

Albany Bridge
Spanning Willamette River on U.S. Highway 20
Albany
Linn County
Oregon

HAER OR-34

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PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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HISTORIC AMERICAN ENGINEERING RECORD

ALBANY BRIDGE
HAER OR-34

Location: Spanning Willamette River on Albany-Corvallis Highway 31 (U.S. 20), Albany, Linn and Benton Counties, Oregon
UTM: Albany, Oregon Quad. 10/491650/4942700

Date of Construction: 1924-26

Structural Type: Four steel Parker through truss spans

Engineer: Conde B. McCullough, Oregon State Highway Department

Builder: Union Bridge Company, Portland, Oregon

Owner: Oregon Department of Transportation

Use: Vehicular bridge

Significance: The Albany Bridge made possible the completion of the Albany-Corvallis Highway. It is one of only a few multiple-span steel truss bridges in Oregon. It is also one of the few major steel truss bridges built in Oregon during the tenure of State Bridge Engineer Conde B. McCullough, who was noted for his beautiful concrete bridges. McCullough tried whenever possible to give a pleasing and even ornate appearance to the bridges he designed. Even when designing this steel bridge, he could not resist including decorative concrete pylons at the portals and concrete railing.

Project Information: Documentation of the Albany Bridge is part of the Oregon Historic Bridge Recording Project, conducted during the summer of 1990 under the co-sponsorship of HABS/HAER and the Oregon Department of Transportation. Researched and written by Gary Link, HAER Historian, 1990. Edited and transmitted by Lola Bennett, HAER Historian, 1992.

Related Documentation: For more information on Conde B. McCullough, see HAER OR-54.

HISTORY

The Albany Bridge over the Willamette River replaced a steel cantilever bridge built in 1892 by Franklin J. Miller. A 1923 state bridge inspection found the cantilever span in serious condition. Overstress and fires had elongated the members to an unsafe degree. The state forbade its own trucks from using the bridge and recommended that the City of Albany post a guard on the bridge to keep loaded trucks off, keep vehicles under 10 m.p.h., and space traffic at least 100' apart across the bridge. State Bridge Engineer Conde B. McCullough recommended that the bridge be replaced as quickly as possible.¹

On June 12, 1924, the Union Bridge Company received the contract to construct a bridge across the Willamette River at Albany. One month later the Oregon State Highway Commission entered into an agreement with Linn County and the City of Albany, in which each would pay a certain amount for the construction. The Southern Pacific Railroad and the Oregon Electric Railway each also agreed to pay a small amount for construction of overhead structures on the bridge for their streetcar lines to cross. The agreement stipulated that the bridge be built under the direction, supervision, and control of the state highway commission. However, it gave responsibility for procuring the right of way for the Albany side approach to Linn County.²

Ellsworth Street was chosen as the site for the bridge because it was at the narrowest crossing. It also lent itself to a straighter approach on the north side and to construction of overhead crossings for the streetcar lines. Work on the bridge began on August 19, 1924. In January the highway commission completed an agreement with the federal government. Under the Federal Aid Road Act of 1916 and the Federal Highway Act of 1921, the government agreed to pay an amount not exceeding 61 percent of the total cost of building the Albany Bridge. The construction of the bridge from then on was designated as Federal Aid Project 104-A.³

Federal Aid Project 104-A ran into trouble from the start. On August 23, 1924 W.A. Barrett and J.J. Barrett, proprietors of an implements company in Albany initiated a suit to stop the Union Bridge Company from constructing the approach on the Albany side of the bridge. Business interests claimed that erection of the approach at the proposed site would block off an alley behind businesses between Lyon Street and Broadalbin Street, blocking delivery of merchandise and supplies. It would also block fire engines from responding to a fire in the alley. Construction of the entire bridge continued until April 14, 1925 when the court handed down an injunction forbidding the Union Bridge Company from completing the approach. The highway commission pressed on to complete the bridge to a usable condition. The condition of the old Albany Bridge was so dilapidated that the commission wished to discontinue its use as soon as possible. The state had the rest of the bridge completed, then erected planking and railing on the fill on the Albany side, making a temporary approach (and therefore they had technically not completed the approach). They informally opened the bridge on November 30, 1925. The old Albany Bridge was closed December 4. The attorneys for the Barrett brothers pressed for charges of contempt of court. Notices were sent to commissioners William Doby, H.B. Van Duser and W.H. Malone, and State Bridge Engineer Conde B. McCullough. The attorneys sought to have the approach torn down. On January 9, 1926, the court dropped the contempt charges so that the matter of damages could be expediently settled. Since the original agreement put responsibility of the right of way for the Albany approach on Linn County, it was determined that the county settle with the Barrett brothers for damages. Work resumed and was completed on March 25, 1926. The old Albany Bridge was destroyed the following June.⁴

