

DOUGLAS COUNTY

INCLUDED: [Significant feature(s) of bridge given in boldface]
 [Field inventoried bridge indicated by asterisk]

| Inv.No. | MHTD | Bridge Name | Description |
|---------|----------|------------------|--|
| *DOUG01 | J 748 | Twin Bridge | 3-100' concrete open spandrel arch 1932 Glen E. Stoner |
| *DOUG02 | J 749 | Twin Bridge | 2-100' concrete open spandrel arch 1932 Glen E. Stoner |
| *DOUG03 | 209003.0 | Rome Bridge | 2-100' pinned Pratt through truss 1914 J.H. Murray |
| *DOUG04 | 283001.4 | Dean Ford Bridge | 2- 96' pinned Pratt through truss 1915 J.H. Murray |

EXCLUDED:

Steel stringer

T 154 T 756 T 972 X 27

Concrete girder

G 369R1 H 344 J 168 J 437 J 663 J 664 T 609
 T 610 X 852 010000.2 094001.2

Concrete slab

082000.2 095000.3 132000.1 174001.3 197004.4 205002.2 226000.1
 281003.9

Concrete box culvert

G 599R1 H 425 J 130 J 436 R 836 T 611 W 123
 W 124 Y 627 Y 628 256003.6 301003.4

Timber stringer

035000.1 260002.8

SUMMARY:

| | Primary | Secondary | Urban | Other | Total |
|----------|---------|-----------|-------|-------|---------------|
| Included | 2 | 2 | 0 | 0 | 4 |
| Excluded | 23 | 14 | 0 | 0 | 37 |
| | 25 | 16 | 1 | 0 | 41 structures |

Twin Bridge

DOUG01

GENERAL DATA

| | | | |
|----------------|---------|------------------|--|
| structure no.: | J 748 | city/town: | 14.2 miles southeast of Vanzant |
| county: | Douglas | feature inters.: | North Fork of White River |
| | | cadastral grid: | S26, T25N, R11W |
| | | highway route: | State Highway 14 |
| | | highway distr.: | 8 |
| | | current owner: | Missouri Highway and Transportation Department |

STRUCTURAL DATA

| | | | |
|-----------------|--|-----------------|--|
| superstructure: | concrete, two-rib, open spandrel arch with concrete deck girder approaches | | |
| substructure: | concrete abutments, wingwalls and spill-through piers | | |
| span number: | 3 | condition: | good |
| span length: | 100.0' | alterations: | none |
| total length: | 465.0' | floor/decking : | asphalt over concrete |
| roadway width: | 20.0' | other features: | concrete guardrails (Missouri State Highway Department standard design); curved alignment; bridge plate: MISSOURI HIGHWAY DEPT. / BRIDGE No. J748 / 1931 |

HISTORICAL DATA

| | |
|----------------|--|
| erection date: | 1931-32 |
| erection cost: | \$33,209.18 |
| designer: | Missouri State Highway Department |
| fabricator : | none |
| contractor: | Glen E. Stoner |
| references: | Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J 748; files on Primary System Bridges - located at the Missouri Highway and Transportation Department, Jefferson City MO; Steve Cusick, "Twin Bridges Span the Years," Springfield Daily News , 6 May 1986; field inspection by Clayton Fraser, 26 January 1990. |
| sign. rating: | 50 |
| evaluation: | NRHP possibly eligible (well-preserved, multiple-span example of MSHD standard bridge configuration of the 1930s) |

inventoried by: Clayton B. Fraser 9 March 1993

Twin Bridge

DOUG02

GENERAL DATA

| | | | |
|----------------|---------|------------------|--|
| structure no.: | J 749 | city/town: | 14.4 miles southeast Vanzant |
| county: | Douglas | feature inters.: | Spring Creek |
| | | cadastral grid: | S27/34, T25N, R11W |
| | | highway route: | State Highway 14 |
| | | highway distr.: | 8 |
| | | current owner: | Missouri Highway and Transportation Department |

