

Early Rail Service in Wilmington

Starting in 1832 the New Castle & Frenchtown Railroad operated a steam engine that pulled passengers and freight from the Delaware River to the Chesapeake Bay - a one-hour trip of 20 miles that eliminated a much longer river, ocean and bay journey of about 300 miles.

The Philadelphia, Wilmington & Baltimore (PW&B) railroad started serving Wilmington to Baltimore in 1837 and from Wilmington to Philadelphia the following year. At Havre de Grace and Perryville, MD, freight cars were pushed onto the first railroad ferry in the U.S., while passengers got off the trains, walked onto the boat and crossed the wide Susquehanna River. On the other side, they resumed their journey by boarding waiting passenger cars. This method of crossing the river continued until 1866 when the first bridge was opened. The PW&B became a major part of the Pennsylvania Railroad in 1881.

In 1872, the Wilmington & Western Railroad started carrying freight and passengers from downtown Wilmington, DE to Landenberg, PA, a journey of about 40 miles. In 1877 it became the Delaware Western (DW) and in 1881 was purchased by the Baltimore & Ohio, to expand its line in order to compete with the PRR for the traffic to New York City.

The Northeast Corridor

Served by the three mid-Atlantic rail lines, and having access to the ocean via the Delaware River, Wilmington was a major commercial hub. Its geographic position, in the center of today's "Northeast Corridor", was key for those seeking to connect the nation's financial center in New York City to the center of political power in Washington DC, via Baltimore, MD; Wilmington, DE; Philadelphia, PA and Trenton, NJ.



On January 28, 1907, the first train departed the then unfinished Wilmington Train Station. (University of Delaware Libraries, Digital Collections)

Railroad Industry in Wilmington, Delaware

THE RISE OF INDUSTRIAL WILMINGTON

By the 1850s, Wilmington's economy had been transformed by steam-powered industry. The carriage-making, shipbuilding, railroad car construction, iron foundry work, and tanning trades employed most of Wilmington's industrial workforce throughout the 19th century. By the end of the Civil War, the largest firms in Wilmington were Harlan & Hollingsworth, Pusey & Jones, The Lobdell Car Wheel Company, and Jackson & Sharp, all locally owned and engaged in the manufacture of railroad equipment.

SKILLED WORKERS

Key to the success and growth of Wilmington's industries was the skilled handling of iron and wood among area workers. During the Civil War, Harlan & Hollingsworth and Pusey & Jones were both pioneers in the production of iron for shipbuilding, relying on their highly experienced ironworkers.



Carpenter-shop workers at Eastern Malleable Iron Company ca. 1905. Built in 1903 on New Castle Avenue south of the Christina, this was Wilmington's largest foundry, employing 2,000 workers. (Hagley Museum & Library)

LIFE IN INDUSTRIAL WILMINGTON

Industrial growth in Wilmington reflected a pattern seen in other American industrial centers - the separation of dwellings from places of work and of working-class housing from middle- and upper-class residences. Geography had a great deal to do with where 19th-century Wilmingtonians lived. The high and healthful land away from the Christina River attracted factory owners and their mansions as well as the middle class, while the flat, eastern lands were developed with row upon row of two-story brick homes for the working class.



Friends of
The Furness Railroad District

www.FriendsOfFurness.org



Pennsylvania RailRoad office Building [1905] with pedestrian bridge to Station.



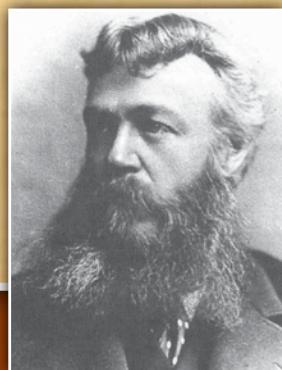
Viaduct [1900] under construction.



B&O Water Street Station [1887].

