



**MITIGATION
DOCUMENTATION FOR THE
BLACK HAWK BRIDGE OVER
THE MISSISSIPPI RIVER IN
LANSING, ALLAMAKEE
COUNTY, IOWA**

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prepared for
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

prepared by
Tallgrass Archaeology LLC
Ray J. Werner, Principal Investigator
2460 South Riverside Dr.
Iowa City, IA 52246

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ABSTRACT

This data recovery project covers the architecture and history of the Black Hawk Bridge, connecting Lansing, Allamakee County, Iowa to rural Crawford County, Wisconsin, south of the Village of DeSoto. The bridge consists of two steel, cantilevered, through truss spans with a suspended through truss span between them. There are six inclined approach spans off the east end of the bridge, where an earthen causeway and four 1950s slough bridges then lead to Wisconsin Highway 35. The west cantilevered span is abutted directly to the bluff on the Iowa side, meeting N. 2nd Street/Iowa Highway 9. This document identifies the defining physical characteristics of the bridge and develops a deeper understanding of a number of historical questions, some of which were posed in the 1992 Historical Architectural Engineering Record (HAER) form for the bridge. Other questions include those identified by the Iowa Department of Transportation. In particular, this report explores the precarious financial situation that the bridge company was in when badly damaged in 1945. It explores in detail the fraud and long-lasting legal problems that ensnared the bridge company and its stakeholders. These questions and the various significances of the bridge are situated within the appropriate historic contexts.

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MITIGATION DOCUMENTATION FOR THE BLACK HAWK BRIDGE OVER THE MISSISSIPPI RIVER IN LANSING, ALLAMAKEE COUNTY, IOWA

INTRODUCTION TO THE BLACK HAWK BRIDGE & THIS PROJECT

The Black Hawk Bridge (Figure 1) spans the Mississippi River from Lansing, Allamakee County, in the far northeast of Iowa, to rural Crawford County, Wisconsin. For many, it is a special, beloved structure. It is over 1,100 feet in length and set high above the river's waterline. Its cantilever design is impressive, though the style was neither particularly common nor rare for such spans across the nation's larger rivers in that period. Many bridges of this age and style have been replaced throughout the country. In addition to length and style, its setting is also notable. The bridge is flanked on the west by the small town of Lansing, which is nestled along the bluffs of the river and up a drainage valley. Conversely, its east end requires nearly 2.5 miles of built earth causeway and four smaller bridges to cross the muddy sloughs and timbered islands on that side of the Mississippi River. The bridge stretches through the public wildlife areas there. In the simplest terms, this is not where one would expect to find such a striking structure. Its competitor bridges were all located at larger urban centers such as La Crosse and Prairie du Chien, Wisconsin, Dubuque, Iowa, and the Quad Cities.

The geography around the Black Hawk Bridge (Figures 2 and 3) is notable because it crosses one of the most recognizable rivers in the country. The Mississippi River is enchanting for those who visit from far away as well as for those who live nearby. Visitors from across the globe want to see the "Mighty Mississippi," "the Father of Waters." Groups of international tourists often credit Mark Twain for their interest in wanting to see the Mississippi River, as it was in many ways romanticized through his writings. Indeed, especially along the Iowa-Wisconsin border, the river provides a spectacle. This part of the river is flanked by bluffs that are among the highest along the river's entire course. The vegetation is transitional between climate zones 5 and 6, and the autumnal color changes are often vibrant. Also of note are the broad lowlands along the river that provide a complex swirl of sloughs and backwaters. Another characteristic of the bridge's setting is the residential neighborhood into which the west span and west abutment were inserted. Many of these houses are of historic age, and some of them retain good historic integrity. Many of these houses are from the mid-to-late-19th century, representing a period of growth in Lansing prior to the building of the bridge. This neighborhood is built along two streets and an alley that are stepped up from the river, overlooking the landscape and the bridge. Among this setting, extending from the small, bluff-side town across the broad river and into the natural wildlife area, Black Hawk Bridge is situated.

The bridge is somewhat unusual for its history. Construction of Black Hawk Bridge was funded through the public sale of stock in a small community, a significant feat in its own right. At the time of construction, it was touted as the only Mississippi River bridge to over-pass the railroad rights-of-way on both banks and for having a 30+ ton carrying capacity, much more than any previous spans over the river in the region. Those were quite the claims for such a small community. As a business, the bridge company struggled, and the stockholders had concerns almost immediately after its opening. This was largely due to it being the subject of local controversy. The bridge company and the local ownership were the victims of a conspiracy,

including stock fraud and other crimes, many details of which are brought to light in this document. The litigation involved with these crimes ensnared the bridge company for over a decade. When a 1945 ice flow destroyed parts of the bridge system, the company was unable to repair the damage. Eventually, the states of Iowa and Wisconsin banded together to purchase and rehabilitate the bridge. However, even that required a passionate grassroots movement of citizens, the navigation of state and local politics, and the firm words of newspaper editors in both states. Some material changes were made to the bridge at that time. Importantly, the deck was replaced with a steel grid, but even that has become a beloved and defining characteristic of the bridge. This steel grid meant people could now see through the deck while crossing the bridge and into the muddy waters of the Mississippi River below. That produced a more profound element of excitement and sometimes even fear in those passing over the bridge. It also produces unique vibrations that make the bridge ‘sing.’

By virtue of being a bridge, the structure is special for the connections it made. It immediately brought increased traffic and business to the community. The lands in Wisconsin, even those within eyesight, seemed like a different world before the bridge was built. It brought the local and regional community together in many ways. It connected the commerce of the region and brought nearby Wisconsin students into the Lansing school. It also encouraged tourism, increasing the number of visitors and dollars coming to the city and region.

The historic contexts in which the Black Hawk Bridge can be situated are well-established and thoroughly documented by the work of Tallgrass Historians and Tallgrass Archaeology in their 2016 and 2018 surveys. Chief among these contexts is transportation. Historically, Lansing as a community was interconnected with a wide range of transportation modes, including river transport, rail transport, and automobile/highway transport. The bridge itself can be understood through the lens of automobile transportation that grew through the early 20th century. This phenomenon and associated grassroots movements encouraged the country and states to make significant efforts to build a network of high-quality, safe roads and other connections. The bridge is essential to the economic and commercial development of the city and region. It has important architectural elements. Furthermore, the bridge even has a place within the contexts of business and law, relying on various precedents and setting others regarding issues of ownership, construction methods, and ongoing operation of bridges along both navigable waters and across interstate borders. The bridge can be situated within the contexts of architecture and engineering, both for its usage of concrete and steel as well as its cantilevered through truss design that upholds another through truss span. The bridge was financed—in large part locally—in the early years of the Great Depression, making it representative of that part of the nation’s history as well.

For these reasons, the bridge became an icon. It has become synonymous with Lansing and its people. Its profile and visage were used in numerous ways, from official logos and seals to memorabilia and souvenirs. It holds a place in the hearts of the people here and the hearts of the many who only pass through.



Figure 1. South longitudinal elevation of bridge, looking north from the Driftless Education Center.

Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 2. Current aerial showing main spans of bridge and approach spans leading to causeway.

Two dolphins can be seen north of two piers on Wisconsin side of channel.

Source: ExpertGPS mapping software, accessed August 2022.

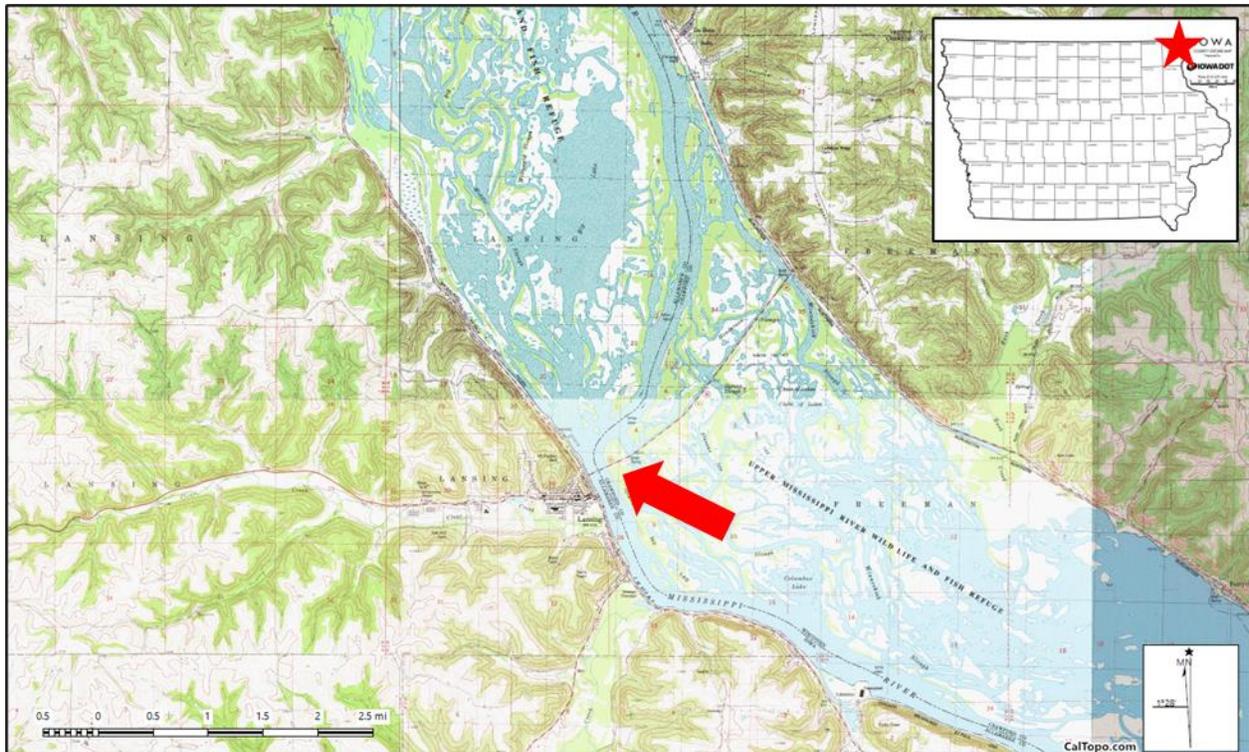


Figure 3. USGS topographic map showing the Mississippi River (main channel marked by line of Iowa-Wisconsin border) and the Black Hawk Bridge (red arrow). Note the many sloughs to the east part of the bridge structure, and the near-90-degree turn in the main channel to its north. Inset: Map of Iowa counties showing project location (red star) in Allamakee County.

Source: ExpertGPS mapping software, accessed August 2022.

This Project & Methodology. Tallgrass Archaeology LLC was contracted by the Iowa Department of Transportation to conduct this study of the bridge as part of the data recovery/mitigation project concerning the Black Hawk Bridge in preparation of its ultimate removal. Because of the bridge’s role in the history, culture, and identity of Lansing and the region, commemorating and documenting it is of the utmost importance. Such a report can document important architectural and historical aspects of a place and investigate aspects of its past that may not have otherwise been fully explored. In the case of this bridge, much attention is given to the financial and legal predicament of the company through the first decades of its existence. However, while this area of inquiry has been touched on previously it has not been thoroughly documented. For this project, mitigation is also a sort of courtesy to those who do and have loved and depended on the bridge for so many years. The research phase of this project was driven by a set of questions outlined by Fraser and McWilliams in the 1992 Historical Architectural Engineering Record (HAER) document for this bridge:

1. What were the toll revenues before the bridge was closed as a result of the damage to the substructure? Could the bridge have eventually met original expectations for revenue generation?
2. Who was Melvin Stone?
3. What was the complete corporate history of McClintic-Marshall Company?
4. How was the substructure work performed?

Other research-driving points included:

5. Provide an assessment of character-defining features merging historic plans with contemporary documentation.
6. Research the company's charter requirements for public-private undertakings.
7. Provide an overview summary of maintenance and rehab work and inspection reports, including bridge closures related to these events.
8. Summarize the history of barge strikes.
9. Provide a detailed summary of earlier documentation sources.
10. Investigate various efforts to enhance the bridge experience and ways that the bridge has been celebrated or commemorated.

Research was conducted using historic newspaper archives, numerous local, county, and state histories, and secondary materials pertaining to the history of transportation and bridges more generally. Historic maps and aerial photographs were consulted. In-person, telephone, and Email conversations and interviews were conducted. Historical collections of private persons and public organizations were consulted. Legal documentation and architectural information were sourced through various online repositories and databases. Just some of the organizations contacted with research questions were: the Wisconsin State Archives; Wisconsin Historical Society in Madison, Wisconsin; City of Prairie du Chien, Wisconsin city hall; State Historical Society of Minnesota; special collections of the University of Wisconsin-La Crosse; United States Coast Guard bridge administer offices; U.S. Coast Guard Headquarters; National Archives and Records Administration; Iowa Secretary of State; Delaware Secretary of State; Delaware Department of Corporations; Delaware State Archives. Newspaper research was conducted mostly through the La Crosse, Wisconsin papers through online repositories, though some other Iowa and other state's newspapers were also identified.

This research was conducted by Ray J. Werner of Tallgrass Archaeology LLC. Werner also prepared this report.

PHYSICAL DESCRIPTION & DEFINING CHARACTERISTICS

Generally, the Black Hawk Bridge consists of one steel, through truss span that is in suspension between two steel, cantilevered, through truss spans. The cantilevered spans each have an anchor arm that connects to their respective approach and a cantilever arm that connects to the suspended truss. The cantilevered spans are rigid and peaked, and a large vertical beam supports the peak. This vertical beam, connecting the anchor and cantilever sections, acts as a fulcrum on which the anchor counterbalances the cantilever. The cantilever spans each sit on a large concrete pier. The west anchor arm or span attaches to a large concrete abutment on the Iowa side. The approach to the east span consists of a series of steel deck truss “approach spans” that are steeply pitched upward to the level of the cantilevered and suspended spans, approximately 55 feet above the high-water line. This structure’s original estimated total carrying capacity was touted as thirty tons when built. The east approach spans sit upon concrete piers that decrease in height from the east cantilever arm to the east concrete abutment. There, the bridge meets a 2.5-mile, built, earthen causeway. There are four slough bridges along the causeway: one deck truss bridge over Winneshiek Slough and railroad at the Wisconsin bank of the river and three concrete and steel girder bridges over other named sloughs. These bridges, the causeway, the east abutment, and the first approach spans were modified and/or replaced during the 1950s rehabilitation project. The west abutment, three main spans, and all but one of the east approach spans are mostly as they were.

The Superstructure

The design for this superstructure (Figure 4) was changed mid-construction, at about the time when the concrete piers were near completion, and no steel installation had been completed. The bridge company hired Melvin B. Stone, a recognized bridge engineer from the Twin Cities, to redesign it at that time; the context of that decision is discussed later in this report. The new design was this cantilevered through truss design, which is estimated to have required less material and lower costs than any previous suspension or truss design would have required. Cantilevered designs were also becoming popular at that time for crossing broad rivers while requiring less material (Heritage Research LTD 2015:3-4). The predominant part of this structure is a steel, rigid-connected, cantilevered through truss of three distinct sections.¹ The center section of the bridge (Figures 5 and 6) is a five-paneled Pennsylvania Through Truss that is approximately 297 feet in length and suspended from each side by a cantilevered span. Each cantilever span (Figures 7 through 9) is approximately 415 feet. The total length of these three sections is approximately 1,127 feet. With the approach spans, the bridge’s total length is approximately 1,600 feet. Each cantilever span is a modified Warren Through Truss, consisting of a three-paneled, interior cantilever arm that connects to the suspended truss and a four-paneled, exterior anchor arm that connects to its respective approach. The west anchor arm connects the west pier (pier 1 in the Burns McConnell diagram) to the abutments on the Iowa side. The east anchor span connects from the second pier (pier 2 of the same diagram) to pier three, where it meets the approach spans described below.

¹ The 1992 HAER document for this bridge and other sources discuss the cantilever spans as one complete unit with an anchor arm and a cantilever arm. Other documents and depictions, including those in Burns McDonnell 2019, discuss them as having an anchor span and a cantilever span. Parsons Brinckerhoff 2005 describes this system as having well-secured, truss-like “back spans” that support the cantilever arms. For ease of definition in this report, each unit will be discussed in the terms defined by the HAER, each as one span with two arms.

A number of connections (Figures 10 and 11) are utilized in its construction. The center span is fully suspended between the two cantilevered spans (Fraser and McWilliams 1992). The Wisconsin site file neatly describes the connections of this span:

The upper chord has two channels with a cover plate and double lacing. The bottom chord consists of two I-beams riveted together with a center plate and batten plates. The verticals and diagonals each consist of two channel sections with double lacing. Verticals and diagonals are riveted to the top and bottom chords at gusset plates. Lateral bracing consists of two angle bars at the bottom and two angle bars with V-lacing at the top. Struts are made up of four angle bars with lacing... (Wisconsin Historical Society 2021).

Most members and connections on the cantilever spans are of similar construction. The primary difference is in the pin-connected segments. These are pairs of pin-connected flat bars that run along each side of each cantilever span. Each elevation of the bridge has two pairs of bars, one pair that flanks the outer flange plate at each connection and another that flanks the inner flange plate at each connection. The first segment of such bars begins at the lower chord of the cantilever arm and extends vertically to the top chord of the interior portal of that arm. The subsequent segments run from there, back along the upper chord of all three cantilever arm panels and the first adjacent panel of the cantilever arm, where it connects to the regular steel beam truss.

The outside width of the bridge is approximately 25 feet, with an interior deck width of about 21 feet. The main span provided approximately 55 feet of clearance from the water below. The cantilever, suspension, and approach spans appear to have been repainted circa 2013, per a stenciled description on the south side of the lower chord.

A defining characteristic of this design is the peak created at the top of the truss, where the anchor spans meet their corresponding cantilevered spans (Figure 12). In some known examples of similar bridges, these are towers. Like many others, the two peaks of the Black Hawk Bridge create a sort of “cat ear” pattern that is typical for this style and method of construction. The center, suspended span creates the appearance of a forehead or skull between the imagined ears. These peaks are necessitated by the physics of the anchor and cantilever design, in which the anchor pulls to counterweigh the cantilever and its load. Such peaks are distinctive of the style. The peaks/towers help the bridge counter move weight across the bridge. These bridges act with tension in the top chord/upper half and compression in the lower bottom chord/lower half. Because of the balancing act that the towers/peaks perform atop the piers and because of the weight they carry, these parts of the structure are typically more elaborate than the sections farther from the pier, where the designs are often lighter and less elaborate (Heritage Research LTS 2015:3-5; Parsons Brinckerhoff 2005:3-144).

East from the east anchor span is a series of six approach spans (Figures 13 through 15). The first five of these approach spans from west to east are steel deck trusses. However, the sixth, connecting Pier 8 to the east abutment, is composed of steel I-beams that were replacement materials used in the 1955-56 rehabilitation along with the adjacent concrete abutment. All these approach spans have the same steel grid deck, curb, and siderails as the cantilevered and suspended spans.

Another defining characteristic of this structure is the incline of the anchor arms and the east approach spans, best demonstrated from the angles provided in some of the photographs below.

Inside the through trusses are various horizontal and angled members that provide further sway support. Steel components of the superstructure came from various sources, including Inland Steel, US Steel, Carnegie Steel, and Chicago Steel. These company brands can be found in various places along the bridge's interior (Holth and McOmber 2021).

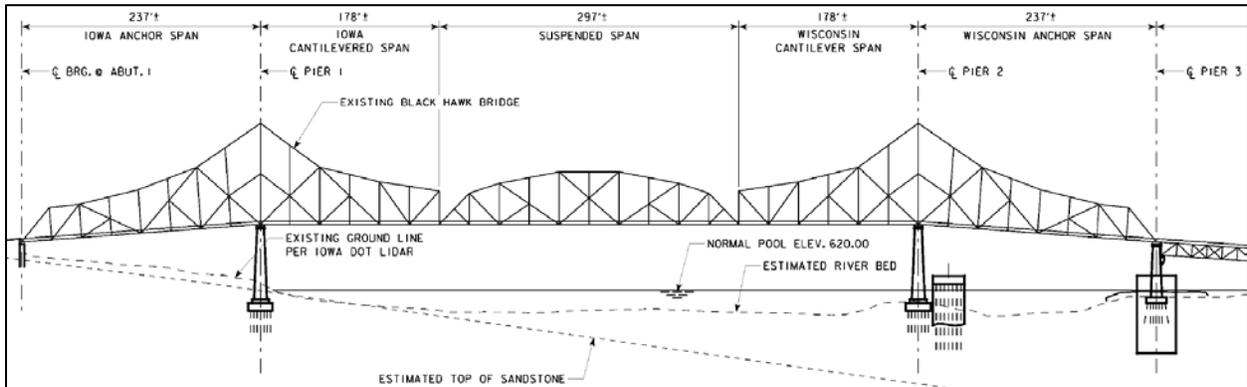


Figure 4. Diagram of south elevation of the Black Hawk Bridge main structure. Note the estimated depths of river bed and bedrock relative to the depths of the piers. This diagram shows the anchor and cantilever arms as separate spans. Source: Burns McDonnell 2019:8.



Figure 5. North side of suspended through truss span, looking southeast, from Front Street. Source: Tallgrass Archaeology LLC, September 18, 2022.

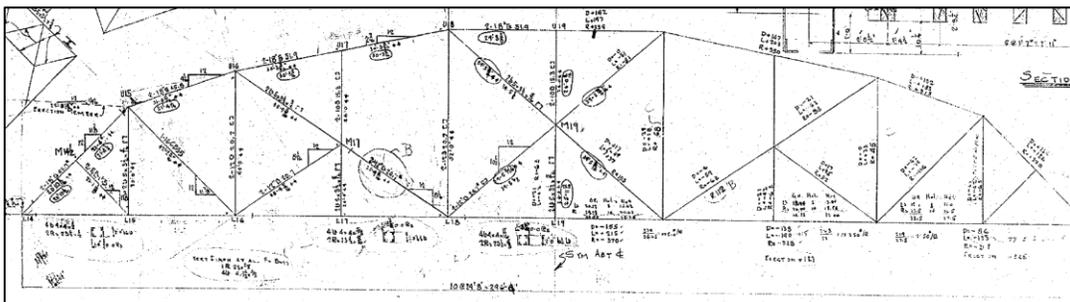


Figure 6. Historic shop drawing of suspended through truss. Source: McClintic-Marshall 1931.

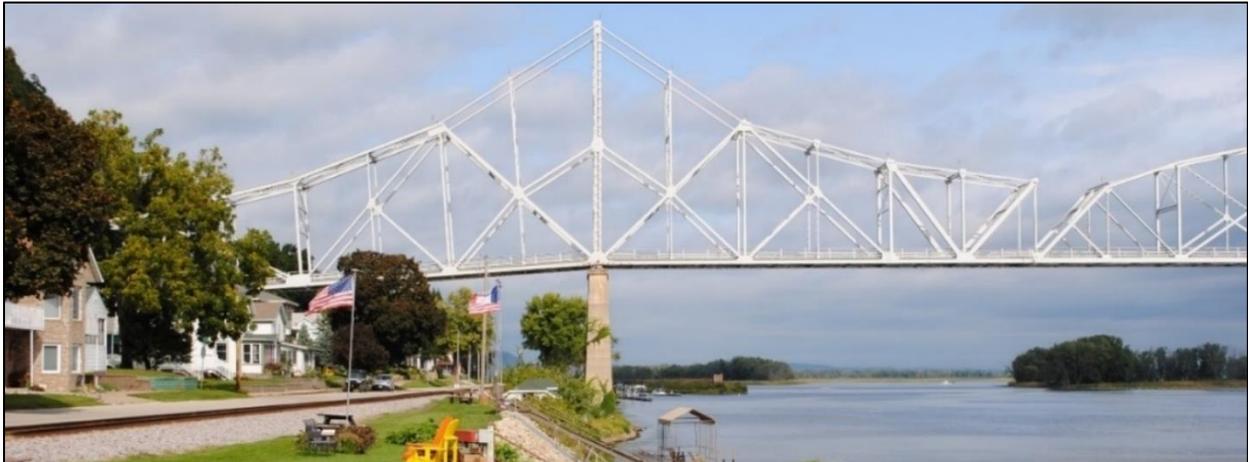


Figure 7. South elevation of west cantilever span, looking north from riverside park.
Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 8. South side of east cantilever span, looking northeast.
Source: Tallgrass Archaeology LLC, September 18, 2022.

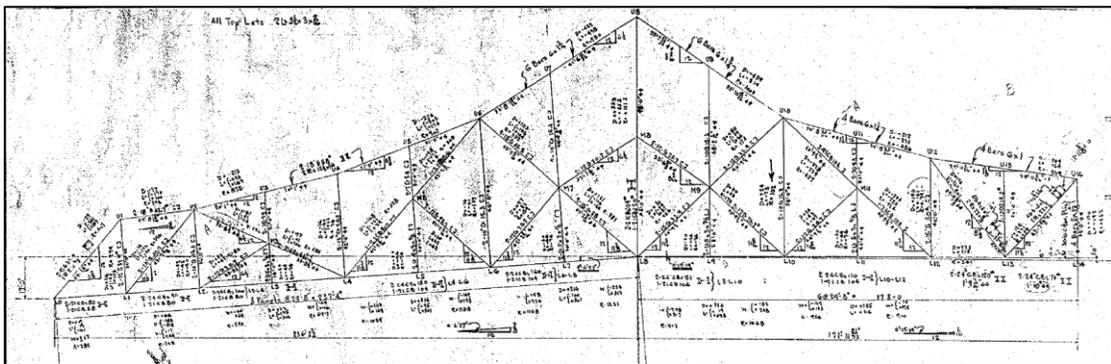


Figure 9. Historic shop drawing of a cantilever span. Source: McClintic-Marshall 1931.



Figure 10. Detail view of suspension-cantilever connections including pin connection, looking northeast. Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 11. Examples of superstructure connections. Left: gusset connection. Right: pin connection. Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 12. Detail view of center vertical and other joints and lacing of west cantilever span peak, looking north. Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 13. View of approach span deck and east through truss from causeway, looking west. Residences of Lansing, Iowa are visible beyond.
 Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 14. South side of deck truss approach spans, looking northwest.
 Source: Tallgrass Archaeology LLC, September 18, 2022.

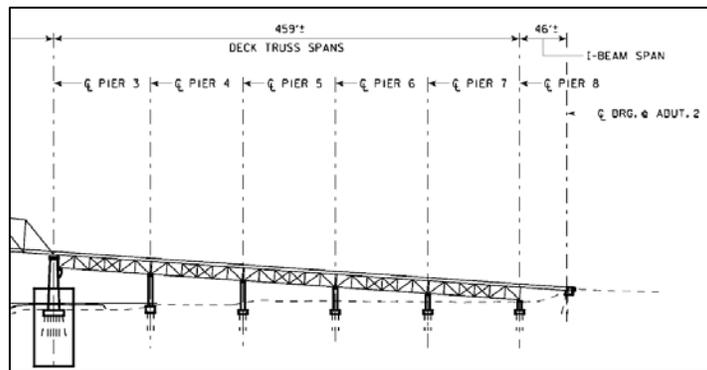


Figure 15. Diagram of south elevation of the east approach spans and east part of main structure.
 Source: Burns McDonnell 2019:8.

The deck along the entire superstructure comprises open steel grids (Figure 16) that were installed during the 1955-56 rehabilitation of the bridge. This deck replaced the bridge's historic deck which consisted of asphalt planks over a wood deck (Figure 17). This steel grid flooring system is a distinctive characteristic of the bridge, and adds an element of interest to its users. Local residents speak of the sound the grid makes when automobiles pass over it and how each vehicle makes a slightly different sound or pitch. For this reason, the local community refers to it kindly as "the singing bridge." In Casella and Deiber 2004, it is noted that such steel grid decks, even with post-1940 retrofits, can contribute to the overall significance of bridges; such floors became important historically, especially after 1940, for aging wood-deck bridges whose capacity could not carry the heaviness of concrete (Casella and Deiber 2004:67).



Figure 16. View from below of steel grid deck and braces across bottom of the bridge, looking southwest under the west span. Note the visibility through the deck.

Source: Tallgrass Archaeology LLC, September 18, 2022

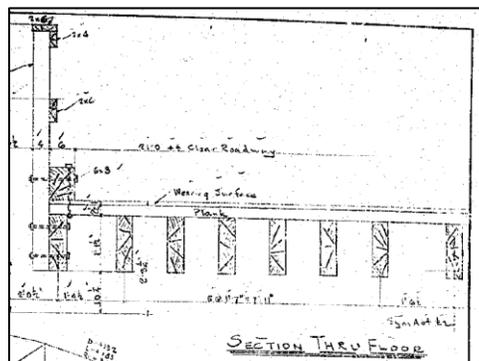


Figure 17. Historic shop drawing of through-section of bridge deck, showing steel superstructure, wood plank layer, and asphalt "wearing surface" layer. Source: McClintic-Marshall 1931.

The Substructure

The substructure of the bridge consists of concrete piers with foundational piles and concrete abutments that were mainly built in 1930-31. Except for some repairs to correct spalling and occasional damage to the concrete, and the replacement of the east abutment, the substructure is largely intact from its original design and materials. From west to east, these are:

- **West Abutment:** built 1930-31; concrete with concrete wings; tapered; met by west anchor span
- **Pier 1** (Figure 18): built 1930-31; concrete with large, oval-shaped opening; tapered; supports west cantilever span
- **Pier 2** (Figure 18): built 1930-31; concrete with two arched openings, similar to span one but with middle concrete component; supports east cantilever span
- **Pier 3** (Figure 18): built 1930-31; concrete span with no openings; has two supporting components on its east side supporting bottom of the deck truss; where east cantilever span and west approach span meet
- **Piers 4 through 8** (Figure 19): built 1930-31; concrete; straight/non-tapered ends; no openings; descending in size from west to east; the north and south ends of each pier are designed as 90-degree offset squares or diamonds that rise higher than main wall on each pier and support each side of deck truss structure; the increase of sand (dredged?) has covered most of the shorter piers
- **East abutment** (Figure 20): rebuilt 1955-56; connects east approach span to the earthen causeway, which was raised and modified slightly at that same time; concrete; mostly covered by sand (dredged?) and vegetation; was originally wood



Figure 18. Piers 1 through 3 as seen from Wisconsin, looking west. Note the two concrete truss supports on the east elevation of Pier 3 and the differences in design of the openings on Pier 1 and Pier 2. Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 19. Piers 4 and 5, samples of approach span piers, looking northwest.
Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 20. East abutment of approach spans at causeway, looking northeast.
Source: Tallgrass Archaeology LLC, September 18, 2022.

The West Side

The west approach, on the Iowa side, is quite a bit different from its Wisconsin counterpart. Here, the west span of the bridge connects directly to the west abutment (Figures 21 and 22) on the Iowa side, creating an immediate stop for bridge users at a T-Intersection with IA-9/IA-26/N. 2nd Street in Lansing. The intersection is on a naturally occurring bench or shelf along the landform and against a bluff. There are residences in close proximity to the abutment, with the concrete retaining walls and wings extending along the bluff side of these houses. There are also residences at the top of the bluff, overlooking the bridge and surroundings. Not only is the approach short, but the road it carries ends abruptly (Figures 23 and 24).



