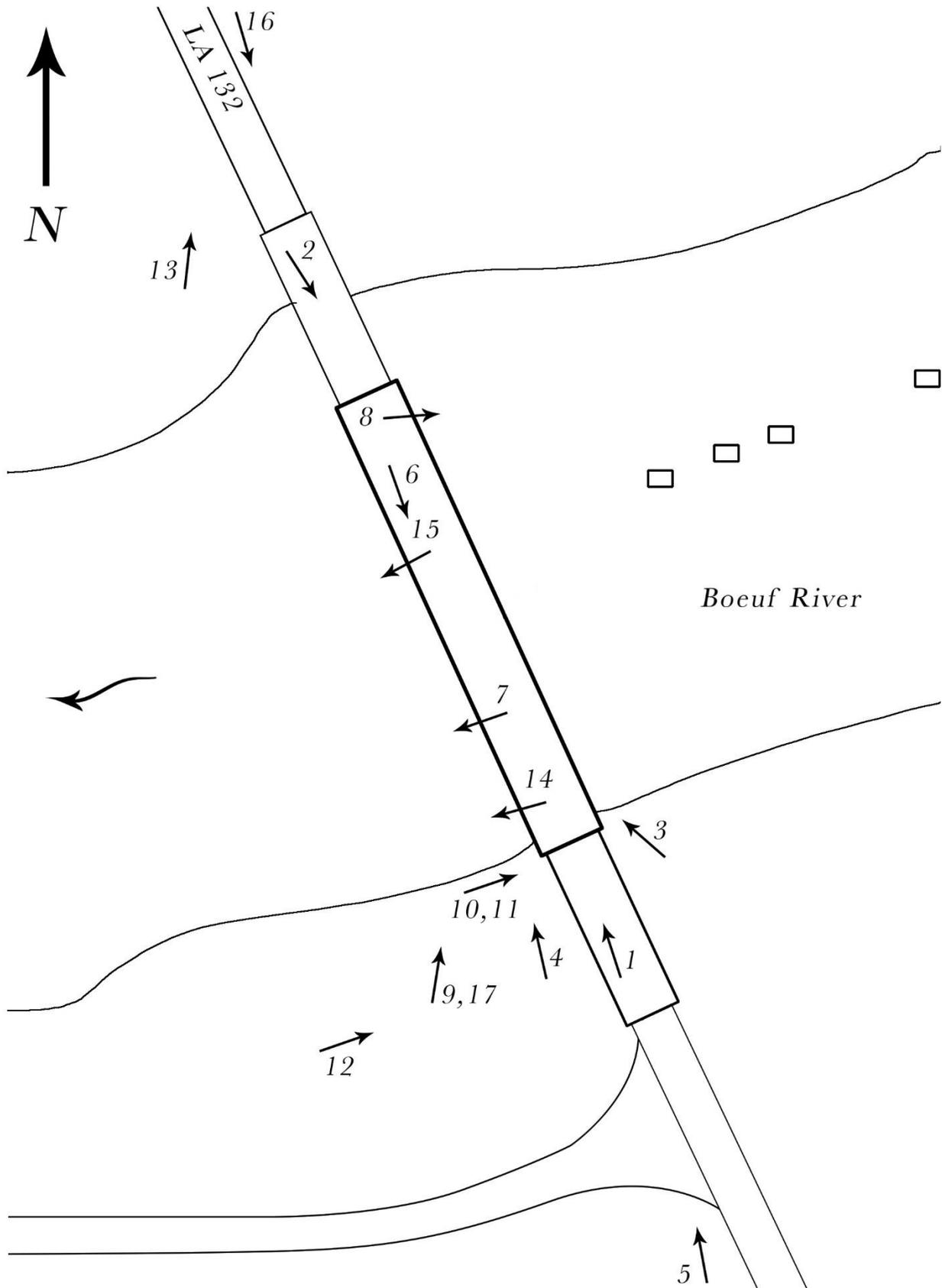
Scale Device 8 Feet Long

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