

PHASE 1A ARCHAEOLOGICAL ASSESSMENT

RIVER CENTER SITE NEW YORK, NEW YORK CEQR NO.96DCP005M

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Prepared for: Allee King Rosen & Fleming, Inc. 117 East 29th Street New York, NY 10016

Prepared by: Historical Perspectives, Inc. P.O. Box 3037 Westport, CT 06880

Date: March, 1997

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Authors: Betsy Kearns, S.O.P.A. Cece Saunders, S.O.P.A. Martha Cobbs

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I. INTRODUCTION

A site at 550 West 59th Street has been slated for rezoning in preparation for construction of a new building, River Center. Plans for this building have not yet been finalized. Historical Perspectives, Inc. was asked, as part of the City Environmental Quality Review (CEQR), to prepare a Phase 1A Archaeological Assessment Report identifying potential prehistoric and historic archaeological resources that could exist on the project site. This evaluation is designed to address two questions: 1) what is the general level of potential for prehistoric and historical archaeological resources of significance (as defined by National Park Service criteria) to exist within the project site, and 2) what is the likelihood that such resources have survived historical subsurface disturbances.

II. SITE LOCATION AND CONDITIONS

The project site is located on the west side of Manhattan on Block 1087, Lot 1 and Lot 5. The block is bounded north and south respectively by 59th and 58th streets, and east and west respectively by 10th (Amsterdam) Avenue and 11th (West End) Avenue (Figure 1). However, the 1903 John Jay College building that occupies nearly the eastern third of the block is not included in the project site. The southwestern corner of the block, Lot 1 is approximately 100 x 100 feet and is cut through by a 20-foot-belowgrade railroad right-of-way with tracks currently in use by Amtrak (Figure 2, Photographs 3 and 4).

At present, the project site is occupied by a red brick and reinforced concrete mixed-use building which is three stories high on the western 200 feet, two stories high for another 200 feet and one story high for the final 100 feet at the eastern limit (Photographs 1 and 2, Figure 13).

The block slopes noticeably downhill from east to west, with a difference in elevations between 10th Avenue and 11th Avenue of approximately 50 feet. The project site runs 500 feet along 58th and 59th streets from 11th Avenue toward 10th Avenue; the 11th Avenue elevation is approximately 25 feet lower than the point 500 feet to the east.

III. METHODOLOGY

Period maps, primarily at the New York Public Library, were consulted for information about topography and building history in the project area. The New York City Department of Buildings, Records Division, was searched for additional detail on site construction. Old photographs in the Local History Room of the New York Public Library enriched this detail. Street opening dates were researched. Soil borings were examined at the Subsurface Exploration Section of the New York City Topographic Bureau for information about the geology of the area and the project lots in particular. A report by Dr. Dennis Weiss, which entailed a reconstruction of the paleo-shoreline of the Hudson River in the vicinity of the of the project site, provided information about the shoreline during prehistoric times. Other documents gave information on the study area and the project site's history as well as archaeological research in nearby areas. A site visit was made in February, 1997 and photographs taken.

IV. PREHISTORIC BACKGROUND

There has been a Native American population in New York State since approximately 12,000 to 9,500 years ago, soon after the end of the Wisconsin ice age. At that time, the sea level was considerably lower than it is today, since so much water was still frozen in the retreating glacier.

These first people are called Paleo-Indians by archaeologists. They were big-game hunters who followed herds of now extinct mammals such as mastodon. They preferred high bluffs from which to spot game, river edges, and areas near lowland swamps Eisenberg (1978:138). No Paleo-Indian sites have been identified within Manhattan.

As the mastodons disappeared and were replaced by white-tail deer and other smaller game, what is known as the Archaic Period (7,000 to 3,000 years ago) began. Sea levels were slowly rising, and the Archaic people made seasonal rounds to harvest resources at varying locations; in addition to hunting, they collected shellfish from the river, shad from the streams, acorns from the emerging oak forests, and many plants from the swamps. Their presence is

"represented by numerous, small, nearly always multicomponent sites, variously situated on tidal inlets, coves and bays, particularly at the heads of the latter, ...and along the lower Hudson River on terraces and knolls, at various elevations having no consistent relationship to the particular cultural complexity" (Ritchie 1980:143).

Approximately 3,000 years ago, the sea-level was about where it is today, and what is called the Woodland Period began. Woodland people continued to exploit natural resources and to hunt, but they also began to cultivate such crops as maize, beans and squash and to settle into villages. Woodland sites are often found near lakes, streams and rivers (Ibid 1980:201).

The arrival of the first Europeans, about 500 years ago, began the Contact Period. This was short-lived in Manhattan because of rapidly spreading colonization, wars, and diseases to which the native people had no immunity. The Indians were "a large collection of Munsee Delaware-speaking groups" (Grumet 1981:59-62) with villages primarily along the East River shore and in lower Manhattan.

V. PREHISTORIC ARCHAEOLOGICAL POTENTIAL

Natural Environment

There are no inventoried prehistoric sites in the immediate project area, according to the New York State Museum inventory files. However, there is one site recorded (New York State Museum #4062) approximately 2.4 miles northeast of the project site, near what is now the reservoir in Central Park. Another, #4061, is approximately 2 miles to the east, near the East River in the vicinity of 59th Street.

Based on ethnographic data, a study by Robert Grumet finds no planting fields or habitation sites near the project area (Figure 5). A main Indian trail, Wickquasgeck Road, passed by or through both of the previously noted New York State Museum inventoried sites, but was approximately 1 1/2 miles from the project site. Another trail, running along Bloomingdale Road, later Broadway, was closer, but did not traverse the site.

An understanding of the natural environment of the area before European settlement is necessary to assess the probability of the existence of Prehistoric archaeological resources on the project lots; where a camp or settlement was located depended on a number of variables including the topographic conditions and accessibility of resources.

The proximity of the Hudson River has always been a significant factor in the natural environment of the project site area. This tidal riverside locale, with its mix of fresh and salt waters, of could have provided a valuable source shellfish and transportation for the Native Americans. Dr. Weiss' Paleoshoreline recreation indicates that a thousand years ago there was a cove between what are now 60th and 61st Streets and 11th Avenue. There was also a stream running nearby. The combination of fresh water for drinking and salt water for fishing would have been very desirable to Native Americans.

The New York City Landmarks Preservation Commission has developed a predictive model for likely locations of prehistoric sites based on an early topographic map (Figure 6). This model is based on a map locating streams at 60th and 56th streets; it does not include the project site as a locus of sensitivity. The model gives adjoining blocks to the north, south and west of the project site a high potential for prehistoric archaeological resources, primarily because of the availability of fresh water. A 1988 archaeological documentary report for the Trump City (later Riverside South) site recommended testing to ascertain the presence or absence of prehistoric remains in the vicinity of the stream and cove at 60th and 61st Streets west of 11th Avenue (Greenhouse 1988: 20).

