

10. NAME(S) OF STRUCTURE
State Bridge Number 179A

11. PHOTOS (W/ FILM ROLL & FRAME NO.) AND SKETCH MAP OF LOCATION
38A:8-14



38A:12

Mack, Warren W. "A History of Motor Highways in Delaware", in Reed, Henry Clay, Delaware: A History of the First State, vol.2, pp.535-550 (NY: Lewis Historical Publishing Co., 1947).

Delaware State Program. Delaware State Highways; The Story of Roads in Delaware.... [Newark, Delaware: Press of Kells, 1919].

Federal Writers' Project. Delaware: A Guide to the First State. (New York: Viking Press, 1938).

Spero, Paula A. C. Metal Truss Bridges in Virginia. ((Charlottesville, Virginia: Virginia Highway & Transportation Research Council, 1978-1981).

Delaware State Archives. New Castle County Levy Court Records. Specifications, Proposals, Contract and Bond files.

Delaware State Archives. New Castle County Road Commissioners Records, 1750-1940.

Delaware DOT records: Annual Reports; contract files.

Plans on file at Delaware DOT: Contract # BNC-52, 704-040-01

12. SOURCES

13. INVENTORIED BY:

AFFILIATION

DATE

P.A.C. Spero & Company with Kidde Consultants for Delaware DOT

April-November 1988

HABS/HAER INVENTORY

See "HABS/HAER Inventory Guidelines" before filling out this card.

1. NAME(S) OF STRUCTURE

State Bridge Number 179A

2. LOCATION

Ashland Cut-off over Mill Creek
Hockessin, New Castle County, Delaware

3. DATE(S) OF CONSTRUCTION

4. USE (ORIGINAL/CURRENT)

Vehicular

5. RATING

MT

6. CONDITION

Fair.

State Highway Bridge 179A is a 20-0" Warren pony truss with riveted and welded connections, divided into two panels. The top and bottom chords are made of double 3" angles; posts are 2½" angles, and diagonals are double 2½" angles. A transverse floor beam (8" I section) is located at the intermediate panel point; eight longitudinal girders support the steel grating deck, which measures 12'-10" curb-to-curb and carries one lane of traffic. The superstructure is supported on semi-coursed rubble stone abutments; there is only one wing wall, on the southeast elevation, of uncoursed rubble masonry and flared configuration.

Delaware Department of Transportation records for Bridge 179A do not document the date of construction. It is very similar to Bridge 66, carrying Breck's Lane over tributary of the Brandywine Creek in Wilmington. Minor repairs amounting to \$340.00 were performed in 1926. Plans for a 1928 repair drawn by the New Castle County Engineer's Office are on file at the Delaware Department of Transportation. These plans call for the reconstruction of one rubble masonry abutment and the underpinning of the other.

State Bridge 179A is significant as one of six intact historic metal truss highway bridges in Delaware. Although few metal truss bridges remain in Delaware, Delaware Department of Transportation photographic archives from the 1920s illustrate approximately ninety metal truss bridges in New Castle County. Structurally similar to Bridges 66 and 424, produced by the prominent Edge Moor Iron Company of Edge Moor, Delaware, Bridge 179A may be a product of that manufacturer as well. In its Warren pony truss configuration employing standardized members, Bridge 179A is typical of the small spans erected along local roadways in rural areas throughout the country in response to increasing traffic in the late nineteenth and early twentieth century. The metal truss bridge type offered several advantages in this application. It was adaptable to a wide variety of site conditions, its structural behavior was scientifically understood, and its prefabricated components made it easy and economical to manufacture, ship, and erect. Structures like Bridge 179A played a vital role in the economic development of rural areas during the last quarter of the nineteenth century and well into the twentieth century, as local transportation networks underwent the initial phases of development. The Warren truss was patented in 1848 by two British engineers, James Warren and Willoughby Monzoni. The original form of a Warren truss was a series of equilateral triangles and as such represents one of the earliest truss types. Later modifications included subdivision by verticals or addition of alternate diagonals.

7. DESCRIPTION

8. HISTORICAL DATA

9. SIGNIFICANCE