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34th STREET REZONING
PRELIMINARY ARCHAEOLOGICAL ASSESSMENT
POTENTIAL DEVELOPMENT SITE 1

1988

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ENVIRONMENTAL REVIEW
NOV 7 - 1988
LANDMARKS PRESERVATION
COMMISSION
file copy

Block 758, Lots 1-14

Bounded by West 34th Street on the south, 9th Avenue on the west, the Harding Building on the north, and Robert Hall on the east.

The 34th Street re-zoning might make development of other parcels in the re-zoning area more attractive. Four such neighboring parcels have been identified as potential development sites 1, 2, 3, and 4. In coordination with the comprehensive 34th Street project environmental assessment, the potential development sites will be preliminarily addressed. Based on the research being performed, if potential archaeological resources are identified on the project site or the four potential development sites, then it is anticipated that development of these parcels would destroy such resources.

In order to assess, in a preliminary overview, the archaeological potential of these four locations, Historical Perspectives, Inc. conducted documentary research, cartographic analysis, and a field inspection during July and August, 1988. The following analysis is a vertical and horizontal comparative study of past and present building footprints. (Due to the nature of record keeping and permit regulations prior to the twentieth century, there are noticeable gaps in the data available for this review). This research is designed to indicate if there is the need for further, in-depth archaeological examination, to identify the specific lots, or portions of lots that require such analysis, or to conclude that prior subsurface disturbances destroyed any prehistoric and historic potential and that further archaeological consideration (a Phase 1A) is not warranted.

P.O. BOX 331 RIVERSIDE, CONNECTICUT 06878
390 (203) 661-0734

PREHISTORIC OVERVIEW

Prehistorically, subsistence and settlement patterns depended heavily upon environmental criteria. The availability of economic and technological resources influenced settlement. Throughout prehistory, influencing factors including topographic and environmental features, have changed. An understanding of these changes and adaptations to them is required to develop a model of prehistoric land use.

Prior to European Contact, the topography of Manhattan was quite different than it is today. Many hills and valley. have been graded and filled, accounting for the present terrain. On the lower west side of the island, just south of the project area, the surface was once covered with coarse quality white limestone (French, p.418). Few visible remnants of rock outcrops and original features remain on the island.

Potential development site 1 was once located on a rise which ran in a southeast to northwest direction (Fig. 1). The specific geographical characteristics of this potential development site, -that is whether or not it was on the edge or top of the knoll- is unknown. Viele's topographic map that clearly depicts this knoll does not record elevations (Fig. 1) and his placement of features can not be accepted as exact and completely accurate. However, the 1811 Commissioner's Map does give elevations at block intersections along 34th Street. At the corner of 9th Avenue and 34th Street the elevation above mean high water was 40'8".

The knoll, composed of gneiss and granite adjacent to marshland, was drained by streams running to the north and southwest (Grafther 1898). The lower elevation along 8th Avenue corresponds to the streambed. The north stream joined with two other streams to drain into the "Reed Valley" at about 10th Avenue and 40th Street. Here the streams formed the Great Kill which then drained into a deep bay at the Hudson River at 42nd Street and 11th Avenue (Stokes Vol.4, p.131). The Reed Valley was still in primitive condition when surveyed by Randall in the early 1800s.

The Hudson River and surrounding streams would have provided a diverse array of resources attractive to Native Americans. Much of the area surrounding the project parcel would have been ideal for resource procurement. The lacustrine, riverine and estuarine environments in close proximity, provide a wealth of floral and faunal resources including fish, birds, reptiles, mammals, and vegetation. In addition, there was at least one known fresh water spring in close proximity, somewhere on the Glass House Farm (Stokes, Vol.6, p.130-131). As the availability and desire to utilize resources varied through prehistory, it is necessary to understand trends and distinct cultural phases of Native Americans in the Northeast.

PaleoIndians, the first known inhabitants of the Northeast, occupied the area between 10,000-12,000 years ago, relying heavily on big-game. Habitation sites have largely been located on upland bluffs or ridge tops, such as those along the Hudson (Eisenberg, p.123). Since sea levels were much lower during this period, few sites have been recovered as many are likely under water (Saxon, p.5). Although little is known of this period, the presence of PaleoIndians in the Hudson Valley has been established.

Following this, the Archaic period lasting from 9,000-3,000 years ago is much better documented. The warming environment provided seasonally available resources which promoted a settlement pattern based on seasonal rounds. Archaic sites in the coastal and tidewater area of New York are often "represented by numerous, small, nearly always multi-component sites, variously situated on tidal inlets, coves and bays, particularly at the heads of the latter, and on fresh water ponds...along the lower Hudson" (Ritchie, p.143). Sites along the Hudson indicate it was utilized for shellfish exploitation during the Archaic period (Snow, p.182). Sites of the transition period between the Archaic and subsequent Woodland periods, tend to be located on high sandy river terraces.

The following Woodland period is marked by the introduction of ceramics. By this time, sea levels and the environment was much as it is today. During this period there was a preference for sites to be on knolls or terraces with well drained soils adjacent to fresh water, such as short term seasonal camps for the extraction of specific resources. Islands in the Northeast with strong northern winds, such as those coming down the Hudson, have often had sites of this period located on south facing slopes for protection (Little, p.26). Also at this time there appears to be a trend toward semi-permanent occupations, and increased riverine aggregation for the exploitation of seasonal fish and bird migrations (Snow, p.265).

The parcel is in a location that would have provided an abundance of resources throughout prehistory. A model developed by the Landmarks Preservation Commission to predict archaeological sensitivity in Manhattan has placed this parcel immediately west of a high sensitivity zone (Fig. 2). Early maps indicate the shoreline of the Hudson was once much closer to the project site than it currently is (Fig. 1). Topographically, the rise would have been attractive for habitation as there were numerous, diverse resources available nearby.

At the time of European arrival, northern Manhattan was occupied by a large number of Munsee Delaware speaking Indians, identified by the colonists as Wiechquesgeck (Grumet, p.60). Historically, Fitzroy Road ran through Block 758. This road, a widened Indian trail, lead north to the Great Kill (Stokes Vol.4, p.164). The trail appeared to run along the rise although it may not have run directly through the site. A map of known Indian land use in Manhattan (Fig.

3) has no mention of Fitzroy Road or an Indian trail at this location (Grumet, 1981).. In fact the closest Native American land shown is a planting field called Sapokanikan, currently near Greenwich Village (Grumet, p.44-45). The majority of known archaeological sites are located in the northern Inwood park section of Manhattan.

It is very likely that prehistoric activities would have taken place on potential development site 1. The surrounding environment and topography is particularly conducive for resource extraction and processing. The nearby streams and freshwater springs are crucial factors for settlement. There are no known prehistoric sites within the parcel, although there is the possibility that it was utilized prehistorically. According to the New York State Museum, State Education Department, there are no known sites within this parcel (personal communication, Philip Lord to Cece Kirkorian, July 26, 1988). He also stated that the probability of prehistoric remains is low unless original deposits remain, e.g. covered and protected by sidewalks etc., or buried by fill from earlier construction.

Prehistoric remains recovered in southern New York tend to occur in shallow deposits. However, as stated, asphalt, sidewalks, and other build-up can protect these resources. The potential to recover archaeological resources rests largely on the original topography and subsequent alterations to it. Since the urbanization in the mid 1800s, the original knoll topography in the West 34th Street area has been graded. This destructive activity may have extended to this potential development site. However, the research required to establish such terrain altering activities is beyond the scope of this project.*

*

The detailed information of the nineteenth century landscape changes on neighboring Block 757, the 34th Street Project site, was available only because the New York Institute for the Education of the Blind was a state-funded school required to file itemized annual reports with the state legislature. It is highly unlikely that such disturbance records could be located for this potential

development site.

HISTORIC OVERVIEW

This area of New York was originally part of rural Bloomingdale, farmed by the Dutch to provide supplies to the city at the southern tip of Manhattan. During the middle of the eighteenth century, land surrounding and including this parcel was referred to as "Newfoundland" (Stokes Vol.4, p.688). The southern portion of the Weylandt patent, traced to 1677, became part of the 'Glass House' Farm, established in the mid 1700s. This 30 acre farm, situated between 32nd and 41st Streets, housed a short-lived glass manufacturing industry which eventually was purchased by the Chemical Manufacturing Company. When the Glass House farm was sold in 1762, much of the land was subsequently transferred to the Rapelje family in 1779.

The Rapelje farm house was east of 11th Avenue between 34th and 35th Streets, with the Hudson River coming up to its garden and boundaries. Smaller farms adjacent to the Rapelje estate also became established at this time. Farms belonging to Isaac Moses and Samuel Watkins bordered the Rapelje estate to the east. Potential development site 1 straddled the border between the Rapelje estate and Isaac Moses' farm. At that time, and through the 1860s, the land remained rural and undeveloped as shown on nineteenth century maps (Colton 1836; Dripps 1852). Also at this time, Fitzroy Road crossed the westerly side of 8th Avenue between 31st and 32nd Streets and continued northwest to about 42nd Street, crossing the site block. The road was eventually closed in 1832, with the advancement of the 1811 grid system from lower Manhattan (Stokes Vol.6, p.1000).

In the early 1800s, this area was generally characterized as residential, agricultural and industrial, in that order (NYCLPC, Neighborhood Maps). In 1850 the area is listed as residential and undeveloped, with industrial and waterfront shipping and transportation complexes being south of 33rd Street (Ibid). An 1844 description of the terrain characterizes it as rising ground overlooking the Hudson River and New Jersey (Wait, p.3). A survey of landmarks in Manhattan by Stokes (Vol.3, plate 175) supports that this parcel was not occupied during earlier times including the Colonial or Revolutionary periods, and has never been occupied by a landmark structure.

In 1833 the streets and avenues in the neighborhood had not been opened and regulated, as it was a short distance beyond the paved part of the city (Wait, p.3). By this time much of this section of Manhattan had been divided into lots resulting from the adoption of the city plan in 1811 (WPA, p.147). By 1836, 8th, 9th and 10th Avenues as well as 34th Street were constructed and facilitated travel (Stokes Vol.3, pp.998,1006,1010). This portion of Manhattan was part of a growing residential belt "from the Twenties to the Fifties between Eighth and Tenth Avenues" housing rows of brick tenements (WPA, p.145). Beginning in the 1840s, north of the

project area, Hell's Kitchen was predominantly occupied by Irish, as was Chelsea to the south (Ibid, p.145). The introduction of railways in the mid-nineteenth century, and increased traffic on the Hudson created industrial sections, with unskilled laborers often being forced into nearby slums.

An 1866 report on the sanitary conditions for the vicinity states that out of 417 tenements in the district, 105 were not hooked into the public sewer system at this time (Citizens Assoc. of New York, p.257). Laws existed regulating when privies should be cleaned, however these were often violated. Privies were to be emptied as soon as they were full, but this was often ignored and they were left in horrible states (Ibid, p.261). The overall condition of this district was considered poor, with the nicer buildings being to the east of 8th Avenue.

SITE SPECIFIC LANDUSE

BLOCK 758

This parcel is on the northeast corner of 34th Street and 9th Avenue (Fig. 4). An 1844 topographic map indicates there was no development on it at that time. By 1849 sewer lines were being laid along 9th Avenue (Wait, p.29), and by 1852 sewer lines were available on 34th Street. Water lines were laid along 34th Street between 8th and 9th Avenues by 1849. However, it is possible that the lines on 34th Street may have been solely available to the New York Institute for the Blind directly to the south of potential development site 1, as The Institute petitioned for their installation. The Water Department official records indicate the earliest date for availability is 1903 on 34th Street, and 1908 on 9th Avenue, far too late to be the initial installation.*

The following history of development on potential development site 1 is presented chronologically for each lot, in numerical sequence. The lot numbers referenced are those designated in the 1913 Bromley Atlas corrected to 1920 (Fig. 5).

