



Chronology

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from *The Great East River Bridge, 1883–1983*
(New York: Brooklyn Museum, 1983)

1802 February 18: The New York *Evening Post* publishes a petition to the State Legislature by citizens of Manhattan and Long Island citing the need for a bridge between the two islands. The proposal raises much dispute as to the method of constructing a bridge which would not impede shipping on the East River.

1807 February 28: John Stevens, a noted inventor, petitions the State Senate concerning a system of floating bridges to span the Hudson and East Rivers. He later advocates tunnels and permanent bridges, but his proposed designs arouse such opposition on the grounds that they would obstruct navigation that his petition is denied.

1809 February 13: Thomas Pope, a carpenter-architect, invites the New York Common Council to see a model of his “Flying Pendent Lever Bridge.” The plan calls for a single 1,800-foot span soaring 223 feet above the East River, connecting Fulton Street in New York with Fulton Street in Brooklyn. Pope also called it his “rainbow bridge” and described it in *A Treatise on Bridge Architecture* published in 1811.

1829 November 5: A project to build a bridge from the foot of Maiden Lane in Brooklyn, high enough to allow the largest ships to pass under it, is reported in the New York *Gazette and General Advertiser*. The estimated cost is given as \$600,000.

1845 Nathaniel S. Prime, in a *History of Long Island*, records that although a bridge between New York and Brooklyn had been “the great topic of conversation” in the early 1800s, by “now the idea of a bridge is as rare a conception as a ‘fifth wheel to a coach,’ and is about as desirable.”

1857 April 4: *Harper’s Weekly* announces that “a bill is before the Legislature to throw a suspension bridge over the East River from New York to Brooklyn...The plan is pronounced feasible and within the cost of a profitable invention, by Mr. [John] Roebling, the architect of the Niagra suspension bridge.”

1865 John A. Roebling, with the assistance of Wilhelm Hildenbrand, prepares a set of plans for his bridge.

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1866 December 21: At a conference in Brooklyn, State Senator Henry Cruse Murphy, contractor William C. Kingsley, and Judge Alexander McCue reach an agreement that results in the passage of an act by the New York State Legislature (April 16, 1867) providing for the construction of the New York and Brooklyn Bridge. Under the Enabling Act, Brooklyn puts up three million dollars in capital stock; New York contributes only half as much.

1867 April 16: The New York Bridge Company is incorporated.

1867 May 23: The New York Bridge Company appoints John Augustus Roebling chief engineer in charge of construction.

1867 September 1: In a forty-eight page report entitled *To the President and Directors of the New York Bridge Company on the Proposed East River Bridge* Roebling discusses his system of trussing and inclined stays running diagonally from the Bridge tower. He claims that if the proposed four main cables were removed, the Bridge would sink but the trussing and stays would keep it from falling. Despite public and professional incredulity, the plan is subsequently approved.

1869 June 21: The Secretary of War officially informs the Bridge Company that he has approved the plan and location of the Bridge. President Ulysses S. Grant subsequently signs a Federal bill passed by Congress to the same effect.

1869 July 22: John A. Roebling dies at the age of sixty-three as the result of an accident that occurred when he was making observations to determine the exact location of the Brooklyn tower. His son, Col. Washington Roebling, is appointed to succeed him as Chief Engineer.

1870 January 3: Work on the Bridge begins with the tearing out of the spare slips of the Fulton Ferry in preparation for the foundations of the Brooklyn tower.

1870 March 19: The caisson for the Brooklyn tower, built by the engineering firm of Webb and Bell, is launched and towed into position. On June 16, the first blocks of granite are laid on the caisson while excavation continues underneath it. The caisson is finally filled and finished on March 11, 1871.

1870 September 15: The city begins buying land for the Manhattan end of the Bridge, a process that continues until 1896. Final settlement appears not to have been made until well into the 1930s.

1870 December 2: Fire in the Brooklyn caisson necessitates flooding of the caisson, delaying progress for almost three months and costing \$15,000. Col. Roebling and six other men are stricken by “caisson disease.”

1871 May 18: The New York caisson is launched (and is filled and finished by May 1872). Although the Brooklyn caisson hit bedrock at 44_ feet, the foundation

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on the New York side rests on tightly packed sand at 78_ feet. One hundred ten men on the New York side were stricken with caisson disease.

1872 During the summer, Col. Roebling is stricken once more by caisson disease, becoming a nearly helpless invalid and suffering the aftereffects for the rest of his life. From this time on he directs the building of the Bridge from his sickroom, with his wife Emily delivering his orders to the Bridge engineers.

