

MacArthur Bridge

STLC15

GENERAL DATA

structure no.:	none	city/town:	St. Louis
county:	St. Louis	feature inters.:	Mississippi River
		cadastral grid:	T45N R7E
		highway route:	Chouteau Avenue
		highway distr.:	6
		current owner:	City of St. Louis

STRUCTURAL DATA

superstructure: steel, 18-panel, pin-connected Pennsylvania through truss with double decks
substructure: coursed stone masonry piers with angled cutwaters

span number:	3	condition:	fair
span length:	668'	alterations:	widened/safety curbs installed, 1946; painted, 1948; closed, 1981
total length:	13,300.0'	floor/decking :	steel grid deck over steel stringers
roadway width:	30.0'	other features:	steel lattice guardrails

HISTORICAL DATA

erection date: 1909-17
erection cost: unknown
designer: Boller and Hodge, New York NY
fabricator : American Bridge Company, NY
contractor: American Bridge Company, New York NY (superstructure and flooring); Missouri Valley Bridge and Iron Company, Leavenworth KS (river piers and substructure of western approach); Fruin-Colnon Company, St. Louis MO; City of St. Louis (superstructure, eastern approach)

references: "Proposed New Bridges over the Mississippi River at St. Louis, Mo," *Engineering News*, 21 March 1907; William E. Rolfe and Lucius H. Cannon, "Municipal Bridge of St. Louis: A Record of Municipal Effort," St. Louis Public Library pamphlet, August 1922; "Chronological History of the Municipal Bridge," St. Louis Public Library, April 1930; "Erecting Three 670-Ft. Steel Bridge Spans," *Engineering and Contracting* 36, 13 December 1911, pages 622-30; S.W. Bowen, "The St. Louis Municipal Bridge," *Engineering News* 67, 8 February 1912, pages 231-40; "Erecting the Last Span of the Municipal Bridge, St. Louis," *Engineering Record* 65, 13 April 1912, pages 399-400; "St. Louis Municipal Bridge East Approach a Steel Viaduct Nearly 3 Miles Long," *Engineering Record* 72, 20 November 1915, pages 634-35; "Completing the Municipal Bridge," *Engineering News* 76, 14 December 1916, pages 1129-1131; "Free Bridge to be Named MacArthur," *St. Louis Globe-Democrat*, 28 March 1942; "Unused Approach on MacArthur Bridge Sold," *St. Louis Globe-Democrat*, 12 August 1942; "Committee Favors Post-War Projects," *St. Louis Globe-Democrat*, 12 September 1945; "Hundreds Back Bridge Fight, Morse Says," *St. Louis Star-Times*, 26 October 1946; "2 Candidates Assail 'Gouge' on Bridge Toll," *St. Louis Star-Times*, 28 October 1946; "Suit to End Bridge Tolls Being Planned," *St. Louis Star-Times*, 14 May 1946; "City Seeks Steel Bridge Barriers; 2 More Killed," *St.*

Mac Arthur Bridge

Louis Globe-Democrat, 3 November 1944; "City Motion in Bridge Toll Case Overruled," *St. Louis Post-Dispatch*, 22 November 1946; "Bridge Fight May Go to Highest Court," *St. Louis Star-Times*, 13 November 1948; "Mayor Defends M'Arthur Bridge Toll Collections," *St. Louis Post-Dispatch*, 15 May 1946; "\$1,000,000 a Year Tolls Saved City by Bridge Ruling," *St. Louis Globe Democrat*, 3 December 1944; "Artery to the East: Rail and Traffic Flows Over MacArthur Bridge," *St. Louis Post-Dispatch*, 4 February 1951; Floyd C. Shoemaker, ed., *Missouri Day by Day* vol. II, State Historical Society of Missouri, 1943, pages 59-60; "Death on MacArthur Bridge," *St. Louis Post-Dispatch*, 26 December 1950; "Free Bridge' Symbolic Victory for the People," *St. Louis Business Journal*, 4-10 February 1991.

sign. rating: 71

evaluation: NRHP eligible (outstanding example of large-scale bridge construction at an important great river crossing)