Figure 21. West concrete abutment, looking west. Walls continue both north and south beyond the view of the camera. Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 22. Three concrete pads between the sidewalk and concrete abutment. These once held posts that upheld the overhanging building on the upper level. Electrical/switch boxes are also seen affixed to the abutment, looking southwest. Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 23. West end of bridge, showing bridge and T-intersection along the bluff, looking north. Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 24. West end of bridge and intersection of IA-9 as seen from the bridge, looking west from the bridge. Source: Tallgrass Archaeology LLC, September 18, 2022.

The East Side: Causeway & Slough Bridges

As seen in maps and aerial photography (Figures 3 and 25), the main channel of the river at Lansing is practically pressing against the side of the Iowa bluffs. The river's passage leaves broad lowlands on its eastern side, which consist of wandering, sluggish sloughs, muddy lakes, and myriad little, thickly-vegetated islands.

This side of the bridge consists of several components: a deck truss bridge over Winneshiek Slough and the railroad (Figure 26), three concrete and steel girder bridges over other named sloughs (Figure 27), and the raised earth causeway (Figures 28 and 29). This area constitutes the majority of the length of the Black Hawk Bridge system and historically led to most of its maintenance problems. In conjunction with a precarious financial situation the hasty construction of its original timber bridges and the lower level of the causeway led to their irreparable damage in a 1945 ice flow. These were the primary subjects of rehabilitation in the 1950s by the Iowa and Wisconsin Departments of Transportation. Originally, this part of the bridge system consisted of five timber spans over five named sloughs and a railroad. However, this was reduced to four total slough bridges. The causeway and associated bridges connect the main bridge to the Wisconsin side highway over the main channel. The causeway was widened and raised during the rehabilitation, and some public parking areas were added.



Figure 25. Current aerial showing locations of slough bridges along causeway to WI-35. Prominent superstructure of bridge off frame to south.
 Basemap Source: ExpertGPS mapping software, accessed August 2022.



Figure 26. 1956 deck truss bridge over Winneshiek Slough and railroad, east end abutment at WI-35, looking northwest. Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 27. West 1956 slough bridge, at Big Slough Boat Landing, looking northeast, an example of concrete and steel girder slough bridge design.
Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 28. View of causeway from automobile, looking east toward bluffs of Wisconsin.
Source: Tallgrass Archaeology LLC, September 18, 2022.

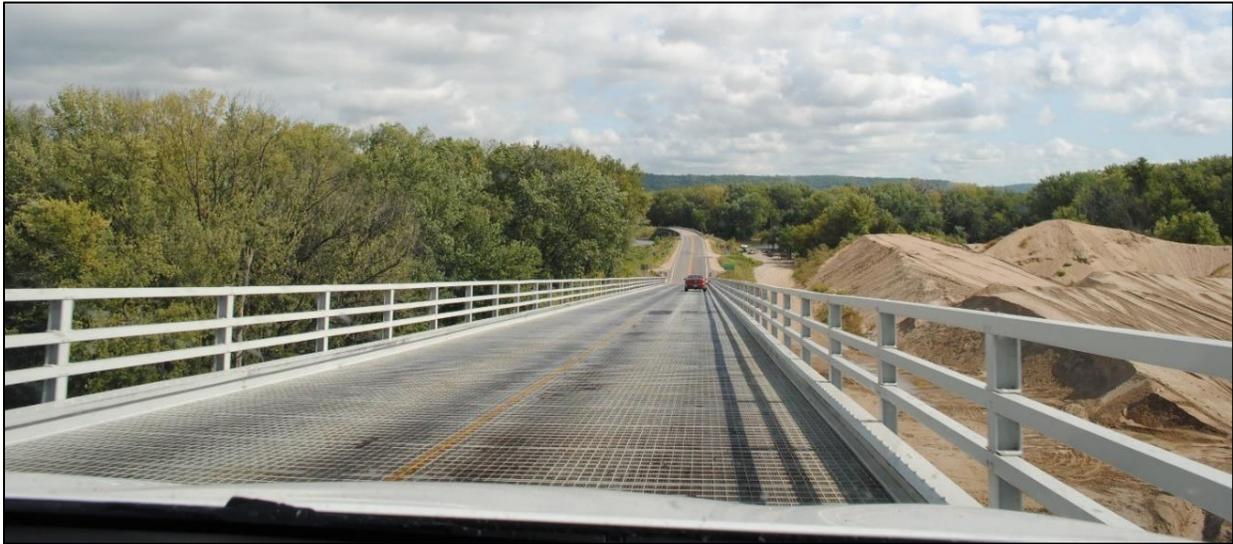


Figure 29. View of causeway from upper part of approach spans, looking east. Note the sand piles to the right (south) of the spans. Source: Tallgrass Archaeology LLC, September 18, 2022.

Other Features

The cantilever spans' portals (Figure 30) are rectangular and hipped, with a horizontal bar approximately fifteen feet above the deck level. Between that vertical and the upper chord or roof of the truss is a series of diamond-patterned bars. Below it, at each end, is a curved, steel knee brace. On the south post of the west portal, facing the Iowa bluff to the west, a plaque is affixed (Figure 31). It reads: "Built by McClintick-Marshall Company. Chicago, Ill. 1931." The portals on the interior arms of these spans are similar in design, but rather than being traditionally hipped, they extend farther on the upper chord and are angled back toward the lower chord.

The steel curb and siderails are 1955-56 replacements. The original curb and siderail were timber.



Figure 30. West portal of the bridge, looking east.
Source: Tallgrass Archaeology LLC, September 18, 2022.



Figure 31. Plaque visible on west side of north beam of west portal, looking east.
Source: Tallgrass Archaeology LLC, September 18, 2022.

The addition of modern lights (Figure 32) in the 21st century is discussed in later sections of this document. These lights are visible along the upper chord of the bridge.



Figure 32. Curved hardware and light fixtures atop the west span of the bridge, looking northeast. Photo contrast increased for better visibility of the curved lighting fixtures.

Source: Tallgrass Archaeology LLC, September 18, 2022.

The addition of protective “dolphins” is also modern (Figure 33). Though not a part of the bridge proper, these large, cylindrical structures help defend the north side of the bridge from anything that might strike its piers. As is thoroughly documented, this point in the river is notoriously dangerous for barge operators. Here, the river makes an almost 90-degree turn, which can be difficult to maneuver, especially during times of increased current. Large tows can get caught in the flow and find themselves pushed alongside these dolphins.

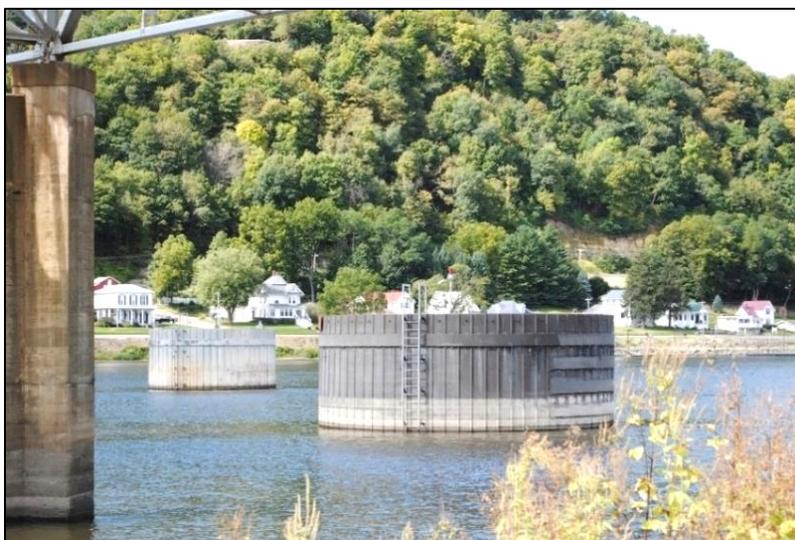


Figure 33. Both dolphins along the north side of bridge, looking northwest from Wisconsin side.

Source: Tallgrass Archaeology LLC, September 18, 2022.

Comparable Bridges

There are a handful of other cantilever bridges to be found crossing Iowa's waterways, primarily larger ones. Comparable bridges include the former Savanna-Sabula bridge, the non-extant Clinton High Bridge, and the non-extant MacArthur Bridge at Burlington. None of the shown examples (Figure 34) support such a clear, central, suspended span. The 1950s Mormon Bridge from Pottawattamie County to Omaha, Nebraska, is also a cantilever bridge.

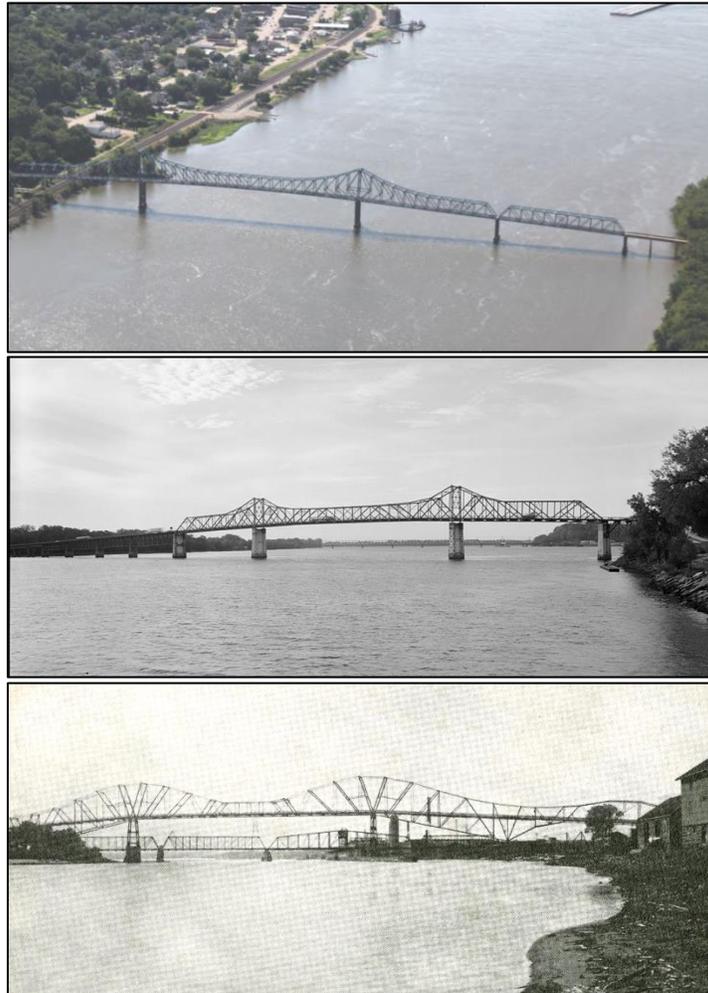


Figure 34. Top: 1932 (former) Savanna-Sabula Bridge over Mississippi River from Savanna, Illinois to Sabula, Iowa. Source: HAER Document of Savanna-Sabula Bridge 2014:31. Middle: former MacArthur Bridge over Mississippi River from Burlington, Iowa to Gulfport, Illinois. Source: Library of Congress digital collections, accessed September 2022. Bottom: circa-1908 postcard showing former cantilever bridge over Mississippi River at Clinton, Iowa. Source: University of Wisconsin-La Crosse Steamboat Photographs Collection, accessed online September 2022.

HISTORICAL OVERVIEW OF THE BLACK HAWK BRIDGE

Historic Contexts

The Development of Lansing. The post-contact history of this area begins with the rustic economic endeavors of trapping and lead speculating. Lead mining proved less productive here than it was to the south around Dubuque, Iowa, Galena, Illinois, and southwest Wisconsin. However, trapping became an important early trade. John Jacob Astor even established one of his famous American Fur Company trading posts in nearby Prairie du Chien. Additionally, the tanning operation of Ulysses S. Grant's family often made calls in this area to collect raw materials for working in Galena. Ulysses himself had acquaintances in burgeoning Lansing. The earliest known cabins in what is now Lansing appeared on the GLO maps and were noted to belong to Houghton and Garrison, and then one was transferred to John Haney. These date to the 1840s and 1850s. The land throughout this corner of Iowa was opened for broader settlement after Iowa's statehood in 1846 and into the 1850s. Over time, the settlement here grew in local importance, where the farmers of the developing, local agricultural industry had access to implements and markets for selling their wheat (the area's most important crop in the early decades) and corn. They relied heavily on river transportation (GLO maps accessed online through Iowa Geographic Map Server; Snyder Van Bechten Company 1878).

By 1875, the city of Lansing had a diversified economy typical of smaller Iowa towns and, in many ways, typical of those along the Mississippi River. There was some manufacturing, including a wagon works, a foundry, a sash and door company, a cabinet factory, a saw mill, a brewery, and others. Alongside these were a number of lumber yards, granaries, elevators, and drug stores. Additionally, Lansing had the typical grocers, dry goods dealers, lawyers, bankers, doctors, newspaper publishers, blacksmiths, and other merchants of a smaller Iowa town. Barge access continued to make the city an important locale for selling grain. During this period the city was also home to the Diamond Jo Steamship Company. After 1897, the Turner button factory was founded. The factory became a prominent enterprise in the city, relying on the abundant mussel crops pulled from the river. That business later evolved into the general production of various materials but continued its business into the modern era. Commercial fishing was important here, and the state of Iowa operated a fishery in Lansing for many years (Burke 1967:52-53, 2000, 2016; Hancock 1913:466-467; Rogers, Nagel, Werner and Artz 2018:10-20; Scarpino 1983).

Despite having such a diverse economy for a relatively small Iowa town, and despite having the benefits the river provided, Lansing's position on the river was a considerable obstacle, cutting the city off from nearly half of the available rural surrounds. The main channel at Lansing was swift and often dangerous, and the miles of muddy sloughs on its Wisconsin side made for slow movement from shore to shore. Ferries operated here from occasionally, but those operated on limited schedules and were not particularly fast. They were also season-dependent. With no efficient, convenient connection to the businesses and people on that side of the river, the city could not reach its full local economic capacity. It is difficult to understate this bridge's economic importance to the history of Lansing, as it made that critical connection. It provided residents on the Wisconsin side of the river with quick and easy access to Lansing's businesses, schools, and other institutions. It provided a connection that impacted the economy of the local and regional communities. Over time, the bridge also proved beneficial for the region's

developing tourism industry, bringing people and dollars to Lansing and the region (Rogers, Nagel, Werner and Artz 2018:10-20; Burke 1967:52-53, 2000, 2016; Naumann 2012).

Great Depression. An important undercurrent of the Black Hawk Bridge story, one to keep in mind through the years leading up to, during, and following its construction, is that of the Great Depression, the worst financial crisis in the nation's history. While many other large-scale construction programs of this period were conducted through federal make-work programs like the Civilian Conservation Corp and the WPA, this bridge was funded through public stock sales. It was a publicly funded bridge with many of the stockholders being local to the small town of Lansing and the vicinity, while similar bridge companies have larger population bases on which to rely. One Class A stock in the bridge company cost \$100, not an insignificant investment in those times.

Transportation In Iowa. The story of the bridge—and even that of Lansing itself—is closely related to that of transportation. In its earliest years, being along the Mississippi River meant it was along the primary artery of north-south transportation in the middle part of the country. Its position afforded it access to steamboats and other water-based modes of transportation, offering connections to cities from St. Paul, Minnesota, to New Orleans, Louisiana, and beyond. Connections were also possible up other waterways, especially to cities along the large Ohio River tributary. In terms of Iowa's growth, the prominent markets and points of arrival for settlers were along the Mississippi River. As the land was generally opened from east to west, patterns of settlement moved slowly along the smaller, inlet waterways and streams. With the further development of the state more generally, overland connections became important too. For Lansing, this included the connection to the county seat in Waukon and to other cities in that part of the state. Despite overland transportation being notoriously slow and dirty at that time, it was the primary method of moving people and goods across the state for most residents prior to the advent of the automobile. The development of railroads through the later part of the 19th century was hugely important in this regard. First crossing the state east to west, then crossing it generally north to south, railroad companies vastly improved the speed and efficiency of transportation in Iowa. Locally, the Dubuque & Minnesota Railroad was built through Lansing in 1872. The railroad had vast significance for the local economy, efficiently connecting it to an outside world that did not have the same seasonal or locational dependencies as river travel. Having that railroad as a lifeline was important to the people of Lansing, especially offering quick access to agricultural markets for grain and other sales. That trackage, which runs directly under the bridge's west span, is now owned and operated by the Canadian Pacific Railroad (Thompson 1989; Rogers, Nagel, Werner, and Artz 2018:10).

The advent of the automobile triggered the next important phase of transportation in Lansing and Iowa. It is also the one in which the Black Hawk Bridge is situated. Indeed, automobile transportation had a lasting impact on the state of Iowa, and that phenomenon was supported by widespread grassroots movements such as the Good Roads Movement. These movements across the state encouraged county and state highway connections to increase commerce, recreation, tourism, and money in-flow. The Iowa Highway Commission was developed to accommodate such developments across the state and to standardize them. Increased paving projects across the state in the early 20th-century ultimately shaped the state's physical and economic landscape. Road transportation overtook rail as the predominant means of transportation across and around

the state. The importance of Iowa's highway system to building the Black Hawk Bridge was recognized from the time of its very inception. In the commemorative book published for its opening, it was noted that Iowa Highway 9 was beyond value to the bridge and to northeast Iowa, especially with its complete paving being already underway. It was to be the very first paved road in the town. It became a sort of symbiotic relationship; the bridge company depended on the state highway system, and the highways became even further useful for motorists because of the connections afforded by the bridge (Fraser and McWilliams 1992; Rogers, Nagel, Werner, and Artz 2018:20-21; Tousley 1931:25; Thomspson 1989). This bridge is one of the prominent Mississippi River spans from Iowa to an adjacent state, even if it was never the most trafficked. The bridge connected the people of Lansing and Iowa to another state and increased traffic through the region.

Cantilever Bridges. Cantilever bridges date back centuries but became increasingly popular with the material and engineering improvements that came in the late-19th century. Perhaps the first, modern cantilever bridge was Heinrich Gerber's Hassfurt Bridge over the Main River, built in 1867. The oldest extant example in the United States is the 1889 railroad bridge over the Hudson River at Poughkeepsie, New York. Another early, famous cantilever bridge in the United States spanned the Kentucky River at Dixville, Kentucky. It was designed by C. Shaler and Louis F. Gustave Bouscaren and was the longest in the country for some time. The 1909 Queensboro Bridge over the East River in New York City, New York, noted for not having any suspended spans, and the 1958 Greater New Orleans bridge over the Mississippi River in New Orleans, Louisiana are some of the very longest examples today. The style was especially popularized after the construction of the Firth of Forth Bridge in Scotland during the 1890s, and by 1892 George S. Morison designed a 710-foot cantilever through truss bridge at Memphis, Tennessee. This was notable as an early through truss example of such bridges, in which the bottom chord of the trusses bore the load. A major benefit to these designs was that they required less material than the alternatives when crossing wide distances. Less material translates to lower cost and lower weight, perhaps one reason why Stone was hired to redesign the bridge mid-construction. They were also easier to construct along wider spans, as the cantilevered arms could be extended from each end and met at the middle. Their spans reach even farther if another truss was suspended between them, as with the Black Hawk Bridge (Parsons Brinckerhoff 2005:2-15,2-16,3-142). Like the examples provided in the previous section, they were a trending design, though not by any means universally used. The fact that the small community of Lansing had such a large, neatly-designed, cantilever-styled bridge with the suspended truss that made it a notable structure. Iowa's large border rivers were crossed by several bridges of the cantilever type through about the first half of the 20th century.

Cantilevered through truss bridges were neither particularly rare nor common. However, in the United States, their predominant usage was in crossing the country's wider rivers, such as the Ohio, Missouri, and Mississippi. Their usage continued through about the middle of the 20th century. Parsons Brinckerhoff notes that the oldest extant examples are the most significant, followed by those with particularly great length (Casella and Deiber 2004:11,14,33; Parsons Brinckerhoff 20015:31-142). Mostly dating from the late-19th century through about 1960, cantilevered, through-truss bridges are as important historically as they are beautiful. Their significance demonstrates architectural trends and can also demonstrate important engineering

developments relevant to material quality and production and the understanding of bridge physics.

Incorporation, Construction, and Profit Motive

The original idea for this bridge was rooted in providing a means of cross-river transportation that did not require ferries, pontoons, or any season-dependent means. The vision of such a service drove the strong community support behind it. According to local tradition, the idea has its origins in approximately 1898, when J.P. Conway and then-councilperson Tom Bakewell successfully completed a drive to fund and build the city scales and asked themselves, “What’s next?” They agreed a bridge would be a worthy challenge and discussed it intermittently until 1914, when Conway passed. He had even acquired 30 oak logs for pilings and had helped form the Interstate Bridge Company (La Crosse *Tribune* [LCT] 05/28/1957:12).

Another objective for the bridge was to ultimately produce a profit. First, the Interstate Bridge Company was formed and then later the Lansing Bridge company—later renamed to be the Iowa-Wisconsin Bridge Company. This monetary motivation is evident in the incorporation charter for both companies. The Interstate Bridge Company was formed in March 1916 and signed into incorporation by a notary public under Iowa law on April 10 of that year. The articles of incorporation detail how much stock was allowed to be sold, how much debt would be allowed to be taken out, and the processes by which financials were to be handled. Its inaugural officers were J.P. Conway, president, H.C. Short, secretary, Fred Schafer, treasurer, T.H. Bakewell, M. Kerndt, Jr., and Julius Boeckh. The operation of an inter-state toll bridge required congressional approval, which the company attained. Bridge plans and specifications were requisite for the congressional approval attained in 1916 before the project could advance. Early design plans were furnished by Lansing-native L.J. Markwardt, who worked with the Madison, Wisconsin-based Forest Products Laboratory. Local historian William Burke describes the plans as precise and well-drawn, but they were quite different from the cantilever bridge that was later designed mid-construction. Interestingly, the articles for this original company did not expressly list charging tolls as an activity, but that was perhaps implicit to “all of the powers necessary for, or incident to, the convenient transaction of business for which it has been organized” (Burke 2016).

A bridge was never built to these original specifications or under its original incorporation or congressional charter. Pursuant to the company’s articles of incorporation, unless otherwise voted on, the company was to be dissolved on the first Tuesday of April, twenty years after initial incorporation. To that end, since no business had been conducted under that company name since April 21, 1930, the corporate status was allowed to expire on April 4, 1936. World War I may have been an important factor in the incorporation and charter being allowed to lapse. At that time, and especially once the United States entered the conflict, steel was needed for the war effort and may have become either too expensive or impossible to acquire.

However, in the years after the war, efforts across the country to improve transportation infrastructure blossomed across the country. This included the creation of many more state routes and the evolution of the “Good Roads Movement.” These national-level phenomena brought back interest in connecting Iowa and Wisconsin highways with a bridge at Lansing. The eventual congressional approvals, stock sales, construction, and bridge operation were all run under the

company name of the Iowa-Wisconsin Bridge Company (briefly called the Lansing Bridge Company before changed by amendment within the first year of existence). This company was formed in March 1928 in Delaware. The articles for this corporation specifically describe the acts of building toll roads, bridges, wharves, and ferries, maintaining them, and charging tolls for them. In firmly naming the toll aspect of the operation, they set a means of revenue beyond collecting stocks and bonds (Burke 2016:3; Interstate Bridge Company 1916; Iowa Wisconsin Bridge Company 1928, 1929, 1930).

With the incorporation of the Iowa-Wisconsin Bridge Company, the effort dedicated to creating the bridge was reignited. The sale of bonds began in earnest soon after in 1928, and congressional approval was granted again that same year. Ralph Netz of the firm Strahan, Harris & Otis, from Toledo, Ohio, was hired to sell them throughout Dubuque, Des Moines, and other areas. He met with local leaders A.F. Heeb of Dubuque and Donald Metcalf of Des Moines to help promote the sale. By March 18, \$60,000 worth of the planned \$425,000 sale had already been sold, with construction planned to start as soon as May or June 1929.

By mid-year 1929, roadways were being cleared and Julius Boeckh was procuring materials for the necessary falsework pilings and wood planking. However, no major construction was underway or scheduled, and bond sales began to slow down considerably. At that time, two more gentlemen were hired to promote further bond sales: John W. Schaffer of Minneapolis and Vernon O'Connor of St. Paul (Dubuque *Telegraph-Herald* [DTH] 03/18/1928:21, Dubuque *Telegraph Herald & Times-Journal* 12/15/1929:5). Schaffer and his associates did secure enough funding for completing the bridge, but in the process, they defrauded the bridge company, and this was a critical factor in its ultimate demise. The many lingering issues that emanated from Schaffer's leadership will be discussed separately below. Oscar Johnson and Sigmund Sunde, stock salesmen from Minneapolis, also assisted in selling the remaining stocks. Each stock was sold at \$300. Class A stocks were said to be worth a return of six percent plus a dividend, while Class B stocks were said to be worth no interest but a dividend.

With these further bond sales, bridge construction continued uninterrupted in 1930, although funds were still relatively low and plans were still developing. In June or July of 1930, the architectural plan changed significantly. Previous plans had called for a suspension bridge like the one concurrently built near Prairie du Chien. The suspension bridge plans developed in 1916 by L.J. Markwardt and Forest Products Laboratory were given federal approval on December 15, 1928, but public opinion was unfavorable toward the design. One reason may have been that this original design required more piers on the Lansing side, which may have been undesirable to the citizens there. So, to accommodate this opinion, the bridge company had a double overhead truss plan designed by Melvin B. Stone, a well-known bridge engineer in Minneapolis. His firm was called the Northwestern Concrete-Steel Company, and his new plans were approved by Assistant Secretary of War Frederick Payne in about June or July of 1930.

Other preparations were also underway. The Milwaukee Road built a parallel track along Front Street in Lansing from about Hale Street to about Henry Street, and materials were brought in along that spur, then a four-ton dinkey engine brought the materials along a temporary track built about half-way across the piers to their points of need. Milwaukee Road district supervisor Meyers and a team of surveyors oversaw this operation. They also ensured that the railroad on

the Wisconsin side was properly overpassed and that regulations of both Iowa and Wisconsin were being followed. On December 31, 1930, the *Waterloo Courier* reported that the concrete piers were ready for the steel superstructure to sit on them. The Inland Steel Company of Chicago was producing the steel, and representatives of the bridge company visited the Chicago factory to see the fabrication process at about that time. Carloads of steel arrived at Lansing daily, and installing the steel superstructure through the winter months was considered a routine job. The construction was overseen by Stone, while Sven Norling was the hydraulic engineer, overseeing any problems arising from working with water. The resident engineer was J.N. Gilbert, assisted by John Burke and Len Barthell. J.M. Knox was the steel foreman. M.E. Johnson served as general superintendent (DTH 11/18/1930:7; LCT 01/31/1930:12, 07/02/1930:6, 12/29/1930:8, 05/31/1931:1; *Waterloo Courier* 12/31/1930:9).

The piers were built over the course of that year. One of the primary out-standing questions posed in previous studies was **“How was this substructure work performed?”** This question was briefly addressed in a *La Crosse Tribune* article at about this time. Work on each pier required the construction of a 60’ x 30’ coffer dam. The dam used heavy timbers driven into the river floor wrapped with steel sheeting. Sand pumps were run non-stop during the process to keep the interior of the coffer dam dry until the pier was complete. The bridge itself was reported to rest on 143 total pilings, driven to a depth of 55 feet below low water. However, other reports showed shallower depths, and it is suspected that at least some of the bridge pilings were not driven to proper depths. On the east bank, roadwork reached across the sloughs (Figure 36) to the site of the east pier in late January 1931. The superstructure was completed in the first half of that year (Figure 37) (*Allamakee Journal* 07/16/1930; Burke 2016:6-7; LCT 01/31/1930:12).



Figure 35. Construction of Piers through Winter 1930-31.

“Work on other piers progressed rapidly and by November 1930 all piers were completed. Still there were people who doubted that a bridge would be built...

“Never,” they said...

“Never” came on May 23.”

(Image Source: *Waterloo Courier* 12/31/1930:9. Quote Source: *La Crosse Tribune* 05/28/1957:12).

Also at this time, a campaign of publicity and promotion began for the bridge. Promoters touted it as the only bridge in the region that could carry 30 tons over the Mississippi River, while other bridges could only hold four to six tons. Other promotions touted it as the best route between the Twin Cities and Chicago for travelers and the best route between the Wisconsin Dells and the Black Hills for nature lovers. None of these connections seemed to make any broad, positive impacts for the Lansing bridge in the long term as the states of Iowa, Wisconsin, and Minnesota

prioritized other routes and other bridges (LCT 02/09/1930:10, 02/08/1931:2, 03/01/1931:2). Other articles described the unique form of the bridge, being the only double overhead bridge across the Mississippi at that time (LCT 05/20/1931:3, 05/31/1931:1). Other means of promotion were the unique design of the bridge, publicity of the name Black Hawk, and the design of thematically related toll house. These publicity efforts can be easily tracked through local newspapers.

The events surrounding the ribbon-cutting event (Figures 38 and 39) are also well-documented in newspapers and local histories. It opened in 1931 (Figure 40).

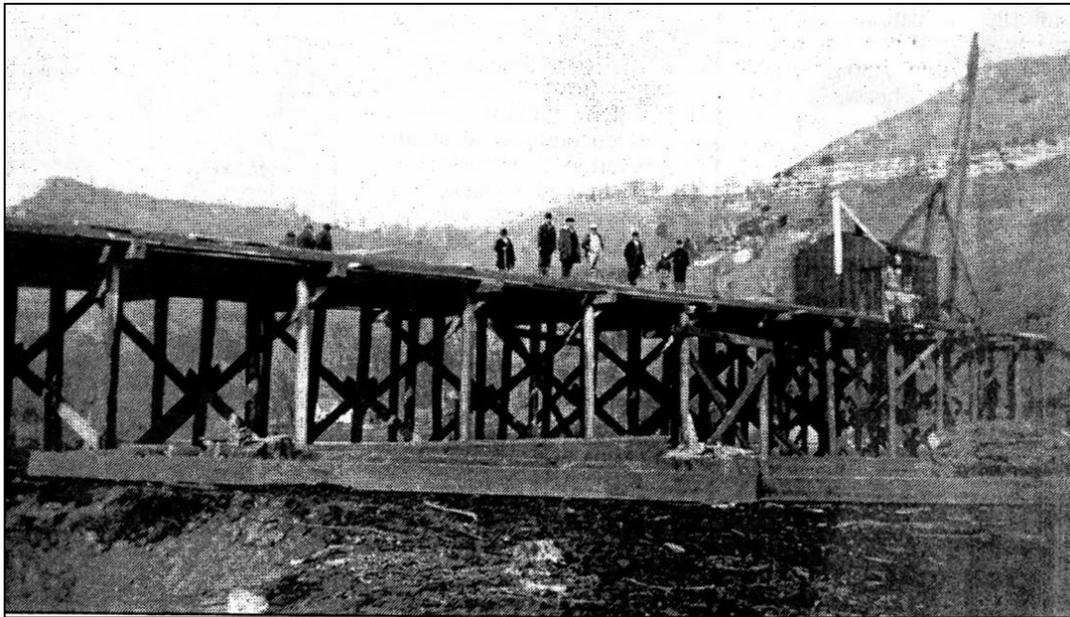


Figure 36. Construction of original Winneshiek Slough Bridge, looking north.
Source: Derva & William Burke Collection.



