BATES COUNTY

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

Inv. No.	MHTD	Bridge Name	Description	
*BATE01	G 864	Miami Creek Bridge	1-100'	**riveted Pratt through truss**
			1925	McNerny and Hallett
*BATE02	T 279R	Rich Hill Bridge	1-100'	**riveted polyg. Warren pony truss**
			1935	Otto W. Knutson
*BATE03	T 280	Marais des Cygnes R. Bridge	1-110'	**riveted polyg. Warren pony truss**
			1935	Otto W. Knutson
BATE04	023001.5	Mormon Fork Bridge	1- 70'	pinned Pratt pony truss
			c1905	
*BATE05	032001.3	Mormon Fork Bridge	1- 55'	pinned Pratt pony truss
			1884	Missouri Valley B&I Company
*BATE06	041002.1	Mormon Fork Bridge	1- 55'	pinned Pratt pony truss
			1886	Missouri Valley B&I Company
*BATE07	081000.8	Mormon Fork Bridge	1- 45'	pinned Pratt half-hip pony truss
			1911	Vincennes Bridge Company
*BATE08	104000.2	Elk Fork Bridge	1- 60'	pinned Pratt half hip pony
			c1910	Vincennes Bridge Company
BATE09	124000.6	Little Deer Creek Bridge	1- 50'	pinned Pratt pony truss
			1901	J.W. Hoover, Kansas City
BATE10	169000.7	Miami Ditch Bridge	1- 38'	**2-angle Warren pony truss**
			c1925	
*BATE11	187002.7	Miami Creek Bridge	1- 80'	**pinned Pratt through truss**
			1904	Midland Bridge Company
BATE12	226000.3	Mound Creek Bridge	1- 30'	steel stringer
			1910	Western Bridge Company
*BATE13	248000.1	Johnstown Bridge	1- 70'	pinned Pratt pony truss
			1899	Kansas City Bridge Company
BATE14	263001.3	Bones Branch Bridge	2- 15'	concrete slab
			1908	county work force
BATE15	310000.3	East Mound Creek Bridge	1- 40'	pinned Pratt pony truss
			1900	
*BATE16	316001.6	Bones Branch Bridge	2- 60'	pinned Pratt half-hip pony truss
			1911	Vincennes Bridge Company
*BATE17	344001.7	Gillum Creek Bridge		(replaced)
*BATE18	356001.4	Bridge	1-150'	**pinned Parker through truss**
			1908	Kansas City Bridge Company
BATE19	359000.1	Bones Branch Bridge	1- 30'	pinned Pratt half-hip pony truss
			c1910	
*BATE20	363R02.3	Miami Creek Bridge	1-100'	**pinned Pratt through truss**
			1906	Kansas City Bridge Company
*BATE21	365000.3	Bell's Mill Bridge		(replaced)
*BATE22	419000.5	Mulberry Creek Bridge	1- 70'	pinned Pratt pony truss
			1911	Vincennes Bridge Company

BATES COUNTY

INCLUDED (cont.):

*BATE23	435002.1	Mulberry Creek Bridge	1- 60'	pinned Pratt pony truss
			1886	Missouri Valley B&I Company
*BATE24	460003.1	Bridge	1-100'	**pinned Pratt through truss**
			1908	Kansas City Bridge Company
*BATE25	460004.1	Haymakers Ford Bridge		(replaced)
BATE26	466000.1	Possum Branch Bridge	1- 30'	riveted Pratt half-hip pony truss
			1900	Pittsburgh Bridge Company
BATE27	484003.8	Panther Creek Bridge	1- 30'	steel stringer
			1903	Midland Bridge Company
BATE28	495001.6	South Double Branch Bridge	1- 30'	steel stringer
			1903	Midland Bridge Company
*BATE29	496001.4	Bridge	1-100'	**pinned Pratt through truss**
			1908	Kansas City Bridge Company
BATE30	496001.7	Soap Creek Bridge	1- 30'	riveted Pratt half-hip pony truss
			1908	Kansas City Bridge Company
*BATE31	501002.2	Walnut Creek Bridge	1- 75'	pinned Pratt pony truss
			1899	Kansas City Bridge Company
*BATE32	509003.0	Walnut Creek Bridge	1- 76'	pinned Pratt pony truss
			1899	J.B. March, Rich Hill MO
*BATE33	547001.0	Bridge		(replaced)
*BATE34	547002.6	Water Works Bridge	1-110'	**pinned Parker through truss**
			1907	Kansas City Bridge Company
*BATE35	547003.3	Marais des Cygnes R. Bridge	1-125'	**pinned Pratt through truss**
			c1910	
*BATE36	547004.0	Bridge	1-100'	**pinned Pratt through truss**
			1908	Kansas City Bridge Company
*BATE37	576002.5	Schell City Bridge	1-175'	**pinned Parker through truss**
			1900	A.M. Blodgett, Kansas City
BATE38	624000.2	Sycamore Branch Bridge	1- 40'	pinned Pratt pony truss
			c1910	
*BATE39	628000.9	Camp Branch Bridge	1- 50'	pinned Pratt pony truss
			1898	Youngstown Bridge Company
*BATE40	648000.3	Papinville Bridge	1-116'	**pinned Pratt through truss**
			1884	Kansas City B&I Company
*BATE41	648001.2	Bridge	1-100'	**pinned Pratt through truss**
			1908	Kansas City Bridge Company
*BATE42	none	Elk Fork Bridge	1- 60'	pinned Pratt pony truss
			1884	Missouri Valley B&I Company

EXCLUDED:

Pratt pony truss
088003.4 132001.0 448002.1

Warren pony truss
H 120 034001.2 088000.9 147000.5 181000.6 240001.5 269001.0
298000.8 309001.1 311000.2 399000.6 497000.4 589000.5 598001.2
599000.8 644001.1 647003.5 663000.8

BATES COUNTY

EXCLUDED (cont.):

Steel stringer / girder

H 258R1	H 400R1	J 597	L 323	S 373	T 32	T 33
T 263	T 278	T 449	T 451	W 536	X 87	X 89
001000.8	018001.4	018002.1	036002.2	055R01.2	079004.6	087000.2088001.3
096000.7	123000.6	125000.3	126R01.2	138000.3	139000.3	144000.9147000.2
154002.3	157001.1	167003.9	167005.0	180002.0	196000.5	243000.9249000.1
259002.6	263000.2	266000.6	268000.7	272001.2	292002.0	303R01.3311000.3
312000.7	318000.9	382000.3	387000.1	390001.5	402000.5	413001.5417000.5
431000.3	431000.7	434R02.2	475002.9	485001.2	497001.5	498000.2499000.6
505000.5	505000.8	505001.7	526001.9	543001.7	544001.4	555002.7555003.3
601R01.5	615000.0	616000.1	619002.1	625002.2	627000.7	627000.8634000.2
654000.6	657000.9	663001.8				

Concrete girder

G 723	X 233	152000.8	214002.7	484000.3	595001.3	596000.4
607001.6						

Concrete slab

G 550	034001.4	040000.9	095000.6	271003.0	279000.3	291000.4291003.4
336000.7						

Concrete box culvert

H 261R	H 263	J 599	P 131	P 612	T 450	T 452
T 453	X 88					

Timber stringer

477000.8	665001.4

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	3	34	0	1	38
Excluded	27	105	0	0	132
	30	139	0	1	170 structures

Miami Creek Bridge

BATE01

GENERAL DATA

structure no.: G 864
county: Bates
city/town: 5.3 miles west of Butler
feature inters.: Miami Creek
cadastral grid: S24, T40N, R32W
highway route: State Highway 52
highway distr.: 7
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 5-panel, rigid-connected Pratt through truss, with two concrete deck girder approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 100.0'
total length: 187.0'
roadway width: 20.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel pipe guardrails

HISTORICAL DATA

erection date: 1924-25
erection cost: $19,452.87
designer: Missouri State Highway Department
fabricator : Illinois Steel Company, Chicago IL
contractor: McNerney & Hallett; Western Bridge Company, Chicago IL

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number G 864; Missouri Highway and Transportation Department Primary System Bridge Record, Book 1, located at Bridge Division, MHTD, Jefferson City MO; **Fourth Biennial Report of the Missouri State Highway Commission** (1923-24), page 137; **Fifth Biennial Report of the State Highway Commission of Missouri** (1925-26), page 158; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 38
evaluation: NRHP non-eligible (distinguished somewhat by its concrete girder approach spans, but still a typically configured example of a common highway truss type)

inventoried by: Clayton B. Fraser 19 December 1991

Rich Hill Bridge

BATE02

GENERAL DATA

structure no.: T 279R
county: Bates
city/town: Rich Hill
feature inters.: Bates County Drainage Ditch
cadastral grid: S4/9, T38N, R31W
highway route: State Supplementary Route B
highway distr.: 7
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 10-panel, rigid-connected Warren pony truss with polygonal upper chord; six steel stringer approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 100.0'
total length: 429.0'
roadway width: 20.0'
condition: good
alterations: none
floor/decking : concrete deck over steel stringers
other features: steel guardrails

HISTORICAL DATA

erection date: 1934-35
erection cost: $27,895.40
designer: Missouri State Highway Department
fabricator : Illinois Steel Company, Chicago IL
contractor: Otto W. Knutson

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number T 279R; Missouri Highway and Transportation Department Primary System Bridge Record, Book 1, located at Bridge Division, MHTD, Jefferson City MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 47
evaluation: NRHP non-eligible (typically configured example of a MSHD long-span truss design, substantially altered)

inventoried by: Clayton B. Fraser 19 December 1991

Marais des Cygnes River Bridge

BATE03

GENERAL DATA

structure no.: T 280
county: Bates

city/town: 4.6 miles east of Rich Hill
feature inters.: Marais des Cygnes River
cadastral grid: S1, T38N, R31W
highway route: State Supplementary Route B
highway distr.: 7
current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 10-panel, rigid-connected Warren pony truss with polygonal upper chords; three steel stringer approach spans
substructure: concrete abutments, wingwalls and piers

span number: 1
span length: 110.0'
total length: 264.0'
roadway width: 20.0'

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

HISTORICAL DATA

erection date: 1934-35
erection cost: $18,973.70
designer: Missouri State Highway Department
fabricator : Illinois Steel Company, Chicago IL
contractor: Otto W. Knutson

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number T 280; Bates County Court Record, Book 6: page 6 (9 January 1884) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 51
evaluation: NRHP possibly eligible (well-preserved example of MSHD long-span truss design)

inventoried by: Clayton B. Fraser 19 December 1991

Mormon Fork Bridge

BATE04

GENERAL DATA

structure no.:	023001.5	**city/town:**	6.4 miles northwest of Adrian
county:	Bates	**feature inters.:**	Mormon Fork
		cadastral grid:	S21/22, T42N, R32W
		highway route:	County Road 23
		highway distr.:	7
		current owner:	Bates County

STRUCTURAL DATA

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

span number:	1	**condition:**	fair
span length:	70.0'	**alterations:**	unknown
total length:	70.0'	**floor/decking :**	timber deck
roadway width:	14.0'	**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 023001.5.

sign. rating: 29
evaluation: NRHP non-eligible (typical example of common truss type)

inventoried by: Clayton B. Fraser 19 December 1991

Mormon Fork Bridge

BATE05

GENERAL DATA

structure no.: 032001.3
county: Bates

city/town: 3.0 miles northwest of Adrian
feature inters.: Mormon Fork
cadastral grid: S25, T42N, R32W / S30, T42N, R31W
highway route: County Road 32
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: wrought iron, 4-panel, pin-connected Pratt pony truss, with steel stringer approach span on south end
substructure: stone masonry abutments and pier

span number: 1
span length: 55.0'
total length: 78.0'
roadway width: 12.5'

condition: fair
alterations: steel pile bent pier added at south end of truss
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 punched rectangular eyebars; vertical: I-beam, with star iron outriders; diagonal: 2 punched rectangular eyebars; counter: one round eye-rod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pin; guardrail: removed on main span, steel lattice at approach

HISTORICAL DATA

erection date: 1884
erection cost: $2225.00 (for two iron bridges)
designer: Missouri Valley Bridge and Iron Company, Leavenworth KS
fabricator : Missouri Valley Bridge and Iron Company, Leavenworth KS; Carnegie Iron Company, Pittsburgh PA
contractor: Missouri Valley Bridge and Iron Company, Leavenworth KS

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 032001.3; Bates County Court Record, Book 6: page 116 (2 September 1884) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 49
evaluation: NRHP possibly eligible (well-preserved, early example of mainstay structural type)

inventoried by: Clayton B. Fraser 30 December 1991

Mormon Fork Bridge

BATE06

GENERAL DATA

structure no.: 041002.1
county: Bates
city/town: 1.8 miles north of Crescent Hill
feature inters.: Mormon Fork
cadastral grid: S16, T42N, R31W
highway route: County Road 41
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: wrought iron, 4-panel, pin-connected Pratt pony truss
substructure: stone masonry abutments

span number: 1
span length: 55.0'
total length: 55.0'
roadway width: 12.2'
condition: fair
alterations: steel pile bent pier added to one abutment
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: I-beam (2 punched rectangular eyebars at the hip), with star outriders; 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; endpost-mounted builder's plate: **MO VALLEY / BRIDGE & IRON WORKS / LEAVENWORTH KANS / 1886**

HISTORICAL DATA

erection date: 1886
erection cost: $450.00
designer: Missouri Valley Bridge and Iron Company, Leavenworth KS
fabricator : Missouri Valley Bridge and Iron Company, Leavenworth KS
contractor: Missouri Valley Bridge and Iron Company, Leavenworth KS

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 041002.1; contract between Bates County and Missouri Valley Bridge and Iron Company, in book titled "Bridge Plans, Bates County," 12 June 1886 - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 51
evaluation: NRHP possibly eligible (well-preserved early example of pinned truss construction)

inventoried by: Clayton B. Fraser 30 December 1991

Mormon Fork Bridge

BATE07

GENERAL DATA

structure no.:	081000.8	**city/town:**	2.8 miles northwest of Burdett
county:	Bates	**feature inters.:**	Mormon Fork
		cadastral grid:	S1/12, T42N, R33W
		highway route:	County Road 81
		highway distr.:	7
		current owner:	Bates County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt half-hip pony truss, with steel stringer approach span

substructure: concrete abutments, wingwalls and pier

span number:	1	**condition:**	good
span length:	45.0'	**alterations:**	none
total length:	64.0'	**floor/decking :**	concrete deck over steel stringers
roadway width:	14.5'	**other features:**	steel pipe guardrails; endpost-mounted builder's plate: **BUILT BY THE VINCENNES BRIDGE CO. / VINCENNES IND**

HISTORICAL DATA

erection date: 1909-11

erection cost: $1279.00 (contract amount)

designer: Vincennes Bridge Company, Vincennes IN

fabricator : Vincennes Bridge Company, Vincennes IN

contractor: Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 081000.8; Bates County Court Record, Book 12: page 226 (2 February 1909), page 359 (3 August 1909), page 372 (26 August 1909), page 374 (27 August 1909), pages 378-79 (7 September 1909); Book 13: pages 10-11 (2 May 1910), page 112 (16 February 1911) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 41

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 30 December 1991

Elk Fork Bridge

BATE08

GENERAL DATA

structure no.: 104000.2
county: Bates

city/town: 4.0 miles northeast of Altona
feature inters.: Elk Fork
cadastral grid: S18/19, T42N, R29W
highway route: County Road 104
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

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

span number: 1
span length: 60.0'
total length: 62.0'
roadway width: 14.1'

condition: fair
alterations: none
floor/decking : timber deck
other features: steel pipe guardrails; endpost-mounted builder's plate: **BUILT BY THE VINCENNES BRIDGE CO. / VINCENNES IND.**

HISTORICAL DATA

erection date: c1910
erection cost: unknown
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN; Cambria Steel Company, Pittsburgh PA
contractor: Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 104000.2; field inspection by Clayton Fraser, 1 June 1991.