Inventoried by: Lisa Schoch 4 August 1994

HAER INVENTORY

Missouri Historic Bridge Inventory

NAME(S) OF STRUCTURE

MacArthur Bridge
MHTD: none

STLC15

DATE(S) OF CONSTRUCTION

1909-17

LOCATION

Chouteau Avenue over Mississippi River; T45N R7E
St. Louis; St. Louis County, Missouri

USE (ORIGINAL / CURRENT)

highway, railroad bridge / closed

RATING NRHP eligible (score: 71)

CONDITION

fair

OWNER

City of St. Louis

span number:	3	superstructure:	steel, 18-panel, pin-connected Pennsylvania through truss with double decks
span length:	668'	substructure:	coursed stone masonry piers with angled cutwaters
total length:	13,300.0'	floor/decking:	steel grid deck over steel stringers
roadway wdt.:	30.0'	other features:	steel lattice guardrails

In the period following the Civil War, westward expansion rapidly accelerated. With expansion came demands for projects for facilitating easier travel, such as new roads and bridges. Agitation for a bridge over the impassible Mississippi arose in the 1860s, resulting in the eventual construction of the Eads Bridge. The Eads, however, was constructed as a toll structure, sparking repeated conflicts between the residents and the owner of the bridge, the Terminal Railroad Association. Around the turn of the century a movement emerged to erect a bridge over the Mississippi that would be owned and operated by the city of St. Louis, free from toll charges, and funded by city bond issues.

The first official proposal for the St. Louis free bridge came on April 6, 1905. The Missouri Legislature, responding to popular agitation, passed an act authorizing large cities (populations of 100,000 or more) to build and operate bridges on rivers forming borders with other states. Later that month St. Louis Mayor Rolla Wells—despite his personal opposition to the bridge—appointed a Municipal Bridge Commission to investigate potential terminal points for the proposed structure. Popular support for a free bridge reached "fever heat" between 1905 and 1909. In 1907 a committee sought to locate the most feasible location for the bridge, enlisting the services of three important engineering firms: Gayler and Rohwer of St. Louis; Ralph Modjeski of Chicago; and Waddell and Harrington of Kansas City. The consensus, with respect to cost, convenience and termini conditions, was that the bridge would be best located at Chouteau Avenue.

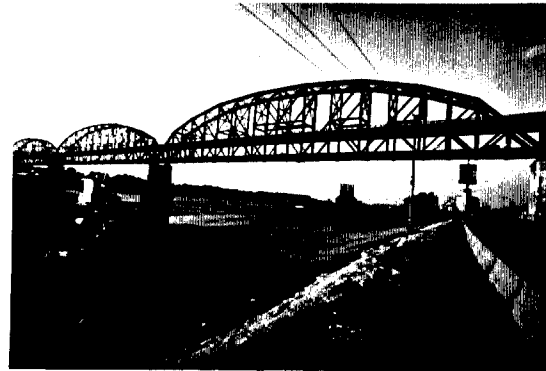
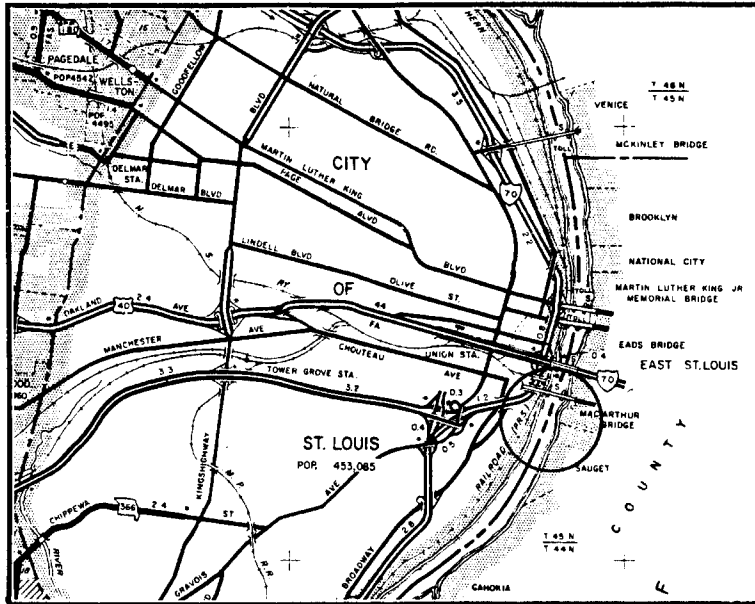
Connecting St. Louis, Missouri, with East St. Louis, Illinois, the Municipal Bridge was slated to be built about a mile below the Eads Bridge. Design plans for the bridge were completed in late 1908 and submitted to the War Department for approval. The first set of plans, prepared by Brenneke and Fay, were rejected for inadequate clearance above the river. The second set was submitted and approved in November. The final design, submitted by Boller and Hodge in substitution of the second set, was approved and retained as the construction design. In accordance with the bridge's final composition, the third set delineated a main span of three double-decked Pennsylvania trusses, each 668 feet and towering 65 feet over the river on massive stone masonry piers.

