

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM**

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC Tremont Street Subway

AND/OR COMMON Tremont Street Subway; "Green Line"

2 LOCATION

STREET & NUMBER beneath Tremont and Boylston Streets along Boston Common and Public Garden

CITY, TOWN Boston CONGRESSIONAL DISTRICT Ninth

STATE Massachusetts CODE 025 COUNTY Suffolk CODE 025

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL	<input type="checkbox"/> PARK
<input checked="" type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT	<input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT	<input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input checked="" type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL	<input checked="" type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY	<input type="checkbox"/> OTHER:

4 OWNER OF PROPERTY

NAME Massachusetts Bay Transportation Authority (M.B.T.A.)

STREET & NUMBER 500 Arborway

CITY, TOWN Jamaica Plain VICINITY OF Massachusetts

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC. Suffolk Registry of Deeds

STREET & NUMBER Suffolk County Court House, Somerset Street

CITY, TOWN Boston STATE Massachusetts

6 REPRESENTATION IN EXISTING SURVEYS

TITLE Historic American Engineering Record

DATE 1973 FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR SURVEY RECORDS Library of Congress, Division of Prints and Photographs

CITY, TOWN Washington STATE District of Columbia

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input checked="" type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Boston's Tremont Street Subway project, supervised by Chief Engineer Howard A. Carsen, called for a subway tunnel with three main branches leading into the central business district, two from the south and one from the north. The main southern incline (entrance ramp) was to be located on Boylston Street at the Public Garden, the second southern incline at the intersection of Tremont Street and Broadway (then called Pleasant Street), connecting with the main line at Boylston. The northern branch would run from Park Street to an incline beyond Haymarket Square, leading up to North Union Station.

European engineers had perfected two methods of subway construction. London pioneered the underground "tube," excavated by deep tunneling without disruption of surface traffic; the tunnel was pieced together within the bore with iron segmental linings, forming a secure and watertight structure. Paris had made extensive use of masonry arches in subway construction; the tunnel was located immediately below ground level and required surface excavation for the length of the route. This method had a serious drawback, however: the tunnel was not a self-contained structure and thus could not withstand underground disruption adjacent to it. Therefore Boston developed a hybrid of the European methods, a steel and concrete tunnel built chiefly in open excavation but independent of lateral support. This technique soon afterward became standard practice in nearly all American subway construction.

Ground was broken for the Tremont Street Subway on March 28, 1895. The segment between the Public Garden incline and the Park Street terminal went into operation on September 1, 1897; the Tremont-Broadway to Boylston branch was added a month later; and by the autumn of the following year the full system (Public Garden to North Station with an alternate northern loop through Adams Square) was in service (see accompanying photocopy of a plan of the Boston subway system as constructed by August 1898). The completed underground system contained five stations (Boylston, Park, Scollay, Adams, and Haymarket) and 5 miles of track covering a distance of 2-2/3 miles. To maintain the quality of the air, ventilation shafts were installed at regular intervals. Incandescent lamps mounted on the walls of the tunnel and in the stations provided light. While the subway itself proved an immediate success, the entrance and exit kiosks drew negative comment. The Classical Revival structures at Boylston and Park Streets were described as "resembling mausoleums" and that at Scollay Square, a baroque structure with central tower carrying four clock faces and a Chatri-type dome, was characterized as "pretentiously monumental... unnecessary and in bad taste."

Expansion of the Tremont Street Subway began in 1912 when the line was extended from North Station to Lechmere Square in Cambridge on an elevated structure and an ornamental viaduct across the Charles River. A second extension opened in 1914, running southwest under Boylston Street, the Back Bay Fens, and Commonwealth Avenue to Kenmore Square (then Governor Square). The Public Garden incline was closed at that time and a new one was constructed in Boylston Street to conform to the alignment of the extension. Arlington Street Station was opened in 1919 to serve Back Bay patrons, Lechmere Station in 1922 to create a subway-surface transfer point. In 1932 all streetcars were removed from Kenmore Square to run through new subway extensions to St. Mary's Street in Brookline and Blandford Street in Brighton. The last major segment of the subway, the Huntington Avenue extension, went into service in 1941.

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8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1897-98

~~BUILDING/ARCHITECT~~ Chief Engineer: Howard A. Carsen

STATEMENT OF SIGNIFICANCE

Boston's Tremont Street Subway was the first underground system for public transportation in the United States and only the fifth such system in the world. The initial section of the line went into service on September 1, 1897, and by autumn of the following year the entire Boston subway system, as then constructed, was in operation. The completed system contained more than 5 miles of track covering a distance of 2-2/3 miles. The obvious success of the subway--approximately 50 million passenger rides were credited to the line during its first year of full operation--led quickly to the building of a similar system in New York City. Since then the subway has continued to be an integral part of public transportation in large American cities.