1874 June 5: An act is passed authorizing New York and Brooklyn to assume control of the Brooklyn Bridge while repaying the original subscribers with interest. The Bridge is placed under the management of a board of trustees, ten from each city including both mayors and comptrollers. Brooklyn is to raise two thirds of the funds; New York one third. The bridge thus becomes a public work.

1875 May: The Brooklyn tower is completed.

1876 July: The New York tower is completed.

1876 August 14: Master mechanic E. F Farrington makes the first trip between the towers riding in a boatswain's chair attached to the traveler wire.

1877 February 9: A temporary footbridge between the towers is completed and crossed.

1877 May 29: The first cable wire is drawn across the river.

1878 October 5: The last wire is drawn across the river.

1878 November: Lack of funds causes the first of a number of interruptions in the work. News breaks of a scandal over the supply of faulty wire.

1879 Work commences on the building of the approaches to the bridge.

1882 June 29: The Legislature directs that the cities of New York and Brooklyn pay to the trustees of the Brooklyn Bridge the sum of \$1.25 million "or so much thereof as shall be necessary to complete the Bridge in the proportion of one third from New York and two thirds from Brooklyn."

1883 May 24: The Brooklyn Bridge is formally opened and dedicated. During the course of its construction approximately twenty-seven men had lost their lives, including John A. Roebling. In his speech, Congressman Abram S. Hewitt, later elected mayor of New York, says:

"When we turn to the graceful structure at whose portals we stand, and when the airy outline of its curves and beauty, pendent between massive towers suggestive of art alone, is contrasted with the over-reaching vault of heaven above and the ever-moving flood of waters beneath we are irresistibly moved to exclaim, 'What hath man wrought!'"

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1883 May 30: Decoration Day. Ten thousand holiday sightseers and fifteen members of Company A of the 12th Regiment are on the Bridge when a woman slips and falls on the steps to the Bridge turnstiles. When the ensuing panic and stampede is over, twelve persons, including two children, are dead. This is the first and last major tragedy on the Bridge.

1883 September Cable cars are installed, running on both sides of the promenade next to the roadways. A ride costs a nickel. Other tolls include ten cents for a wagon drawn by one horse (twenty cents if drawn by two horses); two cents apiece for sheep and hogs; and three cents for bicycles.

1888 The electric lights on the Bridge are declared by the Lighthouse Board to be a menace to river navigation. The problem is corrected by equipping them with reflectors.

1888 Tolls for pedestrians are abolished.

1892 A record crowd of almost a quarter of a million people crosses the bridge on Columbus Day, the four hundredth anniversary of the “discovery” of America.

1893 In order to encourage the “noble art of cycling,” the toll for bicycles is reduced to a penny. But cyclists raise such a fuss at having to dismount to pay any toll that, in 1894, it too is abolished.

1896 February 7: The Bridge rides out a 72-mile-per-hour gale, dispersing all misgivings about its ability to withstand windstorms. No subsequent wind has affected its structure.

1898 January 1: Brooklyn becomes a borough of New York City.

1898 Electric trolleys come into service on the Bridge. With their tracks laid on the roadways, traffic on each roadway is squeezed into one lane instead of two. Electric trains of the Brooklyn Elevated Company are also introduced, replacing the cable cars except during rush hours when both kinds of train run on the same tracks (the “Els” using the cable mechanism at rush hours, and electricity at other times).

1898 July 29: At six o’clock in the evening a traffic jam near the Brooklyn end of the Bridge ties up wagons and trolleys all the way back to the Manhattan entrance. Suddenly the Bridge sags a few inches at two points, approximately 250 feet on both sides of the Manhattan tower. On examination, engineers find that several trusses buckled under the roadbed, but they conclude that the damage is harmless, and make no attempt to straighten the kinks. For a few days after the incident the ferries running across the river (eleven now compared with the fourteen that had existed during the building of the Bridge) do a brisk business.

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1901 July 24: Several of the suspender rods near the center of the main span snap because of heat expansion. It is discovered that the joints connecting them to the Bridge's deck lacked "give" because they had not been recently oiled. The rods are pronounced sound by the Bridge engineers, but those nearest the center of the Bridge are replaced with larger ones and the joints are kept oiled.

