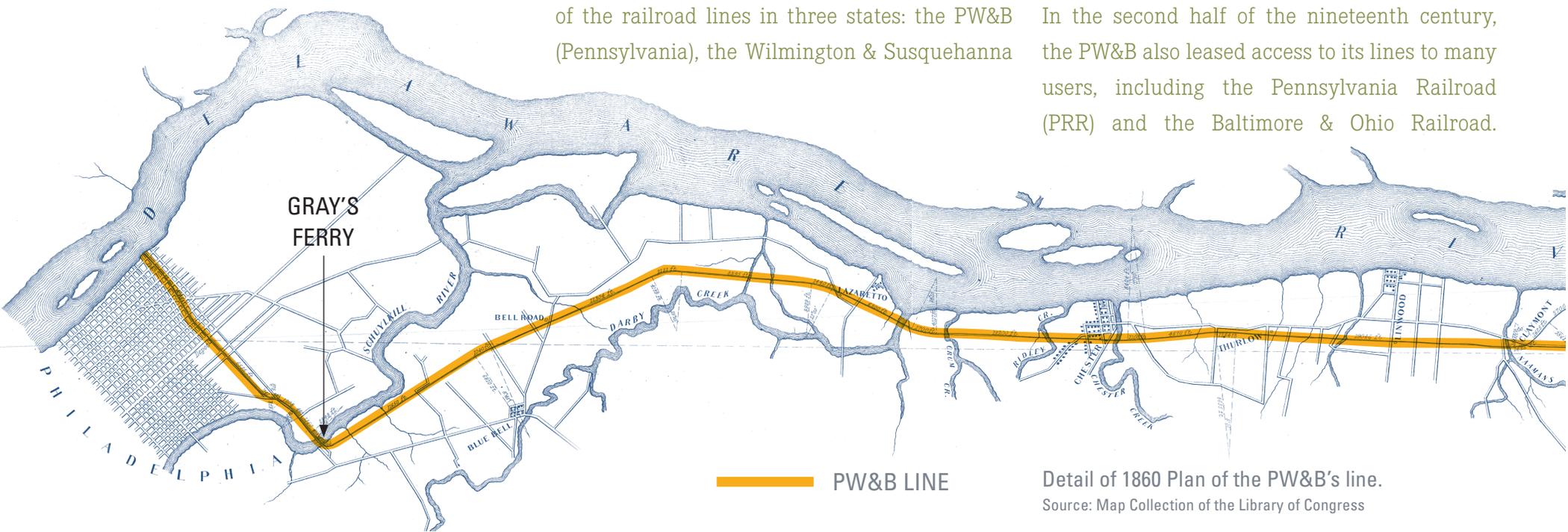


SWINGING OVER THE SCHUYLKILL THE HISTORY OF THE PW&B AND BRIDGE NO. 31

The Philadelphia, Wilmington & Baltimore Railroad Company (PW&B) was formed in 1836. In 1838, the railroad was enlarged by the joining of the railroad lines in three states: the PW&B (Pennsylvania), the Wilmington & Susquehanna

Railroad Company (Delaware), and the Baltimore & Port Deposit Railroad Company (Maryland). The PW&B ran passenger and freight services. In the second half of the nineteenth century, the PW&B also leased access to its lines to many users, including the Pennsylvania Railroad (PRR) and the Baltimore & Ohio Railroad.



— PW&B LINE

Detail of 1860 Plan of the PW&B's line.
Source: Map Collection of the Library of Congress

1836

Philadelphia, Wilmington & Baltimore Railroad Company (PW&B) formed to lay track from Philadelphia south to the Delaware state line.

1838

PW&B, Wilmington & Susquehanna Railroad Company, and Baltimore & Port Deposit Railroad Company merged to form an expanded PW&B connecting Philadelphia and Baltimore.

1838

First permanent bridge crossing at Gray's Ferry (Newkirk Viaduct).

1881

Pennsylvania Railroad (PRR) acquired majority share of stocks of the PW&B.

1901-1902

PW&B replaced Newkirk Viaduct with metal truss swing bridge.

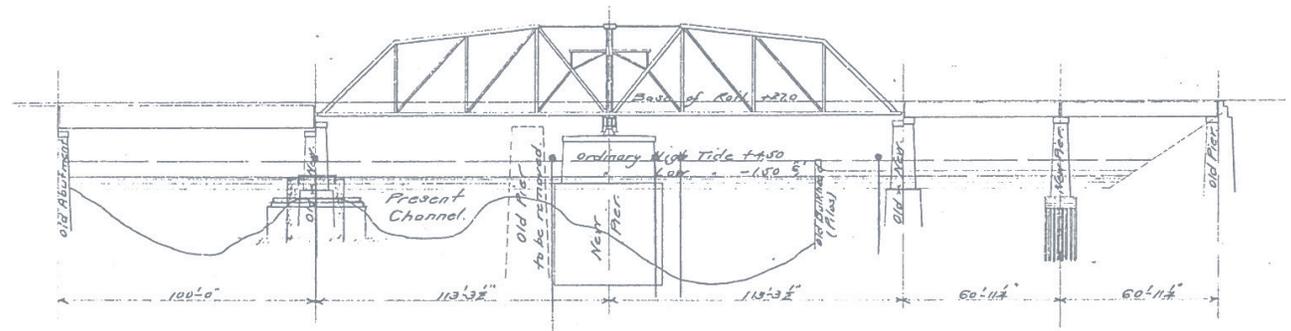
However, due to increased competition between the larger railroads, a bidding war began to buy the railroad line. The PRR eventually succeeded in purchasing a controlling interest in the PW&B in 1881, and in 1902 the PW&B (still controlled by the PRR) was merged with the Baltimore & Potomac railroad company to form the Philadelphia, Baltimore & Washington Railroad Company (PB&W). The PB&W became a leased subsidiary of the Pennsylvania Railroad in 1918. In 1976, Conrail acquired the PRR's assets.

