

# Winner Road Viaduct

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JACK08

## GENERAL DATA

structure no.:	K 394R	city/town:	Kansas City
county:	Jackson	feature inters.:	St. Louis & San Francisco Railroad
		cadastral grid:	S1/36, T49/50N, R33W
		highway route:	U.S. Highway 24
		highway distr.:	4
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure:	steel rigid frame	condition:	good
substructure:	steel rigid-frame legs on concrete pedestals	alterations:	cantilevered sidewalks added, 1977
span number:	17.0	floor/decking :	concrete deck over steel stringers
span length:	76.0'	other features:	concrete guardrails; sidewalks cantilevered from bridge spandrels, with chain link fencing
total length:	1243.0'		
roadway width:	42.0'		

## HISTORICAL DATA

erection date:	1934-35
erection cost:	\$80,657.00 (substructure); \$170,155.85 (superstructure)
designer:	Missouri State Highway Department
fabricator :	unknown
contractor :	M.E.Gillioz, Monett MO
references:	Missouri Highway and Transportation Department Structure Inventory and Appraisal: Structure Number K 394R; files on primary system bridges, located at Missouri Highway and Transportation Department, Jefferson City MO; State Highway Commission, <b>Ninth Biennial Report</b> , 1933-34, pages 183-191; "Winner Road Viaducts," <b>Kansas City Star</b> , 4 August 1935.
sign. rating:	66
evaluation:	NRHP possibly eligible (rare example of MSHD experimental structural type)

inventoried by: Clayton B. Fraser    20 September 1994

# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

Winner Road Viaduct  
MHTD: K 394R

JACK08

**DATE(S) OF CONSTRUCTION**

1934-35

**LOCATION**

U.S. Highway 24 over St. Louis & San Francisco Railroad; S1/36, T49/50N, R33W highway viaduct / highway viaduct  
Kansas City; Jackson County, Missouri

**USE (ORIGINAL / CURRENT)**

highway viaduct / highway viaduct

**RATING** NRHP possibly eligible (score: 66)

**CONDITION**

good

**OWNER**

Missouri Highway and Transportation Department

span number: 17.0  
span length: 76.0'  
total length: 1243.0'  
roadway wdt.: 42.0'

superstructure: steel rigid frame  
substructure: steel rigid-frame legs on concrete pedestals  
floor/decking: concrete deck over steel stringers  
other features: concrete guardrails; sidewalks cantilevered from bridge spandrels, with chain link fencing

The U.S. Highway 24 Viaduct was one of three steel rigid frame structures designed in 1934 by the Missouri State Highway Department as part of extensive work on U.S. Highway 24 through the area [other structures: JACK06, JACK07]. As delineated by MSHD, the viaduct featured seventeen spans of various lengths, with the steel deck girders rigidly fixed to steel pedestals to form a rigid-frame superstructure. In April 1934 the highway department solicited competitive bids for the bridges' construction. In May the department hired M.E. Gillioz to build the concrete pedestals and steel towers for this structure for \$80,657.00. In September the department hired Gillioz to erect the girder superstructure for \$170,155.85. Based in Monett, Missouri, Gillioz was responsible for the construction of numerous bridges throughout the state. A native Missourian, he started a construction business, the Gillioz Company, in 1914. The company was responsible for constructing both buildings and bridges. Gillioz worked on the three structures through 1934 and into 1935. By summer they were almost complete. "The new 1-million-dollar Winner road gateway into Kansas City from the east, which will carry traffic above the railroad tracks in the East Bottoms by a series of viaducts, rapidly is nearing completion," the **Kansas City Star** reported in August. "The first viaduct bridging the Missouri Pacific and Frisco network of tracks bear the Sheffield Steel Company, is 1,242 feet long. It is virtually complete. "Gillioz completed the Winner Road Viaduct soon thereafter. The structure carried increasing vehicular traffic for over 40 years before the highway department undertook a major renovation in 1977. At that time, the original sidewalks were removed, the roadway widened, and new sidewalks added on brackets cantilevered from the spandrel beams. This marked the only substantial alteration of the bridge.

