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ARCHAEOLOGICAL IMPACT REPORT
for the
BRYANT PARK RESTORATION CORPORATION

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Archaeological Impact Report for Bryant Park
Restoration Corporation

Historical Perspectives, Inc.

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INTRODUCTION

The main branch of the New York Public Library, which occupies part of Lot 1, Block 1257 in Manhattan, is located between Fifth and Sixth Avenues and Forty-second and Fortieth Streets. (See Fig. 1) The site has played a role in the city's history since the eighteenth century. The library building, opened in 1911, and Bryant Park to the west comprise one of New York's most impressive blocks; indeed, both park and building are New York City Landmarks and on the National Register of Historic Places.

In order to rehabilitate and reclaim Bryant Park from the unsavory activities which now flourish within its perimeters, the Bryant Park Restoration Corporation proposes that a restaurant be erected adjacent to the west face of the library building. A history of the entire block, included in the Environmental Impact Statement, has detailed its function and the various structures that have stood on the property through time. A city review agency has expressed a concern that the exact locus of previous significant structures on the block has not been sufficiently detailed in order to ascertain the archeological implications of the proposed project. The purpose of this report is to locate, identify, and evaluate potential archaeological resources within the project area of the block, to assess the impact on such resources by the proposed action, and to consider what alternative courses of action could be applied to possibly affected resources, if a conflict should exist. (See Photographs, pp. 19-20)

PHYSICAL HISTORY OF THE SITE

The history of activities and events occurring within Block 1257 has been documented elsewhere. This study will deal only with the physical history of the project site (i.e., the use of the land over time) in order to describe what archaeological resources may have existed in the past and what resources may still survive the passage of time.

What is now Block 1257 was originally part of the common lands granted to the City by the Crown under the Dongan Charter of 1686 (Lydenberg, 1923: p. 437). Bolton's map of Indian paths, MacCoun's map of Manhattan in 1609, and Risse's map of New York in 1800, show no habitation by either native Americans or early settlers in the area.

Apparently General Washington engaged in an unsuccessful skirmish with the British during the Revolutionary War, but it was not until 1823 that the land was put to concerted physical use as a potter's field. This was after the gridiron plan of 1807 had gone into effect, so the street plan was as it is now with the exception of the Middle Road which still existed. (See Fig. 2)

According to a report in the NEW YORK EVENING POST in 1823, the Corporation of the City of New York had evidently passed legislation prohibiting interments in Manhattan south of a certain point. However, they were now considering "interments in public and private vaults from the first of November to the first of April in each year." (AN ACCOUNT OF THE PROCEEDINGS, 1823: p. 5) This editorialized account, which reports debate, speeches, letters, etc. to and by citizens and members of the Common Council, is against the bill and its infringements on the "right of private property," (*ibid.*: p. 4) and gives strong credence to those who claim rotting bodies will not pollute the air, water, or soil thus causing pestilence such as yellow fever.

Notwithstanding the indignation of some of the populace, the Common Council decreed on January 31, 1825, that no more burials could take place at the potter's field at what is now Washington Square. Prudently, they had directed in 1823 that the land at the uptown site be readied to receive interments and by early 1825 this had been accomplished. The sequence was thus: On March 31, 1823, a special committee was appointed by the Common Council to "select a suitable site for a public Burial Place to be called the

City Burying ground." (quoted in Stokes, Vol. 5: p. 1628) On June 9, 1823, the land between Fifth and Sixth Avenues and Fortieth and Forty-fifth Streets, which "contains upwards of 26 acres and is $3\frac{1}{4}$ miles from City Hall" was chosen. "Its situation is high and pleasant and well calculated as to Soil for the Purpose in view." (*ibid.*: p. 1630) The committee suggested that the cemetery be surrounded by a wall with two gates and trees. The fence was a stone wall laid on October 11, 1824. On December 20, 1824, the committee reported that the plot is located on Middle Road, Fifth Avenue, and between Fortieth and Forty-second Streets, is three miles from City Hall, is about ten acres, nearly square, and is part of the common lands belonging to the Corporation of the City of New York. The work is almost finished, which cost \$8,449.91, mostly for the handsome stone fence which is a stone wall topped by a mortised fence of locust posts and best Georgia pine. . . Much money has been saved by employing convicts in blasting and digging. Fifth Avenue has been improved by the removal of rocks. The whole ground is to be surrounded by two rows of weeping willows and elms. (*ibid.*: p. 1643)

It is obvious that the possibility of the survival of any artifacts from the revolutionary or colonial periods would have been destroyed by the earthmoving involved in the process of creating the burial ground.

The disposal of bodies was evidently a continuing problem for the city. According to Stokes' records of the Common Council's actions, an additional public facility for interment was being prepared in 1825 which was located between Third and Fourth Avenues and Forty-eighth and Fiftieth Streets. (Stokes, Vol. 5: p. 1645) On other pages, he states that the potter's field was moved to Fiftieth Street between Fourth and Lexington (Stokes, Vol. 3: p. 715) but that the Fifth Avenue plot "was in use until the Croton Reservoir was built on the site." (Stokes, Vol. 5: p. 1643) "The ground between Fortieth and Forty-second Streets and the Fifth and Sixth Avenues was, by a resolution of the Common Council approved by the Mayor, September 20, 1837, appropriated for reservoir purposes." (From report made by the Committee of Lands and Places to the Board of Aldermen in October, 1845 and quoted in Butler, 1878: p. 4.)

The Distributing Reservoir for the Croton Aqueduct System was completed in 1841 and opened in 1842. A New York newspaper article in the Bryant Park clippings file of the New York Public Library states, in regard to the Fifth Avenue burial ground that "in 1842 the fear of drought seized New York and the bodies again were disinterred and taken elsewhere." (THE SUN'S RAYS, n.d.: n.p.) While the above statement is inaccurate concerning the dates of the potter's field's use, it does point up the city's practice of removing

bodies from defunct cemeteries to newly created ones. Stokes also mentioned this practice when he reported that in 1858 "The remains of 100,000 paupers and strangers were transferred from the city limits to Wards Island. . ." (Stokes, Vol. 5: p. 1875, quoting Lossing, HISTORY OF NEW YORK CITY, II, p. 668). Thus, while no primary sources which state explicitly that the bodies were removed from the site it may be inferred on the basis of the city's documented policy. (Two 1825 documents on the subject of interment were regrettably missing from the Forty-third Street Annex Library.) Even if by misadventure some bodies had been overlooked, the following account of subsequent building activity on the site will prove the patent impossibility of there being any remains of the potter's field left in the project area.

The construction of the Distributing Reservoir of the Croton Aqueduct System was a mammoth undertaking--- as was its subsequent demolition. (See Fig. 3,4) Photographs and drawings attest to its monumental proportions as well as its positioning on the site. The chief engineer for the public works project was John B. Jervis, and in a book published in 1851 he described the Distributing Reservoir's location and design:

This reservoir occupies the highest ground in the vicinity, and higher than any part of the city south of it; the site is generally known as Murray Hill.

In order to maintain the elevation of the water, it was necessary to raise the walls of the reservoir to an average height of forty-five feet and a half above the grade of the streets that bounded it on three sides; the greatest height being forty-nine feet, and the least thirty-nine feet; the foundations were sunk five feet below the grade of the streets. The walls are of hydraulic stone masonry, constructed with openings, to reduce the quantity of masonry and give a more enlarged base. (Jervis, 1851: p.35)

It was further described by other writers such as F. B. Tower and a staff writer for SCIENTIFIC AMERICAN and illustrations help clarify the text. (See Fig. 5-7)

The structure is four-square and measures 420 feet from coping to coping. The outer walls are double and hollow, and the basin is divided by a solid wall of masonry, which bisects it on a north and south line. Judged on grounds of construction, the summit of Murray Hill was an ideal site, for the reason that it was found to be covered to a depth of from 5 to 35 feet with

an impervious clay that worked up into excellent puddle for backing up against the outer walls. By studying the sectional views, it will be seen that the main wall consisted of an outer inwardly sloping wall of 5 feet uniform thickness, an inner stepped wall 8 feet thick at its base, reducing to $2\frac{1}{2}$ feet at the top, and a series of transverse walls, spaced 15 feet center to center and finishing at the top in a series of arched roofs. This is shown in the two sections, one taken in a horizontal and the other in a vertical plane through one angle of the main wall. The total width at the base of the wall is 30 feet, and it will be seen that it possesses great transverse strength and natural stability. The center wall is 30 feet wide at the foundation and 4 feet wide at the top, with a width of 15 feet for the major portion of its height. After the walls were built the clay was excavated from the center of each basin and banked and carefully rolled down against the inner face of the walls, being carried up over the arched roofs and finished off at the level of the coping, . . . The whole interior of the reservoir was then paved with 15-inch blocks. The greatest depth from the floor to the coping is 42 feet, and the greatest depth of water is 38 feet, at which the combined capacity of the two basins is 21,000,000 gallons. (SCIENTIFIC AMERICAN, September 2, 1899: p. 152)

The bottom is a very impervious hard-pan, on which two feet of puddled earth is laid, and this covered by twelve inches of hydraulic concrete. The reservoir is divided into two divisions by a wall of hydraulic masonry, at the toe of which a sloping bank of puddled earth is raised eighteen feet high and covered with rubble masonry; this wall is nineteen feet thick at the bottom, six feet and two-third thick at top water line, and four feet at top. In this wall a waste weir is placed, with a well of two falls, together fifty-two feet, from which the waste water enters a sewer in 42d Street, and passes off about one mile to the Hudson River. In each division there is a waste cock to draw the water from the bottom.

