

United States Department of the Interior  
National Park Service

National Register of Historic Places  
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "X" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Memphis and Arkansas Bridge  
other names/site number Interstate 55 Bridge, CT0108

2. Location

street & number Interstate 55  not for publication  
city or town West Memphis  vicinity  
state Arkansas code AR county Crittenden code 035 zip code 72301  
city or town Memphis  vicinity  
state Tennessee code TN county Shelby code 157 zip code 38106

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this  nomination   
request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic  
Places and meets the procedural and professional requirements set for in 36 CFR Part 60. In my opinion, the property  meets   
does not meet the National Register criteria. I recommend that this property be considered significant:  
 nationally  statewide  locally. (See continuation sheet for additional comments.)

\_\_\_\_\_  
Signature of certifying official/Title Date  
\_\_\_\_\_  
State or Federal agency and bureau

In my opinion, the property  meets  does not meet the National Register criteria. ( See Continuation sheet for additional comments.)

\_\_\_\_\_  
Signature of certifying official/Title Date  
\_\_\_\_\_  
State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:  
 entered in the National Register.  
 See continuation sheet  
 determined eligible for the  
National Register.  
 See continuation sheet  
 determined not eligible for the  
National Register.  
 removed from the National  
Register.  
 other, (explain): \_\_\_\_\_  
\_\_\_\_\_  
Signature of the Keeper Date of Action

Memphis and Arkansas Bridge

Name of Property

Crittenden Co, Arkansas & Shelby Co, Tennessee

County and State

Classification

Ownership of Property  
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property  
(Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property  
(Do not include previously listed resources in count.)

Contributing	Noncontributing	
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		buildings
		sites
1		structures
		objects
1	0	Total

Name of related multiple property listing  
(Enter "N/A" if property is not part of a multiple property listing.)

Historic Bridges of Arkansas

Number of Contributing resources previously listed  
in the National Register

N/A

6. Function or Use

Historic Functions  
(Enter categories from instructions)

TRANSPORTATION: Road-related (vehicular)

Current Functions  
(Enter categories from instructions)

TRANSPORTATION: Road-related (vehicular)

7. Description

Architectural Classification  
(Enter categories from instructions)

OTHER: Continuous truss, Warren truss with verticals,  
through truss bridge

Materials  
(Enter categories from instructions)

foundation Concrete, Stone

walls Steel

roof N/A

other N/A

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

SEE CONTINUATION SHEETS.

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
B Property is associated with the lives of persons significant in our past.
C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A owned by a religious institution or used for religious purposes.
B removed from its original location.
C moved from its original location.
D a cemetery.
E a reconstructed building, object, or structure.
F a commemorative property
G less than 50 years of age or achieved significance within the past 50 years.

Levels of Significance (local, state, national)

LOCAL

Areas of Significance (Enter categories from instructions)

ENGINEERING

Period of Significance

1949-1950

Significant Dates

1949

Significant Person (Complete if Criterion B is marked)

Cultural Affiliation (Complete if Criterion D is marked)

Architect/Builder: Modjeski and Masters - Contractors; Merritt-Chapman and Scott Corp., Harris Structural Steel Co., Virginia Bridge Company - Builders

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

SEE CONTINUATION SHEETS.

**9. Major Bibliographical References****Bibliography**

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Arkansas State Highway and Transportation Department (Environmental Division). *Arkansas Historic Bridge Review and Evaluation: Volume I (December 1987) and Volume II (April 1996)*. Little Rock, AR: no publisher.

Arkansas Highway Department. "OASIS INQUIRY - Bridge 2271." (database). 2000.

Arkansas Historic Preservation Program. "Bridges to the Past." (brochure). 1999.

Carver, Martha. *Draft Survey Report for Historic Highway Bridges. Parts I and II*. Nashville: Tennessee Department of Transportation, 1992.

Comp, Allan, and Donald Jackson. "Technical Leaflet 95: Bridge Truss Types: A Guide to Dating and Identifying." American Association for State and Local History, 1977.

Johnson, Eugene J. and Robert D. Russell, Jr. *Memphis: An Architectural Guide*. Knoxville: University of Tennessee Press, 1990.

Modjeski & Masters. *Memphis and Arkansas Highway Bridge Over the Mississippi River: Final Report to Arkansas State Highway Commission and Department of Highways and Public Works State of Tennessee.* 1950.

Plowden, David. *Bridges*. New York: Viking Press, 1974.

Sculle, Keith A. "'A Completely New Mode of Living:' the Origins of the Town Park Motor Hotel in Memphis." *Tennessee Historical Quarterly* 58 (Winter 1999): 302-315.

**Previous documentation on file (NPS):**

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- Previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # \_\_\_\_\_
- recorded by Historic American Engineering Record # \_\_\_\_\_

**Primary location of additional data:**

- State Historic Preservation Office
- Other State Agency
- Federal Agency
- Local Government
- University
- Other

Name of repository:

Arkansas Highway Department; Tennessee Department of  
Transportation

Memphis and Arkansas Bridge  
Name of Property

Crittenden Co, Arkansas & Shelby Co, Tennessee  
County and State

**10. Geographical Data**

**Acreage of Property** Approximately 26 Acres

**UTM References**

(Place additional UTM references on a continuation sheet.)

A	<u>15</u>	<u>766730</u>	<u>3890690</u>
	Zone	Easting	Northing
B	<u>15</u>	<u>766690</u>	<u>3890640</u>

C	<u>15</u>	<u>765470</u>	<u>3891670</u>
	Zone	Easting	Northing
D	<u>15</u>	<u>765480</u>	<u>3891710</u>

See continuation sheet

**Verbal Boundary Description**

(Describe the boundaries of the property on a continuation sheet.)

Beginning at the east corner of the southeast end of the bridge the boundary proceeds south approximately 65 feet, crossing Interstate 55, to the south corner of the bridge. The boundary then turns west and proceeds along the southwest side of the bridge for 5,222 feet (crossing the Mississippi River) at which point the boundary turns north at the western corner of the bridge. The boundary then extends approximately 65 feet to the north corner of the northwest end of the bridge. Next the boundary turns and follows the northeastern side of the bridge for approximately 5,222 feet, heading in a southeasterly direction to its point of origin at the east corner of the southeast end of the bridge.

