

PH0699721

FOR NPS USE ONLY
RECEIVED FEB 14 1979
JUN 6 1979
DATE ENTERED

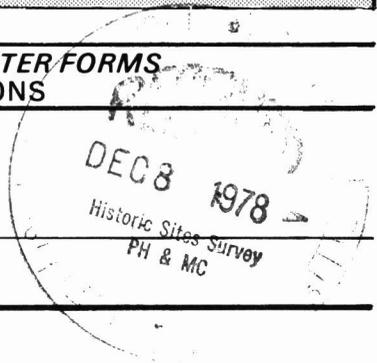
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM

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

1 NAME

HISTORIC
Pennsylvania Railroad Bridge at Trenton over Delaware River
AND/OR COMMON



2 LOCATION

Span Delaware River

STREET & NUMBER
CITY, TOWN Trenton
Morrisville
STATE New Jersey
Pennsylvania
VICINITY OF
CODE 34
42
COUNTY Mercer
Bucks
CODE 021
017
CONGRESSIONAL DISTRICT 4th
NOT FOR PUBLICATION

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK
<input checked="" type="checkbox"/> STRUCTURE	<input checked="" type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL <input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL <input checked="" type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER:

4 OWNER OF PROPERTY

NAME Mr. W. P. Houwen, National Railroad Passenger Corporation ✓
STREET & NUMBER 1617 J. F. Kennedy Boulevard
CITY, TOWN Philadelphia
VICINITY OF
STATE Pennsylvania 19103

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC. Mercer County Courthouse
STREET & NUMBER

CITY, TOWN Trenton
STATE New Jersey

6 REPRESENTATION IN EXISTING SURVEYS

TITLE Historic American Engineering Record Inventory

DATE 1977
 FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR SURVEY RECORDS Office of Archeology and Historic Preservation

CITY, TOWN Washington
STATE D.C.

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input checked="" type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input checked="" type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Completed in 1903 the Trenton Pennsylvania Railroad bridge over the Delaware River is constructed of rock-faced massive Clearfield stone. The bridge is 1080 feet in length and has 18 spans, each with a 60 foot arch with a rise of 12 feet. The bridge is askew at an angle of 71 degrees, ^{30 minutes.} The construction is characteristic of Pennsylvania Railroad Engineering at the turn of the century.

The piers are stone masonry with blocks of stone 24 inches in thickness and the rings of the arches are 39 inches in height. Each ring consists of 38 stones, 21 1/2 inches in thickness at the outer line and twenty inches at the inner, making a total length of 71 feet 4 1/2 inches for the extrados and 66 feet 2 inches for the intrados. The width from out to out coping is 55 feet accomodating four tracks.

Each arch is made up of 12 rings, or ribs, which are fastened to each other with wrought-iron clamps at the keystone and at each of three voussoirs on each side of the keystone. The base of rail is about 42 feet above mean low water level and the spring of the arch about 22 feet above the same line (1903). There is a conduit for telegraph lines.

Work began on the bridge in October, 1901 with excavation for the west abutment. The first stone was not laid until a month later because of constant flooding which delayed preparation of derricks, engines, and working plant.

The foundation caused unexpected trouble owing to the depth to which it was necessary to go. The earlier bridge 1500 feet to the north needed only shallow excavations before finding bedrock, but as this structure approached the New Jersey shore it was necessary to go to great depths. Even so, compromises were made as about half of pier 14 is upon solid rock while the other half is upon a bed of concrete 10 feet in depth. Piers 16 and 17 and the east abutment are also built on beds of concrete.

The cements used were Grant, Atlas, Alpha, and Valcanite Portland.

Yardage of stonework in the bridge is approximately 45,000 cubic yards.

Chief Engineer - William H. Brown
Assistant Engineers - W. A. Pratt
James F. Cullen

Contractors - Chas A. Sims & Company, Philadelphia
James F. Brogan, Supt.

Still in operation for both freight and commuter service, the bridge has had virtually no structural changes since its construction.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES

1903

BUILDER/ARCHITECT

William H. Brown, Chief Engineer

STATEMENT OF SIGNIFICANCE

Engineering/Transportation

The railroad bridge across the Delaware River at Trenton, New Jersey is an excellent example of the monumental stone arch bridges erected by the Pennsylvania Railroad Company at the turn of the century as a result of their coordinated bridge improvement program.