The reservoir is designed for thirty-six feet of water, and when full will stand 115 feet above mean tide. The walls rise four feet above

the water line. An iron railing is to be placed around the walls on top of the cornice. The capacity of this reservoir is 20,000,000 imperial gallons. (Jervis, 1851: p. 35)

The central pilaster on 40th street has an entrance (like that on 42nd street) to the vault where the stop-cocks are situated which regulate the discharge from the Reservoir. The pipes leave the Reservoir at the base of this pilaster and from 40th street, curve into the 5th Avenue, which they pursue until they reach a convenient point diverging to the densely populated parts of the city. (Tower, 1843: p. 120)

(See Fig. 8)

This Reservoir is 420 feet square on the top, measuring on the cornice of the main wall; it is 425 feet square at the top of the cornice of the pilasters, and 436 feet square at the base, measuring from outside to outside of the corner pilasters, covering a little over four acres. The height of the walls is 45 feet above the streets around, and about 50 feet above the foundations. (Tower, 1843: p. 120)

Terraces are built around at the foot of the walls and covered with grass, giving a rich finish to the work. (Tower, 1843: p. 121)

The water was introduced into the Distributing Reservoir on the 4th of July 1842, and the event was hailed by the citizens of New-York with an interest scarcely less than that pervading the whole American people at the remembrance of the event, the anniversary of which, was on that day celebrated.

At an hour when the firing of guns and the ringing of bells had aroused but few from their slumbers, and ere the rays of the morning sun had gilded the city domes, the waters of the Croton gushed up into the Reservoir and wandered about its bottom as if to examine the magnificent structure; or to find a resting place in the temple towards which they had made a pilgrimage.

The national flag floated out from each corner of the Reservoir, and during the day thousands of the citizens visited it giving demonstrations of joy and satisfaction at the accomplishment of this great work. (Tower, 1843: p.122)

Stokes noted that it became fashionable to promenade around the top walls on Sundays. (Stokes, Vol. 3: p. 715) It was unlawful to throw dead animals "or other offensive matter, or anything whatever" into the reservoir. (ACTS OF THE LEGISLATURE, 1861: p. 30) And the fee schedule for water use is as fascinating as the strictures against waste disposal. For instance, there was a charge for each "bathing tub" in a building; the rate for fountains was determined by the height of the jet; cow stables were assessed 75¢ per annum for each cow. (*ibid*: pp. 89-92)

As outlined in the Historic Resources chapter of the Draft Environmental Impact Statement for this project, in 1853 New York's Crystal Palace was constructed to the west of the Reservoir within Block 1257. Although the Palace only stood for five years before burning down, it was a unique and significant structure of its time. According to the research conducted, the easternmost foundation footing (at a maximum depth of 2' 6") of the Crystal Palace was four feet from the westernmost foundation footing of the Reservoir. (Carstensen and Gildemeister, 1854: p. 24, Plate I and II) (See Fig. 9-11) The Palace's 1,250 tons of iron and 39,000 square feet of glass fell within twelve minutes of when the internal fire was discovered on the afternoon of October 5, 1858. Approximately 2,000 people were on the premises when the conflagration began and all survived. Workers connected water hoses and the hydrants were turned on but "Owing, however, to the lowness of the water in the reservoir it was of no avail." (Costello, 1887: pp. 257-259)

The Reservoir could not keep pace with the voracious demands for water and it was in danger of being supplanted by more extensive waterworks at least by 1878 when George Butler delivered and then published an impassioned address in favor of retaining the present Murray Hill Reservoir. (Butler, 1878) In 1880, a chorus of concerned citizenry (and fire insurance companies) successfully fought its demolition. (Municipal Society of New York City, 1880; Board of Underwriters, 1880; Union League Club, 1880) (See Fig. 12)

After having apparently been non-functional for a number of years, the Reservoir was slated for removal to

make way for a public library building in 1897. (Stokes, Vol. 5: p. 2030, reporting on LAWS OF NEW YORK FOR 1897), but it was not until 1899 that the Reservoir was drained and demolition began. The NEW YORK TIMES reported on December 20, 1899, that when the Bryant Park Reservoir was drained out by sewers to the river, fish which had come through strainers as minnows were seen. They were mainly small sunfish and perch. (NEW YORK TIMES, December 20, 1899: p. 1)

The same sources (Schramke, Jervis, et al.) consulted for this report, were studied by architects for the library in order to ascertain the Reservoir construction sequence so they could devise the most expeditious method of removing it. They also realized that they knew very little about the ground conditions beneath the Reservoir. (Lydenberg, 1923: p. 455) The plan settled upon was to dismantle the Reservoir and haul most of the material away, but save some of it to be used in the construction of the library building. Work began on June 6, 1899, an occasion which the COMMERCIAL ADVERTISER reported with all the awe of an explorer breaking in to King Tut's tomb.

Workmen came with shovels, picks and crow-bars to the Forty-second street gate early this morning, and for the first time in years the rusty gate in the ivy was unlocked and the iron-studded door opened. Inside the air was fully twenty degrees cooler than the 95 degrees odd on the street. There were three small connecting square chambers, forty feet high, the middle was separated from the two flanking it by high brick arches. The roofs of the two outer spaces were capped by high-arched domes, and there was a lower one for the centre space, resting upon the crowns of the two side arches. Green mold covered the straight and massive inner walls for half their height, and moisture trickled down here and there across them. There were festoons of white mildew clinging to the brick of the arches, and over the one separating the west chamber there was a jagged track in the masonry that ran from the upper left hand corner and tapped the keystone of the arch. (quoted in Lydenberg, 1923: pp. 456-457)

The SCIENTIFIC AMERICAN article reports that there were 106,000,000 cubic yards of material to be removed (SCIENTIFIC AMERICAN, September 2, 1899: p. 153) whereas the COMMERCIAL ADVERTISER (quoted in Lydenberg, 1923: p. 457) gives a figure of 110,000 cubic yards. Whatever the number, it was an

enormous undertaking as described in the MAIL AND EXPRESS for November 15, 1899:

In order to obtain access to the interior of the reservoir, before any material could be removed, it was necessary to blast this passageway (from 42nd Street) through the immense triple walls and to tunnel through the great bank of clay on the inside. The outside wall, built on a batter and four feet thick at the base, is faced with great blocks of hewn granite and lined with massive rough building stone. Inside of this stands a row of transverse arches, whose piers are at right angles to the outer wall, occupying a space about fifteen feet in width. Next comes the inner or core wall, which is vertical, and again four feet thick. This is lined with puddler's clay from its top, forty-two feet from the floor, sloping to a point about 30 feet from the base of the core wall. On top of this again, battered to the slope, is an 18-inch facing or lining wall.

It took seven weeks to tunnel through this mass of stone for an entrance for trucks and carts. Once this was done a second problem had to be solved. Running north and south through the middle of the reservoir, invisible from the street was another mighty rampart of stone and concrete, twenty feet wide and faced on either side with the same banks of clay and lining walls. . .

Viewing the reservoir from the top of the division wall, the outer masonry looks like the ramparts of some ruined city. The sloping banks of stone and clay have been entirely removed from the western half, leaving the exterior mason work exposed, with here and there a great breach penetrating nearly its whole thickness. The bottom has to be excavated in parts to a depth of fifteen feet below the floor. Here has arisen another and totally unexpected difficulty.

Crushed together by the weight of the millions of tons of water which it formerly had to bear, the earth beneath the two-foot layer of concrete with which the bottom is lined has assumed an adamant consistency. Pick and crowbar glided from it like rifle bullets from Krupp armor plate. Mr. Lentilhon found himself obliged to use dynamite to loosen the very soil he had contracted to excavate. After the charge has been exploded, it can be worked with pick and shovel. . .

Asked as to the immense quantity of material he is digging and blasting out, Mr. Lentilhon said: "Quite a little is reserved by the city. The contract requires me to store 20,000 cubic yards of building stone. You see that we have already stacked about 1,000 yards along the western wall. This is to be used in constructing the New York Library. My contract is by no means finished when I have torn down the reservoir. I am to receive for its removal \$105,000. The remainder of the \$373,000, which is the total amount of my bid will be for constructing the foundations of the new edifice.

"All the battered stone in the corners and entrances belongs to me. I have had my men split it up into paving blocks, and two streets in South Brooklyn have been paved with it. We have got out 100,000 paving blocks up to now, and they bring six cents apiece. The puddler's clay used for lining I have had to dispose of for filling." (quoted in Lydenberg, 1923: pp. 457-458)
(See Fig. 13, 14 and Photograph page 23)

In his HISTORY OF THE NEW YORK PUBLIC LIBRARY, Lydenberg detailed the construction of the central building which took place between 1897 and 1911, but only salient facts having to do with depth and breadth of excavation will be here recorded. The plan was to remove the reservoir working eastward from Bryant Park, but leaving the west wall intact until its stone could be used for the library foundations.

Datum was established at the Fifth Avenue curb opposite Forty-first Street and designated as datum level 100'00". Borings taken in 1899 indicated that bedrock was reached at a higher elevation than had been expected (unfortunately, the borings record cannot now be located), but subsequent excavations proved this to be false. Instead, there were large boulders, probably more of what was encountered in 1824 during excavations for the potter's field, that had been mistaken for bedrock. Therefore, original plans calling for a basement at Datum 100'00" and a cellar at 87'00" could be followed. (Lydenberg, 1923: pp. 459-461) "By the spring of 1900 enough of the reservoir had been removed to allow laying of the foundations. Except at the south end, where the engine and boiler rooms and adjoining cellars go deeper than the general cellar, these rested everywhere on dirt, thoroughly compacted glacial drift." (*ibid.*: p. 463)

Excavations for an engine room were made to datum level 77'00" and for a boiler room to 52'10" along the south or Fortieth Street line. (*ibid.*: p. 464)

"Up to this time very little bedrock had been uncovered, and, as stated before, the foundations of the greater part of the building were set on well compacted glacial drift. As the deep excavations for the pump room, boiler room and engine room progressed, however, bedrock was uncovered in June 1901, at about 20 feet below the curb, that is at levels 67 to 80." (ibid.: p. 466) Blasting to remove the necessary rock was done in the spring of 1901 and by that fall all of the reservoir had been removed except for the west wall whose stone was to be used for the foundations of the boiler room. (ibid.: pp. 466-467) (See Fig. 15)

In the 1920s there was a major ground disturbing project on the north side of Block 1257 caused by the construction of the Sixth Avenue Subway. (See Fig. 16) A photo published in the NEW YORK HERALD TRIBUNE illustrated the disruption created by this transportation project which included construction huts and stored materials over the entire northern one half of Bryant Park. The disruption, however, did not impinge upon the project area.