Nineteenth Century Topographical Maps

Early maps do not agree on the topography or the existence of streams on the project site itself, which complicates the assessment. Each of the 19th century maps studied gives a slightly different contour to the land.

The earliest map, The Commissioners Map of 1807-11, shows a sharp rise in the northeast corner of the block (not a part of the project site), and perhaps part of a slope in the northwest corner of the block. A stream is depicted between 60th and 61st Streets, and another at 56th Street, but none on the project block.

A slightly later map, the Randel Survey Map of 1819-1820, indicates very uneven terrain, with two outcrops in the western third of the block, another partly on 59th Street, and two steep inclines in the eastern third, one of them off the project site. No streams can be seen on the block.

The 1836 Colton Topographical Map (Figure 3) shows only one outcrop in the western third of the block, and a steeply rising hill in the eastern two thirds. Again, streams are shown at 60th/61st Streets and 56th Street.

Ensign's 1845 Map of the City of New York, in contrast, shows a stream running northwest to southeast through the western quarter of the block. No other topographical features are depicted on the block.

On Egbert Viele's 1859 Topographic Map, there is an outcrop, this time in the northwest corner of the block, with a steep dropoff to the west of it. Again, the majority of the block appears level. However, Viele's 1874 Topographical Atlas (Figure 4), shows a different topography from this 1859 one and agrees more with the 1836 Colton. That is, there is a large outcrop in the western third of the block and a steep rise cutting through it north to south. But, unlike the Colton, there is a stream shown on the block in approximately the same location as on the 1845 Ensign Map.

The accuracy of Viele's 1874 map has been called into question in terms of placement of the railroad and waterfront (Greenhouse Consultants 1988: 18). Could the placement of a stream on the block also be questionable? On the other hand, aside from Viele's 1874 and Ensign's 1845, the Burr Map of 1839 and the 1815 Blue Book of Farm Maps have a stream drawn in the western portion of the project block. These two maps do not depict any other topographical features.

Project Site Potential

It is problematical to assess the attractiveness of the project lots for prehistoric utilization given the contradictory data of the topographical representations. Whether or not there was a stream actually on the project site, there were abundant fresh water sources a block northwest that would have been more convenient for Native American usage. If there were a level terrace, as two maps indicate may have existed (1807-1811 Commissioners and 1859 Viele), it would have been an ideal location for a Native American habitation site. On the other hand, rough hilly terrain - indicated by some of the maps - would be less hospitable. By the time the 1859 and 1874 maps were drawn, it is possible that modifications to the topography had been made. Prior to that, it is doubtful that the land had been manipulated, since there were no buildings on it.

Despite contradictory data, it is clear that the project site was high and well-drained, as shown on 19th century maps and confirmed by soil borings. However, if the present differences in elevation also existed in prehistoric times (the east side of the project site is over 25 feet higher than the west side), the slope was steep. The slope that currently exists - which may have been more pronounced in prehistoric times - is not too steep to preclude occupation, but, here again, there were more logical choices nearby.

Since there is some evidence for the existence of a stream on the project site, it is necessary to suppose that the site could have a high potential for prehistoric archaeological resources. The possibility of a habitation site, however, is greatly diminished because of the degree of slope in the terrain and the presence of more attractive loci in proximity to the project site. The site type most likely to be found on the project lots would be a summer fishing camp, indicated by shell middens. None of the borings indicate the presence of shell, which could indicate an Indian midden. These shell middens or refuse heaps, often quite large, are a common indication of a prehistoric habitation or fishing camp during Woodland times.

VI. HISTORIC BACKGROUND

This section of Manhattan, north of the original city, was called Bloomingdale (vale of flowers) by the Dutch. It was first settled by the Dutch in the early 18th century, and the project block eventually became part of the John Somarindyck Farm (Farm Histories, Somarindyck Farm, Vol.1, p.37). When Somarindyck died intestate, his farm was divided among his children in 1809. The "Blue Book of Farm Maps" shows the block belonging to G. W. Somarindynke in 1815. By this time, 10th Avenue had been opened, although 58th and 59th Streets did not open until 1838 (Map of Street Openings). The property soon changed hands again; in 1819-1820, it was owned by David Dunham according to the Randel map of that date.

The block was woodland during the first third of the 19th century; the 1836 map illustrates the area with trees (Figure 3). However, the construction of the Hudson River Railroad in 1847, just west of the project block along what later became 11th Avenue, served as a catalyst for development in the area. The first buildings on the block appeared in 1851; two structures are shown on a lot in the eastern portion of the block, outside the project site (Figure 7). The rest of the block is still wooded. Immediately to the southeast is Bloomingdale Square and to the northwest lies Hamersley Forge. The Hudson River Railroad can be seen on the west side of the block, although according to the Map of Street Openings, 11th Avenue itself did not open until February 4, 1854.

The two structures on the eastern part of the block (not included in the project area) have been replaced, by 1868, by a "Tarnish [an old word meaning varnish] W'rks" (1868 Dripps), but the remainder of the block is still vacant.

No buildings stood on the project site itself as late as 1879 - as shown on the Bromley 1879 Atlas - but the neighborhood around it was a mix of industries and must have had a distinctive aroma. Hamersley Forge was replaced about 1862 by a bone black manufactory. There were stock yards and an abattoir to the west and northwest, a brewery to the north, and lumber yards to the southwest. To the south there was a wall paper manufacturer, flax mills and another brewery, plus an iron foundry between 54th and 55th Streets.

Still identified by David Dunham's name, the project site has been assigned a block number (193) and subdivided, at least on paper, into small lots by 1879 (1879 Bromley). There is a Varnish Factory and several other buildings in the eastern portion of the block outside the project site. Otherwise, the designated lots remain undeveloped except for the southwest corner, where there is a planing mill. This area is now cut through by the Amtrak rail lines. The same map includes a line showing an original watercourse traversing the project site.

VII. CONSTRUCTION RECORD

The pre-1879 division into lots was probably never put into effect, because by 1891 the entire project site was covered by two large gas holder tanks, one smaller one, and several accessory buildings (1891 Bromley). Belonging to the Equitable Gas-light Company, the gas holders, a brick engine house, and a "Moulding Mill" can be seen on an 1892 Sanborn-Perris Insurance Map (Figure 8).

