MONONGAHELA CONNECTING RAILROAD COMPANY,
MAIN BRIDGE
Crossing the Monongahela River at mile post 3.1
Pittsburgh
Allegheny County
Pennsylvania

HAER No. PA-277-B

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Northeast Region
U.S. Custom House
200 Chestnut Street
Philadelphia, PA 19106

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HISTORIC AMERICAN ENGINEERING RECORD

MONONGAHELA CONNECTING RAILROAD COMPANY, MAIN BRIDGE

HAER No. PA-277-B

Location:	Crossing the Monongahela River at mile post 3.1, Pittsburgh, Allegheny County, Pensylvania USGS, Pittsburgh East Quadrangle, Universal Transverse Mercator Coordinates 17.588150.4475609
Date of Construction:	1904
Engineer:	Unknown
Architect:	Unknown
Present Owner:	Monongahela Connecting Railroad Company
Present Use:	Provide access to LTV demolition project for rail shipment of demolition scrap.
Significance:	Major connection between the north and south sides of the plant which was separated by the Monongahela River. Practically all of the intra-mill transfer of materials crossed this bridge during the steel-making process. All outbound rail shipments via The Pittsburgh and Lake Erie Railroad Company or Conrail (formerly Pennsylvania Railroad) were hauled across this bridge.
Project Information:	LTV Steel Corporation has demolished its steel-producing facilities in its South Side plant. As a result, the Mon Con has applied to the Interstate Commerce Commission for and received permission to abandon its rail lines and facilities on the South Side. The Main Bridge will be out of service for rail use after the rail removal project is completed, by early fall. It will then be sold to LTV for use as a utility bridge, as it currently carries approximately 20 utility lines including water, steam, gas and power lines.

Richard L. McCombs
Vice President - Operations
Monongahela Connecting Railroad Company
3600 Second Avenue
Pittsburgh, Pennsylvania

The Main Bridge crosses the Monongahela River at Mile Post 3.1 in the City of Pittsburgh, Pennsylvania. It connects the north side and south side plants of LTV Steel Corporation (formerly Jones & Laughlin Steel Corporation). It consists of seven spans, five of which are over the river, and one which is common to the adjacent Hot Metal Bridge. The span lengths and description follows:

Span Number	Length	Type
Skew	126'-0"	Pratt-through truss
1	154'-0"	Pratt-through truss
2	132'-0"	Pratt-through truss
3	321'-4"	Pratt-through truss
4	195'-9"	Pratt-through truss
5	135'-0"	Pratt-deck truss
6	110'-0"	Girders
Total Length	1174'-1"	

The spans are numbered from north to south. Spans Skew plus No. 1 through No. 4 are pin connected Pratt trusses. Span 5 is an inverted Pratt truss type, or deck truss. The Span 6 inverted Pratt truss was replaced with 110 foot long by 10 foot deep built-up girders in about 1970. Expansion for these trusses was originally provided by roller nests. However, these rollers were replaced in early 1950's with bronze slide plates.

The Main Bridge, as it currently stands, is essentially the same structure that was originally constructed. It was built to replace a single track structure which had been erected in 1887, which would have been too costly to strengthen to carry increased loading. Board meeting minutes of April 11, 1902 note that American Bridge Company was awarded the contract to construct a new double track bridge for 4.1 cents per pound. There is no indication of number of pounds of steel nor of the estimated cost. It is assumed that American Bridge Company did the design work, as well as fabrication and erection. The original tracings are American Bridge Company drawings and are noted as either Youngstown Plant or Keystone Plant. Drawings refer to Order Numbers A 3883 through A 3887, and were prepared in late 1902. Drawings also refer to material as "Medium Open Hearth Steel". Board meeting minutes of the January 1, 1905 annual meeting indicate that the double track bridge was completed in 1904.

Over the course of the years, J&L leased space on the bridge for utility lines to connect the plants on each side of the river. Today there approximately 20 utility lines -- gas-water-steam-electricity attached to the superstructure. There have been a number of repair projects to the bridge during its lifetime, only a few of which are worth noting.

a. In 1950, the roller nests which provided for expansion were determined to be frozen. A firm by the name of Carl J. Jacobsen, Engineers and Contractors, designed new bronze slide plates for expansion purposes, and installed these plates that year.

b. The floor system of Spans 1 through 5 were completely replaced during the late 1960's, including floor beams, stringers and lateral bracing. Engineering was performed by Structural Associates of Pittsburgh and the erection was done with company forces.

c. As part of the same program, Span 6 which was a deck truss, was replaced with two built-up girders, 100 feet long by 10 feet deep. These beams were designed by Structural Associates, fabricated by Bethlehem Steel, and erected by Minotte Construction.

The only traffic over the bridge now is a few carloads of scrap that are being shipped to outside processors. Once that work is complete, the bridge will be sold to LTV Steel for use as a utility bridge. As long as LTV operates their coke plant at Hazelwood on the north side of the Monongahela River and the boiler house on the south side of the river, the bridge will remain in service. There has been some interest by officials of the City of Pittsburgh in using the bridge for limited vehicular use. That will depend to some degree on how the abandoned mill property is used. The fate of this once vital structure is in the hands of the developers.