

Allegheny Portage Railroad

National Park Service
U.S. Department of the Interior

Allegheny Portage Railroad
National Historic Site



Skew Arch Bridge



Location

This original structure is near the Lemon House and Engine House 6 Exhibit Shelter for the Allegheny Portage Railroad National Historic Site. You may walk down a trail or the mowed incline to access the Bridge. For visitors driving, it is located between the lanes of “old” Route 22 approximately one mile from the Summit Exit of “new” US Route 22. There are two parking spots on the traffic island in the middle of old US Route 22.

Specifications

The skew arch is 60 feet 5 inches long on the south elevation, 54 feet 11 inches long on the north elevation, and 22 feet 2 inches high. Broken stone and stone sleepers taken from a section of the railroad were perched, fitted, and laid diagonally by hand without mortar.

The top of the bridge was not tilted but the arch’s imposts were offset and constructed directly across from each other. Rectangular stones were cut into an L shape and were placed to reinforce the external corners of the pilasters and walls. No historic specifications or drawings have been found.

History

The Allegheny Portage Railroad was constructed as a part of the Pennsylvania Mainline Canal System. It consisted of a series of 10 inclined planes and connecting levels that were used to transport railroad cars and canal boats over the Allegheny Mountains between Hollidaysburg and Johnstown - a distance of 36.65 miles. The railroad was considered a major engineering accomplishment in its time and included the first railroad tunnel constructed in the United States.

On July 15, 1832, J. Fenlon, A. and J. Darlin, and R. Kininmouth won the contract to build “A Stone Bridge which will be require for the passage of the Turnpike road over the Rail Way on Section No. 36 of the Portage.” The bridge was to be built according to specifications attached to and considered part of the contract.

The bridge design was changed in 1833 to accommodate a bend in the Huntington, Cambria and Indiana Turnpike road, hence the skewed arch. The construction journal duly noted on May 21, 1833, the expense of “Taking up & relaying masonry in consequence of alteration in place.”

The Skew Arch Bridge was the only road bridge purposely built along the portage. Today the bridge is in fair condition. In 1979 the bridge was stabilized and repaired. Nearly the bridge’s entire exterior has been repointed. Limited sealing was done and some of the facade was mortared.

For Further Reading

[The Allegheny Old Portage Railroad 1834-1854: Building Operation and travel between Hollidaysburg and Johnstown Pennsylvania](#)
By: Mahlon J. Baumgardner and Floyd G. Hoenstine

[Introduction to Early American Masonry: Stone, Brick, Mortar, and Plaster](#)
By: Harley J. McKee