Figure 37. Construction of superstructure over the main channel, looking northeast.
Source: John Rethwisch private collection.



Figure 38. Dedication ceremony.

Source: Collection of Frank Ebersold and Thornton House Bed & Breakfast.



Figure 39. Dedication ceremony.

Source: Derva and William Burke Collection.



Figure 40. Circa-1931 photograph showing coffer dam components around the second and third piers still in place at or near the time the bridge was completed, looking southeast from bluff.

Source: Private collection of Sam & Betty Bell, 2022.

Tolls & Toll Collection

Profit-making was to be accomplished through the charging of tolls, which was expressly mentioned in the company's 1928 charter. Collection was conducted at a 1931 tollbooth (Figure 41) that fit thematically with the Black Hawk name of the bridge. The building was designed to look like a palisade fort, and a teepee-looking structure was added later. The rates set by the company prior to the bridge's opening were:

- Automobile and driver: 50 cents; 10 cents per additional passenger
- Trucks of 1.5-tons: 75 cents; 25 cents for each additional ton or fraction thereof
- Horse, carriage, and driver: 50 cents
- Motorcycle and driver: 25 cents
- Bicycle and rider: 10 cents
- Pedestrian: 10 cents
- Trailer (including two-wheel auto trailers): 25 cents
- Livestock on hoof: 10 cents.



Figure 41. Toll booth and gas pumps at west end of bridge.

Source: John Rethwisch private collection.

In 1933, one man from Ferryville, Wisconsin, used his personal watercraft to cross into Lansing as he believed the tolls were too high (Burke 2016:8; LCT 05/26/1931:3, 06/16/1931:12).

No evidence was found that these toll rates were ever changed. The bridge tolls at Prairie du Chien, Wisconsin, were lowered from time to time, however, and there was some level of competition between the two toll bridges. So, it may have been possible. However, it should be noted that special rates were granted upon request by the directors or managers of the bridge. For instance, in the school year beginning in September 1932, the Lansing public school district saw an increased number of enrollees from the Wisconsin side of the river, and the company allowed a special bus rate for morning and evening school busses (LCT 06/09/1932:6; Postville Herald 09/07/1939:2, 09/28/1939:2). Oscar Thorson, the first and longest-serving receiver for the company, also granted lower rates to some people working on the bridge, notably those working on repairing pilings along the Wisconsin side and those working to clear the river bottoms in the extensive federal dam preparation projects of 1937 (Figure 42). A temporary toll booth was set up on the east side for the workers who were not going in as far as Lansing but were clearing brush and doing other work along the bottoms of the Wisconsin side³, parking along the dike. These special worker rates did not apply to contractors or other travelers, just the workers lodging in Lansing and other towns. The rate included 10 cents per man and 20 cents for a car, both round-trip tolls. On busy work days, this was applied to hundreds of men and about 100 cars with a daily intake of about \$41 (LCT 10/13/1937:13; Postville Herald 10/28/1937:2). Tolls were also waived, at least at times, for Lansing's annual Fish Days celebrations (Postville Herald 08/07/1940:3).



Figure 42. Government clearing project in preparation for lock & dam work along the Mississippi.
 Source: John Rethwisch private collection.

Meeting Financial Expectations: Various Factors

One question that arises from time to time regarding the history of the bridge is: **could the bridge ever have met financial expectations?** It is even one of the research questions proposed in the HAER document. Despite the toll revenue and all the pomp and ceremony that surrounded its dedication and opening, the bridge was not to be a success financially. From 1931 to 1945, the Black Hawk Bridge had an average daily crossing of 75 vehicles (LCT 12/12/1948:19). Oscar Thorson reported substantial traffic in the first months after opening. From secondhand reports, this should have been enough to support its ongoing operations and routine maintenance and repairs, which were nearly always ongoing. Nevertheless, the company was unable to make payments on its debts or pay interest to the shareholders. As early as 1933, the company reported incomes of \$4,000 and expenses of \$4,500 for the first half of the year, with more bills on the way. Articles about the still-young bridge from around the state indicate that “estimated traffic never materialized (Des Moines Tribune 08/17/1931:4; LCT 01/19/1936:5, 12/12/1948:19; Quad-Cities Times 09/29/1933:13). In a 1948 study of the closed bridge, Chief Engineer White of the Iowa State Highway Commission noted that “as a privately owned and privately operated toll highway facility, this Lansing bridge and its approaches were a financial failure. The cost of operation, maintenance and collection of tolls consumed just about all of the earnings. Nothing was left to build up a reserve for depreciation or to make any payments to stockholders” (White 1948:6).

Without access to the company’s financial books and seeing its incomes and expenses, it is impossible to make a reliable assessment of its financial potential. Furthermore, the company was subjected to extreme corruption at the top of its corporate structure, as detailed below, which would likely render them difficult or even impossible to interpret. However, a general estimate could be made with data found in the State of Iowa’s 1948 report. It found that the bridge had

average daily users of 75 vehicles per day during its active years and that the average toll would have been somewhere between \$0.50 (automobiles) and \$0.75 (lowest rate for a truck) per vehicle. 365 days per year times 75 vehicles times an estimated average of \$0.60 per vehicle would provide about \$16,425 of revenue per year. That amount may have been enough to cover the wage of the tollkeepers, general upkeep, repairs, taxes, and debt servicing while saving some for larger repairs such as that necessitated by the 1945 ice jam and paying dividends. However, finding a definitive answer may be an exercise in futility (White 1948).

What is clear, however, is that the company failed financially, and the reasons for this can be broadly categorized in the following four ways:

The Great Depression.

The historical context in which the bridge is situated is mostly outside the bridge company's control. The conception, advocacy, and financial groundwork for the bridge long predated the Great Depression. However, the timing of construction and completion coincided with the worst financial disaster in the nation's history. The Great Depression contributed to the slow stock sales that resulted in short funds during the construction process (described further down) and fraudulent parties' eventual takeover of the board. However, there was still potential for financial solvency. Without a substantial survey of the Great Depression's impact on automobile ownership, commerce, and tourism, it can be assumed that its effects greatly impacted the usage—and thus, the revenue—of the Black Hawk Bridge. The likely impacts of the Great Depression were noted briefly in a Quad-Cities Times article from 1933 and by Julius Boeckh, one of its original proponents, upon its re-opening in 1956 (LCT 4/10/1952:17; Quad-Cities Times 09/29/1933:13).

Lack of highway connectivity and prioritization of competitor bridges.

Though the Lansing bridge was claimed to offer the most direct route between Chicago and the Twin Cities and from the recreational areas and parks of central and western Wisconsin to the Black Hills in South Dakota, the states of Iowa and Wisconsin seemed to prioritize other routes. Priorities were particularly given to those highways and river crossings at larger population centers such as Dubuque, Prairie du Chien, and La Crosse. At the time of its opening, IA-9 was concrete from Lansing to Waukon with good connections from there, but WI-35 was an oiled dirt road north from DeSoto to La Crosse and just a graded dirt and gravel road south to Prairie du Chien. Receiver Thorson addressed this in a letter to the La Crosse Chamber of Commerce's highways committee to pressure them into improving their connections. He called the condition of WI-35 "deplorable" and reported that a small highway bridge near DeSoto had collapsed. He advocated for better connections to and from Lansing which would, in turn, also benefit cities on the Wisconsin side (LCT 11/12/1931:12, 03/31/1934:4; Quad-Cities Times 09/29/1933:13). This lack of prioritization from both states seems to have been an effect of the vicinity's lower population relative to others throughout the region.

Even Minnesota's highway priorities were cited as a problem for Lansing. This problem was identified in an article in the September 29, 1933 issue of the Quad-City Times, which discussed the bridge company's ongoing troubles. It mentioned a roughly twelve-mile stretch of highway Minnesota failed to pave just north of Lansing near the Iowa-Minnesota border. That particular stretch of highway would have completed the claimed shortest route between the Twin Cities and

Chicago. However, priority was given to other highways and, ultimately, to other Mississippi River crossings (Quad-City Times 09/29/1933:13).

Significant competition came from the bridges at La Crescent, Minnesota, La Crosse, Wisconsin, Prairie Du Chien, Wisconsin (erected contemporaneously with the Lansing bridge), and Dubuque, Iowa, which seemed to enjoy more prioritization from their respective states and cities. These competitors effectively left Lansing out of the conversation in 1940, when a report was conducted by the St. Louis-based engineering consulting firm of Sverdrup & Parcel about the Marquette bridge at Prairie du Chien, as that city aimed to purchase the structure eventually. The report assessed the bridge's valuation, earnings, needed repairs, and other necessary expenditures. The report showed the effects of the toll rates, which pushed traffic south toward the Dubuque crossing but not north to Lansing. The report detailed that its competitor bridges saw nearly 34,000 crossings in 1940 that could have been re-routed through Prairie du Chien. The Lansing bridge was not even mentioned as an alternative to Prairie du Chien in that section. The report later concluded that "the bridge at Lansing, Ia., is at a decided disadvantage as regards connecting highways," and "from our observations we are of the opinion that it [the Lansing Bridge] carries very little traffic and will never be a serious competitor" (DTH 08/20/1940:5).² A precursor to the 1940 report did reference Lansing as a competitor bridge, calling both it and the Dubuque bridge "low toll bridges" (LCT 02/07/1939:14). Both the lack of highway connectivity and the significant competition seem to be effects of Lansing's relatively low population that ultimately led to less traffic across the bridge.

² The City of Prairie du Chien was eventually approved by the Wisconsin highway Commission to purchase that bridge. It did so for \$1 million and with the understanding that tolls would only continue until the city's part of the financing was paid off. "This move will assure free movement across the Mississippi to McGregor, Ia." stated one article (LCT 21/08/1949:14).

Meeting Financial Expectations: Fraud and Litigation

After the bridge re-opening in 1956, long-time bridge proponent and initial officer Julius Boeckh lamented: "It would have paid four percent to the stockholders after the first year of operation. Much of the receipts were used in litigation" (LCT 4/10/1952:17, 05/01/1965:1). The bridge company had substantial legal issues that persisted for many years. Some of these were relatively minor, such as a claim from the City of Freeman, Wisconsin, insisting they were due taxes from the bridge company. The Wisconsin Tax Commission settled these hearings with La Crosse Attorney A.H. Schubert representing the bridge company (LCT 08/20/1931:1).

More significantly, a sequence of convoluted, interrelated lawsuits and appeals burdened the company books for over a decade. The matter has its origins as far back as 1929 when Minneapolis promoters Vernon O'Connor and John W. Schaffer were hired to promote the sale of the bridge company's shares. Through this arrangement, the two men and their respective firms, Standard Shares Holding Company and John W. Schaffer & Co., were issued stock in the bridge company. Then, through other contracts and procedural and financial maneuvers, Standard Shares Holding Company and Schaffer completed work in exchange for further stock in the bridge company. Through these means, Schaffer and O'Connor acquired majority control of the company. On April 1, 1930, O'Connor was elected company president, and Schaffer's secretary was elected secretary. Then, in October 1930, during the construction of the bridge, when the substructure was nearly complete, but funds were too low to continue with work on the superstructure, still more funds were required. At that point, Schaffer entered into a contract with his friend John A. Thompson of Des Moines, who was to promote further share sales through a complex system of other companies for which he was president, Thompson & Company and Phoenix Finance Corporation being the important two. Court filings demonstrate that they intended to ultimately foreclose on the bridge and take 100% control of it away from all other shareholders.

Thompson was elected president of the bridge company on November 1, 1930, and barely ten days later, on November 11, Thompson agreed to pay Schaffer's company \$10,000 and an issuance of 3,200 shares in exchange for completing the bridge with a waived requirement of surety bond. Schaffer had preemptively signed a contract with McClintic-Marshall Company on a very compressed timeline for the superstructure construction and with Industrial Contracting Company of Chicago to furnish the steel. These contracts were dated November 8, before any formal agreement was even made between Thompson (acting on behalf of the bridge company) and Schaffer. The pivotal point of this arrangement allowed Phoenix Financial Company to claim foreclosure on the bridge if repayment plus 8% interest was not paid back by the following March. Some other commissions, fees, and stock issuances were paid to Schaffer and Thompson's companies throughout this period. Court filings show how these facts were misrepresented to the public and shareholders (U.S. Court of Appeal 1938; U.S. District Court 1936).

It was later found that Schaffer defrauded the bridge company further still. He was appointed trustee and organizing manager through the new-found control of the company that he, O'Connor, and Thompson had. With this setup, they were issued further stock issuances and 10% commission payments for building the rest of the bridge, which they did via subcontractors. Additionally, he defrauded the bridge company by hiring O'Connor to do the grading and

excavation work for 24 cents per cubic yard. In comparison, O'Connor only sublet the work to the firm of Kramer & Hogg for 15 cents per cubic yard. He also assigned work to O'Connor for the erection of the substructure [perhaps of slough bridges] at the cost of \$193,196.80, though the job was sublet to the Industrial Contracting company for \$97,976.36. However, this level of corruption was not brought to light until years later (U.S. Court of Appeal 1938; U.S. District Court 1936).

Within one year of the bridge opening, the local stockholders were showing signs of distress, as no dividends were paid despite the belief that there was plenty of revenue; Thorson reported late the prior year that traffic seemed high. Moreover, by April 1932, local reporting expressed concern over the corporation's leadership. In 1933, Thompson reported that the company was losing money, having taken in \$4,000 in the first half of the year and having \$4,400 in expenses with more bills coming due from his own Phoenix Finance Corporation, which had recently advanced the bridge company yet another \$17,000 (Burke 2016:8-10; Des Moines Register [DMR] 08/17/1931:4). Soon after that, the Phoenix Finance Corporation, its partners, and subsidiaries, filed suit to foreclose on the bridge and take possession of it away from the bridge company, doing so on September 25, 1933. On September 26, 1933, a district court appointed Oscar Thorson as the company's first receiver, assigned him a Dubuque bank to make deposits, and initiated a series of hearings.

According to court filings, Minnesotan shareholder Fayette D. Kendrick intervened on behalf of the defendant [the bridge company] and its other small shareholders, outlining much of the timeline of Thompson's involvement. Soon after that, other shareholders signed on to the pleadings filed by Kendrick. On December 5, 1934, a special master was appointed to the case, who completed his investigation on March 18, 1936, with a special report to the U.S. District Court. All parties agreed with its conclusions: that most of the bonds were fraudulent and that there would be no foreclosure, but that the bridge company did owe the Phoenix Finance Corporation \$15,000. The receivership was intended to continue until \$15,000 was recouped, but it lasted through the company's life because of continual appeals and litigations. The bridge company was represented by Bradshaw, Schenck & Fowler, F. Ontjes of Mason City, and Dohns of St. Paul. Phoenix was represented by A.H. Schubert of La Crosse (who had previously represented the bridge company in its Wisconsin tax hearings), John Seneff, and J.B. Sloan of Des Moines.

Phoenix and the other claimants tried at least five times in Delaware Courts to appeal this verdict using different grounds on various bond issuances. However, Judge George C. Scott of the U.S. Court of Northern District of Iowa issued a permanent injunction restraining the company from doing so. Even after further hearings and trials, they were always denied. This likely explains why the receivership lasted for the remainder of the bridge's non-state ownership. Appeals trials made their way to the supreme courts of Iowa and Delaware, where the Iowa-Wisconsin Bridge Company was incorporated. (Delaware Supreme Court 1942; Mason City Globe-Gazette 12/03/1936:38; Iowa Supreme Court 1945; Superior Court of Delaware 1940; U.S. Court of Appeals 1938; U.S. Court of Appeals 1940; U.S. District Court 1936).

Eventually, the Phoenix group filed for a Writ of Certiorari, applying to have the case appealed to the United States Supreme Court. However, considering the various other lower courts'

findings, the writ was denied during the U.S. Supreme Court's October 1942 session, upholding the previous judgments in favor of the bridge company (U.S. Supreme Court 1942).

In 1938, a local resident and former company officer lamented whether "the entire bridge enterprise was worth the damage that had been done to the Lansing community by reason of the bridge litigation" (Burke 2016:9).

Phoenix Finance Corporation sued the bridge company at least one other time. In 1939-40, it sued the bridge company for over \$5,000 in bridge tickets and won. In the suit, Phoenix Finance Corporation alleged that they purchased the tickets in June of 1931 at face value to support the bridge operations, under the agreement that the tickets could be resold at face value as a means of repayment to Phoenix or used by Phoenix personnel as needed to use the bridge. It alleged that the state of the tickets was discussed from time to time between the company's acting manager, Thorson, and Thompson, but that the tickets were not honored by Thorson abruptly and without warning in 1937. This change was not given with any notice, and Thompson had not received any funds back from sales. The verdict favored Phoenix Finance Corporation, which received \$5,000. It is impossible to say what motivations or operational restrictions guided Thorson's decision in 1937. However, it seems likely, as this coincides with the timeline of when the special master's report unveiled more profound corruption of Thomspson, Phoenix, Schaffer, and others. Therefore, some level of bitterness may have contributed to his decision (Delaware Supreme Court 1942; Dubuque Telegraph-Herald 04/04/1940:5; Postville Herald 09/07/1939:2, 09/28/1939:2; Superior Court of Delaware 1940; U.S. Court of Appeals 1940; Waterloo Courier 04/05/1940:12).

A new board of directors was elected for the Iowa-Wisconsin Bridge Company in July of 1940. This board included the following individuals:

- Dr. I.C. Bronson, Nora Springs, Iowa
- Fred Bierman, Decorah, Iowa
- Tom Blakewell, Lansing, Iowa
- Irene M. Bell, Mason City, Iowa (who was a continual advocate for the stockholders throughout the entire process and worked to keep communication open for them, serving as a leader of their stockholder protection committee)
- Henry Fett [Foote], Jr. Chicago, Illinois
- Dr. A. Gullison[Gullixson], Albert Lea, Minnesota
- Dr. F. Kendrick, St. Paul (another active advocate for the stockholders who took an active role during legal proceedings)
- H.A. Schremser, Decorah, Iowa.

These were elected through a new majority voting bloc since many shares held by the other companies and their agents were ruled fraudulent. This bloc was identified as the Irene Bell voting group, which held 2,064 total votes. The other was the Phoenix Finance Corp. voting group, which now held only 909 votes. This new group managed the company through its remaining operable years, although it was still in receivership (Des Moines Register 07/26/1942:26; Dubuque Telegraph-Herald 07/14/1940:2; Iowa Supreme Court 1945). It is unclear what precisely the role was of this new board since the company continued to operate via

receivership. It is unknown if they held any real directive powers over the receiver. It may have been more or less a shadow board attempting to conduct the company's business at a time when it may not technically have had the right to do so. It may have been more of a symbolic act.

Lastly, hearings between Phoenix and the bridge company resumed in 1954 when deciding if their remaining stocks were owed dividends from the final bridge sale.

Table 1.
Timeline of Fraud Committed Against
the Iowa-Wisconsin Bridge Company and Related Litigation

1929	John W. Schaffer & Co. and Vernon O'Connor's Standard Shares Holding Co. hired by bridge company to promote further stock sales; paid in commission plus stock offering; both appointed as trustees and managers in the bridge company organization; through sales (perhaps even to O'Connor's firm directly), the two had majority control of the bridge company
1929 or 1930	Melvin B. Stone moves company to office on same floor of Phoenix Building in Minneapolis as Schaffer and O'Connor's offices; about the same time, the suspension bridge plans, already having federal approval, were scrapped; Stone hired to design and build a cantilever bridge instead
Apr 1, 1930	O'Connor elected president of the bridge company; Schaffer's personal secretary elected as secretary of the bridge company
Summer 1930	Suspension bridge plan replaced with plan for cantilever bridge to be designed by Melvin B. Stone; Stone had just become their neighbor on the top floor of the Phoenix Building in Minneapolis
Oct 1930	Construction funds were once again running low, so Schaffer began working with John A. Thompson of Des Moines (Thompson & Co., Phoenix Finance Corp., and others) to promote further stock sales
Nov 1, 1930	John A. Thompson elected president of the bridge company
Nov 11, 1930	Ten days after his election, Thompson hired Schaffer to act as general contractor and oversee remainder of construction; all payment disbursements made through Schaffer's firm, who is also paid a 10% commission plus an issuance of 3,200 shares; Schaffer had already signed contracts with McClintic-Marshall and Industrial Steel Co. several days prior, which was later used as evidence of their premeditation
1931	Schaffer's firm hired O'Connor to oversee grading and other work on the bridge substructure; O'Connor sublet the work out for cheaper than he charged; may also have been paid in further stock
1931	Phoenix Finance Corp. paid cash advances to bridge company with 8% interest due the following year
Sep 25, 1933	Phoenix Finance Corp. et al, file suit to foreclose on the bridge and take complete control of the company; trial process lasted over a decade, draining resources from the company beyond even what the corruption leeches
Sep 26, 1933	First receiver appointed
1933-1942	Ongoing litigation and appeals in Iowa, Delaware, and federal courts
Oct 1942	U.S. Supreme Court virtually upheld rulings of Federal Courts and Delaware Supreme Court in denying Phoenix's writ of certiorari
1945	Final verdict reaffirmed by Iowa Supreme court; ruling that most losses were compensated by the monies they had drained from the company
1954	Hearings were required to settle the issue of if Phoenix was owed any part of the liquidation dividend

Design, Construction, and the Ice Jam of 1945

Perhaps because of the culmination of the previous three points, the company could ultimately not maintain the bridge in the long run. The corrupt, rushed timeline may have also meant that the work was not done to industry standards of the time. Routine maintenance and ongoing repairs did add to the overall costs of operation. Reports showed that Oscar Thorson was in town on occasion to supervise various forms of ongoing maintenance and repair work (LCT 01/19/1936:5). Notably, the slough roadways and bridges, which would ultimately become the proverbial nail in the bridge company's coffin, already required "major repairs" by 1939, when Thorson directed John H. Thompson (a different John Thompson from the one associated with the Phoenix Financial Company group) to oversee the work. Simultaneous repairs were being made to the floors, bracings, and other bridge components (such as pilings, concrete piers, approaches, wood decking and railing, and steel braces) through this period. Because of his position as a receiver, Thorson was required to get court approval for all such repairs, which may have slowed the process and made it unsustainable. One instance of the need for ongoing repair work was reported in an article entitled "The Black Hawk Bridge at Lansing Has Worries" (Postville Herald 10/26/1939:7).

What finally condemned the bridge was an ice jam in March of 1945. The ice jam was reportedly a result of the Coast Guard breaking ice with its cutter Fern on March 21 for the movement of military equipment related to World War II operations. The ice jammed along the slough bridges, taking out some approaches, 100 feet of the Big Slough bridge and about 70 feet of the Winneshiek Slough bridge. The problem was exacerbated by higher than usual water levels at that time. The costs were too great. The company could not afford the costly repairs and closed the bridge indefinitely, allowing it to fall further into disrepair. In 1948, it was reported that about \$600,000 would be needed to repair the bridge or about \$2 million to replace it (Burke 2016:10; LCT 21/08/1949:14). And, sitting idle for so long, other parts of the bridge also fell into disrepair. No cars crossed it from 1945, though some pedestrians used it until it became even too unsafe for that.

A lawsuit against the United States was held in the United States Court of Federal Claims. The court found that anybody erecting a structure in a "navigable channel" does so at their own peril, but that some costs were rightly due to the Bridge Company, which was awarded \$123,000 since the vast majority of the damage was along the sloughs and not the "navigable" portion of the river. One dissenting opinion among the three judges believed that the "navigable" designation applied to the whole breadth of the river rather than just the main channel (LCT 08/21/1949:13; U.S. Court of Federal Claims 1949).

Regardless of its construction quality or who bore responsibility for the damage, in the end, the bridge company was unable to afford any of the repairs needed to continue operation. This financial inability was only exacerbated by the points above, which attributed to low revenues relative to its high expenses and, thus, the inability to keep the Black Hawk Bridge in an operable condition.

State Ownership, Repair & Modification, and 1956 Reopening

In 1948, Lansing resident W.E. Albert, the second receiver for the company, reported that the bridge suffered continued deterioration during this period, with issues including rust, decay of

the wood floor, that “other portions are decaying,” and that the highway approaches were unsafe. At that time, there were over 500 bondholders, all but 20 of whom were residents of Iowa, Wisconsin, and Minnesota. The City of Lansing and Allamakee County also had a combined \$125,000 invested into the bridge. Albert feared that the bridge would be a total loss if something were not done quickly. He and many of the other bondholders hoped that reports of Iowa and Wisconsin jointly purchasing the bridge would come to fruition, and this message became an essential part of a local campaign to sell the bridge to the States of Iowa and Wisconsin. They hoped this would keep the bridge open, and perhaps it could even be a free bridge. A committee was formed to advocate this message. The committee included Frank Christen, chair, Thomas Kerndt, secretary, George C. Aschom, who would be appointed receiver in 1954 after the death of Albert the year prior, Moritz Kerndt, Gene Brennan, Verne Peters, Fred Schafer, Jack Ehrlich, John Brophy, Mayor Peter Paulson, John Hurn, Fred O’Reilly, Harold Wellendorf, Arlen Bjerke, and James Peterson. Thomas W. Kerndt was joined by Harold W. Gaunitz, formerly a commander of the Iowa Department of the American Legion, on a tour of cities along IA-9. They advocated for the bridge’s reopening, emphasizing its benefit to all the cities along the highway (LCT 12/12/1948:19, 01/19/1954:10; Mason City Globe-Gazette 08/07/1948:5).

Residents of Lansing and the vicinity were, of course, determined to get the bridge reopened under joint control of the states. However, the editors for the La Crosse Tribune were also firm advocates for the bridge. They referenced it many times, using striking headlines, often in bold or unusual fonts, such as: “The Bridge that Nobody Wanted,” and “Restore Lansing Bridge,” and later called it the “never-to-be bridge” and other names. Their articles often pressured Wisconsin state officials to work harder in cooperation with their Iowa counterparts to buy, fix, and reopen the bridge. Their pressure was hard enough to warrant at least one direct response from a Wisconsin Highway Commissioner and another from the Mason City Globe-Gazette editors that were then published in the paper. The Wisconsin officials stressed that much work was yet to be settled regarding costs, legal agreements, regulations, and future planning before making a final decision. The Mason City editors did not think the bridge would get enough traffic to be worth all the effort. The La Crosse editors also clearly wanted it to be a toll-free bridge (LCT 08/16/1948:4, 08/22/1948:15, 09/30/1948:6, 08/21/1949:14, 09/24/1949:2, 05/26/1957:6).

F.R. White, the Chief Engineer for the Iowa State Highway Commission, produced a report in 1948 regarding the bridge’s location, construction, financial situation, legal status, and repair. He estimated that the repair cost would be about \$600,000 and that only the public—likely a partnership between the state highway commissions of Iowa and Wisconsin—could afford the purchase, repair, and ongoing maintenance of the bridge. In the cover letter to this study, White asked the state’s Special Assistant Attorney General if the commission could legally split all costs and ownership with Wisconsin’s State Highway Commission. The study found that a replacement bridge would cost \$2 million (LCT 12/12/1948:19).

The Iowa-Wisconsin Bridge Company had to sue in U.S. Court for the right to sell the bridge because of its charter and commission arrangements with the U.S. legislature and the fact that it straddled a state border. After securing that right, the bridge was put up for sale in May 1949, but there were no bidders, as only Iowa had approved the necessary expenditures and was not willing or able to go forward on its own. The bridge was put up for auction in August of the same year, and again, the states made no offer (LCT 12/12/1948:19, 08/21/1949:14).

By 1953, the states were both poised to make an offer. This ultimately led to the two states working together to purchase the bridge and bring it back to working order as a free, public bridge. On February 7, 1951, the states offered \$50,000 for the bridge and its approaches, splitting the cost evenly. However, a Judge ruled that it could not be sold for less than two-thirds of its appraised value of \$104,996. Two-thirds of that would be \$69,997.34, and the states subsequently offered \$70,000, split evenly, later that month. The State of Iowa handled all correspondence and negotiations, an arrangement approved by the State of Wisconsin. In a letter to the bridge company, the Iowa Highway Commission wrote:

We hereby state and represent that this offer is made for the purpose and with the intention that if the offer is accepted and the bridge and approaches are sold and transferred to us we will repair, reconstruct, and rehabilitate the bridge and its approaches and maintain and operate the same free from tolls (LCT 02/29/1952:17, 03/22/1953:1; 03/18/1954:18, 05/05/1954:1).

The bridge company agreed to general terms at the Waukon courthouse and thus began another series of legal matters, though this time under happier, calmer circumstances. Matters had to be settled with railroads, and all agreements with them had to be reaffirmed; Judge Graven ruled in Waterloo that all past agreements to overpass the Burlington Route must be honored. Matters of past tax liabilities and the preparation of deeds had to be settled. Each state had to pay its \$35,000 share to the bridge company. There were also matters of new regulatory statutes that needed to be addressed, especially with the quality and style of the bridge approaches. On the bridge company's end, there were still matters about which stockholders were due a share of the liquidation after final costs and debts had been settled. The states also had to agree on what and how to make certain necessary repairs and so forth. Eventually, in March 1953, the Tribune was able to announce the "Way Cleared for Lansing Bridge Sale." By 1953, all needed legislative and legal issues were finally resolved in both Iowa and Wisconsin. Both state's lawyers were in agreement, all the tax issues were waived by the City of Lansing, Allamakee County, and the City of Freeman, Wisconsin, and all reaffirmed the company's past agreements with the Burlington Railroad. Iowa Federal District Judge Henry N. Graven oversaw the proceedings, and the company's third and last receiver, George C. Aschom of Lansing, had no objections (LCT 02/29/1952:17, 03/22/1953:1; 03/18/1954:18, 05/05/1954:1).

In September of 1953, remaining Class A stockholders were alerted by mail that they would still receive their portion of any bridge liquidation, but that they would each be required to file verified statements of stock ownership by December 31, and that those filings would be reviewed in a federal court. Local historian William Burke believes this was the last of any official correspondence to shareholders from the bridge company (except for any payments). Notably, the estate of W.E. Albert was still owed a claim of \$26,602 for his expenses as a receiver, and George Aschom himself had filed for \$43,000 in expenses. These and other smaller outstanding payments would need to be reimbursed before the dividends were calculated (Burke 2016 3; LCT 09/27/1953:1).

Substantive Changes and Repairs, 1953-1956. In addition to the destruction of the slough road and bridge, the main span's wood floor, wood railings, wood joists, and many other pieces had decayed from the time of the 1945 closure. Notably, the untreated wood of Wisconsin-side embankments would need to be rebuilt entirely, and even some steel would come to need repair.

The work to be done, as described in notes provided with the 1954 repair plans, can be summarized in the following ways:

- Removal
 - “old asphalt plank wearing surface is to be removed by the contractor and dumped at a point one block south and one block east of the west end of the bridge for use by the City of Lansing.” This was completed by Sam Weipert (Iowa State Highway Commission 1954; White 1948:4; Burke 2016:5)
 - “old lumber including stringers floor plank nails, and rail is to be removed by the contractor. All unfit for re-use is to be disposed of by the contractor. Material suitable for reuse shall be piled after removing nails at both ends of the bridge in approximately equal amounts”
 - “existing toll house is to be removed and disposed of by contractor”
 - “existing roadway lighting system including all wiring and lighting fixtures is to be removed and disposed of by the contractor.”
- Installation
 - Open Steel Grid Floor
 - Lighting
 - Fencing at the West End
 - Adding new I-beam approach span and concrete abutment at east end
- Strengthening certain steel members
- Clearing of trees and brush
- Remodeling concrete
- Repainting steel work and concrete abutment at west end
- Re-bridging the sloughs on the Wisconsin side: only four slough spans were built, when five were a part of the original bridge (Burke 2016:3; Iowa State Highway Commission 1954; White 1948:4-5; Wisconsin Historical Society 2022).