**Boundary Justification**

(Explain why the boundaries were selected on a continuation sheet.)

This boundary has been established to isolate the bridge, abutments, and piers, all of which are historically associated with this resource and maintain their integrity.

**11. Form Prepared By**

name/title Kara Mills, National Register/Survey Coordinator  
organization Arkansas Historic Preservation Program date \_\_\_\_\_  
street & number 1500 Tower Building, 323 Center Street telephone (501) 324-9880  
city or town Little Rock state AR zip code 72201

**Additional Documentation**

Submit the following items with the completed form:

**Continuation Sheets**

**Maps**

A USGS map (7.5 or 15 minute series) indicating the property's location

A Sketch map for historic districts and properties having large acreage or numerous resources.

**Photographs**

Representative black and white photographs of the property.

**Additional items**

(Check with the SHPO or FPO for any additional items.)

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## National Register of Historic Places Continuation Sheet

Section number 7 Page 1

### SUMMARY

The Memphis and Arkansas Bridge is located at the crossing of the Mississippi River, on U.S. Interstate 55 as you enter the towns of West Memphis, Arkansas, and Memphis, Tennessee. Comprised of five spans measuring up to 790 feet each, this steel, through truss, Warren truss with verticals spans a total of 5,222 feet. The Memphis and Arkansas Bridge crosses the Mississippi River and is being nominated to the National Register of Historic Places with local significance under Criterion C for its distinctive type and method of construction and as the only bridge spanning the Mississippi River that was designed exclusively for vehicular travel before 1950.

### ELABORATION

After World War II most bridge designers increasingly turned to concrete or steel deck girder bridges; however, the firm of Modjeski and Masters chose to use a Warren through truss design for the Memphis and Arkansas Bridge, a popular bridge type in the mid nineteenth and early twentieth century. The steel, through truss, Warren truss bridge is accessed from both the southeast and northwest by U.S. Interstate 55. The bridge spans from West Crump Boulevard (Highway 65) in Memphis, Tennessee, to the embankment of the St. Francis Levee on the Arkansas side.

The Memphis and Arkansas Bridge commences from the high bluff on the Tennessee bank and after crossing the Mississippi River at required clearances it descends on an easy grade to the Arkansas overflow land where it joins Highway 70. Existing conditions such as the width of the overflow on the Arkansas side and locations and height of the existing railroad bridge piers determined the length, underclearance, and pier locations of the bridge. The main bridge piers were lined up with those of the existing railroad bridges, and underclearances of equal or greater height were provided under the spans. The west abutment of the bridge was set back the same distance from the river as the abutments in the present bridges, spanning the Mississippi River at Memphis, in order to provide a total overflow opening on the Arkansas approach equal to that in the existing bridges

Because the Memphis and Arkansas Bridge is a through truss, it carries its traffic load level with the bottom chords and traffic actually passes through the framework of the bridge. It consists of a four lane through truss main bridge of multiple cantilever type over the present low water river channel, with two additional through truss simple spans on the Arkansas bank. There are 27 approach spans that lead up to this steel bridge, with Warren trusses and vertical supports. The section of the bridge being supported by the Warren truss consists of 5 spans, each measuring approximately 790 feet at the maximum span length; this in conjunction with the 27 approach spans give the bridge a total structural length of 5,222 feet.

The travel surface is 52 feet wide with an overall deck width of 65 feet. Sidewalks that are five feet wide are cantilevered on brackets outside of the trusses to provide access for pedestrians. To reduce dead load, as much as possible, the roadway is designed of concrete filled grid flooring throughout except in the Memphis Anchor Arm where 7 ½" concrete slab is used to provide additional anchorage weight. The bridge supports are constructed of cut stone and concrete and the Warren trusses with verticals run the entire length of the bridge on the northwest and southeast sides. The Warren truss with verticals is designed to allow the diagonals to carry both compressive and tensile forces, with the verticals serving as bracing for the triangular web system.

Memphis and Arkansas Bridge

Name of Property

Crittenden Co, Arkansas & Shelby Co. Tennessee

County and State

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### Integrity

No structural alterations have been made to the bridge to alter its integrity. Its location and setting remains pristine and it exemplifies its original historic design and materials. No changes have been made to alter the historic workmanship or detract from its feeling or association as it is still used as a bridge for vehicular travel.

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## National Register of Historic Places Continuation Sheet

Section number 8 Page 1

### SUMMARY

Constructed in 1949, the Memphis and Arkansas Bridge over the Mississippi River is being nominated to the National Register of Historic Places with local significance under Criterion C because it embodies the distinctive characteristics of a continuous truss, Warren truss with verticals, through truss bridge and is the best example of this design, used exclusively for a vehicular travel, spanning the Mississippi River at Memphis. This bridge is significant in the area of engineering and is being submitted under the multiple property listing "Historic Bridges of Arkansas" and under the associated historic context "Post WWII Era".

### ELABORATION

The planning and construction of the Memphis and Arkansas Bridge, between 1945 and 1949, reflected the boom in automobile travel in the immediate postwar era and the interest from city and regional planners for better transportation links across the Mississippi River. The first bridge to span the Mississippi River at Memphis was the Frisco Bridge, designed by George Morison it was constructed in the late 1880s and early 1890s. The Frisco Bridge was built for the Kansas City, Ft. Scott and Memphis System and its construction was an engineering feat of great professional interest among engineers world wide. Although the concept of the bridge was motivated by the railroad, Congress granted the charter for the construction of the bridge and required that the bridge be designed to allow the passage of railway trains, wagons, vehicles, pedestrians, and the passage of animals. The design of the bridge allowed it to carry interstate traffic on a roadway constructed on the same floor with and between the railway tracks.

In 1916 the Harahan Bridge, a combination vehicular and railroad bridge, was designed by engineers Ralph Modjeski and K. G. Williams. This bridge was adequate for automobile travel in the Memphis area throughout the 1920s and 1930s, but highway planners realized that a wider bridge capable of handling more automobiles—the bridge was 51 feet wide – was essential for future traffic and urban growth in Memphis. There was interest in constructing a new Mississippi River bridge in the late New Deal years, but the involvement of the United States in World War II, and the subsequent control placed on building materials, meant that planning and building the bridge was delayed until the war was over.

