

St. John's Bayou Bridge

NEWM01

GENERAL DATA

structure no.: 101R02.8 city/town: 3.9 miles northeast of New Madrid
county: New Madrid feature inters.: St. John's Bayou
cadastral grid: S29, T23N, R15W
highway route: county road
highway distr.: 10
current owner: New Madrid County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Camelback through truss
substructure: concrete and (recent) steel tube abutments

span number: 1 condition: good
span length: 140.0' alterations: one abutment replaced, 1980
total length: 144.0' floor/decking : timber deck over steel stringers
roadway width: 14.0' other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with lacing; vertical: 2 channels with lacing (2 angles with lacing at the hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing and 2-angle knee braces; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1917
erection cost: unknown
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN;
Cambria Steel Company, Pittsburgh PA
contractor: Vincennes Bridge Company, Vincennes IN
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 101R02.8; New Madrid County Court Record 12: page 435 (3 October 1916), page 571, located at New Madrid County Courthouse, New Madrid, Missouri; J.A.L. Waddell, **Bridge Engineering** (London: John Wiley and Sons, 1916), pages 477-78; field inspection by Richard Collier, 2 April 1992.
sign. rating: 54
evaluation: NRHP possibly eligible (well-preserved example of uncommon structural type)

inventoried by: Clayton B. Fraser 4 August 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

St. John's Bayou Bridge
MHTD: 101R02.8

NEWM01

DATE(S) OF CONSTRUCTION

1917

LOCATION

county road over St. John's Bayou; S29, T23N, R15W
3.9 miles northeast of New Madrid; New Madrid County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 54)

CONDITION

good

OWNER

New Madrid County

span number: 1
span length: 140.0'
total length: 144.0'
roadway wdt.: 14.0'

superstructure: steel, 8-panel, pin-connected Camelback through truss
substructure: concrete and (recent) steel tube abutments
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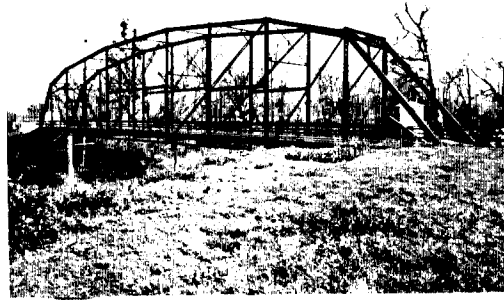
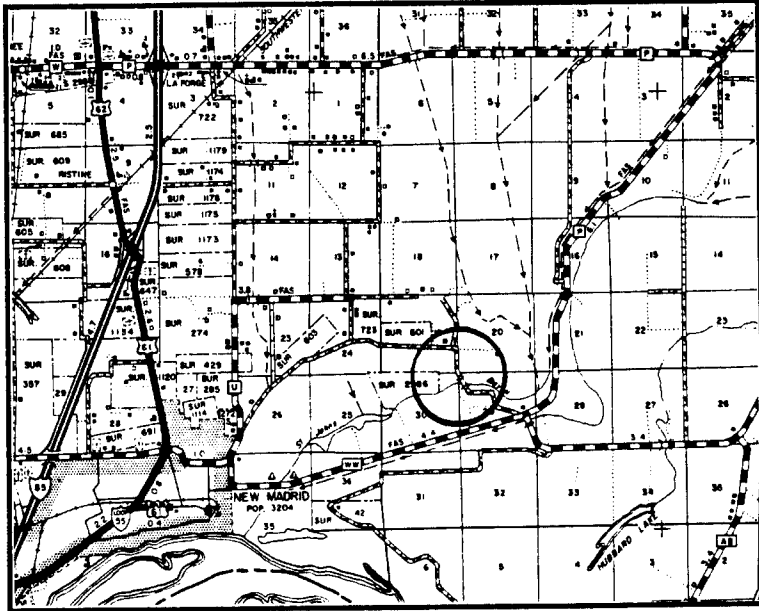
In August 1916 the New Madrid County Court received a petition from W.D. Knott et al. for the platting of a new road in New Madrid Township. The road was established that October. County records are somewhat sketchy - several bridges were being built at the time over St. John's Bayou, a tributary of the Mississippi River - but it appears that in 1917 this bridge was constructed to carry the new road over the bayou some four miles northeast of New Madrid. Consisting of a single, pinned through truss, the long-span structure was fabricated and erected by the Vincennes Bridge Company of Vincennes IN, which was essentially New Madrid County's sole bridge contractor in the 1910s. The St. John's Bayou Bridge carried traffic without serious alteration for decades and is today the county's oldest vehicular bridge. Its original concrete abutment on the south was replaced by steel tubes after the bridge fell into the bayou in 1980, but the superstructure itself remains unaltered.

Straight-chorded Pratt through trusses were used extensively throughout Missouri for medium-span crossings in the late 19th and 20th centuries. For longer crossings after about the turn of the century, however, bridge companies could develop greater efficiency with polygonal-chorded Pratt variants - primarily Parker, Pennsylvania and Camelback trusses. With its distinctive five-faceted upper chords, the Camelback configuration was disdained by some engineers (including the redoubtable J.A.L. Waddell, who called it "uncompromisingly ugly") for its tendency under certain conditions to reverse compressive and tensile forces acting on their individual members. As a result, Camelback trusses never received widespread acceptance. Relatively few were ever built on Missouri's roads, and less than ten have been identified as extant by the bridge inventory. The St. John's Bayou Bridge is thus technologically significant as a well-preserved example of this uncommon structural type.

NAME(S) OF STRUCTURE

St. John's Bayou Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 101R02.8; New Madrid County Court Record 12: page 435 (3 October 1916), page 571, located at New Madrid County Courthouse, New Madrid, Missouri; J.A.L. Waddell, *Bridge Engineering* (London: John Wiley and Sons, 1916), pages 477-78; field inspection by Carl McWilliams and Richard Collier, 2 April 1992.

INVENTORIED BY
Carl McWilliams

AFFILIATION
Fraserdesign, Loveland CO

DATE
4 May 1992