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

inventoried by: Clayton B. Fraser 30 December 1991

Little Deer Creek Bridge

BATE09

GENERAL DATA

structure no.: 124000.6
county: Bates

city/town: 4.2 miles northeast of Adrian
feature inters.: Little Deer Creek
cadastral grid: S30/31, T42N, R30W
highway route: County Road 124
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

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

span number: 1
span length: 50.0'
total length: 52.0'
roadway width: 13.8'

condition: fair
alterations: unknown
floor/decking : timber deck
other features: no guardrails

HISTORICAL DATA

erection date: 1901
erection cost: $289.00 (superstructure cost)
designer: unknown
fabricator : unknown
contractor: J.W. Hoover, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 124000.6; Bates County Court Record, Book 10: page 220 (9 March 1901), page 235 (19 April 1901), page 263 (8 May 1901) - located at Bates County Courthouse, Butler MO.

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

inventoried by: Clayton B. Fraser 30 December 1991

Miami Ditch Bridge

BATE10

GENERAL DATA

structure no.: 169000.7
county: Bates

city/town: 3.4 miles east of Amsterdam
feature inters.: Miami Ditch
cadastral grid: S24, T41N, R33W
highway route: County Road 169
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 3-panel, rigid-connected two-angle Warren pony truss
substructure: concrete abutments and wingwalls

span number: 1
span length: 38.0'
total length: 38.0'
roadway width: 14.2'

condition: fair
alterations: unknown
floor/decking : concrete deck over steel stringers
other features: 2-angle upper chords and inclined end posts

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 169000.7

sign. rating: 39
evaluation: NRHP non-eligible (short-span example of an uncommon structural type, lacking in documentation)

inventoried by: Clayton B. Fraser 30 December 1991

Miami Creek Bridge

BATE11

GENERAL DATA

structure no.: 187002.7
county: Bates
city/town: 6.7 miles northwest of Butler
feature inters.: Miami Creek
cadastral grid: S10, T40N, R32W
highway route: County Road 187
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt through truss
substructure: stone masonry abutments

span number: 1
span length: 80.0'
total length: 82.0'
roadway width: 14.2'
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 punched rectangular eyebars; vertical: two channels with lacing (2 angles at the hip); diagonal: 2 square eyebars; counter: 1 square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with double lacing; portal strut: lattice with curved knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle; endpost-mounted builder's plate: **1903 / THE MIDLAND BRIDGE CO. / FREYGANG & TROCON / PROPRIETORS / KANSAS CITY, MO.**

HISTORICAL DATA

erection date: 1903-04
erection cost: superstructure: $1140.00; substructure: $950.00
designer: Midland Bridge Company, Kansas City MO
fabricator : Midland Bridge Company, Kansas City MO;
Carnegie Steel Company, Pittsburgh PA
contractor: Midland Bridge Company, Kansas City MO (superstructure);
Brown and Moore (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 187002.7; Bates County Court Record, Book 10: page 406 (5 June 1902), page 515 (7 February 1903), pages 518-519 (2 March 1903), page 606 (7 October 1903), page 627 (8 December 1903); Book 11: page 15 (1 February 1904), page 34 (7 March 1904) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 45
evaluation: NRHP non-eligible (typically configured, well-preserved example of common pinned truss type)

inventoried by: Clayton B. Fraser 30 December 1991

Mound Creek Bridge

BATE12

GENERAL DATA

structure no.: 226000.3
county: Bates
city/town: 7.3 miles southeast of Adrian
feature inters.: Mound Creek
cadastral grid: S21/22, T41N, R30W
highway route: County Road 226
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel stringer
substructure: unknown

span number: 1
span length: 30.0'
total length: 30.0'
roadway width: 13.0'
condition: fair
alterations: unknown
floor/decking : unknown
other features: unknown

HISTORICAL DATA

erection date: 1910
erection cost: $460.00
designer: Western Bridge Company, Harrisonville MO
fabricator : Western Bridge Company, Harrisonville MO
contractor: Western Bridge Company, Harrisonville MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 226000.3; Bates County Court Record, Book 12: page 195 (8 December 1908); Book 13: page 13 (6 June 1910), page 62 (26 September 1910) - located at Bates County Courthouse, Butler MO.

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

inventoried by: Clayton B. Fraser 30 December 1991

Johnstown Bridge

BATE13

GENERAL DATA

structure no.: 248000.1
county: Bates
city/town: Johnstown
feature inters.: Deep Water Creek
cadastral grid: S36, T41N, R29W
highway route: County Road 248
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: stone masonry abutments

span number: 1
span length: 70.0'
total length: 72.0'
roadway width: 14.0'
condition: fair
alterations: none
floor/decking : asphalt over corrugated steel deck, with 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 double 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; endpost-mounted builder's plate: **BUILT BY / KANSAS CITY BRIDGE CO. / KANSAS CITY MO.**

HISTORICAL DATA

erection date: 1899
erection cost: superstructure: $454.00; substructure: $385.75
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 Number 248000.1; Bates County Court Record, Book 7: page 580 (22 December 1891); Book 9: page 395 (4 October 1898), page 529 (5 May 1899), page 539 (5 June 1899), page 547 (7 June 1899) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 50
evaluation: NRHP possibly eligible (well-preserved, 19th century example of mainstay structural type)

inventoried by: Clayton B. Fraser 30 December 1991

Bones Branch Bridge

BATE14

GENERAL DATA

structure no.: 263001.3
county: Bates
city/town: 3.3 miles south of Adrian
feature inters.: Bones Branch
cadastral grid: S16/21, T41N, R31W
highway route: County Road 263
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: concrete slab
substructure: concrete abutments and pier

span number: 2
span length: 15.0'
total length: 30.0'
roadway width: 16.1'
condition: fair
alterations: unknown
floor/decking : concrete deck
other features: unknown

HISTORICAL DATA

erection date: 1908
erection cost: unknown
designer: unknown
fabricator : none
contractor: county work force

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 263001.3; Bates County Court Record, Book 12: page 138 (1 September 1908) - located at Bates County Courthouse, Butler MO.

sign. rating: 34
evaluation: NRHP non-eligible (undistinguished, small-scale structure, lacking technological significance)

inventoried by: Clayton B. Fraser 30 December 1991

East Mound Creek Bridge

BATE15

GENERAL DATA

structure no.:	310000.3	**city/town:**	2.8 miles northeast of Butler
county:	Bates	**feature inters.:**	East Mound Creek
		cadastral grid:	S7/18, T40N, R30W
		highway route:	County Road 31
		highway distr.:	7
		current owner:	Bates County

STRUCTURAL DATA

superstructure: steel, 3-panel, pin-connected Pratt pony truss; steel stringer approach spans

substructure: steel pile bent abutments and piers; timber back- and wingwalls

span number:	1	**condition:**	fair
span length:	40.0'	**alterations:**	unknown
total length:	68.0'	**floor/decking :**	timber deck
roadway width:	14.0'	**other features:**	steel guardrails

HISTORICAL DATA

erection date: 1900
erection cost: unknown
designer: unknown
fabricator : unknown
contractor: unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 310000.3; Bates County Court Record, Book 10: page 19 (25 April 1900) - located at Bates County Courthouse, Butler MO.

sign. rating: 31
evaluation: NRHP non-eligible (inadequately documented example of a common structural type)

inventoried by: Clayton B. Fraser 30 December 1991

Bones Branch Bridge

BATE16

GENERAL DATA

structure no.: 316001.6
county: Bates

city/town: 4.0 miles west of Butler
feature inters.: Bones Branch
cadastral grid: S18, T40N, R31W
highway route: County Road 316
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 3- and 4-panel, pin-connected Pratt half-hip pony truss
substructure: concrete abutments, wingwalls and pier

span number: 2
span length: 60.0'
total length: 108.0'
roadway width: 13.9'

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, with 1 angle outrider; diagonal: 1-2 square eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: steel pipe; builder's plate: **BUILT BY THE / VINCENNES BRIDGE CO. / VINCENNES IND.**

HISTORICAL DATA

erection date: 1911
erection cost: $1699.00
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN; Cambria Steel Company, Pittsburgh PA
contractor: Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 316001.6; Bates County Court Record, Book 11: page 396 (1 October 1906); Book 12: page 342 (8 June 1909), page 372 (26 August 1909), pages 378-379 (7 September 1909); Book 13: pages 10-11 (2 May 1910), page 14 (7 June 1910), page 49 (1 September 1910), page 112 (16 February 1911) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 46
evaluation: NRHP non-eligible (standard example of a mainstay structural type, slightly longer than average)

inventoried by: Clayton B. Fraser 30 December 1991

Bridge

BATE18

GENERAL DATA

structure no.: 356001.4
county: Bates

city/town: 3.7 miles northeast of Foster
feature inters.: Bates County Drainage Ditch
cadastral grid: S9, T39N, R32W
highway route: County Road 356
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 9-panel, pin-connected Parker through truss, with pin-connected Pratt bedstead and through girder approach spans
substructure: concrete abutments and pier; welded steel pile bent piers

span number: 1
span length: 150.0'
total length: 272.0'
roadway width: 13.7'

condition: fair
alterations: substructure replaced
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 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: two punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles, braced; portal strut: A-frame; floor beam: I-beam, field bolted to vertical; guardrail: steel channel and pipe

HISTORICAL DATA

erection date: 1907-08
erection cost: unknown
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 Number 356001.4; Bates County Court Record, Book 11: page 219 (4 May 1905), page 367 (24 July 1906), page 418 (3 December 1906), page 587 (8 October 1907), page 600 (6 November 1907); Book 12: page 18 (8 January 1908), page 36 (4 February 1908) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

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

inventoried by: Clayton B. Fraser 31 December 1991

Bones Branch Bridge

BATE19

GENERAL DATA

structure no.: 359000.1
county: Bates
city/town: 4.8 miles southwest of Butler
feature inters.: Bones Branch
cadastral grid: S36, T40N, R32W
highway route: County Road 359
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, pin-connected Pratt half-hip pony truss
substructure: concrete abutments

span number: 1
span length: 30.0'
total length: 32.0'
roadway width: 13.9'
condition: fair
alterations: unknown
floor/decking : timber deck
other features: unknown

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 359000.1.

sign. rating: 20
evaluation: NRHP non-eligible (undocumented, short-span example of an exceedingly common structural type)

inventoried by: Clayton B. Fraser 31 December 1991

Miami Creek Bridge

BATE20

GENERAL DATA

structure no.: 363R02.3
county: Bates

city/town: 3.8 miles southwest of Butler
feature inters.: Miami Creek
cadastral grid: S31, T40N, R31W
highway route: County Road 363
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach span at each end
substructure: concrete abutments; concrete-filled steel cylinder piers

span number: 1
span length: 100.0'
total length: 135.0'
roadway width: 14.0'

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 (2 square eyebars at hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: lattice with curved knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: two steel pipes

HISTORICAL DATA

erection date: 1906
erection cost: $3600.00
designer: Kansas City Bridge Company, Kansas City MO
fabricator : Kansas City Bridge Company, Kansas City MO; Illinois Steel Company, Chicago IL
contractor: Kansas City Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 363R02.3; Bates County Court Record, Book 11: page 351 (29 May 1906), page 358 (19 June 1906), page 359 (20 June 1906) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 43
evaluation: NRHP non-eligible (typical example of pinned Pratt through truss construction)

inventoried by: Clayton B. Fraser 31 December 1991

Mulberry Creek Bridge

BATE22

GENERAL DATA

structure no.: 419000.5
county: Bates
city/town: 1.5 miles northeast of Amoret
feature inters.: Mulberry Creek
cadastral grid: S22, T40N, R33W
highway route: County Road 419
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

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

span number: 1
span length: 70.0'
total length: 72.0'
roadway width: 14.0'
condition: fair
alterations: none
floor/decking : concrete on corrugated steel, 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, with 2 angle outrider; diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 steel pipes

HISTORICAL DATA

erection date: 1909-11
erection cost: $1649.00
designer: Vincennes Bridge Company, Vincennes IN
fabricator : Vincennes Bridge Company, Vincennes IN
contractor: Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 419000.5; Bates County Court Record, Book 12: page 372 (26 August 1909), pages 378-79 (7 September 1909); Book 13: pages 10-11 (2 May 1910), page 112 (16 February 1911) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 42
evaluation: NRHP non-eligible (longer than average, but typically configured example of common structural type)

inventoried by: Clayton B. Fraser 31 December 1991

Mulberry Creek Bridge

BATE23

GENERAL DATA

structure no.: 435002.1
county: Bates

city/town: 2.8 miles southeast of Amoret
feature inters.: Mulberry Creek
cadastral grid: S26/36, T40N, R33W
highway route: County Road 435
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: wrought iron, 4-panel, pin-connected Pratt pony truss, with rolled through girder approach span
substructure: concrete abutments, wingwalls and pier

span number: 1
span length: 60.0'
total length: 90.0'
roadway width: 12.1'

condition: fair
alterations: truss moved
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: I-beam (2 punched rectangular eyebars at hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with unslotted turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pins; star iron outriders

