Ogden River Bridge
Spanning the Ogden River
at Washington Boulevard near 17th Street
Ogden
Weber County
Utah

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Rocky Mountain Regional Office
U.S. Department of the Interior
P.O. Box 25287
Denver, Colorado 80225
Location: Spanning the Ogden River at Washington Boulevard near 17th Street, Ogden, Weber County, Utah

UTM: A - 12/418730/4564980
     B - 12/418730/4564940
Quad: Ogden

Date of Construction: 1924

Builder: Union Construction Company

Present Owner: State of Utah

Present Use: Vehicular and pedestrian bridge; to be replaced by a new vehicular and pedestrian bridge. Sign will be modified and moved to the north end of the new bridge. Projected date for bridge demolition is the fall of 1991.

Significance: The Ogden River Bridge is a five-span, reinforced poured concrete structure built in 1924. It is a good example of an early 20th century reinforced concrete bridge. Construction of such large concrete structures at such an early date in the development of reinforced concrete structure was unusual. The bridge is also significant because it reflects the city's growth and expansion during the 1920s. In addition, this bridge was probably the last structural design by Fred Berne who built, among other important structures, the Ogden Egyptian Theater. Located on the Ogden River Bridge is the "Welcome to Ogden" sign, installed 55 years ago.

1. BRIDGE HISTORY

A. Need for a Bridge

The state of Deseret was created in March 1849 by the earliest Mormon emigrants into the Salt Lake Valley. The legislative body of Deseret, the General Assembly, was first convened in December 1849 and continued until April 5, 1851, seven months after creation of the territory of Utah by the United States Congress. During its short life, this body created some of the most important and lasting legislation in Utah history. Realizing the vital importance of a regional transportation network, the assembly passed an ordinance on February 1, 1850, authorizing the location of two state roads, one from Temple Block in Salt Lake City to the county seat of then "Tuilla County" and the other from Ogden to Provo. The road, built from Provo to Ogden, became known as the Territorial Road and then later as the State Road. In Ogden, this road changed names several times. It was first known as Main Street until 1889; Washington Avenue until 1937, and presently Washington Boulevard. It was also designated U.S. 89 when Utah adopted the Federal numbering system for highways in 1927.

In planning road construction between Ogden and Salt Lake City, two prominent obstacles stood in the way: the Weber and the Ogden rivers. During a trip to Ogden in September 1849, Governor Brigham Young granted Captain James Brown, leader of a detachment of the Mormon Battalion, the right to build bridges across these rivers and to collect tolls from travelers. This grant was later sustained by the General Assembly. As part of this grant, Brown was directed to build the bridges 13 feet wide and to use the collected tolls to maintain the bridges and roads near them in good condition. After five years, the two bridges were to be turned over to the road commission and would, thereafter, become the property of the territory. In the Spring of 1851, Captain Brown paid David Moore $200 to build a log bridge over the Ogden River on the Territorial Road, thus providing the first dependable wagon access to Ogden across this waterway.

Two other bridges were built in the same location during the 1860s and 1870s. During the 1860s, a bridge was constructed, using funds appropriated from the Utah Territorial Legislature. Construction of this bridge was only authorized with an understanding that Ogden City and Weber County would provide a percentage of construction costs. In 1876, the third bridge to be built over the Ogden River on Main Street was constructed. Ogden City contracted with David Moore to construct a replacement bridge on Main Street (Washington Boulevard). The cost of this bridge was $14,000.