STRUCTURAL DATA

superstructure: concrete, two-rib, open spandrel arch, with concrete girder approaches, skewed

substructure: concrete abutments, wingwalls and piers

| | | | |
|----------------|--------|-----------------|---|
| span number: | 2 | condition: | good |
| span length: | 100.0' | alterations: | none |
| total length: | 316.0' | floor/decking : | asphalt over concrete |
| roadway width: | 20.0' | other features: | concrete guardrails (standard Missouri State Highway design); curved alignment; bridge plate: MISSOURI HIGHWAY DEPT. / BRIDGE No. J749 / 1931 |

HISTORICAL DATA

erection date: 1931-32

erection cost: \$24,651.64

designer: Missouri State Highway Department

fabricator : none

contractor: Glen E. Stoner

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J 749; files on Primary System Bridges - located at the Missouri Highway and Transportation Department, Jefferson City MO; Steve Cusick, "Twin Bridges Span the Years," **Springfield Daily News**, 6 May 1986; field inspection by Clayton Fraser, 26 January 1990.

sign. rating: 49

evaluation: NRHP possibly eligible (well-preserved, multiple-span example of MSHD standard bridge configuration of the 1930s)

inventoried by: Clayton B. Fraser 9 March 1993

Rome Bridge

DOUG03

GENERAL DATA

| | | | |
|----------------|----------|------------------|-----------------|
| structure no.: | 209003.0 | city/town: | Rome |
| county: | Douglas | feature inters.: | Beaver Creek |
| | | cadastral grid: | S23, T25N, R17W |
| | | highway route: | County Road 209 |
| | | highway distr.: | 8 |
| | | current owner: | Douglas County |

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete abutments, wingwalls and pier

| | | | |
|----------------|--------|-----------------|---|
| span number: | 2 | condition: | fair |
| span length: | 100.0' | alterations: | none |
| total length: | 200.0' | floor/decking : | concrete on corrugated steel, over steel stringers |
| roadway width: | 12.0' | other features: | upper chord and inclined end post: 2 channels with cover plates and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: 2 angles with lacing; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels; bridge plate: [lists county commissioners, but text is illegible] |

HISTORICAL DATA

erection date: 1913-14
erection cost: \$4683.00
designer: W.S. Dunn, Douglas County Surveyor
fabricator : Kansas City Bridge Company, Kansas City MO;
Illinois Steel Company, Chicago IL
contractor: J.H. Murray, Ava MO
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 209003.0; Douglas County Court Minutes, Book 3: page 102 (27 June 1913), page 118 (9 August 1913), page 121 (2 September 1913), page 127 (4 November 1913), page 185 (7 February 1914), page 278 (3 March 1915), page 306 (8 June 1915) - located at Douglas County Courthouse, Ava MO; field inspection by Clayton Fraser, 26 January 1990.

Rome Bridge

sign. rating: 50
evaluation: NRHP possibly eligible (well-preserved, relatively late example of main-stay truss type)

Inventoried by: Clayton B. Fraser 9 March 1993

Dean Ford Bridge

DOUG04

GENERAL DATA

| | | | |
|----------------|----------|------------------|---------------------------------|
| structure no.: | 283001.4 | city/town: | 10.7 miles southeast of Vanzant |
| county: | Douglas | feature inters.: | North Fork of White River |
| | | cadastral grid: | S18, T25N,R11W |
| | | highway route: | County Road 283 |
| | | highway distr.: | 8 |
| | | current owner: | Douglas County |