LOT 1

The first development took place on lot 1 between 1852 and 1868, when a coal yard and several wooden structures were located on the lot (Dripps 1852, 1868). These remained through the turn of the century (Bromley 1879; Robinson 1883). It is likely that the wooden buildings associated with the coal yard were temporary in nature, and did not possess cellars. The depth of foundations and impact can not be verified. By 1920 a one and two story brick building was on the lot directly at the corner of 34th Street and 9th Avenue, that is on the southern portion of the lot (Bromley 1913 corr. to 1920). Also at this time, lot 1 had a one story wooden structure bordering 9th Avenue, on its western side. According to city atlases, by 1950 the wooden structure was removed, and the entire lot was covered by a two story brick building, which is still standing (Photo A) (Hyde 1906 corr. to 1950). Permits issued in 1922 were for the removal of a two story building, and the construction of a new two story brick building, measuring to 58'6" x 49'4" with a partial cellar of unknown depth (N878, C05606). The 1922 building was constructed on solid rock and hard clay, and there was no mention of cellars in the previous buildings or the location of the partial cellar.

*

For a full discussion of the issue of utility installation, see the Nineteenth Century Homelot Archaeological Potential section of the "Phase 1A Archaeological Assessment, 34th Street Rezoning Project," 1988. Ms. on file with Allee King Rosen and Fleming, Inc.

LOTS 3 and 4

No buildings were present on lots 3 or 4 in 1868 (Dripps 1868). By 1879, the coal yard originally confined to lot 1, was extended north to encompass lots 3 and 4. By 1883, wooden buildings in association with the coal yard were built across all of lot 4 fronting 9th Avenue, and on the east and west ends of lot 3 (Robinson 1883). There is nothing to indicate that either of these structures possessed basements, and the impact of the coal yard activities is likely minimal. By 1920 both lots possessed 5 story brick tenements, each being 100' x 24'8", fronting 9th Avenue. These were both removed in 1955 (DM424, DM342) and became parking lots. The 1906 Hyde atlas corrected to 1950 depicts these as six story brick buildings, which may suggest they had basements. There is no additional data available to confirm this. Currently the lots are both used for parking (Photo B).

LOT 5

Lot 5 was first developed between 1852 and 1868, when a building appeared on the north half of the lot, set back from 34th Street (Dripps 1852, 1868). The 1883 atlas depicts this as a brick 2 story building, still set back from 34th Street (Robinson 1883). In 1926 an extension on the existing 2 story building was added on the south side, to bring the front up to 34th Street. The addition had a 4'8" deep foundation (ALT151). A 1946 permit indicates this was a 4 story building with a cellar (ALT36045), while the 1906 Hyde atlas corrected to 1950 shows a 2 story brick building occupying the entire lot. Likely the top two stories were removed between 1946 and 1950. Currently a 2 story brick building is covering all of this lot (Photo A).

LOT 6

The first construction on lot 6 occurred between 1852 and 1868, when a building was situated on the southern portion of the lot, fronting 34th Street (Dripps 1852, 1868). An 1879 atlas depicts the lot as vacant (Bromley 1879). Contradicting this development date is an 1883 atlas showing a brick building occupying the majority of the lot (Robinson 1883). In 1920 a 3 story brick building with a basement is located on the southern three quarters of the lot, and it appears as a 4 story brick building in 1950 (Bromley 1913 corr. to 1920; Hyde 1906 corr. to 1950). An alteration permit dating to 1875 indicates it is a 4 story brick building with a 10' deep foundation, measuring to 22'x50' (ALT499). Later permits support the presence of a cellar (ALT2280-26, C012451-27). The building currently standing is a brick 4 story structure, and is likely the original (Photo A).

LOTS 7-14

By 1968 lots 7 through 14 each contained a building on

the southern portions, fronting 34th Street (Dripps 1868). This row of brick buildings is shown on an 1883 atlas (Robinson), and permits support that they were tenements. By 1920, lots 7 and 13 each had a brick extension on the rear of the buildings at the north end of the lot (Bromley 1913 corr. to 1920). The 1902 extension on lot 13 was an operating room being added to the Metropolitan Throat Hospital which was housed there. The foundation of the extension measured 8'6" deep (ALT622). In 1924 a 4 story brick tenement was demolished on lot 14 and was then replaced by a 3 story Synagogue with a cellar. The foundation of this was built on hard rock (DM89, NB373). The row of buildings was still standing in 1950, and by 1967, lots 7 through 11 were vacant (Hyde 1906 corr. to 1950; Bromley 1955 corr. to 1967). Demolition permits support that most of these buildings were removed in the 1950s (DM343-56, 368-56, 72-52). Lots 12 and 13 are currently vacant as well (ALT799-70). Currently the only building left is the Synagogue on lot 14. The only foundation depth or size mentioned of all existing buildings is that of the hospital on lot 13 measuring to 18'7" x 64' with an 8'6" deep foundation. All of the tenements probably possessed full cellars. Unfortunately no data was available to clarify this conclusion.

ARCHAEOLOGICAL POTENTIAL

Potential development site 1 lies in a sensitive area for prehistoric cultural remains. The land would have been ideal for prehistoric occupation, as it would have afforded ample opportunities for resource procurement. It is likely that some form of prehistoric utilization did take place on this parcel. Extended habitation is doubtful as the strong northerly winds coming down the Hudson would deter this. Short term habitation sites are most apt to be represented in such an area. The majority of leveling activities during the urbanization of the neighborhood were probably confined to land southeast of the parcel, the land of the New York Institute for the Education of the Blind. A 1979 U.S.G.S. topographic map does show the height on potential development site 1 to be greater than the land to the east and the current elevations for the site neighborhood approximate the 1811 elevations. It is possible that the rise under this parcel may not have been totally removed.

The preliminary review documented historic subsurface disturbance including construction of below grade cellars and basements. The majority of the block appears to have experienced sub-surface disturbance. However, the initial review of the cartographic data and information acquired at the Building Department, Block and Lot files, suggests that there may be existing undisturbed areas.

Lots 3, 4 and 6 each appear to have a narrow portion of undeveloped land behind the previous structures, on the eastern ends of the lots (Hyde 1906 corr. to 1950). These appear to be alleys rather than rear yards, as they are rather narrow. It is likely that these have been disturbed, as a builders trench would have been associated with the construction of the adjacent foundation. Such a trench would have disturbed the majority of this narrow alley.

Lot 7 has a small possibly undisturbed rear yard on the north end of the lot (Ibid). The undisturbed area borders lots 3 and 4 to the west, and lot 8 to the east. In addition, lots 8 through 12 had rear yards on the north end of each lot, that had not been developed. These northern parcels appear to have remained undisturbed, operating as back yards for the tenement buildings on the south side of the lots. The atlases and block and lot records support that these rear yards have not experienced substantial development.

Potential historic archaeological resources are limited to mid to late nineteenth century remains. The lack of occupation prior to this period supports that there is no potential to recover earlier remains. Sewers appear to have been available at the time of earliest construction, with water lines generally being available as well. Therefore, we can not predict the possible presence of nineteenth century back yard features, commonly investigated by archaeologists, e.g., cisterns, privies and wells.

RECOMMENDATIONS

Potential development site 1 may possess prehistoric remains. The site would have provided a wealth of resources attractive for Native American utilization. It is likely that the site was occupied at some time prehistorically, for the extraction of resources. Potential remains would likely represent short term habitations for this purpose. The potential to recover these remains exists where back yards were located historically, or beneath the sites of existing or previous standing structures without cellars. However, we feel that this potential is limited. This limitation is due in large part to the massive earth moving undertaken in the nineteenth century. Clement Clark Moore, a nearby nineteenth century landowner, described the changes brought about by the 1811 Commissioners Survey: "The great principle which governs these plans is, to reduce the surface of the earth as nearly as possible to a dead level. The natural inequities of the ground are destroyed..." (Cohen, p.2511). However, the present day elevations roughly correspond to those taken by the street surveyors prior to leveling. Therefore, the question of the depth of intact soil stratigraphy on the potential development site remains unanswered. The archaeologists reliance on soil boring logs for a glimpse at subsurface conditions will, in this case, not be helpful since they can not reveal the amount of "missing" pre-1811 A horizon or B horizon soil.

Lots 7 through 12 each had rear yards that apparently never hosted substantial structures. However, for more than a century these spaces have been subject to multiple human activities which almost surely would have destroyed or hopelessly mixed shallow-lying prehistoric deposits. The most one could reasonably hope to find would be random artifacts rather than significant remains from Indian occupation.

For those spaces beneath buildings having no basements, the case is less clear cut. Even the slab foundation technique creates a degree of subsurface disturbance, although to what degree is unknown in this instance. Thus lots 3 and 4, on which there are no documented cellars, may possibly possess prehistoric potential.

Remnants of historic lifeways are limited, as there was nothing constructed on this site prior to the middle of the nineteenth century. Documentation supports that the only areas with the potential to yield historic remains, are those rear yards previously mentioned (Lots 7 through 12). Although questionable, there is the possibility that privies, cisterns, and wells were once located in the back yards of these lots. As detailed in the above discussion, municipal sewer was available from the onset of construction on this site. However, based on nineteenth century sanitation reports and health violation records from neighboring blocks there is no reason to believe that each tenement was connected to this available sewer. If privies were in rear

yards of certain of these tenements (e.g., Lots 7 through 12), these privies were, according to late nineteenth century health code regulations, regularly emptied. Periodic cleanings would have destroyed any archaeologically significant deposits.

It has been impossible to ascertain the exact nature of an individual tenement's earliest water supply and, in consideration of the in-depth research expended on the 34th Street Rezoning Project for this same information, we do not feel that further documentary research will provide this evidence. Although there was municipal water in the immediate area at the time of first construction, there may be capped wells and cisterns in the back yard spaces behind Lots 7 through 12. It must be kept in mind that the buildings associated with these back yard spaces were classified as tenements, indicating multiple families that were possibly unrelated and transient. The presence of privy, cistern and well features does not guarantee they will provide additional information on historic lifeways. If we were to proceed on the limited possibility of back yard features/deposits, further research would have to be conducted to establish the possible significance to the archaeological record of such features (e.g., long term occupation by one family or ethnic group).

This vertical and horizontal analysis of past and present footprints was designed to establish potentially sensitive areas for archaeological remains. This preliminary analysis was not designed to provide sufficient data to determine the need for field investigations but to recommend whether or not a full Phase 1A study was warranted. Based on their research goals and priorities, NYCLPC may want to consider the possibility of further investigations on a portion of this site, the rear yards of Lots 7 through 12 for historic resources, and Lots 3 and 4 for prehistoric resources (Fig. 6). However a full Phase 1A archaeological analysis may not be appropriate for this potential development site because it is doubtful if further documentary research could give definitive assurance that potential resources, in fact, exist.

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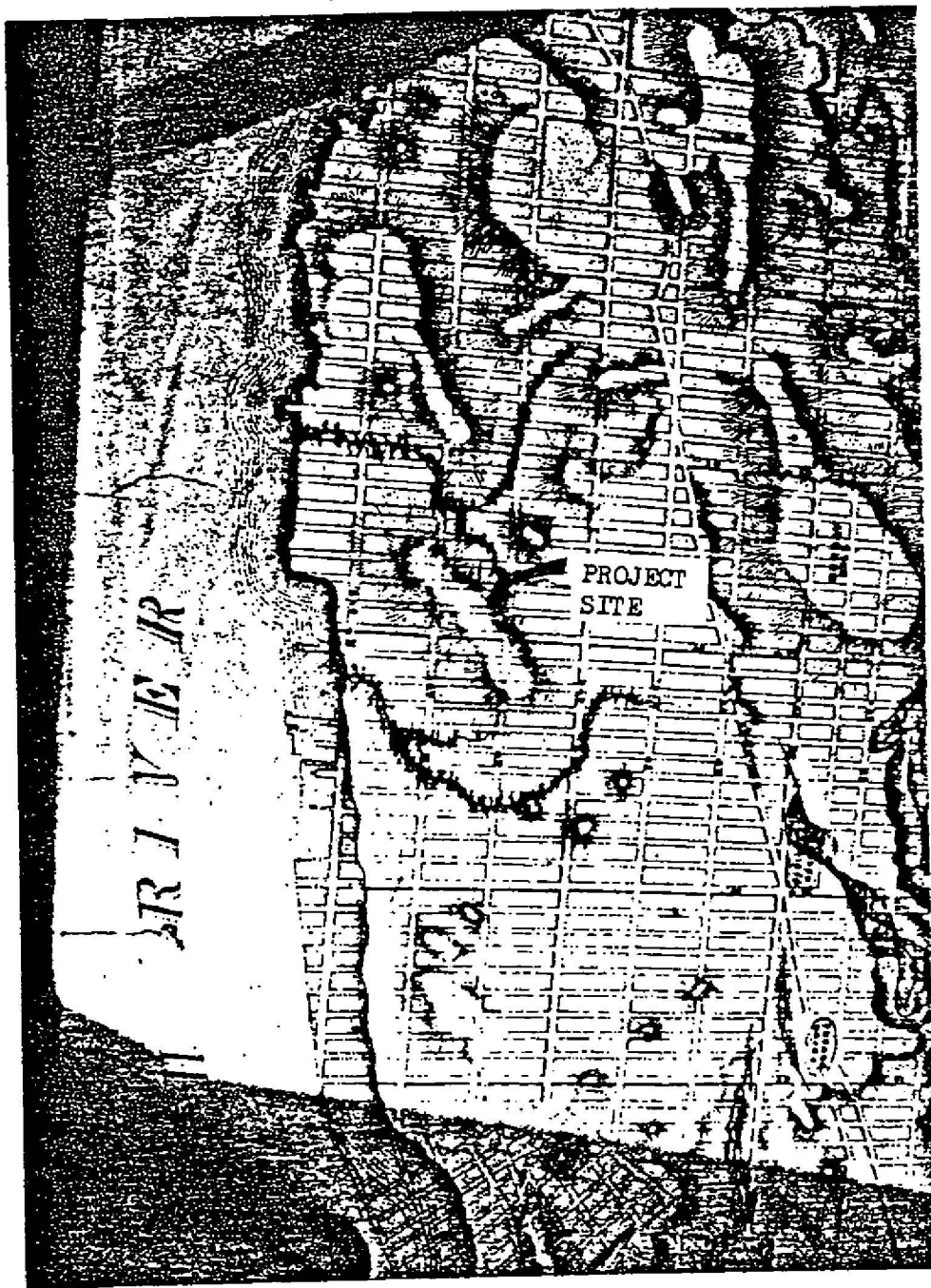
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Viele: 1859 Topographic Map