Interestingly, the consulting engineers for the Memphis and Arkansas Bridge, Modjeski and Masters, was a successor firm to the earlier significant work of Ralph Modjeski, whom scholars such as David Plowden recognize as one of the pre-eminent bridge designers of the early twentieth century. Modjeski had been involved in the design of the adjacent Frisco railroad bridge in 1894 and the Harahan bridge in 1916. Modjeski later entered into a partnership with Frank Masters in 1923. Modjeski died in 1940, but the firm name lived on as Modjeski and Masters.



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The construction of the Memphis and Arkansas Bridge was part of a larger urban development/renewal plan in Memphis in the late 1940s. The bridge spanned from the embankment of the St. Francis Levee on the Arkansas side to West Crump Boulevard (Interstate 65) in Memphis, Tennessee. At the same time that the new bridge for U.S. Highway 70 was under construction, a new bypass route for the highway around the downtown area and the historic African-American neighborhoods of South Memphis was being constructed. This four-lane highway was named E. H. Crump Boulevard, in honor of the Memphis political boss Edward Hull Crump. The bypass, like the bridge, was to divert interstate traffic away from the increasingly congested downtown. Along with attracting various types of commercial development in Memphis, the new bridge and highway soon attracted investors wishing to build Memphis' first "motor hotel." As the roadside architecture historian Keith Sculle has observed:

In 1950 Memphis was the junction of five major federal highways: the east-west routes of U. S. Highways 64, 70, 78, and 79 and the north-south route of U. S. Highway 51. Just as important, it possessed the only highway bridge [the Memphis and Arkansas] crossing the Mississippi River for some 170 miles. Motorists were using this highway network at far greater rates than ever before; it is of little surprise, therefore, that businesspeople of various levels of aspiration and financial capacity began to look at Memphis as a travelers' hub in the twentieth century's consumer culture. (Sculle, 304)

In 1953 Lemuel L. and Milton L. Stroud, along with investors Royal C. Miller and Clint W. Murchison, Sr., established the Town Park Motor Hotel, complete with a Sherry's Restaurant, at the junction of Pennsylvania Avenue and Crump Boulevard, the first highway juncture for east-bound travelers over Memphis and Arkansas Bridge into Memphis. Developed as a high-end motor hotel for traveling businessmen as well as tourists, it was the first major tourist-related business along the new highway. Its early success led to other tourism-related businesses on the east side of the bridge, and within a decade, the Crump Boulevard bypass had developed into a busy commercial artery for Memphis commerce.

### Memphis and Arkansas Bridge

The initiative to build the Memphis and Arkansas Bridge was spearheaded by the Memphis and Arkansas Bridge Commission formed in 1939 by prominent Tennesseans and Arkansans. In May of 1944 the Arkansas State Highway Commission and the Department of Highway and Public Works of Tennessee, with the approval of the Bureau of Public Roads, hired the firm of Modjeski and Masters for the "checking of contractors' details" and the supervision of construction. Although post-war bridge designers increasingly turned to concrete or steel deck girder bridges, the firm Modjeski and Masters chose to use a Warren through truss design. According to Allan Comp, Senior Historian, and Donald Jackson, Civil Engineer (HAER), the Warren truss design dates back to the 1840s. During the late part of the nineteenth century different styles of trusses were developed but it was the Pratt and the Warren designs that gradually demonstrated their versatility, durability, and economic desirability. Because of the success of both bridge designs, nearly all bridge trusses in the mid nineteenth century through the early twentieth century were constructed using variations of these forms.

Between 1945 and 1948 bids were advertised for construction of the bridge. Due to the unattainability of necessary construction materials, as a direct result of World War II, many of the bids had to be re-advertised several times because of the high cost estimates submitted by contractors. In the end Contract No. 1 and Contract No. 2 were