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete abutments, wingwalls and pier

| | | | |
|----------------|--------|-----------------|--|
| span number: | 2 | condition: | fair |
| span length: | 96.0' | alterations: | none |
| total length: | 193.0' | floor/decking : | concrete deck over steel stringers |
| roadway width: | 12.0' | other features: | upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 1 channel; portal strut: 2 latticed angles; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels; bridge plate: 1914 / STEEL FURNISHED BY KANSAS CITY BRIDGE Co. / JAS. THOMPSON PRES. JUDGE / JASON A. NASH ASSOC. JUDGE / JNO. B. DEEDS ASSOC. JUDGE / E.C. BUNCH COUNTY CLERK / W.S. DUNN COUNTY SURVEYOR / J.H. MURRAY CONTRACTOR AND BUILDER |

HISTORICAL DATA

erection date: 1914-15
erection cost: \$5700.00
designer: W.S. Dunn, Douglas County Surveyor
fabricator : Kansas City Bridge Company, Kansas City MO;
Cambria Steel Company, Pittsburgh PA
contractor: J.H. Murray, Ava MO
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 283001.4; Douglas County Court Minutes, Book 3: page 185 (9 May 1914), page 188 (20 June 1914), page 209 (12 August 1914), page 212 (8 September 1914), page 242 (15 December 1914), page 247 (12 January 1915), page 301 (10 May 1915), page 306 (8 June 1915) - located at Douglas County Court-house, Ava MO; field inspection by Clayton Fraser, 26 January 1990.

Dean Ford Bridge

sign. rating: 50

evaluation: NRHP possibly eligible (well-preserved, relatively late example of main-stay truss type)

inventoried by: Clayton B. Fraser 9 March 1993

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Twin Bridge
MHTD: J 748

DOUG01

DATE(S) OF CONSTRUCTION

1931-32

LOCATION

State Highway 14 over North Fork of White River; S26, T25N, R11W
14.2 miles southeast of Vanzant; Douglas County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 3

span length: 100.0'

total length: 465.0'

roadway wdt.: 20.0'

superstructure: concrete, two-rib, open spandrel arch with concrete deck girder approaches

substructure: concrete abutments, wingwalls and spill-through piers

floor/decking: asphalt over concrete

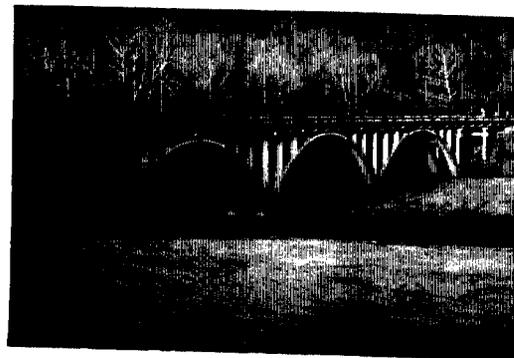
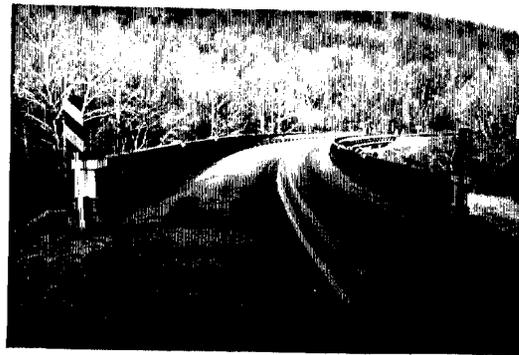
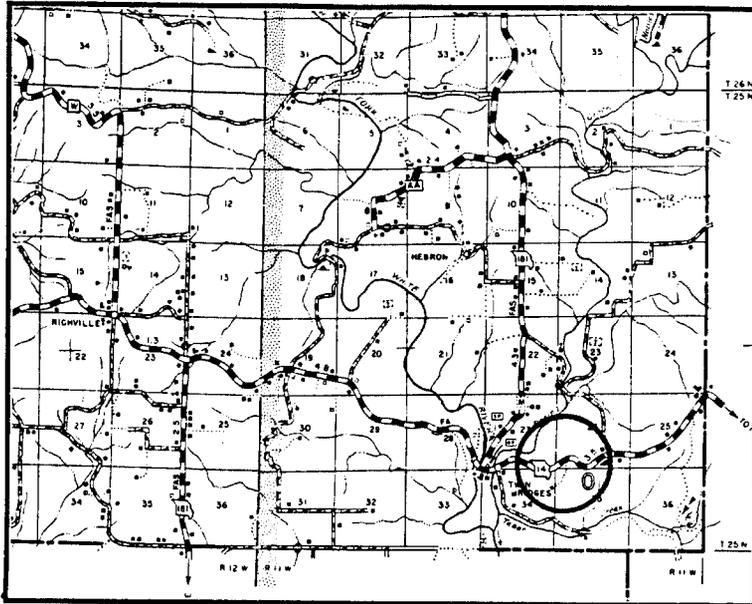
other features: concrete guardrails (Missouri State Highway Department standard design); curved alignment; bridge plate: **MISSOURI HIGHWAY DEPT. / BRIDGE No. J748 / 1931**

