

HISTORIC AMERICAN ENGINEERING RECORD

BEAVER SUSPENSION BRIDGE

HAER NO. AR-53

LOCATION: Spanning the White River on State Highway 187 in the town of Beaver, Carroll County, Arkansas.

UTM: 15/40363370/431170
Quad: Beaver

DATE OF CONSTRUCTION: ca. 1915

MAJOR ALTERATIONS AND ADDITIONS: A major renovation of this bridge was completed ca. 1980.

PRESENT CONDITION AND USE: The bridge is in excellent condition and is currently being used for vehicular and pedestrian traffic.

STYLE: Single span, wire cable suspension bridge.

BUILDER: Unknown. It is assumed that Carroll County officials contracted with an unidentified bridge construction company for the construction of the Beaver Bridge early in the twentieth century.

SIGNIFICANCE: The Beaver Bridge is one of two suspension bridges surviving in Arkansas (the other is the Winkley Bridge, HAER No. AR-48). It is the only suspension bridge currently being used for vehicular traffic.

HISTORIAN: Michael Swanda
Survey Coordinator
Arkansas Historic Preservation Program
August 26, 1988.

STRUCTURAL SYSTEMS

The Beaver Bridge uses a set of two steel cables draped over two steel towers on concrete piers. These steel cables are anchored in concrete abutments buried in the ground. Each of the four main cables contain six individually stranded cables entwined together. From these double cables are suspended vertical steel rod tension members that support a steel substructure. This steel I-beam stringer system is used for stiffening and is laterally braced with diagonal steel beams. Timber floor beams are laid perpendicularly across the steel stringers and support a timber roadway deck. The towers are constructed of two vertical steel I-beams that are pin-connected at the base to a bearing block that is anchored to the top of the concrete pier. This pin connection allows the towers to pivot from the base under live load conditions. Each tower is laterally braced with a series of struts and diagonally crossed members built up from riveted angles and batten plates. Timber posts and planks make up the guardrail.

DIMENSIONS

The Beaver Bridge is approximately 600 feet long.

ADDITIONAL INFORMATION

AHPP Resource No. CR1042.

SOURCES OF INFORMATION

Bridge Division Files, Arkansas Highway and Transportation Department, Little Rock.

Historic Bridge File, Arkansas Historic Preservation Program, Little Rock.

McClurkan, Burney B. Arkansas' Historic Bridge Inventory, Evaluation Procedures 1987 and Preservation Plan. Manuscript of file, Environmental Division, Arkansas Highway and Transportation Department, Little Rock.