HISTORICAL DATA

erection date: 1886
erection cost: unknown
designer: Missouri Valley Bridge and Iron Company, Leavenworth KS
fabricator : Missouri Valley Bridge and Iron Company, Leavenworth KS; Carnegie Iron Company, Pittsburgh PA
contractor: Missouri Valley Bridge and Iron Company, Leavenworth KS

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 435002.1.

sign. rating: 41
evaluation: NRHP non-eligible (early but largely undocumented example of a common structural configuration, moved to this location)

inventoried by: Clayton B. Fraser 31 December 1991

Bridge

BATE24

GENERAL DATA

structure no.: 460003.1
county: Bates
city/town: 3.1 miles northeast of Foster
feature inters.: Bates County Drainage Ditch
cadastral grid: S6, T39N, R32W
highway route: County Road 460
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

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

span number: 1
span length: 100.0'
total length: 126.9'
roadway width: 14.1'
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 punched rectangular eyebars; vertical: 2 channels with lacing (2 angles with batten plates at hip); diagonal: 2 punched rectangular eyebars; lateral bracing: round rod with threaded ends; strut: 2 angles, braced; portal strut: lattice with curved knee braces; floor beam: I-beam, field bolted to vertical; guardrail: 2 steel pipes

HISTORICAL DATA

erection date: 1907-08
erection cost: unknown
designer: Kansas City Bridge Company, Kansas City MO
fabricator : Kansas City Bridge Company, Kansas City MO; Illinois Steel Company, Chicago IL
contractor: Kansas City Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 460003.1; Bates County Court Record, Book 11: page 367 (24 July 1906), page 418 (3 December 1906), page 587 (8 October 1907), page 600 (6 November 1907); Book 12: page 18 (8 January 1908), page 36 (4 February 1908) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 43
evaluation: NRHP non-eligible (well-preserved, typically configured example of mainstay structural type)

inventoried by: Clayton B. Fraser 31 December 1991

Possum Branch Bridge

BATE26

GENERAL DATA

structure no.: 466000.1
county: Bates

city/town: 4.2 miles south of Butler
feature inters.: Possum Branch
cadastral grid: S4, T39N, R31W
highway route: County Road 466
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected Pratt half-hip pony truss
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 : timber deck
other features: steel angle guardrails

HISTORICAL DATA

erection date: 1900
erection cost: $487.75
designer: Pittsburgh Bridge Company, Pittsburgh PA
fabricator : Pittsburgh Bridge Company, Pittsburgh PA
contractor: Pittsburgh Bridge Company, Pittsburgh PA

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 466000.1; Bates County Court Record, Book 10: page 17 (9 February 1900), page 108 (9 July 1900) - located at Bates County Courthouse, Butler MO.

sign. rating: 36
evaluation: NRHP non-eligible (typically configured, short-span example of a common structural type)

inventoried by: Clayton B. Fraser 31 December 1991

Panther Creek Bridge

BATE27

GENERAL DATA

structure no.: 484003.8
county: Bates

city/town: 8.0 miles north of Rockville
feature inters.: Panther Creek
cadastral grid: S3, T39N, R29W
highway route: County Road 484
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel stringer
substructure: unknown

span number: 1
span length: 30.0'
total length: 30.0'
roadway width: 13.6'

condition: fair
alterations: unknown
floor/decking : unknown
other features: unknown

HISTORICAL DATA

erection date: 1903
erection cost: superstructure: $360.00; substructure: $249.33
designer: Midland Bridge Company, Kansas City MO
fabricator : Midland Bridge Company, Kansas City MO
contractor: Midland Bridge Company, Kansas City MO (superstructure); Cull Biggs (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 484003.8; Bates County Court Record, Book 10: page 542 (4 May 1903), page 556 (1 June 1903), page 562 (6 July 1903), page 596 (8 September 1903), page 606 (7 October 1903); Book 11: page 68 (8 June 1904) - located at Bates County Courthouse, Butler MO.

sign. rating: 36
evaluation: NRHP non-eligible (undistinguished example of an exceedingly common structural type)

inventoried by: Clayton B. Fraser 31 December 1991

South Double Branch Bridge

BATE28

GENERAL DATA

structure no.:	495001.6	**city/town:**	8.7 miles northeast of Rich Hill
county:	Bates	**feature inters.:**	South Double Branch
		cadastral grid:	S16, T39N, R30W
		highway route:	County Road 495
		highway distr.:	7
		current owner:	Bates County

STRUCTURAL DATA

superstructure: steel stringer
substructure: unknown

span number:	1	**condition:**	fair
span length:	30.0'	**alterations:**	unknown
total length:	30.0'	**floor/decking :**	unknown
roadway width:	13.8'	**other features:**	unknown

HISTORICAL DATA

erection date: 1903
erection cost: superstructure: $415.00; substructure: $276.25
designer: Midland Bridge Company, Kansas City MO
fabricator : Midland Bridge Company, Kansas City MO
contractor: Midland Bridge Company, Kansas City MO (superstructure); Brown & Moore (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 495001.6; Bates County Court Record, Book 10: pages 518-19 (2 March 1903), page 628 (9 December 1903) - located at Bates County Courthouse, Butler MO.

sign. rating: 36
evaluation: NRHP non-eligible (undistinguished example of an exceedingly common structural type)

inventoried by: Clayton B. Fraser 31 December 1991

Bridge

BATE29

GENERAL DATA

structure no.: 496001.4
county: Bates

city/town: 5.1 miles northeast of Rich Hill
feature inters.: branch of Miami Ditch
cadastral grid: S15, T39N, R31W
highway route: County Road 496
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with pin-connected Pratt half-hip pony truss approach span
substructure: concrete abutments and concrete-filled steel cylinder piers

span number: 1
span length: 100.0'
total length: 168.0'
roadway width: 13.8'

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 rectangular eyebars; vertical: 2 channels with lacing (2 angles with batten plates at hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with continuous plate; portal strut: lattice with curved knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: 2 steel pipes

HISTORICAL DATA

erection date: 1907-08
erection cost: unknown
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 Number 496001.4; Bates County Court Record, Book 11: page 367 (24 July 1906), page 418 (3 December 1906), page 544 (8 August 1907), page 587 (8 October 1907), page 615 (5 December 1907); Book 12: page 18 (8 January 1908), page 36 (4 February 1908), page 51 (4 March 1908) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

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 2 January 1992

Soap Creek Bridge

BATE30

GENERAL DATA

structure no.:	496001.7	**city/town:**	5.2 miles northeast of Rich Hill
county:	Bates	**feature inters.:**	Soap Creek
		cadastral grid:	S15, T39W, R31W
		highway route:	County Road 496
		highway distr.:	7
		current owner:	Bates County

STRUCTURAL DATA

superstructure: steel, 2-panel, rigid-connected Pratt half-hip pony truss
substructure: concrete abutments and wingwalls

span number:	1	**condition:**	fair
span length:	30.0'	**alterations:**	unknown
total length:	32.0'	**floor/decking :**	concrete deck
roadway width:	14.0'	**other features:**	steel pipe guardrails

HISTORICAL DATA

erection date: 1908
erection cost: $959.00
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 Number 496001.7; Bates County Court Record, Book 12: page 96 (6 June 1908), page 107 (8 July 1908), page 210 (5 January 1909) - located at Bates County Courthouse, Butler MO.

sign. rating: 36
evaluation: NRHP non-eligible (typically built example of a common structural type, used for short-span crossings)

inventoried by: Clayton B. Fraser 2 January 1992

Walnut Creek Bridge

BATE31

GENERAL DATA

structure no.: 501002.2
county: Bates

city/town: 2.5 miles southwest of Foster
feature inters.: Walnut Creek
cadastral grid: S16/21, T39N, R33W
highway route: County Road 501
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span at each end

substructure: stone masonry abutments with concrete vertical extensions; steel pile bent piers (paired sets of 2 channels with lacing, braced)

span number: 1
span length: 75.0'
total length: 104.0'
roadway width: 14.1'

condition: good
alterations: deck replaced; substructure altered
floor/decking : asphalt over corrugated steel, with 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 double 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 pin; guardrail: timber; endpost-mounted builder's plate: (broken) **BUIL... KANS... CIT... BRIDG... KANSAS... M...**

HISTORICAL DATA

erection date: 1899
erection cost: $925.00
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 Number 501002.2; Bates County Court Record, Book 9: page 441 (10 February 1899), page 469 (10 March 1899), page 499 (6 April 1899), page 515 (8 April 1899), page 528 (4 May 1899) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 44
evaluation: NRHP non-eligible (typically configured example of common structural type)

inventoried by: Clayton B. Fraser 2 January 1992

Walnut Creek Bridge

BATE32

GENERAL DATA

structure no.: 509003.0
county: Bates

city/town: 2.3 miles northwest of Hume
feature inters.: branch of Walnut Creek
cadastral grid: S31, T39N, R33W
highway route: County Road 509
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

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

span number: 1
span length: 76.0'
total length: 78.0'
roadway width: 14.1'

condition: good
alterations: one vertical replaced with I-beam
floor/decking : timber deck over timber 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 square eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pins

HISTORICAL DATA

erection date: 1898-99
erection cost: $413.50 (superstructure cost)
designer: Kansas City Bridge Company, Kansas City MO (probable)
fabricator : Kansas City Bridge Company, Kansas City MO (probable)
contractor: J.B. March, Rich Hill MO (superstructure); George Alms (substructure)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 509003.0; Bates County Court Record, Book 9: page 235 (29 September 1897), page 325 (8 April 1898), page 342 (3 May 1898), 437 (7 February 1899) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 33
evaluation: NRHP non-eligible (typically configured example of mainstay structural type)

inventoried by: Clayton B. Fraser 2 January 1992

Water Works Bridge

BATE34

GENERAL DATA

structure no.: 547002.6
county: Bates
city/town: 3.5 miles northeast of Rich Hill
feature inters.: Marais des Cygnes River
cadastral grid: S26/27, S34/35, T39N, R31W
highway route: County Road 547
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 8-panel, pin-connected Parker through truss, with pin-connected Pratt half-hip pony truss approach spans
substructure: concrete abutments; concrete-filled steel cylinder piers

span number: 1
span length: 110.0'
total length: 210.0'
roadway width: 14.8'
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 (2 angles with batten plates at hip); diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckles; lateral bracing: round rod with threaded ends; strut: 2 angles with continuous plate; floor beam: I-beam, field bolted to vertical; guardrail: 2 steel pipes

HISTORICAL DATA

erection date: 1907
erection cost: $6873.00
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 Number 547002.6; Bates County Court Record, Book 7: page 384 (8 August 1890), page 400 (23 September 1890), page 415 (22 December 1890); Book 10: page 577 (8 August 1903); Book 11: page 23 (4 February 1904), page 236 (24 July 1905), page 397 (1 October 1906), page 433 (2 January 1907), page 486 (3 April 1907), page 525 (5 June 1907), page 588 (8 October 1907), page 616 (5 December 1907), page 24 (10 January 1908) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 49
evaluation: NRHP possibly eligible (typically configured example of relatively uncommon structural type)

inventoried by: Clayton B. Fraser 2 January 1992

Marais des Cygnes River Bridge

BATE35

GENERAL DATA

structure no.: 547003.3
county: Bates
city/town: 2.7 miles northeast of Rich Hill
feature inters.: Marais des Cygnes River
cadastral grid: S34, T39N, R31W
highway route: County Road 547
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 7-panel, pin-connected Pratt through truss, with steel stringer approach span
substructure: steel pile bent piers with timber back- and wingwalls

span number: 1
span length: 125.0'
total length: 140.0'
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 rectangular eyebars; vertical: 2 channels with lacing (2 angles with lacing at hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with continuous plate; portal strut: A-frame; 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 Number 547003.3; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 31
evaluation: NRHP non-eligible (With its construction history undocumented, this typically built, pinned Pratt through truss is of extremely limited interpretive value.)

inventoried by: Clayton B. Fraser 2 January 1992

Bridge

BATE36

GENERAL DATA

structure no.:	547004.0	city/town:	2.4 miles northeast of Rich Hill
county:	Bates	feature inters.:	Bates County Drainage Ditch
		cadastral grid:	S34/3, T39/38N, R31W
		highway route:	County Road 547
		highway distr.:	7
		current owner:	Bates County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with two pin-connected Pratt half-hip pony truss and one steel stringer approach spans

substructure: concrete abutments; concrete-filled steel cylinder piers; non-original welded steel pile bent piers

span number:	1	condition:	fair
span length:	100.0'	alterations:	welded steel pile bent pier and steel stringer approach span added
total length:	205.0'		
roadway width:	13.7'	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 rectangular eyebars; vertical: 2 channels with lacing (2 angles with batten plates at hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with continuous plate; portal strut: lattice with curved knee braces; floor beam: I-beam, field bolted to vertical; guardrail: 2 steel pipes; pony truss builder's plate (remnant): **...VILLE Mo...08** (Western Bridge Company, Harrisonville MO)

HISTORICAL DATA

erection date: 1907-08

erection cost: unknown

designer: Kansas City Bridge Company, Kansas City MO (main span); Western Bridge Company, Harrisonville MO (approach spans)

fabricator : Kansas City Bridge Company, Kansas City MO (main span); Western Bridge Company, Harrisonville MO (approach spans)

contractor: Kansas City Bridge Company, Kansas City MO (main span); Western Bridge Company, Harrisonville MO (approach spans)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 547004.0; Bates County Court Record, Book 11: page 367 (24 July 1906), page 418 (3 December 1906), page 544 (8 August 1907), page 587 (8 October 1907), page 615 (5 December 1907); Book 12: page 18 (8 January 1908), page 36 (4 February 1908),

page 51 (4 March 1908) - located at Bates County Courthouse, Butler MO; bridge plate (located in county engineer's office at Bates County Courthouse, Butler MO): **1907 / J.W. McFadden Pres. Judge / P.A. Bruce Associate Judge / J. Armstrong Associate Judge / E.B. Borron Engineer**; field inspection by Clayton Fraser, 1 June 1991.

