

# Massachusetts Cultural Resource Information System

## Scanned Record Cover Page

**Inventory No:** ERV.904  
**Historic Name:** French King Bridge  
**Common Name:** Route 2 Bridge over Connecticut River  
**Address:**  
**City/Town:** Erving  
**Village/Neighborhood:** Miller's Falls  
**Local No:**  
**Year Constructed:**  
**Architect(s):**  
**Architectural Style(s):**  
**Use(s):** Other Engineering; Other Transportation  
**Significance:** Art; Engineering; Transportation  
**Area(s):**  
**Designation(s):**



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Commonwealth of Massachusetts  
Massachusetts Historical Commission  
220 Morrissey Boulevard, Boston, Massachusetts 02125  
[www.sec.state.ma.us/mhc](http://www.sec.state.ma.us/mhc)

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Friday, March 07, 2014 at 2:22: AM

MASSACHUSETTS HISTORIC BRIDGE INVENTORY

Updated 4/2/91

Municipality: Erving/Gill District: 2

Street name/Rt. #: ST 2, Mohawk Trail

Over Street name/Rt. #: Connecticut River

Bridge key #: 011216000101 Photo #s: 14:14; 46:1A-2A, 5A-12A; 78:3-5, 7-8

Bridge plan #: E-10-14/G-4-9

Common/historic name: French King Bridge

Current owner: \_\_\_\_\_

UTM coordinates: \_\_\_\_\_ AASHTO rating: 47.9 (7/89)  
616 (1-10-86)

\*\*\*\*\*  
National Register status (insert date) Field rating: \_\_\_\_\_

Entered: \_\_\_\_\_ Potential: MHC 8-24-88

Eligible: \_\_\_\_\_ Non-eligible: \_\_\_\_\_

③ 2 1

\*\*\*\*\*  
Date built (source): 1931-32 (Kleinert, "Design and Construction...")

Date(s) rebuilt (source): \_\_\_\_\_

Builder (source): McClintic-Marshall Corp - super.; Simpson Bros. Corp. - sub. (Kleinert)

Designer (source): MDPW - Albert E. Kleinert, Jr. des (plans)

\*\*\*\*\*  
Structural type/materials: 411

steel, 3-span continuous spandrel-braced deck arch. 2-hinged. Parabolic lower chord, very slightly arched upper chord, Pratt-type spandrel bracing. Superstructure fixed against horizontal movement at both piers -- reactions were actually jacked into the superstructure at conclusion of erection, and the arch hinges were then fixed against further horizontal movement. Both ends of superstructure bear on roller bearing nests on abutments (for longitudinal expansion/contraction). Vertical ties at both abutments to counter any reversal of vertical reaction -- their primary purpose was to hold down ends of the bridge during the cantilever erection process. K-brace lateral systems, both upper and lower. Cross-frame sway bracing \*

Overall length: 782' Deck width/layout: 47'9" out-out

Skew: - c-c end piers. out-out abutments 890'

Main unit, # spans: 3 lengths: center 460'; 2 ends 161'

Approaches, # spans: - lengths: -

Plaque: 2 location: AISC award, NE pylon; builders plate on fence near NE pylon

Alterations, unusual features, comments:

\* at each panel point. Plate girder floor beams, I-beam stringers, concrete slab deck. E. abutment reinforced concrete cellular; W. abutment reinforced concrete gravity type. Rein-concrete balustrade-type guardrail on abutments; wrought-iron ornamented "Boston-type" guardrail on bridge. Pylons at abutment outer corners have simple Neo-Classical detailing (w/ some Art Deco influence) culminating in Renaissance-style lamp standards surmounted by eagles.

1957 plans - new reinforced concrete deck, steel inspection platform.



Visual quality (bridge and setting): High X Average      Low     

Site integrity: Retained X Violated     

**Describe:** Bridge spans 135' above the Connecticut River in a narrow, wooded gorge just above the Connecticut's confluence with the Millers River, and roughly a half mile below the landmark French King Rock. Parking areas and a motel/restaurant complex have been cut into the wooded areas at the ends of the bridge; a secondary town road (Meadow Road) slices into the hillside under the eastern outer span.

**History of bridge and site:**

The French King Bridge was conceived as part of an MDPW project to relocate a particularly hazardous 7-mile stretch of the old Mohawk Trail Highway (ST 2) between Erving and Greenfield. The old route had wound through the villages of Millers Falls and Turners Falls on a course marked by steep grades, sharp curves, narrow bridges, right-angle turns, and a pair of at-grade railroad crossings. The relocated ST 2 now runs north of both villages on an alignment whose principal challenge was the crossing of the precipitous Connecticut River gorge near the French King Rock (so named by the French officer of an Indian scouting party during the French and Indian Wars). A low-level crossing of the gorge was considered, but was soon dropped in favor of a high-level crossing. The selection of a specific structural type for this high-level bridge was based on the Dept's desire to fit the bridge into this dramatic setting, while responding to such factors as: the height and steepness of the gorge's banks; the presence of rock suitable for foundations only a few feet below the ground's surface; and the relative narrowness, irregular depth, rocky bottom, and swift current of the river here. The graceful 3-span arch design which resulted takes advantage of the favorable foundation conditions (critical for an arch) while it avoided the construction of either permanent piers or temporary falsework in the river itself. (The bridge was erected by the cantilever method). Construction was begun in September of 1931; the bridge was completed (at a cost of \$385,000) and opened to travel on September 10, 1932.

The American Institute of Steel Construction named the French King Bridge the most beautiful steel bridge of its class erected in America in 1932.

**Sources:** Albert E. Kleinert, Jr. "Design and Construction of the French King Bridge on the Mohawk Trail Route Across the Connecticut River, Massachusetts" Boston Society of Civil Engineers Journal Vol. 1931, 1932  
 Plans 1931, 1932  
 Maint  RR. American Institute of Steel Construction, Inc. Prize Bridges 1928-1948  
 XX: 6 (June, 1933) pp. 117-135.

Ola B.H.

\*\*\*\*\*

**Summary statement of significance:**

\* [ Third-oldest of 4 known steel deck arch bridges in the MDPW data base, and 5th-oldest of 10 known steel arches of all types in the data base. Has the 22d-longest main-span length (460'; second to T-1-9's 547') among the 13 steel arch bridges, and the 6th-longest span among all bridges in the MDPW data base.

of engineering interest as an unusual development of the already uncommon 3-span "cantilever-arch" bridge type. The French King Bridge differs from a "cantilever-arch" design in that definite reactions were jacked into its steelwork (horizontal reactions were jacked in at the Gill pier; vertical reactions were jacked in at both abutments) at the conclusion of erection, resulting in a bridge which is structurally continuous across 4 supports.

A visual landmark from above and below; winner of a national award for its beauty. Located in an area of some significance in New England's colonial history.

\* UPDATE: This is now the 5th-oldest of 7 positively identified steel rib deck arches in the MDPW data base, and one of 13 known steel rib arches of any configuration in the data base.

Statement prepared by: S.J. Roper

Updated: 4/2/91  
 Date: 2-1-88

\*\*\*\*\*  
 Field survey by: S.J. Roper, MDPW Historic Bridge Specialist

Date: 9-27-84  
 9-13-85  
 10-31-86

MDPW RECOMMENDATION - NATIONAL REGISTER ELIGIBILITY

	<u>Municipality</u>	<u>Street on</u>	<u>No.</u>
<b>Bridge:</b>	Erving/Gill	OT R. Mohawk Trail/Connecticut River	E-10-14/G-1-9

Historic evaluation

Significant because:

- |  |   |          |
|--|---|----------|
| 1) Unusual or unique type                | continuous 3-span spandrel-braced steel deck arch | <u>X</u> |
| or rare survivor of common type          |   | _____    |
| 2) Early example of type                 |   | _____    |
| 3) Design - Valuable contribution        | to bridge technology                              | <u>X</u> |
| 4) Retains integrity                     |   | <u>X</u> |
| 5) Builder known and important           |   | _____    |
| 6) Bridge historically important to area |   | <u>X</u> |

Not significant because:

- |  |                   |          |
|--|-------------------|----------|
| 1) Common type                                   |                   | _____    |
| 2) Post-1931                                     | built 1931-32     | <u>/</u> |
| 3) Design - no contribution to bridge technology |                   | _____    |
| 4) Integrity lost because of:                    | a) alterations    | _____    |
|  | b) disintegration | _____    |
| 5) Builder unimportant or not known              |                   | _____    |
| 6) No known significance in area                 |                   | _____    |

Potentially eligible

Not eligible

Not eligible individually, but located

Conditionally not eligible; review when 50 years old

Comments:

A landmark structure in a dramatic natural setting; a national prize-winner as the most beautiful steel bridge of its class built (opened) in 1932. In engineering terms, an unusual variation on a very uncommon structural type - the steel rib deck arch. One of only 4 steel deck arches in the MDPW data base.

29 Jan 1988

S. J. Roper, MDPW Historic Bridge Specialist

BRIDGES PREVIOUSLY REVIEWED BY M.H.C. -- CONCURRENCE REAFFIRMED

<u>Municipality</u>	<u>On/Over</u>	<u>Br. Dept. No.</u>
Bridge: <u>Erving/Gill</u>	<u>ST 2/Connecticut R.</u>	<u>E-10-14/G-4-9</u>

has previously been reviewed by the Massachusetts Historical Commission and was determined to be: Potentially Eligible  
 on 8-24-88.

After a review of all known bridges of comparable structural type identified in the M.D.P.W. statewide computerized database, the M.D.P.W. now reaffirms its concurrence with that initial determination.

Summary statement of significance:

A landmark structure in a dramatic setting; an unusual variation (unique in Massachusetts) on a very uncommon structural type.

Statement prepared by: S.J. Roper MDPW Historic Bridge Specialist

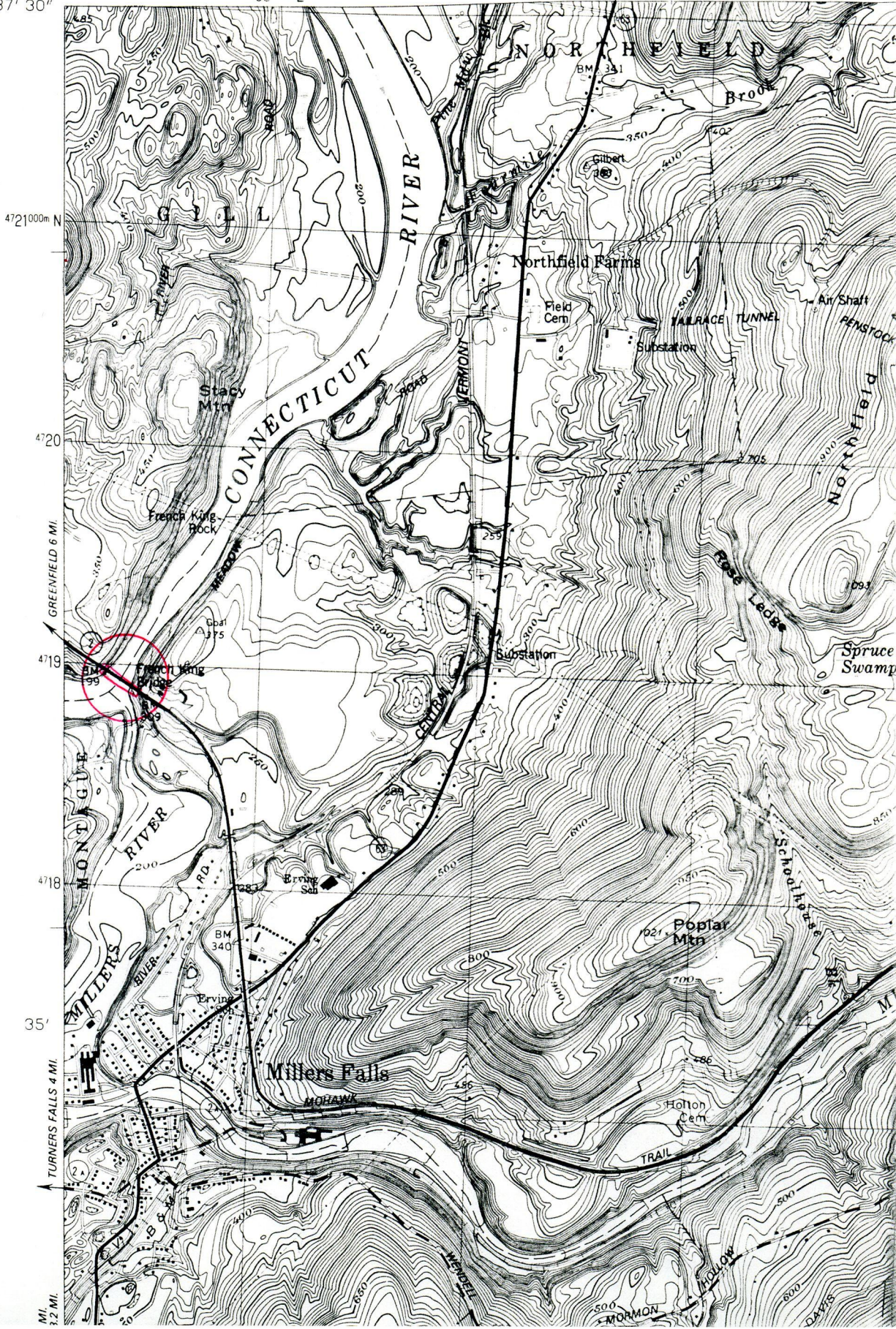
Date: 4/2/91



(BERNARDSTON)  
848 / NE

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

72° 30' 706000m E HINSDALE, N.H. 12 MI. NORTHFIELD 5 MI. 708 27' 30"

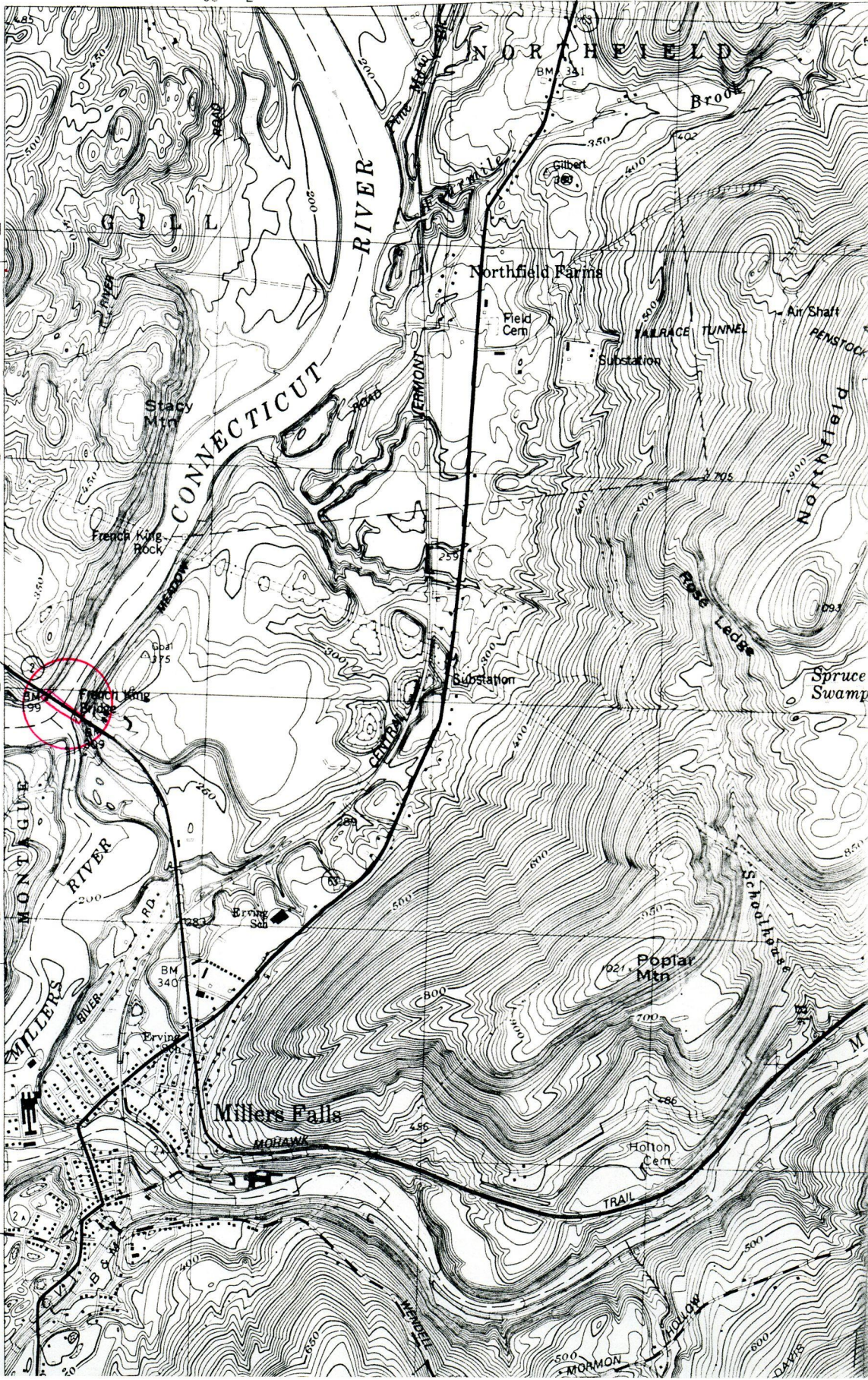


E-10-14/Q-49

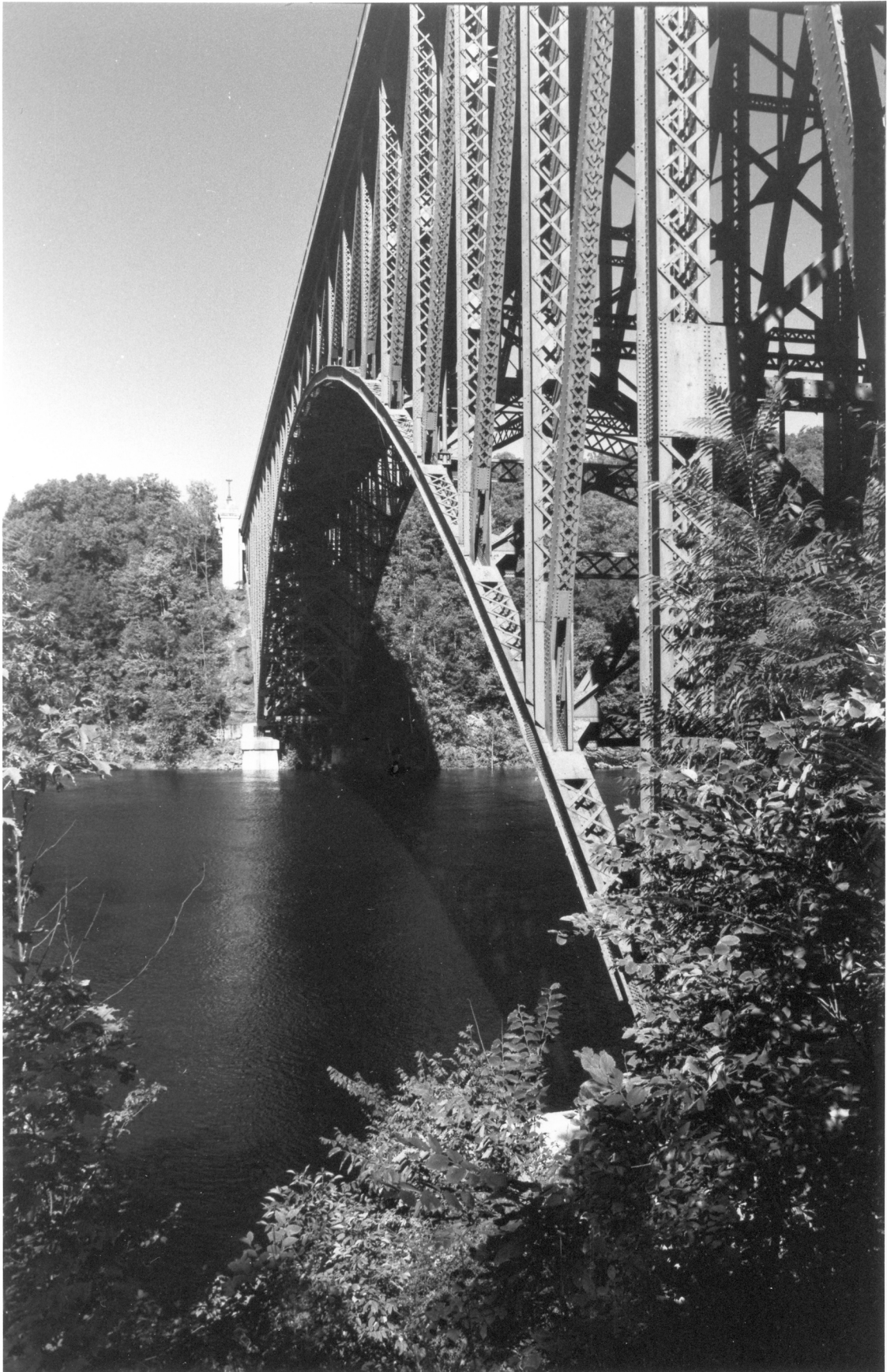
MILLERS FALLS  
QUAD

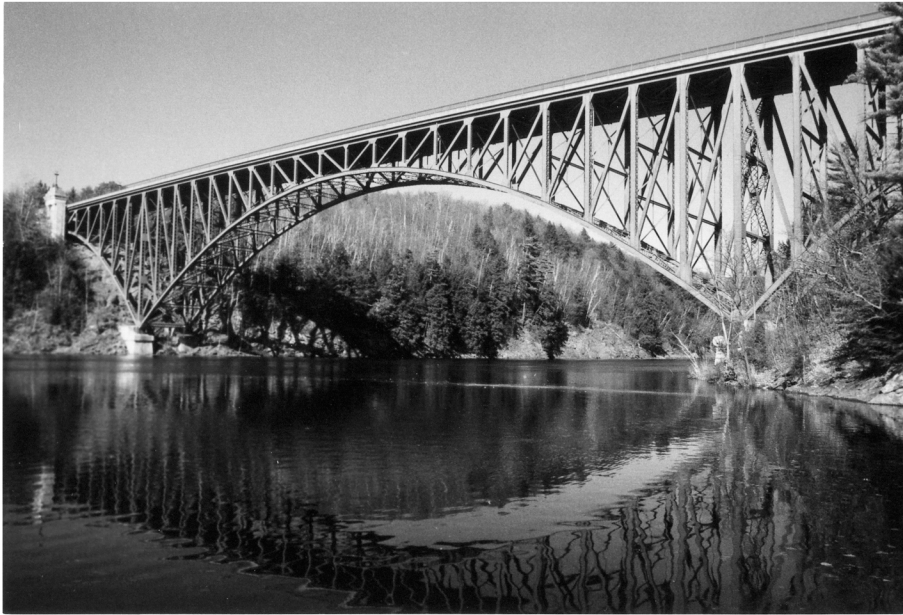
4721000m N  
4720  
4719  
4718  
35'  
TURNERS FALLS 4 MI.  
3.2 MI.

GREENFIELD 6 MI.  
MONTAGUE RIVER  
MILLERS RIVER  
CONNECTICUT RIVER  
NORTHFIELD BROOK  
FRENCH KING ROCK  
STACY MOUNTAIN  
GILBERT  
NORTHFIELD FARMS  
FIELD CEM.  
SUBSTATION  
RAILRACE TUNNEL  
AIR SHAFT  
HENSTOCK  
NORTHFIELD  
SPRUCE SWAMP  
FRENCH KING ROCK  
GAIL A 375  
SUBSTATION  
MONTAGUE  
MILLERS FALLS  
ERVING  
ERVING S.B.  
BM 340  
POPULAR MOUNTAIN  
HOLTON CEM.  
TRAIL  
MORMON  
DAVIS

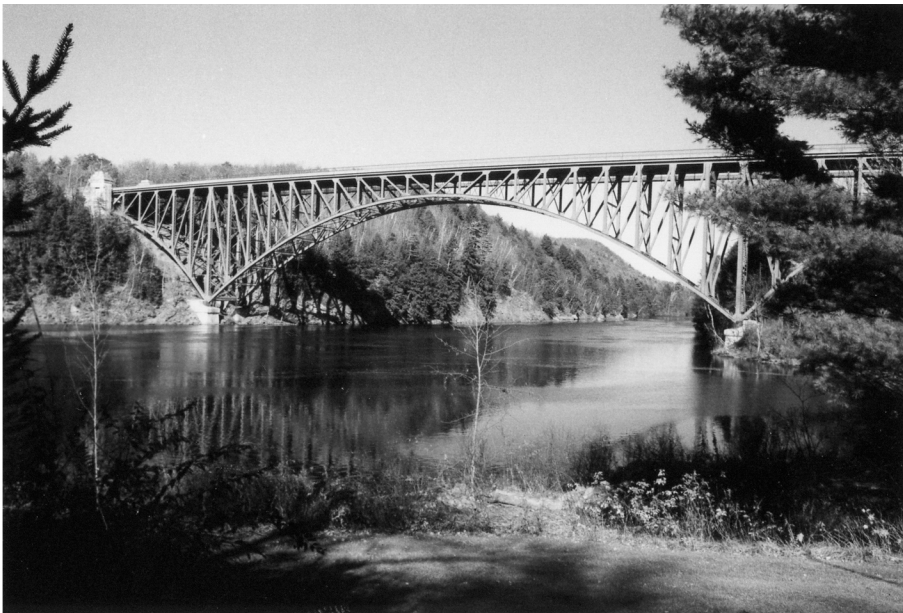








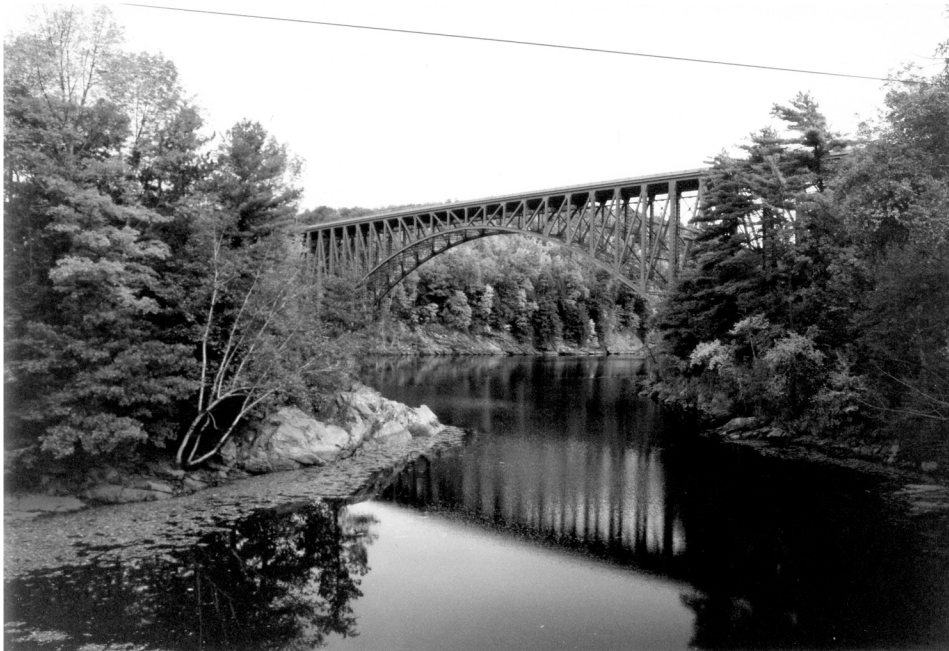
From South



From South



South face, west abutment, from West



From South (27 Sept 1984)



From southeast (13 Sept 1985)



On N rail near NE pylon (13 Sep 1985)



From northwest (13 Sept 1985)

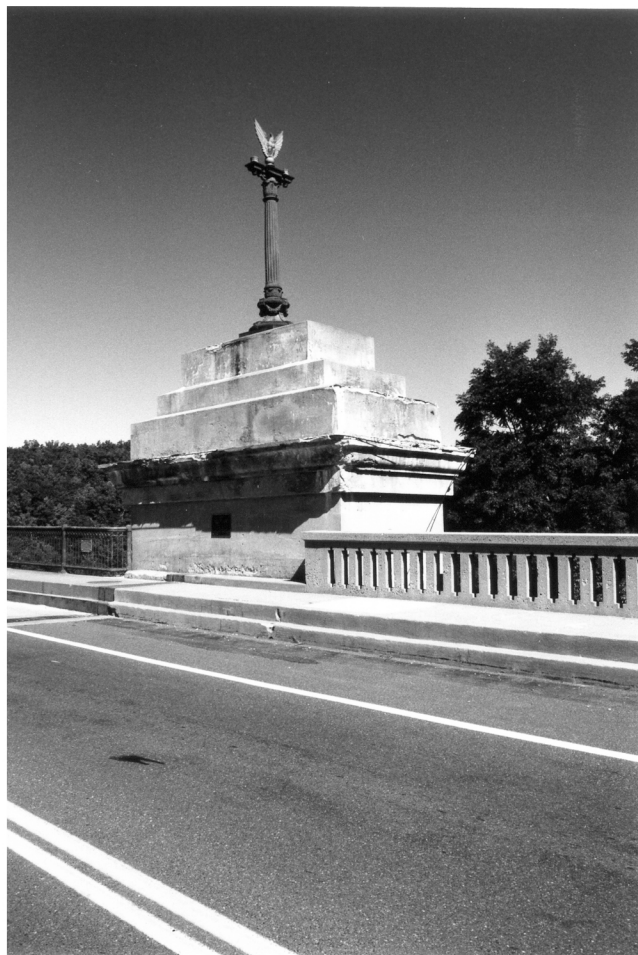




From southeast



W abutment, S pylon, from S

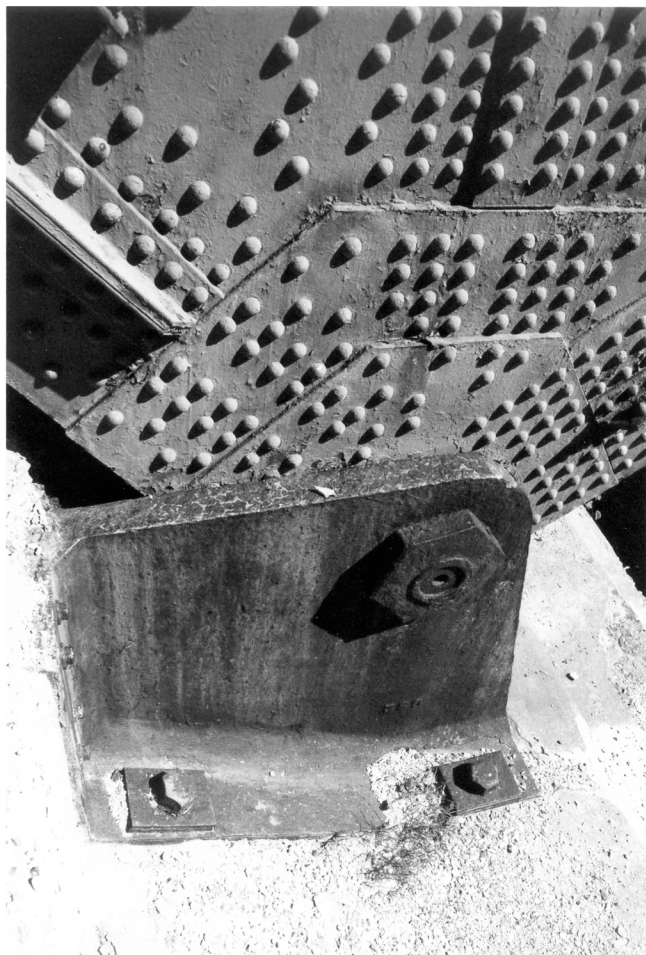


NE end pylon, from S



Northern arch, eastern hinge and abut., from SW





Western hinge, southern arch, from SW



Bearing and anchor at western end of southern line of arches



Bearing and anchor at western end of southern line of arches



On NE end pylon (13 Sept 1985)

Boston 9-21-92  
Globe

# Historic bridge in W. Mass. restored

## French King Bridge given \$5.4m facelift

By B.J. Roche  
SPECIAL TO THE GLOBE

GILL — Jobs were scarce in 1932, but Adrian Savage, then 25, got lucky. He went to work for 35 cents an hour hauling drinking water from the banks of the Connecticut River, 135 feet up to workers building the French King Bridge.