PROPOSED PROJECT AND ITS IMPACT

The proposed development and architectural plans, as they now stand, call for a building to be erected adjacent to the west or rear face of the library, which will run from Forty-second Street to Fortieth Street and will cover the terrace in Bryant Park which extends more than 60 feet westward from the rear wall of the library. The approximate depth of the excavation required is a maximum of twenty feet which is seven feet lower than the existing cellar of the library assuming that the datum plane is the same as in 1899. The 1899 SCIENTIFIC AMERICAN article stated that the grade of Fifth Avenue had been lowered seven feet since 1842 when the Reservoir was completed. The Reservoir foundation depths were five feet below grade so two feet of natural ground would be exposed. "...it is this lowering of the grades on three sides of the reservoir that accounts for the retaining walls that surround it, the earth on the inside of these walls representing the original level of the ground." (SCIENTIFIC AMERICAN, September 2, 1899: p. 153) Thus the 1899 datum established at curb level was two feet below the bottom of the Reservoir. The library cellar was dug out uniformly to thirteen feet below datum (or fifteen feet below the Reservoir bottom) and in some places to forty-seven feet below datum (or forty-nine feet below Reservoir

bottom). Even if the SCIENTIFIC AMERICAN figures were erroneous and grade was approximately the same in 1842 and 1899, the library excavation would have been at least eight feet deeper than that for the Reservoir.

Logically, then, one realizes that the library construction activities destroyed all traces of the Reservoir and whatever else might possibly have survived, even without the corroborating evidence from 1900 that it rested everywhere "on well compacted glacial drift." (Lydenberg, 1923: p. 466) It is unknown if any foundation stones of the western wall of the Reservoir were left in place or if all the material was used in the boiler room construction.

If the proposed construction extends sixty feet west of the western face of the library (within the flanking pavilions) and if the foundation trench disturbance is an additional ten feet to the west and the Reservoir walls were thirty feet thick as specified and commenced at the locus as depicted in the 1853 Crystal Palace plans, then the proposed construction project will very possibly not encounter any remains of the Reservoir's western wall foundations, if they were left intact. (See Fig. 17)

RECOMMENDATIONS

As proposed, the restaurant construction on Block 1257 would not disrupt any known archaeological resources of significance. This assessment, to a great degree, is based upon calculations and measurements reported over a one hundred year span and there is the possibility that a discrepancy of inches may place remains of the interior face of the Reservoir's western wall, if they exist, underneath the terrace west of the library. The Distributing/Croton/Murray Hill Reservoir was a monumental, engineering and architectural phenomenon of nineteenth century New York; and, although its construction, use, and demolition are well documented, the exposure of any extant foundations would provide an invaluable opportunity to record the structural remnants of this phenomenon.

It is recommended that the foundation contractor maintain as narrow a builder's trench as possible ($\leq 10'$) on the periphery of the restaurant; and, an archaeologist be on the premises to photo-document the new foundation excavations in the event that resources significant to the history of New York are indeed uncovered.

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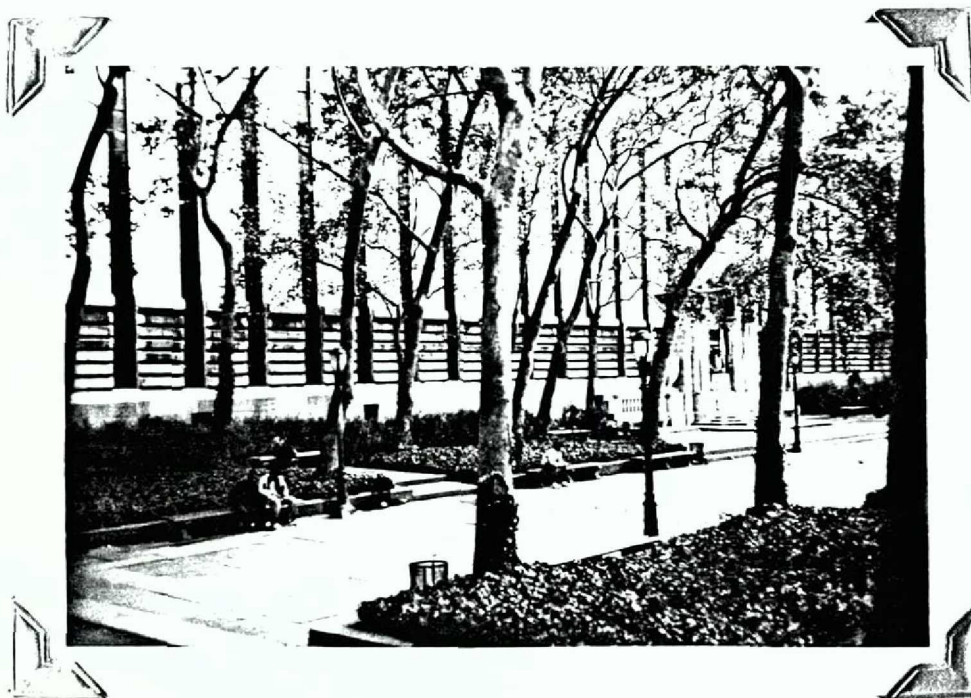
- 1916 ATLAS OF THE BOROUGH OF MANHATTAN. Brooklyn: E. Belcher Hyde.
- 1935 BRYANT PARK. New York: City of New York Department of Parks, Topographical Division. October 14, 1935.
- post PLAN OF WATER LINES AND CONNECTIONS. New York:
1940 New York City Department of Water Supply.
- 1957 ATLAS OF THE CITY OF NEW YORK. New York: G. W. Bromley and Company. Volume 2.
- 1979 GAS MAINS AND SERVICE PLATE, 25-H. Consolidated Edison Company of New York, Inc. New York: Manhattan Maps and Records Bureau.
- 1979 USGS 7.5' series: CENTRAL PARK QUADRANGLE.
- c. NEW YORK CITY SEWER PLAN. New York: New York City
1980 Department of Environmental Protection, Bureau of Sewers.