Brennan Bros. was hired to set new pilings and install the new slough bridges, which were handled separately by the State of Wisconsin. To do so properly, they drove 60ft pilings in first to ascertain the required depths; most were sent 30 feet lower than the normal pool level (LCT 05/05/1954:1, 05/28/1957:1).

The remainder of the work appears to have been done in 1955 and 1956. As per other agreements, most contracts were handled by Iowa officials, except when relating only to the crossing of the bottoms on the Wisconsin side of the river (LCT 01/14/1955:1). Wisconsin handled those arrangements. Whiting-Turner, a company out of Baltimore, Maryland, was contracted for the repair work as they were the lowest bidder. This firm sublet painting to the James Tseuns Co. of Pittsburgh, Pennsylvania. Some of the steelwork was sublet to Holman Erection Co. of Minneapolis, Minnesota. Railings and old flooring were quickly removed, and a new grid floor of about 35,500 square feet was produced in St. Louis, Missouri. The grid floor

arrived in June 1955. A combination of five firms were hired to produce the four new spans across the sloughs. R.J. Conney Construction Company hauled riprap over the bottoms. The L.G. Arnold Company of Eau Claire, Wisconsin, redid the roads over the bottoms. They produced 2.2 miles of road, raising its level by about five feet on average to put it above the all-time high-water point and softening its curves for safety. This work required them to clear much brush and many “grub trees” along the way. Three parking points along the road were added using a sand pumper from the river. New wiring was run through the existing conduit on the bridge (Dubuque Telegraph-Herald 05/22/1956:19; LCT 06/08/1955:14, 01/02/1956:20, 05/28/1957:1).

All this work was done at the cost of \$1,248,844.95—nearly double the estimates of a decade prior. Over \$388,000 of it went to the Whiting-Turner Company to strengthen existing joint connections and build new sections. The roads, Burlington Railroad overpass, and approaches on the Wisconsin side were reconstructed mainly by the Brennan Bros. of Lansing and La Crosse at over \$562,500. Wisconsin Highway Commission district engineer H.H. Hinkley reported the amount of concrete used (3,262 cubic yards) to be more than enough to pave one mile of highway and the amount of steel used (1,226,310 lbs. of structural steel and 420,985 lbs. of reinforcing steel, 25,205 linear feet of pilings) was more than enough to make 770 average-sized cars. L.G. Arnold used 381,000 cubic yards of sand, 15,000 cubic yards of crushed stone, 313,000 yards in length of riprap and heavy stone, and an uncounted amount of soil (LCT 05/08/1957:14, 05/28/1957:1).

At last, the Wisconsin Highway Commission’s division manager, V.L. Fiedler, proclaimed that the bridge would open on October 10, 1956, at 10:00 am. On January 2, months prior, the editors of the Tribune had already written: “Best News of ’56 to be Opening of Black Hawk Span” (LCT 01/02/1956:20, 10/07/1956:23), and that was finally coming to fruition. The reopening ceremony coincided with Lansing’s Fish Days celebration. It was celebrated with speeches at the mid-point of the bridge, a ball game between Lansing and DeSoto, and parades in each of Lansing, DeSoto, and Ferryville. Lansing’s parade was immediately after the mid-bridge speeches, two of which were given by former (and future) Lt. Governor William Nicholas of Iowa and Lt. Governor Warren Knowles of Wisconsin (LCT 05/08/1957:14; 05/28/1957:1).

The bridge reopening was, of course, well met in Lansing. Reports claimed that the bridge was bumper-to-bumper with cars for three consecutive days and that 437 cars passed in one hour on Sunday, October 21, 1956 (LCT 10/23/1956:10, 05/26/1957:6). Katheryne Feuerhelm, a correspondent for the La Crosse Tribune, interviewed several Lansing residents and published some of their responses.

George Aschom, receiver for the bridge company and a local merchant, said:

As one of the merchants of Lansing I believe it will mean much in opening new trade areas. Many of the farmers and business people in this territory are former high school students from our high school and will use the toll free bridge. The increased through-traffic of tourists may help not all lines of business directly, but when one firm enjoys increased business it helps the whole community (LCT 4/10/1952:17).

Lansing Mayor Leo Krieger echoed the importance the bridge would have for travel and tourism:

It will link the two state highways and open new trade and travel areas. The scenery in our part of the Mississippi Valley is some of the most beautiful in the United States. The bridge opening will cut mileage for tourists going in any direction (LCT 4/10/1952:17).

G.M. Kerndt, age 87, president of Kerndt Bros. Savings Bank, spoke of the bridge's importance, in a way emphasizing both its presence as a physical structure and its inherent value to the people of the town:

It's great news for Lansing, but equally as great for all the people of this locality. It is a culmination of years of hard work for many public spirited people and I am only sorry that some of the old-timers who started and wanted a free bridge at Lansing are not here to see it. It means that a marvelous structure that has been going to waste will soon be put back to a much needed service again (LCT 4/10/1952:17).

Julius Boeckh, also age 87, was among the first members listed on the 1916 charter of the Interstate Bridge Company, and an ongoing proponent of the idea. His remarks were sober compared to the others, as he reminisced on what the bridge could have meant for the stockholders in the community, and he pointed out the difficulty that all the lawsuits caused. His factoid-heavy interview was overall positive for the implications of the bridge's reopening, but his exhaustion—and perhaps sorrow—were also evident:

The bridge opened for business in 1931, which was a depression year, and cost \$750,000. It would have paid four per cent to the stockholders after the first year of operation. Much of the receipts were used in litigation. It has been in receivership for some time before it closed in 1945. With the opening of the bridge the traveling public will have the use of it from the end of Iowa Highway 9 and will connect with 35 north and south and 80 east and west. It will be appreciated by the travelling public. The main span is intact, but needs paint and other repairs and will carry a load of 30 tons (LCT 4/10/1952:17).

J.W. Underwood's response reflected his role as president of the school board:

The bridge opening will again put us on the crossroads, not at the end of the road. From 1940 to 1945 there were 128 Wisconsin students graduated from the Lansing High School and the bridge reopening will let them renew acquaintances. We will again welcome students from Wisconsin (LCT 4/10/1952:17).

In what perhaps became the first big test for the new river crossing, a major flood hit in April-May 1965. The flood stage at Lansing is 18 feet, but the flood reached a peak of 22.5 feet there. The worst of the bridge damage was estimated as 2,000 feet of lost asphalt on the Wisconsin side approaches, the repairs of which were estimated to take only two weeks. Mayor Fred Blockhus met with Iowa Lt. Governor John Culver, The Red Cross, and other officials at Marquette to discuss solutions to damage throughout their communities (LCT 05/01/1965:1).

A 1968 study funded through the Iowa legislature explored possible relocation, designs, costs, traffic, and revenue sources for a new bridge at Lansing. The study found that traffic on the Black Hawk Bridge had fallen from 460 vehicles per day in 1957 to 320 in 1960. Through the 1960s, however, average daily crossings rose considerably, rising to 1,080 vehicles per day in 1967, an increase of 8.9 percent from the decade prior. This rate increase far outpaced the two

nearest competitor bridges in the same timeframe. Average daily crossings at La Crosse rose from 9,320 in 1957 to 11,200 in 1967 when the new I-90 bridge was opened for use. Furthermore, in Prairie du Chien, the average daily crossing rose from 2,370 in 1957 to 3,390 in 1967. This study was an early investigation into replacing the Black Hawk Bridge. It included economic data, design options, cost estimates, and a detailed projection of future use (Heineman and Smith et al. 1968: II-14). The report recommended building a new continuous span bridge at or near the extant Black Hawk Bridge site, at the cost of roughly \$4.4 million, and with toll collection from all motorists. The report estimated the opening date of a new bridge in 1971. Plans were so thorough in this report that they designed a toll booth between the lanes on the Iowa side that would have room for a second attendant if future use would require it. The projected first-year data for 850 vehicles per day would have meant a gross annual revenue of \$151,000. The projected 14th year, with 1,400 vehicles per day, would have meant \$258,000 gross annual revenue (Ibid. II-25).

The same survey included a record of all crossings over the Black Hawk bridge in a single 24-hour period in April 1968. There were 739 crossings recorded, and among them were: 585 passenger cars, 2 passenger cars with trailers, 78 pickups, 4 pickups with trailers, 38 single-unit trucks, 4 single-unit trucks with trailers, 21 semi-trucks with trailers, 4 local busses, and 2 transit busses. (Ibid. II-13, II-15). A 2011 report noted about 2,000 average daily crossings (LCT 08/19/2011:9).

New Lights Added in 2004

New lights were installed in 2004 in preparation for the Grand Excursion Sesquicentennial. This event brought a number of Mississippi River riverboats past Lansing en route from Rock Island, Illinois, to St. Paul, Minnesota. The re-illumination of the bridge was the brainchild of Bruce and Mary ReVoir, Lansing residents who took a leadership role in the project. Their initial idea was started by watching New Year's Eve broadcasts on television and seeing cities around the world with well-lit, showy bridges. Their goal was to have lights in place for the Black Hawk Bridge's 70th anniversary in 2001. However, there were struggles with this project too, especially when the contractor doing the work went bankrupt. On top of that, all other bids for the project were more than double the cost. This disruption put the project on hold for some time. The plans were revised from 74 lights to 37, then to 23. However, progress was slow until planning began for the 2004 Grand Excursion. With that, excitement built around lighting the bridge again. The ReVoir's four-plus years of work included working closely with the Iowa Department of Transportation, running a campaign of fundraising to pay for installation and ongoing electrical bills, and donor recognition. Some funds were raised by selling reprints of the original 1931 book about the bridge. Some funds were raised through grants, and others were contributed through Lansing's Grand Excursion 2004 committee. The lights were scheduled to enter operation with the Grand Excursion riverboats' passing of Lansing on June 29, 2004. The work was done by Lowell Electric of Luana, Iowa. The twenty-three lights protrude about one foot out from the south side of the bridge, and John Rethwisch, a local resident, operates the switch (Allamakee Journal 2004; LCT 01/05/2004:1; 17/05/2004:15; Rethwisch 2022; Revoir 2022).

Barge Strikes

Barge strikes have been relatively common at this site throughout its history. The river is heavily trafficked here (Figure 43), and a drastic turn in the river (Figure 44) makes navigation hazardous, especially for larger barge tows. Personal interviews with those familiar with the bridge, including John Rethwisch, who has lived next to the bridge for decades and serves as the switchman for its lighting system, are unanimous that the bridge has been struck many more times than are ever reported in local or regional newspapers.

A report to the same effect came in a La Crosse Tribune story on July 24, 1985, titled “Lansing bridge being battered by barges.” In that story, the official number of strikes reported by the State of Iowa, The State of Wisconsin, and the U.S. Coast Guard from July 1983 to May 1985 totaled four. However, that tally was outpaced by the count of Gus Kerndt, a Lansing lawyer, who counted at least three strikes in just the second half of that period. Kerndt had held meetings at Lansing City Hall with the U.S. Coast Guard, Allamakee County Board of Supervisors, and state representatives. They discussed possible safety measures that could be put in place, possible notices that could be posted to river navigators about the dangerous, nearly-90-degree turn in the river at Lansing, possible improvements to reporting, and possible improvements and repairs that could be made infrastructurally. It was noted that strikes occasionally loosen the barges that float freely and damage private property. The parties agreed to make improvements, and it was reported that the United States Steel Corp. was thoroughly investigating the bridge’s structural safety (LCT 07/24/1985:17). The 2004 Black Hawk Bridge Feasibility Study makes a comment to the same effect: noting that the Coast Guard recorded six hits during a period from 1987 to 1991, but that qualifying hits were only those resulting in \$25,000 or more in damage (CH2MHill 2004:2-11 through 2-15)

Because of this, the total number of barge and other strikes would be impossible to recount and do not appear to have been recorded in any other manner. To that end, a review of newspaper mentions of bridge strikes and those detailed in other sources has been conducted. Those found in this investigation were:

April 10, 1976. The main pier on the Wisconsin end of the bridge was struck at about 1:15am after the barge failed to make the 90-degree turn in strong currents. No damage was reported to the bridge. No damage, except some loosened coupling cables, was reported to the barge. The barge included twelve barges and the *Mary L.*, its tow boat, owned by Robbins Towing Co. of Minneapolis, Minnesota. Ten of the twelve barges were filled with grain. Two, including the lead that hit the pier, were empty. Bill Hiebing, warden for the Crawford County Dept. of Natural Resources, and Jim Atkinson, highway commissioner for Crawford County, lead the investigation. Traffic was held up for about an hour while inspections were made. No charges were filed (LCT 04/12/1976:4).

August 31, 1978. “For the third time this year, a barge has struck a Mississippi River bridge at Lansing,” began the *Tribune* article, as a testament to the subject’s lack of reporting. This time, the *Ed Renshaw* was towing 15 grain-filled barges and struck a bridge abutment at about 3:00am. Nine loose barges blocked the main channel of the river.

July 23, 1983. The *Floyd H. Blaske*, owned by the American Commercial Barge Line of Jefferson, Indiana, was towing fifteen grain-laden barges and struck a cement pier. Two tugboats freed the tow later that morning. The Iowa Department of Transportation reported that small amounts of concrete were chipped away from the edge of the pier (LCT 07/25/1983:11).

1985. A barge hit a pier and its tows floated downriver (CH2MHill 2004:2-14).

1987. A loose tow resulting from this strike hit a riverwall on the Lansing side and was damaged (CH2MHill 2004:2-14).

September 15, 1991. The *Walter Hegestad*, owned by the Canal Barge Company, was towing fifteen barges when it struck the Iowa shore and subsequently hit the bridge on the Wisconsin side in trying to re-manuever. Three of the barges had to be dismantled as the river was closed. The U.S. Coast Guard, Iowa DOT and Wisconsin DNR were all involved with the investigation (LCT 09/17/1991:8).

1994. A barge was recorded to have struck the 1992 dolphins (CH2MHill 2004:2-14).

October 11, 2007. The *Angela K* struck one of the dolphins. It was carrying 14 barges of grain and one of loaded scrap. The channel was blocked for a time before the vessel was moved downriver for repairs (US Coast Guard 2022).

June 28, 2010. The *W.A. Kernan* struck land when trying to navigate the turn. The current carried the barge sideways down the river. Multiple barges were lost, while the rest of the vessel was stranded bank to bank at the protection cell (dolphin) (US Coast Guard 2022).

July 22, 2010. Due to a strike by the *Tom Frazier*, the bridge was closed through the following day, and the Coast Guard closed down river traffic as well. Inspections were made by Department of Transportation officials of each state. The barge came to rest against a “dolphin” which had been placed in the water to protect the pier. Dolphins are steel cells filled with sand and capped with concrete. It is possible that this was the dolphin recommended in a 2007 report and installed in 2009 for a cost of \$800,000 (LCT 07/23/2010:9-10; 07/24/2010:4). The above-mentioned dolphin structures were added in 1992 (Burke 2016:13; US Coast Guard 2022).

November 6, 2010. The bridge the *Ardyce Randall*. The bridge was closed in both directions through the following day while the Wisconsin Department of Transportation conducted an investigation. Traffic was directed toward both La Crosse and Prairie du Chien (LCT 11/07/2010:5).

In August of 2011, a biennial inspection found an 18-inch crack in a concrete pier that required immediate repair. Sunlight was visible through the crack. The bridge was closed on a Thursday and remained closed through the following week while repairs and further inspections were completed. This closure was the first for non-barge strike reasons since the bridge reopened in 1956. Because the closure was expected to impact workers, a shuttle boat was established. Its tentative schedule was to bring Wisconsin workers to Lansing with a departure at 6:30 am, with a return departure at 3:40 pm. A volunteer or bus was to drive passengers to their place of work.

Mayor Don Peters noted the distance other commuters would be required to drive in the meantime and hoped to welcome back their “friends in Wisconsin” soon. Previously, at the 2009 inspection, the bridge scored 40/100, which was reported to be okay (LCT 08/19/2011:9). The bridge was closed again for repairs to the deck and other steel components in the Spring of 2019 (LCT 05/13/2019).³



Figure 43. Night time view of a barge approaching the bridge, looking north.
Source: Private collection of John and Judy Schild.

³ A Freedom of Information Act request was fulfilled by the US Coast Guard/Department of Defense, providing information on several barge strikes since 2001. Further information about pre-2001 barge strikes of this bridge are on file with the Electronic Records Division Reference Branch (RRER) of the National Archives and Records Administration (NARA). Relevant files may include the following and would require another Freedom of Information Act Request: Casualty Report Record; Collision Description; Casualty Collision and Grounding; and Casualty Brief Narrative. Due to time restraints and the potential for repetitive data, a Freedom of Information Act request was not made for these files.

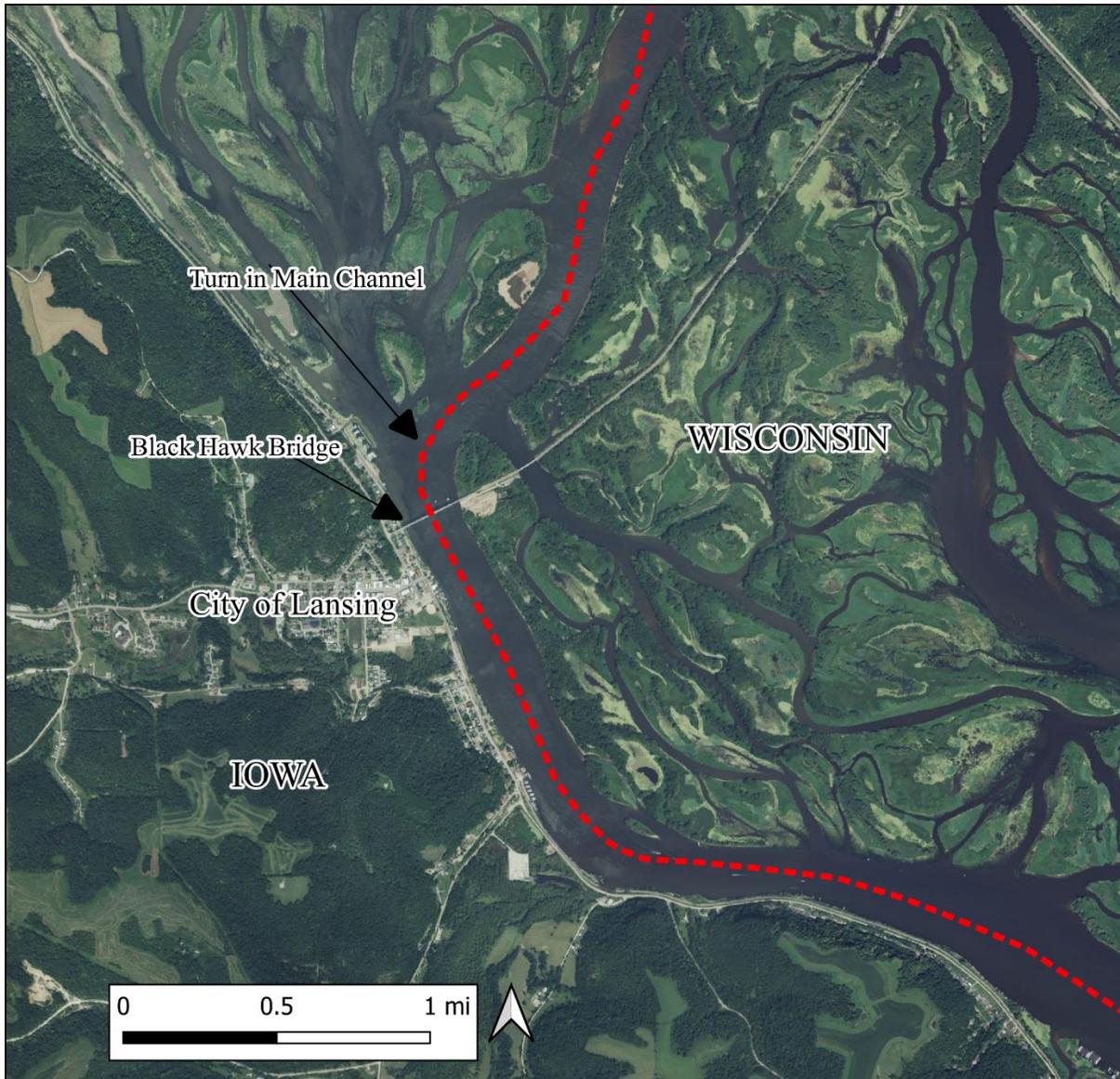


Figure 44. Current aerial showing position of bridge and river. Navigating the river at Lansing is notoriously difficult, especially for southbound barges. The reason for this is that just north of the bridge is a nearly 90-degree bend in the main channel. Operating that turn, combatting the forceful river current, and dodging the piers of the proximal bridge can be difficult. The approximate center of the navigable Main Channel of the Mississippi River, maintained by the US Coast Guard, is shown here (dotted red line). Basemap: QGIS mapping software, accessed January 2023.

IMPORTANT PEOPLE & GROUPS

Melvin B. Stone

Melvin Bailey Stone was born on January 10, 1874, in Darien, Walworth County, southeast Wisconsin. His father was a farmer by trade and moved his family from their Darien, Wisconsin, farm shortly after Melvin's birth to a farm near Algona, Iowa, then to another farm near Sioux Falls, South Dakota. Melvin married Frances (Fannie) Mae Way, a native of Illinois, in Vermillion, South Dakota, on June 22, 1896. The couple then moved to Madison, Wisconsin, where Melvin completed his engineering degree. The 1900 Federal Census for Madison lists their residences as 627 University Avenue. They had two daughters by that time: Dorris G., aged 2 years, and an unnamed baby, aged three months. Melvin graduated from the University of Wisconsin in 1900 with a Bachelor of Science degree in Civil Engineering (Bartlett 1926:655; US Federal Census for Madison, Wisconsin 1900).

As of approximately 1910-12, he worked as an engineer with the A.Y. Bayne & Co. firm located at 608 Metropolitan Life Insurance Building in Minneapolis, Minnesota. A.Y. Bayne & Co. was founded by Alexander Y. Bayne, who was born in the South but moved to Riverton, Iowa, where he graduated high school. He taught school in Iowa from 1876 to about 1880, when he became a traveling salesman in the bridge-building industry. Bayne then founded this company, which built bridges from about 1887 to about 1890. At that point, he became a partner of the Gillette-Herzog Co. of Minneapolis, serving as manager of its highway bridge department. Following this, he served in the same capacity for the American Bridge Company of Minneapolis from 1900 to 1903. From 1903 onward, he continued to work under his own A.Y. Bayne & Co. operation. A book of Minnesota biographies indicated that Bayne was also a "jobbing sales agent" for the American Bridge Company during this time. The firm of A.Y. Bayne & Company acted as a general bridge contractor and built bridges throughout Minnesota, Iowa, the Dakotas, Montana, Michigan, and Wisconsin (Marquis 1907:34-35; University of Wisconsin 1912:274). Through his work with this company, Stone contributed to the erection of span five of the Eagle Point High Bridge (non-extant) from Dubuque, Iowa, to Wisconsin. One advertisement even suggested he designed the whole bridge, which may be true but should be considered unsubstantiated.

The 1910 US Federal Census for Minneapolis, Minnesota, listed the Melvin Stone family as residents of 3981 Thomas Avenue South. Living with Melvin (age 36) and Fannie (33) were their three daughters, Dorris G. (12), Ellen L. (10), and Margaret W. (7), Melvin's father, Avery H. (72), who was a Civil War veteran of the Union Army, and a servant named Mathilda J. Lovereed (22). Melvin was listed as a civil engineer and had zero weeks without work in the prior year (Bartlett 1926:654-655; University of Wisconsin 1912:274; US Federal Census for Minneapolis, Minnesota 1910).

Circa 1913, Stone started his own structural engineering firm called Northwestern Concrete-Steel Company. He advertised several services, including consulting, design, building, supervision of construction, reinforcing, fabrication of materials, and others. In 1913, his offices were listed in Suite 640 of the Andrus Building, and in 1915, they were listed in suite 421 of the same. By 1918, his offices were moved to the New York Life Building, Suite 916, where they remained for many years.

However, at some point in late 1929 or early 1930, between the publication of the 1929 and 1930 editions of the Minneapolis city directory, at virtually the same time he was hired to redesign the Lansing bridge, his offices were moved to Suite 1017 of the Phoenix Building, at 60 4th Street South in Minneapolis (Figures 45-46). In Suite 1000, presumably on the same floor (the top floor of the ten-story building), were the offices of John W. Schaffer, his company, Vernon O'Connor, his Standard Shares Holding Co., and—as listed in this year only—the Iowa-Wisconsin Bridge Company (Figure 46). This arrangement, perhaps only coincidentally, coincides with the 1929-30 take-over of the company, O'Connor's April 1, 1930 election as president of the company, and the decision to hire Stone to design a new cantilever-style bridge superstructure mid-construction (Emporis 2022a, 2022b, 2022c; Minneapolis Directory Company 1915-1933). This is in no way intended to insinuate that Stone was a knowing participant in the defrauding of the Iowa-Wisconsin Bridge Company. It may be coincidental or that he was unknowingly being used as a part of their corrupt effort. Moreover, it was not as though he was unqualified to do the work. Stone had an impressive resume of bridges to his name across the United States and Canada.

NORTHWESTERN CONCRETE-STEEL CO.

Designers and Builders of

Bridges, Buildings, Elevators, Docks

Manufacturers Agents for

Structural Steel and Reinforcing Metal

640 Andrus Bldg. N. W. Phone Nic. 4719



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M. B. STONE, Engineer

PLANS FURNISHED

For Steel or Reinforced Concrete Bridges
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Figure 45. Two advertisements for Melvin Stone's firm. Top: Stone's first ad in a city directory, 1915 (Source: Minneapolis Directory Company: 1915:171). Bottom: Advertisement in the 1930 Minneapolis City Directory for Stone's Northwestern Concrete-Steel Company. This was the first year that the company's address was listed in the Phoenix Building, and it was on the same floor as John Schaffer and Vernon O'Connor's companies, including the Iowa-Wisconsin Bridge Company. His previous few advertisements were of the same size and design and contained the same text except the address was listed as Suite 916 N.Y. Life Building (Source: Minneapolis Directory Company: 1930:171).

1000	Iowa-Wisc Bridge Co Schaffer John W & Co surveyors Standard Shares Hold- ing Co
1010-12	Hennepin Travel Bureau Mater Investment Co United Mfg & Sales Corp
1014	Labor Digest The
1015	Kearney John S real est
1016	Broadview Oil & Gas Corp
1017	N W Concrete-Steel Co

Figure 46. 1930 Minneapolis City Directory, the first time showing Stone's business on the Phoenix Building's tenth floor along with the businesses of Schaffer and O'Connor, including the Iowa-Wisconsin Bridge Company, and approximately coinciding time-wise with his contract to redesign the Black Hawk Bridge (Source: Minneapolis Directory Company: 1930:1844).

In 1919, Stone took out a quarter-page, above-the-fold advertisement in the Minneapolis Star Tribune for the Northwestern Concrete-Steel Company. The ad was exclusively text and contained some very flowery and often wandering language. It cannot be included in full here, but some pieces of it give a robust, grandiose impression of the engineer, nearly a decade before he came to the Lansing scene:

...under the direction of M.B. Stone, founder and manager of the firm, it has undertaken and carried to a successful conclusion construction that will stand as monuments for coming generations to gaze on, links in our great arteries of commerce that typify Minneapolis and her ideals... whether it be in the designing of bridges and other types of concrete and steel construction, the supervision of the work or in the furnishing of the materials from the pumps to the reinforcing metal, the equipment of the company is complete and equal to the emergencies of modern developments. From Toronto to the Pacific Coast and all down the reaches of the Mississippi River. Mr. Stone has planned and supervised the construction of many of the most beautiful bridges on the continent. Minneapolis has two of these bridges... the splendid [Eagle Point] bridge over the river at Dubuque, Iowa was designed by him also. His skill and the reputation that he has achieved in this work has brought him calls from Canada... while the Government has made use of this same skill in its efforts to beautify Yellowstone National Park and to make it possible for the tourist to see all of its wonders from well-constructed roads that wind their way across yawning canyons in bridges designed by this same organization... one of the first [post-World War I] requirements will be bridges, bridges that will link and maintain adequate connections between the ends of these vital arteries of commerce along which will flow a constantly increasing stream of traffic as the Nation devotes more and more of its resources to the task of feeding the world and developing its resources. Bridge builders will be needed, men who have had the experience that Mr. Stone has had in the erection of these lasting monuments to his skill which contributed so much to the war efficiency of the Nation by maintaining the efficiency of our roads at a time when they were vital to the life of the country and the success of the world in its struggle for freedom... Mr. Stone and his organization have demonstrated qualities of leadership in the work of the future... making a practical application to the solution of the world's problems of the ideals for which we fought (Minneapolis *Star Tribune* 06/17/1919:88).

Melvin died on May 19, 1934, only a couple of years removed from his work in Lansing. He is buried in Lakewood Cemetery in Minneapolis. Minneapolis Star “Melvin B. Stone” May 21, 1934, Monday, pg. 8: “Final Services were conducted late today at the Burd P. Johnston funeral home for Melvin Bailey Stone, 59, consulting engineer, who died at his home, 2627 Fortieth street. Mr. Stone, a graduate of the University of Wisconsin, helped plan and construct bridges in the United States and Canada. Mr. Stone, who came to Minneapolis in 1900, was a member of the Zuhrah temple of the Shrine. He is survived by the widow, Fannie Way Stone; four daughters, Mrs. Kenneth W. Tyler and Jeanne Audrey Stone of Minneapolis, Mrs. Harold Gilbert of Willmar, and Mrs. Margaret Frase of Los Angeles; a son, Melvin B. Stone, jr.; a sister, Mrs. Edgar D. Stone, of Brooklyn, N.Y., and a brother, M. H. Stone of Minneapolis” (Minneapolis Star-Tribune 05/21/1934:8).

Articles about his work in Lansing and his death in 1934 noted that he was well known throughout the United States and Canada. For how well he was apparently known, little data is available for his other bridges (LCT 05/20/1934:1).

McClintic-Marshall Company

Though McClintic and Marshall are not household names among the pantheon of American industrialists such as Carnegie, Mellon, or Morgan, the work of these two men can be understood in much the same way. These were their contemporaries, they were known to each other, and at times they depended on each other. McClintic and Marshall held a vision that was very much on par with the others, and their work was also very successful. The two namesake founders of this steel fabrication company were the tall and lanky Howard H. McClintic [sometimes shown as McClintock] and the short-statured Charles D. Marshall. They share an origin story that began in the engineering department of Lehigh University, a private business and engineering school in Bethlehem, Pennsylvania. Bethlehem was home to the steel factories that would eventually become the famous Bethlehem Steel Corporation that would later buy out the McClintic-Marshall Co. and continue to operate it under that name. Bethlehem and its steel industry was an American steel manufacturing giant rivaled only by Pittsburgh and its U.S. Steel Corporation. Steel was a significant part of Bethlehem’s local economy and identity. As young engineering students in this environment, McClintic and Marshall became very familiar with steel manufacturing and construction methods, including the manufacturing of construction parts and components. The two graduated from Lehigh in 1888 (Darnell 1984; Lehigh Alumni Association:1915:9; Time 1931; Warren 2007:125-138).