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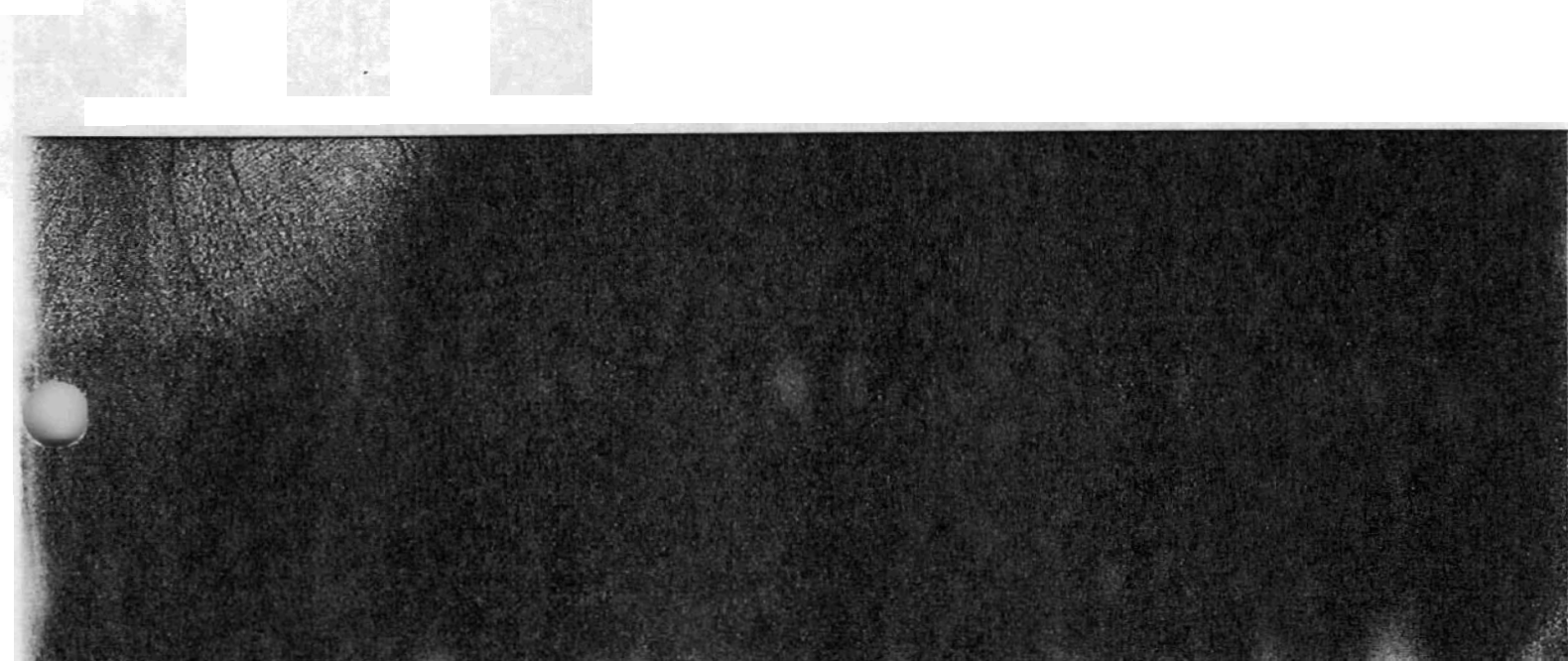
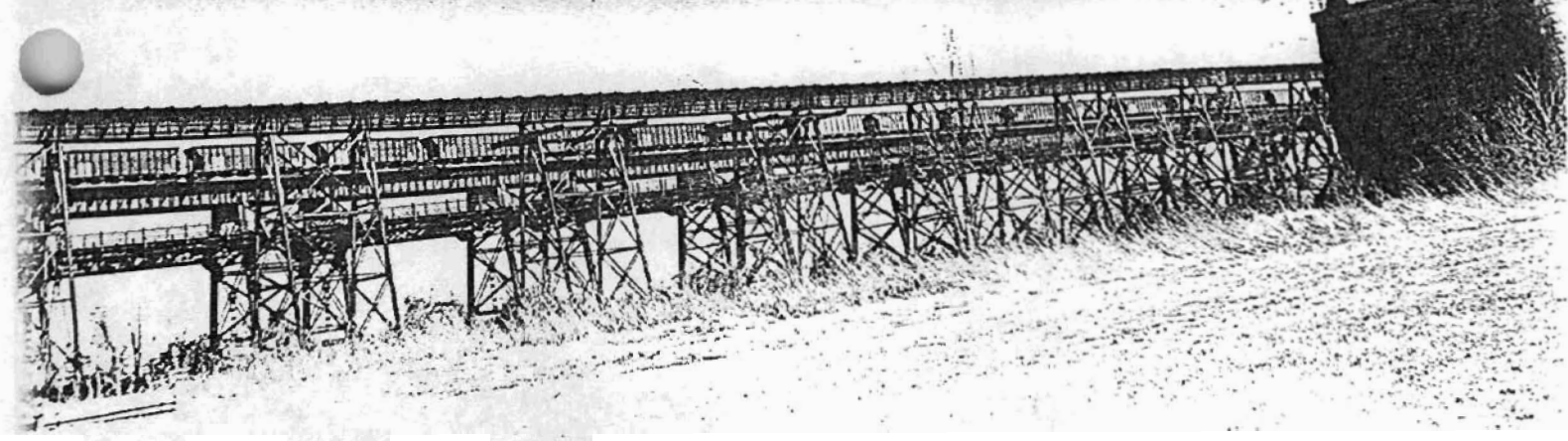
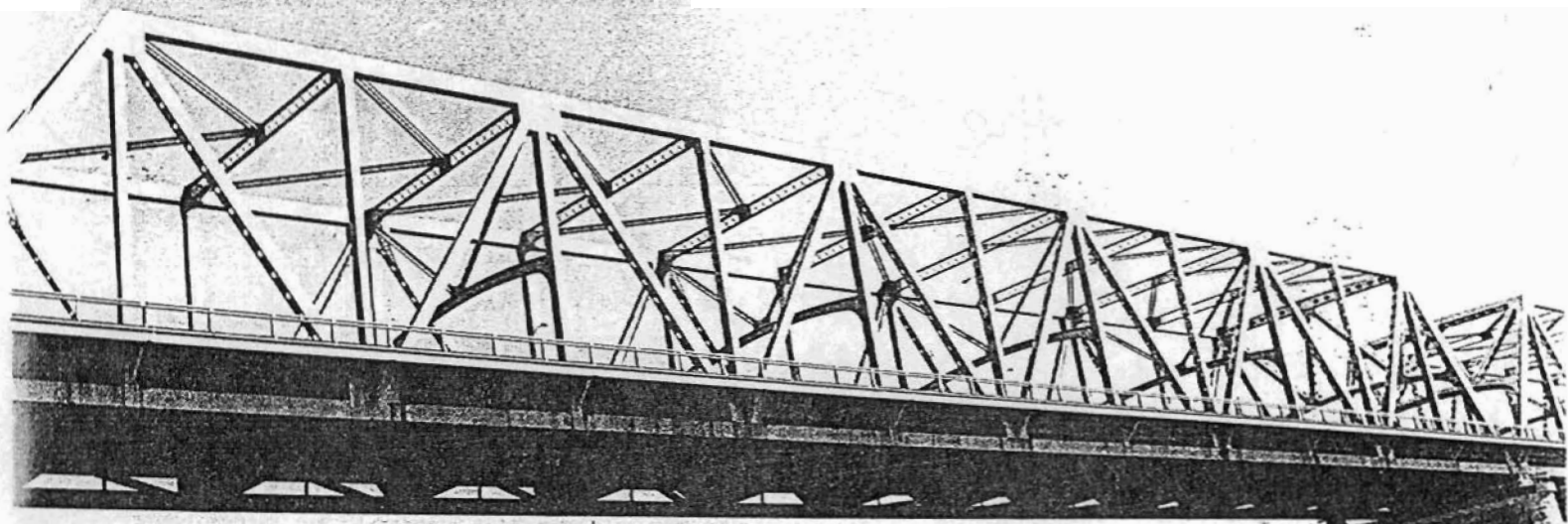
Section number 8 Page 3