terrace
abutting west
face of
library

north to south

September 1983



terrace
library in rear
Bryant
Memorial to
the right

northwest to
southeast

September 1983



Bryant Park
east to west

September
1983

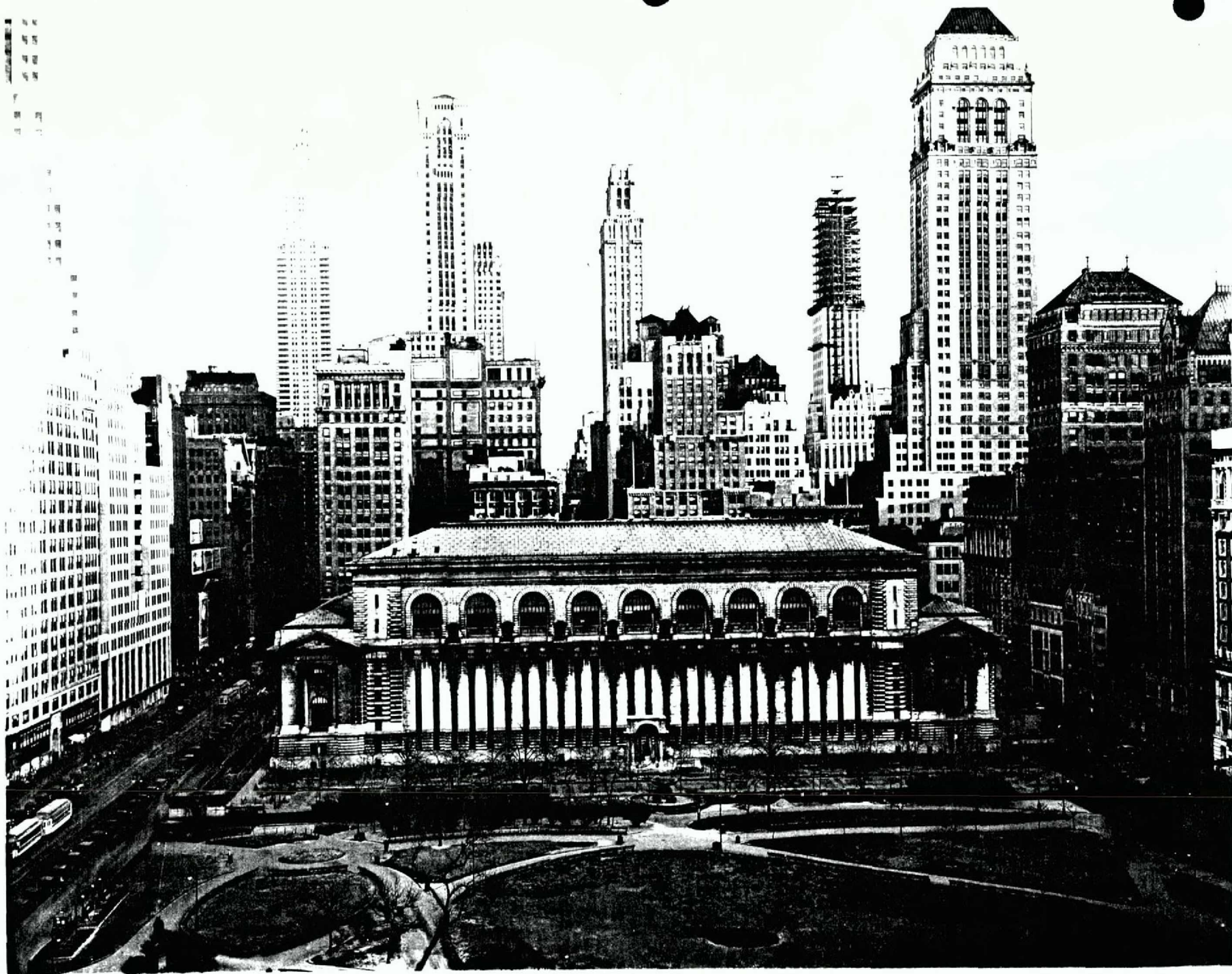


terrace at
rear of
library,
south end

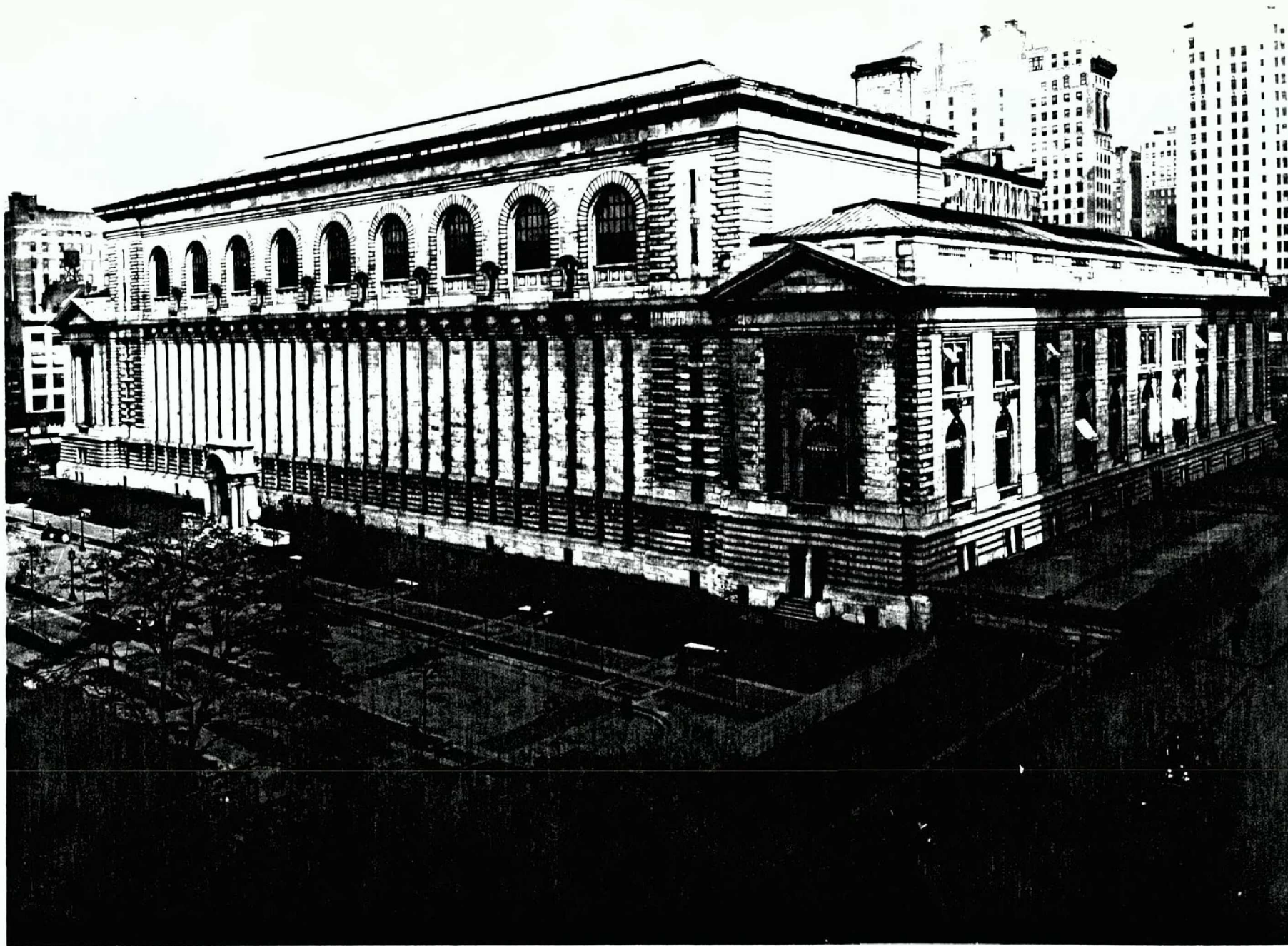
flanking
pavilion to
the left

northwest to
southeast

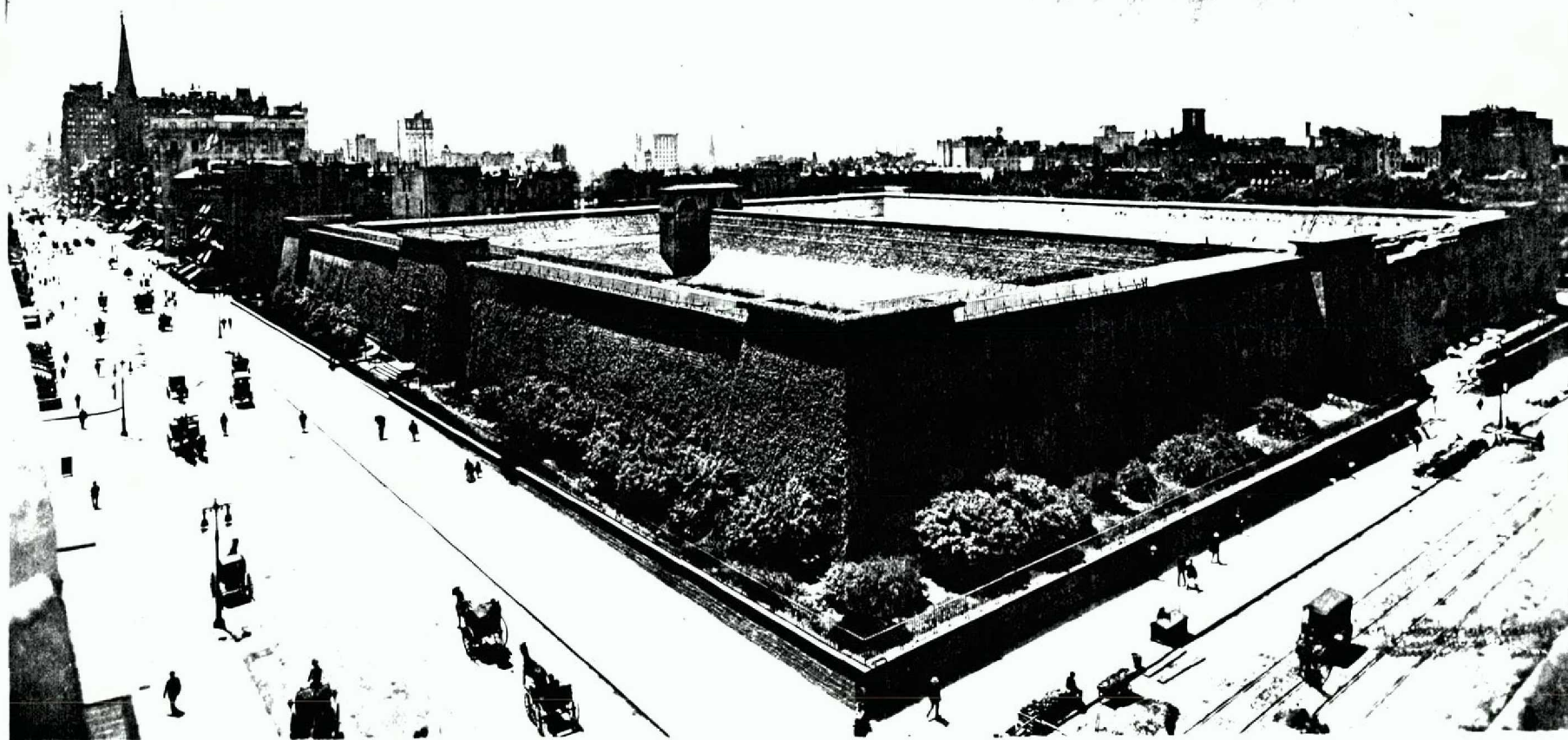
September
1983



West face of the New York Library. Photo supplied by Bryant Park Restoration Corporation.



Southwest corner of the New York Library. Photo supplied by the Bryant Park Restoration Corp.