Railroad Architecture of Frank Furness

Renowned architect **Frank Furness (1839-1912)**, in the course of his 45-year practice, designed more than 600 structures, including banks, office buildings, libraries, mansions, hotels, churches, synagogues, and railroad stations. His designs are evidence of the industrial power of the age. Furness' signature style featured colorful, textured surfaces created by the skillful combination of architectural styles and a daring combination of materials - stone, wood and metal - finished in different fashions and highlighted with bold paint schemes and innovative use of glass. He also often designed all the fixtures and furnishings of the interiors.



The Furness Railroad District

Furness designed buildings in the District are: the **Baltimore & Ohio Railroad Water Street Station (1887)**, the **Pennsylvania Railroad Office Building (1905)**, and the **Pennsylvania Railroad Wilmington Station (1907-08)**, making it the only remaining collection of railroad buildings designed by Frank Furness. A fourth element of the District is the four mile long Wilmington Rail Viaduct (1902-1908). Considered one of America's most original and creative architects, the three remaining Wilmington Furness buildings in the District are evidence of his skill in railroad architecture and are a unique treasure for Delaware and the nation.

Wilmington's Three Major Rail Lines:

THE BALTIMORE & OHIO RAILROAD

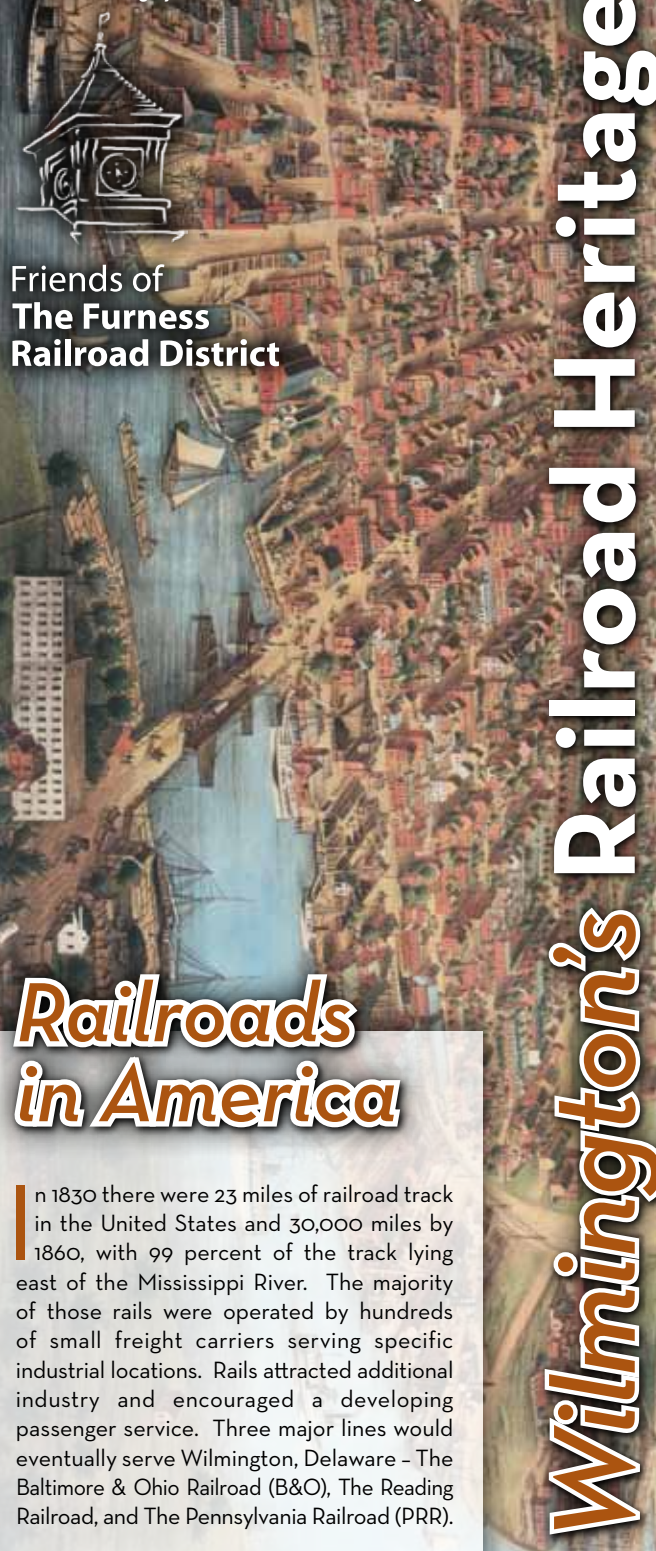
Chartered in 1827, The Baltimore & Ohio Railroad was America's first common carrier railroad. It began serving Wilmington in 1881 with the purchase of the Delaware Western. Two new stations were opened in the city, one on Water Street and the other at Delaware Avenue and DuPont Street (today's Trolley Square), then the city limit.

