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NPS Form 10-900
(Oct 1990)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Registration Form**

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer to complete all items.

1. Name of Property

historic name Substation 219
other name/site number Harlem Substation

2. Location

street & number 309 West 133rd Street [] not for publication
city or town New York [] vicinity
state New York code NY county New York code 061 zip code 10030

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements as set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. ([] See continuation sheet for additional comments.)
[Signature] 9/19/05
Signature of certifying official/Title Date
State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. ([] See continuation sheet for additional comments.)
Signature of certifying official/Title Date
State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:
 entered in the National Register
[] see continuation sheet
[] determined eligible for the National Register
[] see continuation sheet
[] determined not eligible for the National Register
[] removed from the National Register
[] other (explain) _____
Signature of the Keeper Edson H. Beall Date of Action 2-9-06

Substation 219

New York County, New York

Name of Property

County and State

5. Classification

Ownership of Property

(check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property

(check only one box)

- building (s)
- district
- site
- structure
- object

Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
_____	_____	Buildings
_____	_____	Sites
1	0	Structures
_____	_____	Objects
1	0	TOTAL

Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing)

Historic Resources of the New York
City Subway System

**Number of contributing resources
previously listed in the National Register**

0

6. Function or Use

Historic Functions

(Enter categories from instructions)

Transportation/rail-related

Government/public works

Current Functions

(Enter categories from instructions)

Transportation/rail-related

Government/public works

7. Description

Architectural Classification

(Enter categories from instructions)

Modern Movement/

Art Deco

Materials

(Enter categories from instructions)

Foundation Concrete

Walls Brick, concrete

Roof Steel, concrete

Other Decorative finishes: brick, limestone

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets)

See continuation sheet

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section 7 Page 1

Substation 219
Name of Property
New York County, NY
County and State

7. Narrative Description

Substation 219 (Harlem Substation) is located at 309 West 133rd Street between Frederick Douglas Blvd and St. Nicholas Avenue in Harlem. The substation was built in 1932 to provide power for the 8th Avenue Line of the newly opened IND Independent Subway System. It is aligned in a north-south direction along West 133rd Street. The station is rectangular in plan and measures approximately 50 feet in width and 100 feet in length.

General Characteristics and Construction Methods

The construction of IND Substations in the early 1930s marked the end of the manually operated substation. All but five of the 75-plus stations built for the IND system used mercury arc rectifiers in place of the manually operated rotary converters (Payne, 48). These rectifiers functioned by placing a mercury electrode in contact with mercury vapor – a process that resulted in the current being conducted in only one direction. The most conspicuous change seen in the design of the IND substations was the lack of windows and as a result natural light. The majority of the IND substations built after 1932 were smaller underground vaults that used a single mercury arc rectifier. The smaller type of station allowed the power to be more evenly spaced along the line.

The above ground IND substations were constructed in a simple Art Deco style. Brick facades featured ornamental limestone and aluminum doors embossed with geometric and sunburst patterns (Payne, 49). One consistent element found throughout the IND stations is the ornamental limestone door surround carved with zig-zag designs and topped by a tall inscribed lintel that reads, “CITY of NEW YORK” and lists the substation name.

Exterior

The Harlem Substation (#219) is a single-story, double-height masonry building constructed in the Art Deco style on an infill lot (Photo 1). The main façade which faces West 133rd Street is topped by a low brick parapet that is capped by a band of limestone coping. Below this band is a frieze that is comprised of diamond-shaped limestone pieces and a chevron pattern in brick.

The symmetrically arranged facade is centered on a monumental portal with double doors - (they include a human-scale door cut out). The doors are clad in aluminum and are embossed with Art Deco-style geometric motifs (Photo 2). The door surround is a wide

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National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section 7 Page 2

Substation 219
Name of Property
New York County, NY
County and State

band of limestone decorated with Art Deco-style carvings and the familiar "City of New York Harlem Substation" nameplate (Photo 3). The expansive variously-colored brick façade is decorated with four columns of brick bands and a subtle, vertical diamond pattern accented by recessed mortar joints. At the time of this survey (2004) there was extensive work being done on the steel framework of the façade. Large vertical sections of the brick have been removed in order to access the structural steel below.

