

STONE COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
*STON01	G 447R	Railey Creek Bridge	1-110' riveted Pratt through truss 1923 M.E. Gillioz, Monett MO
*STON02	133000.3	Hootentown Bridge	(replaced)
*STON03	141000.0	McCall Ford Bridge	1-155' pinned Pratt through truss 1915 Fred L. Appleby
*STON04	H 404	Y Bridge	5-100' concrete open spandrel arch with split approach, one side 1926 Koss Construction Company

EXCLUDED:

Steel stringer
T1016 016001.0

Concrete girder
J 620 J 723 J 724 T 608 197000.3

Concrete slab
029000.2 037001.2 077001.8 088001.4 100500.1 102000.0
200001.8

Concrete box culvert
J 174 J 473 K 178 X 662 157000.5

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	1	1	0	1	3
Excluded	9	10	0	0	19
	10	11	0	1	22 structures

Railey Creek Bridge

STON01

GENERAL DATA

structure no.: G 447R	city/town: 0.8 mile south of Galena
county: Stone	feature inters.: Railey Creek
	cadastral grid: S7, T24N, R23W
	highway route: State Highway 248
	highway distr.: 8
	current owner: Missouri Highway and Transportation Department

STRUCTURAL DATA

superstructure: steel, 6-panel, rigid-connected Pratt through truss	
substructure: concrete abutments and wingwalls	
span number: 1	condition: good
span length: 110.0'	alterations: guardrails replaced with Armco
total length: 113.0'	floor/decking : concrete deck over steel stringers
roadway width: 20.0'	other features: steel angle guardrails

HISTORICAL DATA

erection date: 1923	
erection cost: \$14,652.35	
designer: Missouri State Highway Department	
fabricator : unknown	
contractor : M.E. Gillioz, Monett MO	
references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. G 447R; Missouri Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.	
sign. rating: 40	
evaluation: NRHP non-eligible (standard example of 1920s MSHD truss design)	

inventoried by: Clayton B. Fraser 5 March 1992

McCall Ford Bridge

STONE03

GENERAL DATA

structure no.: 141000.0	city/town: 3.4 miles northwest of Ponce de Leon
county: Stone	feature inters.: James River
	cadastral grid: S1, T25N, R23W
	highway route: County Road 141
	highway distr.: 8
	current owner: Stone County

STRUCTURAL DATA

superstructure: steel, 10-panel, pin-connected Pratt through truss; steel, 4-panel, pin-connected Pratt half-hip pony truss approach span; 1 steel stringer approach span

substructure: stone and concrete abutments; concrete piers

span number: 1	condition: fair
span length: 155.0'	alterations: one concrete pier replaced with in-kind material
total length: 321.0'	floor/decking : timber deck over timber stringers
roadway width: 12.1'	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 looped square eyebars at the hip); diagonal: 2 punched rectangular eyebars; counter: looped round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: 2 angles; floor beam: I-beam, field-bolted to vertical; guardrail: steel pipe

HISTORICAL DATA

erection date: 1915
erection cost: \$2500.00
designer: Fred L. Appleby, Kansas City MO
fabricator : Illinois Steel Company, Chicago IL (main span); Cambria Steel Company, Pittsburgh PA (pony truss approach span)
contractor: Fred L. Appleby, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 141000.0; Stone County Court Record, Book H: page 459 (4 September 1914), page 531 (9 April 1915), page 547 (6 May 1915), page 549 (3 June 1915), page 555 (21 June 1915), page 572 (4 August 1915); Stone County Court Record, Book I: page 99 (23 November 1916), n.p. (10 June 1916) - located at Stone County Courthouse, Galena MO; field inspection by Clayton Fraser, 31 January 1990.