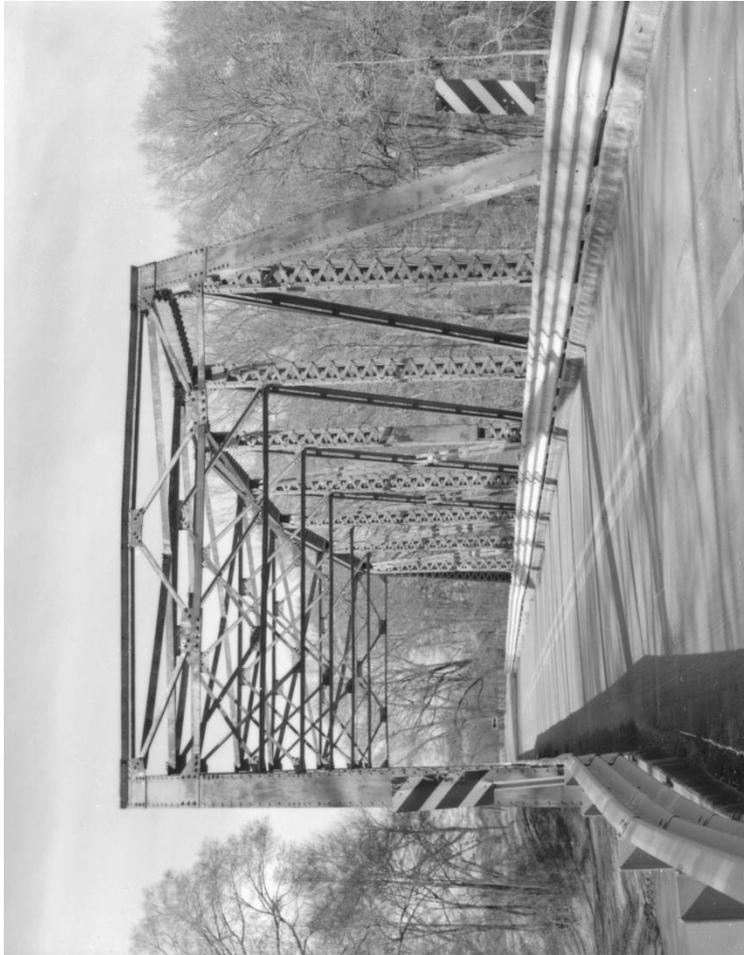
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