The entire elevation is set on a massive, four-foot tall stone plinth that has been faced with cement. The front facade has varied brown-toned bricks set in courses in a diamond pattern (also emphasized by recessed vertical mortar joints) and four vertical bands.

The side and rear facades have no fenestration and only the rear façade shares the same brick cladding seen on the façade.

Interior

The main portion of the interior is a large, street-level, windowless volume. The ceiling is a flat concrete slab, the walls are painted brick and the floor is also a concrete slab. The original Cleveland overhead crane still runs the entire length of this space on massive steel girders. Solid state rectifiers have been installed to replace the rotary converters that once dominated this space. A fresh air intake plenum in the penthouse connects to a wide metal duct which runs along the back wall of the main space to the basement, where the air was circulated out of the station through the spinning action of the rotary converters. Some original equipment remains in this space including DC-circuit breaker panels and signal transformers. The full basement also contains some of the original equipment and is accessed via a spiral metal staircase located in the southeast corner (Photo 4). The equipment still left in the basement includes the massive rocker switches (Photo 5) and circuit breakers of "high tension alley" (Photo 6).

Substation 219

New York County, New York

Name of Property

County and State

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property.
- G** less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance

(Enter categories from instructions)

- Transportation
- Architecture
- Engineering
- Community Planning and Development

Period of Significance

1932

Significant Dates

1932

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal Agency
- Local Government
- University
- Repository name: NYC Transit Archives
- NYC Landmarks Preservation Commission

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section 8 Page 1

Substation 219
Name of Property
New York County, NY
County and State

8. Narrative Statement of Significance

As part of the Multiple Property Submission of the Historic Resources of the New York City Subway System, Substation 219 (Harlem Substation) is significant under Criterion A in the areas of transportation and community planning and development. The station also meets Criterion C in the areas of engineering and architectural design. The Harlem Substation was constructed in 1932 to provide power to the 8th Avenue Line of the IND System. The Harlem Substation retains a relatively high degree of integrity of location, design, setting, materials, workmanship, feeling, and association, and is significant at the local level.

Substations play a vital role as part of the New York Subway system. A substation is an electrical plant built to convert high voltage alternating current (AC) to low voltage (about 600 volts) direct current (DC) used to provide traction power for the trains. Power was generated at a central station. The technology has changed over the years. Originally, large rotary converters were used and housed in the large buildings as in the case of the original IRT and BMT substations. By the time the IND was built, mercury arc rectifiers (MRCs) became the state-of-the-art technology and most of the original IND substations are of this type. The building of the city-owned IND system brought significant changes in the supply technology; instead of generating its own 11,000 volt 25 cycle, the city opted to purchase 13,200 volt 60 cycle AC from Con Edison (who coincidentally had purchased the original IRT powerhouse on West 59th Street in Manhattan).

The above-ground IND substations are usually housed in masonry structures designed in a distinctively Art Deco tradition prevalent at the time, much like the telephone company buildings of the same era. Like other IND substations, this one is architecturally notable for its highly articulated Art Deco facade of brick and limestone, which masks its true function of converting power for the subway system. Art deco motifs are found throughout the facade design including: basketweave brick patterns, pressed geometric patterns on the metal-clad doors, and stylized lettering (bearing the name of the substation carved in the limestone frames over the main portal).

Although much of the original equipment has been removed and replaced, the Harlem Substation is architecturally and historically significant in the areas of architecture, transportation, and engineering. It opened in 1932 to serve the new IND system, which was built between 1932 and 1940.

