JUL 21 1979

Mr. Charles A. Herrington
Acting Keeper of the National Register
Heritage Conservation and Recreation Service
Department of the Interior
18th and C Streets, N.W.
Washington, D.C. 20243

Dear Mr. Herrington:

I am pleased to nominate the Dock Bridge, Newark, Essex County to the National Register.

This nomination has received the majority approval of the State Review Committee for Historic Sites.

Should you want any further information concerning this application, please feel free to contact the staff of the Office of Historic Preservation, Department of Environmental Protection, 109 West State Street, Trenton, New Jersey 08625, telephone (609) 292-2023.

Sincerely,

[Signature]

Betty Wilson
Deputy State Historic Preservation Officer
**JMMARY OF NOMINATION INFORMATION IN ONJH FILES**

**NAME** Deck Bridge  
**COUNTY** Essex  
**MUNICIPALITY** New York City  

**TYPE:**  
- Individual  
- Historic District  
- Multiple Property  
- Documentation Form

**NOMINATION FORM**

- Nomination form (If there are continuation sheets, please indicate number)  
  - First page (#1-6)  
  - Description (#7)  
  - Significance (#8)  
  - Last page (#9-11)  
  - SHPO Signatures  
  - USGS Map  
  - Site plan  
  - Tax map  
  - Floor plan  
  - Photo index map  
  - Other maps  

- Photographs (Indicate number)  
  - Exterior  
  - Interior  
  - Streetscapes  
  - Outbuildings  
  - Historical  
  - Negatives  
  - Contact Sheet

**DATE OF LISTING**  
- State Register 7/31/72  
- National Register 10/5/80

**SUPPLEMENTAL INFORMATION**  
- N.J.H.S.I. #  
- Newspaper/Magazine Articles  
- HABS  
- Other (Please specify)  

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<th>Draft Nomination</th>
<th>Correspondence</th>
<th>Contextual Data</th>
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**STAFF MEMBER**  
**UPDATES:** STAFF  
**DATE** 5/1/81
**NAME**: Dock Bridge  

**MUNICIPALITY**: Newark  

**COUNTY**: Essex Co  

**Nomination Form**:  
- Final Nomination Form [ ]  
- Signed [ ]  
- Unsigned [ ]  
- U.S.G.S. Map [ ]  
- Photocopy [ ]  

**Other Maps**:  

**Plan(s)**: Site [ ]  

**Floor**: [ ]  

**Photographs**:  
- Identified [ ]  
- Unidentified [ ]  
- Inadequate Coverage [ ]  
  - Exterior [ ]  
  - Interior [ ]  
  - Streetscapes [ ]  
  - Outbuildings [ ]  
  - Historical [ ]  

**Negatives**:  
- Same as prints [ ]  
- Less than prints [ ]  
- Additional Negatives [ ]  

**Slides**: Adequate shots  

**Boundaries**:  
- No precise boundaries [ ]  
- Defined by map [ ]  
- U.T.M.'s [ ]  
  - Defined in nomination [ ]  
  - Latitude & longitude [ ]  
  - Boundary justification [ ]  

**National Register notification of listing to SHPO**: [ ]  

**Copies of final approved nomination**: [ ]  

**Other**: Addenda  

**SHPO Notification Letters**:  
- Intent to nominate [ ]  
- National Register [ ]  
- State Register [ ]  

**Owner list**: [ ]  

**Supplemental Information**:  
- W.J.H.S.I. [ ]  
- Newspaper/Magazine articles [ ]  
- Local ordinance data [ ]  
- Other [ ]  
  - Draft nomination [ ]  
  - Recent correspondence [ ]  
  - Maps [ ]  
  - HABS [ ]  

**Materials in/Storage**:  
- Public Meeting notification [ ]  
- Newspaper articles [ ]  
- Historical information [ ]  
  - Draft nomination [ ]  
  - Correspondence [ ]  
  - Other [ ]
NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

NAME
HISTORIC Dock Bridge
AND/OR COMMON Railroad Lift Bridge over the Passaic River

LOCATION
STREET & NUMBER Passaic River
CITY, TOWN Newark
STATE New Jersey
VICINITY OF