Another bridge construction effort at this location began, as a major political struggle in Ogden reached its climax in 1889. In this year, the long struggle between Ogden Gentiles and Mormons reached a turning point when the Liberal Party (Gentiles) won every seat on the Ogden City Commission. Shortly after taking office, the new mayor and city commissioners undertook some municipal changes which, to some extent, altered the face of the city of Ogden. Most significantly, the city's northern boundary was moved twenty blocks north from the Ogden River to accommodate new growth. The east-west streets were then renumbered accordingly. Thus, old 5th Street became 25th Street.
An opportunity presented itself soon after, to help promote new growth in this northern area of the city. On May 23, 1890, the Ogden city engineer briefed the Ogden City Commission on the deteriorated condition of the existing wooden bridge across the Ogden River at Washington Avenue. He recommended that the bridge be either replaced or that immediate repairs be undertaken by his office. About this same time, the Ogden City Railway expressed interest in expanding its trolley system tracks north of the Ogden River on Washington Avenue. It offered to pay three-eighths of the cost of a new bridge, providing it carried a trolley track portal in addition to the proposed roadway portal. Weber County also agreed to pay one-fourth of the cost of the bridge.

The city requested bids for the project and received six by June 20. On June 22, 1890, the city awarded the job to the Smith Bridge Company of Toledo, Ohio, for $14,000. The contract specified construction of a new iron and steel pin-connected Pratt through truss bridge across the Ogden River at Washington Avenue. The bridge measured 121 feet long and 24 feet high and had two portals, one for street cars and the other for wagons, horses and, later, automobiles. The "roadway portal" was 24 feet wide and was located on the east (upriver) side of the span. The "Motor Portal," measuring 12 feet wide, was on the west (downriver) side of the span. A six-foot-wide sidewalk was placed on either side of the bridge. This motor portal served to take a single lane of streetcar traffic across the Ogden River. This line was one of several operated by the Ogden Rapid Transit Company from 36th Street on the south, north to North Ogden. It was abandoned on December 25, 1935, and some of the tracks were removed from Washington Avenue in late 1935, including those on the concrete Ogden River Bridge, built in 1924.

Another expansion of Ogden, north of the Ogden River, occurred during the 1920s and 1930s. During this time, due to increased rail traffic in the west and the fact that Ogden was a critical railroad junction, the city was able to increase its importance as a center of agriculture and industry.

During the 1930s, this growth was spurred by the construction of several new military facilities including the Defense depot, Ogden Arsenal, Clearfield Naval Supply Depot, and Hill Air Force Base. This growth promoted local highway improvements including replacement of the Riverdale viaduct, the relocation of U.S. Highway 89 from Weber Canyon through South Ogden along its present alignment, and the replacement of the old truss bridge with a reinforced concrete structure across the Ogden River at Washington Avenue.

In 1921, early in this growth period, a $70,000 bridge bond issue was passed in the city of Ogden for construction of a new bridge on Washington Avenue. It was not until 1924, however, that a decision was made to actually construct the new bridge. The first note of construction interest was in an Ogden City Commission meeting on May 26, 1924, when the commission passed a resolution to move the $70,000 in the Bridge Bond Fund to the Ogden City general fund 60 to 90 days in advance of the anticipated construction. This meeting was followed by the presentation of plans and specifications for the Ogden River Bridge to the city commission by the city engineer, Joseph M. Tracy, on July 17, 1924. Tracy specified that the bridge
would be a reinforced concrete bridge comprising a total span of 122 feet 4 inches, with two 20-foot sidewalls and a 78-foot roadway, and would accommodate two street railway tracks. Also to be included in this solicitation was the removal of the old steel truss bridge from this location. This plan was unanimously carried by the board of commissioners, and bids were solicited between July 18 through July 23, 1924.