Each of the two large tanks stood 70 feet high and had a capacity of 1,420,000 cubic feet. The smaller tank had a capacity of 487,000 cubic feet and a height of 50 feet (1907 Sanborn). The Consolidated Gas Company was the 1907 owner, but no other changes appear to have occurred on the project site, except for a small pump in its southwest corner. The present John Jay College building, which bears a cornerstone dated 1903 and is east of the project site at Amsterdam (10th) Avenue and 59th Street, is in place but is occupied by the DeWitt Clinton High School for Boys.

By 1926, the smaller gas holder was gone from the northwest corner of the project site (Figure 10), but the other two remained and can be seen flanking the engine house in a 1927 photograph (Figure 11, Microfiche 0579 E-6). The building in the southwest corner of the block was labled "U.S. Rubber Co." A later photograph, taken in 1935, shows the gas holders razed and the project site vacant (Microfiche 0579 F-1 Figure 12). Most of the site remained vacant until 1950 except for the northwest corner at the intersection of 59th Street and 11th Avenue which is shown to be occupied by a gasoline service station on the 1934 Bromley Atlas.

In 1950 a permit was issued for the construction on the project site of a commercial building containing offices and storage (NB#91-1950). The building was described as three stories high (40 feet, 6 Inches), with no cellar or basement. The building was constructed in three levels of differing height to accommodate the natural slope of the land. The first level extended about 324 feet east from 11th Avenue, where it met a second, higher level, also unexcavated. This level continued to the end of the project site that was at grade.

Support piles of open end steel pipe were driven into the ground to the point of refusal by Pile Contractor I.B. Miller. Then the floor slabs were poured in November, 1950, using nearly 1,000 yards of concrete. A Certificate of Occupancy was issued July 20, 1951 (CO#38699), but was superseded by another in December, 1954, this time for a motor vehicle repair shop (CO#43457).

This building still occupies the project site. By 1971, when a sprinkler system was installed (Building Records), it housed the General Motors Factory Branch Service Facilities for the Pontiac and Buick Divisions. It is currently a light industrial use building with parking on the rooftop. (Photographs 1 and 2).

VIII. SOIL BORINGS RECORD/DISTURBANCE RECORD

Three sets of soil borings (1936, 1951, 1995) were located that were helpful in assessing subsurface conditions on the project site. The sixteen borings all record the same basic conditions although the thickness of various strata may vary. A thick stratum of sand, containing silt in some instances, overlies glacial till over mica Schist bedrock. The sandy soil as recorded in the boring logs - unprotected by a plant bearing stratum - must have been subject to natural erosion. Erosion may well have disturbed any prehistoric remains which are usually shallowly deposited.

An analysis of the soil boring logs indicates that the original slope of the project site was probably even steeper than it is today. The incline has been reduced by the addition of fill, especially at the western end of the block where a range of 12 to 21 feet of fill was recorded along 11th Avenue. There is also 8 feet of fill on the southern boundary of the project lots indicating an original slope from north to south in addition to the pronounced east-west slope.

It should be noted, however, that the borings discussed above were all taken in the sidewalk or street. The only borings located that were taken in the interior of the block were "wash" or water borings used to establish the bedrock elevation. They go directly from grade to rock refusal with no record of intervening stratigraphy noted.

Aside from filling, there have been construction episodes that had an effect on the project site's original topography. When the Amsterdam Gas Light Company first built on the site, there had to be some activity involving clearing and/or grading and filling to prepare the uneven terrain area for construction. The 1991 AKRF, Inc. environment assessment of hazardous substance potential was unable to determine from documentary sources whether or not there had been or are underground tanks associated with prior usage on site (AKRF 1991: 4). It is assumed that the Amsterdam Company's tanks were above ground (Figures 8,9,10,11), but "the main pipes leading to and from the gas holders would probably enter from the bottom of the tank and need to be buried for part of their length." (Hartgen/Historical Perspectives, Inc. 1995: 39-40).

The Amtrak easement "has been in existence since before the 1950s but was not put into service until 1991" (AKRF 1991:6). The easement corridor, that extends to approximately 20 feet below grade, may have effectively destroyed any archaeological potential in the northwest corner of the project lot. See Figure 2 and Photograph 3.

The present building occupying the project Lot 5 was erected in 1951 and caused more subsurface disturbance. Steel pipe support piles were driven into the ground to the point of refusal, apparently at 35 foot intervals. The structure was laid on a concrete pad approximately 3 1/2 feet thick. In order to cope with the site slope, the eastern ends of two floors of the existing building are below the grade of the adjacent 58th and 59th Streets. That is, the structure has stepped floors that follow the steep incline, cutting into the hill as it rises (Figure 13). To illustrate, at 200 feet east of 11th Avenue the ground floor (where it ends) extends down more than 10 feet below grade. At the point where the first floor ends (400 feet east of 11th Avenue) it extends approximately 4 to 5 feet below grade. Of course, this intrusion below grade extends north to south across the lot.

IX. CONCLUSIONS

Prehistoric Resources

The project site may have had potential for significant prehistoric archaeological resources at one time, although the data are inconclusive. Nineteenth century maps do not agree on the specific topography or the location of fresh water streams on the project site. However, the preponderance of reliable sources indicate that there was no stream running through the project site although there were fresh water sources nearby. Soil borings do not reveal a stratum of organic material suitable for a "living surface." The terrain was very uneven, but there may have been a level terrace.

The soil borings do show that the difference in elevation from the east to west side of the block was even greater than the current 25 feet. Native Americans preferred a level habitation area, so even if water and/or a small terrace were present, they would be unlikely to choose the project site to live on when loci with optimum conditions presumably existed less than a thousand feet to the northwest. It is entirely possible that they hunted, fished or gathered shellfish in the area, but there is no evidence of shell - perhaps indicative of a shell midden - in the borings.

Therefore, there are two factors that support a conclusion that there is currently low potential for significant prehistoric archaeological resources to exist on the project site:

1) there is no firm evidence of landforms conducive to Native American exploitation on the project lots, whereas there are several very attractive loci quite close by, and

2) severe disturbance to what are usually shallowly deposited resources has more than likely occurred. The disturbance factors include natural erosion on a pronounced slope, construction activity associated with the structures built on-site over time, pilings below the 1951 building, the intrusion of the 1951 building floors below grade, and the Amtrak viaduct.

<u>Historical Era Resources</u>

The data indicate that the Colonial and Federal periods (pre-1850) are not represented on the project lots. Although there were buildings on the eastern end of the block ca. 1851, there were none on the project lots until ca. 1880-1890. It is doubtful that the gas holder tanks and engine house that were built at that time and stood until the early 1930s would provide valuable archaeological "It is believed that the site was used for storage resources. purposes only and did not house a coal gasification plant" (AKRF 1991: 3). Additionally, a 1995 report on the gas industry prepared in conjunction with the Route 9A Reconstruction Project concluded documentary evidence is so abundant and "since the that archeological visibility so low, an archeological probe of the sites offers no meaningful addenda to the study of the gas industry or its technology" (Hartgen/Historical Perspectives 1995: 40).