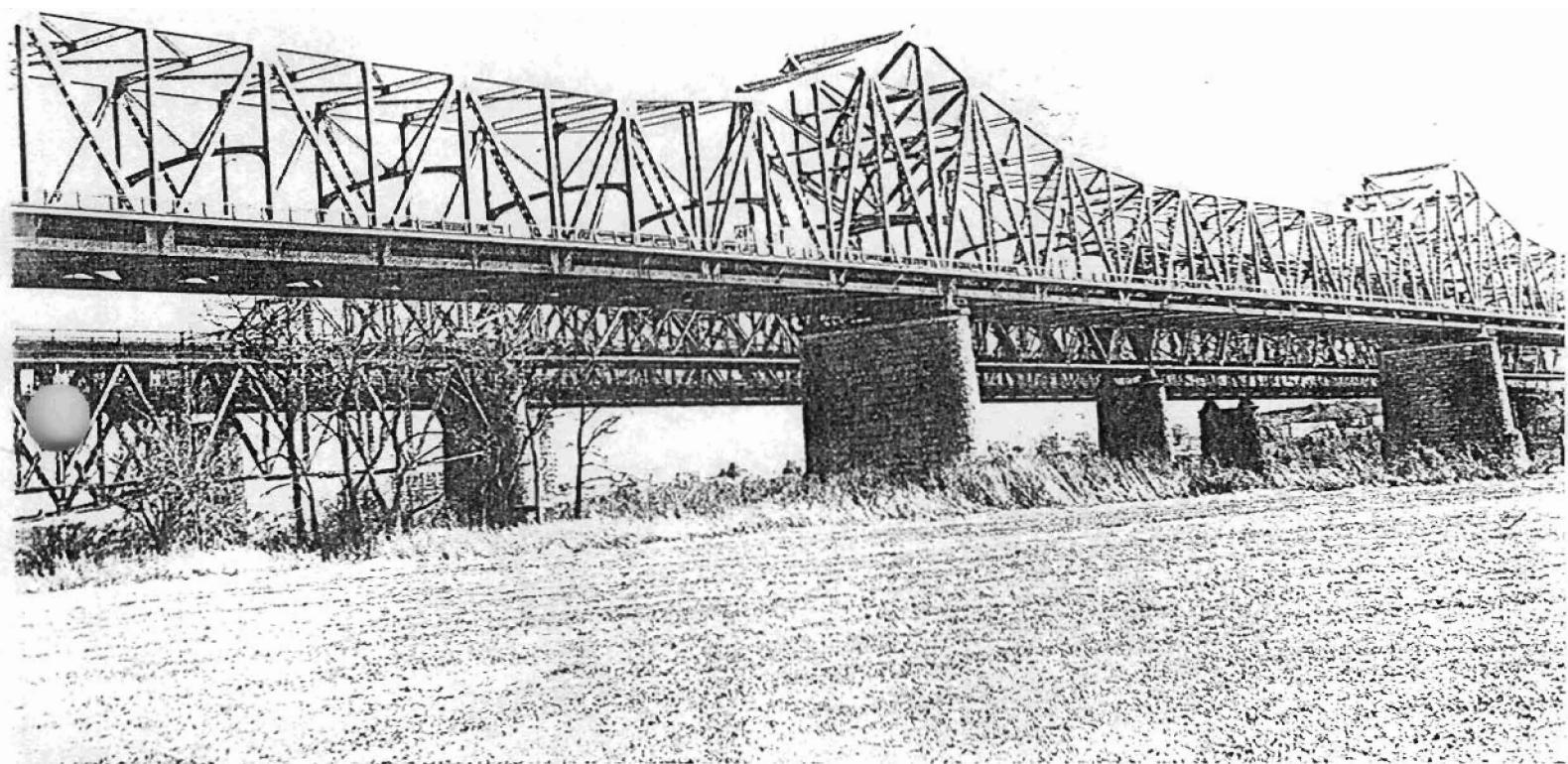
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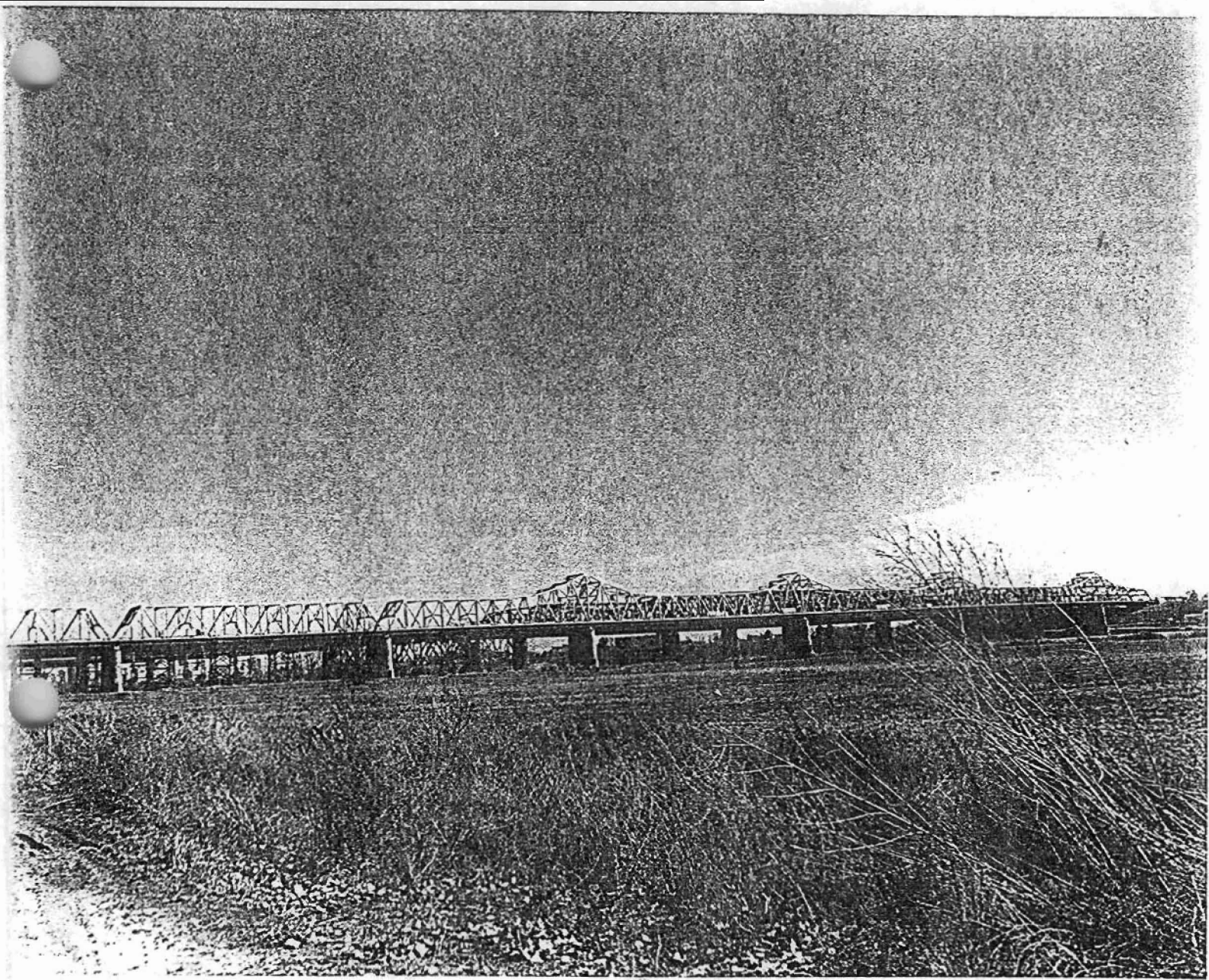
awarded to the Merritt-Chapman and Scott Corporation of New York City; Contract No. 3 was awarded to the Harris Structural Steel Company of New York; and Contract No. 4 was awarded to the Virginia Bridge Company of Roanoke, Virginia. Actual construction work in the field began on 24 August 1945 and the bridge was opened for vehicular traffic on 17 December 1949. During the construction of the bridge, the decision was made to use 57 mercury vapor lights with 16,000 lumens intensity for the bridge roadway and that contract was awarded to the Townsend Electric Company of Jackson, Tennessee. Ten years after the formation of the Bridge Commission and approximately eight years after the start of active engineering work the Memphis and Arkansas Bridge, spanning the Mississippi River, was completed. The entire project was financed as an interstate Federal-aid project.