"It was the Depression and a lot of men went to work on that bridge to make a living," he recalled. "In those days, you were lucky if you got up to \$1 an hour."

Savage went on to other jobs and other loves, including his late wife, Lynne, and the cherry-red 1992 Honda CRX he bought this summer for his 85th birthday. But Savage, who lives in Millers Falls, remains the unofficial historian of the bridge, and he'll be among those celebrating its \$5.4 million renovation and rededication on Sunday.

"The beauty of this bridge is what makes it," he said. "You can go back in time here. When I go over it, I can envision the canoes carrying the French and Indians down the Connecticut, the river paddleboats and the log drives that went from the lakes in New Hampshire and Vermont down to the mills in Turners Falls. There were terrific log drives on that river years and years ago."

One of western Massachusetts' better known landmarks, the French King Bridge on Route 2 between Erving and Gill established a crucial link in east-west transportation in the state. It cost \$385,000 to build, and upon its completion in 1932, won a national award from the American Institute of Steel Construction for the beauty and efficiency of its construction.

Present-day foliage watchers treasure the steel deck arch bridge for its views of the river, farmland, forest and mountains, which have been preserved largely by the state and Northeast Utilities, owner of the Northfield Mountain Pumped Storage Station just north of the bridge.

The bridge also has historical interest. A quarter mile north, jutting out of the middle of the river, is the famous French King Rock, which served as a landmark in the 1750s for French and Indian scouting parties, who named it in honor of King Louis XIV of France.

Residents and elected officials have scheduled a two-day celebration, capped by a Sunday parade and ceremony to rededicate the bridge in honor of the late congressman Silvio O. Conte. They will place a plaque in a rest area on the Erving side of the bridge.

For area officials, the event will mark the end of a long struggle to see the bridge restored to its former glory. In the 1980s, the bridge began to fall apart, said Gill Selectman Patricia Haigis.

"It was terrible," Haigis said. "The concrete had fallen off the steel supporting beams on both sides of the bridge. It was an accident waiting to happen."

Haigis and Erving Selectman Leo Parent sent letters to state officials, and Parent made many trips to Boston, "but most of what we were saying fell on deaf ears," Haigis said.

In 1989 Haigis and Parent posed for pictures on the bridge, showing its deterioration. Soon after they appeared in the area newspapers, Gov. Dukakis announced funding for a 2½-year renovation project, much of which was paid for with federal funds.

"Conte nudged it along," Haigis said. "He found out there was a need in his district, and he got a lot done for us."

Corinne Conte, the congressman's widow, will lead the parade, which will begin at 12:30 at the French King Bowling Center on Route 2 in Millers Falls.

Gov. Joseph B. Ely was among the 15,000 people on hand for the dedication ceremonies on Sept. 10, 1932. Gov. Weld and other state officials have declined the invitation to the rededication, Haigis said.

"I think it's a sad state of affairs that they can't make a commitment to attend," she said. "We wanted to show them that there's another part of the state beyond Worcester."

**P R I Z E**

**B R I D G E S**

*1928—1938*



**AMERICAN INSTITUTE of STEEL CONSTRUCTION, Inc.**  
**One Hundred One Park Avenue • New York, N. Y.**



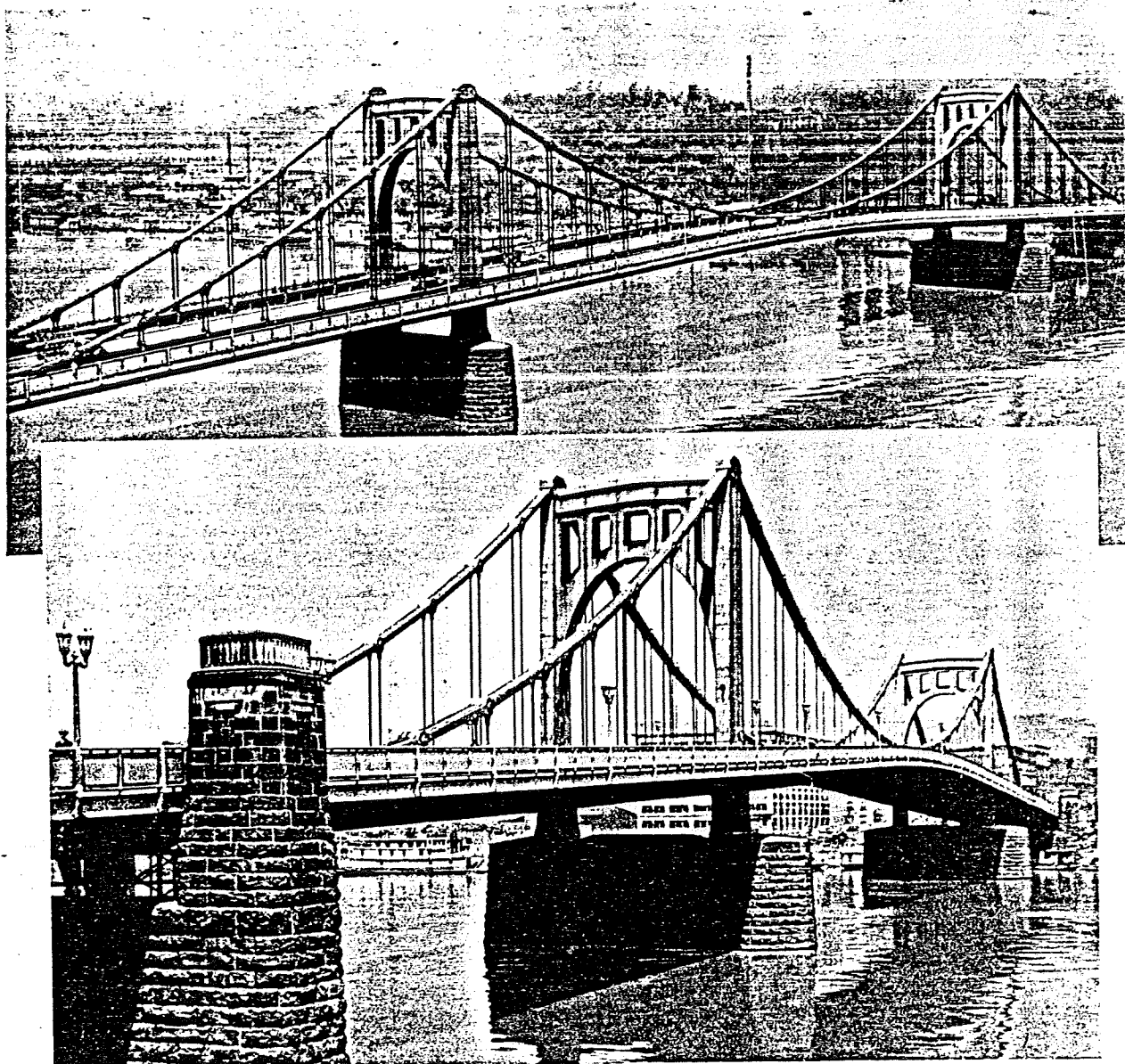
## BEAUTIFUL BRIDGES

STEEL BRIDGES are not only efficient and economical; they can be beautiful. To demonstrate the aesthetics of bridges, the American Institute of Steel Construction established in 1928 an annual award. The prize winning bridges are decorated with stainless steel plaques designating them as the most beautiful constructed during the year. Since this award was initiated, a sincere and growing interest in the architectural excellence of steel bridges has been noticeable. This booklet is now published for the purpose of recording this growth in interest and to commemorate the achievements so far made.

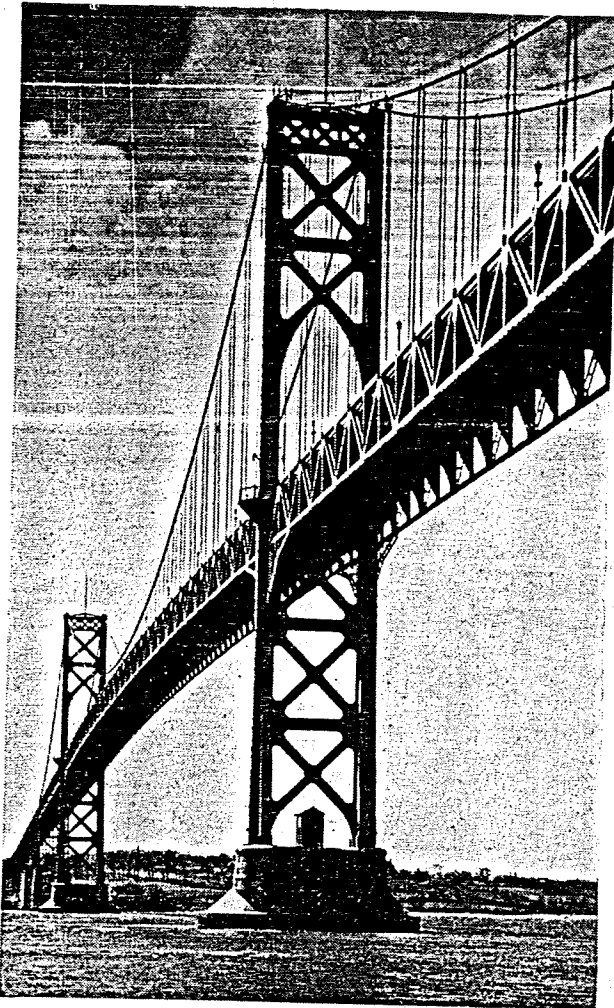
These beautiful bridges have been selected by Juries of Award, composed of leading Consulting Engineers and Architects. The American Institute of Steel Construction has but donated the prizes and believes that it is helping to render a distinct public service in being permitted to play that part in this movement towards improving bridge design in the United States.

June, 1939.

• 1 9 2 8 •

**FIRST PLACE—1928 AWARD**

SIXTH STREET BRIDGE—Pittsburgh, Pa.; Engineer, V. R. Covell, Chief Engineer of Bridges; Fabricators, American Bridge Co.; Owner, Allegheny County; Completed in 1928; Span length: main span, 442 ft., 1 in.; 2 side spans of 221 ft.



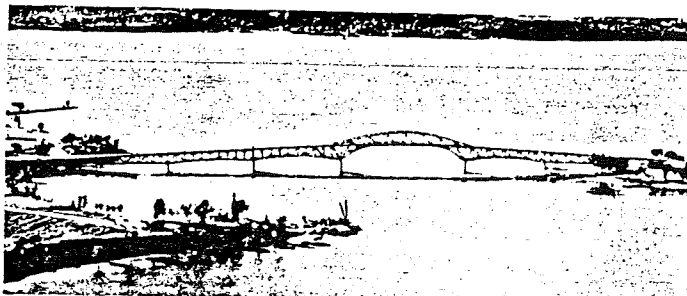
**FIRST PLACE—CLASS A—1929 AWARD**

**MOUNT HOPE BRIDGE**—Across Mount Hope Bay between Bristol and Portsmouth, R. I.; Total Cost, \$4,250,000; Engineers, Robinson and Steinman; Fabricators, McClintic-Marshall Company; Owner, Mount Hope Bridge Company; Completed October 24, 1929.



**FIRST PLACE—CLASS B—1929 AWARD**

**MOUNT PLEASANT BRIDGE**—Over N. Y. Central R.R. Harlem Division, Mt. Pleasant, N. Y.; Total Cost, under \$200,000; Engineer, Jay Downer, Chief Engineer, Westchester County Park Commission; Fabricators, Bethlehem Steel Company; Owner, Westchester County Park Commission; Completed March, 1929.



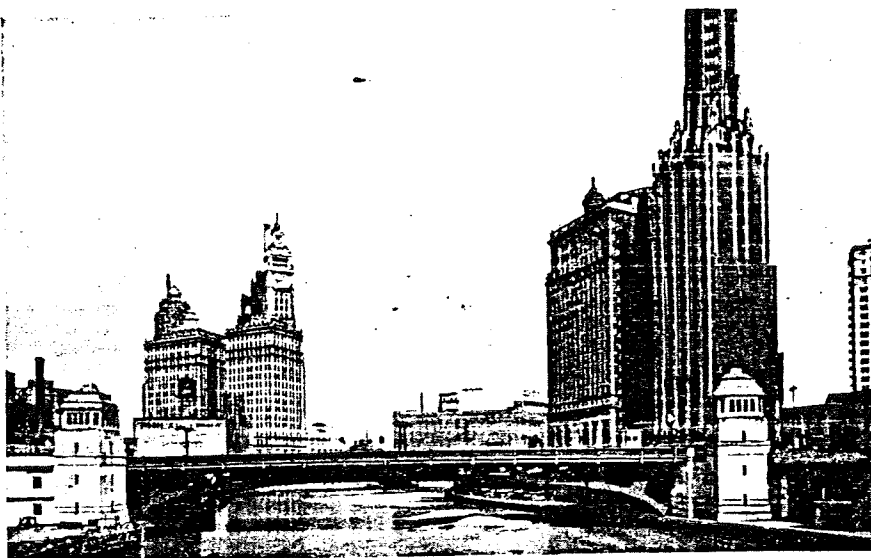
**HONORABLE MENTION—CLASS A—1929 AWARD**

**LAKE CHAMPLAIN BRIDGE**—Across Lake Champlain about 35 miles from the southerly end of the Lake and 70 miles from the Canadian boundary, between Crown Point in the Town of Crown Point, New York, and Chimney Point in the Town of Addison, Vermont; Construction Cost, \$967,816.18; Engineers, Fay, Spofford and Thorndike, Engineers to the Lake Champlain Bridge Commission; Fabricators, American Bridge Company; Owner, Lake Champlain Bridge Commission; Completed for traffic, August 26, 1929; Span length: continuous spans of 290 ft., 434 ft., and 290 ft.

• 1930 •

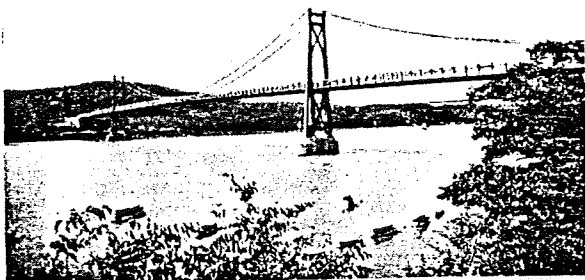
**FIRST PLACE—CLASS A—  
1930 AWARD**

**WABASH AVENUE BRIDGE**—Over Chicago River; Total Cost, \$1,750,000; Engineers, Bureau of Engineering, City of Chicago; Fabricators, American Bridge Company; Owner, City of Chicago; Completed December 20, 1930; Span length, 239 ft.



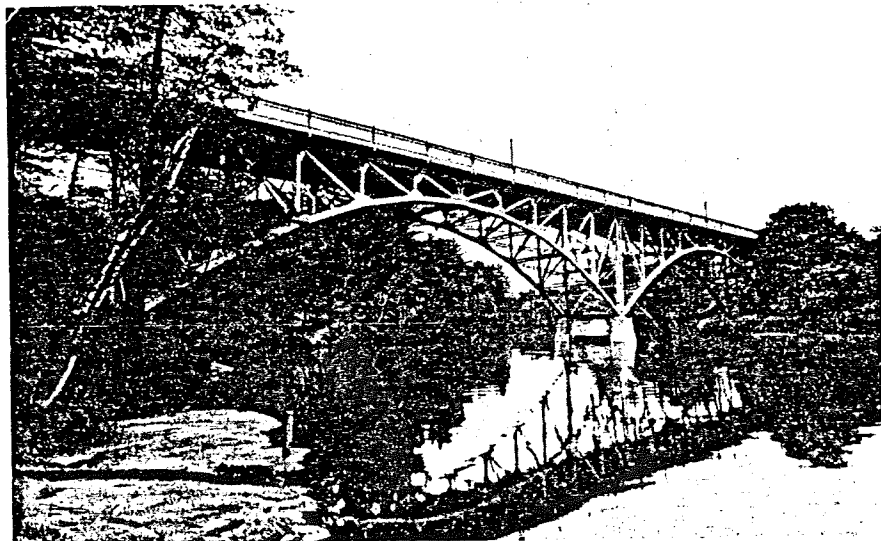
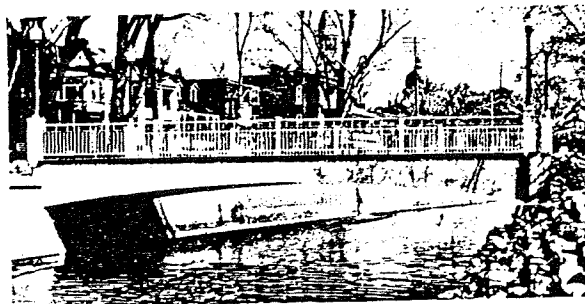
**FIRST HONORABLE MENTION—CLASS A—  
1930 AWARD**

**MID-HUDSON BRIDGE**—Over the Hudson River between the City of Poughkeepsie, Dutchess County, N. Y., and the Hamlet of Highland, Ulster County, N. Y.; Total Cost, \$7,000,000; Engineers, Modjeski and Moran; Fabricators, American Bridge Company; Owner, State of New York; Completed August 25, 1930; Span length: suspension, 1500 ft.; approaches, 750 ft. each.



**HONORABLE MENTION—CLASS C—1930 AWARD**

**LACHINE BRIDGE**—Across the Old Lachine Canal at 18th Ave., Lachine, Canada; Total Cost \$3,100; Engineer, R. Dorion, City Engineer; Fabricators, The Dominion Bridge Co., Limited; Owner, City of Lachine; Completed October 15, 1930; Span Length: 47 ft.

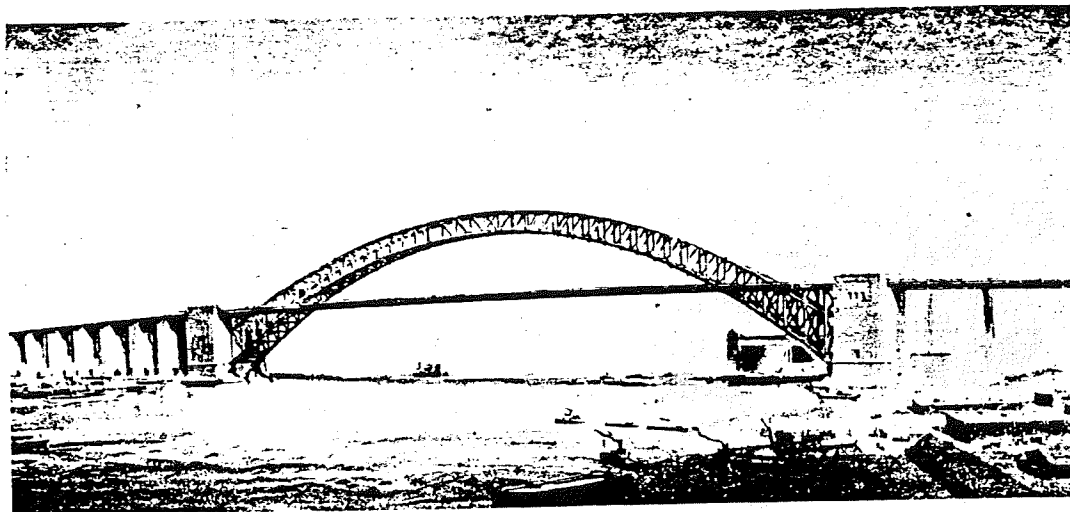


**FIRST PLACE—CLASS C—  
1930 AWARD**

**DELTON BRIDGE**—Town of Delton, Sauk County, Wisconsin; Total Cost, \$54,000 (approximately); Engineers, Wisconsin State Highway Commission; Fabricators, Lakeside Bridge & Steel Co.; Owner, Wisconsin State Highway Commission; Completed in 1930; Span length, 2 spans of 218 ft. each.

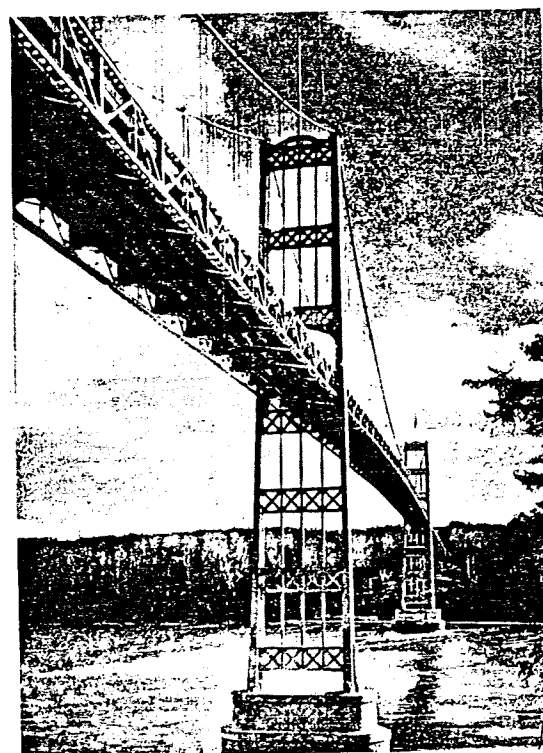


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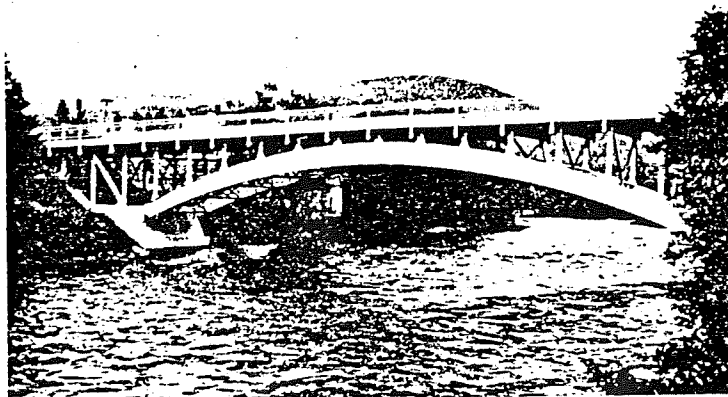
**FIRST PLACE—CLASS A—1931 AWARD**

**BAYONNE BRIDGE**—Across the Kill van Kull between Bayonne, N. J., and Port Richmond, Staten Island, N. Y. Total Cost, \$16,000,000; Engineer, O. H. Ammann; Chief Engineer, The Port of New York Authority; Fabricators, American Bridge Company; Owner, The Port of New York Authority; Completed November 15, 1931; Span length, 1675 ft.



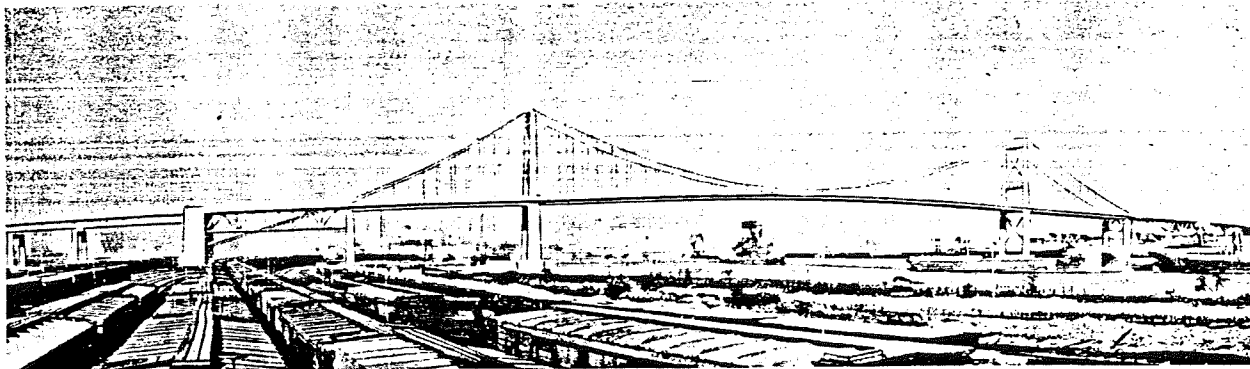
**FIRST PLACE—CLASS B—1931 AWARD**

**WALDO-HANCOCK SUSPENSION BRIDGE**—Over Penobscot River, Bucksport, Maine; Total Cost, \$846,000; Engineers, Robinson & Steinman; Fabricators, American Bridge Company; Owner, State of Maine; Completed November 16, 1931; Span length, 800 ft.



**FIRST PLACE—CLASS C—1931 AWARD**

**WEST STEWARTSTOWN BRIDGE**—Over Connecticut River, West Stewartstown, N. H.; Total Cost, \$45,072.87; Engineers, New Hampshire State Highway Department; Fabricators, American Bridge Company; Completed in 1931; Span length: 136 ft. main arch span, 232 ft. entire overall length.



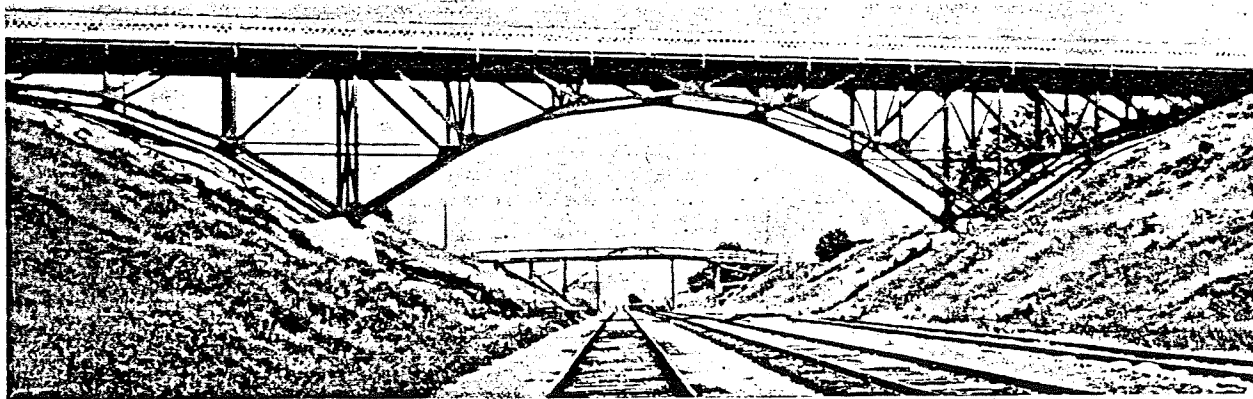
**HONORABLE MENTION—CLASS A—1931 AWARD**

**MAUMEE RIVER SUSPENSION BRIDGE**—Toledo, Ohio; Total Cost, \$3,000,000; Consulting Engineers, Waddell & Hardesty; Consulting Architects, Cass Gilbert, Inc.; Fabricators, McClintic-Marshall Corporation; Owner, City of Toledo; Completed November, 1931; Span length—main span, 785 ft. c.c. of towers; 2 side spans of 203 ft. 9 in.



**HONORABLE MENTION—CLASS B—  
1931 AWARD**

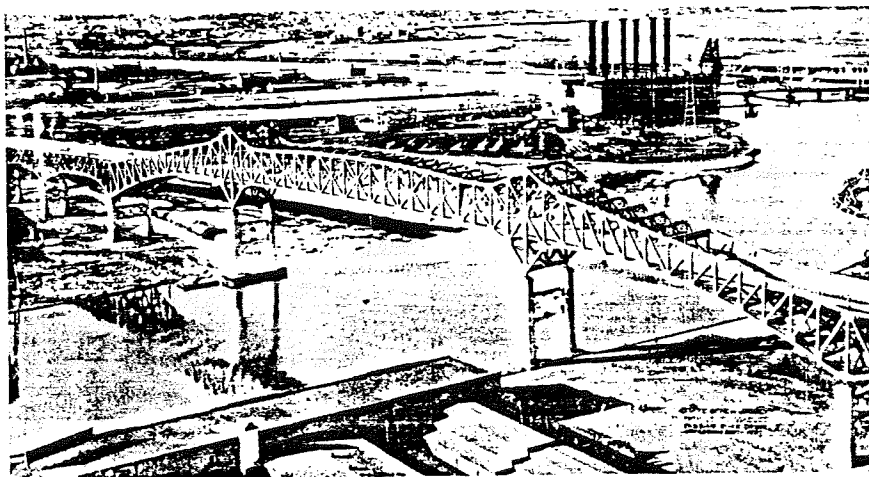
**CROTON LAKE BRIDGE**—Croton Lake, N. Y.; Total Cost, \$821,000; Engineers, Howard R. Baird, Consulting Engineer under the general direction of Jay Downer, Chief Engineer, Westchester County Park Commission; Fabricators, The Mount Vernon Bridge Company; Completed November 4, 1931; Span length, 750 ft.



**HONORABLE MENTION—CLASS C—1931 AWARD**

**AFTON OVERHEAD BRIDGE**—Over C. B. & Q. Railroad in the town of Afton, Union County, Iowa; Total Cost, \$27,047.09; Engineers, Iowa State Highway Commission; Fabricators, American Bridge Company; Owner, State of Iowa; Completed August 20, 1931; Span length—Main span, 108 ft. c.c. of pins; overall length, 218 ft.