X. RECOMMENDATIONS

Although the probability of recovering significant prehistoric remains from the project lots is low, the issue of Native American settlements in Manhattan, which are so rarely found, is of special importance. Therefore, it is appropriate to recommend the analysis of soil borings which it is assumed will be conducted for construction design purposes. Stratigraphic investigation samples could indicate the presence or absence of a stratum of organic material and/or a shell midden. (Shell middens are in some ways analogous to privies as archaeological features. They are less fragile than many other types of features; the deposits are dense, easily visible and relatively large; important information can be obtained from an intact portion of the whole.)

The soils boring program should be designed with consultation and input from a qualified archaeologist. It is recommended that a large diameter core, continuous-tube samples (affording a minimum of compaction or distortion) be taken in enough loci to provide a representative sample of subsurface stratigraphic conditions.

Data from an analysis of soil boring results may corroborate the conclusion that there is very low potential for intact, <u>in situ</u> archaeological resources of significance according to Department of the Interior/National Register criteria to exist on the River Center project site.

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<u>"Blue Book of</u> 1815 (On	<u>Farm Maps"</u> file at the New York Public Library)
	<u>s City of New York.</u> (On file at the Manhattan ugh President's Office.)
Bromley 1879 <u>Atla</u> 1891 1902	s of the City of New York. " "
	York, 21st Street to 66th Street, Hudson River East th Avenue.
	graphical Map of the City and County of New York and Adjacent Country. J.H. Colton & Co., New York.
	<u>Map.</u> Sheet 3. (On file at the New York Public Library.)
	w <u>of the City of New York, North of 50th Street.</u> eyed and Drawn by John F. Harrison, New York.
Ensign, T. & E 1845 <u>City</u>	.H. <u>of New York, New York.</u>
	Openings, 54th Street to 154th Street. C. (On file at the Manhattan Borough President's ce.)
	m <u>of the City of New York.</u> Volume 6. Plates 99, 102 York.
	r. <u>of Farms.</u> Vol. 4, Plate 28. Commissioners of the of New York, New York.
113.	rance Maps of the City of New York. Vol. 6, Plate Surveyed and Published by Sanborn-Perris Map Co., ted, 115 Broadway.