In the last quarter of the 19th century railroad bridge failures increased significantly. Probably the result of the heavier train engines being developed railroad companies grew suspicious of metal bridge construction.

Consequently, these companies began seeking a more dependable bridge building material. From the aspect of design and engineering the result was conventional - the use of an ancient form, the semicircular stone arch - but it reflected the enormous wealth and monumentality of the empires which built them.

The Pennsylvania Railroad probably undertook the most ambitious stone masonry bridge building program in the United States. Starting in 1887 with the Johnstown, Pennsylvania bridge, which by withstanding the ravages of the disastrous flood two years later and thereby convincing advocates and skeptics alike of the strength of stone arch bridges, the Railroad constructed stone bridges for two decades.

By the time the improvement program was completed, the line had erected some of the longest stone bridges ever built.

Built by the Pennsylvania Railroad and designed by William H. Brown, the longest stone arch rail bridge in the world is the Rockville Bridge (1901) across the Susquehanna, just north of Harrisburg, Pennsylvania. Certainly of lesser scale, the Trenton bridge, also designed by Brown, is the only operating stone arch railway bridge across the Delaware River in New Jersey. It is, further, the second longest stone railroad bridge in the state (New Brunswick Viaduct is the longest with 21 spans.)

Costing some \$3 1/2 million to construct in 1903 (bridge - \$1 million, approaches - \$2 1/2 million) this stone arch bridge "said to be the only one in the world, with the exception of the one at New Brunswick, where four tracks run parallel "eliminated two bad curves and cut off some twenty minutes of travel time to Philadelphia when completed" (New York Times, August 23, 1903).

9 MAJOR BIBLIOGRAPHICAL REFERENCES

New York Times. August 23, 1903.
(p.11) col. 3

Engineering News. January 30, 1902. p. 86

Railway Age. March 20, 1903.

Alexander, Edwin. The Pennsylvania Railroad: A Pictorial History. W.W. Norton & Co., Inc. New York: 1947. (pp 49-50, photos 58-61).

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY _____

UTM REFERENCES

A

1	8
5	1
9	6
4	0

4	4
5	0
5	00

B

1	8
5	1
9	9
0	0

4	4
5	0
7	4
0	

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, Historian-Curator

ORGANIZATION

Office of Historic Preservation, Dept. of Environmental Protection April, 1977

STREET & NUMBER

109 West State Street

TELEPHONE

(609) 292-2028

CITY OR TOWN

Trenton, New Jersey

STATE

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

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.

Deputy STATE HISTORIC PRESERVATION OFFICER SIGNATURE

[Signature]

11-27-78

TITLE

Deputy Commissioner, N.J. Dept. Environmental Protection

DATE

FOR NPS USE ONLY	Director, Office of Historic Preservation, Pennsylvania
I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER	
<i>[Signature]</i>	DATE Ed Weitraub
DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION	DATE 4-6-79
ATTEST: <i>[Signature]</i>	DATE
KEEPER OF THE NATIONAL REGISTER	

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FOR NPS USE ONLY
RECEIVED FEB 14 1979
DATE ENTERED JUN 6 1979

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM**

Pennsylvania Railroad Bridge over Delaware River at Trenton
Trenton Morrisville
Mercer County Bucks County
New Jersey 031 Pennsylvania 042

CONTINUATION SHEET #1 ITEM NUMBER #9 PAGE

Schotter, H. W. The Growth and Development of the Pennsylvania Railroad Company. 1927. (pp. 97-98, 299).
Alexander, Edwin P. On the Main Line: The Pennsylvania Railroad in the 19th Century. Bramhall House, New York: 1971.
Wm. H. Shank, Historic Bridges of Pennsylvania. York: Pennsylvania, 1974 (p. 50).
Plowden, David, Bridges: Spans of North America, New York, 1974 (p. 31)

FOR HCRS USE ONLY
RECEIVED MAY 23 1979
DATE ENTERED

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

Pennsylvania Railroad Bridge
Trenton, Mercer County, New Jersey
Morrisville, Bucks County, Pennsylvania

CONTINUATION SHEET

ITEM NUMBER

PAGE

Addenda.

