



## HARLEM DIVISION HISTORY

**T**HE HARLEM VALLEY RAIL TRAIL follows the route of the New York & Harlem Railroad, a 127-mile line between New York City and Chatham, New York. Incorporated in 1831 as a horse-drawn Manhattan street railway, the NY&H was one of the earliest US railroads. Its founders' goal was to reach the Erie Canal and railroads linking Boston and Buffalo via Albany. Construction passed through what became known as the "Harlem Valley" and reached Chatham in 1852, connecting with railroads to Albany, Massachusetts, and soon after, Vermont. The NY&H competed with the parallel Hudson River Railroad, owned by rail baron Cornelius Vanderbilt, who absorbed the NY&H into his New York Central Railroad empire linking New York City, Chicago, and St. Louis in 1873. The NY&H then became the NYCRR's Harlem Division, the name longest associated with the line. Penn Central took over in 1968, naming it the "Harlem Line," now associated with Metro-North Railroad commuter service.

The Harlem Division was a gateway to the outside world for the towns it served. Passenger depots were centers of community life, connected to places near and far, where people came and went, received and sent packages, got their

## FROM RAIL TO TRAIL

world news, and shared local gossip. The US Mail moved by Railway Post Office cars, and before the telephone, station agents provided rapid communication via Western Union Telegraph service.

After World War II, US railroad service and revenues declined with increasing competition with airlines, and automobiles and trucks using new roads, including the growing Eisenhower Interstate Highway system. In 1968, the New York Central merged with the Pennsylvania Railroad, forming Penn Central, which soon went bankrupt. Penn Central cut passenger service back to Dover Plains in 1972 and ended freight trains to Chatham in 1976.

In 1989, New York State acquired 21 miles of the line north of Wassaic for public nonmotorized recreational trail use. The first segment of the Harlem Valley Rail Trail, maintained and operated by the New York State Office of Parks, Recreation and Historic Preservation and the Harlem Valley Rail Trail Association, opened in 1996. Metro-North Railroad restored service to Wassaic in 2000, connecting passengers with one of the most scenic rail trails in eastern New York.

# THE HARLEM DIVISION

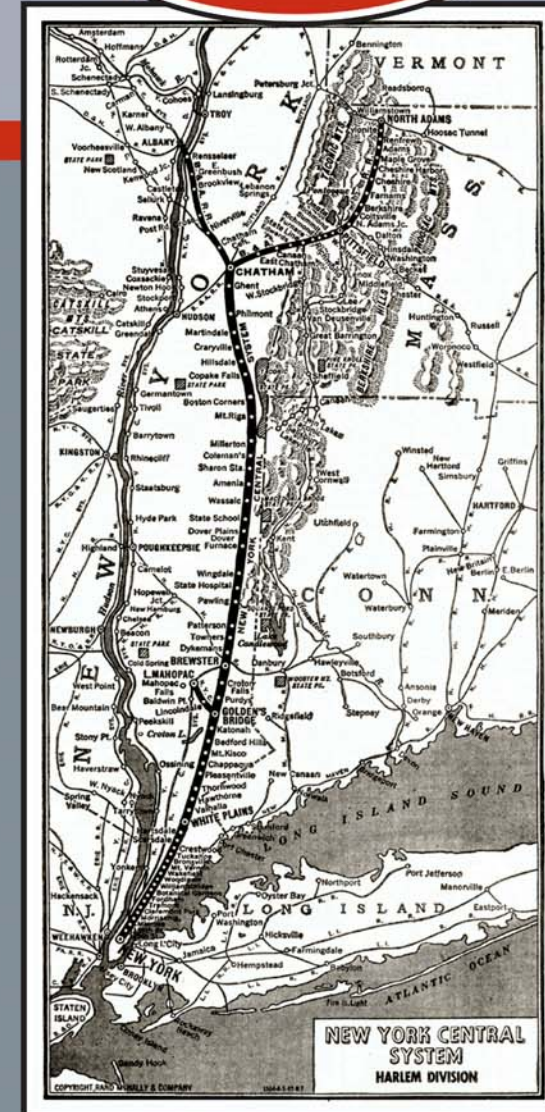
NEW YORK STATE OF OPPORTUNITY  
Parks, Recreation and Historic Preservation



**PASSENGER LINE** This postcard showing people meeting a steam locomotive-drawn train at the Craryville Depot captures the spirit of late nineteenth-century rural Harlem Division passenger service. Harlem Division trains carried a wide variety of passengers: local town shoppers, schoolchildren, New York City business commuters, travelers connecting with trains at Chatham, and tourists heading for all-season recreational destinations. Today, Metro-North Railroad passenger service from New York City ends in Amenia at Wassaic, at the south trailhead for the Harlem Valley Rail Trail. *Source:* Mike Fallon / Copake Auction House