McCall Ford Bridge

sign. rating: 48

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

Inventoried by: Clayton B. Fraser 5 March 1992

Y Bridge

STON04

GENERAL DATA

structure no.:	H 404	city/town:	Galena
county:	Stone	feature inters.:	James River
		cadastral grid:	S6, T24N, R23W
		highway route:	abandoned segment of State Highway 13/43
		highway distr.:	8
		current owner:	City of Galena

STRUCTURAL DATA

superstructure: concrete, 2-rib, open spandrel arch; concrete girder split approach at southwest end; 10 concrete girder approach spans at northeast end

substructure: concrete abutments, wingwall and spill-through concrete piers; concrete and rock wingwall at northeast approach

span number:	5	condition:	good
span length:	100.0'	alterations:	none
total length:	845.0'	floor/decking :	asphalt over concrete deck
roadway width:	23.0'	other features:	concrete guardrails (standard MSHD design); bridge plate: MISSOURI HIGHWAY DEPARTMENT BRIDGE No. H404 1926

HISTORICAL DATA

erection date: 1926-27

erection cost: \$90,811.60

designer: Missouri State Highway Department

fabricator : none

contractor: Koss Construction Company

references: "Crane (Stone County) Missouri", Volume 99 Number 18, 17 (October 1985); "Transportation and Tourism in the Shepherd of the Hills Country: The Case of the Y-Bridge (Part 1)", **White River Valley Historical Quarterly**, Vol. 10 No. 5 (Fall 1989) - located at Galena Public Library, Galena MO; field inspection by Clayton Fraser, 31 January 1990.

sign. rating: 74

evaluation: NRHP listed, 4 April 1991 (outstanding example of MSHD highway bridge design, unique for its split approach)

inventoried by: Clayton B. Fraser 5 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

McCall Ford Bridge
MHTD: 141000.0

STONE03

DATE(S) OF CONSTRUCTION

1915

LOCATION

County Road 141 over James River; S1, T25N, R23W
3.4 miles northwest of Ponce de Leon; Stone County, Missouri

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP possibly eligible (score: 48)

CONDITION

fair

OWNER

Stone County

span number: 1
span length: 155.0'
total length: 321.0'
roadway wdt.: 12.1'

superstructure: steel, 10-panel, pin-connected Pratt through truss; steel, 4-panel, pin-connected Pratt half-hip pony truss approach span; 1 steel stringer approach span
substructure: stone and concrete abutments; concrete 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 (2 looped square eyebars at the hip); diagonal: 2 punched rectangular eyebars; counter: looped round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 2 angles; portal strut: 2 angles; floor beam: I-beam, field-bolted to vertical; guardrail: steel pipe

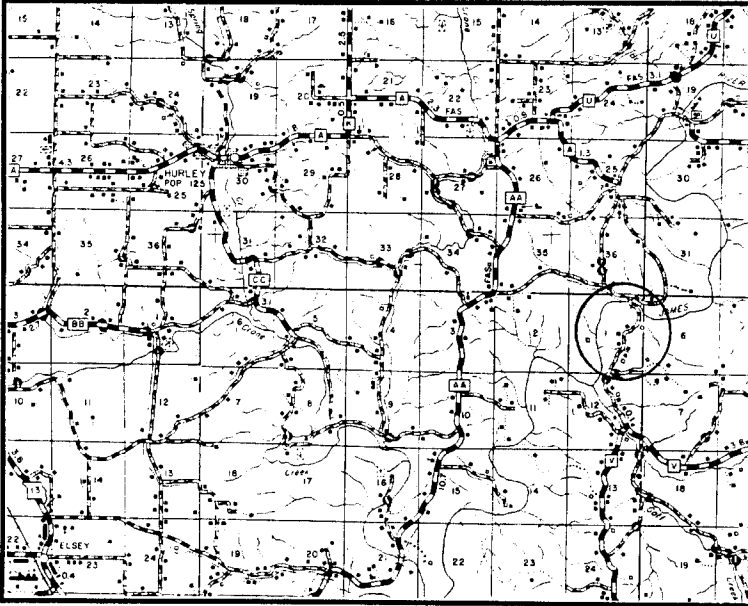
Known locally as the McCall Ford Bridge, this long-span structure carries County Road 141 across the James River some 3½ miles northwest of Ponce de Leon. The structure dates to 1915. In April of that year the Stone County Court cited the need to build a number of bridges across the James and White Rivers. Specifically, the court stated that three steel bridges were to be built, including one over the James River at McCall Ford in the northeastern corner of the county. In May county highway engineer W.T. McCullough surveyed and developed plans and estimates for each of the structures. Bids were solicited and received for the three bridges, and on June 3, 1915, a contract, in the amount of \$22,700.00, was let to Fred L. Appleby of Kansas City. At that time Appleby was an agent for both the Canton Bridge Company of Canton, Ohio, and the Western Bridge Company of Harrisonville, Missouri, but court records do not specify which firm he was representing for this particular contract. In addition to the McCall Ford Bridge, the other two structures included the Welson Ford crossing of the James River, and a bridge over the White River near Townsend Ford, both since removed. Appleby agreed to finish his work by 1 May 1916. Over the next several months the county issued Appleby several warrants for work on the bridges, and the project was evidently completed on schedule. Since its completion, the McCall Ford Bridge has carried vehicular traffic, with only maintenance-related repairs.