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National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section 8 Page 2

Substation 219
Name of Property
New York County, NY
County and State

Substation 219 supplies power to the IND lines from West 125th Street to West 141st Street as well as the Circuit Breaker House on West 133rd Street. This building stands in a block that has been entirely replaced by a 20-story, tile-faced apartment building complex that also includes playgrounds and gardens one story above sidewalk level with some commercial frontage. This 1970s development surrounds the Harlem Substation on three sides. Across the street are four to six-story masonry tenement buildings that dominate the character of this neighborhood.

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section 9 Page 1

Substation 219
Name of Property
New York County, NY
County and State

9. Bibliography

Cudahy, Brian. *A Century of Subways: Celebrating 100 Years of the New York City's Underground Railways*. New York: Fordham University Press, 2003.

Hood, Clifton. *722 Miles: The Building of the Subways and How they Transformed New York*. Baltimore: Johns Hopkins University Press, 1993.

Interborough Rapid Transit Company. *The New York Subway: Its Construction and Equipment*. 1904. Reprinted on website managed by David Pirmann (2004). Retrieved 03/14/04 from source: <http://www.nycsubway.org/irt/irtbook/>.

National Park Service, Department of the Interior Historic American Engineering Record NY-122, "Interborough Rapid Transit Subway (Original Line): The NY Rapid Transit Decision of 1900: Economy, Society, Politics" prepared by Walter B. Katz, 1979.

New York City Landmarks Preservation Commission. *IRT Subway System Underground Interior Designation Report*. New York: NYC LPC, October, 1979.

Orlando, Barbara. "Recapturing the Past: Station Architecture," *At Your Service: MTA New York City Transit Employee Newsletter*, March, 2004.

Parsons, Brinckerhoff, Quade & Douglas, Inc., Historical Perspectives, Inc. and Robert E. Olmstead, P.E. "Phase I: Reconnaissance Level Historical Survey of Transit Authority Properties," June, 1991.

Payne, Christopher. *New York's Forgotten Substations: The Power Behind the Subway*. New York: Princeton Architectural Press, 2002.

Substation 219

New York County, New York

Name of Property

County and State

10. Geographical Data

Acreeage of Property Less than 1 acre

UTM References

(Place additional UTM references on a continuation sheet.)

1	<u>18</u>	<u>588670</u>	<u>4518600</u>	3			
	Zone	Easting	Northing		Zone	Easting	Northing
2				4			

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By (*See Continuation Sheet for authors*)

name/title Contact: Kathleen A. Howe, Historic Preservation Specialist

organization NYS Office of Parks, Recreation & Historic Preservation Date March 30, 2004

street & number Peebles Island, PO Box 189 Telephone 518-237-8643 ext. 3266

city or town Waterford state NY zip code 12188

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

- A **USGS map** (7.5 or 15 minute series) indicating the property's location.
- A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items

(Check with SHPO or FPO for any additional items)

Property Owner (Complete this item at the request of the SHPO or FPO)

name MTA New York City Transit Contact: Hollie Wells, Project Administrator

street & number 2 Broadway, 6th Floor, D6.125 telephone 646-252-4268

city or town New York state NY zip code 10004

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act. As amended (16 U.S.C. 470 *et seq.*)

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, D.C. 20503.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section 10 Page 1

Substation 219
Name of Property
New York County, NY
County and State

10. Geographical Data

Verbal Boundary Description

The boundary of Substation 219 is shown as the bold line on the accompanying site plan entitled, "CITI Map – Substation 219 – 313 West 133rd Street." The designation for Substation 219 includes all portions of the station structure and the property included within the boundaries of the NYCTA right-of way.

Boundary Description

The boundary for Substation 219 encompasses the entire station building and the NYCTA right-of way associated with the structure.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section 11 Page 1

Substation 219
Name of Property
New York County, NY
County and State

11. Form Prepared By:

Steven Bedford, Principal Architectural Historian
Stacey Vairo, Architectural Historian
Fitzgerald & Halliday, Inc.
72 Cedar Street
Hartford, CT 06106
860-247-7200

United States Department of the Interior
National Park Service

**National Register of Historic Places
Continuation Sheet**

Section 11 Page 2

Substation 219
Name of Property
New York County, NY
County and State

Additional Documentation

List of Black and White Photos

Substation 219

New York County, NY

Photographer: Stacey Vairo

Date: November 2004

Negatives on file: Fitzgerald & Halliday, Inc.