THE READING RAILROAD

Completed in 1843, the main line of the Philadelphia & Reading Railroad (P&R), commonly called the Reading Railroad, was originally constructed to haul anthracite coal from mines in northeastern Pennsylvania to the industrial centers in and surrounding Philadelphia. In 1870, the Reading extended into Delaware by establishing the Wilmington & Reading Railroad.

THE PENNSYLVANIA RAILROAD

Founded in 1846, the Pennsylvania Railroad (PRR) took over the Philadelphia, Wilmington & Baltimore in 1881. Over the next decade the PRR had a larger budget than the United States government, employed 250,000 workers nationwide, and had merged with or held an interest in at least 800 other rail lines and companies, including several across Delaware. The PRR's "Wilmington Improvements" - the Wilmington Rail Viaduct, the Wilmington Station and the adjacent PRR Office Building -- were started in 1900.



Friends of
The Furness
Railroad District

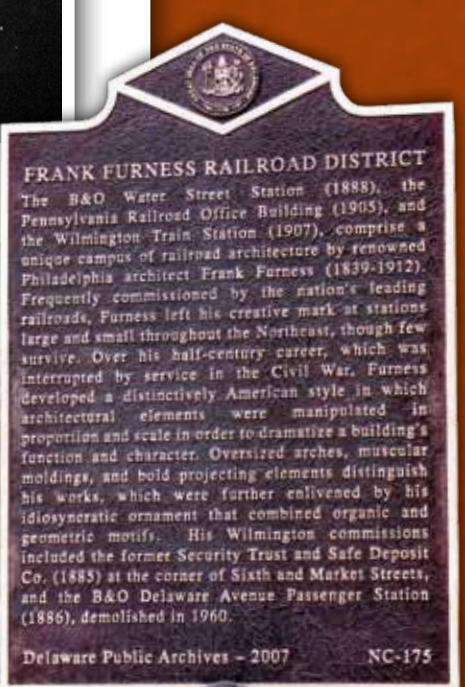
Railroads in America

In 1830 there were 23 miles of railroad track in the United States and 30,000 miles by 1860, with 99 percent of the track lying east of the Mississippi River. The majority of those rails were operated by hundreds of small freight carriers serving specific industrial locations. Rails attracted additional industry and encouraged a developing passenger service. Three major lines would eventually serve Wilmington, Delaware - The Baltimore & Ohio Railroad (B&O), The Reading Railroad, and The Pennsylvania Railroad (PRR).

Wilmington's Railroad Heritage



Railroad Heritage Display in the Joseph R Biden Station by The Friends of the Furness Railroad District.



FRANK FURNESS RAILROAD DISTRICT
The B&O Water Street Station (1888), the Pennsylvania Railroad Office Building (1905), and the Wilmington Train Station (1907), comprise a unique campus of railroad architecture by renowned Philadelphia architect Frank Furness (1839-1912). Frequently commissioned by the nation's leading railroads, Furness left his creative mark at stations large and small throughout the Northeast, though few survive. Over his half-century career, which was interrupted by service in the Civil War, Furness developed a distinctively American style in which architectural elements were manipulated in proportion and scale in order to dramatize a building's function and character. Oversized arches, muscular moldings, and bold projecting elements distinguish his works, which were further enlivened by his idiosyncratic ornament that combined organic and geometric motifs. His Wilmington commissions included the former Security Trust and Safe Deposit Co. (1885) at the corner of Sixth and Market Streets, and the B&O Delaware Avenue Passenger Station (1886), demolished in 1960.