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

panel lengths resulted in standardized sizes for the verticals, diagonals and chord members, making fabrication and assembly relatively easy. In the highly competitive bridge manufacturing industry, in which efficiency equated with profit, Pratt trusses received almost universal use. "The Pratt truss is the type most commonly used in America for spans under two hundred and fifty feet in length," noted bridge engineer J.A.L. Waddell wrote in 1916. "Its advantages are simplicity, economy of metal, and suitability for connecting to the floor and lateral systems." Virtually all of the major regional fabricators manufactured Pratt trusses and marketed them extensively to Missouri's counties in the late 19th and early 20th centuries. The McCall Ford Bridge is distinguished among these for its excellent state of preservation, its relatively long span, and its dramatic setting high above the James River. With its truss, substructure and approach spans essentially in place, it is an important transportation-related resource.

NAME(S) OF STRUCTURE

McCall Ford Bridge

PHOTOS AND SKETCH MAP OF LOCATION**LOCATION MAP**TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 141000.0; Stone County Court Record, Book H: page 459 (4 September 1914), page 531 (9 April 1915), page 547 (6 May 1915), page 549 (3 June 1915), page 555 (21 June 1915), page 572 (4 August 1915); Stone County Court Record, Book I: page 99 (23 November 1916), n.p. (10 June 1916) - located at Stone County Courthouse, Galena MO; field inspection by Clayton Fraser, 31 January 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE5 March 1992

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

Y Bridge
MHTD: H 404

STON04

DATE(S) OF CONSTRUCTION

1926-27

LOCATION

abandoned segment of State Highway 13/43 over James River; S6, T24N, R23W
Galena; Stone County, Missouri

USE (ORIGINAL / CURRENT)

highway bridge / pedestrian bridge

RATING NRHP listed, 4 April 1991 (score: 74)

CONDITION

good

OWNER

City of Galena

span number: 5
span length: 100.0'
total length: 845.0'
roadway wdt.: 23.0'

superstructure: concrete, 2-rib, open spandrel arch; concrete girder split approach at southwest end; 10 concrete girder approach spans at northeast end
substructure: concrete abutments, wingwall and spill-through concrete piers; concrete and rock wingwall at northeast approach
floor/decking: asphalt over concrete deck
other features: concrete guardrails (standard MSHD design); bridge plate: **MISSOURI HIGHWAY DEPARTMENT BRIDGE No. H404 1926**