The contract to found and build the stone river piers was let to the Missouri Valley Bridge and Iron Company on July 28, 1909, for \$459,835.63. The contractor began work on excavating and sinking the caissons in December, completing the task in June 1911. The American Bridge Company won the contract to build the superstructure of the channel spans on November 16, 1909. ABC's bid of \$1,394,043.00 was lower than the nearest competitor. After fabricating the steel in its New York plant, work over the river began in May 1911. Although river ice delayed completion, the superstructure finally stood on August 21, 1912. Between August 1911 and September 1912 the contracts for the western approaches were let. ABC assumed responsibility for the superstructure (total bid, \$477,574.00), and Missouri Valley and Fruin-Colnon Construction shared the work of building the foundations and retaining walls. The western approach was completed in April 1913. On the eastern side, the City of St. Louis accomplished much of the work itself with steel provided by ABC at a cost of \$1,099,453.00. Four small local contractors were awarded contracts for the substructure of the approach spans. Delays on account of unusually high water prevented completion of the eastern approach span until January 3, 1917. Paving (with creosoted wood blocks on concrete) and installation of the lighting system was finished in two weeks, in time for the opening on January 20.

St. Louis' third bridge over the Mississippi, the Municipal Bridge (also known as the City Bridge) finally opened in 1917. St. Louisans' hope for a toll-free bridge, however, were not realized in this grand structure. Exorbitant construction costs forced the city to collect tolls on its own bridge for several years. By 1933 the city had lost about \$17 million on the bridge and public support had diminished. In March 1942 the city's Board of Aldermen adopted an ordinance to officially re-name the structure after a figure they hoped would appeal to their constituents, then-Commander of the United Nations in Australia, Douglas MacArthur. In May the name became official. After World War II the city, in encouragement of post-war projects, voted to widen the bridge and build safety curbs in reaction to mounting traffic deaths. In 1981 the MacArthur Bridge was closed to traffic. Its role in the development of St. Louis and eastern Missouri, however, are immeasurable.

NAME(S) OF STRUCTURE

MacArthur Bridge

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

SOURCES

"Proposed New Bridges over the Mississippi River at St. Louis, Mo," *Engineering News*, 21 March 1907; William E. Rolfe and Lucius H. Cannon, "Municipal Bridge of St. Louis: A Record of Municipal Effort," St. Louis Public Library pamphlet, August 1922; "Chronological History of the Municipal Bridge," St. Louis Public Library, April 1930; "Erecting Three 670-Ft. Steel Bridge Spans," *Engineering and Contracting* 36, 13 December 1911, pages 622-30; S.W. Bowen, "The St. Louis Municipal Bridge," *Engineering News* 67, 8 February 1912, pages 231-40; "Erecting the Last Span of the Municipal Bridge, St. Louis," *Engineering Record* 65, 13 April 1912, pages 399-400; "St. Louis Municipal Bridge East Approach a Steel Viaduct Nearly 3 Miles Long," *Engineering Record* 72, 20 November 1915, pages 634-35; "Completing the Municipal Bridge," *Engineering News* 76, 14 December 1916, pages 1129-1131; "Free Bridge to be Named MacArthur," *St. Louis Globe-Democrat*, 28 March 1942; "Bridge Fight May Go to Highest Court," *St. Louis Star-Times*, 13 November 1948; "Mayor Defends M'Arthur Bridge Toll Collections," *St. Louis Post-Dispatch*, 15 May 1946;

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DATE4 August 1994
