Form No. 10-300 (Rev. 10-74) PHØ367621

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

DATA SHEET

FOR NPS USE ONLY
RECEIVED NOV 23 1976
DATE ENTERED SEP 22 1977

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC
Glen Gardner Pony Pratt Truss Bridge
AND/OR COMMON

2 LOCATION

STREET & NUMBER
Mill Street over Spruce Run — NOT FOR PUBLICATION

CITY, TOWN — CONGRESSIONAL DISTRICT
Glen Gardner — VICINITY OF — 14th

STATE — CODE — COUNTY — CODE
New Jersey — 34 — Hunterdon — 019

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	X OCCUPIED in use	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	__UNOCCUPIED	__COMMERCIAL	__PARK
X STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	PUBLIC ACQUISITION	ACCESSIBLE	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	X YES: UNRESTRICTED	__INDUSTRIAL	X TRANSPORTATION
		__NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME
Hunterdon County
STREET & NUMBER
County Courthouse
CITY, TOWN — STATE
Flemington — VICINITY OF — New Jersey

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Hunterdon County Courthouse
STREET & NUMBER
Main Street
CITY, TOWN — STATE
Flemington — New Jersey

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
New Jersey Historic Sites Inventory (#1230.1)
DATE
1974 — __FEDERAL X STATE __COUNTY __LOCAL
DEPOSITORY FOR SURVEY RECORDS
Historic Sites Section, Dept. of Environmental Protection
CITY, TOWN — STATE
Trenton — New Jersey

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
X EXCELLENT	__DETERIORATED	__UNALTERED	X ORIGINAL SITE
__GOOD	__RUINS	X ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Built in 1870 by William Cowin of Lambertville, New Jersey the Glen Gardner Pony Pratt truss bridge spans the Spruce Run stream as part of Mill Street.

The end posts of this bridge are square vertical iron posts topped with a broader flat cap. The vertical posts have the date of erection on their faces. The top chord, projecting from the vertical posts is a hollow octagonal iron tube, approximately eighty feet long. The intermediate posts which divide this single truss up into eight panels are two flat-iron posts connected at spaced intervals tapering slightly towards the peak with a box-like cap at the top which joins the top chord with the intermediate posts and encases the diagonals. The diagonal bars project from the top of one post to the bottom of that of the next panel. The diagonals are all connected by bolted pins at the bases of the intermediate posts.

Beneath each pin connection the sub-structure supports are provided by steel floor I beams which cross the width of the bridge. Above these beams are additional I beams which cross the length of the bridge. While these structural supports beneath the roadbed are probably original the bed itself is modern asphalt.

A wooden guard-rail protects the span from serious damage by automobile to its structural elements. Although this wooden railing was added om 1949 it certainly conforms closely to the original.

This two lane bridge also has a wooden pedestrian walkway which has a decorative cast-iron waist high railing.

The foundation of the bridge is stone.

Save for the modern roadbed and the guard-rail (added in 1949) this bridge is in nearly pristine condition

A map is attached.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
__PREHISTORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	__LANDSCAPE ARCHITECTURE	__RELIGION
__1400-1499	__ARCHEOLOGY-HISTORIC	__CONSERVATION	__LAW	__SCIENCE
__1500-1599	__AGRICULTURE	__ECONOMICS	__LITERATURE	__SCULPTURE
__1600-1699	__ARCHITECTURE	__EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN
__1700-1799	__ART	X ENGINEERING	__MUSIC	__THEATER
X 1800-1899	__COMMERCE	__EXPLORATION/SETTLEMENT	__PHILOSOPHY	X TRANSPORTATION
__1900-	__COMMUNICATIONS	X INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)
		__INVENTION		

SPECIFIC DATES 1870 BUILDER/ARCHITECT William Cowin

STATEMENT OF SIGNIFICANCE

The Glenn Gardner Pratt Bridge is one of the few known early examples of the Pratt truss bridge in the United States and one of three in New Jersey.

Transportation/Engineering

As the United States increased its industrial might in the 19th Century transportation throughout the nation developed correspondingly and as the means and methods of travel became more and more sophisticated increased demands for better highways encouraged engineers to develop improved roadbeds, canals, railways, and bridges.

Increasingly heavy modes of travel, especially in the railways, forced engineers to consider increased weight capacity of bridges.

At first the pragmatic American, often scornful of abstract theory, was reluctant to adopt technological innovations. Massive weight and resultant structural collapses, however, compelled Americans to master the scientific and mathematical tools necessary for safe bridge design. With engineering and metallurgy lagging behind construction requirements in the United States collapsing bridges prior to 1870 were not an uncommon phenomenom in the country.

The Pratt truss, originally introduced as a wooden bridge, later using combination wood and iron, and finally completely constructed of iron members, was America's first scientifically designed truss bridge.