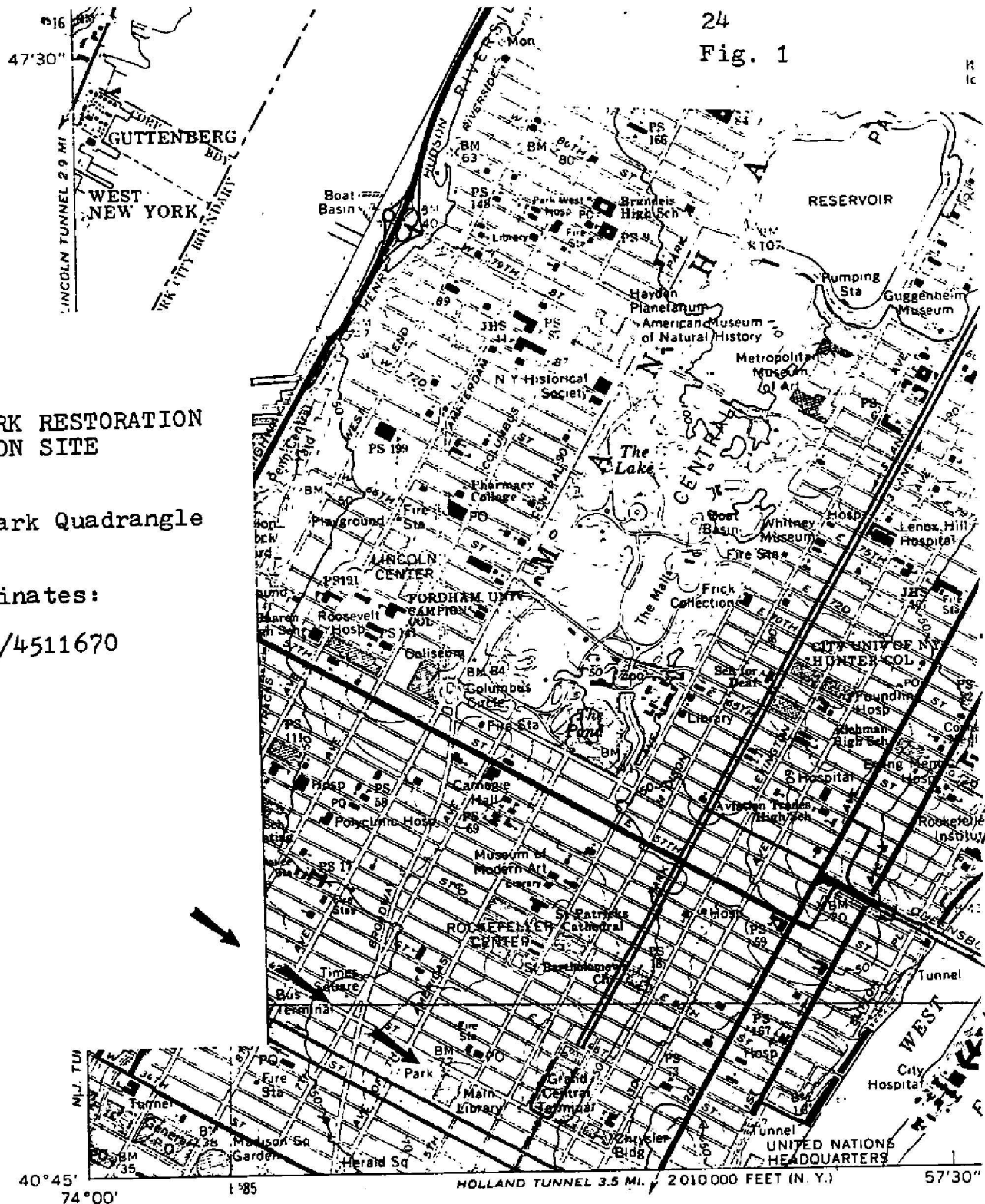
Croton Reservoir during process of demolition. Northeast corner in the foreground.
Photo supplied by the Bryant Park Restoration Corporation.

BRYANT PARK RESTORATION CORPORATION SITE

Central Park Quadrangle

UTM Coordinates:

18/585830/4511670



NEW JERSEY CITY
6165 11 NE

Mapped, edited, and published by the Geological Survey
Revised in cooperation with New York
Department of Transportation

Control by USGS, USC&GS, and New Jersey Geodetic Survey

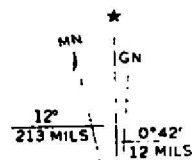
Planimetry by photogrammetric methods and from USC&GS Charts T-4567,
T-5089, T-5264, T-5278, T-5448, T-5449, T-5451, T-5452, T-5453, T-5458,
and T-5778. Topography by photogrammetric methods from aerial photographs
taken 1954 and planetable surveys 1956

Revised from aerial photographs taken 1966. Field checked 1966

Selected hydrographic data compiled from USC&GS Charts 226, 274, 745,
746, and 747 (1966) This information is not intended for navigational purposes

Polyconic projection. 1927 North American datum
10,000-foot grids based on New York coordinate system, Long Island zone,
and New Jersey coordinate system
1000-meter Universal Transverse Mercator grid ticks, zone 18, shown in blue

Red tint indicates areas in which only landmark buildings are shown



UTM GRID AND 1979 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

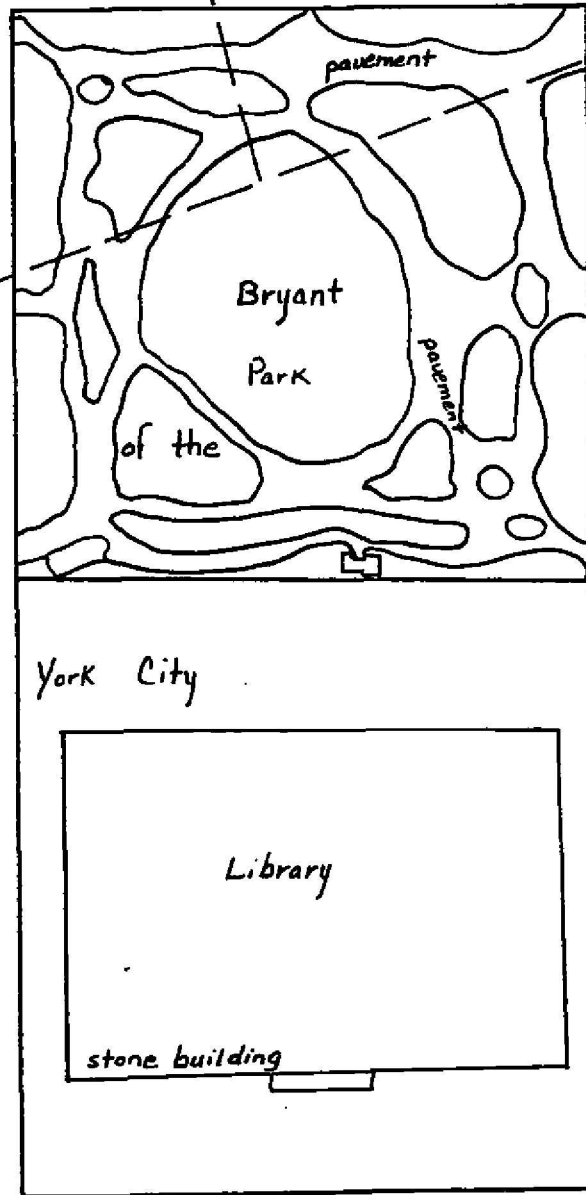
ATLAS OF THE BOROUGH OF MANHATTAN
Brooklyn: E. Belcher Hyde, 1910.

John Taylor
Map 115

Property
Corporation
of
New

York City

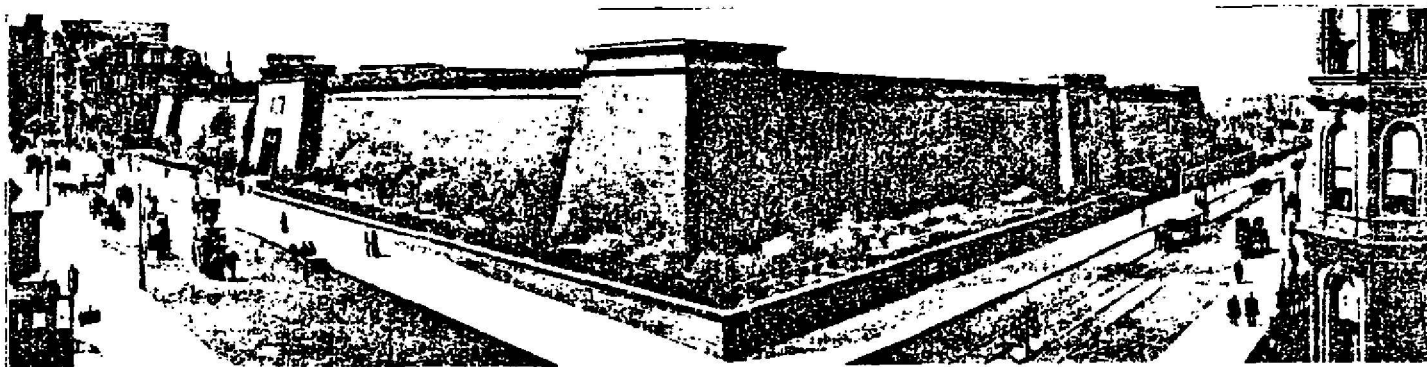
original farm lines



BLOCK 1257

Fifth Avenue

Middle Road
Spur Rd
(once Steuben Street)