FIGURE 1

Detail from Figure 2: Prehistoric Sites of the New York City Landmarks Preservation Commission manuscript "Towards an Archaeological Predictive Model for Manhattan: A Pilot Study"

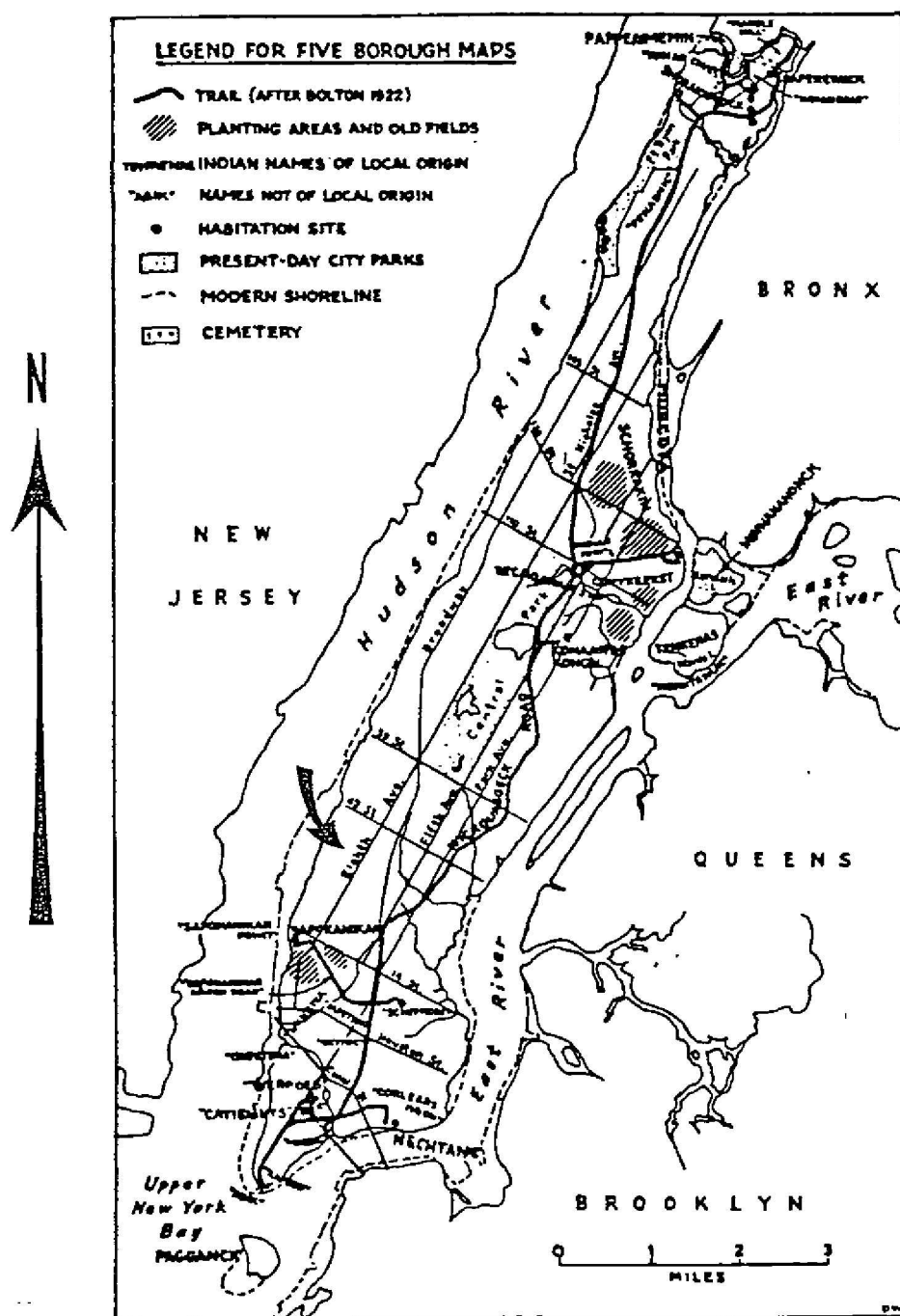
scale 1:24000

all label site

Hudson



Bellevue Hospital



Robert Grumet, 1981

Mary O. I
L.D.

100

800

W. 37TH

Map No. 68

1976

1976

George Rapelye

AVE.

W. 36TH

PROJECT
SITE
LOCATION

1976

GLASS HOUSE FARM

Map No. 41

1976

Isaac Moses

Samuel Haskins

9
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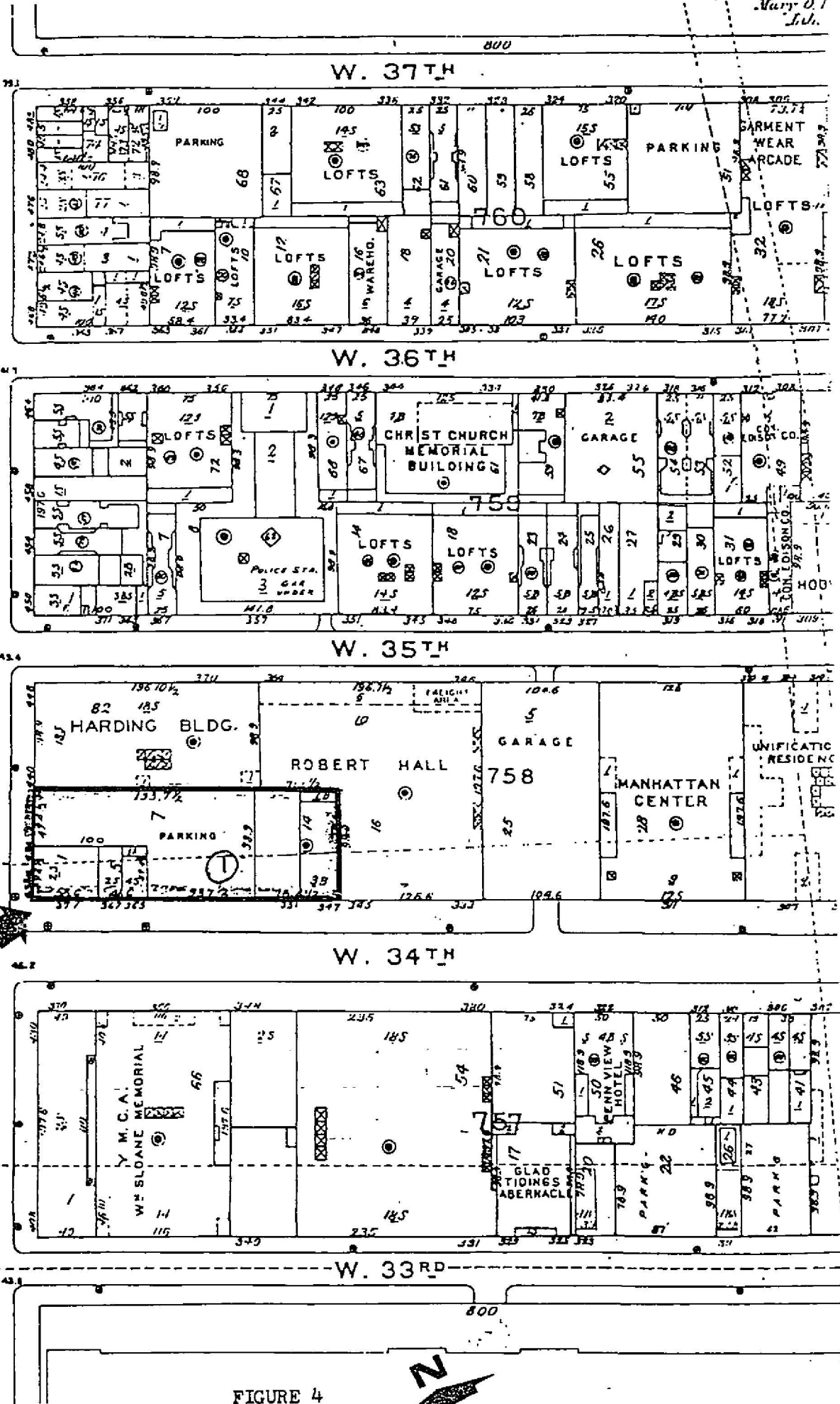
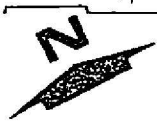
W. 35TH

