
Adaptation

In the early stages of the development of public transportation systems in New York City, all operations were run by private companies. Abraham Brower established New York City's first public transportation route in 1827, a 12-seat stagecoach that ran along Broadway in Manhattan from the Battery to Bleecker Street. By 1831, Brower had added the omnibus to his fleet.

The next year, John Mason organized the New York and Harlem Railroad, a street railway that used horse-drawn cars with metal wheels and ran on a metal track. By 1855, 593 omnibuses traveled on 27 Manhattan routes and horse-drawn cars ran on street railways on Third, Fourth, Sixth, and Eighth Avenues.

Toward the end of the 19th century, electricity allowed for the development of electric trolley cars, which soon replaced horses. Trolley bus lines, also called trackless trolley coaches, used overhead lines for power. Staten Island was the first borough outside Manhattan to receive these electric trolley cars in the 1920s, and then finally Brooklyn joined the fun in 1930. By 1960, however, motor buses completely replaced New York City public transit trolley cars and trolley buses.

The city's first regular elevated railway (el) service began on February 14, 1870. The El ran along Greenwich Street and Ninth Avenue in Manhattan. Elevated train service dominated rapid transit for the next few decades.

On September 24, 1883, a Brooklyn Bridge cable-powered railway opened between Park Row in Manhattan and Sands Street in Brooklyn, carrying passengers over the bridge and back.

New York City's first official underground subway system opened in Manhattan on October 27, 1904. The Interborough Rapid Transit Company (IRT) operated the 9.1-mile long subway line that consisted of 28 stations from City Hall to 145th Street and Broadway.

IRT service expanded to the Bronx in 1905, to Brooklyn in 1908, and to Queens in 1915. The Brooklyn Rapid Transit Company (BRT) began subway service between Brooklyn and Manhattan in 1915. The Brooklyn-Manhattan Transit Corporation (BMT) took over the BRT a few years later.

Private companies also operated the city's earliest motor buses. The Fifth Avenue Coach Company began passenger service between Washington Square and 90th Street in Manhattan with gasoline-powered buses and open-top double-deckers on July 13, 1907.

In 1932, the city's Board of Transportation completed construction of the Eighth Avenue line and created the Independent Rapid Transit Railroad (IND), the first city-run subway service. When the city purchased the BMT and IRT in 1940, it became the sole owner and operator of all New York City subway and elevated lines.

On June 15, 1953, the New York State Legislature created the New York City Transit Authority (now Metropolitan Transportation Authority or MTA) as a separate public corporation to manage and operate all city-owned bus, trolley, and subway routes.
# New York City Transit Timeline

**Quick Reference Guide**

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1. According to DOCUMENT 1, how many modes of public transportation have existed in New York City? List them below:

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2. Which mode of transportation existed for the longest period of time? And the shortest?

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3. Which TWO modes of transportation still exist in New York City today?

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Public transportation in New York City began in the late 1820s with horse power. Omnibuses were oversized stagecoaches that ran along a fixed route. They were meant to seat fifteen passengers, although they were often cramped with more – both inside and on top! The driver stopped when passengers tugged on a strap attached to his ankle.

1. According to the definition above **DOCUMENT 2A**, what powered the omnibuses? What issues might there have been with this power source?

2. How did passengers alert the conductor to stop the omnibus?

3. Describe the problem with Brooklyn omnibus drivers identified in **DOCUMENT 2B**:

4. What does it predict will happen if the problem isn’t addressed?
HORSECARS

Horsecars, streetcars that rode along embedded iron or steel tracks, were designed to carry more people and offer a smoother ride than omnibuses. Passengers asked the conductor, who rode at the back, to signal their stops to the driver by ringing a bell.

Horse-drawn vehicles jammed city streets because their numbers weren’t regulated. In addition, horses were slow, they had trouble climbing hilly streets, they ate lots of hay and grain (and produced lots of manure), and most could only work an average of five years. The deadly outbreak of horse flu caused the death of many horses in 1872 and showed that only one source of public transportation invited disaster.
1. Describe the difference between an omnibus and horsecar (HINT: use DOCUMENTS 1, 2A and 3 for help):

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2. What were some benefits horsecars offered over omnibuses?