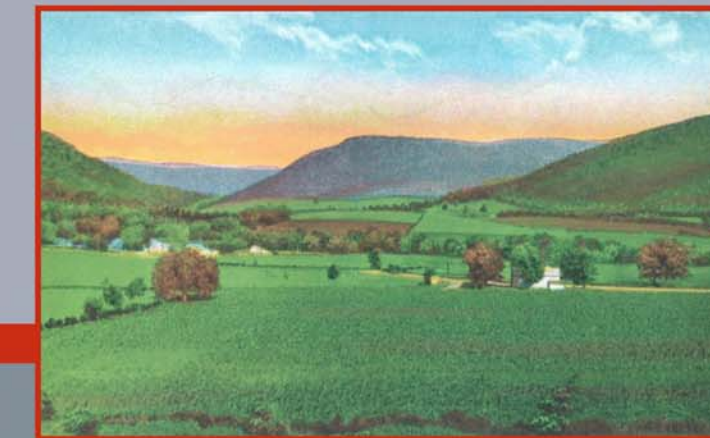
**FREIGHT HAULER** Harlem Division freight trains moved a variety of raw materials and finished goods between rural and urban producers and consumers and interchanged freight with several connecting railroads. Although the Harlem Valley is known today for its bucolic agricultural landscapes, it once hosted busy industries, including several ironworks. The railroad shipped local iron ore, charcoal fuel, and limestone flux to blast furnace plants at Copake Falls, Dover, Millerton, and Wassaic, and delivered raw pig iron to foundries and finished cast-iron products to market. At Iroindale just north of Millerton, the Harlem Division tracks ran under the bridge feeding raw materials to the Millerton Iron Company's blast furnace, shown here in 1880. *Source:* Salisbury Association Collection



**HARLEM DIVISION** 1946 timetable map of Harlem Division stations, branches and connections. *Source:* Pawling Historical Society



**MILK MOVER** The Harlem Division was a vital agricultural artery feeding a constant flow of milk, dairy products, meat, and produce—and ice to cool it all—to New York City for a century. Gail Borden established his first New York Condensed Milk Company processing plant on the line at Wassaic in 1861. Dairy farmers brought fresh milk to processing plants located along the Harlem Division like this Borden creamery at Ghent. Harlem Division trains shipped cold milk to New York City in special cars cooled with ice from area ponds. Harlem Division milk trains included a dedicated nightly fast train from Ogdensburg, New York, via a connection with the Rutland Railroad at Chatham. *Source:* Town of Ghent Historical Archive



**SCENIC ROUTE** The Harlem Valley Rail Trail runs through the Harlem Valley, named after the New York & Harlem Railroad. Known for its scenic beauty, the trail follows the Taconic Mountains for part of its length and passes through quaint villages with views of rolling farmland, woods, and wetlands. The Harlem Valley's camps, hills, lakes, and resorts once offered year-round recreational opportunities reached by the Harlem Division. Today, the rail trail continues the Harlem Division's tradition as a scenic transportation corridor and is a major regional recreational destination. *Source:* Mike Fallon / Copake Auction House

NEW YORK STATE OF OPPORTUNITY  
Hudson River Valley Greenway





## THE ENGINEERING AND HISTORY

## OF BRIDGES AT BLACK GROCERY

**T**HE HARLEM VALLEY RAIL TRAIL crosses over New York State Route 22 and the Roeliff Jansen Kill here at Black Grocery in Copake. The hamlet that once stood here is said to be named for a grocery store that served railroad workers building the first railroad bridge at this location in 1851. The new rail trail bridge erected here in 2022 is one of several spans built at Black Grocery since the New York & Harlem Railroad completed its line between New York City and Chatham in 1852. The story of these bridges reflects the evolution of nineteenth- and twentieth-century railroad bridge engineering, which was driven by the need to carry increasingly heavier locomotives and railroad cars.

The first Black Grocery bridge was a timber trestle, an ancient wooden bridge type with a horizontal deck supported by multiple vertical posts connected by a network of horizontal and diagonal timbers. The New York Central Railroad replaced the Black Grocery trestle toward the end of the nineteenth century, when, like most examples of its type, it had become functionally obsolete.

The next Black Grocery bridge was a Warren deck truss, a riveted steel cage supporting the tracks from below. Truss engineering began with nineteenth-century timber bridges, and by the twentieth century designs like the Warren truss dominated metal bridge construction. This bridge, too, was replaced by the NYCRR as steam locomotives became heavier at the start of the twentieth century.

