Crooked Creek Bridge
CH 17 Over Crooked Creek
(S.N. 026-3012/Sequence No. 19288)
La Clede Township
(Vicinity of Village of Farina)
Fayette County
Illinois

HIER No. FY-2017-1

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic Illinois Engineering Record
Illinois Historic Preservation Agency
Springfield, Illinois

Prepared for the Illinois State Archaeological Survey on behalf of the Illinois Department of Transportation
by:

Heritage Research, Ltd.
Historical/Environmental Consultants
Menomonee Falls, Wisconsin
May 2017

HISTORIC ILLINOIS ENGINEERING RECORD
HIER No. FY-2017-1

# Crooked Creek Bridge
# (REINFORCED CONCRETE, RIGID FRAME)

Location: CH 17 over Crooked Creek
La Clede Township (Vicinity of Farina), Fayette County, Illinois

USGS Quadrangle: USGS Oskaloosa, 7.5 minute, Illinois
Latitude 038° 50' 00.39" N Longitude 088° 42' 48.31" W

Universal Transverse Mercator Coordinates:
Zone 16 351272 Easting 4299481 Northing

Present Owner: Fayette County Highway Department

Present Use: Vehicular Bridge (IDOT Structure No. 026-3012)

Significance: The Crooked Creek Bridge spans Crooked Creek and is a single-span, reinforced-concrete, rigid-frame structure, the load on which is carried by a concrete frame consisting of the abutments and deck constructed as one unit. It was built in 1936 and is one of only fifteen such structures known to have been constructed in Illinois prior to 1950.[1] The fabrication is a good example of this rather unusual structure-type and dates to a period in which reinforced concrete had evolved as a dominant bridge-building material.

## PART 1. HISTORICAL INFORMATION

A. Physical History:

1. Date of Erection: 1936

2. Designer: State of Illinois Division of Highways[2]

3. Original and subsequent owners: Fayette County Highway Department

[1] A search for "concrete frame" bridges in Illinois identified fifteen such structures, including the subject bridge, that predate 1950. A total of only thirty-three were built in 1966 or before, thus suggesting that this is an uncommon bridge type in the state. National Bridge Inventory Data, Available online at http://uglybridges.com, Accessed April 2017.

[2] "Crooked Creek Bridge, S.A. Route 17, SEC 10-B, Fayette County," Original bridge plans prepared by State of Illinois Division of Highways (11 October 1935), Provided by Fayette County Highway Department, Vandalia, IL.

4. Builder or contractor: J.R. Burner (Oblong, IL)

5. Alterations and additions: The character of this bridge is essentially unchanged.

B. Historical Context:[3]

**Bridge Development in Illinois:**

The earliest permanent bridges in Illinois include a few masonry arches built in 1832 when the National Road was extended west from Maryland. At least one other arch was built on the Chicago-Galena Road in the same period (see Figure 1). Accounts of early travelers suggest that rudimentary ferries sometimes facilitated passage over larger streams in the region. Planks laid on the ice were also used to cross bodies of water in winter months. In warmer periods, timber structures accommodated such travel. Little is known of the pile trestles or half-submerged floating platforms used. All were subject to risks and washouts.[4]

**Figure 1:** This image pictures in January 2016 the remains of the ca. 1830s stone arch bridge situated on the nineteenth-century Chicago-Galena Road.

As settlers established permanent communities, "experienced mechanics" – either self-

[3] The "Bridge Development in Illinois," "Concrete Bridges and the Illinois State Highway Department," and "Reinforced-Concrete, Rigid-Frame Bridges with Ornamental Railings" sections of this report are adapted from material (including footnotes) previously prepared by Illinois Department of Transportation (IDOT).

[4] John R. Nolen and IDOT, *Ms. on file at IDOT* (1995), 310ff; Milo M. Quaife, *Chicago's Highways Old and New* (Chicago: D.F. Keller & Co., 1923), 186-189.

taught or from New England shipyards – were attracted to the frontier to erect covered bridges. Between 1820 and 1900, an estimated two to three hundred such bridges were built in Illinois, of which five remained in 2001.[5]

Railroads improved upon the early timber structures. But by the late 1850s their need for stronger bridges encouraged the development of iron fabrications, which were followed after the 1870s by those made of steel. The development of steel trusses in the post-Civil War era contributed to the rapid expansion of railroads, settlement and industrialization in a growing America.[6]

**Concrete Bridges and the Illinois State Highway Department**:

Reinforced concrete emerged at the beginning of the twentieth century as a new building material in bridge construction. Concrete structures were substantially cheaper than bridges constructed of stone. And, without joints, they were generally stronger since the mortar used on stone bridges did not typically fill completely the joints between stones. Additionally were concrete bridges used in many locations with short crossings that would otherwise have claimed structures of steel (i.e., truss bridges). The versatility of concrete was further enhanced as it was reinforced with steel rods or used to encase rolled steel beams, thus protecting them from the weather and giving the bridge a more pleasing appearance.[7]

Illinois established in 1905 a state road authority and subsequently became involved in the design and building of highway structures. The Highway Commission warned local authorities in 1906 of the dangerous condition of existing iron and timber bridges and offered plans for a 40-foot through-girder concrete bridge. A test bridge of this type was built in 1908 at the Southern Illinois Penitentiary, Menard, Illinois, and carried 420 tons before it collapsed.[8]

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[5] Russell M. Garrard, "Early Bridges in Central Illinois," in *Heritage of Mid-Illinois Engineering* (Capital City Chapter of the Illinois Society of Professional Engineers, circa 1976), 15ff; Illinois Department of Transportation (IDOT), *Historic Bridge Survey List* (Springfield, IL: Bureau of Location and Environment, 1992, 2004).

[6] Walter V. Voss, "How New Materials Increased Man's Building Ability," in *Centennial Transactions* (New York: American Society of Civil Engineers, 1953), 829ff.

[7] Walter M. Smith, Sr., and Walter M. Smith, Jr., "Concrete Bridges: Some Important Features in Their Design," *Transactions of the American Society of Civil Engineers* 77 (December 1914): 695-696; Leslie R. Schureman, "Beauty in Short-Span Highway Bridges," *Civil Engineering* 8 (May 1938): 319.

[8] *Second Annual Report of the Illinois State Highway Commission for the Year 1907* (Springfield, IL: State of Illinois, 1908), 77; *Illinois Good Road Commission* (Springfield, IL: 1912[?]); Illinois State Highway Commission, *Modern Bridges for Illinois Highways*, 2nd ed. (Springfield, IL: Illinois State Journal Company, State Printer, 1912), 49-53.