The lowest bid of $58,742.50 was presented by the Union Construction Company on their alternate design.\textsuperscript{20} The city engineer recommended that the Union Construction Company’s bid of $59,442.50, which included the extra materials, be accepted by the city. The commissioners unanimously agreed and awarded the contract to the company.\textsuperscript{21}

B. Construction Chronology

The city of Ogden was very anxious to have the bridge construction completed within a period of 70 days. So, even before the final contract agreements were completed, the Union Construction Company began hauling construction materials to the site in early August.\textsuperscript{22} By the middle of August, demolition of the old bridge was already well underway and construction was expected to be complete within 70 days.\textsuperscript{23}

Late in September 1924, the board of city commissioners solicited and obtained bids concerning the transfer of the old steel truss bridge from Washington Avenue to the Wall Avenue crossing of the Ogden River. This work was awarded to the Union Construction Company on September 22 for $15,497.25.\textsuperscript{24}

A progress report on bridge construction was carried in the \textit{Ogden Standard Examiner} on September 29, 1924. According to the article, unrestricted vehicular and streetcar traffic would be able to proceed across the west portion of the new bridge within 30 days.\textsuperscript{25} No other reports of construction progress were made during October and November, although one newspaper article reported that three workmen on the bridge were hit and injured by a passing streetcar in mid-November.\textsuperscript{26} In early December, it was announced that the new concrete bridge over the Ogden River was to be open for public use by January 1, 1925, at the latest.\textsuperscript{27}

An article in the \textit{Standard Examiner}, dated December 16, 1924, noted that the bridge construction was complete, except for paving of the east side. Traffic was expected to be allowed by the bridge by Christmas.\textsuperscript{28} In late December, severe weather hit northern Utah, ushering in a very cold and wet winter. This temporarily halted bridge completion, but it was expected to resume as soon as the weather moderated.\textsuperscript{29} The weather did not improved as expected, further delaying the paving of the east side of the bridge.\textsuperscript{30} By mid-February, it became apparent that the only practical solution to the construction problem was to open the entire bridge to traffic and pave the east side in the Spring.\textsuperscript{31}

There is no indication that a dedication of the bridge ever took place. Final paving of the east portion of the bridge apparently was done in late March or early April, since the seventh and
final payment for bridge work was paid to the Union Construction Company on April 22, 1925, at a cost of $4,099.64.22

C. Location

The bridge, with its decorative sign, has always been and continues to be a vital link in the transportation network of northern Utah. The bridge initially served as the only reliable access for road travelers going from Ogden and points south to anywhere north of the city, including Box Elder County and Idaho. It maintained this vital importance from territorial days, up until about the beginning of World War II. When Hill Field (later to become Hill Air Force Base) was constructed in the late 1930s and early 1940s, a new route was established from Layton, north along the present route of Highway SR 126, to Hot Springs, north of Ogden. This route allowed truck and other through traffic to avoid passing through the center of Ogden. When the Interstate 15 route was completed through the city in the early 1970s, and a decision was made to divert truck traffic west to Wall Avenue, that too decreased through traffic volumes on Washington Boulevard. Interstate 84, completed in 1975 from the mouth of Weber Canyon to Riverdale, also diverted traffic from Wyoming off U.S. 89 and onto Interstate 15. Nevertheless, traffic volume on the route and over the bridge has continued to increase every year.

II. THE BRIDGE

A. Description

The 67-year-old Ogden River Bridge on Washington Boulevard runs north-south over the west-flowing Ogden River.33 As designed and represented in five sheets of construction drawings prepared in 1924, the bridge is a five-span, steel reinforced, poured concrete structure, parallelogram-shaped in plan, and measuring 123 feet 9 inches in length and width.34

The bridge’s vertical, load-bearing superstructure consists of 12- to 14-feet-tall concrete abutments on each end, with four bullnose-edged piers situated in between, creating spans of 22 feet 6 inches, 25 feet 9 inches, 25 feet 9 inches, 25 feet 9 inches; and 22 feet 6 inches, respectively, measured to the centerline of each pier from the north and south abutments. The abutments sit upon rock masonry revetments or walls which extend along the bank 25 feet from the southwest, northwest and northeast wing. A concrete revetment extends 65 feet along the bank from the southeast wing. The bridge’s horizontal superstructure consists of concrete T-beams, ranging from 3 feet 8 inches to 8 feet on center, running east to west across the piers. The beams range from 14 feet to 19 feet in width and 20 feet to 28 feet in height and are chamfered along their bottom edges.

