Index of /documents/Historic_Bridge_Inventory/dist3

Name	Last modified	Size	Description
Parent Directory		-	
audrain.pdf	15-Oct-2010 18:32	668K	
clark.pdf	15-Oct-2010 18:32	1.7M	
knox.pdf	15-Oct-2010 18:32	2.0M	
lewis.pdf	15-Oct-2010 18:32	2.7M	
lincoln.pdf	15-Oct-2010 18:32	1.7M	
marion.pdf	15-Oct-2010 18:32	1.6M	
monroe.pdf	15-Oct-2010 18:32	2.3M	
montgomery.pdf	15-Oct-2010 18:32	1.2M	
pike.pdf	15-Oct-2010 18:32	1.4M	
ralls.pdf	15-Oct-2010 18:32	1.9M	
scotland.pdf	15-Oct-2010 18:32	1.0M	
shelby.pdf	15-Oct-2010 18:32	1.1M	
warren.pdf	15-Oct-2010 18:32	1.4M	

Apache/2.2.3 (Red Hat) Server at epg.modot.mo.gov Port 80

AUDRAIN COUNTY

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

Inv.No.	MHTD	Bridge Name	Description	
AUDR01	028000.4	Bridge	1- 21'	concrete slab
			c1915	
AUDR02	028001.4	Saling Creek Bridge		(replaced)
AUDR03	050000.1	Bridge	1- 45'	pinned Pratt bedstead
			c1910	
AUDR04	098001.0	Youngs Creek Bridge	1- 55'	pinned Pratt pony truss
			c1910	
AUDR05	122000.6	Youngs Creek Bridge		(replaced)
AUDR06	196000.3	Youngs Creek Bridge	1- 75'	pinned Pratt pony truss
			c1910	
*AUDR07	197000.1	Five Mile Creek Bridge	1- 30'	**concrete open spandrel arch**
			1901	county work force (prob.)
AUDR08	227000.5	Little Skull Lick Ck. Bridge	1- 30'	concrete through girder
			c1920	
AUDR09	266002.2	Scattering Fork Bridge	1- 22'	concrete through girder
			c1920	
AUDR10	278500.3	Clark Street Viaduct	1-130'	**pinned Pratt through truss**
			1928	railroad bridge crew
*AUDR11	341000.3	Fisher Bridge	1-116'	**pinned Pratt through truss**
			1893	Massillon Bridge Company
AUDR12	562000.2	Cuivre River Bridge	1- 64'	pinned Pratt bedstead
			c1905	
AUDR13	633000.7	Loutre River Bridge	1- 50'	pinned Pratt bedstead
			c1910	

EXCLUDED:

Pratt pony truss

089000.4	150001.3	260001.7	348000.4	371001.5	582002.5	

Warren pony truss

014001.0	017004.5	026000.5	027R00.1	031001.1	043001.2	054000.2
061000.4	067000.8	073000.1	076000.6	090000.4	090000.5	094000.9
104000.7	107001.5	122002.6	143001.0	146002.0	147001.0	149001.0
152001.3	171000.1	206001.3	207000.2	227000.9	228000.9	229001.1
285001.4	289000.5	304000.9	363003.8	388001.6	426000.1	437000.8
484000.7	521001.0	551001.4	555000.3	605001.4	669000.5	

Lattice bedstead

017002.9	057000.3	082000.8	138000.8	140000.3	155000.3	172002.0
186000.9	187000.6	196000.4	306000.5	348001.7	355000.3	360000.9
454000.6	479000.9	499003.7	547000.3			

AUDRAIN COUNTY

EXCLUDED (cont.):

Warren bedstead

009001.0	013001.3	104000.6	154000.6

Steel stringer

G 870R	P 89	S 728	S 962	T 205	T 206	X 614
006000.3	046000.1	060R03.3	061001.3	069000.1	073001.0	149002.4
155001.4	178001.3	181000.8	208002.5	321000.8	335000.5	336R00.8
370000.7	370001.7	375000.1	390000.1	431000.5	435000.1	445000.8
451000.6	460000.6	463000.0	471000.9	557000.6	564001.9	581000.4
649000.8						

Steel girder

464001.1	661000.5

Concrete girder

F 19R	G 720R	H 133	H 548	H 549	H 550	H 594R
H 682R	H 832R1	J 114R	J 286R	J 287	J 297	K 672

Concrete slab

H 24	H 337R

Concrete box culvert

F 972R	H 169	H 269	J 116	J 544R	J 785	L 310
P 96	S 961	T 207	T 208	T 214	T 657	X 612
X 613	604001.5					

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	0	10	1	0	11
Excluded	38	101	0	0	139
	38	111	1	0	150 structures

Bridge

AUDR01

GENERAL DATA

structure no.: 028000.4
county: Audrain
city/town: 2.1 miles north of Sturgeon
feature inters.: tributary of Saling Creek
cadastral grid: S28, T52N, R12W
highway route: County Road 28
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: concrete slab
substructure: concrete abutments and wingwalls

span number: 1
span length: 21.0'
total length: 22.0'
roadway width: 15.0'
condition: fair
alterations: unknown
floor/decking: concrete deck
other features: steel lattice guardrails

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: unknown
fabricator: none
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 028000.4.

sign. rating: 26
evaluation: NRHP non-eligible (undistinguished, small-scale structure, lacking in technological significance)

inventoried by: Clayton B. Fraser 23 January 1992

Bridge

AUDR03

GENERAL DATA

structure no.: 050000.1
county: Audrain

city/town: 9.0 miles north of Centralia
feature inters.: tributary of Long Branch Creek
cadastral grid: S35/36, T53N, R11W
highway route: County Road 50
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel truss legs with timber back- and wingwalls

span number: 1
span length: 45.0'
total length: 46.0'
roadway width: 11.8'

condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel lattice guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 050000.1.

sign. rating: 25
evaluation: NRHP non-eligible (technologically undistinguished example of common truss bridge type)

inventoried by: Clayton B. Fraser 23 January 1992

Youngs Creek Bridge

AUDR04

GENERAL DATA

structure no.: 098001.0
county: Audrain
city/town: 12.2 miles northwest of Mexico
feature inters.: Youngs Creek
cadastral grid: S9/16, T52N, R10W
highway route: County Road 98
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 55.0'
total length: 57.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : concrete deck over steel stringers
other features: steel lattice guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 098001.0.

sign. rating: 25
evaluation: NRHP non-eligible (typically configured, inadequately documented example of a common structural type)

inventoried by: Clayton B. Fraser 23 January 1992

Youngs Creek Bridge

AUDR06

GENERAL DATA

structure no.: 196000.3
county: Audrain
city/town: 10.1 miles north of Mexico
feature inters.: Youngs Creek
cadastral grid: S4/5, T52N, R9W
highway route: County Road 196
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with rigid-connected, lattice truss approach span
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 75.0'
total length: 127.0'
roadway width: 11.7'
condition: poor
alterations: unknown
floor/decking : timber decks
other features: steel lattice guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 196000.3.

sign. rating: 28
evaluation: NRHP non-eligible (undocumented, technologically undistinguished structure, with poor physical integrity)

inventoried by: Clayton B. Fraser 23 January 1992

Five Mile Creek Bridge

AUDR07

GENERAL DATA

structure no.: 197000.1
county: Audrain
city/town: 10.7 miles north of Mexico
feature inters.: Five Mile Creek
cadastral grid: S4, T52N, R9W
highway route: County Road 197
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: concrete, continuous rib, open spandrel arch
substructure: concrete abutments and wingwalls

span number: 1
span length: 30.0'
total length: 31.0'
roadway width: 14.2'
condition: fair
alterations: none
floor/decking : concrete deck
other features: plain forming, no guardrails

HISTORICAL DATA

erection date: 1901
erection cost: unknown
designer: unknown
fabricator : none
contractor: county work force (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 197000.1; field inspection by Clayton Fraser and Sheila Bricher-Wade, 5 November 1990.

sign. rating: 64
evaluation: NRHP possibly eligible (well-preserved, early example of empirical concrete design, executed by local labor)

inventoried by: Clayton B. Fraser 23 January 1992

Little Skull Lick Creek Bridge

AUDR08

GENERAL DATA

structure no.: 227000.5
county: Audrain
city/town: 5.3 miles northwest of Mexico
feature inters.: Little Scull Lick Creek
cadastral grid: S5, T51N, R9W
highway route: County Road 227
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: concrete through girder
substructure: concrete abutments and wingwalls

span number: 1
span length: 30.0'
total length: 30.0'
roadway width: 14.0'
condition: fair
alterations: none
floor/decking : concrete deck
other features: plain concrete guardrails

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: unknown
fabricator : none
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 227000.5.

sign. rating: 32
evaluation: NRHP non-eligible (technologically undistinguished example of early concrete bridge type)

inventoried by: Clayton B. Fraser 23 January 1992

Scattering Fork Bridge

AUDR09

GENERAL DATA

structure no.: 266002.2
county: Audrain

city/town: 5.3 miles southwest of Mexico
feature inters.: Scattering Fork of the Salt River
cadastral grid: S7, T50N, R9W
highway route: County Road 266
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: concrete through girder
substructure: concrete abutments and wingwalls

span number: 1
span length: 22.0'
total length: 26.0'
roadway width: 18.7'

condition: fair
alterations: unknown
floor/decking : concrete deck
other features: plain concrete guardrails

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: unknown
fabricator : none
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 266002.2.

sign. rating: 25
evaluation: NRHP non-eligible (technologically undistinguished example of early concrete bridge type)

inventoried by: Clayton B. Fraser 23 January 1992

Clark Street Viaduct

AUDR10

GENERAL DATA

structure no.: 278500.3
county: Audrain
city/town: Mexico
feature inters.: Norfolk & Western and Illinois Central Gulf Railroads
cadastral grid: S25, T51N, R9W
highway route: city street
highway distr.: 3
current owner: City of Mexico

STRUCTURAL DATA

superstructure: steel, 10-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 130.0'
total length: 134.0'
roadway width: 26.5'
condition: fair
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1928
erection cost: unknown
designer: railroad engineering department
fabricator : unknown
contractor: railroad bridge crew

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 278500.3.

sign. rating: 30
evaluation: NRHP determined non-eligible (heavily constructed, but otherwise typical example of pinned Pratt through truss construction)

inventoried by: Clayton B. Fraser 23 January 1992

Fisher Bridge

AUDR11

GENERAL DATA

structure no.: 341000.3
county: Audrain

city/town: 11.1 miles north of Mexico
feature inters.: South Fork of the Salt River
cadastral grid: S31, T53N, R9W
highway route: County Road 341
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss, with rigid-connected Warren pony truss and rigid-connected lattice pony truss approach spans
substructure: steel pile bent piers with timber back- and wingwalls

span number: 1
span length: 116.0'
total length: 230.0'
roadway width: 13.1'

condition: fair
alterations: truss perhaps moved, approach span added, substructure replaced
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, U-bolted to lower chord pin; guardrail: steel lattice; builder's plate: [broken] **Massillon Bridge Company / 1893...**

HISTORICAL DATA

erection date: 1893
erection cost: unknown
designer: Massillon Bridge Company, Massillon OH
fabricator : Massillon Bridge Company, Massillon OH
contractor: Massillon Bridge Company, Massillon OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 341000.3; Audrain County Bridge Record n.p.: see entry for "Fisher Bridge, S31/T53N/R8W"; field inspection by Clayton Fraser and Sheila Bricher-Wade, 5 November 1990.

sign. rating: 40
evaluation: NRHP non-eligible (poorly preserved, early example of mainstay structural type)

inventoried by: Clayton B. Fraser 23 January 1992

Cuivre River Bridge

AUDR12

GENERAL DATA

structure no.: 562000.2
county: Audrain
city/town: 10.3 miles south of Vandalia
feature inters.: West Fork of the Cuivre River
cadastral grid: S27, T51N, R5W
highway route: County Road 562
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: steel, pin-connected Pratt truss-leg bedstead, with steel stringer approach spans
substructure: truss legs; concrete abutments and wingwalls

span number: 1
span length: 64.0'
total length: 92.0'
roadway width: 11.7'
condition: fair
alterations: unknown
floor/decking : concrete deck over steel stringers
other features: steel lattice guardrails

HISTORICAL DATA

erection date: c1905
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 562000.2.

sign. rating: 29
evaluation: NRHP non-eligible (undocumented, modestly scaled and detailed example of early truss bridge type)

inventoried by: Clayton B. Fraser 23 January 1992

Loutre River Bridge

AUDR13

GENERAL DATA

structure no.: 633000.7
county: Audrain
city/town: 10.6 miles southeast of Mexico
feature inters.: Loutre River
cadastral grid: S31, T50N, R7W
highway route: County Road 633
highway distr.: 3
current owner: Audrain County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead, with steel stringer approach spans
substructure: truss leg piers with timber back- and wingwalls

span number: 1
span length: 50.0'
total length: 71.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel lattice guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 633000.7.

sign. rating: 25
evaluation: NRHP non-eligible (undocumented, relatively common Pratt truss subtype, with average integrity)

inventoried by: Clayton B. Fraser 23 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Five Mile Creek Bridge
MHTD: 197000.1

AUDR07

DATE(S) OF CONSTRUCTION
1901

LOCATION
County Road 197 over Five Mile Creek; S4, T52N, R9W
10.7 miles north of Mexico; Audrain County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 64)

CONDITION
fair

OWNER
Audrain County

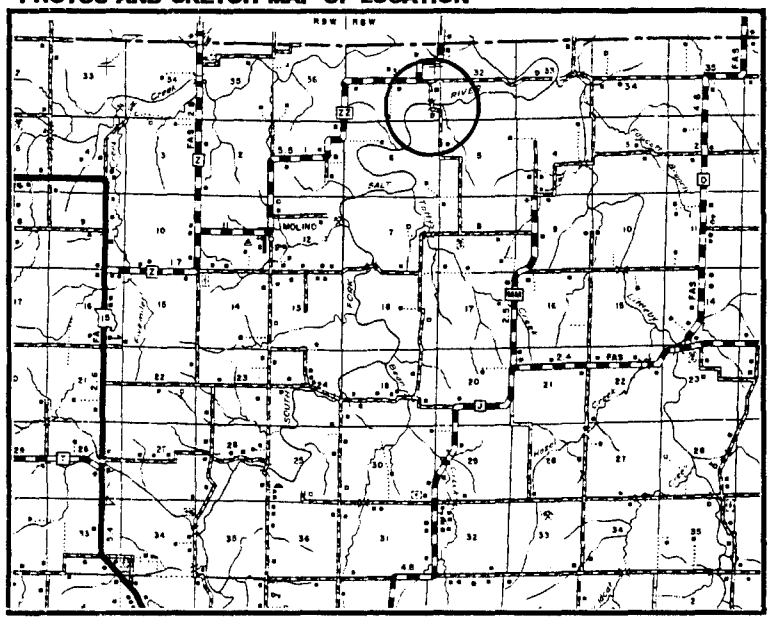
span number:	1	superstructure:	concrete, continuous rib, open spandrel arch
span length:	30.0'	substructure:	concrete abutments and wingwalls
total length:	31.0'	floor/decking:	concrete deck
roadway wdt.:	14.2'	other features:	plain forming, no guardrails

This small-scale concrete structure carries a gravel surfaced county road over Five Mile Creek north of Mexico, the Audrain County seat. The bridge consists of a single open spandrel arch, with a continuous rib that springs into concrete abutments and wingwalls. Audrain County Structure Inventory and Appraisal Records indicate that the bridge was built at this rural crossing in 1901, although other county records have failed to corroborate this. The simple detailing and crude formwork suggest that the bridge was constructed by a county work force. There is no evidence of subsequent structural alterations.

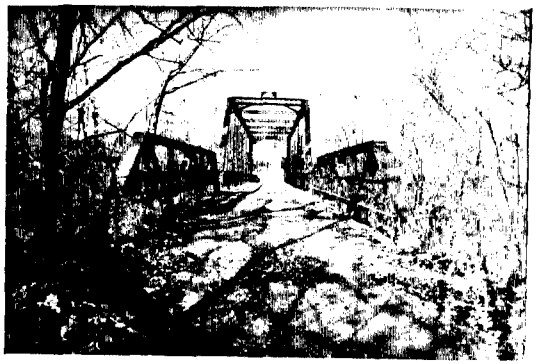
The earliest open spandrel arches in America featured single, relatively thin arch ribs that extended continuously over the width of the bridge. Around 1910 engineers began to experiment with multi-rib designs that used several individual ribs in lieu of continuous ribs. Lighter and more efficient than the former design, these multi-rib arches had almost completely replaced continuous-rib arches by the time that the state highway department adopted the open spandrel arch as a standard long-span concrete bridge configuration. As a result, relatively few continuous-rib arches were ever built in Missouri. The most outstanding of these was the Kingshighway Viaduct in St. Louis, recently demolished. Today only one continuous-rib arch has been identified by the statewide bridge inventory: the Five Mile Creek Bridge in Audrain County. Modestly scaled and simply detailed, it is noteworthy as an early, well-preserved example of empirical concrete design, executed by local labor during the formative years of concrete bridge construction.

NAME(S) OF STRUCTURE
Fisher 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 341000.3; Audrain County Bridge Record n.p.: see entry for "Fisher Bridge, S31/T53N/R8W"; field inspection by Clayton Fraser and Sheila Bricher-Wade, 5 November 1990.

INVENTORIED BY
Clayton B. Fraser

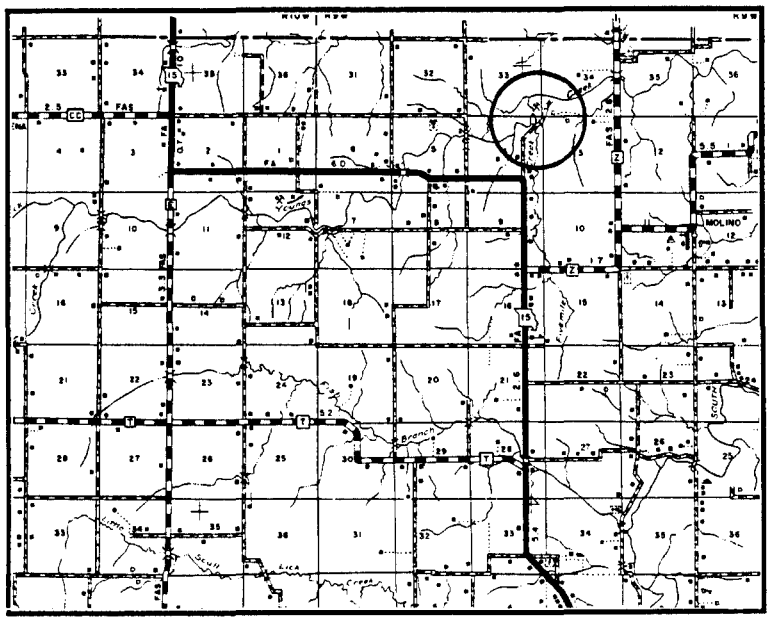
AFFILIATION
Fraserdesign, Loveland CO

DATE
23 January 1992

NAME(S) OF STRUCTURE

Five Mile Creek 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 197000.1; field inspection by Clayton Fraser and Sheila Bricher-Wade, 5 November 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	23 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Fisher Bridge AUDR11
MHTD: 341000.3

DATE(S) OF CONSTRUCTION
1893

LOCATION
County Road 341 over South Fork of the Salt River; S31, T53N, R9W
11.1 miles north of Mexico; Audrain County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 40)

CONDITION
fair

OWNER
Audrain County

span number: 1
span length: 116.0'
total length: 230.0'
roadway wdt.: 13.1'

superstructure: steel, 7-panel, pin-connected Pratt through truss, with rigid-connected Warren pony truss and rigid-connected lattice pony truss approach spans
substructure: steel pile bent piers with timber back- and wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 rectangular eyebars; counter: round rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, U-bolted to lower chord pin; guardrail: steel lattice; builder's plate: [broken] **Massillon Bridge Company / 1893...**

This short-span through truss carries an unpaved county road over the South Fork of the Salt River some eleven miles north of Mexico, the Audrain County seat. The structure consists of a pinned Pratt through truss over the river's channel, with a riveted Warren pony truss on one approach and a riveted lattice pony truss on the other. The channel span is supported by relatively new steel cylinder piers. A builder's plate on the through truss indicates that it was fabricated in 1893 by the Massillon Bridge Company of Massillon, Ohio. Audrain County records from the period are vague, referring briefly to a Hizer Ford Bridge that was built by Massillon in 1892-93. This was the only major span built at this time by Massillon for Audrain County; it may be this crossing of the Salt River, or it may be a different crossing, with the truss subsequently moved here prior to 1926. In February of that year the county contracted with the Pan-American Bridge Company of Indiana to erect a 50-foot Warren pony truss on the south end of the through truss and build a new south abutment. Called the Fisher Bridge at this time, the structure has been further altered by the addition of a lattice truss on its north and the replacement of its original piers. It functions in place today in somewhat deteriorating condition.

The Fisher Bridge is a poorly preserved example of a pin-connected Pratt through truss - a mainstay design for medium-span crossings in the late 19th and early 20th centuries. With a modest span length, typical detailing and a substantial loss of physical integrity, the structure lacks an appreciable degree of technological integrity.

CLARK COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
*CLAR01	K 182	Lee City Bridge	(replaced)
*CLAR02	K 563	Fox River Bridge	(replaced)
*CLAR03	K 918	St. Francisville Bridge	**3-228' riveted cantilever through truss** 1937 F.W. Whitehead
*CLAR04	029R00.7	Wilson Bridge	1- 80' pinned Pratt pony truss **1898** James B. Diver, Keokuk IA
CLAR05	036002.2	Linn Creek Bridge	1- 48' pinned Pratt pony truss **1901** James B. Diver [prob.]
CLAR06	075001.3	Fox River Bridge	1- 66' pin Pratt half-hip pony truss **c1905**
CLAR07	077000.9	Sutherland Branch Bridge	(replaced)
CLAR08	078000.3	Sherwood Bridge	(replaced)
CLAR09	090001.1	Dumas Bridge	1- 60' pinned Pratt pony truss **1911** G.H. Turner, Wyaconda MO
*CLAR10	110002.3	Beard Bridge	1-105' **pinned Pratt through truss** **1914** G.H. Turner, Wyaconda MO
*CLAR11	116001.6	N. Wyaconda River Bridge	1-112' pinned Pratt through truss **c1910**
CLAR12	125001.6	N. Wyaconda River Bridge	1-140' **riveted Pratt through truss** c1925
CLAR13	128002.5	Cama Bridge	1- 68' pinned Pratt pony truss **1914** G.H. Turner, Wyaconda MO
*CLAR14	148001.2	Holmes Bridge	1- 80' pinned Pratt pony truss **1898** James B. Diver, Keokuk IA
CLAR15	151001.0	Little Fox River Bridge	1- 80' pinned Pratt pony truss **c1910**
*CLAR16	164001.6	Fox River Bridge	1- 80' pinned Pratt pony truss **c1910**
*CLAR17	170001.6	Fox River Bridge	1- 82' pinned Pratt pony truss **c1905**
*CLAR18	173000.3	McCoy Bridge	1- 48' pinned Pratt pony truss **c1905**
*CLAR19	174000.1	Fox River Bridge	1-140' **riveted Pratt through truss** c1925
*CLAR20	184000.6	Vermillion Bridge	1- 85' **pinned Pratt through truss** **1899** James B. Diver, Keokuk IA
CLAR21	257002.2	Wyaconda River Bridge	1-160' **riveted Parker through truss** c1925
CLAR22	264001.2	Wyaconda River Bridge	(replaced)
CLAR23	276000.9	Riney Bridge	1- 70' pinned Pratt pony truss **1910** G.H. Turner, Wyaconda MO
*CLAR24	304001.3	Cameron Bridge	(replaced)

CLARK COUNTY

INCLUDED (cont.):

*CLAR25	305000.4	Fox River Bridge	1- 80' c1910	pinned Pratt pony truss
*CLAR26	312001.2	Sugar Creek Bridge	1- 50' c1910	pinned Pratt pony truss
*CLAR27	317002.4	Fox Slough Bridge	1-108' 1897	**pinned Pratt through truss** James B. Diver, Keokuk IA
*CLAR28	319000.7	Honey Creek Bridge	1- 67' 1904	pinned Pratt pony truss James B. Diver, Keokuk IA
*CLAR29	326002.1	Fabius River Bridge		(replaced)
CLAR30	328002.2	Wilson Bridge	1- 45' 1911	pinned Pratt pony truss G.H. Turner, Wyaconda MO
*CLAR31	335001.0	Shaffer Creek Bridge		(replaced)
*CLAR32	358000.6	Wyaconda River Bridge	1-120' c1910	pinned Pratt through truss
*CLAR33	367000.4	Wyaconda River Bridge	1-140' c1925	**riveted Pratt through truss**
*CLAR34	373000.8	Honey Creek Bridge	1- 58' c1910	pinned Pratt pony truss

EXCLUDED:

Pratt pony truss
019001.2 055002.8 056002.1 062000.4 111001.5 118001.0 177001.2

Warren pony truss
J 161 S 128R 409000.3

Steel girder
085000.6 110003.7 111000.3 163003.1

Steel stringer
K 561 K 562 L 166A X 796 027001.1 027001.9 032R01.4
033R01.8 041001.6 049000.8 050001.5 055R02.3 083000.1 084000.5
090000.7 090000.9 115001.6 118000.6 130000.5 132000.5 134000.2
136000.1 139000.7 139001.4 144R00.9 145R00.5 160001.3 161000.3
162R00.7 168R00.3 188R02.0 214001.1 216000.2 220000.8 229000.2
238000.6 244000.1 257002.1 259000.3 259001.5 265001.0 265001.1
271000.7 275001.7 295000.3 297R01.8 306000.7 323000.9 326000.8
331000.8 344R02.7 348000.8 364R00.8 378001.6 407000.4 407000.5
407000.6

Concrete girder
J 86 K 739 241000.6

Concrete slab
F 955R3

CLARK COUNTY

EXCLUDED (cont.):

Concrete box culvert
F1108R H 264R J 85 K 48 K 49 K 187 P 43
S 160 T 792

Timber stringer
T1010

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	1	25	0	0	26
Excluded	19	71	0	0	90
	20	96	0	0	116 structures

St. Francisville Bridge

CLAR03

GENERAL DATA

structure no.: K 918
county: Clark
city/town: 8.7 miles northeast of Kahoka
feature inters.: Des Moines River
cadastral grid: S4/5, T65N, R6W
highway route: State Supplementary Route B
highway distr.: 3
current owner: St. Francisville Bridge Commission

STRUCTURAL DATA

superstructure: steel, 12-panel, rigid-connected cantilever Warren through truss
substructure: concrete abutments and spill-through piers

span number: 3
span length: 228.0'
total length: 763.0'
roadway width: 21.8'
condition: good
alterations: none
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 channels with lacing; vertical: 4 angles, laced; diagonal: 2 channels, laced; lateral bracing: 1 angle; strut: 4 angles, laced and braced; floor beam: I-beams; guardrail: 2 channels; bridge plate: ST. FRANCISVILLE BRIDGE / FEDERAL EMERGENCY ADMINISTRATION OF PUBLIC WORKS / PROJECT NO. 3395-R; builder's plate: ST. FRANCISVILLE BRIDGE / BUILT BY / WAYLAND SPECIAL ROAD DISTRICT NO. 1 / CLARK COUNTY, MISSOURI / BOARD OF SUPERVISORS / O.T. BROWN / CHAS. H. KRUEGER / WILFORD ORR / R.A. KEARNS / SVERDRUP AND PARCEL / CONSULTING ENGINEERS / F.W. WHITEHEAD CONTRACTOR / A.D. 1936

HISTORICAL DATA

erection date: 1936-37
erection cost: unknown
designer: Sverdrup and Parcel, St. Louis MO
fabricator : unknown
contractor: F.W. Whitehead

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 918; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 62
evaluation: NRHP determined eligible (well-preserved, uncommon example of cantilevered truss design)

inventoried by: Clayton B. Fraser 7 January 1992

Wilson Bridge

CLAR04

GENERAL DATA

structure no.: 029R00.7
county: Clark/Scotland
city/town: 4.1 miles northwest of Luray
feature inters.: North Wyaconda River
cadastral grid: S31, T66N, R9W
highway route: County Road 29
highway distr.: 3
current owner: Clark / Scotland County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 80.0'
total length: 120.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pins; guardrail: steel angle; bridge plate: **Sam S. Bowman, Co. Judge Geo. H. Haywood, Geo. H. Harter, Presiding, O.F. Ensign, Com[m]issioner**

HISTORICAL DATA

erection date: 1898
erection cost: $1840.00 (two-bridge contract)
designer: James B. Diver Bridge Company, Keokuk IA
fabricator : unknown
contractor: James B. Diver Bridge Company, Keokuk, IA

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 029R00.7; Clark County Court Record, Book P: page 483 (6 September 1898), page 508 (20 December 1898) - located at Clark County Courthouse, Kahoka MO; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 55
evaluation: NRHP possibly eligible (well-preserved example of mainstay structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Linn Creek Bridge

CLAR05

GENERAL DATA

structure no.: 036002.2
county: Clark
city/town: 2.8 miles northeast of Luray
feature inters.: North Linn Creek
cadastral grid: S26, T66N, R9W
highway route: County Road 36
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 48.0'
total length: 83.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1901
erection cost: unknown
designer: James B. Diver Bridge Company, Keokuk IA [probable]
fabricator : unknown
contractor: James B. Diver Bridge Company, Keokuk IA [probable]

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 036002.2; Clark County Court Record, Book Q: page 379 (8 August 1901) - located at Clark County Courthouse, Kahoka MO.

sign. rating: 35
evaluation: NRHP non-eligible (typically configured example of a common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Fox River Bridge

CLAR06

GENERAL DATA

structure no.: 075001.3
county: Clark
city/town: 4.9 miles northwest of Kahoka
feature inters.: Fox River
cadastral grid: S26, T66N, R8W
highway route: County Road 75
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected, Pratt half-hip pony truss, with steel stringer approach spans
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 66.0'
total length: 118.0'
roadway width: 11.7'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1905
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 075001.3.

sign. rating: 29
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Dumas Creek Bridge

CLAR09

GENERAL DATA

structure no.: 090001.1
county: Clark
city/town: 3.0 miles northeast of Revere
feature inters.: Dumas Creek
cadastral grid: S14, T66N, R7W
highway route: County Road 90
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 60.0'
total length: 61.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1911
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: George H. Turner

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 090001.1; Clark County Court Record, Book S: page 631 (7 July 1911), located at Clark County Courthouse, Kahoka MO.

sign. rating: 38
evaluation: NRHP non-eligible (typically configured example of a common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Beard Bridge

CLAR10

GENERAL DATA

structure no.: 110002.3
county: Clark
city/town: 2.0 miles northeast of Wyaconda
feature inters.: South Wyaconda River
cadastral grid: S28, T65N, R9W
highway route: County Road 110
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers

span number: 1
span length: 105.0'
total length: 159.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: 1913-14
erection cost: $1425.00
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: George H. Turner

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 110002.3; Clark County Court Record, Book T: page 172 (3 July 1913), page 184 (13 August 1913), page 190 (3 September 1913), page 191 (22 September 1913) - located at the Clark County Courthouse, Kahoka MO; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 37
evaluation: NRHP non-eligible (typically configured, well-preserved example of common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

North Wyaconda River Bridge

CLAR11

GENERAL DATA

structure no.: 116001.6
county: Clark
city/town: 1.6 miles northwest of Luray
feature inters.: North Wyaconda River
cadastral grid: S5, T65N, R9W
highway route: County Road 116
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments with timber backing

span number: 1
span length: 112.0'
total length: 113.0'
roadway width: 11.8'
condition: fair
alterations: some diagonals replaced with wire rope
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends and turnbuckle; strut: 4 angles with lacing; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 116001.6; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 23
evaluation: NRHP non-eligible (With its construction history undocumented, this typically built Pratt through truss is of extremely limited interpretive value.)

inventoried by: Clayton B. Fraser 7 January 1992

North Wyaconda River Bridge

CLAR12

GENERAL DATA

structure no.: 125001.6
county: Clark
city/town: 2.7 miles south of Luray
feature inters.: North Wyaconda River
cadastral grid: S23/26, T65N, R9W
highway route: County Road 125
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 7-panel, rigid-connected Pratt through truss
substructure: unknown

span number: 1
span length: 140.0'
total length: 141.0'
roadway width: 13.8'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1925
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 125001.6.

sign. rating: 26
evaluation: NRHP non-eligible (typically configured, undocumented example of common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Cama Bridge

CLAR13

GENERAL DATA

structure no.: 128002.5
county: Clark
city/town: 3.8 miles south of Luray
feature inters.: North Wyaconda River
cadastral grid: S26/35, T65N, R9W
highway route: County Road 128
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: unknown

span number: 1
span length: 68.0'
total length: 70.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1913-14
erection cost: $1405.00
designer: unknown
fabricator : unknown
contractor: George H. Turner

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 128002.5; Clark County Court Record, Book T: page 172 (3 July 1913), page 184 (13 August 1913), page 190 (3 September 1913), page 191 (22 September 1913) - located at the Clark County Courthouse, Kahoka MO.

sign. rating: 38
evaluation: NRHP non-eligible (technologically undistinguished example of truss bridge construction, dating from the 1910s)

inventoried by: Clayton B. Fraser 7 January 1992

Holmes Bridge

CLAR14

GENERAL DATA

structure no.: 148001.2
county: Clark
city/town: 3.1 miles north of Kahoka
feature inters.: Little Fox River
cadastral grid: S2, T65N, R8W
highway route: County Road 148
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers under main span; steel pile bent piers under approach spans

span number: 1
span length: 80.0'
total length: 174.0'
roadway width: 11.8'
condition: fair
alterations: some diagonals replaced with wire rope
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pins; guardrail: steel angle

HISTORICAL DATA

erection date: 1898
erection cost: $2360.00
designer: unknown
fabricator : unknown
contractor: James B. Diver and Company, Keokuk IA

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 148001.2; Clark County Court Record, Book P: page 360 (9 February 1898), page 372 (7 March 1898), page 422 (4 May 1898), page 475 (6 September 1898) - located at Clark County Courthouse, Kahoka, MO; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 44
evaluation: NRHP non-eligible (typical, early example of mainstay structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Little Fox River Bridge

CLAR15

GENERAL DATA

structure no.: 151001.0
county: Clark
city/town: 4.9 miles northwest of Kahoka
feature inters.: Little Fox River
cadastral grid: S4, T65N, R9W
highway route: County Road 151
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 80.0'
total length: 128.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 151001.0.

sign. rating: 30
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Fox River Bridge

CLAR16

GENERAL DATA

structure no.: 164001.6
county: Clark
city/town: 2.1 miles north of Kahoka
feature inters.: Fox River
cadastral grid: S7, T65N, R7W
highway route: County Road 164
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers under main span; steel pile bent piers under approach spans

span number: 1
span length: 80.0'
total length: 191.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam; guardrail: steel angle

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 164001.6; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 32
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Fox River Bridge

CLAR17

GENERAL DATA

structure no.: 170001.6
county: Clark
city/town: 3.4 miles northeast of Kahoka
feature inters.: Fox River
cadastral grid: S9, T65N, R7W
highway route: County Road 170
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers

span number: 1
span length: 82.0'
total length: 129.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pins; guardrail: steel angle

HISTORICAL DATA

erection date: c1905
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 170001.6; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 33
evaluation: NRHP non-eligible (typically configured, long-span example of pinned Pratt pony truss design)

inventoried by: Clayton B. Fraser 7 January 1992

McCoy Bridge

CLAR18

GENERAL DATA

structure no.: 173000.3
county: Clark
city/town: 5.1 miles east of Kahoka
feature inters.: Weaver Branch
cadastral grid: S23/24, T65N, R7W
highway route: County Road 173
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach span
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 48.0'
total length: 69.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: I-beam floor beams, U-bolted to lower chord pins; steel angle guardrails

HISTORICAL DATA

erection date: c1905
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 173000.3; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 26
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common truss type)

inventoried by: Clayton B. Fraser 7 January 1992

Fox River Bridge

CLAR19

GENERAL DATA

structure no.: 174000.1
county: Clark
city/town: 5.1 miles east of Kahoka
feature inters.: Fox River
cadastral grid: S23/24, T65N, R7W
highway route: County Road 174
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 7-panel, rigid-connected Pratt through truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 140.0'
total length: 143.0'
roadway width: 18.0'
condition: fair
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel pipe guardrails

HISTORICAL DATA

erection date: c1925
erection cost: unknown
designer: unknown
fabricator : Illinois Bridge Company, Chicago IL
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 174000.1; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 28
evaluation: NRHP non-eligible (typically configured example of rigid-connected truss design)

inventoried by: Clayton B. Fraser 7 January 1992

Vermillion Bridge

CLAR20

GENERAL DATA

structure no.: 184000.6
county: Clark
city/town: 1.0 mile west of Wayland
feature inters.: Fox River
cadastral grid: S36/31, T65N, R7/6W
highway route: County Road 184
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers

span number: 1
span length: 85.0'
total length: 136.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pins; guardrail: steel angle

HISTORICAL DATA

erection date: 1899
erection cost: $3253.00 (three-bridge contract)
designer: unknown
fabricator : unknown
contractor: James B. Diver and Company, Keokuk IA

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 184000.6; Clark County Court Record, Book P: page 531 (8 February 1899), page 604 (5 June 1899) - located at Clark County Courthouse, Kahoka MO; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 43
evaluation: NRHP non-eligible (typical example of a common truss configuration, with standard detailing, unremarkable dimensions and an average degree of physical integrity.)

inventoried by: Clayton B. Fraser 7 January 1992

Wyaconda River Bridge

CLAR21

GENERAL DATA

structure no.: 257002.2
county: Clark
city/town: 6.6 miles south of Kahoka
feature inters.: Wyaconda River
cadastral grid: S24/25, T64N, R8W
highway route: County Road 257
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 8-panel, rigid-connected Parker through truss
substructure: concrete abutments and wingwalls; steel pile bent piers

span number: 1
span length: 160.0'
total length: 201.0'
roadway width: 13.7'
condition: fair
alterations: none
floor/decking : asphalt over corrugated steel deck, with steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1925
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 257002.2.

sign. rating: 30
evaluation: NRHP non-eligible (typically built riveted Parker through truss - a MSHD standard design for medium- and long-span river crossings in the 1920s and 1930s)

inventoried by: Clayton B. Fraser 7 January 1992

Riney Bridge

CLAR23

GENERAL DATA

structure no.: 276000.9
county: Clark
city/town: 0.8 mile south of Winchester
feature inters.: Honey Creek
cadastral grid: S36, T64N, R7W
highway route: County Road 276
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 70.0'
total length: 124.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: George H. Turner, Wyaconda MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 276000.9; Clark County Court Record, Book S: page 469 (13 December 1910) - located at Clark County Courthouse, Kahoka MO.

sign. rating: 38
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Fox River Bridge

CLAR25

GENERAL DATA

structure no.: 305000.4
county: Clark
city/town: 2.7 miles west of Alexandria
feature inters.: Fox River
cadastral grid: S11/12, T64N, R6W
highway route: County Road 305
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers

span number: 1
span length: 80.0'
total length: 113.0'
roadway width: 11.7'
condition: unknown
alterations: none
floor/decking : timber 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: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : Lackawanna Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 305000.4; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 33
evaluation: NRHP non-eligible (typically configured example of pinned pony truss construction)

inventoried by: Clayton B. Fraser 7 January 1992

Sugar Creek Bridge

CLAR26

GENERAL DATA

structure no.: 312001.2
county: Clark
city/town: 8.6 miles southeast of Kahoka
feature inters.: Sugar Creek
cadastral grid: S18, T64N, R6W
highway route: County Road 312
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers

span number: 1
span length: 50.0'
total length: 75.0'
roadway width: 15.7'
condition: fair
alterations: none
floor/decking : concrete on corrugated steel over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 312001.2; field inspection by Clayton B. Fraser, 13 September 1990.

sign. rating: 28
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Fox Slough Bridge

CLAR27

GENERAL DATA

structure no.: 317002.4
county: Clark
city/town: 3.8 miles southwest of Alexandria
feature inters.: Fox River
cadastral grid: S25, T64N, R6W
highway route: vacated county road
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: timber pile bent abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 108.0'
total length: 155.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped round eyebars at hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing, knee braced; floor beam: I-beam, U-bolted to lower chord pins; guardrail: steel angle

HISTORICAL DATA

erection date: 1897
erection cost: unknown
designer: unknown
fabricator : Jones and Laughlin Steel Company, Pittsburgh PA
contractor: James B. Diver and Company, Keokuk IA

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 317002.4; Clark County Court Record, Book P: page 52 (6 February 1896), page 60 (16 March 1896), page 287 (4 August 1897), page 318 (1 November 1897) - located at Clark County Courthouse, Kahoka MO; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 49
evaluation: NRHP possibly eligible (well-preserved, early example of a mainstay truss configuration)

inventoried by: Clayton B. Fraser 7 January 1992

Honey Creek Bridge

CLAR28

GENERAL DATA

structure no.: 319000.7
county: Clark
city/town: 2.6 miles southeast of Winchester
feature inters.: Honey Creek
cadastral grid: S28/33, T64N, R6W
highway route: County Road 319
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: steel pile bent abutments with timber backwalls

span number: 1
span length: 67.0'
total length: 69.0'
roadway width: 13.6'
condition: fair
alterations: none
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle; builder's plate: [broken] **...Diver Co...Iowa**

HISTORICAL DATA

erection date: 1904
erection cost: unknown
designer: unknown
fabricator: unknown
contractor: James B. Diver and Company, Keokuk IA

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 319000.7; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 40
evaluation: NRHP non-eligible (typical example of common truss type)

inventoried by: Clayton B. Fraser 7 January 1992

Wilson Bridge

CLAR30

GENERAL DATA

structure no.: 328002.2
county: Clark
city/town: 4.8 miles south of Fairmont
feature inters.: Bear Creek
cadastral grid: S15, T63N, R9W
highway route: County Road 328
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 45.0'
total length: 70.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1911
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: George H. Turner, Wyaconda MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 328002.2; Clark County Court Record, Book S: page 336 (1 June 1910), page 483 (15 December 1910) - located at Clark County Courthouse, Kahoka MO.

sign. rating: 35
evaluation: NRHP non-eligible (typically configured, modestly scaled example of common structural type)

inventoried by: Clayton B. Fraser 7 January 1992

Wyaconda River Bridge

CLAR32

GENERAL DATA

structure no.: 358000.6
county: Clark
city/town: 9.6 miles south of Kahoka
feature inters.: Wyaconda River
cadastral grid: S4/5, T63N, R7W
highway route: County Road 358
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: steel pile bent abutments with concrete backwalls; concrete-filled steel cylinder piers

span number: 1
span length: 120.0'
total length: 164.0'
roadway width: 13.5'
condition: fair
alterations: none
floor/decking : asphalt on corrugated steel, with steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 looped round eyebars at hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 358000.6; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 31
evaluation: NRHP non-eligible (undocumented pinned Pratt through truss of average span length and standard detailing)

inventoried by: Clayton B. Fraser 7 January 1992

Wyaconda River Bridge

CLAR33

GENERAL DATA

structure no.: 367000.4
county: Clark
city/town: 11.1 miles south of Kahoka
feature inters.: Wyaconda River
cadastral grid: S9/16, T63N, R7W
highway route: County Road 367
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 7-panel, rigid-connected Pratt through truss
substructure: steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers

span number: 1
span length: 140.0'
total length: 141.0'
roadway width: 13.7'
condition: fair
alterations: none
floor/decking : asphalt on corrugated steel, with steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; strut: 2 angles with "X" bracing; portal strut: A-frame; floor beam: I-beam; guardrail: 2 channels

HISTORICAL DATA

erection date: c1925
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 367000.4; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 28
evaluation: NRHP non-eligible (poorly documented, typically configured example of riveted Pratt through truss construction)

inventoried by: Clayton B. Fraser 7 January 1992

Honey Creek Bridge

CLAR34

GENERAL DATA

structure no.: 373000.8
county: Clark
city/town: 11.6 miles southeast of Kahoka
feature inters.: Honey Creek
cadastral grid: S5/6, T63N, R6W
highway route: County Road 373
highway distr.: 3
current owner: Clark County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: steel pile bent abutments with concrete backwalls

span number: 1
span length: 58.0'
total length: 59.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 373000.8; field inspection by Clayton Fraser, 13 September 1990.

sign. rating: 26
evaluation: NRHP non-eligible (poorly documented, typically configured example of Pratt pony truss design)

inventoried by: Clayton B. Fraser 7 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
St. Francisville Bridge (Des Moines River Bridge) CLAR03
MHTD: K 918

DATE(S) OF CONSTRUCTION
1936-37

LOCATION
State Supplementary Route B over Des Moines River; S4/5, T65N, R6W
8.7 miles northeast of Kahoka; Clark County, Missouri

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP determined eligible (score: 62)

CONDITION
good

OWNER
St. Francisville Bridge Commission

span number: 3
span length: 228.0'
total length: 763.0'
roadway wdt.: 21.8'

superstructure: steel, 12-panel, rigid-connected cantilever Warren through truss
substructure: concrete abutments and spill-through piers
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 channels with lacing; vertical: 4 angles, laced; diagonal: 2 channels, laced; lateral bracing: 1 angle; strut: 4 angles, laced and braced; floor beam: I-beams; guardrail: 2 channels; bridge plate: **ST. FRANCISVILLE BRIDGE / FEDERAL EMERGENCY ADMINISTRATION OF PUBLIC WORKS / PROJECT NO. 3395-R**; builder's plate: **ST. FRANCISVILLE BRIDGE / BUILT BY / WAYLAND SPECIAL ROAD DISTRICT NO. 1 / CLARK COUNTY, MISSOURI / BOARD OF SUPERVISORS / O.T. BROWN / CHAS. H. KRUEGER / WILFORD ORR / R.A. KEARNS / SVERDRUP AND PARCEL / CONSULTING ENGINEERS / F.W. WHITEHEAD CONTRACTOR / A.D. 1936**

The St. Francisville Bridge carries Missouri Supplemental Route B, and Iowa Route 394 over the Des Moines River, between Clark County, Missouri, and Lee County, Iowa. A three-span, rigid-connected Warren through truss cantilevered over the river, the imposing crossing is supported by a concrete substructure with subtle Art Moderne detailing. Designed by the esteemed engineering firm of Sverdrup and Parcel, the bridge was built by F.W. Whitehead, an otherwise obscure contractor. Construction efforts were organized by the Wayland Special Road District No. 1 in Clark County, and funding was provided in part through the Federal Emergency Administration of the Public Works, under Project No. 3395-R. Since its completion in June 1937, the St. Francisville Bridge has functioned as a toll bridge, and it is now Missouri's only such crossing still in non-government hands. As of early 1991, the rate for a one-way crossing was 25 cents.

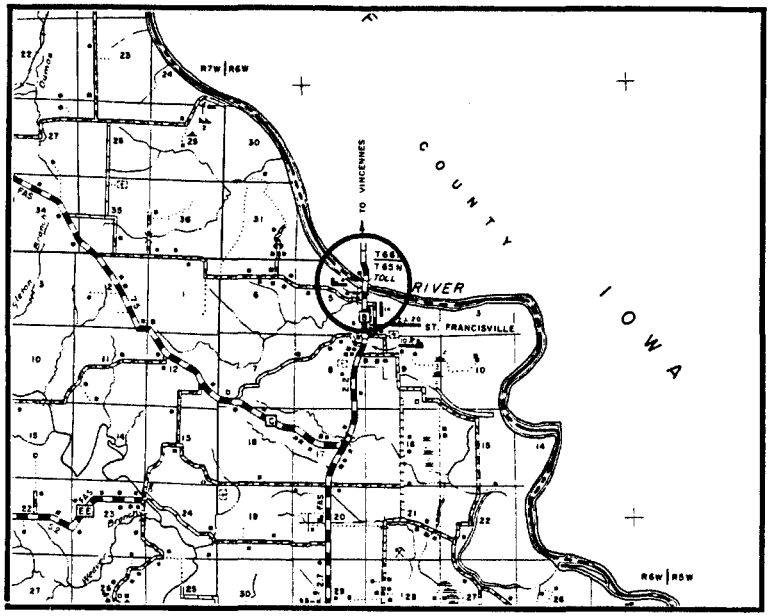
Located at what must be Missouri's most remote interstate crossing, the St. Francisville Bridge is one of the state's few remaining toll bridges. In this it represents a nationwide trend toward toll bridge construction in the 1920s and 1930s. Toll bridges were built at major crossings throughout the country during this time by private companies, small corporations or local citizen groups, to fill the void created by state government inaction. Multiple-span structures such as the Hermann Bridge, the Gasconade Bridge, the Cape Girardeau Bridge and the Jerome Bridge were all built as toll structures and later opened to free traffic once their funding bonds had been retired. The

St. Francisville Bridge, on the other hand, is the only such structure still in private hands and still operating as a toll structure. The bridge is technologically distinguished as a relatively uncommon example of cantilevered truss construction. The cantilevered through truss was a signature design of St. Louis-based Sverdrup and Parcel, which also engineered the similarly configured Hermann, Gasconade and Hannibal bridges. The cantilevered Warren truss configuration is uncommon for a bridge of the scale of St. Francisville, however, more often found on the major Missouri and Mississippi River bridges. A well-preserved interstate crossing, the St. Francisville Bridge is an important highway-related resource.

NAME(S) OF STRUCTURE

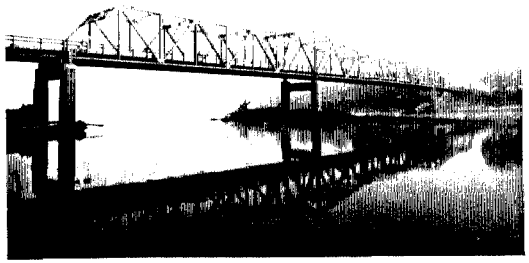
St. Francisville Bridge (Des Moines River Bridge)

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 K 918; field inspection by Clayton Fraser, 13 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	7 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wilson Bridge
MHTD: 029R00.7

CLAR04

DATE(S) OF CONSTRUCTION
1898

LOCATION
County Road 29 over North Wyaconda River; S31, T66N, R9W
4.1 miles northwest of Luray; Clark/Scotland County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 55)

CONDITION
fair

OWNER
Clark / Scotland County

span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt pony truss, with steel stringer approach spans
span length:	80.0'	substructure:	concrete-filled steel cylinder piers
total length:	120.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.7'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pins; guardrail: steel angle; bridge plate: **Sam S. Bowman, Co. Judge Geo. H. Haywood, Geo. H. Harter, Presiding, O.F. Ensign, Com[m]issioner**

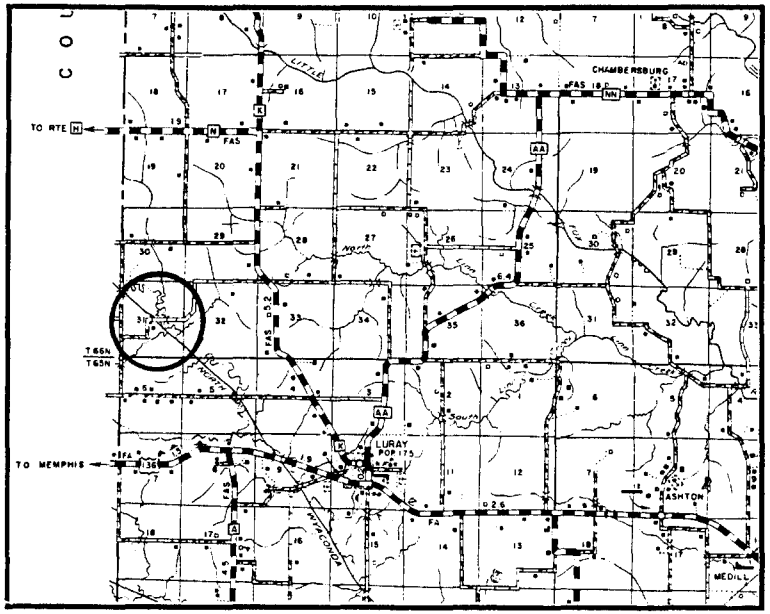
Located some four miles northwest of Luray, this pinned Pratt pony truss carries a gravel-surfaced road over the North Wyaconda River. The structure's history dates to just prior to the turn of the century. On September 16, 1898, Clark County contracted with James B. Diver, a bridge contractor located at nearby Keokuk, Iowa, to build two steel bridges. One was a 40-foot truss built over the Little Fox River near Chambersburg; the other was this 80-foot span over the Wyaconda. Diver completed both structures in a little over three months' time; on December 20, 1898 he was paid $1840.00 for both bridges. Known historically as the Wilson Bridge, apparently for an adjacent landowner, the structure today appears little changed from its original construction.

Thousands of Pratt trusses were erected throughout Missouri in the late 19th and early 20th centuries. Marketed by virtually all of the in-state and regional bridge companies, this versatile structural type was used overwhelmingly by the counties for short- and medium-span applications. With noteworthy dimensions and well-preserved condition, the Wilson Bridge typifies this statewide bridge building trend.

NAME(S) OF STRUCTURE

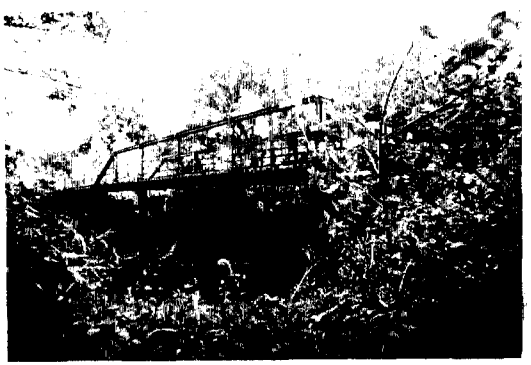
Wilson Bridge (North Wyaconda River Bridge)

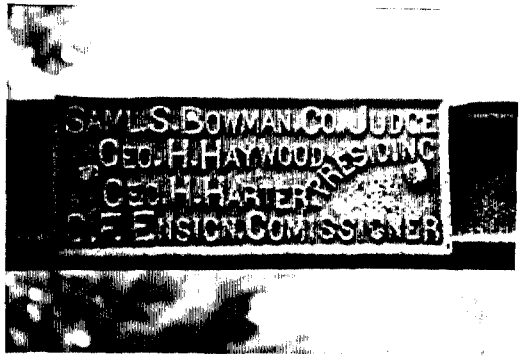
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT GENERAL HIGHWAY MAP





SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 029R00.7; Clark County Court Record, Book P: page 483 (6 September 1898), page 508 (20 December 1898) - located at Clark County Courthouse, Kahoka MO; field inspection by Clayton Fraser, 13 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	7 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Vermillion Bridge (Fox River Bridge) CLAR20
MHTD: 184000.6

DATE(S) OF CONSTRUCTION
1899

LOCATION
County Road 184 over Fox River; S36/31, T65N, R7/6W
1.0 mile west of Wayland; Clark County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 43)

CONDITION
fair

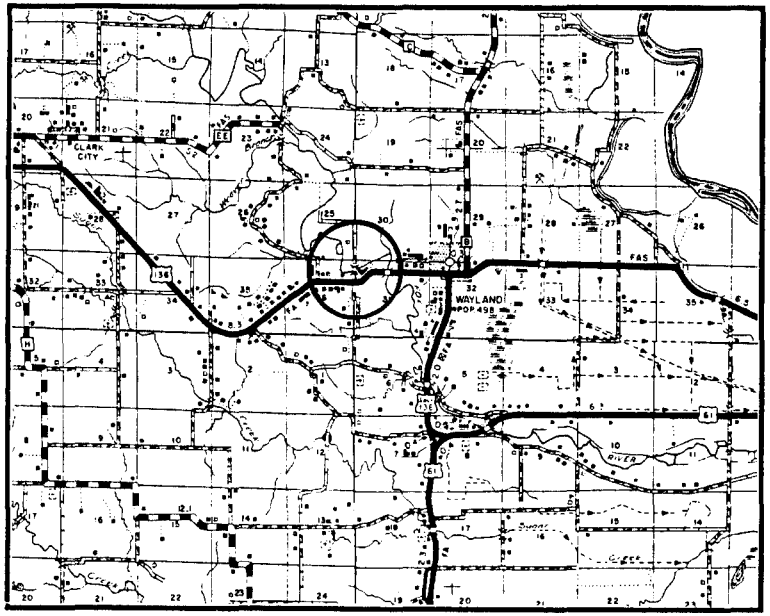
OWNER
Clark County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss, with steel stringer approach spans
span length:	85.0'	substructure:	steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers
total length:	136.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	12.0'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pins; guardrail: steel angle

Located a mile west of Wayland, this short-span through truss carries a gravel-surfaced county road across the Fox River in eastern Clark County. The structure is comprised of a pinned Pratt truss, supported by steel cylinder piers, with steel stringer approach spans on both ends. Known locally as the Vermillion Bridge, it dates from the late 19th century. In February 1899, the Clark County Court hired Keokuk, Iowa, bridge contractor James B. Diver to build this truss and two other, shorter spans. The three bridges were to be completed by June 1st, for which Diver would be paid $3253.00. The contractor did indeed complete the Vermillion Bridge by the beginning of June. It has carried vehicular traffic since at this rural crossing, with only maintenance-related repairs. The bridge is a typically configured, modestly scaled example of a mainstay structural type in Missouri - the pin-connected Pratt truss.

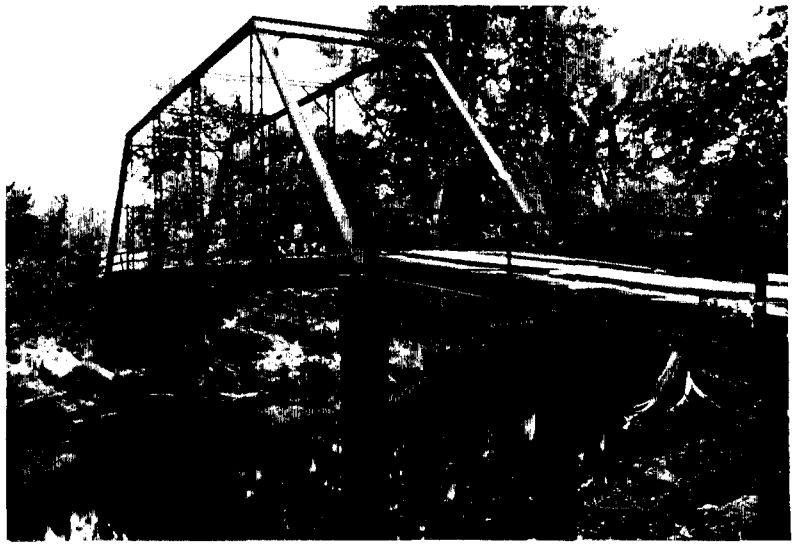
NAME(S) OF STRUCTURE
Vermillion Bridge (Fox River Bridge)

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 184000.6; Clark County Court Record, Book P: page 531 (8 February 1899), page 604 (5 June 1899) - located at Clark County Courthouse, Kahoka MO; field inspection by Clayton Fraser, 13 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	7 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beard Bridge (South Wyaconda River Bridge) CLAR10
MHTD: 110002.3

DATE(S) OF CONSTRUCTION
1913-14

LOCATION
County Road 110 over South Wyaconda River; S28, T65N, R9W
2.0 miles northeast of Wyaconda; Clark County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION
fair

OWNER
Clark County

span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
span length:	105.0'	substructure:	steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers
total length:	159.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.7'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

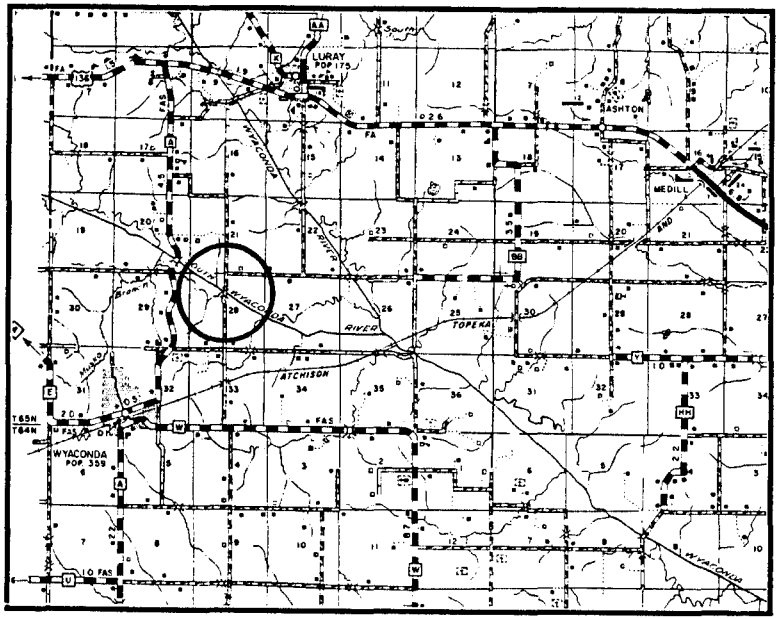
On August 13, 1913, the Clark County Court directed that bids be received to build four steel bridges over the Wyaconda River, then undergoing channelization by the county. Several bridge building firms submitted proposals in early September, but they were all rejected by the court. The project was then relet, and on September 13th new bids were received from three companies: the Massillon Bridge Company of Massillon, Ohio, along with regionally active builders St. Clair and Walker, and George E. Turner. With a combined bid of $6851.88, Turner received the contract to build all four bridges, along with another small span across Honey Creek. Of the total, $1425.00 was for this pinned Pratt through truss, known locally as the Beard Bridge, northeast of the town of Wyaconda. Located along a lightly-trafficked county road, the Beard Bridge still carries local traffic in unaltered condition.

This truss bridge over the South Wyaconda River has retained its structural integrity and is a well-documented example of a pin-connected Pratt through truss - a mainstay design for medium-span crossings in the late 19th and early 20th centuries.

NAME(S) OF STRUCTURE

Beard Bridge (South Wyaconda River 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 110002.3; Clark County Court Record, Book T: page 172 (3 July 1913), page 184 (13 August 1913), page 190 (3 September 1913), page 191 (22 September 1913) - located at the Clark County Courthouse, Kahoka MO; field inspection by Clayton Fraser, 13 September 1990.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton R Fraser	Fraserdesign, Loveland CO	7 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Fox Slough Bridge
MHTD: 317002.4

CLAR27

DATE(S) OF CONSTRUCTION
1897

LOCATION
vacated county road over Fox River; S25, T64N, R6W
3.8 miles southwest of Alexandria; Clark County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING NRHP possibly eligible (score: 49)

CONDITION
fair

OWNER
Clark County

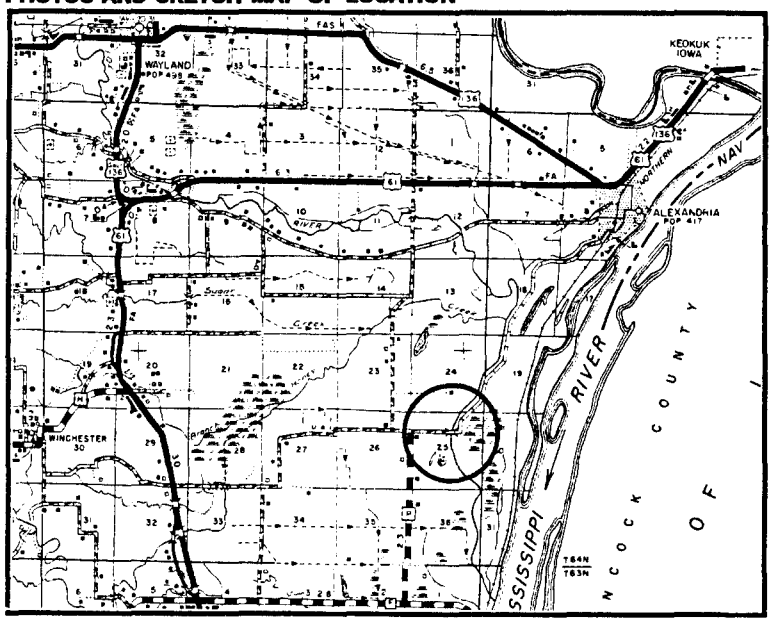
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
span length:	108.0'	substructure:	timber pile bent abutments and wingwalls; concrete-filled steel cylinder piers
total length:	155.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.7'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped round eyebars at hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing, knee braced; floor beam: I-beam, U-bolted to lower chord pins; guardrail: steel angle

Located over a backwater slough of the Mississippi River southwest of Alexandria, this steel structure is comprised of a pinned Pratt through truss, supported by steel cylinder piers, with steel stringer approach spans. The Clark County Court initiated action on the bridge in February 1896. At that time it directed O.F. Ensign, the county road and bridge commissioner, to view this site near Harvey Fox's farm on the newly built road south of Alexandria. Ensign reported in March that an iron bridge, approximately 100 feet in length would be required here, "as that will undoubtedly be the main road from Canton, and the south part of Clay Township to Alexandria, Warsaw and Keokuk and will need a good road." He concluded, "I do not report any particular plan, as you will possibly adopt some one of the several plans that are now on file." The judges shelved Ensign's suggestion, leaving travelers through the swamp to their own devices. It was not until August 1897 that the county let the contract to build the Fox Slough Bridge to James B. Diver and Company of Keokuk, Iowa. Diver's crew began work on the substructure soon thereafter, completing the cylinder piers and pin-connected truss by November 1897. Essentially unaltered today, the Fox Slough Bridge is now closed to traffic and has been allowed to molder by the county.

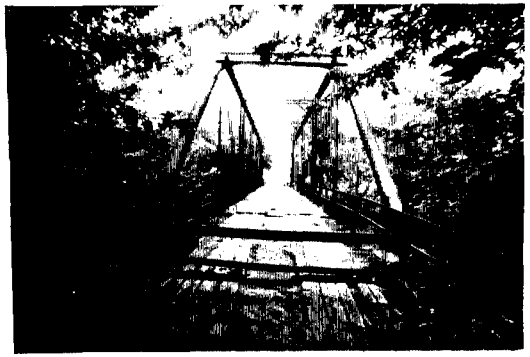
From the early 1880s through the 1920s, the pinned Pratt truss was virtually the exclusive structural type for medium-span roadway crossings in Missouri. Its standardized fabrication, economy of materials and ease of erection made it a mainstay among the various state and regional bridge companies, as well as the state highway department itself in later years. Thousands of such trusses were built throughout the state during this period, and numerous examples remain in place today. The Fox Slough Bridge is distinguished as a relatively early, well-preserved example of this mainstay structural type. The oldest remaining bridge in Clark County, it is a significant transportation-related resource.

NAME(S) OF STRUCTURE
Fox Slough 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 317002.4; Clark County Court Record, Book P: page 52 (6 February 1896), page 60 (16 March 1896), page 287 (4 August 1897), page 318 (1 November 1897) - located at Clark County Courthouse, Kahoka MO; field inspection by Clayton Fraser, 13 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	7 January 1992

KNOX COUNTY

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

Inv.No.	MHTD	Bridge Name	Description
KNOX01	G 453	Edina Bridge	1-140' **riveted Pratt through truss** 1923 W.H. & G.H Turner
KNOX02	004001.2	South Fabius River Bridge	1- 42' pinned Pratt bedstead c1900
KNOX03	008001.4	South Fabius River Bridge	1- 60' pin Pratt half-hip pony truss c1905
KNOX04	024001.3	Moore Bridge	1- 48' pinned Pratt bedstead 1909 John Moore
KNOX05	025000.2	Schragge Bridge	1- 36' steel stringer 1911 Walters Brothers; Illinois Steel Bridge Company
*KNOX06	027000.1	Kiley Bridge	1- 36' riveted lattice bedstead 1911 Walters Brothers; Illinois Steel Bridge Company
KNOX07	057000.1	Brown Bridge	1- 70' pinned Pratt pony truss 1915 Walters Brothers; Ottumwa Box Car Loader Company
KNOX08	072001.8	Sallee Bridge	1- 80' pinned Pratt pony truss 1914 Martin Kiesow; Illinois Steel Bridge Company
KNOX09	084001.6	Parish Bridge	1- 84' pinned Pratt pony truss 1907 Ottumwa Bridge Company
KNOX10	118001.4	Baker Bridge	1- 48' pinned Pratt pony truss 1909 J.K. Johnston; Dildine Bridge Company
KNOX11	123000.1	Kinney Bridge	1- 48' pinned Pratt bedstead 1910 Walters Brothers; Illinois Steel Bridge Company
KNOX12	129002.2	McCann Bridge	1- 60' pinned Pratt bedstead 1910 J.K. Johnston; Illinois Steel Bridge Company
KNOX13	144001.6	Vaughn Bridge	1- 36' riveted lattice bedstead 1911 Walters Brothers; Illinois Steel Bridge Company
KNOX14	150001.4	Beal Fletch Bridge	1- 60' pinned Pratt pony truss 1911 Walters Brothers; Illinois Steel Bridge Company (replaced)
KNOX15	157000.2	Goodwin Bridge	
KNOX16	164000.2	Norton Bridge	1- 36' riveted lattice bedstead 1914 Walters & Son; Illinois Steel Bridge Company
KNOX17	165000.4	Bridge Creek Bridge	1- 46' pinned Pratt bedstead c1915 Illinois Steel Bridge Co. (prob.)