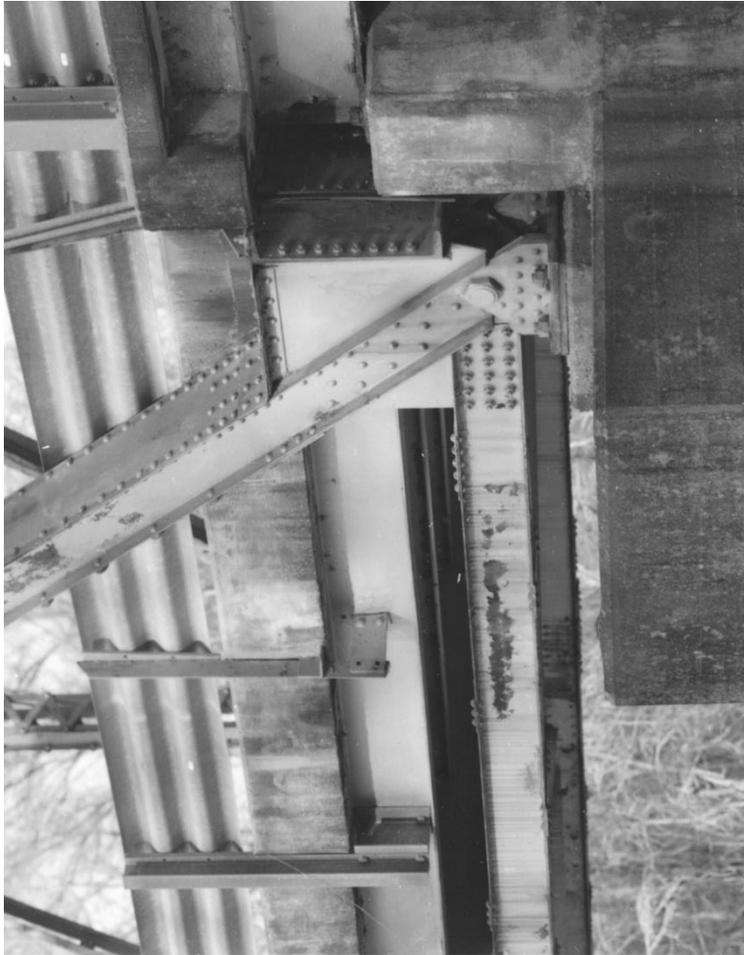
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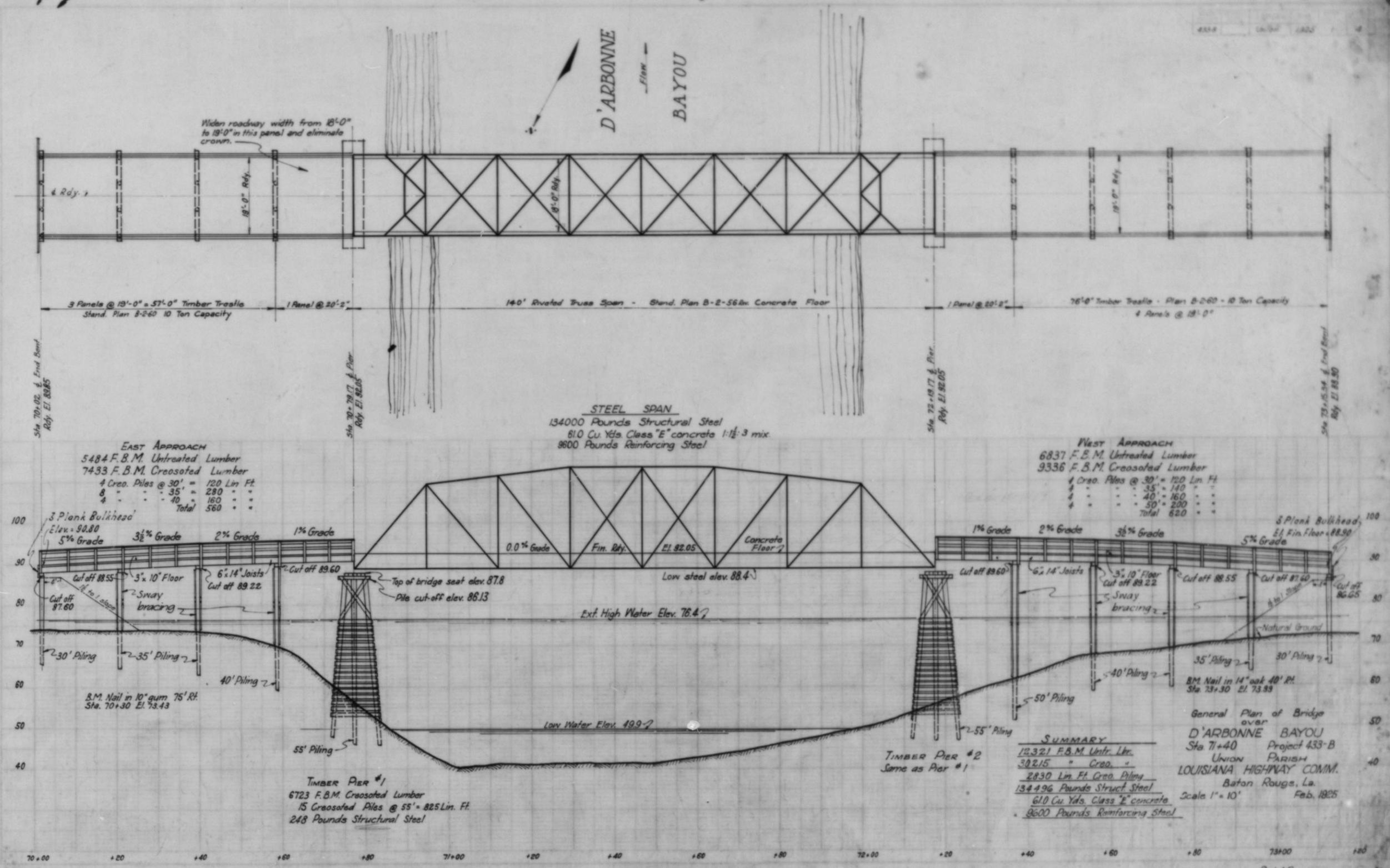