The original Tremont Street Subway has been incorporated into the "Green Line" of Boston's present and much enlarged subway-surface system, operated by the Massachusetts Bay Transportation Authority. Sections of the 1897-98 line have been discontinued or relocated and equipment in the remaining sections has been updated, but that portion of the system between Court Street and Charles Street remains much as it was when constructed. Though Park Street Station, a major interchange for the present system, has been enlarged on the northbound side, Boylston Street Station and the entrance and exit kiosks at both Park and Boylston Street are essentially unaltered.

Historical Background

In 1894 the Massachusetts General Court authorized the formation of a public agency, the Boston Transit Commission, which was to develop and implement a plan to improve that city's transit system. The chief problem was that streets in the business district were simply too narrow to provide adequate clearance for the number of horsecars operating in the area. After considering several alternatives, including an elevated railway, the Commission decided in favor of what one newspaper called the "European transit system"--a valid description since London, Glasgow, and Paris all had operating subway systems at that time. While merchants and leading citizens were generally opposed to the project, the public supported the idea of a subway and approved the start of construction in 1895 by referendum.

The Boston project, directed by Chief Engineer Howard A. Carsen, called for a subway tunnel for trolley cars with three main branches leading into the central business district, two from the south and one from the north. Much of the construction work was done at night to insure as normal a flow of surface traffic as possible. There were numerous problems including inaccurate or nonexistent maps of sewer, water, and gas lines; beds of quicksand; an explosion in the excavation which killed nine; and reinterment of the remains of 910 bodies exhumed as the excavators worked their way through colonial burial grounds.

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9 MAJOR BIBLIOGRAPHICAL REFERENCES

See continuation sheet.

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY approximately 6 acres

UTM REFERENCES

A	1,9	33,01,0,0	4,6,9,11,9,0	B			
	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
C				D			

VERBAL BOUNDARY DESCRIPTION

See continuation sheet.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME/TITLE Polly M. Rettig, Historian, Landmark Review Project; original form prepared by S. Sydney Bradford, Historian, 5/13/63

ORGANIZATION Historic Sites Survey, National Park Service DATE 6/14/76

STREET & NUMBER 1100 L Street NW. TELEPHONE 202-523-5464

CITY OR TOWN Washington STATE District of Columbia

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL STATE LOCAL (NATIONAL HISTORIC LANDMARKS)

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

FEDERAL REPRESENTATIVE SIGNATURE N/A National Historic Landmark

TITLE _____ DATE _____

FOR NPS USE ONLY	
I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER	
DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION	DATE <u>12/7/77</u>
ATTEST:	DATE
KEEPER OF THE NATIONAL REGISTER	

NATIONAL HISTORIC LANDMARKS

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(Description)
Tremont Street
Subway

CONTINUATION SHEET

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All of the Tremont Street Subway was absorbed into Boston's expanded subway system (administered by the Metropolitan Transit Authority from 1947 to 1964 and since that time by the Massachusetts Bay Transportation Authority) and is now generally known as the "Green Line." Two sections of the original subway have been removed from service. The segment from the Tremont-Broadway incline to Boylston was abandoned in 1962. After 1963 the alternate route through Adams Square was abandoned, Scollay Square Station was eliminated, and the main route was realigned slightly to run through a new Government Center Station and tunnel. Equipment in the remaining sections of the original subway has been updated but few structural changes have been made.

Park Street Station, now a major transfer point for the expanded system, has been enlarged on the northbound side, but the Boylston Street Station is essentially unaltered. Original Classical Revival entrance and exit kiosks still stand along the Tremont Street edge of the Boston Common above both the Park and Boylston Stations. Designed by Edward M. Wheelwright, the rectangular stone structures carry sky-lighted hipped roofs. Decorative elements include rusticated pillars at each corner and full entablatures with dentil bands. Rows of windows are recessed into the upper portions of three elevations on each, the doorways in the fourth.

The Central Area Systems Study prepared for the M.B.T.A. in 1971 indicates that the "Green Line" will not be converted from subway (streetcar) to rapid transit operation until the end of the present century and then only if passenger volume justifies the change. At the present time both a Station Modernization and a Green Line System Improvement Program are underway. The effect of the former on the original Tremont line will be most visible at Park Street Station. The latter involves comprehensive upgrading of track and roadbed, structures, power, signals, and communication. In addition, existing streetcars will be refurbished and new light-rail articulated cars will be placed in service.