KNOX COUNTY

INCLUDED (cont.):

KNOX18	166000.5	Rekus Bridge	1- 42'	pinned Pratt bedstead
			1915	Charles Baker;
				Illinois Steel Bridge Company
KNOX19	167001.2	Cain Bridge	1- 28'	steel stringer
			1906	J.K. Johnson
KNOX20	169001.0	Hax Bridge	1- 36'	riveted lattice bedstead truss
			1912	Walters Brothers;
				Illinois Steel Bridge Company
KNOX21	169001.4	Davis Bridge	1- 36'	pinned Pratt bedstead truss
			1904	Illinois Steel Bridge Company
KNOX22	176001.0	Luke Bridge		(replaced)
KNOX23	183000.6	Bridge Creek Bridge	1- 36'	riveted lattice bedstead
			c1915	Illinois Steel Bridge Company
KNOX24	183001.9	Creed-Davis Bridge	1- 36'	pinned Pratt pony truss
			1909	E.L. Davis;
				Dildine Bridge Company
KNOX25	187000.3	Seeger Bridge	1- 85'	pinned Pratt pony truss
			1911	Martin Kiesow;
				Illinois Steel Bridge Company
*KNOX26	192000.6	Seaman Bridge	1- 95'	**pinned Pratt through truss**
			1906	Standard Bridge Company
KNOX27	195000.3	Forest Spring Bridge		(replaced)
*KNOX28	219002.0	Fisher Bridge	1- 36'	pinned Pratt bedstead
			1905	Illinois Steel Bridge Company
KNOX29	239000.8	Little Fabius River Bridge	1- 36'	riveted lattice bedstead
			1911	Illinois Steel Bridge Company
*KNOX30	254000.7	Bradford Bridge	1- 90'	**riveted Camelback pony truss**
			c1920	
KNOX31	264001.0	Noblett Bridge	1- 36'	riveted lattice bedstead
			1911	Upright & Luke;
				Illinois Steel Bridge Company
KNOX32	265002.2	Little Fabius River Bridge	1- 45'	pinned Pratt bedstead
			c1910	
*KNOX33	270002.5	Fowler Bridge	1- 36'	pinned Pratt bedstead
			1903	J.K. Johnston
KNOX34	271000.7	Noblett Bridge	1- 36'	riveted lattice bedstead
			1907	Ottumwa Bridge Company
KNOX35	272002.1	Mason Bridge	1- 42'	pinned Pratt bedstead
			1911	Upright & Luke
*KNOX36	273000.1	Bishop Bridge		(replaced)
KNOX37	281000.8	Coon Creek Bridge	1- 32'	riveted lattice bedstead
			c1910	Illinois Steel Bridge Co. (prob.)
KNOX38	282001.3	Pleasant Valley Bridge	1- 75'	pinned Pratt pony truss
			1913	Walters & Son
*KNOX39	289001.8	South Fabius River Bridge	1- 80'	**pinned Pratt through truss**
			c1890	

KNOX COUNTY

INCLUDED (cont.):

*KNOX40	289002.0	Hamilton Bridge	1- 75'	pinned Pratt pony truss
			1910	Walters Brothers; Illinois Steel Bridge Company
KNOX41	296001.2	Metzgar Bridge	1- 36'	pinned Pratt bedstead
			1906	Illinois Steel Bridge Company
KNOX42	297000.5	Million Creek Bridge	1- 36'	riveted lattice bedstead truss
			c**1910**	Illinois Steel Bridge Co. (prob.)
KNOX43	298001.1	Sweet Oak Bridge	1- 70'	pinned Pratt bedstead
			1910	Walters Brothers; Illinois Steel Bridge Company
KNOX44	304001.2	Troublesome Creek Bridge	1- 56'	pinned Pratt bedstead
			c**1915**	
KNOX45	321001.9	Rose Bridge		(replaced)
KNOX46	336000.6	Newkirk Bridge	1- 28'	steel stringer
			1907	Dildine Bridge Company
KNOX47	344002.0	Salt River Bridge	1- 80'	pinned Pratt pony truss
			c**1910**	Illinois Steel Bridge Company
KNOX48	351000.1	Saling Bridge		(replaced)
KNOX49	351001.8	Salt River Bridge	1- 80'	pinned Pratt pony truss
			c**1910**	
KNOX50	353000.1	Fraley Bridge	1- 48'	pinned Pratt bedstead
			1913	Walters Brothers; Illinois Steel Bridge Company
KNOX51	355000.2	Ralls Bridge	1- 45'	pinned Pratt bedstead
			1910	Walters Brothers; Illinois Steel Bridge Company
*KNOX52	370002.3	Coe Bridge	1- 48'	pinned Pratt bedstead
			1904	local labor; American Bridge Co.
KNOX53	378001.8	Deer Bridge	1- 36'	pinned Pratt bedstead
			1905	Illinois Bridge Company
KNOX54	385000.7	Hall Bridge	1- 48'	pinned Pratt bedstead
			1914	Walters & Son; Illinois Steel Bridge Company
KNOX55	390000.4	Rich Bridge		(replaced)
KNOX56	397001.5	Million Branch Bridge	1- 26'	steel stringer
			1910	Thomas Upright;
KNOX57	399001.6	Pflum Bridge	1- 90'	pinned Pratt pony truss
			1913	Walters & Son; Illinois Steel Bridge Company
KNOX58	408002.0	Bridge	1- 35'	pinned Pratt bedstead
			c**1915**	

EXCLUDED:

Pratt pony truss
015001.7 387001.5

Lattice bedstead
162001.2 172001.6 325001.5

KNOX COUNTY

EXCLUDED (cont.):

Steel stringer / girder

H 770	H 771	J 549	K 328	P 38	S 73	S 434
X 198	X 617	X 824	X 905	006001.1	006001.8	023000.5
036000.9	039000.6	042001.0	045003.2	047002.1	049000.3	057000.4
057001.7	058001.6	070000.5	092001.3	095000.1	101000.1	112000.3
118000.7	118001.6	131001.3	134000.5	135001.4	161000.4	169002.2
181000.2	201000.7	205000.3	210000.1	218000.1	220001.0	222000.8
226000.5	231000.7	262000.2	270000.1	289000.6	299000.5	324000.9
327000.3	332000.1	338R00.6	339000.9	324000.7	349001.1	359001.2
369000.2	378000.2	378003.2	399001.2	409000.6	412000.1	

Concrete girder

H 125

Concrete box culvert

H 134	H 159	J 284	J 285	K 715R	P 37	P 39
S 577	X 42	X 904				

Timber stringer

013001.9 139001.4

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	1	50	0	0	51
Excluded	23	58	0	0	81
	24	108	0	0	132 structures

Edina Bridge

KNOX01

GENERAL DATA

structure no.: G 453
county: Knox
city/town: Edina
feature inters.: North Fork of Fabius River
cadastral grid: S13, T62N, R12W; S18, T62N, R11W
highway route: State Highway 15
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 7-panel, rigid-connected Pratt through truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 140.0'
total length: 144.0'
roadway width: 20.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel pipe guardrails

HISTORICAL DATA

erection date: 1923
erection cost: $18,436.80
designer: Missouri State Highway Department
fabricator : unknown
contractor: W.H. and G.H. Turner

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number G 453; Missouri Highway and Transportation Department, Primary System Bridge Record (see entries for Knox County), on file at MHTD, Jefferson City MO.

sign. rating: 41
evaluation: NRHP non-eligible (typical example of MSHD truss bridge design)

inventoried by: Clayton B. Fraser 3 August 1994

South Fabius River Bridge

KNOX02

GENERAL DATA

structure no.: 004001.2
county: Knox
city/town: 7.3 miles northwest of Baring
feature inters.: North Fork of South Fabius River
cadastral grid: S10/11, T63N, R13W
highway route: County Road 4
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead, with steel stringer approach span
substructure: steel bedstead leg pier and abutments with timber wingwalls

span number: 1
span length: 42.0'
total length: 57.0'
roadway width: 10.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1900
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 004001.2.

sign. rating: 26
evaluation: NRHP non-eligible (typical example of common structural type, inadequately documented)

inventoried by: Clayton B. Fraser 3 August 1994

South Fabius River Bridge

KNOX03

GENERAL DATA

structure no.: 008001.4
county: Knox
city/town: 3.2 miles northwest of Baring
feature inters.: North Fork of South Fabius River
cadastral grid: S20, T63N, R12W
highway route: County Road 8
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt half-hip pony truss
substructure: unknown

span number: 1
span length: 60.0'
total length: 89.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: unknown

HISTORICAL DATA

erection date: c1905
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 008001.4.

sign. rating: 29
evaluation: NRHP non-eligible (typically configured example of common structural type, inadequately documented)

inventoried by: Clayton B. Fraser 3 August 1994

Moore Bridge

KNOX04

GENERAL DATA

structure no.: 024001.3
county: Knox
city/town: 4.8 miles northwest of Baring
feature inters.: North Fork of South Fabius River
cadastral grid: S18, T63N, R12W
highway route: County Road 24
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead, with steel stringer approach spans
substructure: steel pile bent piers

span number: 1
span length: 48.0'
total length: 103.0'
roadway width: 11.9'
condition: fair
alterations: approach spans replaced
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1909
erection cost: $90.00 (erection cost)
designer: unknown
fabricator : unknown
contractor: John Moore

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 024001.3; Knox County Bridge Record Number 1: page 82 (July 1909) - located at the Knox County Courthouse, Edina MO.

sign. rating: 37
evaluation: NRHP non-eligible (typically configured, small-scale truss type)

inventoried by: Clayton B. Fraser 3 August 1994

Schragge Bridge

KNOX05

GENERAL DATA

structure no.: 025000.2
county: Knox
city/town: 3.6 miles northwest of Baring
feature inters.: Nicks Branch
cadastral grid: S8/17, T63N, R12W
highway route: County Road 25
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel stringer
substructure: timber pile bent abutments and wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 11.6'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: unknown

HISTORICAL DATA

erection date: 1911
erection cost: $338.00
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 025000.2; Knox County Bridge Record Number 1: page 129 (May 1911) -located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (undistinguished, small-scale bridge type)

inventoried by: Clayton B. Fraser 3 August 1994

Kiley Bridge

KNOX06

GENERAL DATA

structure no.: 027000.1
county: Knox
city/town: 2.3 miles northeast of Baring
feature inters.: Bridge Creek
cadastral grid: S12/13, T63N, R12W
highway route: County Road 27
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 11.6'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1911
erection cost: $329.00
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 027000.1; Knox County Bridge Record Number 1: page 130 (1911) - located at the Knox County Courthouse, Edina MO; field inspection by Clayton Fraser, July 1992.

sign. rating: 30
evaluation: NRHP non-eligible (undistinguished short-span pony truss)

inventoried by: Clayton B. Fraser 3 August 1994

Brown Bridge

KNOX07

GENERAL DATA

structure no.: 057000.1
county: Knox
city/town: 5.5 miles northeast of Baring
feature inters.: Middle Fabius River
cadastral grid: S4/9, T63N, R11W
highway route: County Road 57
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach span
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 70.0'
total length: 99.0'
roadway width: 13.5'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1915
erection cost: $690.00
designer: Ottumwa Box Car Loader Company, Ottumwa IA
fabricator : Ottumwa Box Car Loader Company, Ottumwa IA
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 057000.1; Knox County Court Record, Book 15, page 512 (24 August 1915) - located at the Knox County Courthouse, Edina MO.

sign. rating: 38
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Sallee Bridge

KNOX08

GENERAL DATA

structure no.: 072001.8
county: Knox
city/town: 2.2 miles southeast of Millport
feature inters.: Middle Fabius River
cadastral grid: S18, T63N, R10W
highway route: County Road 72
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 80.0'
total length: 141.0'
roadway width: 13.6'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1914
erection cost: $1865.90
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Martin Kiesow

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 072001.8; Knox County Court Record, Book 15: page 229 (2 April 1914); Knox County Bridge Record Number 1: page 205 (1914) - both located at the Knox County Courthouse, Edina MO.

sign. rating: 40
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Parish Bridge

KNOX09

GENERAL DATA

structure no.: 084001.6
county: Knox
city/town: 2.5 miles southeast of Colony
feature inters.: Middle Fabius River
cadastral grid: S35, T63N, R10W
highway route: County Road 84
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 84.0'
total length: 146.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1907
erection cost: $1390.00
designer: Ottumwa Bridge Company, Ottumwa IA
fabricator : Ottumwa Bridge Company, Ottumwa IA
contractor: Ottumwa Bridge Company, Ottumwa IA

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 084001.6; Knox County Bridge Record Number 1: page 66 (14 December 1906) - located at the Knox County Courthouse, Edina MO.

sign. rating: 40
evaluation: NRHP non-eligible (typically configured example of exceedingly common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Baker Bridge

KNOX10

GENERAL DATA

structure no.: 118001.4
county: Knox
city/town: 3.8 miles northeast of Hurdland
feature inters.: South Fork of South Fabius River
cadastral grid: S8/9, T62N, R12W
highway route: County Road 118
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 48.0'
total length: 77.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1909
erection cost: $729.74
designer: Dildine Bridge Company, Hannibal MO
fabricator : Dildine Bridge Company, Hannibal MO
contractor: J.K. Johnston

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 118001.4; Knox County Bridge Record Number 1: page 91 (October 1909) - located at the Knox County Courthouse, Edina MO.

sign. rating: 37
evaluation: NRHP non-eligible (typically configured example of exceedingly common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Kinney Bridge

KNOX11

GENERAL DATA

structure no.: 123000.1
county: Knox
city/town: 2.2 miles southwest of Baring
feature inters.: North Fork of South Fabius River
cadastral grid: S3, T62N, R12W
highway route: County Road 123
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead leg abutments with timber wingwalls

span number: 1
span length: 48.0'
total length: 49.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1910
erection cost: $572.76
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 123000.1; Knox County Bridge Record Number 1: page 116 (August 1910) -located at the Knox County Courthouse, Edina MO.

sign. rating: 35
evaluation: NRHP non-eligible (typical example of relatively common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

McCann Bridge

KNOX12

GENERAL DATA

structure no.: 129002.2
county: Knox
city/town: 3.8 miles northeast of Hurdland
feature inters.: South Fork of South Fabius River
cadastral grid: S6, T62N, R12W
highway route: County Road 129
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead, with steel stringer approach span
substructure: steel bedstead leg piers and abutments with timber wingwalls

span number: 1
span length: 60.0'
total length: 86.0'
roadway width: 11.3'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1910
erection cost: $1133.37
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: J.K. Johnston

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 129002.2; Knox County Bridge Record Number 1: page 117 (3 July 1910) - located at the Knox County Courthouse, Edina MO.

sign. rating: 38
evaluation: NRHP non-eligible (typically configured example of relatively common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Vaughn Bridge

KNOX13

GENERAL DATA

structure no.: 144001.6
county: Knox
city/town: 3.8 miles southwest of Edina
feature inters.: Rock Creek
cadastral grid: S28/33, T62N, R12W
highway route: County Road 144
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 14.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1911
erection cost: $544.75
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 144001.6; Knox County Bridge Record Number 1: page 162 (1911) - located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (undistinguished small-scale pony truss)

inventoried by: Clayton B. Fraser 3 August 1994

Beal Fletch Bridge

KNOX14

GENERAL DATA

structure no.: 150001.4
county: Knox
city/town: 1.0 mile northeast of Edina
feature inters.: North Fork of South Fabius River
cadastral grid: S18, T62N, R11W
highway route: County Road 150
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 60.0'
total length: 61.0'
roadway width: 12.8'
condition: fair
alterations: unknown
floor/decking : concrete deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1911
erection cost: $496.05
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 150001.4.

sign. rating: 38
evaluation: NRHP non-eligible (typical medium-span example of common structural type, technologically undistinguished)

inventoried by: Clayton B. Fraser 3 August 1994

Norton Bridge

KNOX16

GENERAL DATA

structure no.: 164000.2
county: Knox
city/town: 6.5 miles northeast of Edina
feature inters.: Little Bridge Creek
cadastral grid: S7/12, T62N, R10/11W
highway route: County Road 164
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1914
erection cost: $335.10
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters and Son

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 164000.2; Knox County Bridge Record Number 1: page 211 (June 1914); Knox County Court Record, Book 15: page 208 (3 March 1914) - located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (undistinguished small-scale pony truss)

inventoried by: Clayton B. Fraser 3 August 1994

Bridge Creek Bridge

KNOX17

GENERAL DATA

structure no.: 165000.4
county: Knox
city/town: 6.7 miles northeast of Edina
feature inters.: Bridge Creek
cadastral grid: S1, T62N, R11W
highway route: County Road 165
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead leg piers

span number: 1
span length: 46.0'
total length: 57.0'
roadway width: 13.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 165000.4.

sign. rating: 25
evaluation: NRHP non-eligible (typically configured, short-span bedstead truss)

inventoried by: Clayton B. Fraser 3 August 1994

Rekus Bridge

KNOX18

GENERAL DATA

structure no.: 166000.5
county: Knox
city/town: 5.4 miles northeast of Edina
feature inters.: Bridge Creek
cadastral grid: S2, T62N, R11W
highway route: County Road 166
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead legs

span number: 1
span length: 42.0'
total length: 43.0'
roadway width: 12.5'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1915
erection cost: $458.00 (superstructure cost)
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Charles Baker

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 166000.5; Knox County Bridge Record Number 1: page 222 (1915); Knox County Court Record, Book 15: page 392 (30 December 1914) - both located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (undistinguished, small-scale bedstead)

inventoried by: Clayton B. Fraser 3 August 1994

Cain Bridge

KNOX19

GENERAL DATA

structure no.: 167001.2
county: Knox
city/town: 2.1 miles northeast of Edina
feature inters.: Troublesome Creek
cadastral grid: S17, T62N, R11W
highway route: County Road 167
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel stringer
substructure: unknown

span number: 1
span length: 28.0'
total length: 49.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : unknown
other features: unknown

HISTORICAL DATA

erection date: 1906
erection cost: $225.00
designer: unknown
fabricator : unknown
contractor: J.K. Johnston

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 167001.2; Knox County Bridge Record Number 1: page 59 (14 December 1905) - located at the Knox County Courthouse, Edina MO.

sign. rating: 32
evaluation: NRHP non-eligible (undistinguished, small-scale example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Hax Bridge

KNOX20

GENERAL DATA

structure no.: 169001.0
county: Knox
city/town: 3.3 miles southeast of Edina
feature inters.: unnamed stream
cadastral grid: S22, T62N, R11W
highway route: County Road 169
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: unknown

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 13.8'
condition: fair
alterations: unknown
floor/decking : unknown
other features: no guardrails

HISTORICAL DATA

erection date: 1912
erection cost: $259.51
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 169001.0; Knox County Bridge Record Number 1: page 163 (1912) - located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (undistinguished, small-scale pony truss)

inventoried by: Clayton B. Fraser 3 August 1994

Davis Bridge

KNOX21

GENERAL DATA

structure no.: 169001.4
county: Knox
city/town: 3.5 miles southeast of Edina
feature inters.: Troublesome Creek
cadastral grid: S22, T62N, 11RW
highway route: County Road 169
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead legs

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 12.0'
condition: fair
alterations: approach spans removed
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1904
erection cost: $400.00
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 169001.4; Knox County Bridge Record Number 1: page 25 (25 August 1904) -located at the Knox County Courthouse, Edina MO.

sign. rating: 34
evaluation: NRHP non-eligible (typical, small-scale example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Bridge Creek Bridge

KNOX23

GENERAL DATA

structure no.: 183000.6
county: Knox
city/town: 8.0 miles northeast of Edina
feature inters.: Bridge Creek
cadastral grid: S8, T62N, R10W
highway route: County Road 183
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: steel pile bent abutments and timber wingwalls

span number: 1
span length: 36.0'
total length: 51.0'
roadway width: 12.1'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 183000.6.

sign. rating: 25
evaluation: NRHP non-eligible (typical, small-scale example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Creed-Davis Bridge

KNOX24

GENERAL DATA

structure no.: 183001.9
county: Knox
city/town: 1.7 miles northwest of Knox City
feature inters.: Wolf Branch
cadastral grid: S20/21, T62N, R10W
highway route: County Road 183
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 11.9'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1909
erection cost: $256.85
designer: unknown
fabricator : Dildine Bridge Company, Hannibal MO
contractor: E.L. Davis

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 183001.9; Knox County Bridge Record Number 1: page 84 (August 1909) - located at the Knox County Courthouse, Edina MO.

sign. rating: 32
evaluation: NRHP non-eligible (typical, small-scale example of common structural type)

Inventoried by: Clayton B. Fraser 3 August 1994

Seeger Bridge

KNOX25

GENERAL DATA

structure no.: 187000.3
county: Knox
city/town: 3.3 miles northeast of Knox City
feature inters.: Bridge Creek
cadastral grid: S10/11, T62N, R10W
highway route: County Road 187
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 85.0'
total length: 109.0'
roadway width: 12.0'
condition: fair
alterations: approach spans added
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1911
erection cost: $1180.25
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Martin Kiesow

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 187000.3; Knox County Bridge Record Number 1: page 141 (1911), page 26 (15 March 1900) - located at the Knox County Courthouse, Edina MO.

sign. rating: 40
evaluation: NRHP non-eligible (typically configured example of common truss type)

inventoried by: Clayton B. Fraser 3 August 1994

Seaman Bridge

KNOX26

GENERAL DATA

structure no.: 192000.6
county: Knox
city/town: 5.3 miles northeast of Knox City
feature inters.: Middle Fabius River
cadastral grid: S1, T62N, R10W
highway route: County Road 192
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with lattice bedstead approach span
substructure: concrete abutments; concrete-filled steel cylinder piers

span number: 1
span length: 95.0'
total length: 167.0'
roadway width: 12.2'
condition: fair
alterations: none
floor/decking : timber 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 (2 square eyebars at the hip); diagonal: 2 looped square eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, field-bolted to vertical; guardrail: none

HISTORICAL DATA

erection date: 1906
erection cost: $1100.00
designer: Standard Bridge Company, Omaha NE
fabricator : Standard Bridge Company, Omaha NE
contractor: Standard Bridge Company, Omaha NE

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 192000.6; Knox County Bridge Record Number 1: pages 3, 45 (3 May 1905); Knox County Court Record, Book 11, page 155 (5 February 1901), page 220 (14 June 1901), page 222 (15 July 1901) - both located at the Knox County Courthouse, Edina MO; field inspection by Clayton Fraser, July 1992.

sign. rating: 41
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 3 August 1994

Fisher Bridge

KNOX28

GENERAL DATA

structure no.: 219002.0
county: Knox
city/town: 6.7 miles southwest of Edina
feature inters.: Little Fabius River
cadastral grid: S16, T61N, R12W
highway route: County Road 219
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead legs with timber abutments and wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and upright end post: 2 channels with cover and batten plates; lower chord: 2 channels with lacing; vertical: 4 angles with lacing; vertical: 2 looped rectangular eyebars; diagonal: 2 looped rectangular eyebars; counter: 1 square eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: none

HISTORICAL DATA

erection date: 1905
erection cost: $414.20
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 219002.0; Knox County Bridge Record Number 1: page 48 (12 August 1905) - located at the Knox County Courthouse, Edina MO; field inspection by Clayton Fraser, July 1992.

sign. rating: 36
evaluation: NRHP non-eligible (typical small-scale example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Little Fabius River Bridge

KNOX29

GENERAL DATA

structure no.: 239000.8
county: Knox
city/town: 3.7 miles southeast of Hurdland
feature inters.: Little Fabius River
cadastral grid: S7, T61N, R12W
highway route: County Road 239
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: steel pile bent abutments

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 13.8'
condition: fair
alterations: truss moved to this location
floor/decking : timber deck over steel stringers
other features: guardrail: none

HISTORICAL DATA

erection date: 1911
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 239000.8; Knox County Bridge Record Number 1: page 183 (1911) - located at the Knox County Courthouse, Edina MO.

sign. rating: 22
evaluation: NRHP non-eligible (undistinguished, small-scale structural type, moved to this location)

inventoried by: Clayton B. Fraser 3 August 1994

Bradford Bridge

KNOX30

GENERAL DATA

structure no.: 254000.7
county: Knox
city/town: 7.5 miles northwest of Novelty
feature inters.: Salt River
cadastral grid: S27/34, T61N, R12W
highway route: County Road 254
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Camelback pony truss, with steel stringer approach spans
substructure: steel pile bent piers and abutments with timber wingwalls

span number: 1
span length: 90.0'
total length: 144.0'
roadway width: 13.7'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 4 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 254000.7; field inspection by Clayton Fraser, July 1992.

sign. rating: 38
evaluation: NRHP non-eligible (uncommon structural type, inadequately documented)

inventoried by: Clayton B. Fraser 3 August 1994

Noblett Bridge

KNOX31

GENERAL DATA

structure no.: 264001.0
county: Knox
city/town: 4.2 miles south of Edina
feature inters.: Coon Creek
cadastral grid: S7, T61N, R11W
highway route: County Road 264
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 11.7'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1911
erection cost: $330.60
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Upright and Luke

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 264001.0; Knox County Bridge Record Number 1: page 143 (1911) - located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (undistinguished small-scale pony truss)

inventoried by: Clayton B. Fraser 3 August 1994

Little Fabius River Bridge

KNOX32

GENERAL DATA

structure no.: 265002.2
county: Knox
city/town: 3.9 miles northeast of Novelty
feature inters.: Little Fabius River
cadastral grid: S29/32, T61N, R11W
highway route: County Road 265
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead legs

span number: 1
span length: 45.0'
total length: 61.0'
roadway width: 13.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 265002.2.

sign. rating: 25
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Fowler Bridge

KNOX33

GENERAL DATA

structure no.: 270002.5
county: Knox
city/town: 4.3 miles northeast of Novelty
feature inters.: Little Fabius River
cadastral grid: S32/33, T61N, R11W
highway route: county road
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: bedstead legs; timber back-wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 channels with batten plates; vertical: 4 angles with double lacing; hip vertical: 2 square eyebars; diagonal: 2 square eyebars; counter: square eyerod with slotted turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical

HISTORICAL DATA

erection date: 1903
erection cost: $348.00
designer: American Bridge Company (Wrought Iron Bridge Company)
fabricator : American Bridge Company (Wrought Iron Bridge Company)
contractor: J.K. Johnston

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 270002.5; Knox County Bridge Record Number 1 p. 17 (10 June 1903) - located at the Knox County Courthouse, Edina MO; field inspected by Clayton Fraser, July 1992.

sign. rating: 36
evaluation: NRHP non-eligible (well-preserved, small-scale example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Noblett Bridge

KNOX34

GENERAL DATA

structure no.: 271000.7
county: Knox
city/town: 4.9 miles southeast of Edina
feature inters.: Coon Creek
cadastral grid: S8, T61N, R11W
highway route: County Road 271
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 12.3'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1907
erection cost: $340.00
designer: Ottumwa Bridge Company, Ottumwa IA
fabricator : Ottumwa Bridge Company, Ottumwa IA
contractor: local labor

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 271000.7; Knox County Bridge Record Number 1: page 64 (December 1906) - located at the Knox County Courthouse, Edina MO.

sign. rating: 32
evaluation: NRHP non-eligible (undistinguished small-scale pony truss)

inventoried by: Clayton B. Fraser 3 August 1994

Mason Bridge

KNOX35

GENERAL DATA

structure no.: 272002.1
county: Knox
city/town: 6.0 miles southeast of Edina
feature inters.: Coon Creek
cadastral grid: S15/16, T61N, R11W
highway route: County Road 272
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead leg abutments with timber wingwalls

span number: 1
span length: 42.0'
total length: 46.0'
roadway width: 12.3'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1911
erection cost: $473.64
designer: unknown
fabricator : unknown
contractor: Upright and Luke

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 272002.1; Knox County Bridge Record Number 1: page 165 (1911) - located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (typical example of common small-scale structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Coon Creek Bridge

KNOX37

GENERAL DATA

structure no.: 281000.8
county: Knox
city/town: 5.8 miles southeast of Edina
feature inters.: Coon Creek
cadastral grid: S9/16, T61N, R11W
highway route: County Road 281
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected lattice bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 32.0'
total length: 33.0'
roadway width: 12.5'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 281000.8.

sign. rating: 20
evaluation: NRHP non-eligible (common small-scale truss configuration)

inventoried by: Clayton B. Fraser 3 August 1994

Pleasant Valley Bridge

KNOX38

GENERAL DATA

structure no.: 282001.3
county: Knox
city/town: 6.6 miles southeast of Edina
feature inters.: South Fabius River
cadastral grid: S11, T61N, R11W
highway route: County Road 282
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: steel pile bent pier and abutments with timber wingwalls

span number: 1
span length: 75.0'
total length: 92.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1913
erection cost: $735.00
designer: unknown
fabricator : unknown
contractor: Walters and Son

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 282001.3; Knox County Bridge Record Number 1: page 186 (1913) - located at the Knox County Courthouse, Edina MO.

sign. rating: 38
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

South Fabius River Bridge

KNOX39

GENERAL DATA

structure no.: 289001.8
county: Knox
city/town: 8.0 miles northeast of Novelty
feature inters.: South Fabius River
cadastral grid: S25/36, T61N, R11W
highway route: County Road 289
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

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

span number: 1
span length: 80.0'
total length: 81.0'
roadway width: 12.0'
condition: fair
alterations: truss moved to this location
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1890
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 289001.8.

sign. rating: 16
evaluation: NRHP non-eligible (poorly preserved, short-span example of mainstay structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Hamilton Bridge

KNOX40

GENERAL DATA

structure no.: 289002.0
county: Knox
city/town: 6.9 miles southwest of Knox City
feature inters.: South Fabius River
cadastral grid: S25/36, T61N, R11W
highway route: County Road 289
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete-filled steel cylinder piers with timber back- and wingwalls

span number: 1
span length: 75.0'
total length: 76.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: 1 looped square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1910
erection cost: $1318.00
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 289002.0; Knox County Bridge Record Number 1: page 121 (1910) - located at the Knox County Courthouse, Edina MO; field inspection by Clayton Fraser, July 1992.

sign. rating: 40
evaluation: NRHP non-eligible (well-preserved, typically configured example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Metzgar Bridge

KNOX41

GENERAL DATA

structure no.: 296001.2
county: Knox
city/town: 4.2 miles southwest of Knox City
feature inters.: Long Branch
cadastral grid: S16/17, T61N, R10W
highway route: County Road 296
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead, with steel stringer approach spans
substructure: steel bedstead leg abutments with timber wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1906
erection cost: $412.50
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 296001.2; Knox County Bridge Record Number 1: page 519 (14 December 1905) - located at the Knox County Courthouse, Edina MO.

sign. rating: 34
evaluation: NRHP non-eligible (typical, small-scale example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Million Creek Bridge

KNOX42

GENERAL DATA

structure no.: 297000.5
county: Knox
city/town: 7.2 miles southeast of Knox City
feature inters.: Million Creek
cadastral grid: S34/35, T61N, R10W
highway route: County Road 297
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected lattice bedstead
substructure: steel pile bent pier and abutments

span number: 1
span length: 36.0'
total length: 52.0'
roadway width: 11.4'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 297000.5.

sign. rating: 26
evaluation: NRHP non-eligible (common small-scale truss type)

inventoried by: Clayton B. Fraser 3 August 1994

Sweet Oak Bridge

KNOX43

GENERAL DATA

structure no.: 298001.1
county: Knox
city/town: 4.4 miles southeast of Knox City
feature inters.: Troublesome Creek
cadastral grid: S14/15, T61N, R10W
highway route: County Road 298
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead legs with timber wingwalls

span number: 1
span length: 70.0'
total length: 71.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1910
erection cost: $956.70
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 298001.1; Knox County Bridge Record Number 1: page 104 (1910) - located at the Knox County Courthouse, Edina MO.

sign. rating: 38
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Troublesome Creek Bridge

KNOX44

GENERAL DATA

structure no.: 304001.2
county: Knox
city/town: 3.0 miles southwest of Knox City
feature inters.: Troublesome Creek
cadastral grid: S9, T61N, R10W
highway route: County Road 304
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt truss-leg bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 56.0'
total length: 57.0'
roadway width: 13.7'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 304001.2.

sign. rating: 25
evaluation: NRHP non-eligible (undocumented example of standard truss type)

inventoried by: Clayton B. Fraser 3 August 1994

Newkirk Bridge

KNOX46

GENERAL DATA

structure no.: 336000.6
county: Knox
city/town: 2.5 miles southwest of Novelty
feature inters.: Black Creek
cadastral grid: S16, T60N, R12W
highway route: County Road 336
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel stringer
substructure: unknown

span number: 1
span length: 28.0'
total length: 29.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : unknown
other features: unknown

HISTORICAL DATA

erection date: 1907
erection cost: $650.00 (two-bridge contract)
designer: unknown
fabricator : unknown
contractor: Dildine Bridge Company, Hannibal MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 336000.6; Knox County Bridge Record Number 1: page 77 (14 December 1906) - located at the Knox County Courthouse, Edina MO.

sign. rating: 36
evaluation: NRHP non-eligible (common small-scale structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Salt River Bridge

KNOX47

GENERAL DATA

structure no.: 344002.0
county: Knox
city/town: 4.4 miles southwest of Novelty
feature inters.: Salt River
cadastral grid: S30, T60N, R12W
highway route: County Road 344
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: steel pile bent piers and abutments with timber wingwalls

span number: 1
span length: 80.0'
total length: 164.0'
roadway width: 13.6'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 344002.0.

sign. rating: 30
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Salt River Bridge

KNOX49

GENERAL DATA

structure no.: 351001.8
county: Knox
city/town: 5.0 miles southwest of Novelty
feature inters.: Salt River
cadastral grid: S32, T60N, R12W
highway route: County Road 351
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 80.0'
total length: 133.0'
roadway width: 13.6'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: lattice and steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 351001.8.

sign. rating: 30
evaluation: NRHP non-eligible (common bridge type, poorly documented)

inventoried by: Clayton B. Fraser 3 August 1994

Fraley Bridge

KNOX50

GENERAL DATA

structure no.: 353000.1
county: Knox
city/town: 2.9 miles southeast of Novelty
feature inters.: North River
cadastral grid: S19/20, T60N, R11W
highway route: County Road 353
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead leg abutments with timber wingwalls

span number: 1
span length: 48.0'
total length: 49.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1913
erection cost: $574.92
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 353000.1; Knox County Bridge Record Number 1: page 177 (1913) - located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (relatively common structural type, technologically undistinguished)

inventoried by: Clayton B. Fraser 3 August 1994

Ralls Bridge

KNOX51

GENERAL DATA

structure no.: 355000.2
county: Knox
city/town: 4.3 miles southeast of Novelty
feature inters.: Lost Creek
cadastral grid: S29, T60N, R11W
highway route: County Road 355
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 45.0'
total length: 46.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1910
erection cost: $549.72
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 355000.2; Knox County Bridge Record Number 1: page 110 (August 1910) - located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Coe Bridge

KNOX52

GENERAL DATA

structure no.: 370002.3
county: Knox
city/town: 5.8 miles northeast of Novelty
feature inters.: Little Fabius River
cadastral grid: S2, T60N, R11W
highway route: County Road 370
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead legs with timber abutments and wingwalls

span number: 1
span length: 48.0'
total length: 49.0'
roadway width: 12.2'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and upright end post: 2 channels with cover and batten plates; lower chord: 2 channels with lacing; vertical: 4 angles with lacing; vertical: 2 looped rectangular eyebars; diagonal: 2 looped rectangular eyebars; counter: 1 square eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical

HISTORICAL DATA

erection date: 1904
erection cost: $415.00
designer: American Bridge Company, New York NY
fabricator : American Bridge Company, New York NY
contractor: local labor

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 370002.3; Knox County Bridge Record Number 1: page 34 (October 1904) - located at the Knox County Courthouse, Edina MO; field inspection by Clayton Fraser, July 1992.

sign. rating: 34
evaluation: NRHP non-eligible (typical, small-scale example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Deer Bridge

KNOX53

GENERAL DATA

structure no.: 378001.8
county: Knox
city/town: 5.1 miles southeast of Novelty
feature inters.: North River
cadastral grid: S28, T60N, R11W
highway route: County Road 378
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1905
erection cost: $430.00
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 378001.8; Knox County Bridge Record Number 1: page 37 (July 1905) - located at the Knox County Courthouse, Edina MO.

sign. rating: 34
evaluation: NRHP non-eligible (typical example of relatively common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Hall Bridge

KNOX54

GENERAL DATA

structure no.: 385000.7
county: Knox
city/town: 3.6 miles southwest of Newark
feature inters.: Little Fabius River
cadastral grid: S29, T60N, R10W
highway route: County Road 385
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel bedstead leg abutments with timber wingwalls

span number: 1
span length: 48.0'
total length: 49.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1914
erection cost: $682.00
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters and Son

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 385000.7; Knox County Bridge Record Number 1: page 210 (6 May 1914); Knox County Court Record, Book 15: page 208 (3 March 1914) - both located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Million Branch Bridge

KNOX56

GENERAL DATA

structure no.: 397001.5
county: Knox
city/town: 2.6 miles northeast of Newark
feature inters.: Million Creek
cadastral grid: S1, T60N, R10W
highway route: County Road 397
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel stringer
substructure: unknown

span number: 1
span length: 26.0'
total length: 27.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : unknown
other features: unknown

HISTORICAL DATA

erection date: 1910
erection cost: $180.60
designer: unknown
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Thomas Upright

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 397001.5; Knox County Bridge Record Number 1: page 108 (October 1910) - located at the Knox County Courthouse, Edina MO.

sign. rating: 30
evaluation: NRHP non-eligible (typical, small-scale example of exceedingly common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Pflum Bridge

KNOX57

GENERAL DATA

structure no.: 399001.6
county: Knox
city/town: 3.6 miles northeast of Newark
feature inters.: South Fabius River
cadastral grid: S8, T60N, R10W
highway route: County Road 399
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 90.0'
total length: 91.0'
roadway width: 13.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1913
erection cost: $962.90
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Walters and Son

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 399001.6; Knox County Bridge Record Number 1: page 185 (1913) - located at the Knox County Courthouse, Edina MO.

sign. rating: 40
evaluation: NRHP non-eligible (typically configured, long-span example of common structural type)

inventoried by: Clayton B. Fraser 3 August 1994

Bridge

KNOX58

GENERAL DATA

structure no.: 408002.0
county: Knox
city/town: 2.4 miles southwest of Newark
feature inters.: unnamed stream
cadastral grid: S27/34, T60N, R10W
highway route: County Road 408
highway distr.: 3
current owner: Knox County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 35.0'
total length: 37.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 408002.0.

sign. rating: 20
evaluation: NRHP non-eligible (typical example of common structural type, poorly documented)

inventoried by: Clayton B. Fraser 3 August 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Seaman Bridge
MHTD: 192000.6

KNOX26

DATE(S) OF CONSTRUCTION
1906

LOCATION
County Road 192 over Middle Fabius River; S1, T62N, R10W
5.3 miles northeast of Knox City; Knox County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 41)

CONDITION
fair

OWNER
Knox County

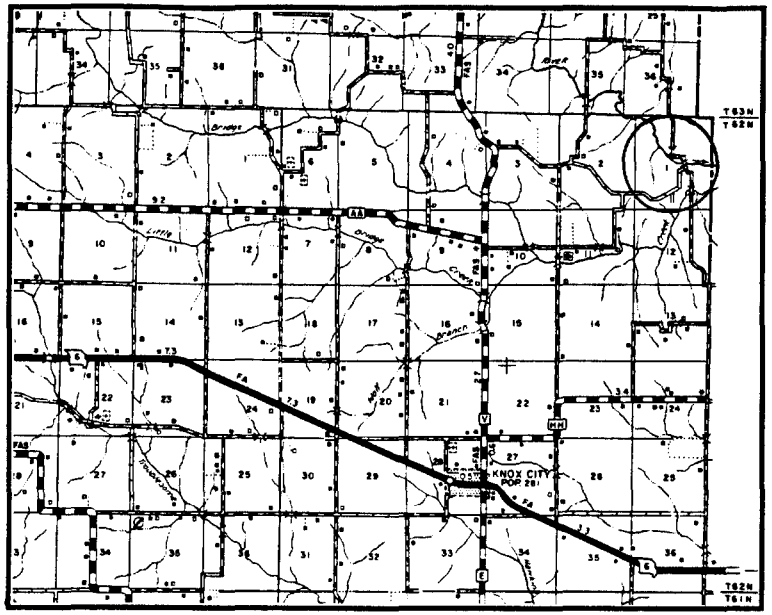
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss, with lattice bedstead approach span
span length:	95.0'	substructure:	concrete abutments; concrete-filled steel cylinder piers
total length:	167.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	12.2'	other 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 (2 square eyebars at the hip); diagonal: 2 looped square eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, field-bolted to vertical; guardrail: none

Spanning the Middle Fabius River along the eastern edge of Knox County, northeast of Knox City, this steel truss rests on a concrete/steel substructure. The Seaman Bridge, as the strcutre is known locally, is comptrised of a single pinned Pratt through span with a lattice bedstead at one end. County records reveal that at least one bridge functioned at this location prior to the erection of the current span. Built for $520.00 by the American Bridge Company in 1901, the earlier structure was destroyed by an ice flow, thereby necessitating the construction of a replacement span in 1906. The Standard Bridge Company of Omaha was contracted by the county to build the replacement truss for $1100.00, which was completed in March of 1906. Since its construction, the Seaman Bridge continues to carry county road traffic while maintaining a high degree of structural integrity.

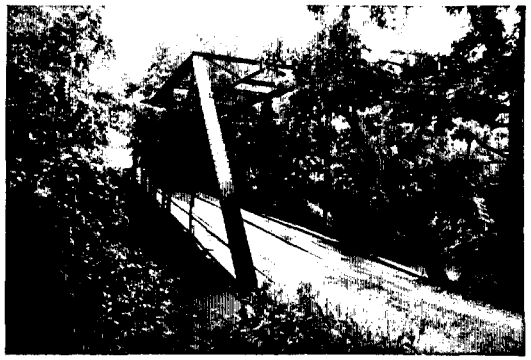
Marketed extensively by virtually all of the in-state and regional bridge contractors and promoted in the form of standardized designs, the pinned Pratt through truss was widely used by Missouri's counties to carry roads over the state's myriad watercourses. Thousands of such trusses were erected across the state in the late 19th and early 20th centuries, and many remain in place today. The Seaman Bridge typifies this widespread bridge building trend.

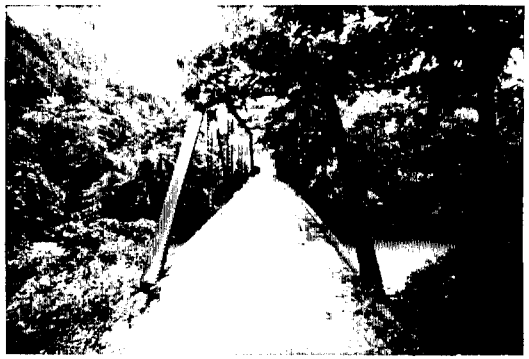
NAME(S) OF STRUCTURE
Seaman Bridge

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 192000.6; Knox County Bridge Record Number 1: pages 3, 45 (3 May 1905); Knox County Court Record, Book 11, page 155 (5 February 1901), page 220 (14 June 1901), page 222 (15 July 1901) - both located at the Knox County Courthouse, Edina MO; field inspection by Clayton Fraser, July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 August 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Fisher Bridge
MHTD: 219002.0

KNOX28

DATE(S) OF CONSTRUCTION
1905

LOCATION
County Road 219 over Little Fabius River; S16, T61N, R12W
6.7 miles southwest of Edina; Knox County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
fair

OWNER
Knox County

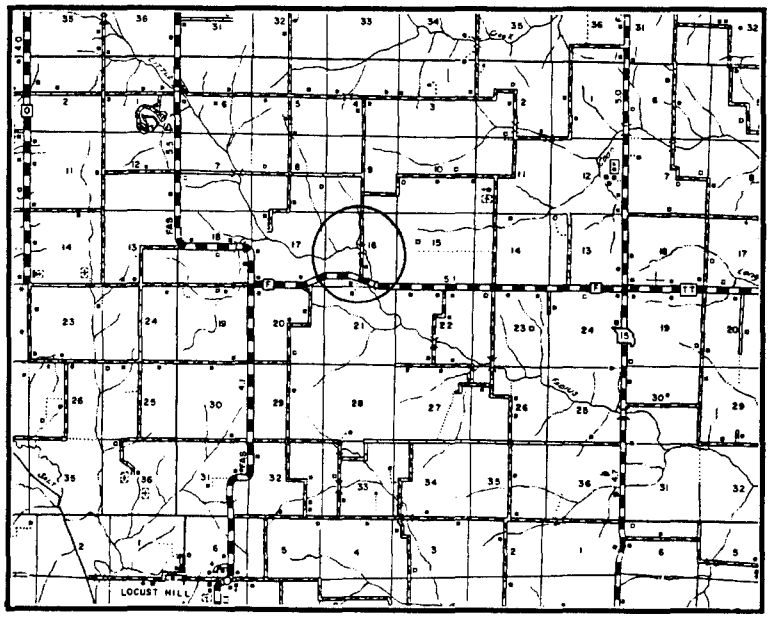
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt truss-leg bedstead
span length:	36.0'	substructure:	steel bedstead legs with timber abutments and wingwalls
total length:	37.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.8'	other features:	upper chord and upright end post: 2 channels with cover and batten plates; lower chord: 2 channels with lacing; vertical: 4 angles with lacing; vertical: 2 looped rectangular eyebars; diagonal: 2 looped rectangular eyebars; counter: 1 square eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: none

Located in west-central Knox County southwest of Edina, this Pratt truss-leg bedstead carries County Road 219 over the Little Fabius River. The Fisher Bridge is comprised of a single short-span bedstead truss, which employs a pin-connected Pratt web configuration. The structure dates to 1905. County officials, in the summer of 1905, bought a truss fabricated in Jacksonville, Illinois, by the Illinois Steel Bridge Company, and soon after paid $414.20 to a local contractor to erect the truss-leg bedstead. Completed that fall, the Fisher Bridge maintains a high degree of structural integrity while continuing to function in place.

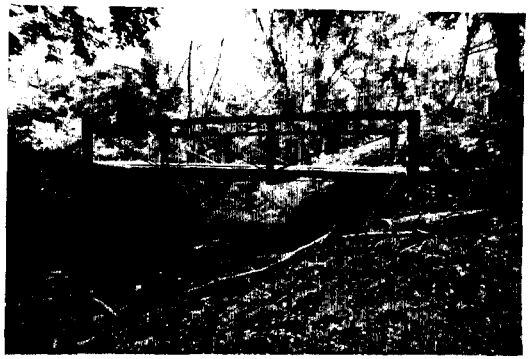
In a bedstead truss, a single "leg" functioned as both end post and support at each corner of the structure. This combined super- and substructure reduced erection costs somewhat, but bedsteads were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Despite these weaknesses, numerous truss leg bedsteads were erected throughout Missouri in the later 1890s and early 1900s. Hundreds remain in place today - in fact, Missouri has probably more bedsteads than any other state. The Fisher Bridge is a well-preserved, though not particularly distinguished, example of this statewide bridge construction trend.

NAME(S) OF STRUCTURE
Fisher 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 219002.0; Knox County Bridge Record Number 1: page 48 (12 August 1905) - located at the Knox County Courthouse, Edina MO; field inspection by Clayton Fraser, July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 August 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bishop Bridge
MHTD: 273000.1

KNOX36

DATE(S) OF CONSTRUCTION
1904

LOCATION
County Road 273 over South Fabius River; S23, T61N, R11W
6.3 miles southwest of Knox City; Knox County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 42)

CONDITION
fair

OWNER
Knox County

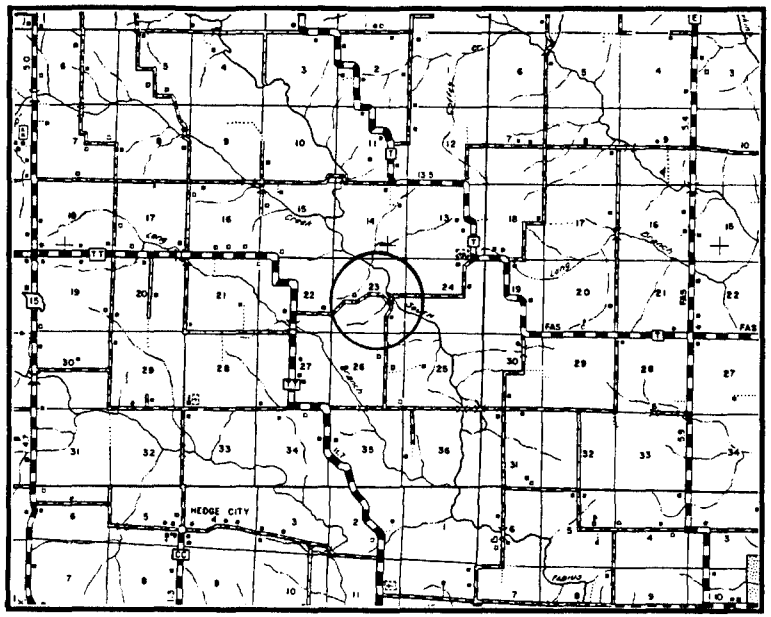
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss, with steel stringer approach span on each side
span length:	60.0'		
total length:	99.0'	substructure:	concrete-filled steel cylinder piers; timber pile abutments and wingwalls
roadway wdt.:	11.6'	floor/decking:	timber deck over steel stringers
		other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 round or 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped square eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: lattice on approach spans

Located southwest of Knox City, this medium-span pony truss carries a gravel-surfaced county road across the South Fabius River. The Bishop Bridge, as it is known locally, is comprised of a pin-connected Pratt half-hip span, supported by concrete-filled steel cylinder piers and approached on both sides by steel stringer spans. It dates to 1904. In June of that year the Knox County Court awarded a contract to local builders McCohn and Vernon to erect this 60-foot span on the Plerna -Knox City Road. The contractors completed work on the structure in October for a total cost of $794.00. Since that time the Bishop Bridge has functioned in place, with only maintenance-related repairs.

A subtype of the venerable Pratt pony truss, the Pratt half-hip configuration was marketed extensively by Midwestern bridge companies in the early 1900s. Its primary advantage as a structural type was that, by eliminating the vertical members at the hip connections, it was more materially conservant than the standard Pratt. Its disadvantage was that it was generally limited to short-span applications: typically 30 to 60 feet. But Missouri's myriad small streams lent themselves to this range, and, as a result, thousands of half-hip ponies were erected across the state between 1900 and 1915. With its 60-foot span and 1904 construction date, the Bishop Bridge in Knox County fits squarely within this bridge building milieu. It is a well-preserved example of this mainstream Missouri roadway truss type.

NAME(S) OF STRUCTURE
Bishop 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 273000.1; Knox County Bridge Record Number 1: page 29 (24 June 1904) - located at the Knox County Courthouse, Edina MO; field inspection by Clayton Fraser, July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 August 1994

LEWIS COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
*LEWI01	J 359R	North Fabius River Bridge	1-128' **riveted Pratt through truss** 1930 Martin Wunderlich
LEWI02	J 982	Canton Bridge	1-**180'** **riveted Parker through truss** 1932 Hartmann; Clark Brothers
*LEWI03	053002.1	Slate Bank Ford Bridge	1-100' **pinned Camelback through truss** **1902** James B. Diver Bridge Company
*LEWI04	055002.1	Reddish Branch Bridge	1- 40' pinned Pratt bedstead **1900** Massillon Bridge Company
*LEWI05	060002.3	Lime Kiln Bridge	1-100' **pinned Pratt through truss** **1896** Wrought Iron Bridge Company
*LEWI06	061000.6	Hilbert Branch Bridge	1- 35' pinned Pratt bedstead **1895** Wrought Iron Bridge Company
*LEWI07	068002.0	Agee Bridge	1- 80' pinned Pratt pony truss **1897** Wrought Iron Bridge Company
*LEWI08	071002.0	Hargis Ford Bridge	1- 90' pinned Pratt pony truss **1904** James B. Diver Bridge Company
*LEWI09	093000.1	Boudreau Bridge	(replaced)
*LEWI10	107003.5	Rayl Bridge	1- 66' pinned Pratt half-hip pony truss **c1910**
*LEWI11	122000.7	Risk Bridge	1- 75' pinned Pratt pony truss **1904** McCohn and Vernon
*LEWI12	127001.1	Sugar Creek Bridge	1- 80' pinned Pratt pony truss **c1905**
*LEWI13	127002.1	Sugar Creek Bridge	1- 85' **pinned Pratt through truss** **c1905**
*LEWI14	128000.5	Uht Bridge	(replaced)
*LEWI15	134002.2	Kirschbaum Bridge	1- 40' pinned Pratt bedstead **1895** Massillon Bridge Company
*LEWI16	150000.8	Relker Bridge	1- 35' **riveted Kingpost pony truss** **1903** County Crew; Missouri B&I Co.
*LEWI17	152000.3	Pollock Ford Bridge	1-100' **pinned Pratt through truss** **1898** Massillon Bridge Company
*LEWI18	165001.2	Lay Bridge	1-100' **pinned Pratt through truss** **1918** Dildine Bridge Company
*LEWI19	167001.5	Buck Horn Bridge	1-100' **pinned Pratt through truss** **1894** St. Louis Bridge and Iron Co.
*LEWI20	183002.7	North Fabius River Bridge	1-**104'** riveted Pratt pony truss c1925
*LEWI21	207001.7	La Grange Bridge	1-110' **pinned Pratt through truss** **1899** Massillon Bridge Company
LEWI22	228001.9	Troublesome Creek Bridge	1- 40' pinned Pratt bedstead **c1910**
*LEWI23	246004.0	Grassy Creek Bridge	1- 40' pinned Pratt bedstead **1898** St. Louis Bridge & Iron Co.

LEWIS COUNTY

INCLUDED (cont.):

*LEWI24	256001.7	Grassy Creek Bridge		(replaced)
*LEWI25	264001.6	Bangert Bridge	1- 90'	**pinned Pratt through truss**
			1900	Wrought Iron Bridge Company
*LEWI26	268002.0	Gilead Bridge	1- 84'	**pinned Pratt through truss**
			1895	Wrought Iron Bridge Company
*LEWI27	276002.0	Maywood Bridge	1-140'	**pinned Pratt through truss**
			1894	St. Louis Bridge & Iron Co.
*LEWI28	285001.3	Durgens Creek Bridge		(replaced)
*LEWI29	308000.2	James Ford Bridge	1-104'	**pinned Pratt through truss**
			1911	Decatur Bridge Company

EXCLUDED:

Pratt pony truss
031001.4 284000.9 284003.9

Warren pony truss
H 28R J 157R 158001.6
257001.4 276002.7

Lattice bedstead
275000.7

Steel stringer

T 808	X 43	X 44	X 348	X 769	013000.9	016000.6
019000.2	022002.0	023000.1	026000.7	029002.1	037001.5	046R00.7
049R00.7	064001.9	072001.0	139000.7	142001.3	144001.3	151001.1
224000.7	225001.6	229002.3	230000.6	256003.8	261000.5	272002.8
285004.3	287001.0					

Concrete slab/girder
H 281R H 295R

Concrete box culvert

J 156	K 253	L 345	L 347	P 44	S 394	X 349

Timber stringer
229002.7

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	2	24	0	0	26
Excluded	16	34	0	0	50
	18	58	0	0	76 structures

North Fabius River Bridge

LEWI01

GENERAL DATA

structure no.: J 359R
county: Lewis
city/town: Monticello
feature inters.: North Fabius River
cadastral grid: urban
highway route: Missouri State Highway 16
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 7-panel, rigid-connected Pratt through truss, with concrete deck girder approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 128.0'
total length: 326.0'
roadway width: 20.4'
condition: good
alterations: renovated
floor/decking : concrete deck
other features: steel pipe guardrails

HISTORICAL DATA

erection date: 1930
erection cost: $33,414.99
designer: Missouri State Highway Department
fabricator : Inland Steel Company, East Chicago Indiana
contractor: Martin Wunderlich

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J 359R; Primary System Bridge Files, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 41
evaluation: NRHP non-eligible (typically configured MSHD standard truss bridge)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Canton Bridge

LEWI02

GENERAL DATA

structure no.: J 982
county: Lewis

city/town: 5.5 miles south of Canton
feature inters.: Wyaconda River
cadastral grid: urban
highway route: State Secondary Route B
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 9-panel, rigid-connected Parker through truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 180.0'
total length: 185.0'
roadway width: 22.0'

condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1932
erection cost: $13,276.89
designer: Missouri State Highway Department
fabricator : unknown
contractor: Hartmann; Clark Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J982; Primary System Bridge Files, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 47
evaluation: NRHP non-eligible (typically configured MSHD standard truss bridge)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Slate Bank Ford Bridge

LEWI03

GENERAL DATA

structure no.: 053002.1
county: Lewis
city/town: 2.5 miles southwest of Deer Ridge
feature inters.: Middle Fabius River
cadastral grid: S7, T62N, R9W
highway route: County Road 53
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Camelback through truss, with Pratt half-hip pony truss approach span on north side
substructure: concrete abutments and wingwalls with concrete-filled steel cylinder piers

span number: 1
span length: 100.0'
total length: 147.0'
roadway width: 11.7'
condition: fair
alterations: steel cables added at verticals; bridge closed
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 angles with lacing; hip vertical: 2 channels with lacing; diagonal: 2 looped rectangular eye-bars; counter: 1 round eyerod with slotted turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles, braced; 4 angles double-laced; portal strut: lattice with curved knee braces; floor beam: I-beam, U-bolted to vertical; guardrail: wire mesh

HISTORICAL DATA

erection date: 1901-02
erection cost: $1453.00 (contract amount)
designer: James B. Diver Bridge Company, Keokuk IA
fabricator : unknown
contractor: James B. Diver Bridge Company, Keokuk IA

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 053002.1; Lewis County Court Record, Book 11: page 489 (28 May 1901), page 492 (24 June 1901), page 535 (27 January 1902), page 595 (24 March 1902), and page 601 (1 May 1902), page 614 (1 May 1902) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 58
evaluation: NRHP possibly eligible (uncommon wagon truss type used at regionally important crossing)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Reddish Branch Bridge

LEWI04

GENERAL DATA

structure no.: 055002.1
county: Lewis
city/town: 2.3 miles northwest of La Belle
feature inters.: Reddish Branch of Middle Fabius River
cadastral grid: S29/30, T62N, R9W
highway route: County Road 55
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 40.0'
total length: 41.0'
roadway width: 12.1'
condition: poor
alterations: bridge heavily repaired and spliced
floor/decking : timber deck
other features: no guardrails; builder's plate: **The Massillon Bridge Company / Massillon Ohio**

HISTORICAL DATA

erection date: 1900
erection cost: $350.00 (contract amount)
designer: Massillon Bridge Company, Massillon OH
fabricator : Massillon Bridge Company, Massillon OH
contractor: Massillon Bridge Company, Massillon OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 055002.1; Lewis County Court Record, Book 11: page 325 (28 August 1900), and page 329 (25 September 1900) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 29
evaluation: NRHP non-eligible (poorly preserved example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Lime Kiln Bridge

LEWI05

GENERAL DATA

structure no.: 060002.3
county: Lewis
city/town: 4.3 miles northwest of Midway
feature inters.: Middle Fabius River
cadastral grid: S9, T62N, R9W
highway route: County Road 60
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss, with 2 steel stringer approach spans on each side
substructure: concrete-filled steel cylinder piers; steel pile bent approach span piers

span number: 1
span length: 100.0'
total length: 187.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped square eyebars; vertical: 1 round eye-rod with WIBCo prong; counter: 2 channels with lacing; diagonal: 1-2 square eyebars with or without turnbuckles; lateral bracing: round rod with threaded ends; strut: I-beam; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles; builder's plate: **1896 WROUGHT IRON BRIDGE CO. / BUILDERS / CANTON OHIO**

HISTORICAL DATA

erection date: 1896
erection cost: $1299.00 (contract amount)
designer: Wrought Iron Bridge Company, Canton OH
fabricator : Wrought Iron Bridge Company, Canton OH
contractor: Wrought Iron Bridge Company, Canton OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 060002.3; Lewis County Court Record, Book 8: page 166 (22 June 1896), page 215 (26 October 1896), page 238 (23 November 1896), page 320 (26 April 1897) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 50
evaluation: NRHP possibly eligible (well-preserved example of mainstay structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Hilbert Branch Bridge

LEWI06

GENERAL DATA

structure no.: 061000.6
county: Lewis
city/town: 2.8 miles west of Midway
feature inters.: Hilbert Branch
cadastral grid: S22, T62N, R9W
highway route: County Road 61
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 2-panel, pin-connected Pratt truss-leg bedstead, with steel stringer approach span
substructure: timber abutments and wingwalls; steel bedstead leg piers

span number: 1
span length: 35.0'
total length: 48.0'
roadway width: 12.1'
condition: poor
alterations: I-beams welded to upper chords
floor/decking : timber deck over steel stringers
other features: upper chord: 2 channels with cover plate and lacing; upright end post: 2 channels with lacing; lower chord: 2 channels with lacing; vertical: 4 angles with double lacing; cast iron hip blocks; guardrail: 2 angles

HISTORICAL DATA

erection date: 1895
erection cost: unknown
designer: Wrought Iron Bridge Company, Canton OH
fabricator : Wrought Iron Bridge Company, Canton OH
contractor: Wrought Iron Bridge Company, Canton OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 061000.6.

sign. rating: 36
evaluation: NRHP non-eligible (poorly preserved example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Agee Bridge

LEWI07

GENERAL DATA

structure no.: 068002.0
county: Lewis
city/town: 3.1 miles northwest of Midway
feature inters.: Middle Fabius River
cadastral grid: S15, T62N, R9W
highway route: County Road 68
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span on north side
substructure: south: truss leg on stone ledge; north: concrete-filled steel cylinder pier with steel extensions; timber abutments and wingwalls

span number: 1
span length: 80.0'
total length: 124.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : timber deck over timber stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped square eyebars; vertical: 4 angles with double lacing; diagonal: 2 looped square eyebars; counter: 1 looped square eyebar with slotted turnbuckle; lateral bracing: round rod with threaded ends; cast iron hip blocks; guardrail: none

HISTORICAL DATA

erection date: 1897
erection cost: $575.00 (contract amount)
designer: Wrought Iron Bridge Company, Canton OH
fabricator : Wrought Iron Bridge Company, Canton OH
contractor: Wrought Iron Bridge Company, Canton OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 068002.0; Lewis County Court Record, Book 8: page 286 (27 May 1889), page 297 (24 June 1889); Book 10: page 377 (30 June 1897), page 425 (27 December 1897) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 53
evaluation: NRHP possibly eligible (typically configured, relatively early example of mainstay structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Hargis Ford Bridge

LEWI08

GENERAL DATA

structure no.: 071002.0
county: Lewis
city/town: 2.0 miles northwest of Midway
feature inters.: Middle Fabius River
cadastral grid: S23, T62N, R9W
highway route: County Road 71
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 90.0'
total length: 100.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 2 square eyebars with turnbuckles; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: 1904
erection cost: $1563.00 (contract amount)
designer: James B. Diver Bridge Company, Keokuk IA
fabricator : unknown
contractor: James B. Diver Bridge Company, Keokuk IA

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 071002.0; Lewis County Court Record, Book 12: page 167 (25 April 1903), page 178 (22 June 1903), page 417 (28 November 1904) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 8 July 1992.

sign. rating: 46
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Rayl Bridge

LEWI10

GENERAL DATA

structure no.: 107003.5
county: Lewis
city/town: 4.8 miles northeast of Monticello
feature inters.: Sugar Creek
cadastral grid: S23/24, T62N, R7W
highway route: County Road 107
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt half-hip pony truss, with steel stringer approach span
substructure: concrete abutments and wingwalls, steel cylinder pier on one side of truss

span number: 1
span length: 66.0'
total length: 67.0'
roadway width: 11.6'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars, 2 square eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 107003.5; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 30
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Risk Bridge

LEWI11

GENERAL DATA

structure no.: 122000.7
county: Lewis
city/town: 4.5 miles northwest of Canton
feature inters.: Wyaconda River
cadastral grid: S17, T62N, R6W
highway route: County Road 122
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: stone masonry abutments and wingwalls with concrete vertical extensions

span number: 1
span length: 75.0'
total length: 76.0'
roadway width: 11.8'
condition: fair
alterations: truss raised, guardrails replaced
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: 2 looped square eyebars with turnbuckles; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: 1904
erection cost: $1382.00
designer: unknown
fabricator : unknown
contractor: McCohn and Vernon

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 122000.7; Lewis County Court Record, Book 9: page 146 (22 August 1892); Book 12: page 306 (28 March 1904), page 350 (27 June 1904), page 428 (26 December 1904) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 42
evaluation: NRHP non-eligible (undistinguished example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Sugar Creek Bridge

LEWI12

GENERAL DATA

structure no.: 127001.1
county: Lewis
city/town: 4.4 miles southwest of Canton
feature inters.: Sugar Creek
cadastral grid: S31/6, T62N, R7W
highway route: County Road 127
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 80.0'
total length: 81.0'
roadway width: 12.1'
condition: fair
alterations: none
floor/decking : asphalt on timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (gusset plates at top of hip); diagonal: 2 looped rectangular eyebars; counter: looped square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to vertical; guardrail: none

HISTORICAL DATA

erection date: c1905
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 127002.1; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 33
evaluation: NRHP non-eligible (undistinguished example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Sugar Creek Bridge

LEWI13

GENERAL DATA

structure no.: 127002.1
county: Lewis
city/town: 3.5 miles southwest of Canton
feature inters.: Sugar Creek
cadastral grid: S5/32, T61N, R6W
highway route: County Road 127
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 85.0'
total length: 86.0'
roadway width: 12.1'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing, 2 square eyebars at the hip; diagonal: 2 punched rectangular eyebars; counter: looped square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: channel; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; guardrail: channel

HISTORICAL DATA

erection date: c1905
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 127002.1; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 28
evaluation: NRHP non-eligible (typical example of common structural type, inadequately documented)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Kirschbaum Bridge

LEWI15

GENERAL DATA

structure no.: 134002.2
county: Lewis
city/town: 1.7 miles southwest of Lewistown
feature inters.: Grassy Creek
cadastral grid: S24/19, T61N, R9W
highway route: County Road 134
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: bedstead legs with timber back- and wingwalls

span number: 1
span length: 40.0'
total length: 41.0'
roadway width: 12.0'
condition: fair
alterations: one vertical replaced with I-beam
floor/decking : timber deck over steel stringers
other features: upper chord and upright end post: 2 channels with cover and batten plates; lower chord: 2 channels with batten plates, 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped square eyebars; counter: 1 looped square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to vertical; builder's plate: **THE MASSILLON BRIDGE COMPANY**; guardrail: none

HISTORICAL DATA

erection date: 1895
erection cost: $410.00 (contract amount)
designer: unknown
fabricator : unknown
contractor: Massillon Bridge Company, Massillon OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 134002.2; Lewis County Court Record, Book 9: page 592 (27 May 1895), page 621 (25 June 1895), page 624 (25 June 1895); Book 10: page 34 (25 November 1895) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 36
evaluation: NRHP non-eligible (poorly preserved example of common small-scale truss type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Relker Bridge

LEWI16

GENERAL DATA

structure no.: 150000.8
county: Lewis
city/town: 1.8 miles southwest of Lewistown
feature inters.: Grassy Creek
cadastral grid: S30, T61N, R8W
highway route: County Road 150
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected kingpost pony truss
substructure: steel pile bent abutments with timber wingwalls

span number: 1
span length: 35.0'
total length: 36.0'
roadway width: 12.0'
condition: good
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 channels; strut: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical

HISTORICAL DATA

erection date: 1903
erection cost: $226.49
designer: Missouri Bridge and Iron Company, St. Louis MO
fabricator : Missouri Bridge and Iron Company, St. Louis MO
contractor: county work force

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 150000.8; Lewis County Court Record, Book 8: page 295 (19 June 1889); Book 12: page 214 (26 October 1903) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 58
evaluation: NRHP possibly eligible (well-preserved example of once mainstay–now rare–short-span truss type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Pollock Ford Bridge

LEWI17

GENERAL DATA

structure no.: 152000.3
county: Lewis
city/town: 2.5 miles northeast of Lewistown
feature inters.: Middle Fabius River
cadastral grid: S5, T61N, R8W
highway route: County Road 152
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

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

span number: 1
span length: 100.0'
total length: 130.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : asphalt on timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: 1 looped square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles; portal builder's plate: THE MASSILLON BRIDGE COMPANY / MASSILLON OHIO / 1898

HISTORICAL DATA

erection date: 1898
erection cost: $1378.00 (contract amount)
designer: Massillon Bridge Company, Massillon OH
fabricator : Massillon Bridge Company, Massillon OH
contractor: Massillon Bridge Company, Massillon OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 152000.3; Lewis County Court Record, Book 10: page 541 (27 June 1898), page 601 (28 November 1898) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 50
evaluation: NRHP possibly eligible (well-preserved example of mainstay structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Lay Bridge

LEWI18

GENERAL DATA

structure no.: 165001.2
county: Lewis
city/town: 3.8 miles southeast of Lewistown
feature inters.: Middle Fabius River
cadastral grid: S24, T61N, R8W
highway route: County Road 165
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach span on each side
substructure: concrete abutments and stone piers

span number: 1
span length: 100.0'
total length: 149.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : asphalt on timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with batten plates, 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 looped square eyebar with slotted turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: wire mesh

HISTORICAL DATA

erection date: 1918
erection cost: $2450.00 (contract amount)
designer: Dildine Bridge Company, Hannibal MO
fabricator : Dildine Bridge Company, Hannibal MO
contractor: Dildine Bridge Company, Hannibal MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 165001.2; Lewis County Court Record, Book 17: page 444 (24 July 1917); Book 18: page 6 (23 April 1918) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 41
evaluation: NRHP non-eligible (well-preserved, structurally representative example of common truss type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Buck Horn Bridge

LEWI19

GENERAL DATA

structure no.: 167001.5
county: Lewis
city/town: 1.5 miles northeast of Tolona
feature inters.: Middle Fabius River
cadastral grid: S31, T61N, R7W
highway route: County Road 167
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete-filled steel cylinder piers; timber pile abutments and wingwalls

span number: 1
span length: 100.0'
total length: 141.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : asphalt on timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped square or rectangular eyebars; vertical: 2 channels with lacing (2 square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: 1894
erection cost: $1222.00 (contract amount)
designer: St. Louis Bridge and Iron Company, St. Louis MO
fabricator : St. Louis Bridge and Iron Company, St. Louis MO
contractor: St. Louis Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 167001.5; Lewis County Court Record, Book 9: page 443 (23 July 1894), page 500 (24 December 1894), page 512 (28 January 1895), page 602 (28 May 1895) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 50
evaluation: NRHP possibly eligible (well-preserved example of mainstay structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

North Fabius River Bridge

LEWI20

GENERAL DATA

structure no.: 183002.7
county: Lewis
city/town: 4.9 miles northeast of Ewing
feature inters.: North Fabius River
cadastral grid: S27, T61N, R7W
highway route: County Road 183
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 104.0'
total length: 145.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1925
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 183002.7.

sign. rating: 32
evaluation: NRHP non-eligible (typically configured, long-span example of common truss type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

La Grange Bridge

LEWI21

GENERAL DATA

structure no.: 207001.7
county: Lewis
city/town: 3.2 miles southwest of Canton
feature inters.: Wyaconda River
cadastral grid: S14/15, T61N, R6W
highway route: County Road 207
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

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

span number: 1
span length: 110.0'
total length: 112.0'
roadway width: 14.8'
condition: fair
alterations: decking removed; bridge closed
floor/decking : timber deck (removed) 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 looped square eyebars; hip vertical: 2 channels with lacing; diagonal: 2 looped square eyebars; counter: 1 round eyerod with turnbuckle; lateral bracing: round eyerod with turnbuckle; strut: 4 angles with spacers; portal strut: lattice with knee braces; floor beam: tapered "fishtail" plate girder, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: 1899
erection cost: $3268.00 (amount paid contractor); $3098.00 (contract amount)
designer: unknown
fabricator : Carnegie Steel Company, Pittsburgh PA
contractor: Massillon Bridge Company, Massillon OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 207001.7; Lewis County Court Record, Book 11: page 126 (26 June 1899), page 191 (26 December 1899), page 278 (24 April 1900) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

sign. rating: 45
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Troublesome Creek Bridge

LEWI22

GENERAL DATA

structure no.: 228001.9
county: Lewis
city/town: 5.3 miles southwest of Lewistown
feature inters.: Troublesome Creek
cadastral grid: S11, T60N, R9W
highway route: County Road 228
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel pile bent piers

span number: 1
span length: 40.0'
total length: 52.0'
roadway width: 11.9'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 228001.9.

sign. rating: 25
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Grassy Creek Bridge

LEWI23

GENERAL DATA

structure no.: 246004.0
county: Lewis
city/town: 1.7 miles northwest of Ewing
feature inters.: Grassy Creek
cadastral grid: S12/1, T60N, R8W
highway route: county road
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, pin-connected Pratt truss-leg bedstead
substructure: steel truss-leg abutments with timber backwalls

span number: 1
span length: 40.0'
total length: 41.0'
roadway width: 11.9'
condition: fair
alterations: none
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1898
erection cost: $435.00 (contract amount)
designer: St. Louis Bridge and Iron Company, St. Louis MO
fabricator : St. Louis Bridge and Iron Company, St. Louis MO
contractor: St. Louis Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 246004.0; Lewis County Court Record Book 10 p. 540 (27 June 1898) and p. 601 (28 November 1898) - located at the Lewis County Courthouse, Monticello MO.

sign. rating: 48
evaluation: NRHP possibly eligible (relatively early example of mainstay structural type)

inventoried by: Clayton B. Fraser 28 July 1992

Bangert Bridge

LEWI25

GENERAL DATA

structure no.: 264001.6
county: Lewis
city/town: 5.3 miles southeast of Ewing
feature inters.: Middle Fabius River
cadastral grid: S24, T60N, R7W
highway route: County Road 264
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: north: stone abutments; south: concrete and stone abutments, steel stringer approach span with steel lattice guardrail; concrete-filled steel cylinder piers between approach span and main span on south

span number: 1
span length: 90.0'
total length: 109.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking: timber deck with wearing boards over timber deck
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped eyebars; vertical: 2 channels with lacing; hip vertical: 2 looped square eyebars; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round eyerod with threaded ends and turnbuckle on top; strut: 2 angles with knee braces; floor beam: I-beam, U-bolted to vertical; guardrail: steel lattice

HISTORICAL DATA

erection date: 1900
erection cost: $891.00
designer: Wrought Iron Bridge Company, Canton OH
fabricator: Wrought Iron Bridge Company, Canton OH
contractor: Wrought Iron Bridge Company, Canton OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 264001.6; Lewis County Court Record, Book 11: page 314 (23 July 1900), page 370 (24 December 1900), page 462 (23 April 1901) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 41
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

Gilead Bridge

LEWI26

GENERAL DATA

structure no.: 268002.0
county: Lewis
city/town: 2.2 miles northeast of Ewing
feature inters.: Middle Fabius River
cadastral grid: S4/9, T60N, R7W
highway route: County Road 268
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss
substructure: west: concrete abutments and wingwalls, steel stringer approach span; east: stone abutment; stone pier between main and approach span on west

span number: 1
span length: 84.0'
total length: 102.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : asphalt on timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; hip vertical: looped round eyerod with WIBCo prong; diagonal: 2 looped eyebars with 2 prongs; counter: looped square eyebar with turnbuckle; lateral bracing: round eyerod with threaded ends and turnbuckle on top; strut: 2 channels; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; guardrail: 2 narrow steel channels; portal builder's plate: **1895 / WROUGHT IRON BRIDGE CO. / BUILDERS / CANTON OHIO**

HISTORICAL DATA

erection date: 1895
erection cost: $544.00 (contract amount)
designer: Wrought Iron Bridge Company, Canton OH
fabricator : Wrought Iron Bridge Company, Canton OH
contractor: Wrought Iron Bridge Company, Canton OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 268002.0; Lewis County Court Record, Book 9: page 593 (27 May 1895), page 621 (25 June 1895); Book 10: page 34 (25 November 1895) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 14 September 1990.

Gilead Bridge

sign. rating: 50

evaluation: NRHP possibly eligible (well-preserved example of mainstay structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 8 July 1992

Maywood Bridge

LEWI27

GENERAL DATA

structure no.: 276002.0
county: Lewis
city/town: 3.3 miles southeast of Durham
feature inters.: Middle Fabius River
cadastral grid: S30, T60N, R6W
highway route: County Road 276
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Pratt through truss, with steel stringer approach span on each end
substructure: timber abutments and wingwalls (steel pile bent piers with timber backing), stone piers capped with concrete

span number: 1
span length: 140.0'
total length: 168.0'
roadway width: 11.9'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; hip vertical: 2 looped square eyebars; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends and turnbuckle on top; strut: 4 angles with lacing and knee braces; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: 1894
erection cost: $1400.00
designer: St. Louis Bridge and Iron Company, St. Louis MO
fabricator : St. Louis Bridge and Iron Company, St. Louis MO
contractor: St. Louis Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 276002.0; Lewis County Court Record, Book 9: page 490 (26 November 1894), page 602 (28 May 1895) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 53
evaluation: NRHP possibly eligible (well-preserved, relatively example of mainstay wagon truss configuration)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 28 July 1992

James Ford Bridge

LEWI29

GENERAL DATA

structure no.: 308000.2
county: Lewis
city/town: 3.5 miles northeast of Durham
feature inters.: North Fabius River
cadastral grid: S19, T60N, R6W
highway route: County Road 308
highway distr.: 3
current owner: Lewis County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with rigid-connected Pratt pony truss approach span on east side
substructure: stone pier between pony approach span and main span on east side; concrete abutments and wingwalls

span number: 2
span length: 105.0'; 60.0'
total length: 165.0'
roadway width: 11.5'
condition: fair
alterations: none
floor/decking : timber deck with wearing boards over steel stringers
other features: Through truss - 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; lateral bracing: round rod with threaded ends; strut: angle with bracing; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guard-rail: steel angle; Pony truss - upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle

HISTORICAL DATA

erection date: 1911
erection cost: $2253.00
designer: Decatur Bridge Company, Decatur IL
fabricator : Illinois Steel Company, Chicago IL
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 308000.2; Lewis County Court Record, Book 14: page 587 (28 November 1910); Book 15: page 352 (24 April 1912) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 14 September 1990.

James Ford Bridge

sign. rating: 37
evaluation: NRHP non-eligible (relatively late example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 8 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Slate Bank Ford Bridge LEWI03
MHTD: 053002.1

DATE(S) OF CONSTRUCTION
1901-02

LOCATION
County Road 53 over Middle Fabius River; S7, T62N, R9W
2.5 miles southwest of Deer Ridge; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING NRHP possibly eligible (score: 58)

CONDITION
fair

OWNER
Lewis County

span number: 1
span length: 100.0'
total length: 147.0'
roadway wdt.: 11.7'

superstructure: steel, 7-panel, pin-connected Camelback through truss, with Pratt half-hip pony truss approach span on north side
substructure: concrete abutments and wingwalls with concrete-filled steel cylinder piers
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 angles with lacing; hip vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 round eyerod with slotted turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles, braced; 4 angles double-laced; portal strut: lattice with curved knee braces; floor beam: I-beam, U-bolted to vertical; guardrail: wire mesh

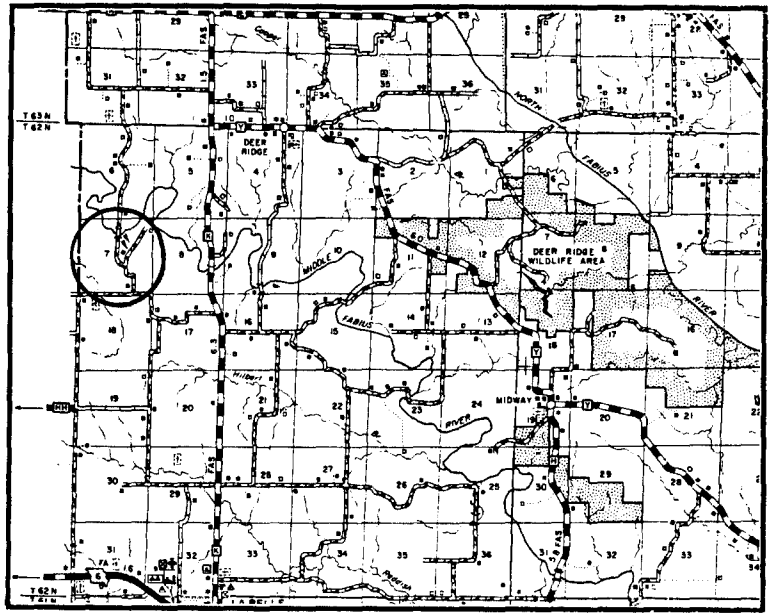
The Lewis County Court in May of 1901 authorized George Roberts, county bridge commissioner, to contract for a steel wagon bridge in the northwestern section of the county. The long-span truss would carry a county road over the Middle Fabius River–some two miles southwest of Deer Ridge–at a crossing known locally as the Slate Bank Ford. The following month a contract was let to the James B. Diver Bridge Company of Keokuk, Iowa, to fabricate and erect the bridge for $1453.00. Comprised of a 180-foot pinned Camelback main span and a half-hip pony truss approach, the bridge was shipped in parts to Lewis County that summer. The bridge was completed and opened to traffic early in 1902. J.E. Beadles, deputy bridge commissioner, reported to the court that "in [the] absence of specs, [he] found no serious fault with [the bridge]." The Slate Bank Ford Bridge has functioned in place since, although in recent years the bridge has been closed to vehicular traffic and part of its deck has been removed. The truss itself, however, is intact and retains a high degree of structural integrity.

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. The Slate Bank Ford Bridge is thus technologically significant as a well-preserved example of this uncommon structural type.