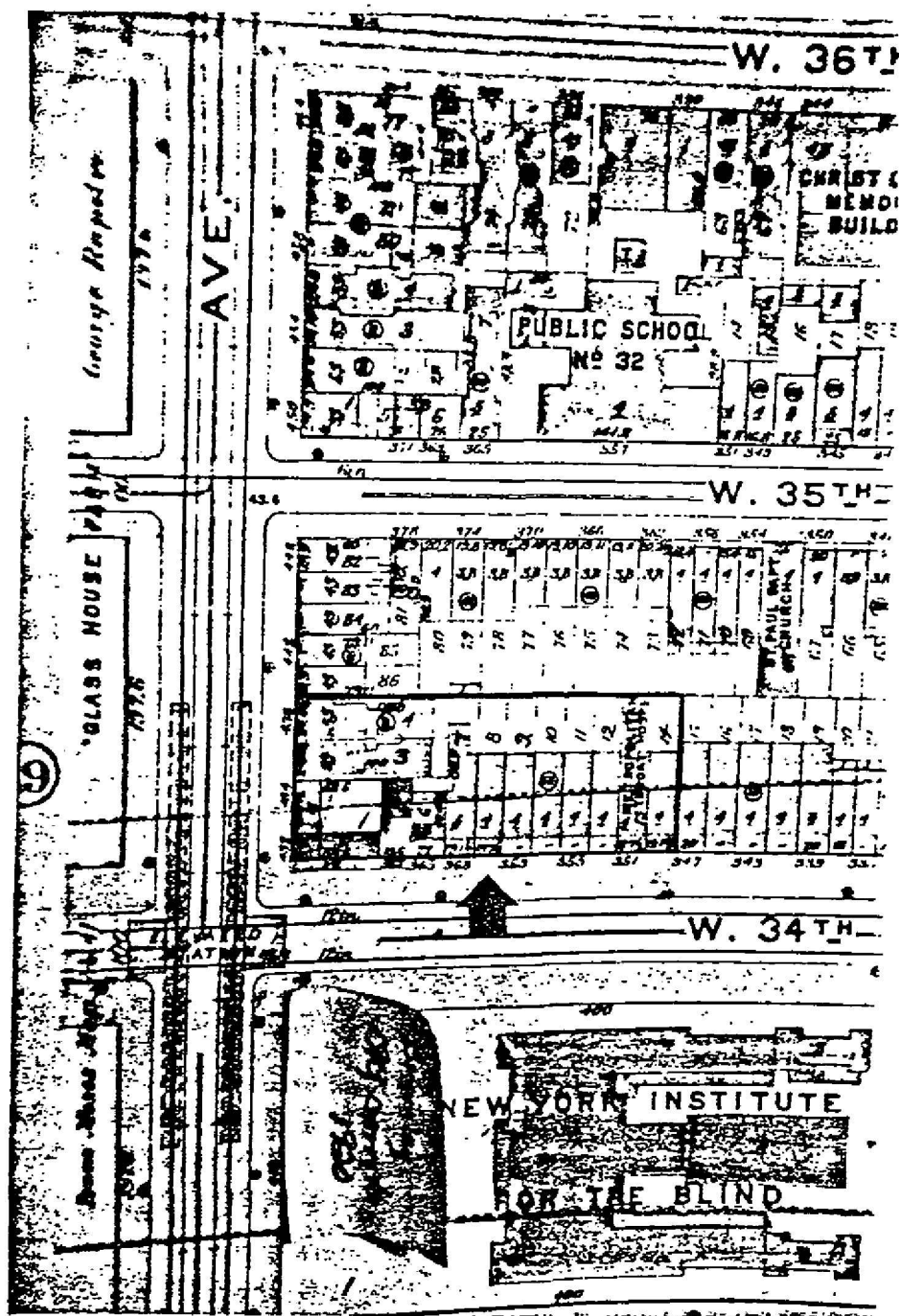
W. 34TH

W. 33RD

800

FIGURE 4





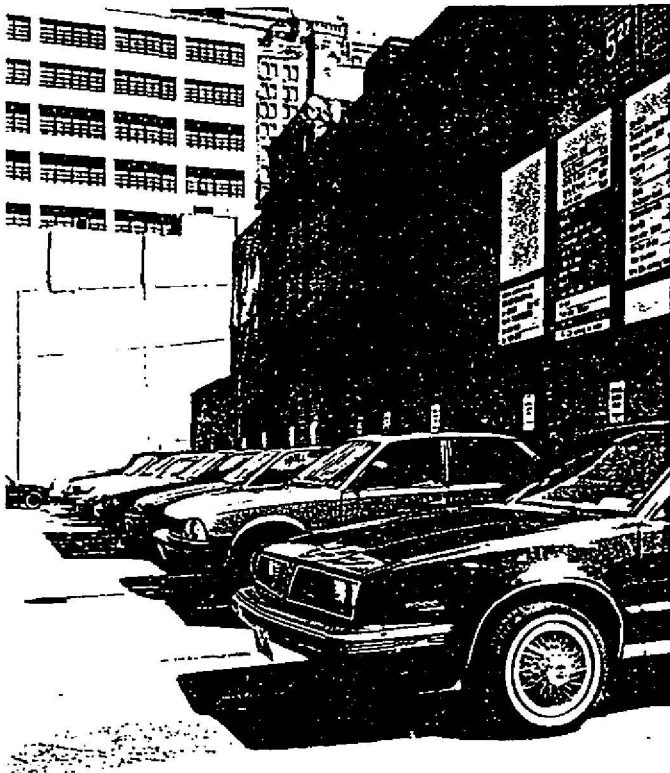
Bromley: Atlas of the City of
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to 1920



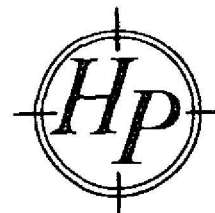
FIGURE 5



A. (right) Facing northwest on
34th Street towards Potential
development site 1, Lots 1, 5, 6



B. (left) Facing east on
9th Avenue , Lots 3, 4.



34th STREET REZONING
PRELIMINARY ARCHAEOLOGICAL ASSESSMENT
POTENTIAL DEVELOPMENT SITE 2

Block 731, Lots 38 through 49

Bounded by 9th Avenue to the east, 34th Street to the south,
35th Street to the north and Lot 50 to the west.

The 34th Street re-zoning might make development of other parcels in the re-zoning area more attractive. Four such neighboring parcels have been identified as potential development sites 1, 2, 3, and 4. In coordination with the comprehensive 34th Street project environmental assessment, the potential development sites will be preliminarily addressed. Based on the research being performed, if potential archaeological resources are identified on the project site or the four potential development sites, then it is anticipated that development of these parcels would destroy such resources.

In order to assess, in a preliminary overview, the archaeological potential of these four locations, Historical Perspectives, Inc. conducted documentary research, cartographic analysis, and a field inspection during July and August, 1988. The following analysis is a vertical and horizontal comparative study of past and present building footprints. (Due to the nature of record keeping and permit regulations prior to the twentieth century, there are noticeable gaps in the data available for this review). This research is designed to indicate if there is the need for further, in-depth archaeological examination, to identify the specific lots, or portions of lots that require such analysis, or to conclude that prior subsurface disturbances destroyed any prehistoric and historic potential and that further archaeological consideration (a Phase 1A) is not warranted.

P.O. BOX 331 RIVERSIDE, CONNECTICUT 06878
(203) 661-0734

PREHISTORIC OVERVIEW

Prehistorically, subsistence and settlement patterns depended heavily upon environmental criteria. The availability of economic and technological resources influenced settlement. Throughout prehistory, influencing factors including topographic and environmental features, have changed. An understanding of these changes and adaptations to them is required to develop a model of prehistoric land use.

Prior to European Contact, the topography of Manhattan was quite different than it is today. Many hills and valleys have been graded and filled, accounting for the present terrain. On the lower west side of the island, just south of the project area, the surface was once covered with coarse quality white limestone (French, p.418). Few visible remnants of rock outcrops and original features remain on the island.

Potential development site 2 was once located on a rise which ran in a southeast to northwest direction (Fig. 1). The specific geographical characteristics of this potential development site, -that is whether or not it was on the edge or top of the knoll-, is unknown. Viele's nineteenth century topographic map that clearly depicts this knoll does not record elevations (Fig. 1) and his placement of features can not be accepted as exact and completely accurate. However, the 1811 Commissioner's Map does give elevations at block intersections along 34th Street. At the corner of 34th Street and 9th Avenue, the elevation in 1811 was 40'8" above mean high water.

The knoll, composed of gneiss and granite adjacent to marshland, was drained by streams running to the north and southwest (Grafther 1898). The north stream joined with two other streams to drain into the "Reed Valley" at about 10th Avenue and 40th Street. Here the streams formed the Great Kill which then drained into a deep bay at the Hudson River at 42nd Street and 11th Avenue (Stokes Vol.4, p.131). The Reed Valley was still in primitive condition when surveyed by Randall in the early 1800s.

The Hudson River and surrounding streams would have provided a diverse array of resources attractive to Native Americans. Much of the area surrounding the project parcel would have been ideal for resource procurement. The lacustrine, riverine and estuarine environments in close proximity, provide a wealth of floral and faunal resources including fish, birds, reptiles, mammals, and vegetation. In addition, there was at least one known fresh water spring in close proximity, somewhere on the Glass House Farm (Stokes, Vol.6, p.130-131). As the availability and desire to utilize resources varied through prehistory, it is necessary to understand trends and distinct cultural phases of Native Americans in the Northeast.

PaleoIndians, the first known inhabitants of the

Northeast, occupied the area between 10,000-12,000 years ago, relying heavily on big-game. Habitation sites have largely been located on upland bluffs or ridge tops, such as those along the Hudson (Eisenberg, p.123). Since sea levels were much lower during this period, few sites have been recovered as many are likely under water (Saxon, p.252). Although little is known of this period, the presence of PaleoIndians in the Hudson Valley has been established.

Following this, the Archaic period lasting from 9,000-3,000 years ago is much better documented. The warming environment provided seasonally available resources which promoted a settlement pattern based on seasonal rounds. Archaic sites in the coastal and tidewater area of New York are often "represented by numerous, small, nearly always multi-component sites, variously situated on tidal inlets, coves and bays, particularly at the heads of the latter, and on fresh water ponds...along the lower Hudson (Ritchie, p.143). Sites along the Hudson indicate it was utilized for shellfish exploitation during the Archaic period (Snow, p.182). Sites of the transition period between the Archaic and subsequent Woodland periods, tend to be located on high sandy river terraces.

The following Woodland period is marked by the introduction of ceramics. By this time, sea levels and the environment was much as it is today. During this period there was a preference for sites to be on knolls or terraces with well drained soils adjacent to fresh water, such as short term seasonal camps for the extraction of specific resources. Islands in the Northeast with strong northern winds, such as those coming down the Hudson, have often had sites of this period located on south facing slopes for protection (Little, p.26). Also at this time there appears to be a trend toward semi-permanent occupations, and increased riverine aggregation for the exploitation of seasonal fish and bird migrations (Snow, p.265).

The parcel is in a location that would have provided an abundance of resources throughout prehistory. A model developed by the Landmarks Preservation Commission to predict archaeological sensitivity in Manhattan has placed this parcel immediately west of a high sensitivity zone (Fig. 2). Early maps indicate the shoreline of the Hudson was once much closer to the project site than it currently is (Fig. 1). Topographically, the rise would have been attractive for habitation as there were numerous, diverse resources available nearby.

At the time of European arrival, northern Manhattan was occupied by a large number of Munsee Delaware speaking Indians, identified by the colonists as Wiechquesgeck (Grumet, p.60). Indian trails spanned the island. Historically, Fitzroy Road ran through Block 758. This road was once an Indian trail leading north to the Great Kill (Stokes Vol.4, p.164). The trail appeared to run along the rise, slightly east of this parcel. A map of known Indian land use in Manhattan (Fig. 3) has no mention of Fitzroy Road

or an Indian trail at this location (Grumet, 1981). In fact the closest Native American land shown is a planting field called Sapokanikan, currently near Greenwich Village (Grumet, p.44-45). The majority of known archaeological sites are located in the northern Inwood park section of Manhattan.

It is very likely that prehistoric activities would have taken place on potential development site 2. The surrounding environment and topography is particularly conducive for resource extraction and processing. The nearby streams and freshwater springs are crucial factors for settlement. There are no known prehistoric sites within the parcel, although there is the possibility that it was utilized prehistorically. According to the New York State Museum, State Education Department, there are no known sites within this parcel (personal communication, Philip Lord to Cece Kirkorian, July 26, 1988). He also stated that the probability of prehistoric remains is low unless original deposits remain e.g., covered and protected by sidewalks, etc., or buried by fill from earlier construction.

Prehistoric remains recovered in southern New York tend to occur in shallow deposits. However, as stated, asphalt, sidewalks, and other build-up can protect these resources. The potential to recover archaeological resources rests largely on the original topography and subsequent alterations to it. Since the urbanization in the mid 1800s, the original knoll topography in the West 34th Street area has been graded. This destructive activity may have extended to this potential development site. However, the research required to establish such terrain altering activities is beyond the scope of this project.*

*

The detailed information of the nineteenth century landscape changes on neighboring Block 757, the 34th Street Project Site, was available only because the New York Institute for the Education of the Blind was a state-funded school required to file itemized reports with the state legislature. It is highly unlikely that such disturbance records could be located for this potential development site.

HISTORIC OVERVIEW

This area of New York was originally part of rural Bloomingdale, farmed by the Dutch to provide supplies to the city at the southern tip of Manhattan. During the middle of the eighteenth century, land surrounding and including this parcel was referred to as "Newfoundland" (Stokes Vol.4, p.688). The southern portion of the Weylandt patent, traced to 1677, became part of the 'Glass House' Farm, established in the mid 1700s. This 30 acre farm, situated between 32nd and 41st Streets, housed a short-lived glass manufacturing industry which eventually was purchased by the Chemical Manufacturing Company. When the Glass House farm was sold in 1762, much of the land was subsequently transferred to the Rapelje family in 1779.

The Rapelje farm house was east of 11th Avenue between 34th and 35th Streets, with the Hudson River coming up to its garden and boundaries. Smaller farms adjacent to the Rapelje estate also became established at this time. Farms belonging to Isaac Moses and Samuel Watkins bordered the Rapelje estate to the east. Potential development site 2 straddled the border between these two small farms. At that time, and through the 1860s, the land remained rural and undeveloped as shown on nineteenth century maps (Colton 1836; Dripps 1852). Also at this time, Fitzroy Road crossed the westerly side of 8th Avenue between 31st and 32nd Streets and continued northwest to about 42nd Street. The road was eventually closed in 1832, with the advancement of the 1811 grid system from lower Manhattan (Stokes Vol.6, p.1000).