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**FIRST PLACE—CLASS A—1932 AWARD**

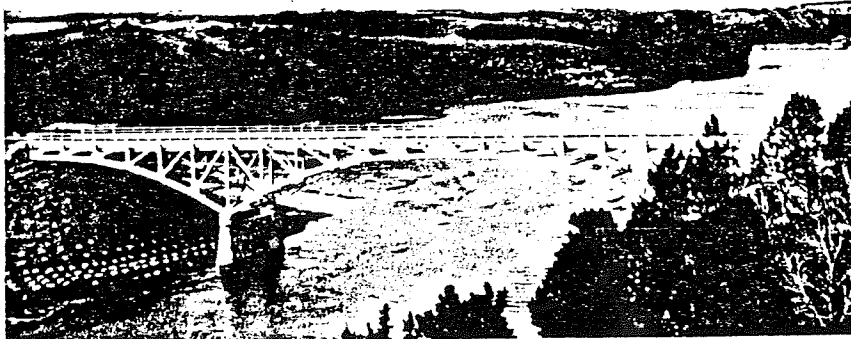
**PULASKI SKYWAY**—Crossings of Hackensack and Passaic Rivers, Hudson County, N. J.; Total Cost, \$4,100,000; Engineer, Jacob L. Bauer, State Highway Engineer; Fabricators, McClintic-Marshall Corporation; Owner, State of New Jersey; Completed November 24, 1932; Span length: channel spans, 550 ft.



**FIRST PLACE—CLASS B—1932 AWARD**

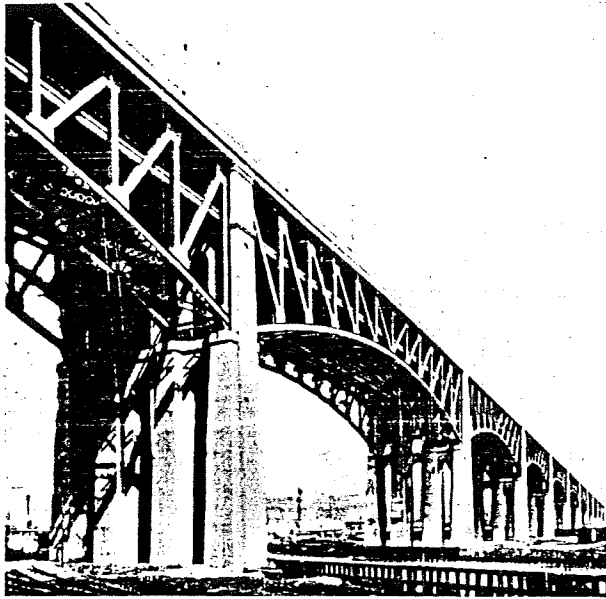
**FRENCH KING BRIDGE**—Towns of Erving and Gill, State of Massachusetts, Mohawk Trail, Route 2, over Connecticut River about six miles east of Greenfield, Mass.; Total Cost, \$385,000 (exclusive of property damages and approaches); Engineers, A. W. Dean, Chief Engineer; G. E. Harkness, Bridge Engineer, Massachusetts Department of Public Works; Fabricators, McClintic-Marshall Corporation; Owner, Commonwealth of Massachusetts; Opened to travel September 10, 1932; Span: 460 ft. center to center pins of center span; 782 ft. center to center of end pins; 890 ft. out to out of abutments.

**FIRST PLACE—CLASS C—  
1932 AWARD**



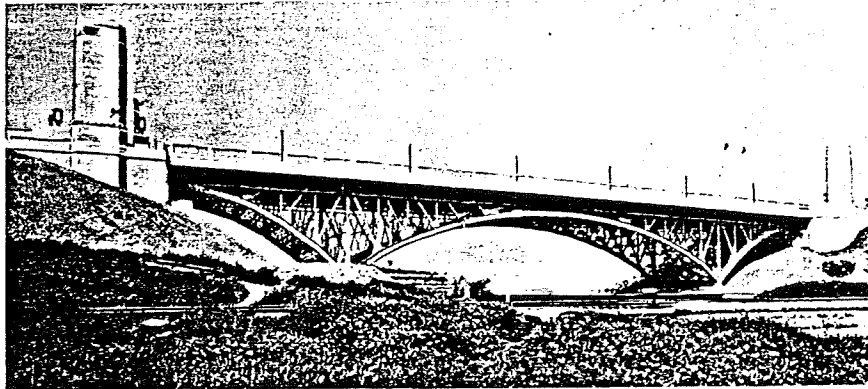
**BRYAN BRIDGE**—Valentine, Nebraska, over the Niobrara River, Federal Highway No. 20; Total Cost, \$51,630.08 (contract price); Engineer, Nebraska Department of Public Works, J. G. Mason, Bridge Engineer; Joseph Sorkin, Designer; Fabricators, Paxton & Vierling Iron Works; Owner, State of Nebraska; Completed September 30, 1932; Span length: 145 ft. 2½ in. central cantilever arch span; anchor arm spans, 72 ft. each.





**HONORABLE MENTION—CLASS A—1932 AWARD**

**LORAIN-CARNEGIE BRIDGE**—Cleveland, Ohio; Total Cost, \$4,750,000; Engineers, F. R. Williams, County Engineer, A. M. Felgate, Bridge Engineer for Cuyahoga County; Wilbur J. Watson, Consulting and Designing Engineer; Fabricator, Mount Vernon Bridge Company; Owner, Cuyahoga County; Completed December 3, 1932; Span length: Individual spans vary from 132 ft. to 299 ft.; length of bridge, 5,865 ft.

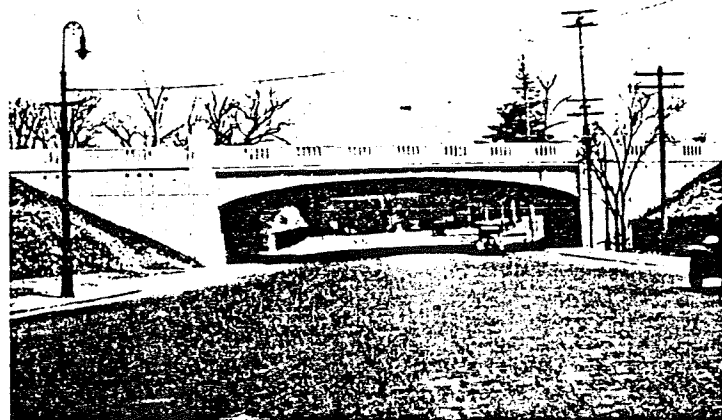


**HONORABLE MENTION—CLASS B—1932 AWARD**

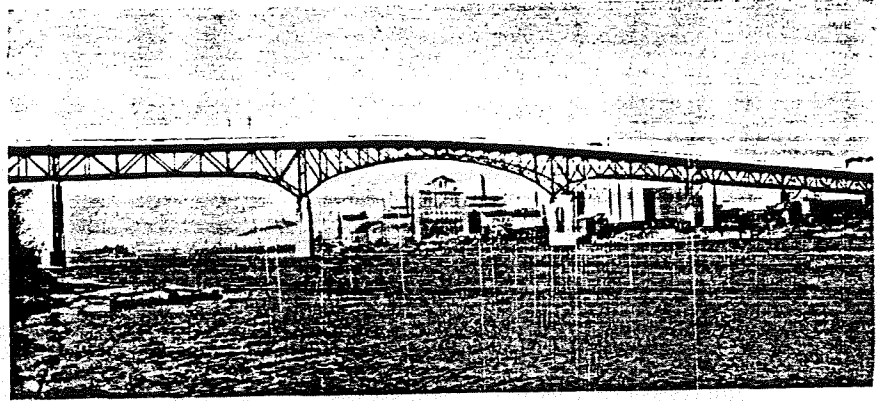
**YORK STREET HIGH LEVEL BRIDGE**—Hamilton, Ont., Canada; Total Cost, \$350,000; Engineers, James, Proctor & Redfern, Ltd.; Fabricators, Hamilton Bridge Company; Owner, City of Hamilton; Completed in 1932; Span length: 220 ft. c.c. piers.

**HONORABLE MENTION—CLASS C—  
1932 AWARD**

**CANTERBURY STREET BRIDGE OVER  
MORTON STREET**—Forest Hills, Boston, Mass.; Total Cost, \$64,178; Engineers, J. R. Worcester & Co.; Fabricators, American Bridge Company; Opened to traffic November, 1932; Span length: 92 ft. 4½ in. c.c. piers.

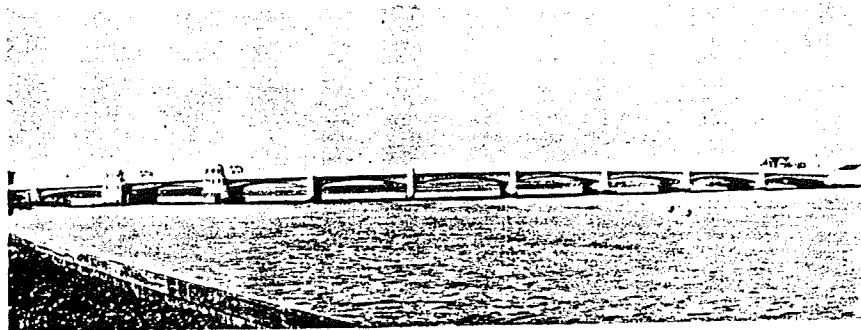


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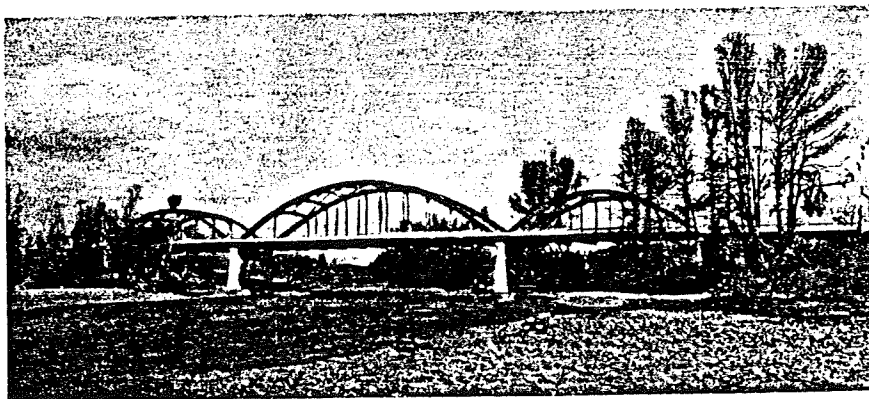
**FIRST PLACE—CLASS A—1933 AWARD**

**CEDAR STREET BRIDGE**—Illinois River at Cedar Street, Peoria, Illinois; Total Cost, \$1,200,000; Engineers, Strauss Engineering Corporation; Fabricators, McClintic-Marshall Corporation; Owner, City of Peoria; Completed January 6, 1933; Span length: main cantilever, 296 ft.; central span with two anchor arms, 204 ft. 9 in.



**FIRST PLACE—CLASS B—1933 AWARD**

**SHARK RIVER BRIDGE**—Between F St., Belmar, and Main St., Avon, N. J.; Total Cost, \$413,320.45; Engineer, Morris Goodkind, Bridge Engineer, State of New Jersey, State Highway Commission; Fabricators, American Bridge Company; Owner, State of New Jersey Highway Commission; Completed October 12, 1933; Spans: 9 spans, 83 ft., plus 1 bascule span, 110 ft.—total length, 853 ft.



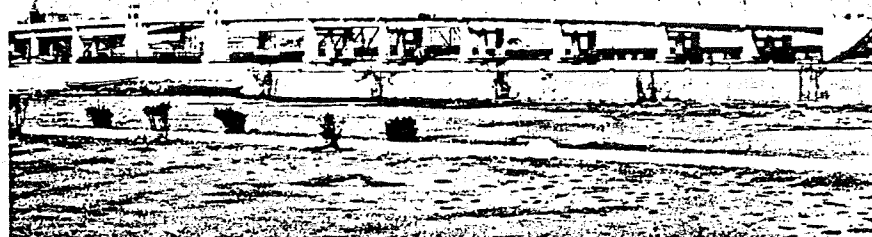
**FIRST PLACE—CLASS C—1933 AWARD**

**DR. JOHN D. McLOUGHLIN BRIDGE**—Over the Clackamas River in Clackamas County, Oregon, on the Oregon City-East Portland Super Highway; Total Cost, \$161,570.16; Engineers, The Oregon State Highway Department; Fabricators, Poole & McGonigle; Owner, Oregon State Highway Commission; Completed June 30, 1933; Span length: 240 ft. main span, flanked by spans of 140 ft. on either side; Total length, 720 ft.



**HONORABLE MENTION—CLASS A—1933 AWARD**

**SOUTH TENTH STREET BRIDGE**—Pittsburgh, Pa., over the Monongahela River; Total Cost, \$1,547,000 (exclusive of property rights); Engineer, V. R. Covell, Chief Engineer, Bureau of Bridges, Department of Public Works, Allegheny County; Fabricators, American Bridge Company; Owner, County of Allegheny, Pa.; Date Completed, February 11, 1933; Spans: Main span, 725 ft.; 2 side spans, 275 ft.; Total length, 1175 ft.

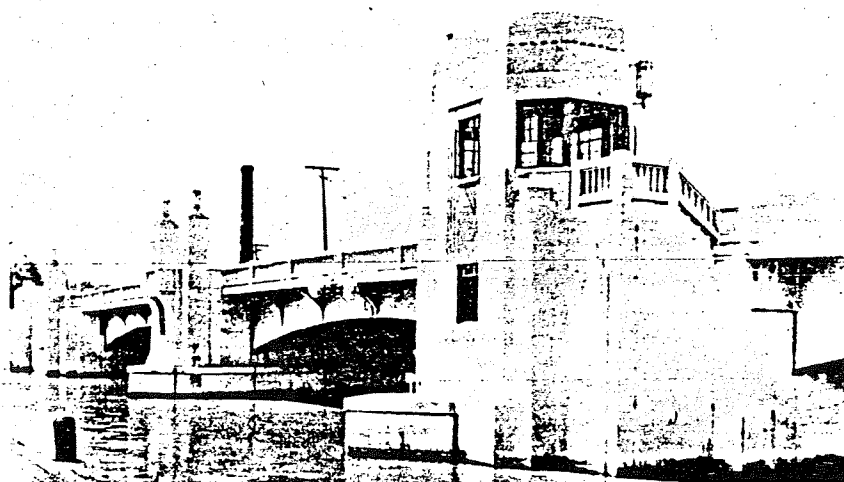


**HONORABLE MENTION—CLASS B—1933 AWARD**

**SHREWSBURY RIVER BRIDGE**—Route No. 36 between Highlands, N. J., and Seabright, N. J.; Total Cost, \$647,548.34; Engineer, Morris Goodkind, Bridge Engineer, New Jersey State Highway Commission; Fabricators, American Bridge Company; Owner, New Jersey State Highway Commission; Completed September 15, 1933; Spans: 1 bascule span of 140 ft. and 10 deck girder spans; Total length, 1242 ft.

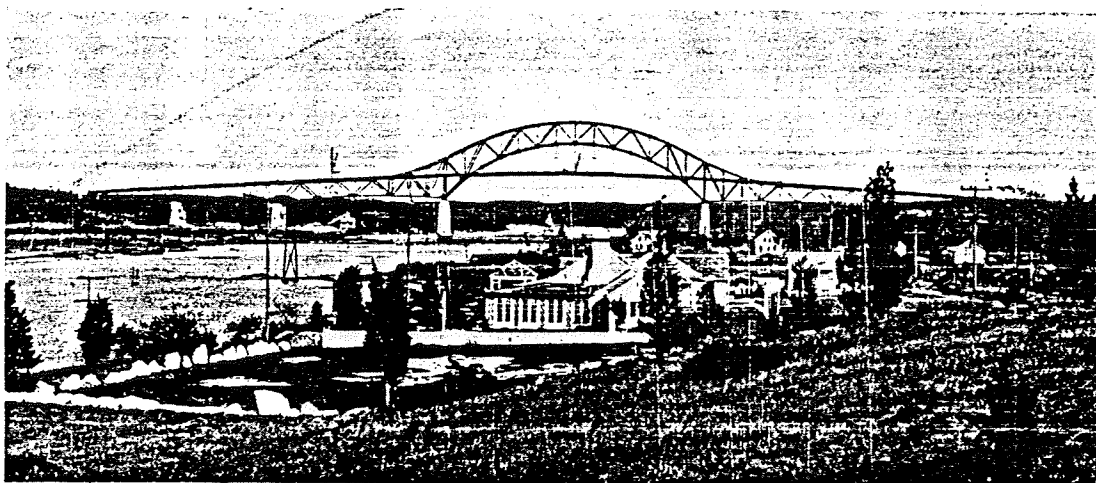
**HONORABLE MENTION—  
CLASS C—1933 AWARD**

**PORT CLINTON BRIDGE**—Over Portage River at Port Clinton, Ottawa County, Ohio, State Route No. 2; Total Cost, \$175,825.18 (bridge proper); Engineer, J. R. Burkey, Chief Engineer of Bridges, Department of Highways, State of Ohio; Fabricators, The R. C. Mahon Company; Owner, State of Ohio, Department of Highways; Completed August 5, 1933; Span length: 80 ft. main span, 2 approach spans 60 ft. each.



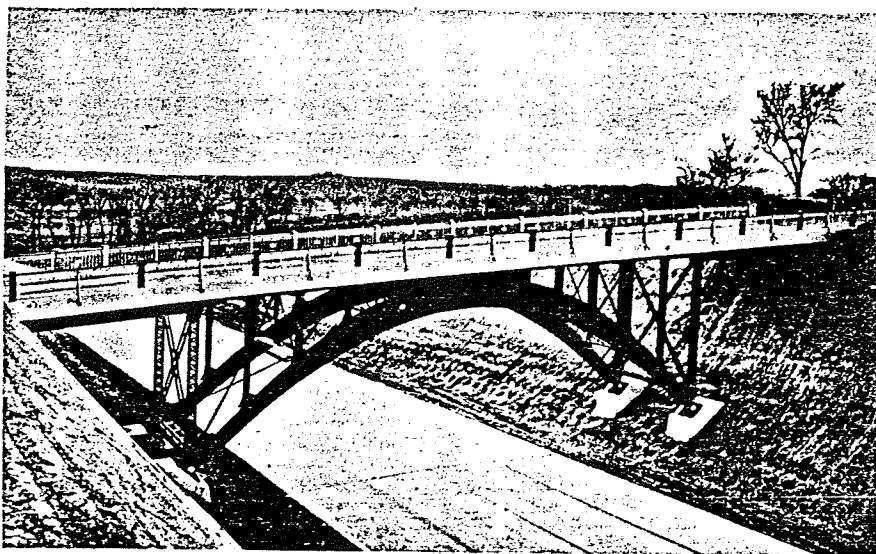


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**FIRST PLACE—CLASS A—1934 AWARD**

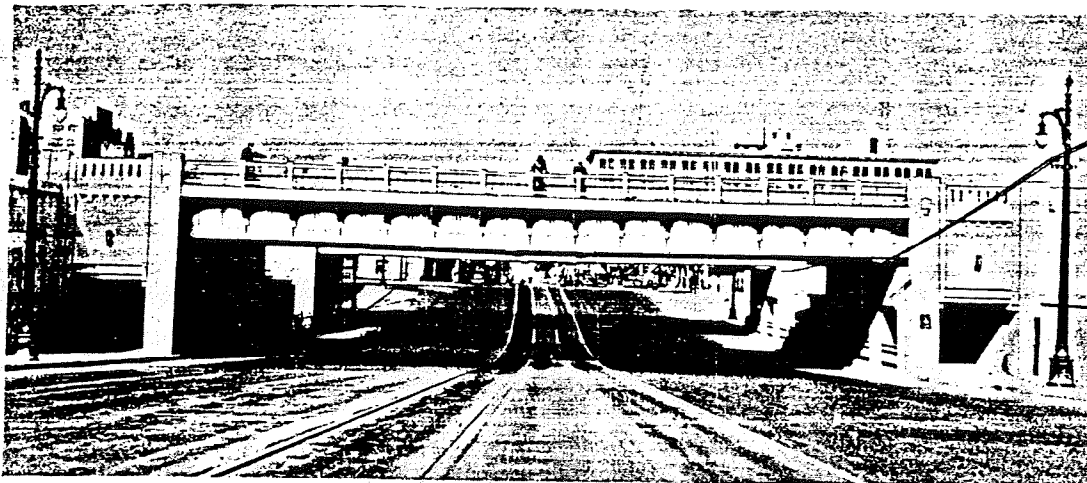
**BOURNE BRIDGE**—Across Cape Cod Canal in the Town of Bourne, Mass.; Total Cost, \$1,610,000; Engineers, Fay, Spofford and Thorndike; Consulting Architects, Cram and Ferguson; Fabricators, American Bridge Company; Owner, U. S. Government; Completed December 4, 1934; Main spans: 396 ft., 616 ft., and 396 ft.



**FIRST PLACE—CLASS C—1934 AWARD**

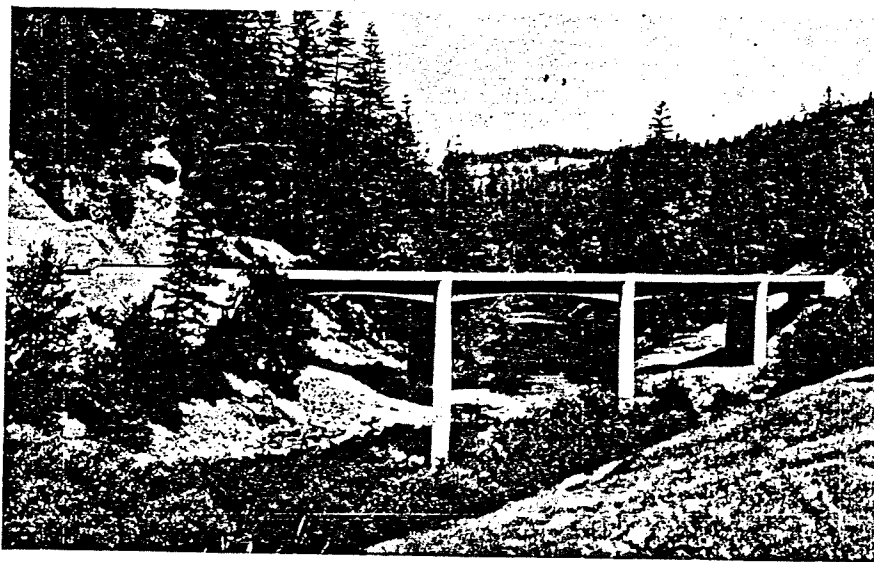
**DOUGLAS COUNTY BRIDGE No. 667**—Grade Separation Road 44 and Dodge Arterial Highway, Nebraska; Total Cost, \$20,000; Engineer, Guy Dorsey, Assistant County Surveyor; Fabricator, Omaha Steel Works; Owner, Douglas County, Nebraska; Completed December 13, 1934; Span length: Arch, 72 ft., overall length of bridge, 123 ft.

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**HONORABLE MENTION—CLASS B—1934 AWARD**

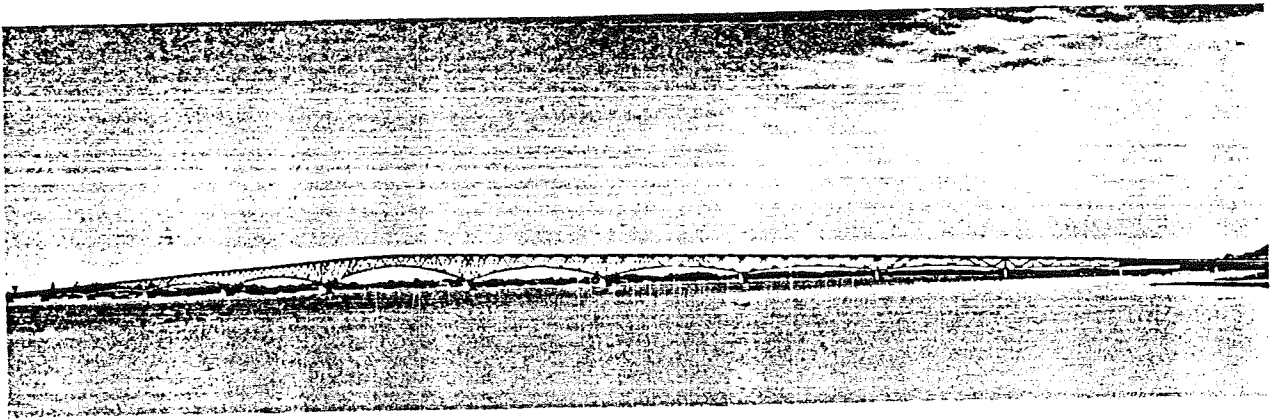
**WOODWARD AVENUE GRADE SEPARATION**—Michigan Central and Grand Trunk R. R. Crossing, Woodward Ave., Detroit, Michigan; Total Cost, \$400,000; Engineers, Michigan Central (Superstructure), Grand Trunk Western (Substructure), assisted by Highway Engineers; Fabricator, American Bridge Company; Owner, State of Michigan; Completed November 1, 1934; Span length: 90 ft., disregarding sidewalk bridging.



**HONORABLE MENTION—CLASS C—1934 AWARD**

**EEL RIVER BRIDGE AT SMITH POINT**—Humboldt County, California, State Highway Route 1, U. S. Route 101, about 50 miles south of Eureka; Total Cost, \$110,000; Engineer, F. W. Panhorst, Acting Bridge Engineer, State of California; Constructor, Neves and Harp, Santa Clara, Calif.; Fabricator, Pacific Coast Steel Corporation; Owner, State of California; Completed December 29, 1934; Span length: 2—100 ft. end spans; 2—120 ft. center spans; Total length, 440 ft., designed continuous over supports.

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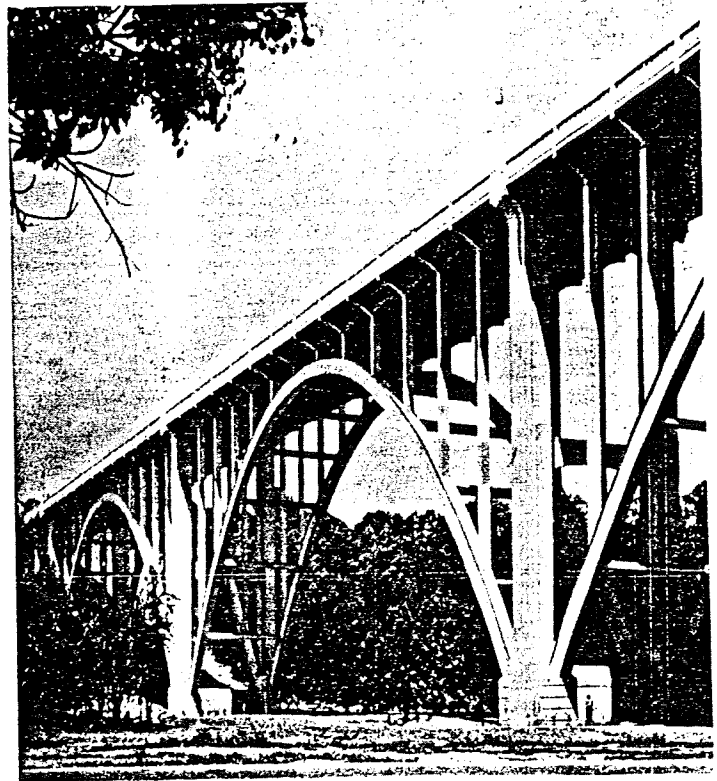


#### FIRST PLACE—CLASS A—1935 AWARD

**NORTH GRAND ISLAND BRIDGE**—Over the Niagara River, extending from the City of Niagara Falls, Niagara County, N. Y., to Buckhorn Island at the north end of Grand Island, Erie County, N. Y.; Total Cost, \$1,296,639.84; Engineers: Built under the direction of Frederick S. Greene, Chief Engineer of the Niagara Frontier Bridge Commission and Superintendent of Public Works of the State of New York. Plans for the superstructure of the river spans prepared by Waddell & Hardesty and George C. Diehl, Inc., Consulting Engineers of the Commission; Fabricators, Jones & Laughlin Steel Corporation and Fort Pitt Bridge Works; Owner, Niagara Frontier Bridge Commission; Completed July 15, 1935; Span Lengths: 1—150 ft., 2—200 ft., 2—250 ft., 2—300 ft., 2—350 ft., 2—400 ft., 1—500 ft., and 3—100 ft.

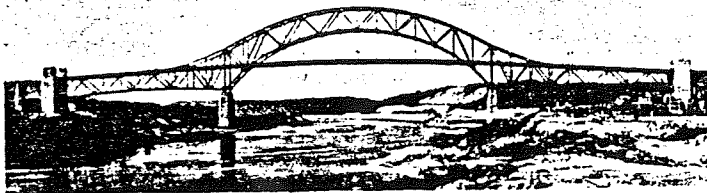
#### FIRST PLACE—CLASS B—1935 AWARD

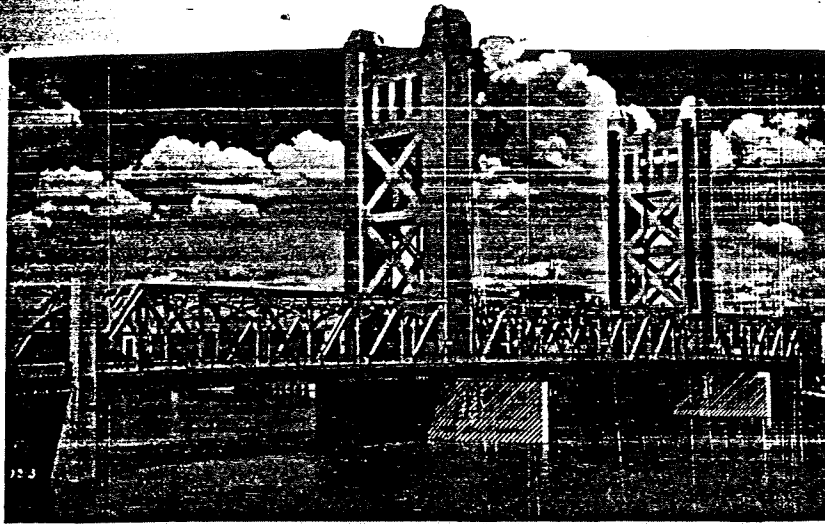
**LORAIN ROAD VIADUCT**—On Lorain Road, State Route 10, across Rocky River Valley, located partially in Cleveland and partially in the Village of Fairview, Cuyahoga County, Ohio; Total Cost, \$496,472.06 (including approaches and landscaping); Engineers: Ohio Department of Highways, John Jaster, Jr., Director; Bureau of Bridges, J. R. Burkey, Chief Engineer; W. H. Rabe, Chief Designing Engineer; D. H. Overman, Principal Designing Engineer for the project; Fabricators, Fort Pitt Bridge Works; Owner, Cuyahoga County; Date Completed, December, 1935; Span Lengths: Two central arches 256 ft. center to center of piers; adjacent arch, either side, 236.7 ft. center of piers; west approach spans, four deck girder spans at 38.6 ft. center to center; east approach span, deck girder, 57.8 ft. center to center; overall length of structure, 1260.9 ft.