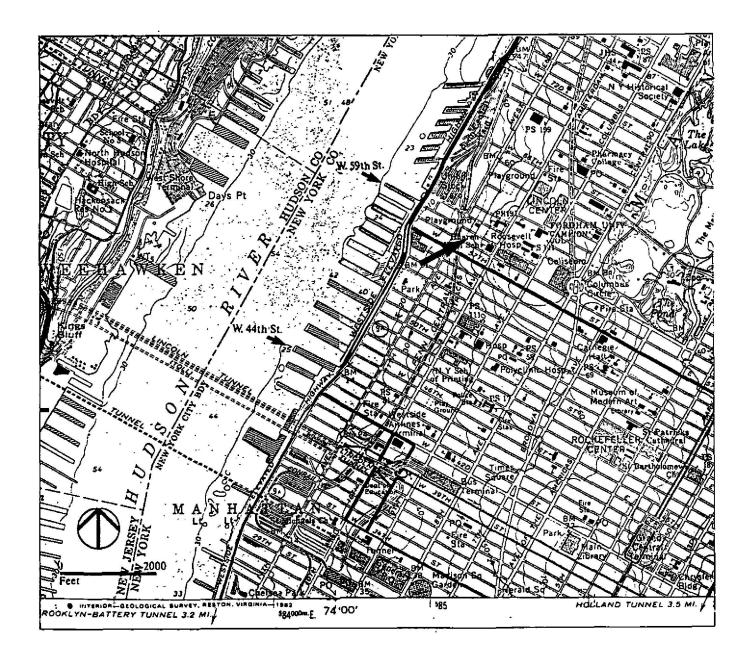
Sanborn

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Figure 1

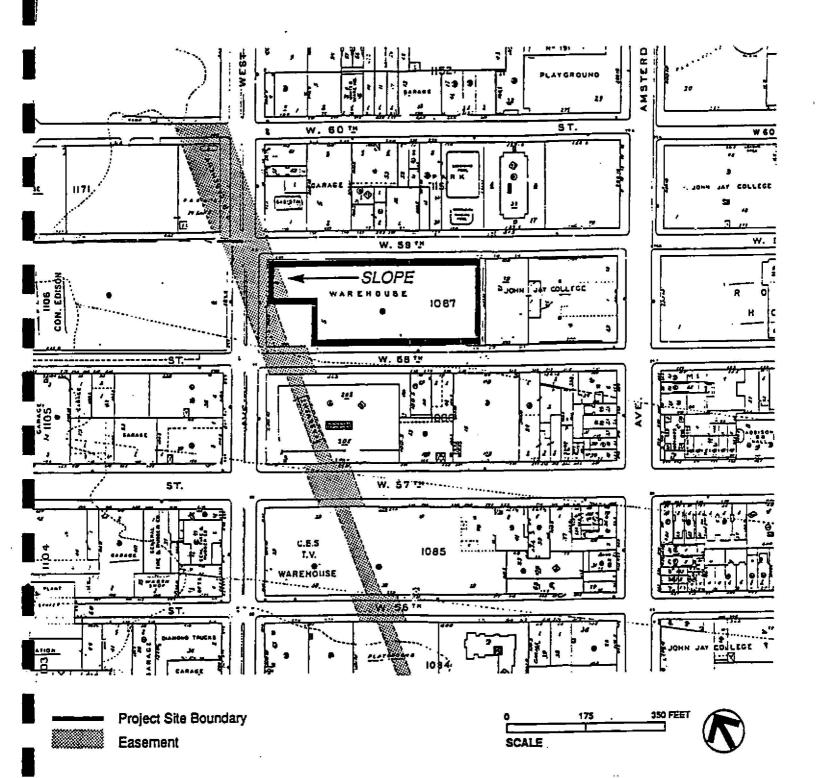


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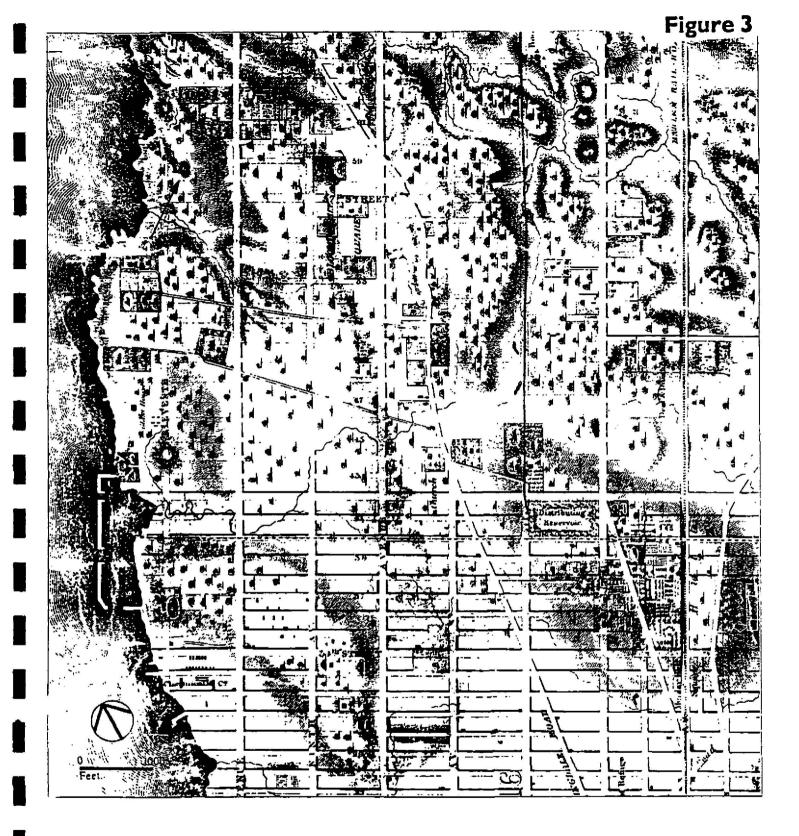
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U.S.G.S. Topographic Map of the Archeological Study Area Weehawken Quadrangle 1981/Central Park Qradrangle 1979

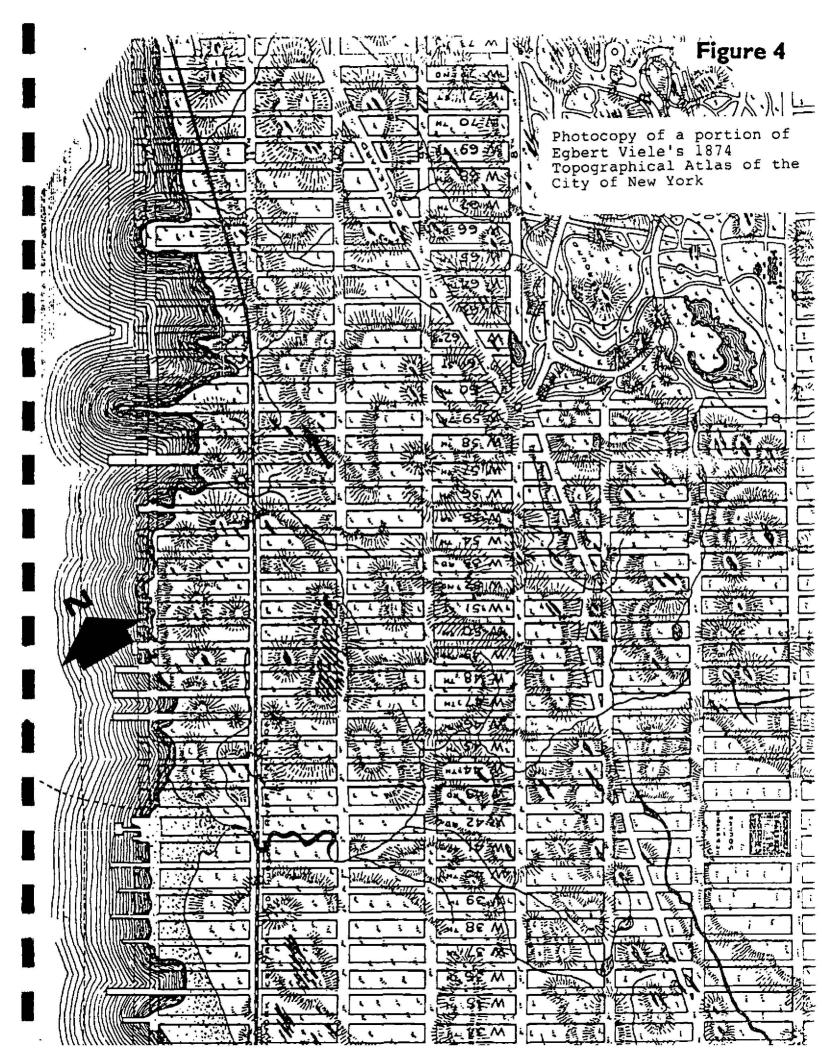
Figure 2 Project Site

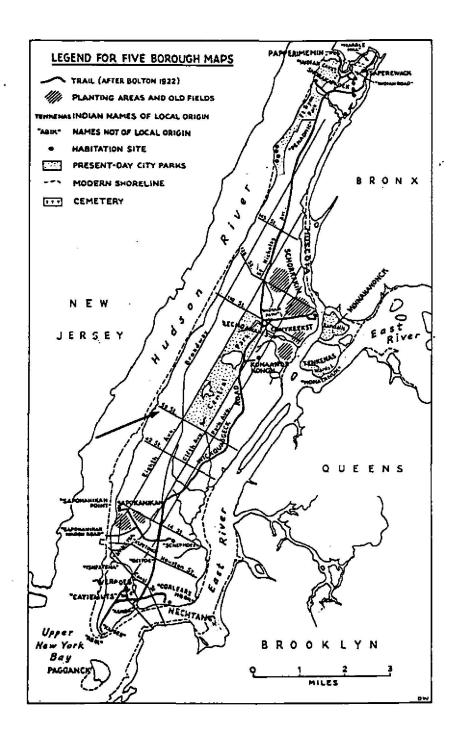


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1836 Colton Topographical Map of the City and County of New York





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Photocopied from Grumet, 1981

