

Steel, Stone, and Backbone: Building New York's Subways 1900-1925

New York Transit Museum, Brooklyn, NY.
Curator: Thomas Harrington

Permanent exhibit

At 722 miles long and 100 years old, the New York City subway system carries 4.6 million riders a day throughout the five boroughs. Built between 1900 and 1936, three private subway companies (Independent Transit, the Brooklyn-Manhattan Transportation, and Interborough Rapid Transit Companies) originated from an idea that dated from the Civil War and a confluence of technology, demographic necessity, and public support.

In *Steel, Stone, and Backbone: Building New York's Subways 1900-1925*, the New York Transit Museum focuses on the workers who built the subway and the forces that led them into the tunnels. The massive influx of people into New York during the late 19th century—especially immigrants and minorities on the lowest rungs of society—provided the labor to tunnel beneath the islands of Manhattan and Long Island with combinations of antiquated and cutting-edge technologies.

Fittingly, the New York Transit Museum is housed in an old subway station in Brooklyn Heights. Beyond the turnstiles are photographs, models, and actual pieces of the public transportation system. Developed by Thomas Harrington in 1997 and updated in 2003 for the subway's centennial, *Steel, Stone, and Backbone* uses historical film clips, artifacts, and contemporary photography to document how the subway transformed the city.

The exhibit correlates the enormous public works undertaking (\$50 million and 30,000 laborers for the initial construction) with rapid development in the city. The opening panels describe how the city "threw its heart into building" parks (Central Park in 1878), bridges (Brooklyn Bridge in 1883), and sky-

scrapers (Flatiron Building in 1902), and detail the city's population explosion. For example, between 1900 and 1910 over 2 million Italian immigrants arrived in the Port of New York and nearly one-half stayed in the area.

The physical confines and materials of *Steel, Stone, and Backbone* simulate the feel of the spaces with which subway construction workers contended. Text and image panels are mounted on unfinished wooden walls and the ceiling is hung with burlap. Contemporary photographs show the new technology used in the subway's creation: jackhammers breaking through the bedrock, compressed air helping to support the tunnels during underwater digging by the "sandhogs," and cast iron rings to create the tube through which the trains travel. Exhibit designer Keith Godard of Studio Works features a spoil cart used for hauling the broken pieces of bedrock as a tangible example of the equipment that removed 3.5 million cubic yards of rock and earth. Next to the cart is a plastic tube filled with layers of sediment to illustrate the geology of the city. Farther along, two wheelbarrows partially filled with rocks demonstrate that, despite technological innovations, much of the work required human muscle.

The issue of ethnic diversity plays subtly throughout the exhibit. Irish, Italians, and African Americans who were responsible for the subway's construction arrived in New York in vast numbers at the turn of the century. The Irish, New York's largest ethnic group at the time and some 40 percent of city government staffing, were most of the subway's foremen, contractors, and labor leaders. Italians were the majority of the excavators or rockmen, who were 70 percent of the subway workforce. An accompanying brochure notes that shrewd negotiations by William Hunter and his Longshoremen's and Mechanics Association secured 500 jobs for African Americans at the outset of the project in 1900. Although images depict diverse workers toiling together on several occasions, the text acknowledges that ethnic segregation was the rule.

Contemporary photography and text create a portrait of men at work. Discussions of how pressure chambers prevented sandhogs from getting the bends are accompanied with images of them emerging from the chambers. Streets were peeled back and trenches dug while teams performed cut-and-cover work in traffic, their hats seen just below grade. Throughout *Steel, Stone, and Backbone*, the effects of construction on the city are highlighted, with pictures of buildings shored up with makeshift wooden scaffolding, including a building with a sign announcing "Business Going on as Usual."

The benefits of such dangerous work seem paltry—day laborer wages in 1915 were \$1.50 to \$2.50 per day—compared to the \$4.81 per day average of 1920. However, for a largely immigrant or migrant population lacking options, the opportunities outweighed the risks. Adjacent to a life-size cutout of a man with a shovel is a sign listing the prices of sundry items and services: an apple was 1¢, a haircut 25¢, a hat \$1.

The end of the exhibit illustrates the influence of the subway on the overall development of New York. When City Hall station opened October 27, 1904, people are shown hopping on the subway cars heading off to work and entertainment. The outer boroughs opened up to development and became accessible to the business centers of the city. The exhibit shows that the subway was integral to the city's growth.

The impact of the subway system extends beyond its speed and convenience. The system inspired music such as "Take the 'A' Train" and co-starred in memorable movies such as "On the Town." The subway defines New York and New Yorkers. *Steel, Stone, and Backbone* uses social and industrial history to provide interpretive insight while attaching human faces to an engineering feat that has become a cultural icon.

Brian D. Joyner
National Park Service

Ironclad Evidence: Stories from the USS Monitor and the CSS Virginia

The Mariners' Museum, Newport News, VA.
Curator: Anna Holloway

March 5, 2004-2005

From the moment the telegraphs began to clatter with news of the Civil War-ironclad duel in Hampton Roads, Virginia, on March 9, 1862, there began a non-stop river of ink written on the ships, the crews, the battle, and its influence on the course of naval architecture and war at sea. Why would the Mariners' Museum devote over 3,000 square feet to retelling a story that has been retold almost every year for the last 140 years?

The museum and its partners are now committed to establishing a \$30 million *USS Monitor Center* dedicated to the display and interpretation of the history of the *USS Monitor* and the 50-plus *Monitor*-type ironclads after the Battle of Hampton Roads. *Ironclad Evidence: Stories from the USS Monitor and the CSS Virginia*, is the Mariners' Museum's first large-scale exhibit dedicated solely to that pivotal naval engagement in 1862. It ties the museum's previous *Monitor* artifact displays with the opening of the center's 40,000 square-foot exhibition and conservation wing in 2007.

The exhibit is divided into four broad themes that examine ship construction, life on board, the battle, and the subsequent loss of both the *Monitor* and the *Virginia*. Through original ship drawings, artwork, models, and personal accoutrements and correspondence, the curator tells the stories of the combatants. Unfortunately, little of the *Virginia* has survived—a piece of iron plate here, some wood fragments there, and more than enough artifacts with dubious provenance—only 5 of the 40 ship-related artifacts are from the *Virginia*.

The *Monitor*'s anchor at the exhibit's entrance is the herald of what follows. The most interesting

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