NAME(S) OF STRUCTURE

Slate Bank 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 053002.1; Lewis County Court Record, Book 11: page 489 (28 May 1901), page 492 (24 June 1901), page 535 (27 January 1902), page 595 (24 March 1902), and page 601 (1 May 1902), page 614 (1 May 1902) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lime Kiln Bridge
MHTD: 060002.3

LEWI05

DATE(S) OF CONSTRUCTION
1896

LOCATION
County Road 60 over Middle Fabius River; S9, T62N, R9W
4.3 miles northwest of Midway; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION
fair

OWNER
Lewis County

span number: 1
span length: 100.0'
total length: 187.0'
roadway wdt.: 12.0'

superstructure: steel, 5-panel, pin-connected Pratt through truss, with 2 steel stringer approach spans on each side

substructure: concrete-filled steel cylinder piers; steel pile bent approach span piers

floor/decking: timber deck over steel stringers

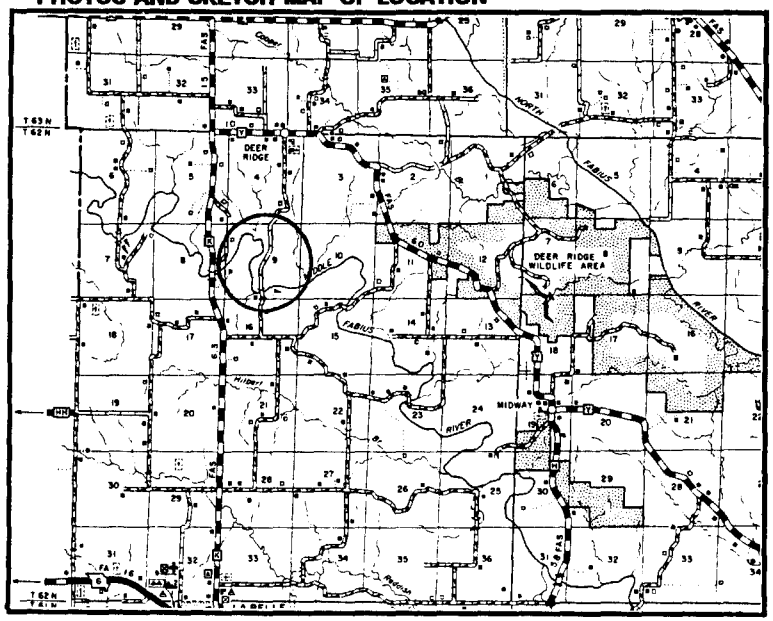
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped square eyebars; vertical: 1 round eyerod with WIBCo prong; counter: 2 channels with lacing; diagonal: 1-2 square eyebars with or without turnbuckles; lateral bracing: round rod with threaded ends; strut: I-beam; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles; builder's plate: **1896 WROUGHT IRON BRIDGE CO. / BUILDERS / CANTON OHIO**

This five-panel steel truss spans the Middle Fabius River in northwestern Lewis County, some four miles northwest of Midway. Approached on each side by steel stringers and featuring pinned connections throughout, this Pratt through truss dates to 1896. In June of that year, county officials let a contract to the Wrought Iron Bridge Company of Canton, Ohio, for the fabrication and erection of a bridge at this site. WIBCo began work on the concrete substructure soon thereafter and completed the 100-foot bridge in November. Total cost: $1299.99. Since its construction, the Lime Kiln Bridge, as it is locally known, continues to carry local county road traffic in essentially unaltered condition.

In Missouri, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the late 19th and early 20th centuries. As a result, thousands of Pratts were built across the state, and today Pratts constitute the most populous group of through trusses. With modest dimensions and standard design and detailing, the Lime Kiln Bridge is a technologically representative pre-20th century example of this mainstay structural type.

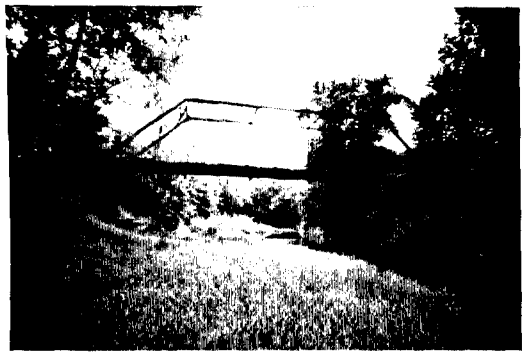
NAME(S) OF STRUCTURE
Lime Kiln Bridge

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 060002.3; Lewis County Court Record, Book 8: page 166 (22 June 1896), page 215 (26 October 1896), page 238 (23 November 1896), page 320 (26 April 1897) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Agee Bridge
MHTD: 068002.0

LEWI07

DATE(S) OF CONSTRUCTION
1897

LOCATION
County Road 68 over Middle Fabius River; S15, T62N, R9W
3.1 miles northwest of Midway; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 53)

CONDITION
fair

OWNER
Lewis County

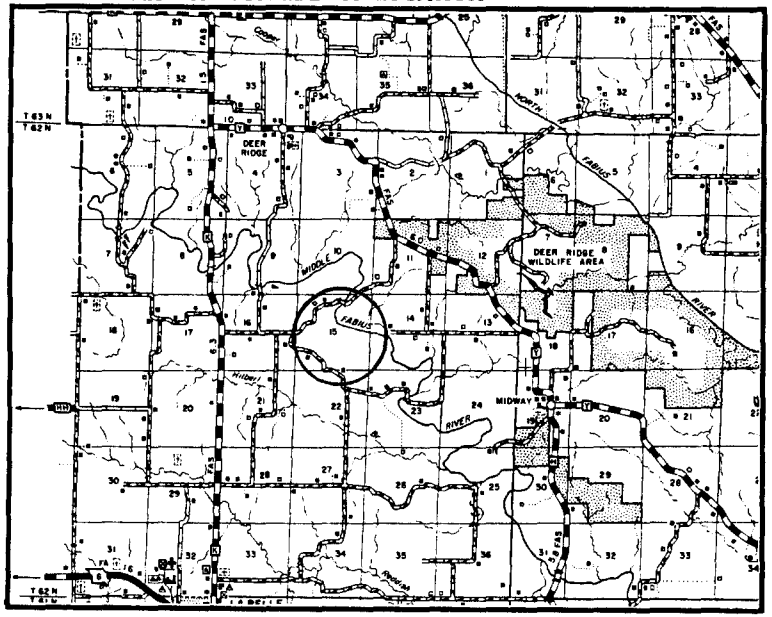
span number: 1
span length: 80.0'
total length: 124.0'
roadway wdt.: 12.0'

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span on north side
substructure: south: truss leg on stone ledge; north: concrete-filled steel cylinder pier with steel extensions; timber abutments and wingwalls
floor/decking: timber deck over timber stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped square eyebars; vertical: 4 angles with double lacing; diagonal: 2 looped square eyebars; counter: 1 looped square eyebar with slotted turnbuckle; lateral bracing: round rod with threaded ends; cast iron hip blocks; guardrail: none

This pinned Pratt pony truss carries a gravel-surfaced county road over the Middle Fabius River, just west of the Deer Ridge Wildlife Area in northwestern Lewis County. At least one other bridge functioned at this location before this structure was erected. County officials in May of 1889 instructed bridge commissioner George Roberts to contract for a bridge at Agee's Ford. A month later local contractor James Jones was hired to build the bridge. By 1897 Jones' bridge had begun to fail, however, and once again county officials let a contract for a new span here. This time the Wrought Iron Bridge Company of Canton, Ohio, received the contract to fabricate and erect a new steel truss on the existing substructure for $575.00. WIBCo completed the new span in December 1897. With no alterations of note, the Agee Bridge continues to carry intermittent vehicular traffic. It is an early, representative example of the pin-connected Pratt pony truss–a mainstay structural type used extensively throughout Missouri in the late 19th century and early 20th century.

NAME(S) OF STRUCTURE
Agee 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 068002.0; Lewis County Court Record, Book 8: page 286 (27 May 1889), page 297 (24 June 1889); Book 10: page 377 (30 June 1897), page 425 (27 December 1897) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

INVENTORIED BY
Clayton B. Fraser and Michelle Crow-Dolby

AFFILIATION
Fraserdesign, Loveland CO

DATE
28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Kirschbaum Bridge
MHTD: 134002.2

LEWI15

DATE(S) OF CONSTRUCTION
1895

LOCATION
County Road 134 over Grassy Creek; S24/19, T61N, R9W
1.7 miles southwest of Lewistown; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
fair

OWNER
Lewis County

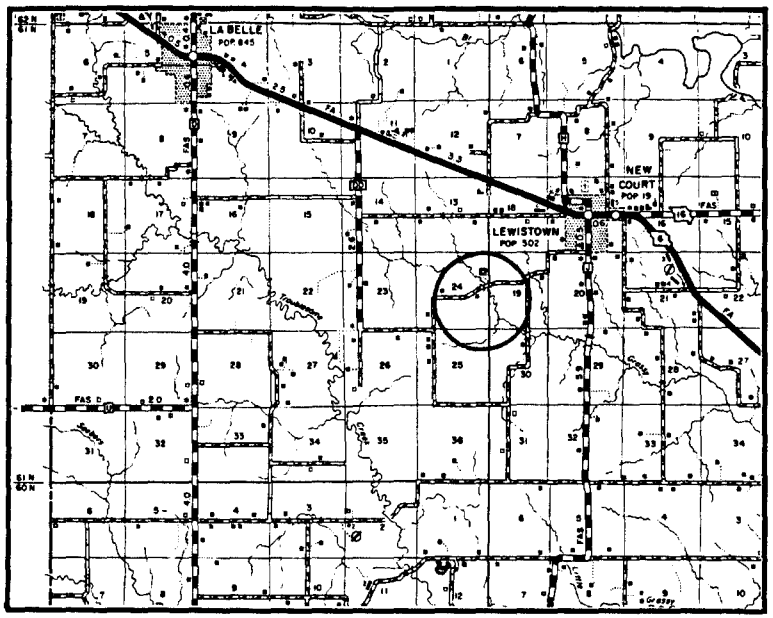
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt truss-leg bedstead
span length:	40.0'	substructure:	bedstead legs with timber back- and wingwalls
total length:	41.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	12.0'	other features:	upper chord and upright end post: 2 channels with cover and batten plates; lower chord: 2 channels with batten plates, 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped square eyebars; counter: 1 looped square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to vertical; builder's plate: **THE MASSILLON BRIDGE COMPANY**; guardrail: none

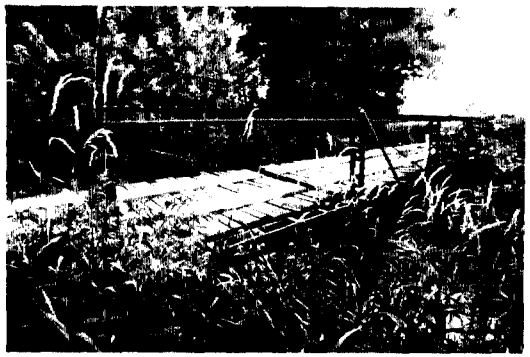
Lewis County officials in the summer of 1895 instructed George Roberts, county bridge commissioner, to view a site over Grassy Creek for a proposed bridge and to let a contract for its construction. In June Roberts hired the Ohio-based Massillon Bridge Company to fabricate and erect this short-span steel structure for $410.00 . Massillon preceded to build a three-panel, pin-connected Pratt truss-leg bedstead for the short west-central county crossing, resting the entire structure on bedstead legs with timber back- and wingwalls. Since it completion in November of 1895, the Kirschbaum Bridge, named for a local land owner, continues to carry county road traffic, although its physical integrity has been compromised somewhat by subsequent alterations.

The bedstead truss enjoyed widespread popularity in Missouri in the late 1890s and early 1900s. A single "leg" functioned as both end post and support at each corner. This combined super-and substructure reduced erection costs somewhat, but bedsteads were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Because of this weakness, bedsteads were typically limited to short-span applications, with few span lengths exceeding 60 feet. Thus, the 40-foot Kirschbaum Bridge is a typical example of a common structural type in Missouri - the pin-connected Pratt truss-leg bedstead.

NAME(S) OF STRUCTURE
Kirschbaum 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 134002.2; Lewis County Court Record, Book 9: page 592 (27 May 1895), page 621 (25 June 1895), page 624 (25 June 1895); Book 10: page 34 (25 November 1895) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Relker Bridge
MHTD: 150000.8

LEWI16

DATE(S) OF CONSTRUCTION
1903

LOCATION
County Road 150 over Grassy Creek; S30, T61N, R8W
1.8 miles southwest of Lewistown; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 58)

CONDITION
good

OWNER
Lewis County

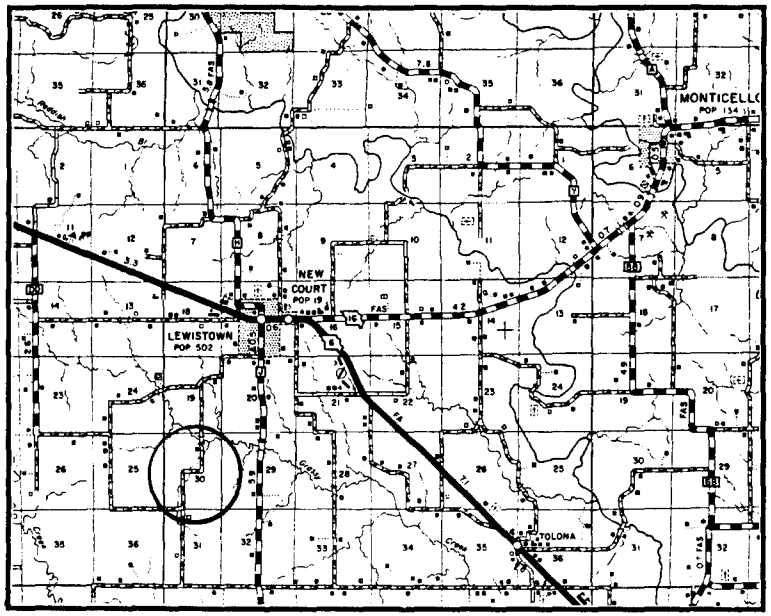
span number:	1	superstructure:	steel, 2-panel, rigid-connected kingpost pony truss
span length:	35.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	36.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	12.0'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 channels; strut: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical

This short-span crossing of Grassy Creek is located some two miles southwest of Lewistown, in west-central Lewis County. Comprised of a rigid-connected kingpost pony truss, the bridge's superstructure is supported by steel pile bent abutments with timber wingwalls. In June of 1889 George Roberts, the ex-officio bridge commissioner, was authorized by the county court to contract for the construction of this structure's predecessor. Evidently, the crossing did not fare well because only four years later the current truss was fabricated by the Missouri Bridge and Iron Company of St. Louis and erected by a county work force. County records indicate that the bridge was completed by October of 1903 at a cost of $226.49, $177.74 of which paid for steel components. Since its completion, the Relker Bridge, named for a nearby land owner, has been utilized primarily by local citizens in rural west-central Lewis County and subsequently exhibits a high degree of physical integrity.

The simplest of truss types, the kingpost pony truss was utilized throughout Missouri during the state's settlement and early development periods in the 19th century. Earliest examples were simple wood trusses, while later kingposts were built of iron or steel. By the turn of the century, though, Pratt truss configurations - including truss-leg bedsteads and half-hip pony trusses - had become the designs of choice for short-span crossings. Consequently, few kingposts were built after 1900, and only about a dozen are now known to remain in use on Missouri's roadways. One of only four Missouri kingposts with riveted connections, the Relker Bridge is technologically representative of kingpost pony truss construction - a once popular but now rare truss design.

NAME(S) OF STRUCTURE
Relker 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 150000.8; Lewis County Court Record, Book 8: page 295 (19 June 1889); Book 12: page 214 (26 October 1903) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Pollock Ford Bridge
MHTD: 152000.3

LEWI17

DATE(S) OF CONSTRUCTION
1898

LOCATION
County Road 152 over Middle Fabius River; S5, T61N, R8W
2.5 miles northeast of Lewistown; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION
fair

OWNER
Lewis County

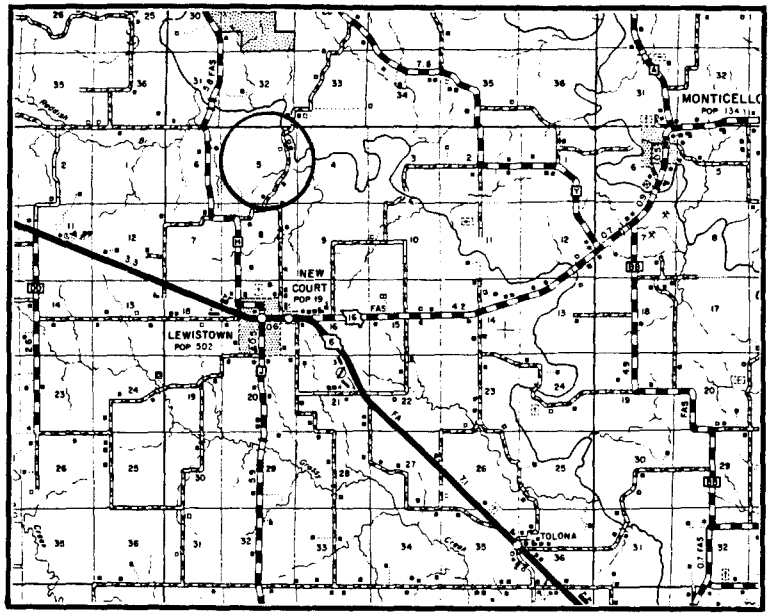
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	100.0'	substructure:	concrete-filled steel cylinder piers, concrete abutments and wingwalls
total length:	130.0'	floor/decking:	asphalt on timber deck over steel stringers
roadway wdt.:	12.0'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: 1 looped square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles; portal builder's plate: THE MASSILLON BRIDGE COMPANY / MASSILLON OHIO / 1898

Located in central Lewis County some two miles northeast of Lewistown, this structure spans the Middle Fabius River. Configured as a 100-foot Pratt through truss with pinned connections, the bridge rests on a concrete/steel substructure. The Massillon Bridge Company of Ohio was awarded a construction contract to erect a bridge at this rural crossing in June 1898. Costing $1378.00 and taking five months to complete, the Pollock Ford Bridge continues to carry local traffic with no physical alterations of note.

In Missouri, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the late 19th and early 20th centuries. As a result, thousands of Pratts were built across the state, and today Pratts constitute the most populous group of through trusses. With modest dimensions and standard design and detailing, the Pollock Bridge is a technologically representative pre-20th century example of this mainstay structural type.

NAME(S) OF STRUCTURE
Pollock 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 152000.3; Lewis County Court Record, Book 10: page 541 (27 June 1898), page 601 (28 November 1898) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Buck Horn Bridge
MHTD: 167001.5

LEWI19

DATE(S) OF CONSTRUCTION
1894

LOCATION
County Road 167 over Middle Fabius River; S31, T61N, R7W
1.5 miles northeast of Tolona; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION
fair

OWNER
Lewis County

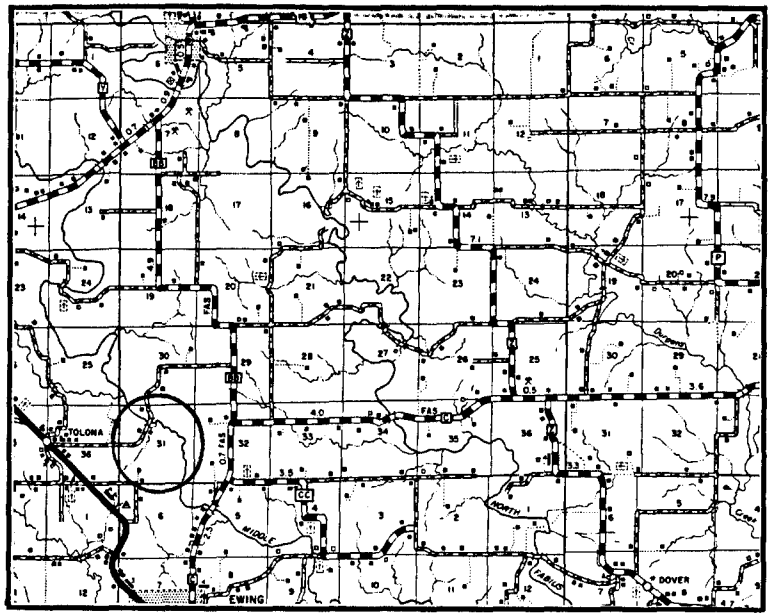
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	100.0'	substructure:	concrete-filled steel cylinder piers; timber pile abutments and wingwalls
total length:	141.0'	floor/decking:	asphalt on timber deck over steel stringers
roadway wdt.:	11.7'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped square or rectangular eyebars; vertical: 2 channels with lacing (2 square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; guardrail: 2 channels

Named after nearby Buck Horn School, the Buck Horn Bridge spans the Middle Fabius River northeast of Tolona in south-central Lewis County. Configured as a Pratt through truss and featuring pinned connections throughout, the superstructure rests on concrete-filled steel cylinder piers, with timber abutments. During the summer of 1894 Lewis County officials approved the construction for a bridge at this location and subsequently let a contract to the Missouri-based St. Louis Bridge and Iron Company to fabricate build the structure. Build for an aggregate cost of $1222.00, the bridge was completed before the new year. The Buck Horn bridge continues to service local vehicular traffic while maintaining a moderate degree of structural and historical integrity. It is a representative example of the pin-connected Pratt through truss - a mainstay structural type used extensively throughout Missouri in the early 20th century.

NAME(S) OF STRUCTURE

Buck Horn 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 167001.5; Lewis County Court Record, Book 9: page 443 (23 July 1894), page 500 (24 December 1894), page 512 (28 January 1895), page 602 (28 May 1895) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
La Grange Bridge
MHTD: 207001.7

LEWI21

DATE(S) OF CONSTRUCTION
1899

LOCATION
County Road 207 over Wyaconda River; S14/15, T61N, R6W
3.2 miles southwest of Canton; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING NRHP non-eligible (score: 45)

CONDITION
fair

OWNER
Lewis County

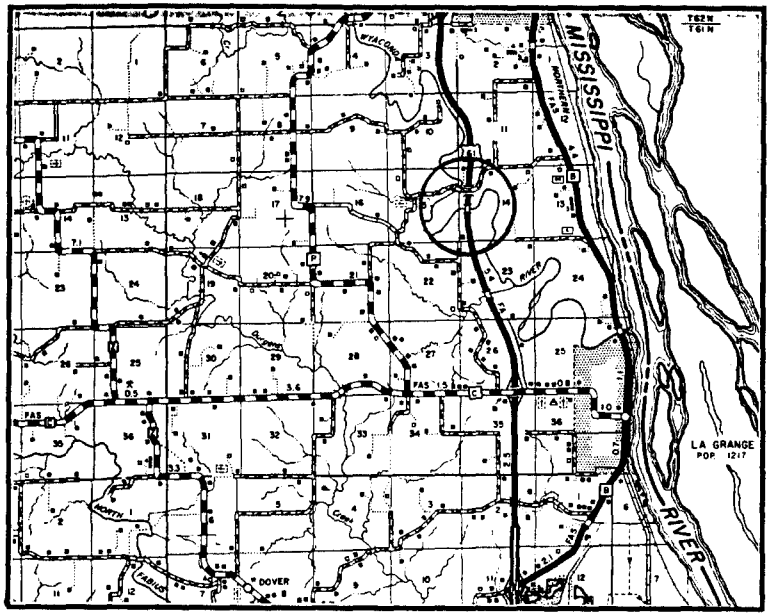
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	110.0'	substructure:	stone masonry abutments and wingwalls
total length:	112.0'	floor/decking:	timber deck (removed) over steel stringers
roadway wdt.:	14.8'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 looped square eyebars; hip vertical: 2 channels with lacing; diagonal: 2 looped square eyebars; counter: 1 round eyerod with turnbuckle; lateral bracing: round eyerod with turnbuckle; strut: 4 angles with spacers; portal strut: lattice with knee braces; floor beam: tapered "fishtail" plate girder, field-bolted to vertical; guardrail: 2 channels

Located in south-eastern Lewis County, southwest of Canton, this medium-span truss carries a gravel-surfaced county road over the Wyaconda River. The bridge consists of a single pinned Pratt truss, supported by stone masonry abutments and wingwalls. The La Grange Bridge was built in 1899 by the Massillon Bridge Company of Ohio for the aggregate sum of $3268.00. A local stone mason, J. Chinchen, was paid $100.00 by the county to build the masonry substructure. Since its completion in 1899, the La Grange Bridge carried local traffic at this rural crossing for numerous decades until its recent closure. Although the bridge's decking has been removed, the truss remains structurally intact. The Wyaconda River Bridge is a representative example of the pin-connected Pratt truss - a mainstay structural type used extensively throughout Missouri in the late 19th and early 20th centuries.

NAME(S) OF STRUCTURE

La Grange 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 207001.7; Lewis County Court Record, Book 11: page 126 (26 June 1899), page 191 (26 December 1899), page 278 (24 April 1900) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 9 July 1992.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Grassy Creek Bridge
MHTD: 246004.0

LEWI23

DATE(S) OF CONSTRUCTION
1898

LOCATION
county road over Grassy Creek; S12/1, T60N, R8W
1.7 miles northwest of Ewing; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 48)

CONDITION
fair

OWNER
Lewis County

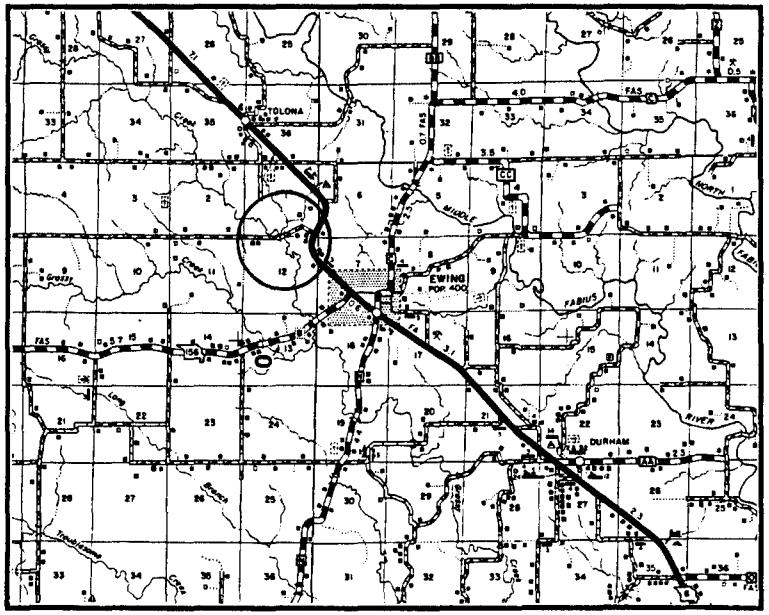
span number:	1	superstructure:	steel, pin-connected Pratt truss-leg bedstead
span length:	40.0'	substructure:	steel truss-leg abutments with timber backwalls
total length:	41.0'	floor/decking:	timber deck
roadway wdt.:	11.9'	other features:	no guardrails

This short-span truss crosses Grassy Creek northwest of Ewing. The structure consists of a single Pratt bedstead, supported by truss-leg piers and approached on one end by a stringer span. With pinned connections and a timber deck, the bridge was erected here in 1898 by the St. Louis Bridge and Iron Company for $435.00. Since that time the structure has carried vehicular traffic in relatively well-preserved condition.

In a bedstead truss, a single "leg" functioned as both end post and support at each corner of the structure. This combined super- and substructure reduced erection costs somewhat, but bedsteads were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Despite these weaknesses, numerous truss leg bedsteads were erected throughout Missouri in the late 1890s and early 1900s. Hundreds remain in place today; in fact, Missouri has probably more bedsteads than any other state. This bridge in Lewis County is distinguished as one of the earliest examples remaining in Missouri of this mainstay structural type: a well-preserved, small-scale example of a prevailing statewide construction trend.

NAME(S) OF STRUCTURE
Grassy Creek 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 246004.0; Lewis County Court Record Book 10 p. 540 (27 June 1898) and p. 601 (28 November 1898) - located at the Lewis County Courthouse, Monticello MO.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 July 1993

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bangert Bridge
MHTD: 264001.6

LEWI25

DATE(S) OF CONSTRUCTION
1900

LOCATION
County Road 264 over Middle Fabius River; S24, T60N, R7W
5.3 miles southeast of Ewing; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 41)

CONDITION
fair

OWNER
Lewis County

span number: 1
span length: 90.0'
total length: 109.0'
roadway wdt.: 12.0'

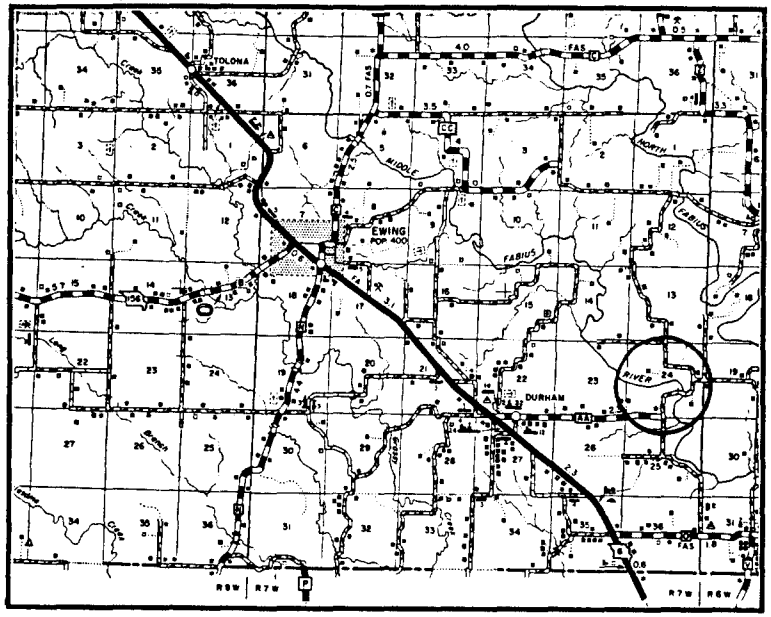
superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: north: stone abutments; south: concrete and stone abutments, steel stringer approach span with steel lattice guardrail; concrete-filled steel cylinder piers between approach span and main span on south
floor/decking: timber deck with wearing boards over timber deck
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped eyebars; vertical: 2 channels with lacing; hip vertical: 2 looped square eyebars; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round eyerod with threaded ends and turnbuckle on top; strut: 2 angles with knee braces; floor beam: I-beam, U-bolted to vertical; guardrail: steel lattice

Located in southern Lewis County, southeast of Ewing, this medium-span Pratt through truss carries a gravel-surfaced county road over the Middle Fabius River. The bridge consists of a single pinned Pratt truss, supported by stone abutments and wingwalls. The Bangert Bridge was built in 1900 by the Wrought Iron Steel Company of Ohio for the aggregate sum of $891.00. Since its completion late in 1900, the Bangert Bridge continues to carry local traffic at this rural crossing. The Middle Fabius River Bridge is a representative example of the pin-connected Pratt truss - a mainstay structural type used extensively throughout Missouri in the late 19th and early 20th centuries.

NAME(S) OF STRUCTURE

Bangert 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 264001.6; Lewis County Court Record, Book 11: page 314 (23 July 1900), page 370 (24 December 1900), page 462 (23 April 1901) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Gilead Bridge
MHTD: 268002.0

LEWI26

DATE(S) OF CONSTRUCTION
1895

LOCATION
County Road 268 over Middle Fabius River; S4/9, T60N, R7W
2.2 miles northeast of Ewing; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION
fair

OWNER
Lewis County

span number: 1
span length: 84.0'
total length: 102.0'
roadway wdt.: 12.0'

superstructure: steel, 5-panel, pin-connected Pratt through truss

substructure: west: concrete abutments and wingwalls, steel stringer approach span; east: stone abutment; stone pier between main and approach span on west

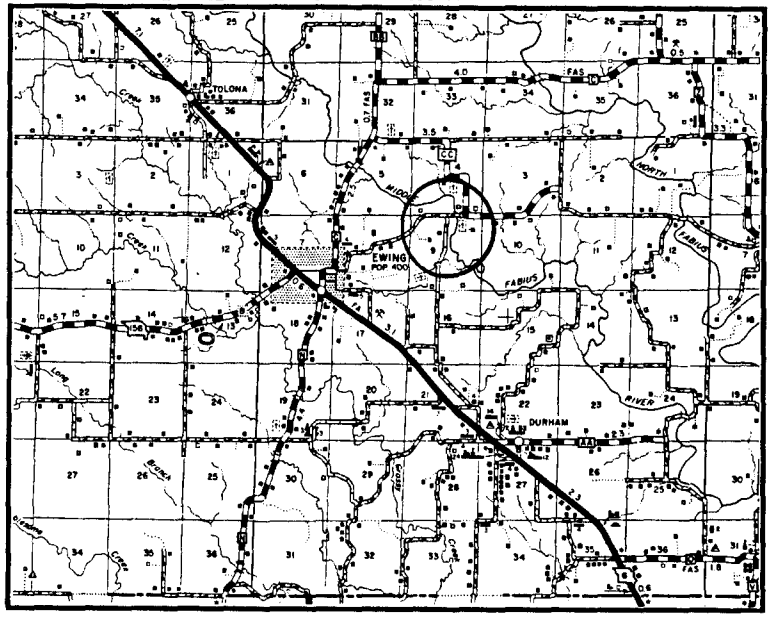
floor/decking:asphalt on timber deck over steel stringers

other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; hip vertical: looped round eyerod with WIBCo prong; diagonal: 2 looped eyebars with 2 prongs; counter: looped square eyebar with turnbuckle; lateral bracing: round eyerod with threaded ends and turnbuckle on top; strut: 2 channels; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; guardrail: 2 narrow steel channels; portal builder's plate: **1895 / WROUGHT IRON BRIDGE CO. / BUILDERS / CANTON OHIO**

This five-panel steel structure, spanning the Middle Fabius River, is located in south-central Lewis County northeast of Ewing. The 84-foot bridge is configured as a single-span Pratt through truss and features pinned connections and a stone and concrete substructure. Lewis County officials instructed George Roberts, county bridge commissioner, to inspect a site for a proposed bridge and to let a contract to build the structure. Soon afterwards, in June of 1895, the Canton, Ohio-based Wrought Iron Bridge Company was awarded the construction project. WIBCo began work on the substructure soon afterwards, and completed the bridge–for a cost of $544.00–in November the same year. Since its completion, the Gilead Bridge has continued to carry rural traffic in essentially unaltered condition. It is a representative example of the pin-connected Pratt through truss: a mainstay structural type used extensively throughout Missouri in the late 19th and early 20th centuries.

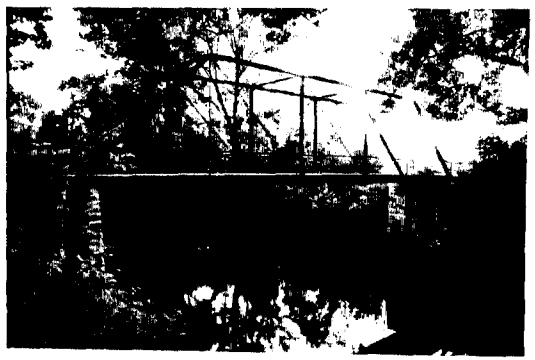
NAME(S) OF STRUCTURE
Gilead Bridge

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 268002.0; Lewis County Court Record, Book 9: page 593 (27 May 1895), page 621 (25 June 1895); Book 10: page 34 (25 November 1895) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Maywood Bridge
MHTD: 276002.0

LEWI27

DATE(S) OF CONSTRUCTION
1894

LOCATION
County Road 276 over Middle Fabius River; S30, T60N, R6W
3.3 miles southeast of Durham; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 53)

CONDITION
fair

OWNER
Lewis County

span number: 1
span length: 140.0'
total length: 168.0'
roadway wdt.: 11.9'

superstructure: steel, 8-panel, pin-connected Pratt through truss, with steel stringer approach span on each end

substructure: timber abutments and wingwalls (steel pile bent piers with timber backing), stone piers capped with concrete

floor/decking: timber deck over steel stringers

other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; hip vertical: 2 looped square eyebars; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends and turnbuckle on top; strut: 4 angles with lacing and knee braces; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; guardrail: 2 channels

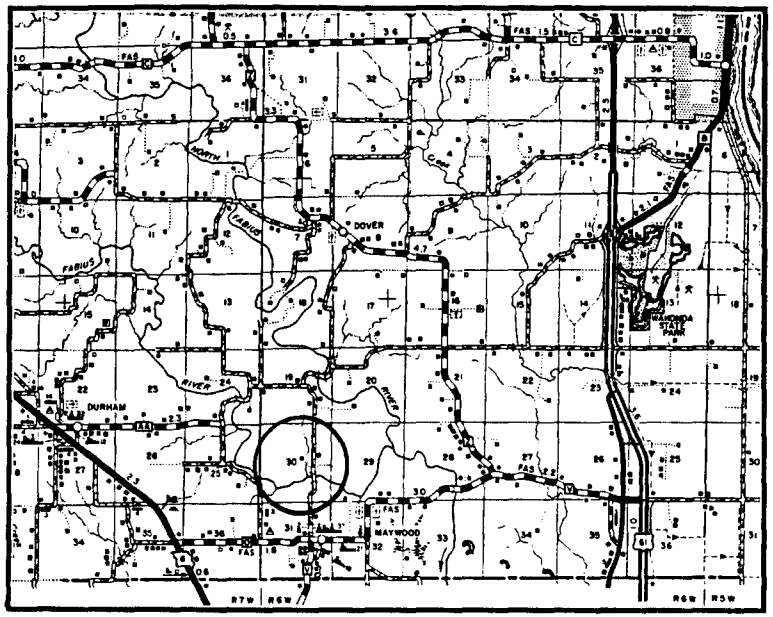
This eight-panel steel structure spans the Middle Fabius River in southern Lewis County, some three miles southeast of Durham. Approached by a steel stringer on either end and featuring pinned connections throughout, this Pratt through truss dates to 1894. Early that year county officials let a construction contract to the St. Louis Bridge and Iron Company for the fabrication and erection of a bridge at this site. The contractor began work on the substructure soon thereafter and completed the 140-foot bridge in November of 1894. Total cost of the structure was $1400.00. Since its construction, the Maywood Bridge, as it is locally known, continues to carry county road traffic in essentially unaltered condition.

In Missouri, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the late 19th and early 20th centuries. As a result, thousands of Pratts were built across the state, and today Pratts constitute the most populous group of through trusses. With modest dimensions and standard design and detailing, the Maywood Bridge is a technologically undistinguished pre-20th century example of this mainstay structural type.

NAME(S) OF STRUCTURE

Maywood 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 276002.0; Lewis County Court Record, Book 9: page 490 (26 November 1894), page 602 (28 May 1895) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
James Ford Bridge
MHTD: 308000.2

LEWI29

DATE(S) OF CONSTRUCTION
1911

LOCATION
County Road 308 over North Fabius River; S19, T60N, R6W
3.5 miles northeast of Durham; Lewis County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION
fair

OWNER
Lewis County

span number: 2
span length: 105.0'; 60.0'
total length: 165.0'
roadway wdt.: 11.5'

superstructure: steel, 6-panel, pin-connected Pratt through truss, with rigid-connected Pratt pony truss approach span on east side

substructure: stone pier between pony approach span and main span on east side; concrete abutments and wingwalls

floor/decking: timber deck with wearing boards over steel stringers

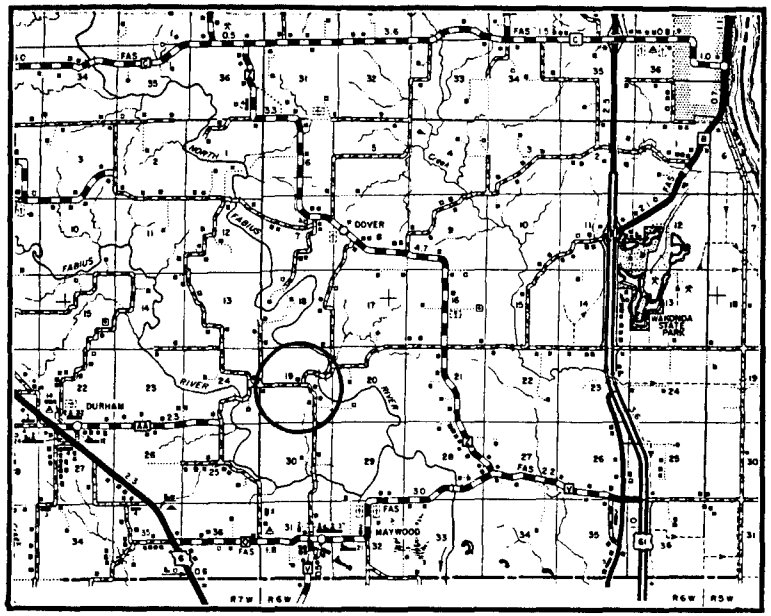
other features: Through truss - upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; strut: angle with bracing; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle; Pony truss - upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle

This six-panel steel structure spans the North Fabius River in southeast Lewis County, some three miles northeast of Durham. Approached by a Pratt pony truss on the east end and featuring pinned connections throughout, this Pratt through truss dates to 1910. Late in the year the county highway commissioner, Thomas J. Sharp, let a construction contract to the Illinois-based Decatur Bridge Company for the fabrication and erection of a bridge at this site. The contractor began work on the substructure soon thereafter and completed the 104-foot bridge in 1911. Total cost of the crossing was $2253.00. Since its construction, the James Ford Bridge, as it is locally known, continues to carry county road traffic in essentially unaltered condition.

In Missouri, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the late 19th and early 20th centuries. As a result, thousands of Pratts were built across the state, and today Pratts constitute the most populous group of through trusses. With modest dimensions and standard design and detailing, the James Ford Bridge is a technologically undistinguished early 20th century example of this mainstay structural type.

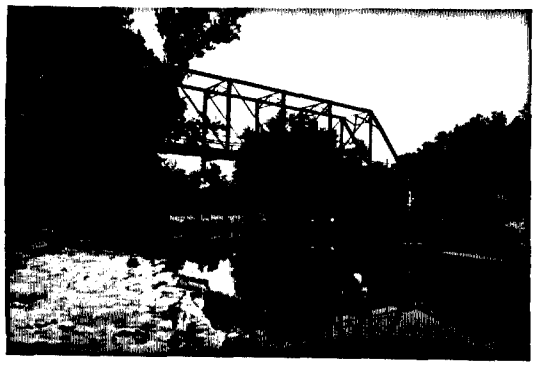
NAME(S) OF STRUCTURE
James Ford Bridge

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 308000.2; Lewis County Court Record, Book 14: page 587 (28 November 1910); Book 15: page 352 (24 April 1912) - located at the Lewis County Courthouse, Monticello MO; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	28 July 1992

LINCOLN COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
LINC01	J 975R	Cuivre River Bridge	**4-180' riveted Parker through truss**
			1933 M.E. Gillioz, Monett MO
LINC02	K 334	Lost Creek Bridge	**1-110' riveted Pratt through truss**
			1938 M.E. Gillioz, Monett MO
LINC03	K 340	Sandy Creek Bridge	**1-120' riveted Pratt through truss**
			1938 R.B. Potashnick
LINC04	K 341	McLeans Branch Bridge	**1-110' riveted Pratt through truss**
			1938 R.B. Potashnick
LINC05	L 844	Little Sugar Creek Culvert	**3- 18' multiplate steel arch culvert**
			1941
*LINC06	009002.2	Moss Ford Bridge	(replaced)
*LINC07	078002.0	Big Lead Creek Bridge	(replaced)
LINC08	111002.0	Lead Creek Bridge	(replaced)
*LINC09	117000.3	Silex Bridge	**1-140' pinned Pratt through truss**
			c1915
*LINC10	118000.3	Mill Creek Bridge	1- 67' pinned Pratt pony truss
			1887 St. Louis Bridge and Iron Co.
*LINC11	130003.0	Briscoe Bridge	**1-100' pinned Pratt through truss**
			c1915
*LINC12	165002.2	Dameron Bridge	(replaced)
*LINC13	175002.5	Cuivre River Bridge	**1-130' pinned Pratt through truss**
			c1910
*LINC14	216000.6	Frenchman's Bluff Bridge	**1-200' pinned Pratt through truss**
			1887 King Iron Bridge Company
*LINC15	319000.3	Chain of Rocks Bridge	**1-190' pinned Pratt through truss**
			1893 St. Louis Bridge and Iron Co.
*LINC16	333001.4	Old Monroe Bridge	**1-200' pinned Pennsylv. through truss**
			1908 Joliet Bridge and Iron Co.
LINC17	335002.1	Cuivre River Bridge	**1-120' pinned Pratt through truss**
			c1910
*LINC18	350000.3	Moscow Mills Bridge	**1-177' pinned Pratt through truss**
			1885 Raymond and Campbell

EXCLUDED:

Pratt pony truss
107000.2 159001.7

Warren pony truss
005001.0 107001.7 110002.0

Steel stringer

J 974	S 143	S 731	T 291	T 420	X 40	031000.1
031000.6	057001.5	057002.0	101000.3	131500.1	159001.0	159003.0
170000.4	198000.4	233001.0	240001.8	240002.6	296001.6	

LINCOLN COUNTY

EXCLUDED (cont.):

Concrete girder

H 602	H 768R	H 964	J 125			

Concrete slab

G 435R	K 330

Concrete box culvert

K 332	K 335	K 361	K 635	K 686	K 687	K 688
T 347	X 351	4275001				

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	5	9	0	0	14
Excluded	21	19	0	0	40
	26	28	0	0	54 structures

Cuivre River Bridge

LINC01

GENERAL DATA

structure no.: J 975R
county: Lincoln
city/town: 2.0 miles east of Troy
feature inters.: Cuivre River
cadastral grid: S30, T48N, R1E
highway route: State Highway 47
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 8-panel, rigid-connected Parker through truss, with steel stringer approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1; 3
span length: 180.0'; 150.0'
total length: 791.0'
roadway width: 22.0'
condition: good
alterations: steel stringer approach spans added
floor/decking : concrete deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1933
erection cost: $76,563.74
designer: Missouri State Highway Department
fabricator : unknown
contractor: M.E. Gillioz, Monett MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J 975R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 51
evaluation: NRHP possibly eligible (multiple-span example of a MSHD standard long-span truss configuration)

inventoried by: Clayton B. Fraser 8 January 1994

Lost Creek Bridge

LINC02

GENERAL DATA

structure no.: K 334
county: Lincoln
city/town: southeastern edge of Elsberry
feature inters.: Lost Creek
cadastral grid: S27, T51N, R2E
highway route: State Highway 79
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

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

span number: 1
span length: 110.0'
total length: 115.0'
roadway width: 24.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel guardrail

HISTORICAL DATA

erection date: 1938
erection cost: $17,662.98
designer: Missouri State Highway Department
fabricator : unknown
contractor: M.E. Gillioz, Monett MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 334; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 42
evaluation: NRHP determined non-eligible (undistinguished example of MSHD truss design in the 1930s)

inventoried by: Clayton B. Fraser 8 January 1994

Sandy Creek Bridge

LINC03

GENERAL DATA

structure no.: K 340
county: Lincoln
city/town: northern edge of Foley
feature inters.: Sandy Creek
cadastral grid: S35, T50N, R2E
highway route: State Highway 79
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt through truss, skewed; two steel stringer approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 120.0'
total length: 227.0'
roadway width: 24.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1938
erection cost: $36,611.08
designer: Missouri State Highway Department
fabricator : unknown
contractor: R.B. Potashnick

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 341; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO

sign. rating: 52
evaluation: NRHP determined non-eligible (standard example of MSHD truss design in the 1930s, slightly noteworthy for skewed configuration)

inventoried by: Clayton B. Fraser 8 January 1994

McLeans Branch Bridge

LINC04

GENERAL DATA

structure no.: K 341
county: Lincoln
city/town: northern edge of Winfield
feature inters.: McLeans Branch
cadastral grid: S23, T49N, R2E
highway route: State Highway 79
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

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

span number: 1
span length: 110.0'
total length: 116.0'
roadway width: 24.0'
condition: fair
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1938
erection cost: $22,361.25
designer: Missouri State Highway Department
fabricator : unknown
contractor: R.B. Potashnick

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 341; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO

sign. rating: 49
evaluation: NRHP non-eligible (standard example of MSHD truss design in the 1930s, slightly noteworthy for skewed configuration)

inventoried by: Clayton B. Fraser 8 February 1994

Little Sugar Creek Culvert

LINC05

GENERAL DATA

structure no.: L 844
county: Lincoln
city/town: 4.2 miles northeast of Troy
feature inters.: Little Sugar Creek
cadastral grid: S21, T48N, R1E
highway route: State Highway 147
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: multiplate steel arch culvert, with concrete arch approach spans
substructure: concrete abutments and piers

span number: 3
span length: 18.0'
total length: 81.0'
roadway width: 18.2'
condition: fair
alterations: unknown
floor/decking : asphalt over earth fill
other features: stone parapets and stone veneer on sidewalls

HISTORICAL DATA

erection date: 1941
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number L 844; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO

sign. rating: 26
evaluation: NRHP non-eligible (technologically undistinguished, small-scale structure)

inventoried by: Clayton B. Fraser 8 February 1994

Silex Bridge

LINC09

GENERAL DATA

structure no.: 117000.3
county: Lincoln
city/town: 0.5 mile south of Silex
feature inters.: North Fork of the Cuivre River
cadastral grid: S7, T50N, R1W
highway route: County Road 117
highway distr.: 3
current owner: Lincoln County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Pratt through truss; 4-panel, rigid-connected Warren pony truss at south approach; steel stringer approach span at north end
substructure: concrete abutments with concrete-filled steel cylinder piers

span number: 1
span length: 140.0'
total length: 210.0'
roadway width: 13.7'
condition: fair
alterations: none
floor/decking : timber 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: 1 round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: unknown
fabricator : Illinois Steel Company, Chicago IL
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 117000.3

sign. rating: 30
evaluation: NRHP non-eligible (typically configured example of common structure type, inadequately documented)

inventoried by: Clayton B. Fraser 8 February 1994

Mill Creek Bridge

LINC10

GENERAL DATA

structure no.: 118000.3
county: Lincoln
city/town: southeastern edge of Silex
feature inters.: Mill Creek
cadastral grid: S7, T50N, R1W
highway route: County Road 118
highway distr.: 3
current owner: Lincoln County

STRUCTURAL DATA

superstructure: wrought iron, 5-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 67.0'
total length: 67.0'
roadway width: 14.0'
condition: fair
alterations: abutments replaced
floor/decking : timber deck over steel or iron 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, with star iron outriders; diagonal: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: plate girder, U-bolted to verticals; guardrail: 2 angles

HISTORICAL DATA

erection date: 1887
erection cost: unknown
designer: St. Louis Bridge and Iron Company, St. Louis MO
fabricator : St. Louis Bridge and Iron Company, St. Louis MO
contractor: St. Louis Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 118000.3; Lincoln County Court Record, Book H:page 252 (12 November 1885), page 293 (24 June 1886), page 301 (12 August 1886), pages 316 and 319 (10 November 1886), page 327 (20 December 1886), pages 328 and 329 (21 December 1886), page 331 (22 December 1886), page 380 (19 May 1887), page 387 (9 August 1887), located at Lincoln County Courthouse, Troy, Missouri; field inspection by Clayton Fraser, 16 October 1989.

sign. rating: 57
evaluation: NRHP possibly eligible (early example of mainstay structural type)

inventoried by: Clayton B. Fraser 8 February 1994

Briscoe Bridge

LINC11

GENERAL DATA

structure no.: 130003.0
county: Lincoln
city/town: western edge of Briscoe
feature inters.: Cuivre River
cadastral grid: S21 / Survey 1745, T50N, R1W
highway route: County Road 130
highway distr.: 3
current owner: Lincoln County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 100.0'
total length: 130.0'
roadway width: 15.0'
condition: fair
alterations: none
floor/decking : concrete deck over steel stringers
other features: guardrail: 2 channels

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: unknown
fabricator : Illinois Steel Company, Chicago, IL
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 130003.0; field inspection by Clayton Fraser, 16 October 1989.

sign. rating: 27
evaluation: NRHP non-eligible (typical example of common structural type, inadequately documented)

inventoried by: Clayton B. Fraser 8 February 1994

Cuivre River Bridge

LINC13

GENERAL DATA

structure no.: 175002.5
county: Lincoln
city/town: 3.8 miles northeast of Truxton
feature inters.: Cuivre River
cadastral grid: S7, T49N, R3W
highway route: County Road 175
highway distr.: 3
current owner: Lincoln County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 130.0'
total length: 190.0'
roadway width: 13.7'
condition: fair
alterations: unknown
floor/decking : concrete deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 175002.5; field inspection by Clayton Fraser, 16 October 1989.

sign. rating: 28
evaluation: NRHP non-eligible (typically configured, inadequately documented example of a common structural type)

inventoried by: Clayton B. Fraser 8 February 1994

Frenchman's Bluff Bridge

LINC14

GENERAL DATA

structure no.: 216000.6
county: Lincoln
city/town: 2.1 miles northeast of Troy
feature inters.: Cuivre River
cadastral grid: S18/19, T49N, R1E
highway route: County Road 216
highway distr.: 3
current owner: Lincoln County

STRUCTURAL DATA

superstructure: wrought iron, 10-panel, pin-connected Pratt through truss
substructure: stone masonry abutments

span number: 1
span length: 200.0'
total length: 200.0'
roadway width: 15.7'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 built-up channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 built-up channels with lacing (2 looped square eyebars at the hip); diagonal: 2 punched rectangular eyebars; strut: 4 angles with lacing, braced; lateral bracing: round rod with threaded ends; floor beam: tapered "fishtail" plate girder, U-bolted to verticals; guardrail: 2 channels; builder's plate: **1886 Built by King Bridge Company Canton Ohio**

HISTORICAL DATA

erection date: 1886-87
erection cost: unknown
designer: King Iron Bridge Company, Cleveland OH
fabricator : King Iron Bridge Company, Cleveland OH; Phoenix Iron Company, Philadelphia PA
contractor: King Iron Bridge Company, Cleveland OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 216000.6; Lincoln County Court Record, Book: H: page 252 (12 November 1885), page 301 (12 August 1886), pages 316 and 319 (10 November 1886), page 326 (13 November 1886), page 332 (22 December 1886), page 339 (15 February 1887), page 349 (18 February 1887), page 358 (8 March 1887), page 380 (19 March 1887); Lincoln County Court Record, Book I: page 152 (18 September 1890), located at Lincoln County Courthouse, Troy, Missouri; field inspection by Clayton Fraser, 16 October 1989.

Frenchman's Bluff Bridge

sign. rating: 65
evaluation: NRHP possibly eligible (outstanding early, long-span example of mainstay structural type)

inventoried by: Clayton B. Fraser 8 February 1994

Chain of Rocks Bridge

LINC15

GENERAL DATA

structure no.: 319000.3
county: Lincoln

city/town: 0.3 mile south of Chain of Rocks
feature inters.: Cuivre River
cadastral grid: S20, T48N, R2E
highway route: County Road 899 / Sycamore St. and Main
highway distr.: 3
current owner: Lincoln County

STRUCTURAL DATA

superstructure: steel or wrought iron, 10-panel, pin-connected Pratt through truss; 4 curved, steel stringer approach spans at the south side, 2 steel stringer approach spans at north end
substructure: concrete abutments and stone masonry piers

span number: 1
span length: 190.0'
total length: 303.0'
roadway width: 13.8'

condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 punched rectangular eyebars at the hip); diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 2 angles; floor beam: I-beam, U-bolted to vertical; guardrail: 2 channels; builder's plate: **1893 St. Louis Bridge and Iron Company Builders** with listing of county officials

HISTORICAL DATA

erection date: 1893
erection cost: $4800.00
designer: St. Louis Bridge and Iron Company, St. Louis MO
fabricator : St. Louis Bridge and Iron Company, St. Louis MO
contractor: St. Louis Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 319000.3; Lincoln County Court Record, Book H: page 224 (13 May 1885); Lincoln County Court Record, Book: J: page 224 (14 August 1893), page 22 (13 November 1893), page 29 (16 November 1893), Lincoln County Court Record K: page 30 (7 April 1898), page 428 (3 November 1909), located at Lincoln County Courthouse, Troy, Missouri; field inspection by Clayton Fraser, 16 October 1989.

Chain of Rocks Bridge

sign. rating: 57
evaluation: NRHP possibly eligible (outstanding early, long-span example of mainstay structural type)

inventoried by: Clayton B. Fraser 8 February 1994

Old Monroe Bridge

LINC16

GENERAL DATA

structure no.: 333001.4
county: Lincoln
city/town: 1.2 miles east of Old Monroe
feature inters.: Cuivre River
cadastral grid: S7, T48N, R3E
highway route: County Road 333
highway distr.: 3
current owner: Lincoln County

STRUCTURAL DATA

superstructure: steel, 11-panel, pin-connected Parker through truss, with steel stringer approach span on each side
substructure: timber pile bent abutments; timber pile with concrete cap pier on north end; concrete pier on south end

span number: 1
span length: 200.0'
total length: 234.0'
roadway width: 15.7'
condition: fair
alterations: substructure partially replaced
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 2 angles, braced; floor beam: I-beam, field-bolted to verticals; guardrail: 2 channels; portal builder's plate: **1908 Built By The Joliet Bridge & Iron Co. Joliet, Ill.** with listing of St. Charles County officials

HISTORICAL DATA

erection date: 1908
erection cost: $3399.32
designer: Joliet Bridge and Iron Company, Joliet IL
fabricator : Joliet Bridge and Iron Company, Joliet IL
contractor: Joliet Bridge and Iron Company, Joliet IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 333001.4; Lincoln County Court Record, Book L: page 279 (8 April 1908), page 293 (2 June 1908), page 326 (4 November 1908), located at Lincoln County Courthouse, Troy, Missouri; field inspection by Clayton Fraser, 16 May 1989.

sign. rating: 55
evaluation: NRHP possibly eligible (well-preserved, long-span example of uncommon Pratt truss subtype)

inventoried by: Clayton B. Fraser 8 February 1994

Cuivre River Bridge

LINC17

GENERAL DATA

structure no.: 335002.1
county: Lincoln
city/town: 2.4 miles northeast of Truxton
feature inters.: West Fork of the Cuivre River
cadastral grid: S10, T49N, R3W
highway route: County Road 335
highway distr.: 3
current owner: Lincoln County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 120.0'
total length: 200.0'
roadway width: 13.8'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 335002.1

sign. rating: 28
evaluation: NRHP non-eligible (undocumented example of a common truss configuration, with standard detailing, unremarkable dimensions and an average degree of physical integrity.)

inventoried by: Clayton B. Fraser 8 February 1994

Moscow Mills Bridge

LINC18

GENERAL DATA

structure no.: 350000.3
county: Lincoln
city/town: Moscow Mills
feature inters.: Cuivre River
cadastral grid: S4 / Survey 1791, T48N, R1E
highway route: County Road 350
highway distr.: 3
current owner: Lincoln County

STRUCTURAL DATA

superstructure: wrought iron, 10-panel, pin-connected Pratt through truss, with steel or iron stringer approach span at each end
substructure: concrete abutments; concrete-filled iron cylinder pier at east side; stone pier at west end

span number: 1
span length: 177.0'
total length: 215.0'
roadway width: 16.0'
condition: fair
alterations: none
floor/decking : asphalt on timber 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: 1 square eyebar with turnbuckle; lower lateral bracing: round rod with threaded ends; upper lateral bracing: round eyerod with turnbuckle; strut: 2 angles; floor beam: tapered "fishtail" plate girder, U-bolted to verticals; guardrail: 2 channels

HISTORICAL DATA

erection date: 1885
erection cost: $3825.00
designer: unknown
fabricator : Carnegie Iron Company, Pittsburgh PA
contractor: Raymond and Campbell

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 350000.3; Lincoln County Court Record, Book H: page 233 (9 June 1885), page 234 (1 July 1885), page 245 (14 August 1885), page 252, (12 November 1885), page 259, (15 December 1885), page 270 (12 February 1886), page 380 (19 May 1897), page 470 (17 May 1888); Court Record Book I: page 9 (13 February 1890), page 144 (14 August 1890), page 152 (18 September 1890), - located at Lincoln County Courthouse, Troy, Missouri. field inspection by Clayton Fraser, 16 May 1989.

Moscow Mills Bridge

sign. rating: 61
evaluation: NRHP possibly eligible (early, long-span example of mainstay structural type, well preserved)

inventoried by: Clayton B. Fraser 8 February 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cuivre River Bridge
MHTD: J 975R

LINC01

DATE(S) OF CONSTRUCTION
1933

LOCATION
State Highway 47 over Cuivre River; S30, T48N, R1E
2.0 miles east of Troy; Lincoln County, Missouri

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP possibly eligible (score: 51)

CONDITION
good

OWNER
Missouri Highway and Transportation Department

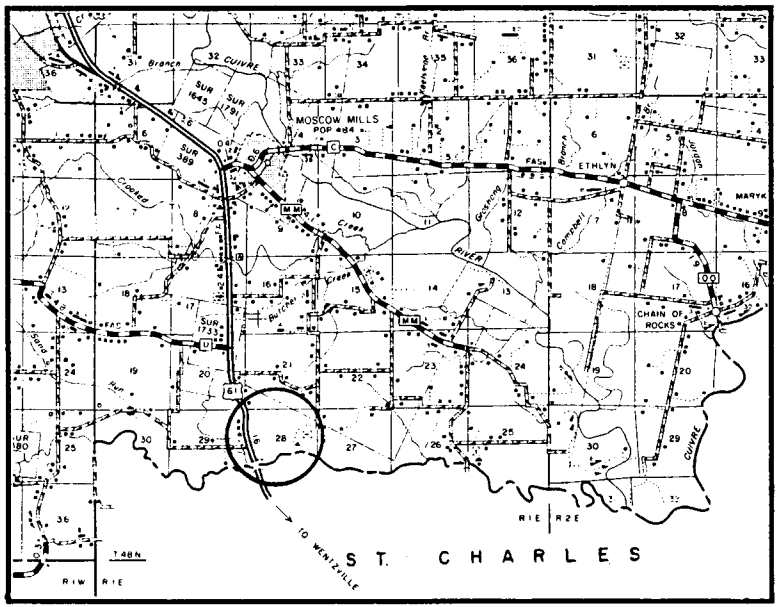
span number:	1; 3	superstructure:	steel, 8-panel, rigid-connected Parker through truss, with steel stringer approach spans
span length:	180.0'; 150.0'	substructure:	concrete abutments, wingwalls and piers
total length:	791.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	22.0'	other features:	steel guardrails

This crossing of the Cuivre River is located on Missouri Highway 47, two miles east of Troy. The 180-foot Parker truss channel span is flanked by three shorter Parkers, with three steel stringer approach spans. Support for the superstructure is provided by concrete abutments and piers, with steel pile bent piers under the steel stringer spans. Design work was prepared by the Missouri State Highway Department in 1933. On March May 5th, M.E, Gillioz of Monett, Missouri, received a contract for the bridge's erection. Apparently completed later that year, the structure has since carried moderate to heavy traffic loads, with the addition of the steel stringers as the only alteration of note.

Many of the large-scale bridges designed by the Missouri State Highway Department in the 1920s and 1930s were replacements for earlier county-built structures. The Cuivre River Bridge ranks among the longest of these multiple-span steel truss bridges built during this period. The rigid-connected Parker trusses that comprise the bridge feature standard MSHD design, but this bridge is distinguished by its multiplicity of spans and overall structure length.

NAME(S) OF STRUCTURE
Cuivre River 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 975R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	8 February 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Silex Bridge LINC09
MHTD: 117000.3

DATE(S) OF CONSTRUCTION
c1915

LOCATION
County Road 117 over North Fork of the Cuivre River; S7, T50N, R1W
0.5 mile south of Silex; Lincoln County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
fair

OWNER
Lincoln County

span number: 1
span length: 140.0'
total length: 210.0'
roadway wdt.: 13.7'

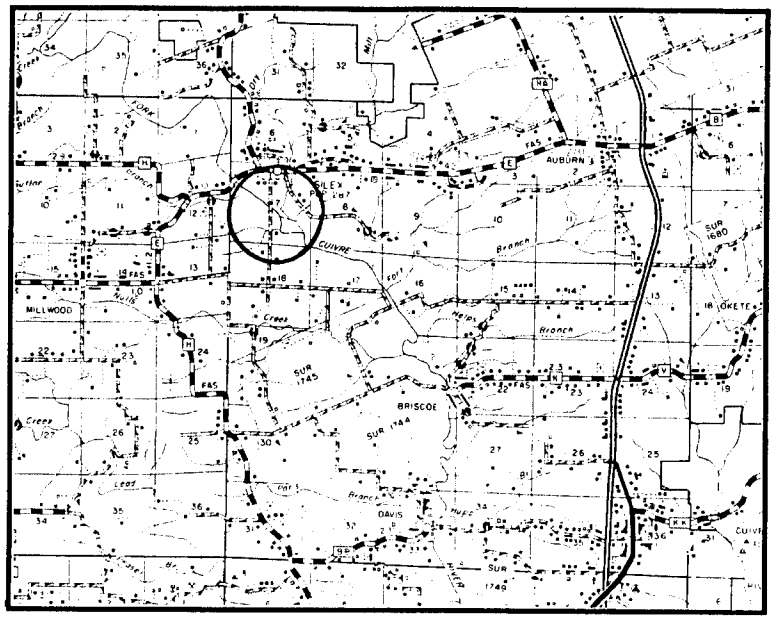
superstructure: steel, 8-panel, pin-connected Pratt through truss; 4-panel, rigid-connected Warren pony truss at south approach; steel stringer approach span at north end
substructure: concrete abutments with concrete-filled steel cylinder piers
floor/decking: timber deck over steel stringers
other features: 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: 1 round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels

Located less than a mile south of Silex in western Lincoln County this 140-foot truss carries an unpaved county road across the North Fork of the Cuivre River. The superstructure is configured as a single-span, pinned Pratt through truss, flanked on the south end by a four-panel riveted Warren pony truss approach span, Concrete abutments and concrete-filled steel cylinder piers provide support. Specific reference to this bridge was not found in Lincoln County records, but based on its appearance and physical condition, it was probably built circa 1915. During the 1910s the Missouri Bridge and Iron Company of Saint Louis and the Missouri Valley Bridge and Iron Company based in Leavenworth, Kansas, contracted to build nearly all of Lincoln County's bridges. One of these two firms probably erected this bridge, but confirming documentation has not been uncovered. Today, the bridge is little changed from its original construction. As such, it possesses a relatively high degree of historical integrity.

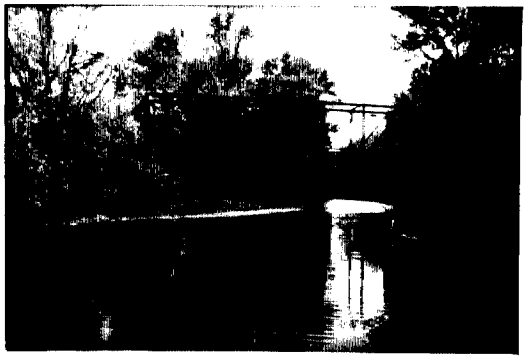
The Silex Bridge typifies Pratt through truss design during its period of construction –it is among thousands of such bridges built throughout Missouri in the early 20th century. Hundreds of these bridges still exist, as identified by the historic bridge inventory, and with its construction history undocumented, the structure is of marginal interpretive value.

NAME(S) OF STRUCTURE
Silex 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 117000.3.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
8 February 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mill Creek Bridge
MHTD: 118000.3

LINC10

DATE(S) OF CONSTRUCTION
1887

LOCATION
County Road 118 over Mill Creek; S7, T50N, R1W
southeastern edge of Silex; Lincoln County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 57)

CONDITION
fair

OWNER
Lincoln County

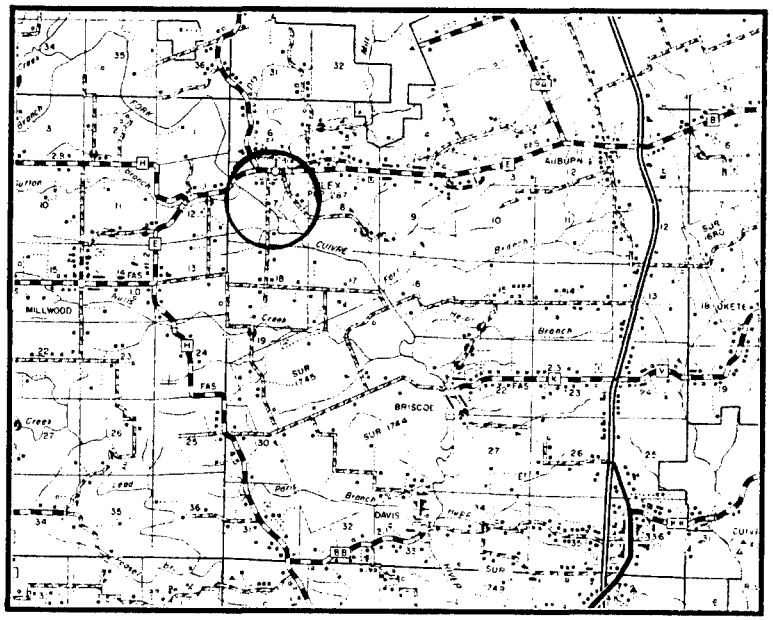
span number:	1	superstructure:	wrought iron, 5-panel, pin-connected Pratt pony truss
span length:	67.0'	substructure:	concrete abutments and wingwalls
total length:	67.0'	floor/decking:	timber deck over steel or iron stringers
roadway wdt.:	14.0'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing, with star iron outriders; diagonal: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: plate girder, U-bolted to verticals; guardrail: 2 angles

Erected in 1887 by the St. Louis Bridge and Iron Company, the Mill Creek Bridge is one of Missouri's oldest remaining pin-connected Pratt pony trusses. Minutes of the Lincoln County Court indicate that efforts to build the bridge began in June of 1886 when the Lincoln County Court employed John F. Wilson to oversee the construction of this bridge, and another structure at Frenchman's Bluff. By November, Frank Wilson (perhaps John's brother) had completed preliminary surveys for both crossings, and construction began soon after. Subsequent references in county court minutes do not discuss construction of the Mill Creek Bridge in great detail, but they do list several warrants for the bridge paid to St. Louis Bridge and Iron. Other warrants for work on the bridge were paid to W.D. Jameson, presumably a local contractor, who built its abutments. the Mill Creek Bridge has since carried light wagon and automobile traffic for more than a century. The substructure features new concrete abutments, but the original superstructure remains structurally unchanged.

As Lincoln County's oldest remaining pinned pony truss, the Mill Creek Bridge is historically noteworthy as an intact remnant of early transportation. The structure is technologically significant as a very early example of Pratt pony truss construction–Missouri's mainstay structural type for short-span crossings in the 19th and 20th centuries. With its star iron outriders, plate girder floor beams and U-bolted verticals, the Mill Creek Bridge is a strong visual reminder of early truss bridge construction in Missouri.

NAME(S) OF STRUCTURE
Mill Creek 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 118000.3; Lincoln County Court Record, Book H: page 252 (12 November 1885), page 293 (24 June 1886), page 301 (12 August 1886), pages 316 and 319 (10 November 1886), page 327 (20 December 1886), pages 328 and 329 (21 December 1886), page 331 (22 December 1886), page 380 (19 May 1887), page 387 (9 August 1887) - located at Lincoln County Courthouse, Troy MO; field inspection by Clayton Fraser, 16 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	8 February 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Briscoe Bridge LINC11
MHTD: 130003.0

DATE(S) OF CONSTRUCTION
c1915

LOCATION
County Road 130 over Cuivre River; S21 / Survey 1745, T50N, R1W
western edge of Briscoe; Lincoln County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
fair

OWNER
Lincoln County

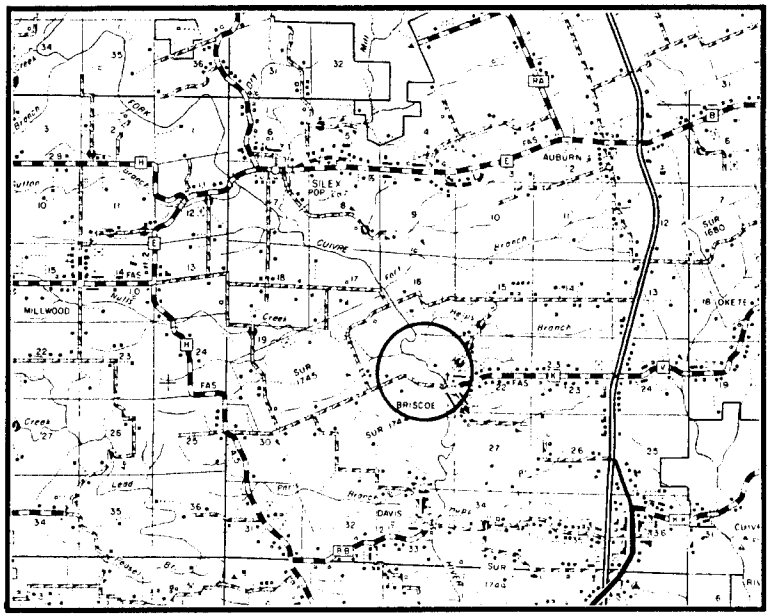
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss, with steel stringer approach spans
span length:	100.0'	substructure:	concrete abutments and wingwalls; concrete-filled steel cylinder piers
total length:	130.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	15.0'	other features:	guardrail: 2 channels

Located on the western edge of Briscoe, this medium-span through truss carries an unpaved county road across the North Fork of the Cuivre River. The structure is configured as a single-span, pinned Pratt through truss with concrete abutments and concrete-filled steel cylinder piers providing support. Specific reference to this bridge was not found in Lincoln County records, but based on its appearance and physical condition, it was probably built circa 1915. During the 1910s the Missouri Bridge and Iron Company of Saint Louis, and the Missouri Valley Bridge and Iron Company based in Leavenworth, Kansas, contracted to build nearly all of Lincoln County's bridges. One of these two firms probably erected this bridge, but confirming documentation has not been uncovered. The bridge is today little changed from its original construction. As such it possesses a relatively high degree of structural integrity.

The Briscoe Bridge is a typically built Pratt through truss. Of below-average span length and with standard detailing, the bridge is of limited technological significance. Similarly, with its construction history undocumented, the structure has little interpretive value.

NAME(S) OF STRUCTURE
Briscoe 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 130003.0; field inspection by Clayton Fraser, 16 October 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
8 February 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Frenchman's Bluff Bridge
MHTD: 216000.6

LINC14

DATE(S) OF CONSTRUCTION
1886-87

LOCATION
County Road 216 over Cuivre River; S18/19, T49N, R1E
2.1 miles northeast of Troy; Lincoln County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 65)

CONDITION
fair

OWNER
Lincoln County

span number:	1	superstructure:	wrought iron, 10-panel, pin-connected Pratt through truss
span length:	200.0'	substructure:	stone masonry abutments
total length:	200.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.7'	other features:	upper chord and inclined end post: 2 built-up channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 built-up channels with lacing (2 looped square eyebars at the hip); diagonal: 2 punched rectangular eyebars; strut: 4 angles with lacing, braced; lateral bracing: round rod with threaded ends; floor beam: tapered "fishtail" plate girder, U-bolted to verticals; guardrail: 2 channels; builder's plate: **1886 Built by King Bridge Company Canton Ohio**

From its formation in 1819 until the 1880s, Lincoln County did not build any permanent bridges across the Cuivre River, which cut across the southern part of the county. Instead, the county court authorized ferries to transport horse and wagon traffic across the river at various points, beginning with the Old Monroe ferry in 1821. In 1885 the judges began contemplating erection of the first major all-metal spans over the Cuivre at Moscow Mills, Frenchman's Bluff and Rig's Ford. The Moscow MIls Bridge–the county's first long-span iron truss–was built that year. In the fall of 1886, the judges ordered county bridge commissioner John Wilson to survey the Frenchman's Bluff site and advertise for competitive bids for the bridge's construction. A contract was let to local mason James Linahan to build the massive limestone abutments, priced at $8.00 per cubic yard. Linahan completed the abutments in early November for a total cost of $1279.20.

