

MARBLE BRIDGE
(Marble Arch Bridge)
(Sanitarium Bridge)
Spanning a ravine at Lake Road (CR 707)
Eureka Springs vicinity
Carroll County
Arkansas

HAER AR-103
AR-103

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
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HISTORIC AMERICAN ENGINEERING RECORD

MARBLE BRIDGE (Marble Arch Bridge) (Sanitarium Bridge) HAER No. AR-103

Location: Spanning a ravine at Lake Road (CR 707), Eureka Springs vicinity, Carroll County, Arkansas

UTM: 15.434116.4025874, Eureka Springs, Arkansas, Quad.

AHTD #: 10955

Structural Type: Stone arch

Construction Date: 1891

Builder: Eureka Sanitarium Company

Owner: Carroll County, Arkansas

Use: Vehicular bridge

Significance: Marble Bridge was built as part of the development of Sanitarium Lake in the early 1890s. With a 44' clear span, it is an impressive example of stone masonry construction and one of the largest surviving stone arch bridges in Arkansas.

Project Information: The Arkansas Historic Bridges Recording Project is part of the Historic American Engineering Record (HAER), a long-range program that documents historically significant engineering sites and structures in the United States. HAER is administered by the Heritage Documentation Programs Division of the National Park Service, United States Department of the Interior, Richard O'Connor, Manager. The Arkansas State Highway and Transportation Department sponsored this project.

Lola Bennett, HAER Historian, 2007

Chronology

- 1803 Louisiana Purchase doubles size of the United States
- 1819 Arkansas Territory created from part of Louisiana Purchase
- 1833 Carroll County formed
- 1836 Arkansas becomes 25th state to join the Union
- 1858 Dr. Alvah Jackson discovers an "Indian healing spring" in Carroll County
- 1860s "*Dr. Jackson's Eye-Water*" acquires a wide-spread reputation
- 1878 Settlement established near Eureka Springs
- 1881 Chicago physician Dr. Charles E. Davis seeks a cure for his wife at Eureka Springs
- 1882 City of Eureka Springs incorporated
- 1883 Eureka Springs Railway opened from Seligman, Missouri, to Eureka Springs, Arkansas
- 1885c Dr. Charles E. Davis moves from Chicago to Eureka Springs, Arkansas
- 1890 Dr. Charles E. Davis forms Eureka Sanitarium Company
- 1891 Development of Sanitarium Lake begins
- 1908 R.R. Thompson moves to Eureka Springs to teach at Crescent College
- 1912 Eureka Springs population 5,000¹
- 1920 Dr. Charles E. Davis retires from private practice
- 1923 R.R. Thompson acquires Sanitarium Lake and begins developing Lake Lucerne Resort
- 1937 Dr. Charles E. Davis dies at Cassopolis, Michigan
- 1966 Lake Lucerne Company sells resort property to Arkansas Resort Company
- 1971 R.R. Thompson dies at Eureka Springs, Arkansas

¹ *Polk's Arkansas State Gazetteer and Business Directory, 1912-1913* (Memphis: R.L. Polk & Co., 1912), 174.

Description

Marble Bridge is a single-span, coursed ashlar masonry arch bridge spanning a natural ravine on the Lake Lucerne entrance road, two miles south of Eureka Springs, Arkansas.² The bridge is approximately 200' long on the southwest side, 75' long on the northeast side, 25' high and 24' wide, with a 16' roadway. The semi-circular arch springs from grade level, rises 17' to the crown and spans 44'. The 1'-high parapets are stepped on the southwest corner of the bridge. There are 5" square openings to drain water along the length of the roadway. The stones average 16" to 24" long, 10"-12" wide and 6" thick.

History

Located at the crest of the Ozark Mountain Range, Eureka Springs—"The City of Healing Waters"—has fifty natural mineral springs within its borders. Long ago, Native Americans made pilgrimages to these sacred springs, but few white men visited until the mid-nineteenth century. In 1856, while on a hunting expedition, Dr. Alvah Jackson discovered the Great Basin Spring in the mountains west of Berryville, Arkansas. Convinced of the water's healing powers, Dr. Jackson began to make use of it in his medical practice. In May of 1879, Judge L.B. Saunders of Berryville brought his family to springs at the urging of Dr. Jackson. Within weeks of Mr. Saunders' reported healing, several hundred individuals were encamped at the spring.