Delaware Public Archives - 2007 NC-175



THE ARCHITECT

Frank Furness, who was born in Philadelphia in 1839, strided architecture by working with professional architects in Philadelphia and New York.



When the Civil War broke out in 1861, Furness (pronounced like furnace) joined the 6th Pennsylvania Volunteer Cavalry. As an officer, he was noted for his courage and daring. At the Battle of Trevilian Station in Virginia in 1864, an outpost of his company was cut off and running out of ammunition, so he volunteered to carry cartridges to them across an open field under fire.



The Pennsylvania Academy of the Fine Arts in Philadelphia.

After the war, he completed his studies and set up his own studio in Philadelphia, where his talent made him one of the leading architects of the Industrial Revolution, and his designs captured the spirit of a time of robust growth in American business. He designed hundreds of office buildings, mansions, homes and made a specialty of designing stations for three of the country's biggest railroads—the Pennsylvania, the Reading and the Baltimore & Annapolis.

THE FURNESS RAILROAD DISTRICT

The train station area included buildings designed together—the station itself, the Pennsylvania Building next door, which now houses the Wilmington offices of Interneer bank ING Direct, and the Baltimore & Ohio Water Street Station. They are reputed to be the largest groupings of Furness-designed railroad buildings still standing.

An organization called the Friends of the Furness Railroad District is trying to increase awareness of the cultural and historic value of the train station and the surrounding area. The Friends of the District would include improvements to the train station vicinity. Historical markers at the sites would explain the architectural significance of the buildings and their place in the history of the development of the city of Wilmington.

To learn more go to www.downtownwilmington.com/FRDO.

Sources: Wilmington, The Station, Friends of the Furness Railroad District, Township Associates, Michael J. Love

An Architectural Gem

Designed by Frank Furness in the Gothic Revival style, the station's unique structure and historical significance are a city treasure

By RICK MULLROONEY

The News-Journal

In the early 1900s, Wilmington's Christina River waterfront was a bustling commercial and manufacturing center. Factories and foundries along its banks turned out train and trolley cars, ships and machinery, while steamships carried cargo and passengers up and down the eastern Seaboard and beyond. In those days, the railroads were the primary means of carrying people and freight by land. The Pennsylvania Railroad's main north-south line along the Christina brought the city out to the major level, and all traffic in and from the waterfront had to cross the grade—leading to delays and, not infrequently, accidents as trains encountered wagons and pedestrians.

So in 1901, the railroad began building a three-mile-long viaduct to raise the tracks above street level to eliminate the grade crossings. It was a massive undertaking, taking six years and costing \$9 million (about \$30 million in today's dollars).

To cap it off, a new train station was needed. The railroad turned to Philadelphia architect Frank Furness, who designed the Water Street Station, which stands today not 100 yards from the Wilmington building, to house the railroad's local offices, and the architect chose similar materials for both. Starting on a strong foundation of cut granite, Furness erected a red brick and terra-cotta station in a style called Gothic Revival. The most remarkable feature of the station is the main floor, which Furness placed beneath the tracks.

Passengers could hear—and feel—the power of the trains as they arrived and departed. It's believed to be the only station in the country with trains running over the waiting room. For Furness, the issue was movement, said Michael J. Love, a biographer of Furness who teaches at Williams College in Massachusetts. By placing the waiting room on the main floor, he wanted to make people physically aware of the power of the trains. The interior also shows off Furness' emphasis on strength and power. Look up at the ceiling and you see the massive iron girders supporting the structure. Another architect would have hidden them, but Furness emphasized them and even had the trees holding the girders together and even had the trees holding the girders together.

The Pennsylvania Building, completed in 1905, is now occupied by ING Direct. Over the years, as automobiles, trucks and airplanes eclipsed trains for travel and freight, the station also declined, but it remained a vital link in the Northeast Corridor line from Boston to Washington. In 1968, Amtrak, which had taken over the line, announced a \$10.4 million renovation of the station, and many long-vanished details, such as the glass-and-metal canopy surrounding the entrances, were reproduced and reinstated. The revitalization of the Christina Riverfront in the 1980s brought more improvements to the area. ING Direct, the Internet banking giant, moved its headquarters to the station building, and a parking garage that echoes the Furness style was built.