#### HONORABLE MENTION—CLASS A— 1935 AWARD

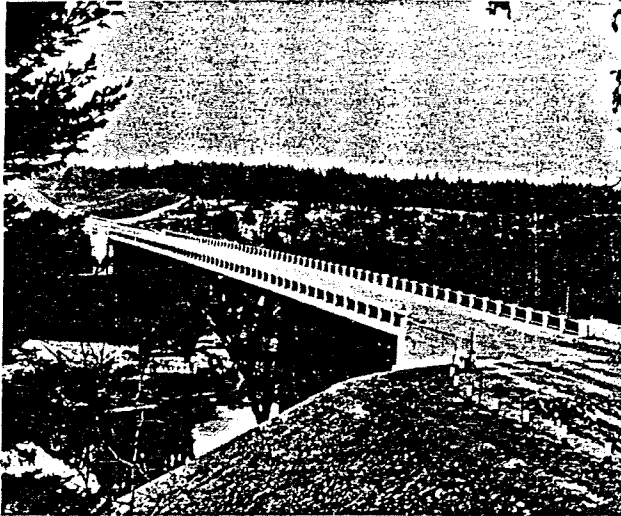
**SAGAMORE BRIDGE**—Across Cape Cod Canal in the Town of Bourne, Mass.; Total Cost, \$1,400,000 (approximate); Engineers, Fay, Spofford and Thorndike; Fabricators, American Bridge Company (superstructure); Owner, U. S. Government; Date Completed June 21, 1935; Span lengths: 1 continuous 3-span structure, length of center span 616 ft. center to center with two side spans each 396 ft.





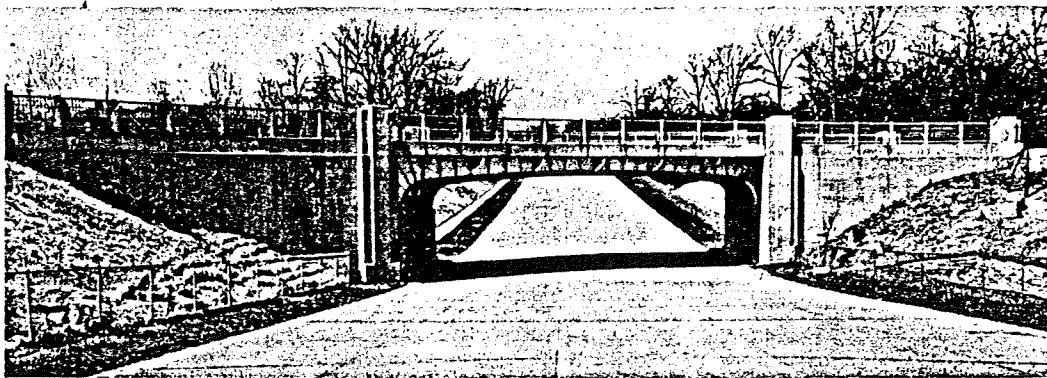
**HONORABLE MENTION—  
CLASS B—1935 AWARD**

**TOWER BRIDGE**—Sacramento, California, across Sacramento River between Sacramento and Yolo Counties; Total Cost, \$975,689.34; Engineers, C. H. Purcell, State Highway Engineer; F. W. Panhorst, Acting Bridge Engineer; Fabricators, Consolidated Steel Corporation, Ltd.; Owner, State of California, Department of Public Works, Division of Highways; Date Opened to Traffic, December 31, 1935; Span lengths: Lift span, 209 ft. 6 in.; 167 ft. 5 in.; 30 ft. 9 in.; 192 ft. 6 in.; 4 spans at 34 ft. 5 in., 34 ft., 34 ft., and 35 ft. Total length of bridge, 738 ft.



**FIRST PLACE—CLASS C—1935 AWARD**

**MORTIMER E. COOLEY BRIDGE**—On M-55 crossing the S. Branch of the Manistee River 3 miles east of Wellston, Ohio; Total Cost, \$179,683.88 (exclusive of plans and engineering); Engineers, Michigan State Highway Department; Fabricators, Wisconsin Bridge & Iron Co.; Owner, Michigan State Highway Department; Date Completed, August 28, 1935—opened to traffic, September 15, 1935; Span lengths: 1 at 300 ft., 2 at 125 ft.



**HONORABLE MENTION—CLASS C—1935 AWARD**

**TAMM AVENUE SEPARATION**—Route 40, St. Louis, Mo.; Total Cost, \$33,406.48; Engineer, T. H. Cutler, Chief Engineer, Missouri State Highway Department; Fabricators, Stupp Bros. Bridge & Iron Company; Owner, Missouri State Highway Department; Date Completed, October 31, 1935—opened to traffic, December 10, 1935; Span length, 66 ft.



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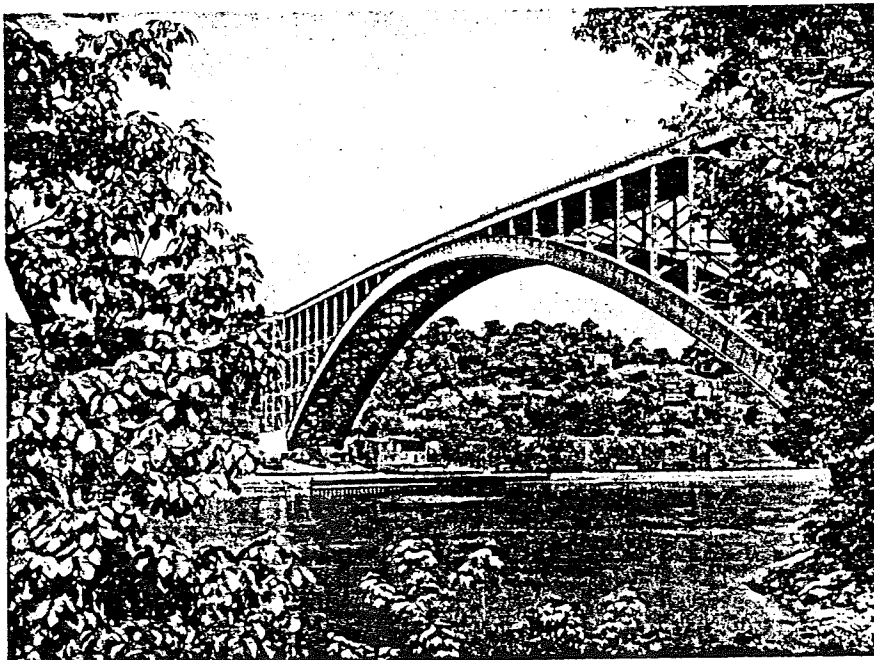
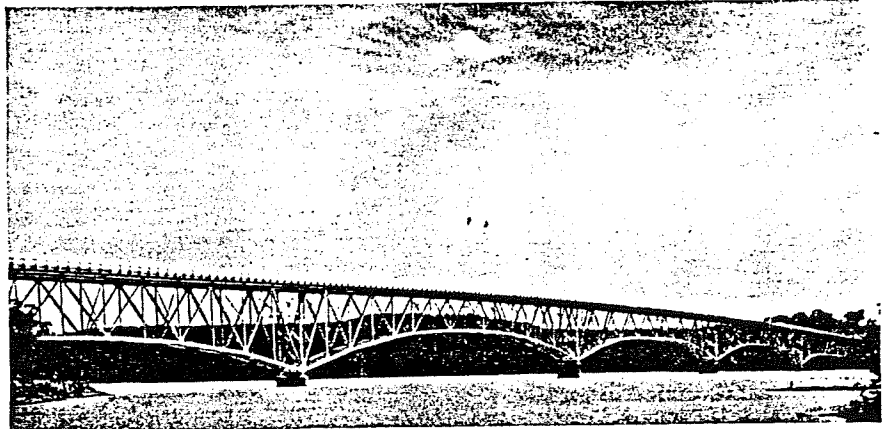


**FIRST PLACE—CLASS A—1936 AWARD**

**EAST RIVER CROSSING, THE TRIBOROUGH BRIDGE**—New York City; Total Cost, \$8,500,000; Engineers: The Triborough Bridge Authority, O. H. Ammann, Chief Engineer; Allston Dana, Engineer of Design; Leon S. Moisseiff, Consulting Engineer; Aymar Embury II, Architect; Fabricators, Bethlehem Steel Company, American Bridge Company and American Locomotive Company; Owner, The Triborough Bridge Authority; Date Opened to Traffic, July 11, 1936; Span length: 1380 ft., width 113 ft.

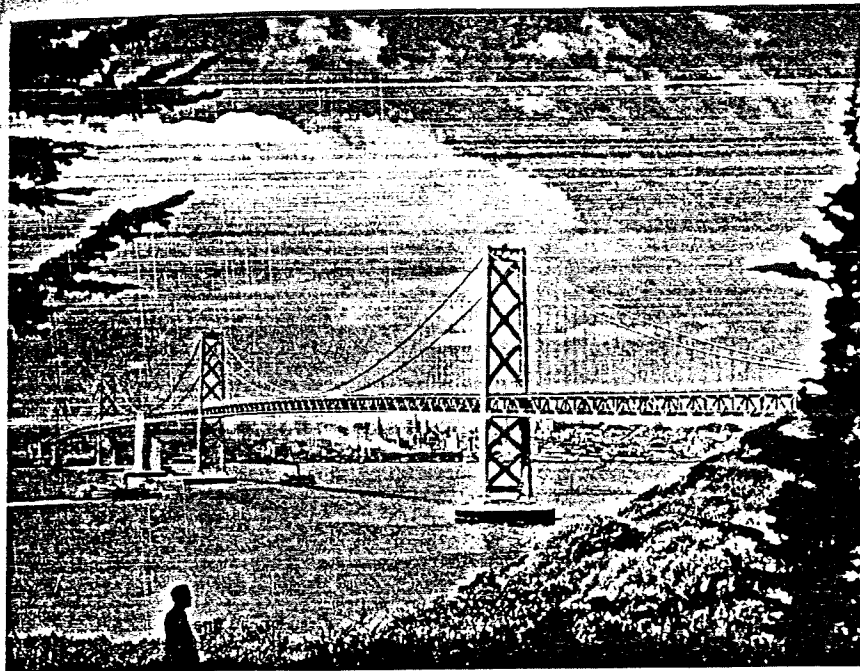
**FIRST PLACE—CLASS B—  
1936 AWARD**

**HURRICANE DECK BRIDGE**  
—Across Sage Arm of the Lake of the Ozarks on Missouri Route No. 5, Camden County, Missouri, between Versailles and Camden-ton; Total Cost, \$656,204.89; Engineers, Sverdrup & Parcel; Fabricators, Stupp Bros. Bridge & Iron Company fabricated the structural steel and sublet the erection to the Wisconsin Bridge & Iron Company; Owner, Camden County, Missouri; Date Opened to Traffic, December 28, 1936; Span lengths: 3 central spans each 464 ft., 2 side spans each 377 ft.



**HONORABLE MENTION—  
CLASS A—1936 AWARD**

**HENRY HUDSON BRIDGE**—Over Harlem River at Spuyten Duyvil, New York City; Total Cost, \$1,200,000; Engineers, Madigan & Hyland, Consulting and Supervising Engineers; Robinson & Steinman, Consulting Engineers on Design; Aymar Embury II, Consulting Architect; Fabricators, American Bridge Company; Owner, Henry Hudson Bridge Authority; Date Completed and Opened to Traffic, December 11, 1936; Span lengths: 1 arch span 800 ft.; 2 tower spans, 45 ft.; 10 plate girder spans, each 60 ft.

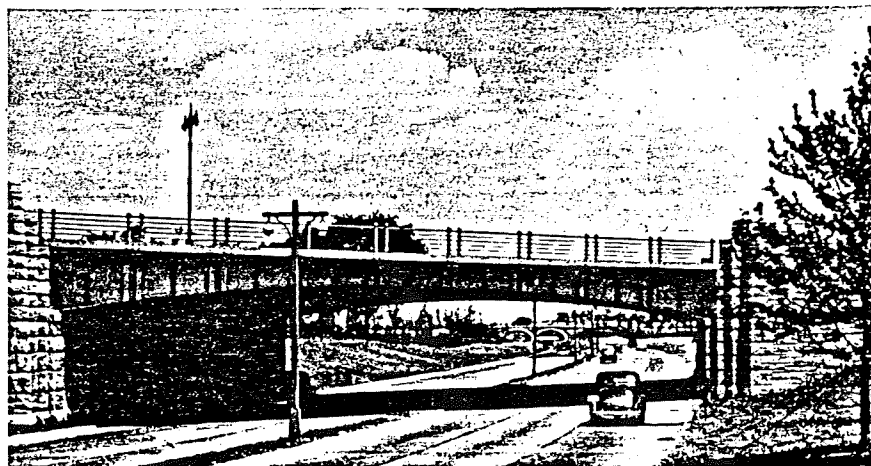
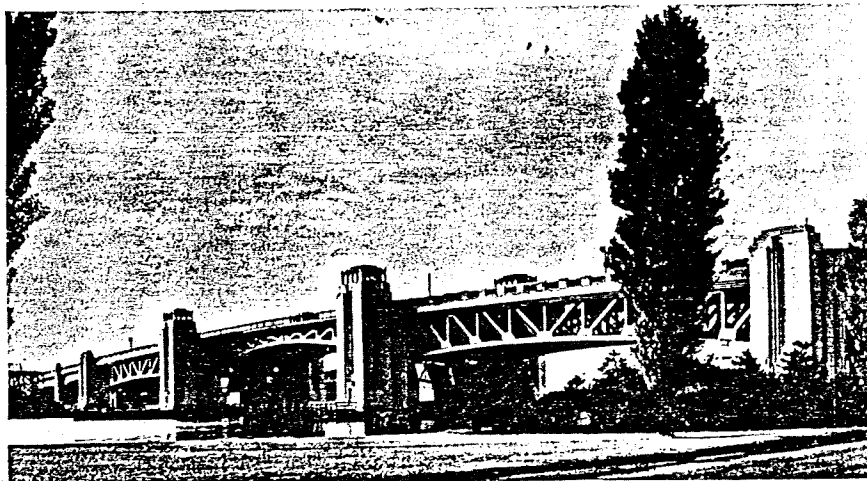


**HONORABLE MENTION—  
CLASS A—1936 AWARD**

**WEST BAY CROSSING, SAN FRANCISCO - OAKLAND BAY BRIDGE**—San Francisco Harbor, California; Total Cost, \$77,200,000 (estimated); Engineer, Charles H. Purcell, Chief Engineer, Department of Public Works, State of California; Fabricators, Columbia Steel Company; Owner, California Toll Bridge Authority of the State of California; Date Completed, November 11, 1936; Opened to Traffic, November 12, 1936; Span lengths: 1 approach span 863 ft.; 2 main spans each 2310 ft.; 4 side spans each 1160 ft.

**HONORABLE MENTION—  
CLASS A—1936 AWARD**

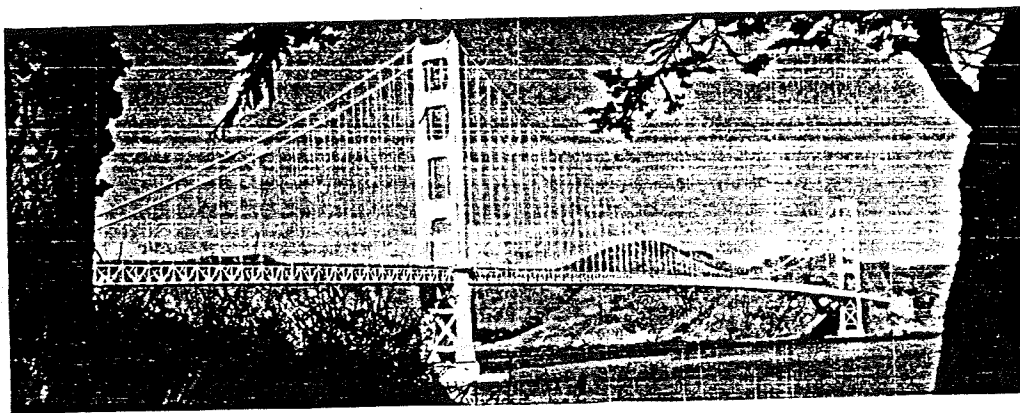
**FORE RIVER BRIDGE**—Between Quincy and Weymouth, Mass.; Total Cost, \$2,400,000 (approximately); Engineers, designed and built by the Massachusetts Department of Public Works under the direction of George H. Delano, Chief Engineer, and George E. Harkness, Bridge Engineer; Desmond & Lord, Consulting Architects; Fabricators, Bethlehem Steel Company; Owner, Commonwealth of Massachusetts; Date Completed, October, 1936; Opened to Traffic, May 23, 1936; Span lengths: 1—212 ft.-6 in. truss span (river span); 3—90 ft. girder spans (approach spans); 1—219 ft. twin bascule span; Total length, 2116 ft.



**FIRST PLACE—CLASS C—  
1936 AWARD**

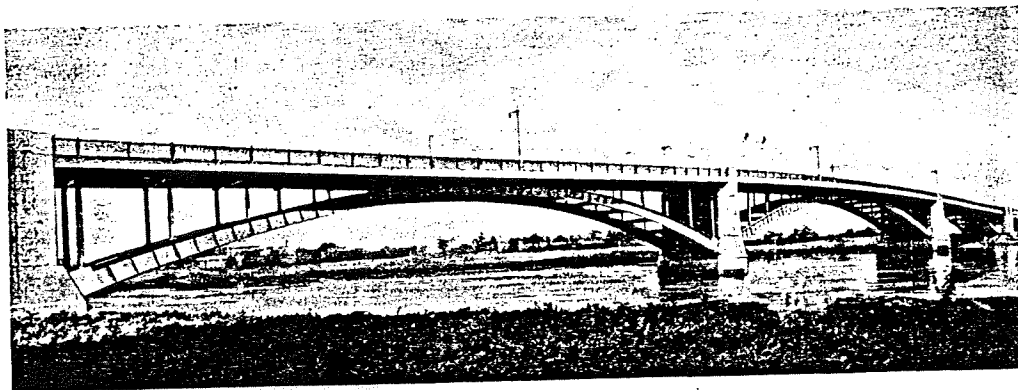
**ASTORIA BOULEVARD OVER GRAND CENTRAL PARKWAY EXTENSION**—Queens County, New York City; Total Cost, \$114,000; Engineers, Long Island State Park Commission and Triborough Bridge Authority; Fabricators, American Bridge Company; Owner, Department of Parks, New York City; Date Opened to Traffic, July 11, 1936; Span length: On skew 92 ft.; Square 74 ft. 8 in.

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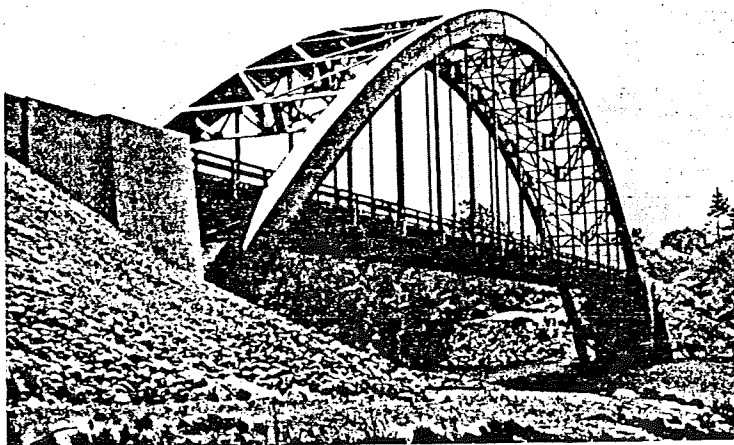
**FIRST PLACE—CLASS A—1937 AWARD**

**GOLDEN GATE BRIDGE**—From Fort Point to Lime Point across the Golden Gate at San Francisco, California; Total Cost, \$27,000,000 (construction cost); Engineers, Joseph B. Strauss, Chief Engineer; O. H. Ammann, L. S. Moisseiff and Charles Derleth, Jr., Consulting Engineers; Fabricators, Bethlehem Steel Company; Owners, Golden Gate Bridge and Highway District; Date Completed, May 26, 1937; Opened to Traffic, May 27, 1937; Span length: Main span, 4200 ft. c-c of towers; Total length, 9200 ft.



**FIRST PLACE—CLASS B—1937 AWARD**

**LITTLE HELL GATE, LOW LEVEL BRIDGE**—Between Randall's Island and Ward's Island, New York City; Total Cost, \$530,000; Engineers, O. H. Ammann, Chief Engineer; Allston Dana, Engineer of Design; Aymar Embury II, Architect; Fabricators, American Bridge Company; Owners, The Triborough Bridge Authority; Date Completed, June 30, 1937; Opened to Traffic, May 15, 1937; Span lengths: 3 spans 167 ft., 280 ft., 242 ft.

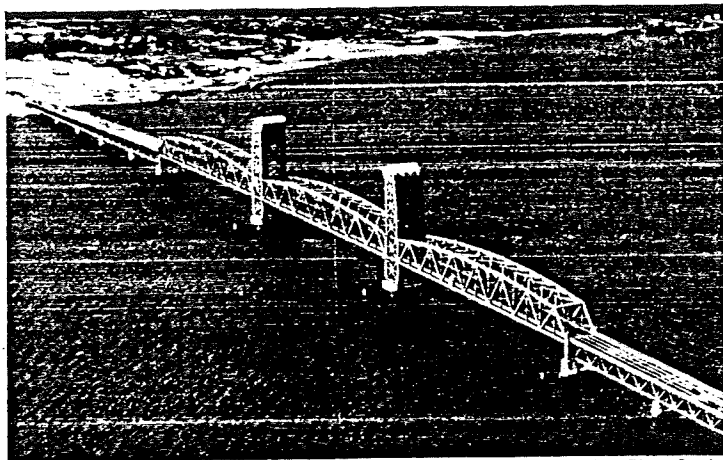


**FIRST PLACE—CLASS C—1937 AWARD**

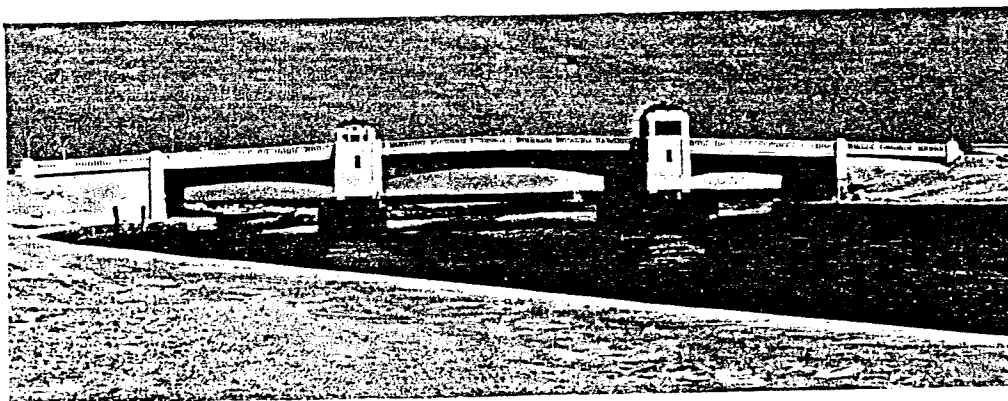
**CHESTERFIELD-BRATTLEBORO BRIDGE**—Over Connecticut River on Route 9; Total Cost, \$198,425.72; Engineers, John W. Childs, Bridge Engineer, Harold E. Langley, Designing Engineer, New Hampshire State Highway Department; Fabricators, Bethlehem Steel Company; Owners, States of New Hampshire and Vermont; Date Completed, August 2, 1937; Opened to Traffic, July 31, 1937; Span length, 425 ft. c-c pins.

**FIRST PLACE—MOVABLE BRIDGES—  
1937 AWARD**

**MARINE PARKWAY BRIDGE**—Over Rockaway Inlet, New York City; Total Cost, \$3,750,000; Engineers: Madigan-Hyland, Consulting and Supervising Engineers on Entire Project; Waddell & Hardesty, Consulting Engineers on Design of Lift and Flanking Spans; Robinson & Steinman, Consulting Engineers on Design of Deck Spans; Aymar Embury II, Consulting Architect; Fabricators and Erectors, American Bridge Company; Owners, Marine Parkway Authority; Date Completed and Opened to Traffic, July 3, 1937; Span length, lift span, 540 ft.

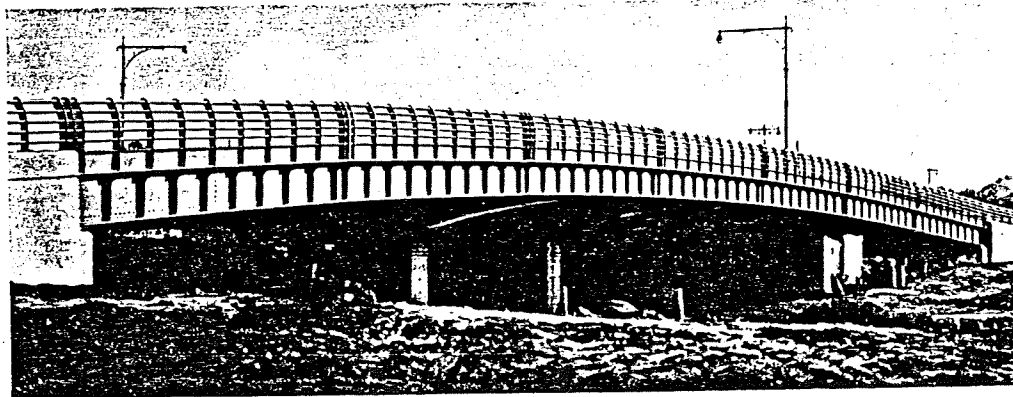


*McLaughlin Photo Service*



**HONORABLE MENTION—MOVABLE BRIDGES—1937 AWARD**

**SHARK RIVER BRIDGE**—Ocean Avenue, between Belmar and Avon, Monmouth County, New Jersey; Total Cost, \$324,982.68; Engineers, Ash-Howard-Needles & Tammen, and Morris Good-kind acting as Associate Consultants; Fabricators, Virginia Bridge Company, structural steel; American Bridge Company, machinery; Owners, Board of Chosen Freeholders of Monmouth County, New Jersey; Date Completed and Opened to Traffic, May 29, 1937; Span lengths: Double leaf simple trunnion bascule span 112 ft. c-c of trunnions, and two flanking spans each 68 ft. long; Total length, 338 ft. 8 in.



**HONORABLE MENTION—CLASS B—1937 AWARD**

**NORTHERN BOULEVARD BRIDGE OVER INTRAMURAL DRIVE**—Flushing Meadow Park, New York City; Total Cost, \$448,376; Engineers, Madigan-Hyland; Fabricators, American Bridge Company; Owners, Department of Parks, City of New York; Date Completed, September 10, 1937; Opened to Traffic, June 8, 1937; Span lengths: 7 spans at 49.5 ft. c-c of columns.

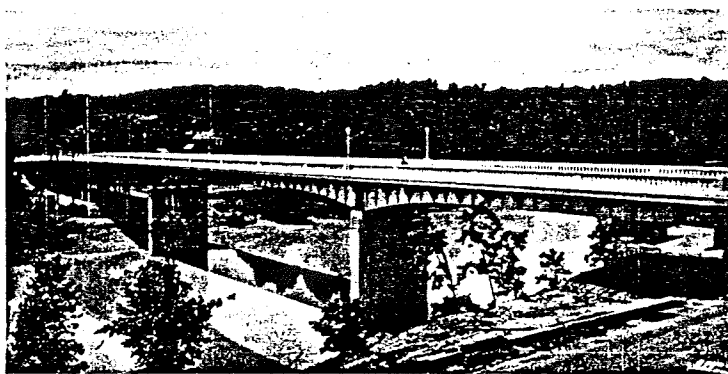


**FIRST PLACE—CLASS A—1938 AWARD**

**MIDDLETOWN-PORTLAND BRIDGE**—Middletown, Connecticut; Total Cost, \$3,000,000; Engineers: Designed by William G. Grove under the direction of L. G. Sumner, Engineer of Bridges and Structures, Connecticut State Highway Department; E. C. Welden, Deputy Highway Commissioner; William J. Cox, State Highway Commissioner; Fabricators, Bethlehem Steel Company; Owner, State of Connecticut; Date Completed, July, 1938; Opened to Traffic, August 6, 1938; Span lengths: 2 steel arches 600 ft. each; Total length, 3,400 ft.

**FIRST PLACE—CLASS B—1938 AWARD**

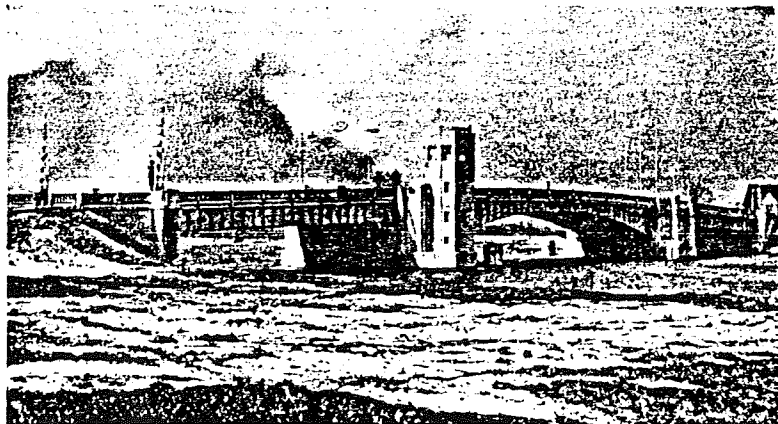
**CAPITAL BRIDGE**—Across Kentucky River at Capital Avenue, Frankfort, Kentucky; Total Cost, \$329,316.39; Engineers, Bridge Department, Department of Highways of Kentucky; Fabricators and Erectors, Bethlehem Steel Company; Owner, Commonwealth of Kentucky; Date Completed, May 25, 1938; Opened to Traffic, June 4, 1938; Span lengths: 3 spans at 67 ft., one continuous span at 474 ft.

**FIRST PLACE—CLASS C—1938 AWARD**

**MIDDLE FORK OF FLATHEAD RIVER BRIDGE**—Belton, Montana; Total Cost, \$74,815.25; Engineers: Montana Highway Department, B. J. Ornburn, Bridge Design Engineer; Fabricators, Pittsburgh-Des Moines Steel Company; Owner, Montana Highway Commission; Date Completed, June 10, 1938; Opened to Traffic, July 2, 1938; Span lengths: 84 ft., 168 ft., 84 ft.