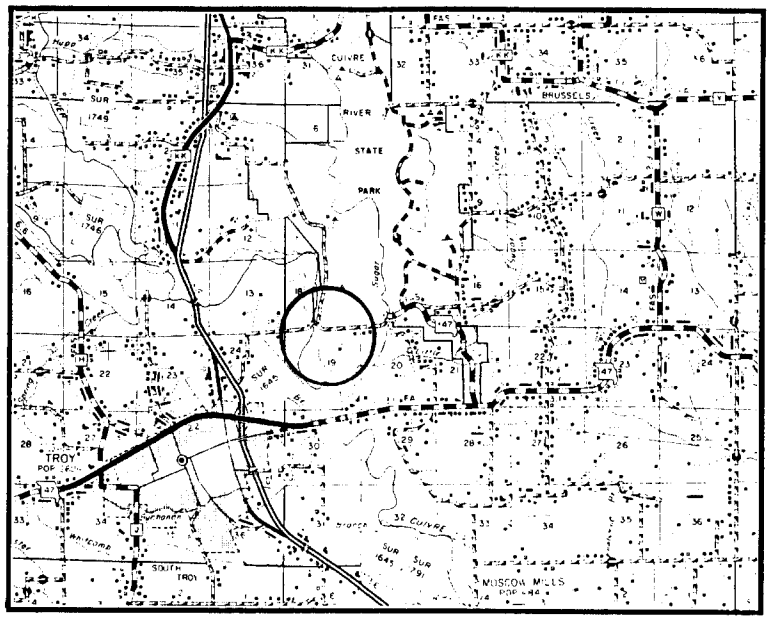
Wilson had delineated a pinned Pratt through truss for this crossing, with a 200-foot span. Though not technologically innovative by national standard, the Frenchman's Bluff Bridge would rate as one of Missouri's longest spans built to date. The county signed a contract with the King Iron Bridge Company for the truss's fabrication and erection. The Cleveland giant used wrought iron components rolled in Philadelphia by the Phoenix Iron Company to shop-rivet the truss pieces, then shipped them by rail to Troy. After the span was erected over timber falseworks, on December 22, 1886, the County Court ordered the sheriff to put all county prisoners to work on the bridge's approaches. Each of the non-volunteer laborers earned $1.00 per day toward unpaid fines. In February 1887 the county contracted to have the bridge painted, and billed the cost to the King Iron Bridge Company. Today, after more than a century, the Frenchman's Bluff retains a remarkable degree of historical integrity.

Before the Missouri State Highway Department began building major river bridges in the 1920s, the individual counties were responsible for erecting and maintaining such structures. Numerous long-span truss bridges were erected over the Meramec, the Salt, the Cuivre, the Grand and other major rivers in the late 19th and early 20th centuries. Their pinned connections and relatively narrow roadway widths have made them likely targets for replacement, however, and many of the large-scale concrete bridges built by MSHD have replaced earlier iron or steel trusses. As a result of decades of attrition, relatively few long-span trusses remain in use today in Missouri. As one of Lincoln County's two oldest wagon bridges (and among the earliest statewide), the Frenchman's Bluff Bridge is historically significant as a well-documented, intact remnant of early transportation. The structure is technologically significant for its 200-foot span length–the longest of all pinned Pratt through trusses statewide. Displaying strong physical integrity, this superlative structure ranks as among Missouri's more historically important bridges built in the late 19th century.

NAME(S) OF STRUCTURE

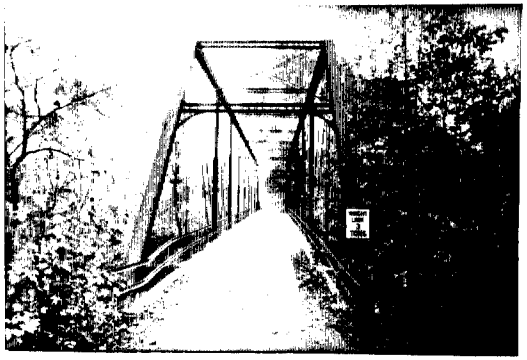
Frenchman's Bluff Bridge

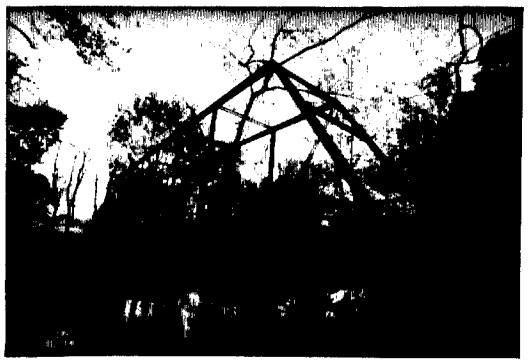
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP





SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 216000.6; Lincoln County Court Record, Book H: page 252 (12 November 1885), page 301 (12 August 1886), pages 316 and 319 (10 November 1886), page 326 (13 November 1886), page 332 (22 December 1886), page 339 (15 February 1887), page 349 (18 February 1887), page 358 (8 March 1887), page 380 (19 May 1887); Lincoln County Court Record, Book I: page 152 (18 September 1890) - located at Lincoln County Courthouse, Troy MO; field inspection by Clayton Fraser, 16 October 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO	8 February 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Chain of Rocks Bridge
MHTD: 319000.3

LINC15

DATE(S) OF CONSTRUCTION
1893

LOCATION
County Road 899 / Sycamore Street and Main over Cuivre River; S20, T48N, R2E
0.3 mile south of Chain of Rocks; Lincoln County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 57)

CONDITION
fair

OWNER
Lincoln County

span number: 1
span length: 190.0'
total length: 303.0'
roadway wdt.: 13.8'

superstructure: steel or wrought iron, 10-panel, pin-connected Pratt through truss; 4 curved, steel stringer approach spans at the south side, 2 steel stringer approach spans at north end
substructure: concrete abutments and stone masonry piers
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 punched rectangular eyebars at the hip); diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 2 angles; floor beam: I-beam, U-bolted to vertical; guardrail: 2 channels; builder's plate: **1893 St. Louis Bridge and Iron Company Builders** with listing of county officials

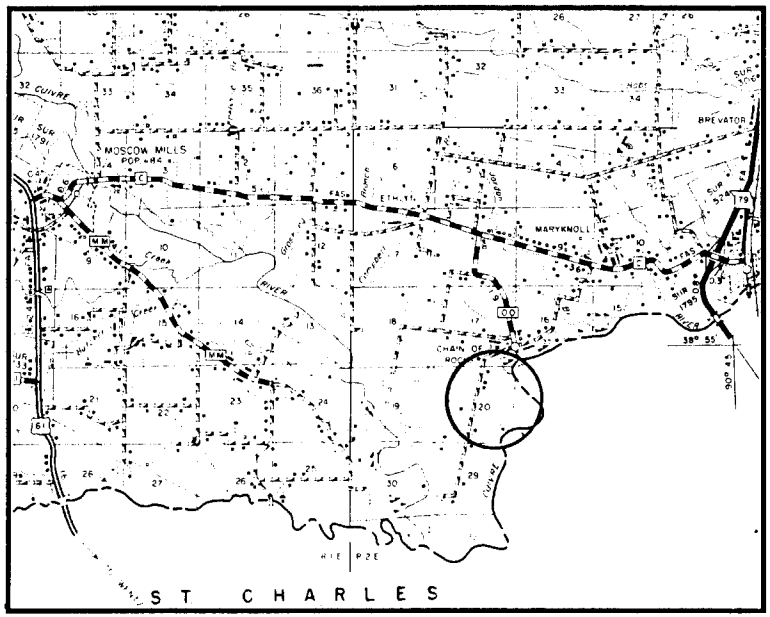
This imposing 190-foot pinned Pratt through truss crosses over the Cuivre River just south of Chain of Rocks, on the St. Charles County line. The truss rests on concrete abutments and stone piers, and is flanked on the south side by a curved four-span steel stringer approach. A portal plate indicates that the bridge was built in 1893 by the St. Louis Bridge and Iron Company. That summer the county court appointed F.D. Brown commissioner in charge of building the Chain of Rocks Bridge. Competitive bids were solicited, and a contract to erect the structure was subsequently awarded to the St. Louis Bridge and Iron Company. The bridge's total cost was $4,800.00, divided between the two counties on a pro-rated basis. St. Charles County, because it had the greater assessed property valuation, paid $3162.65, while Lincoln County paid $1637.35. In April 1898, five years after its completion, the bridge was painted, with the two counties again paying proportional costs. More than a decade later, in November 1909, Lincoln County paid $621.05 for its share of unspecified repairs to the Chain of Rocks Bridge. Today this century-old structure retains a remarkable degree of historical integrity.

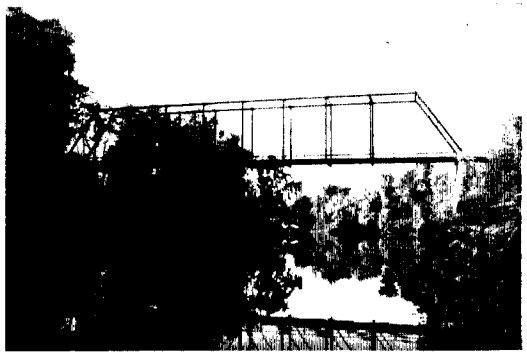
In the early 1880s, the pin-connected Pratt truss superseded the bowstring arch-truss as the iron bridge of choice for medium-span wagon crossings. Patented in 1844 by Thomas and Caleb Pratt, the Pratt design is distinguished by vertical members acting in compression and diagonals that act in tension. "The Pratt truss is the type most commonly used in America for spans under two hundred and fifty (250) 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 bridge fabricators manufactured Pratt trusses and

marketed them extensively to Missouri's counties. With an erection date of 1893 and a span length of 190 feet, the Chain of Rocks Bridge is technologically significant as an early, long-span and well-preserved example of this mainstay structural type. It is historically important as a regional crossing of a major eastern Missouri watercourse–one of the state's most impressive early wagon trusses.

NAME(S) OF STRUCTURE
Chain of Rocks 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 319000.3; Lincoln County Court Record, Book H: page 224 (13 May 1885); Lincoln County Court Record, Book J: page 9 (14 August 1893), page 22 (13 November 1893), page 29 (16 November 1893); Lincoln County Court Record K: page 30 (7 April 1898), page 428 (3 November 1909) -located at Lincoln County Courthouse, Troy MO; field inspection by Clayton Fraser, 16 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	8 February 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Old Monroe Bridge
MHTD: 333001.4

LINC16

DATE(S) OF CONSTRUCTION
1908

LOCATION
County Road 333 over Cuivre River; S7, T48N, R3E
1.2 miles east of Old Monroe; Lincoln County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / closed roadway bridge

RATING NRHP possibly eligible (score: 55)

CONDITION
fair

OWNER
Lincoln County

span number: 1
span length: 200.0'
total length: 234.0'
roadway wdt.: 15.7'

superstructure: steel, 11-panel, pin-connected Parker through truss, with steel stringer approach span each side

substructure: timber pile bent abutments; timber pile with concrete cap pier on north end; concrete pier on south end

floor/decking: timber deck over steel stringers

other features: upper chord and inclined end post: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 2 angles, braced; floor beam: I-beam, field-bolted to verticals; guardrail: 2 channels; portal builder's plate: **1908 Built By The Joliet Bridge & Iron Co. Joliet, Ill.** with listing of St. Charles County officials

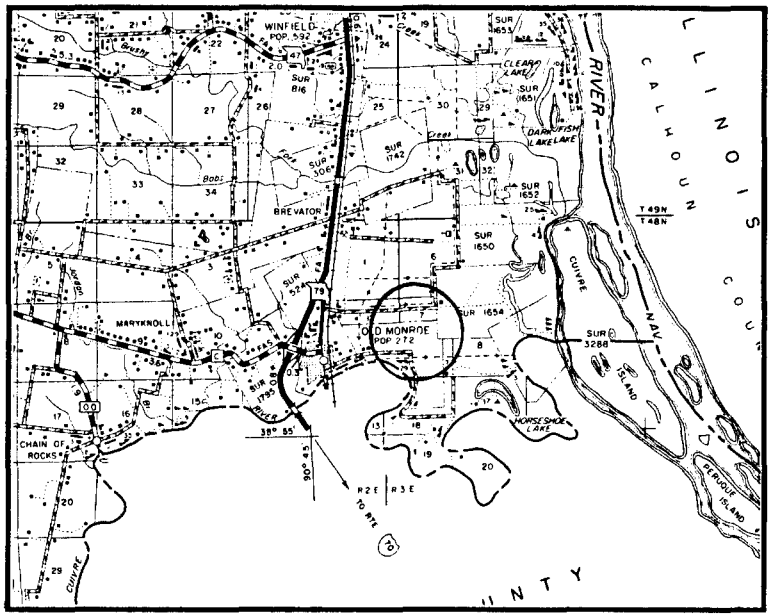
This long-span, pinned Parker through truss carries the Old Monroe Highway across the Cuivre River on the St. Charles County line, just east of the town of Old Monroe. The bridge is flanked by a steel stringer approach span on either end, and is supported by timber and concrete abutments and piers. A portal plate indicates that the bridge was built in 1908 by the Joliet Bridge and Iron Company. Apparently the erection of the span was a cooperative effort between Lincoln and St. Charles Counties. On June 2, 1908, Lincoln County paid the Joliet Bridge Company $1000.00 for the Old Monroe Bridge. This was followed by a $2399.32 payment on November 4, 1908, for a total project expenditure by Lincoln County of $3399.32. St. Charles County presumably paid the balance, but the bridge's total cost is unknown. Since its completion, the bridge served to carry inter-county vehicular traffic for decades until its recent closure. Located in a rural setting, the structure maintains a high degree of structural integrity.

Between the early 1880s, when trusses superseded bowstrings, and the 1920s, when field riveting attained widespread use, the pin-connected truss was the structure of choice for medium- and long-span wagon bridges in Missouri. Virtually all of the major Midwestern bridge companies fabricated pinned trusses and marketed them extensively to counties throughout the state in the late 19th and early 20th centuries. This corresponded with a period of intense bridge construction, as the counties were busily upgrading their road and highway systems. As a result, thousands of pinned trusses were built in Missouri during this formative period, and many remain in place today.

Most of these featured straight-chorded Pratt configurations. After the turn of the century, however, bridge manufacturers found a greater economy in polygonal-chorded Pratt variants (particularly the Parker truss) for long-span applications. Their relatively long spans, light structural members and archaic detailing have rendered pin-connected Parker trusses particularly vulnerable to subsequent replacement. As a result, of the hundreds that once carried vehicular traffic throughout the state, fewer than three dozen remain in place today. These range in span length from 110 feet to 200 feet and in erection date from 1900 to 1932. The Old Monroe Bridge, with its 200-foot span and 1908 construction date, falls within the mainstream of this trend. It is noteworthy for its excellent state of preservation. The Old Monroe Bridge is not unique among Missouri's early roadway spans. Rather, the significance of this structure accrues from its representation of early wagon/auto bridge construction. It is among the longest and best-preserved trusses in Missouri: an outstanding example of a now-uncommon structural type.

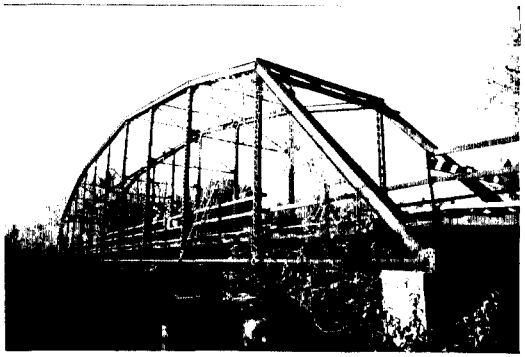
NAME(S) OF STRUCTURE
Old Monroe Bridge

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 333001.4; Lincoln County Court Record, Book L: page 279 (8 April 1908), page 293 (2 June 1908), page 326 (4 November 1908) - located at Lincoln County Courthouse, Troy MO; field inspection by Clayton Fraser, 16 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
8 February 1994

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Moscow Mills Bridge
MHTD: 350000.3

LINC18

DATE(S) OF CONSTRUCTION
1885

LOCATION
County Road 350 over Cuivre River; S4 / Survey 1791, T48N, R1E
Moscow Mills; Lincoln County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 61)

CONDITION
fair

OWNER
Lincoln County

span number: 1
span length: 177.0'a
total length: 215.0'
roadway wdt.: 16.0'

superstructure: wrought iron, 10-panel, pin-connected Pratt through truss, with steel or iron stringer pproach span at each end
substructure: concrete abutments; concrete-filled iron cylinder pier at east side; stone pier at west end
floor/decking: asphalt on timber 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: 1 square eyebar with turnbuckle; lower lateral bracing: round rod with threaded ends; upper lateral bracing: round eyerod with turnbuckle; strut: 2 angles; floor beam: tapered "fishtail" plate girder, U-bolted to verticals; guardrail: 2 channels

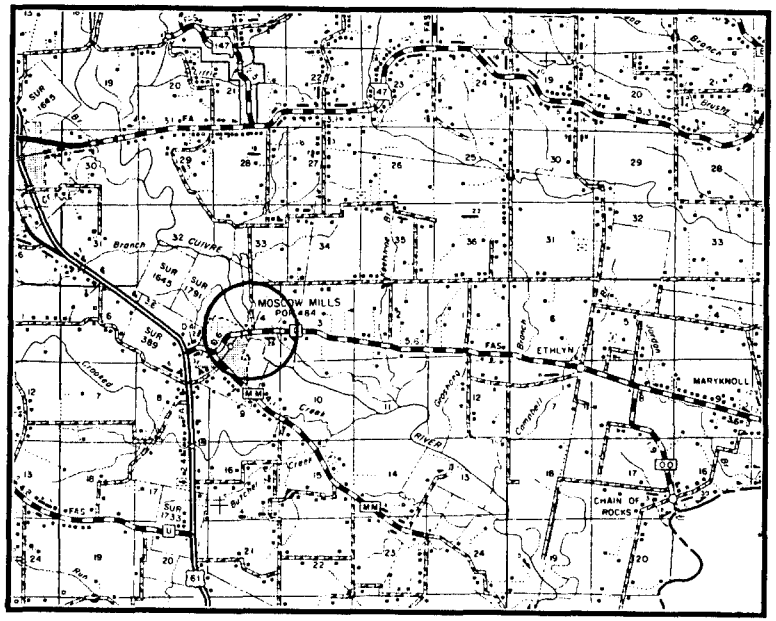
This long-span wrought iron truss crosses over the Cuivre River in the town of Moscow Mills in south-central Lincoln County. Fabricated as a pin-connected Pratt through truss, the bridge rests on concrete abutments, with stone masonry and iron cylinder piers. The Moscow Mills Bridge was Lincoln County's first major span over the Cuivre River. From the formation of the county in 1819 until the 1880s, the Cuivre constituted a formidable obstacle across the county's southern end. In lieu of bridge construction, the county court authorized ferries to transport horse and wagon traffic across the river at various points, beginning with the Old Monroe ferry in 1821. In 1885 the judges began contemplating erection of the first major all-metal spans over the Cuivre at Moscow Mills, Frenchman's Bluff and Rig's Ford. That July the county court advertised for bids to erect the Moscow Mills structure. That same summer county bridge commissioner John Wilson conducted a preliminary survey of the bridge site and probably determined the bridge's exact location. Contractors Raymond and Campbell were then awarded a $3825.00 contract to erect the bridge. The following year, another long-span Cuivre River bridge was built at Frenchman's Bluff. In February 1890 floods washed away the river banks at the Moscow Mills Bridge, necessitating extensive repair work. Today the Moscow Mills Bridge holds the distinction of being Lincoln County's oldest existing span.

In the early 1880s, the pin-connected Pratt truss superseded the bowstring arch-truss as the iron bridge of choice for medium and long-span wagon crossings. Patented in 1844 by Thomas and Caleb Pratt, the Pratt design is distinguished by vertical members acting in compression and diagonals that act in tension. "The Pratt truss is the type most commonly used in America for spans under two hundred

and fifty (250) 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 bridge fabricators manufactured Pratt trusses and marketed them extensively to Missouri's counties. With an erection date of 1885 and a span length of 177 feet, the Moscow Mills Bridge is technologically significant as an early, long-span and well-preserved example of this mainstay structural type. It is historically important as a regional crossing of a major eastern Missouri watercourse–Lincoln County's earliest remaining wagon truss and one of the state's most impressive early wagon trusses.

NAME(S) OF STRUCTURE
Moscow Mills 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 350000.3; Lincoln County Court Record, Book H: page 233 (9 June 1885), page 234 (1 July 1885), page 245 (14 August 1885), page 252, (12 November 1885), page 259 (15 December 1885), page 270 (12 February 1886), page 380 (19 May 1887), page 470 (17 May 1888); Court Record, Book I: page 98 (13 February 1890), page 144 (14 August 1890), page 152 (18 September 1890) - located at Lincoln County Courthouse, Troy MO; field inspection by Clayton Fraser, 16 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
8 February 1994

MARION COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
*MARN01	K 73	North River Bridge	**4-130'** **riveted Pratt through truss** 1932 Vincennes Bridge Company
*MARN02	K 931A1	Mark Twain Memorial Br. **(Mississippi River)**	**3-562'** **riveted cantilever through truss** 1936 Mt. Vernon Bridge Company; Union Bridge Company
*MARN03	L 99R	Quincy Memorial Bridge **(Mississippi River)**	**2-628'** **riveted Baltimore through truss** 1930 Kelly-Atkinson Construction Company; Foundation Co.
*MARN04	012000.7	Lyell Ford Bridge	1- 94' **pinned Pratt through truss** **1898** Kansas City Bridge Company
*MARN05	043000.9	Whitaker Ford Bridge	1- 85' **pinned Pratt pony truss** **1903** Dildine Bridge Company
*MARN06	051001.8	South Fabius River Bridge	1-140' **riveted Parker through truss** c1930
MARN07	070002.0	Hester Bridge	1-128' **pinned Pratt through truss** **c1900**
*MARN08	072000.2	South Fabius River Bridge	1-150' **pinned Pratt through truss** **c1910**
*MARN09	110001.2	North River Bridge	1-100' **pinned Pratt through truss** **c1920**
*MARN10	114000.9	North River Bridge	1-130' **pinned Pratt through truss** **c1910**
*MARN11	116001.9	North River Bridge	(replaced)
*MARN12	118001.6	Terrill Ford Bridge	1-104' **pinned Pratt through truss** **1898** Kansas City Bridge Company
*MARN13	159002.8	Leggett Ford Bridge	(replaced)
*MARN14	160000.4	Voeple Ford Bridge	1-137' **pinned Pratt through truss** **1907** Midland Bridge Company
MARN15	174000.4	North River Bridge	1-136' **pinned Pratt through truss** **c1910**
*MARN16	195001.8	North River Bridge	1-110' **pinned Pratt through truss** **1905** Missouri Bridge and Iron Co.
MARN17	228001.7	South River Bridge	(replaced)
*MARN18	249002.2	Bear Creek Bridge	1- 40' **concrete through girder** 1921 county work force
*MARN19	259001.3	Rock Cut Bridge	(replaced)
*MARN20	274001.0	Withers Mill Bridge	(replaced)
*MARN21	289000.7	South Fabius River Bridge	1-110' **pinned Pratt through truss** **1914** Dildine Bridge Company
*MARN22	291000.2	Grassy Creek Bridge	1- 67' **pinned Pratt pony truss** **1915** Dildine Bridge Company
MARN23	304000.7	Taylor Bridge	**1-200'** **riveted Parker through truss** 1929 Chermus Construction Co.

MARION COUNTY

EXCLUDED:

Pratt pony truss
129000.5 185000.1 187001.5 252001.0

Warren pony truss
055002.3 1850R0.2 225000.7

Other truss
U1850011 185000.3 185000.4

Steel stringer

H 115R	T 72	T 994	U1850006	U1850007	X 45	X 345
027000.5	034002.9	052000.2	056000.7	880001.3	135000.8	151001.0
153001.7	167000.1	167001.5	170002.8	178000.8	178002.0	185000.5
186000.5	262000.3	282000.2	283001.0	289001.1	305000.7	

Steel girder
K 237 081000.5 195001.0

Concrete slab/girder
G 974 K 813 U1850008

Concrete box culvert

G 883R	G 975R	H 946R	J 435R	J 463R	J 678R	K 134
K 329	T 17	T 62	T 63	X 76	X 356	

Timber stringer
U1850010

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	3	15	0	0	20
Excluded	21	31	5	0	57
	24	46	5	0	77 structures

North River Bridge

MARN01

GENERAL DATA

structure no.: K 73
county: Marion
city/town: 2.1 miles west of Palmyra
feature inters.: North River
cadastral grid: S22, T58N, R6W
highway route: Missouri State Highway 168
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 7-panel, rigid-connected Pratt through truss
substructure: concrete abutments, wingwalls and piers

span number: 4
span length: 130.0'
total length: 530.0'
roadway width: 22.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1932
erection cost: $37,590.57
designer: Missouri State Highway Department
fabricator : Vincennes Bridge Company, Vincennes IN;
Inland Steel Company, East Chicago IN
contractor: Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 73; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; field inspection by Clayton Fraser, 8 September 1990.

sign. rating: 47
evaluation: NRHP NRHP non-eligible (typical example of 1930s MSHD truss design)

inventoried by: Clayton B. Fraser 30 April 1992

Mark Twain Memorial Bridge

MARN02

GENERAL DATA

structure no.: K 931A1
county: Marion County MO
Pike County IL
city/town: Hannibal
feature inters.: Mississippi River
cadastral grid: S21, T57N, R4W
highway route: U.S. Highway 36
highway distr.: 3
current owner: States of Missouri and Illinois

STRUCTURAL DATA

superstructure: steel, rigid-connected, cantilever through truss; west end: rigid-connected, polygonal-chorded Warren through truss, with truss two steel stringer approach spans; east end: rigid-connected, polygonal-chorded Warren through truss, with two rigid-connected Warren deck trusses and six steel stringer approach spans

substructure: concrete spill-through piers with Moderne detailing

span number: 3
span length: 562.0'
total length: 2636.0'
roadway width: 22.0'

condition: good
alterations: deck and floor system repairs
floor/decking : concrete deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and double lacing; lower chord: 2 channels with lacing, top and bottom (batten plates on west approach span; vertical: 2 channels with lacing or batten plates; diagonal: 2 channels with lacing, 4 angles with batten plates; lateral bracing: 2 angles; strut: braced channels and angles with lacing; floor beam: built-up plate girder; bridge plate at west approach: **MARK TWAIN MEMORIAL BRIDGE / Named as a tribute to the memory of Samuel L. Clemens (Mark Twain) on the occasion of the centennial of his birth / A.D. 1935 / Federal Emergency Administration of Public Works / Project No. 3624 / built by City of Hannibal, Missouri in cooperation with Hannibal Chamber of Commerce / Financed with the assistance of Missouri State Highway Commission [,] Illinois State Department of Public Works and Buildings[,] And Pike County, Illinois / Consulting Engineers[:] Sverdrup and Parcel[,] St. Louis, Mo / Contractors[:] The Mt. Vernon Bridge Co.[,] Union Bridge & Constr. Co.**

Mark Twain Memorial Bridge

HISTORICAL DATA

erection date: 1934-1936
erection cost: $591,274.00 [additional $203,830.00 in 1971 for painting]
designer: Sverdrup and Parcel, St. Louis MO
fabricator : Mt. Vernon Bridge Company, Mt. Vernon OH
contractor : Mt. Vernon Bridge Company, Mt. Vernon OH (superstructure); Union Bridge Company, New York (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 931A1; files on Primary System Bridges, located at the Missouri Highway and Transportation Department, Jefferson, Missouri; **The Story of Hannibal** (1976), located at the Free Public Library, Hannibal, Missouri; **Hannibal Courier-Post**: "PWA Orders Contractors To Proceed", pages 1 and 2 (30 October 1934), "Bridge Piers Well Started", page 1 (1 February 1935), "Municipal Bridge Work Progresses", pages 1 and 2 (March 1935), "Start Work On One Of Main Piers To Municipal Bridge Over River; First Real Work In River Depths", page 1 (25 March 1935), "Resume Work On Bridge As River Drops", page 1 (10 June 1935), "Steady Rise in Mississippi Halts Work On One Bridge Pier, Job Goes Forward On Others, Steel In Place", pages 1 and 3 (20 June 1935), "Start Work Again On Bridge Piers" pages 1 and 2 (27 July 1935) "Progress With Bridge Steel", n.p. (28 August 1935), "Work On Bridge Is Near Completion", page 1 (9 December 1935), "New Bridge Roadway To Be Let Soon", page 1 (14 December 1935), "Program Of Events For Bridge Dedication Day", "Dedicating The Bridge", "Hannibal's New Bridge 2,636 Feet Long, Fine Example of Engineering and Construction; Has Sixteen Spans", "L.J. Sverdrup, Head Of Engineers [On] Growing Bridge Project, Has Colorful Career; Born In Norway", "Bridge Stands As Monument To Effort And Cooperation; Story Of Preliminary Activities Is An Interesting Chapter", "Romjue Author of Congressional Act Authorizing Construction of Bridge At Hannibal; Senators Gave Support", "Throngs Line Route to See Roosevelt", "Roosevelt Pays Twain Tribute; Praises Spirit" (3 and 4 September 1936) ; **St. Louis Daily Globe-Democrat**: page 1 (4 September 1936); field inspection by Clayton Fraser, 8 September 1990.

sign. rating: 75
evaluation: NRHP determined NRHP eligible (outstanding large-scale example of highway truss construction on an important interstate crossing)

inventoried by: Clayton B. Fraser 30 April 1992

Quincy Memorial Bridge

MARN03

GENERAL DATA

structure no.: L 99R
county: Marion County MO
Adams County IL
city/town: Quincy
feature inters.: Mississippi River
cadastral grid: S2/11, T59N, R5W
highway route: U.S. Highway 24
highway distr.: 3
current owner: Missouri Highway and Transportation Department and Illinois Department of Transportation

STRUCTURAL DATA

superstructure: steel, rigid-connected, continuous Baltimore through truss, with multiple-span deck girder and stringer approach spans
substructure: concrete abutment; concrete piers with art Moderne detailing under main span; concrete spill-through piers under deck girder approach span and steel stringer approach spans

span number: 2
span length: 628.0'
total length: 1754.0'
roadway width: 24.0'
condition: good
alterations: major repair, 1982
floor/decking : unknown
other features: upper chord and inclined end post: 2 channels with cover plate and built-up, double channel lacing; lower chord: 2 built-up channels with lacing; vertical: 2 laced channels; diagonal: 2 laced channels; lateral bracing: 2 angles; strut: angles with lacing; floor beam: built-up plate girder; guardrail: steel; bridge plates on Illinois side - large plate: "QUINCY MEMORIAL BRIDGE Dedicated to the memory of the men and women who served our country in the Armed Forces Erected June 13, 1930", small plate: "QUINCY MEMORIAL BRIDGE Mississippi River Redecked 1982 by State of Illinois FA RT. 63 SEC 1-2By Proj. BH-F-63 (37) Loading HS20 STR. NO 001 0019"

HISTORICAL DATA

erection date: 1928-30
erection cost: $1.2 million (engineer's estimate)
designer: Strauss Engineering Corporation, Chicago IL
fabricator : unknown
contractor: Kelly-Atkinson Construction Company, Chicago IL (superstructure); Foundation Company, New York NY (substructure)

Quincy Memorial Bridge

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. L 99R; files on Primary System Bridges, located at the Missouri Highway and Transportation Department, Jefferson City MO; "Memorial Bridge Plaque Dedicated," **Quincy Herald-Whig**, 31 May 1956; "Making River Bridge–47 Years Ago Here," **Quincy Herald-Whig**, 25 September 1977; "Seven New Mississippi River Highway Bridge," **Engineering News-Record**, 31 July 1930; field inspection by Clayton Fraser, 7 September 1990.

sign. rating: 75

evaluation: NRHP eligible (outstanding example of large-scale highway truss bridge construction)

inventoried by: Clayton B. Fraser 30 April 1992

Lyell Ford Bridge

MARN04

GENERAL DATA

structure no.: 012000.7
county: Marion
city/town: 5.4 miles west of Emerson
feature inters.: South Fabius River
cadastral grid: S21, T59N, R8W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments and concrete-filled steel cylinder piers

span number: 1
span length: 94.0'
total length: 124.0'
roadway width: 12.0'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (square eyebar with double-pronged ends at the hip); diagonal: 2 looped rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; steel angle guardrail

HISTORICAL DATA

erection date: 1898
erection cost: $1140.00 (contract amount)
designer: Kansas City Bridge Company, Kansas City MO
fabricator : Kansas City Bridge Company, Kansas City MO
contractor: Kansas City Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 012000.7; Marion County Court Record Q: page 291 (4 April 1898), page 313 (6 June 1898), page 327 (6 July 1898), located at the Marion County Courthouse, Palmyra MO; field inspection by Clayton Fraser, 8 September 1990.

sign. rating: 45
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 30 April 1992

Whitaker Ford Bridge

MARN05

GENERAL DATA

structure no.: 043000.9
county: Marion
city/town: 2.9 miles east of Emerson
feature inters.: Troublesome Creek
cadastral grid: S23, T59N, R7W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete-filled steel cylinder piers, with concrete back- and wingwalls

span number: 1
span length: 85.0'
total length: 86.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber 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: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; channel guardrail

HISTORICAL DATA

erection date: 1902-03
erection cost: $600.00 (contract amount)
designer: unknown
fabricator : Jones and Laughlin Steel Company, Pittsburgh PA
contractor: Dildine Bridge Company, Cameron MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 043000.9; Marion County Court Record R: page 329 (14 July 1902), page 365 (10 November 1902), located at the Marion County Courthouse, Palmyra MO; field inspection by Clayton Fraser, 7 September 1990.

sign. rating: 48
evaluation: NRHP non-eligible (well-preserved, long-span example of mainstay structural type)

inventoried by: Clayton B. Fraser 30 April 1992

South Fabius River Bridge

MARN06

GENERAL DATA

structure no.: 051001.8
county: Marion
city/town: 2.1 miles south of Emerson
feature inters.: South Fabius River
cadastral grid: S33, T59N, R7W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 8-panel, rigid-connected Parker through truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 140.0'
total length: 141.0'
roadway width: 20.8'
condition: god
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1930
erection cost: unknown
designer: unknown
fabricator : Inland Steel Company, East Chicago IN
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 051001.8; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 25
evaluation: NRHP non-eligible (typically configured and inadequately documented example of common structural type)

inventoried by: Clayton B. Fraser 30 April 1992

Hester Bridge

MARN07

GENERAL DATA

structure no.: 070002.0
county: Marion
city/town: 5.0 miles southwest of Taylor
feature inters.: South Fabius River
cadastral grid: S18, T59N, R6W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 128.0'
total length: 130.0'
roadway width: 13.7'
condition: fair
alterations: abutments extended and truss raised, 1907
floor/decking : timber deck over steel stringers
other features: lattice guardrails (installed in 1907)

HISTORICAL DATA

erection date: c1900
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 070002.0; Marion County Court Record S: page 589 (3 September 1907), located at the Marion County Courthouse, Palmyra MO; field inspection by Clayton Fraser, 7 September 1990.

sign. rating: 28
evaluation: NRHP non-eligible (typically configured and inadequately documented example of common structural type)

inventoried by: Clayton B. Fraser 30 April 1992

South Fabius River Bridge

MARN08

GENERAL DATA

structure no.: 072000.2
county: Marion
city/town: 4.2 miles southwest of Taylor
feature inters.: South Fabius River
cadastral grid: S21, T59N, R6W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 150.0'
total length: 151.0'
roadway width: 13.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with angle kneebraces; portal strut: lattice with curved kneebraces; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels; bridge plate: "H.F. Krizer - Surveyor Cyrus Albertson, J.D. Clark Geo. W. Pine - Judges; stamped in abutments: [partially illegible] "...Trebes Bros"

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 072000.2; field inspection by Clayton Fraser, 7 September 1990.

sign. rating: 32
evaluation: NRHP non-eligible (typical example of common structural type, inadequately documented)

inventoried by: Clayton B. Fraser 30 April 1992

North River Bridge

MARN09

GENERAL DATA

structure no.: 110001.2
county: Marion
city/town: 5.6 miles west of Philadelphia
feature inters.: North River
cadastral grid: S7/12, T58N, R8/9W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

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

span number: 1
span length: 100.0'
total length: 101.0'
roadway width: 15.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel lattice guardrail

HISTORICAL DATA

erection date: c1920
erection cost: unknown
designer: unknown
fabricator : Lackawanna and Cambria Steel Companies, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 110001.2; Marion County Court Record P: page 542 (5 August 1895), page 564 (2 September 1895), located at the Marion County Courthouse, Palmyra MO; field inspection by Clayton Fraser, 8 September 1990.

sign. rating: 25
evaluation: NRHP non-eligible (unremarkable example of common structural type, built relatively late in the milieu of pin-connected truss construction)

inventoried by: Clayton B. Fraser 30 April 1992

North River Bridge

MARN10

GENERAL DATA

structure no.: 114000.9
county: Marion
city/town: 4.0 miles west of Philadelphia
feature inters.: North River
cadastral grid: S17, T58N, R8W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Pratt through truss
substructure: concrete-filled steel cylinder piers, with concrete back- and wingwalls

span number: 1
span length: 130.0'
total length: 132.0'
roadway width: 13.6'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: angle A-frame; floor beam: I-beam, field-bolted to vertical; channel guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 114000.9; field inspection by Clayton Fraser, 8 September 1990.

sign. rating: 30
evaluation: NRHP non-eligible (typical example of common structural type, lacking in documentation)

inventoried by: Clayton B. Fraser 30 April 1992

Terrill Ford Bridge

MARN12

GENERAL DATA

structure no.: 118001.6
county: Marion
city/town: 2.2 miles south of Philadelphia
feature inters.: North River
cadastral grid: S24, T58N, R8W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: concrete-filled steel cylinder piers, with concrete abutments and wingwalls

span number: 1
span length: 104.0'
total length: 153.0'
roadway width: 11.6'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers, with concrete deck on east approach
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 square eyerods with turnbuckles; counter: square rod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: angle A-frame; floor beam: I-beam, U-bolted to vertical; steel pipe / steel angle guardrails; portal builder's plate: **1898 Built by Kansas City Bridge Co. Kansas City, Mo.**

HISTORICAL DATA

erection date: 1898
erection cost: $1195.00 (contract amount)
designer: Kansas City Bridge Company, Kansas City MO
fabricator : Kansas City Bridge Company, Kansas City MO
contractor: Kansas City Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 118001.6; Marion County Court Record Book O, page 303 (6 January 1890), Book Q, page 290 (4 April 1898), located at the Marion County Courthouse, Palmyra MO; field inspection by Clayton Fraser, 8 September 1990.

sign. rating: 45
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 30 April 1992

Voeple Ford Bridge

MARN14

GENERAL DATA

structure no.: 160000.4
county: Marion
city/town: 1.9 miles west of Palmyra
feature inters.: North River
cadastral grid: S22, T58N, R6W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Pratt through truss, with rigid-connected Pratt pony truss approach span
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder pier

span number: 1
span length: 137.0'
total length: 183.0'
roadway width: 13.5'
condition: fair
alterations: pony truss approach span added
floor/decking : timber deck over steel stringers
other features: main span: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 2 channels with lacing; diagonal: 2 looped eyebars; lateral bracing: round rod with threaded ends; strut: 2 braced angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels; pony approach span: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels; vertical: 2 channels; diagonal: 2 angles with batten plates

HISTORICAL DATA

erection date: 1906-07
erection cost: $1897.00 (superstructure)
designer: Midland Bridge Company, Kansas City MO
fabricator : Midland Bridge Company, Kansas City MO; Cambria Steel Company, Pittsburgh PA
contractor: Midland Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 160000.4; Marion County Court Record S: page 420 (19 September 1906), 464 (7 January 1907), page 516 (1 April 1907), located at the Marion County Courthouse, Palmyra MO; field inspection by Clayton Fraser, 7 September 1990.

sign. rating: 42
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 30 April 1992

North River Bridge

MARN15

GENERAL DATA

structure no.: 174000.4
county: Marion
city/town: 3.7 miles northeast of Palmyra
feature inters.: North River
cadastral grid: S8, T58N, R5W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Pratt through truss
substructure: concrete-filled steel cylinder piers

span number: 1
span length: 136.0'
total length: 201.0'
roadway width: 15.7'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 174000.4.

sign. rating: 28
evaluation: NRHP non-eligible (typical example of common structural type, lacking in historical documentation)

inventoried by: Clayton B. Fraser 30 April 1992

North River Bridge

MARN16

GENERAL DATA

structure no.: 195001.8
county: Marion
city/town: 6.4 miles south of Philadelphia
feature inters.: South Fork of North River
cadastral grid: S12, T57N, R8W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: concrete abutments and wingwalls, with concrete and steel cylinder piers

span number: 1
span length: 110.0'
total length: 150.0'
roadway width: 11.3'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: 4 angles with lacing; floor beam: I-beam, U-bolted to vertical; guardrail: 2 channels; portal builder's plate: **Missouri Bridge and Iron Co. / 1905 / St. Louis, Mo.**

HISTORICAL DATA

erection date: 1905
erection cost: unknown
designer: unknown
fabricator : Missouri Bridge and Iron Company, St. Louis MO; Lackawanna Steel Company, Pittsburgh PA
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 195001.8; field inspection by Clayton Fraser, 7 September 1990.

sign. rating: 45
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 30 April 1992

Bear Creek Bridge

MARN18

GENERAL DATA

structure no.: 249002.2
county: Marion
city/town: 4.0 miles west of Withers Mill
feature inters.: Bear Creek
cadastral grid: S24, T57N, R6W
highway route: old Route 36
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: skewed concrete through girder
substructure: concrete abutments and wingwalls

span number: 1
span length: 40.0'
total length: 43.0'
roadway width: 18.0'
condition: good
alterations: none
floor/decking : concrete deck
other features: concrete guardrail with recessed panels

HISTORICAL DATA

erection date: 1920-21
erection cost: $8260.00
designer: Missouri State Highway Department
fabricator : none
contractor: county work force

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 249002.2; Missouri State Highway Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO; Missouri State Highway Board, **First Biennial Report**: 1917-18, pages 100-101; Missouri State Highway Board, **Second Biennial Report**: 1919-20, pages 129, 133, 148-49; field inspection by Clayton Fraser, 7 September 1990.

sign. rating: 57
evaluation: NRHP possibly eligible (well-preserved, early example of MSHD bridge design)

inventoried by: Clayton B. Fraser 30 April 1992

South Fabius River Bridge

MARN21

GENERAL DATA

structure no.: 289000.7
county: Marion
city/town: 5.4 miles east of Philadelphia
feature inters.: South Fabius River
cadastral grid: S2, T58N, R7W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: stone abutments and piers

span number: 1
span length: 110.0'
total length: 160.0'
roadway width: 11.8'
condition: fair
alterations: none
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: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: braced angles; portal strut: angle A-frame; floor beam: I-beam, field-bolted to vertical; steel lattice guardrails

HISTORICAL DATA

erection date: 1914
erection cost: $2900.00
designer: unknown
fabricator : Lackawanna Steel Company, Pittsburgh PA
contractor: Dildine Bridge Company, Cameron MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 289000.7; Marion County Court Record V: page 82 (6 January 1915), located at the Marion County Courthouse, Palmyra MO; field inspection by Clayton Fraser, 8 September 1990.

sign. rating: 41
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 30 April 1992

Grassy Creek Bridge

MARN22

GENERAL DATA

structure no.: 291000.2
county: Marion
city/town: Hester
feature inters.: Grassy Creek
cadastral grid: S13, T59N, R7W
highway route: county road
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: stone masonry abutments

span number: 1
span length: 67.0'
total length: 68.0'
roadway width: 11.7'
condition: fair (bridge closed)
alterations: none
floor/decking : timber 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: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; steel lattice guardrails

HISTORICAL DATA

erection date: 1915
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: Dildine Bridge Company, Hannibal MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 291000.2; Marion County Court Record, Book R, page 241 (7 October 1901), Book R, page 287 (3 March 1902), Book T, page 453 (6 June 1910), Book V, page 229 (20 July 1915), located at the Marion County Courthouse, Palmyra MO; field inspection by Clayton Fraser, 8 September 1990.

sign. rating: 39
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 30 April 1992

Taylor Bridge

MARN23

GENERAL DATA

structure no.: 304000.7
county: Marion
city/town: Taylor
feature inters.: North Fabius River
cadastral grid: S2, T59N, R6W
highway route: old Route 61
highway distr.: 3
current owner: Marion County

STRUCTURAL DATA

superstructure: steel, 10-panel, rigid-connected Parker through truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 200.0'
total length: 201.0'
roadway width: 19.8'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel pipe guardrails

HISTORICAL DATA

erection date: 1928-29
erection cost: $29,411.75
designer: Missouri State Highway Department
fabricator : unknown
contractor: Chermus Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 304000.7; files on Primary System Bridges - located at the Missouri Highway and Transportation Department, Jefferson City MO; Marion County Court Record Q: page 439 (7 March 1899), page 455 (1 March 1899); Marion County Court Record S: page 55 (7 September 1904); Marion County Court Record V: page 327 (6 December 1916), page 483 (11 July 1916); Marion County Court Record W: page 93 (24 July 1917) - located at the Marion County Courthouse, Palmyra MO.

sign. rating: 43
evaluation: NRHP non-eligible (typically configured example of long-span truss design by MSHD in 1920s and 1930s)

inventoried by: Clayton B. Fraser 30 April 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mark Twain Memorial Bridge
MHTD: K 931A1

MARN02

DATE(S) OF CONSTRUCTION
1934-1936

LOCATION
U.S. Highway 36 over Mississippi River; S21, T57N, R4W
Hannibal; Marion County MO / Pike County IL

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP determined NRHP eligible (score: 75)

CONDITION
good

OWNER
States of Missouri and Illinois

span number: 3
span length: 562.0'
total length: 2636.0'
roadway wdt.: 22.0'

superstructure: steel, rigid-connected, cantilever through truss; west end: rigid-connected, polygonal-chorded Warren through truss, with truss two steel stringer approach spans; east end: rigid-connected, polygonal-chorded Warren through truss, with two rigid-connected Warren deck trusses and six steel stringer approach spans

substructure: concrete spill-through piers with Moderne detailing

floor/decking: concrete deck over steel stringers

other features: upper chord and inclined end post: 2 channels with cover plate and double lacing; lower chord: 2 channels with lacing, top and bottom (batten plates on west approach span; vertical: 2 channels with lacing or batten plates; diagonal: 2 channels with lacing, 4 angles with batten plates; lateral bracing: 2 angles; strut: braced channels and angles with lacing; floor beam: built-up plate girder; bridge plate at west approach: **MARK TWAIN MEMORIAL BRIDGE / Named as a tribute to the memory of Samuel L. Clemens (Mark Twain) on the occasion of the centennial of his birth / A.D. 1935 / Federal Emergency Administration of Public Works / Project No. 3624 / built by City of Hannibal, Missouri in cooperation with Hannibal Chamber of Commerce / Financed with the assistance of Missouri State Highway Commission [,] Illinois State Department of Public Works and Buildings[,] And Pike County, Illinois / Consulting Engineers[:] Sverdrup and Parcel[,] St. Louis, Mo / Contractors[:] The Mt. Vernon Bridge Co.[,] Union Bridge & Constr. Co.**

Although the citizens of eastern Missouri and western Illinois in the Hannibal region had been agitating for years to build a highway bridge over the Mississippi River at this point, it was not until passage of the Industrial Recovery Act in 1933 that the project became financially possible. As one of President Roosevelt's measures intended to mitigate the effects of the Depression, the law provided, among other things, for municipalities to secure federal funding for highway and bridge construction projects. While the legislation was working its way through Congress in May 1933, Ivan C. Yates, president of the Hannibal Chamber of Commerce's Public Works Committee, met with city, county and state officials, boosting for the bridge. In July 1933, at the urging of the Public Works Committee, the Hannibal City Council commissioned St. Louis engineers Sverdrup and Parcel to produce a preliminary feasibility study for the bridge. The Public

Works Committee then shuttled between state highway department officials in Jefferson City and Springfield, the War Department, Marion County (Missouri) and Pike County (Illinois) officials, the Missouri State Legislature, and even the Wabash Railroad, which held the charter for the existing railroad bridge over the Mississippi River at Hannibal.

After Sverdrup and Parcel's plans were approved by the War Department, Missouri Congressman M.A. Romjue introduced a bill authorizing construction of the proposed bridge, but it failed to pass during the 1933 session. Romjue re-introduced the measure the next year; it was ratified by the Senate on February 24, 1934. According to the **Hannibal Courier-Post**:

> **Enthusiasm ran high, for the bridge project was one of the most important steps in the progress of Hannibal, northeast Missouri and western Illinois. It would give the city a modern span across the Mississippi connecting the east and west sections of the Pikes Peak Ocean-to-Ocean highway, one of the most important east-west routes of the nation. Bearing the traffic of U.S. highway 36, it would make Hannibal a key point for cross-country travel as well as giving the city an up-to-date vehicular bridge for its everyday traffic.**

The Illinois Department of Public Works and Bridges appropriated $217,506.00 for the east approach, and the Missouri State Highway Commission appropriated $43,900.00 for the west approach and $200,000 for the bridge proper. In April 1934 the federal Public Works Administration pledged a $386,000.00 loan toward the bridge's construction and agreed to pay up to 30 percent of the labor costs (a commitment that eventually totaled $573,438.35). This last appropriation assured the bridge's construction. Sverdrup and Parcel completed the construction drawings, and in August 1934 the city contracted with the Union Bridge and Construction Company of Kansas City for the substructure (bid: $228,438.00), and the Mount Vernon Bridge Company of Mount Vernon, Ohio, for the superstructure (bid: $362,836.00).

Preliminary work on the piers began later that fall. By the end of November pile driving for the east-side land piers was well underway; by the end of the year excavation for six piers had been completed and a steel pile cofferdam built for the seventh. Using both open cofferdams and pneumatic caissons to build the massive piers, the Union Bridge crew continued work throughout the rest of the winter and, after suspending operations for spring flooding in March 1935, through the following year. On June 6, 1935, the Mount Vernon Bridge workers placed the first steel on the Illinois side. As construction was underway in 1935, the substructure and superstructure crews both averaged 100 men. Work on the cantilevered spans pushed through that August and September; the two ends of the channel span were riveted together in early November. After again suspending operations in the winter of 1935-36, work resumed on the superstructure the following spring. The last paint was applied to the steel on July 6th. Two days later the trusses were given a final inspection, and on July 20th the completed bridge was accepted by the City of Hannibal.

The Hannibal Bridge was enormous, with 17 steel spans of varying lengths and configurations, supported by heavy concrete piers. By the time it was completed, the bridge had consumed some 5.4 million pounds of fabricated structural steel, 645,000 pounds of reinforcing steel, 9,550 cubic yards of concrete, 10,050 tons of stone and 7,200 tons of sand. The Mark Twain Memorial Bridge, as it was officially

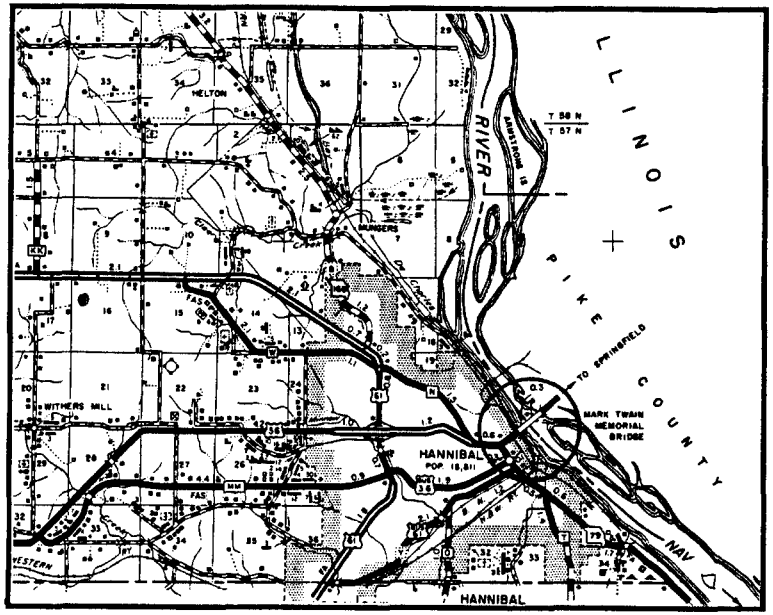
named, was formally dedicated in a gala celebration on September 4, 1936. Tolls were charged to defray the cost of the construction bonds and loans, until the bridge was eventually paid off and made toll-free. Today it carries heavy interstate traffic on U.S. 36, with deck and floor system repairs as the only alteration of note.

Bridges over the Mississippi River comprise some of America's longest examples of vehicular truss construction. With over 400 miles fronting on the great river, Missouri possesses several notable Mississippi River bridges. Seven of the state's longest crossings over the Mississippi are included in the statewide bridge inventory, all of which are considered eligible for the National Register. The Mark Twain Bridge is historically significant because it served as a pivotal transportation link between Illinois and Missouri on a major interstate highway, and it had a major impact on the socioeconomic development of northeastern Missouri. Completed in the fall of 1936, the bridge's importance is reflected in its extravagant dedication ceremony. Featuring no less a personage than President Franklin Roosevelt as the keynote speaker, the gala event attracted the governors of Missouri and Illinois and several members of both states' congressional delegations, including Missouri Senator Harry Truman. Featuring a cantilevered design, the Mark Twain Bridge ranks among Missouri's most monumental examples of steel truss construction. With its multiple through and deck truss and beam spans, the structure ranks as a superlative, well-preserved example of its type.

NAME(S) OF STRUCTURE

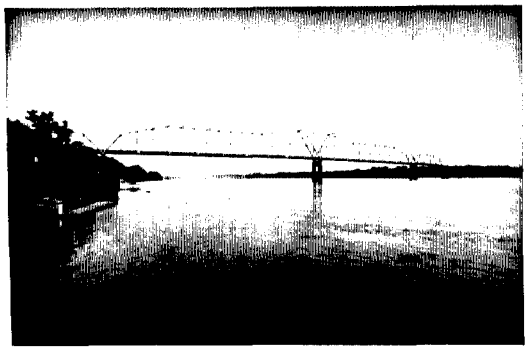
Mark Twain Memorial Bridge

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 No. K 931A1; files on Primary System Bridges, located at the Missouri Highway and Transportation Department, Jefferson, Missouri; **The Story of Hannibal** (1976), located at the Free Public Library, Hannibal, Missouri; **Hannibal Courier-Post**: "PWA Orders Contractors To Proceed", pages 1 and 2 (30 October 1934), "Bridge Piers Well Started", page 1 (1 February 1935), "Municipal Bridge Work Progresses", pages 1 and 2 (March 1935), "Start Work On One Of Main Piers To Municipal Bridge Over River; First Real Work In River Depths", page 1 (25 March 1935), "Resume Work On Bridge As River Drops", page 1 (10 June 1935), "Steady Rise in Mississippi Halts Work On One Bridge Pier, Job Goes Forward On Others, Steel In Place", pages 1 and 3 (20 June 1935), "Bridge Stands As Monument To Effort And Cooperation; Story Of Preliminary Activities Is An Interesting Chapter", "Throngs Line Route to See Roosevelt", "Roosevelt Pays Twain Tribute; Praises Spirit" (3 and 4 September 1936); **St. Louis Daily Globe-Democrat**: page 1 (4 September 1936); field inspection by Clayton Fraser, 8 September 1990.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO	30 April 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Quincy Memorial Bridge
MHTD: L 99R

MARN03

DATE(S) OF CONSTRUCTION
1928-30

LOCATION
U.S. Highway 24 over Mississippi River; S2/11, T59N, R5W
Quincy; Marion County MO / Adams County IL County, Missouri

USE (ORIGINAL / CURRENT)
highway and railroad bridge / highway and railroad bridge

RATING NRHP eligible (score: 75)

CONDITION
good

OWNER
Missouri Highway and Transportation Department and Illinois Department of Transportation

span number: 2
span length: 628.0'
total length: 1754.0'
roadway wdt.: 24.0'

superstructure: steel, rigid-connected, continuous Baltimore through truss, with multiple-span deck girder and stringer approach spans

substructure: concrete abutment; concrete piers with art Moderne detailing under main span; concrete spill-through piers under deck girder approach span and steel stringer approach spans

floor/decking: unknown

other features: upper chord and inclined end post: 2 channels with cover plate and built-up, double channel lacing; lower chord: 2 built-up channels with lacing; vertical: 2 laced channels; diagonal: 2 laced channels; lateral bracing: 2 angles; strut: angles with lacing; floor beam: built-up plate girder; guardrail: steel; bridge plates on Illinois side - large plate: "**QUINCY MEMORIAL BRIDGE Dedicated to the memory of the men and women who served our country in the Armed Forces Erected June 13, 1930**", small plate: "**QUINCY MEMORIAL BRIDGE Mississippi River Redecked 1982 by State of Illinois FA RT. 63 SEC 1-2By Proj. BH-F-63 (37) Loading HS20 STR. N0 001 0019**"

Early 20th century motorists wishing the cross the Mississippi River at Quincy faced two options: riding the ferry that traversed the river in the warm-weather months, or crossing on the vehicular runways cantilevered from the sides of the CB&Q railroad bridge. With neither alternative especially palatable, the local citizenry boosted for a highway bridge at this point off-and-on for years. Plans to build the bridge finally began to coalesce in 1927 with the formation of the Quincy Memorial Bridge Company, a consortium of local business interests. The corporation proposed to build a highway bridge at Quincy and pay for its construction through tolls levied on bridge users. To design the immense structure, the Quincy Memorial Bridge Company hired the Chicago-based Strauss Engineering Corporation–the civil engineering firm later responsible for the design of the Golden Gate Bridge. As delineated by Strauss, the proposed bridge extended 1256 feet, with two 628-foot, rigid-connected Baltimore through truss spans carried continuously over a center concrete pier in the river's channel. The Kelly-Atkinson Construction Company, also of Chicago, was contracted to build the bridge's approaches and erect the superstructural steel; the Foundation Company of New York would build the 36 river piers.

Construction on the bridge proper commenced on June 15, 1928, with construction of the river piers begun in September. Laborers worked on the concrete piers despite massive floodwaters along the Mississippi in November 1928 and again in March 1929. Carrying the cantilevered weight of both main spans, the center pier was the most critical. Men in a pneumatic caisson excavated almost 118 feet below the river's surface to found the center pier on bedrock. The substructure was completed in September 1929. Steelworkers erected the multiple beam and truss spans in 1929-30, assembling the last of the superstructural steel by March 1, 1930.

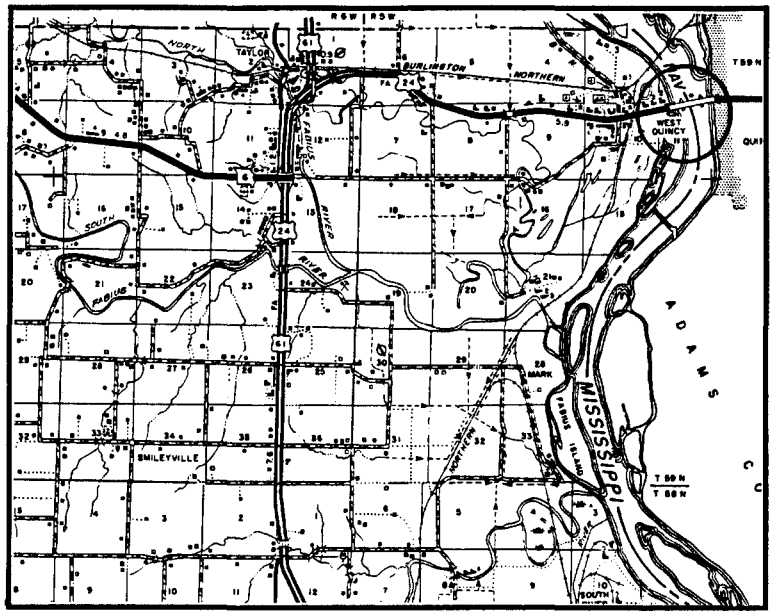
The Quincy Memorial Bridge was opened ceremoniously to traffic on June 16, 1930. It remained under the aegis of the Quincy Memorial Bridge Company as a toll crossing until the construction bonds were retired in 1945. Ownership of the bridge was then transferred to the states of Missouri and Illinois, and the bridge was made toll-free. In 1982, the St. Louis Bridge Construction Company was hired to reconstruct the bridge's deck. The original concrete floor was removed at that time and replaced with a steel grid deck. Other than this, the Quincy Memorial Bridge remains essentially unaltered.

Bridges over the Mississippi River comprise some of America's longest examples of vehicular truss construction. With over 400 miles fronting on the great river, Missouri possesses several notable Mississippi River bridges. Seven of the state's longest crossings over the Mississippi are included in the statewide bridge inventory, all of which are considered eligible for the National Register. The Quincy Memorial Bridge is historically significant because it served as a pivotal transportation link between Illinois and Missouri on a major interstate highway, and it had a major impact on the socioeconomic development of northeastern Missouri. Featuring an unusually configured continuous truss design and multiple girder approach spans, the bridge ranks among Missouri's most monumental examples of steel truss construction–a superlative, well-preserved example of its type.

NAME(S) OF STRUCTURE

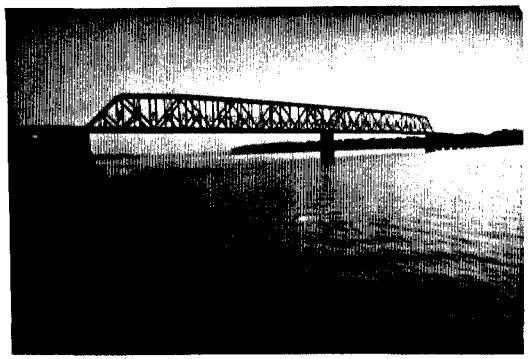
Quincy Memorial Bridge

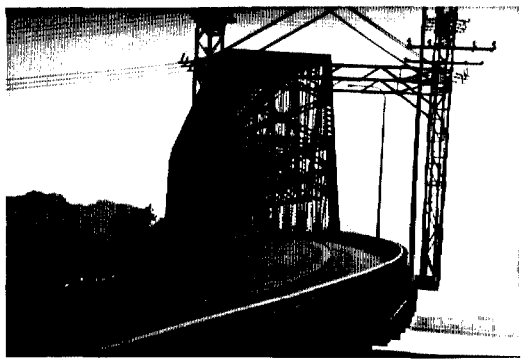
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP





SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. L 99R; files on Primary System Bridges, located at the Missouri Highway and Transportation Department, Jefferson City MO; "Memorial Bridge Plaque Dedicated," **Quincy Herald-Whig**, 31 May 1956; "Making River Bridge–47 Years Ago Here," **Quincy Herald-Whig**, 25 September 1977; "Seven New Mississippi River Highway Bridge," **Engineering News-Record**, 31 July 1930; field inspection by Clayton Fraser, 7 September 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

30 April 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lyell Ford Bridge
MHTD: 012000.7

MARN04

DATE(S) OF CONSTRUCTION
1898

LOCATION
county road over South Fabius River; S21, T59N, R8W
5.4 miles west of Emerson; Marion County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 45)

CONDITION
fair

OWNER
Marion County

span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
span length:	94.0'	substructure:	concrete abutments and concrete-filled steel cylinder piers
total length:	124.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	12.0'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (square eyebar with double-pronged ends at the hip); diagonal: 2 looped rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: A-frame; floor beam: I-beam, U-bolted to vertical; steel angle guardrail

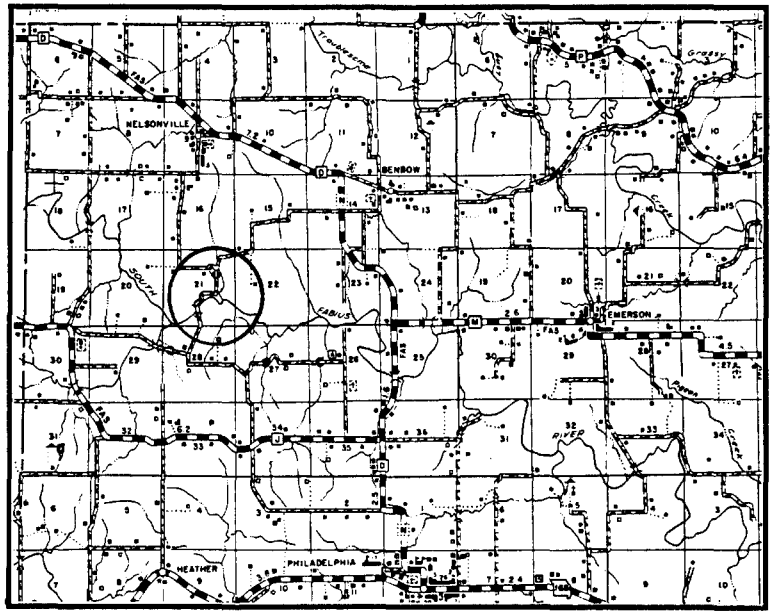
This medium-span through truss carries a gravel-surfaced county road over the South Fabius River west of Emerson. Preparations for construction of the structure began in April 1898, when the Marion County Court directed County Road and Bridge Commissioner Charles Wright to survey the site for a new bridge at Lyell Ford. Two months later the court ordered Wright to solicit competitive bids for the bridge's fabrication and erection, and in July the county awarded a contract to the Kansas City Bridge Company for $1140.00. Kansas City Bridge began excavating for the substructure later that summer; by the end of the year the bridge had been completed. The Lyell Ford Bridge has carried county-road traffic since, with only minor maintenance-related repairs and deck replacements.

In Missouri, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the late 19th and early 20th centuries. As a result, thousands of Pratts were built across the state, and today Pratts constitute the most populous group of through trusses. Though it retains a relatively high degree of physical integrity, the Lyell Ford Bridge is unremarkable in its design, dimensions and detailing.

NAME(S) OF STRUCTURE

Lyell 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 No. 012000.7; Marion County Court Record Q: page 291 (4 April 1898), page 313 (6 June 1898), page 327 (6 July 1898), located at the Marion County Courthouse, Palmyra MO; field inspection by Clayton Fraser, 8 September 1990.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO	30 April 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bear Creek Bridge
MHTD: 249002.2

MARN18

DATE(S) OF CONSTRUCTION
1920-21

LOCATION
old Route 36 over Bear Creek; S24, T57N, R6W
4.0 miles west of Withers Mill; Marion County, Missouri

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP possibly eligible (score: 57)

CONDITION
good

OWNER
Marion County

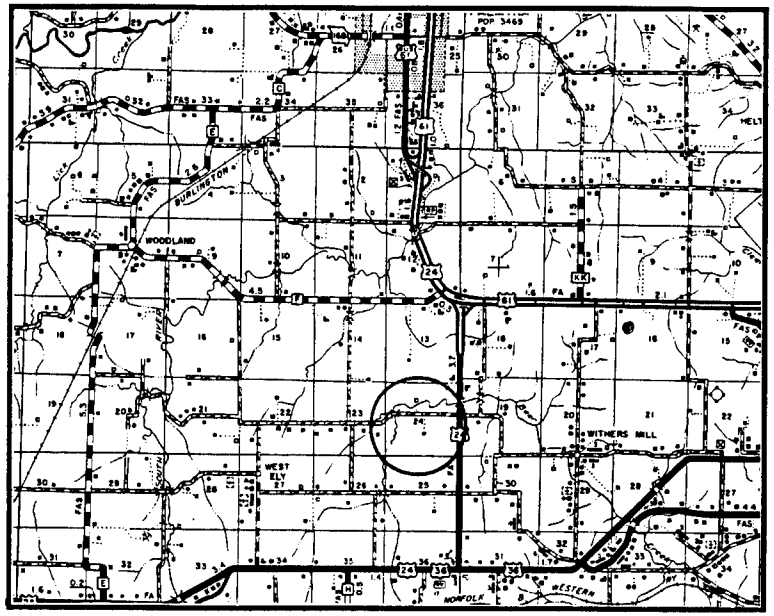
span number:	1	superstructure:	skewed concrete through girder
span length:	40.0'	substructure:	concrete abutments and wingwalls
total length:	43.0'	floor/decking:	concrete deck
roadway wdt.:	18.0'	other features:	concrete guardrail with recessed panels

This medium-span concrete bridge carries a paved county road over Bear Creek some four miles west of Withers Mill. It is one of three such structures designed by the Missouri State Highway Department in 1920 as part of construction of the state road that extended westward from Hannibal. Designated Project 62, bids for construction of this 10¼-mile stretch of highway were solicited by the highway department early in 1920. As reported by the department in its biennial report, "The First letting held on May 24, 1920, resulted in two bids in excess of the engineer's estimate of cost. The second letting held on August 21, 1920, resulted in no bids whatever being received." Instead, the Marion County Court requested that the MSHD award the contract directly to the county, and the county then built the highway and bridges using force account labor. The total cost of the Withers Mill Bridge was reported as $8260.00. It has since carried varying degrees of traffic - first as State Highway 8, later as U.S. Highway 36, and finally as a county road - in essentially unaltered condition.

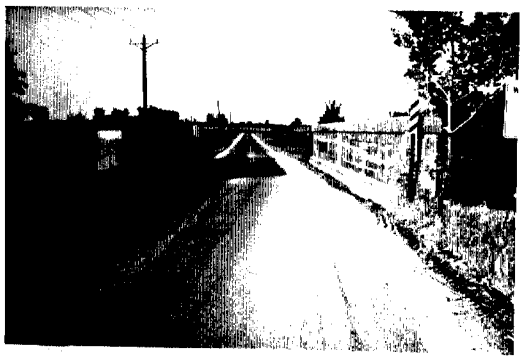
One of the provisions of the Hawes Road Law establishing the Missouri State Highway Department was that the newly formed agency would develop plans and specifications for bridges and culverts. "The Highway Department has maintained a drafting room which has been called upon for many kinds of service," the department reported in 1918, "but the especial function of which has been the preparation of bridge and culvert designs." By 1920, the department had developed several standards for short- and medium-span bridges, as well as special designs for almost 200 larger-scale structures. One of the latter was the Bear Creek Bridge in Marion County, designated MSHD Structure No. F-168. The highway department experimented with concrete through girders briefly as it was developing its first bridge standards but soon discarded the design in favor of deck girders and slabs. As a result, relatively few through girders were ever built in Missouri, and fewer yet remain in use today. The Bear Creek Bridge, like the Withers Mill Bridge [**MARN20**], is thus technologically significant as an uncommon, early example of early state highway department bridge engineering.