72 Cedar Street

Hartford, CT 06106

1. Exterior – showing repairs in 2004. View north.
2. Door detail. View north.
3. Nameplate above the door. View north.
4. Spiral staircase leading to the basement. View southeast.
5. Switches on circuit breakers. View south.
6. High tension alley. View north.

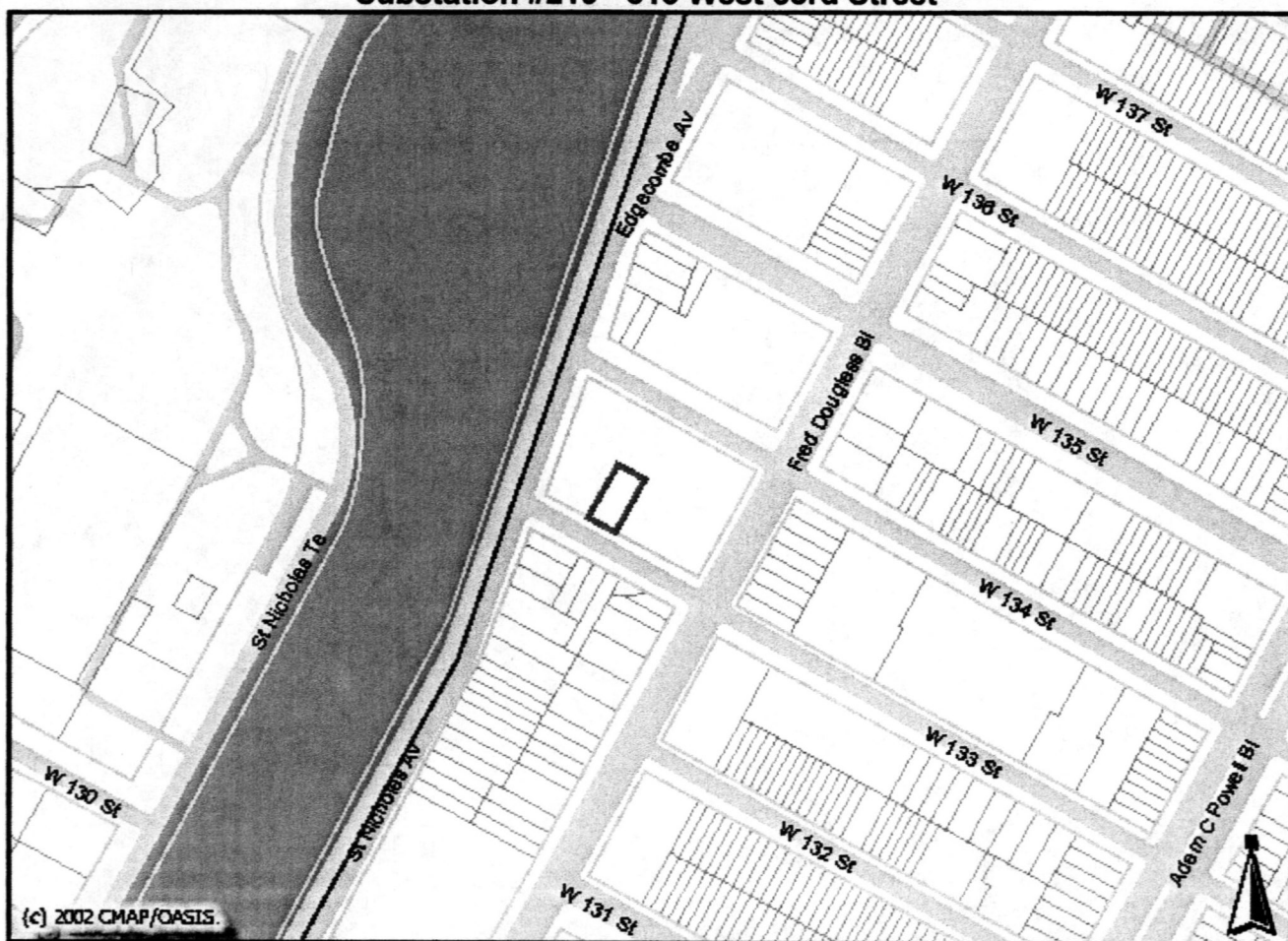


Substation 219
 309 West 133rd St.
 New York County, NY

Hagstrom map, 1998
 1" = 1,750'

CITI Map

Substation #219 - 313 West 33rd Street



width of map is 0.41 miles.

Property Land Use

- Block/Lot Boundaries
- 1 & 2 Family Residential
- Multi-Family Residential
- Mixed Residential/Commercial
- Commercial
- Institutions
- Parking & Transportation
- Industrial
- Vacant

Transportation

- Streets/Bridges
- Subway Stations
- Subway Routes

General Land Use

- Community Gardens
- Parks
- Playgrounds
- Open Spaces along Streets
- Cemeteries

Community Facilities

- Schools
- ### Planning Proposals
- Open Space Proposals
 - Rezoning Areas
 - Olympic Transportation Hubs
 - Olympic Transportation Rtes
 - Olympic Trails
 - Olympic Venues

Political Districts

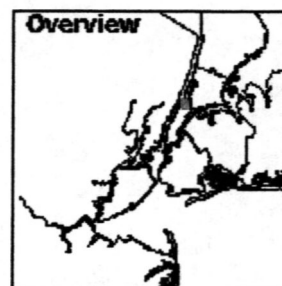
- Community Districts
- City Council Districts



NYC Basemap copyrighted by the New York City Department of Environmental Protection, 2000.