**FIRST PLACE—MOVABLE BRIDGE  
CLASS—1938 AWARD**

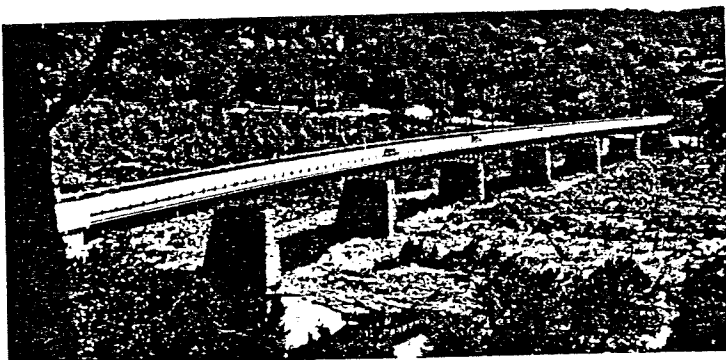
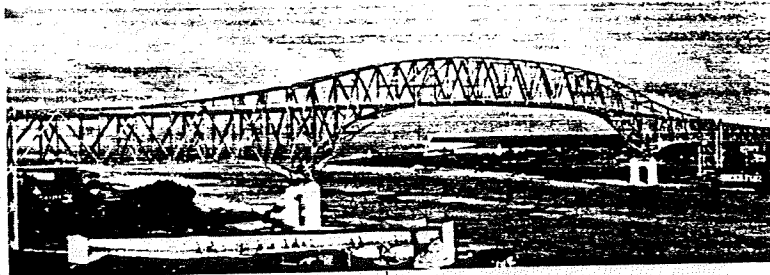
**LAFAYETTE AVENUE BRIDGE, EAST CHANNEL, SAGINAW RIVER**—Bay City, Michigan; Total Cost, \$380,000; Engineers, Hazelet & Erdal; Fabricators, The R. C. Mahon Company; Owner, City of Bay City, Michigan; Date Completed, December 5, 1938; Opened to Traffic, December 7, 1938; Span length: Bascule span, 185 ft.; approach spans, 96 ft.-10 in. and 107 ft.-8 in.



. 1 9 3 8 .

**HONORABLE MENTION—CLASS A—  
1938 AWARD**

**BLUEWATER BRIDGE**—Over St. Clair River, between Port Huron, Michigan, and Sarnia, Ontario, Canada; Total Cost, \$2,744,018.02; Engineers: Modjeski, Masters and Case; Canadian Associate Engineers, Monsarrat and Pratley; Fabricators: American Bridge Company (Main Bridge); Wisconsin Bridge & Iron Company (Michigan Approach); Hamilton Bridge Company (Ontario Approach); Owners: State Bridge Commission of Michigan; Department of Highways, State of Michigan; Department of Highways, Province of Ontario; Date Completed, September 20, 1938; Opened to Traffic, October 8, 1938; Span length, 871 ft. main span.

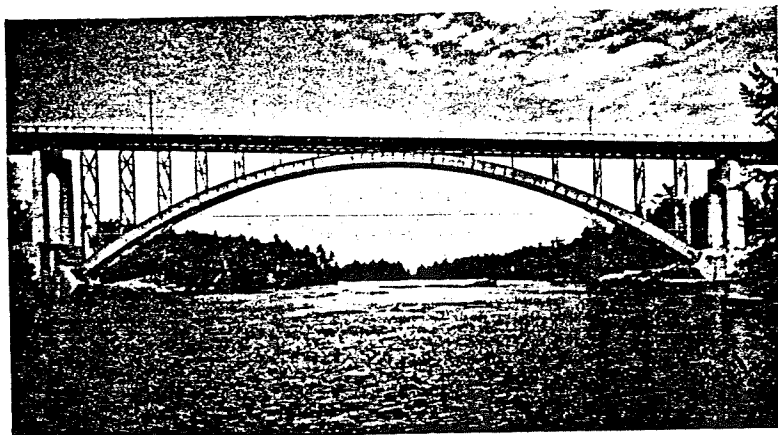
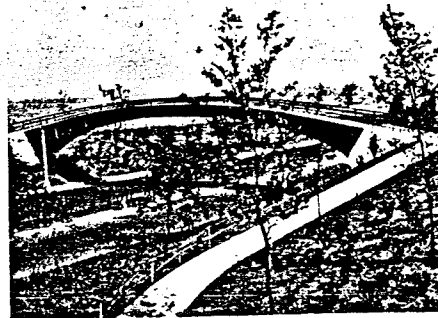


**HONORABLE MENTION—CLASS B  
1938 AWARD**

**CHAIN BRIDGE**—Over Potomac River, between District of Columbia and Virginia; Total Cost, \$342,529 (superstructure); Engineers, Modjeski, Masters and Case; Fabricators, Bethlehem Steel Company; Owner, Government of the District of Columbia; Date Completed and Opened to Traffic, June 17, 1938; Span lengths: 6 at 172 ft., 2 at 160 ft.

**HONORABLE MENTION—CLASS C—  
1938 AWARD**

**BURNHAM PARK PEDESTRIAN BRIDGE**—Foot of East 47th Street, Burnham Park, Chicago, Illinois; Total Cost, \$14,700; Engineers: Engineering Division, Chicago Park District; Fabricators, Duffin Iron Company; Owner, Chicago Park District; Date Completed, September 6, 1938; Opened to Traffic, September 17, 1938; Span length, 115 ft.



**HONORABLE MENTION—CLASS C—  
1938 AWARD**

**THOUSAND ISLANDS INTERNATIONAL BRIDGE**—Between Constance and Georgina Islands in the Canadian Channel of the St. Lawrence River; Total Cost, \$110,000; Engineers: Robinson and Steinman. Design and Supervision: Monsarrat and Pratley, Associate Engineers; William T. Field, Advisory Engineer; Fabricators, Canadian Bridge Company; Owner, The Thousand Islands Bridge Authority; Date Completed and Opened to Traffic, August 18, 1938; Span length, 348 ft. main span.

DETERMINATION OF ELIGIBILITY (MHC OPINION)

TO: BETSU FRIEDBERG

RETURN TO REVIEWER BY \_\_\_\_\_  
(DATE)

FROM: WM. SMITH

DATE: JULY 3, 1991

TOWN: ERVING / GILL

PROPERTY: E-10-14/G-4-9 st. 2 over Connecticut River  
(NAME AND ADDRESS)

" French King Bridge "

1. Does this property meet the criteria for NR eligibility?

YES

NO

A. Criteria

- a. events
- b. lives
- c. characteristics
- d. information

B. Local \_\_\_\_\_ State \_\_\_\_\_ National

2. Statement of Significance: OR Why not eligible?

1932 steel 3-span continuous spandrel braced  
deck truss (2 hinged)

AN unusual variation of an uncommon  
structural type: landmark structure

in 1932, the French King bridge was named  
the most beautiful steel bridge of its class in  
America.

DOE LETTER WRITTEN

Corrected  
9-4-91

FILED IN ER FILE \_\_\_\_\_

\_\_\_\_\_  
(DATE)

TO: Betsy J.

RETURN TO REVIEWER BY \_\_\_\_\_  
(DATE)

FROM: WM. SMITH

DATE: 8/2/88

TOWN: ERVING / GILL

PROPERTY: E-10-14 / G-4-9 st. 2 / Mohawk trail over  
(NAME AND ADDRESS) Connecticut River

\* French King Bridge

1. Does this property meet the criteria for NR eligibility?

YES

NO

A. Criteria

- a. events
- b. lives
- c. characteristics
- d. information

B. Local  State  National

2. Statement of Significance: OR Why not eligible?

1931 CONTINUOUS 3 SPAN SPANDREL BRACED STEEL  
DECK ARCH.

ONE OF ONLY 4 STEEL DECK ARCHES MDPW DATA BASE  
NATIONAL PRIZE WINNER AS THE MOST BEAUTIFUL STEEL  
BRIDGE IN ITS CLASS (1932)

A LANDMARK STRUCTURE

DOE LETTER WRITTEN

FILED IN ER FILE \_\_\_\_\_

\_\_\_\_\_  
(DATE)





August 24, 1988

Mr. James A. Walsh  
 Division Administration  
 Federal Highway Administration  
 Transportation Systems Center  
 55 Broadway - 10th Floor  
 Cambridge, MA 02142

ATTN: Mr. H. Pearlman

RE: Bridges ..... National Register Eligibility

Dear Mr. Walsh:

The Massachusetts Historical Commission has reviewed the historic bridge inventory forms prepared by the Massachusetts Department of Public Works. The MHC concurs with the preliminary finding of the MDPW that the following bridges appear to meet criteria for listing in the National Register of Historical Places.

Erving/Gill E-10-14/G-4-9 St. 2, Mohawk Trail over  
 Connecticut River

1931 continuous 3 span, spandrel braced, steel rib deck arch bridge. Individually eligible for the National Register on the local, state, and national level;. A landmark structure in a dramatic national setting: national prize winner in 1932. An unusual design variation on a very uncommon structural type. One of only four known metal deck arches in Massachusetts.

Pittsfield P-10-5 B&M Railroad over Housatanic River,  
 Mill St.

1897 two span continuous double-intersection with sub-verticals warren deck truss. One of only two known bridges of this type in Massachusetts.

The Massachusetts Historical Commission disagrees with the preliminary finding of the Massachusetts Department of Public Works that the following bridge does not appear to meet criteria for listing in the National Register of Historic Places.

Dudley/Webster W-12-OFF-1 Former Providence, Webster & Springfield  
 Railroad over French River and Providence  
 and Worcester Railroad

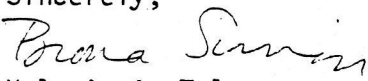
Pre-1888 riveted wrought-iron lattice through truss. Massachusetts Historical Commission agrees with Massachusetts Department of Public Works that much about this bridge is unknown, and that technologically the bridge does not meet criteria for National Register eligibility. However the bridge is the last known element in Webster from Horatio N. Slater's answer to the former monopoly of New York and New England Railroad. In the early 1880's, Rail service in Webster was controlled by the New York and New England Railroad. The high rates charged by the New York and New England Railroad provoked the town's leading manufacturer, Horatio N. Slater to build his own Railroad line, the Providence, Webster & Springfield Railroad in order to connect Webster with the Boston and Albany Railroad system. This railroad line was important to the development of Webster. Massachusetts Historical Commission finds this bridge an important historical element.

MHC concurs with the preliminary findings of MDPW that the following bridges do not appear to meet criteria for listing in the National Register of Historic Places.

<u>Easton</u>	E-G-1	St. 138, Washington St. over Queset Brook
<u>Gardner</u>	G-1-5	Betty Spring Rd. over B&M Railroad
<u>Pittsfield</u>	P-10-5A	B&M Railroad yard line over Mill St.
<u>Pittsfield</u>	P-10-16	Conrail over Housatonic River, Mill St.
<u>Pittsfield</u>	P-10-30	East St. over Housatonic river
<u>Pittsfield</u>	P-10-63	St. 41 over Beagle Brook
<u>Pittsfield</u>	P-10-OFF-1	B&M Railroad yard line over west branch of Housatonic River
<u>Southborough</u>	S-20-15	St. 85, Cordaville Rd. over St. 9

If you have any questions, please feel free to contact William Smith of this office.

Sincerely,

*for*   
 Valerie A. Talmage  
 Executive Director  
 State Historic Preservation Officer  
 Massachusetts Historical Commission

VAT/kh

xc: Frank Bracaglia, MDPW

Boston/Cambridge

B-16-9/C-1-2

Cambridge St. over Charles  
River

1900-1907 (Longfellow Bridge) two hinged, arch bridge with neo-classical details. Oldest known example of a two hinged, arch bridge in Massachusetts. This bridge has been reviewed by the National Park Service and was formally entered in the National Register of Historic Places on December 22, 1978, as a contributing element in the Charles River Basin Historic District.

Colrain

C-18-8

Adamsville Rd over North River

1937 two hinged, steel rib, through arch. Good example of an uncommon structural type in Massachusetts. Located adjacent to the potential National Register district of the 19th century factory village of Griswoldville.

Charlemont/Shelburne

C-5-7/S-11-3

North River Rd. over North  
River

1937 (Four Mile Square bridge) two hinged, steel rib, through arch. Good example of an uncommon structural type in Massachusetts. The Massachusetts Historical Commission disagrees with the Massachusetts Department of Public Works on this bridge, because it is identical to the above bridge in Colrain (C-18-8) and both bridges meet criteria for National Register eligibility.

Cummington

C-21-2

State 9 over East Brook,  
Westfield River

1939 (Dudley Manon bridge) steel box rib, half through arch. The only known example of this structural type in Massachusetts.

Dover/Wellesley

D-10-998/W-13-0

Access Rd to Elm Bank  
over Charles River

1897 (Cheney bridge) three hinged, spandrel braced, steel deck arch. Oldest example of a very uncommon structural type in Massachusetts. This bridge has been reviewed by the National Park Services and was formally entered in the National Register of Historic Places on July 10, 1987 as a contributing element in the Elm Bank Estate.

Erving/Gill

E-10-14/G-4-9

State 2 over Connecticut River

1932 (French King bridge) steel three span continuous, spandrel braced deck truss. An unusual variation of an uncommon structural type in Massachusetts. The French King bridge was named the most beautiful steel bridge in its class in America in 1932.

Lowell

L-15-30

Broadway over Pawtucket Canal

1919 (Broadway Bridge) spandrel braced, rib deck arch. This bridge is a very unusual structural type and is a contributing element in the Lowell Locks and Canals Historic District, which was formally entered as a National Register District on July 13, 1976 and as a National Historic Landmark on December 22, 1977.

Tyngborough

T-9-1

State 113 over Merrimack River

1930 two hinged, steel trussed rib, through arch. A landmark structure and a very uncommon bridge type in Massachusetts.

Waltham

W-4-1

Farwell St. over Charles River

1935 (James Harold Bridge) three hinged, spandrel braced, steel deck arch. Late example of an unusual structural type in Massachusetts with noted art deco details. This bridge was reviewed March 20, 1991 with an Eligible recommendation.

Winchester

W-40-14

Mystic Valley Parkway  
over Aberjona River

1896 three hinged, spandrel braced, steel deck arch bridge. Oldest example of an unusual structural type. Altered by adding two welded arch ribs between the three original arches; however, bridge is definitely a contributing element in the Mystic Valley parkway. A National Register nomination is currently being prepared by the Metropolitan District Commission.

The following bridge is conditionally not eligible; review when fifty years old.

Gloucester

G-5-17

State 128 over Annisquam River

1950 fixed steel rib, deck arch. This bridge is an unusual structural type in Massachusetts. Awarded an honorable mention in a national bridge design competition in 1950. This landmark bridge is in an outstanding natural setting.

The following bridge does not appear to meet National Register criteria for individual listing. However the bridge is located near an area that may be historic. Further survey work is needed in order to determine the presence of historic resources, plans for bridge replacement should take into consideration potential impact to adjacent properties.

Huntington

H-27-6

State 6, Worthington Road,  
over Westfield River & P.C.  
Railroad

If you have any questions, please feel free to contact William Smith of this office.

Sincerely,



Judith B. McDonough  
Executive Director  
State Historic Preservation Officer  
Massachusetts Historical Commission

JBM/WS/hl

cc: Frank Bracaglia, MDPW





September 18, 1991

Mr. Donald E. Hammer, Acting Director  
 Division Administration  
 Federal Highway Administration  
 Transportation Systems Center  
 55 Broadway - 10th Floor  
 Cambridge, MA 02142

ATTN: Mr. H. Pearlman

RE: Massachusetts Bridges, National Register Eligibility

Dear Mr. Fusco:

The Massachusetts Historical Commission has reviewed the historic bridge inventory forms prepared by the Massachusetts Department of Public Works. The Massachusetts Historical Commission concurs with the preliminary findings of the Massachusetts Department of Public Works except where noted with additional comments.

The following bridges meet criteria for listing in the National Register of Historic Places.

Amesbury/Newburyport      A-7-14/N-11-10      Main St. over Merrimack River

1909 (chain bridge) single span steel wire suspension bridge. This landmark bridge is the only known suspension bridge in the MDPW database. MHC concurs with the previous determination of July 7, 1980

Boston/Cambridge      B-16-7/C-1-4      State 2 over Charles River,  
 Soldiers Field Road

1928 (B.U. Bridge) two hinged, trussed rib, steel through arch bridge. Oldest of the five known steel rib through arches in Massachusetts. This bridge has been reviewed by the National Park Service and was formally entered in the National Register of Historic Places on December 22, 1978 as a contributing element in the Charles River Basin Historic District.

Massachusetts Historical Commission, Judith B. McDonough, *Executive Director, State Historic Preservation Officer*  
 80 Boylston Street, Boston, Massachusetts 02116 (617) 727-8470

Office of the Secretary of State, Michael J. Connolly, *Secretary*

French King Bridge

Spanning the Connecticut River on State Highway 2

Erving/Gill

Franklin County

Massachusetts

HAER No. MA-100

PHOTOGRAPHS  
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record  
National Park Service  
Department of the Interior  
Washington, DC 20013-7127

## HISTORIC AMERICAN ENGINEERING RECORD

FRENCH KING BRIDGE  
HAER No. MA-100

Location: Spanning the Connecticut River on State Highway 2, about six miles east of the Town of Greenfield, between the towns of Erving and Gill, Franklin County, Massachusetts  
UTM: Millers Falls, Mass., Quad. 18/705360/4718930

Date of Construction: 1932

Structural Type: Riveted steel deck arch bridge

Engineer: George E. Harkness, Bridge Engineer (MDPW)  
Albert E. Kleinert, Jr., Asst. Structural Engineer (MDPW)

Fabricator/  
Builder: McClintic-Marshall Construction Co., Pittsburgh (steelwork)  
Simpson Brothers Construction Co., Boston (substructure)

Owner: Massachusetts Department of Public Works, Boston

Use: Vehicular highway bridge

Significance: The French King Bridge is one of four known steel deck arch bridges in Massachusetts identified in the Massachusetts Department of Public Works (MDPW) database, and has the sixth longest span of all the bridges in the state under MDPW purview. It is of engineering interest as an unusual development of the uncommon three-span, "cantilever arch" bridge type, in that definite reactions were jacked into its steelwork at the conclusion of construction, resulting in a bridge which is structurally continuous across four supports. The bridge was the crucial link in the establishment of a safe and efficient highway, which replaced a very dangerous section of road between Erving and Greenfield in the early 1930s.

Project Information: Documentation of the French King Bridge is part of the Massachusetts Historic Bridge Recording Project, conducted during the summer of 1990 under the co-sponsorship of HABS/HAER and the Massachusetts Department of Public Works, in cooperation with the Massachusetts Historical Commission.

Lola Bennett, HAER Historian, August 1990

FRENCH KING BRIDGE  
HAER No. MA-100  
(page 2)

### Description

The French King Bridge rises 135' above the level of the Connecticut River, and spans a narrow gorge just above the Connecticut's confluence with the Millers River. The bridge itself is a 782-foot, riveted steel, three-span continuous spandrel-braced deck arch, resting on two concrete river piers and two concrete abutments. It has a parabolic lower chord, and a very slightly arched upper chord, which are connected by a series of verticals and diagonals patterned after the Pratt system. The trusses, spaced 41' apart and divided into thirty-four panels each, are identical and are 782'-0" long between the end pins, and 460'-0" long between the river piers. All truss members are built up of plates and angles, connected with lacing and tie bars. The vertical truss members support plate girder floor beams, on top of which are rolled I-beam stringers and a reinforced concrete deck. The deck carries a 40'-wide roadway and a 6'-wide sidewalk on the north side of the bridge. At the piers, the trusses are fixed to steel shoes by means of huge steel pins. At the abutment ends of the bridge, the trusses are carried on rollers enclosed in protective steel boxes. Concrete pylons extend upward from the abutments, above the level of the roadway, to form the portals of the bridge. These pylons have decorative Art Deco-style paneling on their outer surfaces, and are stepped at the top. On top of each pylon is an ornamental, Neo-Classical, wrought iron electrolier with decorative lanterns on either side, and an eagle on top. A decorative iron fence runs along both sides of the deck, and is bolted to steel castings set in the concrete of the sidewalks. (See Figure 1 and copies of original plans and historic photos in field file.)

### The French King Legend

The French King Bridge derives its name from a natural landmark, long known as the "French King Rock," located about a quarter-mile upstream from the bridge. Today, only the top of the rock is visible above the surface of the river, but in the mid-nineteenth century, prior to the construction of a dam at Turners Falls, this rock was one of the most conspicuous landmarks in the river, rising over 16' above the surface of the water.

Legend has it that during the French and Indian War (1754-1760), a party of Indians led by a French officer came down the river on a scouting expedition, their objective being to find a desirable point to launch an attack. They arrived in the vicinity of the rock as night fell, and made camp on the bank opposite it. The officer, wishing to make note of a fixed location in his report, staged a ceremony christening the rock in honor of the French king, Louis XIV.

It is interesting to note that this legend began a chain reaction of "French King" designations in the area, all named after a man who never set foot on American soil. The first official designation was that of the French King Bridge and the French King Highway, in 1932. These were followed, in the 1950s, by the French King Restaurant, the French King Motor Inn, and the French King Bowling Alley.



FRENCH KING BRIDGE  
HAER No. MA-100  
(page 3)

### Massachusetts Turnpikes and the Mohawk Trail

The highway known today as the Mohawk Trail, of which the French King Highway is part, is a section of State Highway 2 running from the Connecticut River, just east of Greenfield, to Williamstown, on the New York State border in the northwestern corner of Massachusetts. (See Figure 2.) This road traverses a part of the state that is famous for its beautiful scenery and its association with native American Indians.

Geographically, the northwest section of Massachusetts is divided by the Hoosac Mountain Range, with the Hudson Valley to the west, and the Connecticut Valley to the east. It was this mountain range that separated two powerful tribes of Indians prior to the establishment of English settlements, but "the coming together of the Indian tribes in war, and later for the purpose of peaceful alliance, eventually resulted in [a] well defined trail over the barrier."<sup>1</sup> Because Indian trails, as a general rule, followed the natural grades of the landscape, they often later became roads for traders and settlers. In the case of the Mohawk Trail, at least two early roads have been documented that followed on, or near, the course of the old Indian path--the first, a rough foot path, marked out by Elisha Hawley in 1753; the second, a road laid out by Samuel Rice in 1764.<sup>2</sup> After the close of the Revolutionary War, "to meet the exigencies of increasing business and population, and the general poverty of the towns and counties,"<sup>3</sup> the establishment of privately-owned "turnpikes" became commonplace. (See Figure 3.)

Chartered March 8, 1797, the Second Massachusetts Turnpike was authorized to build "from the west line of Charlemont, in the county of Hampshire, to the west foot of Hoosuck (sic) Mountain in Adams, in the county of Berkshire."<sup>4</sup> This route over Hoosac Mountain followed approximately the line of the old Indian trail. Three years later, the General Court of Massachusetts granted a charter to the proprietors of The Fifth Massachusetts Turnpike, authorizing them to lay out a toll road from Greenfield and Northfield to Leominster. This road, "the most extensive and ambitious project sanctioned by the state,"<sup>5</sup> was the first road to open a direct line from east to west across Massachusetts. A few years later, in 1802, a group of men from Greenfield chartered The Fourteenth Massachusetts Turnpike, to complete the section of turnpikes from Boston to the Hudson River, essentially by connecting the Fifth Massachusetts Turnpike with the Second Massachusetts Turnpike. Apparently, however, the promoters ran out of money fairly early in the project, as the road was constructed only as far as Shelburne and never completed.<sup>6</sup> Eventually, the other turnpike corporations dissolved, and the roads were turned over to the counties as free roads.

Although these roads were seldom repaired, and journeys on them were long and often fraught with peril, they served their intended purpose through the nineteenth century. Shortly after the turn-of-the-century and the advent of the automobile, the inadequacies of the old roads for motorized vehicles became evident, and the Massachusetts Highway Commission made plans to improve all the state's roads, including the section of highway from Greenfield to North Adams. Work was begun in September of 1912 and completed in November of 1914, at a cost of \$350,000.<sup>7</sup> At the opening ceremonies, October 24, 1914, the highway was officially dedicated as "The Mohawk Trail," after the Mohawk Indians of that region.

FRENCH KING BRIDGE  
HAER No. MA-100  
(page 4)

### The Erving-Greenfield Cutoff

Other smaller sections of highway throughout the state were improved in the ensuing years, but political and economic events precluded the planning of projects on such a large scale as the Mohawk Trail project. In the early 1920s, the Massachusetts Department of Public Works was formed under Governor Calvin Coolidge's administration. Among their first priorities was the elimination of dangerous sections of highway throughout the state, the section of road between Erving and Greenfield being one of them. This circuitous section of highway, which wound its way through the villages of Millers Falls and Turners Falls in Montague, and had become seriously inadequate for the needs of an increasing volume of heavier and faster vehicles. A state highway engineer of the 1930s described this seven-mile section of road as follows:

The old highway, beginning a little east of Millers Falls and proceeding west, is on a steep grade with a right angle turn part way down the hill where there is a blind grade crossing of the Central Vermont Railroad. A few hundred feet beyond is a second right angle turn with a narrow bridge only 15 feet wide, over Millers River, leading into the village of Millers Falls, with a third right angle turn and a 9 per cent grade leading out of the village. Beyond this point, the alignment and grade of the road is reasonably good until we reach the village of Turners Falls, where the road descends on a 7 per cent grade with a sharp turn at the foot of the grade, and a few hundred feet beyond a right angle turn with a sharp descent, another right angle turn, then over the canal on a narrow bridge with a railroad crossing just beyond, thence over the Connecticut River on the old suspension bridge with a roadway only 18 feet wide, at the end of which is a very dangerous right angle turn and a long steep grade uphill into Greenfield."<sup>8</sup>(See Figure 4.)

Department of Public Works engineers studied a number of plans to eliminate these hazards, most of them aimed at using as much of the existing highway as possible, but eventually each proposal was determined to be unsuitable for one reason or another. Ultimately, it became clear that the only sensible plan was to eliminate the entire route through Millers Falls and Turners Falls, and build a new section of highway between Erving and Greenfield. The major obstacle in this plan was bridging the Connecticut River at a point above Turners Falls, a less-than-ideal location because of the steep, 150-foot banks on either side of the river. After looking at several plans, the engineers decided to cross the river with a bridge at the height of the hills on either side, about 135 feet above the water. When completed, the entire project would include the construction of about six miles of new state highway, a highway grade separation, a bridge over the Central Vermont Railroad and the construction of a large steel arch bridge over the Connecticut River.<sup>9</sup>

The Erving-Greenfield cutoff project was one of a considerable number of highway projects undertaken by the state in the early 1930s. Most of these projects, including the Erving-Greenfield cutoff, received funding under the

FRENCH KING BRIDGE  
HAER No. MA-100  
(page 5)

Federal Emergency Relief and Construction Act of 1930, which provided public works jobs for the unemployed. Additional funding was provided by Chapter 122 of the 1931 Acts of Massachusetts, which increased the gasoline tax and provided "a program for the acceleration of state highway and building construction, in order to alleviate the present unemployment emergency."<sup>10</sup> Under this act, the Department of Public Works launched a major road-building program throughout the state, constructing over 585 miles of new highway and reconstructing 383 miles of old highway, between 1930 and 1933.<sup>11</sup>

During the summer of 1931, the contracts for the Erving-Greenfield cutoff were awarded to Kelleher Corporation of Montague, Massachusetts (for the western section, from Greenfield to the Connecticut River) and to Lawton Construction Company of Providence, Rhode Island (for the eastern section, from the Connecticut River to the road to Millers Falls, just east of the road to Northfield, now Highway 63). Work on these two contracts commenced immediately, and the highway was completed in July of 1932.

### The French King Bridge

George E. Harkness, an engineer at the Massachusetts Department of Public Works in Boston, drew up the plans for the bridge over the Connecticut River. These were completed in August, and later revised in October. (See Figure 5, and copies of plans in field file.) Albert E. Kleinert, Assistant Structural Engineer at the Massachusetts Department of Public Works in 1931, stated that in selecting the type of bridge to be erected on the chosen site, there were a number of governing factors: 1. The level of the new road was to be carried across the gorge at the height of the surrounding hills, an elevation of about 135 feet above the water. 2. The banks on either side of the river were high and steep, and a road had been built into the east bank at a grade approximately 30 feet above the water level. 3. Rock, suitable for the foundations, was found within a few feet of the surface of the ground. 4. The bottom of the river was uneven and rocky, and the depth of the water varied, being 34 feet at the deepest point. 5. The river was comparatively narrow at this location, and any reduction in the waterway was prohibited because the river was used as a source of hydro-electric power<sup>12</sup>. "With these conditions in mind," Kleinert said,

the endeavor was made to develop a bridge which not only fitted the site, but which could be erected by cantilever construction, since the deep water, rocky river bed, and the swift current discouraged the use of falsework in the river. The result of our studies is a steel deck structure, continuous over four supports, two of which are abutments placed at the ends of the bridge, high on the banks, and the other two are piers placed at the edges of the river. ... In naming the type of this structure we have used the term "steel continuous spandrel braced arch," because it is a steel spandrel braced arch between the piers, and is continuous to each abutment where it receives vertical support.<sup>13</sup>

FRENCH KING BRIDGE  
HAER No. MA-100  
(page 6)

### Construction

On September 1, the substructure contract for the abutments, pylons and piers, was awarded to Simpson Brothers of Boston, for \$102,262, and work commenced immediately. Kleinert states that the contractors experienced "no unusual difficulty" in executing their contract. Nearly all the excavation work was done above the level of the water, and involved the removal of only a few feet of earth. The pouring of the concrete and placing of reinforcing steel occurred simultaneously on both sides of the river. "With exceptional speed and efficiency," the contractor completed the project in January of 1932.<sup>14</sup>

Bids for the superstructure were opened October 27, 1931. McClintic-Marshall Construction Company, of Pittsburgh, Pennsylvania, received the contract on November 10, being the low bidder at \$256,910.30. Under the direction of H.G. Reynolds, foreman for the McClintic-Marshall Company, work on the superstructure began in April of 1932, at the Erving (east) side of the river. The shore spans were built upon falsework, made up of some steel members from the Gill end of the bridge. After the steel at the piers had been placed, the erection proceeded by cantilevering out over the river, with the ends of the trusses tied down at the abutments. (See Figures 6-8.) The individual steel members were moved into place by means of a derrick with a 75-foot boom attached. This derrick, carried on a wheeled framework, ran along a track laid on a plank platform on top of the stringers. Trucks, hauling the steel from the freight yard at the Boston & Maine station at Mount Hermon, drove right out onto the bridge to the derrick, at which point the steel was unloaded and placed into position in the bridge, "thereby eliminating all storage and rehandling at the site of the work."<sup>15</sup> Construction proceeded steadily, two panels at a time. The local communities, of course, observed all of this with great anticipation. On May 4, the Greenfield newspaper reported:

The new bridge at the French King rapids is attracting the attention of local people and many Northfield people are making trips to view the erection of the steel now going on. The work is being done on the Erving side of the river and steel has now been erected to a point where it is expected the pier will be reached Wednesday.

The bridge, which is of cantilever construction will be built out on the Erving side to the middle of the river which will probably take until June 1, according to Henry Hazzard, the engineer in charge. Work will then be begun on the Gill side and when the two sides have been built out to the middle of the river they will be joined. This will be the climax and the moment of greatest interest in the process of erecting the bridge.