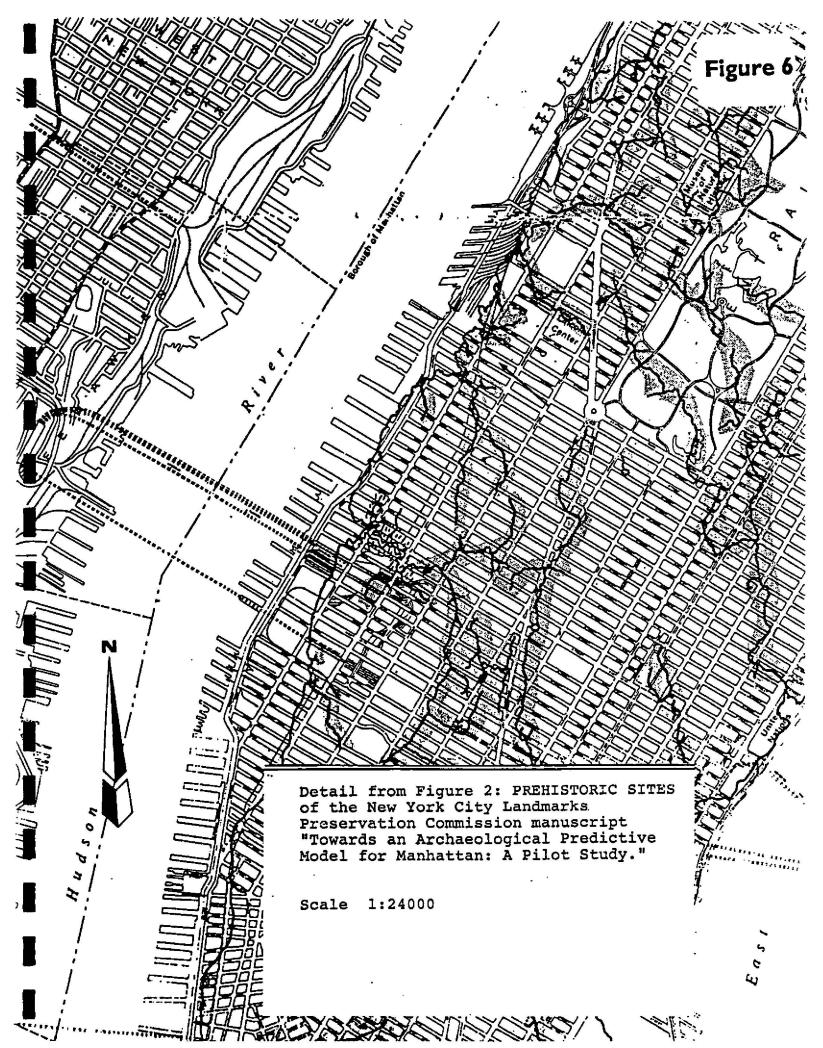
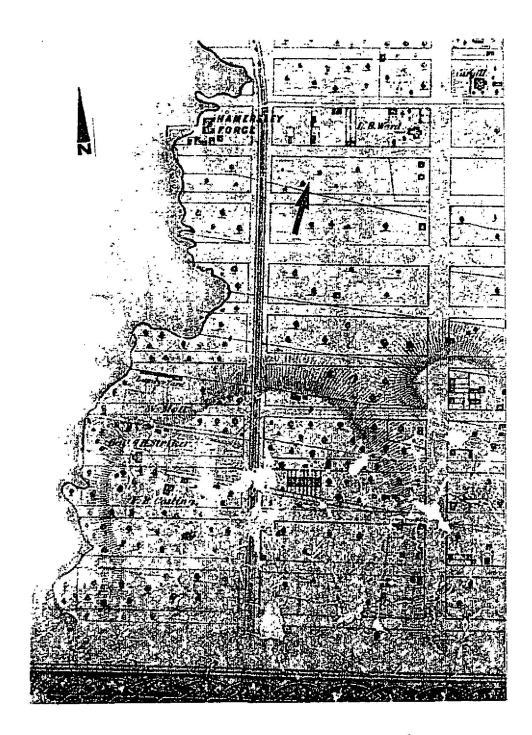
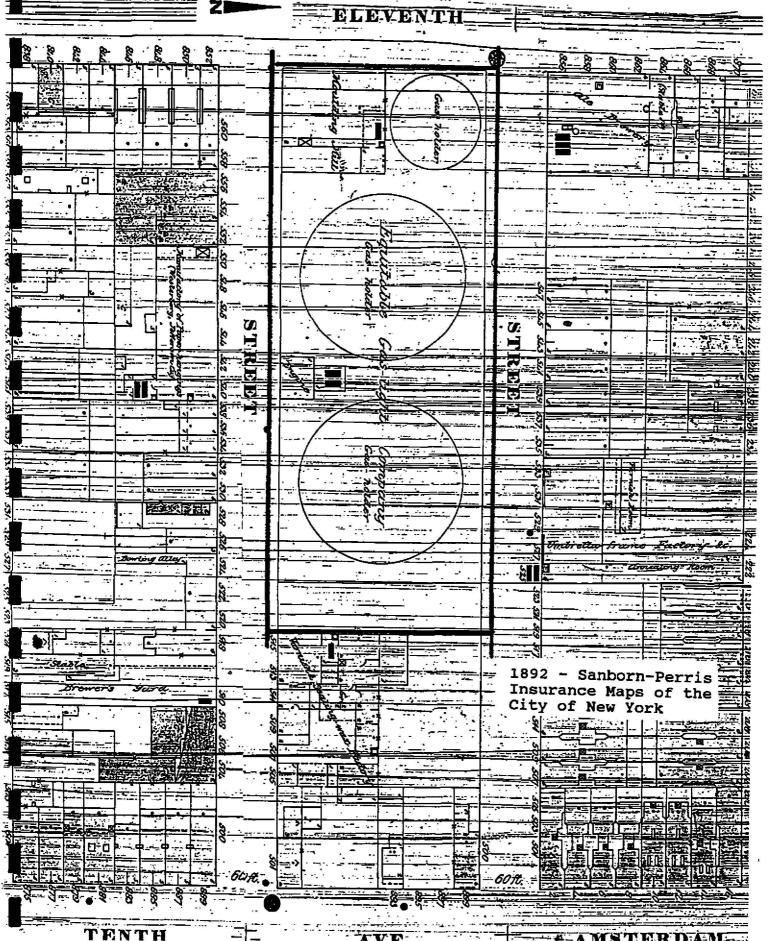


