

# MARIES COUNTY

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

Inv. No.	MHTD	Bridge Name	Description
*MARI01	029003.0	Kaiser Bridge	1-200' steel cable suspension bridge 1930 J.A. Dice, overseer, with local force account labor
*MARI02	none	Maries River Bridge	1-150' steel cable suspension bridge 1928 J.A. Dice, overseer, with local force account labor

EXCLUDED:

Steel stringer						
H 981R	S 783	T 28				
Concrete girder						
H 980R	W 38	W 93	W 94	W 268	W 275	W 490
Z 222	029004.0	030002.0	069000.6	073003.3	088002.7	088003.8
110003.9	117000.1	147002.1	150001.4	166002.4	169001.1	
Concrete slab						
113000.7	150000.8	171002.7				
Concrete box culvert						
H 523	S 515	T 344	T 873	T 874	W 520	X 594
X 882	Y 664					
Timber stringer						
050000.1						

SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	0	1	0	1	2
Excluded	20	16	0	0	36
	20	17	0	1	38 structures

# Kaiser Bridge

MARIO1

## GENERAL DATA

structure no.: 029003.0      city/town: 2.1 miles northwest of Vienna  
county: Maries      feature inters.: Maries River  
cadastral grid: S24, T40N, R10W  
highway route: county road  
highway distr.: 5  
current owner: Maries County

## STRUCTURAL DATA

superstructure: steel cable suspension bridge with timber towers  
substructure: concrete abutments, tower pedestals and tapered concrete deadmen

span number: 1      condition: fair  
span length: 200.0'      alterations: steel cable suspenders, wood floor beams added  
total length: 312.0'      floor/decking : timber deck over 3x6 timber stringers  
roadway width: 12.3'      other features: timber towers with wood plank sheathing; 4-  
inch diameter main cables with 300 parallel  
fence-wire strands and single-strand wrapping;  
irregularly spaced, 7-strand fence-wire suspen-  
ders, looped simply around main cables and  
floor beams; 4x10 timber floor beams, notched  
for suspender wires; wrapped wire lateral  
bracing beneath floor beams

## HISTORICAL DATA

erection date: 1930  
erection cost: \$2005.37  
designer: J.A. Dice  
fabricator : none  
contractor : Henry L. Steinman, with J.A. Dice, overseer

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 029003.0; Minute Book of Special Road District Number 1, located at Maries County Courthouse, Vienna, Missouri; undated 1930 article in **Maries County Home Advisor**; **Rolla Daily News**: "Historic Maries County Bridge May Not Hold Modern Vehicles" (29 April 1987), "Bridge Fate in Hands of the State" (11 November 1987); **Maries County Gazette**: "Swinging Bridge Safe to Cross" (9 November 1988); Robert Hayden, "Historical Resources Mitigation: Bridges over the Osage," report for U.S. Army Corps of Engineers, September 1980, pages 5-21, 35-36; field inspection by Clayton Fraser, 26 October 1989. (See HAER Inventory Form for additional information.)

sign. rating: 54  
evaluation: determined NRHP eligible

inventoried by: Clayton B. Fraser      29 October 1989

# Maries River Bridge

MARI02

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## GENERAL DATA

structure no.:	none	city/town:	5.8 miles north of Vienna
county:	Maries	feature inters.:	Maries River
		cadastral grid:	S35, T41N, R10W
		highway route:	vacated county road
		highway distr.:	5
		current owner:	private

## STRUCTURAL DATA

superstructure:	steel cable suspension bridge with timber towers		
substructure:	concrete abutments, tower pedestals and tapered concrete deadmen		
span number:	1	condition:	towers and cables: fair; floor: deteriorated
span length:	150.0'	alterations:	none
total length:	254.0'	floor/decking :	timber decking over 3x6 timber stringers
roadway width:	11.5'	other features:	timber towers with corrugated steel sheathing; 4-inch diameter main cables with 300 parallel fence-wire strands and single-strand wrapping; irregularly spaced, 7-strand fence-wire suspenders, looped simply around main cables and floor beams; 10x10 timber floor beams, notched for suspender wires; wrapped wire lateral bracing beneath floor beams