A DISTINCTIVE LOOK

The station has the characteristic bold brick Furness look of fiery red brick with arched windows and elegant terra-cotta adornments.

Terra-cotta is a masonry building material popular in the United States from the late 19th century until the 1930s and is still a common material found in city buildings. It's sturdy, relatively inexpensive and easy to work with. Furness' skill for the station is referred to as Gothic Revival. The station's arched window treatments, soaring clock tower and ornate details make it an excellent example of his work.

The arched windows are Romanesque in their design.

The terra-cotta ornamentation can be found on the clock tower's details.

AN ENGINEERING MARVEL

The Wilmington Station is unique in that the rail bed that carries the trains through the station is above the lobby. Most train stations are built with the train level as a walk-down, not a walk-up. This required the architect, Frank Furness, to design the structure strong enough to hold the incredible weight. He accomplished this by using 28 steel columns that support the iron crossbeams. They continue from the train level through the lobby floor and are anchored by huge concrete pyramids. Ron Edwards, Amtrak's district manager for the Wilmington Station, says the strong enough to support a six-story building.

Support columns hold up the railbed.

The station's waiting room is beneath the railbed.

The railbed has three tracks. Two are used mainly for Amtrak, the other for SEPTA's local service.

Closed area of waiting rooms were made unnecessary by the 1980s renovation. They're seldom used today.

BY THE NUMBERS

11

2006 rank of station among Amtrak's busiest

100+

Amtrak and SEPTA trains arriving and departing each day

2,000+

Passengers arriving and departing each weekday

712,000

Passengers arriving and departing each year

1,148

Delawareans employed by Amtrak in 2006

TIMELINE

1837: Philadelphia, Wilmington & Baltimore Railroad completes street-level rail line along Christina River through Wilmington.

1873: Pennsylvania Railroad begins operations over Wilmington line.

1887: B&O Railroad's Water Street Station is built.

1901: PRR begins construction of viaduct raising Wilmington train tracks above street level.