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 3 January 1992

Schell City Bridge

BATE37

GENERAL DATA

structure no.: 576002.5
county: Bates/Vernon

city/town: 2.1 miles southwest of Rockville
feature inters.: Osage River
cadastral grid: S21, T38N, R29W
highway route: County Road 576
highway distr.: 7
current owner: Bates/Vernon Counties

STRUCTURAL DATA

superstructure: steel, 10-panel, pin-connected Parker through truss, with pin-connected Pratt half-hip pony truss approach span
substructure: stone masonry abutments and pier

span number: 1
span length: 175.0'
total length: 318.0'
roadway width: 13.9'

condition: poor
alterations: truss partially collapsed; deck replaced; outriders added to pony truss
floor/decking : asphalt on corrugated steel deck, over steel stringers
other features: upper chord and inclined end post: 2 angles with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 square eyebars at hip); diagonal: 2 punched rectangular eyebars; counter: square pronged eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing, braced; portal strut: lattice with curved knee braces; floor beam: I-beam, U-bolted to vertical; guardrail: 2 pipes; pony truss builder's plate: **THE CANTON BRIDGE CO CANTON OHIO**

HISTORICAL DATA

erection date: 1900
erection cost: $4340.00
designer: A.M. Blodgett, Kansas City MO (main span);Canton Bridge Company, Canton OH (approach span)
fabricator : Kansas City Bridge Company, Kansas City MO (main span); Canton Bridge Company, Canton OH (approach span); Carnegie Steel Company, Pittsburgh PA
contractor: A.M. Blodgett, Kansas City MO (main span); Canton Bridge Company, Canton OH (approach span)

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 576002.5; Bates County Court Record, Book 9: page 604 (8 November 1899), page 609 (16 November 1899), page 617 (7 December 1899); Book 10: page 136 (17 September 1900), page 151 (22 October 1900); Book 11: page 236 (24 July

1905), page 243 (8 August 1905); Book 13: page 63 (6 October 1910) page 83 (8 December 1910) - located at Bates County Court house, Butler MO; Vernon County Court Record, Book F: 12 August 1890, 27 August 1890, 20 October 1890, 1 June 1891, 22 October 1891; Book I: 9 November 1899, 26 September 1900; Book K: 20 January 1904, 2 March 1904, 22 March 1904, 1 July 1904, 6 September 1904- located at Vernon County Courthouse, Nevada MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 58

evaluation: NRHP potentially eligible (earliest example in state of relatively uncommon truss configuration, partially collapsed)

inventoried by: Clayton B. Fraser 6 January 1992

Sycamore Branch Bridge

BATE38

GENERAL DATA

structure no.: 624000.2
county: Bates

city/town: 6.3 miles northeast of Rich Hill
feature inters.: Sycamore Branch
cadastral grid: S32, T38N, R30W
highway route: County Road 624
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

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

span number: 1
span length: 40.0'
total length: 42.0'
roadway width: 14.0'

condition: fair
alterations: none
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 624000.2.

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

inventoried by: Clayton B. Fraser 3 January 1992

Camp Branch Bridge

BATE39

GENERAL DATA

structure no.: 628000.9
county: Bates

city/town: 3.0 miles northwest of Rockville
feature inters.: Camp Branch
cadastral grid: S33/4, T39/38N, R29W
highway route: County Road 628
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

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

span number: 1
span length: 50.0'
total length: 54.0'
roadway width: 14.2'

condition: poor
alterations: east abutment partially collapsed; welded outriders added
floor/decking : timber deck over timber 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, with non-original welded outriders; diagonal (counter): square eyerod; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to vertical; guardrail: removed

HISTORICAL DATA

erection date: 1897-98
erection cost: $335.00
designer: Youngstown Bridge Company, Youngstown OH
fabricator : Youngstown Bridge Company, Youngstown OH; Carnegie Steel Company, Pittsburgh PA
contractor: Youngstown Bridge Company, Youngstown OH

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 628000.9; Bates County Court Record, Book 9: page 189 (8 June 1897), page 198 (7 July 1897), page 298 (11 March 1898), page 340 (2 May 1898) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 39
evaluation: NRHP non-eligible (poorly preserved example of common structural type)

inventoried by: Clayton B. Fraser 3 January 1992

Papinville Bridge

BATE40

GENERAL DATA

structure no.: 648000.3
county: Bates
city/town: Papinville
feature inters.: Marais Des Cygnes River
cadastral grid: S16, T38N, R30W
highway route: County Road 648
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: wrought iron, 7-panel, pin-connected Pratt through truss, with rigid-connected Warren pony truss approach spans
substructure: stone abutments; concrete-filled steel cylinder piers

span number: 1
span length: 116.0'
total length: 234.0'
roadway width: 13.8'
condition: fair
alterations: approach spans altered
floor/decking : timber deck over steel stringers
other features: upper chord and inclined end post: 2 angles with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 punched rectangular eyebars at hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with unslotted turnbuckle; lower lateral bracing: round rod with threaded ends; upper lateral bracing: round eyerod with unslotted turnbuckle; strut: I-beam; portal strut: lattice; floor beam: riveted plate girder, U-bolted to lower chord pins; guardrail: 1 channel and timber; portal builder's plate: **KANSAS CITY BRIDGE & IRON COMPANY**

HISTORICAL DATA

erection date: 1884
erection cost: $3750.00
designer: unknown
fabricator : unknown
contractor: Kansas City Bridge & Iron Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 648000.3; Bates County Court Record, Book 3: pages 514-15 (January 1873); Book 5: page 560 (9 November 1883), page 566 (3 December 1883); Book 6: page 95 (5 June 1884), page 96 (7 July 1884); Book 9: page 395 (4 October 1898), page 410 (15 November 1898); Book 10: page 344 (7 December 1901), page 354 (3 February 1902), page 482 (2 December 1902), page 520 (3 March 1903); Book 11: page 236 (24 July 1905), page 279 (10 November 1905), page 285 (5 December 1905), page 341 (7 May 1906),

page 370 (6 August 1906) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 51
evaluation: NRHP possibly eligible (early example of mainstay structural type)

inventoried by: Clayton B. Fraser 6 January 1992

Bridge

BATE41

GENERAL DATA

structure no.: 648001.2
county: Bates
city/town: 1.0 mile south of Papinsville
feature inters.: Bates County Drainage Ditch
cadastral grid: S21, T38N, R30W
highway route: County Road 648
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: steel, 6-panel, pin-connected Pratt through truss, with two steel stringer approach spans at each end
substructure: concrete-filled steel cylinder piers; non-original steel pile bent pier at south end of main span; steel pile bent abutments and piers under approach spans

span number: 1
span length: 100.0'
total length: 188.0'
roadway width: 14.2'
condition: fair
alterations: substructure and approach spans altered
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 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 continuous plate; portal strut: lattice with curved knee braces; floor beam: I-beam, field bolted to vertical; guardrail: 2 steel pipes

HISTORICAL DATA

erection date: 1907-08
erection cost: unknown
designer: Kansas City Bridge Company, Kansas City MO
fabricator : Kansas City Bridge Company, Kansas City MO; Cambria Steel Company, Pittsburgh PA
contractor: Kansas City Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 648001.2; Bates County Court Record, Book 11: page 367 (24 July 1906), page 418 (3 December 1906), page 544 (8 August 1907), page 587 (8 October 1907), page 615 (5 December 1907); Book 12: page 18 (8 January 1908), page 36 (4 February 1908), page 51 (4 March 1908) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 39
evaluation: NRHP non-eligible (typically built example of mainstay structural type, somewhat altered)

inventoried by: Clayton B. Fraser 3 January 1992

Elk Fork Bridge

BATE42

GENERAL DATA

structure no.: none
county: Bates

city/town: 2.0 miles west of Aaron
feature inters.: Elk Fork
cadastral grid: S24/25, T42N, R30W
highway route: vacated county road
highway distr.: 7
current owner: Bates County

STRUCTURAL DATA

superstructure: wrought-iron, 4-panel, pin-connected Pratt pony truss
substructure: stone abutments

span number: 1
span length: 60.0'
total length: 60.0'
roadway width: 14.0'

condition: poor
alterations: west abutment partially collapsed; deck mostly removed
floor/decking : timber deck (mostly removed) over timber stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: I-beam, with star iron outriders; diagonal: 2 punched rectangular eyebars; counter: round eyerod with slotted turnbuckle; lateral bracing: round rod with threaded ends; floor beam: plate girder, field-bolted to vertical; guardrail: none

HISTORICAL DATA

erection date: 1884
erection cost: $2225.00 (3 bridges)
designer: Missouri Valley Bridge and Iron Company, Leavenworth KS
fabricator : Missouri Valley Bridge and Iron Company, Leavenworth KS
contractor: Missouri Valley Bridge and Iron Company, Leavenworth KS

references: Bates County Court Record, Book 5: page 566 (3 December 1883); Book 6: page 116 (2 September 1884) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

sign. rating: 47
evaluation: NRHP possibly eligible (early example of pinned truss construction)

inventoried by: Clayton B. Fraser 3 January 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Marais des Cygnes River Bridge
MHTD: T 280

BATE03

DATE(S) OF CONSTRUCTION
1934-35

LOCATION
State Supplementary Route B over Marais des Cygnes River; S1, T38N, R31W
4.6 miles east of Rich Hill; Bates 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
span length: 110.0'
total length: 264.0'
roadway wdt.: 20.0'

superstructure: steel, 10-panel, rigid-connected Warren pony truss with polygonal upper chords; three steel stringer approach spans
substructure: concrete abutments, wingwalls and piers
floor/decking: concrete deck over steel stringers
other features: steel guardrails

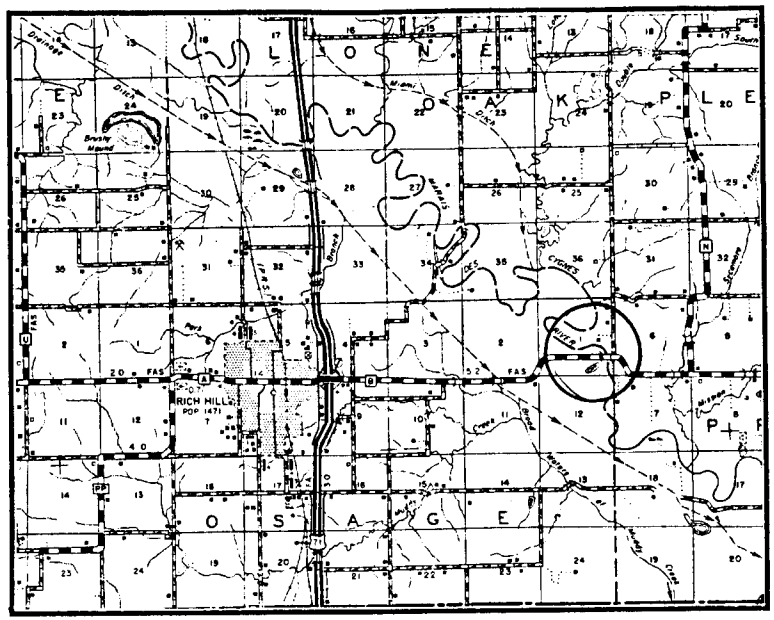
This long-span pony truss carries State Supplementary Route B over the Marais des Cygnes River 4½ miles east of the small town of Rich Hill, in Bates County. The Marais des Cygnes River Bridge is comprised of one rigid-connected Warren pony truss span, with polygonal upper chords, supported by a concrete substructure and approached by three steel stringer spans. The structure was designed by the state highway department in the fall of 1934 and built in 1934-35 by contractor Otto W. Knutson for almost $19,000. Since its completion, the bridge has functioned in place, without substantial alteration.

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 between 100 and 120 feet. Fabricated from essentially the same drawings, their superstructures were virtually identical. The Rich Hill Bridge is distinguished among these as one of the oldest documented example of this mainstay long-span truss type.

NAME(S) OF STRUCTURE

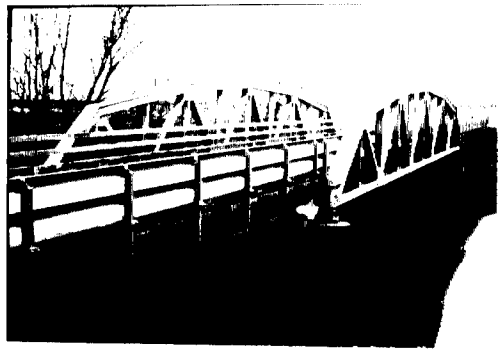
Marais des Cygnes River Bridge

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 T 280; Bates County Court Record, Book 6: page 6 (9 January 1884) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mormon Fork Bridge
MHTD: 032001.3

BATE05

DATE(S) OF CONSTRUCTION
1884

LOCATION
County Road 32 over Mormon Fork; S25, T42N, R32W / S30, T42N, R31W
3.0 miles northwest of Adrian; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 49)

CONDITION
fair

OWNER
Bates County

span number:	1
span length:	55.0'
total length:	78.0'
roadway wdt.:	12.5'

superstructure:	wrought iron, 4-panel, pin-connected Pratt pony truss, with steel stringer approach span on south end
substructure:	stone masonry abutments and pier
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 punched rectangular eyebars; vertical: I-beam, with star iron outriders; diagonal: 2 punched rectangular eyebars; counter: one round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pin; guardrail: removed on main span, steel lattice at approach

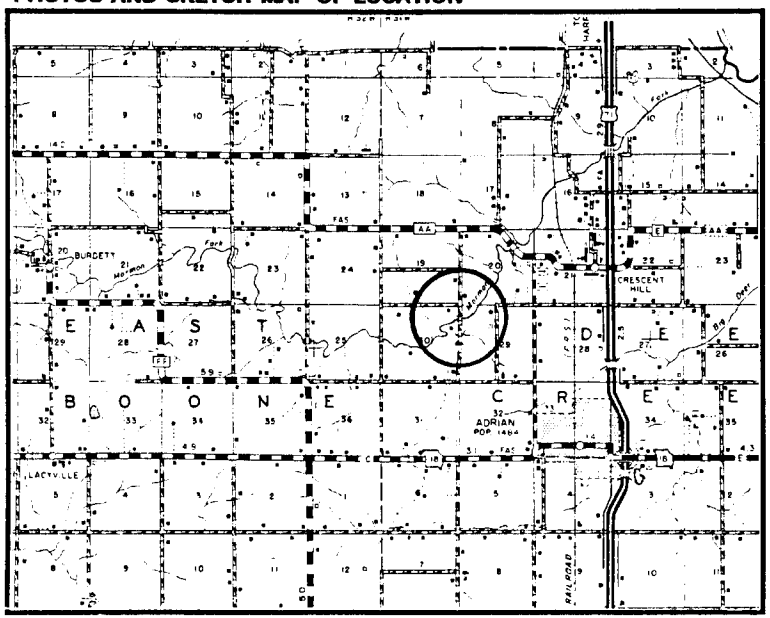
Located on the line between Deer Creek and East Boone Townships, this short-span pony truss carries a gravel-surfaced county road over Mormon Fork northwest of Adrian. The bridge consists of a single pinned Pratt truss, supported by stone masonry abutments and pier and approached on the south end by an iron stringer span. The Mormon Fork Bridge dates to 1884. That year the Bates County Court contracted with the Missouri Valley Bridge and Iron Company for this structure and a bridge over Elk Fork. Using wrought iron components rolled in Pittsburgh by Carnegie, the Leavenworth, Kansas, bridge builder fabricated the truss and erected it on a stone substructure. The two small-scale iron bridges were completed by September for an aggregate cost of $2225.00. The Mormon Fork Bridge has functioned in place since that time, with only repairs to its floor system and the installation of a steel pile bent pier beside one of the abutments as the only alterations of note.

