
Documentation of the Carrollton Bridge over Wakenda Creek

Bridge No. F0404
Carroll County, Route Business 65
1998



History of the Carrollton Bridge
Bridge No. F-404
Business Route 65, Carroll County

by
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The Carrollton Bridge crosses Wakenda Creek on the south edge of Carrollton, Carroll County. The bridge is a six-panel, rigid-connected Warren pony truss with a span length of 100 feet, carried on concrete abutments with wingwalls. It has a 12” reinforced concrete deck with a roadway width of 18.5 feet. The Carroll County Court authorized its construction in late 1918. The Kansas City Bridge Company completed the structure within approximately seven months. In the early 1920s the Missouri State Highway Department subsumed the bridge as part of State Route 3 (later U.S. Routes 24/65). It has continued in service since that time with no major alterations. The Carrollton Bridge is significant as one of Missouri’s older (and longer) Warren pony truss structures. The Kansas City Bridge Company apparently designed the structure, although it resembles later Warren pony trusses built by the Missouri State Highway Department.¹⁸

While the construction of the Carrollton Bridge came during a time of increasing state and federal involvement in road and bridge construction, it was solely a local project. The Federal Aid Road Act of 1916 and Missouri’s Hawes Road Law of 1917 launched the beginning of a state road network, but the counties still incurred most of the responsibilities for road improvement projects. In 1917 and 1918, each of Missouri’s counties received no more than \$6,000 in state aid. The Missouri State Highway Department began providing the counties with standardized plans for roads, bridges, and culverts, and indirectly oversaw state-aid road projects. However, the county highway engineers supplied the detailed construction plans, specifications, and cost estimates for specific projects requiring the approval of the State Highway Board and the Bureau of Public Roads.¹⁹ Carroll County did take advantage of the new public moneys for road and bridge work. In July 1917, the Carroll County Court authorized its County Surveyor and ex-officio Highway Engineer, D. W. Frush, to make applications from the General State Road Fund for seventeen concrete culverts and five concrete and steel bridges totaling \$5,400 in cost; none of the five bridges exceeded \$600 in cost. In July 1918, the county court sought state aid for five additional concrete bridges and three concrete culverts totaling \$5,194.04; again as in 1917 the court set aside half the moneys for their construction. Carroll County also used approximately \$2,400 during 1918 for road dragging. These applications for state aid did not include the Carrollton Bridge. Instead it was entirely a local project authorized by the Carroll

¹⁸Clayton B. Fraser, “HAER Inventory Data Sheet, Carrollton Bridge, (No. F-404),” Missouri Historic Bridge Inventory, 5 Vols., Missouri Department of Transportation, Project No. NBIH (6) (Loveland, Colorado: Fraserdesign, Inc., 1996).

¹⁹Missouri State Highway Board, *Report of the State Highway Board of Missouri for the Period Ending December 1, 1918* (Jefferson City: Hugh Stephens Company, Printers), *passim*.

County Court, and was constructed without the involvement of the Missouri State Highway Department or the State Highway Board.²⁰

The Carrollton Bridge replaced a fifty-year old covered bridge built in 1868. The crossing was a continuation of Carrollton's Main Street leading south from the county courthouse to a ferry crossing on the Missouri River bottom. By the late 1910s, the road had received a macadamized surface. In August 1918, the county court under Presiding Judge W. D. Pinney solicited bids for construction of the new steel bridge over Wakenda Creek. On September 24 the court awarded the construction contract to the Kansas City Bridge Company for \$16,000. County Highway Engineer D. W. Frush signed the contract on behalf of the county court.²¹ During his tenure as presiding judge, Pinney had been a fiscal conservative, refusing to spend more than the county could afford, particularly for new bridges. As reported in the *Carrollton Daily Democrat*, "Bridges were needed in all parts of the county, but he [Pinney] was deaf to the appeals of friend and foe alike. He was willing to call an election at any time to vote money for bridges, but steadfastly refused to sanction the building of more than the county could pay for. His best friends appealed to him in vain." Evidently, then, Pinney and his fellow members of the county court, Joseph B. Bargold and A. B. Sawyer, Jr., had believed a new bridge over Wakenda Creek to be a top priority and had found the money for its construction. When they left office at the beginning of 1919, Carroll County was out of debt and in the black.²²