The bridge has a slight chamber or bow along its length and has a deck or vehicle-driving surface of concrete topped with bituminous overlay. The original decking has been resurfaced with asphalt overlay over the years. Along the east and west sides of the bridge are concrete sidewalks and railing. The steel-reinforced railing consists of roughly 4-inch-wide concrete "posts" at each end and over each pier, with lengths of round-arched balusters in between.
Above the balusters is a wide concrete rail, and below a chamfered concrete curb. All concrete work is smooth-finished, although the form-lines are exposed on the surfaces of the concrete superstructure.

Although built in 1924, the bridge is quite modern in appearance, especially its superstructure. It is of no practical architectural style, having been built in the transitional period between the Neo-Classical Revival and Art-Deco styles. Still, the bridge has some cracking, spalling, and scouring, and there are some stains on the underside of the deck. The pedestrian rails are quite deteriorated in places, with some section broken out. The reinforcing steel is also exposed in places.

B. Bridge Modifications

Some minor remedial repair work has been done on the bridge over the years, but no major structural modifications or repairs appear to have been undertaken since its construction. There have been, however, several deletions of original elements of the bridge over time, in addition to the loss of the double track streetcar line which once crossed the bridge. The four, single-ole, three-globe street lights, which once flanked the edges of the bridge pavement, were removed at some point after the early 1950s. There are currently no street lights on the bridge itself other than the neon sign. One other minor modification was a crosswalk which was placed in the middle of the bridge during the late 1950s to early 1960s. Two small metal signs were hung above the crosswalk from the bottom of the Ogden sign (between the ‘O’ and ‘G’ and the ‘E’ and ‘N’ in the word OGDEN) to warn motorists of the crossing. This crosswalk and the sign had been removed by the 1970s.

C. Ownership and Future

The city of Ogden paid to have the Ogden River Bridge built and, presumably, owned the bridge for a period of time following its construction. At some point after that time, possibly during the early 1940s when Utah State Road Commission maintenance records on the bridge first appeared, bridge ownership reverted to the state and has remained with it since that time.

The Ogden River Bridge carries a large volume of traffic and represents a vital part of the most important surface road in Ogden. Thousands of vehicles daily cross the structure, so its maintenance and continued upgrading are an important part of overall transportation planning for the Ogden area. Due to continuing deterioration of the bridge, and the fact that it is not as wide as the boulevard, continued use of the existing bridge was not considered possible. In the Federal Highway Administration’s "Determination of Eligibility and Finding of Effect" for the Ogden River Bridge, it was recommended that preservation through HAER documentation, demolition and construction of a new bridge be undertaken.35
III. BRIDGE BIOGRAPHICAL MATERIAL

A. Engineering and Design

The design for the Ogden River Bridge was a product of the Ogden city engineer's office. Both the original plans and the modified design, which were used in construction, list "F. Berne" as the designer. "F. Berne", or Fred Berne, was a fairly well-known contractor of the time, though it is not known whether he was a staff member of the city engineer’s office or a subconsultant. Berne arrived in Utah around 1920 and died of heart trouble on December 23, 1924, during the final construction phase of the Ogden River Bridge. According to his obituary, Berne was a well-educated, creative contractor and designer. He was born in France in 1876 and graduated from the School of Arts at Chaions. After working on several construction projects in Europe, Berne came to the United States in 1901 and, as a contractor, built a number of large buildings in Georgia, Pennsylvania, Maryland, and Washington. Most significantly, he designed and patented a concrete construction design which made steel reinforcements less expensive and better. He came to Ogden in 1919 and, among other buildings, constructed the Egyptian Theatre. Berne’s well-known experience with reinforced concrete structures made him an attractive candidate to design such a massive structure as the Ogden River Bridge.