Bridge companies such as Missouri Valley B&I advertised the pinned Pratt truss extensively in their catalogues of standard iron spans in the late 19th century. With its uniformly fabricated components and easy field erection, the Pratt truss was ideally suited for the highly competitive bidding for county bridge construction. Thousands of pinned Pratt ponies were built on Missouri's county road system, and many remain in place today. The Mormon Fork Bridge is distinguished among these for its early construction date and for its well-preserved condition. With both superstructure and substructure intact, it is a technologically significant, early transportation-related resource.

NAME(S) OF STRUCTURE

Mormon 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 Number 032001.3; Bates County Court Record, Book 6: page 116 (2 September 1884) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mormon Fork Bridge
MHTD: 041002.1

BATE06

DATE(S) OF CONSTRUCTION
1886

LOCATION
County Road 41 over Mormon Fork; S16, T42N, R31W
1.8 miles north of Crescent Hill; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 51)

CONDITION
fair

OWNER
Bates County

span number:	1	superstructure:	wrought iron, 4-panel, pin-connected Pratt pony truss
span length:	55.0'	substructure:	stone masonry abutments
total length:	55.0'	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: I-beam (2 punched rectangular eyebars at the hip), with star outriders; 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; endpost-mounted builder's plate: **MO VALLEY / BRIDGE & IRON WORKS / LEAVENWORTH KANS / 1886**

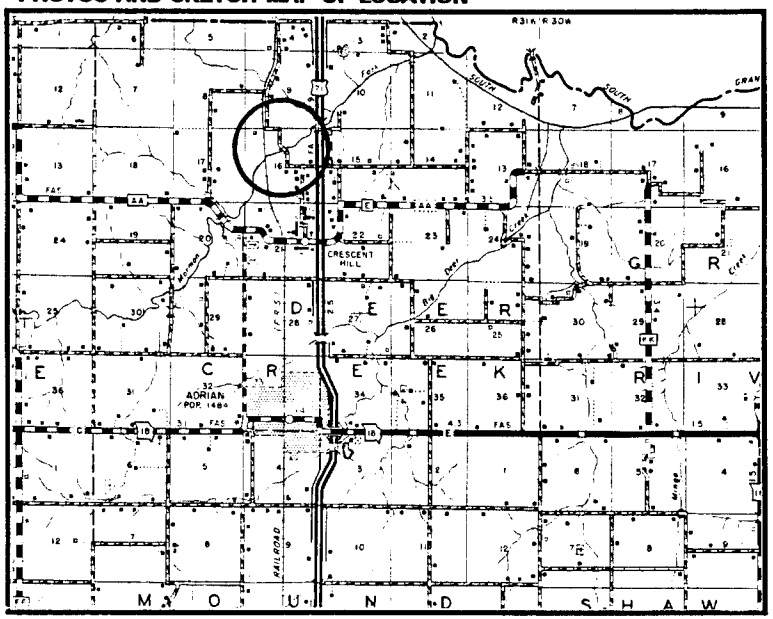
The Mormon Fork Bridge carries County Road 41 over Mormon Fork almost two miles north of Crescent Hill. Consisting of a single pinned Pratt pony truss supported by stone masonry abutments, it dates to 1886. In June of that year the Bates County Court contracted with the Missouri Valley Bridge and Iron Company of Leavenworth, Kansas, to fabricate and erect the truss at this rural Deer Creek Township crossing. Costing $450.00, the small-scale truss was to be completed by September 15 by contractual agreement. Since then, the Mormon Fork Bridge has carried intermittent traffic, with the installation of a steel bent pile pier at one of the abutments as the only alteration of note.

Among Missouri's earliest remaining pinned Pratt pony trusses, this bridge over Mormon Fork is historically noteworthy as an intact remnant of early transportation. A well-preserved and well-documented structure, it is representative of late 19th century pinned truss construction.

NAME(S) OF STRUCTURE

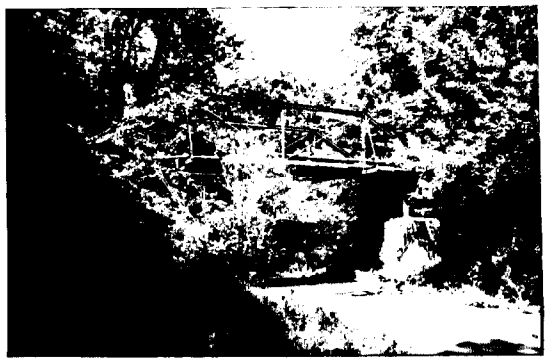
Mormon Fork Bridge

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 Number 041002.1; contract between Bates County and Missouri Valley Bridge and Iron Company, in book titled "Bridge Plans, Bates County," 12 June 1886 - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Miami Creek Bridge
MHTD: 187002.7

BATE11

DATE(S) OF CONSTRUCTION
1903-04

LOCATION
County Road 187 over Miami Creek; S10, T40N, R32W
6.7 miles northwest of Butler; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 45)

CONDITION
good

OWNER
Bates County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss
span length:	80.0'	substructure:	stone masonry abutments
total length:	82.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	14.2'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: two channels with lacing (2 angles at the hip); diagonal: 2 square eyebars; counter: 1 square eyebar with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with double lacing; portal strut: lattice with curved knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: steel angle; endpost-mounted builder's plate: **1903 / THE MIDLAND BRIDGE CO. / FREYGANG & TROCON / PROPRIETORS / KANSAS CITY, MO.**

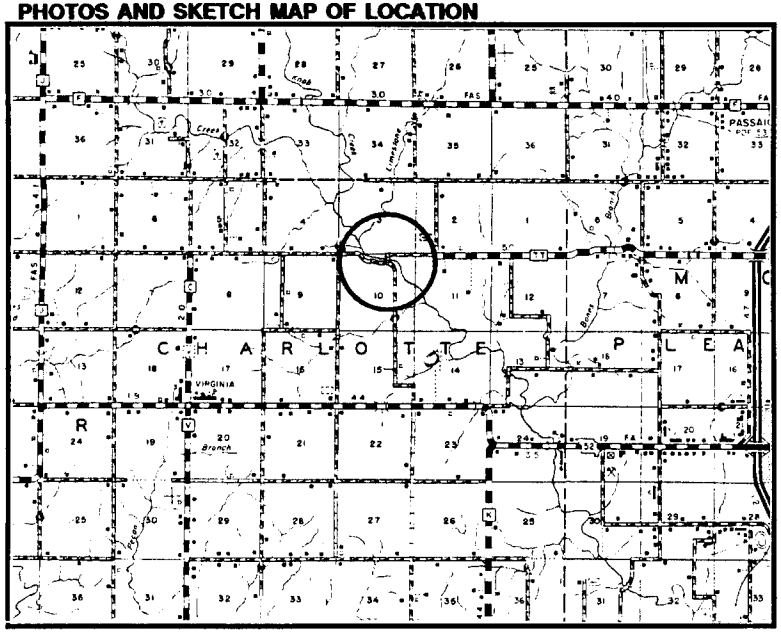
On June 5, 1902, the Bates County Court ordered the county bridge commissioner to place a notice on the existing Miami Creek Bridge announcing its condemnation. In early February of the following year, the county advertised for bids for a steel replacement truss and a new masonry substructure at this location. One month later a $1140.00 contract was awarded to the Midland Bridge Company of Kansas City to fabricate and erect the truss, and a separate $850.00 contract was awarded to local contractors Brown and Moore to build the stone masonry abutments. Work on the new bridge apparently commenced when the stream flow subsided in early fall. After changing its alignment slightly, Brown and Moore completed the masonry work in December. Midland used steel components rolled in Pittsburgh by the Carnegie mills to fabricate the short-span through truss, completing the superstructure and floor in late 1904. The Miami Creek Bridge has since carried intermittent rural traffic on this county road in west-central Bates County.

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 Miami Creek Bridge typifies this statewide bridge building trend.

NAME(S) OF STRUCTURE

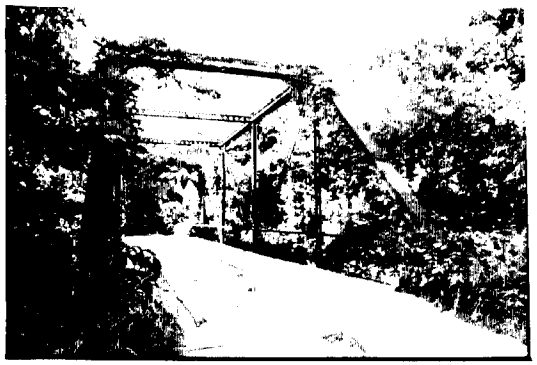
Miami Creek Bridge

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 187002.7; Bates County Court Record, Book 10: page 406 (5 June 1902), page 515 (7 February 1903), pages 518-519 (2 March 1903), page 606 (7 October 1903), page 627 (8 December 1903); Book 11: page 15 (1 February 1904), page 34 (7 March 1904) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Johnstown Bridge
MHTD: 248000.1

BATE13

DATE(S) OF CONSTRUCTION
1899

LOCATION
County Road 248 over Deep Water Creek; S36, T41N, R29W
Johnstown; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 50)

CONDITION
fair

OWNER
Bates County

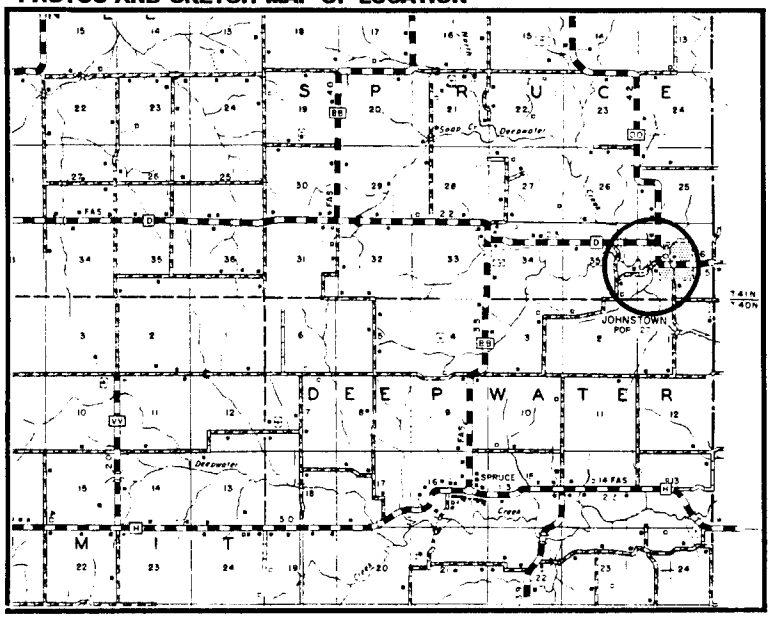
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	stone masonry abutments
total length:	72.0'	floor/decking:	asphalt over corrugated steel deck, with steel stringers
roadway wdt.:	14.0'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with double 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; endpost-mounted builder's plate: **BUILT BY / KANSAS CITY BRIDGE CO. / KANSAS CITY MO.**

Built in 1899, this medium-span pony truss was not the first structure erected at this crossing on the outskirts of Johnstown, in eastern Bates County. In 1891 a wire suspension bridge was constructed here by the Lyndon Wire Cable Bridge Company. Wire suspension bridges of the time were notoriously unstable, and the 1891 Johnstown Bridge lasted only seven years before it needed replacement. In October 1898 Bates County Bridge Commissioner Robert E. Johnson reported to the county court on the need for a new bridge at this crossing. The court ordered Johnson to advertise for bids for a new steel truss and stone substructure. Local mason C.V. Peacock was hired to build the cut stone abutments; the Kansas City Bridge Company supplied the superstructure and erected it for $454.00. Since its completion in 1899, the Johnstown Bridge continues to carry rural traffic over Deep Water Creek, with only maintenance-related repairs. It is a structurally intact, well-documented example, of a pin-connected Pratt pony truss - Missouri's mainstay design for short span crossings in the late 19th and early 20th centuries.

NAME(S) OF STRUCTURE

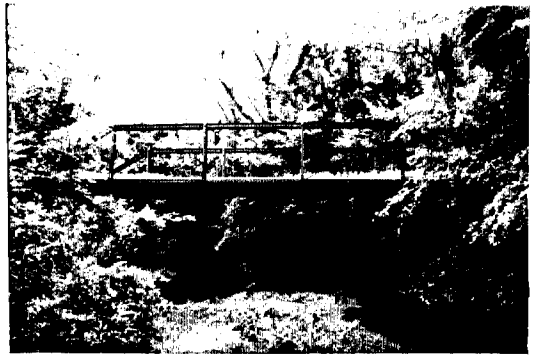
Johnstown Bridge

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 248000.1; Bates County Court Record, Book 7: page 580 (22 December 1891); Book 9: page 395 (4 October 1898), page 529 (5 May 1899), page 539 (5 June 1899), page 547 (7 June 1899) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
MHTD: 356001.4

BATE18

DATE(S) OF CONSTRUCTION
1907-08

LOCATION
County Road 356 over Bates County Drainage Ditch; S9, T39N, R32W
3.7 miles northeast of Foster; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP determined non-eligible (score: 46)

CONDITION
fair

OWNER
Bates County

span number: 1
span length: 150.0'
total length: 272.0'
roadway wdt.: 13.7'

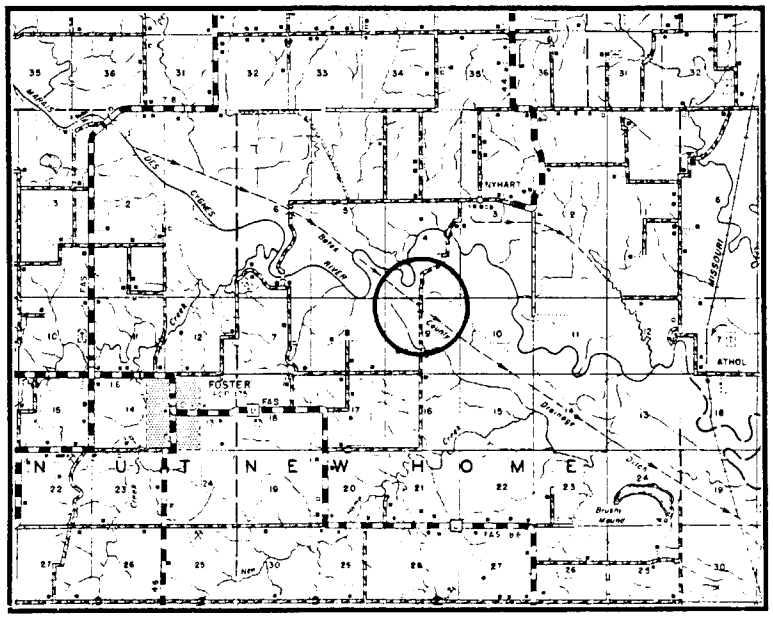
superstructure: steel, 9-panel, pin-connected Parker through truss, with pin-connected Pratt bedstead and through girder approach spans
substructure: concrete abutments and pier; welded steel pile bent piers
floor/decking: timber deck over timber stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: two punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles, braced; portal strut: A-frame; floor beam: I-beam, field bolted to vertical; guardrail: steel channel and pipe

In August 1906 construction began on the Bates County Drainage Ditch, which was designed to carry overflow water from the meandering Marais des Cygnes River. By that winter the work had progressed to the point that several bridges were needed to carry county roads intersected by the ditch. In early December the Bates County Court ordered six major trusses built at various locations over the ditch. Bids from bridge companies in the region were solicited, and early the next year a contract was awarded to the Kansas City Bridge Company to fabricate and erect the trusses. Work progressed throughout the remainder of 1907; by the following March the spans were complete. This short-span Pratt truss northeast of Foster was among those bridges built by KCBCo as part of the 1907 contract. Since its completion, the bridge has functioned in place, with replacement of its substructure as the most notable alteration. It is a typically configured example of a mainstay structural type in Missouri - the pinned Parker through truss.