In the early 1800s, this area was generally characterized as residential, agricultural and industrial, in that order (NYCLP, Neighborhood Maps). In 1850 the area is listed as residential and undeveloped, with industrial and waterfront shipping and transportation complexes being south of 33rd Street (Ibid). An 1844 description of the terrain characterizes it as rising ground overlooking the Hudson River and New Jersey (Wait, p.3). A survey of landmarks in Manhattan by Stokes (Vol.3, plate 175) supports that this parcel was not occupied during earlier times including the Colonial or Revolutionary periods, and has never been occupied by a landmark structure.

In 1833 the streets and avenues in the neighborhood had not been opened and regulated, as it was a short distance beyond the paved part of the city (Wait, p.3). By this time much of this section of Manhattan had been divided into lots resulting from the adoption of the city plan in 1811 (WPA, p.147). By 1836, 8th, 9th and 10th Avenues as well as 34th Street were constructed and facilitated travel (Stokes Vol.3, pp.998,1006,1010). This portion of Manhattan was part of a growing residential belt "from the Twenties to the Fifties between Eighth and Tenth Avenues" housing rows of brick tenements (WPA, p.145). Beginning in the 1840s, north of the project area, Hell's Kitchen was predominantly occupied by Irish, as was Chelsea to the south (Ibid, p.145). The introduction of railways in the mid-nineteenth century, and

increased traffic on the Hudson created industrial sections, with unskilled laborers often being forced into nearby slums.

An 1866 report on the sanitary conditions for the vicinity states that out of 417 tenements in the district, 105 were not hooked into the public sewer system at this time (Citizens Assoc. of New York, p.257). Laws existed regulating when privies should be cleaned, however these were often violated. Privies were to be emptied as soon as they were full, but this was often ignored and they were left in horrible states (Ibid, p.261). The overall condition of this district was considered poor, with the nicer buildings being to the east of 8th Avenue.

SITE SPECIFIC LANDUSE

BLOCK 731

Potential development site 2 is located on the west side of 9th Avenue between 33rd and 34th Streets (Fig.4). By 1849 sewer lines were being installed along this section of 9th Avenue (Wait, p. 29), although The Water Department official records state sewer lines were not installed until 1908. The earlier date is supported by an 1897 alteration permit (583) that states that the house sewers on lot 43 fronting 9th Avenue, were connected to the main sewers. It is difficult to discern when each building was hooked up to local sewer or water lines, as definite connection dates are difficult to ascertain. It is also unclear when water lines were available, as the earliest date given by the Water Department for these on 9th Avenue is 1909, and on 33rd Street is 1907, far too late to be the initial installation.*

The following analysis of development is arranged in numerical sequence by lot numbers, based on those depicted on the Bromley 1913 atlas corrected to 1920 (Fig. 5).

Lots 38 and 39

Lots 38 and 39 each had a building on them by 1852 (Dripps 1852). Lot 38 was entirely covered by a standing structure fronting 33rd Street, while lot 39 had a building on the east portion, fronting 9th Avenue. A vacant yard lay behind the building, on the west end of lot 39 which abutted the building on lot 38. By 1879 the only change appears to be that all of lot 39 was covered by the structure (Bromley 1879). An 1883 atlas shows that the only structure on lot 38 was a wooden building on the southern portion facing 33rd Street, while all of lot 39 was covered by a brick building with a wooden extension on the rear, to the west (Robinson 1883). An alteration permit in 1883 (715) listed the brick building on lot 39 as a 3 story apartment building with an 8' deep foundation. Another permit (ALT2071) stated the foundation was 4' below the curb on loam and sand. By 1920 all of lot 38 was covered by a 2 story wooden building, and the eastern 2/3 of lot 39 was still housing a brick building. Where the wooden extension had been in 1883, a small 1 story unattached wooden structure stood fronting 33rd Street (Bromley 1913 corr. to 1920). Although the function of this wooden building is unknown, it is possible that it was a

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For a full discussion of the issue of utility installation see the Nineteenth Century Homelot Archaeological Potential section of the "Phase 1A Archaeological Assessment, 34th Street Rezoning Project", 1988. Ms. on file with Allee King Rosen and Fleming, Inc.

privy. By 1950, lot 38 had been subdivided and incorporated into lots 39, 40 and 41 (Hyde 1906 corr. to 1950). In 1928 a dining establishment was on lot 39 (ALT1478), and was eventually replaced in 1940 (NB121, C027326). The dining car, now the Cheyenne Diner, covers all of the lot including part of what was lot 38, and has a full cellar (Photo A).

Lots 40-48

Lots 40 through 48 are all facing east, fronting 9th Avenue. In 1852 lots 40, 41, 42, and 43 were vacant, while lots 44 through 48 each possessed a building on the east side fronting 9th Avenue (Dripps 1852). By 1868 each of these lots contained a standing structure occupying the eastern sides of the lots, constituting a row along 9th Avenue (Dripps 1868). In 1883 the buildings remained the same. It is apparent that the lot sizes were rather varied, with 40 through 43 having deeper lots than 44 through 48 (Robinson 1883). All of the buildings at this time were the same depth, with the exception of those on lots 46 and 47 which were slightly smaller in depth. By 1920 all of lots 42, 43 and 48 were covered by structures. Lots 40, 41, 44, 45, 46, and 47 each retained open rear yards on the western portion of the lots (Bromley 1913 corr. to 1920).

Alteration permits support that these buildings were 3 and 4 story dwellings with full cellars (ALT3484-38, ALT2947-39, ALT251-1869, ALT583-1897, ALT2090-24, ALT1916-21, ALT2239-23). Lot 42 had a rear addition, however ALT885 in 1909 states that the extension was built on earth with no cellar, suggesting there is little subsurface disturbance on this portion of the lot. Permits also suggest that the rear yards may have housed toilets, as a 1918 permit for lot 41 states "the present toilets will be removed from yard and placed inside the building..." (ALT2206). There is nothing to indicate whether the toilets in the rear yard were hooked up to public sewers. The alteration permit would have indicated if a new connection with the city sewer was required.

By 1950 all of lot 40 was constructed upon, as were lots 44, 45, 46, 47 and 48. Lot 41, which by then encompassed lot 42 as well, and lot 43 each had rear yards vacant on the western portion of the lot (Hyde 1906 corr. to 1950). During the 1940s the top stories of buildings were removed on lots 45, 46, 47, and 48 (ALT2368-42, DM1214-41). The buildings currently are as they were in the 1950s (Photo B).

Lot 49

Lot 49 is located directly behind lots 46, 47 and 48, fronting 34th Street. The first structure appeared on this lot by 1852 (Dripps 1852). By 1883 a brick building appeared to take up the northern half of the lot (Robinson 1883). A 3 story brick building continued to appear on the 1820 atlas with the southern one-third of the lot remaining vacant (Bromley 1913 corr. to 1920). The lot remained the same

through 1950 when it is depicted as a 3 story brick building with a basement and a vacant rear yard (Hyde 1906 corr. to 1950). The building is still standing, and the lot has been incorporated into lot 48 (Photo C).

ARCHAEOLOGICAL POTENTIAL

Potential development site 2 lies in a sensitive area for prehistoric cultural remains. The land would have been ideal for prehistoric occupation, as it would have afforded ample opportunities for resource procurement. Therefore, some form of prehistoric utilization did take place on this parcel. Extended habitation is doubtful as the strong northerly winds coming down the Hudson would deter this. Short term habitation sites are most apt to be represented in such an area. The majority of leveling activities during the urbanization of the neighborhood were probably confined to the land east of this parcel, the land of the New York Institute for the Education of the Blind. A 1979 U.S.G.S. topographic map does show the elevation of potential development site 2 as greater than the land to the east and the current elevations for the site neighborhood approximate the 1811 elevations. It is possible that the rise under this parcel may not have been totally removed.

The preliminary review documented historic era subsurface disturbance including construction of below grade cellars and basements. This was confirmed during a visual inspection of the site. The majority of the block appears to have experienced sub-surface disturbance. However, the initial review of the cartographic data and information acquired at the Buildings Department, Block and Lot files, suggests that there may be existing undisturbed areas.

Based on the research conducted, it appears that several lots may possess undisturbed rear yards. Lot 41, which now encompasses lot 42, retained an undeveloped area at the rear of each building on the west portion of the lot. This large area is still clear and has the potential to yield archaeological remains. Lot 41 in particular is documented as possessing toilets in the rear yard in the early twentieth century (ALT2206-18). Although lot 42 had a temporary extension on the west end of the building, it did not cover the whole lot, nor was there a cellar. It is possible that all of the presently uncovered portions of these lots are undisturbed and have the potential to produce cultural remains.

Lot 43 retained a small undisturbed portion to the rear of the building, on the west side. This is much smaller than the rear yards behind buildings on lots 41 and 42. Although it has remained undeveloped, it does not appear to have the potential to possess archaeological remains. ALT1189 in 1949 requested that a 5 foot yard of open space at the rear of the building be retained for egress. As a builders trench is required for the construction of the foundation for the adjacent building, the 5' alley would have experienced disturbance as well. The rest of the parcel experienced subsurface disturbance by the construction of a cellar.

In addition, lot 49 retained a small undeveloped rear yard, on the south portion of the lot. This potentially undisturbed section is also adjacent to the western end of

lot 46. While there is currently an L shaped parcel vacant at this area, only the portion of it directly behind the building on lot 49, extending approximately 10-15 feet to the south, has not been disturbed. The remainder had experienced subsurface disturbance with development during the twentieth century.

Potential historic archaeological resources are limited to mid to late nineteenth century remains. The lack of occupation prior to this period supports that there is no potential to recover earlier remains. Sewers appear to have been available at the time of earliest construction, with water lines being generally available by the early 1900s. Therefore, we can not predict the possible presence of nineteenth century back yard features, commonly investigated by archaeologists, e.g., cisterns, privies and wells.

RECOMMENDATIONS

Potential development site 2 may possess prehistoric remains. The site would have provided a wealth of resources attractive for Native American utilization. It is likely that the site was occupied at some time prehistorically, for the extraction of resources. Potential remains would, however, represent short term habitations for this purpose. The potential to recover these remains exists where back yards were located historically, or beneath the sites of existing or previous standing structures without cellars. However, we feel that this potential is limited. This limitation is due in large part to the massive earth moving undertaken in the nineteenth century. Clement Clarke Moore, a nearby nineteenth century landowner, described the changes brought about by the 1811 Commissioners Survey: "The great principle which governs these plans is, to reduce the surface of the earth as nearly as possible to a dead level. The natural inequities of the ground are destroyed..." (Cohen, p. 2511). However, the present day elevations roughly correspond to those taken by the street surveyors prior to leveling. Therefore, the question of depth of intact soil stratigraphy on the potential development site remains unanswered. The archaeologists reliance on soil boring logs for a glimpse at subsurface conditions will, in this case, not be helpful since they can not reveal the amount of "missing" pre-1811 A horizon or B horizon soil.

Lots 41, now encompassing lot 42, and 49 each had rear yards that were not developed historically. However, for more than a century these spaces have been subject to human activities which almost surely would have destroyed or hopelessly mixed shallow-lying prehistoric deposits. The most one could reasonably hope to find would be random artifacts rather than significant remains from Indian occupation.

For those spaces beneath buildings having no basements, the case is less clear cut. Even the slab foundation technique creates an degree of subsurface disturbance,

although to what degree is unknown in this instance. The temporary extension to the rear of the building on lot 42 is the only structure recorded as not having a basement. As this was temporary, the location it was occupying is now part of a back yard.

Remnants of historic lifeways are limited, as there was nothing constructed on this site prior to the middle of the nineteenth century. Documentation supports that the only areas with the potential to yield historic remains, are those rear yards previously mentioned on lots 41 and 49. Although questionable, there is the possibility that privies, cisterns, and wells were once located in the back yards of these lots. As detailed in the above discussion, municipal sewer was available from the onset of construction on this site. However, based on nineteenth century sanitation reports and health violation records from neighboring blocks, there is no reason to believe that each tenement was connected to this available sewer. If privies were in the rear yards of certain of these tenements (e.g., lots 41 and 49), these privies were, according to late nineteenth century health code regulations, regularly emptied. Periodic cleanings would have destroyed any archaeologically significant deposits.