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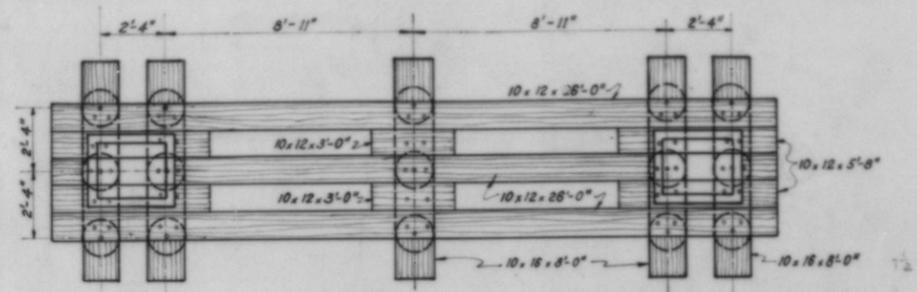


**SUMMARY**

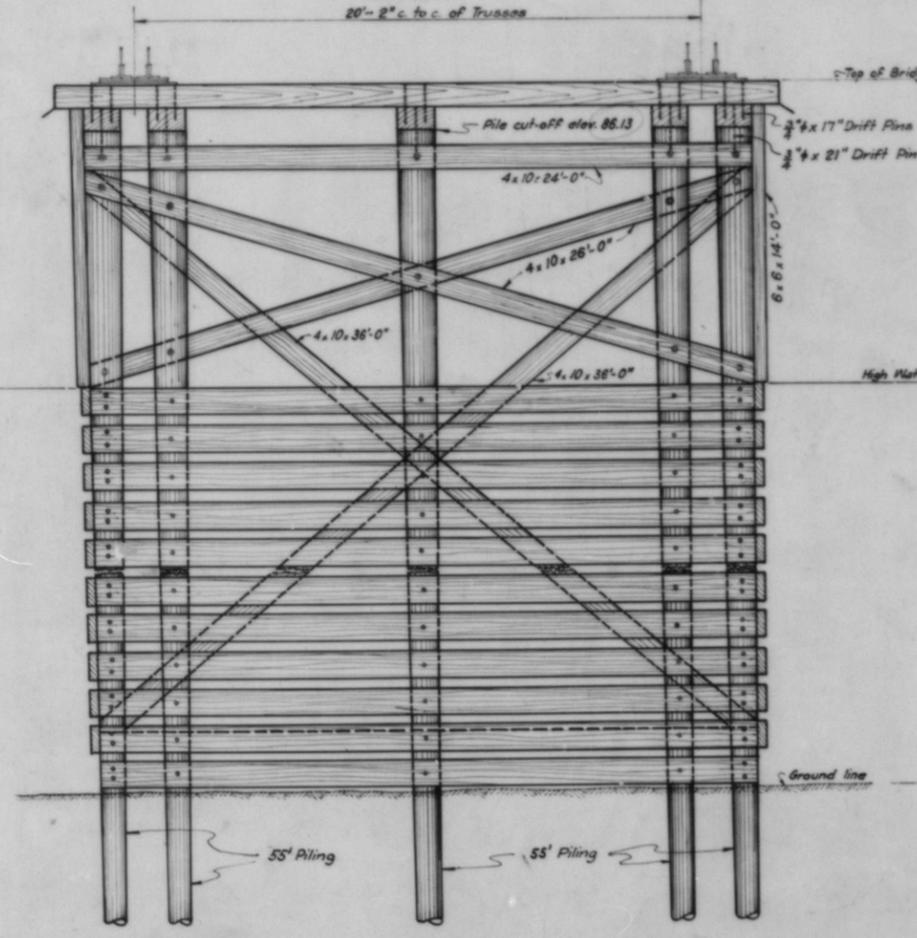
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610 Cu. Yds. Class "E" concrete
9,600 Pounds Reinforcing Steel