NAME(S) OF STRUCTURE

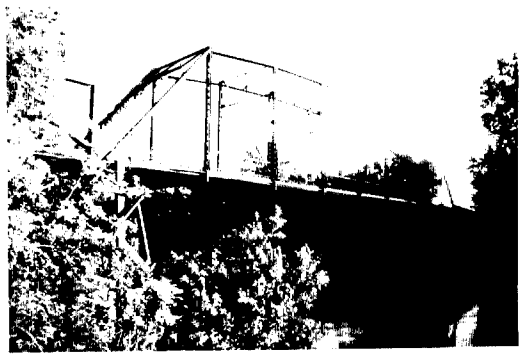
Bridge

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 356001.4; Bates County Court Record, Book 11: page 219 (4 May 1905), page 367 (24 July 1906), page 418 (3 December 1906), page 587 (8 October 1907), page 600 (6 November 1907); Book 12: page 18 (8 January 1908), page 36 (4 February 1908) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Miami Creek Bridge
MHTD: 363R02.3

BATE20

DATE(S) OF CONSTRUCTION
1906

LOCATION
County Road 363 over Miami Creek; S31, T40N, R31W
3.8 miles southwest of Butler; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 43)

CONDITION
fair

OWNER
Bates County

span number: 1
end
span length: 100.0'
total length: 135.0'
roadway wdt.: 14.0'

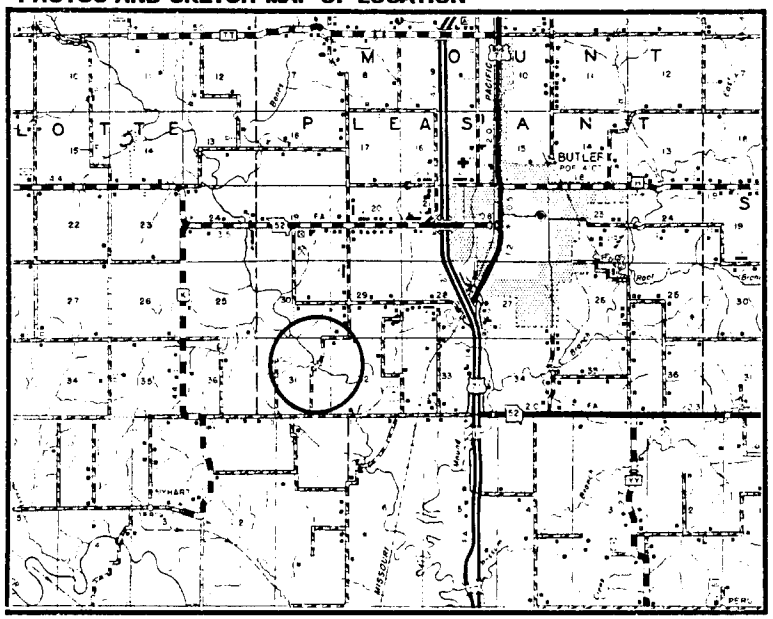
superstructure: steel, 6-panel, pin-connected Pratt through truss, with steel stringer approach span at each
substructure: concrete abutments; concrete-filled steel cylinder piers
floor/decking: concrete deck over steel stringers
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 square eyebars at hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing; portal strut: lattice with curved knee braces; floor beam: I-beam, field-bolted to vertical; guardrail: two steel pipes

Situated in central Bates County almost four miles southwest of Butler, this structure spans Miami Creek. The bridge consists of a concrete-decked Pratt through truss with a steel stringer approach span on each end and concrete-filled steel cylinder piers. The first step toward the bridge's construction occurred on May 1906 when the Bates County Bridge Commissioner advertised "the sale of bridge contracts" for two steel bridges. Very close bidding ensued, in response to the solicitation, with thirteen bids submitted. The county's decision was deferred until the following day, 20 June 1906, pending further discussion. The contract was let to Kansas City Bridge Company of Missouri for $3600.00, which was lower than the company's initial bid. Using steel components rolled by the Illinois Steel Company of Chicago, KCBCo fabricated this pin-connected truss, completing the bridge in late 1906. The Miami Creek Bridge has not undergone significant alterations and continues to carry traffic in its heavily wooded setting. It is a well-preserved example of a mainstay structural type.

NAME(S) OF STRUCTURE

Miami 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 363R02.3; Bates County Court Record, Book 11: page 351 (29 May 1906), page 358 (19 June 1906), page 359 (20 June 1906) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Walnut Creek Bridge
MHTD: 501002.2

BATE31

DATE(S) OF CONSTRUCTION
1899

LOCATION
County Road 501 over Walnut Creek; S16/21, T39N, R33W
2.5 miles southwest of Foster; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 44)

CONDITION
good

OWNER
Bates County

span number: 1
span length: 75.0'
total length: 104.0'
roadway wdt.: 14.1'

superstructure: steel, 5-panel, pin-connected Pratt pony truss, with steel stringer approach span at each end

substructure: stone masonry abutments with concrete vertical extensions; steel pile bent piers (paired sets of 2 channels with lacing, braced)

floor/decking: asphalt over corrugated steel, with 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 double 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 pin; guardrail: timber; endpost-mounted builder's plate: (broken) **BUIL... KANS... CIT... BRIDG... KANSAS... M...**

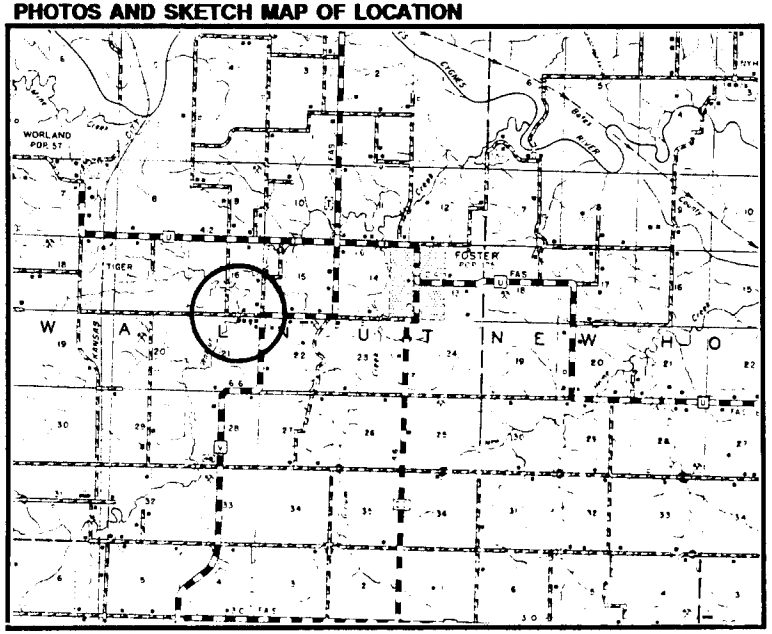
On 10 February 1899 Bates County Bridge Commissioner Robert E. Johnson was ordered by the county court to prepare an estimate for the construction of a new steel truss and stone abutments over Walnut Creek, 2½ miles southwest of Foster. A month later, Johnson solicited competitive proposals to erect the structure. In early April all bids for the project were rejected, because they were all deemed too high, and the bridge commissioner was asked to advertise for new bids. On May 4, 1899, the county awarded a $925.00 construction contract for the new bridge to the Kansas City Bridge Company. Since its completion later that year the Walnut Creek Bridge has carried intermittent rural traffic at this crossing in southwestern Bates County. The replacement of its original timber deck and reinforcement of the substructure are the only alterations of note.

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 Walnut Creek Bridge is noteworthy as a structurally intact, relatively early example of this mainstay structural type.

NAME(S) OF STRUCTURE

Walnut 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 501002.2; Bates County Court Record, Book 9: page 441 (10 February 1899), page 469 (10 March 1899), page 499 (6 April 1899), page 515 (8 April 1899), page 528 (4 May 1899) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Walnut Creek Bridge
MHTD: 509003.0

BATE32

DATE(S) OF CONSTRUCTION
1898-99

LOCATION
County Road 509 over branch of Walnut Creek; S31, T39N, R33W
2.3 miles northwest of Hume; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Bates County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	76.0'	substructure:	stone abutments and wingwalls
total length:	78.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	14.1'	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 square eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pins

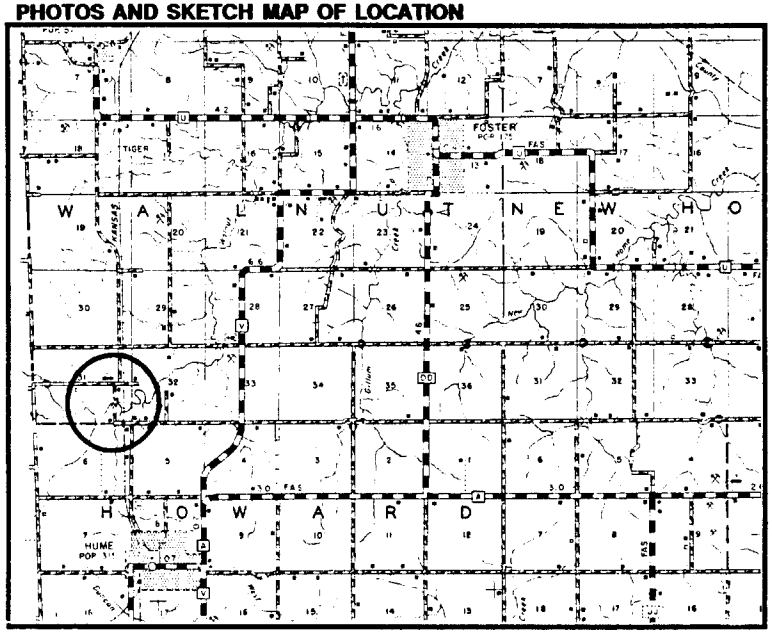
Located northwest of Hume in western Bates County, this medium-span pony truss carries a graveled road over a branch of Walnut Creek. The bridge consists of a timber decked Pratt truss with pinned connections, supported by stone masonry abutments. The Bates County Court first considered construction of the truss and its abutments in September 1897, when it directed the county bridge commissioner to examine two bridge sites in Section 31 of Walnut Township. After soliciting competitive proposals in May 1898, the court hired J.B. March, a former bridge commissioner for the county, to supply and erect the truss and George Alms to build the two stone abutments. The stonework was completed later that summer. March used a truss that was evidently fabricated by the Kansas City Bridge Company, completing the bridge by February 1899. Superstructure cost: $413.50. Since its completion, the Walnut Creek Bridge has since carried intermittent rural traffic, with the replacement of one of its verticals as the only major alteration.

Among Missouri's remaining 19th century pinned Pratt pony trusses, this bridge over Walnut Creek is historically noteworthy as an intact remnant of early transportation. A well-preserved and well-documented truss, the structure is representative of pinned truss construction from the period.