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(Significance)

Tremont Street

CONTINUATION SHEET Subway

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Despite these and other delays, the first section of the new system opened on September 1, 1897, at 6:02 a.m. when car 1752 from Allston entered the Public Garden incline; three minutes later it ended its historic run at the Park Street platform. The second southern branch, from the intersection of Tremont Street and Broadway to Boylston Station opened on October 1 and the final section from North Station to Park Street went into service on September 3, 1898. Construction costs for the entire system totalled nearly \$5 million.

The impact of the subway on Boston was enormous. During its first year of full operation the system was credited with approximately 50 million passenger rides, more than four times the number handled by London's subway in its first year. The removal of streetcar tracks on Tremont Street from Scollay Square to Boylston Street and on Boylston from Tremont to Charles brought immediate relief from choking traffic congestion in the heart of the city. Further, from 200 to 400 more cars an hour were able to travel through the business district at peak traffic periods. Businessmen reported substantial increases in sales, a consequence of the higher passenger capacity of the subway. Irregularities in suburban service were eliminated when long crosstown routes were abolished and the respective cars were instead turned back at the interchange points in the subway. In general the subway pleased everyone, including President William McKinley, who toured the system in 1899 and pronounced it "a grand thing."

The need for a continuous route from Charlestown to Roxbury brought rapid transit trains from Boston's newly completed elevated railway into the subway in 1901. Entering at North Station, the trains ran through Haymarket, Scollay, Park, and Boylston Stations on the outside rail and returned to the elevated structure over a ramp beyond the Tremont-Broadway incline. However, there were continuous problems in operating rapid transit trains in a system constructed for smaller surface equipment, including the high-level wooden platforms which reduced passenger mobility and caused frequent accidents in the stations, and the tight clearances, sharp curves, and steep grades of the subway itself. By 1908 the trains had been removed to their own tunnel under Washington Street (the "Orange Line" of the present M.B.T.A. system) and streetcar operation in the subway returned to normal.

The first major change in the Tremont Street Subway was made in 1912 when the line was extended from North Station to Lechmere Square in Cambridge on an elevated structure and an ornamental viaduct across the Charles River. The last major segment of the subway, the Huntington Avenue extension, went into operation on February 16, 1971 (see physical description for summary of system alterations). In 1947 the Massachusetts General Court authorized the formation of the Metropolitan Transit Authority which assumed responsibility for operation of the subway. The M.T.A. was abolished in 1964 and its functions were transferred to a new Massachusetts Bay Transportation Authority.

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Tremont Street

CONTINUATION SHEET Subway

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The Tremont Street Subway continues to function as part of the "Green Line" of the M.B.T.A.'s expanded subway-surface system, which hauls more passengers per day than any other M.B.T.A. facility. The Central Area System Study prepared for the M.B.T.A. in 1971 indicates that conversion of the subway to rapid transit operation will not take place until the end of the present century and then only if patronage warrants such a change. The programs of station and system improvement now being carried out on the "Green Line" reinforce the probability of continued streetcar operation in Boston for many years.

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(Bibliography & Boundaries)

Tremont Street

CONTINUATION SHEET Subway

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9. MAJOR BIBLIOGRAPHICAL REFERENCES

Clarke, Bradley H. "Diamond Jubilee of America's Oldest Subway," Rollsign
(publication of the Boston Street Railway Association), August-September,
1972.

Cudahy, Brian J. Change at Park Street Under (Brattleboro, Vermont, 1972).

Maltbie, Milo R. "Rapid Transit Subways in Metropolitan Cities," Annual
Report (1904), Smithsonian Institution.

Miller, John Anderson. Fares Please! From Horsecars to Streamliners
(New York, 1941).

10. VERBAL BOUNDARY DESCRIPTION

The boundaries of the national historic landmark designation for the Tremont Street Subway, Boston, Massachusetts, are those of the outer lines of that portion of the Massachusetts Bay Transportation Authority's "Green Line" system of tunnels and stations lying between Court Street on the east and Charles Street on the west, representing the longest continuous portion of the original system still in regular operation (see accompanying photocopies of Massachusetts Bay Transportation Authority route map, dated 1967, and of a plan of Boston subway system as constructed by August, 1898). Also included in the landmark designation are the original entrance and exit kiosks still standing on the north side of Tremont Street above the Park Street and Boylston Street Stations.

Note: The point used in determining the U.T.M. reference for this landmark is the location of the exit kiosk at Park Street Station.

TREMONT STREET SUBWAY
 Boston, Massachusetts

National Historic Landmark
 Boundary

JULY 1967 DRAWN BY THE BOSTON REDEVELOPMENT AUTHORITY