The Bytes of the Big Apple (TM) PLUTO (TM) and Tax Block & Tax Lot files are copyrighted by the New York City Department of City Planning.

Map provided by the Open Accessible Space Information System (OASIS) of New York City



Harlem Substation (#219)



Harlem Substation (#219):
South Elevation Details.

Supplemental view - (1994)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY Substation 219
NAME:

MULTIPLE New York City Subway System MPS
NAME:

STATE & COUNTY: NEW YORK, New York

DATE RECEIVED: 12/27/05 DATE OF PENDING LIST: 1/25/06
DATE OF 16TH DAY: 2/09/06 DATE OF 45TH DAY: 2/09/06
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 06000023

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 2.9.06 DATE

ABSTRACT/SUMMARY COMMENTS:

Entered in the
National Register

RECOM./CRITERIA _____

REVIEWER _____ DISCIPLINE _____

TELEPHONE _____ DATE _____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.



**Clark
& Wilkins**

20-534-5110
www.clarkandwilkins.com

POST
NO
BILLS

POST
NO
BILLS

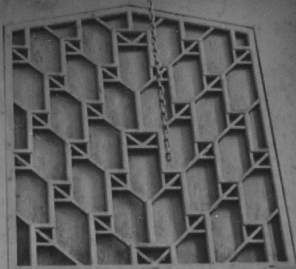
POST
NO
BILLS

POST
NO
BILLS

Substation 219
New York County, NY
Exterior w/2004
repairs.
View north.
Photo 1

Subst 219

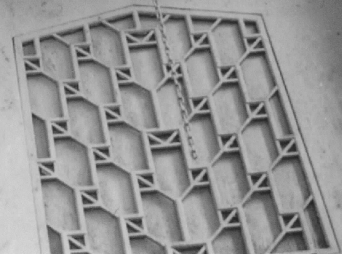
STATION



NO PARKING
ACTIVE DRIVEWAY

Substation 219
New York Co., NY
Door Detail.
View north.
Photo 2

FLARIN
SUBSTATION



Substation 219

New York Co. NY

Nameplate above door.