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3. What problems still existed from using horses to power this mode of public transportation?

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4. What other dangers can you identify from DOCUMENT 3 that passengers might have encountered when riding horsecars?

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Document 3 - Froger-Doudement, Raoul. Street Scene. Brooklyn Collection, Brooklyn Public Library. ca 1900.
CABLE CARS

New York City’s first cable car line opened in 1883 on the new Brooklyn Bridge. Cable Cars were moved by steam-driven machinery in a powerhouse, which continuously drew a loop of wire cables through a slot beneath the street. When the cable car operator wanted the car to go forward, he gripped the running cable with a special device. When he wanted to stop, he released the moving cable. Cable cars were useful on streets that were too steep for horses. Steam-powered cable became less valuable once electricity became available for trolleys and resulted in ending the run of cable cars in New York City in 1909.
1. According to DOCUMENT 4, when and where did the first cable cars appear?

2. What powered cable cars?

3. What could cable cars do more easily than horsecars?

4. What eventually contributed to the end of the cable cars?
Opening the Bridge Railroad.
After a delay of some months, the bridge railroad was thrown open to the public and the cars were put in operation on schedule time without a hitch. They will probably continue to run without interruption, for the delay has been due to the extraordinary care taken in testing the apparatus in every way in order to secure smoothness and efficiency beyond the chance of accident. The cars run at intervals of five minutes for the present, and can be run more frequently if there is any necessity for it. It will thus be apparent in a very short time from now whether the bridge railroad has a capacity for all the passenger traffic that it will be called on to meet. If it should prove ample for all demands, that fact should have an important bearing upon the policy of the trustees, and should tend entirely in the line that the Eagle has all along favored, namely, to make the bridge free except for railroad passengers. A handsome income should be derived from the cars, sufficient, perhaps, in time to warrant not merely the freedom of the foot and roadways, but even a reduction of the toll on the railroad.

Adaptation

Opening the Bridge Railroad.
After a delay of some months, the bridge railroad was thrown open to the public and the cars were put in operation on schedule time without a hitch. They will probably continue to run without interruption, for the delay has been due to the extraordinary care taken in testing the apparatus to make sure it’s safe. The cars run at intervals of five minutes and can be run more frequently if there is any necessity for it. It will be clear very soon if the bridge railroad has a capacity for all the passengers that want to ride it. The Eagle favors that the bridge be free to cross except for railroad passengers. A handsome income can be made from the [cable] cars fares. The Bridge might earn enough from these fares to take away those currently paid by pedestrians and eventually reduce of the fare on the railroad.
1. According to DOCUMENT 5, why was opening the railroad over the Brooklyn Bridge so delayed?

2. The article explains that the cars will run every five minutes. Why might there be reason to run them more frequently?

3. Who does the Brooklyn Daily Eagle think should have to pay to cross the Brooklyn Bridge?

4. What does the author argue will be gained by making railroad passengers pay for their rides?
TROLLEYS

For 70 years, trolleys ran in all five boroughs of New York City. Trolleys operated by electrical power delivered through wires running overhead or underground. They were faster and cleaner than horsecars and cheaper to build and operate than cable cars. However, the rapid increase in fuel-powered cars and trucks in the 1920s doomed the trolleys. Running on fixed tracks in the middle of the city’s streets, trolleys became a nuisance in traffic and getting on and off them was dangerous. During the 1930s and 40s, motor buses gradually replaced trolleys, though some trolley routes continued into the 1950s.

Document 6 - Third Avenue Trolley. The Brooklyn Collection, Brooklyn Public Library. 1898.
1. How were trollies powered? Circle the part of the trolley in DOCUMENT 6 that would have been used to power it.