CLASSIFICATION
CATEGORY STRUCTURE
OWNERSHIP
PUBLIC
PRIVATE
BOTH

PUBLIC ACQUISITION
IN PROCESS
BEING CONSIDERED

STATUS
X OCCUPIED
UNOCCUPIED
WORK IN PROGRESS
ACCESSIBLE
YES: RESTRICTED
YES: UNRESTRICTED
NO

PRESENT USE
AGRICULTURE
COMMERCIAL
EDUCATIONAL
ENTERTAINMENT
GOVERNMENT
INDUSTRIAL
MILITARY
TRANSPORTATION
OTHER:

OWNER OF PROPERTY
NAME Northeast Corridor Operations, National Railroad Passenger Corporation/Amtrak
STREET & NUMBER 1617 John F. Kennedy Building, Room 603
CITY, TOWN Philadelphia
VICINITY OF
STATE Pa.

LOCATION OF LEGAL DESCRIPTION
COURTHOUSE, REGISTRY OF DEEDS, ETC.
STREET & NUMBER
CITY, TOWN
STATE

REPRESENTATION IN EXISTING SURVEYS
TITLE Northeast Corridor Aerial Reconnaissance of Historic Structures
DATE 13-15 April 1977
DEPOSITORY FOR SURVEY RECORDS Federal Railroad Administration, DOT/HAER, National Park Service
CITY, TOWN Washington
STATE D.C.
Dock Bridge over the Passaic River in Newark, New Jersey, a through-truss lift bridge, was constructed in 1935 by Waddell & Hardesty, Consulting Engineers, after the patent of Dr. J.A.L. Waddell. It was constructed for the Pennsylvania Railroad with T.W. Pinard, Chief Engineer of the railroad.

The structure consists of two deck girder approach spans 94 feet and 64 feet long, respectively; a through Warren truss, with verticals, 11ft span 230 feet long and two deck girder approach spans 64 and 68 feet long, respectively. Bridge A8.50 carries three tracks and C8.50 carries one track. PATH trains are carried on a separate span. The bridges are side by side and operate independently. This bridge has two sets of lift towers supporting three lift towers. The south towers support two bridge structures. Each span has the moving machinery located at the center of the span on the top chord of the trusses.

The substructure is 24 feet above mean high water and the abutments and piers are concrete with stone facings. There are timber fenders on both sides of the channel at the rest piers.

The main drive motors are 260-horsepower DC series wound electric motors. There are electro-hydraulic truster brakes on each motor. The motors are geared through common spur reduction gears on shafts which transmit power to the cable drums. Cables run over the cable drums to the end of the span where they pass over an idler sheave to the bridge sheave. The bridges are raised and lowered by uphaul and downhaul cables. The counterweight cables are attached to the top chord of the trusses and run over sheaves. There is a 150 horse power gasoline engine in the machinery house of each span. This engine serves as an emergency power source. There are compressors in the operator's house, basement, for bridge floor and rail locks. There are AC motor DC generator sets in the operator's house at the north shore. The bridge operator occupies the fifth floor of this house. The operator's level contains the signal interlock box, track model board, reversing drum controllers, and navigation light controls. There is a cable tunnel below the river for cables carrying single-phase and 3-phase 4150-volt AC.

The operator's level is the top floor of the five-level house on the north shore. The other floors contain railroad electrical equipment. The house has steam heating which was installed in 1974.

The bridge is in generally good condition with some minor deterioration of some structural elements and need for repair in the mechanical and electrical equipment.
Dock Bridge is the only vertical lift bridge on the Northeast Corridor railroad route, and is the newest of the movable bridges on the Corridor. The structure is unique because of the operation of six tracks on three bridges with two lift spans.

Dr. J.A.L. Waddell was one of the first to patent a simplified and improved design of vertical lift bridge in the United States. Vertical lift bridges of small spans and low lifts were constructed in Europe at a fairly early date, but no vertical lifts of any size were constructed until the late 19th century. The consulting engineering firm for the construction of this structure, Waddell & Hardesty, used the patent of Dr. Waddell in the design of the bridge.

Vertical lift bridges were more widespread in the U.S. after 1908. This type is economical in construction and operation and has proven efficient in heavily trafficked areas because the span can be opened in less time than is required for a swing bridge. In addition, the span can be partially raised when height requirements are low. Heavy railroad traffic between New York City and Newark and the frequent openings necessary on the Passaic River make this structure critical to the operation of the Northeast Corridor railroad system.