View north.

Photo 3



Substation 219

New York Co, NY

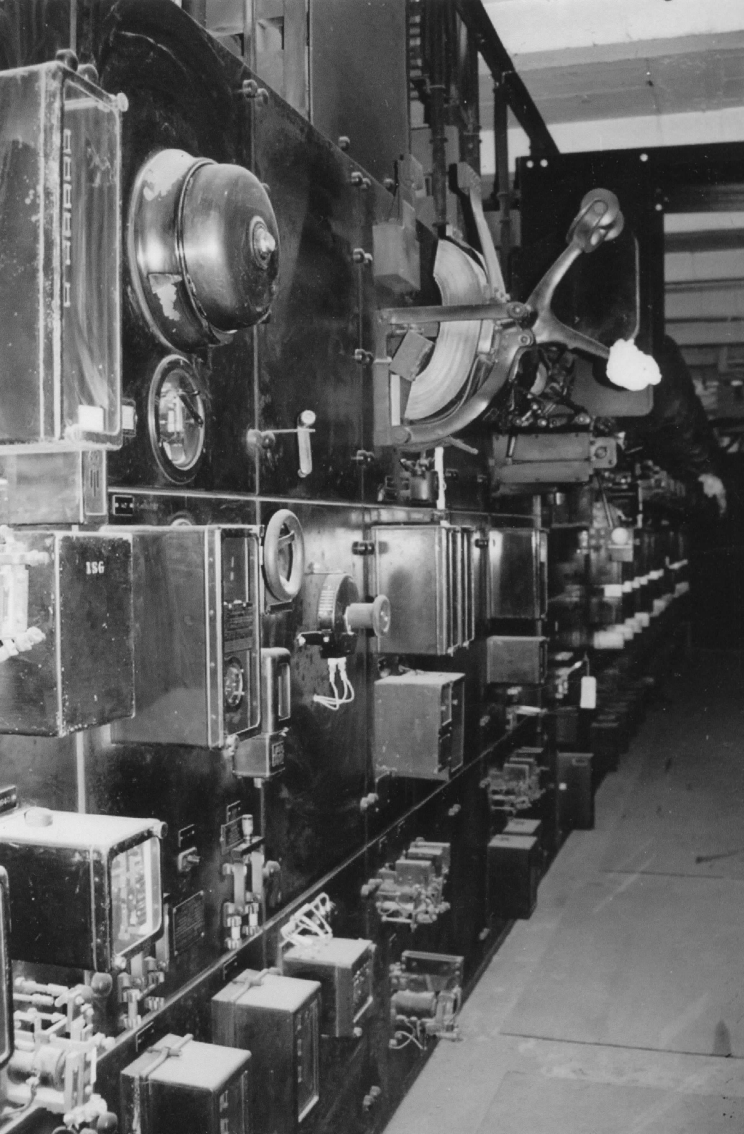
Spiral staircases
leading to basement

View southeast

Photo 4

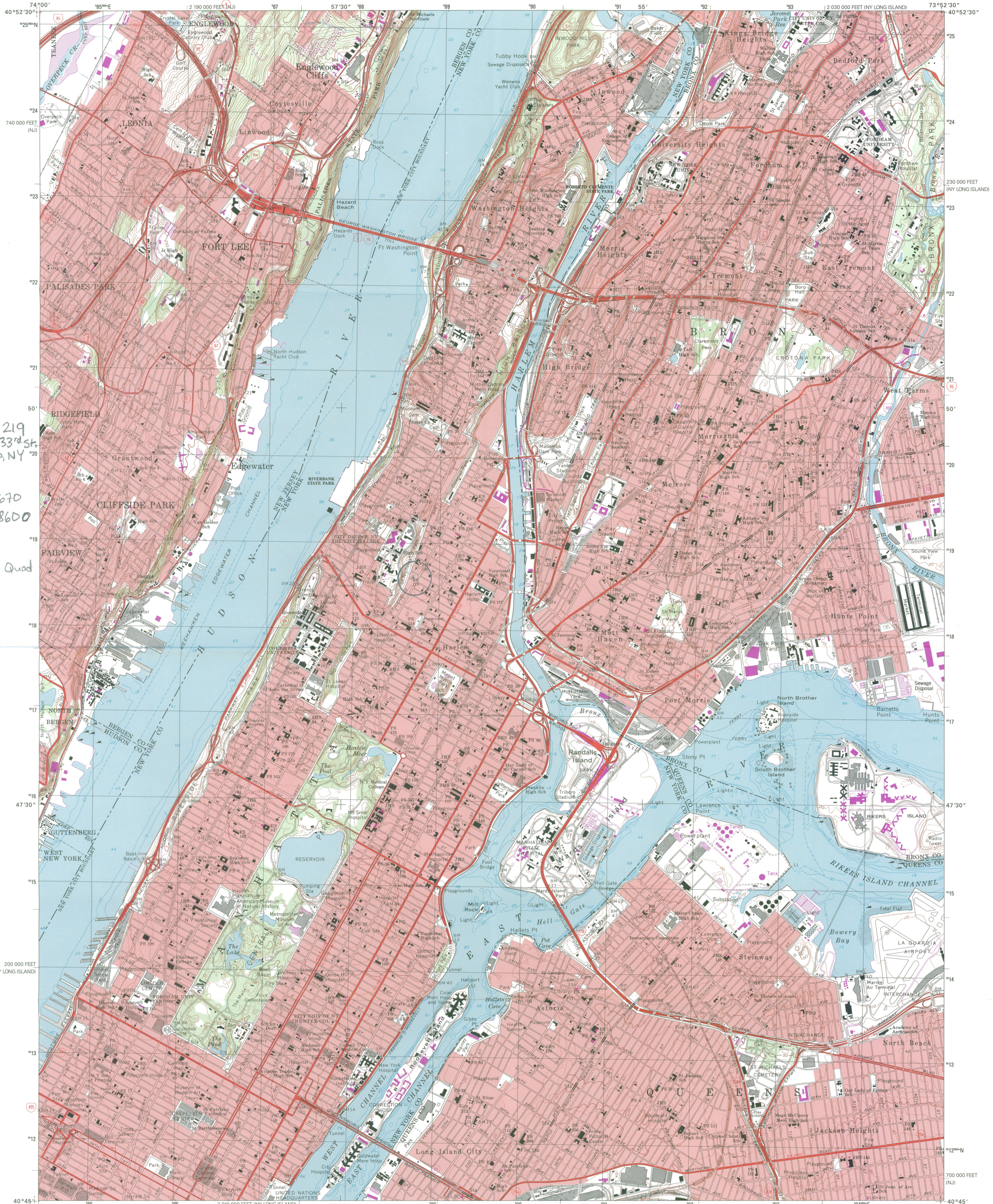


Substation 219