The earliest concrete girder highway bridge known to have been built in Illinois was constructed in 1908. It had four girders – two lower (located beneath the bridge's deck) and two edge (located above and along the sides of the bridge's deck). Two through-girder bridges, which used only edge-girders, were constructed in 1910. On the flat prairies of Illinois the increased use of through-girder bridges meant that high-water clearance could be maintained, while the deck of a structure could be dropped – thus reducing the rise needed for a bridge's approaches. This was possible since the bridge's load-bearing girders reached above the deck, instead of being placed below.[9]

The State Highway Commission published in 1912 a 53-page bulletin "to encourage the construction of better highway bridges" by local road commissions. The bulletin outlined the financial and safety advantages of modern, properly designed bridges built either of concrete or steel and described the commission's bridge design services. The narratives were reinforced with pictures of poorly designed and collapsed bridges. In several cases noted by the commission, the cause of the bridge failure was the fact that the structure collapsed under the weight of motorized steam tractors then found on township roads. The bulletin also provided several examples of modern bridges of both concrete and steel that had been built throughout the state using commission plans.[10]

The Illinois State Legislature in 1913 subsequently passed the Tice State Aid Road Bill. It established the Illinois State Highway Department which was to be led by the Chief State Highway Engineer and overseen by the State Highway Commission. The department was divided into five bureaus: roads, bridges, maintenance, tests and audits. The state was then divided into seven geographic districts, each headed by a division engineer. The road, bridge and maintenance bureaus generally planned, designed and implemented the state aid road system, as well as provided consulting services and plans for county highway departments and other local entities that had bridge projects. The 1913 legislation also gave the State Highway Department total control of the construction and maintenance of all bridges considered to be state aid improvements, as well as great influence over bridges owned by county and township governments.[11]

**Reinforced-Concrete, Rigid-Frame Bridges with Ornamental Railings:**

Although Charles S. Whitney of Milwaukee designed a pair of rigid-frame bridges in

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[9] David Plowden, *Bridges: The Spans of North America* (New York: Viking Press, 1974), 297-300; IDOT *Historic Bridge Survey List*; IDOT, *Statement of Significance* (Springfield, IL: Bureau of Location and Environment, 1997), 21.

[10] Illinois State Highway Commission, *Modern Bridges for Illinois Highways*, 1-12.

[11] *Fifth Report of the Illinois State Highway Department for the Years 1913, 1914, 1915, 1916* (Springfield, IL: Illinois State Journal Co., State Printer, 1917), xi-xii, 61-63; "Good Roads Bill Passed by House," *Chicago Daily Tribune*, 6 June 1913, 2.

1919, a more refined version of the rigid-frame derivative of a reinforced concrete bridge emerged in 1922 with the designs of Arthur G. Hayden, the designing engineer of the Westchester County (NY) Park Commission. The chief design aspect of such a bridge is that the concrete is cast as a continuous unit around a web of reinforcing bars – the deck and abutments are not separate elements fastened together. The bridge deck carries the load and transfers it directly to the abutments. The rigid connection of these components provides for a thinner deck at the center and reduced mass in the abutments. The thinner center increases the height above the water and, as a result, a lower bridge profile that reduces the amount of grading needed at the approaches. When viewed from the side, a rigid frame bridge is identified by the nominal arch at the center. Both the reduced amount of concrete and higher clearance combined to make rigid-frame spans economical and simple to build in the field. Another important aspect of rigid-frame bridges that separated them from their edge-girder counterparts is that they can be easily widened without significant changes to the original structure. And finally, the nominal arch and the ability to use decorative, instead of purely structural, railings provided opportunities for aesthetic design.[12]

Regarding the bridge's ornamental concrete railing, it is a standard Illinois Department of Transportation design called "Texas Classic Type 411." This type of railing had four styles of windows that were known as Type A – segmental arch, Type B – round arch, Type C – rectangular (no arch) and Type D – pointed arch. The subject bridge railing utilized the Type C window. These designs were implemented in order to give bridges of the 1920s and 1930s some aesthetic embellishments, rather than simply being a display of utilitarian components. Ornamental concrete railing systems were very popular in Illinois during this period because they had the strength required to deflect wayward vehicles back into the roadway. Furthermore, concrete was easy to use and conducive to manufacturing as pre-cast components, or having unskilled workers pour it on site. This latter instance was often the case with bridge building crews supported by the Works Progress Administration or other Federal work relief efforts.[13]

**Fayette County and La Clede Township:**

Fayette County was organized in 1821 while the initial settlement in its southeastern regions dates to the early 1830s. Its population was sparse until the 1855 arrival of the

[12] *Analysis of Rigid Frame Concrete Bridges*, 4th ed. (Chicago: Portland Cement Association, 1936), 5-6, Available online at https://babel.hathitrust.org, Accessed April 2017; "Historic Bridges of North Carolina: Types of Bridges," North Carolina Department of Transportation, Available online at http://ncdot.gov/projects/ncbridges/historic/types, Accessed April 2017.

[13] "Railing Appraisal," Illinois Highway Information System Structure Information and Procedure Manual (01 July 2016), Item No. 36A; Whitney, *Bridges*, 200-03; Donald C. Jackson, *Great American Bridges and Dams* (New York: John Wiley & Sons Press, 1988), 37.

Illinois Central Railroad in Vandalia and, shortly thereafter, the appearance of a second railroad in the southeastern part of the county. Railroads subsequently sold significant tracts of agricultural land, an action that sparked new settlement. A large number of Germans, who used the land for growing corn and wheat, were among those settling on newly available property in La Clede Township.[14]

Located along the Illinois Central Railroad line, the Village of Farina was platted in 1857 and incorporated in 1875. The village, with a population of approximately 400 by the late 1870s, had emerged as a local support center and shipping point. It claimed a flour mill, several general stores, a bank, three blacksmith shops and a grain merchant. Wheat and corn were the primary products shipped from the community in the 1880s. About eight miles to the east, in Clay County, the small Village of Iola was established in 1870. It had about 200 residents in the early 1880s and was served by the Ohio & Mississippi Railroad, later the Baltimore & Ohio. The principal products shipped from Iola were livestock and grain. Connecting area farmers to services in Farina and Iola were a series of roads developed primarily along section and half-section lines.[15]