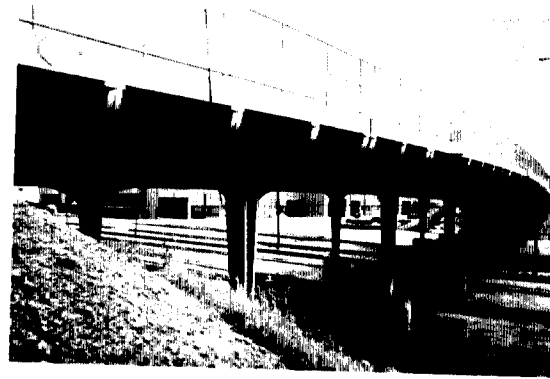
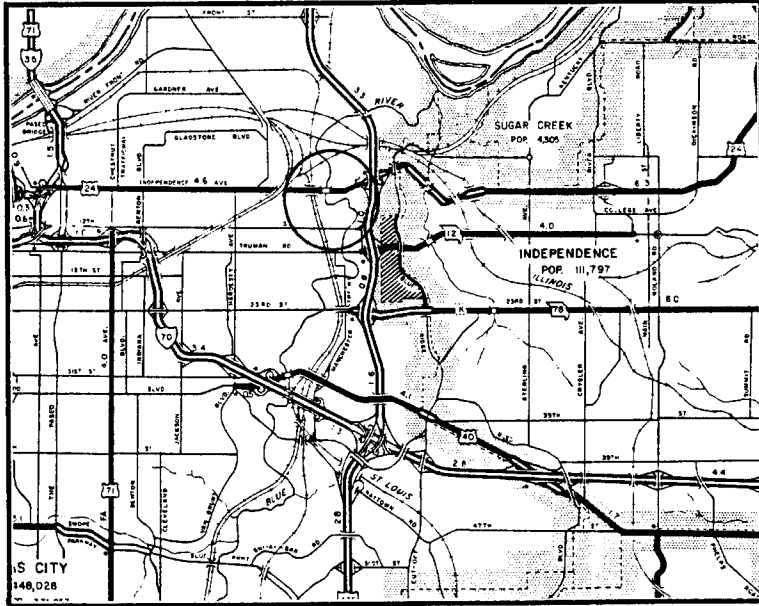
"For the period from November 1, 1932, to December 1, 1934, designs have been prepared and contracts let on 792 new structures," the highway department stated in 1935. Most of these design were for typically configured truss or beam bridges, with separate super- and substructural systems. For three structures in Jackson County, however, the department employed "steel rigid-space-frame" designs, which tied the superstructural girders rigidly with steel columns to form a single inflexible system. Steel rigid-frame bridges had been developed in the late 19th century and marketed extensively to the counties by bridge fabricators as the bedstead truss. Due primarily to their structural shortcomings, bedsteads largely fell from favor soon after the turn of the century in virtually all of the country except Missouri. Eventually even Missouri counties stopped buying bedsteads. The rigid-frame design remained dormant in the state

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until the highway department revived it in the early 1930s with a limited number of urban viaducts and overpasses. But MSHD's use of rigid frames proved shortlived before World War II, limited primarily to Kansas City and St. Louis, and the department never adopted it as a structural standard. The only remaining examples in Missouri of this rather esoteric structural type are the three Jackson County structures built in 1934 and the Chouteau Avenue Viaduct in St. Louis [STLC10]. The Winner Road Viaduct is thus technologically significant—despite its subsequent alteration—as a relatively rare example of what was essentially an experimental structural type for the state highway department.

**NAME(S) OF STRUCTURE**  
Winner Road Viaduct

**PHOTOS AND SKETCH MAP OF LOCATION**



**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

**SOURCES**

Missouri Highway and Transportation Department Structure Inventory and Appraisal: Structure Number K 394R; files on primary system bridges, located at Missouri Highway and Transportation Department, Jefferson City MO; State Highway Commission, **Ninth Biennial Report**, 1933-34, pages 183-191; "Winner Road Viaducts," **Kansas City Star**, 4 August 1935.

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**DATE**  
24 September 1994