## HISTORICAL DATA

erection date:	1928
erection cost:	\$1668.68
designer:	J.A. Dice
fabricator :	none
contractor:	force account labor, with J.A. Dice, overseer

references: Minute Book of Special Road District Number 1, located at Maries County Courthouse, Vienna, Missouri; Robert Hayden, "Historical Resources Mitigation: Bridges over the Osage," report for U.S. Army Corps of Engineers, September 1980, pages 5-21, 35-36; field inspection by Clayton Fraser, 27 October 1989. (See HAER Inventory Form for additional information.)

sign. rating:	54
evaluation:	potentially NRHP eligible

inventoried by: Clayton B. Fraser 29 October 1989

# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

Kaiser Bridge (Swinging Bridge)  
MHTD: 029003.0

MARI01

**DATE(S) OF CONSTRUCTION**

1930

**LOCATION**

county road over Maries River; S24, T40N, R10W  
2.1 miles northwest of Vienna; Maries County, Missouri

**USE (ORIGINAL / CURRENT)**

roadway bridge / roadway bridge

**RATING** determined NRHP eligible (score: 54)

**CONDITION**

fair

**OWNER**

Maries County

span number: 1	superstructure: steel cable suspension bridge with timber towers
span length: 200.0'	substructure: concrete abutments, tower pedestals and tapered concrete deadmen
total length: 312.0'	floor/decking: timber deck over 3x6 timber stringers
roadway wdt.: 12.3'	other features: timber towers with wood plank sheathing; 4-inch diameter main cables with 300 parallel fence-wire strands and single-strand wrapping; irregularly spaced, 7-strand fence-wire suspenders, looped simply around main cables and floor beams; 4x10 timber floor beams, notched for suspender wires; wrapped wire lateral bracing beneath floor beams

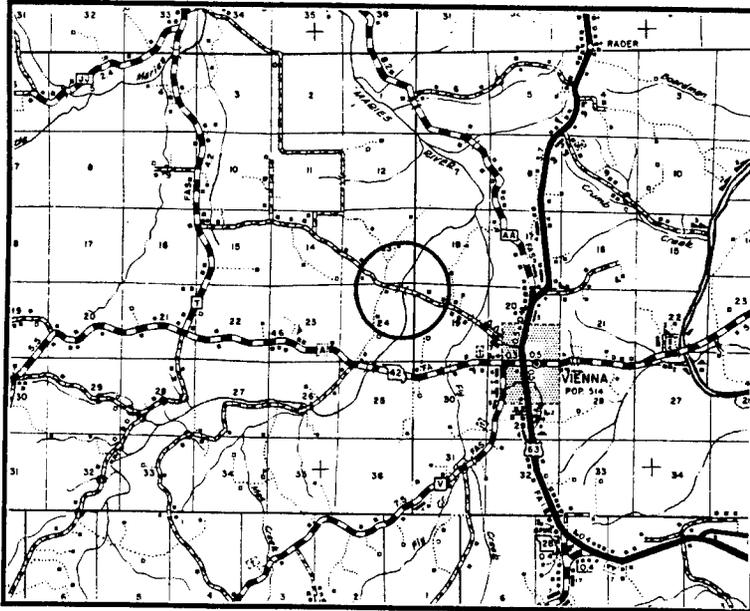
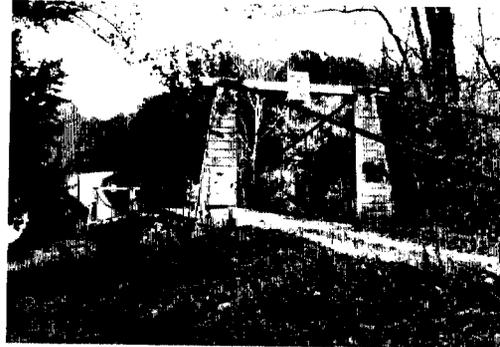
In response to road maintenance shortcomings by Maries County, a group of citizens around Vienna formed their own Special Road District Number 1 in February 1925. Three years later the district constructed a 150-foot steel suspension bridge over the Maries River. In September 1930 the district let contracts for a second span over the river, at the Kaiser crossing northwest of Vienna. "This bridge has been talked about for years," the Vienna newspaper reported. "It is a fine improvement and it links up the Vienna - St. Thomas Road with [State Highway] Number 63." Fifty feet longer than the earlier structure, this lightweight bridge featured fence-wire cables and suspenders, two squat timber towers and massive concrete deadmen buried at the four corners. Hardware dealer Fred Schmidt supplied the 250 sacks of cement and 13,000 pounds of wire, and local builder Henry Steinman erected the bridge under the supervision of J.A. Dice. Work began on October 20th; in November the bridge was completed. Total cost: \$2005.37, divided equally between the district and local subscription. The Kaiser Bridge carried traffic with minimal maintenance until its closure in 1987. Following an extensive rehabilitation in 1988, the bridge was re-opened and carried light county-road traffic in fair condition until its recent re-closure.