The Twin Bridges are located about fourteen miles southeast of Vanzant, in Douglas County's Richland Township. They were built in 1931-32 as part of an effort to extend State Highway 14 across the southeastern portion of the county. The contract for the two bridges was let to Glen E. Stoner on August 28, 1931. Built with concrete from nearby Olden, they were completed in June 1932 for a combined cost of \$57,860.74. One of the two bridges, J-748, is comprised of three 100-foot concrete open spandrel arches, with two concrete deck girder approach spans. Spanning the North Fork of the White River, with an overall length of 465 feet, it is the longer of the two bridges. The other of the Twin Bridges, J-749, is comprised of two 100-foot concrete open spandrel arches, with two concrete deck girder approach spans. With an overall length of 316 feet, it spans Spring Creek about two-tenths of a mile east of the North Fork Bridge. Both bridges are curved at about five degrees, and the Spring Creek crossing is slightly skewed. Although the two bridges are not identical, they have become known collectively as the Twin Bridges. At one time there was a post office at the site, but it apparently closed in the 1950s. A general store also operated by the bridges for many years, and more recently, the area has become a popular put-in spot for canoers.

In the 1920s and 1930s the Missouri State Highway Department developed plans for a number of concrete bridges that were erected on the state's highways. For concrete bridges with span lengths under 80 feet, filled spandrel arches were most often executed, while for longer-span bridges, the highway department instead typically opted for open spandrel designs. Single-span examples of the latter configuration were fairly common, but multiple-span open spandrel arches were built far less often. Approximately twenty multiple-span, open spandrel arches have been identified by the statewide bridge inventory. The Twin Bridges in Douglas County are significant among these as well-preserved, locally prominent examples. Only a handful of Missouri's open spandrel arches have more than three spans, and fewer, still, have individual span lengths greater than 100 feet.

NAME(S) OF STRUCTURE

Twin 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 J 748; files on Primary System Bridges - located at the Missouri Highway and Transportation Department, Jefferson City MO; Steve Cusick, "Twin Bridges Span the Years," *Springfield Daily News*, 6 May 1986; field inspection by Clayton Fraser, 26 January 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

9 March 1993

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Twin Bridge
MHTD: J 749

DOUG02

DATE(S) OF CONSTRUCTION

1931-32

LOCATION

State Highway 14 over Spring Creek; S27/34, T25N, R11W
14.4 miles southeast Vanzant; Douglas County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / highway bridge

RATING NRHP possibly eligible (score: 49)