2. List TWO reasons why trollies were better than some earlier modes of transportation?

3. Where did trollies run and why did this make getting on and off them so dangerous in the early 20th Century?

4. Reflect on your knowledge of what it's like to take the subway today. How might trollies have been better than the subway? How might they be worse?
DEATH BY THE TROLLEY.

THE GHASTLY RECORD IT HAS MADE IN BROOKLYN.

Look in Both Directions Before You Cross the Street—A List of Those Who Have Been Killed in This City. Many Children Slaughtered.

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1. Describe what is happening in DOCUMENT 7’s image:

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2. What point of view do you think DOCUMENT 7 is trying to show to the reader? Is it a positive or negative view of trolleys?

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3. What advice does the headline give to readers to protect themselves from trolleys?

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New York was the first American city to use motor buses for public transit. In 1905 the Fifth Avenue Coach Company introduced gasoline-powered double-decker buses that operated on crosstown and uptown lines. Within two years, it had replaced all of its horse-drawn vehicles with motor buses.

Motor bus service expanded greatly in the 1920s and 30s when Mayor Fiorello LaGuardia ordered that they replace all electric-traction vehicles, including trolleys. More than 700 buses were purchased for the Manhattan conversion in 1935-36 that established the standard in bus design, with two doors, a rear-mounted engine and transmission, and a hoodless front end. Today, nearly 5,000 buses operate in all five boroughs, covering almost 3,000 miles of routes.
1. Use DOCUMENT 8 to describe what New York City’s first motor buses looked like:

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2. How were motor buses powered?

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3. Why do you think Mayor La Guardia preferred motor buses over electric-traction vehicles?

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4. What mode of transportation have motor buses evolved into today?

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________________________________________________________________________
1. What year was this photo taken?

2. Are Bay Ridge residents happy or saddened by motor buses in their neighborhood? Cite evidence from DOCUMENT 9 to support your position:

3. What would have made a motor bus more comfortable than other modes of transportation prior to 1949?

4. What similarities can you identify between the motor bus in this photo and the versions we currently find in New York City today?

ELEVATED TRAINS (EL)*

New York City’s earliest form of rapid transit was the elevated railway, or el. New York Elevated Railway was introduced to replace cables in 1871 and ran on tracks nearly three stories above city avenues.

Els drastically changed the way in which New Yorkers viewed their city and lived their lives. By 1880 most Manhattan residents were within a ten-minute walk from an el. They allowed residents to live, work, and shop in different parts of the city and interact with people from other neighborhoods. Although the els were dirty and noisy and blocked sunlight from the streets below, they allowed people to travel quickly and cheaply throughout the city like never before.

By 1903 the elevated systems changed from steam to electric power, offering a smoother, cleaner ride.
1. Describe what an elevated train (el) looks like according to Document 10:

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2. How do you think els changed the look of Brooklyn's streets (HINT: examine previous documents to compare and contrast what the streets looked like before the el's were built)?

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3. Document 10 claims that the el's were the first form of “rapid transit.” List TWO reasons why this mode of transit was so much faster than previous examples:

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4. List TWO positive impacts the el had on residents’ lives. List TWO negative impacts.

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SUBWAY

To ease New York City's demand for rapid transit, city authorities determined to build a subway that would meet two objectives. First, it would quickly move people about in crowded Manhattan. Secondly, it would move them out of crowded Manhattan. Subway lines would extend out to vast tracts of undeveloped land, where new neighborhoods could be created, helping to turn the cramped island of Manhattan into a sprawling metropolitan area.

The Interborough Rapid Transit Company (IRT) began construction on the first subway line in 1900, and less than four years later, it began moving New Yorkers beneath city streets, carrying over 100,000 riders on its very first day. Subways, traveling at close to 40 miles per hour, were much faster than trolleys (6 miles per hour) and elevated trains (12 miles per hour). Passengers appreciated choices between local and express service and fewer weather-related delays than street transportation.