General Plan of Bridge over  
**D'ARBONNE BAYOU**  
 Sta 71+40 Project 433-B  
 UNION PARISH  
 LOUISIANA HIGHWAY COMM.  
 Baton Rouge, La.  
 Scale 1" = 10' Feb. 1925

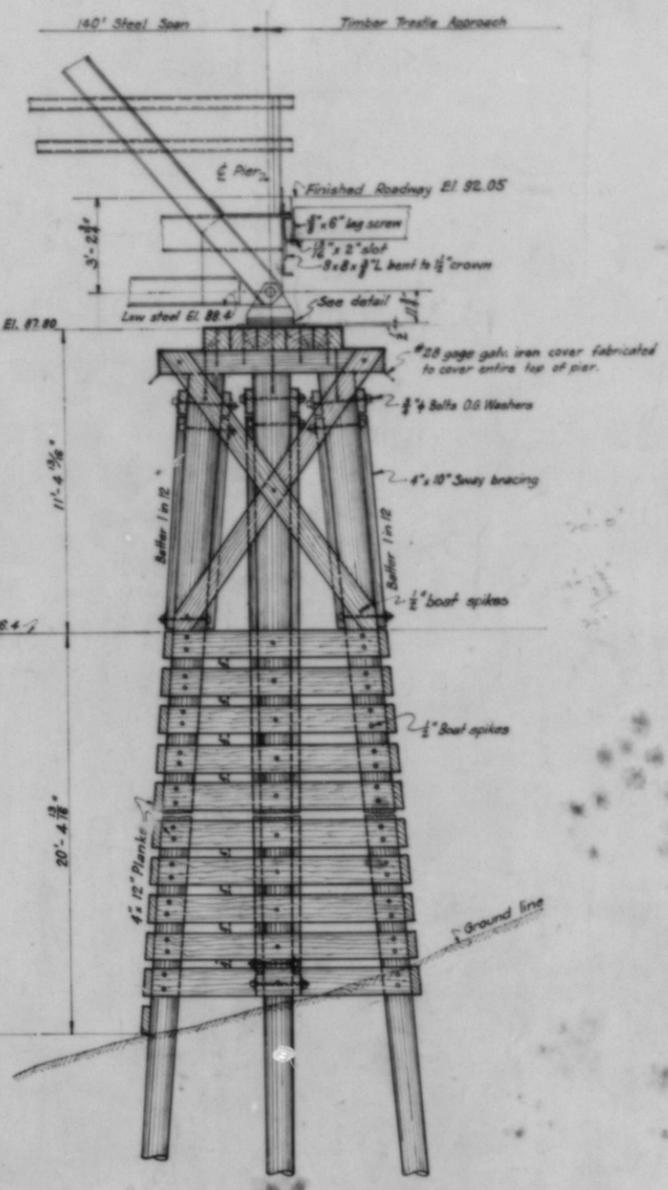
20



PLAN



ELEVATION



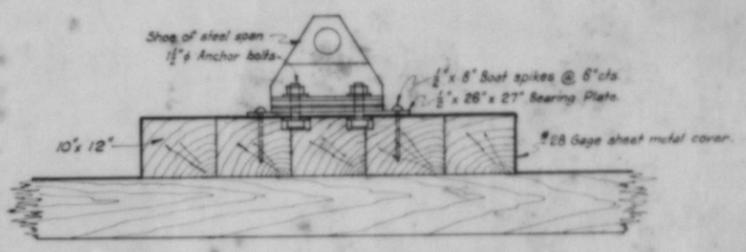
END VIEW

BILL OF MATERIAL (One Pier)

