

Birmingham Bridge
Local road spanning the Little Juniata River
South of PA 453
Tyrone Vicinity
Blair County
Pennsylvania

HAER No. PA-236

HAER
PA
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1-

PHOTOGRAPHS

WRITTEN HISTORIC AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

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Jet Lowe, Photographer, March 1988

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HISTORIC AMERICAN ENGINEERING RECORD

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BIRMINGHAM BRIDGE

HAER No. PA-236

Location: Local road spanning the Little Juniata River, South of PA 453, Tyrone Vicinity, Blair County, Pennsylvania

USGS Quad: Tyrone, Pennsylvania (1:24000)
UTM: 17 E.736800 N.4503360

Date of Construction: 1898

Builder: Penn Bridge Company, fabricator
M.H. Stebbins, contractor
J.A. Patterson, civil engineer

Present Owner: Blair and Huntingdon Counties

Present Use: Vehicular bridge

Significance: This single span pin-connected Pratt through-tress is unique for a Pratt truss in that the portals contain hip verticals that carry compressive stresses (hip verticals for the standard Pratt truss type carry tensile stresses only).

Project Information: In February 1987, the Historic American Engineering Record (HAER) and the Historic American Buildings Survey (HABS) began a multi-year historical and architectural documentation project in southwestern Pennsylvania. Carried out in conjunction with America's Industrial Heritage Project (AIHP), HAER undertook a comprehensive inventory of Blair and Cambria counties as the first step in identifying the region's surviving historic engineering works and industrial resources.

The results of this project have been published in Blair County and Cambria County, Pennsylvania: An Inventory of Historic Engineering and Industrial Sites (1990), edited by Gray Fitzsimons and produced by HABS/HAER for the National Park Service. Information has also been published in Huntingdon County, Pennsylvania: An Inventory of Historic Engineering and Industrial Sites, (1991), by Nancy Shedd, Sarah Heald, editor and published by HABS/HAER for the National Park Service.

Compiler: Nancy Shedd and Ken Heineman, Historians
Gray Fitzsimons and Kenneth Rose, Editors

History:

Structure Type(s): Through Pratt Truss
Length: 140'; Number of Spans: 1; Length of Main Span: 140'; Width: 15'
Material: Ashlar sandstone; Condition: Good

This single span pin-connected Pratt through-truss was erected across the Little Juniata River, just north of Birmingham, in 1898. According to an inscription in the east abutment, the bridge was built by M.H. Stebbins, contractor, C.H. Reimard, inspector, and J.A. Patterson, civil engineer. Measuring approximately 140' in length, the bridge rests on sandstone abutments and consists of compression members of steel channel sections and riveted lacing bars; and tension members of forged steel eyebars. The portals of this bridge are somewhat unique for a Pratt truss in that they contain hip verticals that carry compressive stresses (hip verticals for the standard Pratt truss type carry tensile stresses only). In addition, a diagonal compression member extends from the junction of the lower chord and hip vertical to the main portal member. The portals feature decorative panels containing clover-leaf cutouts in the web section of the lateral bracing. Steel I-beam floor-beams and stringers support the wooden deck. Presently in good condition, the bridge serves a single residence on the south side of the Little Juniata.

Sources:

Date of construction and names of engineer and builder are inscribed in stone abutment.

DESCRIPTION: Spanning the Little Juniata River near Birmingham, this single-span 137' Pratt through-truss steel bridge has a 14.7'-wide deck of 3"-thick plank on steel stringers and beams. The bridge has cut-stone abutments and a metal crest with a design of six cut-out quatrefoils on the top chord at both ends of the bridge.

HISTORY: This Pratt through-truss steel bridge abuts Route 453, immediately north of the entrance to the town of Birmingham. The bridge was erected in 1898 by the Penn Bridge Company of Beaver Falls, Pennsylvania, to replace a wooden bridge constructed in 1852. As built, it included a pedestrian sidewalk on the downstream side, which was later removed.

The Birmingham Bridge joins Blair and Huntingdon counties, with Blair County assuming actual responsibility for maintenance and the two counties sharing the cost equally. The bridge was sandblasted and painted in 1978. A 1987 inspection found the structure in good condition, recommending renailing of the deck and eventual addition of more nailers.

This bridge is the only means of access to two dwellings on the Blair County side of the river. It receives little traffic; thus its 5-ton weight limit is not a limitation; because of limited demand, it is unlikely to be replaced.

Sources:

Gwin, Dobson & Foreman, Inc. Supplementary Inventory Report, Blair County Bridge No. 48, March 1987. PennDot District 9 Office, Hollidaysburg.
Huntingdon County Bridge File No. 15, Huntingdon County Bridge Office. Huntingdon County Courthouse.
Shedd, Nancy S., and Harshbarger, Jean P. Second Century 1887-1987: A Huntingdon County Bicentennial Album. Huntingdon: Huntingdon County Historical Society, 1987.