As young engineers fresh out of university, McClintic, and Marshall gained early employment with the Schiffler Bridge Company in Pittsburgh. It would not be long before they held a majority share of it. This company was founded in about 1870 by Aaron G. Schiffler, a former partner of the Keystone Bridge Company. At Keystone, Schiffler gained experience in building wood and iron bridges and enjoyed the financial backing and networking connections of Andrew Carnegie. Carnegie’s brother Thomas served as treasurer for the company from its founding, and the family secured the company significant, often railroad-related, contracts. After leaving Keystone and forming his own Schiffler Bridge Company, Schiffler experienced continued success. The company became a partnership in 1888 when J.W. Walker joined as proprietor. Their primary shops at 48th Street and the Alleghany Valley Railroad in Pittsburgh were busy, and they opened a second shop called the “Walker Works” circa 1898-99 elsewhere in

Pittsburgh. In 1890, Walker retired after only two years as a partner, and Schiffler subsequently decided to sell the company. He sold it to the two young engineers, McClintic and Marshall, who purchased a majority of the company only two years removed from university. They were joined by three minority owners. The group ran the Schiffler Bridge Company for a decade and enjoyed a good amount of success. One of their major bridge clients was the Chicago, Burlington & Quincy Railroad. They ran the business until 1900, when it was part of a major steel factory consolidation in which 28 bridge building entities were merged into the American Bridge Company of Coraopolis, Pennsylvania. This massive merger was the brainchild of J.P. Morgan & Company, who sold it only one year later to the very prominent U.S. Steel Company. The Keystone Bridge Company, where Schiffler got his start, and its Carnegie-related subsidiaries were also purchased as a part of this merger (Darnell 1984; Marvig 2022a, 2022b; Nasaw 2006:105-107; Time 1931; Warren 2007:125-138).

In 1900, McClintock and Marshall approached noted industrialist Andrew William Mellon with a proposal to form a new firm after their sale of the Schiffler Bridge Company. The two pitched an idea for a company where they would purchase Pittsburgh-made, rolled steel, a material that had yet to reach its peak prominence and turn it into construction components. With his backing, they produced steel girders and other products and shipped them by express to clients across the country. An early contract for them was for the Marshall Field's store, a project that ultimately popularized their name and company. By 1929, the company was doing \$50 million per year in contracts and touted a capacity of 600,000 tons. As noted in a Time magazine article after the company's eventual sale, their only true competitor in scope was the U.S. Steel Company in Pittsburgh. The two competitive companies had to work together to furnish steel in alternating batches to construct the Empire State Building (Darnell 1984; Shales 2011:119-145; Tauranac 2014:182, 207; Time 1931).

The McClintic-Marshall Company has left its mark on the nation with its role in constructing many important bridges, in addition to the Black Hawk Bridge. The most notable bridge constructed by McClintic-Marshall Company is the Golden Gate Bridge in San Francisco, California, completed in 1937. At the time, the company had been purchased by and was a subsidiary of Bethlehem Steel. The company also designed and built the Ambassador Bridge from Detroit, Michigan, to Windsor, Ontario.

Among the other significant bridges that the company served as general contractor for were:

- Anthony Wayne Bridge, Toledo, Ohio
- French King Bridge over the Connecticut River in Franklin County, Mass.
- The company was also responsible for a portion of the 1932 Pulaski Skyway, a bridge over the Hackensack River in New Jersey (NRHP).
- Another of their large bridges was the 1929 Cooper River Bridge, aka John P. Grace Memorial Bridge, over the Cooper River in Charleston, South Carolina. It was demolished from 2005 to 2007.
- Black Hawk Chute Bridge, over a minor channel of the Mississippi River at Keithsburg, Illinois (1910)
- ASB Bridge, Kansas City, Missouri (1911, vertical lift bridge)
- Carlton Bridge, Bath, Maine
- Louisiana Little River Bridge

- 1930 Cheshire Bridge over the Connecticut River

Some of the company's other significant works came in the form of structural engineering and steel framework. The company often supplied structural steel for buildings and bridges. Some significant buildings and structures for which the company was the primary supplier of structural steel include:

- General Electric Building, Manhattan, New York City, New York (1931, NRHP)
- Shea's Buffalo Theater, Buffalo, New York (1926, NRHP)
- Bingham Company Warehouse, Cleveland, Ohio (1916, NRHP)
- Calhoun Hotel, Seattle, Washington (1909, NRHP)
- Gulf Tower, Pittsburgh, Pennsylvania (1932)
- 500 5th Avenue, New York City, New York (1931), 60-stories tall
- Dzerzhinskiy Tractor Factory (aka Volgograd Tractor Plant; aka Stalingrad Tractor Plant), Volgograd, Russia (1930) Steel structure manufactured by M-M in New York City
- Beaux-Arts Apartment Towers, New York City, New York (1930)

Lastly, and perhaps even most significantly overall, the McClintic-Marshall Company built all of the locks of the Panama Canal (Lehigh Alumni Association 1915:9). In addition to this selection are dozens of other bridges, structures, and buildings, running the full range of size and style, for which the company either served as contractor, engineer, or steel supplier.

Oscar Thorson (Secretary-Treasurer from 1931; Receiver from 1933 to 1946)

One of the most influential figures in the story of the Black Hawk Bridge was Oscar Reynolds Thorson (often spelled Thorsen or Thorston, particularly earlier in his life) of Des Moines (Figure 47). He was born in Jönköping, Sweden, on July 16, 1873, and immigrated to the United States in the late 1880s. In 1896, he and Klara Anderson (1874-1945) married and started a family in Des Moines. He had a second marriage to Rose A. Fischer (1885-1968), with whom he wed circa 1920 and with whom he is buried (US Federal Census Records for Des Moines, Iowa 1910, 1920, 1930).

By all accounts, Thorson was a colorful character. He was a photographer by trade, which had been his listed profession with his own business in the 1910 and 1920 Federal Census Records. He was also a former wrestling promoter, promoting many prominent matches in Des Moines during the first part of the 20th century. Upon his death in 1956, the Des Moines Register ran an article telling some of his promoting tactics and other fun stories as remembered by the sport's local enthusiasts and the next generation of local agents whom he mentored; they said he had a knack for turning everyday happenings into witty stories or jokes. His obituary was published on the front page of the Des Moines Tribune on March 1, 1956 (Des Moines Tribune 03/01/1956:1,8).

From 1922 to 1928, he was a prohibition agent with the job of enforcing the Volstead Act in Sioux City, Iowa. This occupation is even more interesting because he managed the East Des Moines liquor store, a state-commission-sanctioned outlet, for about thirteen years. The 1931 Des Moines City Directory listed him as a rental agent with an office in the Burton Building. The

1934 edition listed his occupation as “sec-treas,” and the 1936 edition as rec[eiver] of the Iowa-Wisconsin Bridge Company. These were testaments to his position and the seriousness with which he would handle his responsibilities. Thorson lived in a large house with tile shingles at 911 Thompsen Avenue in Des Moines. True to his colorful personality, he grew many interesting plants. The Tribune even published photos of his particularly large tobacco plants that he had grown there after acquiring them on one of his many trips to southwest Wisconsin via Lansing (DMR 04/26/1956:13; Des Moines Tribune 09/23/1932:12; R.L. Polk & Company 1927:1311, 1931:927, 1934:746, 1936:850).

Thorson was elected as secretary-treasurer of the Iowa-Wisconsin Bridge Company at its annual meeting in 1931. He frequently traveled to the city to see the bridge and conduct related business. He was a strong promoter of the bridge and reported to the Des Moines Register that traffic “is heavy already over the new bridge across the Mississippi at Lansing on Iowa highway 9” (DSM 08/17/1931:4). Because of this advocacy, Judge Scott appointed Thorson as receiver of the Iowa-Wisconsin Bridge Company at the onset of its legal proceedings, and he continued his advocacy for the bridge throughout much of its court hearings and litigation. He was also present for inspections and oversaw repair work from time to time.

He worked to ensure that everything was working properly for the bridge. Even pressuring the Interstate Power Company of Des Moines to build an emergency plant in or near Lansing to ensure the bridge’s lights could remain functional and to commit to keeping the power lines clear and intact. According to some reports, he even threatened to build a backup power plant with his own company if they would not. In October 1931, he reportedly received a verbal assurance that they would build one (Postville Herald 10/29/1931:3).

Another way that Thorson used force to support the bridge operations was by pressuring the states to improve their highways in that vicinity. In a letter to the highways committee of the La Crosse Chamber of Commerce. He lambasted Wisconsin’s roads and mentioned how highway improvements are needed. Emphasizing a sort of symbiosis between the success of the bridge and the success of their community, he wrote:

On account of the deplorable condition of No. 35 south of our bridge entrance... all our efforts since the Blackhawk bridge opened for traffic have been to encourage traffic to and from La Crosse... We have also found that a constantly increasing number of northeastern Iowa people drive to La Crosse to trade in the stores where they undoubtedly can find a larger assortment than in their respective small home towns, and also to buy their house necessities and groceries at probably cheaper prices (LCT 03/31/1934:4).

Perhaps his experience as a wrestling promoter proved useful in working to support the bridge.

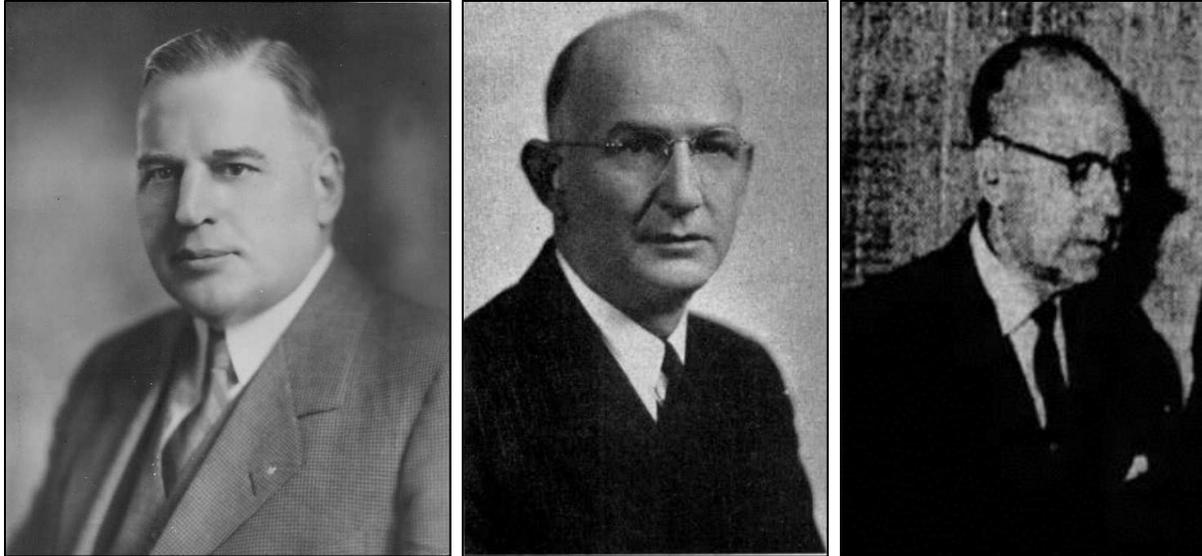


Figure 47. The three receivers for the Iowa-Wisconsin Bridge Company: left: Oscar Thorson, who served from 1933 to 1946 (Source: Ancestry.com user Charles David Nyreen); center: W.E. Albert, who served from 1946 to 1953 (Source: Speaker 1953:51); and right: George Aschom, who served from 1953 to the closure of the company (Source: LCT 08/09/1962:1).

W.E. Albert (Receiver from 1946 to 1953)

William E. “Bill” Albert (Figure 47) was born in Pepin, Wisconsin, on May 15, 1899. He moved with his family to Lansing in 1904, where he attended school, graduating high school in Lansing in 1917. He then studied at Iowa State College (now University). He and Anita Bakewell (possible niece to Tom Bakewell, one of the original bridge idea supporters) were married in June 1921. They had four children, two of whom were still at home at his death. Personally, and professionally, Albert was light-hearted, giving, and an avid conservationist. He inherited his bent for conservationism from his father, who was appointed State Game Warden from 1921 to 1932. Albert was employed in the Fisheries Department part-time as early as 1917 and then full-time in 1924. In the 1920 census, his occupation was listed as fish culturist employed at the State Fish Hatchery. He still lived at home, and his father’s occupation was listed as Game Warden for the State of Iowa. Their residence was listed on Diagonal Street, the northeast terminus of which rests at the terrace overlooking the Black Hawk Bridge and the Mississippi River. In the 1940 Federal Census, he was listed as Supervisor for the Fish Hatchery, and he still resided on Diagonal Street, except as the head of his household. His personal and career interests were both focused on the fish of the Mississippi River, trout programs in eastern Iowa, and the rivers of the state. He served in many roles for the state, working up through the ranks until his retirement in 1947. From retirement to his death, he was involved in many local and state charitable organizations, served on the Iowa Tax Commission, and was a receiver for the Iowa-Wisconsin Bridge Company from April 15, 1946, until his death. He died unexpectedly of a heart attack in his Lansing home on January 17, 1953 (LCT 09/27/1953:1; Speaker 1953:51-52; 1953; US Federal Census Records for Lansing, Iowa 1920, 1940).

Oversight of the bridge may have been a natural duty for Albert. He certainly demonstrated through his life a penchant for local and state engagement and an affinity for things related to the health and usage of the Mississippi River. Unfortunately, he was made to lead the bridge

company through trying times. He helped navigate the company through many of its complicated legal battles, through the aftermath of the ice damage and subsequent closure, and helped push for a solution from the states. Indeed, Albert was on the record many times advocating for the states to purchase the bridge before it became a total loss. He pressed state officials and anyone who would listen about getting it fixed up and the benefits the bridge would provide. He also helped protect the stockholders as much as he could (Mason City Globe-Gazette 08/07/1948:5; LCT 12/12/1948:19, 01/19/1954:10).

George Aschom (Receiver from 1953 to closure of company)

Aschom (Figure 47) was appointed receiver by Judge Graven in March 1953, after the death of Albert, during the sale and related proceedings. Aschom died in 1972, aged 76. He was a veteran of World War I and ran a family grocery store in Lansing for many years (LCT 03/04/1953:13, 03/18/1954:18, 05/08/1957:14, 09/07/1972:3). After the closure of the Iowa Wisconsin bridge company, Aschom took a leadership role with the Great River Road project, then a part of the Iowa Parkway Commission that was working in tandem with Wisconsin and other states on a national route to run along both sides of the Mississippi River. Today, the Great River Road scenic route is an important part of the Lansing geography and impacts the use and importance of the Black Hawk Bridge. Aschom's role in this process included studying potential routes and recommending areas for further scenic development, rest stops, etc. (LCT 10/22/1967:33, 09/25/1969:20).

Irene M. Bell

Bell was a resident of Mason City. She was critical in holding together the general voting bloc of shareholders. She acted as a representative of them and kept communication open. She communicated with general stockholders about legal proceedings and tried to hold a solid voting bloc against the Phoenix group. She served as secretary-treasurer of the Stockholders' Protection Committee and appears to have been more or less a shadow board of directors (Burke 2016:8-10; LCT 12/2/1937:10).

Fayette D. Kendrick

On December 5, 1933, Fayette D. Kendrick intervened on behalf of the bridge company while they were in ongoing foreclosure hearings and litigation with the Phoenix Finance Corp. Kendrick was a Minnesotan and stockholder in the company. According to searing notes: "he alleged that the bridge company was and had been since 1930 dominated by one J. A. Thompson and his associates; that by the exercise of such domination these men had fraudulently procured the execution and delivery of the trust deed." Other stockholders signed on to his statements, and his representation of them throughout the process was significant (Supreme Court 1942; (U.S. Court of Appeals 1938).

Vernon O'Connor

Vernon William O'Connor (Figure 48) was born in Minnesota on November 25, 1896. He attended the University of Minnesota, and in the 1920 Federal Census for Renville, Minnesota, where he was listed as a resident with his wife Effie and his cousin Roy. He was also listed as a secretary for a loan association. In the 1930 Federal Census for St. Paul, Minnesota, he was listed as a resident of Summit Avenue with his wife, four children, and two female live-in servants. Also, in that census, he was listed as president of a bridge construction company (US Federal

Census Records, Renville, Minnesota 1920, St. Paul, Minnesota 1930). He died in Dade, Florida, in 1955. O'Connor's company was called the Standard Shares Holding Company, which shared an office with Schaffer's company on the tenth floor of the Minneapolis Phoenix Building.

O'Connor was a close associate of John Schaffer. The two worked closely together in a fraudulent stock scheme with John Thompson to foreclose on the bridge and take complete control of the company. O'Connor was for a time president of the bridge company before the election of Thompson. The three, through inappropriately awarding themselves contracts with generous benefits and stock issuances, eventually became majority owners of the company while also setting the company up with loans to their own companies that they knew would not be able to be paid back. Upon their effort to force the bridge foreclosure, Kendrick and others stepped in to defend the bridge company and its general stockholders from the takeover.



Figure 48. 1917 College Yearbook photograph of Vernon O'Connor as member of the Wing and Bow Club, which is listed as an agricultural honors fraternity that existed from pre-1913 to about 1934 (Source: University of Minnesota 1917:424)

John W. Schaffer

John W. Schaffer defrauded the Iowa-Wisconsin Bridge Company with his associates Vernon O'Connor and John Thompson. His Minneapolis-based company was John W. Schaffer & Co., which shared an office with O'Connor and his business. Together with Thompson, they defrauded the bridge company through a complex system of inappropriate stock issuances and other monies. Schaffer was the one who got Thompson and his companies involved in the scheme. Almost immediately after Thompson was elected company president, Schaffer was hired as a general contractor for bridge completion, taking a commission and further stock issuances as payment.

John A. Thompson

John Thompson, a Des Moines businessman, was elected president of the Iowa-Wisconsin Bridge Company in November 1930, in the middle of the bridge's construction. He was responsible for manipulating contracts and other business through his own companies, Schaffer's

company, and Vernon's company while fronting as a responsible guide for the company. These contracts fraudulently enriched these men and provided them with fraudulent stock issuances that gained them a firmer grip on the company's board and management. By loaning money to the bridge company that it could not pay, Thompson and his associates planned to foreclose upon the bridge and take complete control of the company. Thompson's original business was called Thompson & Co. of Des Moines. However, through the process, he worked under the auspices of numerous companies, the most important of which, the Phoenix Finance Corp., is often used to refer to them as a singular. It is unknown if the Phoenix name was borrowed more or less from the Minneapolis office building from which O'Conner and Schaffer operated, if the connection is more sinister than that, or if it is just a mere coincidence. The Phoenix Finance Corp. acted as the primary litigator for the decade-long legal battles between this group and the bridge company.

Known Tollkeepers

- Alfred Meyers
- Leo Stirn
- Harold Severson – appointed by Thorson in April 1937 (LCT 04/20/1937:10) [“other shifts” were covered by Meyers and Stirn; the added shifts may have been related to the major work being done for the lock and dam at nearby Lynxville, Wisconsin; a booth was added on the east end for the workers using the dike part but not crossing the full bridge]
- William Munchoff – appointed by Thorson in January 1939 upon Severson's resignation to work as a Standard Oil delivery worker (LCT 01/06/1939:9).
- Michael J. Reilly (Dubuque *Telegraph-Herald* 09/04/1966:16)

REMEMBERING & CELEBRATING THE BLACK HAWK BRIDGE

The Black Hawk Bridge, despite its many trials and tribulations, has left a lasting impact on the people of Lansing and the surrounding area. It also makes an impact on visitors and those just simply passing through. Perhaps because of its design, size, and sheer presence, it has become a beloved landmark. Ultimately, it has become a symbol of the community, representing the place and people in it. It can be found on city trucks, the headers of old newspaper scraps, commemorative memorabilia, souvenirs, and much more. The bridge has been written about and photographed many times over. It was even featured in a January 5, 2023 episode of the trivia game show *Jeopardy!*—and the contestant responded correctly. Indeed, throughout researching the Black Hawk Bridge, one thing became evident: it is a beloved landmark. Ask anyone in Lansing, and they will share their memories of the bridge or tell you why it is important to them and their community. Lansing residents have voiced their thoughts and opinions throughout this project about why this bridge is so beloved. Some share their thoughts, hoping that a potential new bridge will carry some of the same significant characteristics; others simply want to share their fondness. Here are some of their thoughts and memories.

Lansing Mayor Melissa Hammell wrote:

The Blackhawk bridge has been good to Lansing through the years and is commonly used to represent our town. It has been heavily photographed through the years, and its image has been used in countless ways. In recent years the lighting of the bridge has been used as a beacon, letting people know about a birthday or anniversary that is being celebrated or a loved one remembered.

Our community is sad to see it go, there is a sense of pride in keeping that bridge for as long as we have, but we look forward to having a new bridge that can serve our community even better and hopefully it will still carry some of the charm of the original.

Rick Welsh is a Lansing resident and local business leader. He holds an extensive collection of artifacts and newspaper clippings pertaining to the Black Hawk Bridge. In his own words, he has enough Black Hawk Bridge stuff to “overwhelm you”—and that assessment is accurate. Many, many hours could be spent pouring over and studying his collection. In addition to sharing some of his collection, Rick relayed a number of memories and thoughts about the bridge:

Some notable memories- I come from a large family and I have vivid memories of encouraging our father to drive fast over the bumps at the top of each incline on either side of the bridge. Most of the time he wouldn't comply, but once in a while he gave in to the pressure. Seems simple now but as a child it was epic.

Growing up working in the family retail business I've heard countless comments from customers about our bridge. Comments ranging from “it's beautiful” to “it's terrifying”. Many of the comments are about the sound it makes as vehicles cross its steel grid deck. The size of the crossing vehicle determines the pitch of the sound. Visitors and locals commonly refer to our bridge as the “singing bridge”.

As a business owner, the importance of our bridge cannot be overstated. Not just for Lansing, but for all of northeast Iowa and southwest Wisconsin

Steve Knabel is a retired professor and current Lansing resident. He wrote:

I grew up in Dubuque, Iowa and always drove up this way to fish and canoe in the many streams nearby. I have always been impressed with the natural beauty of the area around Lansing and how the bridge integrated so well with it. I realize that time has moved on and the bridge needs to be replaced with something that can handle the increased heavy traffic. I just hope that the new bridge can retain some of the character of the old bridge, as I know most folks around here really identify with the style and beauty of that bridge. I also sense it has had a great cultural significance for many people here, for example the lights on the bridge are often lit when someone in the area dies and on other special occasions. It has also given many of my friends and relatives a little “thrill” whenever their cars “bounced” over the inclines on the metal grates!

Steve Murray sits on the Lansing City Council. He intimated:

My name is Steve Murray and currently am a city council member. My wife, Sarah and I moved to Lansing in January of 2020. So, I do not have much history on the bridge other than traveling with my grandparents, John and Lela Murray, across the bridge as a young boy getting to their trailer in Blackhawk Park across the river.

As a young boy I just remember always feeling a little scared as we traveled over it. The sound of the grates beneath the tires added to the emotions and fear of falling through and landing in the river.

We purchased the house directly above the bridge and have always heard that the Black Hawk bridge has also been called the signing bridge. This is very fitting as each vehicle crossing the bridge makes a slightly different sound. Since we get to listen to it every day, I’m not sure if we will be saddened or appreciative of a concrete bridge deck when the new bridge is erected. Another thing we often witness from above and continue to be perplexed by is the amount of drivers that turn right onto the bridge who take the turn to sharp when pulling a trailer and crashing into the concrete guard rail.

From Dan Moy, author, historian, and photographer:

My first encounter with the Black Hawk Bridge was in the late 1980s. The first time I crossed the bridge I found the experience comparable to the first time I took a ride on a rollercoaster. I began to regularly visit Lansing since 2010 when I decided to work on creating a photo book on the Black Hawk Bridge. I have self-published two books on the bridge and I am collaborating with Ric and Betty Zarwell on a more comprehensive photo essay on the Bridge and the surrounding wildlife refuge which will be published with a conventional book publisher.

The only thing I want to tell you regarding my interest in the Black Hawk Bridge is this. My interest in the Bridge stems from the fact that the bridge is of the combo suspension/truss bridge variety, not very prevalent anymore. Also, as I did my research, I found myself building a case for the Bridge’s significance. Think about this. The money raised to build the bridge, \$750K, was raised locally, just before the Great Depression. The Bridge was constructed and completed during the Great Depression. The Bridge was designed and built by firms, some of which worked on many of the significant structures

built early in the 20th century, including the Empire State Building, the George Washington Bridge, the Ambassador Bridge between Detroit and Windsor, ON, and the Golden Gate Bridge. The bridge stood closed for over a decade because an ice storm early in 1945 destroyed the wooden auxiliary bridges and the original company owning the toll bridge lacked the resources to replace those connecting bridges. There was a time over 30 years ago when the powers that be once considered tearing down the Bridge and not replacing it at all without realizing the sizeable number of people who drive on it daily. So, you see the history of the Black Hawk Bridge as well as knowing the attitude of Lansing's citizens towards the bridge is a story which interests me greatly.

Bruce ReVoir, a city councilperson, has a lifelong history with the bridge. He wrote:

I am Bruce ReVoir from Lansing. At present I have just over 3½ years of service on the Lansing city council. I am retired and moved back to Lansing about six years ago. My parents purchased the house at 241 North Second Street at the foot of the current Black Hawk Bridge in 1944. I lived at that location from 1951 to 1970, until I was drafted into the army. My parents sold the house to IDOT in 1987, so the state could widen the bridge approach road.

The Black Hawk Bridge is a life line between DeSoto and Ferryville Wisconsin and Lansing, Iowa. Each one is a small town (ie; under 1,000 population each) that depend on each other for economic survival.

In 1958 the asphalt planks used as a road bed on the bridge were replaced with steel grid plates. Myself and many neighborhood kids would play on the stacks of bridge deck plates under the bridge before and as they were installed on the bridge.

In 2000 (Y2K) my wife and I were watching New Year's Eve on the tv, waiting for the world to stop spinning (y2k joke). The networks were showing many major cities around the world with bridges reaching over a body of water with lights on the bridges. Many of them seemed to have the lights high lite the importance of the bridge and its structural style.

We felt why not ours (both she and I grew up in Lansing). She and I worked for four years to gain approval from state and federal agencies to put lights on the bridge. With tremendous local grass roots support, vocal and monetary we were able to install the lights on the bridge. It being the first Iowa owned bridge to have lights on it. It was done with all funds being private donations and no tax payer money was used. The lights have been on since 2004, many people have a connection to the bridge with memorials to help fund current expenses to honor past and present events in their own lives.

Are you aware of a book that was published in 1931 in honor of the bridge grand opening? Back then it was a paper copy. Book gives a history of how bridge came to be. It was started with a few Lansing business man in the early 1900's having a dream of a bridge across the big river. In 2002 my wife and I tracked down an original copy of said book. As a tool for fund raising to help pay for installing bridge lights, we wanted to make new copies for sale. By a stroke of luck, the original publisher was still in business in Decorah, Iowa. Anundsen Publishing Co. was willing to reprint the 1931 copy and turn it into a hard bound book. Eric Anundsen current owner, was very good to work with and it was his father who wrote the book and published it for sale back in 1931. We ended up selling 370

copies to help fund the bridge lights. There should be a copy of "The Book of The BLACK HAWK BRIDGE" we sent to the state of Iowa library in Des Moines.

Frank Ebersold is a Lansing business owner. He owns and operates the historic Thornton House Bed & Breakfast, which overlooks the Mississippi River and the Black Hawk Bridge.

Times have undeniably changed since Lansing's Blackhawk Bridge was constructed back in 1931 but as much as things have changed, the same reasons why we needed a bridge then still exist today.

The reasons for the bridge are obvious but what isn't immediately apparent is precisely just how much 'Lansonians' love their bridge. The iconic image of the cantilevered Blackhawk Bridge adorns hats, shirts and has inspired thousands of pictures and countless pieces of art- all featuring the recognizable Blackhawk Bridge. In fact, when you find almost any reference of Lansing, IA on the web the iconic image of this old, sturdy iron bridge is sure to follow.

In Lansing, we know nothing truly lasts forever and when confronted with this reality in choosing a new design for our new bridge, we decided the best way to pay homage to our sturdy old iron friend of over 90 years was to build a new bridge that closely resembled the old bridge- another nod to the old adage that as much as things change, they really do remain the same.

Derva Burke is director of the Meehan Memorial Public Library in Lansing. She has a fond connection with the bridge, the city, and local history. Her husband, William, has produced several texts on local and regional history. Together, they have been invaluable resources in remembering and preserving the story of Lansing. In 1984, she moved to Lansing, and her family renovated the historic elevator along the river into Big River Sprots and Gifts, located in the shadow of the Black Hawk Bridge. They lived on the top floors. Derva recounted her feelings on the bridge through multiple telephone, email, and in-person interviews. She summarized her thoughts:

Back in the winter of 1970-71 had my first glimpse of and drive over. I am from Central Wisconsin and we were in Decorah for a wedding. We came to Lansing to cross the bridge and head up to La Crosse on our way back home. It was dusk and there was lots of snow and the river was frozen. We ended up driving down to the river, in sight of the bridge and drove up to it and around to get into it. All I remember is that it was such a beautiful stately structure spanning the river in that blue winter hue. That quick photo has always been hidden in my inner thoughts.

In 1974 my future husband took me to his hometown, Lansing, Iowa. I did not connect this inner picture to be in Lansing. Wow, did the bells and whistles go off in my head. I am in this place again. And that beautiful bridge and the sentimental value I have for it. I am sure I am not the only one that has sentiments connected to this bridge. I was heartbroken too when the discussion started regarding replacement. What a "bad" word replacement of this bridge.

With my work here at the library in Lansing, along with my husband's love for the history of this town and this area, we put together the story of the bridge, from its building in 1932 and the closing of the dike, abandonment of this bridge, to the dike being reopened 12 years

later. He had already done the research and I added the pictures that have been collected. The stories that have come out of the woodwork. It has been a great trip to experience.

My biggest concern is how this community, and this area, is going to handle the processing time? I feel for the businesses, the families that are on both sides of the river. Can they handle the closure time? What will be left at the other end of this? Both sides of the river depend on each other.

80 years from now, someone else may be writing this same story, reflecting on the new bridge. Life changes, and we change. May all of us be strong during this process.

As demonstrated over the years, the bridge has become an important icon for the community. Although many people throughout Lansing understand the need for a new bridge, they are often willing to share their memories and fondness for the original. In summary, the prospect of losing this important landmark and economic connector brings sadness to the surface. It will be deeply missed by those who live there and remember it fondly from times gone by. Despite the sadness regarding the loss, there is also a lot of understanding.