NAME(S) OF STRUCTURE

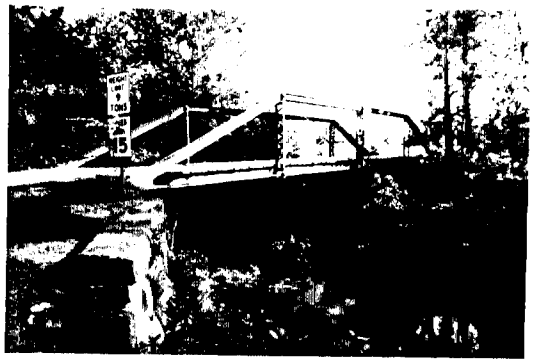
Walnut Creek Bridge

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 509003.0; Bates County Court Record, Book 9: page 235 (29 September 1897), page 325 (8 April 1898), page 342 (3 May 1898), 437 (7 February 1899) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Water Works Bridge
MHTD: 547002.6

BATE34

DATE(S) OF CONSTRUCTION
1907

LOCATION
County Road 547 over Marais des Cygnes River; S26/27, S34/35, T39N, R31W
3.5 miles northeast of Rich Hill; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 49)

CONDITION
good

OWNER
Bates County

span number: 1
span length: 110.0'
total length: 210.0'
roadway wdt.: 14.8'

superstructure: steel, 8-panel, pin-connected Parker through truss, with pin-connected Pratt half-hip pony truss approach spans
substructure: concrete abutments; 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 looped rectangular eyebars; vertical: 2 channels with lacing (2 angles with batten plates at hip); diagonal: 2 looped rectangular eyebars; counter: square eyebar with turnbuckles; lateral bracing: round rod with threaded ends; strut: 2 angles with continuous plate; floor beam: I-beam, field bolted to vertical; guardrail: 2 steel pipes

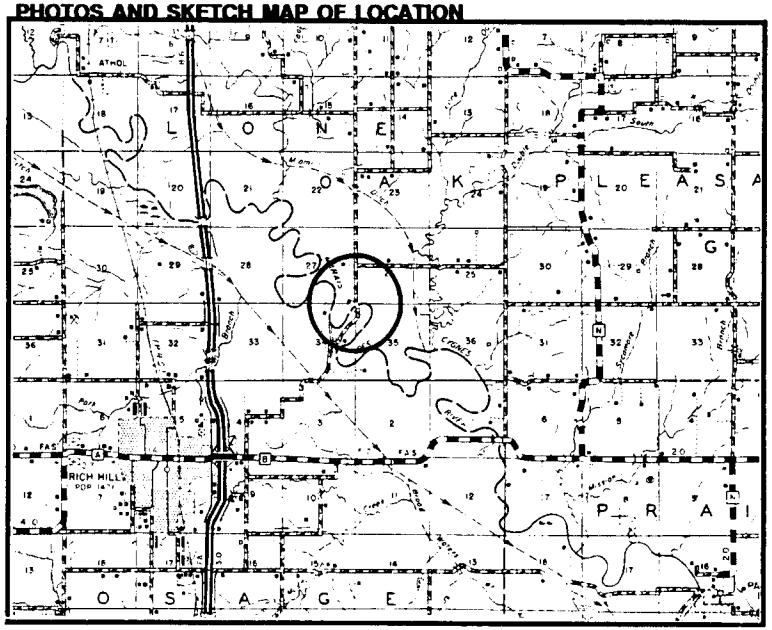
The first known permanent bridge over the Marais des Cygnes River at this crossing was a wire suspension bridge built in 1890 by contractors J.W. Mitchell and E.C. Espry. In October 1906 the Bates County Court ordered the county bridge commissioner to remove the existing span, located near the Rich Hill water works, and prepare an estimate and plans for a steel replacement structure. In early June the court awarded a $6873.00 contract to the Kansas City Bridge Company to fabricate and erect this pinned Parker truss. Completed by the end of December 1907, the Water Works Bridge has since functioned in place in unaltered condition at this southern Bates County crossing.

This span over the Marais des Cygnes River has retained its physical integrity, and is a relatively well-documented example of a pin-connected Parker through truss - a mainstay design for medium- and long-span crossings in the late 19th and early 20th centuries.

NAME(S) OF STRUCTURE

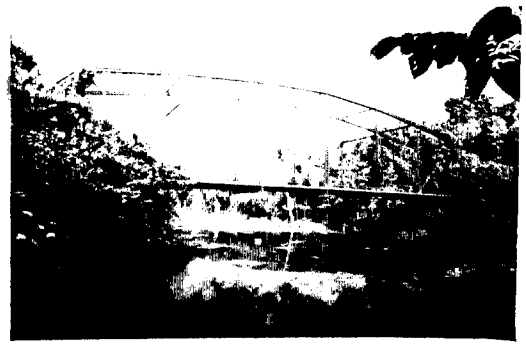
Water Works Bridge

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 547002.6; Bates County Court Record, Book 7: page 384 (8 August 1890), page 400 (23 September 1890), page 415 (22 December 1890); Book 10: page 577 (8 August 1903); Book 11: page 23 (4 February 1904), page 236 (24 July 1905), page 397 (1 October 1906), page 433 (2 January 1907), page 486 (3 April 1907), page 525 (5 June 1907), page 588 (8 October 1907), page 616 (5 December 1907), page 24 (10 January 1908) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
MHTD: 547004.0

BATE36

DATE(S) OF CONSTRUCTION
1907-08

LOCATION
County Road 547 over Bates County Drainage Ditch; S34/3, T39/38N, R31W
2.4 miles northeast of Rich Hill; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 38)

CONDITION
fair

OWNER
Bates County

span number: 1
span length: 100.0'
total length: 205.0'
roadway wdt.: 13.7'

superstructure: steel, 6-panel, pin-connected Pratt through truss, with two pin-connected Pratt half-hip pony truss and one steel stringer approach spans

substructure: concrete abutments; concrete-filled steel cylinder piers; non-original welded steel pile bent piers

floor/decking: timber deck over timber stringers

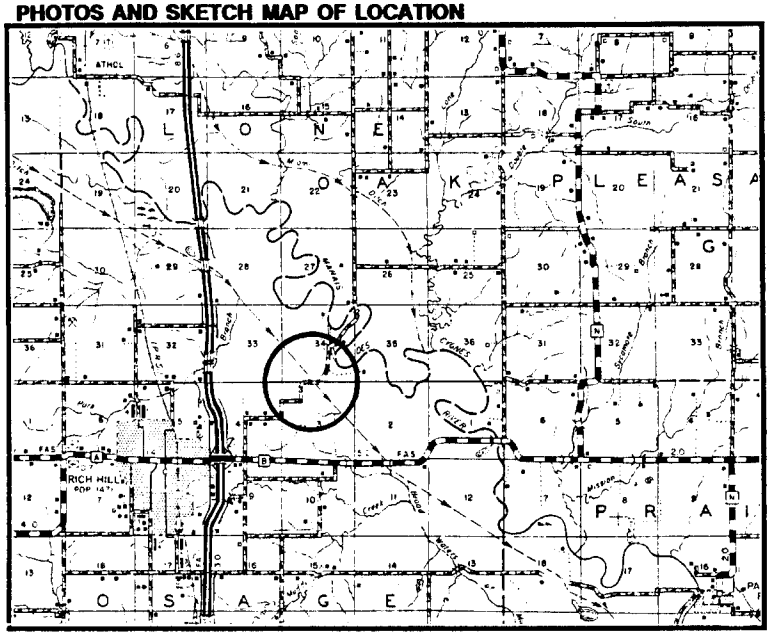
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing (2 angles with batten plates at hip); diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with continuous plate; portal strut: lattice with curved knee braces; floor beam: I-beam, field bolted to vertical; guardrail: 2 steel pipes; pony truss builder's plate (remnant): **...VILLE Mo...08** (Western Bridge Company, Harrisonville MO)

In August 1906 construction began on the Bates County Drainage Ditch, which was designed to carry overflow water from the meandering Marais des Cygnes River. By that winter the work had progressed to the point that several bridges were needed to carry county roads intersected by the ditch. In early December the Bates County Court ordered six major trusses built at various locations over the ditch. Bids from bridge companies in the region were solicited, and early the next year a contract was awarded to the Kansas City Bridge Company to fabricate and erect the trusses. Work progressed throughout the remainder of 1907; by the following March the spans were complete. This short-span Pratt truss north of Rich Hill was among those bridges built by KCBCo as part of the 1907 contract. It had apparently been completed less than a year before the county bought two pony truss approach spans from the Western Bridge Company of Harrisonville MO. Other than the subsequent addition of a steel stringer approach span on the end of one of the pony trusses, the bridge remains unaltered, as it continues to carry traffic at this rural crossing. It is a typically configured example of a mainstay structural type in Missouri - the pinned Pratt through truss.

NAME(S) OF STRUCTURE

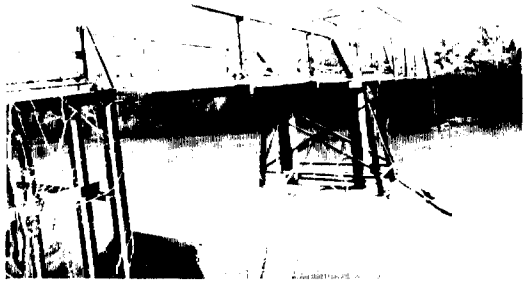
Bridge

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 547004.0; Bates County Court Record, Book 11: page 367 (24 July 1906), page 418 (3 December 1906), page 544 (8 August 1907), page 587 (8 October 1907), page 615 (5 December 1907); Book 12: page 18 (8 January 1908), page 36 (4 February 1908), page 51 (4 March 1908) - located at Bates County Courthouse, Butler MO; bridge plate (located in county engineer's office at Bates County Courthouse, Butler MO): **1907 / J.W. McFadden Pres. Judge / P.A. Bruce Associate Judge / J. Armstrong Associate Judge / E.B. Borron Engineer**; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Schell City Bridge
MHTD: 576002.5

BATE37

DATE(S) OF CONSTRUCTION
1900

LOCATION
County Road 576 over Osage River; S21, T38N, R29W
2.1 miles southwest of Rockville; Bates/Vernon County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING NRHP possibly eligible (score: 58)

CONDITION
poor

OWNER
Bates/Vernon Counties

span number: 1
span length: 175.0'
total length: 318.0'
roadway wdt.: 13.9'

superstructure: steel, 10-panel, pin-connected Parker through truss, with pin-connected Pratt half-hip pony truss approach span
substructure:stone masonry abutments and pier
floor/decking: asphalt on corrugated steel deck, over steel stringers
other features: upper chord and inclined end post: 2 angles with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 square eyebars at hip); diagonal: 2 punched rectangular eyebars; counter: square pronged eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing, braced; portal strut: lattice with curved knee braces; floor beam: I-beam, U-bolted to vertical; guardrail: 2 pipes; pony truss builder's plate: **THE CANTON BRIDGE CO CANTON OHIO**

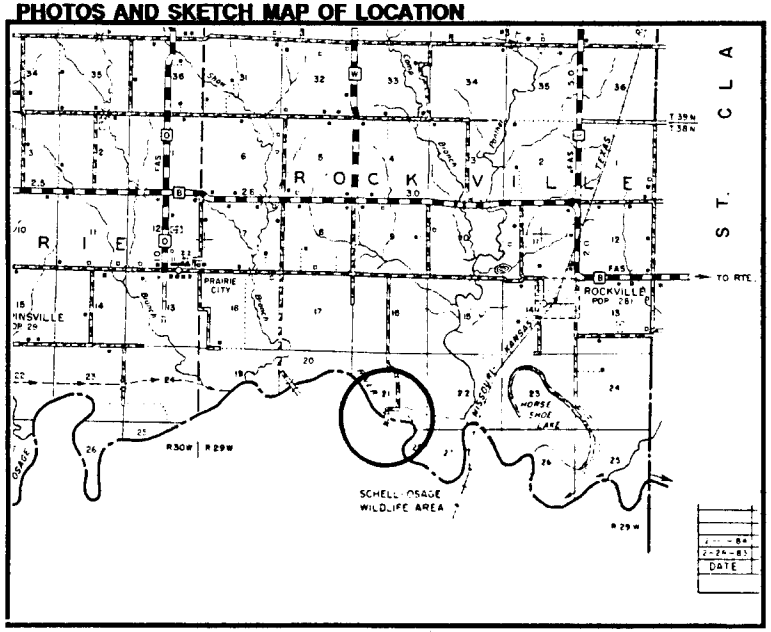
On November 8, 1899, the Bates County Court met with officials from adjacent Vernon County to look at the existing iron bridge across the Osage River near Schell City, on the line between the two counties. The group found "the [bridge] to be unsafe and dangerous to cross," and then they adjourned to the Hotel Davis to discuss whether to repair or replace the structure. The judges decided to construct a new bridge and ordered Bates County Bridge Commissioner Robert E. Johnson to make an estimate for the replacement structure and post "closed" signs on the old truss. A week later Johnson submitted plans for the new bridge, and the county advertised for proposals for several alternate designs, including a timber truss on stone or tubular piers, a steel truss on stone or tubular piers and a wire suspension bridge. On December 7th the two county courts met in a joint session in Nevada, the Vernon County seat, to consider the proposals received from thirteen regional and national companies. Low bidder at $4090.00, A.M. Blodgett of Kansas City was awarded the contract to supply and erect a steel truss on a stone substructure. Blodgett used a pinned Parker through truss that was presumably fabricated by the Kansas City Bridge Company, completing the structure by mid-September 1900. Each county paid half of the $4340.00 bill, an amount $250.00 above the original contract due to extra masonry work. Ten years later, the original south approach span was replaced with a pony truss fabricated by the Canton Bridge Company. Since then, the Schell City Bridge has since carried inter-county traffic at this rural crossing in southeastern Bates County, until its recent closure due to the failure of one of its hip verticals.

The Schell City Bridge is significant as the oldest dateable example remaining in Missouri of the pin-connected Parker through truss - a mainstay design for medium- and long-span river crossings between circa 1900 and 1920. A regionally important crossing between Bates and Vernon Counties, the structure is well-documented and is distinguished technologically by its long span length.

NAME(S) OF STRUCTURE

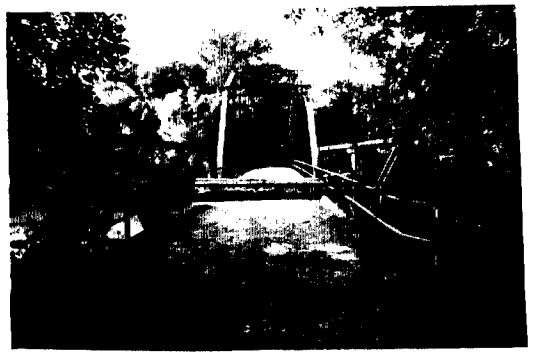
Schell City Bridge

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 576002.5; Bates County Court Record, Book 9: page 604 (8 November 1899), page 609 (16 November 1899), page 617 (7 December 1899); Book 10: page 136 (17 September 1900), page 151 (22 October 1900); Book 11: page 236 (24 July 1905), page 243 (8 August 1905); Book 13: page 63 (6 October 1910), page 83 (8 December 1910) - located at Bates County Courthouse, Butler MO; Vernon County Court Record, Book F: 12 August 1890, 27 August 1890, 20 October 1890, 1 June 1891, 22 October 1891; Book I: 9 November 1899, 26 September 1900; Book K: 20 January 1904, 2 March 1904, 22 March 1904, 1 July 1904, 6 September 1904 - located at Vernon County Courthouse, Nevada MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Camp Branch Bridge
MHTD: 628000.9

BATE39

DATE(S) OF CONSTRUCTION
1897-98

LOCATION
County Road 628 over Camp Branch; S33/4, T39/38N, R29W
3.0 miles northwest of Rockville; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING NRHP non-eligible (score: 39)

CONDITION
poor

OWNER
Bates County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	concrete abutments and wingwalls
total length:	54.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	14.2'	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, with non-original welded outriders; diagonal (counter): square eyerod; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to vertical; guardrail: removed

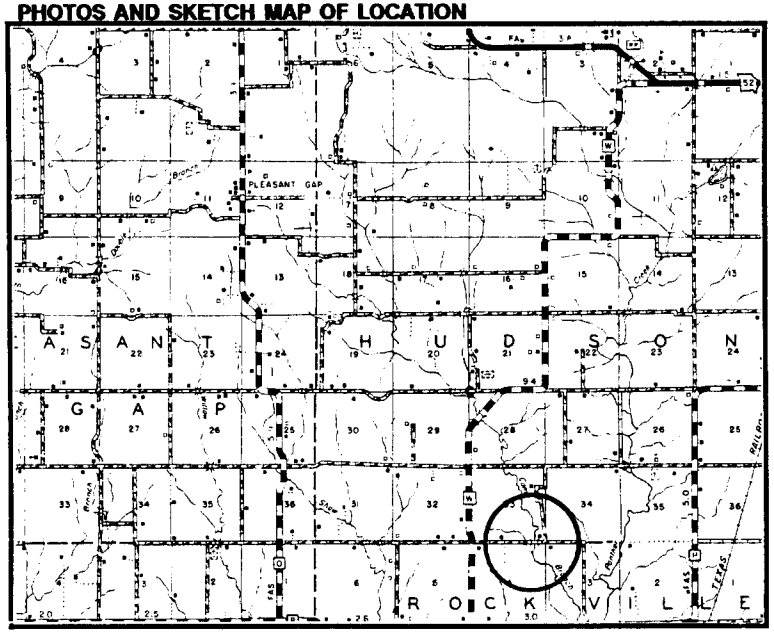
On June 8, 1897, the Bates County Court ordered the county bridge commissioner to advertise for the construction of a bridge over Camp Branch, three miles northwest of Rockville. One month later a contract for $335.00 was awarded to the Youngstown Bridge Company of Youngstown, Ohio, for the new structure. The Camp Branch Bridge was completed in the spring of 1898 and carried traffic at this rural crossing in southeastern Bates County until its closure due to a partial collapse of one abutment.