Over a month after awarding the contract, on November 7, 1918, the court authorized a first payment of \$6,000 to the Kansas City Bridge Company. Equipment and materials arrived at the bridge site through December until it practically blocked off the roadway. Construction began at the end of December, overseen by R. A. Murphy of Kansas City Bridge. Through January and February 1919, the two concrete abutments slowly took shape while the old covered bridge was carefully dismantled. The steelwork began in about mid-March once the falsework supports had been erected. Meanwhile, the county court authorized a second payment of \$6,000 on March 6, and the third and final payment of \$4,000 on April 8, 1919. An accident interrupted progress on the bridge in April when Murphy, the construction foreman, caught his sleeve in the concrete mixer and badly mangled his arm and wrist. The bridge opened for traffic on Saturday, May 3, 1919. Pleased with the new structure, Carrollton's newspaper called it "a great piece of modern engineering," with "enough room for two vehicles to pass easily . . . The bridge work is olive green, and is a very handsome product."²³

²⁰Carroll County Road Record Book, 1909-1920 (microfilm) (Jefferson City: Missouri State Archives, Missouri State Information Center), 550, 587.

²¹Carroll County Historical Society, *Carroll County, Missouri, 1910-1968* (Marceline: Walsworth Publishing Company, 1968), 29; Carroll County Court Minutes 1916-1918, 290 (microfilm) (Jefferson City: Missouri State Archives, Missouri State Information Center); *Carrollton Daily Democrat*, September 26, 1918.

²²*Carrollton Daily Democrat*, January 2, 1919.

²³Each of the three payments toward the bridge came out of Carroll County's general revenue fund. Carroll County Court Records, Vol. 1, 1916-1918, 615; Vol. 2, 1918-1921, 42 (microfilm)

The Kansas City Bridge Company likely designed the Carrollton Bridge. (Plans for the structure have not been located).²⁴ Since its incorporation in January 1893, the Kansas City Bridge Company had built numerous steel bridges throughout central and western Missouri and the Midwestern Plains states. Within Carroll County the company garnered well over a dozen bridge construction projects between 1899 and 1918, and at the time of the Carrollton Bridge project in 1918-1919, had a contract for another bridge in Van Horn Township near Bogard.²⁵ Most of the company's surviving structures in Missouri date from the 1890s through 1920. These include over a dozen pin-connected Pratt through truss bridges with spans up to 150 feet in length, and seven pin-connected Parker through trusses with spans up to 170 feet. Shorter spans include numerous Pratt pony trusses and half-hip pony trusses, both pinned and rigid-connected; several pinned Pratt bedstead trusses; and numerous steel stringers. The company also built some of the first rigid-connected Warren pony trusses, the earliest dating to 1904. While longer than the other riveted Warren pony trusses erected by the Kansas City Bridge Company, the Carrollton Bridge was probably based on one of their earlier designs. In the years after 1920, the company's focus evidently shifted to larger through truss structures, such as the Lexington Bridge completed in 1925, and Platte County's Fairfax Bridge built in 1935. The Manchester Trafficway, completed in 1940, is the last known bridge attributed to the Kansas City Bridge Company.²⁶

Joseph Warren Hoover, the founder and president of the Kansas City Bridge Company, had strong ties with other major bridge companies. Born near North Canton, Ohio, in 1850, Hoover received a civil engineering degree from the University of Michigan in 1875. He served as chief engineer of the Indianapolis Bridge Company for three years before joining the Wrought Iron Bridge Company of Canton, Ohio, in 1878. In 1884, Hoover moved to Kansas City as the western agent for Wrought Iron Bridge, and continued in that position after the American Bridge Company purchased Wrought Iron Bridge in 1900. (While working for the Wrought Iron Bridge Company, Hoover incorporated his own Kansas City Bridge Company in 1893). In 1902, Hoover became the western agent for the Canton Bridge Company, resigning that position in 1909 for health reasons. In addition to his continuing interests in the Kansas City Bridge Company, by 1908 Hoover also held stakes in the Hoover Construction Company and the

(Jefferson City: Missouri State Archives, Missouri State Information Center); Carroll County Court Minutes, 1916-1918, 302; 1918-1921, 36, 44; Carroll County Funds Book, 1917-1921, 65, 85, 89 (microfilm) (Jefferson City: Missouri State Archives, Missouri State Information Center); *Carrollton Daily Democrat*, December 24, 1918, February 27, March 13, April 11, May 1, 1919.

