10. NAME(S) OF STRUCTURE

State Bridge Number 66

11. PHOTOS (W/ FILM ROLL & FRAME NO.) AND SKETCH MAP OF LOCATION

46B:18-26

46B:19A

12. SOURCES

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).

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

Scharf, J. Thomas. History of Delaware 1607-1888. (Port Washington, New York: Kennikat Press, 1972).

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

Hagley Library. Edge Moor Iron Company Records.

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: Structures Division files.

Plans on file at Delaware DOT: (None)

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 66

2. LOCATION
Brecks Lane over Brandywine Creek Tributary
Wilmington, New Castle County, Delaware

3. DATE(S) OF CONSTRUCTION

4. USE (ORIGINAL/CURRENT)
Vehicular

5. RATING
MT

6. CONDITION
Deteriorated: North truss has diagonal and post that are rusted through. Floor beams are rusted through (section loss); some of truss members are bent.

7. DESCRIPTION

State Highway Bridge 66 is a 21'-0" riveted Warren pony truss, divided into two panels. The top and bottom chords are made of double 4"x4" angles; posts are 3"x4" angles, and diagonals are double 3"x3" angles. A transverse floor beam encased in concrete and measuring 8½"x16" is located at the intermediate panel point; the longitudinal girders are encased within the concrete deck. The bridge carries two lanes of traffic, and measures 20'-8" wide. It is supported on random rubble stone abutments with U-shaped stone wing walls.

8. HISTORICAL DATA

Delaware Department of Transportation records for Bridge 66 do not document the date of construction. Located near Breck's Mill, Bridge 66 is very similar to Bridge 179A, carrying the Ashland Cut-off over Mill Creek. It was built by the Edge Moor Bridge Works of Wilmington, Delaware. Later alterations to this Warren pony truss bridge include the replacement of the original timber deck with a concrete slab and the encasement of the floor beam and I-beam stringers in concrete. The Edge Moor Bridge Works built several of these pony trusses in New Castle County between 1880 and 1900. Another surviving example of their work is the Wiggins Mill Pond Bridge, Bridge 424. Located on the banks of the Delaware River just north of Wilmington, the Edge Moor Iron Company was incorporated in 1869 as an iron rolling mill for the manufacture of iron for general purposes. Under the direction of president William Sellers, the company evolved into a manufacturer of structural iron and steel for bridges, viaducts and roof work. In 1873, the Edge Moor Bridge Works was established for the fabrication of bridges. In 1879, the company diversified by including boilers as one of their products. The Edge Moor Bridge Works was operational until 1900 when it was acquired by the American Bridge Company of New Jersey. Edge Moor was one of twenty-four bridge companies purchased by J. P. Morgan's American Bridge Company in 1900. At that time, American Bridge purchased the 14 acre parcel from the Edge Moor Bridge Works and assumed control of the bridge manufacturing operations while the Edge Moor Iron Company concentrated on the production of Galloway Boilers. American Bridge operated the bridge division at Edge Moor for a time, but then consolidated its holdings at its Ambridge, Pennsylvania location. The Edge Moor Iron Works continued as a manufacturer of boilers and tanks until its liquidation in 1933. The Bridge Works fabricated bridges for locations throughout the East, such as over the East River in New York City, the Susquehanna River near Harrisburg, Pennsylvania and the Pennsylvania Railroad Bridge over Schuylkill River in Philadelphia.

9. SIGNIFICANCE

Despite the fact that Bridge 66 appears to be in deteriorated condition, it is significant as one of six remaining historic metal truss highway bridges in Delaware, and for its association with the prominent Edge Moor Bridge Works. 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. In its Warren pony truss configuration employing standardized members, Bridge 66 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 66 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.