CONDITION

good

OWNER

Missouri Highway and Transportation Department

span number: 2

span length: 100.0'

total length: 316.0'

roadway wdt.: 20.0'

superstructure: concrete, two-rib, open spandrel arch, with concrete girder approaches, skewed

substructure: concrete abutments, wingwalls and piers

floor/decking: asphalt over concrete

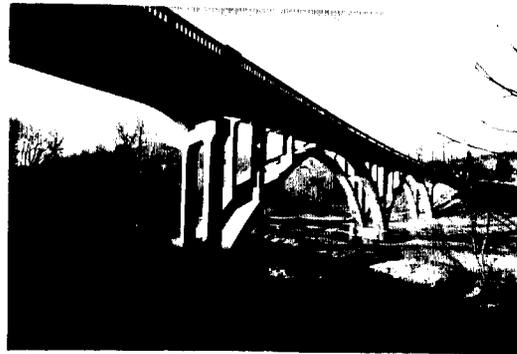
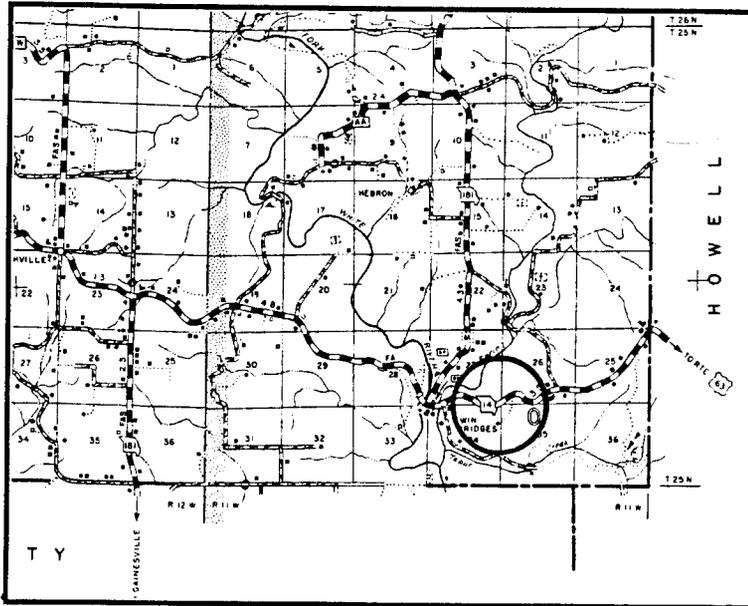
other features: concrete guardrails (standard Missouri State Highway design); curved alignment; bridge plate: MISSOURI HIGHWAY DEPT. / BRIDGE No. J749 / 1931

The Twin Bridges are located about fourteen miles southeast of Vanzant, in Douglas County's Richland Township. They were built in 1931-32 as part of an effort to extend State Highway 14 across the southeastern portion of the county. The contract for the two bridges was let to Glen E. Stoner on August 28, 1931. Built with concrete from nearby Olden, they were completed in June 1932 for a combined cost of \$57,860.74. One of the two bridges, J-748, is comprised of three 100-foot concrete open spandrel arches, with two concrete deck girder approach spans. Spanning the North Fork of the White River, and with an overall length of 465-feet, it is the longer of the two bridges. The other of the Twin Bridges, J-749, is comprised of two 100-foot concrete open spandrel arches, with two concrete deck girder approach spans. With an overall length of 316-feet, it carries Highway 14 across Spring Creek about two-tenths of a mile east of the North Fork Bridge. Both bridges are curved at about five degrees, and the Spring Creek crossing is slightly skewed. Although the two bridges are not identical, they have become known collectively as the Twin Bridges. At one time there was a post office at the site, but it apparently closed in the 1950s. A general store also operated by the bridges for many years, and more recently, the area has become a popular put-in spot for canoers.

In the 1920s and 1930s the Missouri State Highway Department developed plans for a number of concrete bridges that were erected on the state's highways. For concrete bridges with span lengths under 80 feet, filled spandrel arches were most often executed, while for longer-span bridges, the highway department instead typically opted for open spandrel designs. Single-span examples of the latter configuration were fairly common, but multiple-span open spandrel arches were built far less often. Approximately twenty multiple-span, open spandrel arches have been identified by the statewide bridge inventory. The Twin Bridges in Douglas County are significant among these as a well-preserved and locally prominent example, with a notable 100-foot span length. Only a handful of Missouri's open spandrel arches have individual span lengths greater than 100-feet.

