

VIGO COUNTY BRIDGE #139
Over Sugar Creek on 74th Place,
approximately 1500' south of the
intersection of 74th Place and Paris Road
Terre Haute vicinity
Vigo County
Indiana

HAER No. IN-83

HAER
IND
84-TEHA.V,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Northeast Region
Philadelphia Support Office
U.S. Custom House
200 Chestnut Street
Philadelphia, P.A. 19106

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Location: Over Sugar Creek on 74th Place,
Approximately 1500' south of the intersection of 74th
Place and Paris Road, Terre Haute vicinity.
Vigo County
Indiana
UTM: 16. 454550. 4370830
QUAD: Dennison, Indiana

Date of Construction: 1911.

Engineer: George Grimes

Present Owner: Jointly owned by Vigo County, Indiana and Edgar
County, Illinois.
c/o Vigo County Commissioners, 201 Cherry
Terre Haute, Indiana 47807

Present Use: Vehicular bridge.

Significance: Bridge No. 139, over Sugar Creek on 74th Place, the
Indiana/Illinois state line is locally significant as an
example of early 20th century reinforced concrete
bridge design and construction. The work of the Terre
Haute engineer, George Grimes, who was well-known
for his work in Vigo County, it utilizes known design
elements in an aesthetically pleasing manner. The
bridge was built as a mutual project between two
county councils and a local township, who shared
funding responsibilities.

Project Information: A Memorandum of Agreement calls for the bridge to
be offered for 30 days and, if there is no valid offer, the
bridge shall be demolished. It also provides that the
bridge will be recorded according to appropriate HAER
standards for bridges of local significance.

The bridge was recorded by Camille B. Fife and
Thomas W. Salmon II of The Westerly Group, Inc., RR
1 Box 141, Farmersburg IN 47850.

Description:

Bridge #139 is located in a rural farmland area, just south of the Paris Road, a traditional link between Terre Haute, West Terre Haute and the town of Paris Illinois. This road winds through sparsely populated areas of low rolling hills and woodlands. 74th Place, which intersects the Paris Road just north of the bridge, is classified as a Rural Minor Collector Road. The bridge is within the flood plain associated with Sugar Creek and is subject to annual over the road flow.

There is a well-defined channel in Sugar Creek at this point. The shallows are sand and fine gravel. Sharp earthen banks form the littoral between water and the woods or fields. Northeast and southeast of the bridge a pair of agricultural drainage ditches interrupt these banks. Both ditches carried a small amount of water to Sugar Creek during the drought period of summer/fall 1994. The adjacent fields are well-kept, fairly well fenced and are given to pasture and grain. A two-wire fence has been strung across the creek about three yards from the east bridge facade to keep cattle from wandering upstream. The creek banks are home to sycamores, hackberries, maples, ash, ailanthus and numerous herbaceous shrubs and forbes. This is particularly true on the west side of the bridge, although a few trees dot the edges of the east or downstream side.

74th Place is an active road. A very large number of agricultural vehicles use it as well as passenger cars. The sharp gradient from the center line of the bridge to the end of its abutment is a curious aspect of the structure. The high point is three to four feet above the adjacent road surfaces. Naturally this insists that vehicles drop their speeds dramatically, as they pass over this one-lane bridge.

Bridge #139 is a single-span, reinforced concrete structure, approximately 98 feet in length. The span of the elliptical arch is approximately 51 feet. According to a contemporary treatise on bridge design: "Segmental and elliptical arches appear to best advantage on low bridges, for the form originated from insufficient space for a greater rise."¹ This principle is well-demonstrated in this, small, low rural bridge. The face work of the bridge is also of reinforced concrete, with smooth spandrels. The width of the existing roadbed through the bridge is fourteen feet.

¹ H. G. Tyrrell, *Artistic Bridge Design, a Systematic Treatise on the Design of Modern Bridges According to Aesthetic Principles*, Myron C. Clark Pub., Chicago, 1912, p. 107.