The boundaries of the Pennsylvania Railroad Bridge are delineated to include, in addition to the arches over the Delaware River, the arches and abutment walls on Mill Street on the Pennsylvania side and Route 29 North and South on the New Jersey side.

Beginning at a point along the curb of Mill Street (Pennsylvania), 30 feet north of the wall of the bridge proceed 20 feet west parallel to the bridge. Thence, proceed south 120 feet parallel to Mill Street. Thence, proceed east parallel to the bridges to the New Jersey bank. Thence, proceed past the arch over Route 29 South and the arch over Route 29 North to a point 20 feet east of the east curb of Route 29 North. Thence, proceed North 120 feet (parallel to this curb). Thence, proceed west parallel to the bridge to the point of beginning.

T. Karschner
5/1979

THE NATIONAL REGISTER OF HISTORIC PLACES

DATE REC'D **MAY 29 1979**

_____ INDIVIDUAL RESPONSE (ATTACHED)

_____ INFORMATIVE MATERIAL SENT

_____ TELEPHONE CALL (ATTACHED)

DATE ACTION TAKEN _____

INITIALS _____

MORRISVILLE
BUCKS COUNTY
PENNA.

MILL ST.

PENNSYLVANIA RAILROAD BRIDGE
MORRISVILLE, PA.
TRENTON, NJ

DELAWARE RIVER

T. Karschner
5/1979

ROUTE 29 South

ROUTE 29 North

TRENTON
MERCER COUNTY
NJ

RECEIVED
MAY 28 1979
FREDERICK
MAYOR

Property Pennsylvania Railroad Bridge

State N.J.

Working Number 2.14.79.318

Ref # 79001502

TECHNICAL

Photos 2
Maps 1

CONTROL

OK 2.15.79

Called SHPO for UBD - HOLD 4/19/79 J.F.T.

HISTORIAN

ACCEPT.
6-5-79

Additional information received. Although local historical context not developed, bridge is clearly significant as part of major maintenance, improvement, & construction program undertaken by the RR company to serve markets in 2 states.

ARCHITECTURAL HISTORIAN

ARCHEOLOGIST

OTHER

HAER

"Only stone arch railroad bridge across the Delaware River in New Jersey" It retains its structural integrity with virtually no alteration. Regionally significant in context of engineering and transportation. Man, was it expensive!! (3.5 million bucks)