The work is to be completed before Sept. 15 but with favorable conditions it may be finished sooner. Thirty skilled steel workers are now at work on the bridge and riveting began on Monday.<sup>16</sup>



FRENCH KING BRIDGE  
 HAER No. MA-100  
 (page 7)

By the end of May, the contractors had completed the cantilever on the Erving side of the river, and moved their equipment to the opposite side, to begin the second half of the erection. The Gill side of the bridge was constructed during the month of June, and went fairly steadily, until the end of the month when a rash of accidents occurred. While the company took every possible precaution, including hiring a lifeguard, who stayed in a boat below the bridge, the workers on the bridge were in almost constant danger. The newspaper reported that one worker crushed his hand, several were injured by falling rivets, and one riveter, Charles Spat, fell 115 feet to his death when his wrench slipped.<sup>17</sup>

Despite injured workers and delays on account of rain, however, the construction progressed, and on the afternoon of July 7, 1932, the two halves of the bridge were joined in the middle, when the last chord on the arch on the downstream side was bolted into place. (See Figure 9.) This, of course, was the most difficult phase of construction, as the two cantilevers had to meet precisely. The newspaper described this engineering feat as follows:

One of the most astounding feats of the construction of the French King bridge over the Connecticut river, yet one so ordinary that the engineers failed to let the general public in on the secret, was the movement Thursday of 1250 tons of steel a space of five inches.

When the engineers set out to erect the largest and highest bridge in the Massachusetts highway system, they planned the Erving half to rest solidly from the beginning on its stone abutment.

The Gill half, just completed, had a calculated deficiency of five inches in length after the two middle panels were in place. At the base of this span were placed powerful hydraulic jacks and the weight and balance of the 1250 tons of steel jutting 230 feet out over the river were so nicely arranged that by operating the jacks the end of the span could be swung up or down, forward or back, so to make the union with the Erving side exact.

The calculations were proven exact Thursday, when engineers from Boston and many other places saw the bridge joined and the final sections of steel riveted into place. This operation is not unusual in bridge building but the scale of the present undertaking attracted the interest of many bridge builders and structural steel men.<sup>18</sup> (See Appendix A.)

In mid-July, shortly before the steel work was completed, the concrete work on the deck, curbs and sidewalk was begun. This part of the construction had been contracted to the Ward Construction Company, who sub-contracted to the Bassett Construction Company of Needham. The newspaper described this final phase of construction as follows:

Forms have already been made and laid for a portion of the roadway across the bridge. A force of men is at present polishing the pylons at the eastern entrance of the bridge. It has been decided to erect a bronze pole of about 15 feet high on each of these

FRENCH KING BRIDGE  
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pylons, on top of which will be a large bronze eagle and at each side of the eagle will be a lantern of the revolutionary period which will be lighted with electricity. The fences will be of cast iron, four feet in height and the posts of the fence will be of cast iron.<sup>19</sup>(See Figures 10 and 10a.)

On July 21, the first 115 feet of the deck on the Erving side of the bridge was poured.<sup>20</sup> Forms for the concrete were made of plywood, in sections 4 feet wide and 115 feet long, constructed so they would fit between the stringers. Five panels, or 115 feet, of the deck were poured at one time, and the pourings alternated from one end of the bridge to the other.<sup>21</sup> Despite a few minor setbacks, due to heavy rainfall and lack of forms for the concrete, the contractors completed the concrete work on August 29.<sup>22</sup> The fence was then erected on both sides of the deck. Finally, the steel superstructure was painted, the roadway was paved with asphalt, and the construction of the French King Bridge was complete.(See Figures 11 and 12.)

#### Bridge Dedication and Celebration

During the construction of the bridge, residents of surrounding communities formed a committee to plan a gala celebration in honor of its opening. There was no doubt that the festivities would be well-attended. As the bridge neared completion, people came from all over to witness the engineering marvel for themselves, and the Greenfield newspaper carried reports of increasing numbers of visitors at the bridge:

(August 29)--Sunday was the banner day for visitors at the French King bridge. The number of people visiting the bridge was the greatest since the bridge was started and it is estimated that over 5,000 people visited at either end of the bridge.<sup>23</sup>

(September 6)--One of the largest crowds ever counted since the new French King bridge was started visited the bridge on Sunday and Monday. It was estimated that a trifle over 10,000 people viewed the structure, coming in cars representing the various states in the Union.<sup>24</sup>

(September 12)--A check was made on Sunday of cars visiting the French King bridge which showed that from 11 o'clock in the forenoon until 5 o'clock in the evening there were over 1400 cars per hour that passed over the bridge. More than half of that number parked their cars and walked out on the bridge and viewed the scenery both up and down the river.<sup>25</sup>

On the afternoon of September 10, 1932, with much fanfare, the French King Bridge was officially dedicated and opened to traffic.(See Appendix B.) A throng of 15,000 people lined the bridge and overflowed to the river banks and fields below. "For more than two miles on either side of the bridge, solidly parked automobiles lined the highway."<sup>26</sup> Numerous state, county and local officials, including Governor Joseph B. Ely, attended the ceremonies. A

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 HAER No. MA-100  
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concert by the Greenfield military band was followed with speeches by Governor Ely and Frank E. Lyman, Commissioner of the Department of Public Works. The highlight of the day was a mile-long parade of highway transportation progress, which included: a yoke of steers and a cart, a covered wagon, a stage coach, a one hoss shay, a horse-drawn freight wagon, bicycles of all kinds, automobiles of all kinds, road builder's equipment, and road maintenance equipment. (See Figure 13.) After the parade, there were outboard motor races on the river, and airplane maneuvers over the bridge by the National Guard.

The profound effect this new bridge and section of highway would have on travelers in Massachusetts, evoked the following lines, penned by local historian John A. Taggart, who had written an historical paper for the souvenir program:

This is a period which has seen wonderful development in transportation; so much so that there is no longer an isolated country or an isolated community. The automobile and the airship have penetrated the former unexplored wilds of the earth. The balloon has searched the mysterious heights of the stratosphere, and the submarine has visited the watery depths of "Davy Jones' locker." Who dares say that the wildest dreams of Jules Verne may not yet come true.

The earth is girdled with steel rails and modern highways beckon where the legions of Caesar, Alexander and Napoleon once struggled through mire or over rock strewn heights.

We consider with pride the splendid highway system of Massachusetts. Today we dedicate a magnificent addition to the justly famous Mohawk Trail system. The imposing structure of steel and concrete which here spans the Connecticut river is a noble monument to man's skill and ingenuity. The miles of newly constructed highway which approach the bridge from west and east open up a territory rich in history and replete with views which delight the eyes.

Let us feel assured that coming generations will appreciate that we have builded not for ourselves alone, but also for those who shall people this fair valley after the builders have passed to that bourne from whence no traveler returns.<sup>27</sup>

The bridge was given a first place award (see Appendix C.) as the most beautiful steel bridge in its class for 1932, by the American Institute of Steel Construction, and bears a plaque inscribed as follows:

American Institute of  
 Steel Construction  
 -----  
 Annual Award of Merit  
 Most Beautiful Steel Bridge  
 Class B                    1932

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### Simpson Brothers Corporation

The Simpson Brothers company, under the proprietorship of G. Fred and James Simpson, was first listed in Boston directories in 1882. Their advertisements stated that the company did asphalt paving, including, "Streets, Street Crossings, Carriage Ways, Side Walks and Private Walks, Floors in Breweries, Stables, Basements and Laundries of Private Dwellings, Warehouses, Mills, Rinks and Manufactories of every description."<sup>28</sup> The advertisements indicate that at that time, asphalt was a new building material in the United States, as it had to be imported from Europe. Business must have been good during the early years, however, because the company was incorporated in 1899. By the early 1900s, the company, still under the management of G. Fred Simpson, had expanded its operation to include concrete construction and concrete manufacturing. At some unknown point, presumably between 1915 and 1925, the company changed hands, and Charles F. Knowlton was elected president. A 1932 advertisement said that they were "general contractors and builders," specializing in "reinforced concrete construction."<sup>29</sup> (See Figure 14.) During the late 1940s and the 1950s, the company was mainly involved in road construction. The company continued to be listed in directories through 1959.

### McClintic-Marshall Construction Company

Howard Hale McClintic was born at Lewistown, Pennsylvania, April 9, 1867. His father, Robert Hofferd McClintic, was in the furniture and undertaking business. Howard McClintic received his early education in the public schools and went on to study civil engineering at Lehigh University. After his graduation in 1888, McClintic was employed for a short time by a Pittsburgh engineering firm, and subsequently was engaged by the Shiffler Bridge Company of that same city.

When the American Bridge Company took over the Shiffler Company in 1900, McClintic, along with college classmate Charles Donnell Marshall, went into business for themselves. With the financial backing of Andrew and Richard Mellon, the two men purchased an old steel plant in Pottstown, Pennsylvania, and began to operate under the name of McClintic-Marshall Construction Company, and "ultimately built it into one of the nation's largest independent steel fabricating firms."<sup>30</sup> The company's most well-known projects included: the lock gates for the Panama Canal; the George Washington Bridge over the Hudson River; the Golden Gate Bridge at San Francisco; the Ambassador Bridge at Detroit, Michigan; Salmon Tower and the New York Central Railroad Building in New York; the Civic Opera House and Merchandise Mart of Chicago; and the steel plant for the Tata Iron and Steel Co. of British India.<sup>31</sup>

By 1931, the company was valued at \$64,000,000, and had plants at Rankin, Lancaster, Carnegie and Pottstown, Pennsylvania, and at Chicago, Buffalo and Los Angeles.<sup>32</sup> That year, Howard McClintic retired, and the business was acquired by the Bethlehem Steel Company for \$32,000,000, although the company retained its name and some of its directors.<sup>33</sup> Several years later, H.H. McClintic died in Pittsburgh, on August 5, 1938. (See Figure 15.)

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### Conclusion

Since its construction in 1932, the only major repair on the bridge has been a deck replacement in 1955. Today, the French King Bridge is in need of a coat of paint, as well as extensive repairs to the wrought-iron railings, the concrete pylons and walkways, and the deck. After several years of concerted public pressure, the bridge is finally going to be repaired. The legislature has recently passed a bill to increase the gasoline tax, in order to fund a number of public works projects, including the rehabilitation of the French King Bridge.

The French King Bridge is significant as one of four known steel deck arch bridges in Massachusetts, and one of the longest spans in the state. It is of engineering interest as an unusual development of the uncommon three-span, "cantilever arch" bridge type, in that definite reactions were jacked into the steelwork at the conclusion of its construction, making the bridge structurally continuous across four supports. The bridge fabricator, McClintic-Marshall Company of Pittsburgh, was a very significant bridge-building firm in the early to mid-nineteenth century. The French King Bridge was the crucial link in the establishment of a safe and efficient highway across northern Massachusetts in the 1930s, and is a reminder of the great strides being made in transportation technology during that period.



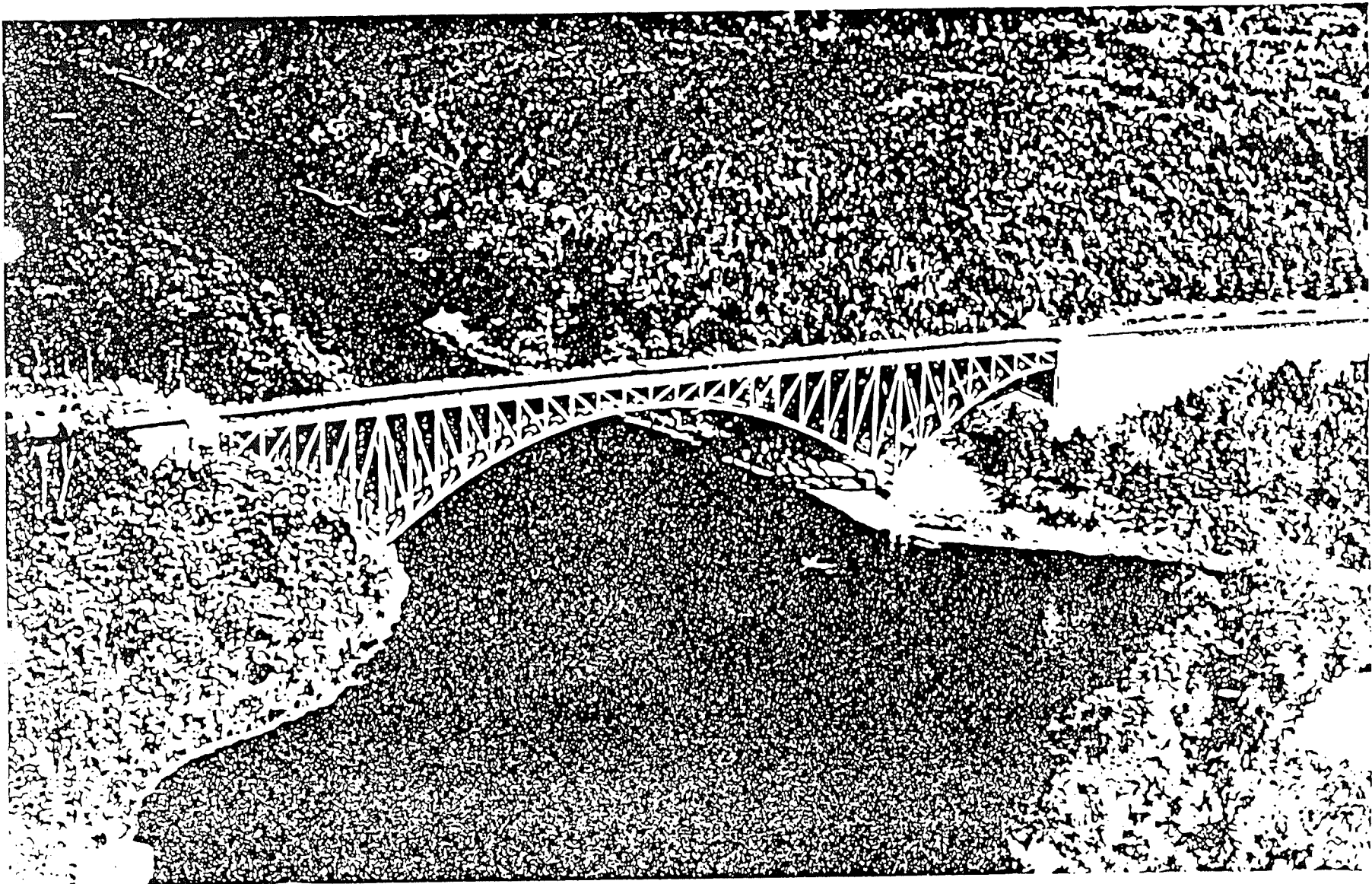


Figure 1. Aerial view of the French King Bridge, 1930s.  
(History of the Town of Gill, Stoughton, 1978.)

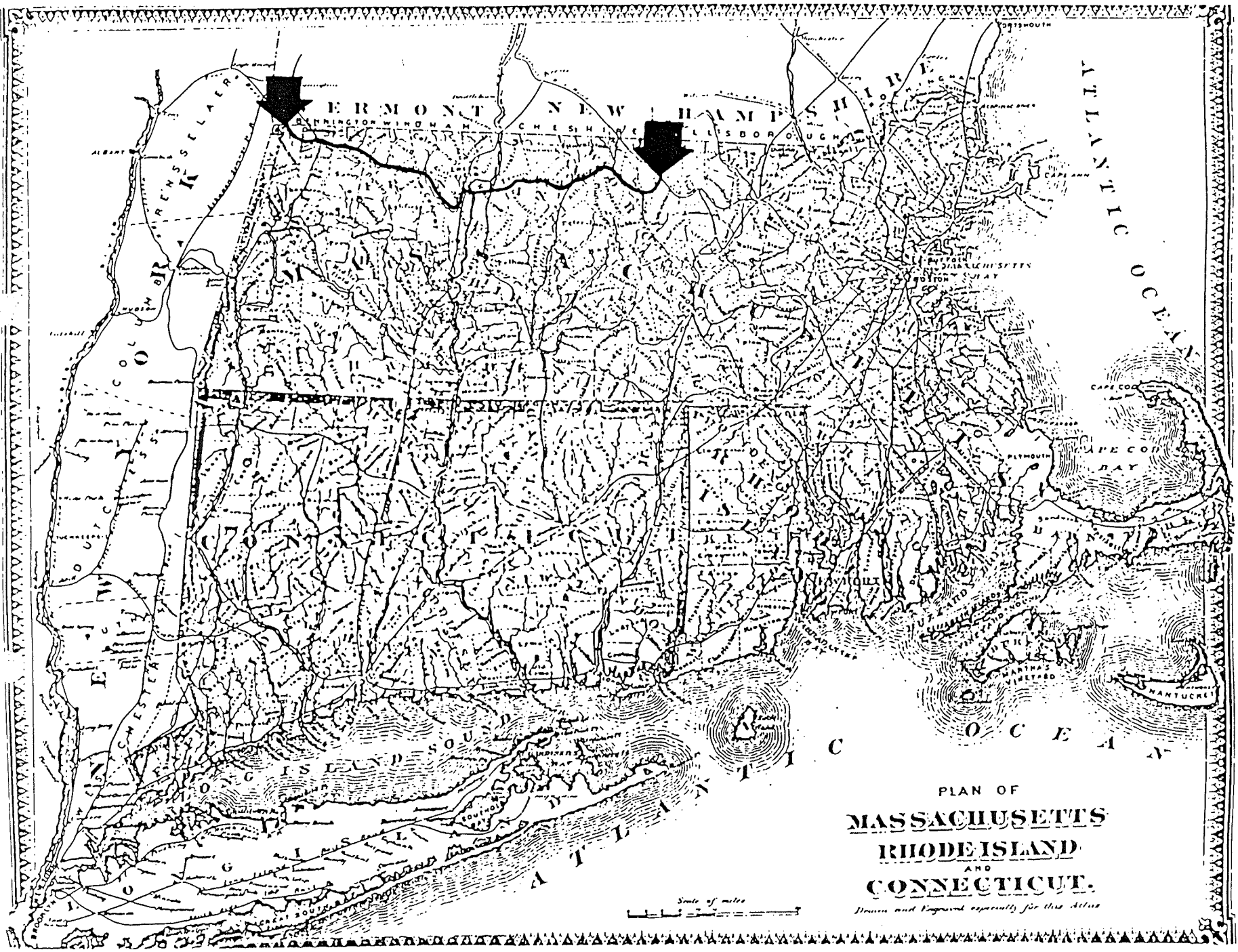


Figure 2. Map of Massachusetts (F.W. Beers, 1870), showing

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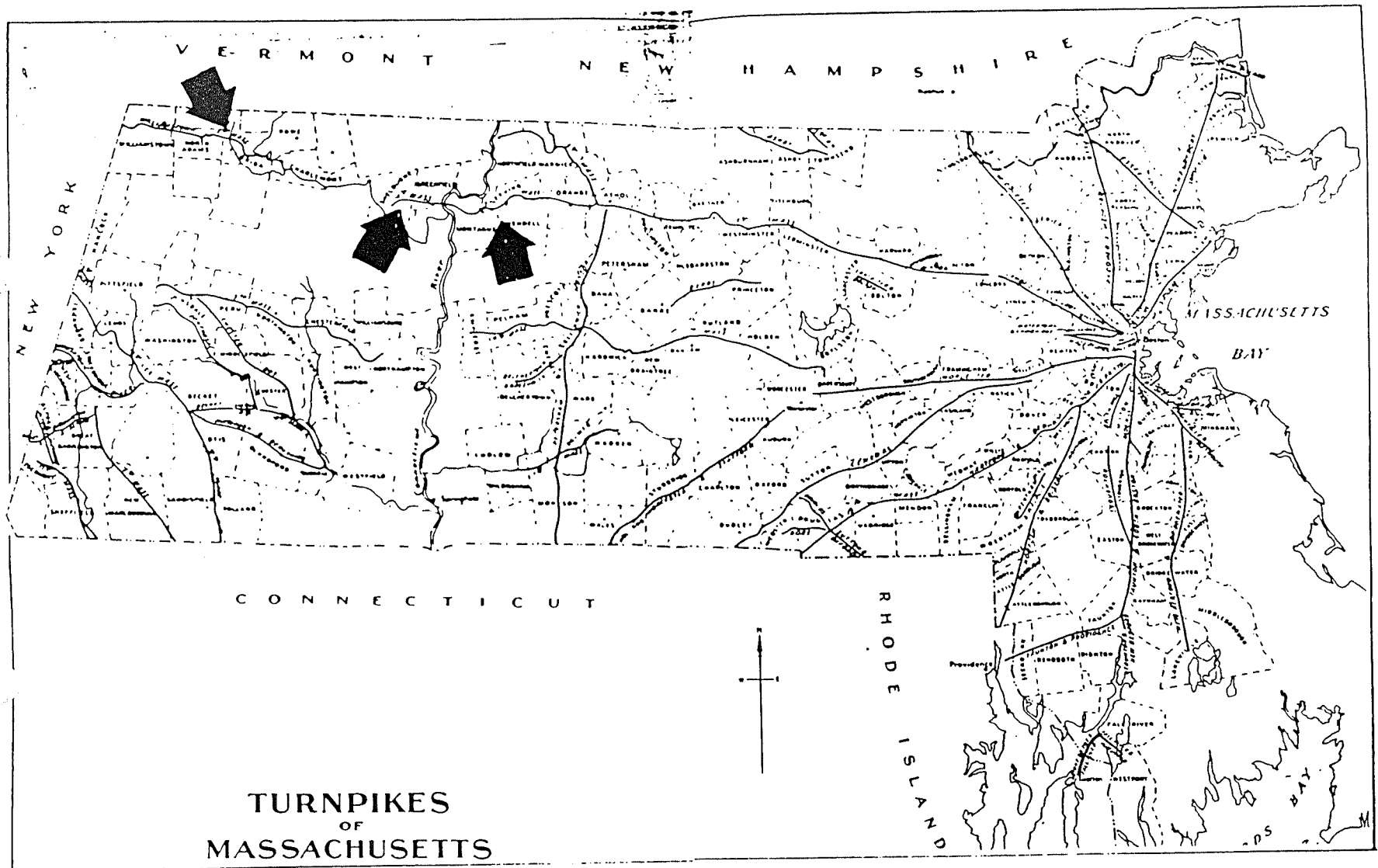
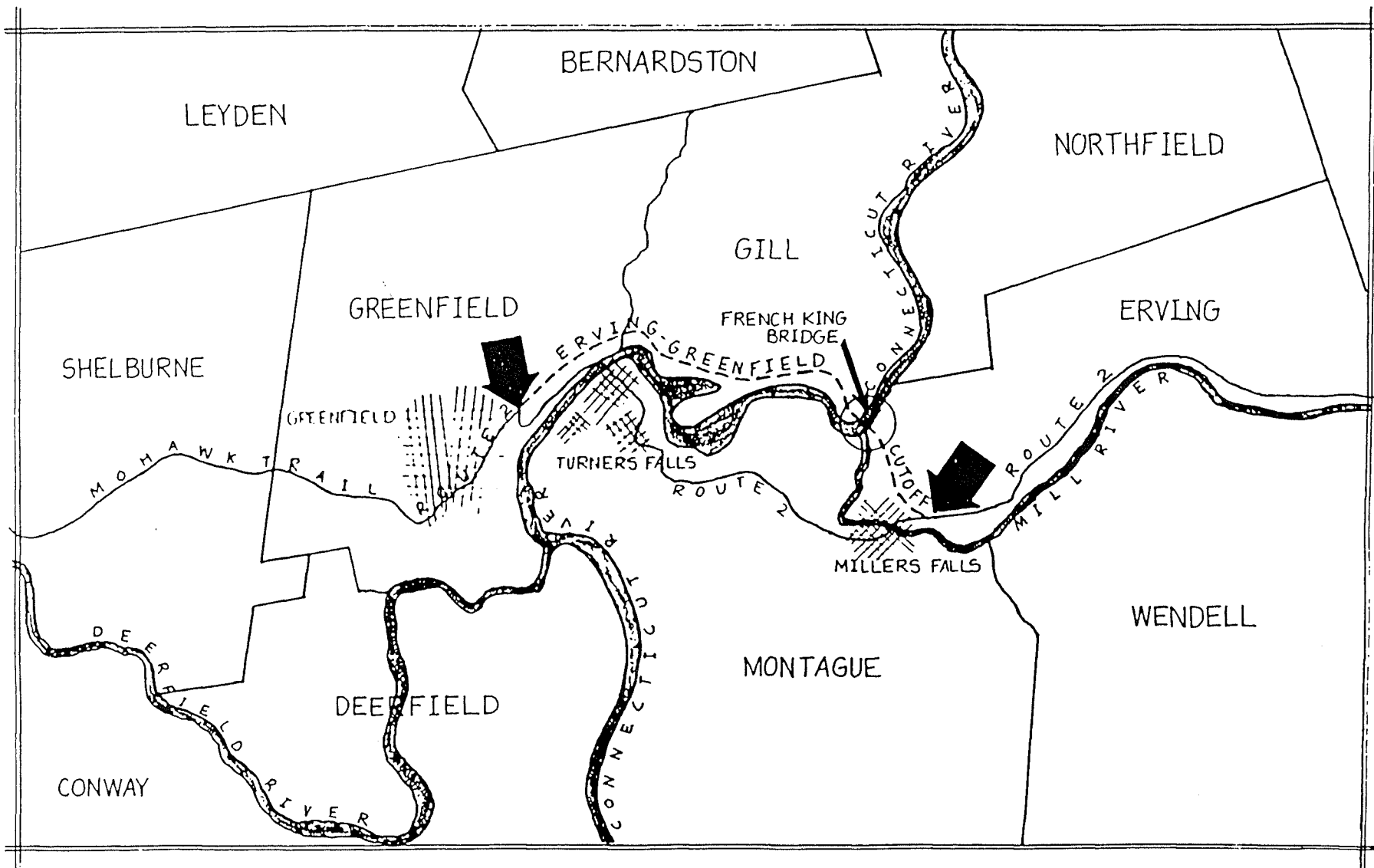


Figure 3. Map of Massachusetts (Wood, 1919), showing locations of Massachusetts turnpikes.



CENTRAL FRANKLIN COUNTY, MASSACHUSETTS  
 SHOWING LOCATION OF OLD SECTION OF STATE HIGHWAY 2 AND 1932 ERVING-GREENFIELD CUTOFF  
 (APPROXIMATED FROM HISTORIC MAPS AND DESCRIPTIONS, LMB 1990.)

Figure 4. Map of Central Franklin County, Massachusetts, showing old section of State Highway 2 and location of 1932 Erving-Greenfield cutoff.

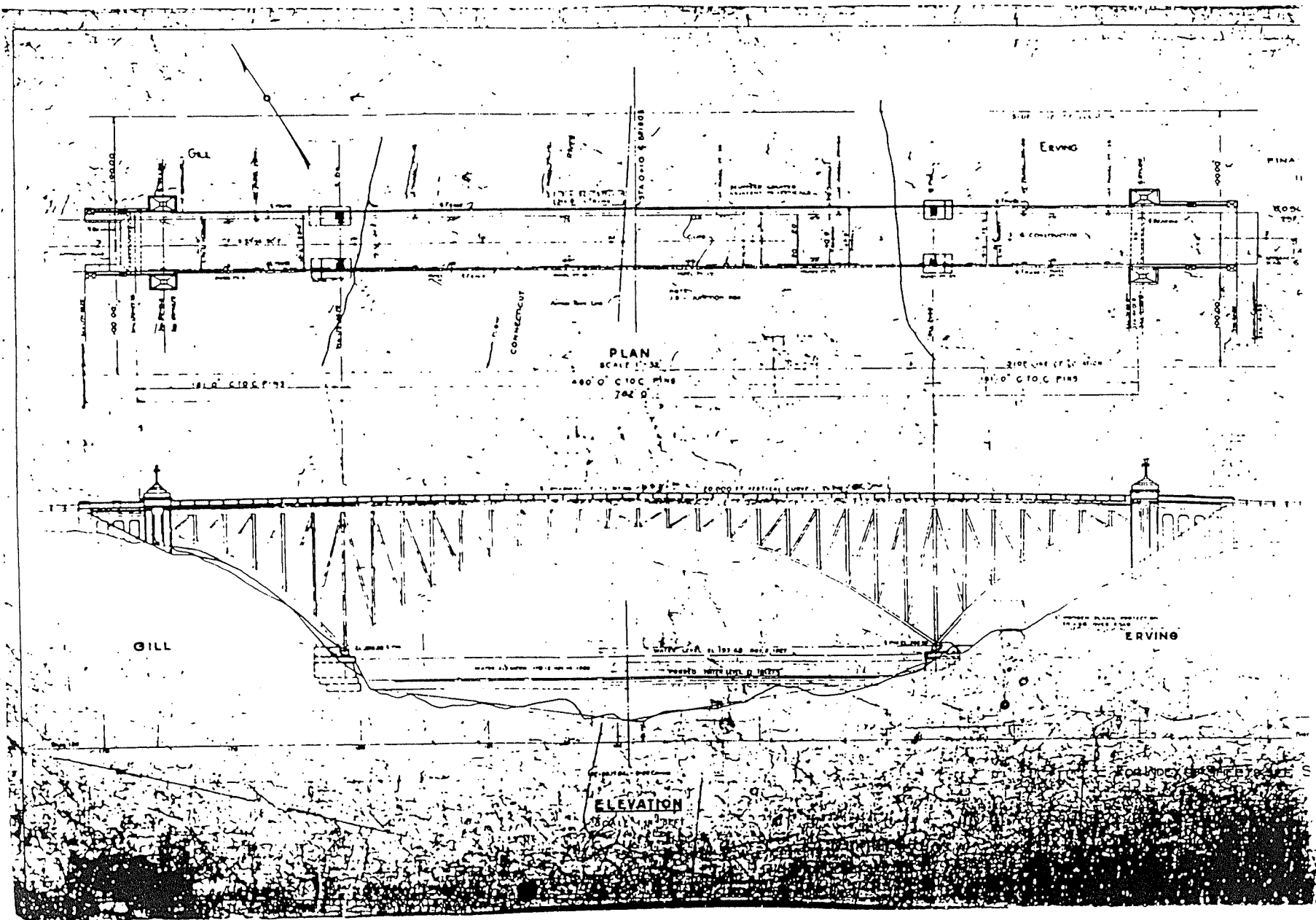


Figure 5. Plan for elevation of French King Bridge.  
 (Courtesy of Massachusetts Department of Public Works.)