NAME(S) OF STRUCTURE

Twin 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 J 749; files on Primary System Bridges - located at the Missouri Highway and Transportation Department, Jefferson City MO; Steve Cusick, "Twin Bridges Span the Years," *Springfield Daily News*, 6 May 1986; field inspection by Clayton Fraser, 26 January 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

9 March 1993

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Rome Bridge
MHTD: 209003.0

DOUG03

DATE(S) OF CONSTRUCTION

1913-14

LOCATION

County Road 209 over Beaver Creek; S23, T25N, R17W
Rome; Douglas County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION

fair

OWNER

Douglas County

| | |
|--|---|
| <p>span number: 2 span length: 100.0' total length: 200.0' roadway wdt.: 12.0'</p> | <p>superstructure: steel, 6-panel, pin-connected Pratt through truss substructure: concrete abutments, wingwalls and pier floor/decking: concrete on corrugated steel, over steel stringers other features: upper chord and inclined end post: 2 channels with cover plates and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: 2 angles with lacing; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels; bridge plate: [lists county commissioners, but text is illegible]</p> |
|--|---|

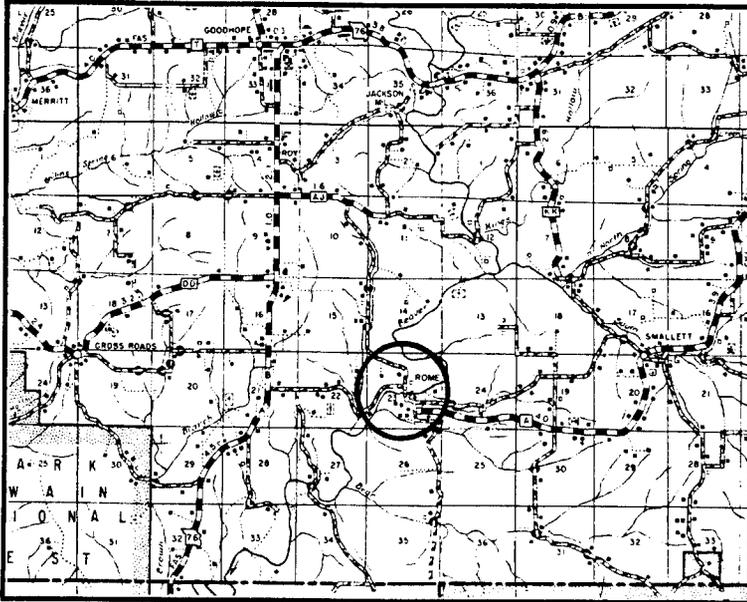
On June 27, 1913, the Douglas County Court ordered county surveyor W.S. Dunn to locate a bridge site at the town of Rome, on Beaver Creek. Dunn was to estimate the cost for a Class B bridge at this point and advertise for bids for construction the structure. Assisting Dunn in the survey was J.H. Murray, a local contractor from Ava who sometimes served the county in an unofficial capacity as a deputy highway engineer. Dunn and Murray completed the survey and design work for the Rome bridge in the summer of 1913, and on September 2 competitive bids were opened for its construction. Proposals were received from three regionally active bridge firms: the Midland Bridge Company, Kansas City Bridge Company and the Massillon Bridge Company. But the lowest bid was submitted by J.H. Murray himself, who offered to supply and erect the two pinned Pratt through trusses on a concrete substructure for \$4683.00. Murray received the contract, resigned his position as deputy highway engineer, and began work on the substructural excavation. He used two 100-foot spans fabricated by the Kansas City Bridge Company, erecting them over timber falseworks on concrete pier and abutments. After Murray completed the truss early the next year, the county hired J.B. Coonts to grade the approaches. The Rome Bridge completed, Murray was back on the job surveying bridge sites for the county later that year. The Rome Bridge has functioned in place since that time, without major alteration.