Several names were suggested to the highway commission for the bridge. The Oregon Authors' League and the Northwestern Poetry Association asked the state to name it after Sam Simpson, who wrote the poem "Beautiful Willamette" near the bridge's location. The Corvallis Chamber of Commerce unanimously passed a resolution urging the state to name the bridge after

the Honorable J.K. Weatherford. Mr. Weatherford was an Albany resident and a regent of the Oregon Agricultural College (now Oregon State University) in Corvallis, who had devoted much of his time upbuilding that institution. But the highway commission conferred with representative citizens of Albany and kept the name "Albany Bridge." Thus the bridge was dedicated on May 1, 1926.⁵

The bridge served the Albany-Corvallis Highway adequately for several decades. However, by the late 1950's its narrow design and its location in the center of Albany created traffic problems. In March 1960 a delegation from Albany told the highway commission that traffic was too heavy on the bridge which was by then part of U.S. Highway 20. They asked for a companion span beside the present bridge. The commission replied that studies of the problem would continue, but it could promise no plans for a new bridge in the near future. In 1965 the state again said no to an Albany delegation asking for a second bridge. Traffic across the bridge increased from 6,000 vehicles per day in 1953 to 13,000 per day in 1968. City residents complained that rush hour or a sporting event in Corvallis could cause traffic to back up a mile or so from the bridge. In April 1969 the state decided to build a companion bridge to the Albany Bridge. At the time the new bridge was opened in the first week of July 1971 the state reconstructed the north end approach on the Albany Bridge. Now each bridge carries one-way traffic.⁶

DESCRIPTION

Upon observing the Albany Bridge one may wonder why Conde B. McCullough, who was so fond of designing and building concrete arch bridges, built a steel through truss bridge at Albany. The Willamette River is still technically navigable at Albany. With that in mind, the contract for the building of the bridge stipulated that the structure be built so as to be easily converted to a moveable span, should the United States War Department (at that time the governing body for navigable waterways) so decree. A multiple steel truss span proved to be the best design for this situation, being easily converted to a vertical-lift span.⁷

Starting from the south end, the bridge consists of one 92' retaining wall, five 32' reinforced concrete deck girder spans, four 200' steel through Parker truss spans, and two 65' reinforced concrete deck girder spans. Inside the steel trusses the vertical clearance is 14'-11", and the horizontal clearance is 26'. The entrance to each portal is flanked by concrete obelisk lamp posts. Five-foot wide concrete sidewalks line the outside of the bridge, each delineated by an ornate precast concrete handrail running the length of the bridge.⁸ The truss spans rest on cast steel shoes. Fixed shoes are at the north end of river spans 1, 2, and 4, and at the south end of span 3. Expansion shoes (originally on rollers, but now on neoprene pads) are at the south ends of spans 1, 2, and 4, and the north end of span 3. The shoes rest atop reinforced concrete piers. Piers 2 and 3 are river piers, piers 1 and 4 are on land.⁹

CONSTRUCTION

The contract for the construction of the Albany Bridge was awarded to the Union Bridge Company of Portland on June 12, 1924. O.A. Chase was the resident engineer for the state. Work on the bridge began on the falsework on August 19, 1924. Having found suitable foundation at a higher elevation than expected, not as much excavation was needed at the Albany end and a savings in concrete resulted. 3,161 cubic yards of excavation were moved and 3,760 cubic yards of concrete were used. The structure required 176 tons of reinforcing steel and 776 tons of structural steel. 10,709 feet of wood piling were driven. Concrete piling was used for the bents of the approach spans. Completion of the approach span and banisters on the Albany side were

delayed by a legal suit. Work was completed March 25, 1926. Total amount paid to the Union Bridge Company was \$242,706.82.¹⁰

MAINTENANCE

Less than one month after the bridge was completed the concrete handrail was damaged by telephone company workers placing lines on the bridge. The railing was repaired, but Bridge Engineer Conde B. McCullough complained, "The disturbing fact is that patch work of this kind never entirely obliterates the original defect and the appearance of our rail cap will never exactly be as good as in the first instance." Along with the four decorative pylons at the truss portals, the handrail is the only decorative feature of the bridge. Through the 1930's it was cleaned periodically with wire brushes.¹¹