B. Contractor

The bridge was built by the Union Construction Company of Ogden, which was formed in 1923. This construction company was composed entirely of local Ogden businessmen. Principals of the company in 1924 included W. Earl Roche, general manager and president; William H. Taylor, vice president; and Joseph Ririe, secretary-treasurer. In 1926, Roche moved to Oakland, California. In the 1927 Polk Directory for Ogden, William H. Child had assumed the presidency, with Taylor as vice president and general manager, and Ririe remaining secretary-treasurer. This remained constant until Taylor assumed the presidency of the company after Child’s death in 1930. Ririe remained secretary-treasurer until his death in 1937. The company appears to have ceased operations in 1938. Interestingly, Child was a well-known brick and tile manufacturer for thirty-five years in the intermountain area before assuming control of the Union Construction Company. Ririe was the Utah State auditor from 1916 to 1920 and state treasurer from 1932 until his death in 1937.

The Union Construction Company had a strong achievement record from early in its existence. Many construction projects in Ogden and Weber County were conducted by this company during 1923 and 1924. These included resurfacing of the state road between Clearfield and Layton, building the Riverdale viaduct, building the Ogden River Bridge, and moving the iron bridge from Washington to Wall avenue.

In later years, the company apparently continued to do federal highway construction work, but did much of it in Idaho, particularly between Salmon And the Idaho-Montana state line. A search for other bridge construction projects by the company was not fruitful. The company did construct the Riverdale viaduct over the Weber River in 1924 and relocated the iron truss bridge over the Ogden River from Washington Avenue to Wall Avenue in the same year. However, the company’s involvement in other bridge construction projects after that time is not known.
Photographic copy of photograph (ca. 1940, original print in possession of Utah Department of Transportation, District One, Ogden, Utah). Ogden River Bridge; view to northeast.
IV. ENDNOTES

1. *Laws and Ordinances of the State of Deseret*, compilation of 1851 (Salt Lake City, Utah: 1919).


5. Ibid., 381.

6. Ibid., 382.


10. Ibid., 59.


14. Ogden City Engineer's office, Drawing no. 3182, traced 1924 (Ogden, Utah: Ogden City, 1890). One large format photograph of this drawing is attached as part of this documentation.

15. William W. Terry, *Weber County is Worth Knowing* (Ogden, Utah: privately published), 172; D. W. "Red" McCarthy, personal communication, 1989; Utah Historical Records Project, *A History of Ogden* (Ogden, Utah: Ogden City Commission), 58; *The Ogden Standard Examiner*, 13 November 1936, 7A.

16. Roberts and Sadler. *Ogden, Utah: Junction City*, 114 and 130.

17. *The Ogden Standard Examiner*, 31 January 1925, 8; Ibid., 11 October 1924, 8.

18. Ogden City Commission Minutes, Book F1, 423.
19. Ibid., 508-509.

20. Ibid., 520.

21. Ogden City Corporation, "Advertisement, Instructions to Bidders, Proposal, Specifications, Contract and Bond for Bridge over Ogden River at Washington Avenue" (Ogden, Utah: Office of the city engineer, 17 July 1924).

22. Ibid., 11 August 1924, 1.

23. Ibid., 22 August 1924, 6.

24. Ibid., 30 September 1924, 1.

25. Ibid., 29 September 1924, 6.

26. Ibid., 16 November 1924, 9.

27. Ibid., 3 December 1924, 12.

28. Ibid., 16 December 1924, 12.

29. Ibid., 23 December 1924, 5.

30. Ibid., 4 January 1925, 8.

31. Ibid., 18 February 1925, 10.

32. Ogden City Commission, 1925 Minute Book, 240.

33. The bridge is portrayed in nine large format photographs and one photographic copy of a ca. 1940 photograph which are included as part of this documentation.