Figure 7



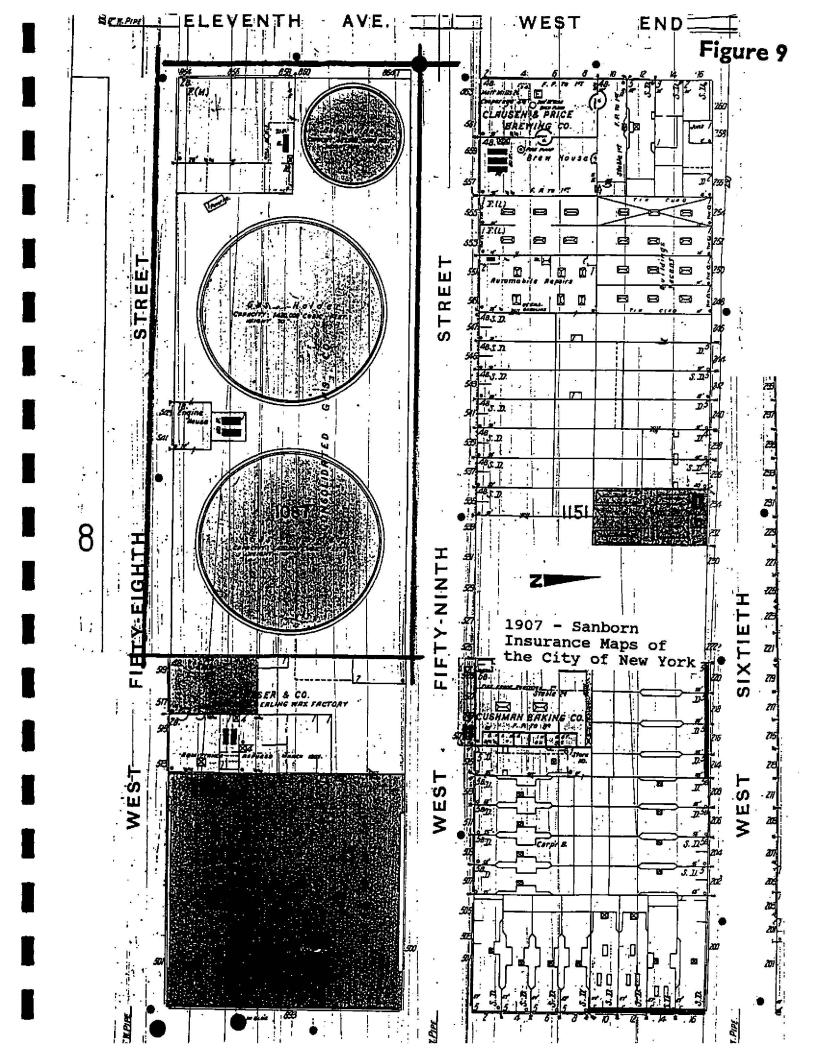
1851 Dripps; Map of the City of New York, North of 50th Street

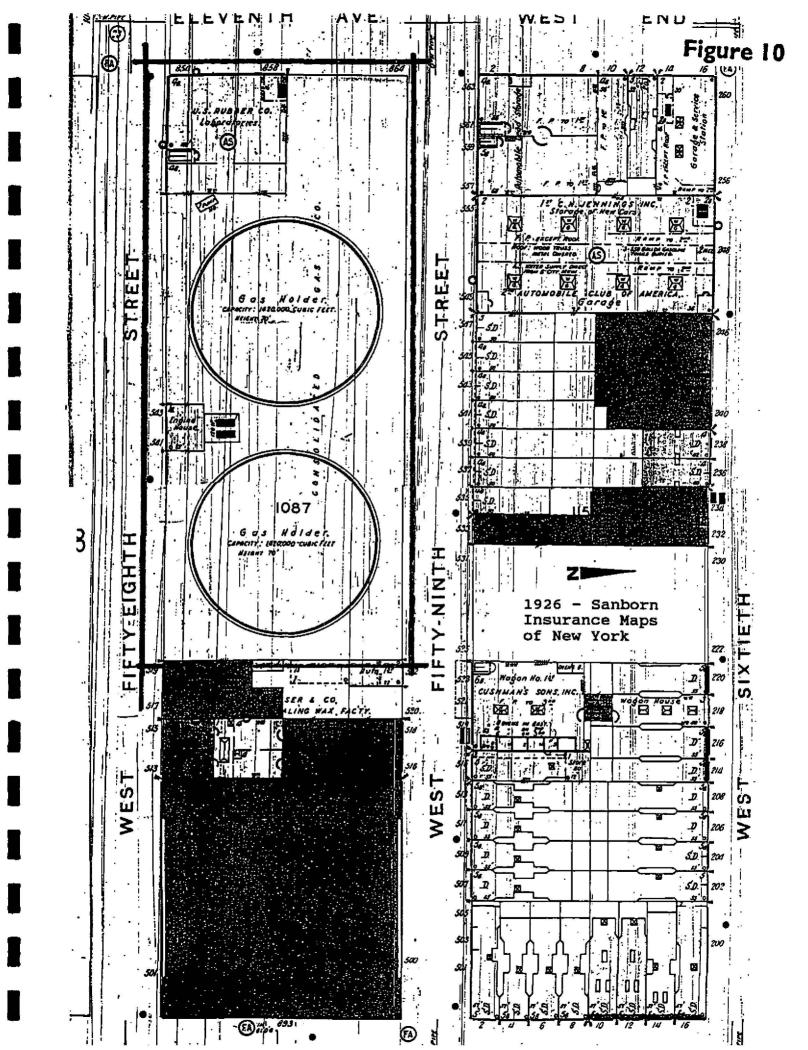
Figure 8



TENTH

VE 4



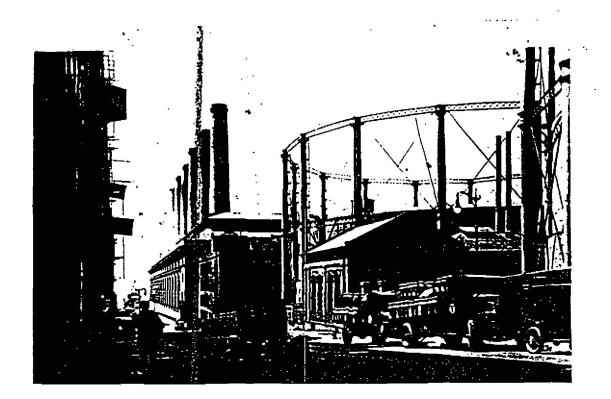


New York Public Library Local History Photograph Archives. 1927. Microfiche 0579 E-6

N

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Looking northwest down 58th Street toward 11th Avenue. Note the two gas tanks flanking the engine house.



New York Public Library Local History Photograph Archives. P.L. Sperr, May 8, 1935. Microfiche 0579 F1.

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Looking east from 11th Avenue up 58th Street. Vacant area on the left is the project lot.