The machinery and electrical systems which were specifically designed for this bridge have not been significantly altered since their installation. Earle Gear and Machine Company of Philadelphia was the contractor for the machinery and the electrification was done by Gibbs & Hill.
MAJOR BIBLIOGRAPHICAL REFERENCES

J., George A. and W.S. Kinne, eds. Movable and Long-Span Steel Bridges

Hovey, Otis Ellis, Movable Bridges New York: John Wiley & Sons, Inc. 1926
Plowden, David. Bridges, the Spans of North America. New York: The Viking Press
U.S. DOT. Northeast Corridor High Speed Rail Passenger Service Improvement Project,

GEOGRAPHICAL DATA

acreage of nominated property

QUADRANGLE NAME Elizabeth

QUADRANGLE SCALE 1: 24,000

UTM REFERENCES

A B C D E F G H

ZONE EASTING NORTHING ZONE EASTING NORTHING ZONE EASTING NORTHING

VERBAL BOUNDARY DESCRIPTION

Dock Bridge crosses the Passaic River from Newark, N.J. to Harrison, N.J. on the
former Penn Central railroad line.

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

STATE New Jersey

CODE

COUNTY Essex

CODE

New Jersey

Code

COUNTY Hudson

FORM PREPARED BY

NAME/TITLE Janice Artemel, Cultural Resources Coordinator, October 24, 1977

ORGANIZATION DeLreau, Cather/Parsons & Associates, Northeast Corridor Project

DATE

STREET & NUMBER 1201 Connecticut Avenue, Room 1005

TELEPHONE

CITY OR TOWN Washington D.C.

STATE

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

DATE 2-21-79

TITLE Acting Deputy Commissioner, Department of Environmental Protection

FOR NPS USE ONLY

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

DATE

KEEPER OF THE NATIONAL REGISTER

ATTEST:

DATE

CHIEF OF REGISTRATION

DATE
NECIP: DeLEUV, CATHERjPARSONS

SUBJECT: Passaic River
VIEW: RR Bridge--aerial
LOCATION: Newark, N.J.
MILEPOST: 8.50
PHOTOGRAPHER: J. Boucher
DATE: April 1977
Mr. Charles A. Herrington  
Acting Keeper of the National Register  
Heritage Conservation and Recreation Service  
Department of the Interior  
18th and C Streets, N.W.  
Washington, D.C.  20243

Dear Mr. Herrington:

I am pleased to nominate the Dock Bridge, Newark, Essex County to the National Register.

This nomination has received the majority approval of the State Review Committee for Historic Sites.

Should you want any further information concerning this application, please feel free to contact the staff of the Office of Historic Preservation, Department of Environmental Protection, 109 West State Street, Trenton, New Jersey 08625, telephone (609) 292-2023.

Sincerely,

[Signature]

Betty Wilson  
Deputy State Historic Preservation Officer
# SUMMARY OF NOMINATION INFORMATION IN ONJH FILES

**NAME**: Deck Bridge  
**COUNTY**: Essex  
**MUNICIPALITY**: Newark City

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## NOMINATION FORM

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**- Photographs (Indicate number)**

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**DATE OF LISTING**

- State Register: 7/21/77  
- National Register: 1/2/83

## SUPPLEMENTAL INFORMATION

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**DATE** 1/1/77

**STAFF MEMBER**

**UPDATES: STAFF**

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5/91
NAME  Dock Bridge
MUNICIPALITY  Newark
COUNTY  Essex Co

Nomination Form:
Final Nomination Form  ✔  Signed  ✔  Unsigned  
U.S.G.S. Map  ✔  Photocopy  

Other Maps

Plan(s): Site  Floor  

Photographs:

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<td>✔</td>
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<tr>
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</table>

Negatives:
Same as prints  Less than prints  Additional Negatives  

Slides: adequate shots

Boundaries:
No precise boundaries  Defined in nomination  
Defined by map  Latitude & longitude  
U.T.M.'s  Boundary justification  

National Register notification of listing to SHPO:  ✔
Copies of final approved nomination:  ✔

Other: Addenda

SHPO Notification Letters:
Intent to nominate  ✔  National Register  ✔  State Register  ✔