The most prominent way in which the Black Hawk Bridge was first celebrated was the publication of “The Book of the Black Hawk Bridge” by Albert S. Tousley, editor, in 1931 upon the dedication of the newly completed bridge. The book greetings from Lansing Mayor R.G. Miller, the book’s editor, and the governors of Iowa, Wisconsin, and Minnesota. Other items included a poem of the Mississippi Valley by Marie Devine, a description of the construction of the bridge, old-time views of Lansing places and people, historical summaries of Chief Black Hawk, Allamakee County, the towns of the county, including Lansing as well as a summary of Wisconsin’s past. Edgar R. Harlan of the State Historical Department made other contributions, including views showing stages of bridge growth, old Mount Hosmer, other bridges in the region, the Pride of Winneshiek, The Scenic Mississippi, Highway 9, Lansing – then and now, Memorial Day 1931, the Winneshiek Bottoms, old time cuts of Lansing groups, a few bits of history from the “good old days,” and a professional directory of Allamakee County (Tousley 1931). The dedication ceremony included a parade from the bridge to the city park, a welcome address by the Lansing Mayor, R.G. Miller, an exhibition by drum corps, a high dive from the bridge, and surfboard riding on the river. The evening included a fireworks display on the riverfront (Fraser and McWilliams 1992). Of course, this booklet was full of praise, flattering comments, fancy prose, and optimism for the prosperous future the bridge promised to the City of Lansing and the region. The book was intended to serve as the public dedication program for the bridge’s opening and reflect the original hopes and dreams that the community had for completing this bridge.

Despite being fraught with troubles and challenges through the course of its existence, the Black Hawk Bridge at Lansing, Iowa has been a beloved part of the local identity.

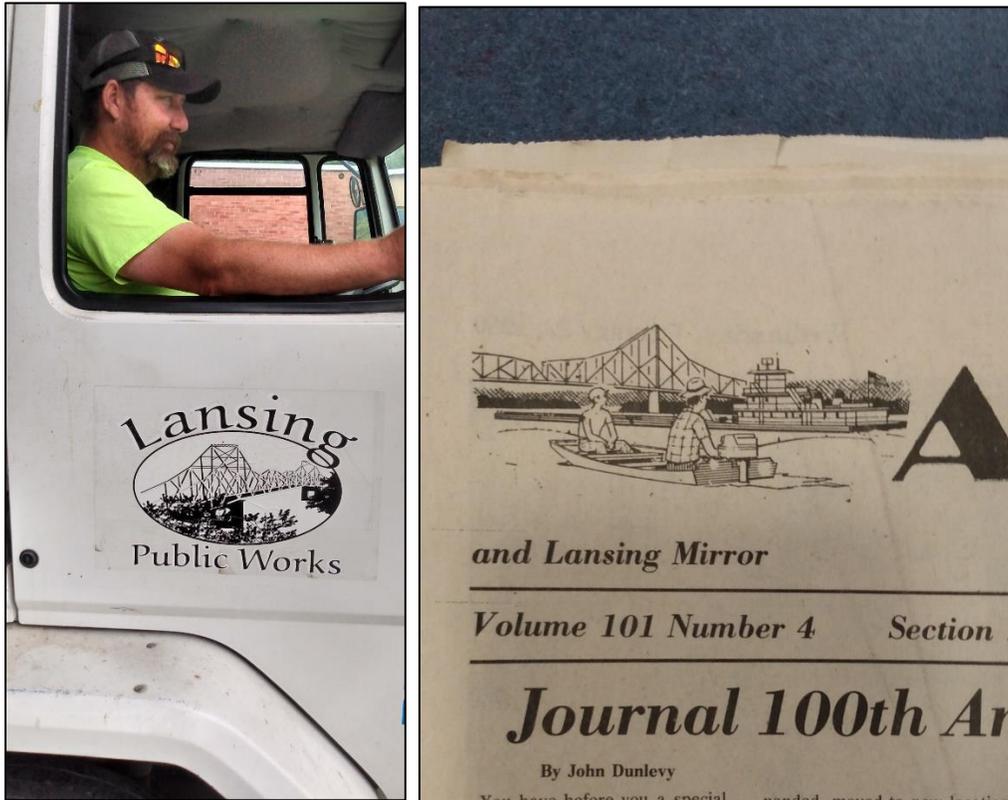
Table 2.
Timeline of Studies of Black Hawk Bridge and Vicinity
including Engineering, Historical, Architectural, and Archaeological Studies of

Year	Author	Title	Notes
1940	Sverdrup & Parcel		Survey conducted for City of Prairie du Chien regarding Marquette bridge and competitors; did not consider bridge at Lansing a serious competitor; did not expect it to be financially successful (crossings at Dubuque and La Crosse were treated more seriously); a copy of this report could not be located but it was discussed heavily in newspapers
1948	F.R. White/Iowa Highway Commission	<i>The Mississippi River Bridge and Its Approaches, at Lansing, Iowa</i>	Evaluation of bridge in exploring possibility of joint IA & WI acquisition; notes financial failure of the bridge; noted costs of refurbishment and replacement
c1954	Iowa Highway Commission		Engineering work and schematic drawings for bridge rehabilitation
1968	Wilbur Smith & Associates	<i>Mississippi River Toll Bridge, July 1968: Preliminary Engineering Report</i>	Bridge replacement study conducted for Iowa DOT; study shows financial information and projections, as well as various options for its future; recommended as high priority for replacement
1977			Field check of some archaeological sites in Allamakee County; not reviewed
1977	Pogue, Shank, and Horton	“Allamakee County History and Architecture,” in Hotopp, Hotopp, and Grisham’s <i>Iowa’s Great River Road Cultural and Natural Resources</i>	Not reviewed
1978			Archaeological survey conducted for work on IA-9; no sites identified; not reviewed
1979	M.H. Bowers	<i>G. Kearndt & Bros. Elevator and Warehouses #11, 12, and 13</i>	NRHP nomination; no direct discussion of bridge
1983	Barbara Withrow	<i>Cultural Resources Survey of Proposed Wing Dam Sites, Crawford County, Wisconsin and Allamakee County, Iowa.</i>	Archaeological survey for wing dam project; just northeast of bridge; conducted for Corps of Engineers; no sites identified
1986	Allamakee County Historic Preservation Commission	<i>1986 Allamakee County Historical Site Survey—Final Report</i>	Not reviewed
1990/92	Fraser & McWilliams		Field inspection of the bridge/HAER summary

1991	Rebecca Conard	<i>Lansing Fisheries Building</i>	NRHP nomination; no direct discussion of bridge
1993	Wilbur Smith & Associates	<i>Black Hawk Bridge: Iowa 9 Over the Mississippi River, Lansing, Iowa</i>	Not reviewed
1993	Virginia Gnabasik	<i>Archaeological Investigation of Proposed Expansion Area for the Lansing Beneficial use Disposal Area, Crawford County, Wisconsin</i>	Study of area along south side of east approach
1994		<i>Proposed Repairs of the Black Hawk Bridge (Lansing Bridge; Mississippi River)</i>	R&C# 940303084; not reviewed
1994	Boszhart and Moffat	<i>An Archaeological Survey of Ten Dredge Spoil Sites on the Upper Mississippi River.</i>	Study included points within Gnabasik's 1993 project area
1994	Fraser & McWilliams	8-page report on this bridge	Historic Architectural Engineering Record (HAER) documentation; recommended the bridge as NRHP-eligible
1994	Fraser	Draft NRHP nomination for bridge	On file with WI SHPO
1995	Roberts & Fraser	<i>Highway Bridges in Iowa 1869-1945</i>	Multiple Property Document
1995/96	Fraser & McWilliams		Addendum to HAER report
2003	Bear Creek Archaeology	<i>Cultural Resources Review for the Region Surrounding the Community of Lansing, Allamakee County, Iowa and Adjoining Parts of Crawford County, Wisconsin</i>	Bridge considered for NRHP eligibility; required both states' approval; Wisconsin representatives considered strong significance under Criterion C; Iowa's considered eligibility under both C and A.
2004	CH2MHill	<i>Black Hawk Bridge Feasibility Study</i>	Broader engineering study
2004	Bear Creek Archaeology	<i>Addendum to Cultural Resources Review for the Region Surrounding the Community of Lansing, Allamakee County, Iowa and Adjoining Parts of Crawford County, Wisconsin</i>	Archaeological investigation of Lansing
2011		<i>Proposed Pier Protection Cell aka Dolphin installation Upstream of Black Hawk Bridge Project</i>	R&C# 110703030; Not reviewed
2011			Report for bridge closure; R&C# 110803094; not reviewed
2012	Molly Myers Naumann	<i>A Report on an Intensive Level Architectural & Historical</i>	Study of downtown Lansing business district; discusses

		<i>Survey of the Business District in Lansing, Iowa</i>	importance of bridge to commerce and transportation of Lansing
2014	Molly Myers Naumann	<i>Lansing Main Street Historic District</i>	National Register nomination; discusses importance of bridge to commerce and transportation of Lansing
2016	Tallgrass Historians	<i>Black Hawk Bridge Evaluation Update & Reconnaissance Architectural/Historical Study of a Selected Survey Area</i>	Reconnaissance-level survey; discussed importance of bridge in history of the area; NRHP-eligibility reaffirmed; Supplemental inventory form produced for No. 03-00146
2016	William Burke	<i>The Story of The Black Hawk Bridge and Its Value to the City of Lansing</i>	Historical overview of the Black Hawk Bridge
2018	Tallgrass Archaeology	<i>Mississippi River Bridge at Lansing, Allamakee County, Iowa</i>	Phase I Archaeological and historical/architectural intensive-level survey; discussed important of bridge in history of the area
2018	Burns & McDonnell	<i>2D Hydraulics, Black hawk Bridge, Lansing, Iowa</i>	Study suggesting that widening the main span could improve safety and navigability
2019	Burns & McDonnell	<i>Mississippi River Bridge at Lansing</i>	Rehabilitation and re-use study conducted for the Iowa DOT; study provided specific option for removal, re-use, and replacement
2021	Wisconsin Department of Transportation	Site File and Eligibility Determination	On file with WI SHPO
Ongoing			Physical bridge inspections every two years, beginning approximately 1991

GALLERY I: VISUAL REPRESENTATIONS OF THE BLACK HAWK BRIDGE



Left: The bridge was featured on city vehicles as early as 1999. Right: The bridge, a barge, and some fishermen were also featured on the front-page banner of the *Allamakee Journal* from about 1993 to 2021. Photo Credits: Derva Burke, 2022.



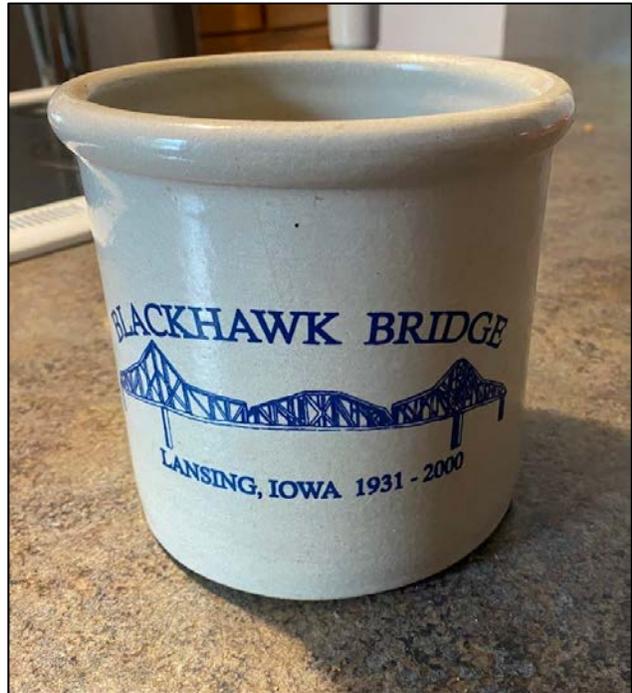
Left: teddy bear sold by Big River Gifts in 1986. Photo Credit: Derva Burke, 2022. Right: advertisement for Big River Gifts offering these bears for a buy one-get one rate. Source: *La Crosse Tribune*, 05/23/1986, pg. 3.



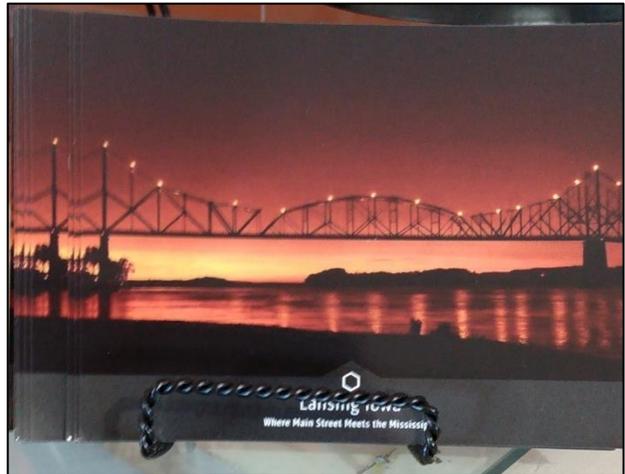
Left: commemorative throw blanket including profile of Black Hawk Bridge, circa early 1980s.
Right: bug and glass including profile of Black Hawk Bridge, available for sale 2022. Photo Credits: Derva Burke, 2022.



Christmas Tree Ornaments. Left: 1991. Right: 2001. Photo Credits: Derva Burke, 2022.



Left: cutting board featuring profile of Black Hawk Bridge, available for sale 2022. Photo Credit: Derva Burke, 2022. Right: crock featuring profile of Black Hawk Bridge. Photo Credit: Rick Welsh, 2022.



Two examples of postcard prints made by local artists circa 1999. Photo Credits: Derva Burke, 2022.



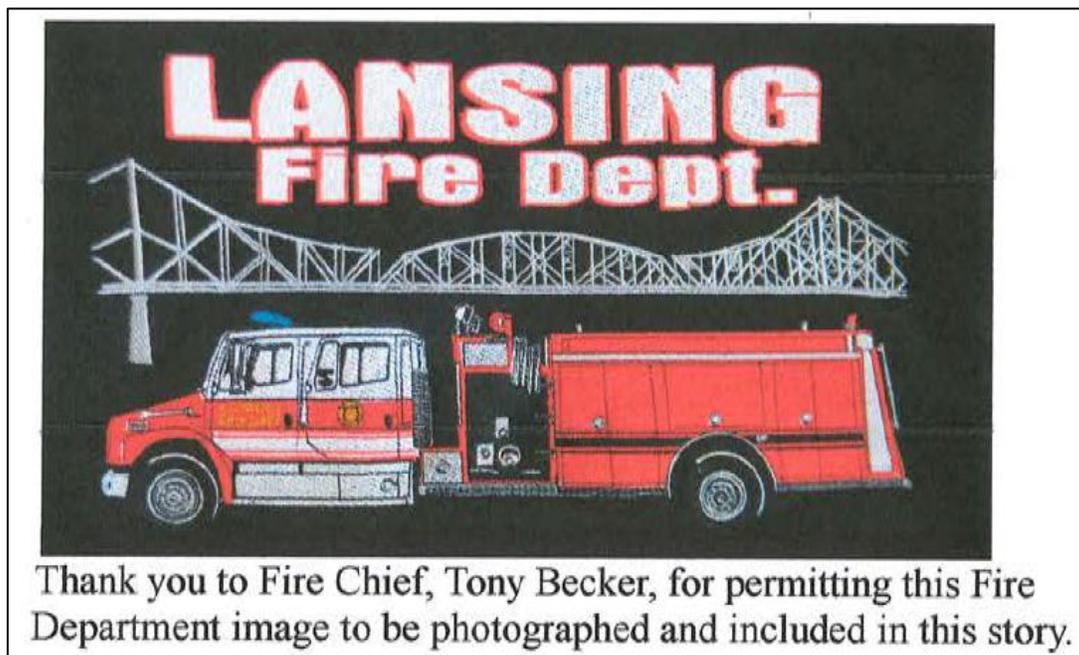
Two private recreations of the bridge. Top: wood model built circa 2010 and on display at Meehan Memorial Library in Lansing. Bottom: one of several metal bridge creations, made by local craftsman for local residents, this example is at corner of Center Street and 6th Street in Lansing.
Photo Credits: Derva Burke, 2022.



Collection of Fish Days Buttons showing Black Hawk Bridge, various dates, on display at the Driftless Area interpretive center in Lansing. Photo Credits: Derva Burke, 2022.



1996 Lansing Fire Department commemorative die-cast item. Photo Credit: Rick Welsh, 2022.



Use of bridge profile in further Lansing Fire Department resources. Source: Burke 2016:14.



Depiction of bridge on ball park/sports complex signage, Front Street, Lansing, looking west.
Source: Tallgrass Archaeology LLC, September 2022.



Lansing's river museum signage showing silhouette of bridge, Front Street, Lansing, looking east.
Source: Tallgrass Archaeology LLC, September 2022.



Sample business signage showing approximate depiction of bridge along top, Main Street, Lansing, looking southwest. Source: Tallgrass Archaeology LLC, September 2022.



Two examples of Black Hawk Bridge depiction along Main Street, Lansing, looking south. Top: business signage. Bottom: public mural. Both at the same address.

Source: Tallgrass Archaeology LLC, September 2022.



Sample business signage depicting the Black Hawk Bridge, Main Street, looking north.

Source: Tallgrass Archaeology LLC, September 2022.



Informational signage and map for the Driftless Scenic Byway, including bridge silhouette in upper-left corner, located on north side of Main Street, Lansing, looking northeast.

Source: Tallgrass Archaeology LLC, September 2022.



Commemorative lapel pins designed by Fred Easker, 2020s.

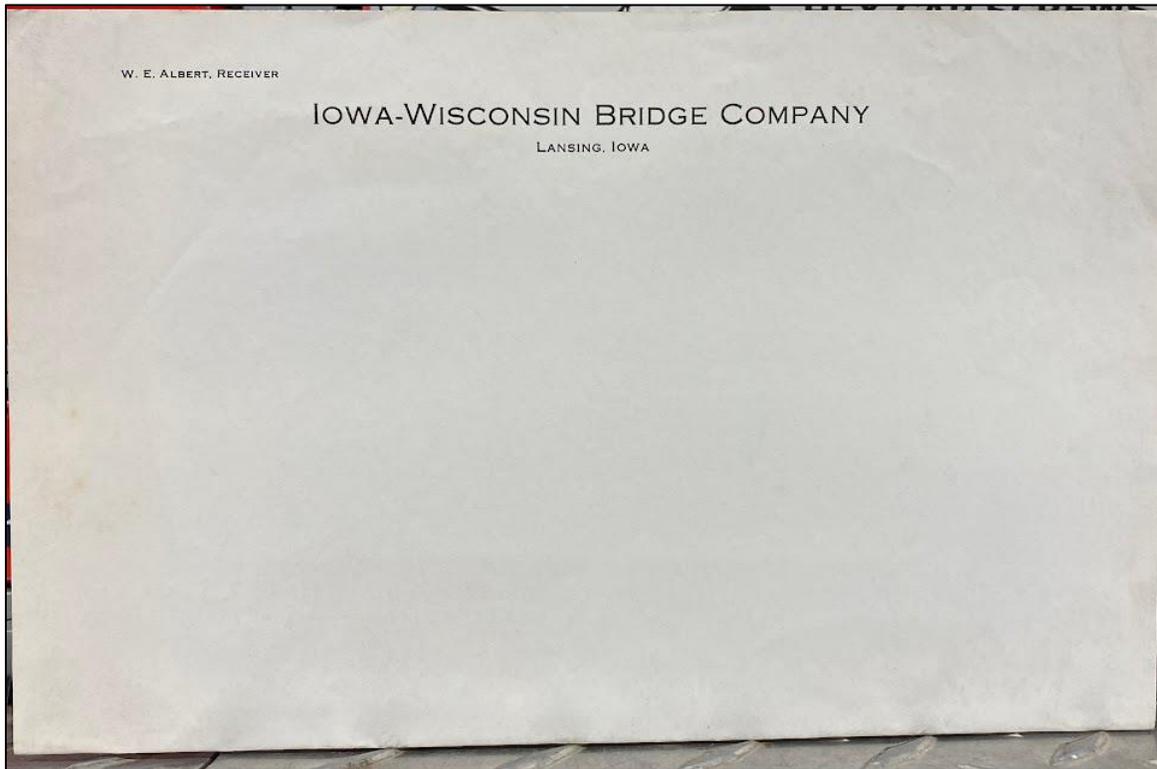
Source: Fred Easker, artist, website. Accessed online at easkerart.com, November 2022.



Telescopes at the Driftless Education Center allow visitors to inspect the bridge, the river, traffic, and the scenery around Lansing, looking north.

Source: Tallgrass Archaeology LLC, September 2022.

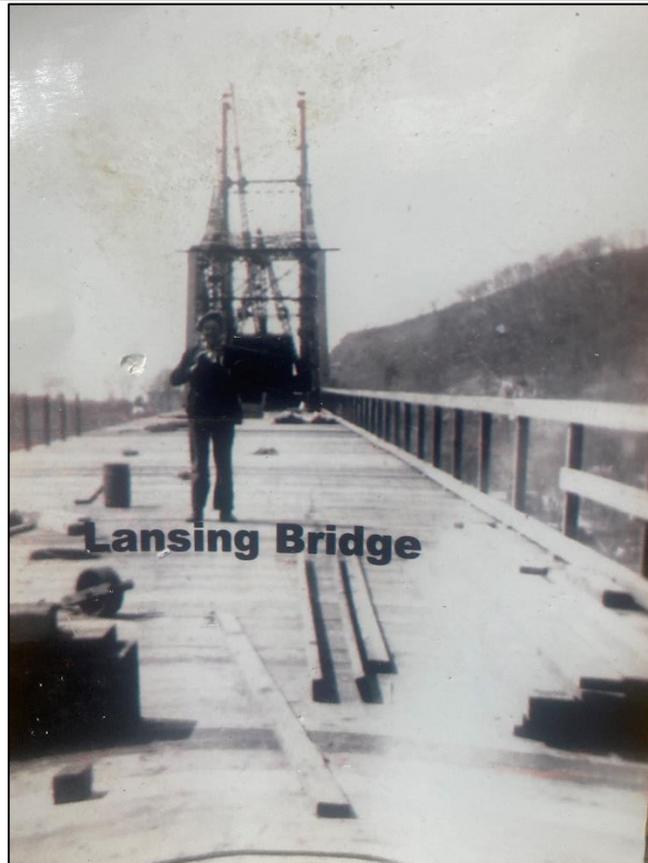
GALLERY II: ADDITIONAL ARTIFACTS & HISTORIC PHOTOGRAPHS



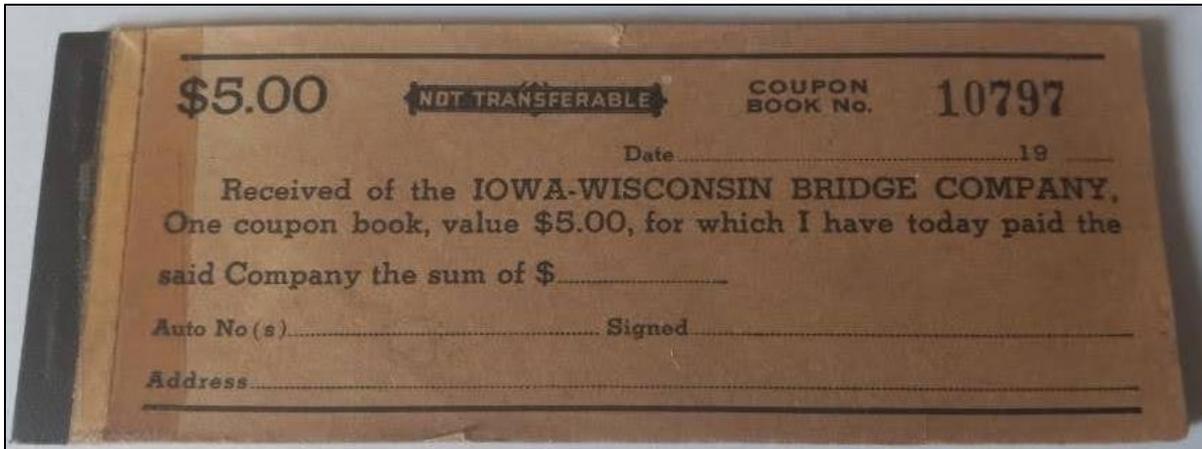
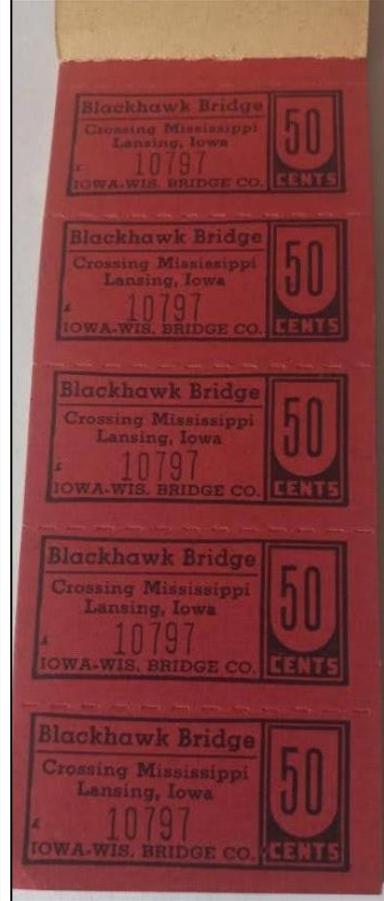
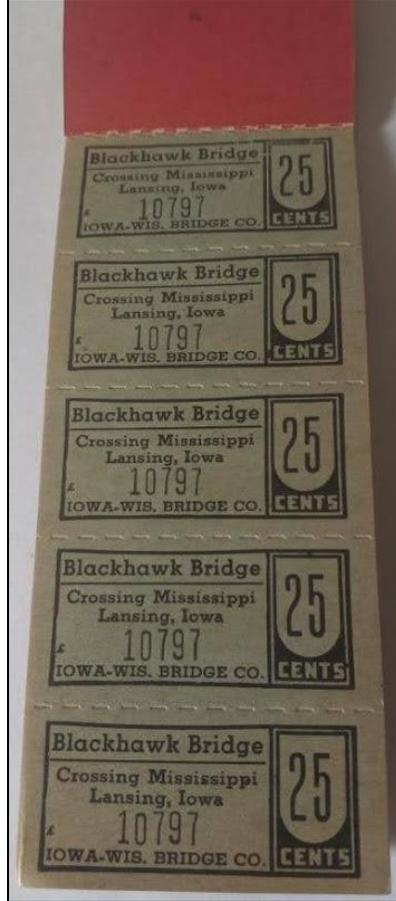
Stationery for receiver W.A. Albert. Photo Credit: Rick Welsh, 2022.



Photographic print of work being done clearing materials for 1950s reconstruction.
Photo Credit: Rick Welsh, 2022.



Two photographs taken during bridge construction. Photo Credit: Rick Welsh, 2022.



Three select pages and cover of a \$5 bridge crossing coupon book. Date unknown.
Photo Credit: John Rethwisch, 2022.



Top: printer's block for 10-cent bridge coupon book. Bottom: 10-cent bridge coupon.
Photo Credits: Rick Welsh, 2022.



1931 courtesy card for W.E. Albert, later receiver for the company, and signed by the company president, Thompson. Photo Credits: Rick Welsh, 2022.



Stock certificate for Iowa-Wisconsin Bridge Company. Photo Credits: Rick Welsh, 2022.



Front and back of 1931 commemorative Black Hawk Bridge Coin. Photo Credits: Rick Welsh, 2022.



Construction of Superstructure. Source: Ric & Betty Zarwell collection, 2022.



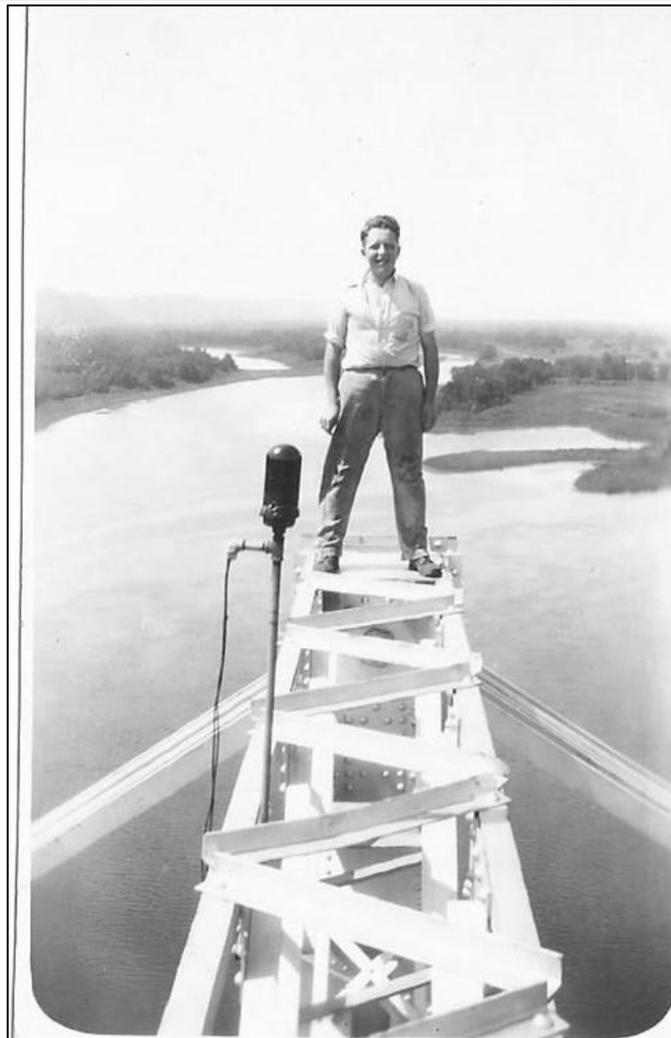
Construction of Superstructure. Source: Ric & Betty Zarwell collection, 2022.



Construction of Superstructure, with tollbooth visible at right.
Source: Ric & Betty Zarwell collection, 2022.



Two photos of scale model USS Arizona passing through Lansing.
Source: John Rethwisch Private Collection.



Two bridge scene photographs, circa 1960s. Source: John Rethwisch private collection.