²⁴Fraser states that "the [Carrollton] bridge is virtually identical with later MSHD-designed Warren trusses," but indicates the designer's identity is unclear. Fraser, "HAER Inventory Data Sheet, Carrollton Bridge, (No. F-404)," Missouri Historic Bridge Inventory.

²⁵Fraser, Missouri Historic Bridge Inventory, *passim*; Carroll County Court Minutes 1918-1921, 69.

²⁶Fraser, Missouri Historic Bridge Inventory, *passim*.

Contractors Machinery Company. He remained with Kansas City Bridge Company in an advisory capacity until his death in June 1925. Hoover was described as “highly educated and one of the ablest technical engineers in everything connected with bridge manufacture and bridge construction.”²⁷

By 1910, Hoover had relinquished his presidency of the Kansas City Bridge Company to Alexander Maitland, Jr. Born near Richmond, Missouri, in 1866, Maitland received his civil engineering degree from the University of Missouri in 1889. He held a brief tenure there as an assistant professor in civil engineering, then served five years as an assistant engineer in the bridge and building department of the Missouri Pacific Railroad. Maitland came to Kansas City in 1898, and in 1901 became the contracting manager for the American Bridge Company under Joseph Hoover. In 1905 Maitland joined Hoover’s Kansas City Bridge Company, soon becoming its president, and remained there at least through 1918 when the Carrollton Bridge was constructed. H. P. Treadway served as the company’s vice president under Maitland. Both Maitland and Treadway were founding members in 1915 of the Kansas City Chapter, American Society of Civil Engineers. The Kansas City Bridge Company continued in operation through at least 1940.²⁸

Following the passage of Missouri’s Centennial Road Law in 1921, the Missouri State Highway Department subsumed the Carrollton Bridge as a part of State Route 3, a road running the length of the state between Iowa and Arkansas. Up to that time, state road work in Carroll County had been minimal. The Carroll County Court had appointed its three-member county highway board in February 1919, and when these men refused to serve, appointed three others in April. While receiving state aid for local bridges, Carroll County Highway Engineer D. W. Frush failed to seek any money for the county’s two designated state roads, Routes 3 and 10. By the end of 1920, no state or federal money had yet been allocated for Carroll County’s portions of these two state roads. In 1924, the Missouri State Highway Department graded over eight miles of Route 3 from Carrollton south to the Missouri River (including the Carrollton Bridge), then paved this section of highway in the following year. This work corresponded with the construction of the Waverly Bridge over the Missouri River south of Carrollton. This segment of State Route 3 was soon redesignated U.S. Routes 65/24, and is now part of Business Route 65.²⁹

²⁷Walter Williams and Floyd C. Shoemaker, *Missouri: Mother of the West*, 5 Vols. (Chicago: American Historical Company, 1930), 4: 15-16; Carrie Westlake Whitney, *Kansas City, Missouri, Its History and Its People, 1800-1908*, 3 Vols. (Chicago: S.J. Clarke Publishing Company, 1908), 396-399. Albert M. Blodgett was an early associate in the Kansas City Bridge Company, but soon teamed up with E. I. Farnsworth to form Farnsworth and Blodgett, and after 1899 operated his own A. M. Blodgett Construction Company. *Kansas City Times*, May 29, 1942.

²⁸ Kansas City Press Club, comp., *Men of Affairs in Greater Kansas City* (Kansas City: Gates City Press, 1912), 43; *Kansas City, Missouri, City Directory, 1910* (Kansas City: Gates City Directory Company, 1910), 836; *Kansas City, Missouri, City Directory, 1918* (Kansas City: Gates City Directory Company, 1918), 1,274.