New York Co, NY
Switches on circuit
breakers
View south.
Photo 5



Substation 219
New York County, NY
High Tension Alley
View north
Photo 6

6

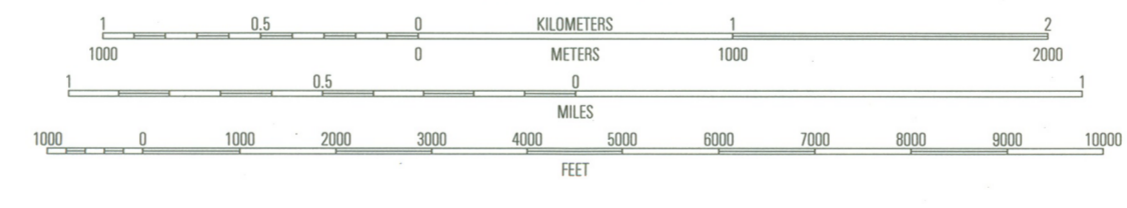
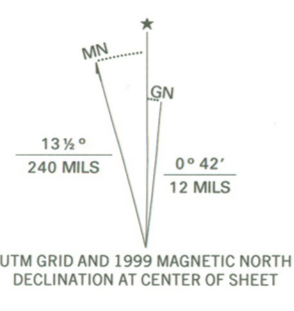