One year later, when Chicago physician Dr. Charles E. Davis (1844-1938) came to the Ozarks seeking a cure for his ailing wife, Eureka Springs was booming:

Hotels, boarding houses and every available habitation are full to overflowing; tents are springing up in all directions. The business interests keep pace with other progress, and our business men are thoroughly imbued with the importance of our city and its magic waters, and subscribe largely and liberally to all efforts at public improvement. The multitudes who congregate at the springs or flood our streets are intelligent, cultured and well dressed. Churches are springing up all over the city. Educational interests are being attended to; literary societies, circulating libraries, etc., are supplying a demand for mental encouragement; comforts and conveniences for the care of the sick are increasing and bath houses multiplying.³

After witnessing his wife's health restored, Dr. Davis moved to Eureka Springs and became an active participant in the area's civic improvements.⁴ In 1890, Davis and several financial backers formed the Eureka Sanitarium Company, to establish a state-of-the-art health resort in the region. Believing that outdoor recreation was an essential component of good health, the Eureka

² There are two smaller stone arch bridges on the road, the larger of which is located one-quarter mile south of Marble Bridge.

³ "Future Outlook for Eureka Springs," *The Guide* [Eureka Springs, Arkansas], 1881.

⁴ "Is the Pioneer Resident Physician," *The Daily Times-Echo* [Eureka Springs, Arkansas], 1908, 42.

Sanitarium Company developed a 1,800-acre park on the shores of a spring-fed lake three miles south of Eureka Springs. Originally known as "Crystal Lake," in honor of Dr. Davis' daughter Crystal, the resort was later renamed "Sanitarium Lake," "Spring Lake," and finally, "Lake Lucerne."⁵

In 1891, the Sanitarium Company erected a stone masonry dam, built a boathouse and fleet of rowboats, blazed hiking and bridle trails and constructed a 5-mile entrance road (Lake Road), featuring several impressive stone arches to carry the road over natural ravines and depressions. Few records of the construction of Lake Road have been found, except a reference to marble being quarried from a nearby hillside in March of 1891 and a c.1891 photograph of the nearly completed Marble Bridge.⁶ Physical evidence suggests that the Lake Road bridges were professionally designed and built by experienced stone masons—perhaps some of the same individuals who designed and built the stone masonry structures in downtown Eureka Springs. In the spring of 1892, the Sanitarium Company advertised their new facilities:

*The Sanitarium Company of Eureka Springs are pleased to announce that they have their improvements perfected to such a degree as to afford visitors rare opportunities for enjoyment. They have 1,800 acres of park grounds, comprising most beautiful mountain scenery. ...There are about five miles of elegant graded and macadamized boulevards, some of them passing over massive arched stone bridges built of white cotton rock, with pink marble trimmings; crossing picturesque gulches and affording very easy grades for carriages to and from the beautiful lake, whose crystal waters, fed by more than twenty of the most celebrated springs in the Ozarks, sparkle in rippling wavelets under the overhanging cliffs of Tacoma Mountain...*⁷

Although the company's proposed electric railway never materialized, local hotels began offering excursions to the lake, which soon became a favorite destination for picnicking, boating and horseback riding. Dr. Davis opened his practice in early 1897, receiving patients—many from the Midwest—at the Sanitarium's medical clinic in downtown Eureka Springs.⁸ The Sanitarium offered massage, therapeutic baths, and magnetic and electrolysis treatments for all types of psychological and physical ailments.⁹

The Eureka Springs Sanitarium Company was active for nearly two decades. Following his wife's death in 1920, Dr. Davis retired from private practice and sold Sanitarium Lake to Crescent College President Richard R. Thompson (1878-1971), who developed a small resort—

⁵ The site is referred to as "Crystal Lake" in the April 1895 edition of *The Guide* [Eureka Springs, Arkansas]. Numerous early-twentieth century images bear hand-written references to "Sanitarium Lake."