²⁹Carroll County Court Minutes, 1918-1921, 42; Carroll County Court Record, 1918-1921, 35;

Missouri State Highway Board, *Report of the State Highway Board of Missouri for the Period Ending December 1, 1920* (Jefferson City: Hugh Stephens Company, Printers), 209; Missouri State Highway Department, "Plan and Profile of Proposed State Road, Route 3, Carroll County," 1923, Project No. FAP-242, Sections A and B. Plans and Records Office, Design Division, Missouri Department of Transportation.

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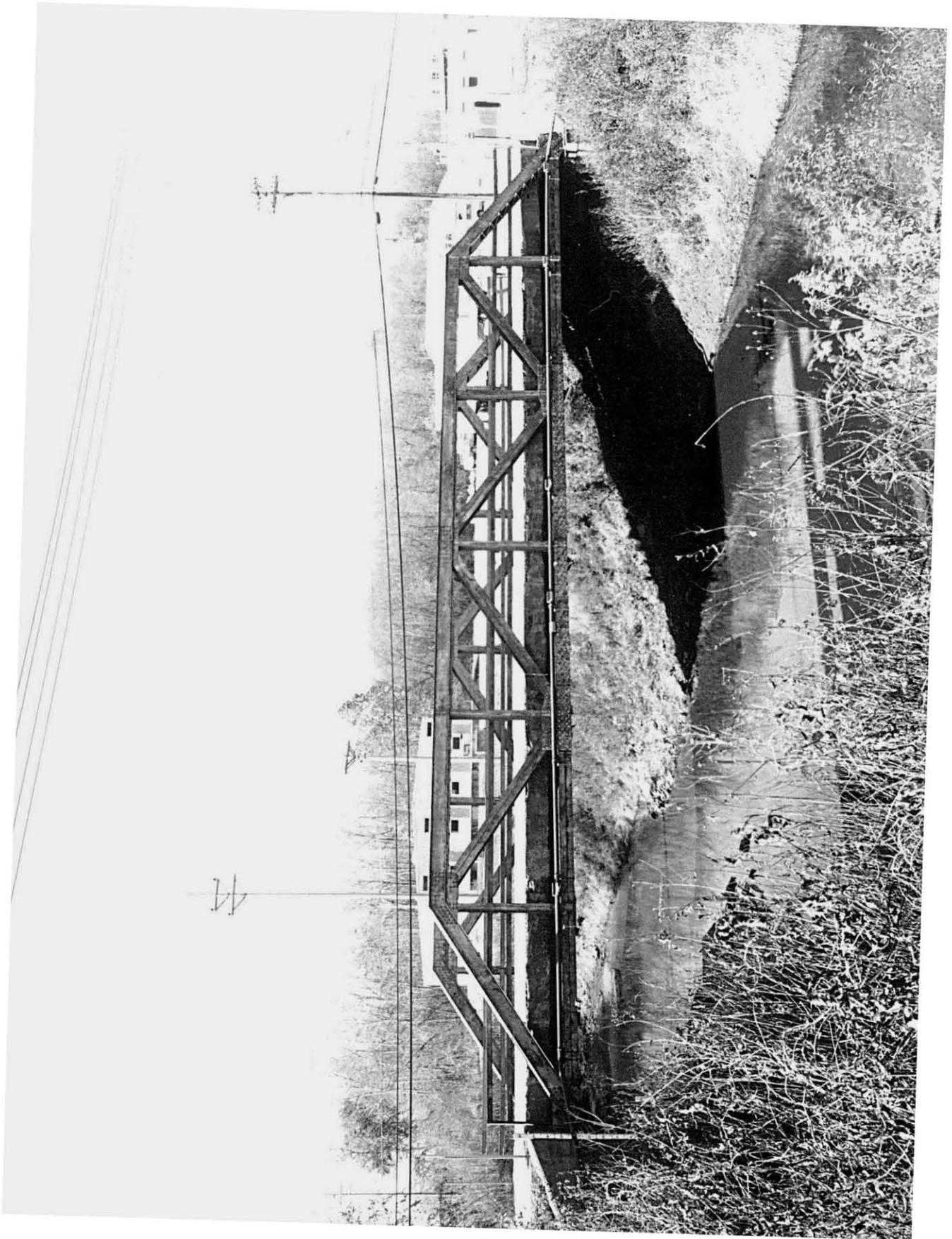
Bridge No. F-404