Special Road District Number 1 lasted from 1925 until its dissolution in 1936. Although the district built several culverts, the Kaiser Bridge and Maries River Bridge (MARI02) were the only major spans constructed by the group during this period. The county court at this time was building concrete structures based on state highway department standards. In contrast, these lightweight suspension bridges, designed empirically and built by local labor using easily obtainable materials, represent an unusual application of vernacular tradition to bridge construction. Missouri bridge builder J.A. Dice was responsible for the design and construction oversight of both structures. Although Dice had built a number of similar suspension spans between 1897 and about 1940, only ten such structures remain in place today, in varying degrees of repair. The Kaiser Bridge is among the better preserved of Dice's remaining bridges: a technologically significant example of an esoteric and uncommon bridge type.

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**NAME(S) OF STRUCTURE**

Kaiser Bridge

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

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**SOURCES**

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure No. 029003.0; Minute Book of Special Road District Number 1, located at Maries County Courthouse, Vienna, Missouri; undated 1930 article in *Maries County Home Advisor*; *Rolla Daily News*: "Historic Maries County Bridge May Not Hold Modern Vehicles" (29 April 1987), "Bridge Fate in Hands of the State" (11 November 1987); *Maries County Gazette*: "Swinging Bridge Safe to Cross" (9 November 1988); Robert Hayden, "Historical Resources Mitigation: Bridges over the Osage," report for U.S. Army Corps of Engineers, September 1980, pages 5-21, 35-36; field inspection by Clayton Fraser, 26 October 1989.

**INVENTORIED BY**

Clayton B. Fraser

**AFFILIATION**

Fraserdesign, Loveland CO

**DATE**29 October 1989

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# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

Maries River Bridge  
MHTD: none

MARI02

**DATE(S) OF CONSTRUCTION**

1928

**LOCATION**

vacated county road over Maries River; S35, T41N, R10W  
5.8 miles north of Vienna; Maries County, Missouri