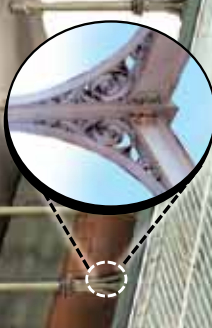
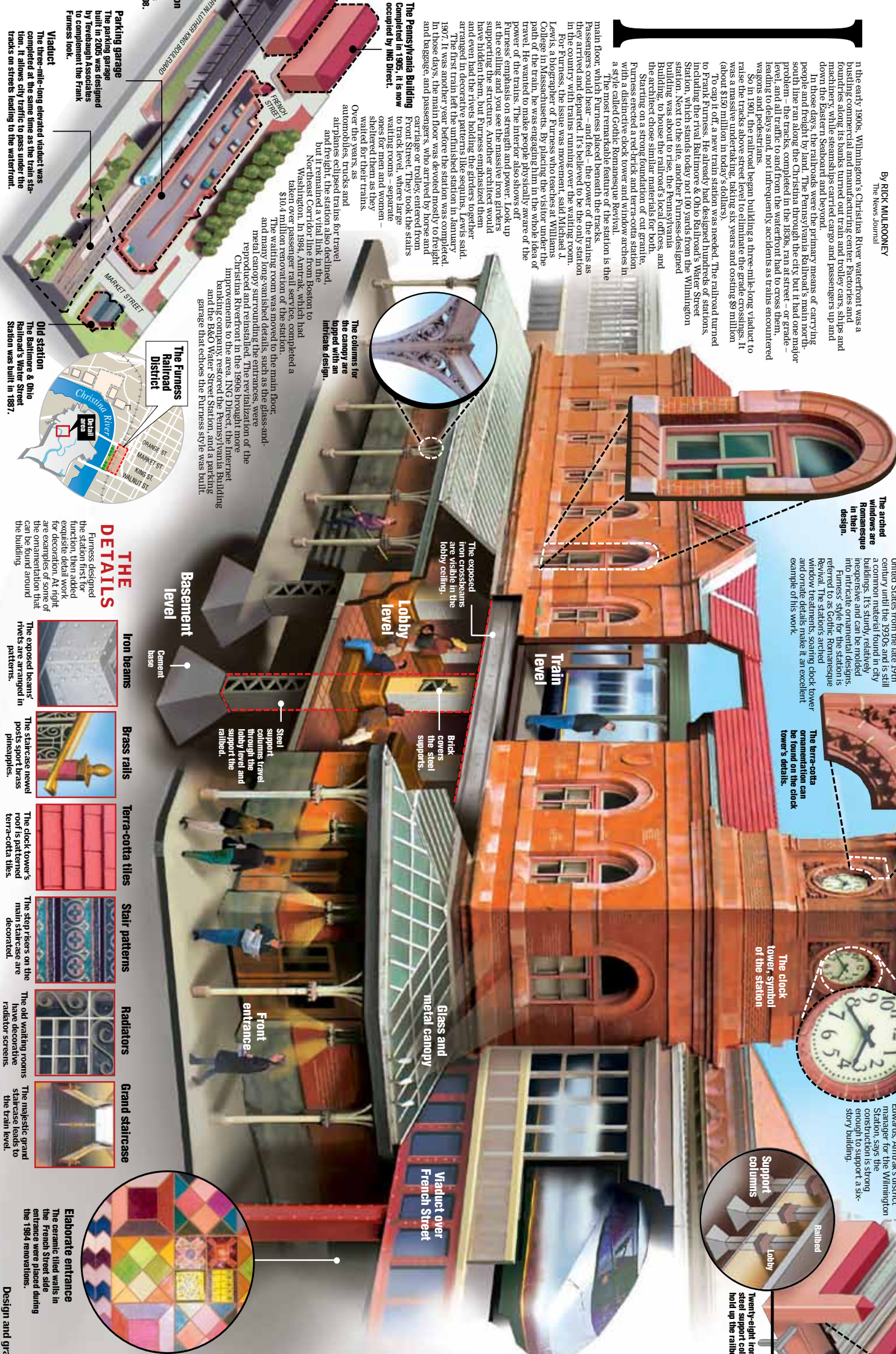
1905: Pennsylvania Building completed.

1907: On Jan. 28, first train leaves unfinished Wilmington station on new viaduct south to Baltimore.

1908: Wilmington Train Station is completed. All tracks are raised above street level.

1944: Three-year renovation of Wilmington Train Station, now operated by Amtrak, is completed.

2006: \$10 million in federal funding is secured for future renovations.



The clock tower, symbol of the station

The terra-cotta ornamentation can be found on the clock tower's details.

Support columns hold up the railbed.

Closed area of waiting rooms were made unnecessary by the 1980s renovation. They're seldom used today.

The station's waiting room is beneath the railbed.

The columns for the canopy are topped with an intricate design.

The exposed iron crossbeams from the station lobby ceiling.

Brick covers the steel supports.

Steel support beams hold up the lobby level and support the railbed.

Glass and metal canopy

Front entrance

The train station area included buildings designed together—the station itself, the Pennsylvania Building next door, which now houses the Wilmington offices of Interneer bank ING Direct, and the Baltimore & Ohio Water Street Station. They are reputed to be the largest groupings of Furness-designed railroad buildings still standing.

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The three-mile-long elevated viaduct was completed at the same time as the train station. It allows city traffic to pass under the tracks on streets leading to the waterfront.

The parking garage built in 2005 was designed to revitalize resources for the Frank Furness look.

The Baltimore & Ohio Railroad's Water Street Station was built in 1887.

The columns for the canopy are topped with an intricate design.

Basement level

Lobby level

Train level

Front entrance

French Street

Elaborate entrance

The ceramic tiled walls in the French Street side entrance were placed during the 1984 renovations.

Design and graphics by Dan Garrow