Substation 219
309 West 133rd St
New York City NY

Zone 18
Easting 588670
Northing 4518600

USGS
Central Park Quad
1:24000

Produced by the United States Geological Survey
Topography compiled 1966. Planimetry derived from imagery taken 1977 and other sources. Photomosaics using imagery dated 1995; no major culture or drainage changes observed. Survey control current as of 1966. Boundaries, other than corporate, revised 1999. Selected hydrographic data compiled from NOS charts 226, 274, 745, 746, and 747 (1966). This information is not intended for navigational purposes. North American Datum of 1927 (NAD 27).
Projection: New York coordinate system, Long Island zone (transverse Mercator).
10 000-foot ticks: New York coordinate system, Long Island zone and New Jersey coordinate system.
1000-meter Universal Transverse Mercator grid, zone 18 North American Datum of 1983 (NAD 83) is shown by dashed corner ticks. The values of the shift between NAD 27 and NAD 83 for 7.5-minute intersections are obtainable from National Geodetic Survey NADCON software.
There may be private inholdings within the boundaries of the National or State reservations shown on this map. Information shown in purple may not meet USGS content standards and may conflict with previously mapped contours.



SCALE 1:24 000
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
TO CONVERT FROM FEET TO METERS, MULTIPLY BY 0.3048
DEPTH CURVES AND SOUNDINGS IN FEET, DATUM IS MEAN LOWER LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
THE MEAN RANGE OF TIDE IS APPROXIMATELY
4 FEET IN THE HUDSON RIVER AND 5 FEET IN THE EAST RIVER
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, P.O. BOX 25286, DENVER, COLORADO 80225
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION

Primary highway	Light-duty road, hard or hard surface
Secondary highway	Improved surface
Unimproved road	Unimproved road

Interstate Route U.S. Route State Route

1	2	3
4	5	6
7	8	

1 Hackensack
2 Yonkers
3 Mount Vernon
4 Weehawken
5 Flushing
6 Jersey City
7 Brooklyn
8 Jamaica

CENTRAL PARK, NY-NJ
1995
NIMA 6265 IV SW-SERIES V821





The New York City Landmarks Preservation Commission

1 Centre Street, 9th Floor North, New York NY 10007 TEL: 212-669-7922 FAX: 212-669-7797

<http://nyc.gov/landmarks/>



RONDA WIST
EXECUTIVE DIRECTOR
rwist@lpc.nyc.gov

February 3, 2005

Ms. Ruth Pierpont, Director
New York State Office of Parks Recreation
and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island
P.O. Box 189
Waterford, New York 12188-0189

Re: The Historic Resources of the New York City Subway
System, various counties, New York

Dear Ms. Pierpont:

I write on behalf of Chair Robert B. Tierney in response to your request for comment on the eligibility of The Historic Resources of the New York City Subway System (Bronx, Kings and New York Counties) and the individual substations and related buildings nominated for the State and National Registers of Historic Places.

The Commission has reviewed the materials submitted by the Historic Preservation Field Services Bureau and believes that the Joralemon Street Tunnel, Subway Substation 7, Substation 13, Substation 17, Substation 42, Substation 409, Substation 235, Central IND Substation, Substation 219, the 207th Street Yard—Signal Service Building and Tower B, the Coney Island Yard Gatehouse, the Coney Island Electric Motor Repair Shop, the Concourse Yard Entry Buildings, and the Concourse Yard Substation appear to meet the criteria for inclusion on the State and National Registers of Historic Places.

Sincerely yours,

Ronda Wist

cc: Robert B. Tierney, Chair
Mary Beth Betts