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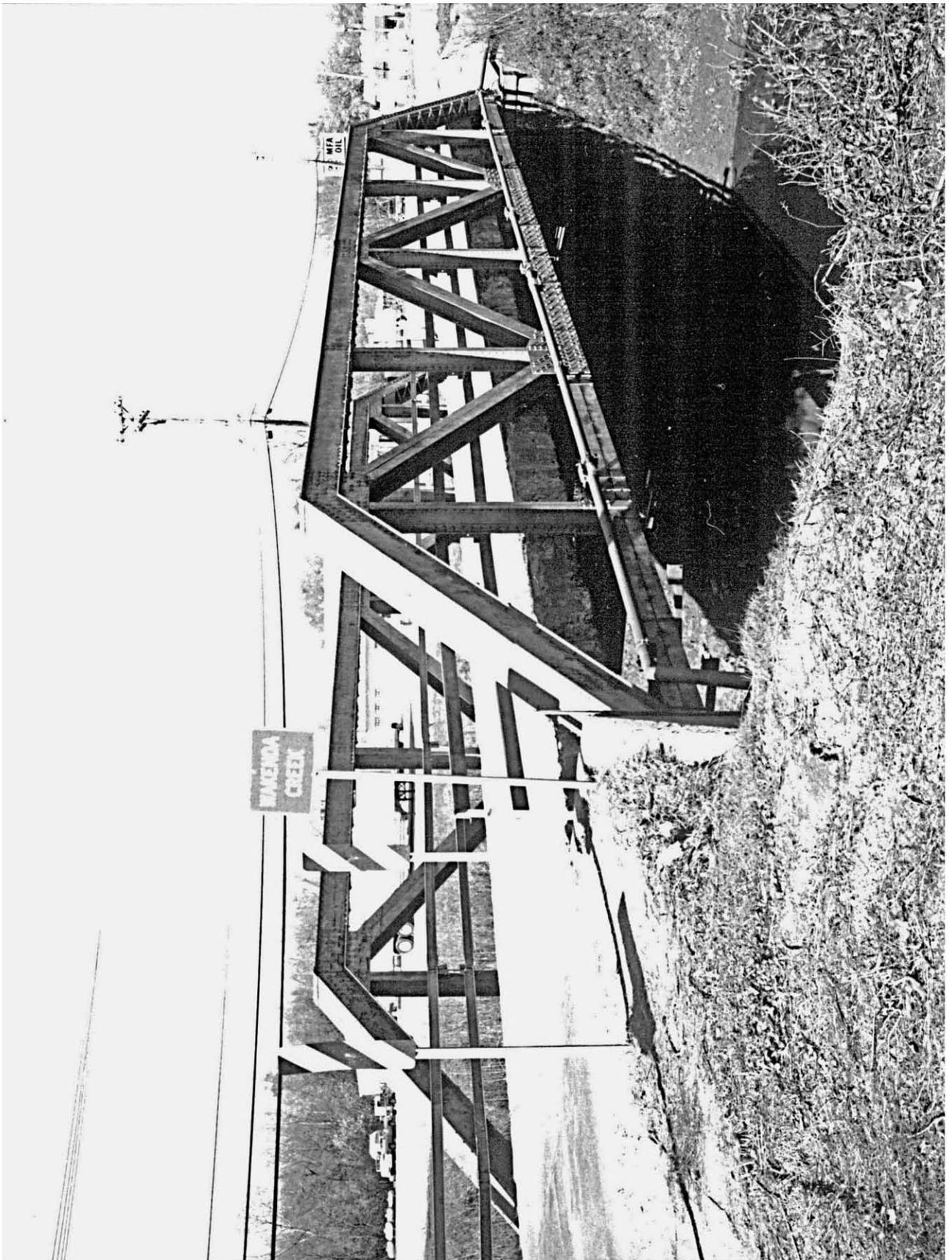
Shaun W. Schmitz, Photographer