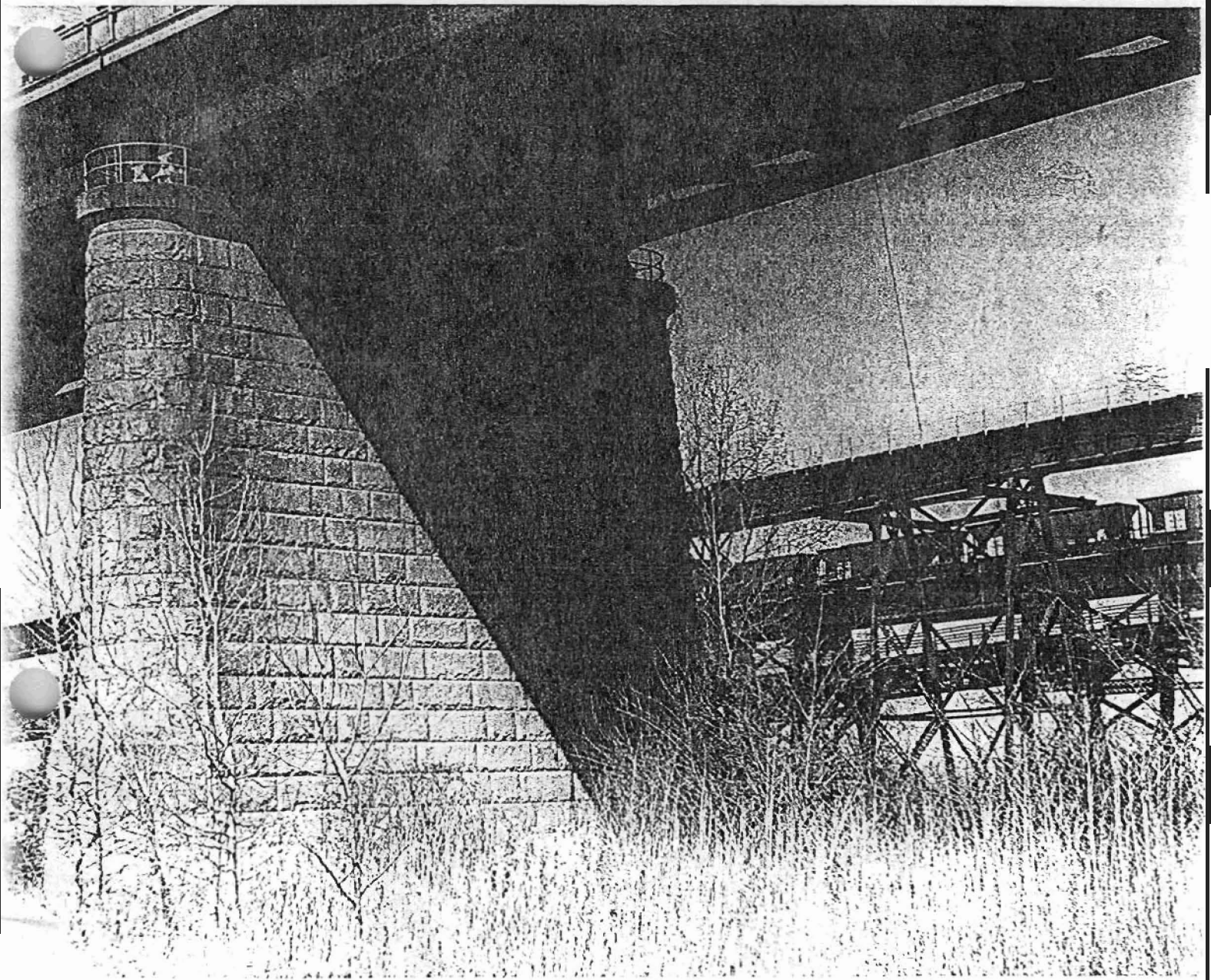
### Conclusion/Significance

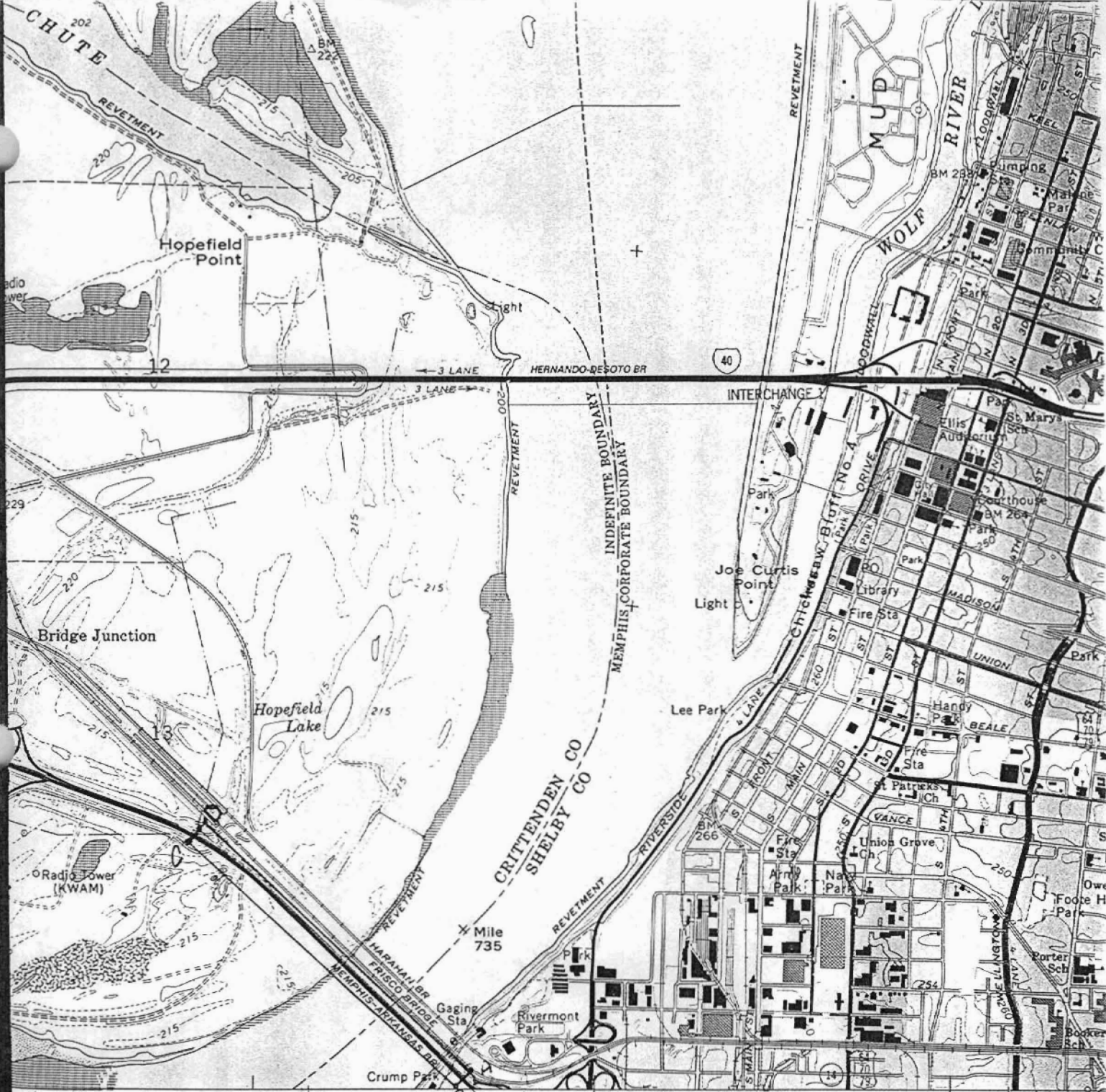
The construction of the Memphis and Arkansas Bridge resulted from the need to provide a more efficient transportation route across the Mississippi River. This bridge is being nominated to the National Register of Historic Places with **local significance** under **Criterion C** because it is the best example of a continuous truss, Warren truss with verticals, through truss, bridge designed exclusively for vehicular traffic in this area. This bridge is significant in the area of engineering and is being submitted under the **multiple property listing** "Historic Bridges of Arkansas" and under the associated **historic context** "Post WWII Era."





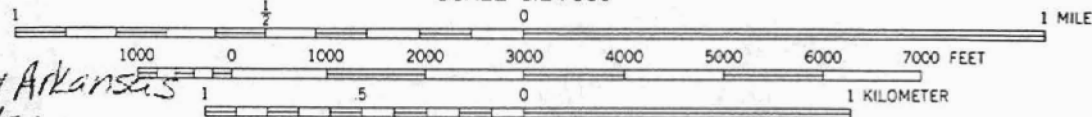






6 MI. TO I-240 (VIA I-55)  
 CLARKSDALE, MISS. (VIA U.S. 61) 74 MI.  
 (SOUTHWEST MEMPHIS)  
 2954 11 SE

SCALE 1:24 000



1°42' 30 MILS

*Memphis and Arkansas Bridge*  
*West Memphis, Crittenden Co., AR*  
*Memphis, Shelby Co., TN*

CONTOUR INTERVAL 10 FEET  
 BOTTLED LINES REPRESENT 5-FOOT CONTOURS  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929