CROSSING THE SCHUYLKILL

The railroad swing bridge at Gray's Ferry, also known as PW&B Swing Bridge (Bridge No. 31), was not the first crossing on the Schuylkill River at this location. The Schuylkill River was traversed by a ferry from the mid-1600s until George Gray's Ferry (operating from 1747) was replaced with a pontoon bridge in 1778. Several floating bridges occupied the crossing until a permanent wooden bridge, the Newkirk Viaduct, was constructed in 1838. The Newkirk Viaduct, which supported the



Circa 1898 view of the draw span on the Newkirk Viaduct, which allowed for the navigation of the Schuylkill River. Source: PhillyHistory.org



Plan for the construction of the PW&B Swing Bridge (Bridge No. 31) crossing the Schuylkill River, dated December 1900. Source: Archives of Conrail

1902

PW&B merged with the Baltimore & Potomac railroad company to form the Philadelphia, Baltimore & Washington Railroad Company (PB&W).

1918

PB&W became fully leased subsidiary of the PRR.

1976

Conrail acquired the PRR.

1984

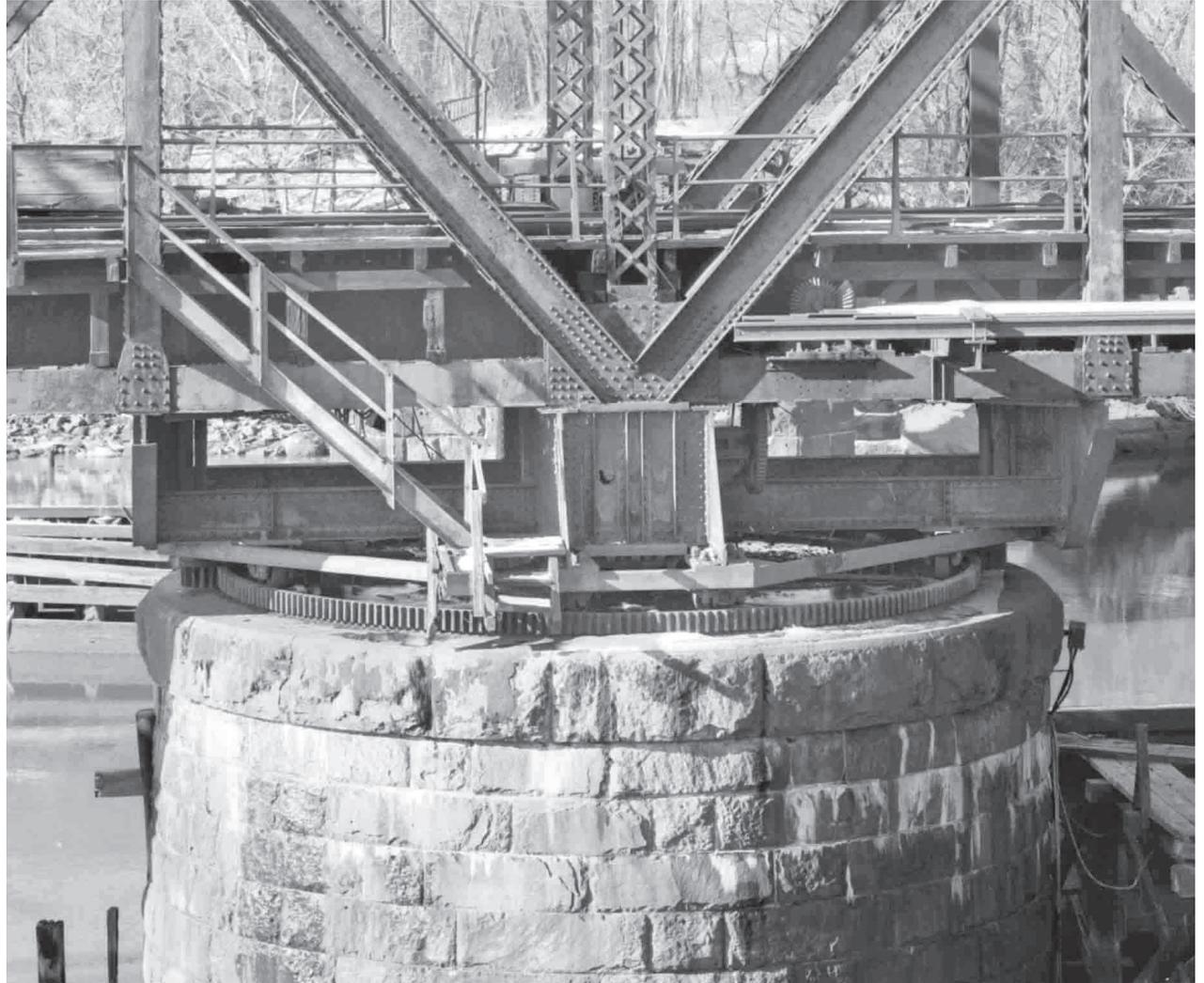
Use of the 1902 swing bridge was discontinued.