One of the Midwest's most prolific bridge fabricators, the Kansas City Bridge Company maintained an extensive catalogue of truss types, ranging from the exotic to the commonplace. KCBrcO, like most of the region's bridge builders of the time, relied heavily on pin-connected Pratt truss variants for its standard truss types. Patented in 1844 by Thomas and Caleb Pratt, the Pratt design was characterized by upper chords and vertical members acting in compression and lower chords and diagonals that acted in tension. Its parallel

chords and equal panel lengths resulted in standardized sizes for the verticals, diagonals and chord members, making fabrication and assembly relatively easy. In the highly competitive bridge manufacturing industry, in which efficiency equated with profit, Pratt trusses received almost universal use. "The Pratt truss is the type most commonly used in America for spans under two hundred and fifty feet in length," noted bridge engineer J.A.L. Waddell wrote in 1916. "Its advantages are simplicity, economy of metal, and suitability for connecting to the floor and lateral systems." Virtually all of the major regional fabricators manufactured Pratt trusses and marketed them extensively to Missouri's counties in the late 19th and early 20th centuries. The Rome Bridge is distinguished somewhat by its two-span configuration, but, with its 1913 fabrication date and 100 foot span length, it is structurally unremarkable among Missouri's trusses.

NAME(S) OF STRUCTURE

Rome 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 209003.0; Douglas County Court Minutes, Book 3: page 102 (27 June 1913), page 118 (9 August 1913), page 121 (2 September 1913), page 127 (4 November 1913), page 185 (7 February 1914), page 278 (3 March 1915), page 306 (8 June 1915) - located at Douglas County Courthouse, Ava MO; field inspection by Clayton Fraser, 26 January 1990.

INVENTORIED BY

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DATE9 March 1993

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Dean Ford Bridge
MHTD: 283001.4

DOUG04

DATE(S) OF CONSTRUCTION

1914-15

LOCATION

County Road 283 over North Fork of White River; S18, T25N,R11W
10.7 miles southeast of Vanzant; Douglas County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION

fair

OWNER

Douglas County

span number: 2
span length: 96.0'
total length: 193.0'
roadway wdt.: 12.0'

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete abutments, wingwalls and pier
floor/decking: concrete deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 1 channel; portal strut: 2 latticed angles; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels; bridge plate: 1914 / STEEL FURNISHED BY KANSAS CITY BRIDGE Co. / JAS. THOMPSON PRES. JUDGE / JASON A. NASH ASSOC. JUDGE / JNO. B. DEEDS ASSOC. JUDGE / E.C. BUNCH COUNTY CLERK / W.S. DUNN COUNTY SURVEYOR / J.H. MURRAY CONTRACTOR AND BUILDER

Soon after completing construction of the Rome Bridge (DOUG03), local contractor J.H. Murray was asked to accompany Douglas County Surveyor W.S. Dunn to locate a suitable bridge site over the North Fork of the White River at the eastern part of the county. In May 1914 the men located two possible sites for the bridge - at the Dean Ford southeast of Vanzant and farther north at Topaz, surveying both for a bridge and the road that would lead to it. For the crossings, Dunn designed a two-span, Class B pinned Pratt truss, supported by a concrete substructure. In August the county advertised for bids for the construction of a bridge over the North Fork at either of the two crossings. Bids for the North Fork bridges were opened on September 8, 1914. Proposals were received from the Blodgett Construction Company, the Midland Bridge Company and the Kansas City Bridge Company, all from Kansas City, and from J.H. Murray himself. Murray was hired to build the bridge at Dean Ford for \$5700.00. As he had with the Rome Bridge, Murray again resigned his position with the county to undertake the construction of this bridge. Using two 96-foot trusses fabricated by the Kansas City Bridge Company, Murray completed the Dean Ford Bridge early the following year, whereupon he returned to his county post. The bridge has functioned in place since its completion, without major alteration.