Inventory
Review 4/10/79

REVIEW UNIT CHIEF

On basis of above review

Accept
L. Beebe
6/6/79

BRANCH CHIEF

KEEPER

National Register Write-up

7-3-79

Send-back

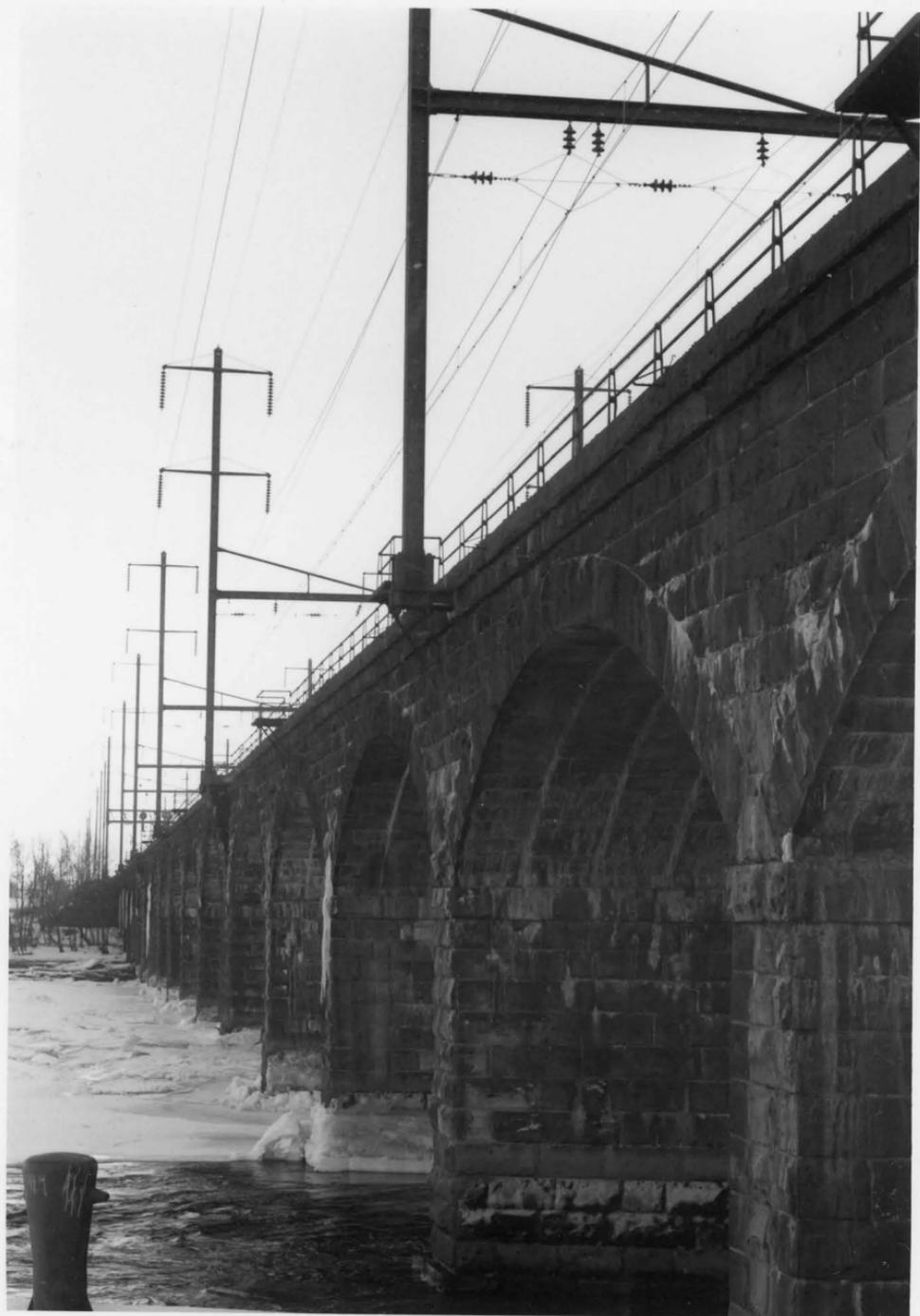
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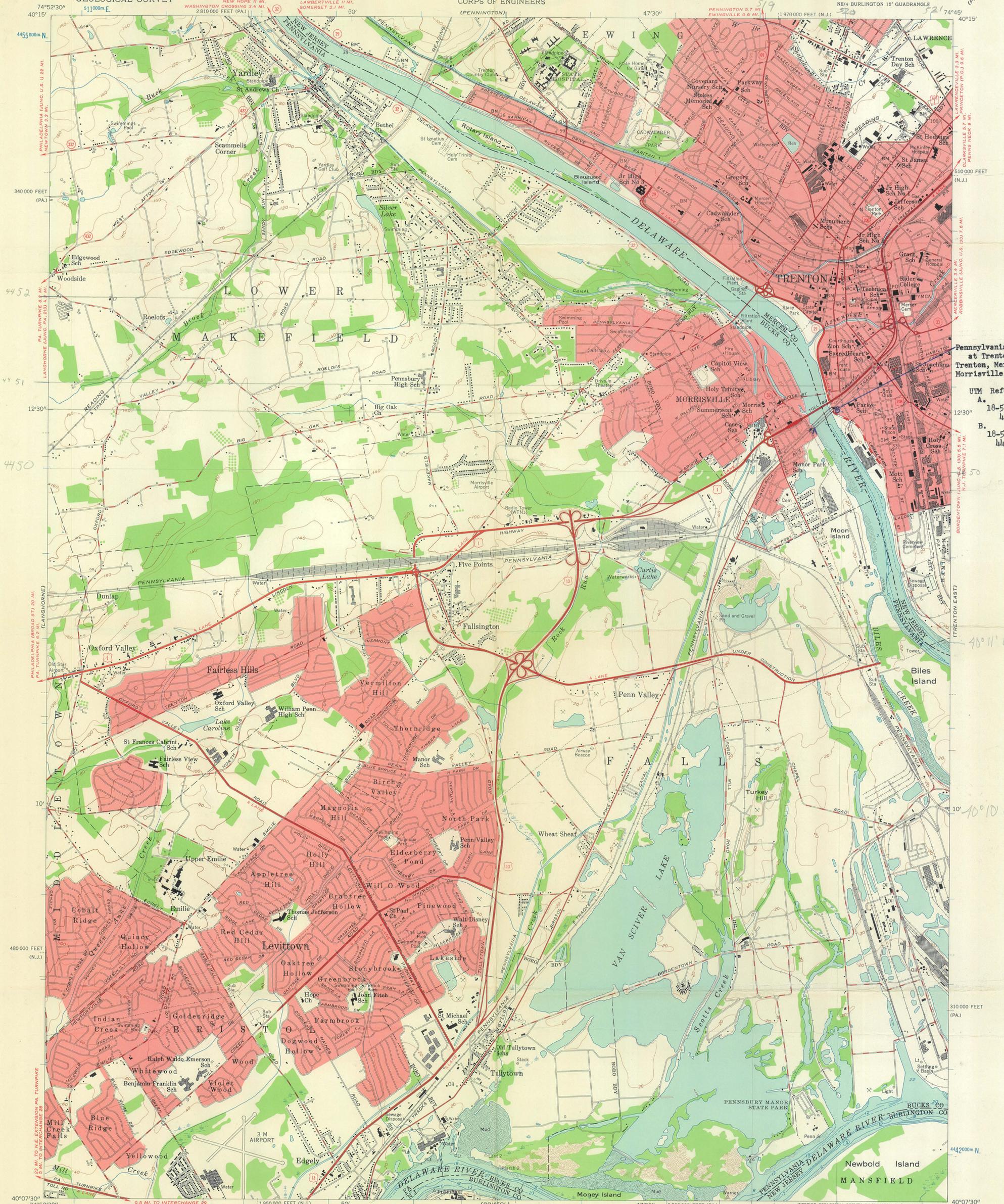
JUN 6 1979