1903 December 12: Commissioner Gustave Lindenthal of the Department of Bridges proposes to New York Mayor Seth Low that steadily growing traffic on the Brooklyn Bridge indicates a need for an extra deck and two extra trains that, in turn, would require the installation of another set of cables, stays, and suspenders half way up the towers. The plan is abandoned as too expensive, but the traffic problem continues to grow.

1903 December 19: The Williamsburg Bridge to Brooklyn (Lefferts Buck, Engineer) opens. It does little to ease traffic on the Brooklyn Bridge.

1907 Estimates show that half a million people cross the Brooklyn Bridge on an average day.

1908 The cable cars are removed, but additional coaches are added to the elevated trains and the tracks are heavily reinforced, increasing the load on the Bridge. The South Ferry station on the Lexington Avenue subway comes into service.

1909 December 31: The Manhattan Bridge to Brooklyn (Gustave Lindenthal, engineer) opens. For a short time, traffic on the Brooklyn Bridge is relieved.

1915 The New York City Board of Aldermen changes the Bridge's name from the New York and Brooklyn Bridge to the Brooklyn Bridge. The subways begin to run beneath the East River, starting with the I.R.T. line from 42nd Street.

1920 The Seventh Avenue subway at Old Slip (built in 1919), and the B.M.T. line at Whitehall Street and 60th Street, tunnel under the river, but the traffic on the Bridge is between six and eight times heavier than it was when the Bridge opened.

1922 July 3: It is discovered that the two northernmost cables have slightly shifted at the point where they cross the Manhattan tower. The eleven saddles that support the cables have been dragged a little towards the center of the Bridge, and the rollers on which the saddles rest have become rigid with rust, endangering the cables' ability to adjust to changes in weight.

1922 July 6: All motor traffic is barred from the Bridge. Trains are ordered to keep a thousand feet apart, and trolleys a hundred feet, while crossing the Bridge. Grover Whalen, Commissioner of Plants and Structures under New York Mayor John F. Hylan, proposes that the Bridge be rebuilt. Gustave Lindenthal (engineer of the Manhattan Bridge) says there is no danger, and Washington Roebling (now eighty-five and living in retirement in Trenton, New Jersey)

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agrees, saying, “The Bridge is good for another century.” The cables, it turns out, had been designed to slip, and their slipping showed that they were automatically equalizing the load. When the cables ceased moving, fear abated. But the Bridge remained closed except to mass transit and pedestrians.

1925 May: The Bridge is reopened to automobile traffic, but trucks—except for those used for mail and newspaper deliveries—remain banned.

1929 The *SS America* is forced to cut thirty feet off its top mast in order to pass under the Bridge and reach its berth in drydock.

1931 New York Mayor Jimmy Walker receives a note threatening to blow up the Brooklyn Bridge. The note is signed with what appears to be the initials “KKK.”

1935 The *Engineering News-Record* refers to the Bridge as “hardly more than a sentimental landmark.”

1942 June 30: The ferry to Greenpoint, Brooklyn—the last East River ferry in service—goes out of business.

1944 The Bridge’s elevated trains are discontinued.

1945 The Bridge stations and the William Street footbridge to City Hall Park are removed.

1946 After a two-year inspection, a team of bridge engineers concludes that all the Bridge requires is a coat of paint.

1949 The Steinman Company is given the job of rehabilitating the Bridge. The work involves taking up the trolley and “el” tracks and the trusses that separate them from the roadways; widening the two roadways to thirty-foot, three-lane highways; replacing the old roadways with steel mesh and concrete; and laying a new wooden floor on the promenade.

1950 The cost of remodeling the Bridge is estimated at about \$7 million.

1950 January 22: In order to take measurements to determine the exact vertical curve of the Bridge, engineers bring about the first total closing of the Bridge (8:00 A.M. to 3:55 P.M.) in its history.

1950 March 6: Remodeling work begins on the Bridge, and the trolley makes its last run from Manhattan’s Park Row to Brooklyn. The 104 passengers included a Brooklyn couple who had used the trolley for fifty years, an elderly gentleman who had first ridden over in 1898, and a Boy Scout who blew taps.

1952 Three lanes of auto traffic in both directions come into operation, and all truck traffic is eliminated.

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1981 As a precautionary measure, work commences on a project to strengthen the main cables at the anchorages by forcing liquid zinc into the miniscule space surrounding the wires where they meet the anchor. The work is to be completed by 1983. Although a pedestrian is killed in June when a diagonal stay snaps, there appears to be general agreement that the Bridge is good for another hundred years.