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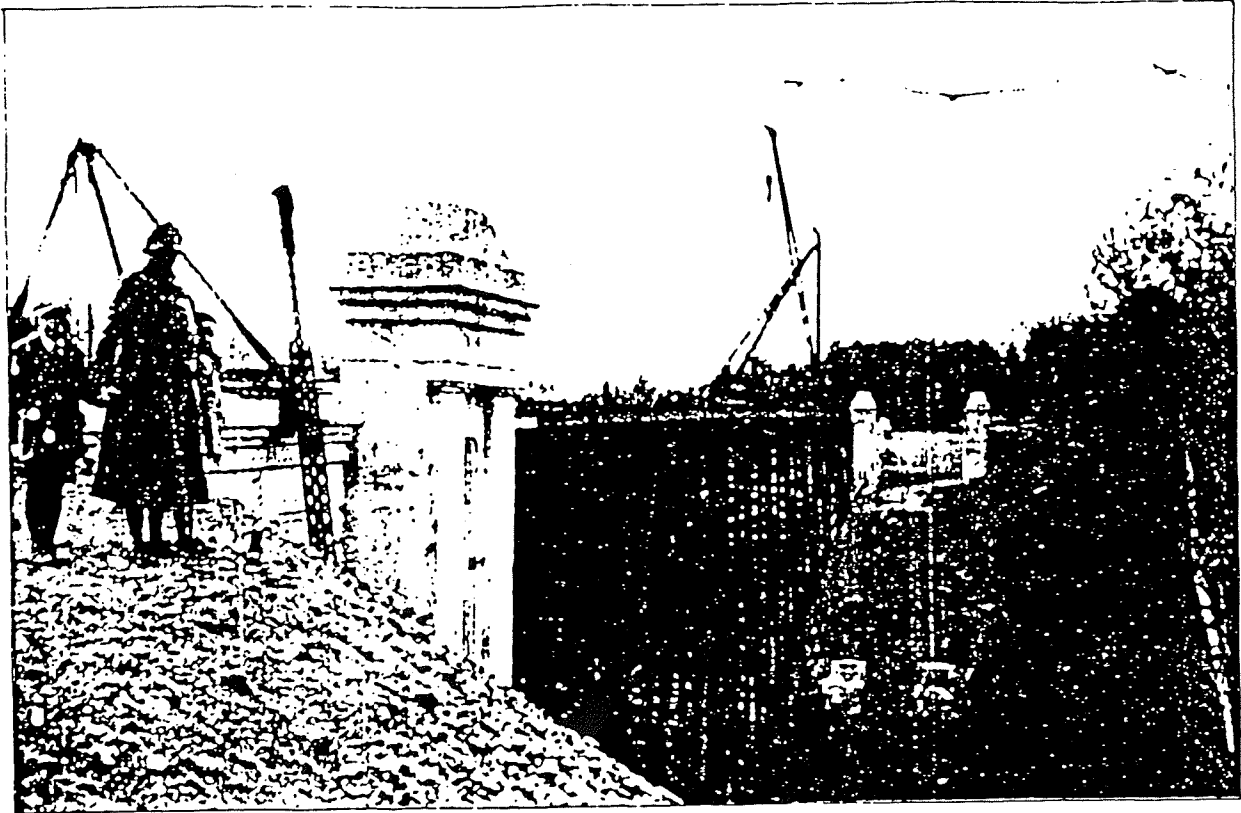


Figure 6. Photo of French King Bridge construction, 1932.  
Harry W. Fay, photographer.  
(Collection of Dr. Ward M. Hunting, New Salem, Massachusetts.)

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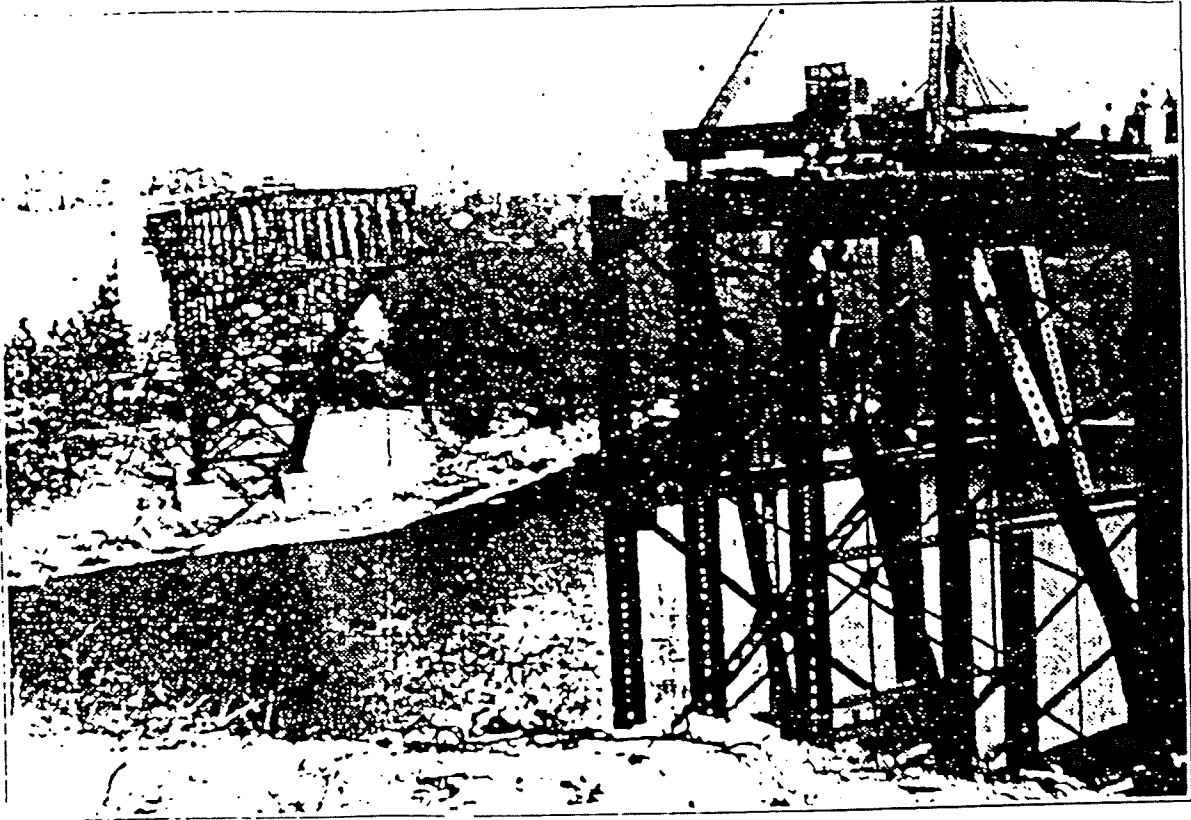


Figure 7. Historic photo of French King Bridge construction, 1932.  
(Photo courtesy of The Greenfield Recorder, Greenfield, Massachusetts.)

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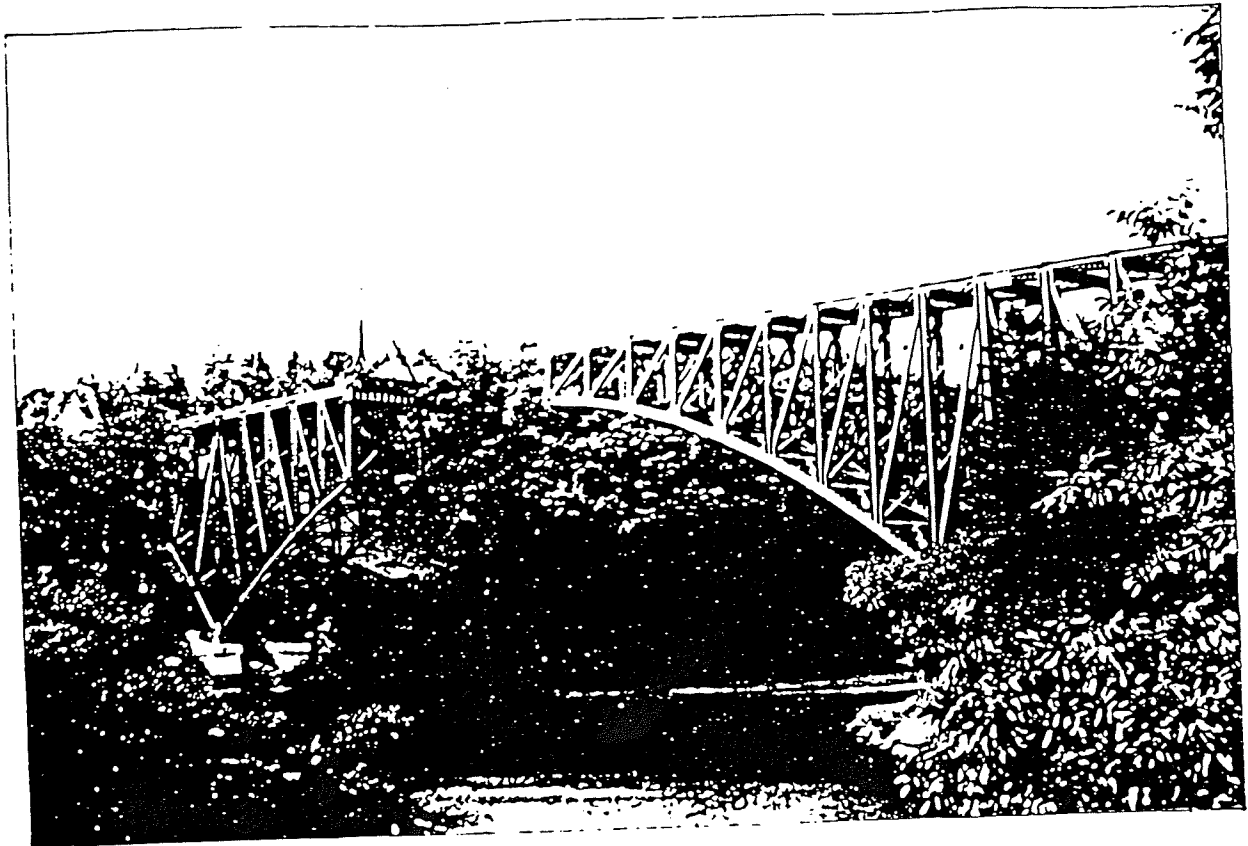


Figure 8. Photo of French King Bridge construction, 1932.  
Harry W. Fay, photographer.  
(Collection of Dr. Ward M. Hunting, New Salem, Massachusetts.)

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Figure 9. Photo of French King Bridge construction, 1932.  
Harry W. Fay, photographer.  
(Collection of Dr. Ward M. Hunting, New Salem, Massachusetts.)

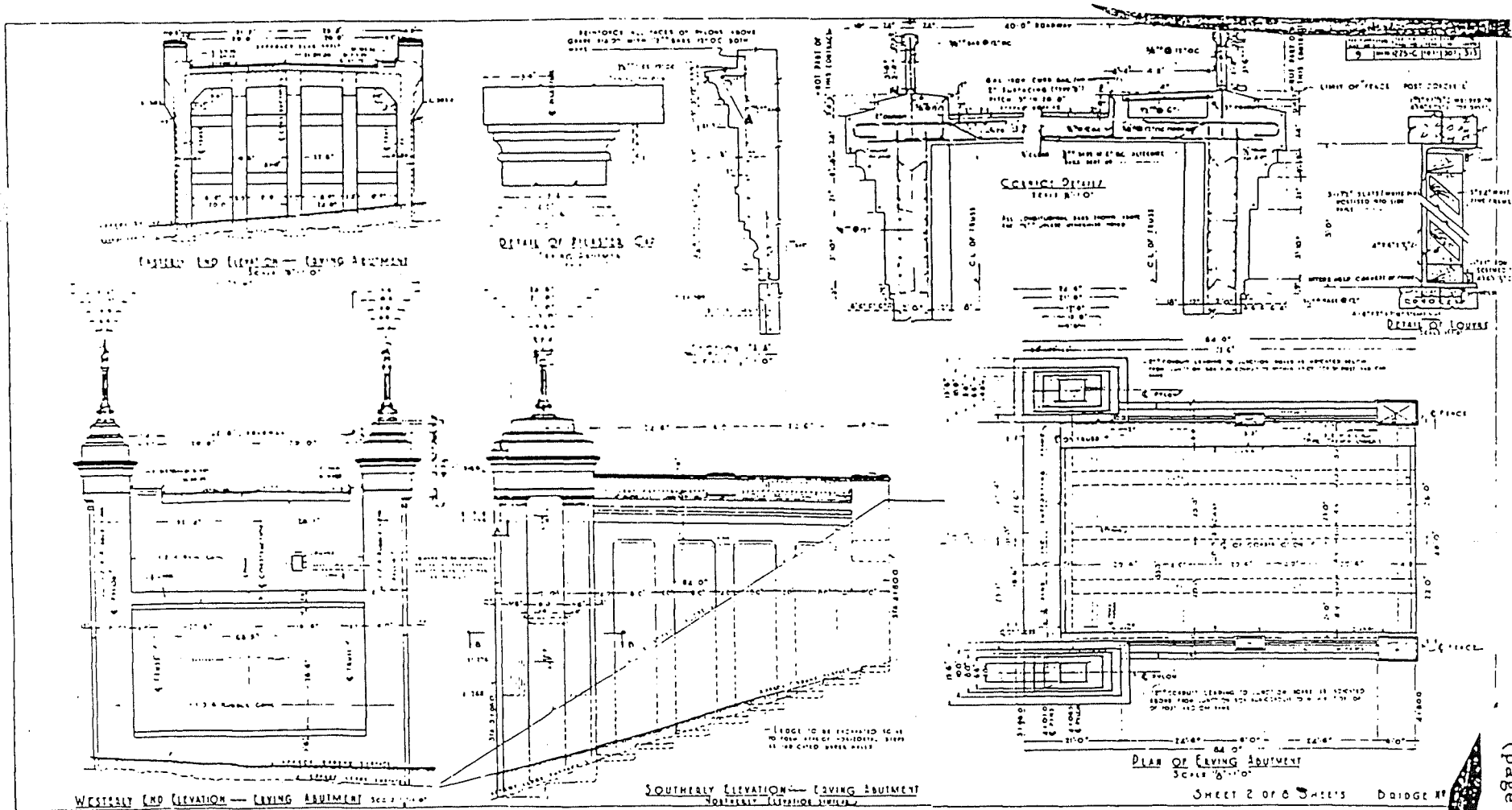
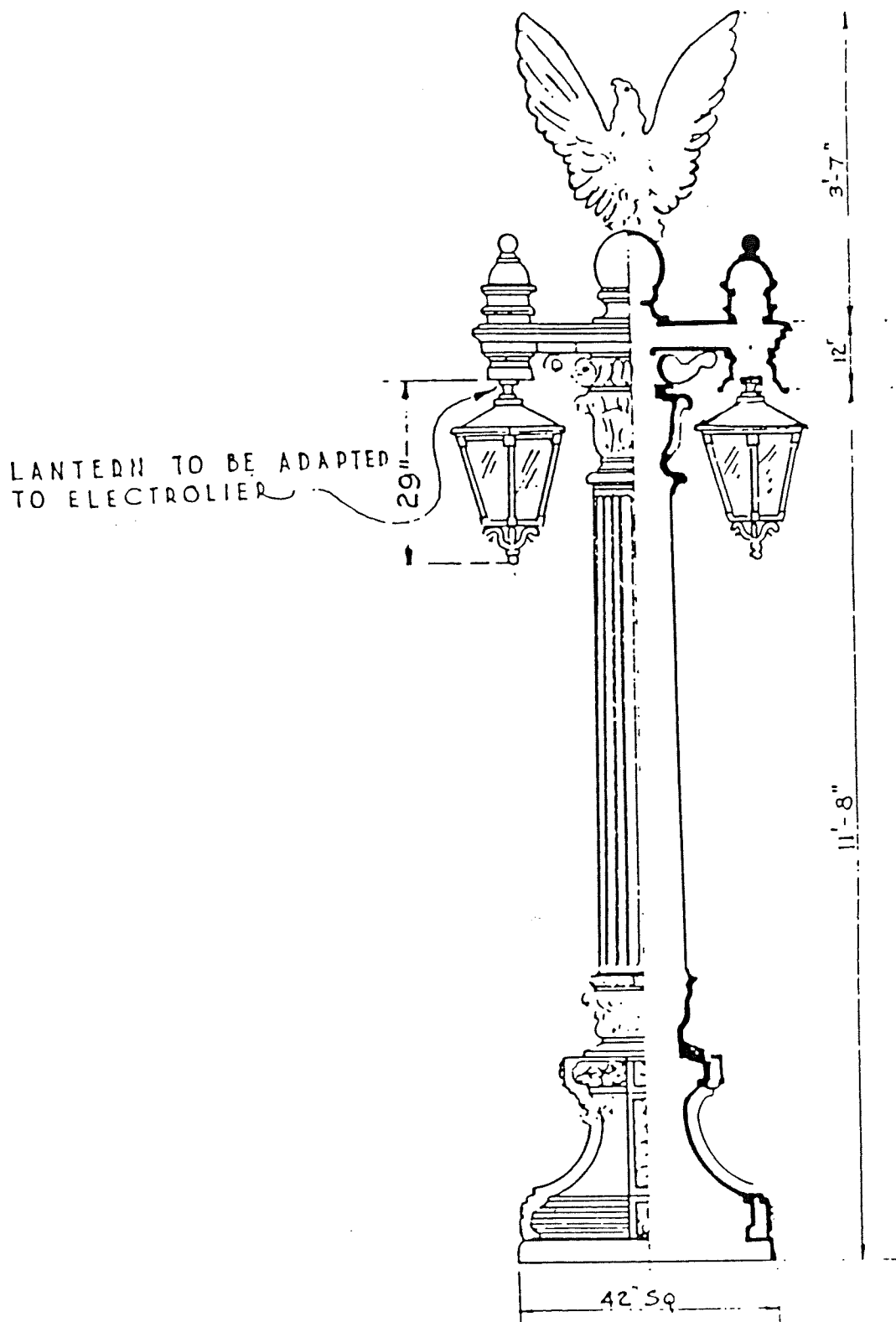


Figure 10. Plan for French King Bridge abutments and pylons, 1931.  
 (Courtesy of Massachusetts Department of Public Works.)



TWO LIGHT ELECTROLIER  
SCALE  $\frac{1}{2}$ " = 1'-0"

Figure 10a. Detail of plan for French King Bridge electroliers, 1931.  
(Courtesy of Massachusetts Department of Public Works.)



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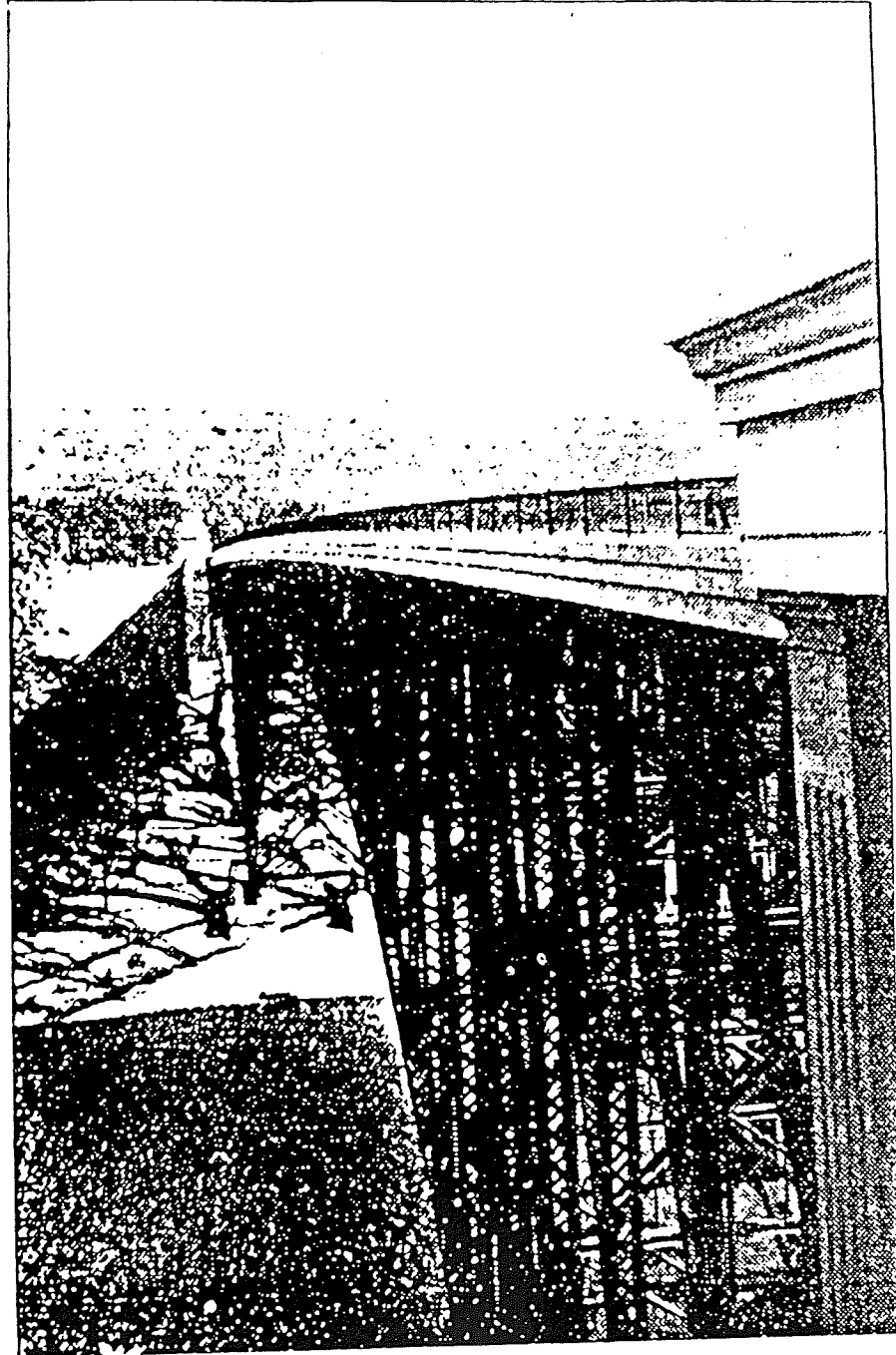
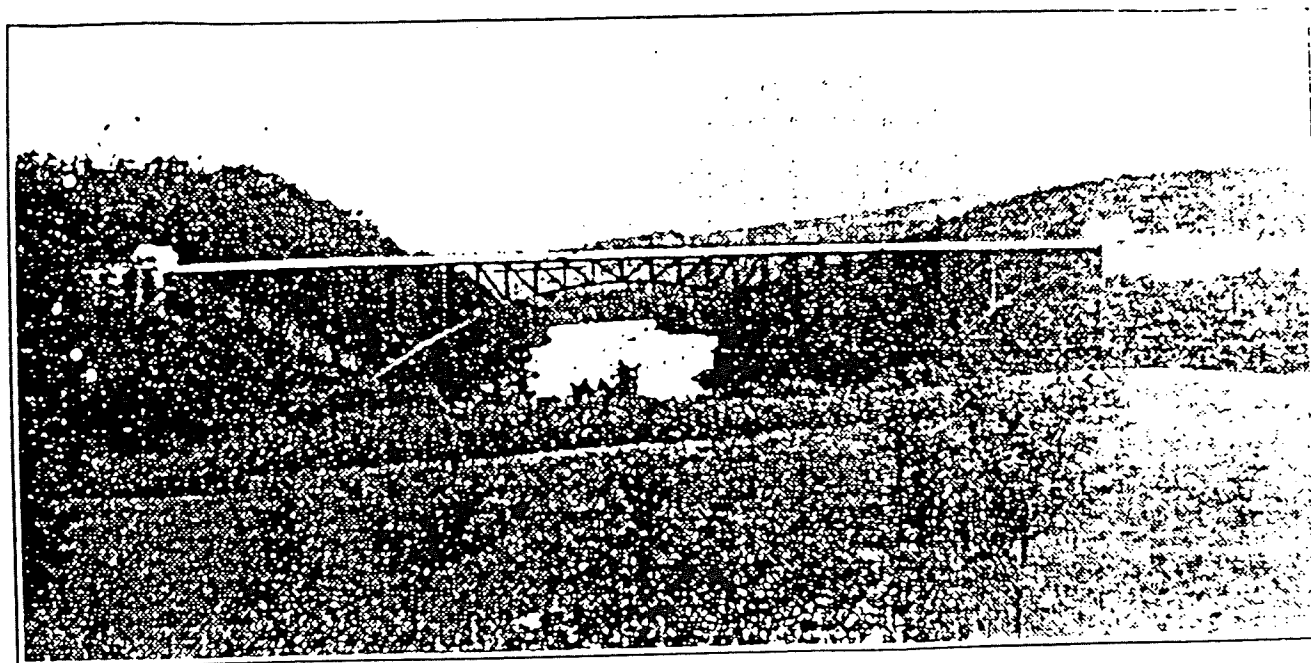


Figure 11. View of completed French King Bridge,  
looking east from Gill abutment, 1932.  
(Photo courtesy of The Greenfield Recorder, Greenfield, Massachusetts.)

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## THE COMPLETED FRENCH KING BRIDGE



The graceful sweep of the new structure that carries Route 2 over the Connecticut is well displayed in this recent photograph taken from just below where Millers river joins the larger stream.

Figure 12. View of completed French King Bridge,  
looking north from Millers Falls, 1932.  
(Photo courtesy of The Greenfield Recorder, Greenfield, Massachusetts.)



Figure 13. French King Bridge dedication and celebration, September 10, 1932.  
Harry W. Fay, photographer.  
(Collection of Dr. Ward M. Hunting, New Salem, Massachusetts.)

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# REINFORCED CONCRETE CONSTRUCTION

*We Design and Construct all kinds of Concrete Structures*

FIRE PROOF BUILDINGS  
RESERVOIRS      STANDPIPES  
OIL AND WATER TANKS  
RETAINING WALLS      COAL POCKETS



## Artificial Stone

*Sidewalks, Walks,  
Driveways, Steps, Buttresses,  
Curbing, Floors, Etc.*

### Simpson Bros. Corporation

77 SUMMER STREET

*(See other Side)*

BOSTON, MASS.

# STREET PAVING

## HASSAM

COMPRESSED CONCRETE AND  
GRANITE BLOCK  
THE MOST ECONOMICAL STREET  
PAVING

## SIMASCO

BITUMINOUS PAVEMENT LAID ON  
CONCRETE FOUNDATION OR ON OLD  
ROAD SURFACE -

ALSO

## WOOD BLOCK AND BRICK

### Simpson Bros. Corporation

77 SUMMER STREET

*(See other side)*

BOSTON, MASS.

FRENCH KING BRIDGE  
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Figure 14. Advertisement for Simpson Brothers Corporation,  
from Boston City directories.

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*The National Cyclopaedia of American Biography*

*Howard H. McClintic*

Figure 15. Portrait of Howard H. McClintic.  
(The National Cyclopaedia of American Biography, 1941.)

# Half Of New French King Bridge---1250 Tons In All Moved Space Of 5 Inches

**Astounding Feat of Construction Performed — Gill Half of Structure Had Been Resting on Hydraulic Jacks and Weight and Balance So Nicely Arranged Union With Erving Side Was Exact — Work Now Being Rushed — Completion Due Sept. 1st**



First lower chord of French King bridge in place, being lower part of structure. James Kelley of state highway department, resident engineer, in foreground.

—One of the most astounding feats of the construction of the French King bridge over the Connecticut river, yet one so ordinary that the engineers failed to let the general public in on the secret, was the movement Thursday of 1250 tons of steel a space of five inches.

When the engineers set out to erect the largest and highest bridge in the Massachusetts highway system, they planned the Erving half to rest solidly from the beginning on its stone abutment.

The Gill half, just completed, was a calculated distance of five inches in length after the two middle panels were in place. At the base of this span were placed powerful hydraulic jacks and the weight and balance of the two feet of steel

were so nicely arranged that by operating the jacks the end of the span could be swung up or down, forward or back, to make the union with the Erving side exact.

The calculations were brought exact Thursday, when engineers from Boston had built this piece and the bridge, and the final sections of the Erving half were in place. This operation, so far unusual in bridge building, had the scale of the project, and the intricate details of the bridge, and the intricate details of the project, and the intricate details of the project.

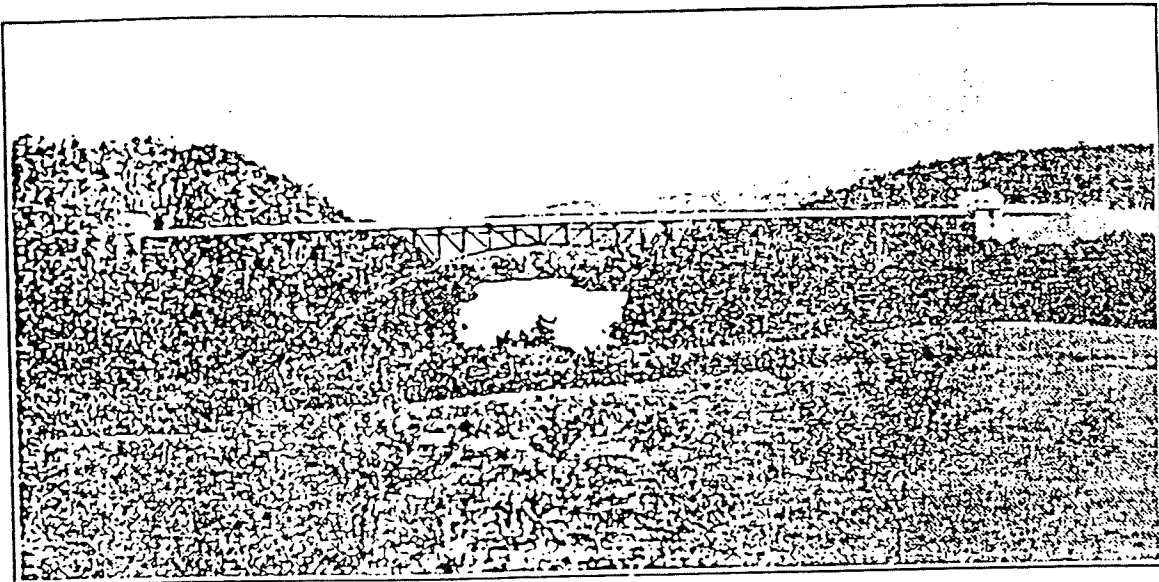
The bridge, which is the largest and highest in the Massachusetts highway system, is now being completed. The Gill half, just completed, was a calculated distance of five inches in length after the two middle panels were in place. At the base of this span were placed powerful hydraulic jacks and the weight and balance of the two feet of steel

APPENDIX A.  
Newspaper article relating the final phase of construction of the French King Bridge.  
(The Daily Recorder-Gazette, July 8, 1932.)



# SOUVENIR PROGRAM

*On the Occasion of the*  
**Dedication of the French King Bridge**  
*Saturday, Sept. 10, 1932 at 2 P. M.*



--- PROGRAM: ---

1:30 To 2 P. M.  
Band concert by the Greenfield military band: (On the bridge).

2 To 3 P. M.  
Speaking program (on the bridge):  
Frank E. Lyman, commissioner of public work  
Joseph B. Ely, governor of the commonwealth.