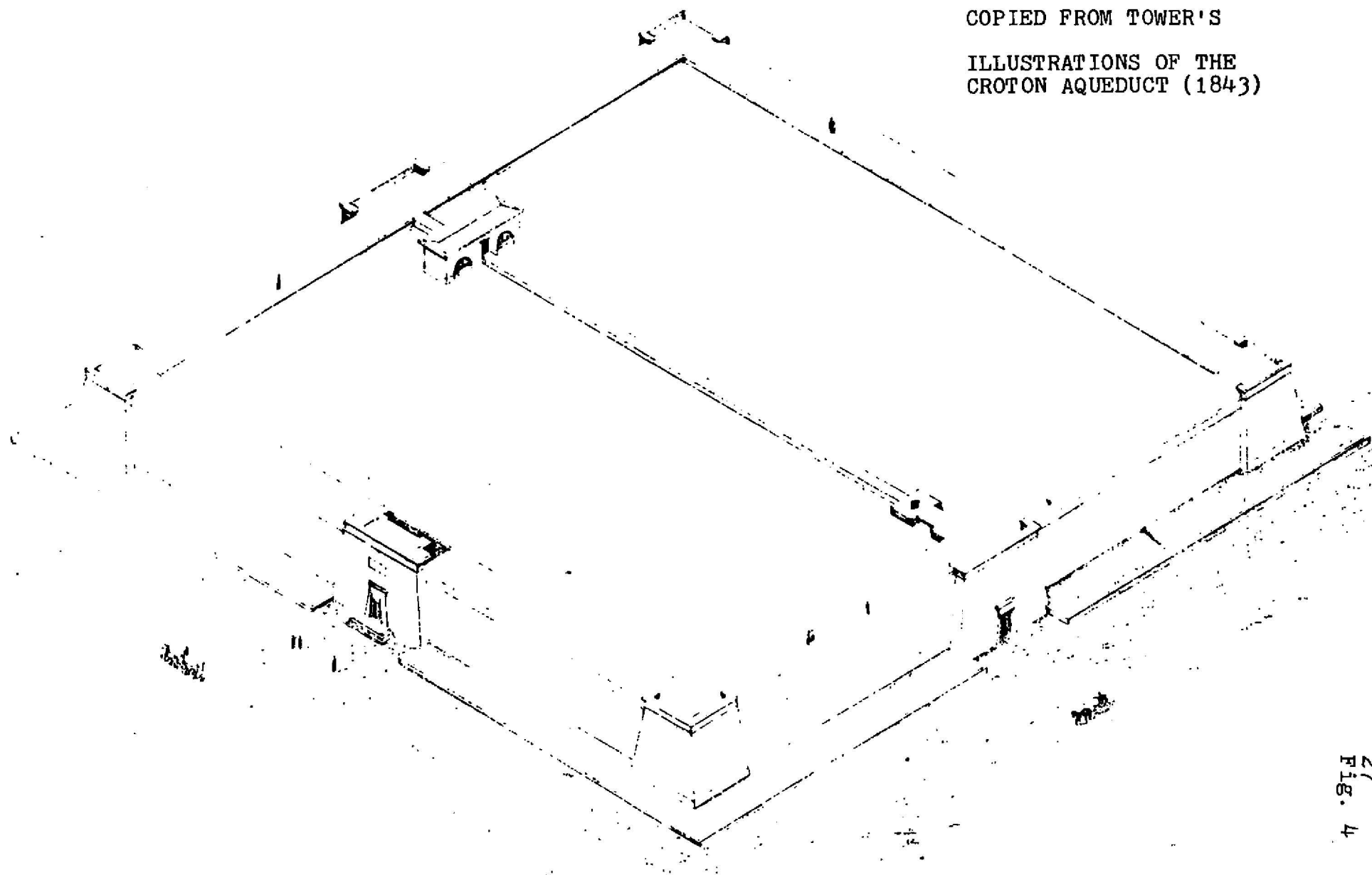


Croton Reservoir

from: Lydenberg's HISTORY OF THE NEW YORK
PUBLIC LIBRARY

COPIED FROM TOWER'S

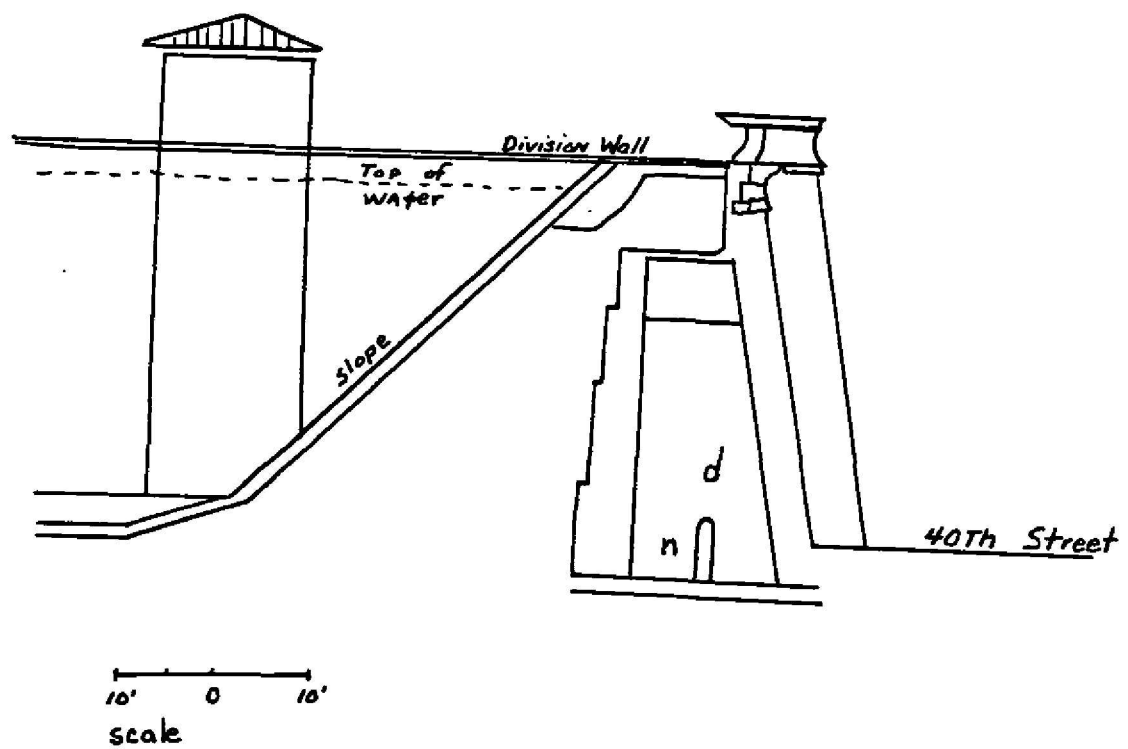
ILLUSTRATIONS OF THE
CROTON AQUEDUCT (1843)



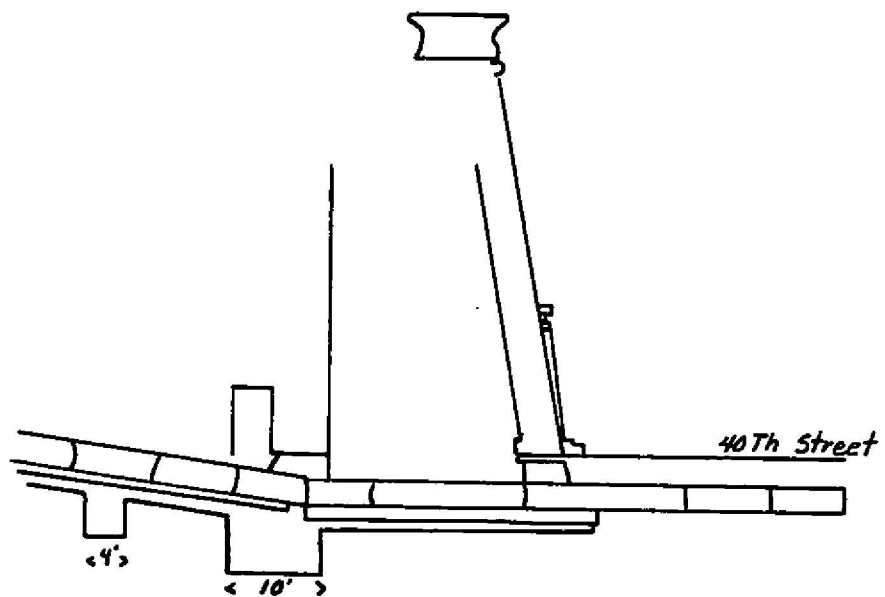
27
Fig. 4

DISTRIBUTING RESERVOIR.