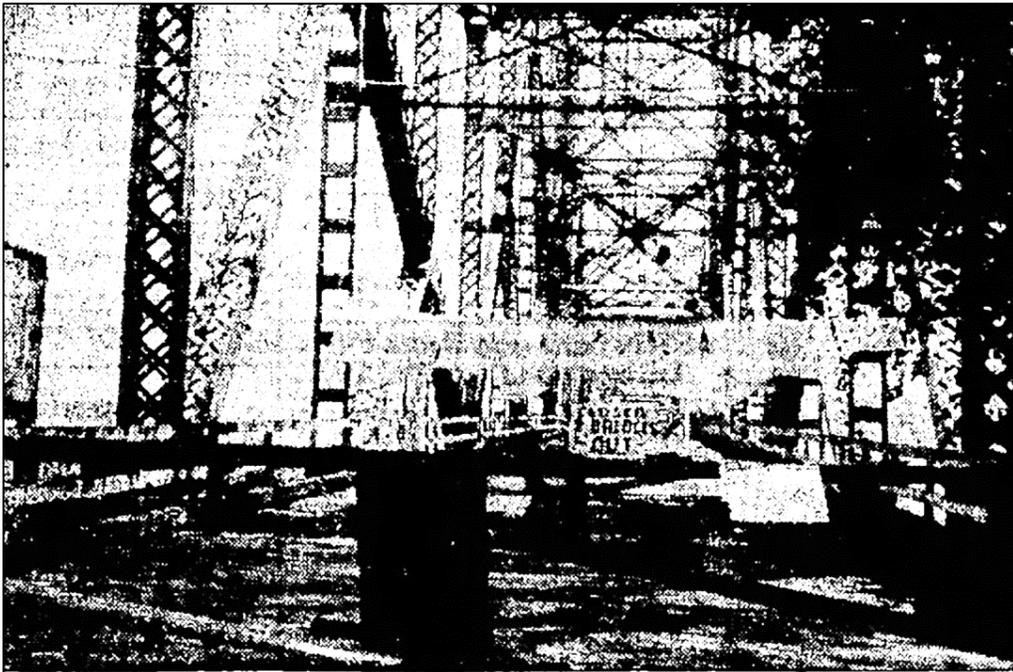
Cropped photograph showing steamboat passing by the bridge.
Source: John Rethwisch private collection.



Framed, colorized print from circa early-1930s, showing bridge with coffer dam on pier two, tollbooth, and filling station. Source: Private collection of Sam & Betty Bell, 2022.



The tollbooth was eventually removed and used as part of a motel, where visitors could sleep.
Source: Meehan Memorial Public Library collection.



This 1948 photograph from the Mason City *Globe-Gazette* shows a clothesline hung in front of the “BRIDGE OUT” sign on the west end of the bridge. The original caption read: “A \$750,000 Clothesline Support—The only use made of the Blackhawk bridge at Lansing, since part of it was destroyed by floods in 1945, is shown the picture above—that of providing supports for a woman’s clothesline (Source: Mason City *Globe-Gazette* 08/07/1948:5).



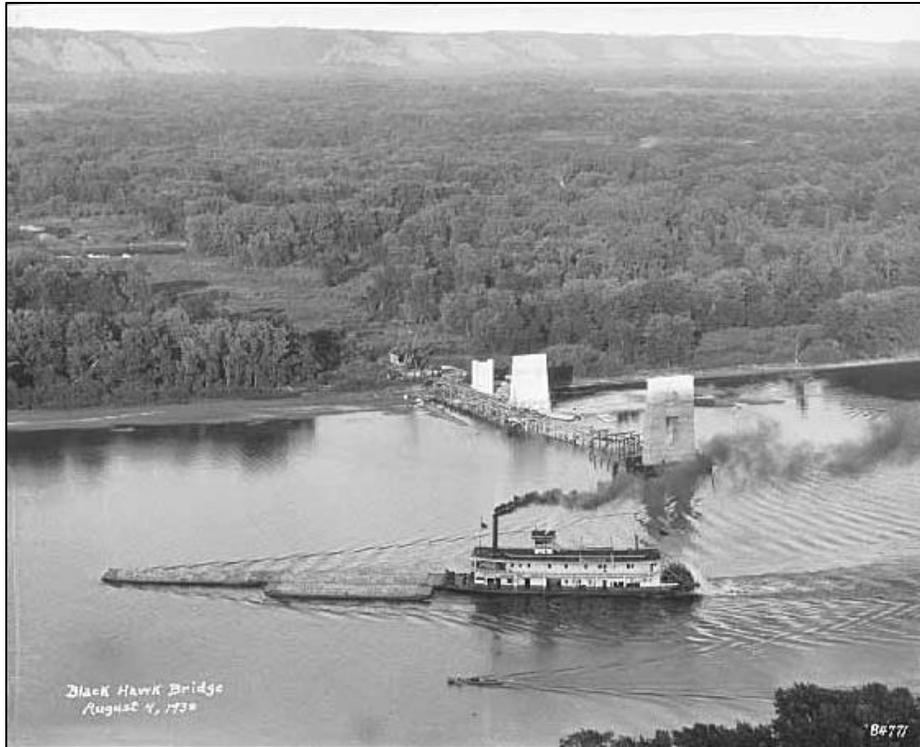
August 4, 1930 photograph. Construction of bridge, looking northeast from Lansing.
Source: Collection of Norton & Peel, photographers. At the Minnesota Historical Society, St. Paul, Minn.



August 4, 1930 photograph. Construction of east approach or slough crossing, direction uncertain.
Source: Collection of Norton & Peel, photographers. At the Minnesota Historical Society, St. Paul, Minn.



Two similar August 4, 1930 photographs. Construction of bridge, looking west from Wisconsin bank of main channel.
Source: Collection of Norton & Peel, photographers. At the Minnesota Historical Society, St. Paul, Minn.



August 4, 1930 photograph. Construction of bridge, looking east from Mt. Hosmer Park.
Source: Collection of Norton & Peel, photographers. At the Minnesota Historical Society, St. Paul, Minn.



August 4, 1930 photograph. Construction of bridge, looking west near Wisconsin bank of river.
Source: Collection of Norton & Peel, photographers. At the Minnesota Historical Society, St. Paul, Minn.

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- 1957 "Here are the men who have the job of organizing the re-dedication of the Black Hawk bridge..." May 8. Pg 14. La Crosse, Wisconsin.
- 1957 "Never-to-be Bridge Restored: Dedicated Black Hawk Span." May 26. Pg 6. La Crosse, Wisconsin.
- 1957 "Bridge Completed in October." May 28. Pg 1. La Crosse, Wisconsin.
- 1957 "Talk of Bridge Started Before Turn of Century at Lansing." May 28. Pg 12. La Crosse, Wisconsin.
- 1962 "Road Promoters." August 9. Pg 1. La Crosse, Wisconsin.
- 1965 "Flood Cleanup Task Starts." May 1. Pg 1. La Crosse, Wisconsin.
- 1967 "Great River Road Tour to Cover 311-Mile Stretch." October 22. Pg 33. La Crosse, Wisconsin.
- 1969 "Parkway Unit Names 2 Wis., Iowa Men." September 25. Pg 20. La Crosse, Wisconsin.
- 1972 "Obituaries: George Aschom." August 7. Pg 3. La Crosse, Wisconsin.
- 1976 "Lansing Bridge Hit by Barge Reported Safe." April 12. Pg 4. La Crosse, Wisconsin.
- 1983 "Towboat damages pier on bridge." July 25. Pg 11. La Crosse, Wisconsin.
- 1985 "Lansing Bridge Being Battered by Barges." July 24. Pg 17. La Crosse, Wisconsin.
- 1986 Ad for Big River Sports & Gifts including mention of buy-on-get-one offer for a Black hawk Bridge souvenir teddy bear. May 23. Pg 3. La Crosse, Wisconsin.
- 1991 "Barge Hits Bridge in Lansing." September 17. Pg 8. La Crosse, Wisconsin.
- 2003 Notice of public meeting for Black Hawk Bridge feasibility study. April 19. Pg 18. La Crosse, Wisconsin.
- 2004 "Efforts to light Lansing bridge shine bright." January 5. Pg 1. La Crosse, Wisconsin.
- 2004 "Decorative lights to illuminate Black Hawk Bridge." March 17. Pg 15. La Crosse, Wisconsin.
- 2010 DeSoto-Lansing Bridge Closed." July 23. Pg 9-10. La Crosse, Wisconsin.
- 2010 Bridge Reopens After Hit by Tow." July 24. Pg 4. La Crosse, Wisconsin.
- 2010 "Lansing Bridge Closed After Barge Strike." November 7. Pg 5. La Crosse, Wisconsin.
- 2011 "Bridge to Remain Closed for Repairs." August 19. Pg 9. La Crosse, Wisconsin.

2019 “Sooner or later, say goodbye to the Lansing-De Soto bridge of the Mississippi River.”
May 13. La Crosse, Wisconsin.

Mason City *Globe Gazette*

1936 “Most of Bridge Company Bonds Ruled as Fraud: Scott’s Decision Victory of
Stockholders of Lansing Project.” December 3. Pg 38. Mason City, Iowa.

1948 “Seek Restoration of Bridge at Lansing: Co-operation of Wisconsin, Iowa Proposed.”
August 7. Pg 5. Mason City, Iowa.

Minneapolis *Star-Tribune*

1919 Advertisement for the Northwestern Concrete-Steel Company. June 17. Pg 88.
Minneapolis, Minnesota.

1934 “Melvin B. Stone.” Obituary. May 21. Pg 8. Minneapolis, Minnesota.

Postville *Herald*

1931 Thorson pressured Interstate Power Company to build backup generator. October 29. Pg
3. Postville, Iowa.

1937 Thorson secures lower toll rates for federal dam project workers. October 28. Pg 2.
Postville, Iowa.

1937 More information about government dam project and number of workers. December 30.
Pg 2. Postville, Iowa.

1939 Hearing held for lowering tolls on Marquette Bridge. September 7. Pg 2. Postville, Iowa.

1939 Judge Scott sets date for hearing in Cedar Rapids. September 28. Pg 2. Postville, Iowa.

1939 Ferris lowers rates at Marquette Bridge. September 28. Pg 2. Postville, Iowa.

1939 “The Black Hawk Bridge at Lansing Has Worries.” October 26. Pg 7. Postville, Iowa.

1940 Information about Fish Days celebration including waived tolls Black Hawk Bridge.
August 7. Pg 3. Postville, Iowa.

Quad-Cities *Times*

1933 “Des Moines Man Named Receiver for River Bridge.” September 29. Pg 13. Davenport,
Iowa.

Waterloo *Courier*

1930 “Piers of ‘Black Hawk Bridge’ Over Mississippi Are Ready for Steel.” December 31. Pg
9. Waterloo, Iowa.

1940 “Finance Company Appeal Lansing Bridge Injunction: Judge Scott Quashes Suits Filed
in Delaware.” April 5. Pg 12. Waterloo, Iowa.

APPENDIX:

Historical Architectural Data Base (HADB) Form

Historical Architectural Data Base

Data Entry Form for Studies and Reports

Doc. No.: _____

Source of Study: Certified Local Government Project Section 106 Review & Compliance Project
 Historical Resource Development Program Project Other

Project Reference #: BRF-009-9(73)—38-03

Authors/Editor/Compiler/Originator:

Ray J. Werner

Author Role: Consultant Private Researcher/Writer Teacher Student
 Project employee/volunteer Site Administrator Other: _____

Title of Work:

**MITIGATION DOCUMENTATION FOR THE BLACK HAWK BRIDGE OVER THE
MISSISSIPPI RIVER IN LANSING, ALLAMAKEE COUNTY, IOWA**

Year Issued: 2022

Type of Work Performed:

(check one only)

Survey:

- Windshield survey minimum level documentation
- Reconnaissance survey to make recommendations for intensive survey(s).
- Intensive survey
- Mixed intensive and reconnaissance survey

Plan:

- Planning for Preservation/Survey
- Community Preservation Plan

Property Study:

- Iowa Historic Property Documentation Study
- Historic American Building Survey (HABS)
- Historic American Engineering Record (HAER)
- Management or Master Plan
- Historic Structure Report
- Feasibility/Re-use Study
- Architectural/Engineering Plans and Specs.

National Register:

- Multiple Property Documentation Form

Other (e.g., private research, school project, video): Data Collection/Mitigation

MITIGATION DOCUMENTATION FOR THE BLACK HAWK BRIDGE OVER THE MISSISSIPPI RIVER IN LANSING, ALLAMAKEE COUNTY, IOWA

Kind of Work Produced:

(fill in one section only: Report or Monograph or Chapter, etc.)

Report: Published/produced by: Tallgrass Archaeology LLC

Place issued: Iowa City, Iowa

Client: Iowa Department of Transportation

If applicable, include:

Series Title: _____

Volume #: _____ Report #: TA22-849

Monograph: Publisher Name: _____

Place: _____

Chapter: In: _____ First pg. #: _____ Last pg. #: _____

Journal: Name: _____ Vol. _____ No. _____ Pages: _____ to _____

Thesis: Degree (check one): Ph.D. LL.D. M.A. M.S. B.A. B.S.

Name of College/University: _____

Paper: Meeting: _____

Place: _____

Other: _____

Geographic Scope of Study:

City/town Township(s) County Region of Iowa Statewide Other: _____

State: IA _____

County: Allamakee _____

Town: Lansing _____

Township: _____

Range: _____

Time Focus: (check any decades that receive particular attention)

before 1830 1830s 1840s 1850s 1860s 1870s 1880s 1890s

1900s 1910s 1920s 1930s 1940s 1950s 1960s 1970s 1980/later

Keyword: (Index of any subjects, topics, or people given prominent attention in the report)

<u>Bridge</u>	<u>Black Hawk</u>
<u>Lansing</u>	<u>Allamakee</u>
<u>Cantilever</u>	<u>Through Truss</u>
<u>Warren</u>	<u>Pennsylvania</u>
<u>Steel</u>	<u>Grid</u>
<u>Mississippi Riverq</u>	<u>Slough</u>
<u>Abutment</u>	<u>Fraud</u>
<u>Stock</u>	<u>Rehabilitation</u>

APPENDIX B:

Corporation Documents from the Iowa Sec. of State

Issue Date: 6/13/2022

IOWA

SECRETARY OF STATE

STATEMENT REGARDING DOCUMENTS FILED

Name: IOWA-WISCONSIN BRIDGE COMPANY

I, PAUL D. PATE, secretary of state of the state of Iowa, custodian of the records of incorporations, certify that a diligent search of the records of incorporations fails to reveal articles of incorporation, certificate of organization, certificate of authority, or any other document relating to the entity above.



A handwritten signature in blue ink that reads "Paul D. Pate".

PAUL D. PATE SECRETARY OF STATE



Issue Date: 6/13/2022

IOWA

SECRETARY OF STATE

STATEMENT REGARDING DOCUMENTS FILED

Name: INTERSTATE BRIDGE COMPANY

Date Incorporated: 04/10/1916

Duration: expired 04/04/1936

I, PAUL D. PATE, secretary of state of the state of Iowa, custodian of the records of incorporations, certify that the corporation named on this certificate was duly incorporated under the laws of Iowa on the date printed above.

I further certify that according to the records filed with the Secretary of State's office the above-named entity was cancelled by our office on 04/21/1930 for failure to file their 1929 annual report.



A handwritten signature in blue ink that reads "Paul D. Pate".

PAUL D. PATE SECRETARY OF STATE



Printed on
Recycled Paper

ARTICLES OF INCORPORATION OF THE INTERSTATE BRIDGE COMPANY.

We, the undersigned subscribers, have associated ourselves as a body corporate under the provisions of chapter 1, Title 9, of the Code of the State of Iowa, and acts amendatory thereto, and hereby adopt the following articles of incorporation.

Article One. The name of this corporation shall be the Interstate Bridge Company.

Article Two. The principal place of business of this corporation shall be at Lansing, Allamakee County, Iowa.

Article Three. The general nature of the business to be transacted by this corporation shall be the purchase of real, personal and mixed property, and the construction, installation, maintenance and repair of a bridge and approaches thereto, and everything necessary and convenient to the erection, establishment and maintenance thereof during the period of the life of this charter, in the states of Iowa, Wisconsin, and any other state or territory of the United States, or tributary thereto, with full power and authority to lease, sell, assign, transfer, convey, mortgage and exchange any and all shares, and any and all rights, privileges and immunities belonging to or connected herewith, in any state or territory of the United States, or tributary thereto, and in all foreign countries, with full right to charge and collect any and all tolls for the use of the said bridge and approaches thereto. This corporation shall also have the power to issue notes, bonds, or other evidences of indebtedness, to mortgage or pledge its corporate franchises, its real and personal property, and other securities, whether its own or of other companies, corporations or individuals, owned by it; to secure the payment of any or all its bonds or other evidences of indebtedness in whole or in part by trust deed or deeds, mortgage or mortgages, pledge or pledges, or by assignment or assignments, and to sell, exchange or dispose of any property, real, personal or mixed, acquired, owned or controlled by said company.

Without in any particular limiting any of the objects and powers of the corporation, it is hereby expressly declared and provided that the corporation shall have the power to issue bonds and other obligations in payment for property purchased or acquired by it, or for any other object in or about its business; to mortgage or pledge any stocks, bonds or other obligations, or any property which may be acquired by it during the life of this charter, to secure any bonds or other obligations, by it assured or incurred; to guarantee any dividends or bonds or contracts, or other obligations; to make and perform contracts of any kind and description, and in carrying on its business, or for the purpose of attaining or furthering any of its objects, to do any and all other acts and things, and to exercise any and all other powers which a copartnership or natural person could do or exercise, and which now or hereafter may be authorized by law.

Article Four. This corporation shall have all of the powers necessary for, or incident to, the convenient transaction of the business for which it has been organized, including the power to own, lease, buy, exchange and sell real, personal and mixed property; and further among its powers shall be the following:

1. To have perpetual succession;
2. To sue and be sued by its corporate name;
3. To have a common seal, which it may alter at pleasure;
4. To render the interests of the stockholders transferrable;
5. To exempt the private property of its members from liability for corporate debts;

6. To make contracts, acquire and transfer property, possessing the same powers in such respects as natural persons;

7. To establish by-laws, and make all rules and regulations necessary for the management of its affairs at present and in the future.

Article Five. The authorized capital stock of this corporation is one hundred thousand (\$100,000) dollars, divided into shares of one hundred (\$100) dollars each, and the same to be of the par value of one hundred (\$100) dollars each, which shall be fully paid in cash, services, or other equivalent, approved and allowed by the committee appointed by the said corporation, and in compliance with the laws of the state of Iowa. The amount of capital stock with which it will commence business is One Hundred Thousand dollars, and the remainder of its stock will be issued and paid from time to time as its board of directors may direct. All stock will be sold for cash or exchange, or paid for in property, or other things of value, approved by the board and executive council of this state under the provisions of section 1641 of the Code Supplement as amended by Acts of the Thirty-fourth General Assembly.

Article Sixth. This corporation shall commence business on the First Tuesday of April, 1916, and shall continue for a term of twenty years, with the right of renewal as provided by law, unless dissolved by a vote of not less than two-thirds of the stock then outstanding.

Article Seven. The affairs of this corporation shall be conducted by a board of not less than three nor more than six directors, to be elected annually by the stockholders at their regular meeting, or at a special meeting called for that purpose; and the board of directors may at any time, select from their own number, an executive board consisting of not less than three nor more than five members, which board shall have full charge of the corporation, subject to the approval of the full board.

It may also select such other officers, agents, and employes as the convenient transaction of its business may require.

Article Eight. The officers of this corporation shall be a president, a president pro tem, a secretary and a treasurer. All officers and directors of this corporation shall hold their office for a period of one year, or until their successors are chosen and qualified, and any vacancy in any office, or in the board of directors, may be filled by the remaining directors until the successors of the person thus chosen to fill such vacancy is elected by the stockholders or directors, at an annual or special meeting called for that purpose, and has duly qualified.

Article Nine. The board of directors of this corporation shall be elected at the annual meeting of the stockholders, which shall be held on the First Tuesday of April in each year, commencing with the year 1917, at the principal office of the company at such hour as may be fixed by the directors or by the by-laws. The officers of this corporation shall be chosen by the directors at the annual meeting of the directors, which shall be held each year immediately after the annual meeting of the stockholders. Until the annual meeting of the stockholders in the year 1917, and until their successors are chosen and have duly qualified, shall constitute the board of directors of this corporation, and its officers shall be

J. P. Conway, president, residing at Lansing, Iowa.

H. C. Short, Secretary, residing at Lansing, Iowa.

Fred Schafer, Treasurer, residing at Lansing, Iowa

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T. H. Bakewell, residing at Lansing, Iowa.

M. Kerndt, Jr. residing at Lansing, Iowa.

Julius Boeckh, residing at Lansing, Iowa.

Article Ten. The highest amount of indebtedness or liability to which the corporation may at any time subject itself, shall not exceed two-thirds of its capital stock then outstanding; but it may issue its bonds as provided by section 1611 of the Code of Iowa, or by any amendments thereto.

Article Eleven. The private property of the stockholders of this corporation shall be exempt from corporate debts.

Article Twelve. This corporation may at any time be dissolved by unanimous consent of all its stockholders, or by the affirmative vote of two-thirds thereof at any regular or special meeting of its stockholders called for that purpose; at least ten days notice in writing of such meeting, and of the purpose to dissolve must be given to each and every stockholder whose name appears upon the books of the corporation before such dissolution may be ordered. A letter addressed to their last known post office, given in sufficient time, shall be sent to each of the stockholders, stating the object of the meeting, a sufficient time to be given to him leaving at least ten days from the date of the delivery of the said letter to his last known post office shall be considered sufficient notice, and the secretary shall keep a record of the day and time at which said notice was sent to each of said stockholders.

Article Thirteen. These articles, except number eleven, may be amended at any annual meeting of the stockholders, or at any special meeting called for that purpose; but no such amendment shall be made without the affirmative vote of two-thirds of the shares of stock then outstanding.

In witness whereof, we have hereunto subscribed our names this 20th day of March, A.D. 1916.

J. P. CONWAY,
H. C. SHORT
FRED SCHAFER
T.H.BAKEWELL
M. KERNDT JR.
JULIUS BOECKH

State of Iowa,)
) SS.
Allamakee County,)

Before me, A. Cooper, a notary public in and for said county, personally appeared on this 20th day of March, 1916, J. P. Conway, H. C. Snort, Fred Schafer, T. H. Bakewell, M. Kerndt, Jr., and Julius Boeckh, said persons being each to me personally known to be the identical persons whose names are subscribed in the foregoing articles of incorporation, and each for himself acknowledged the same to be his free and voluntary act and deed for the uses and purposes therein expressed.

Witness my hand and notarial seal at Lansing in the County of Allamakee, State of Iowa, the day and year last above written.

(SEAL)

A. COOPER
Notary Public in and for said County and State.

STATE OF IOWA,)
ALLAMAKEE, COUNTY.) SS.

Filed for Record the 6th day of April A.D., 1916 at 6 o'clock P.M., and Recorded in Book C. Page 332 & 333 of Miscellaneous Records. F. H. KLEES, Recorder.
STATE OF IOWA) SS Filed for record in the office of Secretary of State April 10 A. D. 1916 and Recorded in Book V-5 Page 580 W. S. ALLEN, Secretary of state

Cert. No. 23726
Expires April 4 1936
Returned to J. P. Conway, Lansing, Ia. APR 26 1916
Fees \$116.50

July 15 - 1916

APPENDIX C:

Corporation Documents from the Delaware Sec. of State

CERTIFICATE OF INCORPORATION

OF

LANSING BRIDGE COMPANY

FIRST: The name of this corporation is
LANSING BRIDGE COMPANY.

SECOND: Its principal office in the State of Delaware is located at No. 7 West Tenth Street, in the City of Wilmington, County of New Castle. The name and address of its resident agent is the Corporation Trust Company of America, No. 7 West Tenth Street, Wilmington, Delaware.

THIRD: The nature of the business, or objects or purposes to be transacted, promoted or carried on are:

To construct, own, operate, and maintain toll roads, toll bridges and ferries at such places and between such points in the United States or elsewhere, as the company may determine and to collect such tolls for passage over the same as may lawfully be charged.

To construct, own, operate and maintain such roads, wharves, landing places and to do and perform all other acts and things incidental or necessary thereto, or in connection therewith.

To manufacture, purchase or otherwise acquire, own, mortgage, pledge, sell, assign and transfer, or otherwise dispose of, to invest, trade, deal in and deal with, goods, wares and merchandise and real and personal property of every class and description.

To acquire, and pay for in cash, stock or bonds of this

corporation or otherwise, the good will, rights, assets and property, and to undertake or assume the whole or any part of the obligations or liabilities of any person, firm, association or corporation.

To acquire, hold, use, sell, assign, lease, grant licenses in respect of, mortgage, or otherwise dispose of letters patent of the United States or any foreign country, patent rights, licenses and privileges, inventions, improvements and processes, copyrights, trade-marks and trade names, relating to or useful in connection with any business of this corporation.

To guarantee, purchase, hold, sell, assign, transfer, mortgage, pledge or otherwise dispose of shares of the capital stock of, or any bonds, securities or evidence of indebtedness created by any other corporation or corporations organized under the laws of this state or any other state, country, nation or government, and while the owner thereof to exercise all the rights, powers and privileges of ownership.

To issue bonds, debentures or obligations of this corporation from time to time, for any of the objects or purposes of the corporation, and to secure the same by mortgage, pledge, deed of trust, or otherwise.

To purchase, hold, sell and transfer the shares of its own capital stock; provided it shall not use its funds or property for the purchase of its own shares of capital stock when such use would cause any impairment of its capital; and provided further that shares of its own capital stock belonging to it shall not be voted upon directly or indirectly.

To have one or more offices, to carry on all or any of its operations and business and without restriction or limit as to amount, to purchase or otherwise acquire, hold, own, mortgage, sell, convey, or otherwise dispose of real and personal

SEVENTH: This corporation is to have perpetual existence.

EIGHTH: The private property of the stockholders shall not be subject to the payment of corporate debts to any extent whatever.

NINTH: In furtherance, and not in limitation of the powers conferred by statute, the board of directors is expressly authorized:

To make and alter the by-laws of this corporation, to fix the amount to be reserved as working capital over and above its capital stock paid in, to authorize and cause to be executed mortgages and liens upon the real and personal property of this corporation.

From time to time to determine whether and to what extent, and at what times and places, and under what conditions and regulations, the accounts and books of this corporation, (other than the stock ledger) or any of them, shall be open to inspection of stockholders; and no stockholder shall have any right of inspecting any account, book or document of this corporation except as conferred by statute, unless authorized by a resolution of the stockholders or directors:

By resolution or resolutions, passed by a majority of the whole board to designate one or more committees, each committee to consist of two or more of the directors of the corporation, which, to the extent provided in said resolution or resolutions or in the by-laws of the corporation, shall have and may exercise the powers of the board of directors in the management of the business and affairs of the corporation and may have power to authorize the seal of the corporation to be affixed to all papers which may require it. Such committee or

committees shall have such name or names as may be stated in the by-laws of the corporation or as may be determined from time to time by resolution adopted by the Board of Directors.

Pursuant to the affirmative vote of the holders of at least a majority of the stock issued and outstanding, having voting power, given at a stockholders' meeting duly called for that purpose, or when authorized by the written consent of the holders of a majority of the voting stock issued and outstanding the board of directors shall have power and authority at any meeting to sell, lease or exchange all of the property and assets of this corporation, including its good will and its corporate franchises, upon such terms and conditions as its board of directors deem expedient and for the best interests of the corporation.

This corporation may in its by-laws confer powers upon its directors in addition to the foregoing, and in addition to the powers and authorities expressly conferred upon them by the statute.

Both stockholders and directors shall have power, if the by-laws so provide, to hold their meetings, and to have one or more offices within or without the State of Delaware, and to keep the books of this corporation (subject to the provisions of the statutes), outside of the State of Delaware at such places as may be from time to time designated by the board of directors.

TENTH: This corporation reserves the right to amend, alter, change or repeal any provision contained in this certificate of incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

WE, THE UNDERSIGNED, being each of the original subscribers to the capital stock hereinbefore named for the purpose of forming a corporation to do business both within and without the State of Delaware, and in pursuance of the General Corporation Law of the State of Delaware, being Chapter 65 of the Revised Code of Delaware, and the acts amendatory thereof and supplemental thereto, do make and file this certificate, hereby declaring and certifying that the facts herein stated are true, and do respectively agree to take the number of shares of stock hereinbefore set forth, and accordingly have hereunto set our hands and seals this 20th day of March A. D. 1928.

In presence of:

Herbert E. Latter
A. L. Miller
T. L. Fray
A. V. Lane



STATE OF DELAWARE

33:

COUNTY OF NEW CASTLE

BE IT REMEMBERED, That on this 20th day of March, A. D. 1928, personally came before me, Herbert E. Latter, a Notary Public for the State of Delaware, A. L. Miller, T. L. Fray and A. V. Lane, parties to the foregoing certificate of incorporation, known to me personally to be such, and severally acknowledged the said certificate to be the act and deed of the signers respectively and that the facts therein stated are truly set forth.

GIVEN under my hand and seal of office the day and year aforesaid.

Herbert E. Latter
Notary Public.

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
LANSING BRIDGE COMPANY

Lansing Bridge Company, a corporation organized and existing under and by virtue of the provisions of an Act of the General Assembly of the State of Delaware, entitled "An Act providing a General Corporation Law", approved March 10, 1899, and the Acts amendatory thereof and supplemental thereto, the Certificate of Incorporation of which was filed in the office of the Secretary of State of Delaware on the 20th day of March, 1928, and recorded in the Office of the Recorder of Deeds for New Castle County, State of Delaware, on the 20th day of March, 1928, does hereby certify:

1. That at a meeting of the Board of Directors of said Lansing Bridge Company, duly held and convened, a resolution was adopted setting forth and declaring advisable an amendment proposed to the Certificate of Incorporation of said corporation, as follows:

WHEREAS, it is deemed advisable in the opinion of the Board of Directors to change the name of the corporation from Lansing Bridge Company to Iowa-Wisconsin Bridge Company,

NOW, THEREFORE, BE IT RESOLVED, that the Certificate of Incorporation of this corporation be amended by striking out from Article First thereof the words "Lansing Bridge Company" and inserting in lieu thereof the words "Iowa-Wisconsin Bridge Company".

RESOLVED FURTHER, that a special meeting of the stockholders of the company entitled to vote on said proposed amendment be called and held on the 5th day of June, 1928 at two o'clock P. M. for the purpose of considering and acting upon said amendment.

RESOLVED FURTHER, that the Secretary of the company be and he is hereby authorized and directed to give written notice of the time, place and purpose of such meeting of the stockholders, either delivered to each stockholder or mailed to him at his post office address at least five (5) days before the date fixed for said meeting.

2. That thereafter, pursuant to the aforesaid resolutions of its Board of Directors, a special meeting of the stockholders of said Lansing Bridge Company

was duly called and held in accordance with law and the by-laws of said corporation, at the office of Marshall, Melhorn, Marlar & Martin, in the City of Toledo, Ohio, on the 5th day of June, 1928, at two o'clock P. M., at which meeting more than a majority of voting stockholders of said corporation were present in person or by proxy; that at said meeting a vote of the stockholders by ballot, in person or by proxy, was taken for and against said proposed amendment, which vote was conducted by H. R. Bloch and C. A. Zimm, the two judges appointed for that purpose by said meeting, and that at the said meeting, by vote conducted as aforesaid, said amendment was duly adopted in accordance with the provisions of Section 26 of the General Corporation Law of Delaware, the persons holding all the voting stock of the corporation then issued and outstanding voting for said proposed amendment, to-wit: five thousand (5,000) shares of common stock out of a total issue of five thousand (5,000) shares thereof, voted for said amendment and no shares thereof voted against the same, all as appears by the certificate made by the judges appointed to conduct the vote on said amendment at said meeting.

IN WITNESS WHEREOF, said Lansing Bridge Company has caused its corporate seal to be hereunto affixed and this certificate to be signed by L. H. Notnagel, its Vice-President, and T. J. Lynch, its Secretary, this 9th day of June, 1928.