NAME(S) OF STRUCTURE
Bear Creek 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 No. 249002.2; Missouri State Highway Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO; Missouri State Highway Board, **First Biennial Report**: 1917-18, pages 100-101; Missouri State Highway Board, **Second Biennial Report**: 1919-20, pages 129, 133, 148-49; field inspection by Clayton Fraser, 7 September 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
30 April 1992

MONROE COUNTY

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

Inv.No.	MHTD	Bridge Name	Description
*MONR01	018001.5	Cook's Ford Bridge	1-112' **pinned Pratt through truss** **1914** Decatur Bridge Co., Decatur IL (replaced)
*MONR02	024000.1	Santa Fe Bridge	(replaced)
*MONR03	036001.7	Long Branch Bridge	(replaced)
*MONR04	071001.5	Long Branch Bridge	1- 60' pinned Pratt bedstead **1911** Illinois Steel Bridge Company (replaced)
MONR05	093000.6	Tulip Bridge	1- 45' riveted Pratt pony truss 1922 Dildine Bridge Co., Hannibal
MONR06	094000.8	County Line Bridge	1- 56' riveted Pratt bedstead **1914** Decatur Bridge Co., Decatur IL
MONR07	112000.5	Middle Grove Bridge	1- 42' pinned Pratt bedstead **1902**
MONR08	117000.2	Milligan Creek Bridge	1-112' **pinned Pratt through truss** **1912** Decatur Bridge Co., Decatur IL
*MONR09	175000.6	Coal Bank Bridge	1-120' **riveted Pratt through truss** 1929 Dildine / county work force
*MONR10	205002.5	Cutright Bridge	1-112' **pinned Pratt through truss** **1912** Decatur Bridge Co., Decatur
*MONR11	209002.6	Cedar Bluff Bridge	1- 75' pinned Pratt pony truss **1908**
MONR12	210000.2	Bee Creek Bridge	1-108' **pinned Pratt through truss** **1905** Pan American Bridge Company
*MONR13	230000.5	Range Line Bridge	1- 34' steel stringer **1912** Decatur Bridge Co., Decatur IL (replaced)
MONR14	233001.3	Briar Creek Bridge	(replaced)
MONR15	268002.6	Alexander Bridge	**1-100'** riveted Pratt pony truss 1930 Martin Wunderlich (replaced)
MONR16	275001.8	Elk Fork Bridge	1- 80' **riveted 3-web Pratt pony truss** 1924 Dildine Bridge Co., Hannibal
MONR17	303000.6	Mud Creek Bridge	1- 45' riveted Warren bedstead **1905** Pan-American Bridge Company
MONR18	324000.5	Legrand Bridge	1- 48' riveted Warren bedstead **1907** Pan-American Bridge Company (replaced)
*MONR19	331000.2	Fairgrounds Bridge	1-102' pinned Pratt through truss **1910** Decatur Bridge Co., Decatur IL
MONR20	334000.8	Glover Bridge	1- 60' pinned Pratt pony truss **1904** Decatur Bridge Co., Decatur IL
MONR21	342001.1	Otter Creek Bridge	1- 80' pinned Pratt pony truss **1910**
*MONR22	353000.6	Miles Bridge	
*MONR23	357001.7	Middle Fork Bridge	
*MONR24	405000.8	Edwards Ford Bridge	
*MONR25	446000.7	Roney Ford Bridge	

MONROE COUNTY

INCLUDED (cont.):

*MONR26	450001.2	Crooked Creek Bridge	1- 90'	pinned Pratt through truss
			1910	
MONR27	547001.2	Combs Bridge	1- 40'	riveted Warren bedstead
			1904	Decatur Bridge Co., Decatur IL
*MONR28	552000.5	Crooked Creek Bridge	1- 64'	pinned Pratt half-hip pony truss
			1910	
MONR29	556002.3	Clear Creek Bridge		(replaced)
*MONR30	564000.2	Patterson Bridge	1- 70'	pinned Pratt pony truss
			1913	Decatur Bridge Co., Decatur IL
MONR31	589000.8	County Line Bridge	1- 48'	riveted Warren bedstead
			1905	Pan-American Bridge Company
*MONR32	none	Union Covered Bridge	1-125'	**covered timber Burr arch-truss**
			1871	Joseph C. Elliot, Payson IL

EXCLUDED:

Pratt pony truss
023000.6 028001.0 034001.3 354001.8 507000.4 582001.4 588000.4

Warren pony truss
J 19 039000.5 040000.4 045000.8 167000.6 205001.4 406001.7493000.2
507000.9 508000.8 562002.9

Warren bedstead
070001.3 076001.4 091000.7 270000.8 313001.0 372001.7

Lattice bedstead
053000.7 091001.2 094000.7 291000.2 374000.3

Concrete slab
X 993 036001.2

Concrete box culvert
H 132 H 193 J 163 J 164 J 165 J 167 J 767
J 795 P 3 P 4 S 901 T 381 T 829 331000.4

Steel stringer / girder
T 382 X 624 002000.8 050000.4 054000.5 064000.5 065001.0
073R01.4 077000.9 081000.6 122000.7 131000.4 142001.4 209002.5234000.3
241000.4 249000.1 268000.8 273000.5 297000.2 310001.0 311000.4322000.2
331000.1 353001.5 366000.8 376002.2 389000.2 392001.8 435001.3510001.2
517001.0 527000.8 543R00.1 544003.3 558001.0 569000.6 570000.5583001.0
590000.3 594000.1 599000.6

MONROE COUNTY

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	0	23	0	1	24
Excluded	17	70	0	0	87
	17	93	0	1	111 structures

Cook's Ford Bridge

MONR01

GENERAL DATA

structure no.: 018001.5
county: Monroe
city/town: 1.2 miles west of Santa Fe
feature inters.: Long Branch
cadastral grid: S18, T53N, R8W
highway route: County Road 18
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: concrete abutments, wingwalls and (non-original) concrete spill-through piers

span number: 1
span length: 112.0'
total length: 170.0'
roadway width: 11.5'
condition: fair
alterations: truss moved, 1930
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 eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles, braced; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle; A-frame portal strut; portal builder's plate: 1914 BUILT BY DECATUR BRIDGE Co. / JNO. T. GRIGSBY AGENT / T.L. McGEE / E.M. LIPP / B.F. VAUGHN / JUDGES OF THE COUNTY COURT / M.W. CALDWELL HIGHWAY ENG. / M.K. CURTRIGHT COUNTY CLK

HISTORICAL DATA

erection date: 1914; moved 1930
erection cost: $3865.00
designer: Decatur Bridge Company, Decatur IL
fabricator : Decatur Bridge Company, Decatur IL; Cambria Steel Company, Pittsburgh PA
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 018001.5; Monroe County Court Record, Book W: page 48 (7 April 1914); Book X: page 547 (16 September 1929), page 600 (7 July 1930), located at Monroe County Courthouse, Paris MO; Contract between the Decatur Bridge Company and Monroe County (14 May 1914) for three steel bridges, located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

Cook's Ford Bridge

sign. rating: 29
evaluation: NRHP non-eligible (typically configured example of common structural type, moved to this location)

inventoried by: Clayton B. Fraser 30 July 1991

Long Branch Bridge

MONR04

GENERAL DATA

structure no.: 071001.5
county: Monroe
city/town: 9.4 miles south of Paris
feature inters.: Long Branch
cadastral grid: S28/29, T53N, R10W
highway route: County Road 71
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt truss-leg bedstead
substructure: truss legs with timber backing

span number: 1
span length: 60.0'
total length: 91.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: end post and truss legs: 2 channels with cover plate and lacing; upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates (outer panels), 2 punched rectangular eyebars (inner panels); vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted below lower chord; guard-rail: steel lattice

HISTORICAL DATA

erection date: 1911
erection cost: $888.00
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL; Lackawanna Steel Company, Pittsburgh PA
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 071001.5; Monroe County Court Record, Book V: page 244 (4 April 1911), located Monroe County Courthouse, Paris MO; Contract between the Illinois Steel Bridge Company and Monroe County (4 April 1911), located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

sign. rating: 42
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

County Line Bridge

MONR06

GENERAL DATA

structure no.: 094000.8
county: Monroe
city/town: 6.2 miles southeast of Middle Grove
feature inters.: Upper Long Branch
cadastral grid: S30/31, T52N/T53N, R11W
highway route: County Road 94
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 45.0'
total length: 46.0'
roadway width: 11.7'
condition: fair
alterations: unknown
floor/decking : concrete deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1922
erection cost: $650.00 (contract amount)
designer: Dildine Bridge and Iron Company, Hannibal MO
fabricator : Dildine Bridge and Iron Company, Hannibal MO
contractor: Dildine Bridge and Iron Company, Hannibal MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 094000.8; Monroe County Court Record, Book T: page 427 (1 September 1902); Book X: page 156 (17 July 1922), page 162 (21 August 1922) - located at Monroe County Courthouse, Paris MO.

sign. rating: 30
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Middle Grove Bridge

MONR07

GENERAL DATA

structure no.: 112000.5
county: Monroe
city/town: immediately south of Middle Grove
feature inters.: Milligan Creek
cadastral grid: S16/17, T53N, R12W
highway route: County Road 112
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 4-panel, rigid-connected Pratt truss-leg bedstead
substructure: steel pile bent abutments and piers

span number: 1
span length: 56.0'
total length: 81.0'
roadway width: 10.6'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1914
erection cost: $1645.00
designer: Decatur Bridge Company, Decatur IL
fabricator : Decatur Bridge Company, Decatur IL
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 112000.5; Monroe County Court Record, Book S: page 538 (7 June 1897); Book T: page 442 (6 October 1902), located at Monroe County Courthouse, Paris MO; Contract between the Decatur Bridge Company and Monroe County (14 May 1914) for three steel bridges, located in file drawer at Monroe County Courthouse, Paris MO.

sign. rating: 37
evaluation: NRHP non-eligible (technologically undistinguished example of relatively common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Milligan Creek Bridge

MONR08

GENERAL DATA

structure no.: 117000.2
county: Monroe
city/town: 2.5 miles southwest of Middle Grove
feature inters.: Milligan Creek
cadastral grid: S19, T53N, R12W
highway route: county road
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: steel pile bent abutments and piers with timber back- and wingwalls

span number: 1
span length: 42.0'
total length: 43.0'
roadway width: 11.6'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: steel lattice guardrails

HISTORICAL DATA

erection date: 1902
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 117000.2; Monroe County Court Record, Book T: page 442 (6 October 1902), located at Monroe County Courthouse, Paris MO.

sign. rating: 26
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton B Fraser 17 January 1992

Coal Bank Bridge

MONR09

GENERAL DATA

structure no.: 175000.6
county: Monroe
city/town: 4.5 miles southeast of Paris
feature inters.: Elk Fork of the Salt River
cadastral grid: S29/30, T54N, R9W
highway route: County Road 175
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 112.0'
total length: 150.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

HISTORICAL DATA

erection date: 1912
erection cost: $2650.00
designer: Decatur Bridge Company, Decatur IL
fabricator : Decatur Bridge Company, Decatur IL; Cambria Steel Company, Pittsburgh PA
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 175000.6; Contract between the Decatur Bridge Company and Monroe County (5 June 1912) for seven steel bridges, located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

sign. rating: 35
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 17 January 1992

Cutright Bridge

MONR10

GENERAL DATA

structure no.: 205002.5
county: Monroe
city/town: 3.3 miles southwest of Paris
feature inters.: Elk Fork of the Salt River
cadastral grid: S26, T54N, R10W
highway route: County Road 205
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 120.0'
total length: 159.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; strut: 2 angles with bracing; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle

HISTORICAL DATA

erection date: 1929
erection cost: $5512.00 (superstructure cost)
designer: Dildine Bridge Company, Cameron MO
fabricator : Dildine Bridge Company, Cameron MO;
Jones and Laughlin Steel Company, Pittsburgh PA
contractor: county work force

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 205002.5; Monroe County Court Record, Book X: page 534 (22 May 1929), located at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

sign. rating: 40
evaluation: NRHP non-eligible (typical example of common truss type)

inventoried by: Clayton B. Fraser 17 January 1992

Cedar Bluff Bridge

MONR11

GENERAL DATA

structure no.: 209002.6
county: Monroe
city/town: 4.0 miles southwest of Paris
feature inters.: Elk Fork of the Salt River
cadastral grid: S29, T54N, R10W
highway route: County Road 209
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss, with 3-panel, rigid-connected Pratt pony truss approach span
substructure: stone abutment (southeast); concrete abutment (northwest); concrete-filled steel cylinder piers

span number: 1
span length: 112.0'
total length: 158.0'
roadway width: 10.7'
condition: fair
alterations: pony truss approach span added
floor/decking : timber deck over steel stringers
other features: Pratt through truss: upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice
With the following exceptions, the Pratt pony truss is configured the same as the main span: top chord end post: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 1 channel; diagonal: 2 angles with batten plates.

HISTORICAL DATA

erection date: 1912
erection cost: $2604.00
designer: Decatur Bridge Company, Decatur IL
fabricator : Decatur Bridge Company, Decatur IL;
Cambria Steel Company, Pittsburgh PA
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 209002.6; Contract between the Decatur Bridge Company and Monroe County (5 June 1912) for seven steel bridges, located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

sign. rating: 31
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 17 January 1992

Bee Creek Bridge

MONR12

GENERAL DATA

structure no.: 210000.2
county: Monroe
city/town: 3.9 miles southwest of Paris
feature inters.: Bee Creek
cadastral grid: S29, T54N, R10W
highway route: County Road 210
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 75.0'
total length: 98.0'
roadway width: 11.5'
condition: fair
alterations: unknown
floor/decking : concrete deck over steel stringers
other features: steel lattice guardrails

HISTORICAL DATA

erection date: 1908
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 210000.2; Monroe County Court Record, Book U: page 480 (8 January 1908), located at Monroe County Courthouse, Paris MO.

sign. rating: 34
evaluation: NRHP non-eligible (inadequately documented, technologically undistinguished example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Range Line Bridge

MONR13

GENERAL DATA

structure no.: 230000.5
county: Monroe
city/town: 5.2 miles southwest of Paris
feature inters.: Elk Fork of the Salt River
cadastral grid: S30/25, T54N, R10/11W
highway route: County Road 230
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach span
substructure: stone abutments; concrete-filled steel cylinder piers

span number: 1
span length: 108.0'
total length: 126.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: A-frame; floor beam: I-beam, U-bolted to lower chord pin; guardrail: steel angle

HISTORICAL DATA

erection date: 1905
erection cost: $1,390.00
designer: Pan-American Bridge Company, New Castle IN
fabricator : Pan-American Bridge Company, New Castle IN; Cambria Steel Company, Pittsburgh PA
contractor: Pan-American Bridge Company, New Castle IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 230000.5; Monroe County Court Record, Book U: page 141 (9 February 1905), page 157 (25 March 1905), located at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

sign. rating: 37
evaluation: NRHP non-eligible (typically configured, well-preserved example of mainstay structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 17 January 1992

Briar Creek Bridge

MONR14

GENERAL DATA

structure no.: 233001.3
county: Monroe
city/town: 6.6 miles west of Paris
feature inters.: Briar Creek
cadastral grid: S15, T54N, R11W
highway route: County Road 233
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel stringer
substructure: steel pile bent abutments with timber back- and wingwalls

span number: 1
span length: 34.0'
total length: 35.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: unknown

HISTORICAL DATA

erection date: 1912
erection cost: $361.00
designer: Decatur Bridge Company, Decatur IL
fabricator : Decatur Bridge Company, Decatur IL
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 233001.3; Contract between the Decatur Bridge Company and Monroe County (8 June 1912) for three steel bridges, located in file drawer at Monroe County Courthouse, Paris MO.

sign. rating: 28
evaluation: NRHP non-eligible (typical, small-scale example of exceedingly common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Mud Creek Bridge

MONR17

GENERAL DATA

structure no.: 303000.6
county: Monroe
city/town: 4.8 miles northwest of Madison
feature inters.: Mud Creek
cadastral grid: S21/22, T55N, R12W
highway route: County Road 303
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 100.0'
total length: 102.0'
roadway width: 11.8
condition: good
alterations: truss moved to this location from multiple-span bridge
floor/decking : timber deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1930
erection cost: $60,002.18 (multiple-span bridge contract)
designer: Missouri State Highway Department
fabricator : unknown
contractor: Martin Wunderlich

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 303000.6; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO.

sign. rating: 28
evaluation: NRHP non-eligible (typical example of MSHD standard truss design, moved to this location)

inventoried by: Clayton B. Fraser 17 January 1992

Fairgrounds Bridge

MONR19

GENERAL DATA

structure no.: 331000.2
county: Monroe
city/town: Paris
feature inters.: unnamed stream
cadastral grid: S11, T54N, R10W
highway route: County Road 331
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 3-web, 4-panel, rigid-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 80.0'
total length: 101.0'
roadway width: 11.7'ers
condition: fair
alterations: none
floor/decking : asphalt over concrete deck, with steel string-

other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 4 angles with continuous plate; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice; concrete sidewalk cantilevered from the north web of truss

HISTORICAL DATA

erection date: 1923-24
erection cost: $2985.00 (superstructure cost)
designer: Dildine Bridge Company, Cameron MO
fabricator : Dildine Bridge Company, Cameron MO; Illinois Steel Company, Chicago IL
contractor: county work force

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 331000.2; Monroe County Court Record, Book X: page 222 (4 September 1923), page 231 (6 November 1923), page 257 (5 May 1924), located at Monroe County Courthouse, Paris MO; field inspection by Richard Collier and Carl McWilliams, 6 June 1991.

sign. rating: 72
evaluation: NRHP eligible (uniquely configured example of common structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 17 January 1992

Glover Bridge

MONR20

GENERAL DATA

structure no.: 334000.8
county: Monroe
city/town: 5.2 miles northwest of Madison
feature intere.: Mud Creek
cadastral grid: S21, T55N, R12W
highway route: County Road 334
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Warren truss-leg bedstead, with steel stringer approach spans
substructure: truss-leg piers

span number: 1
span length: 45.0'
total length: 74.0'
roadway width: 11.7'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1905
erection cost: $573.00 (contract amount)
designer: Pan-American Bridge Company, New Castle IN
fabricator : Pan-American Bridge Company, New Castle IN
contractor: Pan-American Bridge Company, New Castle IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 334000.8; Monroe County Court Record, Book U: page 184 (7 August 1905), located at Monroe County Courthouse, Paris MO; Contract between the Pan-American Bridge Company and Monroe County (13 September 1905) for four steel bridges, located in file drawer at Monroe County Courthouse, Paris MO.

sign. rating: 46
evaluation: NRHP possibly eligible (early example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Otter Creek Bridge

MONR21

GENERAL DATA

structure no.:	342001.1	**city/town:**	9.3 miles north of Madison
county:	Monroe	**feature inters.:**	Otter Creek
		cadastral grid:	S4, T55N, R11W
		highway route:	County Road 342
		highway distr.:	3
		current owner:	Monroe County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Warren truss-leg bedstead
substructure: truss leg abutments with timber back- and wingwalls

span number:	1	**condition:**	fair
span length:	48.0'	**alterations:**	unknown
total length:	49.0'	**floor/decking :**	timber deck
roadway width:	11.5'	**other features:**	steel lattice guardrails

HISTORICAL DATA

erection date: 1907
erection cost: $535.00 (contract amount)
designer: Pan-American Bridge Company, New Castle IN
fabricator : Pan-American Bridge Company, New Castle IN
contractor: Pan-American Bridge Company, New Castle IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 342001.1; Contract between the Pan-American Bridge Company and Monroe County (1 December 1906), located in file drawer at Monroe County Courthouse, Paris MO.

sign. rating: 30
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Middle Fork Bridge

MONR23

GENERAL DATA

structure no.: 357001.7
county: Monroe
city/town: 6.1 miles northwest of Paris
feature inters.: Middle Fork of the Salt River
cadastral grid: S35, T55N, R11W
highway route: County Road 357
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with lattice pony truss and steel stringer approach spans
substructure: steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers

span number: 1
span length: 102.0'
total length: 151.0'
roadway width: 11.6'
condition: fair
alterations: none
floor/decking: timber 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: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice; portal builder's plates: **1910 / DECATUR BRIDGE Co. / J.T. GRIGSBY AGENT / JUDGES / JAS S. ALLEN / JAS T. UMSTATTD / O.E. BROWN / J.N. MAGRUDER C0 CLERK**

HISTORICAL DATA

erection date: 1910
erection cost: unknown
designer: Decatur Bridge Company, Decatur IL
fabricator: Decatur Bridge Company, Decatur IL
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 357001.7; field inspection by Richard Collier and Carl McWilliams, 6 June 1991.

sign. rating: 37
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Edwards Ford Bridge

MONR24

GENERAL DATA

structure no.: 405000.8
county: Monroe
city/town: 3.8 miles northwest of Paris
feature inters.: Otter Creek
cadastral grid: S21, T55N, R10W
highway route: County Road 405
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: steel pile bent abutments with timber backwalls; concrete-filled steel cylinder piers

span number: 1
span length: 60.0'
total length: 97.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pin; guardrail: steel angle; endpost-mounted bridge plate: **Built By Decatur Bridge Co. Decatur ILL**

HISTORICAL DATA

erection date: 1904
erection cost: $900.00 (contract amount)
designer: Decatur Bridge Company, Decatur IL
fabricator : Decatur Bridge Company, Decatur IL
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 405000.8; Monroe County Court Record, Book U: page 42 (7 June 1904), page 53 (August 1904), page 147 (6 March 1905), located at Monroe County Courthouse, Paris MO; Contract between the Decatur Bridge Company and Monroe County (31 August 1904), located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Richard Collier and Carl McWilliams, 6 June 1991.

sign. rating: 42
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Roney Ford Bridge

MONR25

GENERAL DATA

structure no.: 446000.7
county: Monroe
city/town: 5.6 miles northeast of Paris
feature inters.: Otter Creek
cadastral grid: S20, T55N, R9W
highway route: County Road 446
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 80.0'
total length: 101.0'
roadway width: 11.9'
condition: fair
alterations: none
floor/decking : timber 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: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

HISTORICAL DATA

erection date: 1910
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 446000.7; Monroe County Court Record, Book V: page 96 (7 February 1910), located at Monroe County Courthouse, Paris MO; field inspection by Richard Collier and Carl McWilliams, 6 June 1991.

sign. rating: 36
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Crooked Creek Bridge

MONR26

GENERAL DATA

structure no.: 450001.2
county: Monroe
city/town: 7.8 miles northeast of Paris
feature inters.: Crooked Creek
cadastral grid: S5, T55N, R9W
highway route: County Road 450
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 90.0'
total length: 123.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber 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: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

HISTORICAL DATA

erection date: 1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 450001.2; Monroe County Court Record, Book V: page 110 (7 May 1910), located at Monroe County Courthouse, Paris MO; field inspection by Richard Collier and Carl McWilliams, 6 June 1991.

sign. rating: 31
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Combs Bridge

MONR27

GENERAL DATA

structure no.: 547001.2
county: Monroe
city/town: 12.1 miles north of Paris
feature inters.: Brush Creek
cadastral grid: S14, T56N, R10W
highway route: County Road 547
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Warren truss-leg bedstead
substructure: steel truss-leg piers

span number: 1
span length: 40.0'
total length: 65.0'
roadway width: 11.7'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1904
erection cost: $484.00 (contract amount)
designer: Decatur Bridge Company, Decatur IL
fabricator : Decatur Bridge Company, Decatur IL
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 547001.2; Monroe County Court Record, Book U: page 53 (1 August 1904), page 135 (30 January 1905), located at Monroe County Courthouse, Paris, Missouri; Contract between the Decatur Bridge Company and Monroe County (31 August 1904), located in file drawer at Monroe County Courthouse, Paris MO.

sign. rating: 46
evaluation: NRHP possibly eligible (early example of relatively common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Crooked Creek Bridge

MONR28

GENERAL DATA

structure no.: 552000.5
county: Monroe
city/town: 9.1 miles north of Paris
feature inters.: Crooked Creek
cadastral grid: S33, T56N, R10W
highway route: County Road 552
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt half-hip pony truss, with steel stringer approach spans
substructure: steel pile bent abutments with timber back- and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 64.0'
total length: 104.0'
roadway width: 11.8'
condition: poor
alterations: bridge closed
floor/decking : timber 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: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

HISTORICAL DATA

erection date: 1910
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 552000.5; Monroe County Court Record, Book V: page 110 (7 May 1910), located at Monroe County Courthouse, Paris MO; field inspection by Richard Collier and Carl McWilliams, 6 June 1991.

sign. rating: 32
evaluation: NRHP non-eligible (typically configured, inadequately documented example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

Patterson Bridge

MONR30

GENERAL DATA

structure no.: 564000.2
county: Monroe
city/town: 9.6 miles northwest of Paris
feature inters.: Crooked Creek
cadastral grid: S32, T56N, R10W
highway route: County Road 564
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 70.0'
total length: 97.0'
roadway width: 10.7'
condition: fair
alterations: none
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: 4 angles with lacing; outrider: 2 angles; diagonal: 2 punched rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle

HISTORICAL DATA

erection date: 1913
erection cost: $2344.00
designer: Decatur Bridge Company, Decatur IL
fabricator : Decatur Bridge Company, Decatur IL; Cambria Steel Company, Pittsburgh PA
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 564000.2; Monroe County Court Record, Book V: page 546 (8 February 1913), located at Monroe County Courthouse, Paris MO; Contract between Decatur Bridge Company and Monroe County (10 February 1913) for six bridges, located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Richard Collier and Carl McWilliams, 6 June 1991.

sign. rating: 38
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 17 January 1992

County Line Bridge

MONR31

GENERAL DATA

structure no.: 589000.8
county: Monroe
city/town: 8.6 miles north of Madison
feature inters.: Upper Otter Creek
cadastral grid: S31/36, T56N, R11/12W
highway route: County Road 589
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected Warren truss-leg bedstead
substructure: concrete abutments and wingwalls; steel truss-leg piers

span number: 1
span length: 48.0'
total length: 81.0'
roadway width: 12.1'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1905
erection cost: $680.00
designer: Pan-American Bridge Company, New Castle IN
fabricator : Pan-American Bridge Company, New Castle IN
contractor: Pan-American Bridge Company, New Castle IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 589000.8; Contract between Pan-American Bridge Company and Monroe County (10 April 1905) for two bridges, located in file drawer at Monroe County Courthouse, Paris MO.

sign. rating: 46
evaluation: NRHP possibly eligible (early example of relatively common truss type)

inventoried by: Clayton B. Fraser 17 January 1992

Union Covered Bridge

MONR32

GENERAL DATA

structure no.: none
county: Monroe
city/town: 6.5 miles southwest of Paris
feature inters.: Elk Fork of the Salt River
cadastral grid: S26, T54N, R11W
highway route: vacated county road
highway distr.: 3
current owner: Monroe County

STRUCTURAL DATA

superstructure: covered timber Burr arch-truss
substructure: stone abutments

span number: 1
span length: 125.0'
total length: 130.0'
roadway width: 17.6'
condition: excellent - restored
alterations: bridge closed to traffic
floor/decking : timber deck over timber stringers
other features: upper chord and inclined end post: double timber arches bolted to timber verticals; lower chord: timber; diagonal: timber; lateral bracing: timber; strut: timber with knee braces; floor beam: timber; wood shingle roof; beveled horizontal siding on exterior walls

HISTORICAL DATA

erection date: 1871
erection cost: $1850.00
designer: William L. Smiley
fabricator : none
contractor: Joseph Elliot, Payson IL

references: Monroe County Court Record, Book M: page 15 (8 April 1870), page 56 (6 June 1870), page 67 (9 June 1870), page 75 (6 July 1870), page 78 (6 July 1870), page 124 (4 October 1870), page 201 (17 January 1871), page 356 (6 September 1871), page 357 (7 September 1871); Monroe County Court Record, Book U: page 263 (2 April 1906), page 576 (1 December 1908), located at Monroe County Courthouse, Paris MO; "Bridges To Another Time" pp. 14-18 (Fall 1987), by Sue Holst, **Missouri Resource Review**; "Covered Bridges" (no date), Missouri Department of Natural Resources [brochure], located in Jefferson City, Missouri; "Engineering and Enterprise Early Metal-Truss Bridges in Ohio" pp. 14-29 (February - March 1985), by David A. Simmons, **Timeline**, the Ohio Historical Society; field inspection by Clayton Fraser, 15 September 1991.

sign. rating: 79
evaluation: NRHP individually listed (well-preserved, now-rare example of what once was a mainstay structural type)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cook's Ford Bridge (Long Branch Bridge) MONR01
MHTD: 018001.5

DATE(S) OF CONSTRUCTION
1914; moved 1930

LOCATION
County Road 18 over Long Branch; S18, T53N, R8W
1.2 miles west of Santa Fe; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
fair

OWNER
Monroe County

span number:	1	superstructure:	steel, 7-panel, pin-connected Pratt through truss
span length:	112.0'	substructure:	concrete abutments, wingwalls and (non-original) concrete spill-through piers
total length:	170.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	11.5'	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 eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles, braced; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle; A-frame portal strut; portal builder's plate: **1914 BUILT BY DECATUR BRIDGE Co. / JNO. T. GRIGSBY AGENT / T.L. McGEE / E.M. LIPP / B.F. VAUGHN / JUDGES OF THE COUNTY COURT / M.W. CALDWELL HIGHWAY ENG. / M.K. CURTRIGHT COUNTY CLK.**

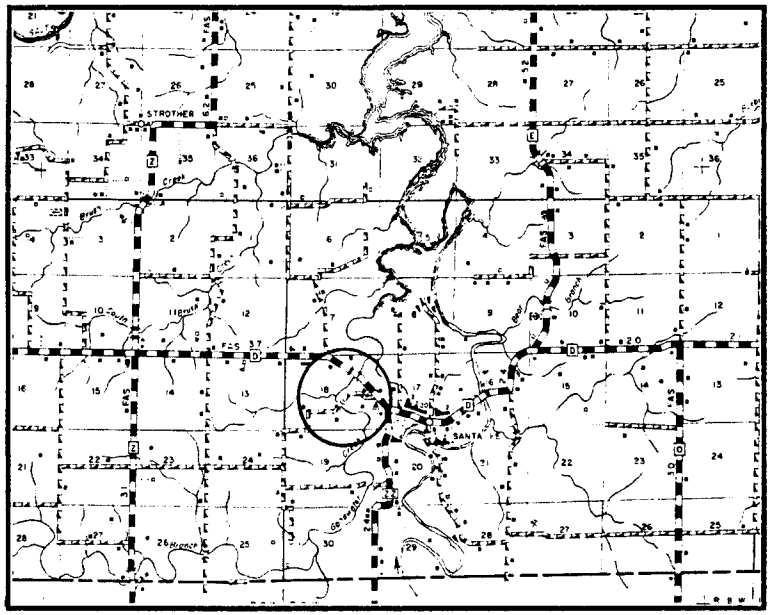
In April 1914 the Monroe County Court directed county engineer W.W. Caldwell to advertise for bids for the construction of three bridges: the Middle Grove Bridge across Oldham Creek [**MONR07**], the Legrand Bridge south of Woodlawn [**MONR18**], and the Pleasant Hill Bridge across the Elk Fork of the Salt River. The following month the court contracted with the Decatur Bridge Company of Illinois for the structures. Longest of the three with a span length of 112 feet, the Pleasant Hill Bridge cost $3865.00. It featured a pinned Pratt channel span, supported by steel cylinder piers, with 76 feet of steel stringer approaches. Using steel rolled by the Cambria mills in Pittsburgh, Decatur Bridge fabricated and erected the three steel spans later that year without report of incident. The Pleasant Hill Bridge functioned in place for fifteen years on a county road that later was incorporated as part of a state highway. In 1930, however, it was replaced by a heavier structure by the state highway department. The through truss was at that time moved to the Cook's Ford over Long Branch, just west of Santa Fe, where it was re-erected on a new concrete substructure. The bridge has carried vehicular traffic since, in essentially unaltered condition.

The Pleasant Hill / Cook's Ford Bridge typifies pinned Pratt truss construction. It is one of thousands of such short-span through trusses erected on Missouri's county roads in the early 20th century and is one of hundreds of such spans remaining in place today.

NAME(S) OF STRUCTURE

Cook's Ford Bridge (Long Branch 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 No. 018001.5; Monroe County Court Record, Book W: page 48 (7 April 1914); Book X: page 547 (16 September 1929), page 600 (7 July 1930), located at Monroe County Courthouse, Paris MO; Contract between the Decatur Bridge Company and Monroe County (14 May 1914) for three steel bridges, located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Coal Bank Bridge (Elk Fork Bridge) MONR09
MHTD: 175000.6

DATE(S) OF CONSTRUCTION
1912

LOCATION
County Road 175 over Elk Fork of the Salt River; S29/30, T54N, R9W
4.5 miles southeast of Paris; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
fair

OWNER
Monroe County

span number:	1	superstructure:	steel, 7-panel, pin-connected Pratt through truss, with steel stringer approach spans
span length:	112.0'	substructure:	concrete abutments and wingwalls; concrete-filled steel cylinder piers
total length:	150.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.8'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

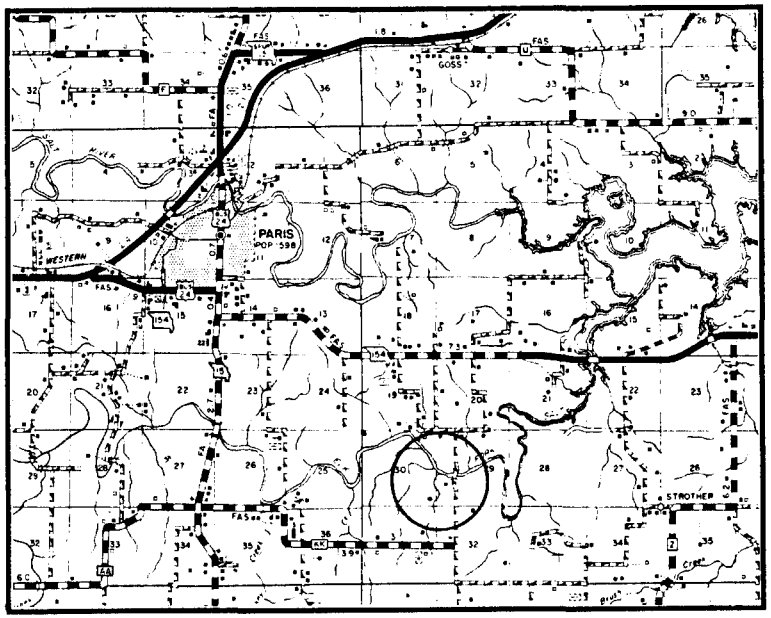
This steel structure spans the Elk Fork of the Salt River some four miles southeast of Paris, the Monroe County seat. Located in southeastern Monroe County, the pinned Pratt through bridge dates to 1912. The Monroe County Court contracted with Decatur Bridge Company of Decatur, Illinois, that June to build seven bridges for the inclusive sum of $9854.00. One of the seven bridges designated to be erected in the ensuing six months, the Coal Bank Bridge would cost $2650.00. Decatur Bridge used steel components rolled in Pittsburgh by the Cambria Steel Works to fabricate this pin-connected Pratt truss, erecting it on steel cylinder piers later that year. Since its completion, the Coal Bank Bridge has carried traffic with few alterations.

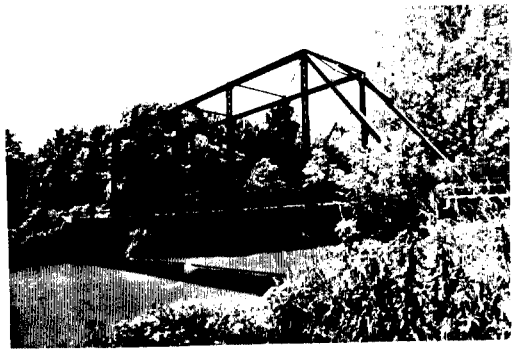
In Missouri, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the late 19th and early 20th centuries. As a result, thousands of Pratts were built across the state, and today Pratts constitute the most populous group of through trusses. With modest dimensions and standard design and detailing, the Coal Bank Bridge is a technologically undistinguished example of this mainstay structural type.

NAME(S) OF STRUCTURE

Coal Bank Bridge (Elk Fork 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 No. 175000.6; Contract between the Decatur Bridge Company and Monroe County (5 June 1912) for seven steel bridges, located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cedar Bluff Bridge (Elk Fork Bridge) MONR11
MHTD: 209002.6

DATE(S) OF CONSTRUCTION
1912

LOCATION
County Road 209 over Elk Fork of the Salt River; S29, T54N, R10W
4.0 miles southwest of Paris; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Monroe County

span number: 1
span length: 112.0'
total length: 158.0'
roadway wdt.: 10.7'

superstructure: steel, 7-panel, pin-connected Pratt through truss, with 3-panel, rigid-connected Pratt pony truss approach span

substructure: stone abutment (southeast); concrete abutment (northwest); concrete-filled steel cylinder piers

floor/decking: timber deck over steel stringers

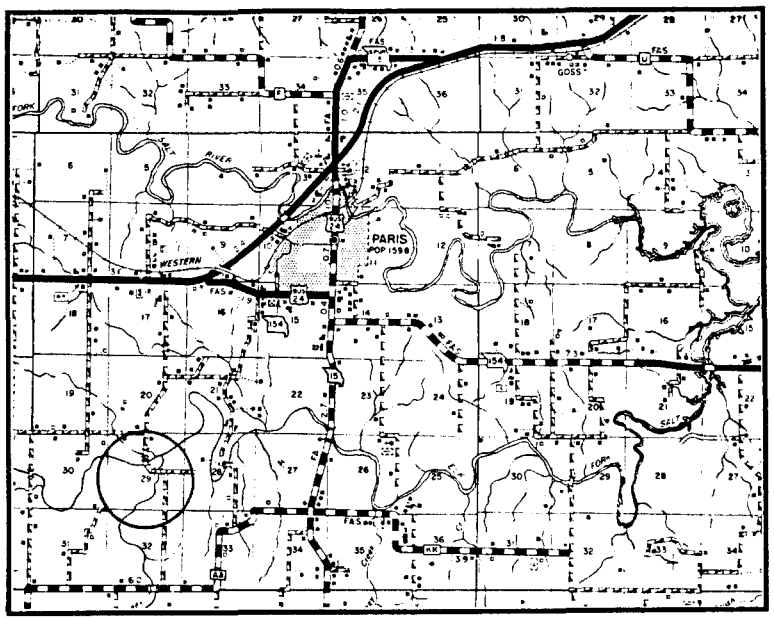
other features: Pratt through truss: upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice;
With the following exceptions, the Pratt pony truss is configured the same as the main span: top chord end post: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 1 channel; diagonal: 2 angles with batten plates.

Located in south-central Monroe County four miles southwest of Paris, this bridge spans the Elk Fork of the Salt River. The structure - a pin-connected Pratt through truss supported by steel tubes - is known locally as the Cedar Bluff Bridge. Early in 1912 the Monroe County Court solicited bids for the Cedar Bluff Bridge and several other steel spans. The court in June awarded the contract to fabricate and erect the Cedar Bluff Bridge to the Decatur Bridge Company of Decatur, Illinois, for $2604.00. Using steel components produced by the Cambria Steel Works of Pittsburgh, Decatur Bridge built this short-span through truss later that year. The riveted Pratt pony truss was added at an unknown later date, but the structure has undergone relatively few alterations as it has functioned in place to the present. The Cedar Bluff Bridge is a representative example of the pin-connected Pratt truss - a mainstay structural type used extensively throughout Missouri in the early 20th century.

NAME(S) OF STRUCTURE

Cedar Bluff Bridge (Elk Fork 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 No. 209002.6; Contract between the Decatur Bridge Company and Monroe County (5 June 1912) for seven steel bridges, located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Range Line Bridge (Elk Fork Bridge) MONR13
MHTD: 230000.5

DATE(S) OF CONSTRUCTION
1905

LOCATION
County Road 230 over Elk Fork of the Salt River; S30/25, T54N, R10/11W
5.2 miles southwest of Paris; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION
fair

OWNER
Monroe County

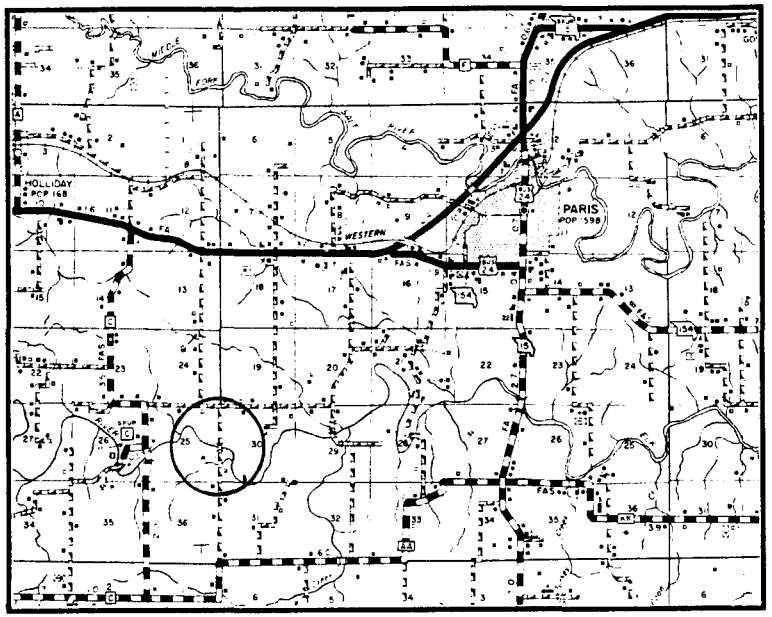
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach span
span length:	108.0'	substructure:	stone abutments; concrete-filled steel cylinder piers
total length:	126.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.7'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: A-frame; floor beam: I-beam, U-bolted to lower chord pin; guardrail: steel angle

Located in south-central Monroe County, this pin-connected Pratt through truss carries a gravel-surfaced county road across the Elk Fork of the Salt River. County records indicate that competitive bids were accepted to build this bridge - called the Range Line Bridge - in March 1905, in response to a petition from a sizeable contingent of area residents. Typical of the day, the petitioners agreed to deliver materials to site, in order to help offset construction costs. The Pan American Bridge Company of New Castle, Indiana, won the contract to construct the Range Line Bridge and seven other steel spans for $6495.00. This structure possesses a high degree of physical integrity, despite its slightly damaged approach guardrail. Since its completion in 1905, the Range Line Bridge has carried traffic in this heavily wooded Monroe County setting. It is a typically configured, modestly scaled example of a mainstay structural type - the pinned Pratt through truss.

NAME(S) OF STRUCTURE

Range Line Bridge (Elk Fork 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 No. 230000.5; Monroe County Court Record, Book U: page 141 (9 February 1905), page 157 (25 March 1905), located at Monroe County Courthouse, Paris MO; field inspection by Carl McWilliams and Richard Collier, 6 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Fairgrounds Bridge
MHTD: 331000.2

MONR19

DATE(S) OF CONSTRUCTION
1923-24

LOCATION
County Road 331 over unnamed stream; S11, T54N, R10W
Paris; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP eligible (score: 72)

CONDITION
fair

OWNER
Monroe County

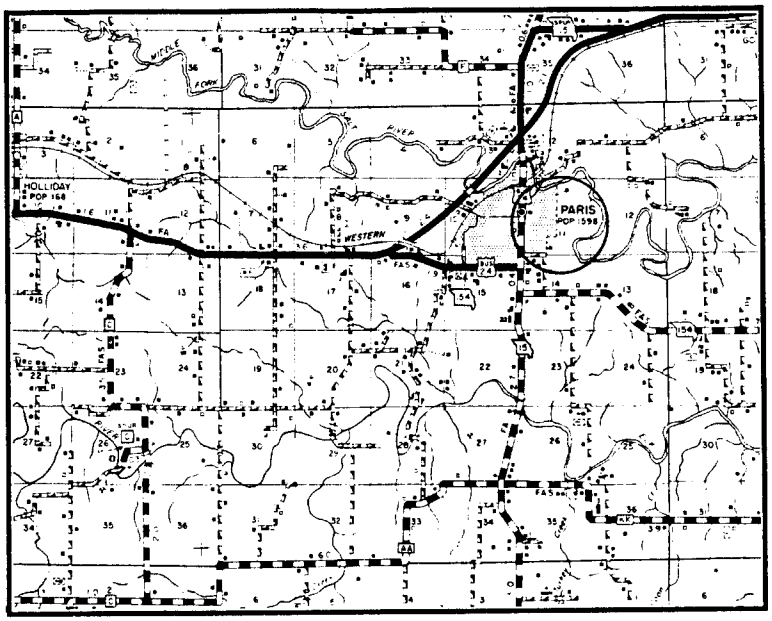
span number:	1	superstructure:	steel, 3-web, 4-panel, rigid-connected Pratt pony truss, with steel stringer approach spans
span length:	80.0'	substructure:	concrete abutments, wingwalls and piers
total length:	101.0'	floor/decking:	asphalt over concrete deck, with steel stringers
roadway wdt.:	11.7'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 4 angles with continuous plate; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice; concrete sidewalk cantilevered from the north web of truss

Completed in late 1923, the Fairgrounds Bridge spans an unnamed stream in Paris, the Monroe County seat. This atypically configured structure consists of a riveted, 3-web Pratt pony truss with steel lattice guardrails and a concrete sidewalk cantilevered from the truss's north web. In September 1923 the Monroe County Court ordered a permanent bridge built across the stream to the county fairgrounds in Paris in time for the 1924 county fair. Presumably the structure was needed to carry the increased vehicular and pedestrian traffic during fair season. The county solicited bids for the steel superstructure and in November awarded the contract to Dildine Bridge Company of Hannibal, Missouri, to fabricate the truss for $2985.00. Because Dildine was infrequently employed in Monroe County, this bridge company was an unusual choice for the court. Using steel components rolled by the Illinois Steel Company, Dildine fabricated the bridge and shipped it to Paris, where it was assembled by local labor. Since its completion, the Fairgrounds Bridge continues to carry standard traffic in Paris. The lower chords and stringers have recently been refurbished, but the riveted Pratt truss remains in unaltered and well-preserved condition.

The Pratt web composition of the Fairgrounds Bridge is one that has been used on thousands of county bridges throughout Missouri. What distinguishes this structure from its common counterparts, however, is the triple-web configuration. Evidently intended to separate the two lanes of traffic traveling to and from the county fairgrounds, the center web is an exceedingly rare feature - the only one of its kind identified by the statewide bridge inventory.

NAME(S) OF STRUCTURE
Fairgrounds 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 No. 331000.2; Monroe County Court Record, Book X: page 222 (4 September 1923), page 231 (6 November 1923), page 257 (5 May 1924), located at Monroe County Courthouse, Paris MO; field inspection by Richard Collier and Carl McWilliams, 6 June 1991.

INVENTORIED BY
Clayton Fraser and Michelle Crow-Dolby

AFFILIATION
Fraserdesign, Loveland CO

DATE
17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Glover Bridge
MHTD: 334000.8

MONR20

DATE(S) OF CONSTRUCTION
1905

LOCATION
County Road 334 over Mud Creek; S21, T55N, R12W
5.2 miles northwest of Madison; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 46)

CONDITION
fair

OWNER
Monroe County

span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren truss-leg bedstead, with steel stringer approach spans
span length:	45.0'	substructure:	truss-leg piers
total length:	74.0'	floor/decking:	timber deck
roadway wdt.:	11.7'	other features:	steel angle guardrails

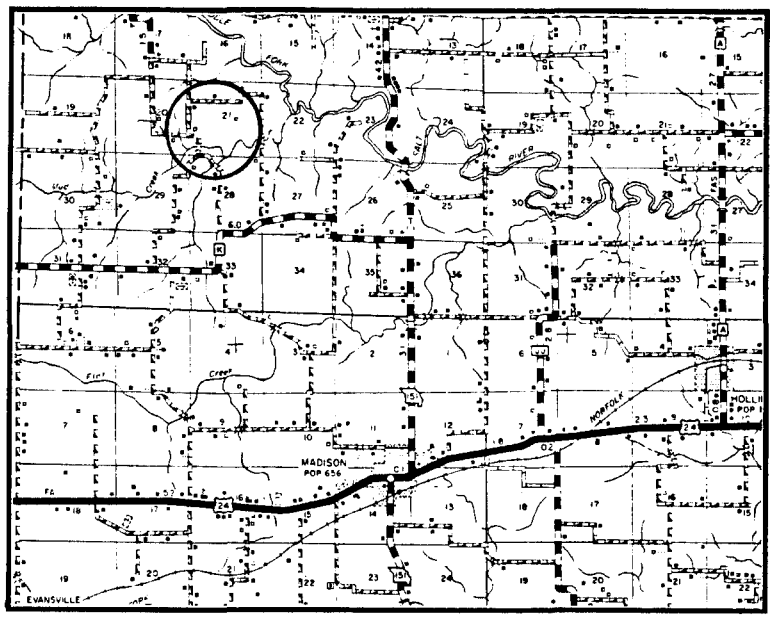
Located some five miles northwest of Madison, this small-scale steel truss carries a gravel-surfaced county road over Mud Creek. The bridge is comprised of a single rigid-connected Warren bedstead truss, supported by its original bedstead legs. Known locally as the Glover Bridge for its proximity to the farm of James Glover, this structure dates to 1905. That August the Monroe County Court directed county road and bridge engineer John Grigsby to erect three small bridges: a span just east of Madison, a span across Glen Creek south of Middle Grove, and this span northwest of Madison. Grigsby contracted wit the Pan-American Bridge Company of New Castle, Indiana–Monroe County's perennial bridge builder–to fabricate and erect the bridges. Completed later in 1905, the Glover Bridge has functioned in place, with only maintenance-related repairs.

In a bedstead truss, a single "leg" functioned as both end post and support at each corner of the structure. This combined super- and substructure reduced erection costs somewhat, but bedsteads were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Despite these weaknesses, numerous truss leg bedsteads were erected throughout Missouri in the late 1890s and early 1900s. Hundreds remain in place today; in fact, Missouri has probably more bedsteads than any other state. The majority of these employ pinned Pratt web configurations. A relatively smaller number of bedsteads have Warren webs. The Glover Bridge is distinguished among these later structures for its early construction date and well-preserved condition.

NAME(S) OF STRUCTURE

Glover 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 No. 334000.8; Monroe County Court Record, Book U: page 184 (7 August 1905), located at Monroe County Courthouse, Paris MO; Contract between the Pan-American Bridge Company and Monroe County (13 September 1905) for four steel bridges, located in file drawer at Monroe County Courthouse, Paris MO.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO	17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Miles Bridge
MHTD: 353000.6

MONR22

DATE(S) OF CONSTRUCTION
1912

LOCATION
County Road 353 over Middle Fork of the Salt River; S30/25, T55N, R11/12W
4.2 miles north of Madison; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP determined non-eligible (score: 37)

CONDITION
fair

OWNER
Monroe County

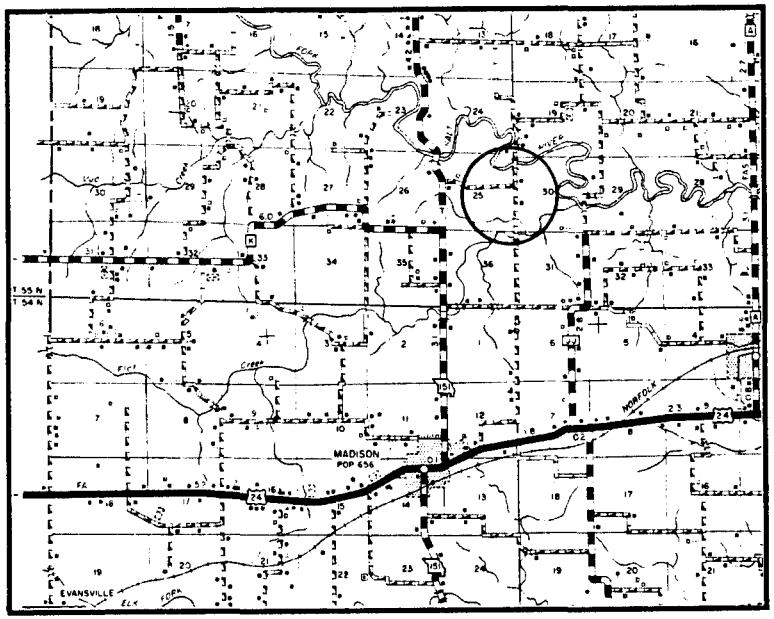
span number: 1
span length: 90.0'
total length: 150.0'
roadway wdt.: 11.7'

superstructure: steel, 6-panel, pin-connected Pratt through truss, with lattice pony truss approach spans
substructure: steel pile bent abutments at grade with timber backwalls; concrete-filled steel cylinder piers
floor/decking: timber 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: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice; portal builder's plate: **1912 / JUDGES / T.A. McGEE / B.F. VAUGHN/ E.M. LIPP / M.K. CURTRIGHT COUNTY CLERK/ M.W. CALDWELL COUNTY ENGR. / BUILT BY/ DECATUR BRIDGE Co. / DECATUR, ILL. / J.T. GRIGSBY AGENT.**

The Miles Bridge carries a gravel-surfaced county road over the Salt River some four miles north of Madison. This pinned Pratt through truss dates to 1912. In May of that year, according to county records, the Monroe County Court ordered the Miles Bridge built, provided that the local citizens upgrade the approach road at no cost to the county. After reviewing several bids for the project, the court awarded a contract to fabricate and erect the bridge to the Decatur Bridge Company of Decatur, Illinois. The agreement also included the construction of an additional seven bridges in the county for the aggregate sum of $9854.00. Located in western Monroe County, the Miles Bridge features steel lattice guardrails and 2-panel pony truss approach spans on both ends of the through truss. A builder's plate on the bridge lists the county court members, Monroe County Highway Engineer and the contractor. This bridge continues to carry traffic and maintains an average degree of historical integrity. It is a typically configured, modestly scaled example of the truss type built extensively throughout Missouri in the early 20th century.

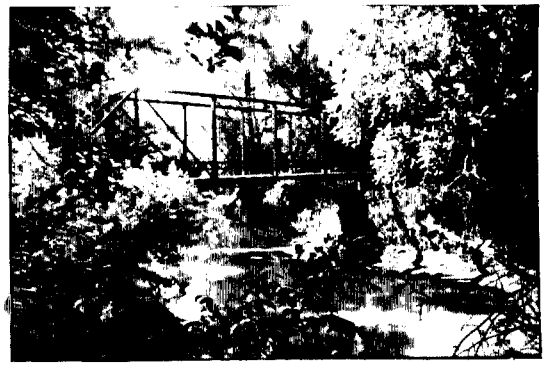
NAME(S) OF STRUCTURE
Miles Bridge (Middle Fork Bridge)

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 No. 353000.6; Monroe County Court Record, Book V: page 435 (8 May 1912), located at Monroe County Courthouse, Paris MO; Contract between the Decatur Bridge Company and Monroe County (6 June 1912), located in file drawer at Monroe County Courthouse, Paris MO; field inspection by Richard Collier and Carl McWilliams, 6 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Combs Bridge
MHTD: 547001.2

MONR27

DATE(S) OF CONSTRUCTION
1904

LOCATION
County Road 547 over Brush Creek; S14, T56N, R10W
12.1 miles north of Paris; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 46)

CONDITION
fair

OWNER
Monroe County

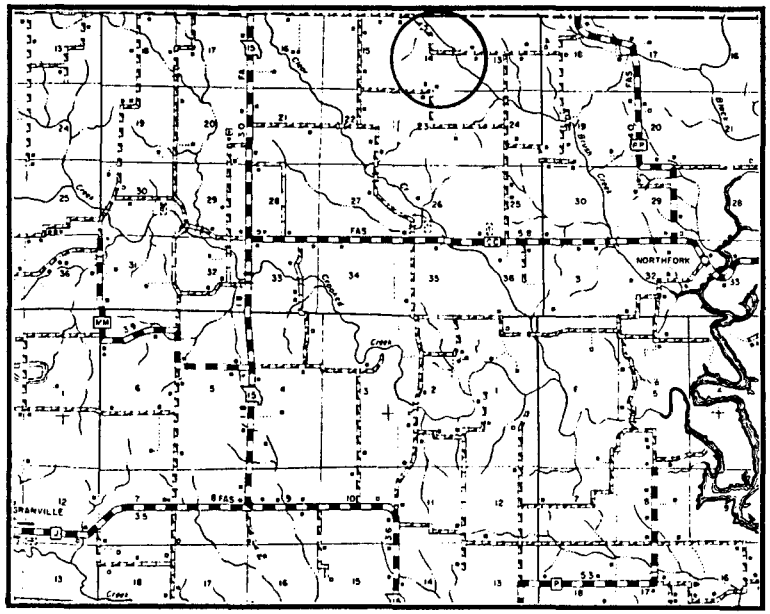
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren truss-leg bedstead
span length:	40.0'	substructure:	steel truss-leg piers
total length:	65.0'	floor/decking:	timber deck
roadway wdt.:	11.7'	other features:	steel angle guardrails

Located some 12 miles north of Paris, the Monroe County seat, this small-scale steel truss carries a gravel-surfaced county road over Brush Creek. The bridge is comprised of a single rigid-connected Warren bedstead truss, supported by its original bedstead legs. Known locally as the Combs Bridge, this structure dates to 1904. That August the Monroe County Court contracted with the Midland Bridge Company of Kansas City to fabricate and erect two small bridges: a 60-foot span across Otter Creek at the Edwards Ford [**MONR24**] and this 40-foot span across Brush Creek. At some point, the contract was transferred from Midland to the Decatur Bridge Company of Decatur, Illinois; the Illinois firm was paid for the completion of both bridges in January 1905. Cost of the Combs Bridge: $484.00. Since its completion, the Combs Bridge has functioned in place, with only maintenance-related repairs.

In a bedstead truss, a single "leg" functioned as both end post and support at each corner of the structure. This combined super- and substructure reduced erection costs somewhat, but bedsteads were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Despite these weaknesses, numerous truss leg bedsteads were erected throughout Missouri in the late 1890s and early 1900s. Hundreds remain in place today; in fact, Missouri has probably more bedsteads than any other state. The majority of these employ pinned Pratt web configurations. A relatively smaller number of bedsteads have Warren webs. The Combs Bridge is distinguished among these later structures for its early construction date and well-preserved condition.

NAME(S) OF STRUCTURE
Combs 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 No. 547001.2; Monroe County Court Record, Book U: page 53 (1 August 1904), page 135 (30 January 1905), located at Monroe County Courthouse, Paris, Missouri; Contract between the Decatur Bridge Company and Monroe County (31 August 1904), located in file drawer at Monroe County Courthouse, Paris MO.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
County Line Bridge
MHTD: 589000.8

MONR31

DATE(S) OF CONSTRUCTION
1905

LOCATION
County Road 589 over Upper Otter Creek; S31/36, T56N, R11/12W
8.6 miles north of Madison; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 46)

CONDITION
fair

OWNER
Monroe County

span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren truss-leg bedstead
span length:	48.0'	substructure:	concrete abutments and wingwalls; steel pile bent piers
total length:	81.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	12.1'	other features:	steel guardrails

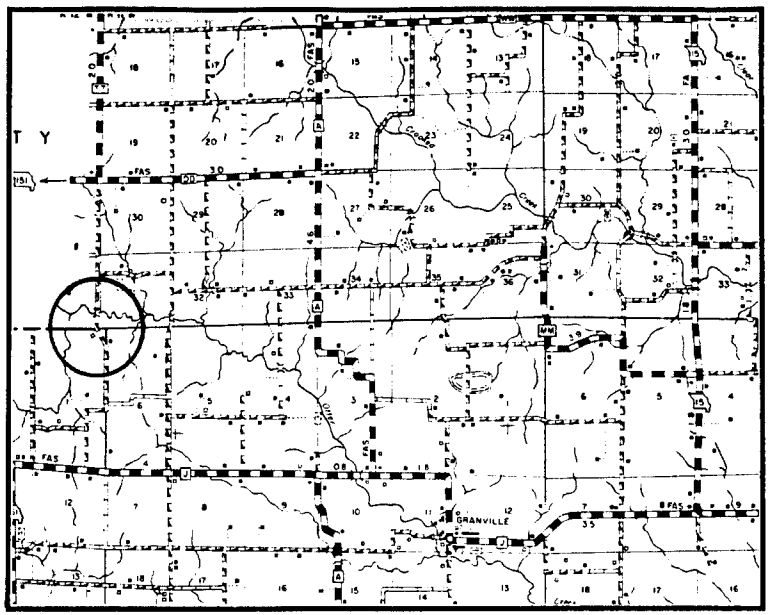
Located almost nine miles north of Madison, this small-scale steel truss carries a gravel-surfaced county road over Upper Otter Creek on the Monroe/Shelby County line. The bridge is comprised of a single rigid-connected Warren bedstead truss, supported by its original bedstead legs and approached by steel stringer spans. The County Line Bridge, as it was called at the time of its construction, dates to 1905. That April the Monroe County Court ordered built two small bridges on the line with Shelby County: a 24-foot steel stringer span and this 48-foot bedstead with strigner approaches. The court contracted with the Pan-American Bridge Company of New Castle, Indiana–Monroe County's perennial bridge builder–to fabricate and erect the bridges. Completed later in 1905, the County Line Bridge has functioned in place, with only maintenance-related repairs.

In a bedstead truss, a single "leg" functioned as both end post and support at each corner of the structure. This combined super- and substructure reduced erection costs somewhat, but bedsteads were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Despite these weaknesses, numerous truss leg bedsteads were erected throughout Missouri in the late 1890s and early 1900s. Hundreds remain in place today; in fact, Missouri has probably more bedsteads than any other state. The majority of these employ pinned Pratt web configurations. A relatively smaller number of bedsteads have Warren webs. The County Line Bridge is distinguished among these later structures for its early construction date and well-preserved condition.

NAME(S) OF STRUCTURE

County Line 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 No. 589000.8; Contract between Pan-American Bridge Company and Monroe County (10 April 1905) for two bridges, located in file drawer at Monroe County Courthouse, Paris MO.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	17 January 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Union Covered Bridge MONR32
MHTD: none

DATE(S) OF CONSTRUCTION
1871

LOCATION
vacated county road over Elk Fork of the Salt River; S26, T54N, R11W
6.5 miles southwest of Paris; Monroe County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / pedestrian bridge

RATING NRHP individually listed (score: 79)

CONDITION
good - restored

OWNER
Monroe County

span number: 1
span length: 125.0'
total length: 130.0'
roadway wdt.: 17.6'

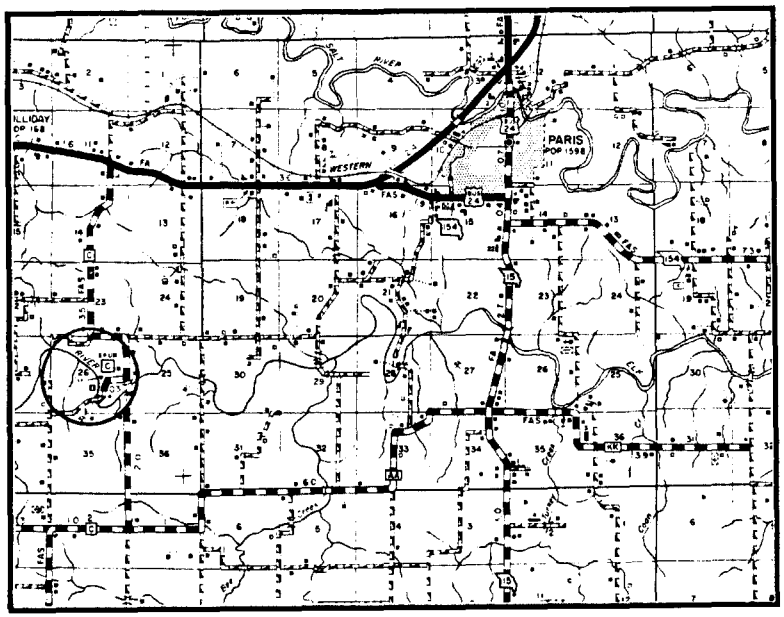
superstructure: covered timber Burr arch-truss
substructure: stone abutments
floor/decking: timber deck over timber stringers
other features: upper chord and inclined end post: double timber arches bolted to timber verticals; lower chord: timber; diagonal: timber; lateral bracing: timber; strut: timber with knee braces; floor beam: timber; wood shingle roof; beveled horizontal siding on exterior walls

Named for the nearby Union Church, the Union Covered Bridge spans the Elk Fork of the Salt River on the old Paris to Fayette Road. The present covered bridge is the third bridge to occupy this site. An open wooden bridge was first built at this location in 1849. After being washed out, however, this first structure was replaced by another wooden bridge in 1858. It too suffered extensive damage ten years later and was subsequently condemned by the Monroe County Court. In April 1870 the court ordered a third bridge built at the site, appropriating $5000.00 toward its construction. After several petitions for and against the bridge, the county court awarded the construction contract to Joseph Elliot of Payson, Illinois. Prior to this time, Elliot had erected four covered bridges in Monroe County based on an arch-truss design by Theodore Burr. William L. Smiley was given $500.00 by Monroe County for drafting the plans and specifications for the covered bridge. Completed in 1871, the single-span timber Burr arch-truss features stone abutments, beveled horizontal siding on the exterior walls and a wood-shingled roof. The structure, which was restored in 1968 by the Missouri State Park Board, is now the centerpiece of a small state park. It carries only pedestrian traffic, with its physical and historical integrity intact.

During the early- to mid-19th century, timber was used almost exclusively for roadway bridges in rural Missouri. The ready availability and concomitant low cost of timber contributed to the popularity of wooden bridges. Because wooden structural members could not long withstand the forces of nature, such bridges were often covered to provide protection and thus increase their longevity. After the industrial revolution and the proliferation of iron foundries and fabrication shops, though, timber bridges, covered or otherwise, were eclipsed by all-iron trusses. Early covered bridges typically employed Burr arch-truss (designed by Theodore Burr of Pennsylvania in 1804), Town lattice (patented by Ithiel Town in 1820), or Howe truss (patented by William Howe in 1840) superstructures, along with such lesser known truss types as Smith trusses. The Union Covered Bridge, like all of the timber trusses built in the county by Illinois contractor Joseph Elliot, featured a Burr arch-truss that sprang into massive stone abutments. It is the last of its kind remaining in Missouri.

NAME(S) OF STRUCTURE
Union Covered Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES
Monroe County Court Record, Book M: page 15 (8 April 1870), page 56 (6 June 1870), page 67 (9 June 1870), page 75 (6 July 1870), page 78 (6 July 1870), page 124 (4 October 1870), page 201 (17 January 1871), page 356 (6 September 1871), page 357 (7 September 1871); Monroe County Court Record, Book U: page 263 (2 April 1906), page 576 (1 December 1908), located at Monroe County Courthouse, Paris MO; "Bridges To Another Time" pp. 14-18 (Fall 1987), by Sue Holst, **Missouri Resource Review**; "Covered Bridges" (no date), Missouri Department of Natural Resources [brochure], located in Jefferson City, Missouri; "Engineering and Enterprise Early Metal-Truss Bridges in Ohio" pp. 14-29 (February - March 1985), by David A. Simmons, **Timeline**, the Ohio Historical Society; field inspection by Clayton Fraser, 15 September 1991.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton Fraser and Michelle Crow-Dolby	Fraserdesign, Loveland CO	17 January 1992

In 1967 the State of Missouri took over stewardship of its remaining covered bridges. Administered as State Historic Sites by the Department of Natural Resources, four such bridges still exist, and each has been listed individually in the National Register of Historic Places. In addition to the Union Covered Bridge, Missouri's three other covered bridges include the Sandy Creek Covered Bridge near Hillsboro, the Burfordville Covered Bridge at the Bollinger Mill State Historic Site, and the Locust Creek Covered Bridge near Laclede in Linn County.

MONTGOMERY COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
MONT01	H 213	Mineola Bridge	1-100' **riveted Pratt through truss** 1925 Pope Construction Co.
*MONT02	J 39R	Loutre River Bridge	1-120' **riveted Pratt through truss** 1943 L.V. Hites Construction Co.
*MONT03	K 226A	Hermann Bridge **over Missouri River**	**7-400' riveted cantilever through truss** 1930 Kansas City Structural Steel Co.
MONT04	018001.0	Coal Branch Bridge	(replaced)
MONT05	022000.1	Little Loutre Creek Bridge	1- 36' riveted lattice bedstead **1914** Missouri Bridge and Iron Co.
*MONT06	079002.2	Morris Ford Bridge	1- 90' **pinned Camelback pony truss** 1930 Missouri Bridge and Iron Co.
*MONT07	115002.6	Bear Creek Bridge	1- 65' pinned Pratt pony truss **1912** Missouri Bridge and Iron Co.
MONT08	125000.4	Watkins Bridge	(replaced)
*MONT09	131000.2	Bear Creek Bridge	1- 70' pinned Pratt pony truss 1930 Missouri Bridge and Iron Co.
MONT10	154000.6	Palmer Bridge	1- 30' steel stringer **1917** county work force
*MONT11	190000.6	Little Loutre Bridge	1- 90' **pinned Camelback pony truss** 1930 Missouri Bridge and Iron Co.
MONT12	191000.5	Browne Bridge	1- 65' riveted Warren pony truss **1916** Missouri Bridge and Iron Co.
*MONT13	198001.4	Whetstone Creek Bridge	1- 80' pinned Pratt pony truss **1903** Missouri Bridge and Iron Co.
MONT14	210000.3	McCarty Bridge	(replaced)
MONT15	251000.4	Camp Creek Bridge	(replaced)
*MONT16	269000.6	Morrow Bridge	1-140' **pinned Pratt through truss** **1909** Missouri Bridge and Iron Co.
MONT17	283000.6	Prairie Fork Bridge	1- 80' pinned Pratt pony truss **1906** Missouri Bridge and Iron Co.
*MONT18	287002.7	Dry Fork Bridge	1- 46' pinned Pratt half-hip pony truss c1895

EXCLUDED:

Pratt pony truss
162000.7 183001.7

Warren pony truss
J 193 T 236 074001.2 159000.7 160001.2

MONTGOMERY COUNTY

EXCLUDED:

Steel stringer

P 72	S 368	S 623	S 806	X 108	058000.2	060000.1
071001.6	072001.8	077000.5	088000.1	102001.0	117000.5	142000.3
147000.6	148003.4	156001.1	165000.9	212000.1	219001.0	227001.5
282001.7	293002.0	296000.1	298000.2	306001.4	308000.1	

Steel girder

011000.6	051001.2	079000.5	150000.8

Concrete girder

J 192

Concrete slab

H 214	H 234R

Concrete box culvert

J 194	S 381	S 622	S 626	T 172	T 235	T 478
T 618	X 66	X 308	X 309	X 657		

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	3	15	0	0	18
Excluded	22	41	0	0	63
	25	56	0	0	81 structures

Mineola Bridge

MONT01

GENERAL DATA

structure no.: H 213
county: Montgomery
city/town: immediately west of Mineola
feature inters.: Loutre River
cadastral grid: S34, T48N, R6W
highway route: State Secondary Highway N
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Pratt through truss, with concrete slab approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 100.0'
total length: 301.0'
roadway width: 20.0'
condition: good
alterations: none
floor/decking: concrete deck over steel stringers
other features: steel pipe guardrails

HISTORICAL DATA

erection date: 1925
erection cost: $26,305.32
designer: Missouri State Highway Department
fabricator: unknown
contractor: Pope Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. H 213; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO.

sign. rating: 36
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 21 February 1990

Loutre River Bridge

MONT02

GENERAL DATA

structure no.: J 39R
county: Montgomery
city/town: 1.2 miles south of McKittrick
feature inters.: Loutre River
cadastral grid: S26, T46N, R5W
highway route: Missouri State Highway 19
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt through truss; Warren pony truss and steel stringer approach spans
substructure: timber pile bent abutments, wingwalls and piers

span number: 1
span length: 120.0'
total length: 546.0'
roadway width: 20.0'
condition: good
alterations: bridge largely rebuilt after washout, 1943
floor/decking : concrete deck over steel stringers
other features: steel pipe guardrails

HISTORICAL DATA

erection date: 1929; 1943
erection cost: $26,240.93 (1929); $76,171.00 (1943)
designer: Missouri State Highway Department
fabricator : Illinois Steel Company, Chicago IL
contractor: M.E. Gillioz, Monett MO (1929 through truss);
L.V. Hites Construction Company (1943 pony trusses and steel stringers)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. J 39R; Missouri Highway and Transportation Department Primary System Bridge Record, located at Bridge Division, MHTD, Jefferson City MO.

sign. rating: 45
evaluation: NRHP non-eligible (typically configured examples of common structural type, built in two different stages)

inventoried by: Clayton B. Fraser 21 February 1990

Hermann Bridge

MONT03

GENERAL DATA

structure no.:	K 226A	**city/town:**	1.8 miles south of McKittrick
county:	Montgomery Gasconade	**feature inters.:**	Missouri River
		cadastral grid:	S35, T46N, R5W
		highway route:	State Highway 19
		highway distr.:	3
		current owner:	Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, rigid-connected cantilevered Warren through truss; Warren deck truss and steel stringer approach spans at the north end; Warren polygonal through truss approach spans at the north end

substructure: concrete abutments and piers

span number:	7	**condition:**	good
span length:	400.0'	**alterations:**	none
total length:	2232.0'	**floor/decking :**	concrete over steel stringers
roadway width:	20.0'	**other features:**	end post: 2 built-up channels with cover plate and double lacing; top chord: 2 built-up channels with cover plate and single lacing; lower chord: 2 built-up channels with lacing; vertical: 4 angles with batten plates, and 2 channels with lacing; diagonal: 4 angles with batten plates, and 2 channels with lacing; lateral bracing: 4 angles with lacing; strut: 4 angles with lacing, braced; floor beam: I-beam; guardrail: 2 steel pipes

HISTORICAL DATA

erection date: 1928-30

erection cost: $800,000 (engineer's estimate)

designer: L.J. Sverdrup, St. Louis MO

fabricator : Kansas City Structural Steel Company, Kansas City MO;
Illinois Steel Company, Chicago, IL

contractor: Kansas City Structural Steel Company, Kansas City MO (superstructure;
The Foundation Company, Chicago IL (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 226A; files on Primary System Bridges - located at the Missouri Highway and Transportation Department, Jefferson City, Missouri; "Bridging the Missouri," **Hermann-Advertiser-Courier**, 22 February 1929; "Bridge Employee Drowns," **Hermann-Advertiser-Courier**, 6 September 1929; "Missouri River Bridge Work in Full Progress," **Hermann-Advertiser-Courier**, 14 March 1930; "Thousands

Expected in Hermann for Bridge Dedication," **Hermann-Advertiser-Courier**, 22 August 1930; "Eight Thousand Attend Bridge Dedication Ceremonies," **Hermann-Advertiser-Courier**, 5 September 1930; "They Build for the Future of Hermann," **Missouri**, September 1930; field inspection by Clayton Fraser, 27 October 1989.

sign. rating: 71

evaluation: NRHP eligible (outstanding, large-scale example of steel truss construction, located on important great river crossing)

inventoried by: Clayton B. Fraser 21 February 1990

Little Loutre Creek Bridge

MONT05

GENERAL DATA

structure no.: 022000.1
county: Montgomery
city/town: 2.5 miles southwest of Wellsville
feature inters.: Little Loutre Creek
cadastral grid: S4/9, T49N, R6W
highway route: county road
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 2-panel, lattice bedstead, with steel stringer approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 36.0'
total length: 61.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: unknown

HISTORICAL DATA

erection date: 1913-14
erection cost: $540.00 (engineer's estimate)
designer: Missouri Bridge and Iron Company, St. Louis MO
fabricator : Missouri Bridge and Iron Company, St. Louis MO
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 022000.1; Montgomery County Court Record, Book I: page 202 (2 September 1913), page 249 (2 March 1914), located at Montgomery County Courthouse, Montgomery City MO.

sign. rating: 39
evaluation: NRHP non-eligible (typical example of short-span truss type)

inventoried by: Clayton B. Fraser 21 February 1990

Morris Ford Bridge

MONT06

GENERAL DATA

structure no.: 079002.2
county: Montgomery
city/town: 5.1 miles southeast of Middletown
feature inters.: Elkhorn Creek
cadastral grid: S22/27, T50N, R4W
highway route: County Road 81
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Camelback pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 90.0'
total length: 92.0'
roadway width: 11.8'
condition: good
alterations: none
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: 4 angles with continuous plate; diagonal: 2 punched rectangular eyebars; counter: 2 round eyerods with turnbuckles; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1930
erection cost: unknown
designer: Missouri Bridge and Iron Company, St. Louis MO
fabricator : Missouri Bridge and Iron Company, St. Louis MO; Lackawanna Steel Company, Pittsburgh PA
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 079002.2; Montgomery County Court Record, Book 1: page 110 (2 December 1912), page 195 (1 September 1913), page 249 (2 March 1914); Bridge Petition from W.W. Cowan et al. for bridge at Morris Ford; Montgomery County Road and Bridge Commissioner's Report re. bridge over Elkhorn Creek, S27, T50N, R4W; contract with Missouri Bridge and Iron Company (court record, petition, report and contract all located at Montgomery County Courthouse, Montgomery City MO); field inspection by Clayton Fraser, 27 October 1989.

sign. rating: 72
evaluation: NRHP eligible (well-preserved example of uncommon truss type)

inventoried by: Clayton B. Fraser 21 February 1990

Bear Creek Bridge

MONT07

GENERAL DATA

structure no.: 115002.6
county: Montgomery
city/town: 4.5 miles east of Bellflower
feature inters.: Bear Creek
cadastral grid: S20, T49N, R3W
highway route: county road
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete-filled steel cylinder piers with timber pile bent abutments

span number: 1
span length: 65.0'
total length: 97.0'
roadway width: 12.0'
condition: fair
alterations: steel I-beam welded to one end post
floor/decking : concrete over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars: floor beam: I-beam, U-bolted to vertical

HISTORICAL DATA

erection date: 1912
erection cost: unknown
designer: Missouri Bridge and Iron Company, St. Louis MO (probable)
fabricator : Missouri Bridge and Iron Company, St. Louis MO (probable)
contractor: Missouri Bridge and Iron Company, St. Louis MO (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 115002.6; Montgomery County Court Record, Book I: page 110 (2 December 1912), located at Montgomery County Courthouse, Montgomery City MO; field inspection by Clayton Fraser, 27 October 1989.

sign. rating: 23
evaluation: NRHP non-eligible (typical, inadequately documented example of common structural type, altered)

inventoried by: Clayton B. Fraser 21 February 1990

Bear Creek Bridge

MONT09

GENERAL DATA

structure no.: 131000.2
county: Montgomery
city/town: 3.2 miles south of Bellflower
feature inters.: Bear Creek
cadastral grid: S3, T48N, R4W
highway route: County Road 131
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 70.0'
total length: 72.0'
roadway width: 11.8'
condition: good
alterations: none
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: 4 angles with continuous plate; diagonal: 2 punched rectangular eyebars; counter: 2 round eyerods with turnbuckles; lateral bracing; round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1930
erection cost: $4800.00
designer: Missouri Bridge and Iron Company, St. Louis MO
fabricator : Missouri Bridge and Iron Company, St. Louis MO; Lackawanna Steel Company, Pittsburgh PA
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 131000.2; contract with Missouri Bridge and Iron Company (1930), located at Montgomery County Courthouse, Montgomery City, Missouri; field inspection by Clayton Fraser, 27 October 1989.

sign. rating: 40
evaluation: NRHP non-eligible (late example of common structural type)

inventoried by: Clayton B. Fraser 21 February 1990

Palmer Bridge

MONT10

GENERAL DATA

structure no.: 154000.6
county: Montgomery
city/town: 4.7 miles northeast of Montgomery City
feature inters.: Little Wolf Creek
cadastral grid: S13/24, T49N, R5W
highway route: county road
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel stringer
substructure: concrete abutments and wingwalls

span number: 1
span length: 30.0'
total length: 30.0'
roadway width: 13.0'
condition: fair
alterations: none
floor/decking : timber deck
other features: unknown

HISTORICAL DATA

erection date: 1917
erection cost: $388.00 (engineer's estimate)
designer: T.L. Cardwell, Montgomery County Road and Bridge Commissioner
fabricator : unknown
contractor: county work force

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 154000.6; "General Report of the Road and Bridge Commissioner in the matter of bridges on hand" (3 June 1917), located at Montgomery County Courthouse, Montgomery City MO.

sign. rating: 35
evaluation: NRHP non-eligible (small-scale example of common structural type)

inventoried by: Clayton B. Fraser 21 February 1990

Little Loutre Bridge

MONT11

GENERAL DATA

structure no.: 190000.6
county: Montgomery
city/town: 6.5 miles west of Montgomery City
feature inters.: Little Loutre Creek
cadastral grid: S6, T48N, R6W
highway route: county road
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Camelback pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 90.0'
total length: 91.0'
roadway width: 11.5'
condition: good
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord / inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with continuous plate; diagonal: 2 punched rectangular eyebars; counter: 2 round eyerods with turnbuckles; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1930
erection cost: unknown
designer: Missouri Bridge and Iron Company, St. Louis MO
fabricator : Missouri Bridge and Iron Company, St. Louis MO; Lackawanna Steel Company, Pittsburgh PA
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 190000.6; Montgomery County Court Record, Book I, page 355 (9 March 1910), 403 (7 September 1910); contract with Missouri Bridge and Iron Company (court record and contract located at Montgomery County Courthouse, Montgomery City MO);field inspection by Clayton Fraser, 27 October 1989.

sign. rating: 72
evaluation: NRHP determined eligible (well-preserved example of uncommon truss type)

inventoried by: Clayton B. Fraser 21 February 1990

Browne Bridge

MONT12

GENERAL DATA

structure no.: 191000.5
county: Montgomery
city/town: 6.1 miles west of Montgomery City
feature inters.: Little Loutre Creek
cadastral grid: S29, T49, R6W
highway route: county road
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 4-panel, rigid-connected Warren pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 65.0'
total length: 65.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1916
erection cost: unknown
designer: Missouri Bridge and Iron Company, St. Louis MO
fabricator : Missouri Bridge and Iron Company, St. Louis MO
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 191000.5; Road and Bridge Commissioner's Report (1 September 1916), located at Montgomery County Courthouse, Montgomery City MO.

sign. rating: 42
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 21 February 1990

Whetstone Creek Bridge

MONT13

GENERAL DATA

structure no.: 198001.4
county: Montgomery
city/town: 6.7 miles southwest of Montgomery City
feature inters.: Whetstone Creek
cadastral grid: S7, T48N, R6W
highway route: county road
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span
substructure: steel pile bent abutments; concrete-filled steel cylinder pier

span number: 1
span length: 80.0'
total length: 104.8'
roadway width: 10.3'
condition: good
alterations: three approach spans replaced with earth fill; abutments and pier on one side replaced with steel pile bent piers
floor/decking : timber deck over steel stringers
other features: upper chord / inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 2 square eyerods with turnbuckles; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: timber

HISTORICAL DATA

erection date: 1903
erection cost: $1923.00
designer: T.L. Cardwell, Montgomery County Road and Bridge Commissioner
fabricator : Missouri Bridge and Iron Company, St. Louis MO
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 198001.4; Montgomery County Court Record, Book H: page 426 (9 September 1903), pages 463-64 (11 January 1904); Montgomery County Road and Bridge Commissioner's report and contract with Missouri Bridge and Iron Company (8 September 1903), all located at Montgomery County Courthouse, Montgomery City MO; field inspection by Clayton Fraser, 27 October 1989.

sign. rating: 48
evaluation: NRHP non-eligible (well-preserved example of common structural type)

inventoried by: Clayton B. Fraser 21 February 1990

Morrow Bridge

MONT16

GENERAL DATA

structure no.: 269000.6
county: Montgomery
city/town: 3.3 miles northwest of Big Spring
feature inters.: Loutre River
cadastral grid: S24, T47N, R6W
highway route: county road
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls, south end; stone abutments, north end

span number: 1
span length: 140.0'
total length: 140.0'
roadway width: 12.2'
condition: good
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord / inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 3 angles with batten plates, 2 channels with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 2 angles; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1909
erection cost: unknown
designer: Missouri Bridge and Iron Company, St. Louis
fabricator : Missouri Bridge and Iron Company, St. Louis
contractor: Missouri Bridge and Iron Company, St. Louis

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 269000.6; Montgomery County Court Record, Book I, page 272 (4 January 1909), located at Montgomery County Courthouse, Montgomery City MO; field inspection by Clayton Fraser, 27 October 1989.

sign. rating: 44
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 21 February 1990

Prairie Fork Bridge

MONT17

GENERAL DATA

structure no.: 283000.6
county: Montgomery
city/town: 3.2 miles southwest of Mineola
feature inters.: Prairie Fork
cadastral grid: S16, T47N, R6W
highway route: county road
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete-filled steel cylinder piers; timber pile bent abutments

span number: 1
span length: 80.0'
total length: 103.0'
roadway width: 12.0'
condition: good
alterations: unknown
floor/decking : timber deck
other features: unknown

HISTORICAL DATA

erection date: 1906
erection cost: $1594.50
designer: Missouri Bridge and Iron Company, St. Louis MO
fabricator : Missouri Bridge and Iron Company, St. Louis MO
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 283000.6; Montgomery County Court Record, Book H, page 415 (2 June 1903); Missouri Bridge and Iron Company's original construction drawing (6 September 1905); Montgomery County Road and Bridge Commissioner's report (20 September 1905), all located at Montgomery County Courthouse, Montgomery City MO.

sign. rating: 46
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 21 February 1990

Dry Fork Bridge

MONT18

GENERAL DATA

structure no.: 287002.7
county: Montgomery
city/town: 1.5 miles southwest of Americus
feature inters.: Dry Fork
cadastral grid: S10, T46N, R6W
highway route: county road
highway distr.: 3
current owner: Montgomery County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt half-hip pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 46.0'
total length: 49.0'
roadway width: 11.9'
condition: fair
alterations: truss moved; abutments replaced c1950
floor/decking : concrete over corrugated steel, with steel stringers
other features: inclined end post: 3 channels; upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars (2 round eyebars at the hip); vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to vertical

HISTORICAL DATA

erection date: c1895
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 287002.7; field inspection by Clayton Fraser, 27 October 1989.

sign. rating: 18
evaluation: NRHP non-eligible (apparently an early example of mainstay structural type, but moved to this location and lacking in documentation)

inventoried by: Clayton B. Fraser 21 February 1990

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hermann Bridge
MHTD: K 226A

MONT03

DATE(S) OF CONSTRUCTION
1928-30

LOCATION
State Highway 19 over Missouri River; S35, T46N, R5W
1.8 miles south of McKittrick; Montgomery / Gasconade County, Missouri

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP eligible (score: 71)

CONDITION
good

OWNER
Missouri Highway and Transportation Department

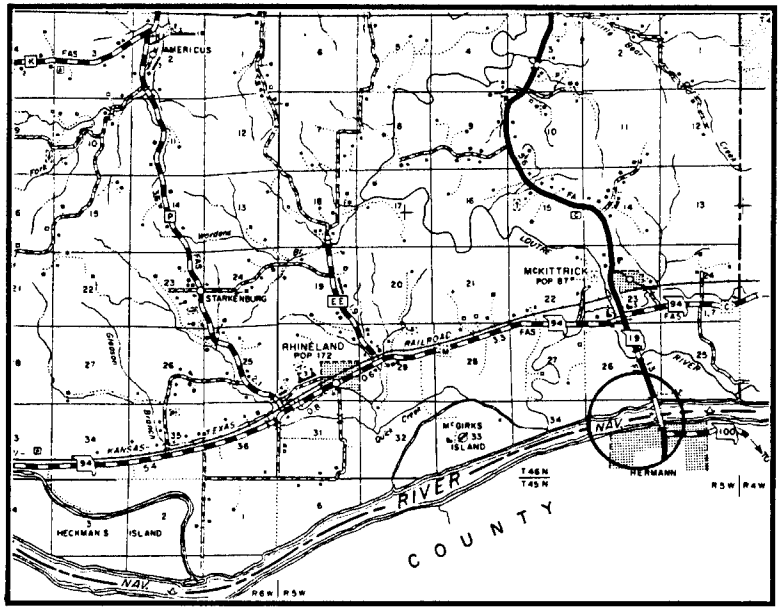
span number:	7	superstructure:	steel, rigid-connected cantilevered Warren through truss; Warren deck truss and steel stringer approach spans at the north end; Warren polygonal through truss approach spans at the north end
span length:	400.0'		
total length:	2232.0'		
roadway wdt.:	20.0'	substructure:	concrete abutments and piers
		floor/decking:	concrete over steel stringers
		other features:	end post: 2 built-up channels with cover plate and double lacing; top chord: 2 built-up channels with cover plate and single lacing; lower chord: 2 built-up channels with lacing; vertical: 4 angles with batten plates, and 2 channels with lacing; diagonal: 4 angles with batten plates, and 2 channels with lacing; lateral bracing: 4 angles with lacing; strut: 4 angles with lacing, braced; floor beam: I-beam; guardrail: 2 steel pipes

After years of boosting for a vehicular bridge across the Missouri River at Hermann and waiting in vain for the state highway department to build it, a committee of local businessmen took the initiative and began serious planning for the proposed structure themselves in 1925. L.J. Sverdrup, then the MSHD Chief Highway Bridge engineer, advised them that the state could not undertake the bridge due to restrictions under the Centennial Road Law that prohibited the state from building any bridges over navigable streams. MSHD did offer to build the approaches, if the city could build the bridge proper. Funded jointly by the Hermann Commercial Club, Gasconade County and the City of Hermann, soundings were made at the proposed crossing site by the Long Year Exploration Company of Minneapolis; Sverdrup estimated that a bridge here would cost some $800,000. The Commercial Club then convinced the National Toll Bridge Company, a subsidiary of the J.G. White Engineering Company of New York, to fund the erection of a toll span here, along with other similar structures by the company at Madison, Indiana, and Independence, Missouri. The city of Hermann and Gasconade and Montgomery Counties immediately granted a franchise for the bridge to the Hermann Bridge Company and, after a couple of delays, so did Congress, with the enabling legislature finally signed by President Coolidge on February 29–leap day–1928.