Nine expansion joints which had needed repair as early as 1937 were repoured in 1952. That same year 150 feet of pipe railing on the sidewalk of the west approach and 320 feet of concrete handrail were repaired. In 1961 the bridge's defunct lighting system was replaced-- fluorescent lights were installed over the roadway and mercury vapor lights over the approaches. The following year the east sidewalk was replaced. In 1971 the four spans of the north approach were replaced by two 65-foot reinforced-concrete deck girder spans, merging with the approaches of the new Lyon Street Bridge. In June 1984 inspectors reported that 30 to 40 percent of the steel surfaces were exposed and rusted. The following summer all exposed steel on the structure was repainted. The next year inspectors discovered that the roller bearings on the expansion ends of the truss spans were moving out from under bearing points. Bridge engineers decided to replace the rollers with neoprene pads 4 $\frac{3}{4}$ " thick. This was done in the spring of 1987 by lifting the spans off the piers with hydraulic jacks.¹²

ENDNOTES

1. "Steel Bridge Blast Creates Spectacle," Oregonian 11 June 1926, p.18; Oregon Department of Transportation, Bridge Section, Maintenance File #1025D, Letter dated 1 June 1923, Conde B. McCullough, State Bridge Engineer to Roy A. Klein, State Highway Engineer; and letter dated 3 November 1923, Roy Klein to Court of Linn County, Albany.
2. ODOT, General Records Office, Albany Bridge File, Agreement dated 11 July 1924; Oregon State Highway Commission, Sixth Biennial Report, 1923-1924, p.220.
3. "Bridge Work Promised for Tuesday," Albany Evening Herald, 18 August 1924, p.1; Oregon State Archives, Record Group H4, 76A-90/1, Agreement for Federal Aid Project 104-A, dated 15 January 1925 (hereafter cited as OSA); and letter dated 9 November 1923, Conde B. McCullough to P.A. Young, First National Bank of Albany.
4. "Contempt Charges at Albany Dropped," Oregonian, 10 January 1926, p.1; "New Ruction Starts Over Albany Bridge," Oregonian, 4 December 1925, p.1.
5. OSA: Letter dated 25 April 1926, Northwestern Poetry Association to State Highway Commission; letter dated 30 April 1926, Oregon Authors' League to State Highway Commission; letter dated 27 May 1926, State Highway Commission to Northwestern Poetry Association; letter dated 8 May 1926, State Highway Commission to Oregon Authors' League; Resolution of Corvallis Chamber of Commerce dated 20 April 1926; letter dated 5 April 1926, Albany Chamber of Commerce to State Highway Commission.
6. "Albany Seeks 2nd Span on Road to Corvallis," Oregonian 12 March 1960; Albany Democrat-Herald 30 December 1964, 26 January 1965, 28 January 1965, 30 January 1965, 16 May 1968; Statesman (Salem, Oregon) 20 March 1968, Capital Journal (Salem) sec. 1, 4; The Oregon Journal (Portland) 7 July 1971.
7. ODOT, General Records Office, Albany Bridge File, Agreement dated July 11, 1924; ODOT, Bridge Section, Drawing #3085.
8. ODOT, Bridge Section, "Bridge Log, 1"; and Drawings #3085, #3096.
9. ODOT, Bridge Section, Drawings #3085 and 3089.
10. Oregon State Highway Commission, Seventh Biennial Report, 1921-1922, p.220; OSA: letter dated 22 April 1925, Conde B. McCullough, State Bridge Engineer to Roy A. Klein, State Highway Engineer; and letter dated 15 December 1927, Roy Klein to Hansen & Roland of Tacoma, Washington.
11. ODOT, Bridge Section, Maintenance File #1025D, "Bridge History Record of Maintenance," and letter dated 26 April 1926, Conde B. McCullough to Pacific Telephone and Telegraph Company.

12. "Bright Lights for Bridge Traffic," Albany Democrat-Herald 28 July 1961; "Bridge Busting," Albany Democrat-Herald 3 April 1962; ODOT, Bridge Section, Maintenance File #1025D: "Weekly Cost Report Bridge and Building Crews," 28 October 1985; memo for record dated 12 June 1984, Jack Davis, Special Studies Manager, letter dated 7 April 1987, Jerry Backstrand, Assistant Bridge Engineer to Gary Bowling, Region Bridge Inspector; interoffice memo dated 28 October 1985, Fred Lucht, Region Bridge Maintenance Supervisor; interoffice memo dated 6 March 1986, Walt Hart, Bridge Engineer to Fred Lucht.