3 to 4 P. M.  
Parade of highway transportation progress: American Legion drum and bugle corps, Greenfield, Company L Massachusetts National guard; Orange Howitzer company, Massachusetts National guard; Automobiles with county and town officials

Minute Tapioca band, Orange; Indian Travels Scene, Greenfield; Boy Scouts, Oliver Cowles; Indian Trade Scene, Millers Falls; Redmen; Hunters and Trappers Scene, Northfield Farms; Boy Scouts; Early Traders Scene, Millers Falls; Boy

Scouts; Soap Handcraft Scene; Living Bear; Riversmen and Legends; Scene, Greenfield; Boy Scouts; Child Life on the Farm (1850); "Mary P. Wells Smith"; Greenfield Women's club; Early Singing School; Riverside Community club

Buckland - Colman - Shelburne school band; Yoke of steel, two wheel cart; D. W. Hart; Buckland; Yoke of steel, two wheel cart; S. T. K. Haverhill; Duden boys; Express covered wagon; Mr. Hermon schools; Stage coach; John J. Woodlock; John F. Allen; one horse show; Mr. and Mrs. Merritt; Hammond; Northfield; one horse cart; Mrs. Dagnaud; Greenfield; one horse cart; Mrs. Duval; Greenfield; Irish jumping car; Northfield; hotel; Phil. Foster; horse-drawn freight wagon; A. F. Tyler; L. M. Stanbridge; Berensson; horse-drawn butcher cart; Oliver Cowles; Northfield

Girl Scouts Drum corps, Greenfield; bicycle section, four high wheels; six safeties; auto section, four ancients; 12 moderns.

American Legion junior five and drum corps, Amherst; transportation section; Stake Side Auto Truck, Carroll Bros., Millers Falls; Freight Pick-up Van, B. & M. T. Co., Haigs, Turners Falls; Refrigerator Truck, J. G. Turnbull, Greenfield; Tank Truck and Trailer, S. C. of N. Y., Greenfield; Overland Passenger Bus, Short Line Bus Inc.; Road Builders Equipment, Kelleher Bros., Turners Falls; Road Maintenance Equipment, Mass. Highway Dept.

4 To 4:30 P. M.  
Outboard motor races on the river finishing near the down stream side of bridge.  
Airplane maneuvers in the air over the bridge by planes of Mass. National Guard.

APPENDIX B.  
Souvenir Program from the French King Bridge Dedication and Celebration,  
September 10, 1932

*Compliments of*  
**THE DAILY RECORDER-GAZETTE**  
"FRANKLIN COUNTY'S ONLY DAILY NEWSPAPER"

FRENCH KING BRIDGE DEDICATION -- SAT., SEPT. 10, 1932.

## Historical Paper Prepared by John A. Taggart, Historian

### Location of New French King Bridge One of Historical Interest --- Many Interesting Anecdotes --- Bridge Statistics

From the dawn of history mankind has been concerned with problems of travel and transportation. It has been truly said that "The means and methods of travel and transportation are a prerequisite of civilization."

We shall do well today to consider some of the problems which concerned those who first peopled this part of our fair Connecticut valley, from the settled and nomad tribes of red men to the first white men who made use of its land and water facilities as arteries of travel and transportation.

Before the coming of white men, this noble river around and above which we are gathered today offered the quickest and easiest passage-way between the homes of the northern tribes and the great salt waters on the south, hence it was the main north and south travel route through what is now western Massachusetts.

In due time a few restless souls with pioneering instincts left the somewhat inhospitable shores of the Atlantic waters on the east and fared forth westward through the unbroken forest seeking a place to found new homes.

The fertile open meadows along the broad river which we now know as "The Connecticut" were a spectacle which gladdened the hearts of the home seekers. Those level tracts had annually been burned over by the red men until not a vestige of forestation remained, and here they had cultivated their corn and tobacco receiving abundant returns from the rich alluvial soil. Here were lands ready to cultivate without the labor of first clearing unbroken forest and here settlements were made.

The problem of transportation was a serious one to those early settlers. The river afforded a quick and convenient facility for north and south travel, but to the east and west it was quite another matter.

For generations the Indians had selected and adopted what to them seemed the most feasible trails in all directions and these trails the early settlers first made use of. The best known and most famous of these old trails was early known as the "Mohawk" from the fact that it

led from the home of the "Pocumtucks" in this fair valley, over the western mountain to the home of the war-like "Mohawks" in what we now know as the "Mohawk valley."

This trail was made use of by the early whites as foot path, bridle path and post road, over which toiled the patient ox and the sweating stage horses until we of the present generation are enabled through the combined efforts and instrumentalities of towns, counties and the Massachusetts department of public works to see that ancient pathway covered by a modern highway which closely follows the original trail and perpetuates its name — The Mohawk trail — enabling all to enjoy the beautiful and inspiring views which a passage over it makes possible.

Our forefathers saw the passing of the trail the bridle path and pack horse the cart path and faithful ox and the post road with its "one horse shay" and stage coach. They also witnessed the era of steam which brought the railroads and steamships, crags at first but eventually developed as we see them today.

The generations of this period have seen the coming of the bicycle, the trolley car, the automobile and the airplane. We have also seen the passing of a large part of the sailing craft which once dotted the expanse of the seven seas, and noted the substitution of steam and electricity as the motive power of water craft.

What the future holds in store for us in the way of transportation we know not. But it is in the lap of the Gods and the effects of coming generations, but we may point with pride to the progress thus far made in that aforementioned prerequisite of civilization.

The particular task of the writer is to give something of the history pertaining to the territory adjacent to what will soon be known and spoken of from Maine to California and from the Canadas to the Gulf as the "French King bridge on the Mohawk Trail route."

Whence came the name French King and to what was the name given? There are several legends pertaining to the matter and like

many another matter of history we are obliged to depend on legend for the answer.

An immense boulder situated in the middle of Connecticut river about one fourth mile above the new French King bridge has been known as "French King rock" since before the memory of living men. It was no doubt brought to its present resting place by the southward movement of a glacier in the far distant ice-age. Its dimensions have never been accurately determined, but in early days, before the dam at Turners Falls raised the level of the river waters, the rock stood over 16 feet above the surface of the water and was one of the most conspicuous objects in the whole length of the river.

Some idea of its weight, and powers of resistance to pressure may be had when it is realized that during the lifetime of those who have been familiar with its history, the rock has withstood the annual movements of ice which the spring freshets have brought to bear upon it, as well as the tremendous pressure of many log jams and has not even moved from its former position even the fractional part of an inch.

#### The Legend

During the French and Indian war, a party of French and Indians came down the Connecticut river on a scouting expedition, their object being to spy out the most desirable point to launch an attack at a later time. The party was under the command of a French officer. They reached the vicinity of the rock as the shades of night appeared. Eeling of no mind to attempt the passage of the rapids just below the rock in the dark, they made camp on the western bank opposite it.

The rock being the most conspicuous object which had attracted his notice, the officer wished to mention it in his report and fix it as something which might be referred to in the future, hence he staged a ceremony by lighting an altar fire on its top, sprinkled it with the water of the river and christened it French King in honor of his sovereign. The truth of this legend was vouched for by the late Solomon Caswell and also the late Caleb White; two of the last in this vicinity of the old rivermen, who regaled the writer with many tales of the activities upon and along Connecticut river during their remembrance.

Not only did the early days see steady though slow advance in land facilities for transportation, but the river as well was made more useful by the building of bridges, dams and canals.

It may not be inappropriate at this time to quote from an historical paper by Mr. Charles V. Hazelton of Turners Falls. "For over 200

## FRENCH KING BRIDGE DEDICATION -- SAT., SEPT. 10, 1932.

years the Connecticut river was the main artery of travel and transportation between the towns and cities of the coast and nearly all the territory embraced by its watershed in Vermont, New Hampshire and western Massachusetts.

Naturally, the first assistance to navigation upon the waters of the Connecticut river were the establishment of canals and locks in order that the various natural falls and rapids might be safely passed by flat boats so called. For each canal a dam must be provided to furnish the necessary water to operate the locks. Records show that the dam, locks and canal at Windsor Locks were built in 1824. Those at South Hadley were built and opened in 1795. The Turners Falls locks and canals were opened for business in 1798 and those at Belows Falls in 1802.

There was also a canal with one lock at "French King rapids." It began at French King rock and ended at a point just below the mouth of Millers river where the dam to furnish water for the lock was located. The canal was located on the Gill side of the river and at a point near where the lately constructed French King bridge spans the river, a house was constructed to accommodate the lock tender. That house has sometimes been mistakenly called a hotel. The hotel was on the opposite side of the river and was for many years known as The Durkee tavern of which more anon.

Quoting further from Mr Hazelton's narrative it appears that after the opening of the canals at Turners Falls and French King rapids, "For the next forty or fifty years a very prosperous business was carried on, but in 1840, when the Connecticut river railroad was built to Greenfield, and began the transportation of travel and merchandise, the business of the canals very rapidly diminished, until they did not pay for their operation, the last boat going through the locks in 1856. From that time until 1865, the old canals were going to decay as to their locks and dams, and the canal beds were growing up to brush."

In 1855 the old Locks and Canal company's franchise and property was acquired by outside interests. A new company, The Turners Falls company, was organized. That company was, by act of the legislature, relieved of the obligation to maintain the old canals for navigation purposes and empowered to build and maintain a dam for power purposes. Mr. Hazelton states, "This dam was the fourth to be built at that point since 1793." He further states "Timothy M. Stoughton born in 1818, and for 90 years a resident of Riverside, said to me that he had seen three dams, either carried out

or seriously injured by ice freshets before this dam of 1866 was built."

Thus was closed the colorful chapter in which the old locks and canals played their parts in river navigation in this vicinity.

The present concrete dam at Turners Falls being much higher than its predecessor, raised the level of the river to a point well above French King rock, submerging all traces of the old canal and leaves only a small portion of the French King rock above water.

Now let us turn from the river and note briefly some of the improvements in land facilities for travel and transportation in this vicinity.

As time went on it was evident that fords and ferries could not properly accommodate the requirements of east and west land transportation and bridges were built at various points in this vicinity.

One of the first to span the Connecticut river was at what is now Montague City. It was situated near the site of the present covered bridge. It was a crude affair of wooden arches. The flooring followed the contour of the arches, so that in crossing it, one must needs pursue an up and down course. Sometime later (exact date unknown) this bridge fell while a drove of cattle were crossing it. Among the cattle was a mounted horseman who went down with the cattle and strange to relate both horse and man were saved though many of the cattle were lost.

At that early date even as now, it was deemed appropriate to celebrate the opening of a new bridge. The late George Andrews of Montague City told of the celebration which was held at the opening of that bridge, he receiving the details from the lips of his grandfather, the late Elijah Alvord.

That bridge was replaced by another of more substantial construction which gave way to others previous to the construction of the present covered bridge which was built in 1860 by the late Aaron Wright of Greenfield from plans drawn by the late Jason L. Carl also of Greenfield.

From the records of the late Lyman Gilbert of Northfield Falls it appears that early in 1860 he assisted in building a bridge across Millers river near its mouth, probably at or near the site of the present iron bridge. It is related that Mr. Gilbert had the good fortune to safely cross the partly finished bridge with his heavily loaded ox cart just a moment before it collapsed.

With the coming of bridges the old cart roads were improved to accommodate stages and horse and ox drawn freight wagons.

Passing beneath the French King

bridge which we dedicate today, we see the old "east side" stage road over which passed the Hartford to Brattleboro stages in the long ago. The "west side" route was through Greenfield, Bernardston and Guilford, Vt.

On the level tract just westerly of the mouth of Millers river, stood the famous Durkee tavern which dispensed cheer to river boatmen, log drivers, and the large traffic of the stage road. At this hospitable institution the stage changed horses coming and going, the drivers of the ox and horse drawn freight trains "put up" for the night as did many a horseman and foot-sore wayfarer. Its first landlord is unknown, but its second was Thomas Durkee. He was landlord for several years and his mantle fell upon the shoulders of his son Jeremiah who had a long and successful career as owner and manager, conducting the affairs of the tavern in a manner which made it known afar.

But the world moves on, the march of progress may not be stayed. "One generation cometh and another generation passeth away." Our forefathers left us a goodly heritage and made possible many of the privileges which we enjoy today. These beautiful, wooded hills which adjoin the highway and bridge which we here dedicate looked down upon a scene of great activity in the faraway days of which we have written. They saw much which the present generation may only see through the eyes of legend and written history. No more may be seen the dusky warrior and his frail craft of birchen bark. No more may be heard the songs of the old river boatmen as they floated down the river or tolled upriver in their cumbersome crafts, aided by the "white ash breeze." No more may be heard the mellow tones of the coach horn as it warned the hostlers at Durkee's tavern to have fresh horses in readiness. No more may we of today see the red-shirted, spike-shod log driver as he balanced gracefully, peavy in hand, upon the treacherous floating log and "shot the rapids" in a spirit of bravado or sought courageously for the elusive "key log" in a jamb on French King rock.

Those men of early days were devoid of all pretense, possessed of a spirit which knew only contempt for danger, and a tenacity of purpose which enabled them to hold their own among a race of hard working—and sometimes hard fighting—men, who notwithstanding their few vices, were possessed of an abundance of these homely virtues which we of today may well strive to emulate.

In the words of another we might add, "Where are ye oh fearless men?"

FRENCH KING BRIDGE DEDICATION -- SAT., SEPT. 10, 1932.

Where are ye today? I call, the hills reply again that ye have passed away."

And so let us ring down the curtain on acts and scenes of the past, and give our attention to the present. This is a period which has seen wonderful development in transportation; so much so that there is no longer an isolated country or an isolated community. The automobile and the airship have penetrated the former unexplored wilds of the earth. The balloon has searched the mysterious heights of the stratosphere, and the submarine has visited the watery depths of "Davy Jones' locker." Who dares say that the wildest dreams of Jules Verne may not yet come true.

The earth is girdled with steel rails and modern highways beckon where the legions of Caesar, Alexander and Napoleon once struggled through mire or over rock-strewn heights.

We consider with pride the splendid highway systems of Massachusetts. Today we dedicate a magnificent addition to the justly famous

Mohawk Trail system. The imposing structure of steel and concrete which here spans the Connecticut river is a noble monument to man's skill and ingenuity. The miles of newly constructed highway which approach the bridge from west and east open up a territory rich in history and replete with views which delight the eyes.

Let us feel assured that coming generations will appreciate that we have builded not for ourselves alone, but also for those who shall people this fair valley after the builders have passed to that bourne from whence no traveler returns.

Statistics

French King bridge has the unique distinction of being the only bridge of its particular type in Massachusetts and so far as known, the only one in this country.

It was designed in the Bridge Engineers Department of the Massachusetts Department of Public Works.

During the first period of its erec-

tion it was of the cantilever type. It remained such until its two cantilever sections were joined at the center, when it ceased to be a cantilever and became what is termed "A deck spandrel, braced arch, with supported cantilever ends."

Length of steel construction, 783 feet.

Height from floor to mean low water, 139 feet.

Weight of steel, 2,605 tons.

Weight of concrete floor, 2,186 tons.

Weight of bituminous floor finish, 442 tons.

Abutments contain 6500 yards of concrete.

Width of roadway, 40 feet.

Width of sidewalk, 5 feet.

Approximate cost of bridge and abutments, \$375,000.

Total cost of the whole cut-off from Millers Falls to Greenfield including the bridge will be approximately \$950,000.

COMMITTEE CHAIRMEN

ON FRENCH KING BRIDGE CELEBRATION

General Chairman - J. B. KENNEDY  
General Secretary, EDWARD M. AYER  
Reception - - - JOHN W. HAIGIS  
Program - - - ROBERT P. DOLAN  
Music - - - - PERCY C. ROBERTS  
Marshal - - - - MYRON STEVENS  
Boat - - - - - CARL F. ULRICH

Float - - - GEORGE W. PILLSBURY  
Publicity - - - PAUL C. BELKNAP  
Militia - CAPT. COLLIN H. KILBURN  
Airplane - - - GEORGE W. WILCOX  
Automobile - - EDWARD H. NOLAN  
Receiving Stand, ELWYN L. STREETER  
Finance - - - STANLEY B. WOODS

For Full Details and Pictures of  
**THE FRENCH KING BRIDGE DEDICATION**

Be Sure to Read Monday's

**Daily Recorder-Gazette**

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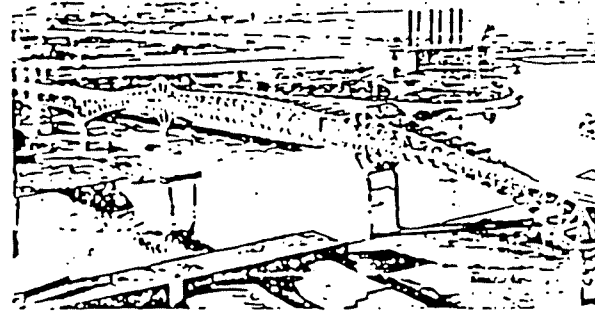
# PRIZE BRIDGES

1928-1938



AMERICAN INSTITUTE of STEEL CONSTRUCTION, Inc.  
One Hundred One Park Avenue - New York, N. Y.

• 1932 •



### FIRST PLACE—CLASS A—1932 AWARD

PULASKI SKYWAY—Crossings of Hackensack and Passaic Rivers, Hudson County, N. J.; Total Cost, \$1,100,000; Engineer, Jacob L. Bauer, State Highway Engineer; Fabricators, McClintic Marshall Corporation; Owner, State of New Jersey; Completed November 21, 1932; Span length: channel spans, 550 ft.



### FIRST PLACE—CLASS B—1932 AWARD

FRENCH KING BRIDGE—Towns of Erving and Gill, State of Massachusetts, Mohawk Trail, Route 2, over Connecticut River about six miles east of Greenfield, Mass.; Total Cost, \$385,000 (exclusive of property damages and approaches); Engineers, A. W. Dean, Chief Engineer; G. E. Harkness, Bridge Engineer, Massachusetts Department of Public Works; Fabricators, McClintic Marshall Corporation; Owner, Commonwealth of Massachusetts; Opened to travel September 10, 1932; Span: 460 ft. center to center pins of center span; 782 ft. center to center of end pins; 890 ft. out to out of abutments.



### FIRST PLACE—CLASS C— 1932 AWARD

BRYAN BRIDGE—Valentine, Nebraska, over the Niobrara River, Federal Highway No. 20; Total Cost, \$51,630.08 (contract price); Engineer, Nebraska Department of Public Works; J. G. Mason, Bridge Engineer; Joseph Sotkin, Designer; Fabricators, Paxton & Vierling Iron Works; Owner, State of Nebraska; Completed September 30, 1932; Span length: 115 ft. 2 1/2" in. central capstone arch span, anchor arm spans, 72 ft. each.

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APPENDIX C.  
AISC Awards brochure, 1932.

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## ENDNOTES

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2. William B. Browne, The Mohawk Trail: Its History and Course (Pittsfield, Mass., 1920), pp.21-25.
3. Josiah Gilbert Holland, History of Western Massachusetts, vol. 1 (Springfield, 1855), p.313.
4. Acts of Massachusetts, 1797.
5. Frederic J. Wood, The Turnpikes of New England (Boston, 1919), p.69.
6. Ibid, p.103.
7. Souvenir of the Mohawk Trail, and Annual Report of the Massachusetts Highway Commission, 1915 (Boston, 1915).
8. Albert E. Kleinert, Jr., "Design and Construction of the French King Bridge On the Mohawk Trail Route Across the Connecticut River, Massachusetts," Journal of the Boston Society of Civil Engineers, June, 1933, pp.117-118.
9. Annual Report of the Massachusetts Department of Public Works, 1931 (Boston, 1931).
10. Acts of Massachusetts, 1931, pp.96-98.
11. Annual Reports of the Massachusetts Department of Public Works, 1930-33 (Boston, 1930-33).
12. For more information on the history of hydro-electric development in the Connecticut River valley, see HAER No. MA-107: Eleventh Street Bridge, Turners Falls.
13. Kleinert, p.121.
14. Ibid, pp.127-128.
15. Ibid, pp.128-129.
16. The Daily Recorder-Gazette, Greenfield, Mass., May 4, 1932.
17. Ibid, June 21-July 1, 1932.
18. Ibid, July 8, 1932.
19. Ibid, July 13, 1932.



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20. Ibid, July 22, 1932.
21. Kleinert, p.135.
22. Recorder-Gazette, August 20, 1932.
23. Ibid, August 29, 1932.
24. Ibid, September 6, 1932.
25. Ibid, September 12, 1932, p.7.
26. Ibid, September 12, 1932, p.1.
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## HISTORIC AMERICAN ENGINEERING RECORD

## INDEX TO PHOTOGRAPHS

French King Bridge  
Spanning the Connecticut River on State Highway 2  
Erving-Gill  
Franklin County  
Massachusetts

HAER No. MA-100

Martin Stupich, Photographer, Summer 1990

- MA-100-1     General view of east portal from roadway, looking west
- MA-100-2     General view of east portal from roadway, looking west
- MA-100-3     Detail of concrete railing and pylon with wrought iron electrolier  
                 at northeast corner of span, looking northwest
- MA-100-4     Detail of wrought iron railing and builder's plate at northeast  
                 corner of span, looking northeast
- MA-100-5     Detail of A.I.S.C. award plaque on south face of northeast pylon
- MA-100-6     General view of west portal from north sidewalk, looking southeast
- MA-100-7     General view of span from downstream, looking northwest
- MA-100-8     Detail of west end of span from downstream, looking northwest
- MA-100-9     Detail of east end of span, showing truss geometry, looking north
- MA-100-10    General view from east river bank, showing truss geometry under  
                 roadway, looking west
- MA-100-11    General view from east river bank at southeast pier, showing truss  
                 geometry under roadway, looking northwest
- MA-100-12    Detail from east river bank, showing east abutment and pylons and  
                 truss geometry under roadway, looking upward and northeast

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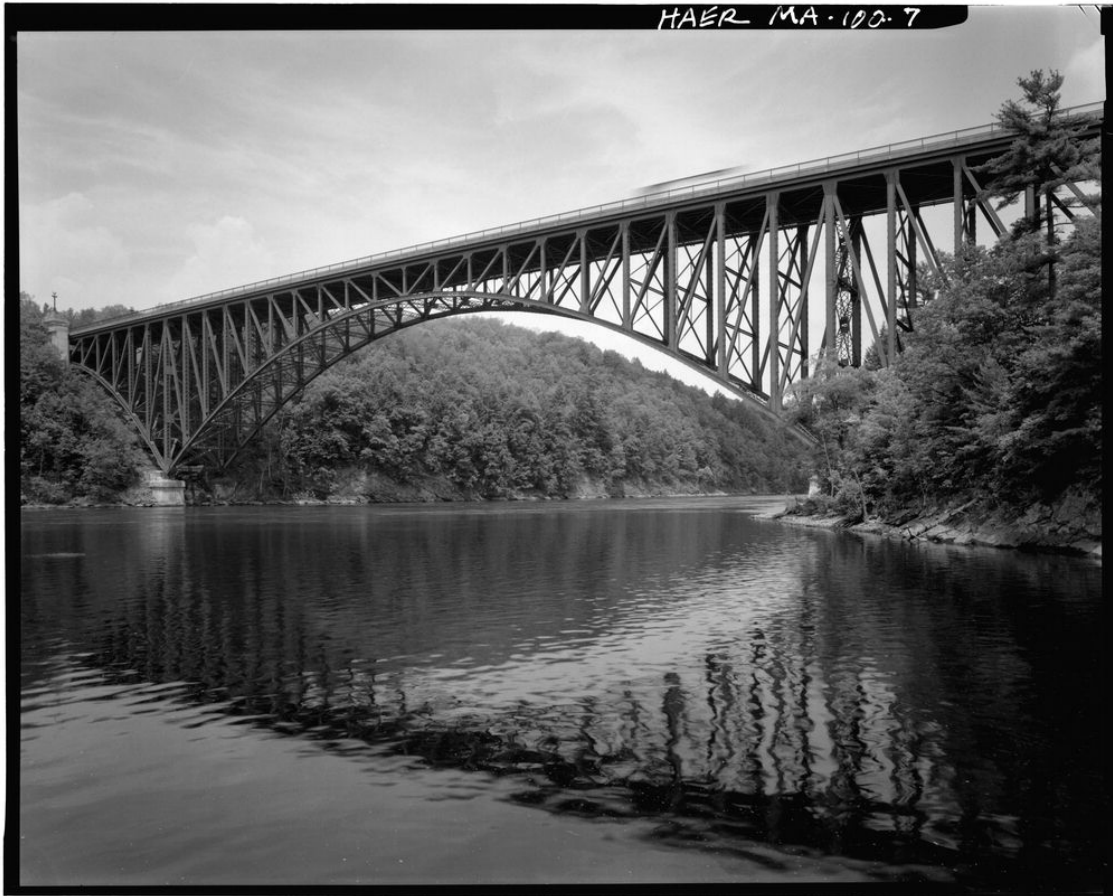
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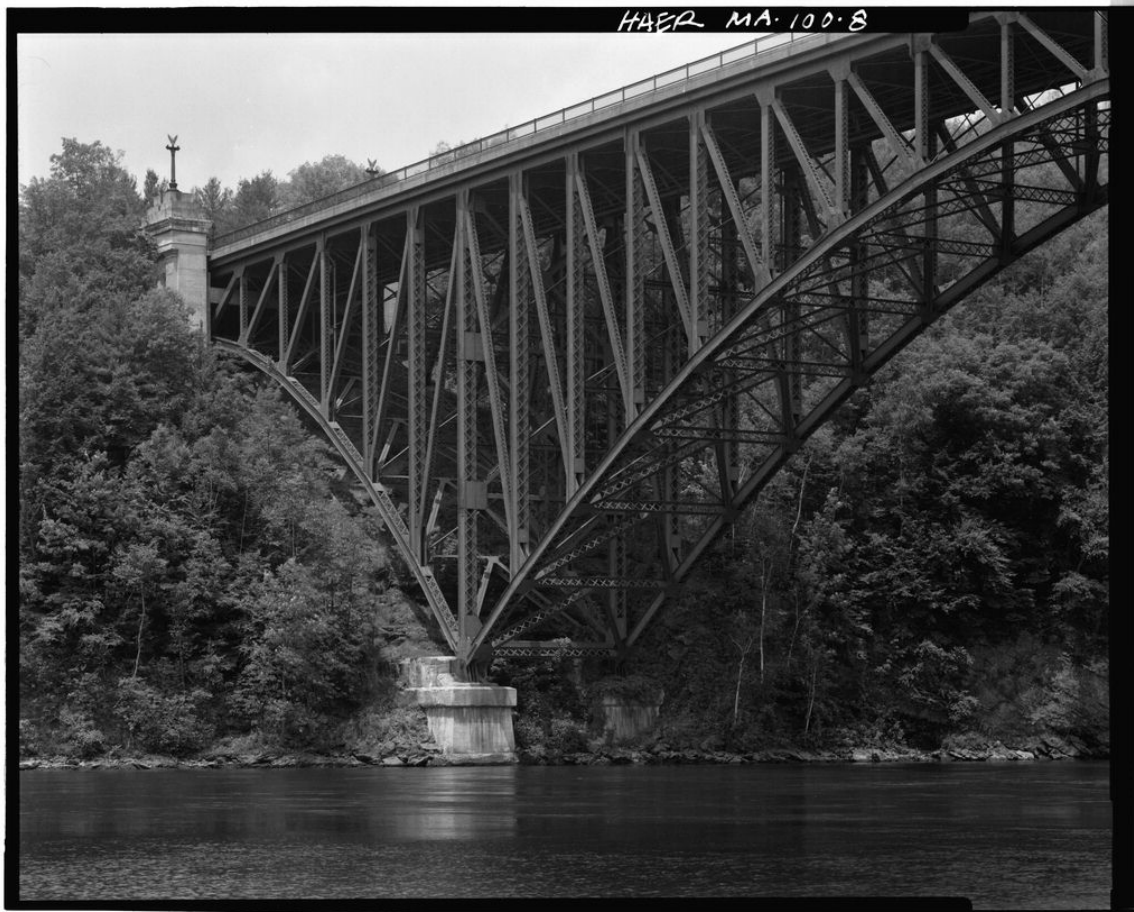
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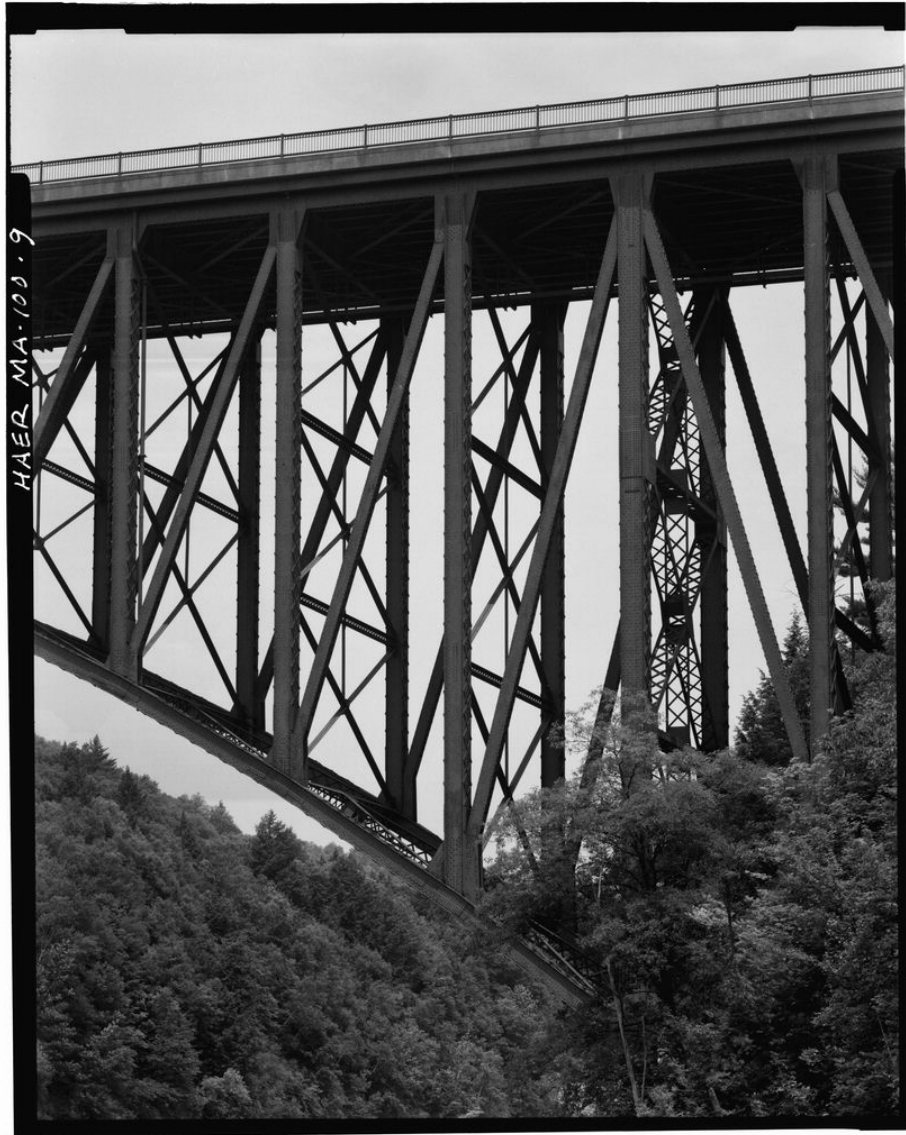
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