**USE (ORIGINAL / CURRENT)**

roadway bridge / abandoned

**RATING** potentially NRHP eligible (score: 54)

**CONDITION**

towers and cables: fair; floor: deteriorated

**OWNER**

private

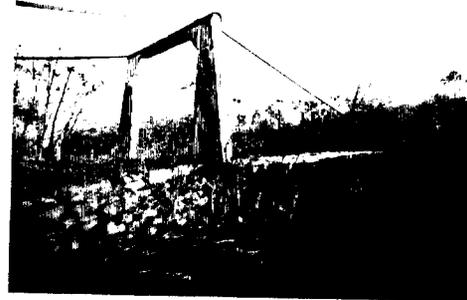
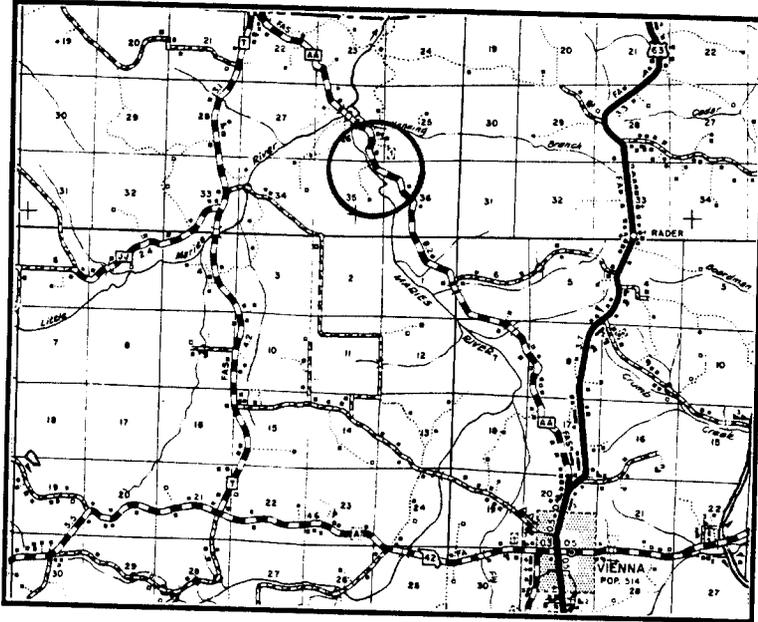
span number: 1	superstructure: steel cable suspension bridge with timber towers
span length: 150.0'	substructure: concrete abutments, tower pedestals and tapered concrete deadmen
total length: 254.0'	floor/decking: timber decking over 3x6 timber stringers
roadway wdt.: 11.5'	other features: timber towers with corrugated steel sheathing; 4-inch diameter main cables with 300 parallel fence-wire strands and single-strand wrapping; irregularly spaced, 7-strand fence-wire suspenders, looped simply around main cables and floor beams; 10x10 timber floor beams, notched for suspender wires; wrapped wire lateral bracing beneath floor beams

In February 1925 citizens around Vienna, the Maries County seat, formed the Special Road District Number 1 to maintain roads and stream crossings in their region. Three years later, in the summer of 1928, the district undertook its first major bridge: a 150-foot span over the Maries River six miles north of the town. The bridge was a single-span suspension structure, with a cambered deck and fence-wire main cables and suspenders. Two squat timber towers supported the cables, with massive concrete deadmen buried at the four corners. The Interlocking Fence Company supplied the 9,000 pounds of wire, the Argyle Lumber Company supplied 200 sacks of cement for the deadmen, abutments and tower pedestals, and the bridge was constructed that summer by local laborers under the supervision of bridge builder, J.A. Dice. Total construction cost: \$1668.68, including approach grading. Despite its extremely lightweight construction, the Maries River Bridge carried traffic for several years before its eventual abandonment to the adjacent landowner. Now privately held, the structure stands abandoned, with its deck, stringers and floor beams in deteriorating condition.

Special Road District Number 1 lasted from 1925 until its dissolution in 1936. Although the district built several culverts, the Maries River Bridge and the Kaiser Bridge (MARI01) were the only major spans constructed by the group during this period. The county court at this time was building concrete structures based on state highway department standards. In contrast, these lightweight suspension bridges, designed empirically and built by local labor using easily obtainable materials, represent an unusual application of vernacular tradition to bridge construction. Missouri bridge builder J.A. Dice was responsible for the design and construction oversight of both structures. Although Dice had built a number of similar suspension spans between 1897 and about 1940, only ten such structures remain in place today, in varying degrees of repair. The Maries River Bridge is among the better preserved of Dice's remaining bridges: a technologically significant example of an esoteric and uncommon bridge type.

**NAME(S) OF STRUCTURE**  
Maries River Bridge

**PHOTOS AND SKETCH MAP OF LOCATION**



**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

**SOURCES**

Minute Book of Special Road District Number 1, located at Maries County Courthouse, Vienna, Missouri; Robert Hayden, "Historical Resources Mitigation: Bridges over the Osage," report for U.S. Army Corps of Engineers, September 1980, pages 5-21, 35-36; field inspection by Clayton Fraser, 27 October 1989.

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29 October 1989