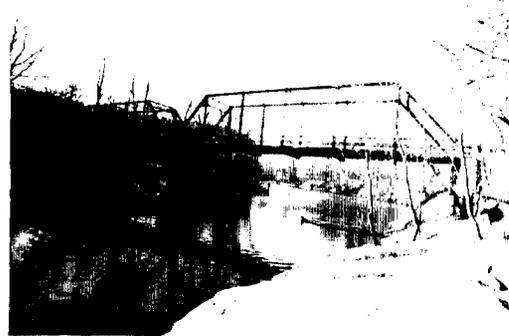
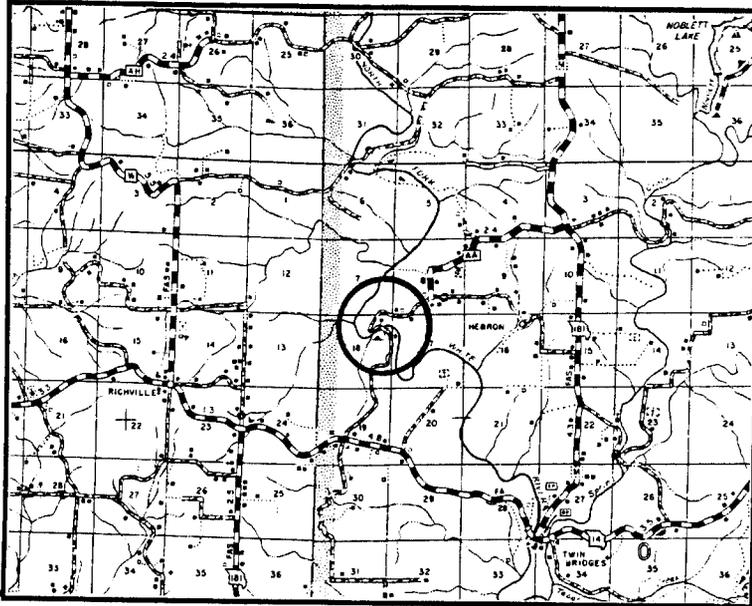
One of the Midwest's most prolific bridge fabricators, the Kansas City Bridge Company maintained an extensive catalogue of truss types, ranging from the exotic to the commonplace. KCBrcO, like most of the region's bridge builders of the time, relied heavily on pin-connected Pratt truss variants for its standard truss types. Patented in 1844 by Thomas and Caleb Pratt, the Pratt design was charac-



terized by upper chords and vertical members acting in compression and lower chords and diagonals that acted in tension. Its parallel chords and equal panel lengths resulted in standardized sizes for the verticals, diagonals and chord members, making fabrication and assembly relatively easy. In the highly competitive bridge manufacturing industry, in which efficiency equated with profit, Pratt trusses received almost universal use. "The Pratt truss is the type most commonly used in America for spans under two hundred and fifty feet in length," noted bridge engineer J.A.L. Waddell wrote in 1916. "Its advantages are simplicity, economy of metal, and suitability for connecting to the floor and lateral systems." Virtually all of the major regional fabricators manufactured Pratt trusses and marketed them extensively to Missouri's counties in the late 19th and early 20th centuries. The Dean Ford Bridge is distinguished somewhat by its two-span configuration, but, with its 1913 fabrication date and 100 foot span length, it is structurally unremarkable among Missouri's trusses.

NAME(S) OF STRUCTURE

Dean Ford 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 283001.4; Douglas County Court Minutes, Book 3: page 185 (9 May 1914), page 188 (20 June 1914), page 209 (12 August 1914), page 212 (8 September 1914), page 242 (15 December 1914), page 247 (12 January 1915), page 301 (10 May 1915), page 306 (8 June 1915) - located at Douglas County Courthouse, Ava MO; field inspection by Clayton Fraser, 26 January 1990.

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