L. H. Notnagel
Vice-President.

T. J. Lynch
Secretary.

STATE OF OHIO)
) SS:
COUNTY OF LUCAS)

BE IT REMEMBERED, That on the 9th day of June, 1928, personally came before the undersigned, a Notary Public in and for the county and state aforesaid, L. H. Notnagel, Vice-President of Lansing Bridge Company, a corporation of the state of Delaware, the corporation herein described and which executed the foregoing certificate, known to me personally to be such, and he, the said L. H. Notnagel, as such Vice-President, duly executed said certificate before me and acknowledged the said certificate to be his act and deed and the act and deed of said corporation; that the signature of said Vice-President and of the Secretary of said

(3)

corporation to said foregoing certificate are in the handwriting of the said Vice-President and said Secretary of said corporation, respectively, and that the seal affixed to said certificate is the corporate seal of said corporation, and that his act of sealing, executing, acknowledging and delivering the said certificate was duly authorized by the Board of Directors and stockholders of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand the day and year aforesaid.


Rufus Public, Lucas County, Ohio.

A statement of the designations and powers, preferences and rights, and the qualifications, limitations or restrictions thereof, in respect of the Class A stock and Class B stock are as follows:

The holders of the Class A stock shall be entitled to receive, when and as declared by the board of directors of the corporation out of the net assets in excess of capital or net profits as permitted by law, preferential dividends at the rate of six per centum (6%) per annum on the par value thereof, and no more, except as hereinafter provided, payable annually, semi-annually or quarterly on such days as may be determined by the board of directors, before any dividend shall be declared or paid upon or set apart for the Class B stock. Such dividends upon the Class A stock shall be non-cumulative.

For the purpose of redeeming the Class A stock, the corporation may in each year set aside from the surplus or net profits, remaining after the aforesaid non-cumulative dividend of six per centum (6%) has been paid upon or set apart for payment in full to the holders of the Class A stock, and before any dividends shall be declared or set aside for payment to the holders of the Class B stock or additional dividends as hereinafter provided shall be declared or set aside for payment to the holders of the Class A stock, a sinking fund which shall not exceed forty per cent (40%) of the total surplus or net profits remaining and available for distribution as dividends in each year.

Whenever the dividend above provided for upon the Class A stock shall have been paid, or declared and a sum sufficient for the payment thereof set apart, dividends may be declared by the board of directors out of the remainder of the net assets in excess of capital or net profits available for dividends.

in the following manner:

Class A stock and Class B stock shall share, share and share alike in additional dividends declared by the board of directors up to and not exceeding ten per centum (10%) per annum payable as dividends on the Class A stock. For the purpose of determining the percentage of dividends paid on the Class A stock the six per cent (6%) dividend first received by the Class A stock shall be included in the computation. Such additional dividends on Class A stock and Class B stock shall be non-cumulative.

Whenever the dividends above provided for shall have been paid, or declared and a sum sufficient for the payment thereof set apart, dividends upon the Class B stock may be declared by the board of directors out of the remainder of the net assets in excess of capital or net profits available for dividends; and the holders of the Class A stock shall not be entitled to participate in any such dividends.

The Class A stock may be redeemed in whole or in part on any dividend date at the option of the corporation to be exercised by its Board of Directors at One Hundred Two Dollars and Fifty Cents (\$102.50) a share.

If less than all shares of Class A stock are to be redeemed, the shares to be redeemed shall be selected by lot or pro rata, as the Board of Directors may determine. Notice of the intention of the corporation to redeem shares of Class A stock shall be mailed at least thirty (30) days before the date

of redemption to each holder of record of the shares to be redeemed, at his last known post office address as shown by the corporation's records. At any time after such notice has been mailed as aforesaid, the corporation may deposit the aggregate redemption price with any bank or trust company in the City of Lansing, Iowa, named in such notice, payable in the amounts aforesaid to the respective holders of the shares so to be redeemed, on endorsement and surrender of their certificates, and thereupon such holders shall cease to be stockholders with respect to said shares, and from and after the making of such deposit said holders shall have no interest in or claim against the corporation with respect to such shares and shall be entitled only to receive said monies from said bank or trust company without interest. The corporation may also purchase shares for redemption at not exceeding the redemption price above specified.

Any Class A stock redeemed or purchased for redemption under any provision hereof, or otherwise, shall be cancelled and not reissued.

In the event of the dissolution, liquidation or winding up of the corporation, whether voluntary or involuntary, the holders of Class A stock shall be entitled to receive and be paid One Hundred Dollars (\$100) a share, before any distribution is made to the holders of the Class B stock, but shall not be entitled to share further in the assets of the corporation or the proceeds of liquidation. The remaining assets or proceeds of liquidation, shall be distributed among the holders of the Class B stock.

The holders of the Class A stock, as such, shall have no right whatsoever to any stock dividends which may be declared, or to subscribe for any new issue of stock or increased

stock, whether Class B or Class A, or securities convertible into stock, or warrants, or rights to purchase stock, which may now or hereafter be authorized or issued.

So long as any of the Class A stock shall be outstanding, the corporation shall not (except for the purpose of redeeming all of the Class A stock) unless with the affirmative vote or written consent of the holders of at least two-thirds (2/3) in amount of the then outstanding Class A stock.

(a) Consolidate with any other corporation, or sell, lease, exchange, or otherwise dispose of all or substantially all of the property and business of the corporation; provided, however, that the corporation may consolidate with any other corporation, or sell, lease, exchange, or otherwise dispose of all or substantially all of its property and business without the vote or written consent of the holders of two-thirds (2/3) in amount of the outstanding Class A stock by paying to the holders of the Class A stock who shall not vote in favor of any such transaction, or who shall not consent thereto the sum of One Hundred Two Dollars and Fifty Cents (\$102.50) per share.

(b) Increase the authorized amount of Class A stock or create any stock (or security convertible into stock) having any preference or priority over or equality with Class A stock.

(c) Guarantee the payment of obligations or stock of other corporations (except obligations of subsidiary corporations incurred in the usual course of business).

(d) Alter, amend or repeal any of the provisions of the Certificate of Incorporation which are protective of the Class A stock.

The holders of the Class A stock shall have no voting power nor shall they participate in the management and control of the corporation, all voting rights being vested exclusively in the holders of the Class B stock, nor shall the holders of the Class A stock be entitled to notice of meetings of stockholders, except as may be otherwise provided by the laws of the State of Delaware."

(2) That thereafter on the 5th day of November 1929, at eleven o'clock A. M., pursuant to such call of the board of directors and upon ^{waiver of} notice as provided by the by-laws of the corporation and by law to each stockholder so entitled to vote, a special meeting of the stockholders was held and there were present at such meeting in person or by proxy the holders of more than a majority of the voting stock of said corporation.

(3) That at said meeting of the stockholders the amendment as aforesaid was presented for consideration and a vote of the stockholders entitled to vote, by ballot, in person or by proxy, was taken for and against the proposed amendment, which vote was conducted by two judges appointed for that purpose by the said meeting of the stockholders, which said judges decided upon the qualifications of the voters, accepted their votes and when the vote was completed, counted and ascertained the number of shares voted respectively for and against the amendment, and declared whether the persons or bodies corporate holding the majority of the voting stock of said corporation had voted for or against the proposed amendment and made out a certificate accordingly, stating the number of shares of stock issued and outstanding and entitled to vote thereon, and the

number of shares voted for and the number of shares voted against the amendment respectively, and subscribed and delivered said certificate to the secretary of the corporation.

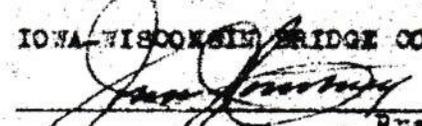
(4) That a certificate as aforesaid by the said judges having been made, subscribed and delivered as aforesaid and it appearing by said certificate of the judges that the persons or bodies corporate holding the majority of the stock of said corporation entitled to vote, namely, five thousand (5,000) shares out of a total of five thousand (5,000) shares of common stock, issued and outstanding and entitled to vote upon said amendment, there being no preferred stock issued or outstanding, have voted in favor of the amendment and that no shares have voted against the amendment, the said amendment was declared duly adopted.

(5) That accordingly the amendment to the certificate of incorporation as amended of IOWA-WISCONSIN BRIDGE COMPANY as hereinbefore set out has been duly adopted in accordance with the provisions of Section 23 of the General Corporation Laws of the State of Delaware.

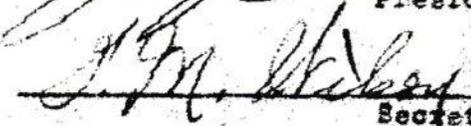
(6) That the capital of the corporation will not be reduced under or by reason of said amendment.

IN WITNESS WHEREOF, the said IOWA-WISCONSIN BRIDGE COMPANY has made under its corporate seal and the hands of John J. Courtney, its president, and the hand of F. M. Wilson, its secretary, the foregoing certificate, and the said president and the said secretary have hereunto severally set their hands and caused the corporate seal of the Company to be hereunto affixed this 9th day of November 1929.

IOWA-WISCONSIN BRIDGE COMPANY



President

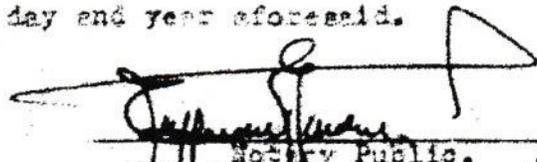


Secretary.

STATE OF MINNESOTA }
COUNTY OF RAMSEY } SS.

BE IT REMEMBERED that on this 9th day of November, 1928, I, Clifford W. Gardner, a Notary Public in and for the county and state aforesaid, do hereby certify that John J. Courtney, president of IGWA-WISCONSIN BRIDGE COMPANY, personally known to me to be such, duly executed the foregoing certificate before me, and that the said John J. Courtney, president as aforesaid, duly acknowledged before me that the signatures of the said president and the said secretary of said Company, to said certificate appended, are in the handwriting of the president and secretary of IGWA-WISCONSIN BRIDGE COMPANY, respectively; and that the corporate seal to said certificate affixed is the common and corporate seal of said Company; and that the same was duly affixed by the authority of the stockholders of said Company.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of office the day and year aforesaid.


Notary Public.
L. P. No. 11 W. Gardner
My commission expires Nov 14, 1929
Ramsey County Minn.

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
LANSING BRIDGE COMPANY.

Lansing Bridge Company, a corporation organized and existing under and by virtue of the provisions of an Act of the General Assembly of the State of Delaware, entitled "An Act providing a General Corporation Law", approved March 10, 1899, and the acts amendatory thereof and supplemental thereto, the certificate of incorporation of which was filed in the office of the Secretary of State of Delaware on the 20th day of March, 1928, and recorded in the Office of the Recorder of Deeds for New Castle County, State of Delaware, on the 20th day of March, 1928, do hereby certify:

1. That at a meeting of the Board of Directors of said Lansing Bridge Company, duly held and convened, a resolution was adopted setting forth and declaring advisable an amendment proposed to the certificate of incorporation of said corporation, as follows:

WHEREAS the authorized capital stock of this corporation was fixed by the original articles of incorporation as five thousand (5,000) shares without nominal or par value; and

WHEREAS it is deemed advisable to increase the said authorized capital stock,

NOW, THEREFORE, BE IT RESOLVED That the authorized capital stock of this corporation be increased from five thousand (5,000) shares without nominal or par value to six thousand five hundred (6,500) shares, of which five thousand (5,000) shall be common stock without nominal or par value and one thousand five hundred (1,500) shares shall be preferred stock of the par value of One Hundred Dollars (\$100) per share.

RESOLVED FURTHER That the certificate of incorporation of this company be amended by striking out Article Fourth thereof and by inserting in lieu of said Article Fourth a new Article Fourth, to read as follows:

FOURTH: The total number of shares that may be issued by the corporation is six thousand five hundred (6,500), of which five thousand (5,000) shall be common stock without nominal or par value

and one thousand five hundred (1,500) shares shall be preferred stock of the par value of One Hundred Dollars (\$100) per share.

The particular character of the preferences of the preferred stock, and the conditions and limitations applying thereto and to the common stock are as follows:

The preferred stock may be issued as and when the Board of Directors shall determine, and the holders thereof shall be entitled to fixed, preferential, cumulative dividends at the rate of seven per cent. (7%) per annum, from date of issue and no more, payable quarterly on the first days of March, June, September and December in each year.

The holders of the preferred stock, as such, shall have no right whatsoever to any stock dividends which may be declared, or to subscribe for any new issue of stock or increased stock, whether common or preferred, or securities convertible into stock, or warrants, or rights to purchase stock, which may now or hereafter be authorized or issued.

In the event of the dissolution, liquidation or winding up of the corporation, whether voluntary or involuntary, the holders of preferred stock shall be entitled to receive and be paid One Hundred Ten Dollars (\$110) a share, plus an amount equal to all accumulated and unpaid dividends thereon before any distribution is made to the holders of the common stock, but shall not be entitled to share further in the assets of the corporation or the proceeds of liquidation. The remaining assets or proceeds of liquidation, shall be distributed among the holders of the common stock.

The preferred stock may be redeemed in whole or in part on any dividend date at the option of the corporation to be exercised by its Board of Directors at One Hundred Ten Dollars (\$110) a share and accrued dividends.

If less than all shares of preferred stock are to be redeemed, the shares to be redeemed shall be selected by lot or pro rata, as the Board of Directors may determine. Notice of the intention of the corporation to redeem shares of preferred stock shall be mailed at least thirty (30) days before the date of redemption to each holder of record of the shares to be redeemed, at his last known post office address as shown by the corporation's records. At any time after such notice has been mailed as aforesaid, the corporation may deposit the aggregate redemption price with any bank or trust company in the City of Lansing, Iowa, named in such notice, payable in the amounts aforesaid to the respective holders of the shares so to be redeemed, on endorsement and surrender of their certificates, and thereupon such holders shall cease to be stockholders with respect to said shares, and from and after the making of such deposit said holders shall have no inter-

est in or claim against the corporation with respect to such shares and shall be entitled only to receive said monies from said bank or trust company without interest. The corporation may also purchase shares for redemption at not exceeding the redemption price above specified.

Any preferred stock redeemed or purchased for redemption under any provision hereof, or otherwise, shall be cancelled and not reissued.

So long as any of the preferred stock shall be outstanding, the corporation shall not (except for the purpose of redeeming all of the preferred stock) unless with the affirmative vote or written consent of the holders of at least two-thirds (2/3) in amount of the then outstanding preferred stock,

(a) Consolidate with any other corporation, or sell, lease, exchange, or otherwise dispose of all or substantially all of the property and business of the corporation; provided, however, that the corporation may consolidate with any other corporation, or sell, lease, exchange, or otherwise dispose of all or substantially all of its property and business without the vote or written consent of the holders of two-thirds (2/3) in amount of the outstanding preferred stock by paying to the holders of preferred stock who shall not vote in favor of any such transaction, or who shall not consent thereto the sum of One Hundred Ten Dollars (\$110) per share together with an amount equal to all accumulated and unpaid dividends thereon to the date of payment upon surrender and cancellation of the certificates for such preferred stock.

(b) Increase the authorized amount of preferred stock or create any stock (or security convertible into stock) having any preference or priority over or equality with preferred stock.

(c) Guarantee the payment of obligations or stock of other corporations (except obligations of subsidiary corporations incurred in the usual course of business).

(d) Alter, amend or repeal any of the provisions of the Certificate of Incorporation which are protective of the preferred stock.

Except as otherwise provided by law, the holders of preferred stock shall have no voting power unless (a) dividends on said preferred stock shall remain in arrears and unpaid for eight (8) successive quarterly periods, or (b) the corporation defaults in due observance and performance of any of the other terms, provisions and conditions hereof and/or of the preferred stock, and such default shall continue for a period of six months after the receipt of notice

specifying the default and demand for compliance with the terms, provisions and conditions hereof and/or of the preferred stock signed by the holders of not less than twenty-five per cent. (25%) in amount of the preferred stock then outstanding, and in case any such default shall occur and/or continue as above provided, then and in any such instance the holders of preferred stock shall exercise the total and exclusive voting power and rights of all of the corporation's stock so long as such default or defaults shall continue, but no longer.

RESOLVED FURTHER That the Certificate of Incorporation of this company be further amended by striking from Article Ninth thereof the following provision, to-wit:

Pursuant to the affirmative vote of the holders of at least a majority of the stock issued and outstanding, having voting power, given at a stockholders' meeting duly called for that purpose, or when authorized by the written consent of the holders of a majority of the voting stock issued and outstanding, the board of directors shall have power and authority at any meeting to sell, lease or exchange all of the property and assets of this corporation, including its good will and its corporate franchises, upon such terms and conditions as its board of directors deem expedient and for the best interests of the corporation.

RESOLVED FURTHER That a special meeting of the stockholders of the company entitled to vote on said proposed amendments be called and held on the 5th day of June, 1928, at two o'clock P.M., for the purpose of considering and acting upon said amendments.

RESOLVED FURTHER That the Secretary of the company be and he is hereby authorized and directed to give written notice of the time, place and purpose of such special meeting of stockholders, either delivered to each such stockholder or mailed to him at his post office address at least five (5) days before the date fixed for said meeting.

2. That thereafter, pursuant to the aforesaid resolutions of its Board of Directors, a special meeting of the stockholders of said Lansing Bridge Company was duly called and held in accordance with law and the by-laws of said corporation, at the office of Marshall, Melhorn, Marlar & Martin, in the City of Toledo, Ohio, on the 5th day of June, 1928, at two o'clock P.M., at which meeting more than a majority of voting stockholders of said corporation were present in person or by proxy; that at said meeting a vote of the stockholders by ballot, in person or by proxy, was taken for and against said proposed amendments, which vote was conducted by H. R. Blech and C. A. Zinn, the two judges appointed for that purpose by said meeting, and that at the said meeting, by vote conducted as aforesaid,

in accordance with the provisions of Section 26 of the General Corporation Law of the State of Delaware, said amendments were adopted by the persons holding all the voting stock of the corporation then issued and outstanding voting for said proposed amendments, to-wit: five thousand (5,000) shares of common stock out of a total issue of five thousand (5,000) shares thereof, voted for said amendments and no shares thereof voted against the same, all as appears by the certificate made by the judges appointed to conduct the vote on said amendments at said meeting.

IN WITNESS WHEREOF said Lansing Bridge Company has caused its corporate seal to be hereunto affixed and this certificate to be signed by D. F. Melhorn, its President, and T. J. Lynch, its Secretary, this 5th day of June, 1928.

D. F. Melhorn
President.

T. J. Lynch
Secretary.

STATE OF OHIO)
) SS
COUNTY OF LUCAS

BE IT REMEMBERED That on the 5th day of June, 1928, personally came before the undersigned, a Notary Public in and for the county and state aforesaid, D. F. Melhorn, President of Lansing Bridge Company, a corporation of the state of Delaware, the corporation herein described and which executed the foregoing certificate, known to me personally to be such, and he, the said D. F. Melhorn, as such President, duly executed said certificate before me and acknowledged the said certificate to be his act and deed and the act and deed of said corporation; that the signatures of said President and of the Secretary of said corporation to said foregoing certificate are in the handwriting of the said President and said Secretary of said corporation, respectively, and that the seal affixed to said certificate is the corporate seal of said corporation, and that his act of sealing, executing, acknowledging and delivering the said certificate was duly authorized by the Board of Directors and stockholders of said corporation.

IN WITNESS WHEREOF I have hereunto set my hand the day and year aforesaid.

Pros. O. Marler
Notary Public, Lucas County, Ohio.

IOWA-WISCONSIN BRIDGE COMPANY

CERTIFICATE OF AMENDMENT

Iowa-Wisconsin Bridge Company, a corporation organized and existing under the laws of the State of Delaware, hereby certifies as follows:

(1) That the Board of Directors of said corporation, at a meeting duly convened and held on the 7th day of July, 1930, at 12 o'clock noon, proposed an amendment to its Certificate of Incorporation, and at said meeting adopted a resolution setting forth the amendment proposed, declaring its advisability, and calling a meeting of the stockholders of said corporation entitled to vote in respect thereof, for the consideration thereof; said amendment being as follows:

That the Certificate of Incorporation of the Iowa-Wisconsin Bridge Company be amended by striking out Section "Fourth" thereof and by inserting in lieu thereof the following:

"FOURTH. The total number of shares of stock which the corporation shall have authority to issue is 7,500, of which 3,750 shares of the par value of \$100.00 each, amounting in the aggregate to \$375,000.00, shall be Class A Stock, and of which 3,750 shares without par value shall be Class B Stock. Class B stock may be issued from time to time for such consideration as may be fixed by the Board of Directors.

"A statement of the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, in respect of the Class A stock and Class B stock, are as follows:

"The holders of Class A stock shall be entitled to receive, when and as declared by the Board of Directors of the corporation out of the net assets in excess of capital or net profits as permitted by law, preferential dividends at the rate of \$6.00 per annum, and no more, except as hereinafter provided, which said divi-

dividends shall be payable annually, semi-annually, or quarterly, on such days as may be determined by the Board of Directors, before any dividend shall be declared or paid upon, or set apart for, Class B stock. Such dividends upon Class A stock shall be cumulative.

"Whenever the dividend above provided for upon the Class A stock shall have been paid or declared, or a sum sufficient for the payment thereof set apart, dividends may be declared by the Board of Directors out of the remainder of the net assets in excess of capital or from net profits available for dividends, in the following manner: Class B stock shall receive a dividend of \$6.00 on each share, and thereafter Class A stock and Class B stock shall participate alike in the maximum amount of \$4.00 per share, making a total aggregate amount to which the Class A stock might become entitled of \$10.00 per share.

"Whenever the dividends above provided for shall have been paid or declared, or a sum sufficient for the payment thereof set apart, further dividends upon the Class B stock may be declared by the Board of Directors out of the remainder of the net assets in excess of capital or from net profits available for dividends, and the holders of Class A stock shall not be entitled to participate in any of such dividends. All dividends on Class B stock and all dividends on Class A stock, except the initial \$6.00 per share on the Class A stock, shall be non-cumulative.

"The Class A stock may be redeemed, in whole or in part, on any dividend date at the option of the corporation, to be exercised by its Board of Directors, at \$105.00 per share, plus all accrued dividends.

"If less than all shares of Class A stock are to be redeemed, the shares to be redeemed shall be selected by lot or pro rata, as the Board of Directors may determine. Notice of the intention of the corporation to redeem shares of Class A stock shall be mailed at least thirty (30) days before the date of redemption to each holder of record of the shares to be redeemed, at his last known post office address as shown by the corporation's records. At any time after such notice has been mailed as aforesaid, the corporation may deposit the aggregate redemption price with any bank or trust company in the City of Lansing, Iowa, named in such notice, payable in the amounts aforesaid to the respective holders of the shares so to be redeemed, on endorsement and surrender of their certificates, and thereupon such holders shall cease to be stockholders with respect to said shares, and from and after the making of such deposit said holders shall have no interest in or claim against the corporation with respect to such shares and shall be entitled only to receive said moneys from said bank or trust company

without interest. The corporation may also purchase shares for redemption at not exceeding the redemption price above specified.

"Any Class A stock redeemed or purchased for redemption under any provision hereof, or otherwise, shall be canceled and not reissued.

"In the event of the dissolution, liquidation or winding up of the corporation, whether voluntary or involuntary, the holders of Class A stock shall be entitled to receive and be paid \$105.00 a share, before any distribution is made to the holders of Class B stock, but shall not be entitled to share further in the assets of the corporation or the proceeds of liquidation. The remaining assets or proceeds of liquidation shall be distributed among the holders of Class B stock.

"The holders of the Class A stock as such, shall have no right whatsoever to any stock dividends which may be declared or to subscribe for any new issue of stock or increased stock of whatever class, or securities convertible into stock or warrants, or rights to purchase stock which may now or hereafter be authorized or issued.

"So long as any of the Class A stock shall be outstanding, the corporation shall not (except for the purpose of redeeming all of the Class A stock) unless with the affirmative vote or written consent of the holders of at least two-thirds in amount of the then outstanding Class A stock:

"(a) Consolidate with any other corporation, or sell, lease, exchange, or otherwise dispose of, all, or substantially all, of the property and business of the corporation; provided, however, that the corporation may consolidate with any other corporation, or sell, lease, exchange, or otherwise dispose of, all, or substantially all, of its property and business without the vote or written consent of the holders of two-thirds in amount of the outstanding Class A stock, by paying to the holders of the Class A stock who shall not vote in favor of any such transaction, or who shall not consent thereto, the sum of \$105.00 per share;

"(b) Increase the authorized amount of Class A stock or create any stock (or security convertible into stock) having any preference or priority over or equality with Class A stock.

"(c) Guarantee the payment of obligations on stock of other corporations (except obligations of subsidiary corporations incurred in the usual course of business).

"(d) Alter, amend or repeal any of the provisions of the Certificate of Incorporation which are protective of the Class A stock.

"The holders of the Class A stock shall have no voting power, nor shall they participate in the management and control of the corporation, all voting rights being vested exclusively in the holders of Class B stock, nor shall the holders of the Class A stock be entitled to notice of meetings of stockholders except as may be otherwise provided by the laws of the State of Delaware."

(2) That thereafter and on the 4th day of August, 1930 at 10 o'clock A.M., pursuant to such call of the Board of Directors and upon notice as provided by the By-Laws of the corporation and by law to each stockholder so entitled to vote, a special meeting of the stockholders was held, and there were present at such meeting in person, or by proxy, the holders of more than a majority of the voting stock of said corporation.

(3) That at said meeting of the stockholders, the amendment as aforesaid was presented for consideration and a vote of the stockholders entitled to vote, by ballot, in person or by proxy, was taken for and against the proposed amendment, which vote was conducted by two judges appointed for that purpose by the said meeting of the stockholders, which said judges decided upon the qualifications of the voters, accepted their votes, and when the vote was completed, counted and ascertained the number of shares voted respectively for and against the amendment, and declared whether the persons or bodies corporate holding the majority of the voting stock of said corporation had voted for or against the proposed amendment, and made out a certificate accordingly, stating the number of shares of stock issued and outstanding and entitled to vote thereon, and the number of

shares voted for, and the number of shares voted against, the amendment, respectively, and subscribed and delivered said certificate to the Secretary of the corporation.

(4) That a certificate as aforesaid by the said judge having been made, subscribed and delivered as aforesaid, and it appearing by said certificate of the judges that the persons or bodies corporate holding the majority of the stock of said corporation entitled to vote, namely, 2,737 shares out of a total of 3,337 shares, issued and outstanding and entitled to vote upon said amendment, have voted in favor of the amendment and that no shares have voted against the amendment, the said amendment was declared duly adopted.

(5) That accordingly the amendment to the certificate of incorporation of the Iowa-Wisconsin Bridge Company as hereinbefore set out has been duly adopted in accordance with the provisions of Section 26 of the General Corporation Laws of the State of Delaware.

(6) That the capital of the corporation will not be reduced under or by reason of said amendment.

IN WITNESS WHEREOF, the said Iowa-Wisconsin Bridge Company has made under its corporate seal and the hand of Vernon W. O'Connor, its President, and the hand of M. E. Lockhart, its Secretary, the foregoing certificate, and the said President and the said Secretary have hereunto severally set their hands and caused the corporate seal of the Company to be hereunto affixed this 18th day of August, 1930.

IOWA-WISCONSIN BRIDGE COMPANY

By

Vernon W. O'Connor
Its President

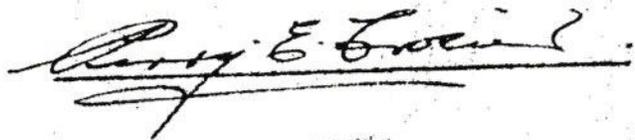
And

M. E. Lockhart
Its Secretary

STATE OF MINNESOTA
SS
COUNTY OF HENNEPIN

BE IT REMEMBERED that on this 18th day of August, 1930
I, a notary public in and for the County and State aforesaid, do
hereby certify that Vernon W. O'Connor, President of the Iowa-
Wisconsin Bridge Company, personally known to me to be such, duly
executed the foregoing certificate before me, and that the said
Vernon W. O'Connor, President as aforesaid, duly acknowledged
before me that the signatures of the said President and the
said Secretary of said Company to said certificate appended, are
in the handwriting of the President and Secretary of the Iowa-
Wisconsin Bridge Company, respectively; and that the corporate
seal to said certificate affixed is the common and corporate
seal of said Company; and that the same was duly affixed by the
authority of the stockholders of said Company.

IN WITNESS WHEREOF, I have hereunto set my hand and
the seal of office the day and year aforesaid.



PERRY E. GOSNELL
Notary Public, Hennepin County, Minn.
My commission expires Aug. 22nd 1933

19

Certificate
for Renewal and Revival of Charter

8750 L. P. #10
3754 L. P. #1

~~Iowa~~ Iowa-Wisconsin Bridge Company a corporation organized under the laws of Delaware, the certificate of incorporation of which was filed in the office of the Secretary of State on the 30th day of March, 1935, and recorded in the office of the Recorder of Deeds for Newcastle County, in Certificate of Incorporation Record N, Vol. 27, Page 523 etc on the 30th day of March, 1935, the charter of which was voided for non-payment of taxes, now desires to procure a restoration, renewal and revival of its charter, and hereby certifies as follows:

1. The name of this corporation is ~~Iowa~~ Iowa-Wisconsin Bridge Company

2. Its principal office in the State of Delaware is located at ¹⁰⁰ ~~West~~ West 10th Street, City of Wilmington, County of Newcastle and the name and address of its resident agent is The Corporation Trust Company ¹⁰⁰ ~~West~~ West 10th Street, Wilmington, Delaware.

3. The date when the restoration, renewal, and revival of the charter of this company is to commence is the 31st day of March, 1936, some being prior to the date of the expiration of the charter. This renewal and revival of the charter of this corporation is to be perpetual.

4. This corporation was duly organized and carried on the business authorized by its charter until the 1st day of April, A. D. 1936, at which time its charter became inoperative and void for non-payment of taxes and this certificate for renewal and revival is filed by authority of the duly elected directors of the corporation in accordance with the laws of the State of Delaware.

IN TESTIMONY WHEREOF, and in compliance with the provisions of Section 73 of the General Corporation Law of the State of Delaware, as amended, providing for the renewal, extension and restoration of charters, H. A. Schremser

the last and acting President, and Irene M. Bell, the last and acting Secretary of ~~Iowa~~ Iowa-Wisconsin Bridge Company

have hereunto set their hands to this certificate this 29th day of April, 1937

H. A. Schremser
Last and Acting President.

Irene M. Bell
Last and Acting Secretary.

STATE OF IOWA

)
) SS:
)

BE IT REMEMBERED, that on this 29th day of April A. D. 1937, personally came before me, a Notary Public in and for the ~~State~~ State aforesaid, E. A. Schremser, the last and acting President of ~~Iowa~~ Iowa-Wisconsin Bridge Company and Irene M. Bell, the last and acting Secretary thereof, known to me personally to be such, and they, the said E. A. Schremser and Irene M. Bell as such President and Secretary respectively, duly executed the foregoing certificate before me and severally acknowledged the said certificate to be their act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year aforesaid.

F. J. Bennett

Notary Public.