The only decorative relief on the bridge is the composition formed by a cast dado, balustrade and coping. This feature is interesting in that the stages of casting can be seen in the lines of separation which are presently enhanced by the effects of deterioration. These three elements include the coping, which is beveled, and protrudes at the bridge ends, the dado and the balusters. The latter are square in section and the voids between them form slightly rectangular openings. The abutments do not contain these openings, but are of smooth concrete in a horizontal band between the coping and the dado. Bridge deterioration includes spalling and delamination, especially along the entrados at the underside of the arch ring. In addition, abutment walls have cracked or are missing, especially at the south approach to the bridge.

Bridge #139, with its interesting decorative detailing in cast concrete presents an appealing appearance in the rural setting. When it was constructed, it was a notably modern interpretation of the use of reinforced concrete in bridge design.

Historical Information:

On a day in October of 1910, Vigo County, Indiana Commissioners, A. T. Jones, Thomas Ryan and Frank Hutchinson met with their fellow commissioners from Eldridge township and Edgar County, Illinois: Messrs. Vickers, William Tessant, Wright, P. L. Stonebruner and W. W. Handy. Mr. Handy was elected the president of a joint board of the Commissioners, for the purpose of planning and financing a bridge over Sugar Creek, whose center line was between the two states. They planned a concrete bridge, of approximately 65 feet in length and 14 feet wide. Its total cost, not to exceed \$4,000. Mr. George Grimes, a noted Vigo County engineer was awarded the generous sum of \$25.00 to prepare the plans. Vigo County would pay the costs of the bridge, to be reimbursed one quarter of the cost from Eldridge Township funds and an additional one quarter from Edgar County funds.

Although the Commissioner's record is silent on the subject, it seems likely that the bridge to be designed by Mr. Grimes was a replacement for an earlier structure, since an 1895 map shows that a major roadway (the present 74th place) crossed the stream at the site of the present bridge.

By the February term of the new year, plans and specifications for the new bridge on the county line were submitted by engineer Grimes and approved by the joint Board. Costs for the construction of this "flat arch bridge of reinforced concrete" were now determined to be \$3,865.00. Other changes had occurred with the new year. Mr. A. T. Jones had been replaced by a new commissioner in Vigo County: Mr. William F. Alterkruse, and Robert

Hammond had joined the Illinois contingent. The bridge plans were filed with the County Auditor of Vigo County and it was agreed that a contract would be advertised and awarded no later than March 4th, 1911. The construction would be jointly supervised by the County Engineer of Vigo County and by the State Highway Commissioner of Edgar County in Illinois.

Four bids were received, from the firms of Lowe & Brunker, J. W. Kinser, Harry A. Carpenter, and the Paris Bridge Company, which was the low bidder at \$3,147.00. Construction was probably completed by the end of the year, although no specific information has been found concerning the completion and/or dedication of the bridge. A dedicatory placque on the bridge is undated, but lists the three Vigo County Commissioners, Vigo County Engineer Robert E. Gibbons, Superintendent James Harrington and the Paris Bridge Co. (contractors).

George Grimes, the engineer of record, was a man who played many roles during his lifetime. He was born in Portsmouth, Ohio to a family whose background included work in the iron foundries of Pittsburgh, before relocating to the midwest. Young George was educated in the public schools and local college in Portsmouth. In 1871 he came to Clinton, Indiana to serve as the rodman on the construction of the Evansville, Terre Haute and Chicago railroad (later the C. and E.I.) from Danville to Terre Haute. During his three year tenure, he was promoted to assistant division engineer. Mr. Grimes was also involved with the mining and shipping of coal in Clinton, before becoming division engineer for the Toledo, St. Louis and Kansas City railroad (the "Clover Leaf"). He continued to work in railroad engineering in the Terre Haute area, and completing railroad surveys in Kentucky and Tennessee, until the 1880s, when he became county surveyor in Vigo County, Indiana, a post he held for six years. He opened his own practice in Terre Haute, and for about ten years provided engineering and surveying services to the community, later adding construction activities. For the balance of his life, he served on and off as county surveyor and road engineer. When he died in 1926 at the age of 79, it was said that he "bore distinction" for his work, especially the design of a "four-cornered track" at the county fair grounds which was much admired.