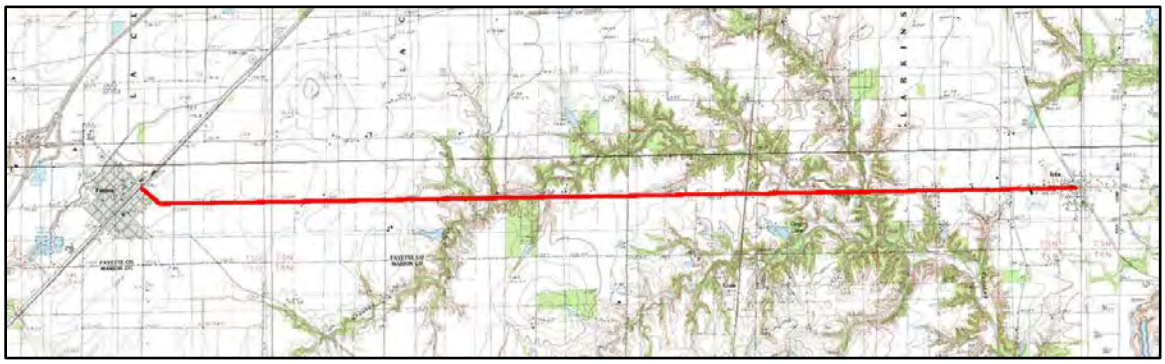

**Figure 2:** The roadway between the villages of Farina (to the left) and Iola (to the right) is illustrated by this map. Railroads were available in each community. U.S. Geological Survey, *Kinmundy Quadrangle Illinois* [map], 1985, 1:24000, 7.5 Minute Series (Reston, VA: United States Department of the Interior, USGS, 1985); U.S. Geological Survey, *Oskaloosa Quadrangle Illinois* [map], 1985, 1:24000, 7.5 Minute Series (Reston, VA: United States Department of the Interior, USGS, 1985).

## Local Road Development and the Crooked Creek Bridge:

Fayette County Highway 17 begins in the Village of Farina and extends east along the half-section lines of Sections 33-36 in La Clede Township. It then continues as Clay

[14] Newton Bateman, et. al., eds., *Historical Encyclopedia of Illinois and History of Fayette County* (Chicago: Munsell Publishing Company, 1910), 613, 626-27, 648.

[15] *History of Fayette County, Illinois* (Philadelphia: Brink, McDonough & Co.), 1878; *History of Clay County, Illinois* (Flora, IL: Martin Printing co., 1969), 159; *Illinois State Gazetteer and Business Directory, 1882* (Chicago: R.L. Polk & Co., 1882): 736-737, 835.

County Highway 7 to the Village of Iola – a total of eight miles. The roadway emerged during the township's initial period of road development and most of it was designated in the first quarter of the twentieth century as a Rural Free Delivery Route.[16]

138 miles of State Aid Roads in Fayette County were graveled in late 1935 and throughout 1936 as part of a Work Projects Administration (WPA) project. The State Aid Road program allocated state gas tax revenue to counties for improving and maintaining certain local and secondary roadways not included in the state and federal highway system. The Illinois Highway Department in May 1936 contracted with Arnold Orville of Casey, Illinois, to grade CH 17 as part of Illinois State Aid Route 17. An article in the *Farina News* noted that the project, which employed sixty-seven men, provided work for almost every man listed on local relief rolls. The project consisted of grading and straightening the roadway, as well as establishing an eighty-foot right-of-way. Such a right-of-way width identified the road as a secondary route within the department's highway classification system since local routes only warranted a sixty-foot right-of-way.[17]

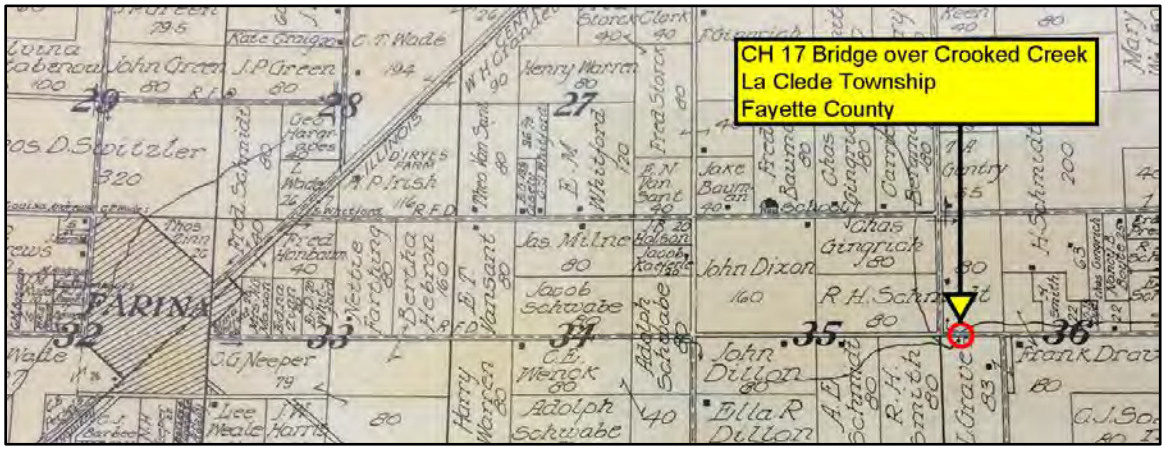


**Figure 3:** The location of the subject bridge, and its predecessor in particular (given that this map predates the subject bridge by 21 years), in the context of its relationship to Farina, is illustrated in this image. *Standard Atlas of Fayette County, Illinois* (1915): 61.

As part of the project, J.R. Burner[18] of Oblong, Illinois, received a separate state aid

[16] *Standard Atlas of Fayette County, Illinois* (Chicago: Geo A. Ogle & Co., 1915); *Illinois State Atlas--Fayette County Map* (Chicago: Warner & Beers, 1876.

[17] "To the Citizens of Fayette County," (RE: WPA Road Projects), *Farina News*, 14 January 1937, 1; *Eighteenth Annual Report of the Division of Highways* (Springfield, IL: State of Illinois, 1935), 34-35; *Nineteenth Annual Report of the Division of Highways* (Springfield, IL: State of Illinois, 1936), 128-29; Contract #6250 (Grading), State Aid Route 17, Fayette County (17 January 1936), ), Located in Illinois Department of Transportation Contract Files, Record Group 242.28, Illinois State Archives, Springfield, IL; "Farina-Iola Road," *Farina News*, 3 April 1936.