The Camp Branch Bridge is a typical example of a common truss configuration, with standard detailing, unremarkable dimensions and below-average physical integrity.

NAME(S) OF STRUCTURE

Camp 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 Number 628000.9; Bates County Court Record, Book 9: page 189 (8 June 1897), page 198 (7 July 1897), page 298 (11 March 1898), page 340 (2 May 1898) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Papinville Bridge
MHTD: 648000.3

BATE40

DATE(S) OF CONSTRUCTION
1884

LOCATION
County Road 648 over Marais Des Cygnes River; S16, T38N, R30W
Papinville; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 51)

CONDITION
fair

OWNER
Bates County

span number: 1
span length: 116.0'
total length: 234.0'
roadway wdt.: 13.8'

superstructure: wrought iron, 7-panel, pin-connected Pratt through truss, with rigid-connected Warren pony truss approach spans
substructure: stone abutments; concrete-filled steel cylinder piers
floor/decking: timber deck over steel stringers
other features: upper chord and inclined end post: 2 angles with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 punched rectangular eyebars at hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with unslotted turnbuckle; lower lateral bracing: round rod with threaded ends; upper lateral bracing: round eyerod with unslotted turnbuckle; strut: I-beam; portal strut: lattice; floor beam: riveted plate girder, U-bolted to lower chord pins; guardrail: 1 channel and timber; portal builder's plate: **KANSAS CITY BRIDGE & IRON COMPANY**

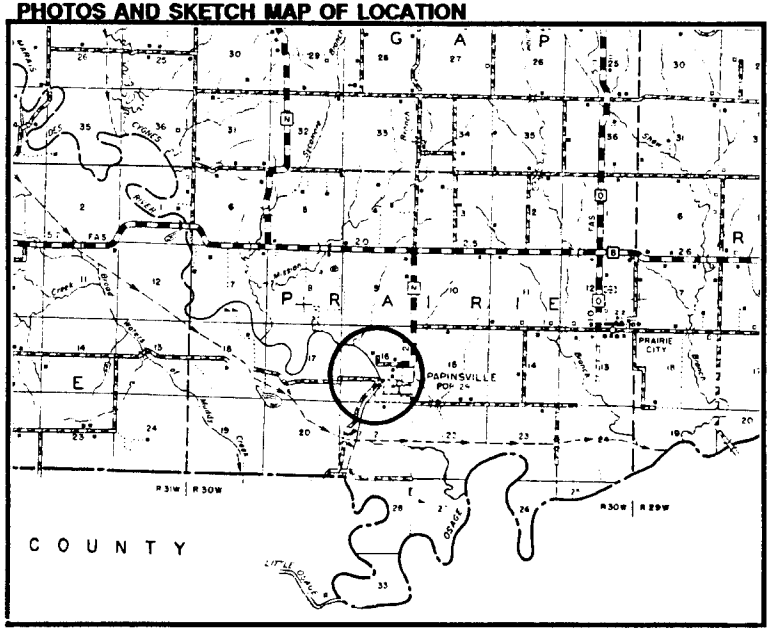
Located at the western periphery of the small town of Papinsville (originally spelled Papinville), this crossing of the Marais Des Cygnes River featured one of Bates County's first trusses. The timber/iron combination truss that first spanned the river here was replaced in 1873 by the St. Louis Bridge and Iron Company with a Howe combination truss, built on the original stone abutments. Ten years later, in November 1883, the county ordered the construction of a new all-iron superstructure to replace the "wood one now decayed." On 3 December 1883 a $2175.00 contract was awarded to the Kansas City Bridge and Iron Company to erect the new bridge, presumably using at least part of the original stone substructure. The new Papinville Bridge was completed by July 1884, and has since carried traffic at this crossing in southeastern Bates County. The court has ordered numerous repairs on the bridge over the years, including rebuilding the east pier, masonry work and refurbishing the approach spans. Several different contractors have been involved, including the Clinton Bridge Company of Clinton, Iowa, and the Midland Bridge Company of Kansas City. Today the bridge is in fair condition and its approach spans, recently repaired, retain a low degree of structural integrity.

As one of Bates County's two oldest vehicular bridges, the Papinville Bridge is historically noteworthy as an intact and extremely well-documented remnant of early transportation. Among the earliest of all pinned Pratt through trusses statewide, the bridge is representative as a late 19th century example of pinned truss construction.

NAME(S) OF STRUCTURE

Papinville 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 648000.3; Bates County Court Record, Book 3: pages 514-15 (January 1873); Book 5: page 560 (9 November 1883), page 566 (3 December 1883); Book 6: page 95 (5 June 1884), page 96 (7 July 1884); Book 9: page 395 (4 October 1898), page 410 (15 November 1898); Book 10: page 344 (7 December 1901), page 354 (3 February 1902), page 482 (2 December 1902), page 520 (3 March 1903); Book 11: page 236 (24 July 1905), page 279 (10 November 1905), page 285 (5 December 1905), page 341 (7 May 1906), page 370 (6 August 1906) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
MHTD: 648001.2

BATE41

DATE(S) OF CONSTRUCTION
1907-08

LOCATION
County Road 648 over Bates County Drainage Ditch; S21, T38N, R30W
1.0 mile south of Papinsville; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 39)

CONDITION
fair

OWNER
Bates County

span number: 1
span length: 100.0'
total length: 188.0'
roadway wdt.: 14.2'

superstructure: steel, 6-panel, pin-connected Pratt through truss, with two steel stringer approach spans at each end

substructure: concrete-filled steel cylinder piers; non-original steel pile bent pier at south end of main span; steel pile bent abutments and piers under approach spans

floor/decking: timber deck over timber stringers

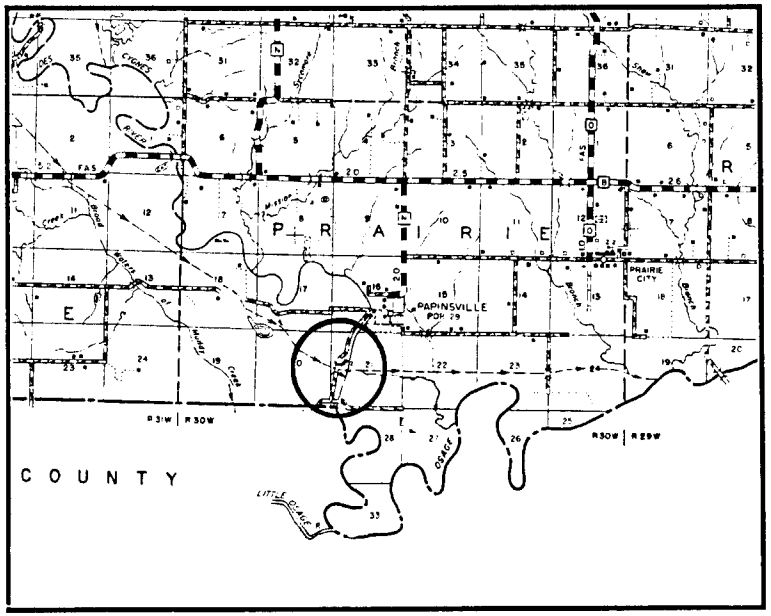
other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles with continuous plate; portal strut: lattice with curved knee braces; floor beam: I-beam, field bolted to vertical; guardrail: 2 steel pipes

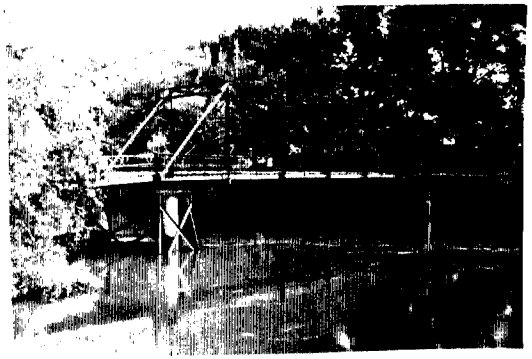
This Pratt through truss, situated in southern Bates County, spans the Bates County Drainage Ditch a mile south of Papinsville. Consisting of a single steel truss, approached by steel stringer spans on both ends, the structure was built as part of a county-wide bridge program in 1907-08. In August 1906 construction began on the Bates County Drainage Ditch, which was designed to carry overflow water from the meandering Marais des Cygnes River. By that winter the work had progressed to the point that several bridges were needed to carry county roads intersected by the ditch. In early December the Bates County Court ordered six major trusses built at various locations over the ditch. Bids from bridge companies in the region were solicited, and early the next year a contract was awarded to the Kansas City Bridge Company to fabricate and erect the trusses. Work progressed throughout the remainder of 1907; by the following March the spans were complete. This short-span Pratt truss north of Rich Hill was among those bridges built by KCBCo as part of the 1907 contract. The main truss remains intact, but the approaches have apparently been replaced. The bridge is a typically configured example of a mainstay structural type in Missouri - the pinned Pratt through truss.

NAME(S) OF STRUCTURE

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 648001.2; Bates County Court Record, Book 11: page 367 (24 July 1906), page 418 (3 December 1906), page 544 (8 August 1907), page 587 (8 October 1907), page 615 (5 December 1907); Book 12: page 18 (8 January 1908), page 36 (4 February 1908), page 51 (4 March 1908) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991

HAER INVENTORY
Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elk Fork Bridge
MHTD: none

BATE42

DATE(S) OF CONSTRUCTION
1884

LOCATION
vacated county road over Elk Fork; S24/25, T42N, R30W
2.0 miles west of Aaron; Bates County, Missouri

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING NRHP possibly eligible (score: 47)

CONDITION
poor

OWNER
Bates County

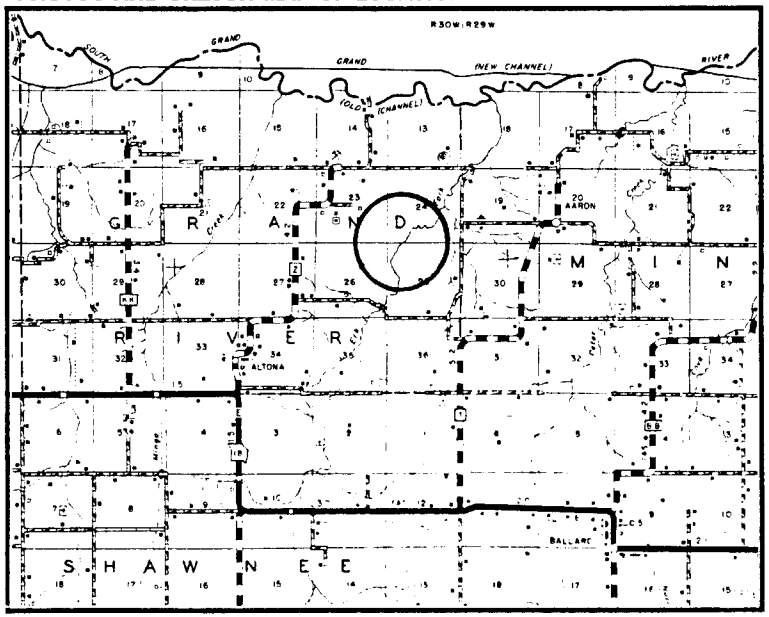
span number:	1	superstructure:	wrought-iron, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	stone abutments
total length:	60.0'	floor/decking:	timber deck (mostly removed) over timber stringers
roadway wdt.:	14.0'	other features:	upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: I-beam, with star iron outriders; diagonal: 2 punched rectangular eyebars; counter: round eyerod with slotted turnbuckle; lateral bracing: round rod with threaded ends; floor beam: plate girder, field-bolted to vertical; guardrail: none

This medium-span pony truss spans Elk Fork some two miles west of Aaron, in Grand Township. Consisting of a pinned Pratt truss, supported by cut stone abutments, the bridge dates to 1884. On December 3, 1883, the Bates County Court appropriated $2225.00 for the construction of three new bridges, two of which were to be erected at crossings over Elk Fork. The contract for the bridges was awarded to the Missouri Valley Bridge and Iron Company of Leavenworth, Kansas, which completed the structures by September 1884. The iron structure with stone abutments carried traffic for almost a century in northeast Bates County. Now abandoned, the structure has been allowed to molder and is overgrown with vegetation. Nonetheless, the Elk Fork Bridge superstructure displays a high degree of historical integrity. As one of Bates County's oldest vehicular bridges - and among the earliest of all trusses statewide - it is historically noteworthy as an example of early transportation.

NAME(S) OF STRUCTURE

Elk Fork Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT GENERAL HIGHWAY MAP

SOURCES

Bates County Court Record, Book 5: page 566 (3 December 1883); Book 6: page 116 (2 September 1884) - located at Bates County Courthouse, Butler MO; field inspection by Clayton Fraser, 1 June 1991.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO	19 December 1991