The Paris Bridge Company was organized in Paris, Illinois sometime after 1900. By 1904 it was listed in the City Directory as Paris Bridge and Supply Company and George E. Zimmerly was listed as president. In 1910 it was located at the corner of Springfield and Austin streets in Paris and F. D. Lydick (a local physician) was listed as manager. By 1914 the company had been absorbed into the Zimmerly Bridge Company at 109 South Austin Street which continued to operate in the community for many years. Descendants of the Zimmerly family still reside in Paris, Illinois.

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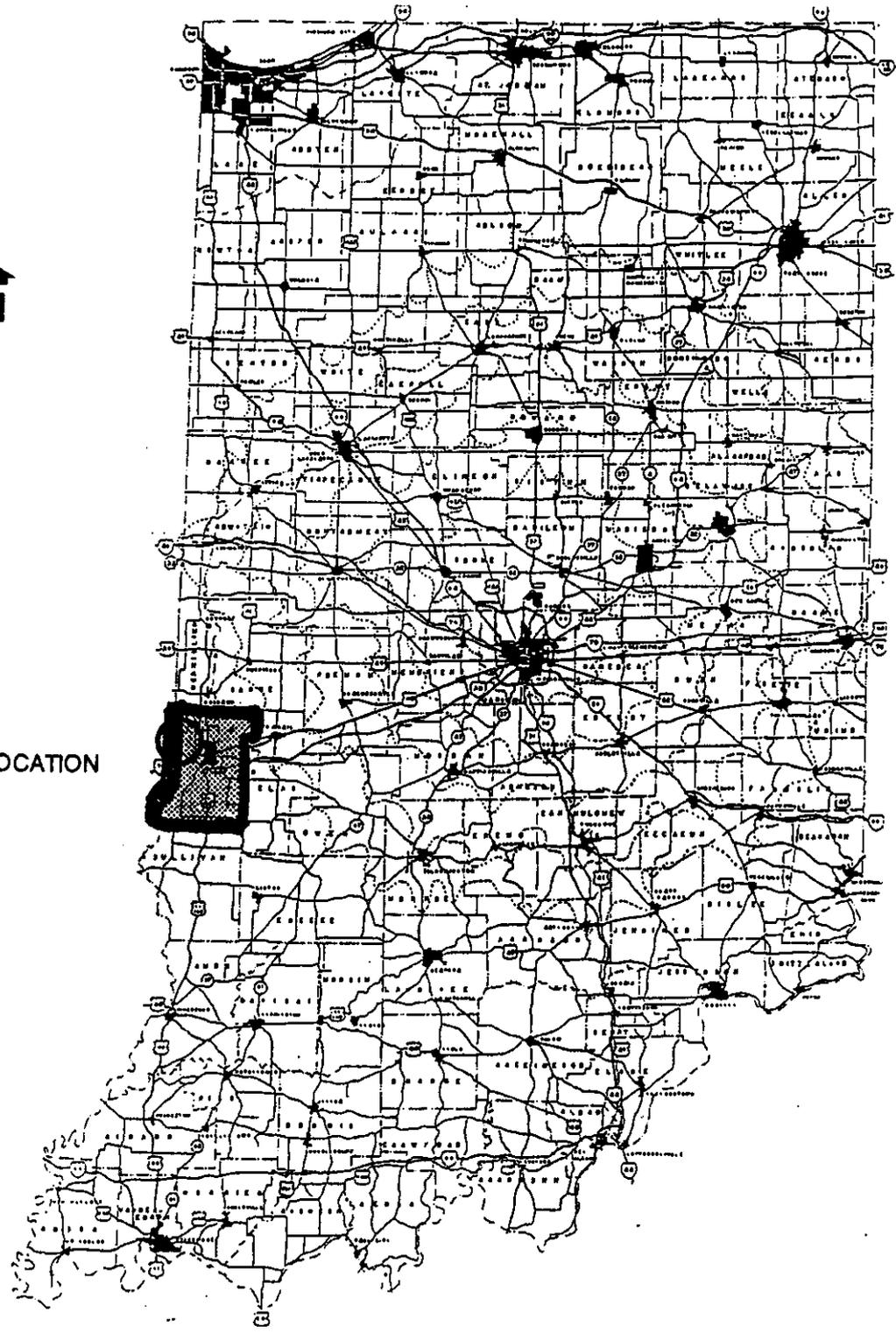
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PROJECT LOCATION



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