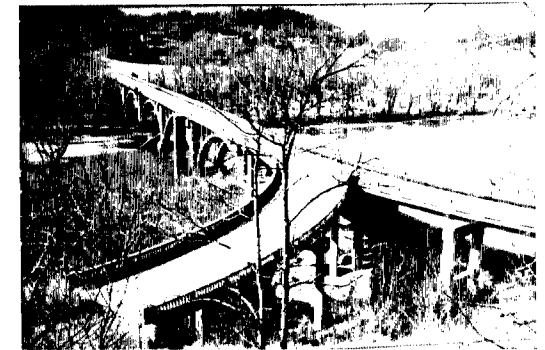
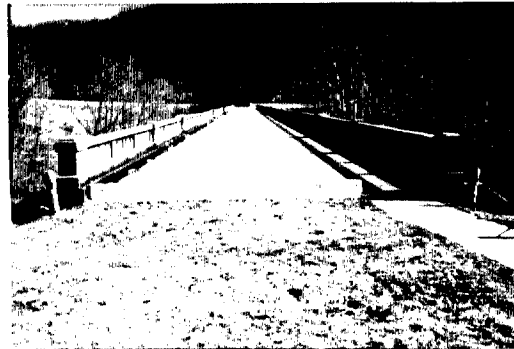
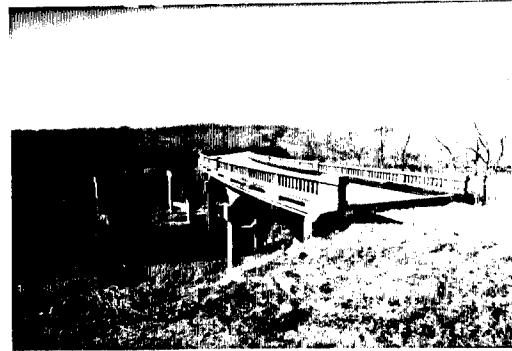
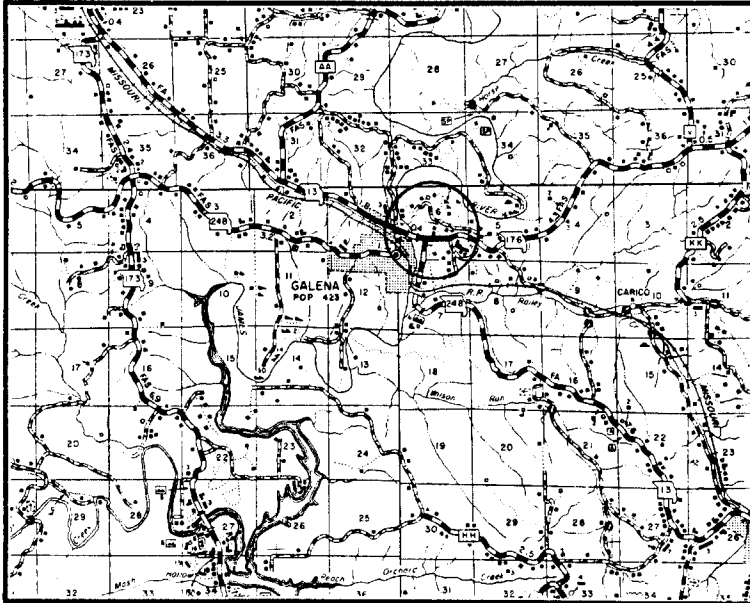
The first structure to span the James River at Galena was a three-span, Parker through truss erected near the local canning factory in 1910-11. Following construction of the Y Bridge in 1927, the original steel bridge was dismantled and rebuilt as a two-span structure at Hootentown [STON02]. Construction of the Y Bridge played an important role in opening the Ozarks to regional and state commerce, and to the tourism industry. The structure was the first of a number of 100-foot long, 23-foot wide concrete deck bridges to be built in Missouri, with others following in 1928, 1929, 1931 and 1932. In addition to being the first of these structures, the bridge is also significant owing to its unique Y configuration. Built by the Missouri Highway Department, the bridge is comprised of a two-rib, concrete, open spandrel arch with a concrete girder split approach on the southwest side. Work on the bridge began in 1926, and its completion was marked by a dedication ceremony on November 13, 1927. Up to 5000 persons attended the event which included a short address by Congressman Dewey Short. One week later the bridge formally opened and began to carry traffic. The Y Bridge served its original purpose for fifty-eight years, until it was closed to vehicles on 25 November 1985. Since that date, the bridge has been maintained by the town of Galena as a pedestrian crossing.

The Galena Y Bridge is significant both as an important regional crossing of the James River, and as an outstanding example of concrete bridge construction, designed by the Missouri State Highway Department. The bridge's Y configuration is unique—one of only three or four such examples in America—and the crossing is additionally significant as a superlative example of concrete open spandrel arch construction.

NAME(S) OF STRUCTURE

Y Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT
GENERAL HIGHWAY MAP

SOURCES

"Crane (Stone County) Missouri", Volume 99 Number 18, 17 (October 1985); "Transportation and Tourism in the Shepherd of the Hills Country: The Case of the Y-Bridge (Part 1)", *White River Valley Historical Quarterly*, Vol. 10 No. 5 (Fall 1989) - located at Galena Public Library, Galena MO; field inspection by Clayton Fraser, 31 January 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO

DATE

5 March 1992