[18] Research located no relevant information regarding a J.R. Burner; however, the 1930 and 1940 census records indicate that

contract for a bridge where CH 17 crossed Crooked Creek. The "reinforced concrete, rigid-frame bridge" replaced an existing steel truss structure and cost $6,876. The project also utilized WPA labor. In keeping with CH 17's classification as a secondary route, the Crooked Creek bridge had a width of 24 feet instead of the twenty-foot width utilized for bridges on local roads.[19]

**Figure 4:** An undated, historic photograph of the bridge in winter. Image provided by Michael A. Maxey, P.E., Fayette County Engineer, to John N. Vogel. Ph.D., Heritage Research, Ltd. (HRL), 12 April 2017 via e-mail, Copy on file at HRL, Menomonee Falls, WI.

Traffic on CH 17 at the Crooked Creek Bridge averaged less than fifty vehicles per day. Although other portions of CH 17 had more traffic, this particular stretch, under Illinois Highway Department criteria, was actually no busier than a local road. CH 17 remained a graveled conveyance as late as 1971.[20]

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Edwin R. Burner of that village worked as a "road building contractor," U.S. Federal Census— Population, (1930 & 1940), Available online at www.ancestry.com, Accessed April 2017.

[19] Contract #6272 (Bridge), State Aid Route 17, Fayette County (17 January 1936); "Crooked Creek Bridge, S.A. Route 17, SEC 10-B, Fayette County;" *Eighteenth Annual Report*, 34-35. A review of the *Farina News* for the year 1936 found no mention of the subject bridge.

[20] Illinois Division of Highways, "Traffic Map, Fayette County, Illinois," Illinois State-Wide Highway Planning Survey Map (1937), Available at Illinois State Library, Springfield, IL; *Eighteenth Annual Report*, 34-35; *Triennial Atlas & Plat Book, Fayette County, Illinois* (Rockford, IL: Rockford Map Publishers, Inc., 1971).

PART II: ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural Character: The Crooked Creek Bridge was constructed in 1936 and is a reinforced-concrete, rigid-frame structure that carries the road over Crooked Creek.

2. Condition of Fabric: The historical integrity of the structure is generally good.

B. Description:[21]

The Crooked Creek Bridge is a reinforced concrete, rigid frame fabrication that is 49'-3" long. Its overall width is 28'-6", while that of the traffic deck is 24'-5". The roadway is flanked by ornamental, concrete railings. Traffic is carried by a load-bearing deck tied to the abutments. In such an instance, the abutments are approximately 12" thick at the footing and increase to 20" thick at the top. The deck, which embodies a very shallow, elliptical arch is 24" thick at the 2'-9" and 46'-9" marks on the 49'-3" long traffic surface, 23" thick at the 3'-9" and 45'-9" marks, 19" thick at the 9'-6" and 40'-6" marks, 16" thick at the 14'-4" and 35'-3" marks, and 15" thick at the 19'-6", 24'-9" and 30' marks. Wing-walls extend approximately 2'-4" horizontally, at 133 degrees from each abutment, before tapering down for the remaining 12'-3" of its length.

The railing rises from a 7½" by 20" curb and is a Texas Classic type 411 with Type C (squared) windows. It is anchored by solid concrete blocks that are located over the abutments and that are 2½" higher than the railing itself. Each block is 30" long and 34" high, although, given the curb, its top is 40" above the roadway. The width of each of the four blocks is 14" at the bottom and 12" at the top. A large center panel maintains the 14" width of each block, thus creating a prominent sense of geometric relief wide between the panel and the 12" anchor crown. The railing consists of three sections, all of which rise from the curb. The east and west sections are 13'-6" long, while that in the center is 16'-7" long. The balusters are 5½" wide and 6½" deep and separated by 7½" (squared) windows. The three railing sections are anchored at each end by balusters that are 9" wide. Above the windows is a 3¾" intermediate chord on which is set the railing's 7" high and 10" wide top chord, the overall height of which is 37½" above the roadway.

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[21] The measurements used to describe this bridge were taken from either the original plans or the structure itself during field investigations. Activities were limited to components that could be reached from the deck, slopes around and ground beneath the deck without aid of ladders, boats or other equipment.

The bridge is also characterized by canted corners on all concrete surfaces. Additionally does the original, concrete traffic deck have at least one asphalt overlay and subsequent asphalt patching, the depth of which is approximately 2 to 3 inches. The bottom of the rigid frame deck, at its center, was 11'-3" above the water of Crooked Creek as of May 2017, after periods of heavy rain. The structure has no bridge plate.

PART III: SOURCES OF INFORMATION

A. Primary and Unpublished Sources:

"Crooked Creek Bridge, S.A. Route 17, SEC 10-B, Fayette County." Original bridge plans prepared by State of Illinois Division of Highways (11 October 1935). Provided by Fayette County Highway Department, Vandalia, IL.

*Eighteenth Annual Report of the Division of Highways.* Springfield, IL: State of Illinois, 1935.

"Farina-Iola Road." *Farina* (IL) *News*, 3 April 1936.

Maxey, Michael A., P.E. Fayette County Engineer. Various Materials. Fayette County Highway Department, Vandalia, IL.

*Fifth Report of the Illinois State Highway Department for the Years 1913, 1914, 1915, 1916.* Springfield, IL: Illinois State Journal Co., State Printer, 1917.

"Good Roads Bill Passed by House," *Chicago Daily Tribune*, 6 June 1913.

Illinois Department of Transportation Contract Files. Record Group 242.28. Illinois State Archives, Springfield, IL.

Illinois Division of Highways. "Traffic Map, Fayette County, Illinois." Illinois State-Wide Highway Planning Survey Map (1937). Available at Illinois State Library, Springfield, IL.

*Illinois Good Roads Commission.* Springfield, IL: 1912[?].

*Illinois State Atlas—Fayette County Map.* Chicago: Warner & Beers, 1876.

*Illinois State Gazetteer and Business Directory, 1882*. Chicago: R.L. Polk & Co., 1882.

Illinois State Highway Commission. *Modern Bridges for Illinois Highways,* 2nd ed. Springfield, IL: Illinois State Journal Company, State Printer, 1912.

*Nineteenth Annual Report of the Division of Highways.* Springfield, IL: State of Illinois, 1936.

"Railing Appraisal." Illinois Highway Information System Structure Information and Procedure Manual (01 July 2016).

*Second Annual Report of the Illinois State Highway Commission for the Year 1907*. Springfield, IL: State of Illinois, 1908.

*Standard Atlas of Fayette County, Illinois.* Chicago: Geo A. Ogle & Co., 1915.

"To the Citizens of Fayette County," (RE: WPA Road Projects). *Farina News*, 14 January 1937.