It has been impossible to ascertain the exact nature of an individual tenement's earliest water supply and, in consideration of the in-depth research expended on the 34th Street Rezoning Project for this same information, we do not feel that further documentary research will provide this evidence. Although there was municipal water in the immediate area at the time of construction, there may be capped wells and cisterns in the back yard spaces behind lots 42 and 49. It must be kept in mind that the buildings associated with these back yard spaces were classified as tenements, indicating multiple families that were possibly unrelated and transient. The presence of privy, cistern and well features does not guarantee they will provide additional information on historic lifeways. If we were to proceed on the limited possibility of back yard features/deposits, further research would have to be conducted to establish the possible significance to the archaeological record of such features (e.g., long term occupation by one family or ethnic group).

This vertical and horizontal analysis of past and present footprints was designed to establish potentially sensitive areas for archaeological remains. This preliminary analysis was not designed to provide sufficient data to determine the need for field investigations but to recommend whether or not a full Phase 1A study was warranted. Based on their research goals and priorities, NYCLPC may want to consider the possibility of further investigations on a portion of this parcel, the rear yards of Lots 41 and 49, for historic resources (Fig. 6). However, a full Phase 1A archaeological analysis may not be appropriate for this potential development site because it is doubtful if further documentary research could give definitive assurance that

potential resources, in fact, exist.

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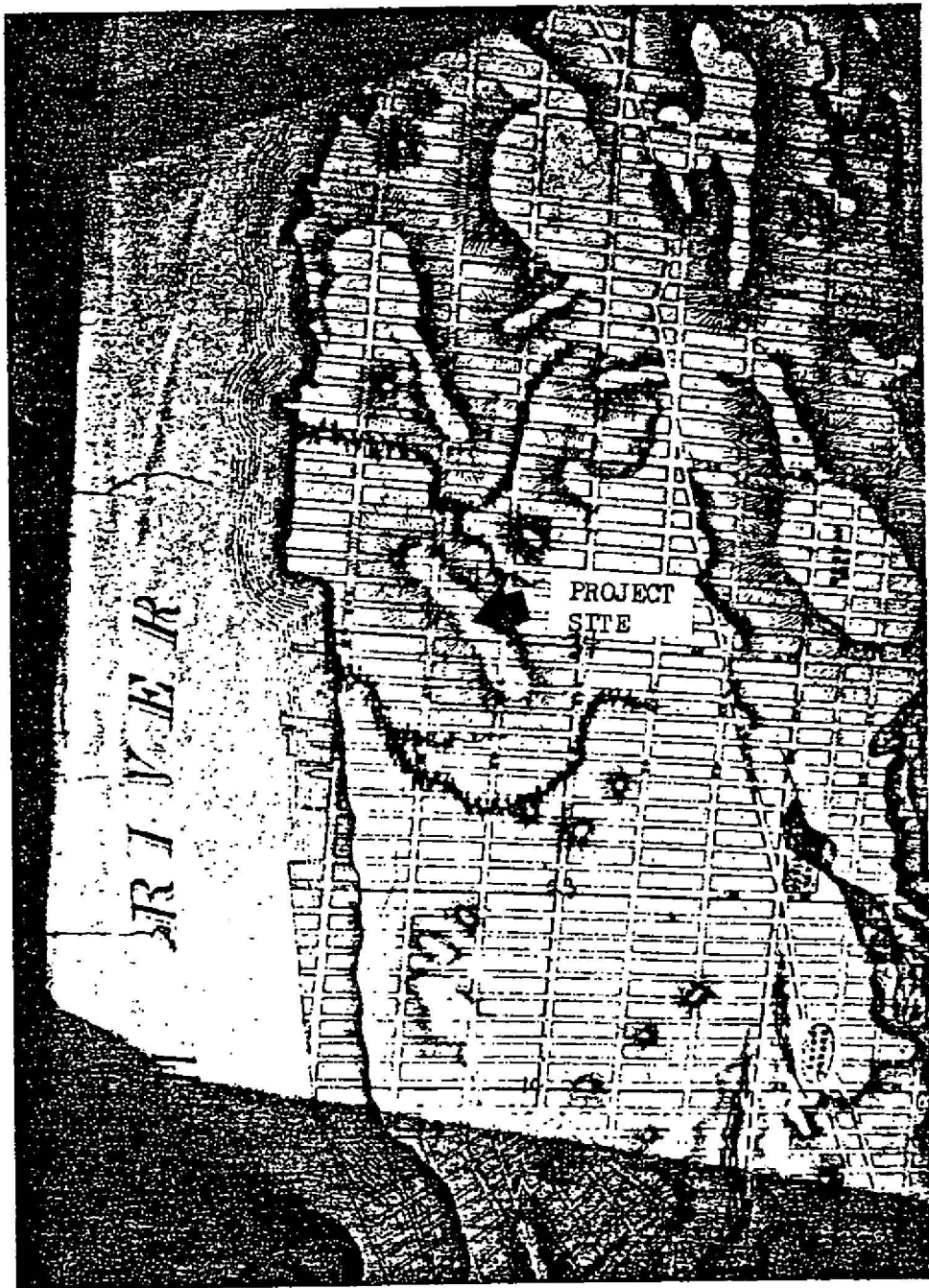
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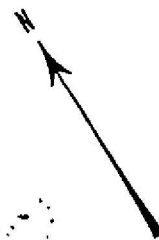
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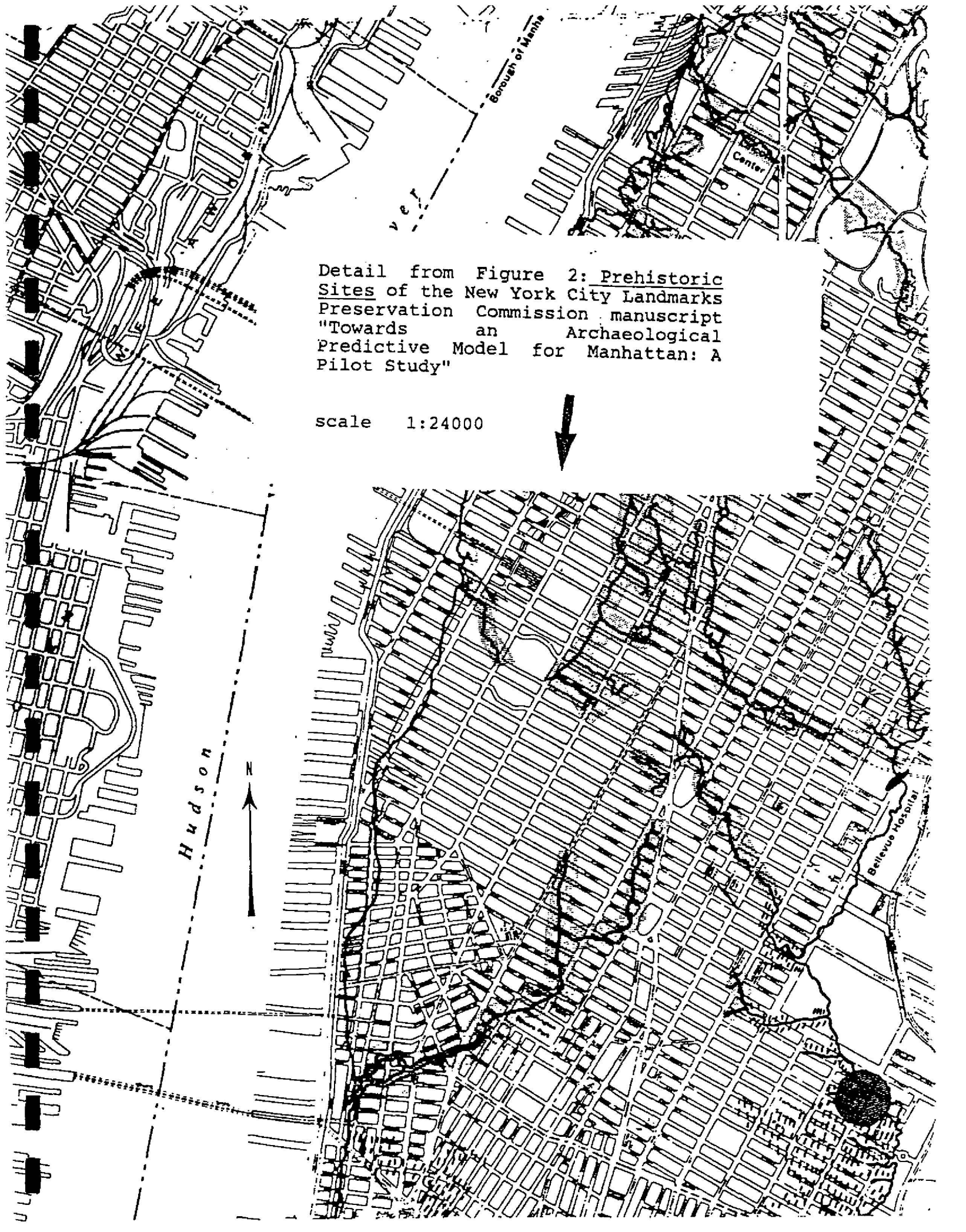
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Viele 1859 Topographic Map

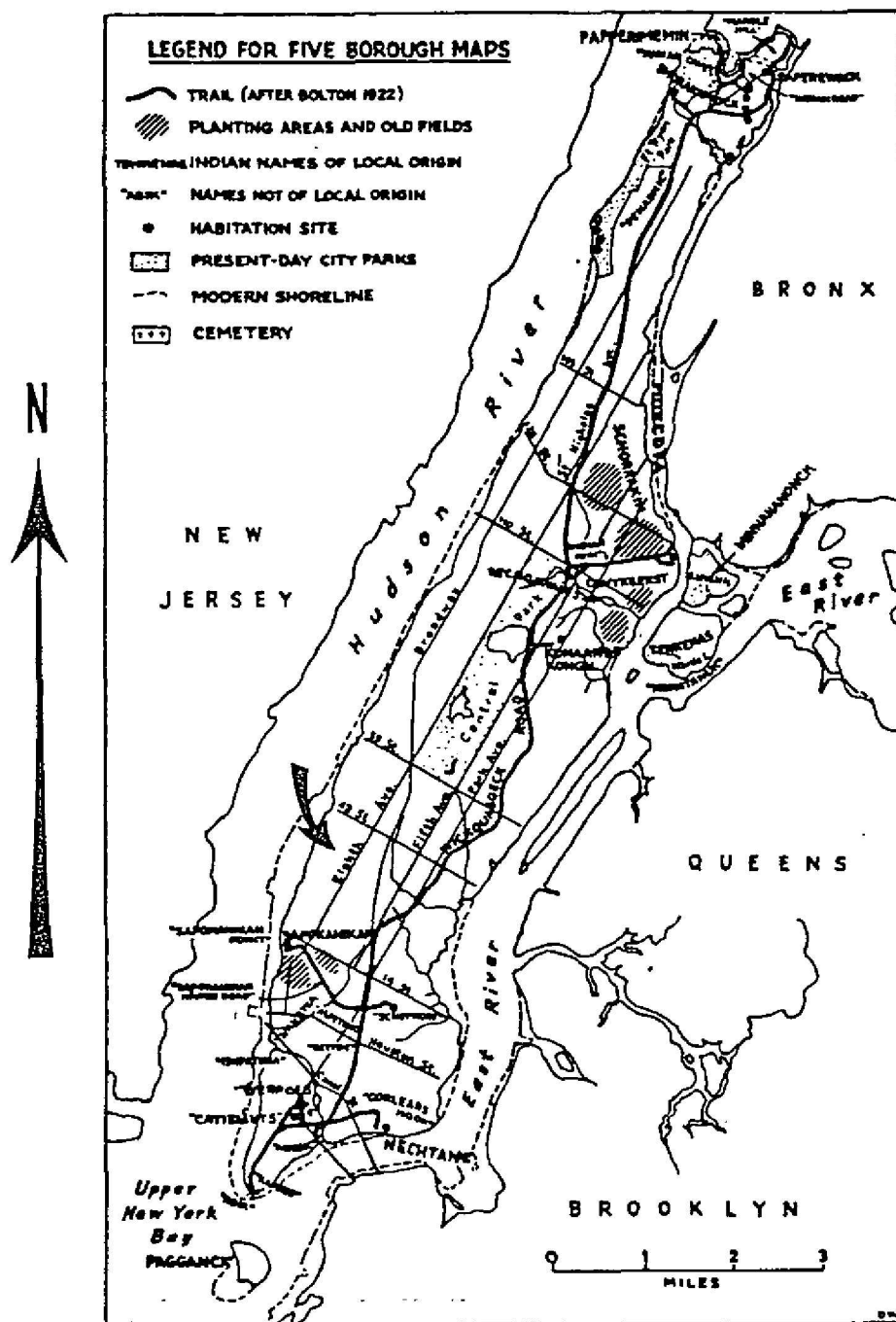
FIGURE 1





Detail from Figure 2: Prehistoric
Sites of the New York City Landmarks
Preservation Commission manuscript
"Towards an Archaeological
Predictive Model for Manhattan: A
Pilot Study"