2018

The 1902 swing bridge was removed and replaced by a modern swing bridge on the same alignment.

PW&B railroad tracks as well as pedestrian and vehicular traffic, was constructed with a draw span in order to maintain boat traffic on the Schuylkill River. For many years, the crossing at Gray's Ferry carried both wagon and railroad traffic; the railroad operated on the south side of the bridge and wagons operated on the north side of the bridge. The new railroad line was so popular, that in its first year of operation, a total of 146,410 riders were recorded, totaling almost \$300,000 in ticket sales. Due to the bridge's wood construction and city restrictions, the viaduct and lines into the city were operated with horse-drawn rail cars, in order to prevent fires. The draw section of the Newkirk Viaduct was originally operated with horses, but was replaced with steam power in 1852.

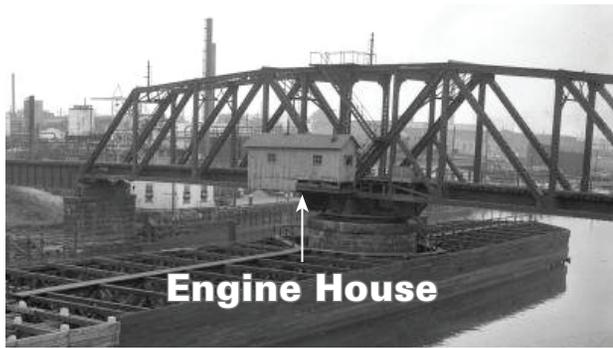
In 1901, the City of Philadelphia constructed a new bridge for wagon and pedestrian traffic over the Schuylkill River. The Gray's Ferry Avenue swing bridge was 1,190 feet long, had a 36-foot-wide roadway and two 10-foot-wide sidewalks. It also held two trolley tracks. River traffic was accommodated by a 223-foot, 6-inch swing span that allowed 75 feet of open water to each side of its central pier. The construction of a new vehicular bridge carrying Gray's Ferry Avenue,



Remaining parts of rack and pinion gearing on the PW&B Swing Bridge (Bridge No. 31). The entire rack and pinion system for the swing bridge was 28 feet in diameter, or approximately the length of two, mid-size cars.

Source: Historic American Engineering Record (HAER)





View of the east side of the PW&B Bridge (Bridge No. 31) in 1959. Source: Phillyhistory.org

Aerial View of the PW&B Swing Bridge (Bridge No. 31) at Gray's Ferry, ca. 1925. The swing bridge carrying Gray's Ferry Avenue is adjacent.

Source: Hagley Museum and Library

(replaced in 1976), released the railroad from its obligation to carry various forms of traffic.

PW&B SWING BRIDGE (BRIDGE NO. 31)

The railroad company demolished the Newkirk Viaduct and constructed a new railroad-only metal truss swing bridge (PW&B Swing Bridge; Bridge No. 31) on the same alignment between 1901 and 1902. In order to keep the waters of the Schuylkill River open to boats, the bridge included a 266-foot metal-truss swing span centered on a concrete pier faced with stone.

The PW&B Swing Bridge (Bridge No. 31) was built by the American Bridge Company of Coraopolis, Pennsylvania. The bridge represents a small-scale example of the use of swing span technology for railroad bridges, few examples of which were ever built in Pennsylvania. Due to this rarity of construction type in Pennsylvania, the bridge was determined eligible for listing in the National Register of Historic Places in 2014. The swing span was operated by a rack and pinion system, where a series of gears, driven by steam power, turned the bridge 90° to allow for the passage of vessels on the Schuylkill River.



Gray's Ferry Avenue
Swing Bridge

PW&B Swing Bridge (Bridge No. 31)

MOVING WITH THE TIMES

As part of the consolidation of rail lines acquired by Conrail, the PW&B Swing Bridge (Bridge No. 31) over the Schuylkill River was abandoned in 1984. In order to leave the river unobstructed, the swing span was left in the open position until 2018. The bridge was removed in 2018 in order to accommodate a new swing bridge in the same location as part of the Schuylkill River Trail to allow unobstructed use of the Schuylkill River. The history of the crossing continues to evolve to meet community needs, and serve the essential function of a transportation link between the west and east banks of the Schuylkill River.



2014 view of the PW&B Swing Bridge (Bridge No. 31) in the open position, prior to its demolition. The 1976 Gray's Ferry Avenue Highway Bridge is in the background.

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