After the National Toll Bridge Company offered Sverdrup a position as general manager of the bridge project, he resigned from the highway department and began the engineering work for the structure. Sverdrup secured approval of the plans from the War Department in July 1928 and finalized the drawings and specifications later that summer. As delineated by Sverdrup the Hermann Bridge was comprised of four 400-foot, rigid-connected Warren through trusses cantilevered over the main channel of the Missouri River, with simply supported trusses over the flood plain north of the river. The trusses would all be supported by bull-nosed concrete piers, founded on

NAME(S) OF STRUCTURE
Hermann 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 No. K 226A; files on Primary System Bridges - located at the Missouri Highway and Transportation Department, Jefferson City, Missouri; "Bridging the Missouri," **Hermann-Advertiser-Courier**, 22 February 1929; "Bridge Employee Drowns," **Hermann-Advertiser-Courier**, 6 September 1929; "Missouri River Bridge Work in Full Progress," **Hermann-Advertiser-Courier**, 14 March 1930; "Thousands Expected in Hermann for Bridge Dedication," **Hermann-Advertiser-Courier**, 22 August 1930; "Eight Thousand Attend Bridge Dedication Ceremonies," **Hermann-Advertiser-Courier**, 5 September 1930; "They Build for the Future of Hermann," **Missouri**, September 1930; field inspection by Clayton Fraser, 27 October 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
21 February 1990

caissons deep beneath the river. The contract to sink the caissons and build the substructure was awarded to the Foundation Company of Chicago and the contract to fabricate and erect the massive trusses went to the Kansas City Structural Steel Company. Work on the substructure began almost immediately, with the Foundation Company shipping equipment and laborers to the site by train late in 1928. The contractors faced exceedingly wet conditions in 1929 and dry conditions in 1930, hampering work of the bridge. Finally, on August 29, 1930, the bridge was formally dedicated and opened to traffic. Since that time, it has continued to function in place, without serious alteration. With administration of the bridge assumed by the Missouri Highway and Transportation Department, tolls are no longer collected for passage over it.

No less a personage than Missouri Governor Caulfield attended the dedication ceremony in 1930. "I am proud of the work that Missouri is doing in the building of highways," he said to the audience gathered around the podium. "I am glad that during the year of 1930, when there has been considerable unemployment, Missouri will have doubled her highway construction record of 1929, and will have given employment to thousands of Missouri citizens who otherwise would face the problem of being out of work." Undertaken during the early years of the Great Depression, the Hermann Bridge marked the first of what would be a series of great river bridges built in the state. It has formed a regionally important crossing of the Missouri River: the only span between Jefferson City and Washington. Featuring a cantilevered design, the Hermann Bridge ranks among Missouri's most monumental examples of steel truss construction. With a span length of 400 feet and an overall length of 2232 feet, the multiple-span structure clearly ranks as a superlative example of its type. Its distinctive curved profile formed the prototype for several other great river bridges undertaken by L.J. Sverdrup. Similarly configured structures undertaken by Sverdrup and Parcel include the Mark Twain Bridge in Hannibal, the Miami Bridge and the Washington Bridge. As an important river crossing and a well-preserved example of large-scale bridge construction, the Hermann Bridge is one of Missouri's more noteworthy highway trusses.

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Loutre Bridge
MHTD: 190000.6

MONT11

DATE(S) OF CONSTRUCTION
1930

LOCATION
county road over Little Loutre Creek; S6, T48N, R6W
6.5 miles west of Montgomery City; Montgomery County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP determined eligible (score: 72)

CONDITION
good

OWNER
Montgomery County

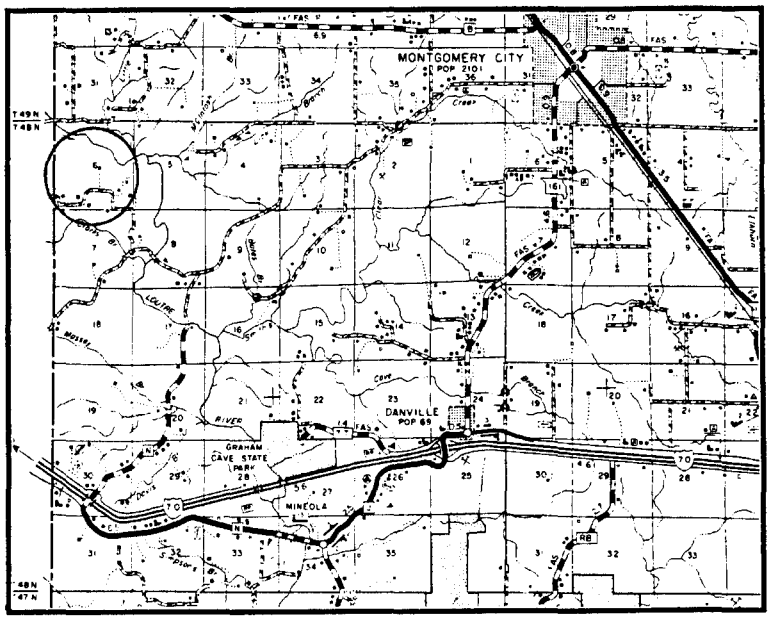
span number:	1	superstructure:	steel, 5-panel, pin-connected Camelback pony truss
span length:	90.0'	substructure:	concrete abutments and wingwalls
total length:	91.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.5'	other features:	upper chord / inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with continuous plate; diagonal: 2 punched rectangular eyebars; counter: 2 round eyerods with turnbuckles; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

In March 1910 the Montgomery County Court ordered county road and bridge commissioner T.L. Cardwell to view the site for a new bridge over Little Loutre Creek petitioned for by Orin Sailor. The court soon thereafter ordered a truss bridge built on steel cylinder piers by the Missouri Bridge and Iron Company of St. Louis. In 1930 the county contracted again with the MoB&I, this time to fabricate and erect a replacement structure for the 1910 truss. The St. Louis firm built a single-span, pinned Camelback pony truss on concrete abutments, poured directly over the foundations for the earlier structure. (The steel tubes were incorporated in the bridge's west abutment and can still be seen.) Completed later that year, the Little Loutre Bridge has carried county-road traffic since, in essentially unaltered condition.

Pin-connected trusses were built by the thousands throughout Missouri in the late 19th and early 20th centuries. Camelback pony trusses were much less common, and relatively few remain in place today, virtually all rigid-connected. But pin-connected Camelback pony trusses are a true rarity in Missouri. Only the Little Loutre Bridge and another span in Montgomery County [**MONT06**] use this peculiar configuration. The bridges are further distinguished by their composition - combining pin-connected technology of an early county-built truss with the heavy web members and concrete substructure and deck of a later highway truss. As a well-preserved example of an uncommon truss type, built relatively late in the milieu of pinned truss construction, the Morris Ford Bridge is a noteworthy structural anomaly.

NAME(S) OF STRUCTURE
Little Loutre 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 No. 190000.6; Montgomery County Court Record, Book I, page 355 (9 March 1910), 403 (7 September 1910); contract with Missouri Bridge and Iron Company (court record and contract located at Montgomery County Courthouse, Montgomery City MO);field inspection by Clayton Fraser, 27 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	21 February 1990

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Morris Ford Bridge
MHTD: 079002.2

MONT06

DATE(S) OF CONSTRUCTION
1930

LOCATION
County Road 81 over Elkhorn Creek; S22/27, T50N, R4W
5.1 miles southeast of Middletown; Montgomery County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP eligible (score: 72)

CONDITION
good

OWNER
Montgomery County

span number:	1	superstructure:	steel, 5-panel, pin-connected Camelback pony truss
span length:	90.0'	substructure:	concrete abutments and wingwalls
total length:	92.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	11.8'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with continuous plate; diagonal: 2 punched rectangular eyebars; counter: 2 round eyerods with turnbuckles; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

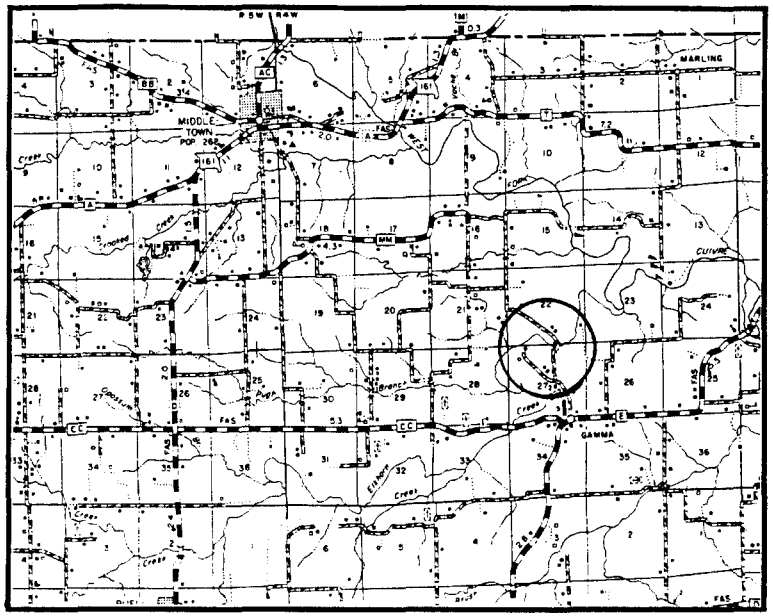
In 1911 the Montgomery County Court received a petition from W.W. Cowan et al. for a bridge on the Middletown and Gamma Road over Elkhorn Creek, a mile north of the small town of Gamma at the Morris Ford. The court ordered county road and bridge commissioner T.L. Cardwell to investigate the site, and in September he presented two plans to the court based upon drawings by the Missouri Bridge and Iron Company for 75- and 80-foot pony trusses. The judges set the petition aside at the time, but acted tentatively on it late in 1912, when they again ordered Cardwell to investigate the site. Again the court failed to act when presented with Cardwell's report. In September 1913 the court ordered Cardwell - by now well familiar with the site - to visit once more to survey for a bridge and estimate for its construction. County records are sketchy, and it is unclear whether the court ever did order a bridge built at this time, but in 1930 the county contracted with the Missouri Bridge and Iron Company of St. Louis for a steel bridge at the Morris Ford. Comprised of a single pinned Camelback pony truss supported by concrete abutments, the structure has since its completion carried county-road traffic in essentially unaltered condition.

Pin-connected trusses were built by the thousands throughout Missouri in the late 19th and early 20th centuries. Camelback pony trusses were much less common, and relatively few remain in place today, virtually all rigid-connected. But pin-connected Camelback pony trusses are a true rarity in Missouri. Only the Morris Ford Bridge and another span in Montgomery County [**MONT11**] use this peculiar configuration. The bridges are further distinguished by their composition - combining pin-connected technology of an early county-built truss with the heavy web members and concrete substructure and deck of a later highway truss. As a well-preserved example of an uncommon truss type, built relatively late in the milieu of pinned truss construction, the Morris Ford Bridge is a noteworthy structural anomaly.

NAME(S) OF STRUCTURE

Morris 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 No. 079002.2; Montgomery County Court Record, Book 1: page 110 (2 December 1912), page 195 (1 September 1913), page 249 (2 March 1914); Bridge Petition from W.W. Cowan et al. for bridge at Morris Ford; Montgomery County Road and Bridge Commissioner's Report re. bridge over Elkhorn Creek, S27, T50N, R4W; contract with Missouri Bridge and Iron Company (court record, petition, report and contract all located at Montgomery County Courthouse, Montgomery City MO); field inspection by Clayton Fraser, 27 October 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO	21 February 1990

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Whetstone Creek Bridge MONT13
MHTD: 198001.4

DATE(S) OF CONSTRUCTION
1903

LOCATION
county road over Whetstone Creek; S7, T48N, R6W
6.7 miles southwest of Montgomery City; Montgomery County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 48)

CONDITION
good

OWNER
Montgomery County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span
span length:	80.0'	substructure:	steel pile bent abutments; concrete-filled steel cylinder pier
total length:	104.8'	floor/decking:	timber deck over steel stringers
roadway wdt.:	10.3'	other features:	upper chord / inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 2 square eyerods with turnbuckles; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: timber

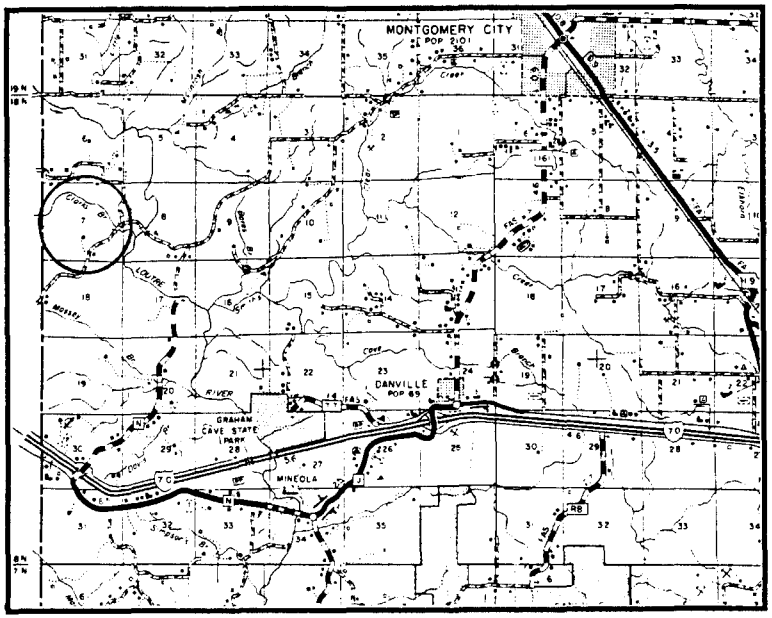
The Montgomery County Court in September 1903 contracted with the Missouri Bridge and Iron Company of St. Louis to fabricate and erect a single-span steel bridge on the western edge of the county, near the border with Callaway County. The medium-span truss would carry the Montgomery City / Williamsburg Road over Whetstone Creek, some six miles west of Montgomery City, the county seat. For this crossing T.L. Cardwell, the county road and bridge commissioner, designed a pin-connected Pratt pony truss with four steel stringer approach spans, supported by steel pile bent abutments and a 24-inch-diameter, concrete-filled steel cylinder pier. MoB&I began work on the substructure soon thereafter, completing the truss by the end of the year. Total cost: $1923.00. The Whetstone Creek Bridge has carried traffic since. The three approach spans on the east side have since been replaced with an earth fill, but the structure remains otherwise intact.

Marketed extensively by virtually all of the in-state bridge contractors and promoted in the form of standardized designs, the pinned Pratt pony truss was used extensively by Missouri's counties to carry roads over the state's myriad small streams. Thousands of such small-scale trusses were erected across the state, and many remain today. The Whetstone Creek Bridge is noteworthy as a well-preserved, relatively early example of this mainstay structural type - the earliest documented wagon bridge in Montgomery County.

NAME(S) OF STRUCTURE

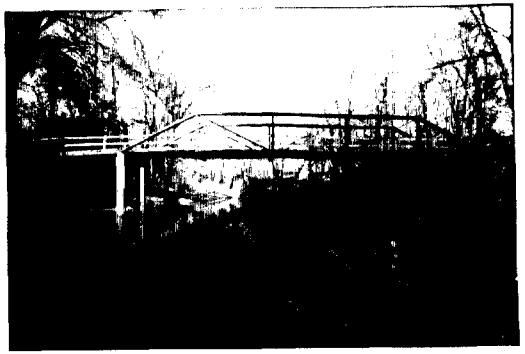
Whetstone Creek Bridge

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 No. 198001.4; Montgomery County Court Record, Book H: page 426 (9 September 1903), pages 463-64 (11 January 1904); Montgomery County Road and Bridge Commissioner's report and contract with Missouri Bridge and Iron Company (8 September 1903), all located at Montgomery County Courthouse, Montgomery City MO; field inspection by Clayton Fraser, 27 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	21 February 1990

PIKE COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
PIKE01	K 317R	Calumet Creek Bridge	1-**100'** **riveted polyg. Warren pony truss** 1936 Deering and Davidson
PIKE02	K 322	Ramsey Creek Bridge	1-**100'** steel plate through girder 1936 Martin Wunderlich; Condon, Cunningham and Lemmon
*PIKE03	K 487R	Noix Creek Bridge	1-**100'** **riveted polyg. Warren pony truss** 1936 Otto W. Knutson
*PIKE04	K 932R	Champ Clark Bridge **over Mississippi River**	**5-420'** **riveted Pennsylvania through truss** 1928 Wisconsin B&I Company; Missouri Valley B&I Company
*PIKE05	018001.8	Eagle's Nest Bridge	1-**295'** **pinned Pennsylvania through truss** **1907** Missouri B&I Company, St. Louis
*PIKE06	023000.2	S. Spencer Creek Bridge	1- 80' pinned Pratt pony truss **1910** Midland Bridge Co., Kansas City
*PIKE07	029001.5	Little Peno Creek Bridge	3- 16' **concrete arch culvert** c**1900** St. Louis & Hannibal Railroad
*PIKE08	060000.6	Bradley Ford Bridge	1- 80' pinned Pratt pony truss **1910** Decatur Bridge Co., Decatur IL
*PIKE09	151000.1	Frankford Railroad Bridge	1- 25' **stone arch** c**1890** St. Louis & Hannibal Railroad
*PIKE10	252001.5	Indian Creek Bridge	(replaced)
*PIKE11	262001.2	Hagan Ford Bridge	1- 60' pinned Pratt bedstead **1904** Missouri B&I Company, St. Louis

EXCLUDED:

Pratt pony truss

008004.7	018002.5	019000.7	078000.3	114000.5	141000.6	157001.4
190001.3	241001.7	245000.6	254500.4			

Warren pony truss

K 313R	125001.1	135000.9	136002.4	282001.0

Lattice bedstead

166001.2	296000.1

Steel stringer

F 604R	H 530R	K 315R	K 318R	K 321R	L 242	S 775
003001.3	007002.1	009000.5	010001.5	011001.2	031000.9	036000.8
046001.9	046002.2	051000.4	051001.4	054000.1	080003.0	080004.0
092002.0	109002.1	114001.1	116000.8	116001.2	121000.7	126002.4
135001.4	136001.5	137000.7	140000.9	149000.3	150001.2	153000.4
156000.8	156000.9	169001.2	174000.9	176000.6	188002.9	190000.1
212002.0	219001.2	230001.6	234001.5	243000.1	253000.8	254R01.2
255000.3	260002.4	265000.8	278001.4	297000.1		

PIKE COUNTY

EXCLUDED (cont.):

Steel girder
H 231R K 323R K 324A

Steel culvert
011001.6

Concrete girder
J 127R J 743 T 881 X 894A

Concrete slab
K 316R K 319R K 399R K 400R

Concrete box culvert
H 230R H 235R H 882R K 314 T 407 T 676 031004.0
044001.8 147002.3 254500.1 254500.2 254500.3

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	4	6	0	0	10
Excluded	25	71	0	0	96
	29	77	0	0	106 structures

Calumet Creek Bridge

PIKE01

GENERAL DATA

structure no.: K 317R
county: Pike
city/town: 1.4 miles northwest of Clarksville
feature inters.: Calumet Creek
cadastral grid: S8, T53N, R1E
highway route: State Highway 79
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 10-panel, rigid-connected polygonal Warren pony truss, skewed, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete hammerhead spill-through piers

span number: 1
span length: 100.0'
total length: 262.0'
roadway width: 22.0'
condition: good
alterations: none
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 angles with batten plates; vertical: wide flange; diagonal: wide flange; lateral bracing: 1 angle; floor beam: I-beam, with cantilevered extensions outside webs on both sides to support sidewalks; guardrail: concrete; bridge plate: **MISSOURI HIGHWAY DEPT. BRIDGE N° K 317 1935**

HISTORICAL DATA

erection date: 1935-36
erection cost: $33,698.95
designer: Missouri State Highway Department
fabricator : unknown
contractor: Deering and Davidson

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 317R; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 58
evaluation: NRHP possibly eligible (one of a number of polygonal Warren truss built from plans promulgated by the Missouri State Highway Department in the 1930s)

inventoried by: Clayton B. Fraser 26 March 1991

Ramsey Creek Bridge

PIKE02

GENERAL DATA

structure no.: K 322
county: Pike
city/town: 6.4 miles southeast of Clarksville
feature inters.: Ramsey Creek
cadastral grid: S6, T52N, R1E
highway route: State Highway 79
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel plate through girder, with steel stringer approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 100.0'
total length: 190.0'
roadway width: 22.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1936
erection cost: $26,168.00
designer: Missouri State Highway Department
fabricator : unknown
contractor: Martin Wunderlich; Condon, Cunningham and Lemmon

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 322; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 54
evaluation: NRHP possibly eligible (one of a number of similarly constructed, long-span bridges built from plans of the Missouri State Highway Department in the 1930s)

inventoried by: Clayton B. Fraser 26 March 1991

Noix Creek Bridge

PIKE03

GENERAL DATA

structure no.: K 487R
county: Pike
city/town: southeastern edge of Louisiana
feature inters.: Noix Creek
cadastral grid: S20, T54N, R1W
highway route: State Highway 79
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 10-panel, rigid-connected polygonal Warren pony truss, skewed, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete hammerhead spill-through piers

span number: 1
span length: 100.0'
total length: 218.0'
roadway width: 24.0'stringers
condition: good
alterations: deck repairs, 1988
floor/decking : asphalt-covered concrete deck, over steel
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: wide flange; diagonal: wide flange; lateral bracing: 1 angle; floor beam: I-beam, with cantilevered extensions outside webs on both sides to support sidewalks; guardrail: concrete; bridge plate: **MISSOURI HIGHWAY DEPT. BRIDGE N° K 487 1935**

HISTORICAL DATA

erection date: 1935-36
erection cost: $48,711.30
designer: Missouri State Highway Department
fabricator : Carnegie Steel Company, Pittsburgh PA
contractor: Otto W. Knutson

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 487R; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 58
evaluation: NRHP possibly eligible (one of a number of polygonal Warren truss built from plans promulgated by the Missouri State Highway Department in the 1930s)

inventoried by: Clayton B. Fraser 26 March 1991

Champ Clark Bridge

PIKE04

GENERAL DATA

structure no.: K 932R
county: Pike / Pike
city/town: Louisiana
feature inters.: Mississippi River
cadastral grid: S18, T54N, R1W
highway route: U.S. Highway 54
highway distr.: 3
current owner: Missouri Highway and Transportation Department; Illinois Department of Public Works and Bridges

STRUCTURAL DATA

superstructure: steel, 14-panel, rigid-connected Pennsylvania through truss; 6 steel plate deck girder approach spans at the east end
substructure: concrete abutments, wingwalls and piers

span number: 5
span length: 420.0'
total length: 2248.0'
roadway width: 20.0'
condition: good
alterations: deck replaced
floor/decking : asphalt-covered concrete over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and double lacing; lower chord: 2 built-up channels with batten plates on top and bottom; vertical: 4 angles with lacing; diagonal: 4 angles with batten plates; lateral bracing: steel angles - bottom, 4 angles with lacing - top; strut: 4 angles with lacing; floor beam: plate girder; guardrail: 2 channels; portal plate: **DEDICATED TO CHAMP CLARK MEMBER OF CONGRESS SPEAKER OF THE HOUSE**; bridge plates (Missouri side): **1927 MISSISSIPPI RIVER BRIDGE ENGINEERS HARRINGTON, HOWARD AND ASH CONTRACTORS WISCONSIN BRIDGE & IRON CO. SUPERSTRUCTURE THE MISSOURI VALLEY BRIDGE & IRON CO. SUBSTRUCTURE; 1927 MISSISSIPPI RIVER BRIDGE MISSOURI-ILLINOIS BRIDGE CO...** [long list of company officers]; builder's plate (Illinois side): **BUILT BY WISCONSIN BRIDGE & IRON CO. NORTH MILWAUKEE, WISCONSIN 1927**

HISTORICAL DATA

erection date: 1926-28
erection cost: $1,000,000.00
designer: Harrington, Howard and Ash, Kansas City MO
fabricator : Wisconsin Bridge and Iron Company, Milwaukee WI
contractor: Wisconsin Bridge and Iron Company, Milwaukee WI (superstructure); Missouri Valley Bridge and Iron Company, Leavenworth KS (substructure)

Champ Clark Bridge

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 932R; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; **Pike County Missouri: People, Places & Pikers**, compiled and edited by Karen Schwadron (1981), Pike County Historical Society; **Louisiana Press-Journal**, souvenir bridge edition (8 June 1988); "Seven New Mississippi River Highway Bridges," **Engineering News-Record**, 31 July 1930; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 72

evaluation: NRHP eligible (outstanding large-scale example of highway truss construction)

inventoried by: Clayton B. Fraser 26 March 1991

Eagle's Nest Bridge

PIKE05

GENERAL DATA

structure no.: 018001.8
county: Pike
city/town: 7.5 miles northwest of Louisiana
feature inters.: Salt River
cadastral grid: S30, T55N, R2W
highway route: County Road 18
highway distr.: 3
current owner: Pike County

STRUCTURAL DATA

superstructure: steel, 14-panel, pin-connected Pennsylvania through truss; 1 Pratt truss-leg bedstead and 2 steel stringer approach spans at each end
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 295.0'
total length: 450.0'
roadway width: 18.0'
condition: fair
alterations: steel stringer approach spans added
floor/decking : timber 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: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 braced angles; portal strut: 4 angles with double lacing and curved knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

HISTORICAL DATA

erection date: 1907
erection cost: $11,390.00
designer: J.D. Beauchamp, Pike County Engineer
fabricator : Missouri Bridge and Iron Company, St. Louis MO;
Jones and Laughlin Steel Company, Pittsburgh PA
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 018001.8; Pike County Court Record - Book C: page 98 (20 January 1904), page 138 (26 December 1904), page 139 (2 January 1905), page 140 (20 January 1905), page 150 (7 February 1905), page 162 (12 May 1905), page 196 (7 February 1906), page 199 (5 March 1906), page 220 (16 July 1906), page 240 (8 November 1906), page 249 (26 November 1906), page 250 (31 December 1906), page 305 (1 January 1907), page 355 (3 January 1907); Pike County Court Record S: page 402 (8 January 1907), pages 422 and 427 (9 February 1907); original bridge contract (5 March 1906); original bridge drawing (for bedstead approaches), (22 August 1906) - located at Pike County Courthouse, Bowling Green MO; field inspection by Clayton Fraser, 14 September 1990.

Eagle's Nest Bridge

sign. rating: 72
evaluation: NRHP eligible (outstanding long-span example of uncommon truss type)

inventoried by: Clayton B. Fraser 26 March 1991

South Spencer Creek Bridge

PIKE06

GENERAL DATA

structure no.: 023000.2
county: Pike
city/town: 7.2 miles southwest of Frankford
feature inters.: South Spencer Creek
cadastral grid: S25/26, T54N, R5W
highway route: County Road 23
highway distr.: 3
current owner: Pike County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: timber abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 80.0'
total length: 112.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels (steel lattice on approach spans); builder's plate: **1910 / THE MIDLAND BRIDGE CO. / FREYGANG & TROCON PROPRIETORS / KANSAS CITY MO.**

HISTORICAL DATA

erection date: 1910
erection cost: $1341.00
designer: Midland Bridge Company, Kansas City MO
fabricator : Midland Bridge Company, Kansas City MO; Illinois Steel Company, Chicago IL
contractor: Midland Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 023000.2; Pike County Court Record - Book C: page 518 (5 July 1910), page 524 (16 August 1910); Pike County Court Record T: page 425 (7 February 1911) - located at Pike County Courthouse, Bowling Green MO; field inspection by Clayton Fraser, 15 September 1990.

sign. rating: 44
evaluation: NRHP non-eligible (typically configured example of mainstay structural type)

inventoried by: Clayton B. Fraser 26 March 1991

Little Peno Creek Bridge

PIKE07

GENERAL DATA

structure no.: 029001.5
county: Pike
city/town: 1.4 miles south of Frankford
feature inters.: Little Peno Creek
cadastral grid: S11, T54N, R4W
highway route: County Road 29
highway distr.: 3
current owner: Pike County

STRUCTURAL DATA

superstructure: concrete arch culvert
substructure: concrete abutments, wingwalls and piers

span number: 3
span length: 16.0'
total length: 65.0'
roadway width: 52.0'
condition: fair
alterations: railroad tracks removed and bridge graded for road
floor/decking : concrete deck
other features: no guardrails

HISTORICAL DATA

erection date: c1900
erection cost: unknown
designer: St. Louis and Hannibal Railroad (probable)
fabricator : none
contractor: St. Louis and Hannibal Railroad (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 029001.5; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 37
evaluation: NRHP non-eligible (small-scale concrete railroad culvert)

inventoried by: Clayton B. Fraser 26 March 1991

Bradley Ford Bridge

PIKE08

GENERAL DATA

structure no.: 060000.6
county: Pike
city/town: 3.0 miles southeast of Louisiana
feature inters.: Little Buffalo Creek
cadastral grid: S33, T54N, R1W
highway route: County Road 60
highway distr.: 3
current owner: Pike County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 80.0'
total length: 121.0'
roadway width: 11.8'
condition: fair
alterations: original timber deck replaced with concrete
floor/decking : concrete on corrugated steel, 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: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: 1910
erection cost: $2556.00
designer: Decatur Bridge Company, Decatur IL
fabricator : Decatur Bridge Company, Decatur IL; Cambria Steel Company, Pittsburgh PA
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 060000.6; Pike County Court Record - Book C: page 507 (11 April 1910), page 548 (11 November 1910); Pike County Court Record T: page 425 (7 February 1911) - located at Pike County Courthouse, Bowling Green MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 36
evaluation: NRHP non-eligible (typically configured example of common structural type, poorly preserved)

inventoried by: Clayton B. Fraser 26 March 1991

Frankford Railroad Bridge

PIKE09

GENERAL DATA

structure no.: 151000.1
county: Pike
city/town: Frankford
feature inters.: unnamed stream and gravel road
cadastral grid: S35, T55N, R4W
highway route: County Road 151
highway distr.: 3
current owner: Pike County

STRUCTURAL DATA

superstructure: semi-circular stone arch
substructure: stone

span number: 1
span length: 25.0'
total length: 25.0'
roadway width: 20.0'
condition: fair
alterations: railroad tracks removed and bridge graded for road
floor/decking : earth grade over stone
other features: no guardrails

HISTORICAL DATA

erection date: c1890
erection cost: unknown
designer: St. Louis and Hannibal Railroad (probable)
fabricator : none
contractor: St. Louis and Hannibal Railroad (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 151000.1; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 35
evaluation: NRHP non-eligible (noteworthy for use of native stone and display of craftsmanship, but lacking in documentation)

inventoried by: Clayton B. Fraser 26 March 1991

Hagan Ford Bridge

PIKE11

GENERAL DATA

structure no.: 262001.2
county: Pike
city/town: 4.9 miles south of Curryville
feature inters.: Indian Creek
cadastral grid: S16, R52N, R4W
highway route: County Road 262
highway distr.: 3
current owner: Pike County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt truss-leg bedstead, with steel stringer approach spans
substructure: steel pile bent abutments; steel truss-leg piers

span number: 1
span length: 60.0'
total length: 85.0'
roadway width: 11.7'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and upright end post: 2 channels with cover and batten plates; lower chord: 2 channels with steel pipe connectors; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: timber

HISTORICAL DATA

erection date: 1904
erection cost: $649.92
designer: Missouri Bridge and Iron Company, St. Louis MO
fabricator : Missouri Bridge and Iron Company, St. Louis MO
contractor: Missouri Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 262001.2; Pike County Court Record - Book C: page 120-21 (26 September 1904) - located at Pike County Courthouse, Bowling Green MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 46
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 26 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Calumet Creek Bridge
MHTD: K 317R

PIKE01

DATE(S) OF CONSTRUCTION
1935-36

LOCATION
State Highway 79 over Calumet Creek; S8, T53N, R1E
1.4 miles northwest of Clarksville; Pike County, Missouri

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP possibly eligible (score: 58)

CONDITION
good

OWNER
Missouri Highway and Transportation Department

span number: 1
span length: 100.0'
total length: 262.0'
roadway wdt.: 22.0'

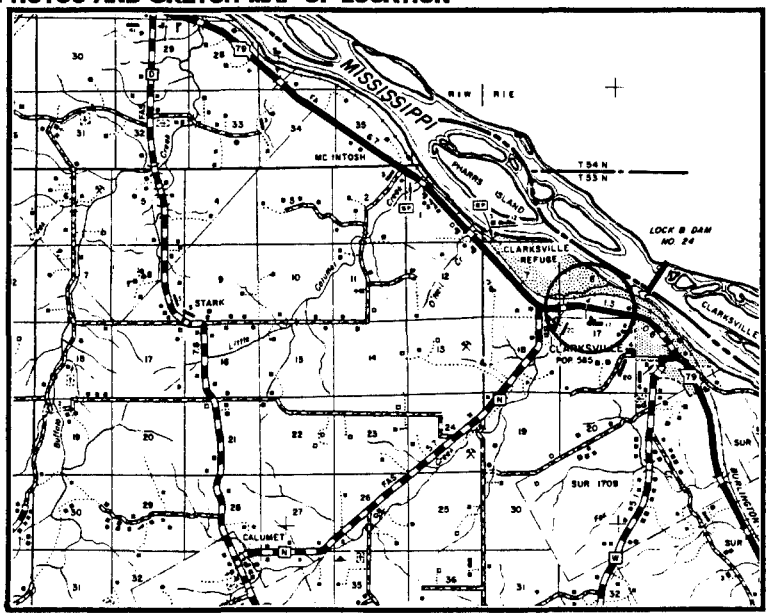
superstructure: steel, 10-panel, rigid-connected polygonal Warren pony truss, skewed, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete hammerhead spill-through piers
floor/decking: concrete deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: wide flange; diagonal: wide flange; lateral bracing: 1 angle; floor beam: I-beam, with cantilevered extensions outside webs on both sides to support sidewalks; guardrail: concrete; bridge plate: **MISSOURI HIGHWAY DEPT. BRIDGE N° K 317 1935**

Located northwest of Clarksville, this long-span pony truss carries Missouri State Highway 79 over Calumet Creek. The bridge is comprised of a single rigid-connected pony truss span, which is supported by a concrete substructure and approached by steel stringer spans. The Calumet Creek Bridge was designed by the state highway department and constructed in 1935-36 by contractors Deering and Davidson for $33,698.95. The bridge is largely unaltered, other than deck repairs undertaken in 1988.

The Missouri State Highway Department used riveted Warren configurations for its pony trusses almost from the time the agency developed its first bridge standards around 1920. Structurally straightforward and versatile, these ubiquitous trusses were erected by the hundreds throughout the state in span lengths ranging from 40 to 100 feet. In the early 1930s the highway department designed Warren trusses with polygonal upper chords, a variation that was more materially conservant than the straight-chorded Warren for long-span applications. Relatively few of these Warren subtypes were built during the decade, due more to their extreme span length than to their utility. Approximately fifteen of these polygonal Warren pony trusses have been identified as extant by the statewide bridge inventory, all built between 1932 and 1940 and all spanning 100 feet or more. Fabricated from essentially the same drawings, their superstructures were virtually identical. With a construction date of 1935-36, this span in Pike County falls well within the mainstream of this minor structural trend in Missouri.

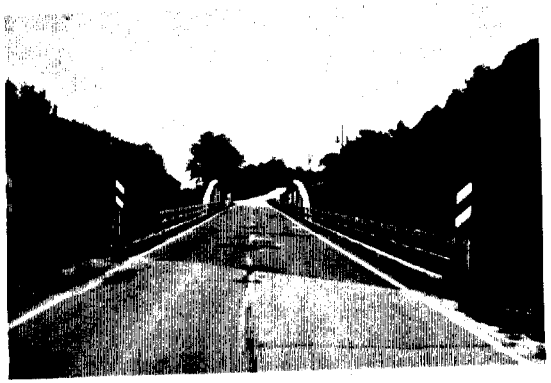
NAME(S) OF STRUCTURE
Calumet Creek Bridge

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 No. K 317R; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	26 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ramsey Creek Bridge
MHTD: K 322

PIKE02

DATE(S) OF CONSTRUCTION
1936

LOCATION
State Highway 79 over Ramsey Creek; S6, T52N, R1E
6.4 miles southeast of Clarksville; Pike County, Missouri

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP possibly eligible (score: 56)

CONDITION
good

OWNER
Missouri Highway and Transportation Department

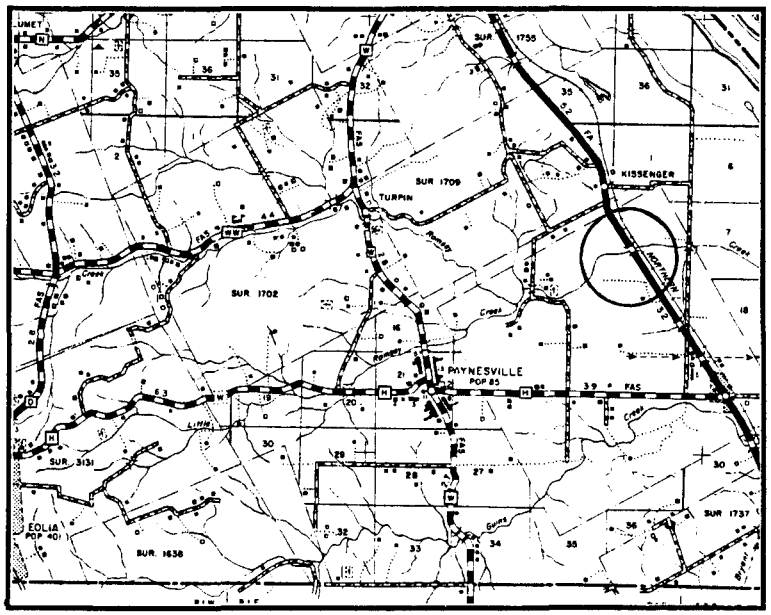
span number:	1	superstructure:	steel plate through girder, with steel stringer approach spans
span length:	100.0'	substructure:	concrete abutments, wingwalls and piers
total length:	190.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	22.0'	other features:	steel angle guardrails

This multiple-span bridge carries State Highway 79 over Ramsey Creek at a rural crossing southeast of Clarksville. The structure consists of a single long-span, riveted plate through girder, flanked by a pair of steel stringer approach spans; the superstructure is supported by concrete piers and abutments. The Ramsey Creek Bridge was engineered by the Missouri State Highway Department in 1936. Designating the project as Federal Aid Project 487E, the agency solicited competitive proposals in June. That month the state highway commission awarded a contract to build the bridge to Martin Wunderlich and Condon, Cunningham & Lemmon. The contractors apparently completed the structure later that year for $26,168.00. Since that time the bridge has functioned in place, with only minor maintenance-related repairs.

Through the 1930s and 1940s, the Missouri State Highway Department designed and built progressively longer steel beam bridges, using both rolled and plate girders in through and deck configurations. This culminated at the end of the decade with spans around 150 feet. Other longer girders had been built elsewhere in the country, but for Missouri, this represented a noteworthy technological feat. With its 100-foot through girder span and 1936 construction date, the Ramsey Creek Bridge is noteworthy as one of the earliest of these long-span beam bridges.

NAME(S) OF STRUCTURE
Ramsey Creek 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 No. K 322; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	26 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Noix Creek Bridge
MHTD: K 487R

PIKE03

DATE(S) OF CONSTRUCTION
1935-36

LOCATION
State Highway 79 over Noix Creek; S20, T54N, R1W
southeastern edge of Louisiana; Pike County, Missouri

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP possibly eligible (score: 58)

CONDITION
good

OWNER
Missouri Highway and Transportation Department

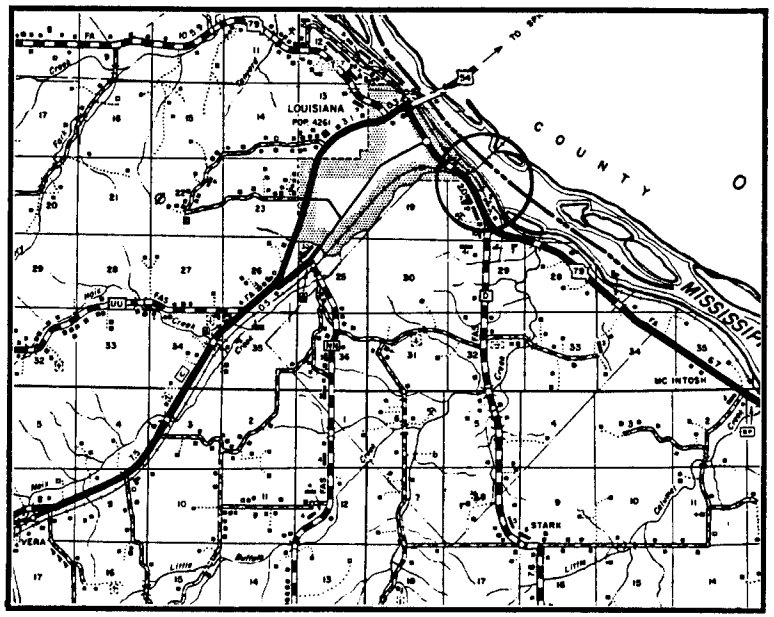
span number:	1	superstructure:	steel, 10-panel, rigid-connected polygonal Warren pony truss, skewed, with steel stringer approach spans
span length:	100.0'		
total length:	218.0'	substructure:	concrete abutments and wingwalls; concrete hammerhead spill-through piers
roadway wdt.:	24.0'	floor/decking:	asphalt-covered concrete deck, over steel stringers
		other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: wide flange; diagonal: wide flange; lateral bracing: 1 angle; floor beam: I-beam, with cantilevered extensions outside webs on both sides to support sidewalks; guardrail: concrete; bridge plate: **MISSOURI HIGHWAY DEPT. BRIDGE N° K 487 1935**

Located at the southern periphery of Louisiana, this long-span pony truss carries Missouri State Highway 79 over Noix Creek. The bridge is comprised of a single rigid-connected pony truss span, which is supported by a concrete substructure. The Noix Creek Bridge was designed by the state highway department and constructed in 1935-36 by contractor Otto Knutson for $48,711.30. The bridge is largely unaltered, other than deck repairs undertaken in 1988.

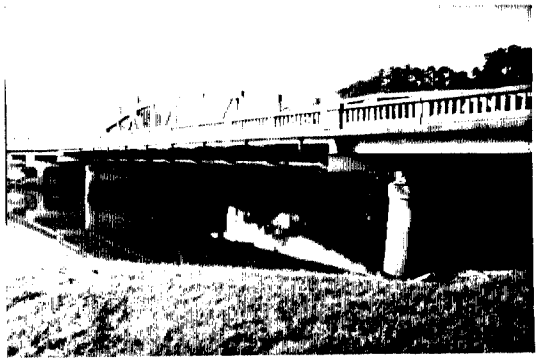
The Missouri State Highway Department used riveted Warren configurations for its pony trusses almost from the time the agency developed its first bridge standards around 1920. Structurally straightforward and versatile, these ubiquitous trusses were erected by the hundreds throughout the state in span lengths ranging from 40 to 100 feet. In the early 1930s the highway department designed Warren trusses with polygonal upper chords, a variation that was more materially conservant than the straight-chorded Warren for long-span applications. Relatively few of these Warren subtypes were built during the decade, due more to their extreme span length than to their utility. Approximately fifteen of these polygonal Warren pony trusses have been identified as extant by the statewide bridge inventory, all built between 1932 and 1940 and all spanning 100 feet. Fabricated from essentially the same drawings, their superstructures were virtually identical, other than the addition of accessories such as the cantilevered sidewalks on the Noix Creek Bridge. With a construction date of 1935-36, this span in Pike County falls well within the mainstream of this minor structural trend in Missouri.

NAME(S) OF STRUCTURE
Noix Creek 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 No. K 487R; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Fraserdesign, "Noix Creek Bridge: Preliminary Determination of NRHP Eligibility for the Missouri Historic Bridge Inventory," 29 September 1992; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	26 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Champ Clark Bridge
MHTD: K 932R

PIKE04

DATE(S) OF CONSTRUCTION
1926-28

LOCATION
U.S. Highway 54 over Mississippi River; S18, T54N, R1W
Louisiana; Pike County, Illinois / Pike County, Missouri

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP eligible (score: 72)

CONDITION
good

OWNER
Missouri Highway and Transportation Department; Illinois Department of Public Works and Bridges

span number:	5	superstructure:	steel, 14-panel, rigid-connected Pennsylvania through truss; 6 steel plate deck girder approach spans at the east end
span length:	420.0'		
total length:	2248.0'	substructure:	concrete abutments, wingwalls and piers
roadway wdt.:	20.0'	floor/decking:	asphalt-covered concrete over steel stringers
		other features:	upper chord and inclined end post: 2 channels with cover plate and double lacing; lower chord: 2 built-up channels with batten plates on top and bottom; vertical: 4 angles with lacing; diagonal: 4 angles with batten plates; lateral bracing: steel angles - bottom, 4 angles with lacing - top; strut: 4 angles with lacing; floor beam: plate girder; guardrail: 2 channels; portal plate: **DEDICATED TO CHAMP CLARK MEMBER OF CONGRESS SPEAKER OF THE HOUSE**; bridge plates (Missouri side): **1927 MISSISSIPPI RIVER BRIDGE ENGINEERS HARRINGTON, HOWARD AND ASH CONTRACTORS WISCONSIN BRIDGE & IRON CO. SUPERSTRUCTURE THE MISSOURI VALLEY BRIDGE & IRON CO. SUBSTRUCTURE; 1927 MISSISSIPPI RIVER BRIDGE MISSOURI-ILLINOIS BRIDGE CO...** [long list of company officers]; builder's plate (Illinois side): **BUILT BY WISCONSIN BRIDGE & IRON CO. NORTH MILWAUKEE, WISCONSIN 1927**

"Bring Illinois paved highways down to the river opposite Louisiana and we will take the pavement on to the Pacific Ocean." This was the message Louisiana's Chamber of Commerce sent to their counterparts in Pittsfield, Illinois, on February 12, 1926, thus beginning formal efforts to build the Champ Clark Bridge. Funding was arranged, in part through sale of stock in the Missouri-Illinois Bridge Company, and in March John Harrington of the Kansas City engineering firm Harrington, Howard and Ash surveyed proposed bridge sites. Harrington quickly proclaimed the Mansion Street site as an ideal location for a bridge. On May 5th President Coolidge signed H.R. 8918 into law, authorizing the bridge's erection. That October the Missouri Valley Bridge and Iron Company began work on the substructure, and a year later all the piers were in place. In the meantime, the Wisconsin Bridge and Iron Company was hard at work erecting the superstructure. High water caused by heavy rains slowed construction in the spring of 1927, but the project was only slightly behind schedule until September 6, 1927. On that day falsework holding the second span gave way, and the partially completed truss fell into the river. One workman died in the mishap, and it took two months to remove the fallen bridge from the river. Following this major setback, the structure was completed without further incident. Opened to traffic on May 15th, the bridge was formally dedicated in a

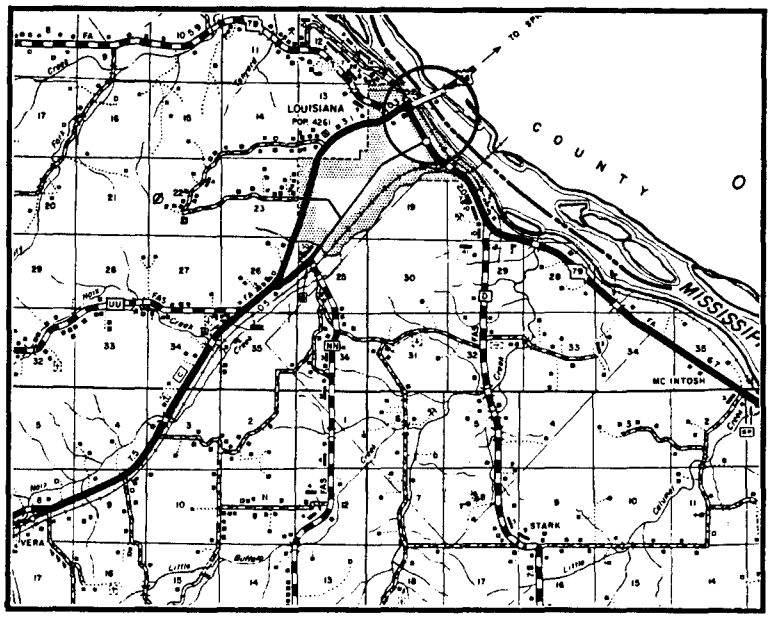
lavish ceremony held June 9, 1928. A parade with some fifty floats and nine bands marched its way from Bowling Green to the bridge site, where a Saint Louis man swan-dived off the top of the bridge. Among other dignitaries, the governors of Missouri and Illinois and the mayor of Chicago were in attendance. Named for Champ Clark, former Missouri Congressman and Speaker of the House, the bridge operated as a toll crossing until June 1952, when its indebtedness was paid off. It has served as a free crossing since that time, with deck replacement and pier repair in 1981 as the only alterations of note.

Bridges over the Mississippi River comprise some of America's longest examples of vehicular steel truss construction. With over 400 miles fronting on the great river, Missouri possesses several notable Mississippi River bridges. Seven of these, including the Champ Clark Bridge, are included in the statewide historic bridge inventory, and are all individually eligible for inclusion in the National Register. Although typically configured, the Champ Clark Bridge ranks among Missouri's most monumental examples of steel truss construction. The crossing is also historically significant for its pivotal role as an interstate crossing over a major river.

NAME(S) OF STRUCTURE

Champ Clark 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 No. K 932R; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; **Pike County Missouri: People, Places & Pikers**, compiled and edited by Karen Schwadron (1981), Pike County Historical Society; **Louisiana Press-Journal**, souvenir bridge edition (8 June 1988); "Seven New Mississippi River Highway Bridges," **Engineering News-Record**, 31 July 1930; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO	26 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Eagle's Nest Bridge
MHTD: 018001.8

PIKE05

DATE(S) OF CONSTRUCTION
1907

LOCATION
County Road 18 over Salt River; S30, T55N, R2W
7.5 miles northwest of Louisiana; Pike County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP eligible (score: 72)

CONDITION
fair

OWNER
Pike County

span number: 1
span length: 295.0'2
total length: 450.0'
roadway wdt.: 18.0'

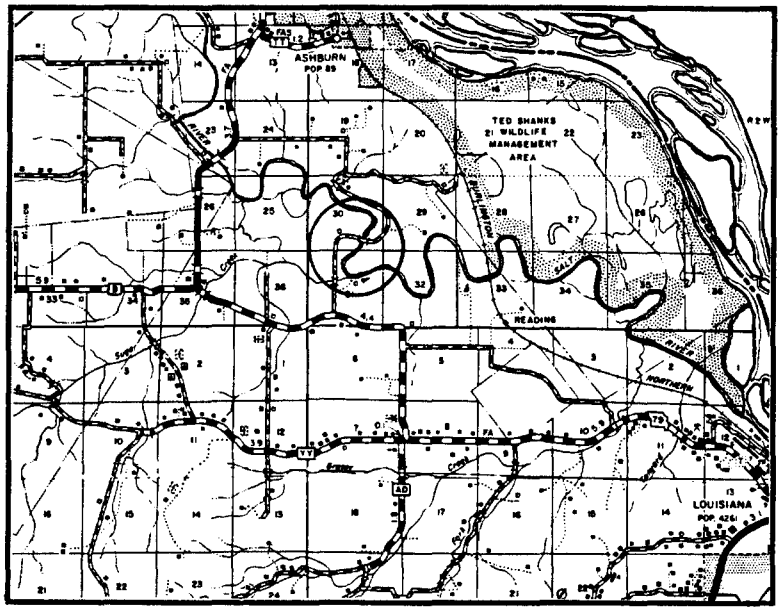
superstructure: steel, 14-panel, pin-connected Pennsylvania through truss; 1 Pratt truss-leg bedstead and steel stringer approach spans at each end
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers
floor/decking: timber deck over steel stringers
other features: upper 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: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 braced angles; portal strut: 4 angles with double lacing and curved knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

Bridging the Salt River at Eagle's Nest Ford was a process that took some three years to complete. Pike County Surveyor J.D. Beauchamp first viewed suitable sites for the bridge in June 1904. This was only a preliminary survey, however, with no further action taken at that time. Then, in December 1904 the Pike County Court ordered Beauchamp to estimate the cost and determine the best site for a Salt River bridge between Eagle's Nest and Bullock's Ford. A month later the Court ordered revenue from Buffalo and Salt River Townships to be set aside for two years to pay for the proposed bridge. This order was later rescinded, though, and in early February 1905 the Court established a special bridge fund to pay for the structure. A year later, in February 1906, the Court finally authorized Beauchamp to solicit bids to build the bridge, based on his design. On March 5, 1906, the Missouri Bridge and Iron Company was awarded an $11,390.00 contract to erect a Salt River crossing just downstream from Eagle's Nest Ford. The contract called for a 295-foot main span and four 40-foot approach spans, with an 18-foot roadway. The substructure consisted of concrete-filled steel cylinder piers under the main span, and steel bents with concrete pedestals under the approach spans. Although Missouri B&I agreed to complete the project by the following January, the truss was not ready for traffic until June 1907. Today, the Eagle's Nest Bridge still functions in its original location. Possessing a high degree of historical integrity, the bridge is little changed from its original appearance.

Before the state highway department began building major river crossings in the 1920s, the individual counties were responsible for erecting and maintaining such structures. Numerous long-span truss bridges were erected over the Salt, the Meramec, the Cuivre, the Grand and other major rivers in the late 19th and early 20th centuries. Their pinned connections and relatively narrow roadway widths

NAME(S) OF STRUCTURE
Eagle's Nest 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 No. 018001.8; Pike County Court Record - Book C: page 98 (20 January 1904), page 138 (26 December 1904), page 139 (2 January 1905), page 140 (20 January 1905), page 150 (7 February 1905), page 162 (12 May 1905), page 196 (7 February 1906), page 199 (5 March 1906), page 220 (16 July 1906), page 240 (8 November 1906), page 249 (26 November 1906), page 250 (31 December 1906), page 305 (1 January 1907), page 355 (3 January 1907); Pike County Court Record S: page 402 (8 January 1907), pages 422 and 427 (9 February 1907); original bridge contract (5 March 1906); original bridge drawing (for bedstead approaches), (22 August 1906) - located at Pike County Courthouse, Bowling Green MO; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO	26 March 1991

have made them likely targets for replacement, however, and many of these early iron or steel trusses have been subsequently replaced. As a result of decades of attrition, relatively few long-span trusses remain in use in Missouri. The Eagle's Nest Bridge is distinguished among these as a well-preserved example of a relatively uncommon Pratt truss subtype - the Pennsylvania through truss. Even more significant is the bridge's distinction as the state's longest pin-connected truss, other than the Chouteau Bridge over the Missouri River. A graceful long-span structure, it is one of Missouri's most important early wagon trusses.

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Peno Creek Bridge
MHTD: 029001.5

PIKE07

DATE(S) OF CONSTRUCTION
c1900

LOCATION
County Road 29 over Little Peno Creek; S11, T54N, R4W
1.4 miles south of Frankford; Pike County, Missouri

USE (ORIGINAL / CURRENT)
railroad culvert / roadway culvert

RATING NRHP non-eligible (score: 37)

CONDITION
fair

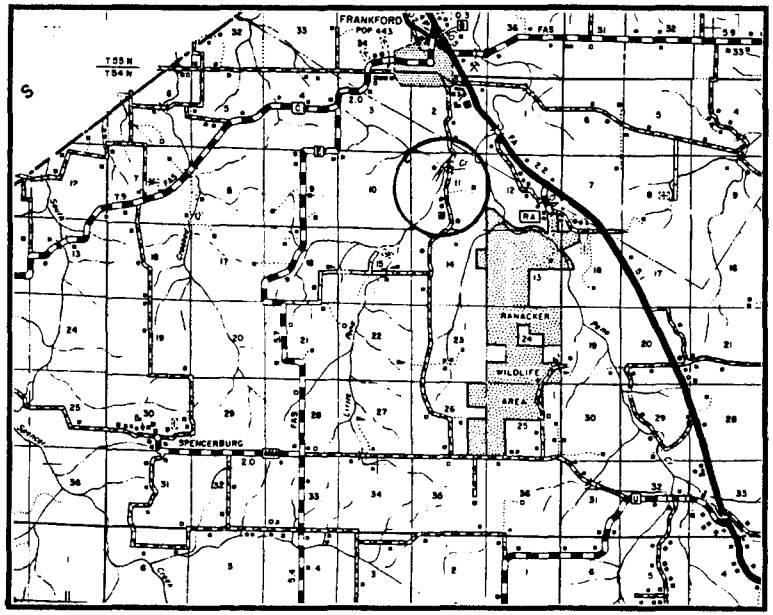
OWNER
Pike County

span number:	3	superstructure:	concrete arch culvert
span length:	16.0'	substructure:	concrete abutments, wingwalls and piers
total length:	65.0'	floor/decking:	concrete deck
roadway wdt.:	52.0'	other features:	no guardrails

The Little Peno Creek Bridge was built as a railroad crossing by the St. Louis and Hannibal Railroad. When the right-of-way was later abandoned by the railroad, the grade was converted into a county road. The Peno Creek structure is technologically unremarkable and suffers from a loss of historic context relative to its association with the railroad.

NAME(S) OF STRUCTURE
Little Peno Creek 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 No. 029001.5; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	26 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bradley Ford Bridge
MHTD: 060000.6

PIKE08

DATE(S) OF CONSTRUCTION
1910

LOCATION
County Road 60 over Little Buffalo Creek; S33, T54N, R1W
3.0 miles southeast of Louisiana; Pike County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
fair

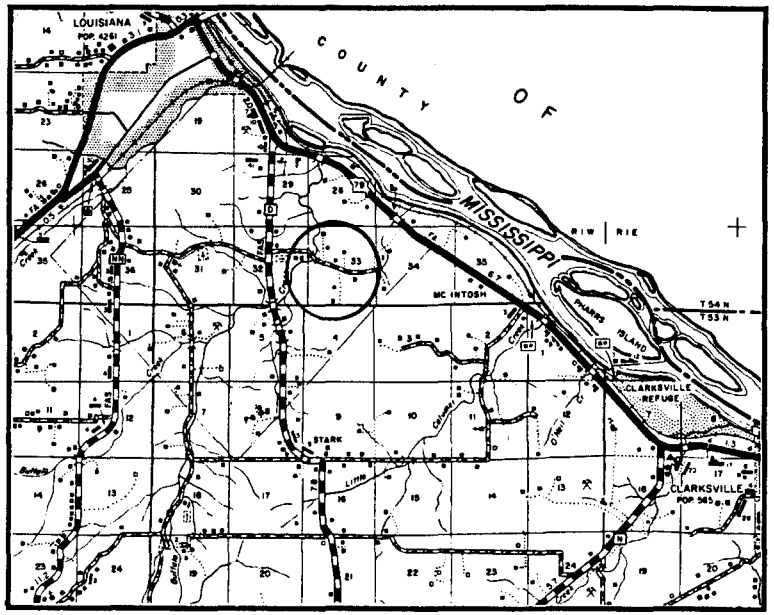
OWNER
Pike County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
span length:	80.0'	substructure:	concrete abutments and wingwalls; concrete-filled steel cylinder piers
total length:	121.0'	floor/decking:	concrete on corrugated steel, over steel stringers
roadway wdt.:	11.8'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

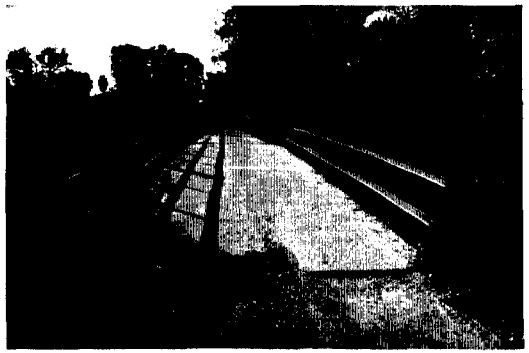
Known locally as the Bradley Ford Bridge, this pinned Pratt pony truss carries a county road over Little Buffalo Creek three miles southeast of Louisiana, about a mile from the creek's confluence with the Mississippi River. Configured as a pin-connected Pratt pony truss, the bridge was built in 1910 by the Decatur Bridge Company. On April 11, 1910, the Pike County Court awarded a contract to the Decatur, Illinois, firm to fabricate and erect an 80-foot steel truss with approaches and concrete substructure over Buffalo Creek at Bradley's Ford. The contract stipulated that the structure would be complete by July 6th. Decatur took longer than planned to build the bridge, however, finally finishing it in November. It has functioned in place since that time. The structure's original timber deck has been replaced with concrete over corrugated steel, and a vertical member on the north side has been damaged in a collision. The Bradley Ford Bridge is a typically configured example of a common structure type.

NAME(S) OF STRUCTURE
Bradley 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 No. 060000.6; Pike County Court Record - Book C: page 507 (11 April 1910), page 548 (11 November 1910); Pike County Court Record T: page 425 (7 February 1911) - located at Pike County Courthouse, Bowling Green MO; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
26 March 1991

RALLS COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
RALL01	033000.9	Shiel Bridge	(replaced)
RALL02	051000.1	Bear Creek Bridge	(replaced)
RALL03	071000.1	Ilasco Bridge	2- 20' **concrete through girder** **1910** Portland Cement Co. (poss.)
*RALL04	089001.0	Bailey Ford Bridge	1-**230'** **pinned Pennsylv. through truss** **1910** Stupp Brothers B&I Company
RALL05	094002.1	Spencer Creek Bridge	**2**- 80' riveted Warren pony truss 1925 Louis Rich Construction Co.
*RALL06	116001.9	Spencer Creek Bridge	1-120' **pinned Pratt through truss** **1911** Stupp Brothers B&I Company
RALL07	128001.1	Turkey Creek Bridge	1-**100'** riveted Pratt pony truss c1925
*RALL08	181001.6	Gill Bridge	1- 95' **pinned Pratt through truss** **1909** Stupp Brothers B&I Company
RALL09	185001.6	Morowitz Bridge	1- 67' pinned Pratt pony truss **1904** Stupp Brothers B&I Company
RALL10	200001.5	Spencer Creek Bridge	1- 50' pinned Pratt half-hip pony truss c**1905** Stupp Brothers B&I (prob.)
*RALL11	202002.0	Menefee Ford Bridge	1- 85' pinned Pratt pony truss **1911** Stupp Brothers B&I Company
*RALL12	220000.4	Butler Ford Bridge	1-100' **pinned Pratt through truss** **1893** St. Louis Bridge and Iron Co.
RALL13	234000.5	Rohr/Galloway Bridge	(replaced)
*RALL14	241002.3	Hutchison Bridge	1- 60' pinned Pratt pony truss **1913** Miller and Borcherding
*RALL15	279000.1	Al's Tavern Bridge	1- 60' pinned Pratt pony truss **1910** Stupp Brothers B&I Company

EXCLUDED:

Pratt pony truss
221000.8 246001.1 289000.3

Warren pony truss
J 77 094002.1 188003.5 234001.2 244000.8

Steel stringer

K 443	S 28R	T 212	T 386	T 387	X 377	X 378
026000.3	027001.9	038001.2	040000.9	071002.5	076000.6	080000.6
080000.9	103000.5	125000.6	146000.4	153001.2	188003.4	191002.2
199000.6	238000.2	238002.5	256001.4	257001.4	262001.4	262002.9
267000.7	338500.2					

RALLS COUNTY

EXCLUDED (cont.):

Concrete girder

J 118	J 337	J 338	J 429R1	J 430R1	S 27	094001.9

Concrete box culvert

H 586	J 981	P 120	S 453	S 840	X 647	X 697
X 895	134000.8					

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	0	12	0	0	12
Excluded	22	33	0	0	55
	22	45	0	0	67 structures

Ilasco Bridge

RALL03

GENERAL DATA

structure no.: 071000.1
county: Ralls
city/town: 0.3 mile south of Ilasco
feature inters.: Marble Creek
cadastral grid: S1/2, T56N, R4W
highway route: County Road 71
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: concrete through girder
substructure: concrete abutments, wingwalls and pier

span number: 2
span length: 20.0'
total length: 47.0'
roadway width: 20.0'
condition: fair
alterations: none
floor/decking : concrete deck
other features: plainly detailed concrete guardrails and bulkheads

HISTORICAL DATA

erection date: 1910
erection cost: unknown
designer: unknown
fabricator : none
contractor: Portland Cement Company, Ilasco MO (possible)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 071000.1; Ralls County Court Record, Book G, page 154 (9 August 1910), located at the Ralls County Courthouse, New London MO.

sign. rating: 58
evaluation: NRHP possibly eligible (earliest example in state of uncommon structural type, predating standardization by the state highway department)

inventoried by: Clayton B. Fraser 27 March 1991

Bailey Ford Bridge

RALL04

GENERAL DATA

structure no.: 089001.0
county: Ralls
city/town: 5.5 miles southeast of New London
feature inters.: Salt River
cadastral grid: S11, T55N, R4W
highway route: County Road 89
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, 10-panel, pin-connected Pennsylvania through truss, with pin-connected Pratt pony truss and steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 230.0'
total length: 322.0'
roadway width: 16.0'
condition: fair
alterations: none
floor/decking : timber 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 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with turnbuckle; strut: braced angles; portal strut: angles; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles; portal builder's plate: **1910 / BUILT BY STUPP BRIDGE & IRON CO. / ST. LOUIS MO.** (with listing of county officials' names)

HISTORICAL DATA

erection date: 1910
erection cost: $7699.00 (contract amount)
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO; Illinois Steel Company, Chicago IL
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 089001.0; Ralls County Court Record G: page 54 (8 February 1910), page 69 (10 February 1910), page 75 (7 March 1910), pages 97 and 99 (7 April 1910), page 148 (3 August 1910), page 172 (4 October 1910), page 174 (5 October 1910), page 183 (11 November 1910), page 204 (30 December 1910), located at Ralls County Courthouse, New London, Missouri; field inspection by Clayton Fraser, 14 September 1990.