scale 1:24000



Robert Grumet, 1981

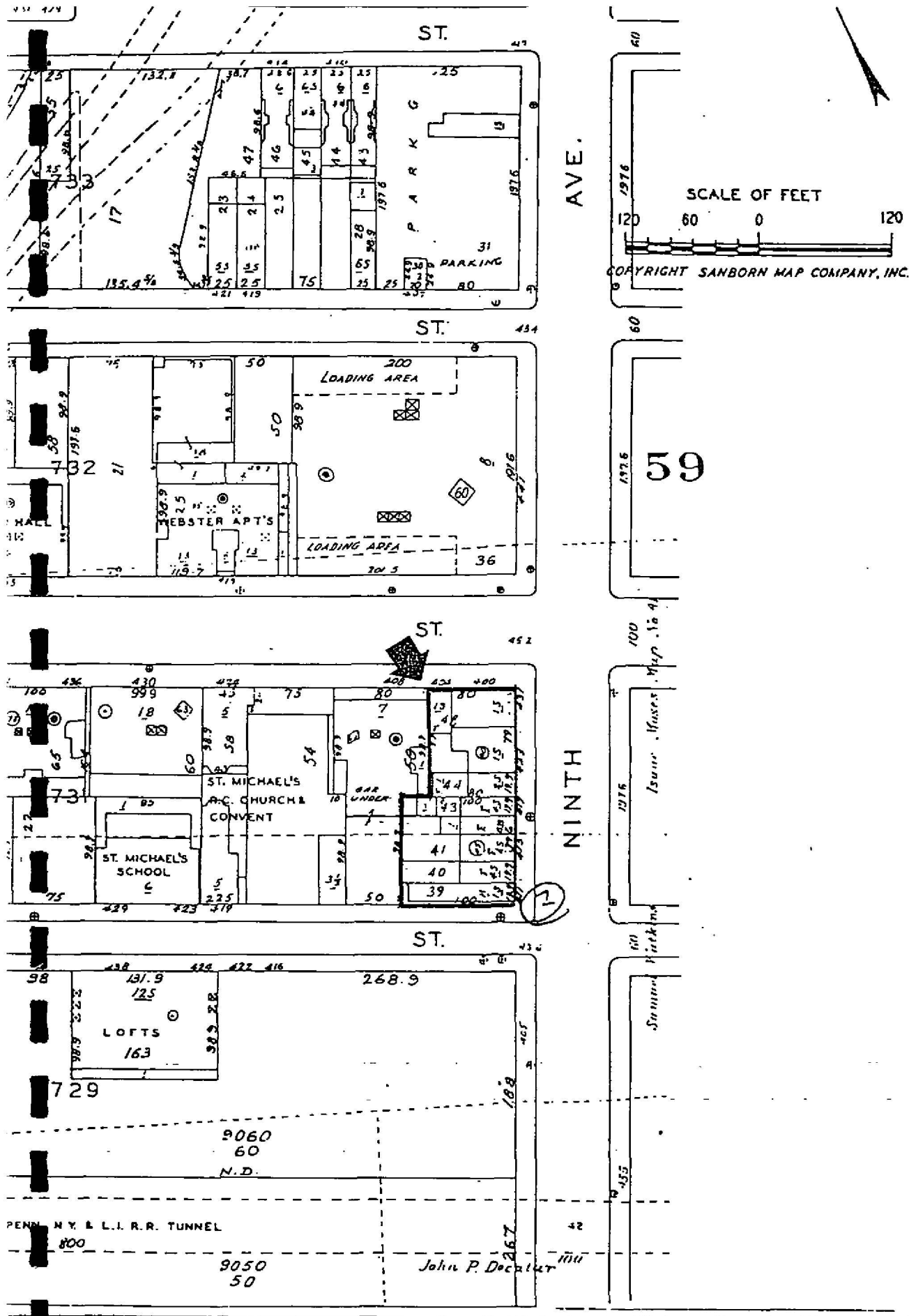
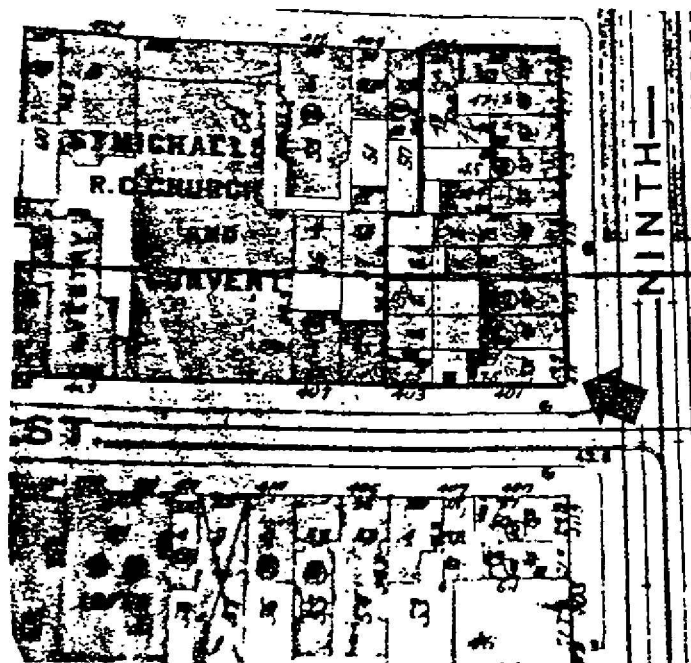
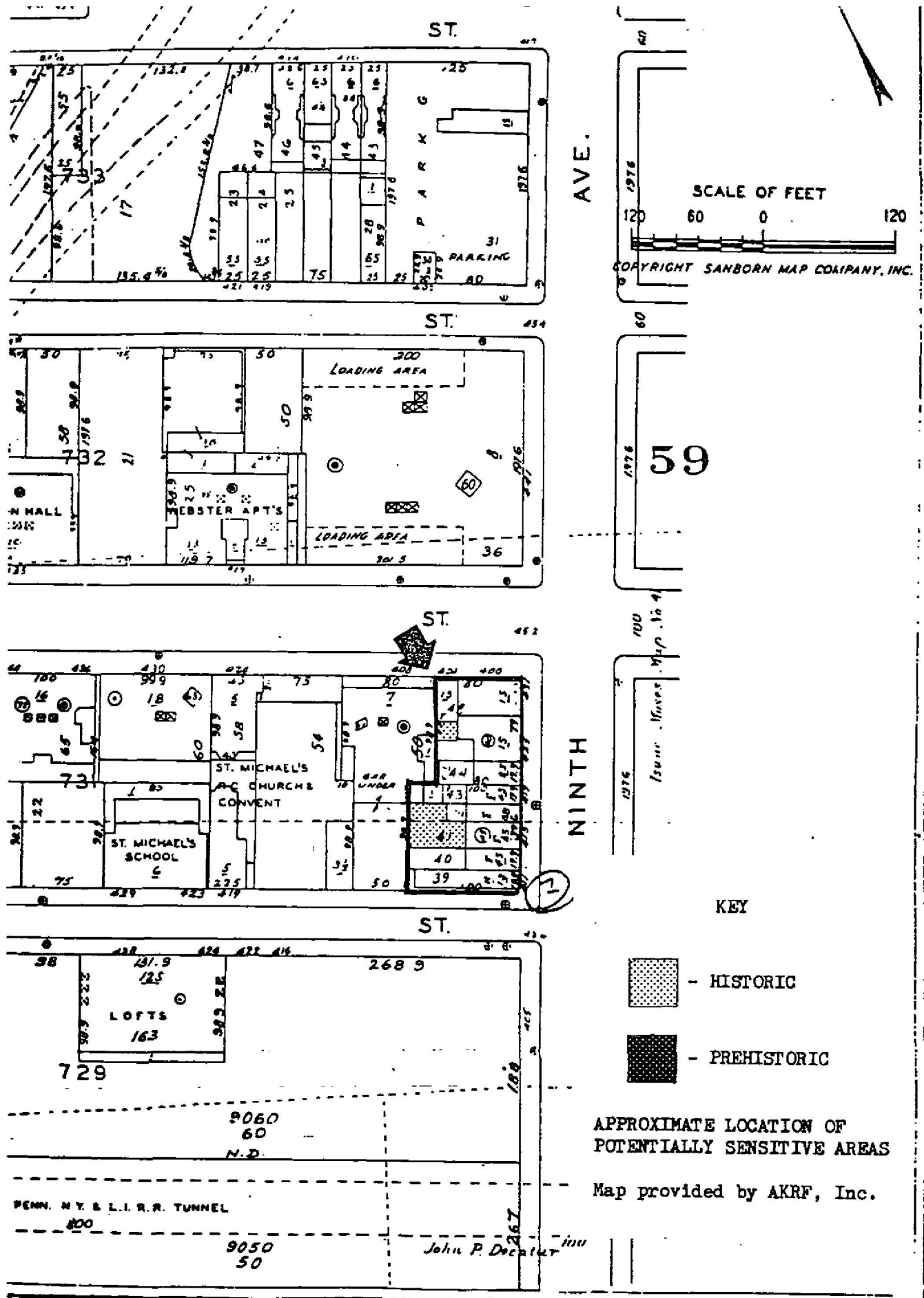