Owner list  

Supplemental Information:
NJHSTI  Draft nomination  
Newspaper/Magazine articles  Recent correspondence  ✔
Local ordinance data  Maps  HABS
Other  

Materials in Storage:
Public Meeting notification  Draft nomination  ✔
Newspaper articles  Correspondence  
Historical information  Other  

State Register Encroachments

Tax Act Certification

Section 106 Consultations and Comments

Grants-in-Aid

Notes:

Reorganized by:  D4  Date:  8/19/81
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 Dock Bridge
AND/OR COMMON Railroad Lift Bridge over the Passaic River

2. LOCATION
STREET & NUMBER Passaic River
CITY, TOWN Newark
STATE New Jersey
VICINITY OF 10th
COUNTY Essex
CODE 34
CODE 013

3. CLASSIFICATION
CATEGORY
DISTRICT
BUILDING(S)
STRUCTURE
SITE
OBJECT
OWNERSHIP
PUBLIC
PRIVATE
BOTH
PUBLIC ACQUISITION
IN PROCESS
BEING CONSIDERED
STATUS
X OCCUPIED
UNOCCUPIED
WORK IN PROGRESS
ACCESSIBLE
YES, RESTRICTED
YES, UNRESTRICTED
NO
PRESENT USE
AGRICULTURE
COMMERCIAL
EDUCATIONAL
ENTERTAINMENT
GOVERNMENT
INDUSTRIAL
MILITARY
MUSEUM
PARK
PRIVATE RESIDENCE
RELIGIOUS
SCIENTIFIC
TRANSPORTATION
OTHER:

4. OWNER OF PROPERTY
NAME Northeast Corridor Operations, National Railroad Passenger Corporation/Amtrak
STREET & NUMBER 1617 John F. Kennedy Building, Room 603
CITY, TOWN Philadelphia
STATE Pa.
VICINITY OF 19103

5. LOCATION OF LEGAL DESCRIPTION
COURTHOUSE, REGISTRY OF DEEDS, ETC.
STREET & NUMBER
CITY, TOWN
STATE

6. REPRESENTATION IN EXISTING SURVEYS
TITLE Northeast Corridor Aerial Reconnaissance of Historic Structures
DATE 13-15 April 1977
FEDERAL
STATE
COUNTY
LOCAL
DEPOSITORY FOR SURVEY RECORDS Federal Railroad Administration, DOT/HAER, National Park Service
CITY TOWN Washington
STATE D.C.
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Flowden, David. Bridges, the Spans of North America. New York: The Viking Press
U.S. DOT, Northeast Corridor High Speed Rail Passenger Service Improvement Project,

GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY

QUADRANGLE NAME Elizabeth

UTM REFERENCES

A B
ZONE EASTING NORTING

B C
ZONE EASTING NORTING

C D
ZONE EASTING NORTING

D E
ZONE EASTING NORTING

E F
ZONE EASTING NORTING

F G
ZONE EASTING NORTING

G H
ZONE EASTING NORTING

QUADRANGLE SCALE 1:24,000

VERBAL BOUNDARY DESCRIPTION
Dock Bridge crosses the Passaic River from Newark, N.J. to Harrison, N.J. on
the former Penn Central railroad line.

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

STATE New Jersey

CODE

COUNTY Essex

CODE

STATE New Jersey

CODE

COUNTY Hudson

FORM PREPARED BY

NAME / TITLE Janice Artemel, Cultural Resources Coordinator, October 24, 1977

ORGANIZATION Dalew, Cather/Parsons & Associates, Northeast Corridor Project

STREET & NUMBER 1201 Connecticut Avenue, Room 1005

CITY OR TOWN Washington D.C.

STATE

STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE x

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 Commissioner, Department of Environmental Protection

TITLE Deputy Commissioner, Department of Environmental Protection

DATE 7-21-79

FOR NPS USE ONLY

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

KEEPER OF THE NATIONAL REGISTER

DATE

CHIEF OF REGISTRATION

DATE

GPO 921-809
NECIP - DeLEUW, CATHER/PARSONS
SUBJECT: Passaic River
VIEW: RR Bridge--aerial
LOCATION: Newark, N.J.
MILEPOST: 8.50
PHOTOGRAPHER: J. Boucher
DATE: April 1977