U.S. Federal Census–Population (1930-1940). Available online at www.ancestry.com. Accessed April 2017.

B. Secondary and Published Sources:

*Analysis of Rigid Frame Concrete Bridges*. 4th ed. Chicago: Portland Cement Association, 1936. Available online at https://babel.hathitrust.org. Accessed April 2017.

Bateman, Newton, et. al., eds. *Historical Encyclopedia of Illinois and History of Fayette County.* Chicago: Munsell Publishing Company, 1910.

Garrard, Russell M. "Early Bridges in Central Illinois." *Heritage of Mid-Illinois Engineering*. Capital City Chapter of the Illinois Society of Professional Engineers, circa 1976.

"Historic Bridges of North Carolina: Types of Bridges." North Carolina Department of Transportation. Available online at http://ncdot.gov/projects/ncbridges/historic/types, Accessed April 2017.

*History of Clay County, Illinois.* Flora, IL: Martin Printing Co., 1969.

*History of Fayette County, Illinois.* Philadelphia: Brink, McDonough & Co., 1878.

Illinois Department of Transportation. *Historic Bridge Survey List*. Springfield, IL: Bureau of Location and Environment, 1992, 2004.

_____. *Statement of Significance*. Springfield, IL: Bureau of Location and Environment, 1997.

Jackson, Donald C. *Great American Bridges and Dams*. New York: John Wiley & Sons Press, 1988.

National Bridge Inventory Data. Available online at http://uglybridges.com. Accessed April 2017.

Nolen, John R. and the Illinois Department of Transportation (IDOT). *Ms. on file at IDOT* (1995).

Plowden, David. *Bridges: The Spans of North America*. New York: Viking Press, 1974.

Quaife, Milo M. *Chicago's Highways Old and New*. Chicago: D.F. Keller & Co., 1923.

Schureman, Leslie R. "Beauty in Short-Span Highway Bridges." *Civil Engineering* 8 (May 1938): 318-319.

Smith, Sr., Walter M. and Walter M. Smith, Jr. "Concrete Bridges: Some Important Features in Their Design." *Transactions of the American Society of Civil Engineers* 77 (December 1914): 695-744.

*Triennial Atlas & Plat Book, Fayette County, Illinois.* Rockford, IL: Rockford Map Publishers, Inc., 1971.

U.S. Geological Survey. *Edgewood Quadrangle Illinois* [map]. 1956. 1:62500, 15 Minute Series. Reston, VA: United States Department of the Interior, USGS, 1956

U.S. Geological Survey. *Kinmundy Quadrangle Illinois* [map]. 1985. 1:24000, 7.5 Minute Series. Reston, VA: United States Department of the Interior, USGS, 1985.

U.S. Geological Survey. *Oskaloosa Quadrangle Illinois* [map]. 1985. 1:24000, 7.5 Minute Series. Reston, VA: United States Department of the Interior, USGS, 1985.

Voss, Walter V. "How New Materials Increased Man's Building Ability." *Centennial Transactions*. New York: American Society of Civil Engineers, 1953.

## PART IV: METHODOLOGY OF RESEARCH

A. Research Strategy

Research objectives were to place the bridge in its geographic, historic and engineering contexts. A strategy was developed to accomplish those goals that investigated local, regional and statewide documentary sources. On-site observation and investigation of the bridge was also part of the research plan.

B. Research Process

1. Visited bridge site to review conditions, as well as to photograph and measure the structure.

2. Searched repositories in Springfield (IL) for data relating to road, bridge and local development in Fayette County.

3. Prepared report draft.

4. Document draft internally reviewed at Heritage Research, Ltd.

5. Document draft reviewed by IDOT and IHPA.

6. Completed all revisions and submitted to IDOT.

C. Archives and Repositories Used/Consulted:

Illinois State Archives
Norton Building
State Capitol Complex
Springfield, Illinois 62756
(IDOT Record Group 242.28, Local Government Records Index and Maps)

Illinois State Historical Society Library
Abraham Lincoln Presidential Library
112 N. 6th Street

Springfield, Illinois 62701-1507
(Histories, Various Newspapers)

Illinois State Library
300 S. 2nd Street
Springfield, Illinois 62701-1796
(Map Collection and County Histories)

Wisconsin Historical Society
816 State Street
Madison, Wisconsin 53706
(Illinois State Gazetteers)

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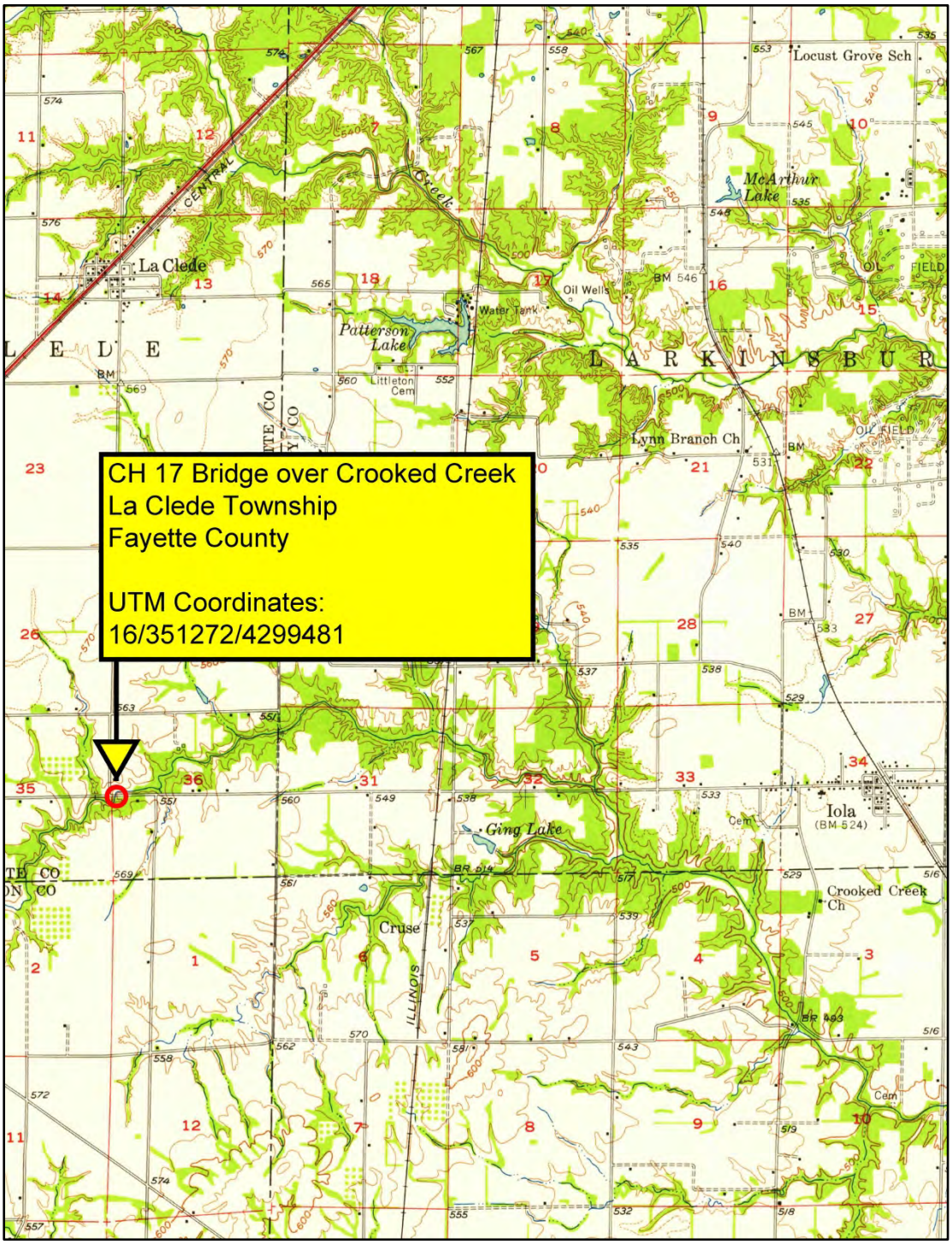
PART V: PROJECT INFORMATION