traced from: Schramke's NEW YORK'S CROTON AQUEDUCT

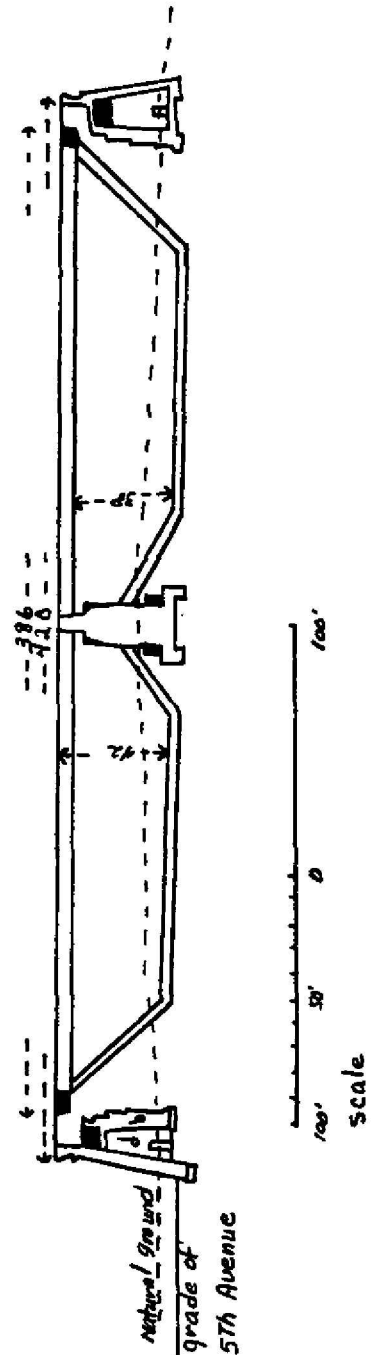


traced from: Schramke's NEW YORK'S CROTON AQUEDUCT

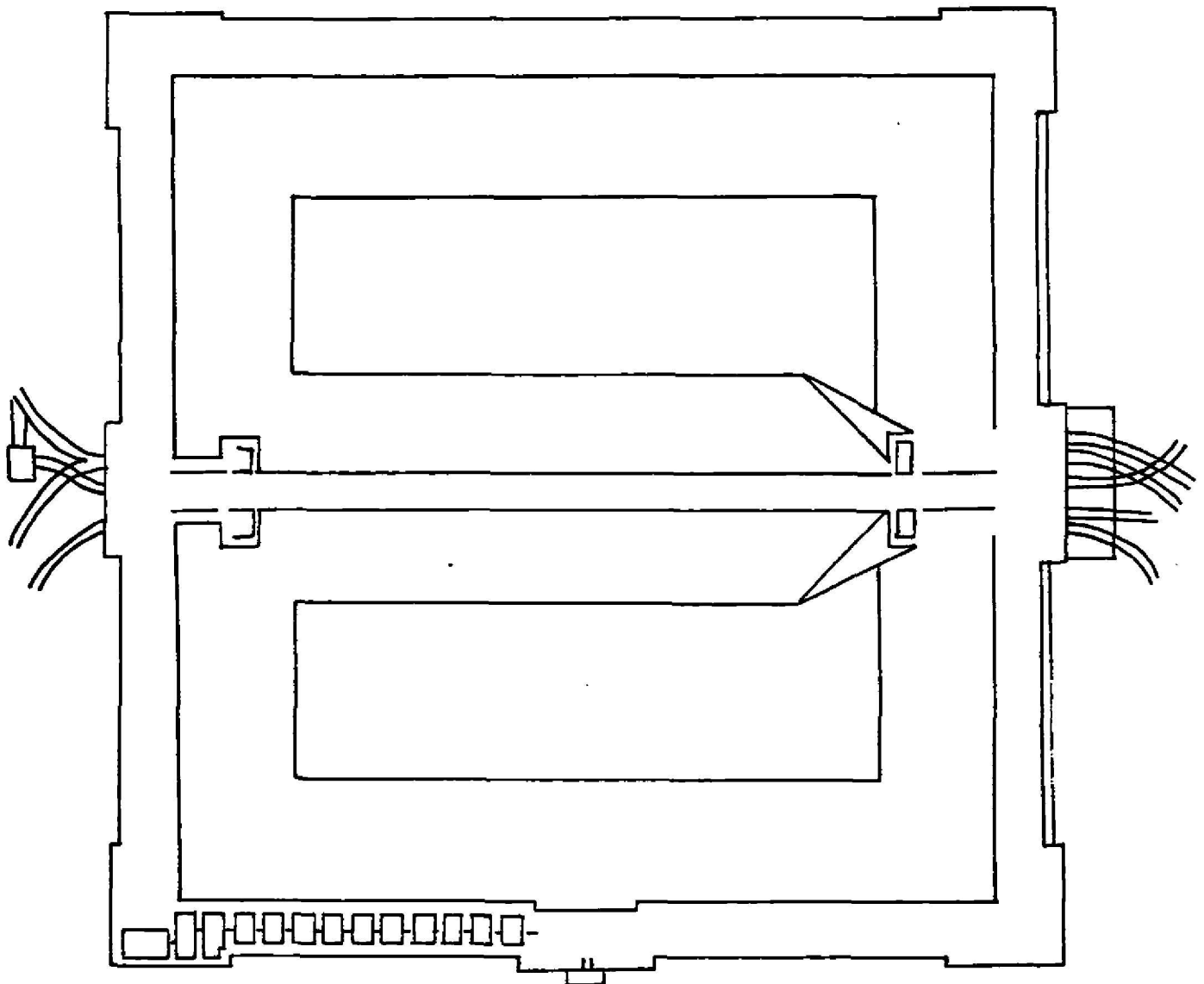


10' 0 10'
scale

traced from: Schramke's NEW YORK'S CROTON AQUEDUCT



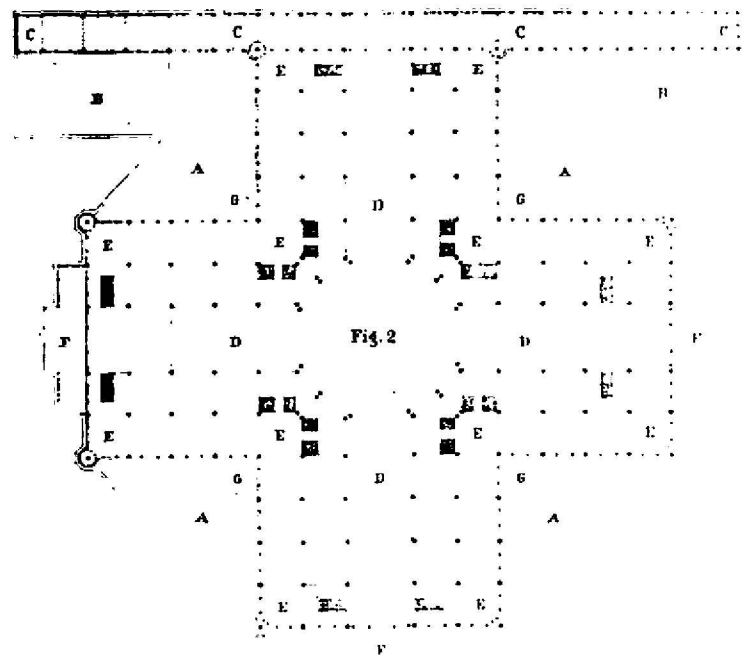
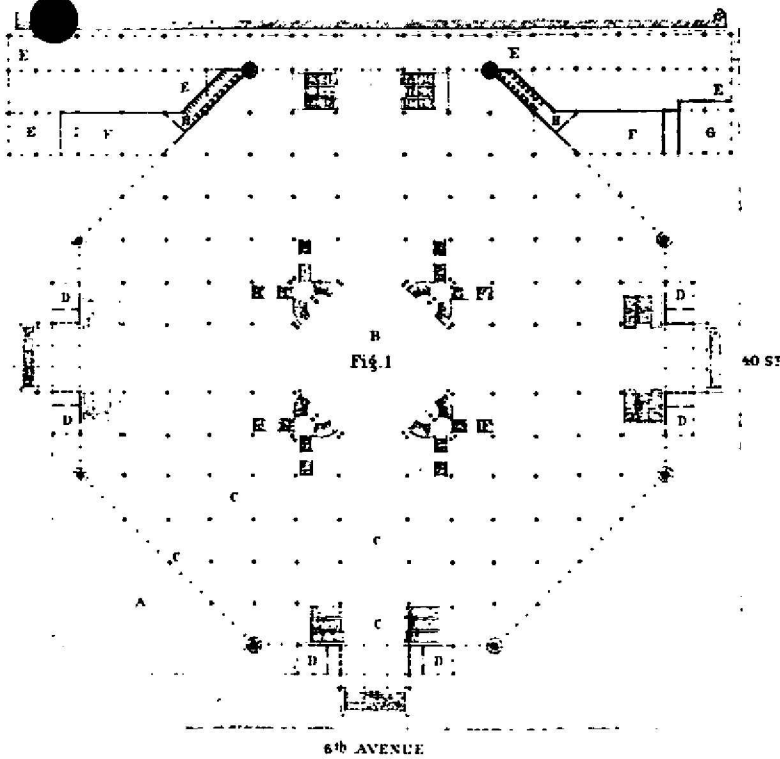
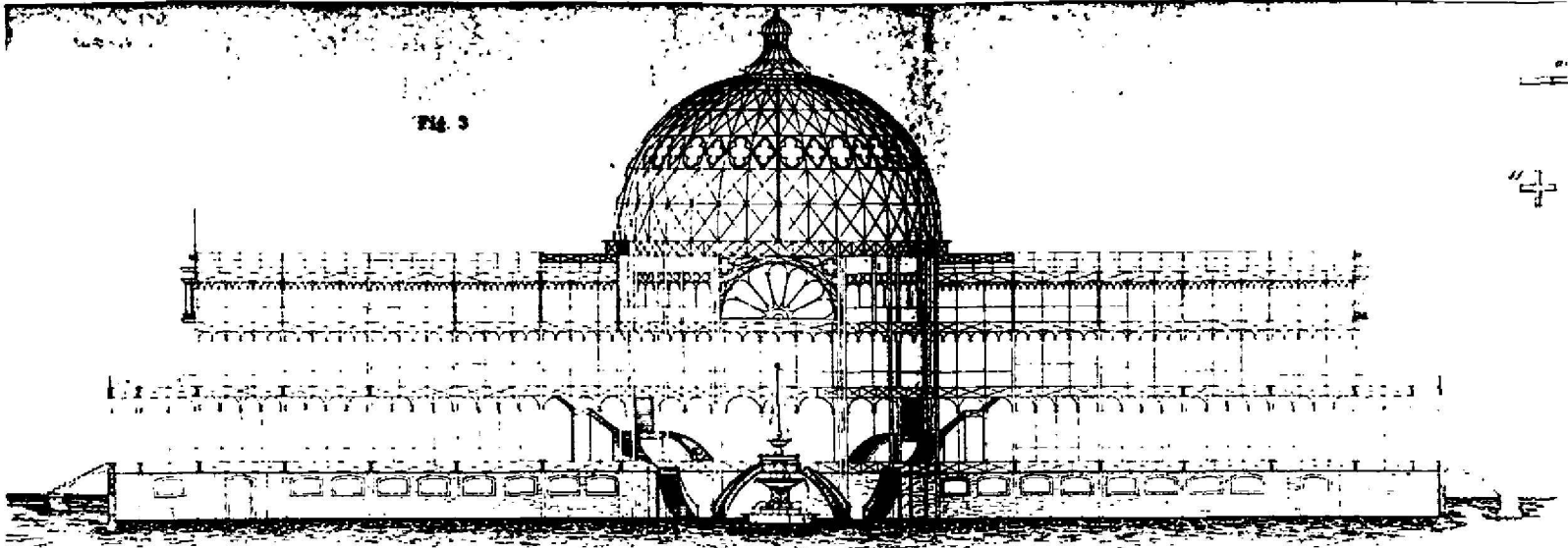
traced from: Schramke's NEW YORK'S CROTON AQUEDUCT



57th Avenue.