Bailey Ford Bridge

sign. rating: 67
evaluation: NRHP possibly eligible (well-preserved, long-span example of uncommon truss type)

inventoried by: Clayton B. Fraser 27 March 1991

Spencer Creek Bridge

RALL05

GENERAL DATA

structure no.: 094002.1
county: Ralls
city/town: 5.5 miles southeast of New London
feature inters.: Spencer Creek
cadastral grid: S28, T55N, R5W
highway route: County Road 94
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, rigid-connected Warren pony truss
substructure: concrete abutments, wingwalls and pier

span number: 2
span length: 80.0'
total length: 269.0'
roadway width: 20.5'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel pipe guardrails

HISTORICAL DATA

erection date: 1925
erection cost: $23,390.04
designer: Missouri State Highway Department
fabricator : unknown
contractor: Louis Rich Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 094002.1; Missouri Highway and Transportation Department Primary System Bridge Record, Book 2 (see entries for Ralls County), located at MHTD, Jefferson City MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 40
evaluation: NRHP non-eligible (typical example of MSHD truss detailing of the 1920s)

inventoried by: Clayton B. Fraser 27 March 1991

Spencer Creek Bridge

RALL06

GENERAL DATA

structure no.: 116001.9
county: Ralls
city/town: 6.9 miles southwest of New London
feature inters.: Spencer Creek
cadastral grid: SUR 3177, T54N, R5W
highway route: County Road 116
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: concrete abutments, wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 120.0'
total length: 158.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with knee braces; floor beam: I-beam, field-bolted to verticals; guardrail: 2 angles; portal builder's plate: **1911 / BUILT BY STUPP BRO'S BRIDGE & IRON / ST. LOUIS, MO.** (list of county officers)

HISTORICAL DATA

erection date: 1911
erection cost: unknown
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO; Cambria Steel Company, Pittsburgh PA
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 116001.9; Ralls County Court Record G: page 290 (3 July 1911), page 294 (7 August 1911) - located at Ralls County Courthouse, New London, Missouri; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 43
evaluation: NRHP non-eligible (typical well-preserved example of mainstay structural type, with undistinguished design and dimensions)

inventoried by: Clayton B. Fraser 27 March 1991

Turkey Creek Bridge

RALL07

GENERAL DATA

structure no.: 128001.1
county: Ralls
city/town: 2.3 miles west of New London
feature inters.: Turkey Creek
cadastral grid: SUR 3243, T55N, R5W
highway route: County Road 128
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: unknown

span number: 1
span length: 100.0'
total length: 102.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : concrete deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1925
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 128001.1.

sign. rating: 28
evaluation: NRHP non-eligible (typically configured, inadequately documented example of exceedingly common structural type)

inventoried by: Clayton B. Fraser 27 March 1991

Gill Bridge

RALL08

GENERAL DATA

structure no.: 181001.6
county: Ralls
city/town: western edge of Perry
feature inters.: Lick Creek
cadastral grid: S28/33, T54N, R7W
highway route: County Road 181
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 95.0'
total length: 134.0'
roadway width: 11.5'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; 2 looped rectangular eyebars; diagonal: 2 looped rectangular eyebars; counter: 1 round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; floor beam: I-beam, field-bolted to vertical; guardrail: timber; portal builder's plate: **1909 / STUPP BRO'S BRIDGE & IRON CO. / ST. LOUIS MO. / (LISTING OF JUDGES) A.V. ELY COUNTY SURVEYOR**

HISTORICAL DATA

erection date: 1909
erection cost: unknown
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO; Cambria Steel Company, Pittsburgh PA
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 181001.6; Ralls County Court Record G: page 5 (5 July 1909), page 17 (3 August 1909), page 63 (10 February 1910) - located at Ralls County Courthouse, New London MO; **Atlas of Ralls County, Missouri** (New London, Missouri: S.S. Carroll and Company, 1904); Howard, Goldena Roland, **Ralls County, Missouri** (New London, Missouri: By the Author, 1980); "Petition," from M.P. LaFrance et al. to Ralls County Court, 8 August 1905 - located at County Clerk's Office, Ralls County Courthouse, New London, Missouri; **Portrait and Biographical Record of Marion, Ralls, Pike Counties, Missouri** (Chicago:

C.C. Owen and Company, 1895); Williams, Walter, Jr., **History of Northeast Missouri** (New York: Lewis Publishing Company, 1912); field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 45

evaluation: NRHP determined eligible (typical, well-preserved example of mainstay structural type)

inventoried by: Clayton B. Fraser 27 March 1991

Morowitz Bridge

RALL09

GENERAL DATA

structure no.: 185001.6
county: Ralls
city/town: 5.0 miles west of Ilasco
feature inters.: Bear Creek
cadastral grid: S6, T56N, R4W
highway route: County Road 185
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: unknown

span number: 1
span length: 67.0'
total length: 108.0'
roadway width: 13.9'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: unknown

HISTORICAL DATA

erection date: 1904
erection cost: $634.00
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 185001.6; Ralls County Court Record F: page 69 (3 October 1904), located at Ralls County Courthouse, New London MO.

sign. rating: 41
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 27 March 1991

Spencer Creek Bridge

RALL10

GENERAL DATA

structure no.: 200001.5
county: Ralls
city/town: 6.4 miles southeast of Perry
feature inters.: Spencer Creek
cadastral grid: S34, T54N, R6W / S3, T53N, R6W
highway route: County Road 200
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt half-hip pony truss
substructure: stone masonry abutments

span number: 1
span length: 50.0'
total length: 52.0'
roadway width: 12.0'
condition: fair/poor
alterations: truss heavily damaged
floor/decking : timber deck
other features: unknown

HISTORICAL DATA

erection date: c1905
erection cost: unknown
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO (probable)
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO (probable)
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO (probable)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 200001.5.

sign. rating: 19
evaluation: NRHP non-eligible (poorly preserved, poorly documented example of common structural type)

inventoried by: Clayton B. Fraser 27 March 1991

Menefee Ford Bridge

RALL11

GENERAL DATA

structure no.: 202002.0
county: Ralls
city/town: 1.5 miles south of Perry
feature inters.: Lick Creek
cadastral grid: S34, T54N, R7W / S3, T53N, R7W
highway route: County Road 202
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 85.0'
total length: 127.0'
roadway width: 10.3'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical with knee bracing; guardrail: 2 angles; endpost-mounted builder's plate: **BUILT BY STUPP BRO'S BRIDGE & IRON CO. / ST. LOUIS MO. / 1911**; bridge plate: **CLASS B**

HISTORICAL DATA

erection date: 1911
erection cost: unknown
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO; Illinois Steel Company, Chicago IL
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 202002.0; Ralls County Court Record E: page 484 (3 June 1901), page 486 (1 July 1901), page 499 (4 September 1901); Ralls County Court Record G: page 216 (6 February 1911), page 290 (3 July 1911), located at Ralls County Courthouse, New London MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 48
evaluation: NRHP possibly eligible (well-preserved, long-span example of mainstay structural type)

inventoried by: Clayton B. Fraser 27 March 1991

Butler Ford Bridge

RALL12

GENERAL DATA

structure no.: 220000.4
county: Ralls
city/town: 4.6 miles southeast of Center
feature inters.: Spencer Creek
cadastral grid: S19, T54N, R5W
highway route: County Road 220
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: wrought iron, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 100.0'
total length: 130.0'
roadway width: 13.3'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 square bars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: bottom - round rod with turnbuckle, top - round rod with threaded ends - bottom; strut: 2 angles with knee braces; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1893
erection cost: $2680.00
designer: St. Louis Bridge and Iron Company, St. Louis MO
fabricator : St. Louis Bridge and Iron Company, St. Louis MO
contractor: St. Louis Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 220000.4; Ralls County Court Record D: page 440 (3 October 1892), page 443 (4 October 1892), page 450 (7 November 1892), page 475 (6 April 1893), located at Ralls County Courthouse, New London MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 50
evaluation: NRHP possibly eligible (well-preserved, early example of mainstay structural type)

inventoried by: Clayton B. Fraser 27 March 1991

Hutchison Bridge

RALL14

GENERAL DATA

structure no.: 241002.3
county: Ralls
city/town: 6.1 miles south of Perry
feature inters.: East Lick Creek
cadastral grid: S26, T53N, R7W
highway route: County Road 241
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls (collapsed at west end)

span number: 1
span length: 60.0'
total length: 60.0'
roadway width: 11.6'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 angles with batten plates; diagonal: 2 looped rectangular eyebars; counter: 1 round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1913
erection cost: $1550.00 (contract amount)
designer: Miller and Borcherding, St. Louis MO
fabricator : unknown
contractor: Miller and Borcherding, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 241002.3; Ralls County Court Record G: page 481 (7 April 1913), located at Ralls County Courthouse, New London MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 37
evaluation: NRHP non-eligible (typical example of common structural type)

inventoried by: Clayton B. Fraser 27 March 1991

Al's Tavern Bridge

RALL15

GENERAL DATA

structure no.: 279000.1
county: Ralls
city/town: 0.7 mile south of Ilasco
feature inters.: Marble Creek
cadastral grid: S11, T56N, R4W
highway route: County Road 279
highway distr.: 3
current owner: Ralls County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 60.0'
total length: 62.0'
roadway width: 14.3'
condition: fair
alterations: deck removed from sidewalk
floor/decking : asphalt over timber deck, with steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; guardrail: 2 angles; sidewalk cantilevered from west web; endpost-mounted builder's plate: BUILT BY STUPP BRO'S BRIDGE & IRON CO. / ST. LOUIS MO / 1910

HISTORICAL DATA

erection date: 1910
erection cost: unknown
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 279000.1; Ralls County Court Record G: page 135 (4 July 1910), page 154 (9 August 1910), located at Ralls County Courthouse, New London MO; field inspection by Clayton Fraser, 14 September 1990.

sign. rating: 44
evaluation: NRHP non-eligible (typically configured example of mainstay structural type)

inventoried by: Clayton B. Fraser 27 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ilasco Bridge
MHTD: 071000.1

RALL03

DATE(S) OF CONSTRUCTION
1910

LOCATION
County Road 71 over Marble Creek; S1/2, T56N, R4W
0.3 mile south of Ilasco; Ralls County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 58)

CONDITION
fair

OWNER
Ralls County

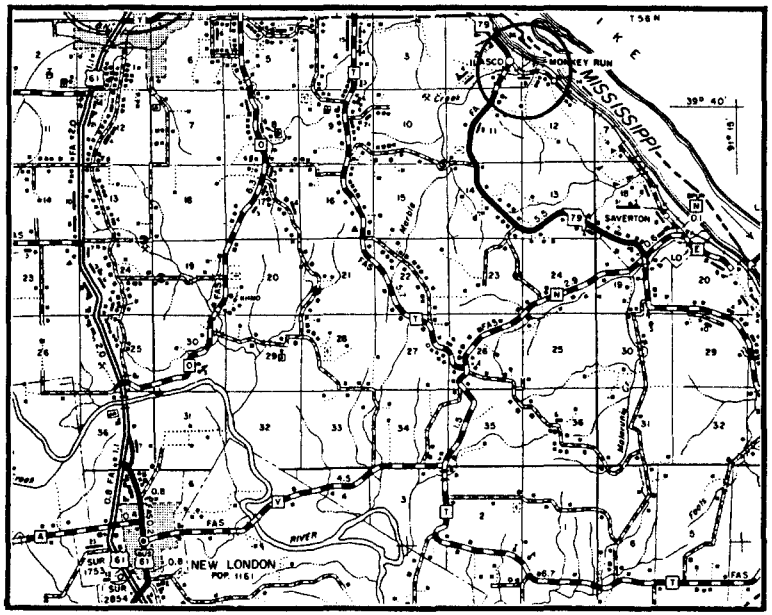
span number:	2	superstructure:	concrete through girder
span length:	20.0'	substructure:	concrete abutments, wingwalls and pier
total length:	47.0'	floor/decking:	concrete deck
roadway wdt.:	20.0'	other features:	plainly detailed concrete guardrails and bulkheads

Located immediately south of the small town of Ilasco, this short-span concrete bridge carries a county road over Marble Creek. The Ilasco Bridge is comprised of two through girder spans, supported by concrete abutments and pier. The structure is plainly detailed, with modest copings and bulkheads as the only architectural expression. County records are sparse regarding the bridge and its builder's plate has been removed, but it appears to have been built in 1910. The probable manufacturer of the cement and contractor for the bridge is the Portland Cement Company, located nearby in Ilasco. The lack of documentation is unfortunate: the Ilasco Bridge may have marked an experimental use of concrete for bridge construction by Ralls County, which was otherwise committed to steel trusses for its vehicular spans. Since its completion, the Ilasco Bridge has carried traffic in essentially unaltered condition. Today, checking and spalling of the concrete surface constitute the only diminution of the bridge's structural integrity.

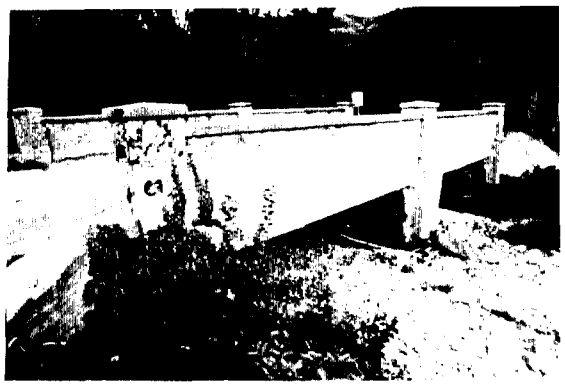
Unlike many Midwestern states, Missouri did not employ reinforced concrete extensively for construction of vehicular bridge superstructures in the 1910s. The various counties and, to a lesser extent, the state highway department continued to prefer steel for bridge superstructures well after concrete had received widespread acceptance elsewhere. This, combined with subsequent attrition, has resulted in a relatively small number of concrete bridges that exist today from this formative period. The Ilasco is distinguished among these as the earliest of the less than ten concrete through girders found in the state. Modestly scaled and simply detailed, it is noteworthy as an early, well-preserved example of concrete bridge construction in Missouri.

NAME(S) OF STRUCTURE
Ilasco 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 No. 071000.1; Ralls County Court Record, Book G, page 154 (9 August 1910), located at the Ralls County Courthouse, New London MO.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO

DATE
27 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bailey Ford Bridge
MHTD: 089001.0

RALL04

DATE(S) OF CONSTRUCTION
1910

LOCATION
County Road 89 over Salt River; S11, T55N, R4W
5.5 miles southeast of New London; Ralls County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 67)

CONDITION
fair

OWNER
Ralls County

span number: 1
span length: 230.0'
total length: 322.0'
roadway wdt.: 16.0'

superstructure: steel, 10-panel, pin-connected Pennsylvania through truss, with pin-connected Pratt pony truss and steel stringer approach spans

substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

floor/decking: timber 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 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with turnbuckle; strut: braced angles; portal strut: angles; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles; portal builder's plate: **1910 / BUILT BY STUPP BRIDGE & IRON CO. / ST. LOUIS MO.** (with listing of county officials' names)

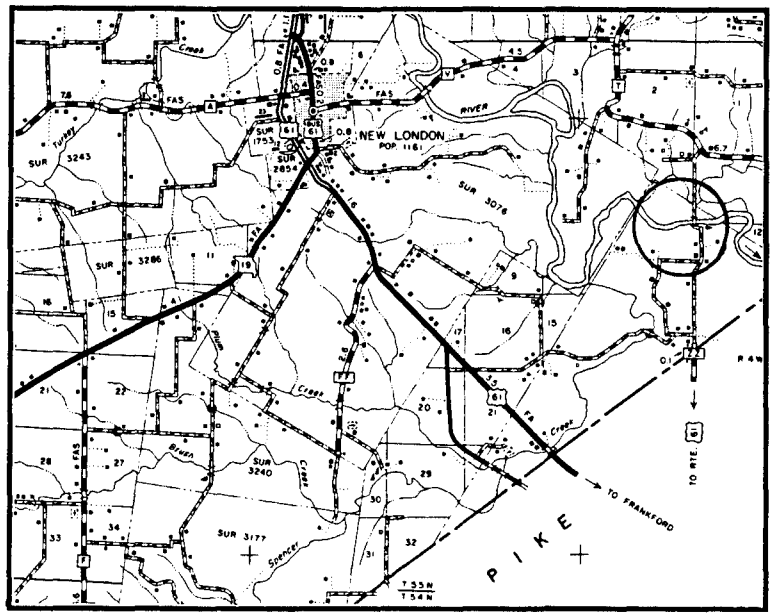
On February 8, 1910, Abner S. Hoden and his neighbors in southeastern Ralls County presented a petition to the county court asking that a bridge be built across the Salt River at Bailey Ford. Agreeing with the petitioners, the court directed county surveyor A. Victor Ely to locate a site and estimate the cost of the proposed structure. Two days later Ely reported back that a 230-foot span with flanking 24-foot approach spans would be required, and that the bridge would cost an estimated $7000.00. In March he solicited competitive proposals to erect the bridge at Bailey Ford. Having received bids from five firms, the county court, on April 7, 1910, awarded the contract to fabricate and erect the long-span truss to the Stupp Brothers Bridge and Iron Company for $7699.00. The St. Louis-based firm worked throughout the summer and fall of 1910, completing the bridge late in September. As built, the Bailey Ford Bridge consisted of a long-span pinned Pennsylvania truss, supported by tubular piers and approached on both ends by pinned pony truss and steel stringer spans. Ely and the county court met at the new structure on October 5th . Ely examined the truss and proclaimed that it had been built according to specifications. The court then formally accepted the bridge, authorizing final payment to Stupp Brothers. Its physical integrity intact, the Bailey Ford bridge still serves to carry vehicular traffic in a rural setting.

Between the early 1880s, when trusses superseded bowstrings, and the 1920s, when field riveting attained widespread use, the pin-connected truss was the structure of choice for medium- and long-span wagon bridges in Missouri. Virtually all of the major Midwestern bridge companies fabricated pinned trusses and marketed them extensively to counties throughout the state in the late 19th and early 20th centuries. This corresponded with a period of intense bridge construction, as the counties were busily upgrading their road and

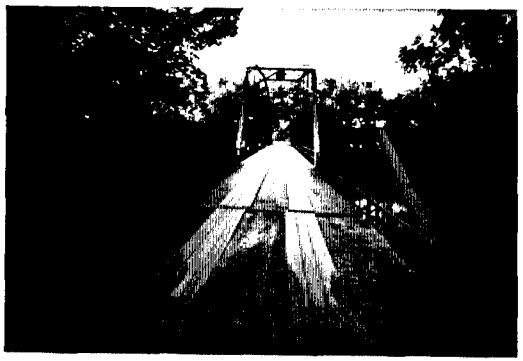
highway systems. As a result, thousands of pinned trusses were built in Missouri during this formative period, and many remain in place today. Most of these featured straight-chorded Pratt configurations. After the turn of the century, however, bridge manufacturers found a greater economy in polygonal-chorded Pratt variants for long-span applications. Their relatively long spans, light structural members and archaic detailing have rendered these trusses particularly vulnerable to subsequent replacement. As a result, of the few pinned Pennsylvania trusses that once carried vehicular traffic in the state, fewer than ten remain in place today. The Bailey Ford Bridge is distinguished among these as a well-preserved example. With its polygonal top chord and subdivided panels, the truss exemplifies this relatively uncommon type. And with its 230-foot span length, it is among the longest pin-connected trusses remaining in use in Missouri. Serving as a major crossing of the Salt River for more than eighty years, the Bailey Ford Bridge is historically significant for its longstanding role in the development of regional transportation. It is one of the state's more significant early roadway trusses.

NAME(S) OF STRUCTURE
Bailey 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 No. 089001.0; Ralls County Court Record G: page 54 (8 February 1910), page 69 (10 February 1910), page 75 (7 March 1910), pages 97 and 99 (7 April 1910), page 148 (3 August 1910), page 172 (4 October 1910), page 174 (5 October 1910), page 183 (11 November 1910), page 204 (30 December 1910), located at Ralls County Courthouse, New London, Missouri; field inspection by Clayton Fraser, 14 September 1990.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO	27 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Spencer Creek Bridge
MHTD: 116001.9

RALL06

DATE(S) OF CONSTRUCTION
1911

LOCATION
county road over Spencer Creek; SUR 3177, T54N, R5W
6.9 miles southwest of New London; Ralls County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 43)

CONDITION
fair

OWNER
Ralls County

span number:	1	superstructure:	steel, 7-panel, pin-connected Pratt through truss with steel stringer approach spans
span length:	120.0'	substructure:	concrete abutments, wingwalls; concrete-filled steel cylinder piers
total length:	158.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.8'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with knee braces; floor beam: I-beam, field-bolted to verticals; guardrail: 2 angles; portal builder's plate: **1911 / BUILT BY STUPP BRO'S BRIDGE & IRON / ST. LOUIS, MO. / H.J. PRIEST PRESIDING JUDGE, M.T. GILL[,] W.T. GORE[,] ASSOCIATE JUDGES / J.W. PITT COUNTY CLERK / A.V. ELY HIGHWAY ENGINEER**

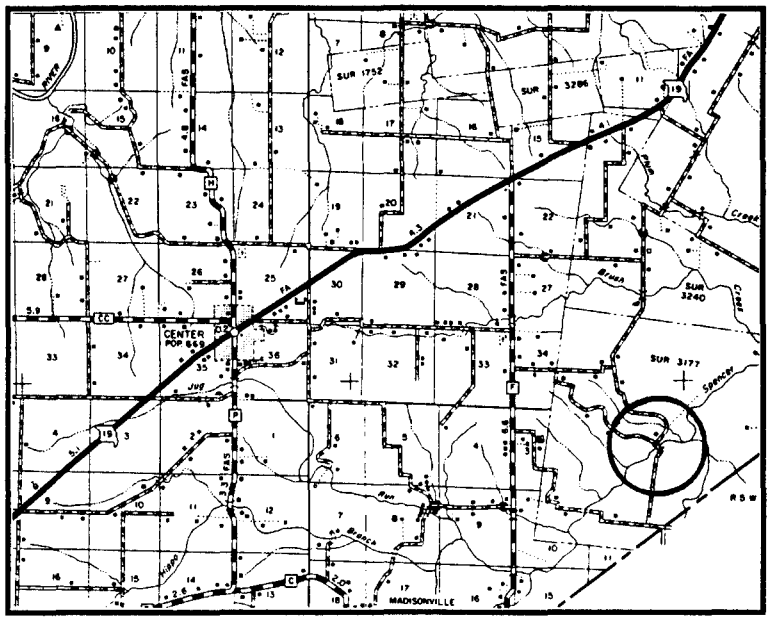
This bridge carries a county road over Spencer Creek about seven miles southwest of New London near the Pike County line. Designed as a seven-panel pin-connected Pratt through truss, the structure rests on concrete abutments and steel cylinder piers. The 120-foot main span is flanked by two steel stringer approach spans, creating an overall structure length of 158 feet. A builder's plate denotes that the bridge was built in 1911 by the Stupp Brothers Bridge and Iron Company of Saint Louis. County Court minutes reveal that the Stupp Brothers were active in Ralls County bridge building in 1911, but planning efforts for this bridge are not specifically discussed. The minutes do show, though, that on July 3, 1911, the county paid Stupp Brothers $2900.00, a portion of which was for partial payment for the Spencer Creek Bridge. Just over a month later, on August 7th, the county issued three more warrants totaling $3767.00 to Stupp Brothers. A portion of those monies, presumably, also included payment for the Spencer Creek Bridge. Since its erection, the bridge has carried local vehicular traffic in a rural setting. Appearing largely as originally built, the structure has suffered no measurable loss of physical integrity.

In Missouri the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the late 19th and early 20th centuries. Most of the structures erected during this period were based on standard plans developed either by the state highway department (after 1917) or by the individual bridge companies, such as the prolific Stupp Brothers firm in St. Louis. As a result, thousands of Pratt trusses were built across the state, all very much alike in detailing, and today the Pratt truss constitutes the most populous group of through trusses. The Spencer Creek Bridge is a typically configured pin-connected Pratt through truss.

NAME(S) OF STRUCTURE

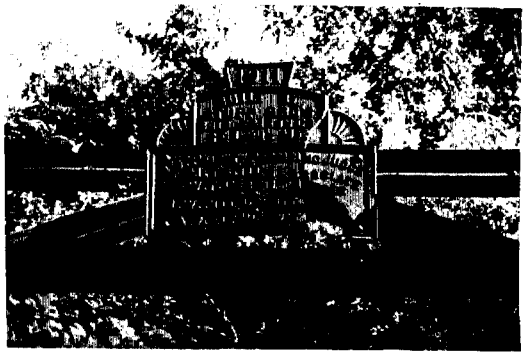
Spencer Creek Bridge

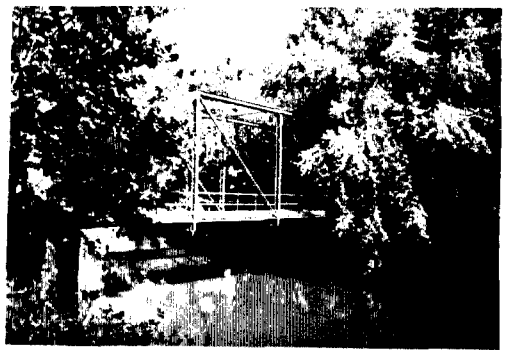
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP





SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 116001.9; Ralls County Court Record G: page 290 (3 July 1911), page 294 (7 August 1911) - located at Ralls County Courthouse, New London, Missouri; field inspection by Clayton Fraser and Carl McWilliams, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton Fraser and Carl McWilliams	Fraserdesign, Loveland CO	27 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Gill Bridge
MHTD: 181001.6

RALL08

DATE(S) OF CONSTRUCTION
1909

LOCATION
County Road 181 over Lick Creek; S28/33, T54N, R7W
western edge of Perry; Ralls County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP determined eligible (score: 45)

CONDITION
fair

OWNER
Ralls County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss with steel stringer approach spans
span length:	95.0'	substructure:	concrete abutments and wingwalls; concrete-filled steel cylinder piers
total length:	134.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.5'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; 2 looped rectangular eyebars; diagonal: 2 looped rectangular eyebars; counter: 1 round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; floor beam: I-beam, field-bolted to vertical; guardrail: timber; portal builder's plate: **1909 / STUPP BRO'S BRIDGE & IRON CO. / ST. LOUIS MO. / (LISTING OF JUDGES) A.V. ELY COUNTY SURVEYOR**

Ralls County, Missouri, was formed by an act of the state legislature on November 6, 1820. Named after Daniel Ralls, a state legislator who had died earlier that year, the county originally encompassed most of the northeastern corner of the state. It extended north to the Iowa border and east to the Mississippi River and included lands that eventually became Audrain, Monroe, Shelby, Marion, Know, Lewis, Clark and Scotland counties. By the time the last of these was partitioned from Ralls County in 1836, the region had undergone some thirty years of settlement. By the mid-1840s Ralls County was largely homesteaded, with a handful of crossroads villages established as centers of commerce. As towns such as New London, Saverton, Hazard and Renssalaer developed, an impromptu network of roads and trails formed to link them, following the typical pattern of settlement and transportation.

The first planned road in the county was reportedly the route that Marturin Bouvet built from his salt works on Lick Creek to the Bay de Charles on the Mississippi River. Another road was later cleared to link New London, the Ralls County seat, with Hannibal. In 1823 the Salt River Road was extended from St. Charles through Ralls County to the mouth of the Des Moines River at Missouri's northeastern tip. Other local trails and post roads developed over time to link settlers with the mills and towns. Most were surfaced with hard-packed earth and often became seething quagmires after heavy rains, but two of the county's early roads were covered with timber planks. The more famous of these latter tracks was the Hannibal and New London Plank Road, a toll route that linked the interior with a port on the Mississippi River. Agitation for this road began in 1852; that year a contingent from Hannibal approached the Ralls County Court with a proposal to build the road if the county would construct a bridge over the Salt River along its route. With the county's approval for the bridge, the road was laid using oak planks set on a tamped earth base.

Plagued by severe maintenance costs, the plank road lasted only a short time. It was eventually sold at a substantial loss to the Hannibal and Ralls County Gravel Road Company, which removed the timbers and resurfaced the route with stone. The Salt River Bridge–Ralls County's first major wagon span–fared somewhat better than the road, although it too required frequent repairs to keep it serviceable. In this it was indicative of early bridge construction in the county. As the region developed, road maintenance and bridge construction fell under the aegis of the county court. To span the myriad of streams, runs, gullies, sloughs and washes that crisscrossed the region, the judges ordered small-scale timber stringer structures built in the mid-19th century. Though inexpensive to erect, most of these spans tended to be structurally suspect and required constant maintenance to prevent their collapse. Moreover, they were limited to short-span applications. Timber/iron combination trusses, covered with wood walls and roofs, were used for crossings that required longer spans. And in the late 1870s the county court began contracting for all-iron structures as a more durable alternative to wood construction.

At the turn of the century some 825 miles of public road extended through Ralls County. Of these 35 miles were surfaced with gravel or stone. Most of the better roads were old turnpikes, all but the New London-Hannibal Gravel Road by then freed of tolls. After 1900 the county court continued its modest program of road and bridge construction, typically building one or two steel trusses per year. The judges at this time contracted for such major structures as the Joanna Bridge over the Salt River (1900) and the Menafee Ford Bridge over Lick Creek (1901), as well as shorter spans over Spencer, Ely and Bear creeks. In 1905 the pace quickened somewhat, as the county began erecting short-span trusses in groups. Though the structures were strictly utilitarian, they were also a symbol of accomplishment, at least for County Surveyor George H. Engle, who began using a lithograph of the Ashers Ford Bridge over the Salt River on his office letterhead.

To fabricate and erect these steel structures, the county relied exclusively on a single bridge manufacturer–the Stupp Brothers Bridge and Iron Company. In this, Ralls County was simply following a regional trend. As Ralls and other counties in Missouri, Iowa and Illinois contracted with the St. Louis-based bridge firm in the late 19th century, Stupp Brothers emerged as one of the region's most prolific bridge builders. The company had been founded in 1859 as the South St. Louis Iron Works by John Stupp, a German immigrant who had moved to St. Louis from New York. After John Stupp retired in 1879, his three sons, George, Peter and Julius, operated the firm, manufacturing architectural and structural iron, boilers and machinery in their shop on Carondolet Avenue. "They build iron and steel bridges for railways, cities and country highways on contract," an 1898 gazette stated, "or they furnish other contractors the ready made parts, manufacture Wrought Iron and Steel Work for buildings and other articles therewith connected."

The counties and municipalities of Missouri were among the Stupp brothers' best customers. The period of extensive rural road and bridge construction in the state during the late 19th century coincided with the Stupps' ascendence in the industry, combining to create a booming market for the firm's regional sales representatives. The Stupps operated branch offices in Kansas City and Iowa City, from which they solicited contracts, submitted bids and built bridges. In 1886 the company moved its plant to larger quarters at Seventh and Shenandoah streets. There between 80 and 90 men fabricated bridges at works that "cover nearly an entire block and are equipped with the most complete machinery and all facilities for factory purposes." In 1890 the brothers incorporated the firm as the Stupp Brothers Bridge and Iron Company. In 1904 the Stupps exhibited a display on bridge construction at the St. Louis World's Fair.

Ralls County was a steady if unspectacular client of Stupp Brothers Bridge and Iron. The competitive bidding process that the county employed in the 19th century was largely dropped after 1904, as George Engle simply ordered new steel structures from Stupp, based upon the bridge company's plans and specifications. To gauge the necessity for bridges at particular crossings, Engle and the court usually relied on citizens' petitions to the court. These were often accompanied by subscriptions of money to help the county defray the cost of construction. In September 1903, for instance, the court received a "numerously signed" petition and subscription for a steel truss over Taylor's Branch north of Perry. The court responded by directing Engle to "view, survey and estimate the cost" for the bridge. A month later he hired a local contractor to build the abutments. When the abutments were completed, Engle ordered a truss from Stupp; by March 1904 the Taylor's Branch Bridge was complete.

In August 1905 the court received a similar petition for a steel bridge to replace the aging timber span over Lick Creek on the road between Perry, in Ralls County, and Santa Fe, in Monroe County. M.P. LaFrance and several other residents of Salt River Township were joined by a contingent from Monroe County in requesting the new structure. "We the undersigned, resident citizens of Ralls and Monroe Counties," their application stated, "receiving our Mail, transacting our business, Banking, Merchandise of all kinds, and shipping there from produce, live stock and etc. from Perry; respectively ask your favorable consideration of a Petition now before your Honorable Body, to build a wagon bridge accross [sic] Lick Creek on the road leading West from Perry to Santa Fe, Missouri." Although many people signed the petition, they did not offer an accompanying subscription of money and could not, therefore, present a persuasive case to the court. The judges tabled their petition indefinitely. It was not until M.T. Gill was elected to the county court three years later that the prospects for a replacement bridge over Lick Creek began to improve.

Judge May Tompkins Gill was born in 1865 on a farm alongside Lick Creek five miles south of Perry. His father, Thomas Gill, was an accomplished merchant farmer who had moved to Missouri from Illinois in 1852. In 1866 Thomas Gill bought a store and relocated the family to the Lick Creek Crossroads, which later developed into the town of Perry. Here he operated the store, as well as a mill, a livery stable and a lumber yard, eventually acquiring two-thirds of the real estate in town. May Gill worked for his father at these businesses before moving out on his own. He married Lena Moss in 1892 and obtained property from his father immediately west of Perry, on which he established a thriving commercial stock farm. "He is widely known among the extensive stockmen and the mule buyers have learned to depend upon his ranch for valuable animals by the carload," one gazetteer stated. In 1899 Gill built a substantial frame house on his farm. "The Gill residence is among the elaborate country homes of Ralls County," the gazetteer continued. "It commands a view of the big farm-ranch, and reflects the substantial character of its owner. Its wooded front echoes the noise of the little commercial center just beyond Lick Creek and its annual output adds materially to the clearings credited to Perry as a business point."

As a vice president of the Perry Bank and one of the small town's chief capitalists, May Gill eventually dominated Perry commerce as his father had. His move into local politics thus seemed a natural extension of his business dealings. In 1908 Gill was elected one of the three judges on the Ralls County Court. There he served for four years as western district judge and for four more years as presiding judge.

After Gill's election in 1908, he, along with judges H.J. Priest and J.H. Holloway, almost immediately undertook an ambitious program of bridge construction. "Their administration has been marked with the improvements to the highways, the building of bridges and other noteworthy accomplishments," a county history reported in 1912. The judges authorized bridges throughout the county, but concentrated much of the new construction in Salt River Township. In late 1908 and 1909 the court ordered at least six new steel bridges built on the roads in the southwestern section of the county. One of these was to span Lick Creek just west of Perry–the crossing that had been petitioned unsuccessfully in 1905. By 1909 the court's receptivity to the bridge had changed appreciably, due largely to the fact that it was located adjacent to Gill's farm. With Gill benefitting directly from the new span, its acceptance by the court was assured, a fact acknowledged by the judges when they referred to the structure as the Gill Bridge.

At the court's direction in the spring of 1909, county surveyor A. Victor Ely ordered a 95-foot truss for the Gill Bridge, to be fabricated and erected by Stupp Brothers. Like his predecessor, George Engle, Ely simply outlined the overall dimensions for the Lick Creek Bridge and left the specific truss design to the bridge company. As delineated by Stupp, the structure consisted of a pin-connected Pratt through truss over the creek's main channel, flanked on both sides by steel stringer approach spans.

Typical of most of the region's bridge builders, the Stupp Brothers 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 functioned 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. "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."

In the highly competitive bridge manufacturing industry, in which efficiency equated with profit, Pratt trusses received almost universal use. 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. As a result, the Pratt truss was the structure of choice in Missouri for medium- and long-span wagon bridges. More Pratt trusses were built in Missouri during the period than all other truss types combined.

The short-span bridge that Stupp fabricated for the Lick Creek crossing in 1909 featured a standard Pratt configuration, straight from Stupp's current roster of designs. With a nominal roadway width of 12 feet and a span length of 95 feet, the truss was divided into five equal panels. The inclined endposts and upper chords consisted of two back-to-back channels, covered by a continuous plate on top and joined by batten plates beneath. The verticals in the interior panels were similarly configured, with two back-to-back channels laced together by metal straps. Two looped square eyebars formed the verticals at the hips. The lower chords and diagonals were each made up of two looped rectangular eyebars; the counters consisted of round eyerods with slotted turnbuckles. I-beam floor beams were field-bolted to the verticals below the lower chord pins; these carried the steel stringers, which in turn supported the timber deck. The struts were comprised of two angles, with A-frame struts at the portals. Both upper and lower lateral braces were round rods with threaded ends.

The truss was supported on all four corners by built-up steel bearing shoes, with fixed bearings on one end and sliding bearings on the other. The shoes were anchor-bolted to concrete-filled steel cylinder piers founded on driven piles. The channel span was approached on each side by a steel stringer span, with concrete mass abutments and angled wingwalls. Decorative cast iron plates mounted on the bridge's portals identified the builder and listed the members of the county administration.

Soon after receiving the contract for the bridge, a Stupp Brothers crew began work on the substructural excavation. Meanwhile, the truss was fabricated in the firm's St. Louis shops, using members rolled in Pittsburgh by the Cambria Steel Company. Construction progressed quickly through the spring and summer, and by August the bridge was completed and accepted by the county.

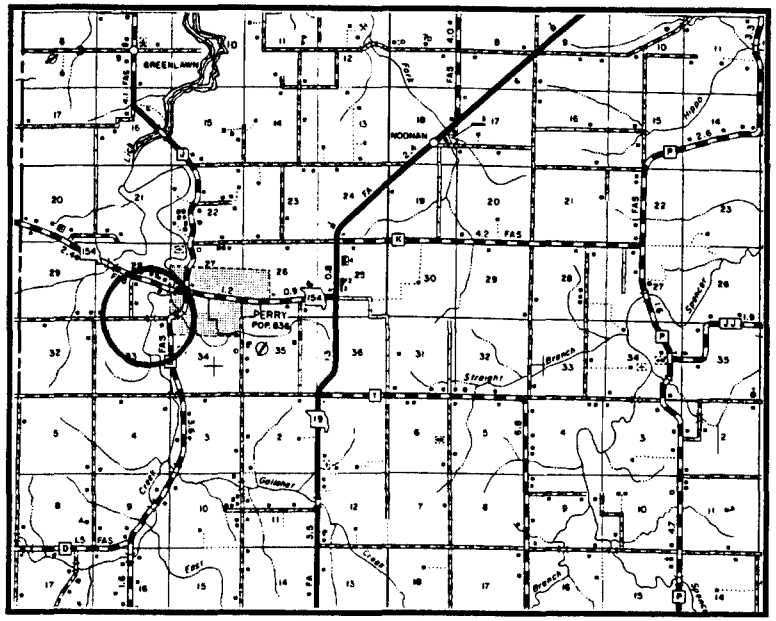
The road served as the main route west from Perry until its subsequent replacement by State Highway 154. Today the Gill Bridge and County Road 181 carry local farm-to-market traffic. The bridge's deck has been replaced more than once, its steel angle guardrails have been mangled by several collisions at the approaches, and the walls of its tubular piers are beginning to bulge after several of the rivets have failed. The truss's steel superstructure remains essentially intact, however, although its deteriorating condition has prompted the county to post the bridge with a four-ton load limit. No longer suitable to carry heavy, wide farm implements, the Gill Bridge is now scheduled for replacement.

Like virtually all of Missouri's counties, Ralls County followed a definite progression in its bridge construction in the 19th century, in response to evolving transportation needs and technological development in the bridge industry. The first simple spans, built as the county was undergoing its initial settlement, were rudimentary timber structures. These were cheap and easy to build but lacking in durability and limited in span length. With greater revenues from increased settlement, the county could undertake more ambitious timber/iron combination trusses in the 1860s and 1870s. These, in turn, were superseded in the late 1870s by all-iron spans, made readily available by mass production. Although the county court barely noticed the transition from iron to steel in the 1890s, this evolution marked a watershed that would continue into the 20th century for bridge fabricators and the rolling mills that supplied them.

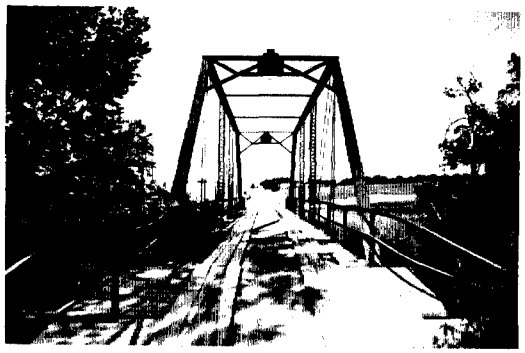
The Gill Bridge, with a fabrication date of 1909 and a span length of 95 feet, is neither the oldest nor the longest of the Ralls County's remaining spans. The significance of this span does not lie in its representation of unusual or innovative technology. At the time of its construction, it was one of the thousands of pinned Pratt trusses erected throughout Missouri. Rather, the Gill Bridge is important for its illustration of two prevailing bridge trends–the construction of rural roadway bridges by county governments and the design and manufacture of pinned Pratt trusses in the late 19th and early 20th centuries. The Gill Bridge is today distinguished among Missouri's pin-connected trusses as well-documented and well-preserved example of what was once a mainstay structural type.

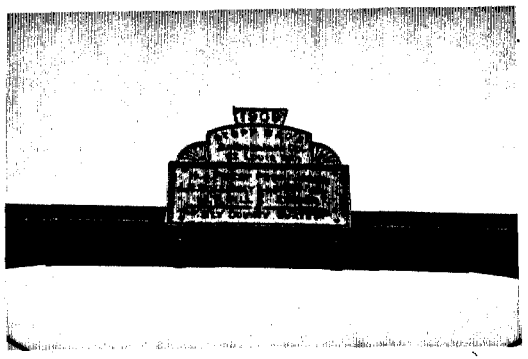
NAME(S) OF STRUCTURE
Lick Creek Bridge

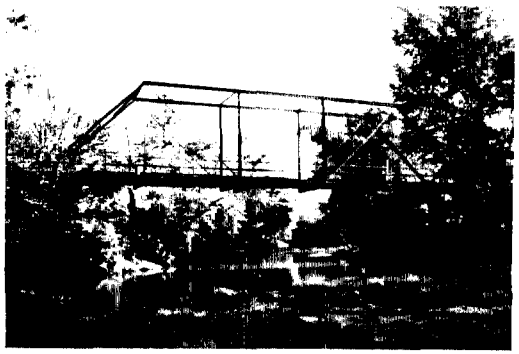
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP







SOURCES
Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 181001.6; Ralls County Court Record G: page 5 (5 July 1909), page 17 (3 August 1909), page 63 (10 February 1910), located at Ralls County Courthouse, New London MO; field inspection by Clayton Fraser and Carl McWilliams, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton Fraser and Carl McWilliams	Fraserdesign, Loveland CO	27 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Menefee Ford Bridge RALL11
MHTD: 202002.0

DATE(S) OF CONSTRUCTION
1911

LOCATION
County Road 202 over Lick Creek; S34, T54N, R7W / S3, T53N, R7W
1.5 miles south of Perry; Ralls County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 48)

CONDITION
fair

OWNER
Ralls County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
span length:	85.0'	substructure:	concrete abutments and wingwalls; concrete-filled steel cylinder piers
total length:	127.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	10.3'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical with knee bracing; guardrail: 2 angles; endpost-mounted builder's plate: **BUILT BY STUPP BRO'S BRIDGE & IRON CO. / ST. LOUIS MO. / 1911**; bridge plate: **CLASS B**

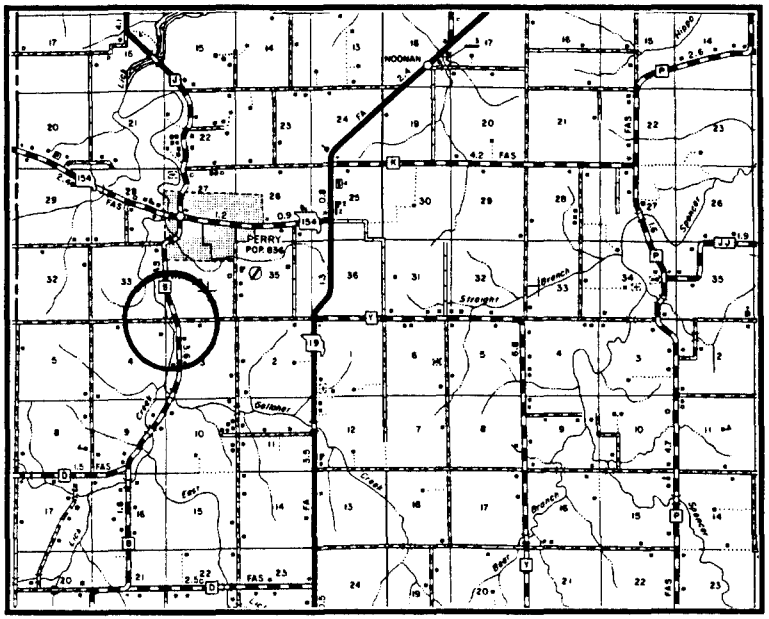
On September 4, 1901, the Ralls County Court contracted with local bridge builder Mort Strode to build a timber stringer bridge at the R.R. Menefee Ford near the town of Perry, in South Salt River Township. Typical of such rudimentary spans, Strode's timber structure lasted less than ten years. By early February 1911, the bridge no longer carried traffic, and nearby residents were again petitioning the county court for a bridge across Lick Creek at the Menefee Ford. As had occurred a decade before, the court viewed the petition favorably. But unlike their predecessors, the members of the 1911 court opted to build a more permanent steel bridge. The new Menefee Ford Bridge was thus configured as a pin-connected Pratt pony truss, supported by steel cylinder piers, with concrete abutments at the approaches. Still in existence, the bridge's 85-foot channel span is flanked by two steel stringer approach spans, creating an overall structure length of 127 feet. A builder's plate confirms 1911 as the date of erection, and reveals that the Stupp Brothers Bridge and Iron Company of Saint Louis was the contractor. On July 3, 1911, the county paid the Stupp Brothers $2900.00, a portion of which was for "the Menefee approaches". The court's decision to build a steel bridge was a wise one. The Menefee Ford Bridge has now carried local vehicular traffic for 80 years. With no noticeable alterations, the structure has retained virtually all of its original historical integrity.

In the late 19th century, an 85-foot span would likely have required construction of a through truss, with overhead bracing. By 1911, however, pony trusses had been strengthened - using heavier endposts and knee braces at the verticals - to the point that they were used as a matter of course for spans up to about 100 feet. The Menefee Ford Bridge is a typical, long-span pinned pony truss, built during a period of intense bridge construction throughout Missouri by one of the state's most prolific bridge fabricators.

NAME(S) OF STRUCTURE

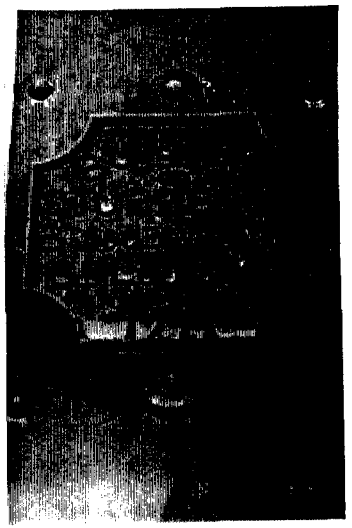
Menefer Ford Bridge (Lick Creek Bridge)

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 No. 202002.0; Ralls County Court Record E: page 484 (3 June 1901), page 486 (1 July 1901), page 499 (4 September 1901); Ralls County Court Record G: page 216 (6 February 1911), page 290 (3 July 1911), located at Ralls County Courthouse, New London MO; field inspection by Clayton Fraser and Carl McWilliams, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton Fraser and Carl McWilliams	Fraserdesign, Loveland CO	27 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Butler Ford Bridge
MHTD: 220000.4

RALL12

DATE(S) OF CONSTRUCTION
1893

LOCATION
County Road 220 over Spencer Creek; S19, T54N, R5W
4.6 miles southeast of Center; Ralls County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION
fair

OWNER
Ralls County

span number: 1
span length: 100.0'
total length: 130.0'
roadway wdt.: 13.3'

superstructure: wrought iron, 6-panel, pin-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 square bars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: bottom - round rod with turnbuckle, top - round rod with threaded ends - bottom; strut: 2 angles with knee braces; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles

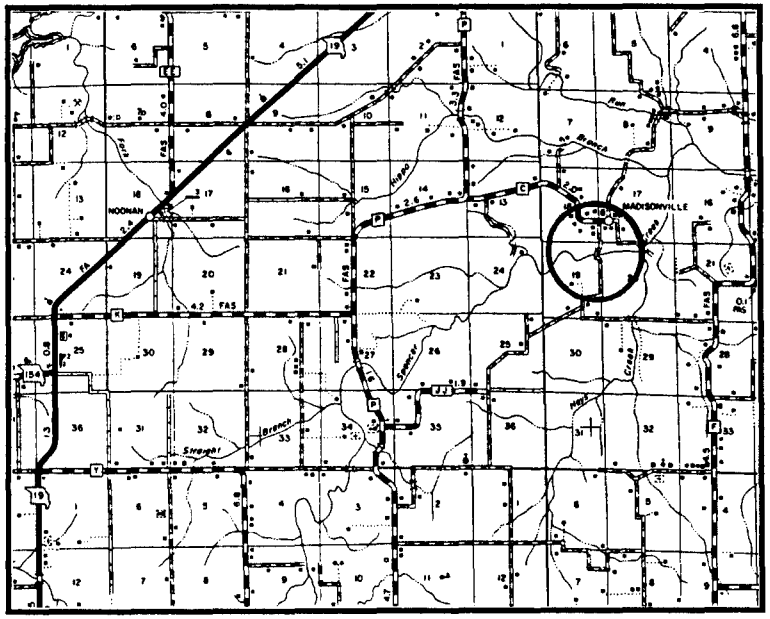
The Butler Ford Bridge carries a county road over Spencer Creek 4½ miles southeast of Center, in southeastern Ralls County. Designed as a six-panel, pin-connected Pratt through truss, the origins of the present bridge date to late 1892. Petitions for a permanent span over Spencer Creek in this vicinity were first submitted to the Ralls County Court in October 1892. Soon after, county surveyor Lee Wells examined various sites and selected the Butler Ford crossing just south of Madisonville as the most feasible location for the new bridge. Bids were solicited, and on November 7, 1892, a $2680.00 contract "for an iron span as near as practable (sic) to Madisonville according to plans and specifications on file" was awarded to the Saint Louis Bridge and Iron Company. County Judge J.M. Smith was charged with the responsibility of overseeing the structure's construction. The bridge took five months to build. In April 1893, Wells reported that the wrought iron bridge across Spencer Creek had been satisfactorily completed. Approving Well's report, the court formally accepted the bridge and authorized payment of $2680.00 to Saint Louis Bridge and Iron. The Butler Ford Bridge survives today with virtually all of its historical integrity intact. Located on a seldom-traveled county road, the structure still serves to carry local traffic.

Other iron trusses were built in Ralls County before the Butler Ford Bridge, but none remain in place today. This structure is thus distinguished as the oldest intact vehicular bridge in the county and one of the oldest in the region. Technologically, the bridge is representative of the Pratt trusses built in the late 19th century. With its pinned connections and wrought iron members, it is a well-preserved, early example of wagon bridge construction in Missouri.

NAME(S) OF STRUCTURE

Butler Ford Bridge (Spencer Creek 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 No. 220000.4; Ralls County Court Record D: page 440 (3 October 1892), page 443 (4 October 1892), page 450 (7 November 1892), page 475 (6 April 1893), located at Ralls County Courthouse, New London MO; field inspection by Clayton Fraser and Carl McWilliams, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton Fraser and Carl McWilliams	Fraserdesign, Loveland CO	27 March 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hutchison Bridge (East Lick Creek Bridge) RALL14
MHTD: 241002.3

DATE(S) OF CONSTRUCTION
1913

LOCATION
county road over East Lick Creek; S26, T53N, R7W
6.1 miles south of Perry; Ralls County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION
fair

OWNER
Ralls County

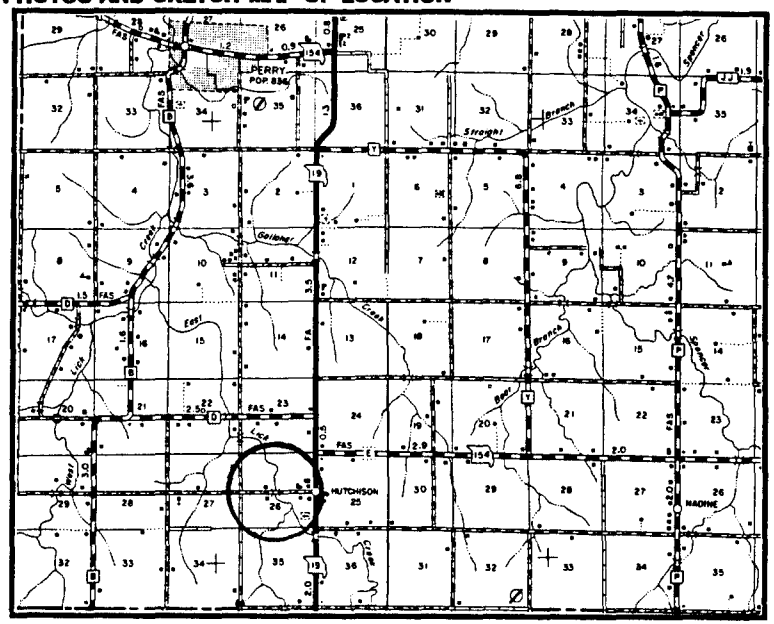
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	concrete abutments and wingwalls (collapsed at west end)
total length:	60.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.6'	other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 angles with batten plates; diagonal: 2 looped rectangular eyebars; counter: 1 round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

The Hutchison Bridge crosses over East Lick Creek six miles south of Perry, about 1½ miles north of the Audrain County line. Built as a pin-connected Pratt pony truss, the modest span carries a gravel-surfaced county road and is supported by a concrete substructure. The abutment at the structure's west end has collapsed, precipitating the crossing's closure. The bridge's history dates to 1913. On April 13th of that year contracts to build four bridges were awarded to Miller and Borcherding, contractors from Saint Louis. Included among the four spans was the Hutchison Bridge across Lick Creek, for a contract price of $1550.00. Miller and Borcherding erected the bridge as contracted, and it subsequently served to carry vehicular traffic for many years until its recent closure. With modest dimensions and standard detailing, the Hutchison Bridge typifies the thousands of small-scale pinned pony trusses built in the early 20th century throughout Missouri.

NAME(S) OF STRUCTURE

Hutchison Bridge (East Lick Creek 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 No. 241002.3; Ralls County Court Record G: page 481 (7 April 1913), located at Ralls County Courthouse, New London MO; field inspection by Clayton Fraser and Carl McWilliams, 14 September 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton Fraser and Carl McWilliams	Fraserdesign, Loveland CO	27 March 1991

SCOTLAND COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
SCOL01	K 186	North Fabius River Bridge	**3**-140' **riveted Pratt through truss** **1934** Ebbe Construction Company
SCOL02	T 74R	Wyaconda River Bridge	1-120' **riveted Pratt through truss** **1936** Vaughn Construction Company
SCOL03	005R00.4	Tucker Bridge	1- 32' steel stringer **1913** GMW; Illinois Steel Bridge Co.
SCOL04	010000.9	Johnson Bridge	1- 60' pinned Pratt pony truss **1907** D.C. Ripley
SCOL05	024000.1	Little Fox River Bridge	1-100' **pinned Pratt through truss** **c1910**
SCOL06	029001.2	North Fork Bridge	1- 48' pinned Pratt bedstead **c1910** Illinois Steel Bridge Co. (prob.)
SCOL07	042001.2	Lionberger Bridge	1- 45' pinned Pratt pony truss **1913** S.P. Corwin; Ill. Steel Br. Co.
SCOL08	044000.7	Mankopf Bridge	1- 36' riveted lattice bedstead **1906** Interstate Bridge Company
SCOL09	055001.7	Little Fox River Bridge	1- 55' pinned Pratt pony truss **c1910**
SCOL10	083000.4	North Fabius River Bridge	(replaced)
SCOL11	089001.1	S. Wyaconda River Bridge	1- 44' pinned Pratt pony truss **c1910** Illinois Steel Bridge Co. (prob.)
SCOL12	108000.4	Flick Bridge	(replaced)
SCOL13	120000.1	North Fabius River Bridge	1- 60' riveted Pratt half-hip pony truss **c1915**
SCOL14	126000.2	North Fork Bridge	1- 42' pinned Pratt half-hip pony truss **1904** John Martin and Company
SCOL15	140001.1	Lindberger Bridge	1- 60' pinned Pratt pony truss **1919** Shuman & Jones; Illinois Steel Bridge Co.
SCOL16	146000.7	S. Wyaconda River Bridge	1- 70' pinned Pratt pony truss **c1910** Illinois Steel Bridge Co. (prob.)
SCOL17	153001.8	S. Wyaconda River Bridge	1- 60' pinned Pratt bedstead **1912** Illinois Steel Bridge Company
SCOL18	166001.6	N. Wyaconda River Bridge	1- 60' pinned Pratt bedstead **c1910** Illinois Steel Bridge Co. (prob.)
SCOL19	188000.7	Middle Fabius River Bridge	1- 48' pinned Pratt pony truss **c1910** Illinois Steel Bridge Co. (prob.)
*SCOL20	189000.2	Middle Fabius River Bridge	1- 60' pinned Pratt bedstead **c1910** Illinois Steel Bridge Company
*SCOL21	208001.6	Strosnider Bridge	1- 64' pinned Pratt bedstead **1911** Illinois Steel Bridge Company
*SCOL22	221000.9	Hale Bridge	1- 40' pinned Pratt pony truss **1907** Midland Bridge Company

SCOTLAND COUNTY

INCLUDED (cont.):

SCOL23	266001.1	Allen Creek Bridge	1- 40'	pinned Pratt half-hip pony truss
			c1910	Illinois Steel Bridge Co. (prob.)
SCOL24	283000.8	Bridge		(replaced)
SCOL25	287000.8	Tobin Creek Bridge		(replaced)
SCOL26	295000.5	Tobin Creek Bridge	1- 48'	pinned Pratt pony truss
			c1910	Illinois Steel Bridge Co. (prob.)
SCOL27	367000.3	Tobin Creek Bridge	1- 34'	riveted lattice bedstead
			c1910	Illinois Steel Bridge Company
*SCOL28	369000.0	Middle Fabius River Bridge	1- 75'	pinned Pratt pony truss
			c1915	
SCOL29	371000.1	Indian Creek Bridge	1- 36'	riveted lattice bedstead
			c1910	Illinois Steel Bridge Company
*SCOL30	375000.4	Middle Fabius River Bridge	1- 70'	pinned Pratt pony truss
			c1910	Illinois Steel Bridge Company
SCOL31	376000.8	Fabius River Bridge	1- 70'	pinned Pratt pony truss
			c1910	
*SCOL32	378000.3	Indian Creek Bridge	1- 34'	riveted lattice bedstead
			c1910	Illinois Steel Bridge Co. (prob.)
*SCOL33	391000.1	Bridge	1- 48'	pinned Pratt bedstead
			1910	Illinois Steel Bridge Company
*SCOL34	427000.3	Million Bridge	1- 40'	riveted lattice bedstead
			1912	Illinois Steel Bridge Company
SCOL35	428001.3	Vassar Hill Bridge		(replaced)
SCOL36	435000.2	Smith Bridge		(replaced)

EXCLUDED:

Pratt pony truss

Y 29	132002.8	156001.4	175R00.8	387000.5

Warren pony truss

J 780	126000.5

Warren bedstead

303000.7

Lattice bedstead

014001.3	086000.4	208001.7	225000.2	257000.3

Steel stringer / girder

J 843	K 283	L 295	S 165	S 178	S 414	X 173
X 174	X 201	004000.2	013R00.4	025001.4	036R00.8	041R00.9
041001.2	048000.1	049001.2	050000.7	050001.4	055R01.0	055R01.9
055000.0	062R00.2	064000.3	071000.1	082002.0	091000.5	091001.5

SCOTLAND COUNTY

EXCLUDED (cont.):

Steel stringer / girder

112001.0	114000.1	119R00.5	120000.5	121000.6	139001.5	141000.9
151000.3	152001.1	154R01.2	160000.9	163000.3	174000.3	189001.1
192001.0	196000.5	205001.4	223000.7	238000.3	242001.0	251000.2
267000.0	282001.3	284000.6	306001.4	307000.3	309000.4	309000.9
316000.3	323000.4	325000.7	327R00.4	333000.3	337000.7	340000.8
348000.4	352001.2	360000.4	363R00.1	364001.1	369001.4	378000.6
379000.2	381000.1	383001.2	385000.2	396000.1	401000.5	407000.7
435000.4	451000.3					

Concrete slab / girder

H 857	H 858	H 898	K 284	L 130

Concrete culvert

G 880	H 897	P 85	S 415	X 202	242001.7

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	2	28	0	0	28
Excluded	21	82	0	0	103
	23	110	0	0	131 structures

North Fabius River Bridge

SCOL01

GENERAL DATA

structure no.: K 186
county: Scotland
city/town: 1.2 miles west of Memphis
feature inters.: North Fabius River
cadastral grid: S12, T65N, R12W
highway route: U.S. Highway 136
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 7-panel, rigid-connected Pratt through truss
substructure: concrete abutments, wingwalls and piers

span number: 3
span length: 140.0'
total length: 431.0'
roadway width: 22.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: unknown

HISTORICAL DATA

erection date: 1934
erection cost: $58,954.85
designer: Missouri State Highway Department
fabricator : unknown
contractor: Ebbe Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 186; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 44
evaluation: NRHP non-eligible (typically configured example of MSHD truss design from the 1930s)

inventoried by: Clayton B. Fraser 25 August 1992

Wyaconda River Bridge

SCOL02

GENERAL DATA

structure no.: T 74R
county: Scotland
city/town: 6.6 miles northwest of Memphis
feature inters.: Wyaconda River
cadastral grid: S1/12, T66N, R12W
highway route: State Highway C
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt through truss, with steel stringer approach span
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 120.0'
total length: 174.0'
roadway width: 24.0'
condition: good
alterations: approach span added, 1946
floor/decking : concrete deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1936
erection cost: $13,662.50
designer: Missouri State Highway Department
fabricator : unknown
contractor: Vaughn Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number T 74R; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 39
evaluation: NRHP non-eligible (typically configured example of MSHD truss design from the 1930s)

inventoried by: Clayton B. Fraser 25 August 1992

Tucker Bridge

SCOL03

GENERAL DATA

structure no.: 005R00.4
county: Scotland
city/town: 8.5 miles northwest of Crawford
feature inters.: South Wyaconda River tributary
cadastral grid: S19, T67N, R12W
highway route: County Road 5
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel stringer
substructure: unknown

span number: 1
span length: 32.0'
total length: 32.0'
roadway width: 14.0'
condition: fair
alterations: unknown
floor/decking : unknown
other features: unknown

HISTORICAL DATA

erection date: 1913
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: G.M. Woodruff

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 005R00.4.

sign. rating: 30
evaluation: NRHP non-eligible (typical example of common short-span bridge type)

inventoried by: Clayton B. Fraser 25 August 1992

Johnson Bridge

SCOL04

GENERAL DATA

structure no.: 010000.9
county: Scotland
city/town: 8.7 miles northwest of Memphis
feature inters.: South Wyaconda River
cadastral grid: S33, T67N, R12W
highway route: County Road 10
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: timber pile abutments, wingwalls and piers

span number: 1
span length: 60.0'
total length: 104.0'
roadway width: 12.2'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1907
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: D.C. Ripley

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 010000.9; Scotland County Road Record, Book 4: page 232 (5 February 1906), page 453 (3 December 1907) - located at Scotland County Courthouse, Memphis MO.

sign. rating: 40
evaluation: NRHP non-eligible (typically configured, inadequately documented example of a common structural type)

inventoried by: Clayton B. Fraser 25 August 1992

Little Fox River Bridge

SCOL05

GENERAL DATA

structure no.: 024000.1
county: Scotland
city/town: 9.9 miles northwest of Arbela
feature inters.: Little Fox River
cadastral grid: S19, T67N, R10W
highway route: County Road 24
highway distr.: 3
current owner: Scotland County / Van Buren County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: unknown

span number: 1
span length: 100.0'
total length: 101.0'
roadway width: 15.7'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: non-original wire rope guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 024000.1.

sign. rating: 25
evaluation: NRHP non-eligible (undocumented example of pinned Pratt through truss construction)

inventoried by: Clayton B. Fraser 25 August 1992

North Fork Bridge

SCOL06

GENERAL DATA

structure no.: 029001.2
county: Scotland
city/town: 8.5 miles northwest of Crawford
feature inters.: North Fork of North Fabius River
cadastral grid: S27, T67N, R13W
highway route: County Road 29
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead, with steel stringer approach spans
substructure: steel pile bent piers with timber back- and wingwalls

span number: 1
span length: 48.0'
total length: 78.0'
roadway width: 11.7'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 029001.2.

sign. rating: 33
evaluation: NRHP non-eligible (technologically undistinguished example of a relatively common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 25 August 1992

Lionberger Bridge

SCOL07

GENERAL DATA

structure no.: 042001.2
county: Scotland
city/town: 8.0 miles north of Memphis
feature inters.: North Wyaconda River
cadastral grid: S31, T67N, R11W
highway route: County Road 42
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: unknown

span number: 1
span length: 45.0'
total length: 65.0'
roadway width: 11.6'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1913
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: S.P. Corwin

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 042001.2; Scotland County Road Record, Book 5: page 215 (4 March 1913) - located at Scotland County Courthouse, Memphis MO.

sign. rating: 35
evaluation: NRHP non-eligible (typical example of pinned Pratt pony truss construction)

inventoried by: Clayton B. Fraser 25 August 1992

Mankopf Bridge

SCOL08

GENERAL DATA

structure no.: 044000.7
county: Scotland
city/town: 8.1 miles northeast of Memphis
feature inters.: North Wyaconda River
cadastral grid: S32/33, T67N, R11W
highway route: County Road 44
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected steel lattice bedstead
substructure: steel pile bent piers with timber back- and wingwalls

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 14.4'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1906
erection cost: unknown
designer: Interstate Bridge Company
fabricator : Interstate Bridge Company
contractor: Interstate Bridge Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 044000.7; Scotland County Road Record, Book 4: page 245 (23 April 1906), page 278 (7 August 1906), page 310 (10 November 1906) - located at Scotland County Courthouse, Memphis MO.

sign. rating: 32
evaluation: NRHP non-eligible (technologically undistinguished example of small-scale truss bridge)

inventoried by: Clayton B. Fraser 25 August 1992

Little Fox River Bridge

SCOL09

GENERAL DATA

structure no.: 055001.7
county: Scotland
city/town: 7.0 miles northwest of Granger
feature inters.: Little Fox River
cadastral grid: S34, T67N, R10W
highway route: County Road 55
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: steel pile bent piers with timber back- and wingwalls

span number: 1
span length: 55.0'
total length: 96.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 055001.7.

sign. rating: 33
evaluation: NRHP non-eligible (typical, undocumented example of pinned Pratt pony truss construction)

inventoried by: Clayton B. Fraser 25 August 1992

South Wyaconda River Bridge

SCOL11

GENERAL DATA

structure no.: 089001.1
county: Scotland
city/town: 3.2 miles northeast of Memphis
feature inters.: branch of South Wyaconda River
cadastral grid: S28, T66N, R11W
highway route: County Road 89
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt pony truss
substructure: steel pile bent piers with timber back- and wingwalls

span number: 1
span length: 44.0'
total length: 45.0'
roadway width: 16.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 089001.1.

sign. rating: 33
evaluation: NRHP non-eligible (undocumented, undistinguished, small-scale structure, lacking in technological significance)

inventoried by: Clayton B. Fraser 25 August 1992

North Fabius River Bridge

SCOL13

GENERAL DATA

structure no.: 120000.1
county: Scotland
city/town: 6.2 miles northwest of Crawford
feature inters.: North Fork of North Fabius River
cadastral grid: S2, T66N, R13W
highway route: County Road 120
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, rigid-connected, Pratt half-hip pony truss, with steel stringer approach spans
substructure: timber pile bent abutments, wingwalls and piers

span number: 1
span length: 60.0'
total length: 90.0'
roadway width: 14.4'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 120000.1.

sign. rating: 28
evaluation: NRHP non-eligible (typically configured, undocumented example of pinned Pratt half-hip pony truss design)

inventoried by: Clayton B. Fraser 25 August 1992

North Fork Bridge

SCOL14

GENERAL DATA

structure no.: 126000.2
county: Scotland
city/town: 9.2 miles northwest of Memphis
feature inters.: North Fork of North Fabius River
cadastral grid: S7/12, T66N, R12/13W
highway route: County Road 126
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt half-hip pony truss, with steel stringer approach spans
substructure: timber pile bent abutments, wingwalls and piers

span number: 1
span length: 42.0'
total length: 88.0'
roadway width: 14.0'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1904
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: John Martin and Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 126000.2; Scotland County Road Record, Book 4: page 109 (10 November 1904), page 114 (27 November 1904) - located at Scotland County Courthouse, Memphis MO.

sign. rating: 37
evaluation: NRHP non-eligible (typically configured example of pinned Pratt half-hip pony truss design)

inventoried by: Clayton B. Fraser 25 August 1992

Linderberger Bridge

SCOL15

GENERAL DATA

structure no.: 140001.1
county: Scotland
city/town: 5.7 miles northwest of Memphis
feature inters.: South Wyaconda River
cadastral grid: S12, T66N, R12W
highway route: County Road 140
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: timber pile bent abutments, wingwalls and piers

span number: 1
span length: 60.0'
total length: 127.0'
roadway width: 11.5'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1919
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Shuman and Jones

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 140001.1; Scotland County Road Record, Book 5: page 499 (5 June 1916) - located at Scotland County Courthouse, Memphis MO.

sign. rating: 38
evaluation: NRHP non-eligible (relatively late example of pinned Pratt pony truss construction)

inventoried by: Clayton B. Fraser 25 August 1992

South Wyaconda River Bridge

SCOL16

GENERAL DATA

structure no.: 146000.7
county: Scotland
city/town: 3.9 miles northeast of Memphis
feature inters.: South Wyaconda River
cadastral grid: S20, T66N, R11W
highway route: County Road 146
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 70.0'
total length: 150.0'
roadway width: 11.6'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 146000.7.

sign. rating: 36
evaluation: NRHP non-eligible (typically configured example of a common structural type)

inventoried by: Clayton B. Fraser 25 August 1992

South Wyaconda River Bridge

SCOL17

GENERAL DATA

structure no.: 153001.8
county: Scotland
city/town: 4.0 miles northeast of Memphis
feature inters.: South Wyaconda River
cadastral grid: S28, T66N, R11W
highway route: County Road 153
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt bedstead, with steel stringer approach spans
substructure: steel pile bent piers with timber back- and wingwalls

span number: 1
span length: 60.0'
total length: 115.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1912
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 153001.8; Scotland County Road Record, Book 3: page 413 (8 August 1902), page 420 (2 September 1902) - located at Scotland County Courthouse, Memphis MO.

sign. rating: 40
evaluation: NRHP non-eligible (slightly longer than average example of a relatively common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 25 August 1992

North Wyaconda River Bridge

SCOL18

GENERAL DATA

structure no.: 166001.6
county: Scotland
city/town: 3.2 miles northwest of Granger
feature inters.: North Wyaconda River
cadastral grid: S21/22, T66N, R10W
highway route: County Road 166
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt bedstead, with steel stringer approach spans
substructure: timber pile bent abutments, wingwalls and piers

span number: 1
span length: 60.0'
total length: 95.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 166001.6.

sign. rating: 36
evaluation: NRHP non-eligible (slightly longer than average example of a relatively common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 25 August 1992

Middle Fabius River Bridge

SCOL19

GENERAL DATA

structure no.: 188000.7
county: Scotland
city/town: 8.0 miles southwest of Memphis
feature inters.: North Fork of Middle Fabius River
cadastral grid: S24/25, T65N, R13W
highway route: County Road 188
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt pony truss
substructure: unknown

span number: 1
span length: 48.0'
total length: 48.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 188000.7.

sign. rating: 28
evaluation: NRHP non-eligible (typical example of common truss type)

inventoried by: Clayton B. Fraser 25 August 1992

Middle Fabius River Bridge

SCOL20

GENERAL DATA

structure no.: 189000.2
county: Scotland
city/town: 7.8 miles southwest of Memphis
feature inters.: North Fork of Middle Fabius River
cadastral grid: S31, T65N, R12W
highway route: County Road 189
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt bedstead
substructure: steel pile bent piers, with timber back- and wingwalls

span number: 1
span length: 60.0'
total length: 61.0'
roadway width: 13.8'
condition: fair
alterations: original truss legs replaced by steel pile bent piers
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 189000.2; field inspection by Clayton Fraser, 13 July 1992.

sign. rating: 36
evaluation: NRHP non-eligible (relatively common Pratt truss sub-type, typically configured)

inventoried by: Clayton B. Fraser 25 August 1992

Strosnider Bridge

SCOL21

GENERAL DATA

structure no.: 208001.6
county: Scotland
city/town: 4.5 miles northwest of Memphis
feature inters.: Foreman Creek
cadastral grid: S27, T65N, R11W
highway route: County Road 208
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt bedstead
substructure: steel pile bent piers, with timber back- and wingwalls

span number: 1
span length: 64.0'
total length: 65.0'
roadway width: 11.7'
condition: fair
alterations: original truss legs replaced by steel pile bent piers
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1911
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL; Lackawanna Steel Company, Pittsburgh PA
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 208001.6; Scotland County Road Record, Book 5: page 119 (14 July 1911) - located at Scotland County Courthouse, Memphis MO; field inspection by Clayton Fraser, 13 July 1992.

sign. rating: 36
evaluation: NRHP non-eligible (typical example of a relatively common Pratt truss sub-type, with marginal integrity)

inventoried by: Clayton B. Fraser 25 August 1992

Hale Bridge

SCOL22

GENERAL DATA

structure no.: 221000.9
county: Scotland
city/town: 9.8 miles west of Memphis
feature inters.: North Fork of Middle Fabius River
cadastral grid: S3, T65N, R13W
highway route: County Road 221
highway distr.: 3
current owner: Scotland County / Schuyler County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: timber pile bent abutments, wingwalls and piers

span number: 1
span length: 40.0'
total length: 68.0'
roadway width: 14.0'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to verticals; guardrail: 2 angles.