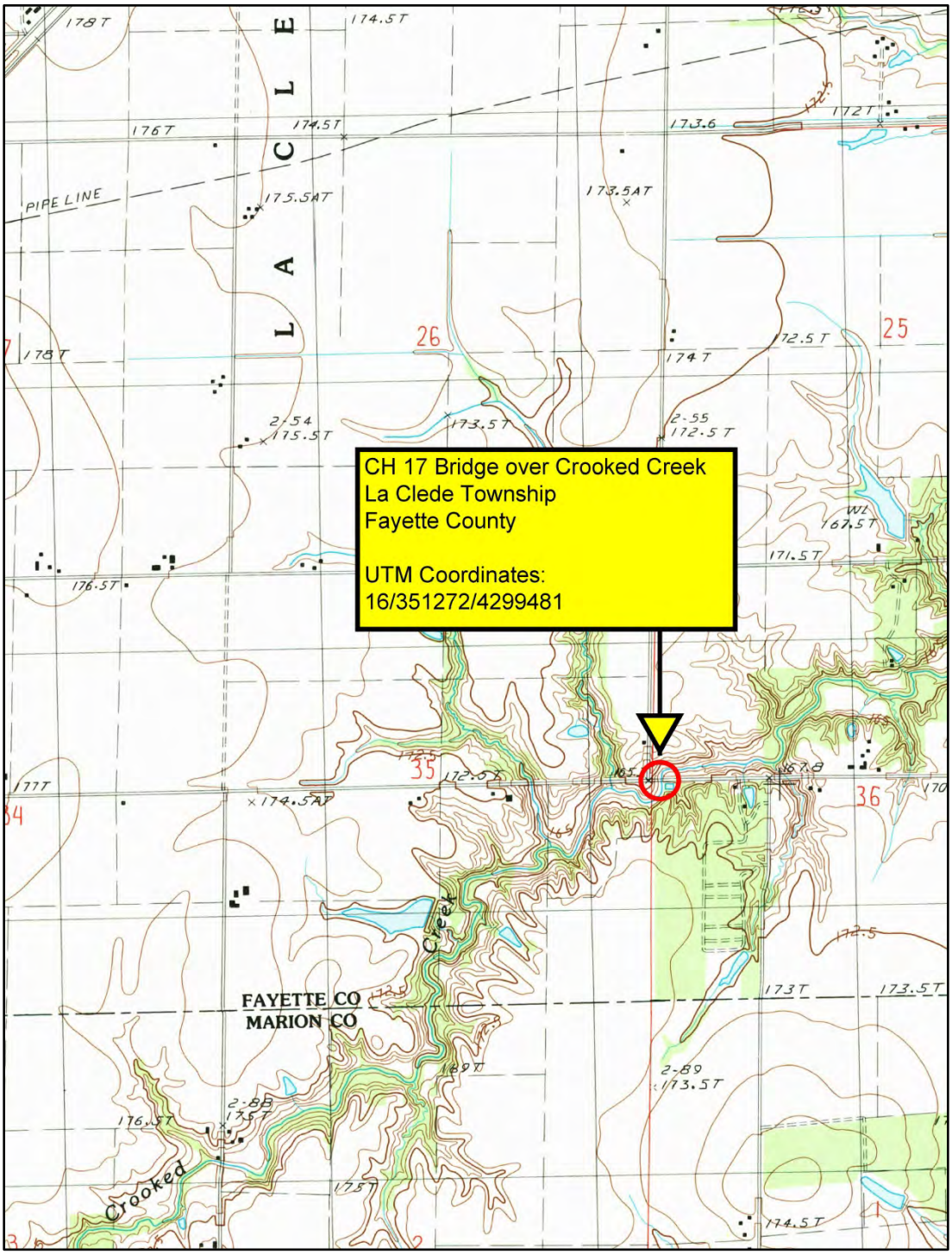
This HIER archival documentation is submitted in compliance with a stipulation of a Memorandum of Agreement (MOA) between the Federal Highway Administration, Illinois Division, and the Illinois State Preservation Officer, dated with its final signature on 28 March 2017. The MOA was executed in compliance with CFR 36 800.6(b)(1)(iv) of the National Historic Preservation Act of 1966, as amended.