Number	SIZE	Description	F.B.M.	Location
3	10x12x26'-0"	Cros. Rough	780	Shillage
4	10x12x5'-8"	" "	227	" "
2	10x12x3'-0"	" "	80	" "
5	10x18x8'-0"	" "	533	Caps
4	6x6x14'-0"	" "	188	Sway Bracing
8	4x10x24'-0"	" "	840	" "
4	4x10x26'-0"	" "	347	" "
2	4x10x36'-0"	" "	240	" "
27	4x12x24'-0"	" "	2532	Fender
14	4x12x10'-0"	" "	580	Fender
12	4x12x12'-0"	" "	576	" "
			8723	Total

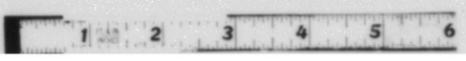
15 Cros. Piles @ 55' = 825 Lin. Ft.

- To be included with  
Cros. Lumber and piling
- 40 Sq. Yds. #28 gage galv. sheet iron = 20.5<sup>#</sup>
  - 20 - 3/4" x 25 1/2" bolts with O.G. Washers
  - 27 - 3/4" x 2 1/2" " " " "
  - 333 - 1/2" x 10" Bolt spikes
  - 12 - 3/8" x 8" " " " "
  - 15 - 3/4" x 21" drift pins
  - 30 - 3/4" x 17" " " " "
- Steel
- 2 - 1/2" x 26" x 27" bearing plate = 200<sup>#</sup>
  - 8 - 1/2" x 6" anchor bolts with washers = 48<sup>#</sup>
- Note: Pile lengths given are approximate for estimating purposes only.