HISTORICAL DATA

erection date: 1907
erection cost: unknown
designer: Midland Bridge Company, Kansas City MO
fabricator : Midland Bridge Company, Kansas City MO
contractor: Midland Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 221000.9; Scotland County Road Record, Book 4: page 444 (5 November 1907) - located at Scotland County Courthouse, Memphis MO; field inspection by Clayton Fraser, 13 July 1992.

sign. rating: 43
evaluation: NRHP non-eligible (short-span example of typical pinned Pratt pony truss construction)

inventoried by: Clayton B. Fraser 25 August 1992

Allen Creek Bridge

SCOL23

GENERAL DATA

structure no.: 266001.1
county: Scotland
city/town: 8.9 miles southeast of Memphis
feature inters.: Allen Creek
cadastral grid: S15/16, T65N, R10W
highway route: County Road 266
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt half-hip pony truss, with steel stringer approach span
substructure: timber pile bent piers, abutments and wingwalls

span number: 1
span length: 40.0'
total length: 57.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 266001.1.

sign. rating: 33
evaluation: NRHP non-eligible (modestly scaled and detailed example of Pratt pony truss construction from circa 1910)

inventoried by: Clayton B. Fraser 25 August 1992

Tobin Creek Bridge

SCOL26

GENERAL DATA

structure no.: 295000.5
county: Scotland
city/town: 6.2 miles southwest of Memphis
feature inters.: Tobin Creek
cadastral grid: S12, T64N, R12W
highway route: County Road 295
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: timber pile bent abutments, wingwalls and piers

span number: 1
span length: 48.0'
total length: 72.0'
roadway width: 16.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 295000.5.

sign. rating: 33
evaluation: NRHP non-eligible (typically configured and modestly scaled example of common structural type)

inventoried by: Clayton B. Fraser 25 August 1992

Tobin Creek Bridge

SCOL27

GENERAL DATA

structure no.: 367000.3
county: Scotland
city/town: 5.8 miles southwest of Memphis
feature inters.: Tobin Creek
cadastral grid: S33/34, T65N, R12W
highway route: County Road 367
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: concrete abutments and wingwalls

span number: 1
span length: 34.0'
total length: 35.0'
roadway width: 12.4'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 367000.3.

sign. rating: 33
evaluation: NRHP non-eligible (undistinguished, short-span example of a relatively common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 25 August 1992

Middle Fabius River Bridge

SCOL28

GENERAL DATA

structure no.: 369000.0
county: Scotland
city/town: 10.0 miles southwest of Memphis
feature inters.: Middle Fabius River
cadastral grid: S28, T64N, R12W
highway route: County Road 369
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: timber pile abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 75.0'
total length: 106.0'
roadway width: 11.8'
condition: poor
alterations: two verticals replaced with steel I-beams
floor/decking : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: c1915
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 369000.0; field inspection by Clayton Fraser, 13 July 1992.

sign. rating: 28
evaluation: NRHP non-eligible (Exhibiting below-average physical integrity, this bridge ranks as a poorly documented example of a common structural type.)

inventoried by: Clayton B. Fraser 25 August 1992

Indian Creek Bridge

SCOL29

GENERAL DATA

structure no.: 371000.1
county: Scotland
city/town: 4.4 miles southwest of Memphis
feature inters.: Indian Creek
cadastral grid: S36, T65N, R12W
highway route: County Road 371
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: unknown

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 13.3'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 371000.1.

sign. rating: 33
evaluation: NRHP non-eligible (undistinguished, short-span example of a relatively common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 25 August 1992

Middle Fabius River Bridge

SCOL30

GENERAL DATA

structure no.: 375000.4
county: Scotland
city/town: 9.3 miles southwest of Memphis
feature inters.: Middle Fabius River
cadastral grid: S25, T64N, R12W
highway route: County Road 375
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt pony truss; 1 steel stringer approach span at each end
substructure: steel pile bent abutments with timber back- and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 70.0'
total length: 110.0'
roadway width: 11.5'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: steel angle guardrails; I-beam floor beams, field-bolted to verticals

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL; Lackawanna Steel Company, Pittsburgh PA
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 375000.4; field inspection by Clayton Fraser, 13 July 1992.

sign. rating: 38
evaluation: NRHP non-eligible (typical example of a common truss configuration, with standard detailing, unremarkable dimensions and an average degree of physical integrity)

inventoried by: Clayton B. Fraser 25 August 1992

Fabius River Bridge

SCOL31

GENERAL DATA

structure no.: 376000.8
county: Scotland
city/town: 9.2 miles south of Memphis
feature inters.: Fabius River
cadastral grid: S30, T64N, R11W
highway route: County Road 376
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach spans
substructure: unknown

span number: 1
span length: 70.0'
total length: 102.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 376000.8.

sign. rating: 28
evaluation: NRHP non-eligible (undistinguished, undocumented example of common structural type)

inventoried by: Clayton B. Fraser 25 August 1992

Indian Creek Bridge

SCOL32

GENERAL DATA

structure no.: 378000.3
county: Scotland
city/town: 4.8 miles south of Memphis
feature inters.: Indian Creek
cadastral grid: S6, T64N, R11W
highway route: County Road 378
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: steel pile bent piers and abutments with timber back- and wingwalls

span number: 1
span length: 34.0'
total length: 35.0'
roadway width: 11.5'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL (probable)
fabricator : Illinois Steel Bridge Company, Jacksonville IL (probable)
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 378000.3; field inspection by Clayton Fraser, 13 July 1992.

sign. rating: 33
evaluation: NRHP non-eligible (undistinguished, short-span example of a relatively common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 25 August 1992

Bridge

SCOL33

GENERAL DATA

structure no.: 391000.1
county: Scotland
city/town: 0.7 mile southeast of Rutledge
feature inters.: unnamed stream
cadastral grid: S35/36, T64N, R11W
highway route: County Road 391
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: bedstead leg abutments with timber back- and wingwalls

span number: 1
span length: 48.0'
total length: 49.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: steel angle guardrails; builder's plate: **1910 / Illinois Steel Bridge Co. / Jacksonville, Ill.**

HISTORICAL DATA

erection date: 1910
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 391000.1; field inspection by Clayton Fraser, 13 July 1992.

sign. rating: 41
evaluation: NRHP non-eligible (short-span example of relatively common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 25 August 1992

Million Bridge

SCOL34

GENERAL DATA

structure no.: 427000.3
county: Scotland
city/town: 8.0 miles southwest of Memphis
feature inters.: Middle Fabius River
cadastral grid: S8, T64N, R12W
highway route: County Road 427
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead, with steel stringer approach spans
substructure: timber pile abutments, wingwalls and piers

span number: 1
span length: 40.0'
total length: 79.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails; remnant of builder's plate (Illinois Steel Bridge Company)

HISTORICAL DATA

erection date: 1912
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 427000.3; field inspection by Clayton Fraser, 13 July 1992.

sign. rating: 37
evaluation: NRHP non-eligible (undistinguished, short-span truss)

inventoried by: Clayton B. Fraser 25 August 1992

Smith Bridge

SCOL36

GENERAL DATA

structure no.: 435000.2
county: Scotland
city/town: 8.0 miles northeast of Memphis
feature inters.: North Wyaconda River
cadastral grid: S3, T66N, R11W
highway route: County Road 435
highway distr.: 3
current owner: Scotland County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected, lattice bedstead
substructure: timber pile abutments, wingwalls and piers

span number: 1
span length: 40.0'
total length: 68.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1912
erection cost: unknown
designer: Illinois Steel Bridge Company, Jacksonville IL
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: Illinois Steel Bridge Company, Jacksonville IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 435000.2; Scotland County Road Record, Book 5: page 208 (2 January 1913) - located at Scotland County Courthouse, Memphis MO.

sign. rating: 37
evaluation: NRHP non-eligible (undistinguished, short-span example of a relatively common truss type)

inventoried by: Clayton B. Fraser 25 August 1992

SHELBY COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
*SHEL01	017001.3	McCully Bridge	1-150' **pinned Pratt through truss** **1891**
*SHEL02	020002.2	Black Creek Bridge	1- 45' pinned Pratt bedstead **1907** Pan-American Bridge Company
*SHEL03	126000.1	South Fabius River Bridge	1-170' **pinned Camelback through truss** **1899**
SHEL04	127000.2	Jones Branch Bridge	1- 36' riveted lattice bedstead **1909** Michelmann Steel Constr. Co.
SHEL05	171001.8	Kirby Bridge	1- 60' pinned Pratt bedstead c**1910**
SHEL06	176001.7	Tannehill Bridge	1- 30' riveted lattice bedstead **1907** G.T. Meredith (replaced)
SHEL07	231001.0	Clear Creek Bridge	
*SHEL08	290000.3	Walkersville Bridge	1-**100'** riveted Pratt pony truss c1930
*SHEL09	300000.3	Salt River Bridge	1-**110'** riveted Pratt pony truss c1930
SHEL10	307000.5	Turney Bridge	1- 28' riveted lattice bedstead **1907** Pan-American Bridge Company (replaced)
SHEL11	310000.2	Hammett Bridge	
*SHEL12	320001.4	Conboy Bridge	1-100' **pinned Pratt through truss** **1910** Pan American Bridge Company
*SHEL13	321001.2	Gillis Bridge	1- 80' pinned Pratt bedstead **1908** Pan American Bridge Company
*SHEL14	333000.5	Jordan Bridge	1- 80' pinned Pratt bedstead **1907** Michelmann Steel Constr. Co.
SHEL15	379001.5	Maupin Bridge	1- 36' riveted lattice bedstead **1911** Decatur Bridge Company (replaced)
SHEL16	392000.9	Kidwell Bridge	

EXCLUDED:

Pratt pony truss
112000.4 207001.1 214000.3 215000.4 339000.4 340000.3 349000.3

Warren pony truss
020002.2 034001.1 134000.8 187000.7 224000.4 383000.8 399001.2

Lattice bedstead
044000.6 072000.6 084001.6 202002.2 275001.1 277001.5 304000.8
324000.7 332001.6

SHELBY COUNTY

EXCLUDED (cont.):

Steel stringer

H 590R	J 768R	L 167	P 40	S 427	S 711	T 391
T 601	X 125	X 211	X 496	033000.1	076000.4	090000.6
100000.9	134000.8	134001.1	173000.7	194000.1	207001.3	217000.5
221000.3	246000.5	253001.0	276001.2	341001.3	367000.1	370000.1
371000.1	375001.4	379003.3	387001.1	396000.8	397000.1	500000.7

Concrete girder

G 990	H 588	H 589

Concrete slab

043000.3

Concrete box culvert

H 683	K 192	K 193	K 195	K 196	K 280	S 227
S 228	T 215	T 229	X 274			

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	0	13	0	0	13
Excluded	25	48	0	0	73
	25	61	0	0	86 structures

McCully Bridge

SHEL01

GENERAL DATA

structure no.: 017001.3
county: Shelby
city/town: 5.1 miles northwest of Leonard
feature inters.: Salt River
cadastral grid: S8/17, T59N, R12W
highway route: County Road 17
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments with timber back- and wingwalls

span number: 1
span length: 150.0'
total length: 151.0'
roadway width: 13.6'
condition: fair
alterations: truss moved from outside the county, 1901
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 looped square eyebars at the hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round eyerod with turnbuckle - upper, round rod with threaded ends - lower; portal strut: latticed angles; floor beam: plate girder, U-bolted to vertical; guardrail: 2 channels; endpost-mounted builder's plate [broken] **1891...**

HISTORICAL DATA

erection date: 1891
erection cost: $994.00 (cost of re-erection in 1901)
designer: unknown
fabricator : unknown
contractor: American Bridge Company (1901 re-erection)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 017001.3; Shelby County Court Record, Book 15: page 531 (6 August 1901), page 543 (3 September 1901), page 554 (8 October 1901); Shelby County Court Record, Book 16: page 82 (6 August 1902), page 213 (6 May 1903) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 October 1991.

sign. rating: 31
evaluation: NRHP non-eligible (early, well-preserved example of mainstay structural type, but lacking in documentation and moved from original location)

inventoried by: Clayton B. Fraser 3 February 1992

Black Creek Bridge

SHEL02

GENERAL DATA

structure no.: 020002.2
county: Shelby
city/town: 1.3 miles northwest of Leonard
feature inters.: Black Creek
cadastral grid: S13/24, T59N, R12W
highway route: County Road 20
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt truss-leg bedstead
substructure: bedstead legs with timber back- and wingwalls

span number: 1
span length: 45.0'
total length: 46.0'
roadway width: 11.8'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: steel lattice guardrails

HISTORICAL DATA

erection date: 1907
erection cost: $795.00
designer: unknown
fabricator : unknown
contractor: Pan-American Bridge Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 020002.2; Shelby County Court Record, Book 17: page 321 (2 July 1907) - located at Shelby County Courthouse Shelbyville MO.

sign. rating: 39
evaluation: NRHP non-eligible (typical example of common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 3 February 1992

South Fabius River Bridge

SHEL03

GENERAL DATA

structure no.: 126000.1
county: Shelby
city/town: 8.3 miles northeast of Bethel
feature inters.: South Fabius River
cadastral grid: S4/33, T59/60N, R9W
highway route: County Road 126
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 9-panel, pin-connected Camelback through truss
substructure: concrete abutments

span number: 1
span length: 170.0'
total length: 172.0'
roadway width: 13.5'
condition: fair
alterations: truss moved to this location
floor/decking : timber 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 looped rectangular eyebars; counter: 2 square eyebars with unslotted turnbuckles; lateral bracing: round eyebar with unslotted turnbuckle (upper), round rod with threaded ends (lower); strut: 2 braced angles; portal strut: steel lattice with decorative cresting and curved portal knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

HISTORICAL DATA

erection date: 1899
erection cost: unknown
designer: unknown
fabricator : Carnegie Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 126000.1; Illustrated Historical Atlas of Shelby County, Missouri (Philadelphia: Edwards Bros, 1878) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 October 1991.

sign. rating: 48
evaluation: NRHP determined non-eligible (long-span example of uncommon Pratt truss subtype, moved from outside the county)

inventoried by: Clayton B. Fraser 3 February 1992

Jones Branch Bridge

SHEL04

GENERAL DATA

structure no.: 127000.2
county: Shelby
city/town: 8.4 miles northeast of Bethel
feature inters.: Jones Branch
cadastral grid: S10, T59N, R9W
highway route: County Road 127
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected, lattice bedstead, with steel stringer approach span
substructure: timber abutments, wingwalls and piers

span number: 1
span length: 36.0'
total length: 51.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: no guardrails

HISTORICAL DATA

erection date: 1909
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: Michelmann Steel Construction Company, Quincy IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 127000.2; Shelby County Court Record, Book 18: page 38 (7 June 1909); Illustrated Historical Atlas of Shelby County, Missouri (Philadelphia: Edwards Bros, 1878) - located at Shelby County Courthouse, Shelbyville MO.

sign. rating: 35
evaluation: NRHP non-eligible (short-span example of relatively common Pratt truss sub-type, exhibiting below-average physical integrity)

inventoried by: Clayton B. Fraser 3 February 1992

Kirby Bridge

SHEL05

GENERAL DATA

structure no.: 171001.8
county: Shelby
city/town: 5.5 miles northwest of Shelbyville
feature inters.: Black Creek
cadastral grid: S10, T58N, R11W
highway route: County Road
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 4-panel, pin-connected Pratt truss-leg bedstead
substructure: steel pile bent piers

span number: 1
span length: 60.0'
total length: 60.0'
roadway width: 11.7'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: steel lattice guardrails

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 171001.8.

sign. rating: 28
evaluation: NRHP non-eligible (undocumented, typically configured example of relatively common Pratt truss sub-type; marginal integrity)

inventoried by: Clayton B. Fraser 3 February 1992

Tannehill Bridge

SHEL06

GENERAL DATA

structure no.: 176001.7
county: Shelby
city/town: 1.7 miles west of Shelbyville
feature inters.: unnamed stream
cadastral grid: S24/25, T58N, R11W
highway route: County Road 176
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected, lattice bedstead
substructure: steel pile bent piers

span number: 1
span length: 30.0'
total length: 30.0'
roadway width: 11.8'
condition: fair
alterations: unknown
floor/decking : concrete deck over steel stringers
other features: no guardrails

HISTORICAL DATA

erection date: 1907
erection cost: unknown
designer: unknown
fabricator : Pan-American Bridge Company
contractor: G.T. Meredith

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 176001.7; Shelby County Court Record, Book 17: pages 256-57 (5 April 1907) - located at Shelby County Courthouse, Shelbyville MO.

sign. rating: 32
evaluation: NRHP determined non-eligible (relatively common small-scale truss type, with marginal integrity)

inventoried by: Clayton B. Fraser 3 February 1992

Walkersville Bridge

SHEL08

GENERAL DATA

structure no.: 290000.3
county: Shelby
city/town: 3.8 miles north of Shelbina
feature inters.: Salt River
cadastral grid: S18, T57N, R10W
highway route: County Road 290
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 100.0'
total length: 101.0'
roadway width: 11.6'
condition: fair
alterations: none
floor/decking : concrete deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 4 angles with batten plates; vertical: 4 angles with batten plates; diagonal: 4 angles with batten plates; lateral bracing: 1 angle; floor beam: I-beam, field-bolted to vertical; guard-rail: steel lattice

HISTORICAL DATA

erection date: c1930
erection cost: unknown
designer: unknown
fabricator : Carnegie Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 290000.3; Shelby County Court Record, Book 15: page 213 (5 September 1899), page 262 (5 December 1899) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 September 1991.

sign. rating: 28
evaluation: NRHP non-eligible (longer than average, but typically configured, poorly documented example of a common structural type)

inventoried by: Clayton B. Fraser 3 February 1992

Salt River Bridge

SHEL09

GENERAL DATA

structure no.: 300000.3
county: Shelby

city/town: 5.0 miles southeast of Shelbyville
feature inters.: Salt River
cadastral grid: S15, T57N, R10W
highway route: County Road 300
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 110.0'
total length: 111.0'
roadway width: 11.6'

condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: wide flange; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; lateral bracing: 1 angle; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: c1930
erection cost: unknown
designer: unknown
fabricator : Illinois Steel Company, Chicago IL
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 300000.3.

sign. rating: 33
evaluation: NRHP non-eligible (typically configured, undocumented, long-span example of a common structural type)

inventoried by: Clayton B. Fraser 3 February 1992

Turney Bridge

SHEL10

GENERAL DATA

structure no.: 307000.5
county: Shelby
city/town: 3.6 miles east of Shelbina
feature inters.: unnamed stream
cadastral grid: S35/36, T57N, R10W
highway route: County Road 307
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice bedstead
substructure: concrete abutments and wingwalls

span number: 1
span length: 28.0'
total length: 29.0'
roadway width: 10.9'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: no guardrails

HISTORICAL DATA

erection date: 1907
erection cost: $285.00
designer: unknown
fabricator : unknown
contractor: Pan-American Bridge Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 307000.5; Shelby County Court Record, Book 17: page 307 (4 June 1907), page 321 (2 July 1907) - located at Shelby County Courthouse, Shelbyville MO.

sign. rating: 32
evaluation: NRHP non-eligible (relatively common small-scale truss, with marginal integrity and incomplete documentation)

inventoried by: Clayton B. Fraser 3 February 1992

Conboy Bridge

SHEL12

GENERAL DATA

structure no.: 320001.4
county: Shelby
city/town: 4.7 miles northeast of Shelbina
feature inters.: Salt River
cadastral grid: S24, T57N, R10W
highway route: County Road 320
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss; 2-panel lattice bedstead approach span at the north end; 1 steel stringer approach span at the south end
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers

span number: 1
span length: 100.0'
total length: 158.0'
roadway width: 11.3'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with continuous plate; portal strut: latticed angles with curved knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

HISTORICAL DATA

erection date: 1910
erection cost: $2795.00
designer: unknown
fabricator : unknown
contractor: Pan-American Bridge Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 320001.4; Shelby County Court Record, Book 18: page 212 (4 May 1910), page 240 (6 June 1910), page 340 (3 January 1911); Illustrated Historical Atlas of Shelby County, Missouri (Philadelphia: Edwards Bros, 1878) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 October 1991.

sign. rating: 37
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 3 February 1992

Gillis Bridge

SHEL13

GENERAL DATA

structure no.: 321001.2
county: Shelby

city/town: 4.5 miles southeast of Shelbyville
feature inters.: Black Creek
cadastral grid: S1/2, T57N, R10W
highway route: County Road 321
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt truss-leg bedstead
substructure: steel truss legs with timber backwalls

span number: 1
span length: 80.0'
total length: 81.0'
roadway width: 11.8'

condition: good
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars, or 2 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 square eyebars; counter: square eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: 1908
erection cost: $615.00
designer: unknown
fabricator : Lackawanna Steel Company, Pittsburgh PA
contractor: Michelmann Steel Construction Company, Quincy IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 321001.2; Shelby County Court Record, Book 17: page 378 (3 December 1907), page 476 (2 June 1908), page 558 (4 January 1909) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 October 1991.

sign. rating: 48
evaluation: NRHP possibly eligible (one of Missouri's longest-span example of pinned bedstead construction)

inventoried by: Clayton B. Fraser 3 February 1992

Jordan Bridge

SHEL14

GENERAL DATA

structure no.: 333000.5
county: Shelby

city/town: 6.7 miles northeast of Shelbina
feature inters.: Black Creek
cadastral grid: S7, T57N, R9W
highway route: County Road 333
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt truss-leg bedstead
substructure: steel pile bent piers with timber back- and wingwalls

span number: 1
span length: 80.0'
total length: 81.0'
roadway width: 12.0'

condition: fair
alterations: truss legs replaced with steel pile bent piers
floor/decking : timber deck over steel stringers
other features: upper chord and upright end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars, or 2 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 square eyebars; counter: square eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

HISTORICAL DATA

erection date: 1907
erection cost: $650.00
designer: unknown
fabricator : Lackawanna Steel Company, Pittsburgh PA
contractor: Michelmann Steel Construction Company, Quincy IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 333000.5; Shelby County Court Record, Book 16: page 385 (4 May 1904); Shelby County Court Record, Book 17: page 307 (4 June 1907) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 October 1991.

sign. rating: 44
evaluation: NRHP non-eligible (one of Missouri's longest-span example of pinned bedstead construction)

inventoried by: Clayton B. Fraser 3 February 1992

Maupin Bridge

SHEL15

GENERAL DATA

structure no.: 379001.5
county: Shelby
city/town: 6.8 miles south of Clarence
feature inters.: Otter Creek
cadastral grid: S15/22, T56N, R12W
highway route: County Road
highway distr.: 3
current owner: Shelby County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected, lattice bedstead
substructure: unknown

span number: 1
span length: 36.0'
total length: 37.0'
roadway width: 12.0'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: unknown

HISTORICAL DATA

erection date: 1911
erection cost: $1414.00 (for three bridges)
designer: unknown
fabricator : unknown
contractor: Decatur Bridge Company, Decatur IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 379001.5; Shelby County Court Record, Book 18: page 38 (7 June 1909), page 453 (3 July 1911) - located at Shelby County Courthouse, Shelbyville MO.

sign. rating: 33
evaluation: NRHP non-eligible (undocumented, undistinguished, small-scale structure, lacking in technological significance)

inventoried by: Clayton B. Fraser 3 February 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
South Fabius River Bridge SHEL03
MHTD: 126000.1

DATE(S) OF CONSTRUCTION
1899

LOCATION
County Road 126 over South Fabius River; S4/33, T59/60N, R9W
8.3 miles northeast of Bethel; Shelby County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP determined non-eligible (score: 48)

CONDITION
fair

OWNER
Shelby County

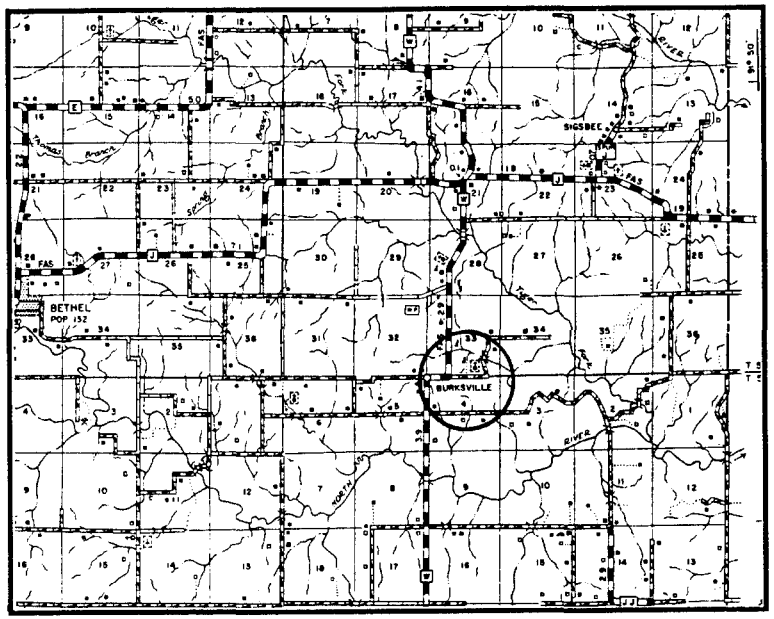
span number:	1	superstructure:	steel, 9-panel, pin-connected Camelback through truss
span length:	170.0'	substructure:	concrete abutments
total length:	172.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.5'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: 2 square eyebars with unslotted turnbuckles; lateral bracing: round eyebar with unslotted turnbuckle (upper), round rod with threaded ends (lower); strut: 2 braced angles; portal strut: steel lattice with decorative cresting and curved portal knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

The South Fabius River Bridge carries a gravel-surfaced county road about eight miles northeast of Bethel on the Lewis County line. A bridge plate (now removed but visible in historic photographs), denotes that the structure was built in 1899. An early, long-span, pin-connected Camelback through truss, the bridge was evidently moved to this location in the early part of the century. For long-span crossings, especially over the Salt and Fabius Rivers, Shelby County officials often eschewed new construction, opting instead to purchase existing trusses and have them re-erected. Such was the case with the South Fabius River Bridge, and the history of its original construction is thus unknown. The bridge, nonetheless, appears structurally intact, and has functioned in its present location between Shelby and Lewis Counties for well over fifty years.

Pin-connected Pratt trusses were built by the thousands throughout Missouri in the late 19th and early 20th centuries. Camelback trusses were much less common, and relatively few remain in place today. Built in 1899, the South Fabius River Bridge is the earliest documented of only nine pinned Camelback through trusses known to still exist statewide. The bridge's lack of documentation is mitigated by its early erection date, and the rarity of its type. Having long since acquired a sense of time and place at its current location, South Fabius River Bridge is a well-preserved example of a now rare structural type - the pinned Camelback through truss.

NAME(S) OF STRUCTURE
South Fabius River 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 No. 126000.1; Illustrated Historical Atlas of Shelby County, Missouri (Philadelphia: Edwards Bros, 1878) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 October 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Conboy Bridge
MHTD: 320001.4

SHEL12

DATE(S) OF CONSTRUCTION
1910

LOCATION
County Road 320 over Salt River; S24, T57N, R10W
4.7 miles northeast of Shelbina; Shelby County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION
fair

OWNER
Shelby County

span number: 1
span length: 100.0'
total length: 158.0'
roadway wdt.: 11.3'

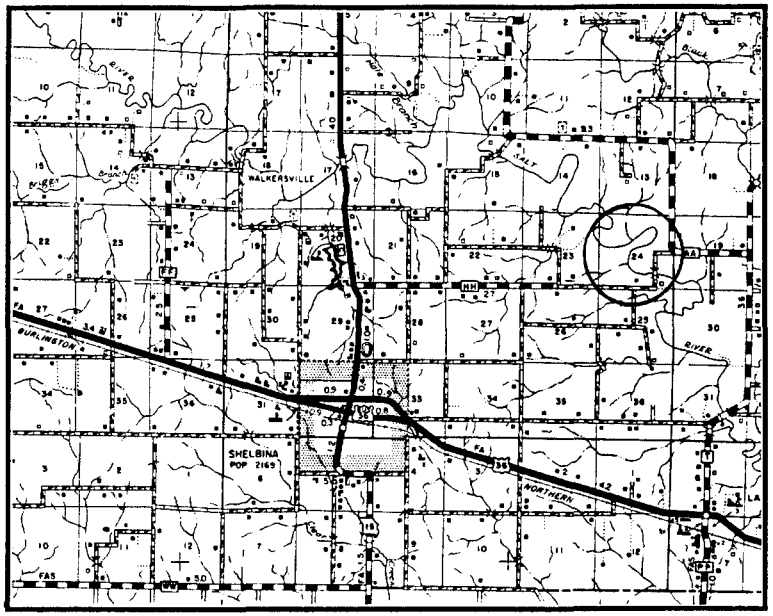
superstructure: steel, 6-panel, pin-connected Pratt through truss; 2-panel lattice bedstead approach span at the north end; 1 steel stringer approach span at the south end
substructure: concrete abutments and wingwalls; concrete-filled steel cylinder piers
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with continuous plate; portal strut: latticed angles with curved knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

The Conboy Bridge carries a secondary county road over the Salt River slightly under five miles northeast of Shelbina, in southeastern Shelby County. A pin-connected Pratt through truss, the structure is approached on its north end by a latticed pony truss. Support is provided by concrete abutments and concrete-filled steel cylinder piers. Efforts to build the crossing began in the spring of 1910. At a meeting of the Shelby County Court, held on May 4, 1910, county highway engineer, W.W. Mitchel reported that he had estimated the costs of four steel bridges. The largest of these was the Conboy Bridge - named for adjacent landowner Thomas Conboy - over the Salt River. A month later, on June 6th, the Pan American Bridge Company was awarded a $2795.00 contract for the structure's erection. Based in New Castle, Indiana, Pan American was a prominent bridge building firm, operating throughout the midwest. Another, smaller, Pan American Bridge Company was also active in northeast Missouri, however. Based in nearby Moberly, this firm often competed with the larger Indiana firm of the same name. It is unclear which of the two companies built this bridge. The Conboy Bridge was completed according to plan, and subsequently served to carry local traffic in a rural location. Displaying strong historical integrity, the structure's appears much the same as when originally built.

In Missouri, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the late 19th and early 20th centuries. As a result, thousands of Pratts were built across the state, and today Pratts constitute the most populous group of through trusses. Though it retains a relatively high degree of physical integrity, the Conboy Bridge is unremarkable in its design, dimensions and detailing.

NAME(S) OF STRUCTURE
Conboy 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 No. 320001.4; Shelby County Court Record, Book 18: page 212 (4 May 1910), page 240 (6 June 1910), page 340 (3 January 1911); Illustrated Historical Atlas of Shelby County, Missouri (Philadelphia: Edwards Bros, 1878) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 October 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Gillis Bridge
MHTD: 321001.2

SHEL13

DATE(S) OF CONSTRUCTION
1908

LOCATION
County Road 321 over Black Creek; S1/2, T57N, R10W
4.5 miles southeast of Shelbyville; Shelby County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 48)

CONDITION
good

OWNER
Shelby County

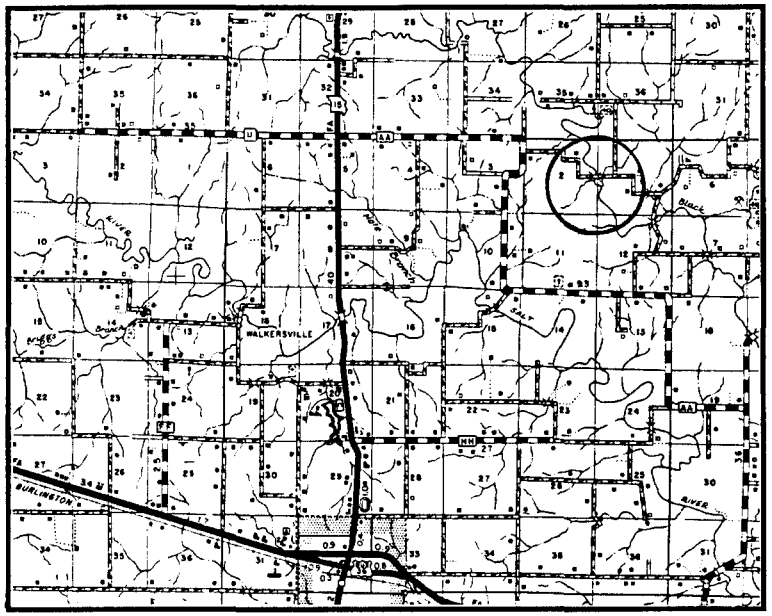
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt truss-leg bedstead
span length:	80.0'	substructure:	steel truss legs with timber backwalls
total length:	81.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.8'	other features:	upper chord and end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars, or 2 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 square eyebars; counter: square eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

The Gillis Bridge carries a secondary county road over the Black River some four miles southeast of Shelbyville, in southeastern Shelby County. A pin-connected Pratt truss-leg bedstead, the structure is supported by its original bedstead legs. Its 80-foot span rates among the state's longest on a bedstead design. Efforts to bridge the crossing began in late 1907. At a meeting of the Shelby County Court, held on December 3, 1907, county highway engineer W.W. Mitchel reported on the necessity of two bridges. One of these was a short-span, steel stringer, while the other was this 80-foot bedstead, known as the Gillis Bridge. Plans to build the Gillis Bridge were put on hold until the following spring. On June 2, 1908, the Michelmann Steel Construction Company of Quincy, Illinois, submitted a low bid of $615.00 for the structure's erection. The county court initially tabled the offer, but at a later meeting decided to accept it. On January 4, 1909, Shelby County issued a $615.00 warrant to Michelmann for completion of the Gillis Bridge. Having served to carry local traffic in a rural location, the structure has suffered virtually no loss of physical integrity over the years.

In a bedstead truss, a single "leg" functioned as both end post and support at each corner of the structure. This combined super- and substructure reduced erection costs somewhat, but bedsteads were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Despite these weaknesses, numerous truss leg bedsteads were erected throughout Missouri in the later 1890s and early 1900s. Hundreds remain in place today - in fact, Missouri has probably more bedsteads than any other state. The Gillis Bridge is distinguished as a well-preserved, long span example of this statewide bridge construction trend. In fact, its 80-foot length is unexcelled by any other bedstead in the state.

NAME(S) OF STRUCTURE
Gillis 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 No. 321001.2; Shelby County Court Record, Book 17: page 378 (3 December 1907), page 476 (2 June 1908), page 558 (4 January 1909) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 October 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Jordan Bridge
MHTD: 333000.5

SHEL14

DATE(S) OF CONSTRUCTION
1907

LOCATION
County Road 333 over Black Creek; S7, T57N, R9W
6.7 miles northeast of Shelbina; Shelby County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 44)

CONDITION
fair

OWNER
Shelby County

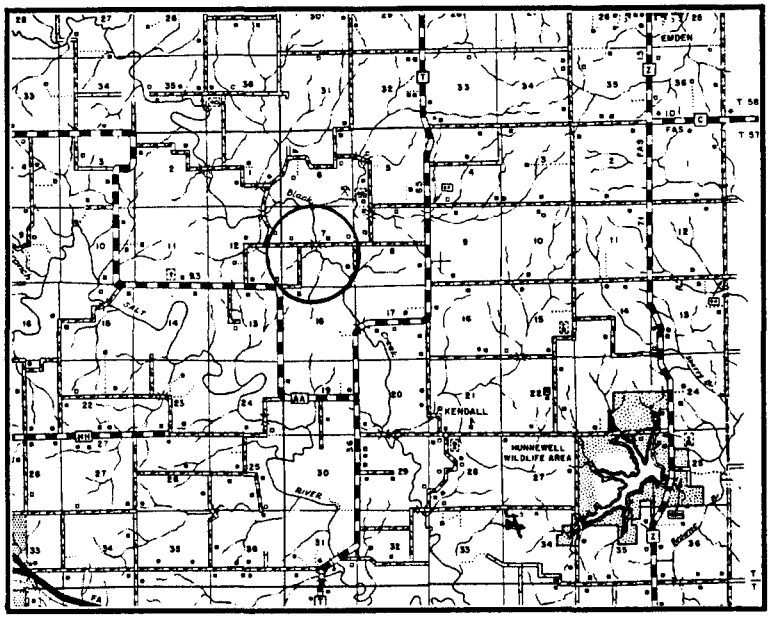
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt truss-leg bedstead
span length:	80.0'	substructure:	steel pile bent piers with timber back- and wingwalls
total length:	81.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	12.0'	other features:	upper chord and upright end post: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars, or 2 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 square eyebars; counter: square eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

The Jordan Bridge carries a gravel-surfaced county road over Black Creek northeast of Shelbina, in southeastern Shelby County. The bridge is configured as a Pratt bedstead truss, with pinned connections and timber deck. In the summer of 1907, the Shelby County Court appropriated $650.00 for this long-span bedstead, designed by county highway engineer W.W. Mitchell. The county contracted with the Michelmann Steel Construction Company of Quincy, Illinois, to fabricate and erect the structure, which was apparently completed later that year. Since its completion, the Jordan Bridge has continued to function in place, with the replacement of its bedstead legs with timber pile bents as the only alteration of note.

In a bedstead truss, a single "leg" functioned as both end post and support at each corner of the structure. This combined super- and substructure reduced erection costs somewhat, but bedsteads were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Despite these weaknesses, numerous truss leg bedsteads were erected throughout Missouri in the later 1890s and early 1900s. Hundreds remain in place today - in fact, Missouri has probably more bedsteads than any other state. The Jordan Bridge is distinguished as a well-preserved, long span example of this statewide bridge construction trend. In fact, its 80-foot length is unexcelled by any other bedstead in the state.

NAME(S) OF STRUCTURE
Jordan 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 No. 333000.5; Shelby County Court Record, Book 16: page 385 (4 May 1904); Shelby County Court Record, Book 17: page 307 (4 June 1907) - located at Shelby County Courthouse, Shelbyville MO; field inspection by Clayton Fraser, 8 October 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992

WARREN COUNTY

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

Inv. No.	FHWA	Bridge Name	Description
*WARR01	K 969	Washington Bridge **over Missouri River**	**5-475'** **riveted cantilever through truss** 1934 Stupp Bros. Bridge & Iron Co. Missouri Valley Br. & Iron Co. (replaced)
WARR02	Z 678	Lake Creek Bridge	
*WARR03	004001.3	Camp Creek Bridge	1- 70' pinned Pratt pony truss **1894** Farnsworth and Blodgett
WARR04	008000.4	Bailey Branch Bridge	1- 24' steel stringer **1906** Stupp Bros. Bridge & Iron Co.
*WARR05	023000.5	Steinhagen Bridge	**2- 85'** **pinned Pratt through truss** **1896** J.S. McCleary and Sons
*WARR06	026000.6	Indian Camp Creek Bridge	1- 80' **riveted Camelback pony truss** **1918** county work force (replaced)
*WARR07	028000.2	Hollman Ford Bridge	
*WARR08	085004.3	Charrette Creek Bridge	1- 85' pinned Pratt pony truss c1910
WARR09	099001.7	Loutre Slough Bridge	1- 30' riveted lattice bedstead **1908** Stupp Bros. Bridge & Iron Co.
WARR10	106001.4	Clay Branch Bridge	1- 40' pinned Pratt half-hip pony truss **1902** Stupp Bros. Bridge & Iron Co.
WARR11	116000.3	Water Run Creek Bridge	1- 30' riveted lattice bedstead **1908** Stupp Bros. Bridge & Iron Co.
*WARR12	133000.2	West Point Bridge	1-124' **pinned Pratt through truss** **1905** Stupp Bros. Bridge & Iron Co.
WARR13	155000.2	Charrette Creek Bridge	1- 23' pinned Pratt half-hip pony truss **1901** American Bridge Company

EXCLUDED:

Pratt pony truss
122000.8

Warren pony truss
K 93 T 38 057002.0 109000.1

Lattice bedstead
036001.1

Steel stringer
W 113 X 212 X 214 Y 981 009000.5 031001.5 044000.5
073002.8 113001.0 118001.1 118001.9

Concrete girder
G 704 H 578 K 94 K 391

WARREN COUNTY

EXCLUDED (cont.):

Concrete slab

073001.0	131001.9	139001.0	269000.1

Concrete box culvert

A3122	H 575	H 576	H 577	H 579	H 869	J 140
J 141	L 254R1	S 293	T 512	X 213	X 898	X 899

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	1	10	0	0	11
Excluded	24	15	0	0	39
	25	25	0	0	50 structures

Washington Bridge

WARR01

GENERAL DATA

structure no.: K 969
county: Warren
city/town: Washington
feature inters.: Missouri River
cadastral grid: Survey 1647, T44N, R1W
highway route: State Highway 47
highway distr.: 3
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, rigid-connected, cantilever Warren through truss
substructure: concrete abutments and piers with Moderne detailing

span number: 5
span length: 475.0'
total length: 2562.0'
roadway width: 22.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: upper chord and inclined end post: 2 built-up channels with cover plate and lacing; lower chord: 2 built-up channels with batten plates; vertical: 2 angles with lacing; diagonal: 2 channels with lacing or batten plates; lateral bracing: 2 angles with lacing; floor beam: I-beam, field-bolted to vertical; guardrail: 2 steel channels

HISTORICAL DATA

erection date: 1934-36
erection cost: $802,000.00
designer: Sverdrup and Parcel, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO (superstructure)
Missouri Valley Bridge and Iron Co., Leavenworth KS (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. K 969; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; "Building Bridge Major Event for City," **The (Washington) Missourian**, 24 May 1989, page 10; Ralph Gregory, **A History of Washington, Missouri**, pages 81-82, 88-89; Mari-Anne Messmann, "Desire, Determination Bridge the Missouri," **Washington Missourian**, 6 February 1975; "Washington Bridge Was 38 Years Old Monday," **Washington Missourian**, 30 May 1974; "Building of Bridge Major Event for City," **Washington Missourian**, 24 May 1989; "Work on Washington Bridge to Begin Soon," **Hermann Advertiser-Courier**, 15 March 1929; field inspection by Clayton Fraser, 29 June 1994.

Washington Bridge

sign. rating: 72
evaluation: NRHP determined eligible (superlative example of large-scale truss bridge construction on an important crossing of the Missouri River)

inventoried by: Clayton Fraser and Michelle Crow-Dolby 22 February 1993

Camp Creek Bridge

WARR03

GENERAL DATA

structure no.: 004001.3
county: Warren
city/town: 10.9 miles northwest of Warrenton
feature inters.: Camp Creek
cadastral grid: S3/10, T48N, R3W
highway route: Pin Oak Road
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span
substructure: stone masonry abutments; concrete pier

span number: 1
span length: 70.0'
total length: 85.0'
roadway width: 11.4'
condition: fair
alterations: original steel cylinder pier replaced by concrete abutments in 1914
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped square eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1894
erection cost: original: $1250.00; 1914 reconstruction: $1300.00
designer: Farnsworth and Blodgett, Kansas City MO
fabricator : unknown
contractor: original: Farnsworth and Blodgett, Kansas City MO; 1914 reconstruction: Miller and Borcherding, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 004001.3; Various papers relating to "Bridge No. 19", including report to the court from Benjamin Frick (21 October 1914) and original contract and construction drawings; Warren County Court Record G: page 57 (29 August 1893), page 86 (2 December 1893), page 137 (1 September 1894), page 161 (31 December 1894) - all located at Warren County Courthouse, Warrenton MO; field inspection by Clayton Fraser, 18 October 1990.

sign. rating: 53
evaluation: NRHP possibly eligible (well-preserved, relatively early example of mainstay structural type)

inventoried by: Clayton B. Fraser 22 February 1993

Bailey Branch Bridge

WARR04

GENERAL DATA

structure no.: 008000.4
county: Warren
city/town: 12.4 miles northwest of Warrenton
feature inters.: Bailey Branch
cadastral grid: S25, T49N, R3W
highway route: County Road 8
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel stringer
substructure: unknown

span number: 1
span length: 24.0'
total length: 25.0'
roadway width: 13.9'
condition: fair
alterations: unknown
floor/decking : unknown
other features: unknown

HISTORICAL DATA

erection date: 1906
erection cost: $999.00
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 008000.4; Warren County Court Record I: page 387 (12 May 1906), page 390 (6 August 1906), page 396 (7 August 1906) - located at Warren County Courthouse, Warrenton MO.

sign. rating: 38
evaluation: NRHP non-eligible (a typically built example of rudimentary steel stringer bridge construction)

inventoried by: Clayton B. Fraser 28 October 1993

Steinhagen Bridge

WARR05

GENERAL DATA

structure no.: 023000.5
county: Warren
city/town: 5.5 miles north of Warrenton
feature inters.: Big Creek
cadastral grid: S34, T46N, R2W
highway route: County Road 23
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss
substructure: stone abutments; concrete-filled steel cylinder pier

span number: 2
span length: 85.0'
total length: 170.0'
roadway width: 12.6'
condition: fair
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 punched square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: 1896
erection cost: unknown
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: J.S. McCleary and Sons

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 023000.5; Warren County Court Record G: pages 335-36 (8 August 1896), page 341 (8 September 1896); County Court Record I: page 557 (8 November 1907), page 575 (6 February 1908 - located at Warren County Courthouse, Warrenton MO; field inspection by Clayton Fraser, 18 October 1989.

sign. rating: 48
evaluation: NRHP possibly eligible (well-preserved, two-span example of mainstay structural type)

inventoried by: Clayton B. Fraser 22 February 1993

Indian Camp Creek Bridge

WARR06

GENERAL DATA

structure no.: 026000.6
county: Warren
city/town: 3.2 miles northeast of Wright City
feature inters.: Indian Camp Creek
cadastral grid: S2, T47N, R1W
highway route: North Stringtown Road
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Camelback pony truss, with concrete slab approach spans
substructure: concrete abutments and piers

span number: 1
span length: 80.0'
total length: 105.0'
roadway width: 13.6'
condition: fair
alterations: none
floor/decking : concrete deck over steel stringers
other features: upper chord and inclined end posts: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles (steel pipe guardrails at approaches); bridge plate: **Class A bridge / 1918**

HISTORICAL DATA

erection date: 1918
erection cost: $5342.58
designer: Benjamin Frick, Warren County Engineer
fabricator : Illinois Steel Bridge Company, Jacksonville IL
contractor: county work force

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 026000.6; Warren County bridge records: original drawing by Benjamin Frick and various papers pertaining to bridge - located at Warren County Courthouse, Warrenton MO; field inspection by Clayton Fraser, 18 October 1989.

sign. rating: 50
evaluation: NRHP possibly eligible (well-preserved example of uncommon Pratt truss subtype)

inventoried by: Clayton B. Fraser 18 October 1989

Charrette Creek Bridge

WARR08

GENERAL DATA

structure no.: 085004.3
county: Warren
city/town: 6.5 miles southeast of Warrenton
feature inters.: Charrette Creek
cadastral grid: S18, T46N, R1W
highway route: Stark Church Road
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 85.0'
total length: 86.0'
roadway width: 12.7'
condition: fair
alterations: none
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 looped rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped rectangular eyebars; counter: square eyerod with turnbuckle; lateral bracing: round eyerod; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: unknown
fabricator : Cambria Steel Company, Pittsburgh PA
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 085004.3; field inspection by Clayton Fraser, 18 October 1989.

sign. rating: 34
evaluation: NRHP non-eligible (longer than average, but a typically configured pinned Pratt pony truss, poorly documented)

inventoried by: Clayton B. Fraser 22 October 1993

Loutre Slough Bridge

WARR09

GENERAL DATA

structure no.: 099001.7
county: Warren
city/town: 0.5 mile southwest of Case
feature inters.: Loutre Slough
cadastral grid: S21, T46N, R4W
highway route: County Road 99
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice truss-leg bedstead
substructure: steel pile bent abutments

span number: 1
span length: 30.0'
total length: 30.0'
roadway width: 14.2'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: no guardrails

HISTORICAL DATA

erection date: 1908
erection cost: $590.00
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 099001.7; Warren County Court Record J: page 30 (15 September 1908) - located at Warren County Courthouse, Warrenton MO.

sign. rating: 43
evaluation: NRHP non-eligible (undistinguished, small-scale structure, lacking in technological significance)

inventoried by: Clayton B. Fraser 22 February 1993

Clay Branch Bridge

WARR10

GENERAL DATA

structure no.: 106001.4
county: Warren
city/town: 6.6 miles west of Hopewell
feature inters.: Clear Branch tributary
cadastral grid: S4/9, T45N, R3W
highway route: County Road 106
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt half-hip pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 40.0'
total length: 40.0'
roadway width: 13.5'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: timber guardrails

HISTORICAL DATA

erection date: 1902
erection cost: $400.00 (superstructure only)
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 106001.4; Warren County Court Record H: page 448 (10 May 1902), page 466 (31 May 1902), page 495 (20 September 1902) - located at Warren County Courthouse, Warrenton MO.

sign. rating: 41
evaluation: NRHP non-eligible (undistinguished, short-span example of a relatively common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 22 February 1993

Water Run Creek Bridge

WARR11

GENERAL DATA

structure no.: 116000.3
county: Warren
city/town: 1.2 miles southeast of Holstein
feature inters.: Water Run Creek
cadastral grid: S20, T45N, R2W
highway route: Schomberg Road
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected lattice truss-leg bedstead
substructure: concrete abutments and wingwalls

span number: 1
span length: 30.0'
total length: 31.0'
roadway width: 14.2'
condition: fair
alterations: unknown
floor/decking : timber deck over steel stringers
other features: no guardrails; builder's plate: **Stupp Brothers Bridge and Iron Company, St. Louis MO**

HISTORICAL DATA

erection date: 1909
erection cost: unknown
designer: Stupp Brothers Bridge and Iron Company, St. Louis MO
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 116000.3.

sign. rating: 38
evaluation: NRHP non-eligible (undistinguished, short-span example of a relatively common Pratt truss sub-type)

inventoried by: Clayton B. Fraser 22 February 1993

West Point Bridge

WARR12

GENERAL DATA

structure no.: 133000.2
county: Warren
city/town: 1.0 mile north of Peers
feature inters.: Charrette Creek
cadastral grid: S22, T45N, R2W
highway route: County Road 133
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss; steel, pin-connected Pratt pony approach span
substructure: concrete abutments; concrete-filled steel cylinder piers

span number: 1
span length: 124.0'
total length: 186.0'
roadway width: 13.7'
condition: good
alterations: none
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: square eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

HISTORICAL DATA

erection date: 1905
erection cost: $2625.00
designer: A.H. Wehmeyer, Warren County Surveyor
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO; Lackawanna Steel Company, Pittsburgh PA
contractor: Stupp Brothers Bridge and Iron Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 133000.2; Warren County Court Record I: page 97 (1 August 1904), page 132 (16 November 1904), page 160 (8 February 1905), page 189 (6 April 1905), page 291 (9 November 1905), page 294 (10 November 1905) - located at Warren County Courthouse, Warrenton MO; field inspection by Clayton Fraser, 18 October 1990.

sign. rating: 50
evaluation: NRHP possibly eligible (well-preserved, well-documented example of mainstay structural type)

inventoried by: Clayton B. Fraser 22 February 1993

Charrette Creek Bridge

WARR13

GENERAL DATA

structure no.: 155000.2
county: Warren
city/town: 3.5 miles northwest of Marthasville
feature inters.: Charrette Creek
cadastral grid: S15/22, T45N, R2W
highway route: County Road 155
highway distr.: 3
current owner: Warren County

STRUCTURAL DATA

superstructure: steel, 2-panel, pin-connected Pratt half-hip pony truss with 1 steel stringer approach span
substructure: concrete abutments and wingwalls

span number: 1
span length: 25.0'
total length: 30.0'
roadway width: 15.7'
condition: fair
alterations: truss moved
floor/decking : corrugated steel deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1901
erection cost: $223.00 (superstructure only)
designer: American Bridge Company, New York NY
fabricator : unknown
contractor: superstructure: American Bridge Company, New York NY; substructure: local stonemasons

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 155000.2; Warren County Court Record H: page 313 (11 May 1900), page 338 (7 August 1901), pages 347-48 (10 August 1901), page 356 (2 September 1901), page 386 (4 February 1902) - located at Warren County Courthouse, Warrenton MO.

sign. rating: 36
evaluation: NRHP non-eligible (shorter than average, typically configured example of a common structural type)

inventoried by: Clayton B. Fraser 22 February 1993

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Washington Bridge
MHTD: K 969

WARR01

DATE(S) OF CONSTRUCTION
1934-36

LOCATION
State Highway 47 over Missouri River; Survey 1647, T44N, R1W
Washington; Warren County, Missouri

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP determined eligible (score: 72)

CONDITION
good

OWNER
Missouri Highway and Transportation Department

span number:	5	superstructure:	steel, rigid-connected, cantilever Warren through truss
span length:	475.0'	substructure:	concrete abutments and piers with Moderne detailing
total length:	2562.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	22.0'	other features:	upper chord and inclined end post: 2 built-up channels with cover plate and lacing; lower chord: 2 built-up channels with batten plates; vertical: 2 angles with lacing; diagonal: 2 channels with lacing or batten plates; lateral bracing: 2 angles with lacing; floor beam: I-beam, field-bolted to vertical; guardrail: 2 steel channels

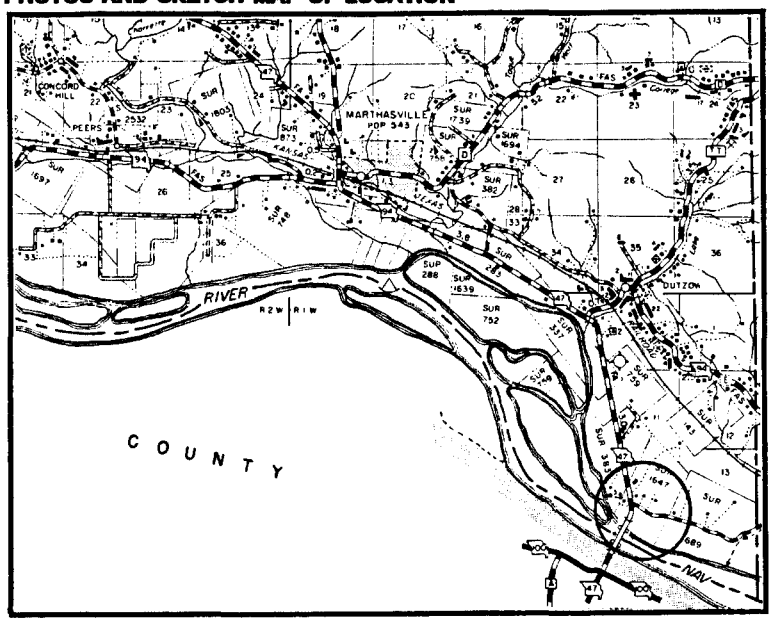
Local citizens and elected officials had been lobbying off-and-on for years for a highway bridge over the Missouri River at Washington. In 1930 the Washington Bridge Committee was formed, and three years later Congress authorized the bridge's construction. Sverdrup and Parcel of St. Louis were hired to engineer the structure, which was to be funded through a combination of federal aid grants, state highway department monies and locally raised loan proceeds. Construction bids let in the spring of 1934 elicited proposals from eleven firms; that summer contracts were awarded to the Missouri Valley Bridge and Iron Company for the substructure and Stupp Brothers Bridge and Iron Company for the superstructure. Work got underway in October 1934, and by late November a hundred workers were employed setting the structure's foundations. Construction of the impressive bridge was carried out over the course of the next eighteen months. The bridge was opened to traffic on April 8, 1936; on May 28th a formal dedication ceremony was held. Attended by a host of regionally important dignitaries, the event featured bridge designer L.J. Sverdrup as the guest of honor. The bridge operated as a toll crossing until the fall of 1951, when its indebtedness was finally retired. During the 1930s and 1940s, the standard toll charge was 45 cents for one-way, or 75 cents for a round-trip crossing. The Washington Bridge today appears largely as originally built, having only been subjected to minor, maintenance related repairs.

Fourteen vehicular steel truss bridges over the Missouri River are included in Missouri's statewide historic bridge inventory. As a group, these bridges comprise some of the state's longest examples of truss bridge construction. Undertaken during the depth of the Great Depression, the Washington Bridge was one of a series of great river bridges built in Missouri during the 1920s and 1930s. It has formed a regionally important crossing of the Missouri River: the only span between Hermann and St. Charles. Featuring a cantilevered design, the Washington Bridge ranks among Missouri's most monumental examples of steel truss construction. With a span length of 475 feet and an overall length of 2562 feet, the multiple-span structure clearly ranks as a superlative example of its type. Its distinctive curved

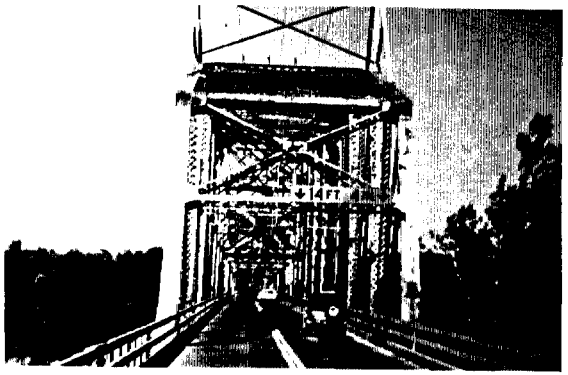
profile distinguished it among several great river bridges undertaken in the state by prominent St. Louis civil engineers Sverdrup and Parcel. Similarly configured structures undertaken by Sverdrup and Parcel include the Mark Twain Bridge in Hannibal, the Hermann Bridge and the Miami Bridge. As an important river crossing and a well-preserved example of large-scale bridge construction, the Washington Bridge is one of Missouri's more noteworthy highway trusses.

NAME(S) OF STRUCTURE
Washington 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 No. K 969; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; "Building Bridge Major Event for City," **The (Washington) Missourian**, 24 May 1989, page 10; Ralph Gregory, **A History of Washington, Missouri**, pages 81-82, 88-89; Mari-Anne Messmann, "Desire, Determination Bridge the Missouri," **Washington Missourian**, 6 February 1975; "Washington Bridge Was 38 Years Old Monday," **Washington Missourian**, 30 May 1974; "Building of Bridge Major Event for City," **Washington Missourian**, 24 May 1989; "Work on Washington Bridge to Begin Soon," **Hermann Advertiser-Courier**, 15 March 1929; field inspection by Clayton Fraser, 29 June 1994.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Camp Creek Bridge
MHTD: 004001.3

WARR03

DATE(S) OF CONSTRUCTION
1894

LOCATION
Pin Oak Road over Camp Creek; S3/10, T48N, R3W
10.9 miles northwest of Warrenton; Warren County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 53)

CONDITION
fair

OWNER
Warren County

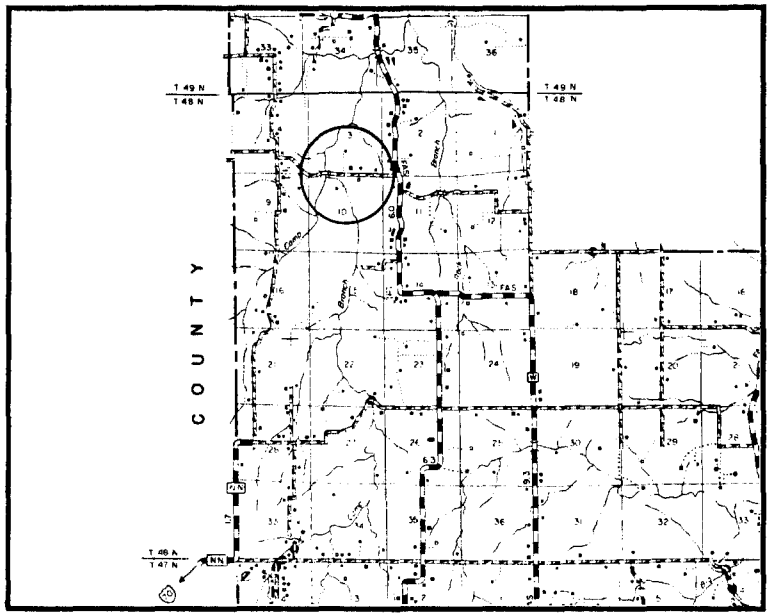
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span
span length:	70.0'	substructure:	stone masonry abutments; concrete pier
total length:	85.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	11.4'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped square eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

Meeting in the county seat of Warrenton, the Warren County Court in December 1893 received a citizens' petition for a permanent bridge in Camp Creek Township. Located in the northern part of the county, the structure would carry a county road across Camp Creek. The judges granted the petition in February and later that spring awarded a contract to Farnsworth and Blodgett of Kansas City to fabricate and erect a medium-span truss on stone masonry abutments and a steel cylinder pier. The contractors completed the bridge in August 1894 for $1250.00. The truss carried traffic for twenty years before the west abutment collapsed, dropping the span into the creek. Declaring an emergency, the county hired St. Louis contractors Miller and Borcherding to construct a new concrete pier and re-erect the truss with new steel stringers for $1300.00. Once repaired, the Camp Creek Bridge has functioned in place since, with no other alterations of note.

Although altered somewhat in 1914, this crossing of Camp Creek has now functioned in its current condition for more than 75 years. The bridge is a well-documented, typical example of a pin-connected Pratt pony truss - a mainstay design for short-span crossings in the years around the turn of the century.

NAME(S) OF STRUCTURE
Camp Creek 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 No. 004001.3; Various papers relating to "Bridge No. 19", including report to the court from Benjamin Frick (21 October 1914) and original contract and construction drawings; Warren County Court Record G: page 57 (29 August 1893), page 86 (2 December 1893), page 137 (1 September 1894), page 161 (31 December 1894) - all located at Warren County Courthouse, Warrenton MO; field inspection by Clayton Fraser, 18 October 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Steinhagen Bridge
MHTD: 023000.5

WARR05

DATE(S) OF CONSTRUCTION
1896

LOCATION
County Road 23 over Big Creek; S34, T46N, R2W
5.5 miles north of Warrenton; Warren County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 48)

CONDITION
fair

OWNER
Warren County

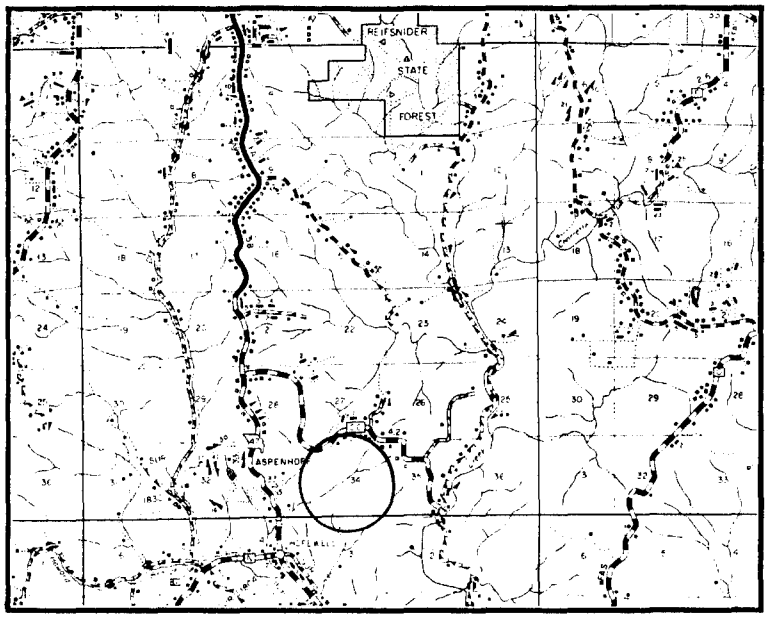
span number:	2	superstructure:	steel, 5-panel, pin-connected Pratt through truss
span length:	85.0'	substructure:	stone abutments; concrete-filled steel cylinder pier
total length:	170.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	12.6'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 punched square eyebars at the hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles

Early in 1896 the Warren County Court contracted with local contractor J.S. McCleary and Sons to erect a substantial bridge over Big Creek north of the small settlement of Steinhagen. Located on the Warrenton - Hawk Point Road (the major route north from the county seat), the structure consisted of two short-span Pratt through trusses, supported by stone masonry abutments and a center concrete-filled steel cylinder pier. McCleary subcontracted with the Stupp Brothers Bridge and Iron Company of St. Louis to fabricate the pin-connected trusses, which McCleary assembled in August 1896. The Steinhagen Bridge has survived in unaltered condition, although since the subsequent construction of State Highway 47, it has carried only intermittent traffic.

Thousands of Pratt trusses were erected throughout Missouri in the late 19th and early 20th centuries. Marketed by virtually all of the in-state and regional bridge companies, this versatile structural type was used overwhelmingly by the counties for short- and medium-span applications. With typical dimensions and detailing, the Steinhagen Bridge typifies this statewide bridge building trend.

NAME(S) OF STRUCTURE
Steinhagen 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 No. 023000.5; Warren County Court Record G: pages 335-36 (8 August 1896), page 341 (8 September 1896); County Court Record I: page 557 (8 November 1907), page 575 (6 February 1908 - located at Warren County Courthouse, Warrenton MO; field inspection by Clayton Fraser, 18 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Indian Camp Creek Bridge
MHTD: 026000.6

WARR06

DATE(S) OF CONSTRUCTION
1918

LOCATION
North Stringtown Road over Indian Camp Creek; S2, T47N, R1W
3.2 miles northeast of Wright City; Warren County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION
fair

OWNER
Warren County

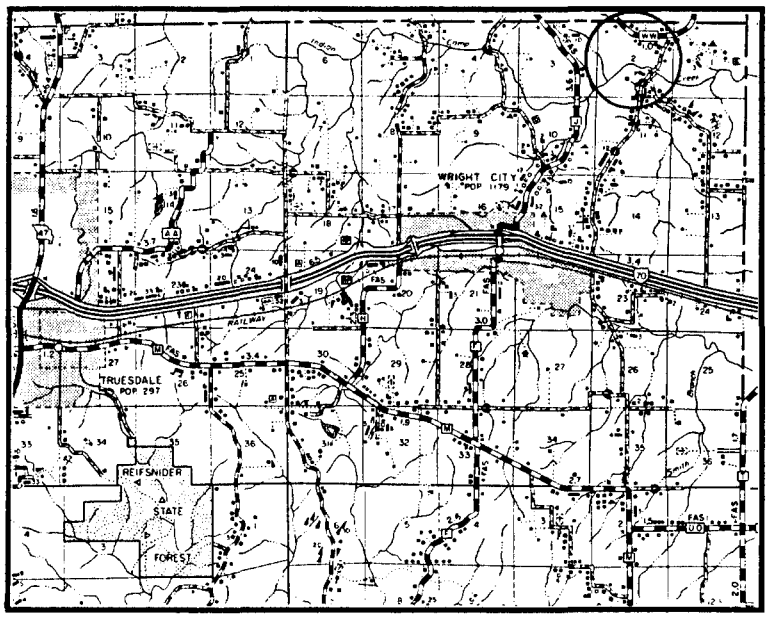
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss, with concrete slab approach spans
span length:	80.0'	substructure:	concrete abutments and piers
total length:	105.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	13.6'	other features:	upper chord and inclined end posts: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles (steel pipe guardrails at approaches); bridge plate: **Class A bridge / 1918**

This bridge carries North Stringtown Road over Indian Camp Creek three miles northeast of Wright City, near the Lincoln County line. A bridge plate reveals that the five-panel, rigid-connected Camelback pony truss was erected in 1918. Drawings for the structure, prepared by County Highway Engineer Benjamin Frick, were based on "Class A" Missouri Steel Specifications, developed in 1911. Frick also prepared plans for the substructure - comprised of concrete abutments on spread footers. Steel for the truss was delivered to Wright City by the Illinois Steel Bridge Company of Jacksonville, Illinois. Illinois Bridge was paid $1750.00 for the steel, while the East Saint Louis Bridge Company and the Missouri Bridge and Iron Company were both paid smaller amounts for bridge materials. Once all the material had been received, the structure was erected by a county bridge crew. The total cost came to $5342.58. Somewhat unusual, the truss has been painted yellow. Today, the bridge continues to carry vehicular traffic in its rural northeast Warren County location.

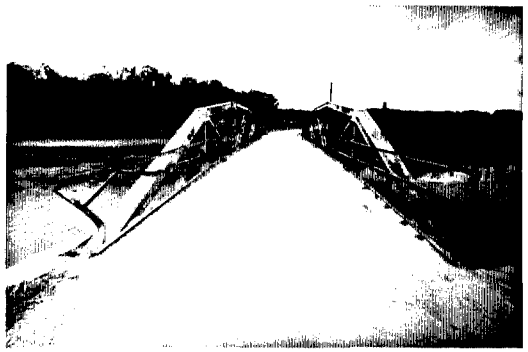
Rigid-connected pony trusses - primarily of the Warren configuration - were built by the thousands throughout Missouri in the 1910s and 20s. Rigid-connected Camelback ponies were built far less often, however, and relatively few remain in place today. Less than 20 of these unusual bridges remain in use on Missouri's roadways. As a well-preserved example of an uncommon truss type, built at the height of riveted truss construction, the Indian Camp Creek Bridge is a noteworthy structural anomaly.

NAME(S) OF STRUCTURE
Indian Camp Creek 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 No. 026000.6; Warren County bridge records: original drawing by Benjamin Frick and various papers pertaining to bridge - located at Warren County Courthouse, Warrenton MO; field inspection by Clayton Fraser, 18 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hollman Ford Bridge
MHTD: 028000.2

WARR07

DATE(S) OF CONSTRUCTION
1906

LOCATION
Bell Road over Indian Camp Creek; S5, T47N, R1W
3.0 miles northwest of Warrenton; Warren County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 46)

CONDITION
fair

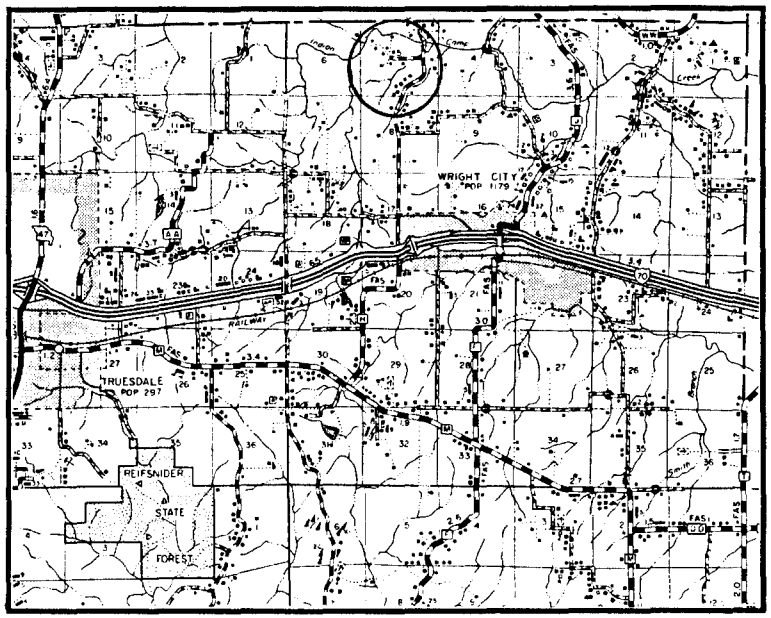
OWNER
Warren County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss, with 1 steel stringer approach span
span length:	65.0'	substructure:	concrete abutment at north end; steel pile bent abutment at south end; concrete-filled steel cylinder piers
total length:	81.0'		
roadway wdt.:	13.0'	floor/decking:	timber deck over steel stringers
		other features:	upper chord and inclined end post: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

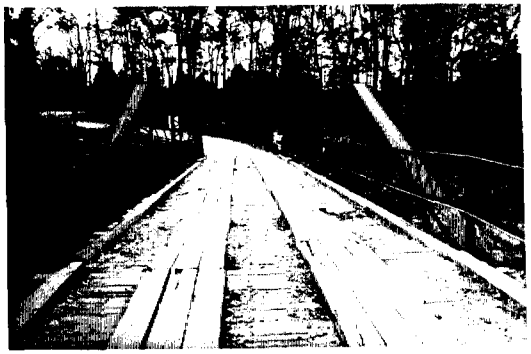
In November 1904 W.H. Bollinger petitioned the Warren County Court for a new bridge at Hollman Ford near Wright City, saying, "Owing to the location of the ford of the creek and the hilly and broken condition of the surrounding or adjoining lands, it is very hard to secure a site suitable for the erection and maintenance of a bridge at this point." The court in February 1905 instructed county surveyor A.W. Wehmeyer to locate and design the structure. Wehmeyer delineated a medium-span, pinned Pratt pony truss, supported high above Indian Camp Creek by concrete and steel abutments with steel cylinder piers between the truss and a single steel stringer approach span. After advertising for competitive bids, Wehmeyer awarded a construction contract to Stupp Brothers Bridge and Iron Company in September, but the judges nullified the contract and ordered him to try again. Two months later Wehmeyer contracted with O.W. Childs, but again the court intervened, rejecting the contract. Finally, in December the surveyor re-hired Stupp Brothers to build the bridge. The St. Louis contractor completed the structure by the May 1st contract deadline. Total cost: $999.00 (some $550.00 less than the company's original bid). The Hollman Ford Bridge received steel replacement stringers two years later, but has otherwise remained intact. It is a typical example of a common truss configuration, with standard detailing, unremarkable dimensions and an average degree of physical integrity.

NAME(S) OF STRUCTURE
Hollman 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 No. 028000.2; Warren County Court Record I: page 140 (18 November 1904), page 167 (10 February 1905), page 256 (9 August 1905), page 273 (5 September 1905), page 294 (10 November 1905), page 304 (7 December 1905), page 66 (31 December 1908) - located at Warren County Courthouse, Warrenton MO; field inspection by Clayton Fraser, 18 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
West Point Bridge
MHTD: 133000.2

WARR12

DATE(S) OF CONSTRUCTION
1905

LOCATION
County Road 133 over Charrette Creek; S22, T45N, R2W
1.0 mile north of Peers; Warren County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION
good

OWNER
Warren County

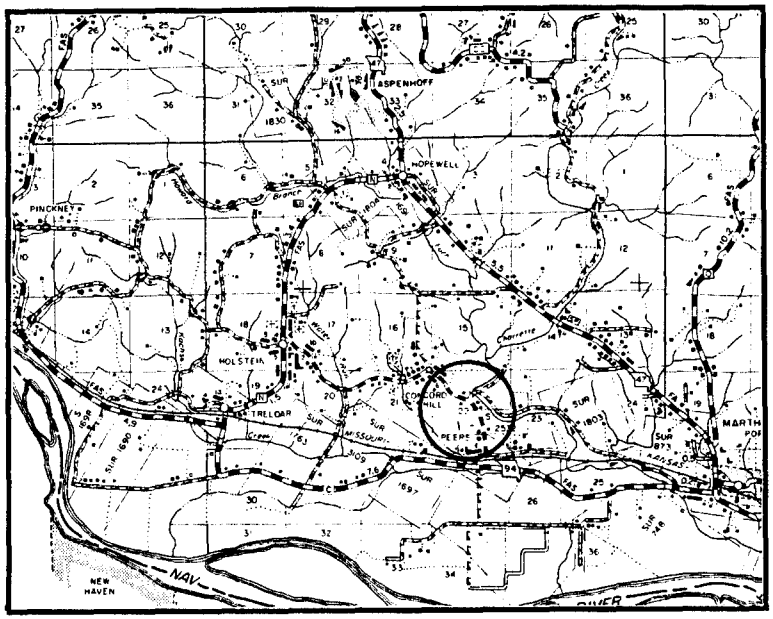
span number:	1	superstructure:	steel, 7-panel, pin-connected Pratt through truss; pin-connected Pratt pony approach span
span length:	124.0'	substructure:	concrete abutments; concrete-filled steel cylinder piers
total length:	186.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.7'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: square eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; floor beam: I-beam, field-bolted to vertical; guardrail: steel lattice

After receiving several petitions from H.A. Schoppenhorst and others for a permanent bridge over Charrette Creek, the Warren County Court in November 1904 ordered county surveyor A.W. Wehmeyer to survey the site and prepare plans and specifications for the structure. Located on the Marthasville - Holstein Road, three miles north of the Missouri River, the bridge that Wehmeyer engineered consisted of a medium-span Pratt through truss with a single pony truss approach span on the east. Wehmeyer advertised for competitive bids in February 1905 and two months later awarded the construction contract for $2625.00 to the Stupp Brothers Bridge and Iron Company. A Stupp crew began excavation for the concrete abutments soon thereafter. Using steel components milled by Lackawanna Steel Company of Pittsburgh, the St. Louis contractor completed the pin-connected trusses by early November. Called the West Point Bridge because of its position on a tight westward curve of the stream, the structure has carried traffic since 1905 in essentially unaltered condition.

The West Point Bridge is a well-preserved and well-documented example of a mainstay structural type–the Pratt through truss. The structure accrues additional significance due to its intact pinned Pratt pony truss approach span.

NAME(S) OF STRUCTURE
West Point 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 No. 133000.2; Warren County Court Record I: page 97 (1 August 1904), page 132 (16 November 1904), page 160 (8 February 1905), page 189 (6 April 1905), page 291 (9 November 1905), page 294 (10 November 1905) - located at Warren County Courthouse, Warrenton MO; field inspection by Clayton Fraser, 18 October 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	3 February 1992