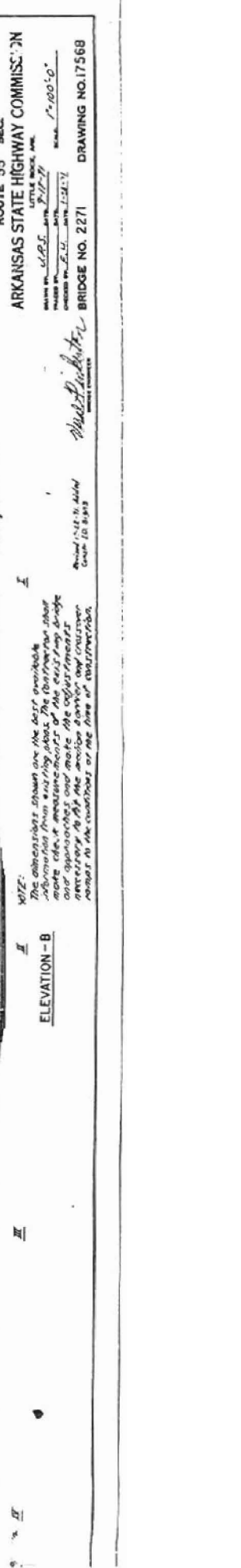
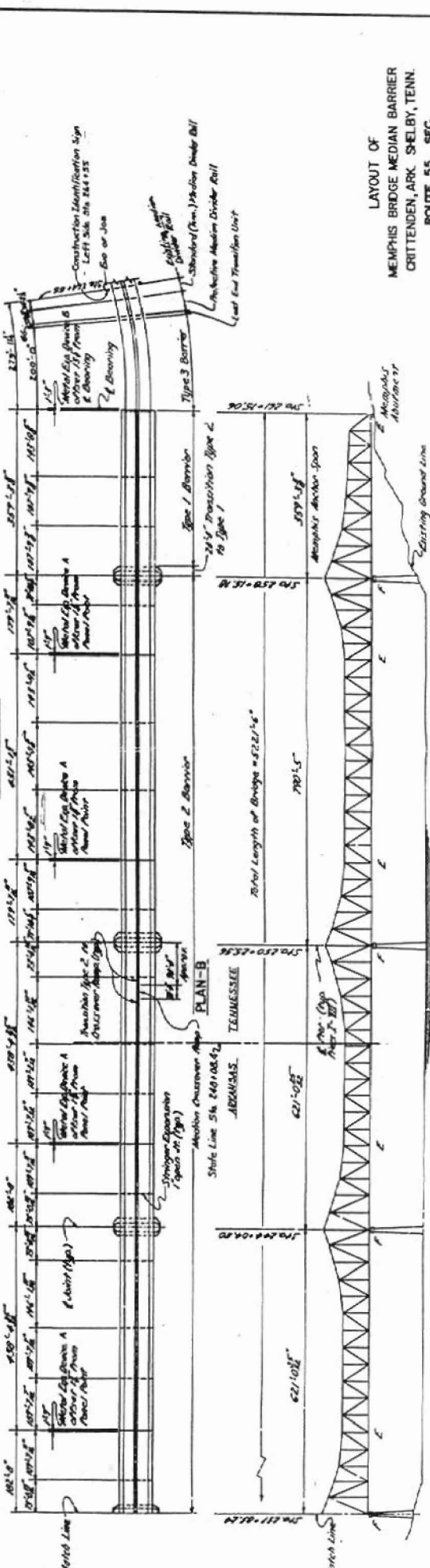
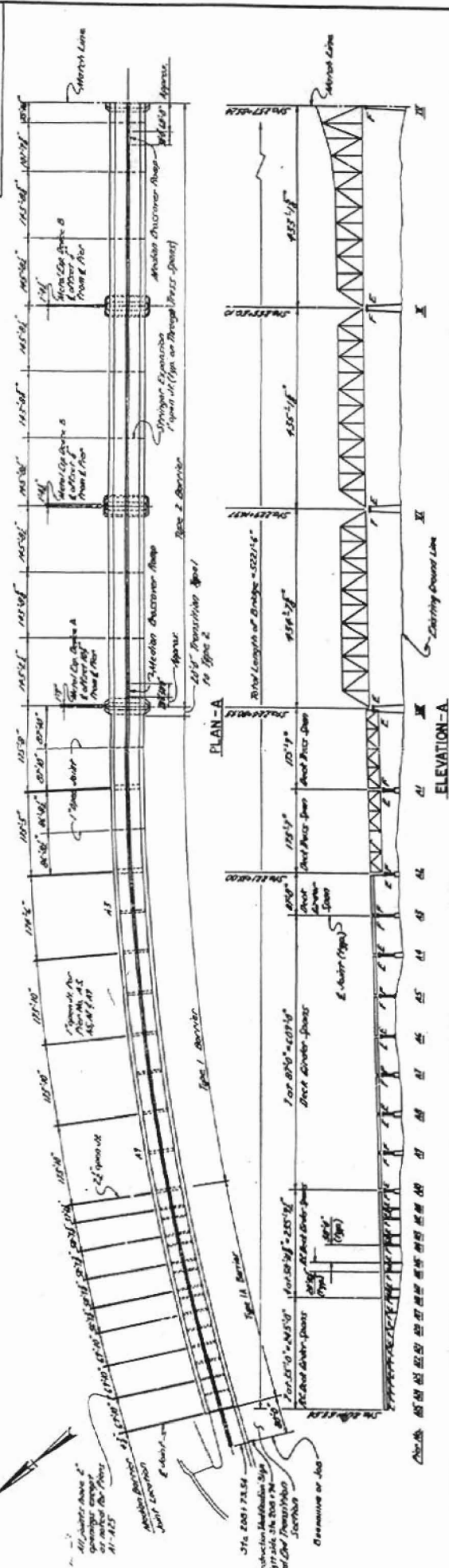
UTM GRID AND 1993 MAGNETIC NORTH  
 DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
 FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092  
 TENNESSEE DEPARTMENT OF CONSERVATION, DIVISION OF GEOLOGY, NASHVILLE, TENNESSEE 37243  
 AND ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARK. 72204  
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

nt indicates extension of urban areas

C. 15/765470/3891670  
 D. 15/765480/3891710  
 B. 15/766690/3890640

DATE	BY	CHKD.	APP.	NO.
10/25/57	W.S.	W.S.		6
11/18/57				3
11/21/57				12



LAYOUT OF  
 MEMPHIS BRIDGE MEDIAN BARRIER  
 CRITTENDEN, ARK. SHELBY, TENN.  
 ROUTE 55 SEC.  
 ARKANSAS STATE HIGHWAY COMMISSION

BRIDGE NO. 2271 DRAWING NO. 1756B  
 SCALE: 1"=100'-0"  
 DATE: 10/25/57  
 DRAWN BY: W.S.  
 CHECKED BY: W.S.  
 APPROVED BY: W.S.

NOTE:  
 The elevations shown are the best available  
 elevations from existing data. The barrier and  
 approach and make the correct barrier  
 necessary to fit the median barrier and structure  
 to the conditions of the line of construction.