The last railroad bridge at Black Grocery was a plate girder deck bridge, a riveted steel-plate structure installed by the NYCRR in 1905. This bridge type emerged in the early twentieth century as a standard replacement for short spans. The last train crossed at Black Grocery in 1976, and the girder bridge, long a traffic hazard, was removed in 1991.

The new Harlem Valley Rail Trail bridge at Black Grocery is a bowstring arch truss, a modern prefabricated welded steel trail bridge installed in 2022. This truss form, named for its curved top resembling an archery bow, is a popular design for contemporary long-span trail bridges.

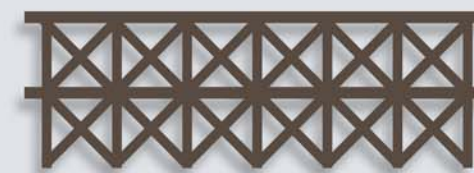
# BLACK GROCERY BRIDGES



**TIMBER TRESTLE** The first Black Grocery railroad bridge was a timber trestle, a simple bridge type with a continuous deck held up by multiple closely spaced posts connected and stiffened by horizontal struts and diagonal braces. Wooden trestles, common on early railroads, were typically short-lived structures, requiring constant maintenance. They were often victims of decay, fire, or obsolescence as locomotive weights increased. The first Black Grocery trestle, built with square timbers in 1851, was later replaced with one using round posts. *Source:* James Bothur Collection



**WARREN DECK TRUSS** The second Black Grocery railroad bridge type was a steel truss, a stiff box of riveted diagonal, horizontal, and vertical members supporting the track from below. This was a Warren-type truss, patented in 1848 by British engineer James Warren and featuring diagonal members in a W pattern, here superimposed in a "double intersection" variation forming a repeated X pattern. This truss design is light, strong, easily prefabricated and erected, and eventually became the most common late nineteenth- and twentieth-century bridge truss type. The Black Grocery truss was built in the 1880s or 1890s. Its original stone abutments were replaced with concrete in 1899 prior to the span's replacement a few years later. *Source:* Ron Vincent Collection



TIMBER TRESTLE



DOUBLE INTERSECTION WARREN TRUSS



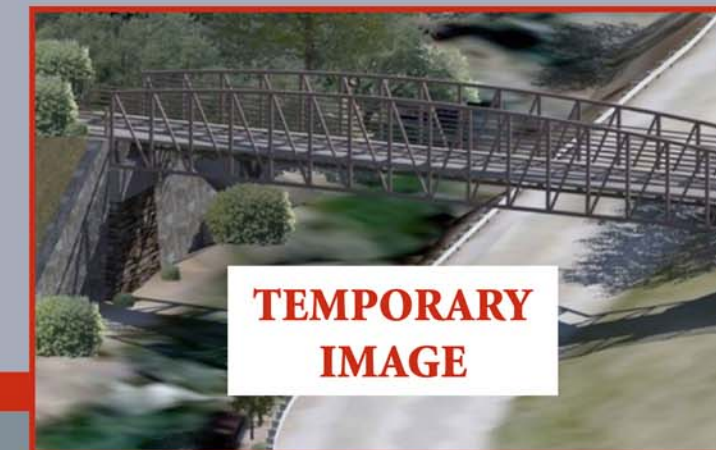
PLATE GIRDER



MODIFIED BOWSTRING ARCH PRATT TRUSS



**PLATE GIRDER BRIDGE** The last Black Grocery railroad bridge type was a riveted steel-plate girder deck bridge erected in 1905 when steam locomotives were becoming heavier. This structure consisted of two long parallel I-beams built from structural steel plates with vertical ribs and horizontal flanges, joined laterally by steel floor beams and diagonal braces. This inexpensive and easily maintained bridge design emerged as a standard type for short spans in the early twentieth century. The last train crossed at Black Grocery on March 27, 1976. The 13-foot, 6-inch clearance and sharp approach turns had been traffic obstacles, and the bridge was removed and the road realigned in 1991. *Source:* David L. Saums



**BOWSTRING ARCH TRUSS** The new rail trail bridge here is a welded prefabricated steel truss in the shape of a bowstring arch. Bowstring truss designs emerged in the mid-nineteenth century. This modified version follows the Pratt truss configuration, patented in 1844 by Caleb and Thomas Pratt, which became a popular nineteenth- and twentieth-century bridge type. To install the new bridge here, workers trucked prefabricated welded sections to the site, bolted them together, and lifted them into place by crane. The bridge officially opened on [TO BE DETERMINED], 2022. *Source:* Milestone Heritage Consulting