32
Fig. 9

ed from: Carstensen and Gildemeister's
NEW YORK CRYSTAL PALACE



Scale for Ground Plans

MAPS OF THE CITY OF NEW YORK,
Volume 6
New York: William Perris, 1854

RESERVOIR

CRYSTAL PALACE

scale:
17/8" = 100'

New York Public Library Photographic Archives

Bryant Park 1281-A4

1855

north to south

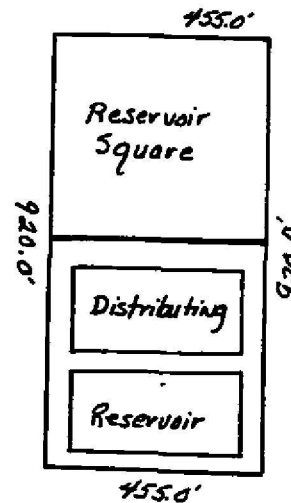
Croton Reservoir

Crystal Palace

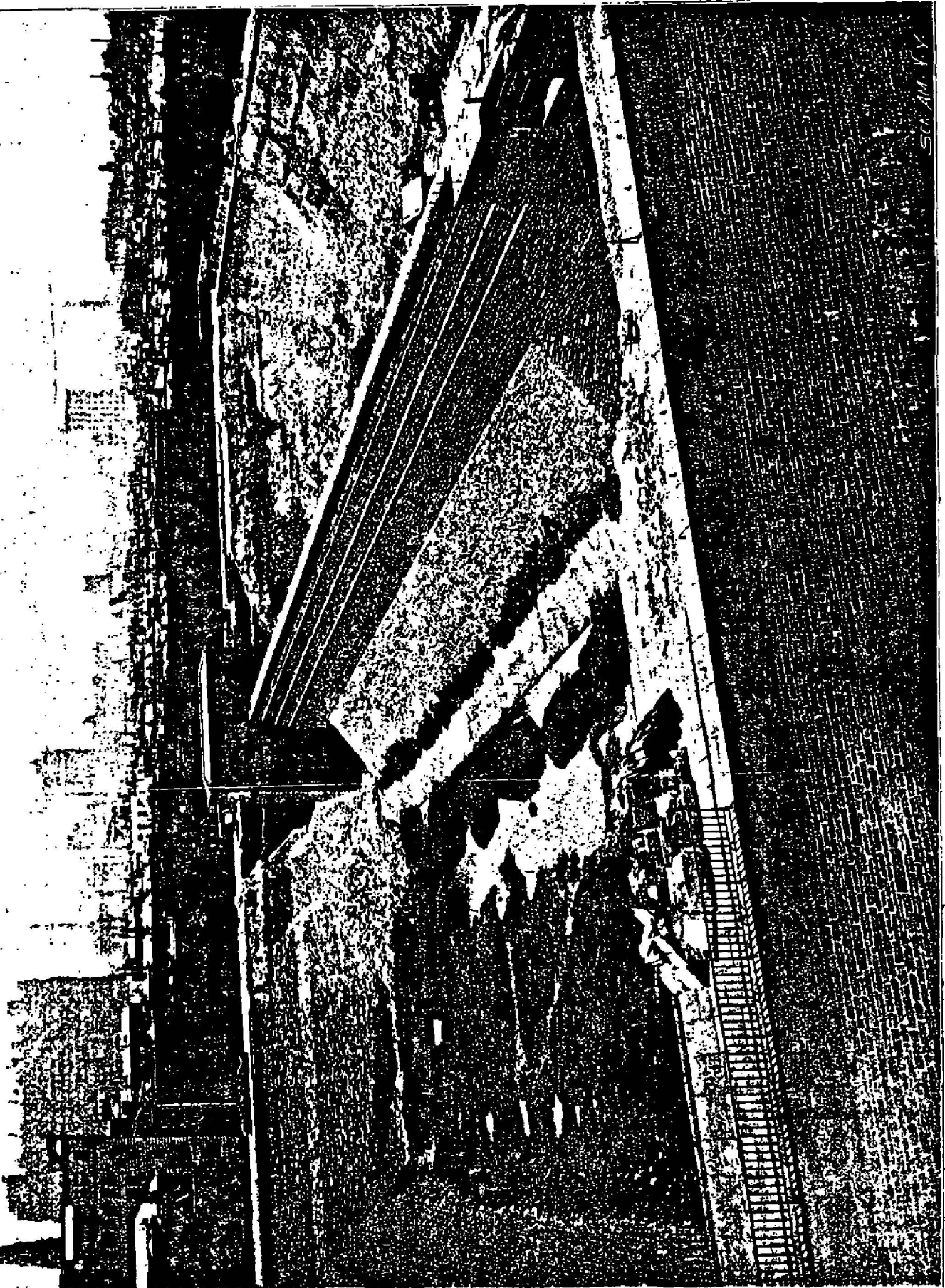


MAPS AND LISTS OF REAL ESTATE BELONGING
to the CITY OF NEW YORK

New York: Printed by Order of the
Commissioners of the Sinking Fund.
J. C. Buckhout, City Surveyor,
January 1, 1860.



copied from: SCIENTIFIC AMERICAN 9/2/1899



BIRD'S EYE VIEW OF THE FORTY-SECOND STREET RESERVOIR, NOW IN COURSE OF REMOVAL.

copied from: Lydenberg's HISTORY OF THE NEW YORK
PUBLIC LIBRARY



Croton Reservoir during demolition.

[illegible]

00

east wall of Crystal Palace, ground level, 1853- 1858



1" = 80'

Sixth
Avenue

ATLAS OF THE BOROUGH OF MANHATTAN,
Volume 2. Plate 13.
Brooklyn: E. Belcher Hyde, 1913(corrected)
scale: 1" = 80'

street

BRYANT PARK

LIBRARY

street

Fig. 15

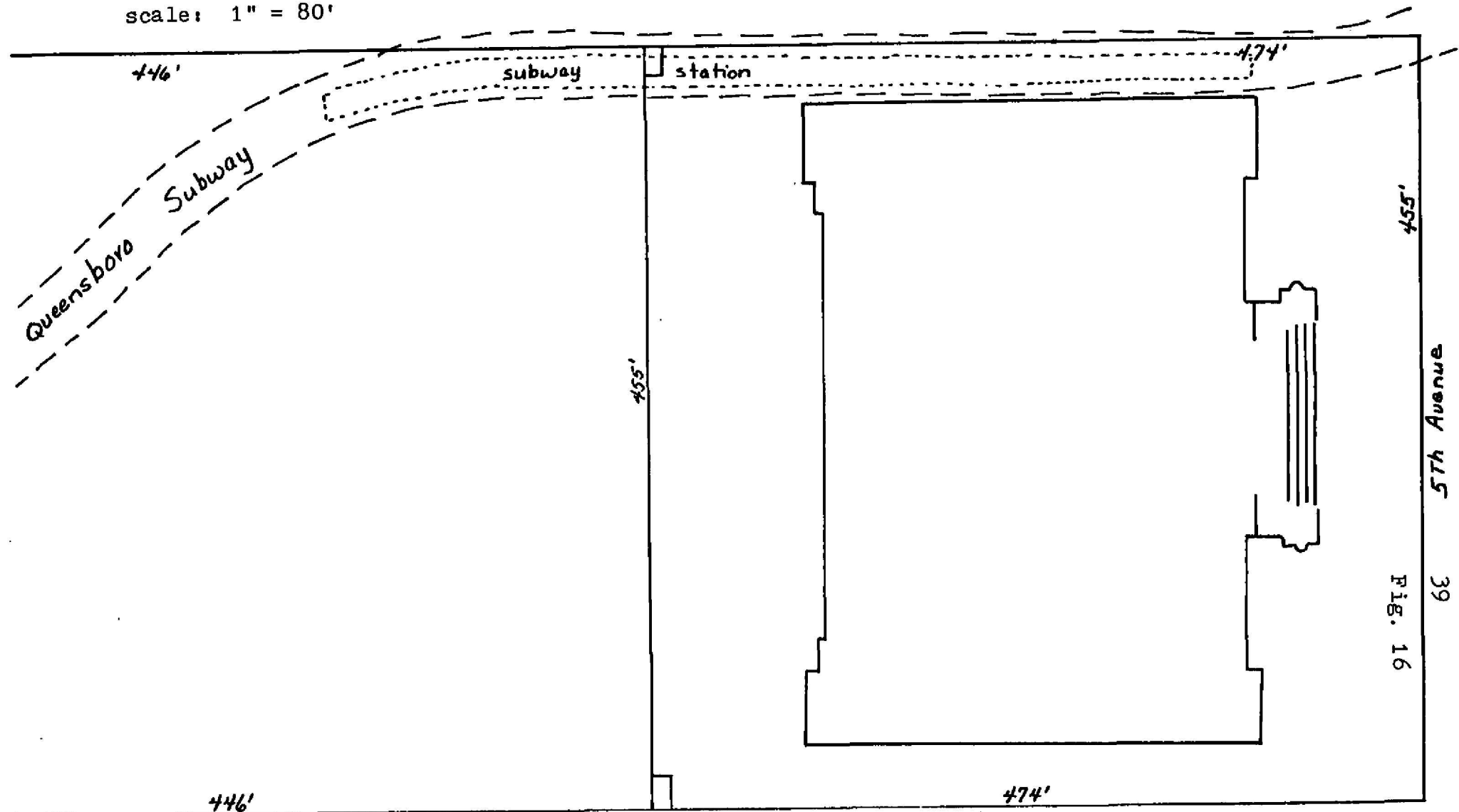
ATLAS OF THE CITY OF NEW YORK, Volume 2

New York: G. W. Bromley and Company

updated to 1957



scale: 1" = 80'



RELATIONSHIP OF FOUNDATION WALLS OF
SIGNIFICANT STRUCTURES ON BLOCK 1257,
EXISTING AND NON-EXISTING

west wall of New York City Public Library 1911+



west wall of proposed development



west wall of Croton Reservoir, ground level, 1842 - 1900



east wall of Crystal Palace, ground level, 1853- 1858



scale, on east-west basis, only:

1" = 80'

Distances measured from the Sixth Avenue curb,
east side.



Sixth
Avenue