# 1956 USGS Map Identifying Bridge Location:



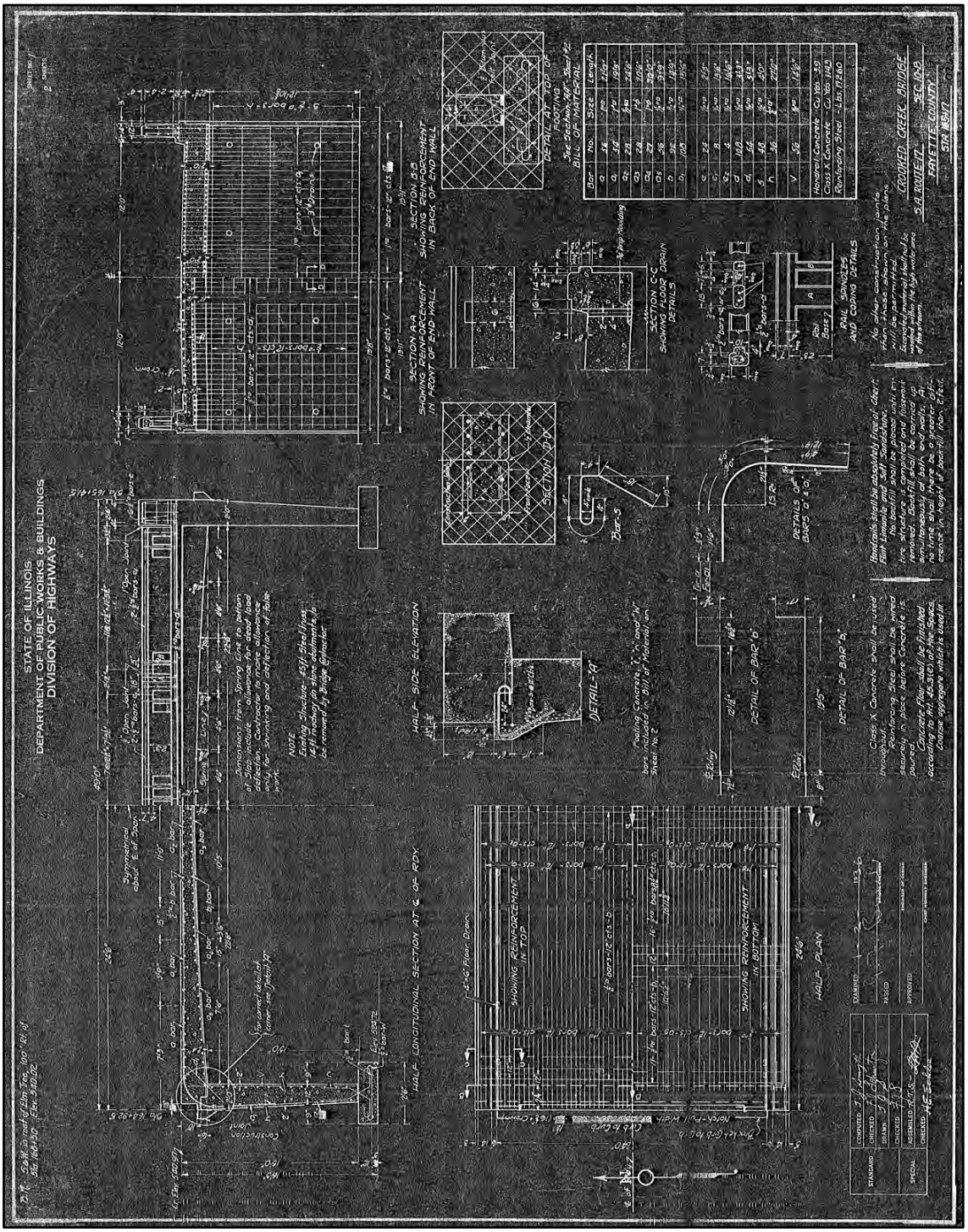

U.S. Geological Survey, *Edgewood Quadrangle* [map], 1956, 1:62500, 15 Minute Series (Reston, VA: United States Department of the Interior, USGS 1956).

# 1985 USGS Map Identifying Bridge Location:



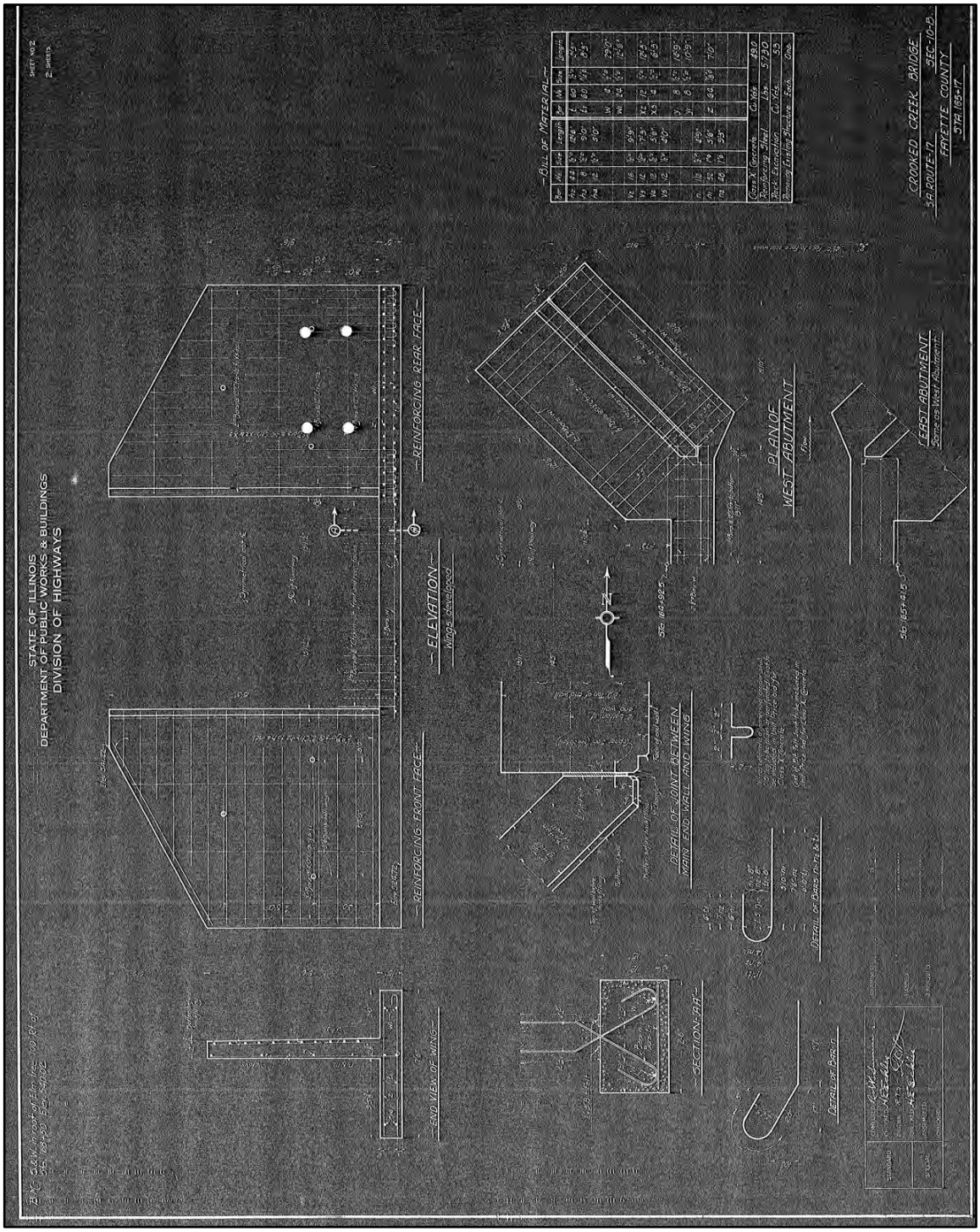

U.S. Geological Survey, *Oskaloosa Quadrangle* [Map], 1985.