November 1998

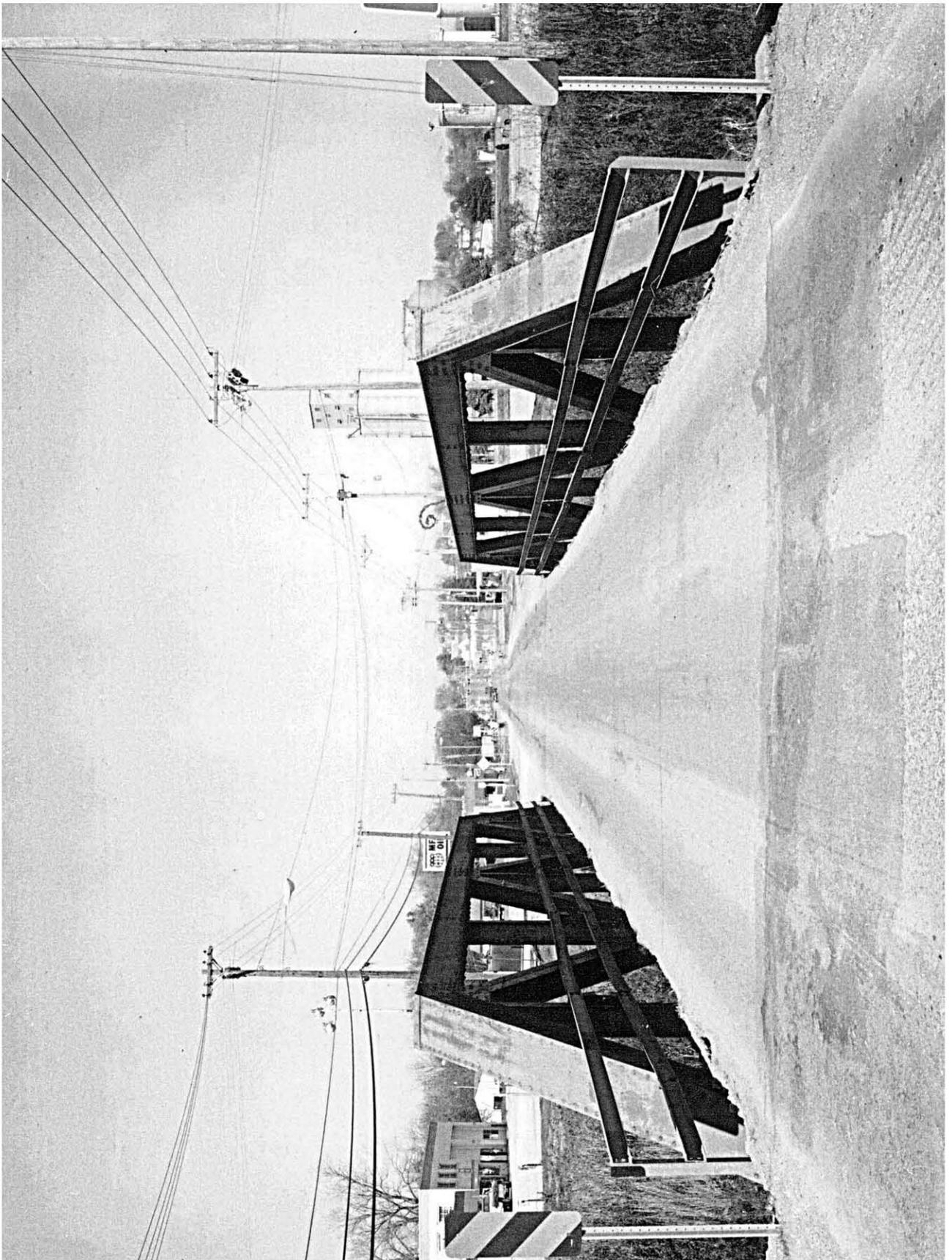
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#1 of 10: Carrollton Bridge over Wakenda Creek, view to the west.