Federal Register Entry

Re-submit







Pennsylvania RR Bridge
at Trenton
Trenton, Mercer Co., NJ
Morrisville, Bucks Co., Pa.

UTM References:
A. 18-5-19-640
44-50-500
B. 18-5-19-900
44-50-740

40°11'00"

40°10'00"

310 000 FEET
(PA.)

442 000m N.

40°07'30"

40°07'30"

40°07'30"

40°07'30"

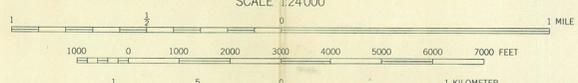
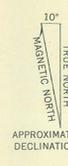
Mapped by the Army Map Service
Edited and published by the Geological Survey
Control by US&GS, USCE, and New Jersey
Geodetic Survey

Topography from aerial photographs by photogrammetric
methods. Aerial photographs taken 1942. Field check 1943.
Culture revised by the Geological Survey 1954-1955

Hydrography from USC&GS chart 296 (1954)

Polyconic projection. 1927 North American datum
10,000-foot grids based on Pennsylvania coordinate
system, south zone, and New Jersey coordinate system
1000-meter Universal Transverse Mercator grid ticks,
zone 18, shown in blue

Red tint indicates areas in which only
landmark buildings are shown



SCALE 1:24 000

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

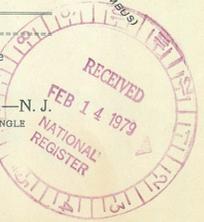
DEPTH CURVES AND SOUNDINGS IN FEET-DATUM IS MEAN LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS 6.3 FEET



ROAD CLASSIFICATION
Heavy-duty ——— Light-duty ———
Medium-duty ——— Unimproved dirt ———
U. S. Route ——— State Route ———