Most of the subway system we know today was built from 1913 to 1931 when the Brooklyn-Manhattan Transit Corporation (BMT) was formed to build new subway lines and Independent Subway System (IND) was founded to replace many older El trains. In 1940 the city combined all three subway companies and it became part of the Metropolitan Transportation Authority when the MTA was created in 1968.

New York City's subway system is one of the busiest and most extensive in the world, serving nearly 5 million passengers every day with 26 train lines operating on over 800 miles of track. The subway runs 24 hours a day, seven days a week, and connects all boroughs except Staten Island. Plans included expanding the system to Staten Island, but the route was never built. However, Staten Islanders can depend on the Staten Island Railway, which became part of MTA in 1971, linking 22 communities across the island.

**THE BROOKLYN DAILY EAGLE**

NEW YORK CITY • THURSDAY, JANUARY 9, 1908 • VOL. 60 • NO. 8 • 20 PAGES, INCLUDING TUNNEL AND FUTURE SECTIONS • THREE CENTS

TUNNEL IS OPEN: REJOICING IN BROOKLYN

A Great Celebration of the Inauguration of Rapid Transit Under the East River.

THOUSANDS TRAVEL.

Subway Trains Operate on a Perfect Schedule Between the Borough Hall and the Battery.

SPEECHES, BOMBS AND FLAGS

Public Ceremonies on Borough Hall Steps Attended by a Great Throng—The Borough in Gay Attire.

GREAT THRONG AT BOROUGH HALL, LISTENING TO THE SPEECHES.
1. What is **DOCUMENT 11** and when was it made?

2. What is *The Brooklyn Daily Eagle* celebrating?

3. Examine the photo and headlines in **DOCUMENT 11** and describe how Brooklyn celebrated the occasion:

4. What two locations is the subway traveling between? Why is this significant?
1. Examine **DOCUMENT 12**. What do you think the B.M.T. was?

2. Identify what the black and red solid lines represent on the map. Did Brooklyn have more elevated or underground lines?

3. What do the dotted lines represent? What does this tell you about subway construction in Brooklyn during the early 20th Century?

4. What areas of Brooklyn did not have public transportation? What would you guess these areas looked like (crowded, rural, suburban)?

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1. The Verrazano-Narrows Bridge connects Brooklyn and Staten Island. How do you think people crossed the New York Harbor from Brooklyn to Staten Island before it was built?

2. When the Verrazano-Narrows Bridge was completed, it stretched over two miles, making it the longest bridge in the world at that time. What impact do you think building this bridge had on New York City?

3. In 1950 the population of Staten Island was 191,555. In 1970, six years after the Verrazano-Narrows Bridge was completed, the population of Staten Island nearly doubled to 295,443 people. Why do you think that was?
GLOSSARY

**Apparatus:** a complicated instrument or device

**Cable-powered:** powered by steam-driven machinery that continuously draws a loop of wire cables through a slot beneath the street

**Capacity:** the largest amount or number that can be contained.

**Crosstown:** transit that moves across the city from east to west

**Dominate:** to have controlling power over

**Double-decker:** bus that has two levels separated by a stairway

**Drastically:** acting rapidly, severe in effect

**Elevated Railway:** Railway that operates above ground

**Embed:** to enclose or surround

**Extensive:** having wide or large extent

**Extraordinary:** so unusual as to be remarkable

**Fleet:** a group of vehicles that move together or are under one management

**Handsome:** very large, sizeable

**Hitch:** jerky movement or pool, unexpected stop or obstacle

**Interval:** a period of time between events

**Manure:** horse poop

**Metropolitan:** characteristics of something that lives in a large important city

**Nineteenth (19th) Century:** the century from 1800-1899

**Nuisance:** something annoying or troublesome

**Omnibus:** oversized stagecoach that runs along a fixed route and carries 15 passengers

**Powerhouse:** a building in which electric power is generated

**Sprawling:** spread out

**Stagecoach:** a coach pulled by horses that carries passengers and runs on a schedule between stops