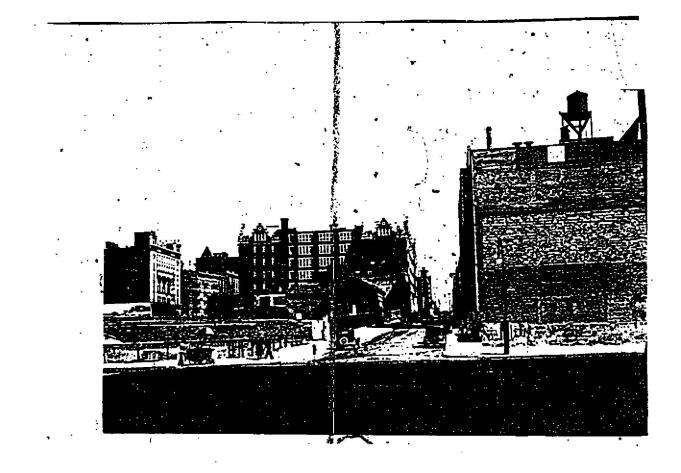
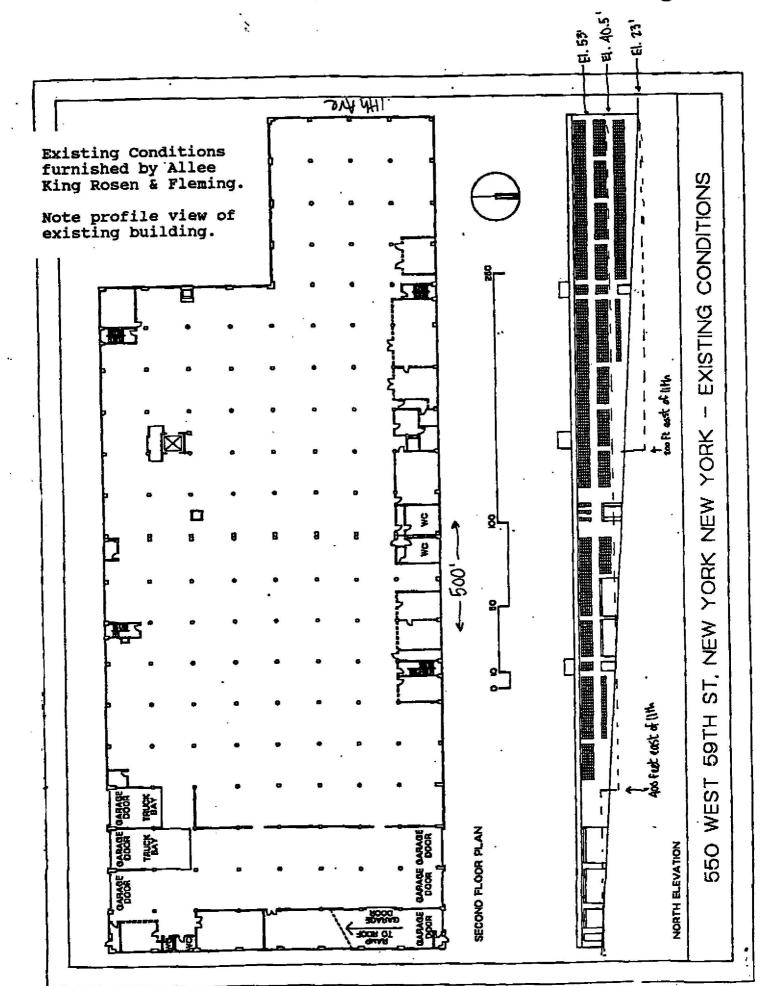
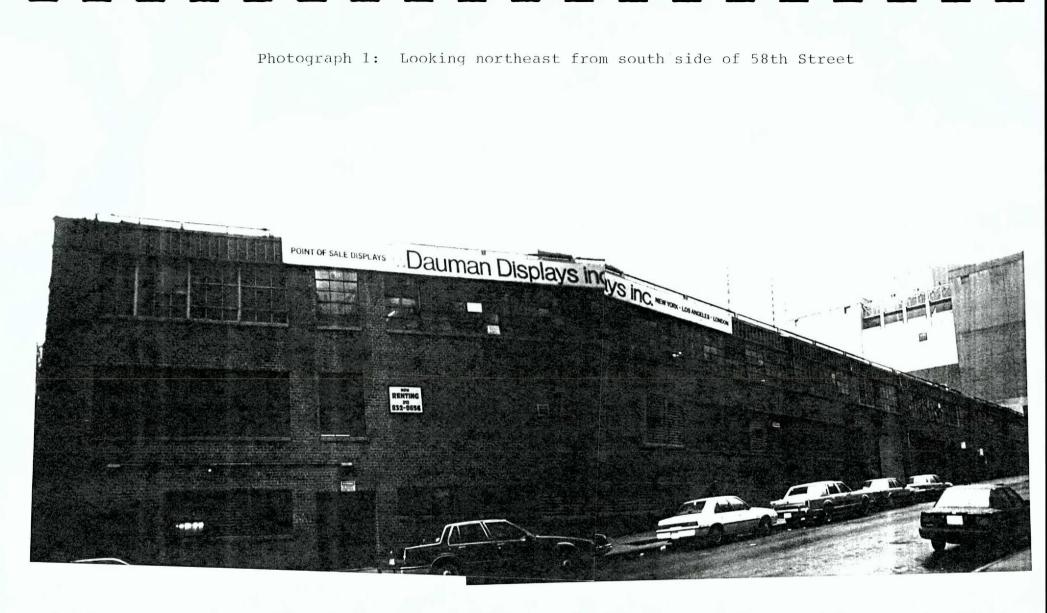
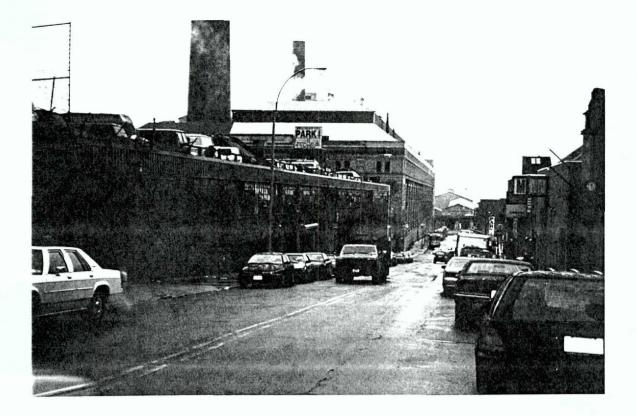


Figure 13

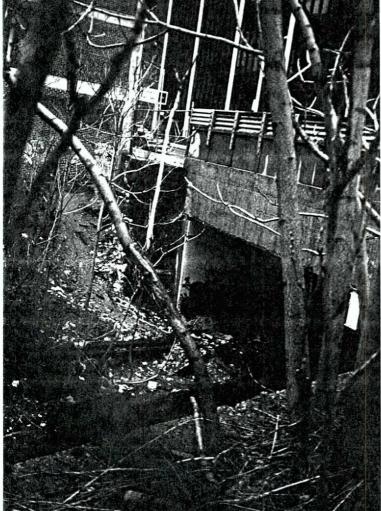






Photograph 3: Railroad easement. Looking northwest from 58th Street





Photograph 4: Railroad easement. Looking southeast from 11th Avenue.