TRENTON WEST, PA.-N.J.
NE/4 BURLINGTON 15' QUADRANGLE
N 4007.5-W 7445.17.5

1955



6191 9
JUN 9

NAME OF PROPERTY PA RR Bridge STATE NJ/PA

Date Information Requested/Date Put in "Hold" Drawer: 4-19-79

Date to Be Pulled from "Hold" Drawer: 5-19-79 6-1
(30 Days from Date Requested)

Information Requested From: Terry Karshner, SHPC

Information Requested/Reason Nomination Is Being Held:

VBD

5/23 - busy ✓✓
- will call a.m. 5/24

5/24 - In mail. SUSPENSE - NLT COB FRI JUN 1

Joe Towner
Reviewer

CONRAIL

BR 0.33



April 19, 1979

SUBJECT: Pennsylvania Railroad Bridge - U.G. Bridge #0.33
(File: Br. #0.33 - WGJ)

Mr. Ed Weintraub
State Historic Preservation Officer
Office of Historic Preservation
Box 1026
Harrisburg, PA 17120

Dear Mr. Weintraub:

This will acknowledge receipt of your letter of April 3, 1979 informing us that our property will be considered by the State Review Board for nomination to the National Register of Historic Places and requesting any comments we may have concerning this action.

Since we are unaware of all restrictions that may be imposed upon our Corporation which could restrain or otherwise limit us in the development of any future plans we may have for this structure, we respectfully request that this property not be nominated at this time.

Very truly yours,

(Signed) J. T. Sullivan

J. T. Sullivan, P.E.
Chief Engineer -
Design & Construction

19th Floor - (215) 893-6106

NP
CONRAIL

PENNSYLVANIA RAILROAD BRIDGE
6/26/79

(PA)

July 23, 1979

SUBJECT: 663 & H32-NR
(File: BR. #0.33 - WGJ)

Mr. Charles A. Herrington
Acting Keeper of the National Register
Heritage Conservation and Recreation Services
Department of the Interior
Pension Building
440 G Street, N.W.
Washington, DC 20243

ATTENTION: NOM

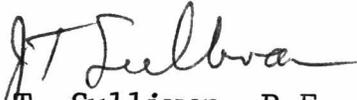
Dear Mr. Herrington:

This refers to your letter dated July 9, 1979 clarifying the location of Conrail's property which has been nominated for listing in the National Register of Historic Places per Dr. Murtagh's letter of June 18, 1979.

I am attaching for your information a copy of my letter to Mr. Ed Weintraub dated April 19, 1979 in response to a similar inquiry from the Commonwealth of Pennsylvania.

As indicated in that letter, we prefer not to have our property nominated since such listing may severely restrict us from implementing any future plans we may have for this particular structure.

Very truly yours,


J. T. Sullivan, P.E.
Chief Engineer -
Design & Construction

19th Floor - (215) 893-6106

71 5 8 1979

us 8/3

INTERNATIONAL REGISTER OF HISTORIC PLACES

DATE: **JUL 26 1979**

INDIVIDUAL RESPONSE (ATTACHED) _____

INFORMATIVE MATERIAL SENT _____

TELEPHONE CALL (ATTACHED) _____

DATE COPIES TAKEN _____

INITIALS _____

ENTRIES IN THE NATIONAL REGISTER

NEW JERSEY

STATE

Date Entered

JUN 6 1979

Name

Location

Reaction Motors Rocket Test Facility

Franklin Lakes
Bergen County

← Pennsylvania Railroad Bridge

Trenton
Mercer County
also in
Morrisville
Bucks County, PA

Also Notified

Mr. Ed Weintraub, SHPO, PA
Honorable Harrison A. Williams, Jr.

Honorable Bill Bradley
Honorable Andrew Maguire
Honorable Frank Thompson, Jr.
Honorable Richard S. Schweiker
Honorable H. John Heinz, III
Honorable Peter H. Kostmayer

State Historic Preservation Officer
Mr. Daniel J. O'Hern
Commissioner
Department of Environmental Protection
P.O. Box 1420
Trenton, New Jersey 08625

6/8/79

Byers/bjr

NR