34. Much of the information on the structural aspects of this bridge come from the original plans for the bridge and from the bridge inspection file. Original plans for the bridge are located at the Ogden City Engineer's office under Drawing nos. 3215, 3218, 3219 and 3220. Four large format photographs of these drawings are included as part of this documentation. Following are the references for these two sources of information: Structures Department, Inspection File for Ogden River Bridge, Utah Department of Transportation, District One, Ogden; Engineer's Office, "Ogden River Bridge at Washington Ave., Submitted by Union Construction Co, Adopted Design. Drawing Numbers 3215, 3218, 3219, 3220, Ogden City, Ogden, 1924.

35. Federal Highway Administration and Utah Department of Transportation, "Determination of Eligibility and Finding of Effect for Project No. BRM-2037(3); Ogden River Bridge Replacement (Salt Lake City, Utah: Utah Historic Preservation Office, 12 September 1989); R. L. Polk, R. L. Polk & Co's Utah State Gazetteer 1924-1925 (Salt Lake City, Utah: R. L. Polk & Co. of Utah, 1924), 130.

36. The Ogden Standard Examiner, 24 December 1924, 3.
37. Ibid.


39. Ibid. (1926), 438.

40. Ibid. (1927), 151, 541.


42. *The Ogden Standard Examiner*, 10 July 1937, 1.


44. The Ogden Standard Examiner, 10 July 1937, 1.

45. Ibid., 1 February 1925, 14.

46. Ibid., 27 October 1930, 1.

V. BIBLIOGRAPHY

A. BOOKS AND PUBLISHED SOURCES


B. NEWSPAPERS


_________. "City to Open River Street", 22 August 1924, p. 6, col. 2.

_________. "Bridge Lights Will Go Soon", 29 September 1924, p. 6, col. 4.

_________. "Union Given Bridge Work", 30 September 1924, p. 1, col. 4.

_________. 16 November 1924, p. 9, col. 5.

_________. "Bridge will be Open Jan. 1", 3 December 1924, p. 12, col. 5.


_________. "Defer Plans for Bridge Dedication", 23 December 1924, p. 12, col. 5.

_________. "Berne Rites Next Friday", 24 December 1924, p. 3, col. 4.

_________. "Storm Hinders New Bridge Work", 4 January 1925, p. 8, col. 3.

_________. "Road Work to Open in Spring", 31 January 1925, p. 8, col. 6.


_________. "New Bridge Open for Full Width", 18 February 1925, p. 10, col. 4.


*Standard (Ogden), [City Council Minutes]*, 21 June 1890, p. 6, col. 1 and 2.

C. DOCUMENTS AND REPORTS

Federal Highway Administration and Utah Department of Transportation. "Determination of Eligibility and finding of Effect for Project No. BRM-2037(3); Ogden River Bridge Replacement", 12 September 1989. Utah Historic Preservation Office, Salt Lake City.

Ogden City Commission Minute Book H. 1 July 1890, p. 619 and 620.

Ogden City Commission Minute Book F1. 26 May 1924, p. 423.

_________. 31 July 1924, p. 508 and 509.

_________. 11 August 1924, p. 520.

Ogden City Commission Minute Book, 22 April 1925, p. 240.


D. PERSONAL COMMUNICATIONS

Young, Michael. Personal communication, 1991. [This was a telephone conversation between the author and Mr. Young who is president of Young Electric Sign Company and grandson of its founder, Thomas Young.]

E. MAPS/DRAWINGS

Utah State Road Commission. State Road Map of Utah. Salt Lake City, Utah, 1927.

Ogden City. "Steel Bridge over Ogden River at Washington Avenue, 1890". Drawing No. 3182. Traced by A. H. Shaw, February 13, 1924. Ogden City Engineering Department, Ogden, Utah. [The "At Washington Avenue, 1890" is crossed out and "Moved to Wall Avenue" is penciled in.]

Ogden City. "Ogden River Bridge at Washington Avenue", Submitted by Union Construction Company, Adopted Design. Drawings No. 3215, 3218, 3220, Ogden City Engineers office, Ogden, Utah, August 1924.