

OHIO DEPARTMENT OF TRANSPORTATION  
HISTORIC BRIDGE SURVEY REPORT

1/21/2011



SFN #: 07XXXXX1

County: BELMONT

Municipality: BRIDGEPORT

NR Rec: NR Listed

Previous Inventory/Date:

Status:

ODOT District: Owner: WEST VIRGINIA

Lat/Long: 40.07261 / 80.73975

Location: WV BORDER (BRIDGEPORT BRIDGE)

UTM:

Feature On: OLD US 40 (NATIONAL ROAD)

Feature Intersected: OHIO RIVER (BACK CHANNEL)

Type: THRU TRUSS

Design: PARKER (PINNED)

Material: METAL

Railing Type: LATTICE RAILINGS

# Spans: 3

Overall Length: ft.

Out to Out Width: ft.

Roadway Width: ft.

Year Built: 1893

Alteration (Date):

Source: Style/History

Designer/Builder WROUGHT IRON BRIDGE COMPANY (CANTON, OH)

**Setting/Context:**

The bridge is closed to traffic (ca. 1992). A new parallel bridge has been built to the south of the old bridge. The bridge is located in a setting with a mix of late 19th to late 20th century commercial and residential development between Bridgeport, OH and West Wheeling, WV (Wheeling Island). A rail line crosses at grade at the west end of the bridge. Beyond that OH Route 7 is carried on a viaduct over US 40.

**Physical Description:**

The 3 span, pin-connected Parker thru truss bridge has been strengthened by threading Bailey trusses through the thru trusses to relieve them of live load. In the process, the original built-up floorbeams were cut down or removed to make space for the Bailey trusses. The bridge has eyebar lower chords and diagonals, except for the lower chords in the end panels which are built-up sections from angles and lacing. The upper chords are built-up box-shaped sections with cover plate and lacing. The cantilevered sidewalks are supported on built-up lattice girders with curvilinear bars and decorative, cast-iron end posts. The built-up, vertical end posts of each span have decorative sheet-metal lozenges. The posts extend above the upper chord to support arched lattice portal bracing. Each post is topped by an elaborate finial shaped from sheet metal. The gap between the end posts of adjacent spans is filled with decorative lattice work and sheet-metal cutouts.

**Integrity:**

Flooring system compromised by removal of original floorbeams. Loss of original fabric from corrosion and loss of some architectural features (parts of finials, sections of railing, etc.)

**Summary of Significance:**

The 1893 Parker thru truss bridge is the oldest example of its type/design in the Ohio inventory and among the most architecturally elaborate examples of any metal-truss bridge in the region. It was fabricated in 1893 by the Wrought Iron Bridge Company of Canton, Ohio, for the Wheeling-Belmont Bridge Company and was originally a private toll bridge. The bridge was bought by the State of West Virginia and the tolls removed prior to 1952. The bridge is historically associated with the Old National Road/US 40 and is located in the Wheeling Island Historic District, WV. The bridge is in WV jurisdiction, which extends to the west bank of the river. According to WVDOT, the Bridgeport Bridge has been cleared for demolition and is scheduled to be removed in 2009. The bridge was listed as a contributing resource to the Wheeling Island Historic District in 1992 about the time the bridge was closed to traffic and bypassed. Supporting documentation provided by WVDOT as attachments D and E. The bridge was surveyed in ODOT's prior metal-truss inventory (ca. 1981-83, survey form located), but it does not appear that it was scored or

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evaluated for eligibility at that time.

Camelback and Parker trusses are members of the Pratt-family of trusses with sloped top chords Technologically, Camelback and Parker trusses differ only in the number of top chord slopes (Camelbacks have exactly five slopes, and Parkers have more than five slopes.) The sloped-chord trusses provide the greatest depth at midspan where it is needed to accommodate the stresses, meaning that less material is needed in their construction as compared to a parallel chord truss of similar span, but fabrication is made more difficult due to the varying lengths of the members. The sloped-chord trusses are often associated with longer spans where the savings in material is great enough to be worth the additional fabrication costs. The practice of sloping the top chords dates to at least the 1840s and appeared early in the development of metal trusses. As with other truss designs, pin connections were used from the 1870s to 1900s, and mostly phased out during the 1910s. Rivet connections were being used by the early 1900s and were prevalent from the 1910s to 1940s. Standardized rivet-connected Camelback and Parker designs were used by many state highway departments, including the Ohio State Highway Department. There are 24 trusses (8 Camelback, 16 Parker; 7 pinned, 17 riveted) in the Ohio inventory dating from 1893 to 1959 (July 2009).

**Reviewed By/ Date:** JPH (6/09)

**Notes:**

Communication with C. Fint (WV DOT), Apr. 27, 2009. Revised June 30, 2009.

**For Eligible Bridge:**

**Level of Significance:** Moderate

**Justification:**

The pin connected thru truss bridge is one of 13 extant examples of bridges with polygonal upper chords and/or subdivided panels in the state that date from 1888 until 1923. It is of moderate significance given that the numbers in the population.

**In Management Plan (2009)?** No