⁶ John Casper Branner, *Annual Report of the Geological Survey of Arkansas for 1892*, Vol. IV (Little Rock: Brown Printing Company, 1893), 339; "Marble Bridge," Photo #11-1145, Bank of Eureka Springs Archive, Eureka Springs, Arkansas.

⁷ "The Sanitarium," *The Guide* [Eureka Springs, Arkansas], Spring 1892.

⁸ The 1904 Sanborn Fire Insurance Map of Eureka Springs indicates that the Eureka Sanitarium Company (by 1909, the Magnetic Spring Sanitarium) was located on Spring Garden Avenue.

⁹ *Carroll County Historical Quarterly*, Spring 1983, 5-6.

renamed Lake Lucerne—with construction of a lodge, cabins, dance pavilion and golf course.¹⁰ Lake Lucerne remained a popular recreation facility through the 1960s.

Design

The arch is an ancient structural form, probably a refinement of the even earlier practice of corbelling stones or timbers to span a void. The defining characteristic of an arch is its reliance on compression to transfer gravity loads to the supporting foundations. While arch bridges can be built of any material, an arch is the only efficient way to span long distances with stone. Since the stones in a masonry arch rely on each other for support, wooden falsework is used to support the arch until all the stones are fitted together. The structure becomes self-supporting when the final stone is wedged into place at the crown of the arch. Well-built stone arch bridges are extremely strong and durable. America's oldest stone arch bridge, Pennypack Creek Bridge (1697) at Philadelphia, still carries traffic more than three centuries after its construction.¹¹

Despite their strength and longevity, stone arch bridges were not commonly built in Arkansas. By the time the population had increased enough for counties to begin building bridges in earnest, it was generally easier and less expensive to erect pre-fabricated metal truss bridges. Nevertheless, some impressive stone arch bridges were built in Arkansas in the nineteenth and early twentieth centuries. Marble Bridge is one of six surviving examples of this type identified to date.¹²

¹⁰ Richard Ryan Thompson was born at Fulton, Kentucky in 1878. He taught school in Tennessee, Texas and Arkansas before arriving in Eureka Springs in 1908. Thompson served as President of Crescent College until 1924 and was subsequently owner of Ozarka Water Company and Lake Lucerne Resort.

¹¹ See HAER No. PA-465, Pennypack Creek Bridge.

¹² Since, by definition, a stone arch bridge relies on stone to carry loads, this list does not include stone-faced concrete bridges. Presumably, there are other stone arch bridges that have not yet been identified.

Bridge	Location	County	Date	Span	Builder	Status
SALADO ¹³	US 167 / SALADO CREEK	INDEPENDENCE	1870	43'	JOHN SCHNABEL	LOST
SPRING CREEK ¹⁴	SPRING CREEK ROAD / SPRING CREEK	WASHINGTON		<25'		LOST
HUNTSVILLE ROAD	GOFF FARM ROAD / UNNAMED CREEK	WASHINGTON		21'		EXTANT
SPRINGFIELD STREET	SPRINGFIELD STREET/	CARROLL		<25'		LOST
MARBLE 1 ¹⁵	CR 707 / RAVINE	CARROLL	1891	44'	SANITARIUM CO.	EXTANT
MARBLE 2	CR 707 / DITCH	CARROLL	1891	22'	SANITARIUM CO.	EXTANT
MARBLE 3	CR 707 / DITCH	CARROLL	1891	<10'	SANITARIUM CO.	EXTANT
MAIN STREET	SELLARS ST / SILVER SMITH BRANCH	LOGAN	1923	<10'	AARON MOORE	EXTANT
CEDAR CREEK ¹⁶	CR 5 / CEDAR CREEK	CONWAY	1935	32'	CCC	EXTANT

¹³ Anthony Leone, "Salado Bridge," *Arkansas Gazette (Sunday Magazine)*, 16 June 1957, 1F.

¹⁴ Carroll County Historical Society Photograph Collection, Berryville, Arkansas.

¹⁵ See HAER No. AR-103, Marble Bridge.

¹⁶ See HAER No. AR-31, Cedar Creek Bridge.

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Jet Lowe, photographer, April 2008

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