Bridge Plan Sheet 1:




The bridge's original plan set found on this page, and that following, were provided by Michael A. Maxey, P.E., Fayette County Engineer to John N. Vogel, Ph.D., Heritage Research, Ltd., 12 April 2017 via e-mail, copy on file at HRL, Menomonee Falls, WI.

Bridge Plan Sheet 2:




See citation on preceding page.

HISTORIC ILLINOIS ENGINEERING RECORD

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La Clede Township
(Vicinity of the Village of Farina)
Fayette County
Illinois

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John N. Vogel, Ph.D., Photographer

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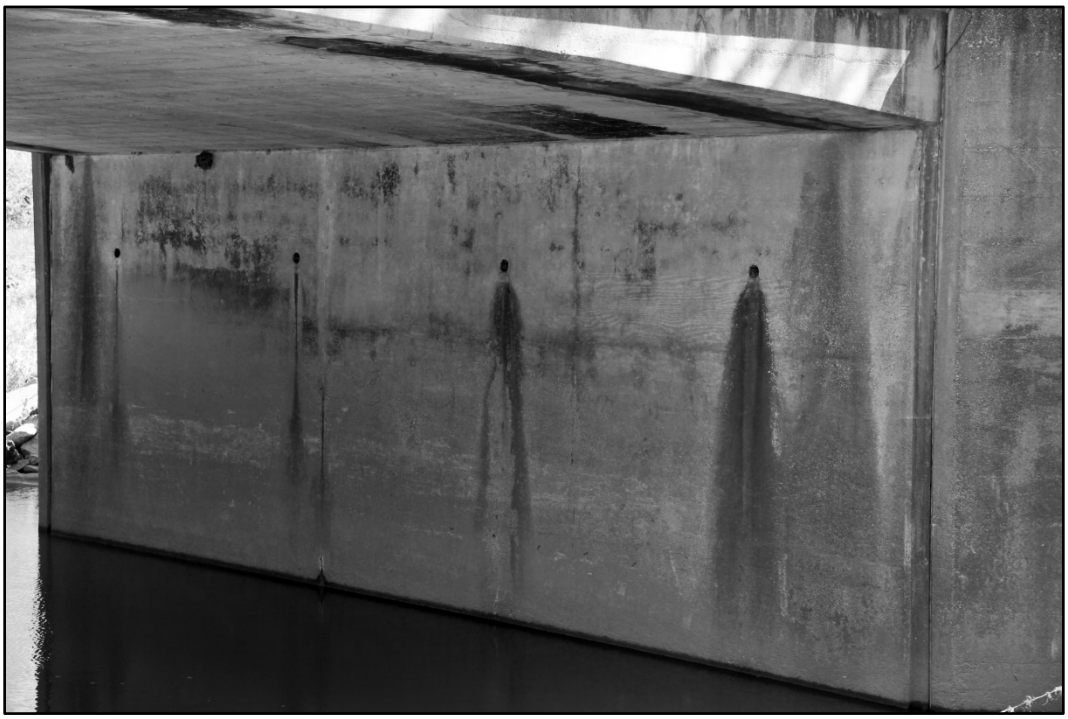

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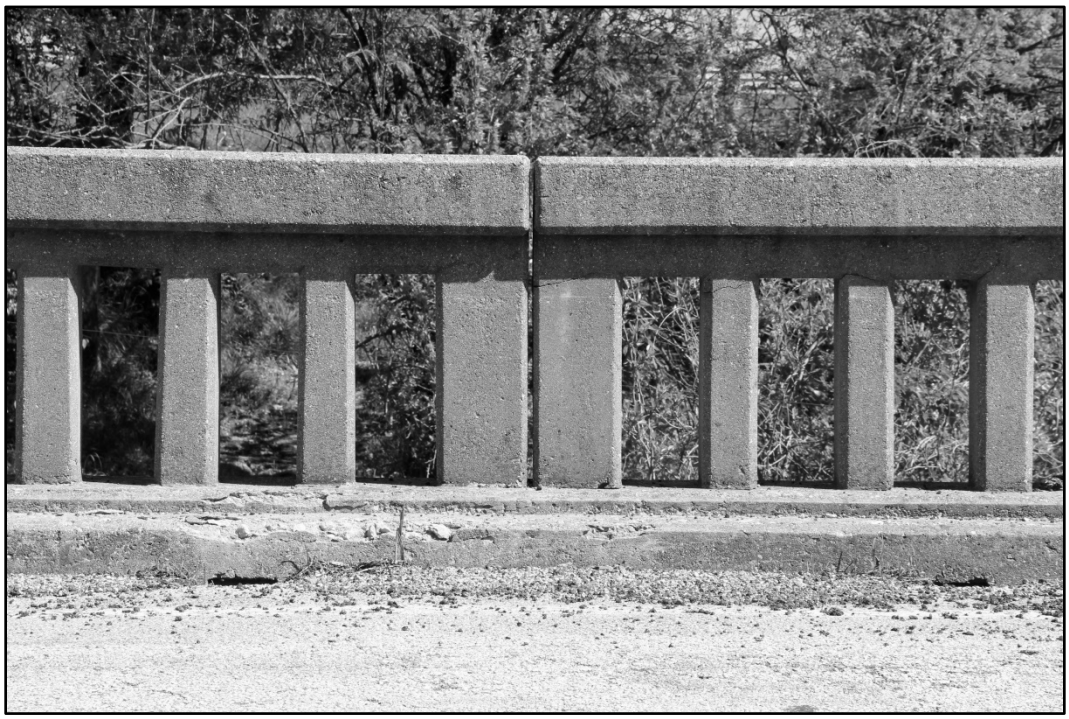

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