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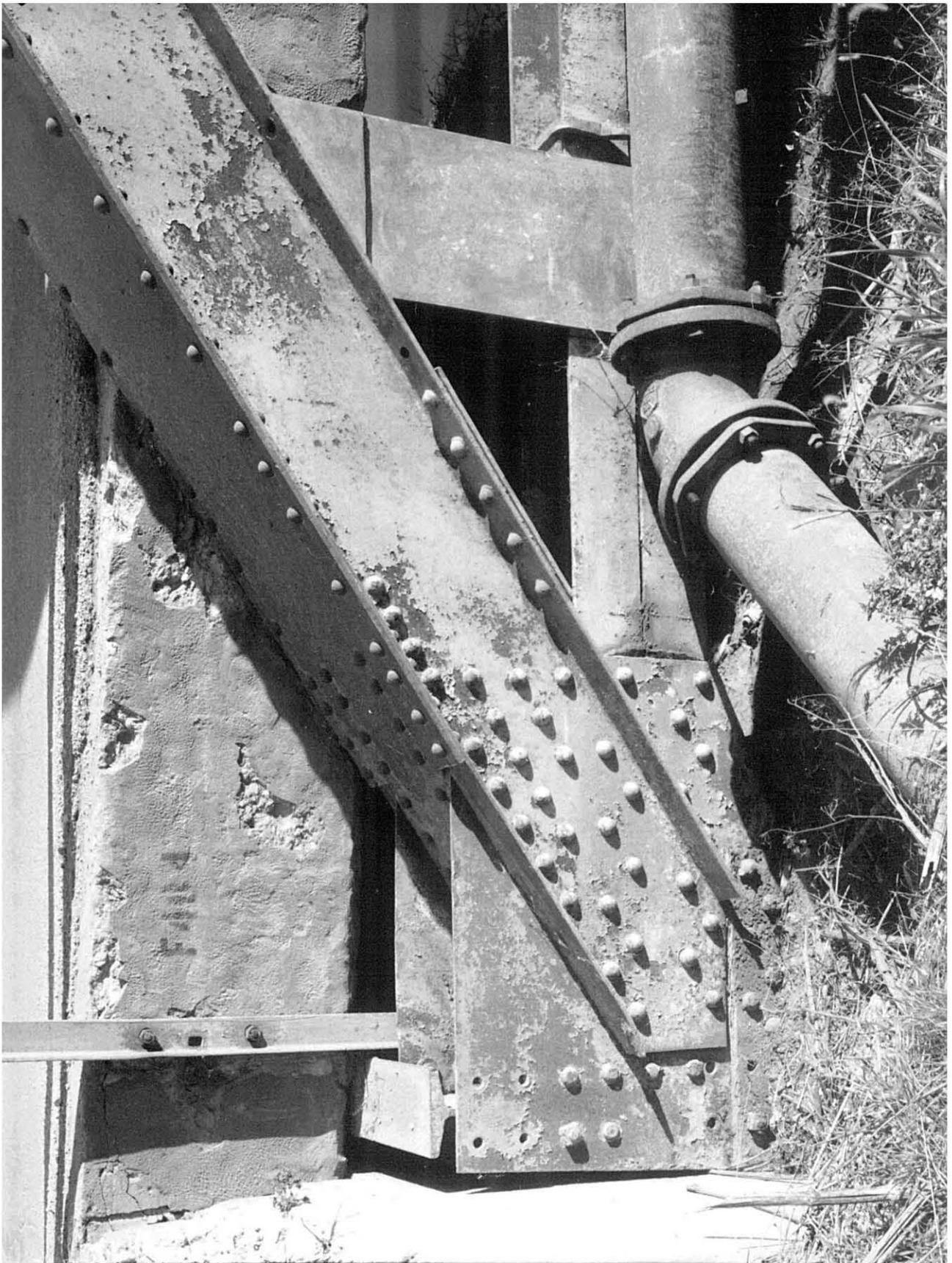
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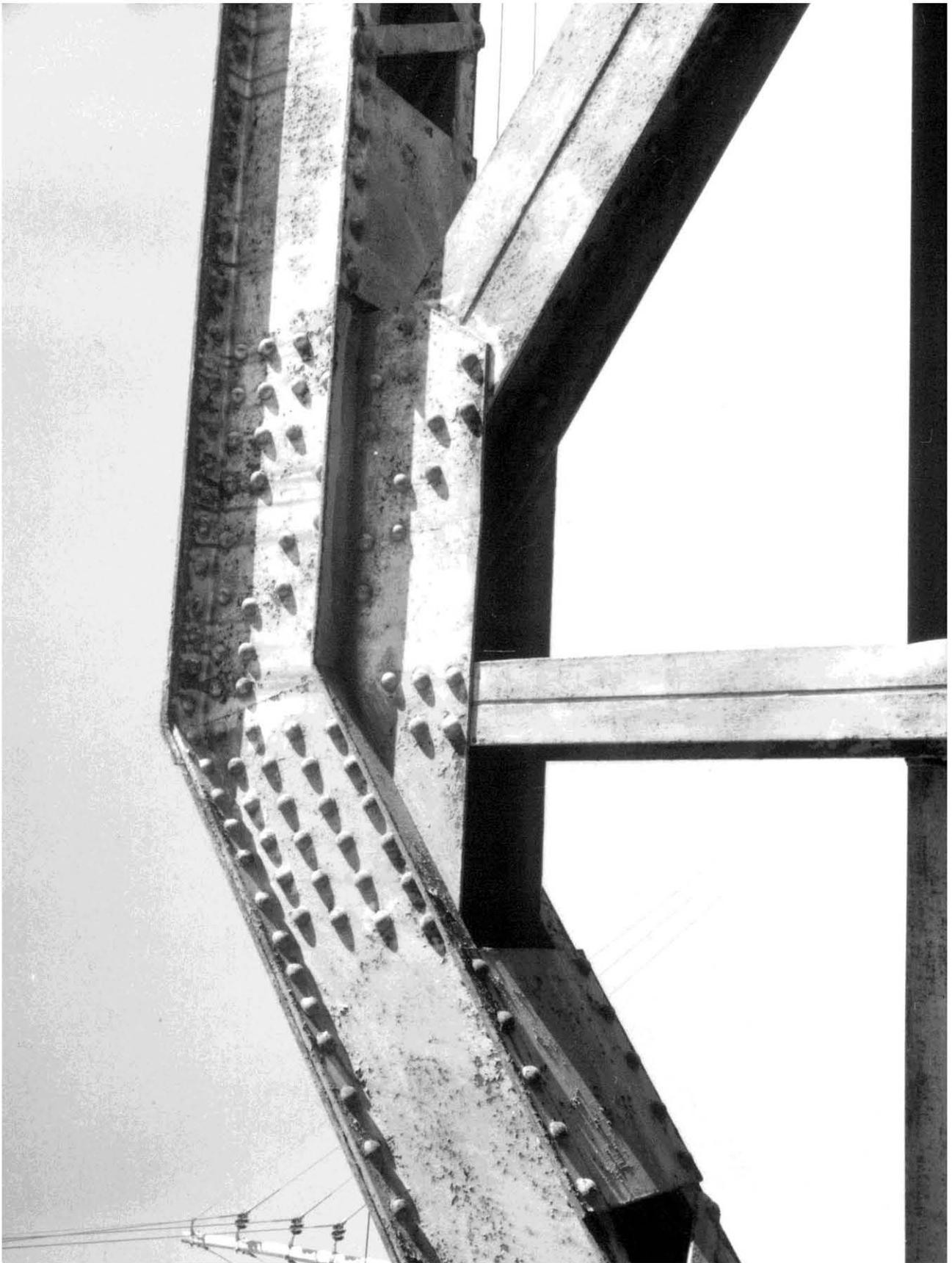
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#10 of 10: View of floor system (steel floor beams and reinforced concrete stringers).