(Iron has a number of advantages over wooden-being strong, durable, fire-resistant, and resiliant.)

Accepted reluctantly by Railroad engineers when first presented in the mid-19th century the iron Pratt truss gradually gained national favor by 1870, becoming a common feature on the Pennsylvania Railroad and numbers of their affiliates.

(con't)

9 MAJOR BIBLIOGRAPHICAL REFERENCES

See attached

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY not applicable

UTM REFERENCES

	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
A	18	510420	4510350	B			
C				D			

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

Terry Karschner, Historic-Curator

ORGANIZATION — DATE

Historic Sites Section, Dept. of Environmental Protection — 12/16/75

STREET & NUMBER — TELEPHONE

P.O. Box 1420 — (609) 292-2023

CITY OR TOWN — STATE

Trenton — New Jersey

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL X STATE ____ LOCAL ____

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

TITLE — DATE

Commissioner, Dept. of Environmental Protection — AUG - 5 1976

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION — DATE 9-22-77

ATTEST: Charles Cole — KEEPER OF THE NATIONAL REGISTER — DATE 9.22.77

KEEPER OF THE NATIONAL REGISTER

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Glen Gardner Pony Pratt Truss Bridge
Glen Gardner
Hunterdon County
New Jersey 034

Significance (Con't)

Later, in modified and perfected forms the Pratt bridge became the standard all-steel truss bridge for American highways and railroads.

While the primary adoption of the iron truss was generated by the rapid development, of railroads the enormous weights of the trains eventually led to their replacement. Vehicular truss bridges, however, were not subject to the enormous stresses which railroad bridges were exposed (particularly a secondly level) and consequently survived more frequently.

Still, for an early Pratt tress bridge to exist today is rare.

The Glenn Gardner bridge reads, at various places on the members:
-Built by Wm. Cowin, Lambertville, New Jersey
-Committee W. K. Mellick, G. Gulick, D. Chaimberlin
-1870 "

Industry

Little is known of William Cowin, builder of three extant Platt-type iron truss bridges in Hunterdon County.

Born in England in 1825 to William and Sarah Cowen the family apparently came to the United States between 1830 and 1840, but did not settle in New Jersey until a few years later.

William Cowin, Sr., was a molder in a foundry in Lambertville in 1850 while William Jr. was listed as being a pattern maker.

By 1860, however, William Cowin had changed his name slightly and became owner of a foundry and machine shop in Lambertville. Making primarily coal railroad car Cowin's business, which employed some forty men, also made and erected five iron bridges in 1860.

(Con't)

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Glen Gardner Pony Pratt Truss Bridge
Glen Gardner
Hunterdon County New Jersey 034

Industry (Con't)

The 1870 Census also records William Cowin as being the owner of an Iron Foundry in Lambertville, now employing 80 men. Unfortunately, while the records note that the foundry made car wheels and other castings, no mention is made of his bridge building activities, although it is known that he erected at least one iron bridge (Glen Gardner) in 1870.

Cowin became involved in at least two other industrial interprises, the Lambertville Paper Manufacturing Co. (est. 1870) and the Amwell Mills Co. (cotton-mill est 1866), but by 1880 he disappeared from the Lambertville scene.

Today, only the bridges remain as an artifact providing a glimpse into Cowin's bridge erecting enterprise.

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Glen Gardner Pony Pratt Truss Bridge
Glen Gardner
Hunterdon County
New Jersey 034

Bibliographical

Plowden, David, Bridges: The Spans of North America
New York: 1974 (pp 65, 84, 85)
Condit, Carl W., American Building Art: The 19th Century
New York: 1960 (Chapter IV)
Snell, James P., History of Hunterdon and Somerset Counties
New York: 1881 (p. 283)
7th United States Census (1850) New Jersey, Hunterdon County
Schedule #1; Population
8th United States Census (1860) New Jersey, Hunterdon County.
Schedules #1 and 5 (Population and Products of Industry).
9th United States Census (1870). New Jersey, Hunterdon County.
Schedule #4; Products of Industry.

data also derived from inscriptions on bridge itself.

Form No. 10-300a
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
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DATE ENTERED SEP 22 1977

GLEN GARDNER PONY PRATT TRUSS BRIDGE , NEW JERSEY

CONTINUATION SHEET ITEM NUMBER PAGE

The Glen Gardner Pony Pratt Truss Bridge is recorded in the County Engineers' office as having a span of 76 feet and a roadway of 15 feet 4 inches.

A physical measurement of the bridge from end post to end post derives a 81 feet 2 inches span and a width of 19 feet 10 inches. The latter measurements of the span would seem to be more reasonable as there are eight ten foot panels. The discrepency in widths can be accounted for - the field measurements were from the end posts and the roadbed estimates only clearance for automobiles.