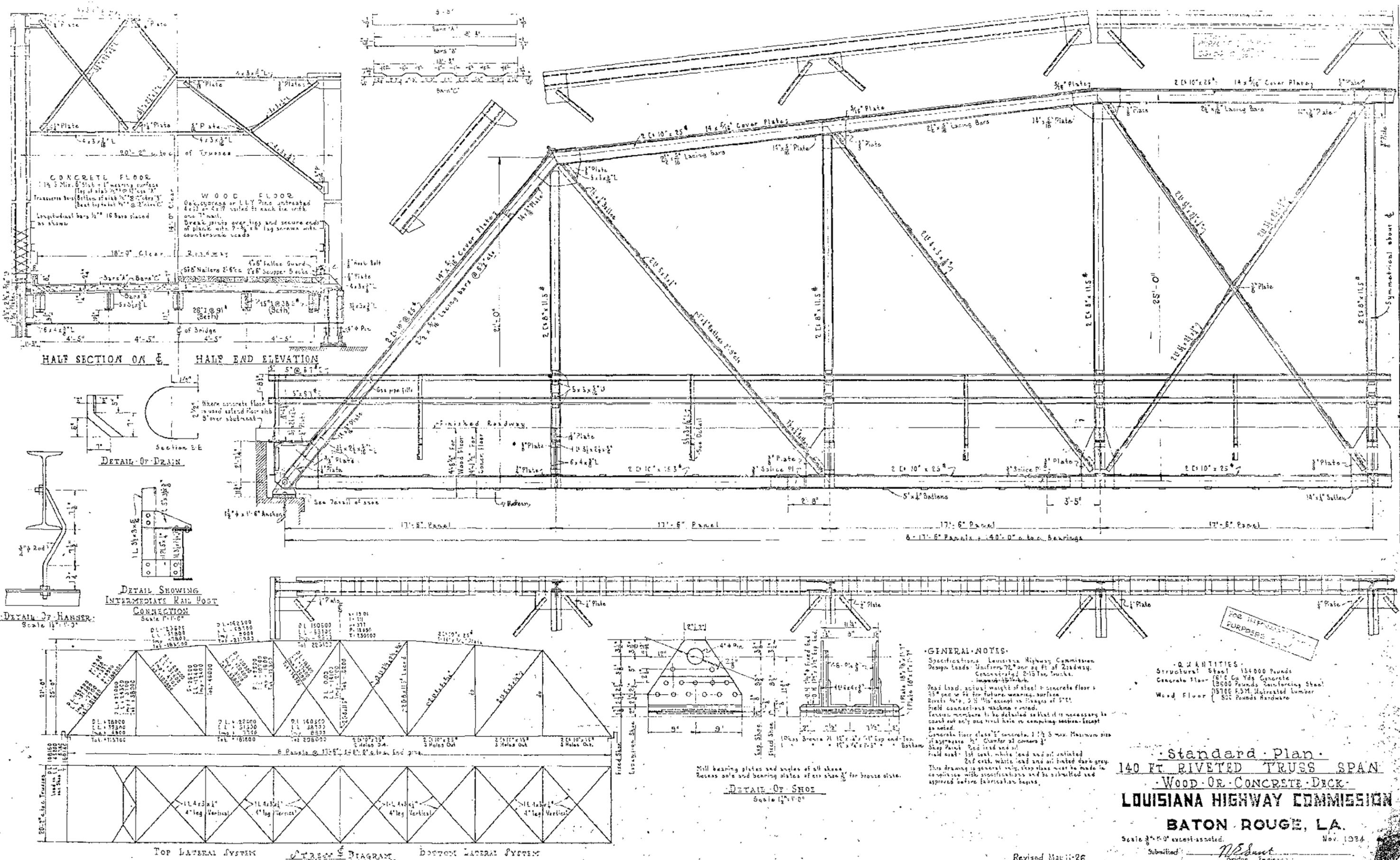


DETAIL OF BRIDGE SEAT  
Scale 1" = 1'-0"

TIMBER PIER  
FOR  
D'ARBONNE BAYOU BRIDGE  
UNION PARISH PROJ. 433-B  
LOUISIANA HIGHWAY COMM.  
Baton Rouge, La.  
Scale 3/8" = 1'-0" except as noted. Feb. 1925



B-14-9



**GENERAL NOTES**

Specifications Louisiana Highway Commission  
 Design loads Uniform 72' per sq ft of roadway  
 Concentrated 2-15 Ton trucks  
 Impact 15% of static

Dead load, actual weight of steel, concrete floor is 25' per sq ft for future wearing surface  
 Rivets 40, 50, 60 lbs except in stages of 50 lbs  
 Field connections machine riveted  
 Truss members to be detailed so that it is necessary to count out only one rivet hole in computing section, except as noted.  
 Concrete floor class 'E' concrete, 1 1/2 S max. Maximum size of aggregate 3/4" Clear for all corners 1" Sharp Point. Red lead and oil field coat, white lead and oil tinted.

This drawing is general only, shop plans must be made in compliance with specifications and be submitted and approved before fabrication begins.

**QUANTITIES**

Structural Steel 154,000 Pounds  
 Concrete Floor 68' Cu Yds Concrete  
 13,600 Pounds Reinforcing Steel  
 Wood Floor 15,788 F.S.M. Untreated Lumber  
 500 Pounds Hardware

**Standard Plan**  
**140 FT RIVETED TRUSS SPAN**  
**WOOD OR CONCRETE DECK**  
**LOUISIANA HIGHWAY COMMISSION**  
**BATON ROUGE, LA.**

Scale 3/4" = 1'-0" except as noted.  
 Revised May 11-26  
 Submitted: *N. E. Smith*  
 Division Engineer  
 Nov. 1934

Detailed and Traced by M.C. Heath

FOR INFORMATION PURPOSE ONLY

10-2-66 REVISED