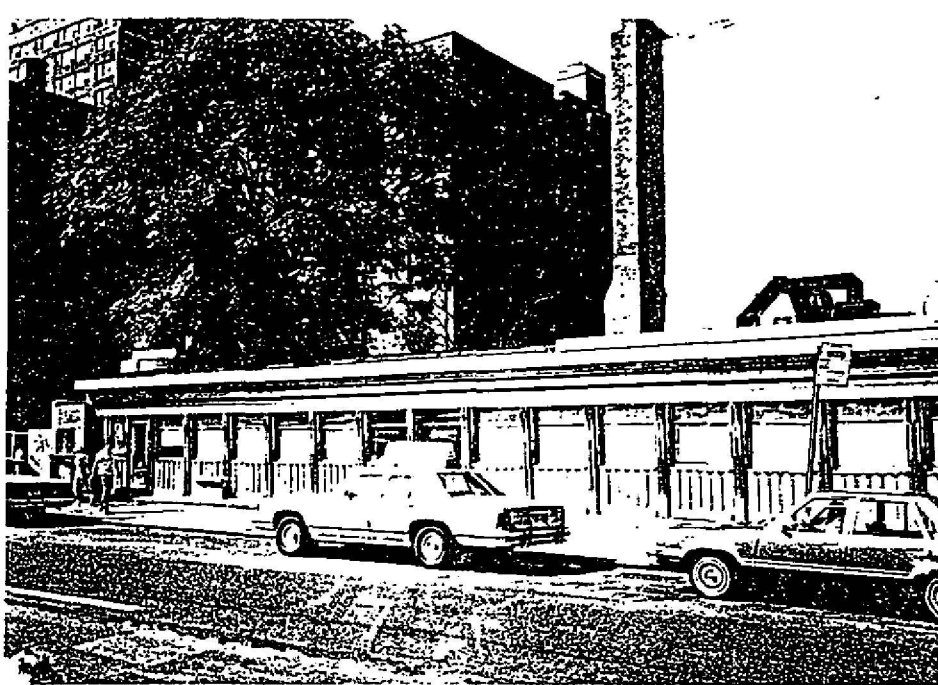
FIGURE 4: Project Site Location





**FIGURE 6 Project Site Location
With Sensitive Areas Shown**

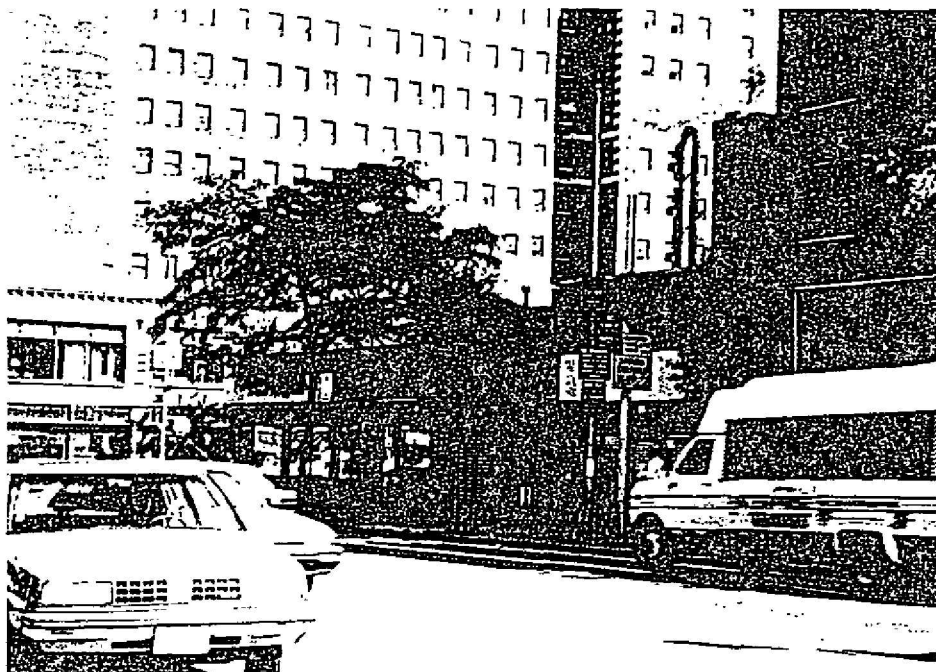




A. The Cheyenne Diner, Lot 39. Facing northwest from 33rd Street



B. Lots 40 through 48 fronting 9th Avenue. Facing west from 9th Avenue.



C. Lot 49 fronting 34th Street. Facing southeast from 34th Street



34th STREET REZONING
PRELIMINARY ARCHAEOLOGICAL ASSESSMENT
POTENTIAL DEVELOPMENT SITE 3

Block 732, Lots 1 through 6

Bounded by West 34th Street on the south, Tenth Avenue to the west, Lot 7 to the east, and Lot 73 to the north.

The 34th Street re-zoning might make development of other parcels in the re-zoning area more attractive. Four such neighboring parcels have been identified as potential development sites 1, 2, 3, and 4. In coordination with the comprehensive 34th Street project environmental assessment, the potential development sites will be preliminarily addressed. Based on the research being performed, if potential archaeological resources are identified on the project site or the four potential development sites, then it is anticipated that development of these parcels would destroy such resources.

In order to assess, in a preliminary overview, the archaeological potential of these four locations, Historical Perspectives, Inc. conducted documentary research, cartographic analysis, and a field inspection during July and August, 1988. The following analysis is a vertical and horizontal comparative study of past and present building footprints. (Due to the nature of record keeping and permit regulations prior to the twentieth century, there are noticeable gaps in the data available for this review). This research is designed to indicate if there is need for further, in-depth archaeological examination, to identify the specific lots, or portions of lots that require such analysis, or to conclude that prior subsurface disturbances destroyed any prehistoric and historic potential and that further archaeological consideration (a Phase 1A) is not warranted.

PREHISTORIC OVERVIEW

Prehistorically, subsistence and settlement patterns depended heavily upon environmental criteria. The availability of economic and technological resources influenced settlement. Throughout prehistory, influencing factors including topographic and environmental features, have changed. An understanding of these changes and adaptations to them is required to develop a model of prehistoric land use.

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The Hudson River and surrounding streams would have provided a diverse array of resources attractive to Native Americans. Much of the area surrounding the project parcel would have been ideal for resource procurement. The lacustrine, riverine and estuarine environments in close proximity, provide a wealth of floral and faunal resources including fish, birds, reptiles, mammals, and vegetation. In addition, there was at least one known fresh water spring in close proximity, somewhere on the Glass House Farm (Stokes, Vol.6, p.130-131). As the availability and desire to utilize resources varied through prehistory, it is necessary to understand trends and distinct cultural phases of Native Americans in the Northeast.

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It is very likely that prehistoric activities would have taken place on potential development site 3. The surrounding environment and topography is particularly conducive for resource extraction and processing. The nearby streams and freshwater springs are crucial factors for settlement. There are no known prehistoric sites within the parcel, although there is the possibility that it was utilized prehistorically. According to the New York State Museum, State Education Department, there are no known sites within this parcel (personal communication, Philip Lord to Cece Kirkorian, July 26, 1988). He also stated that the probability of prehistoric remains is low unless original deposits remain, e.g., covered and protected by sidewalks, etc., or buried by fill from earlier construction.

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HISTORIC OVERVIEW

This area of New York was originally part of rural Bloomingdale, farmed by the Dutch to provide supplies to the city at the southern tip of Manhattan. During the middle of the eighteenth century, land surrounding and including this parcel was referred to as "Newfoundland" (Stokes Vol.4, p.688). The southern portion of the Weylandt patent, traced to 1677, became part of the 'Glass House' Farm, established in the mid 1700s. This 30 acre farm, situated between 32nd and 41st Streets, housed a short-lived glass manufacturing industry which eventually was purchased by the Chemical Manufacturing Company. When the Glass House farm was sold in 1762, much of the land was subsequently transferred to the Rapelje family in 1779.

The Rapelje farm house was east of 11th Avenue between 34th and 35th Streets, with the Hudson River coming up to its garden and boundaries. Smaller farms adjacent to the Rapelje estate also became established at this time. Farms belonging to Isaac Moses and Samuel Watkins bordered the Rapelje estate to the east. Potential development site 3 fell within land owned by the Rapelje estate. At that time, and through the 1860s, the land remained rural and undeveloped as shown on nineteenth century maps (Colton 1836; Dripps 1852). Also at this time, Fitzroy Road crossed the westerly side of 8th Avenue between 31st and 32nd Streets and continued northwest to about 42nd Street. The road was eventually closed in 1832, with the advancement of the 1811 grid system from lower Manhattan (Stokes Vol.6, p.1000).

In the early 1800s, this area was generally characterized as residential, agricultural and industrial, in that order (NYCLP, Neighborhood Maps). In 1850 the area is listed as residential and undeveloped, with industrial and waterfront shipping and transportation complexes being south of 33rd Street (Ibid). An 1844 description of the terrain characterizes it as rising ground overlooking the Hudson River and New Jersey (Wait, p.3). A survey of landmarks in Manhattan by Stokes (Vol.3, plate 175) supports that this parcel was not occupied during earlier times including the Colonial or Revolutionary periods, and has never been occupied by a landmark structure.

In 1833 the streets and avenues in the neighborhood had not been opened and regulated, as it was a short distance beyond the paved part of the city (Wait, p.3). By this time much of this section of Manhattan had been divided into lots resulting from the adoption of the city plan in 1811 (WPA, p.147). By 1836, 8th, 9th and 10th Avenues as well as 34th Street were constructed and facilitated travel (Stokes Vol.3, pp.908,1006,1010). This portion of Manhattan was part of a growing residential belt "from the Twenties to the Fifties between Eighth and Tenth Avenues" housing rows of brick tenements (WPA, p.145). Beginning in the 1840s, north of the project area, Hell's Kitchen was predominantly occupied by Irish, as was Chelsea to the south (Ibid, p.145). The introduction of railways in the mid-nineteenth century, and

increased traffic on the Hudson created industrial sections, with unskilled laborers often being forced into nearby slums.

An 1866 report on the sanitary conditions for the vicinity states that out of 417 tenements in the district, 105 were not hooked into the public sewer system at this time (Citizens Assoc. of New York, p.257). Laws existed regulating when privies should be cleaned, however these were often violated. Privies were to be emptied as soon as they were full, but this was often ignored and they were left in horrible states (Ibid, p.261). The overall condition of this district was considered poor, with the nicer buildings being to the east of 8th Avenue.

SITE SPECIFIC LANDUSE

BLOCK 732

Potential development site 3 is located on the northeast corner of 34th Street and 10th Avenue (Fig. 4). This portion of 10th Avenue was open by 1815, and sewers were available along it by 1859. Water lines were also in place by 1878. While public sewer and water lines were available, not every building was connected immediately. The connection date of each building is difficult to determine as these records are not always available, and are difficult to ascertain.*

The following analysis of development on the parcel is presented by lot numbers in numerical sequence. The numbers referenced are those represented on the Bromely 1913 atlas corrected to 1920 (Fig. 5).

LOT 1

Lot 1 appears to have been developed on by 1852 (Dripps 1852). By 1868 a larger structure appeared on this lot, at the corner of 10th Avenue and 34th Street. This was one of a row of buildings fronting 34th Street, which appear to be a row of tenements, which continued to stand through the 1960s (Dripps 1868, Hyde 1906 corr. to 1967). By 1920 the entire lot was covered by a building which was a 2 story brick tenement (DM360-30). In 1936 a gas station replaced the previous structure. Installation of grease pits and gasoline storage tanks caused subsurface disturbance to much of the lot (ALT238). Currently the lot continues to house a gas station (Photo A).

LOT 2

Lot 2 is facing west onto 10th Avenue. In 1852 a building is shown fronting 10th Avenue, as it is in 1868 and 1879 (Dripps 1852, 1868; Bromley 1879). By 1883 the building is shown as being on the western half of the lot, and is constructed from wood (Robinson 1883). In 1920 this was a 5 story brick building with a full cellar which occupied all but a narrow portion of the eastern most section of the lot. The building continued to stand through the 1960s (Bromley 1955 corr. to 1967), and has since been removed. It is now part of lot 1, possessing a gas station (Photo A).

*

For a full discussion of the issue of utility installation see the Nineteenth Century Homelot Archaeological Potential section of the "Phase 1A Archaeological Assessment, 34th Street Rezoning Project", 1988. Ms. on file with Allee King Rosen and Fleming, Inc.

LOTS 3-6

By 1868 lots 3 through 6 were part of a row of tenement buildings fronting 34th Street (Dripps 1868). In 1883 these were depicted as a row of brick buildings, likely tenements, spanning the block (Robinson 1883). Each of the lots retained a rear yard of equal size, on the north side of the lot. A 1920 atlas shows that each of these buildings had a small one story wooden addition on the northeast rear of each building. There is no information available to suggest the function of these (Bromley 1913 corr. to 1920). By 1950 lot 3 had been encompassed by adjacent lot 1, and together housed a gas station. Lot 4 had a brick addition on the rear of the building, on the north side of the lot, and lots 5 and 6 remained the same with an open rear yard (Hyde 1906 corr. to 1950). By 1980 the gas station had taken over the entire parcel encompassing lots 1 through 6. A 1980 map indicates the current subsurface storage tanks are located approximately where the rear yards of lots 5 and 6 had been.

ARCHAEOLOGICAL POTENTIAL

Potential development site 3 lies in a sensitive area for prehistoric cultural remains. The land would have afforded ample opportunities for resource procurement, and likely some form of prehistoric utilization did take place on this parcel. Extended habitation is doubtful as the strong northerly winds coming down the Hudson would deter this. Short term habitations are most apt to be represented in such an area. The majority of leveling activities during the urbanization of the neighborhood appears to be confined to land east of the parcel, the land of the New York Institute for the Education of the Blind. A 1979 U.S.G.S. topographic map shows the height of potential development site 3 to be greater than the land to the east, and the current elevations for the site neighborhood approximate the 1811 elevations. It is possible that the rise under this parcel may not have been totally removed.

Potential historic archaeological resources are limited to mid to late nineteenth century remains. The lack of occupation prior to this period supports that there is no potential to recover earlier remains. Sewers appear to have been available after the time of earliest construction, with water lines being available by 1878. Potential remains would include privies, cisterns and wells. Features of this sort would tend to be located in open yards behind buildings. However, by at least 1866 privies were cleaned on a periodic basis and thus would likely not possess fill representing this period.

The preliminary review documented subsurface disturbance including construction of below grade cellars, basements, gasoline storage tanks and grease pits. This was confirmed during a visual inspection of the site. The majority of the block appears to have experienced sub-surface disturbance. The only potentially undisturbed rear yards, behind buildings previously on lots 5 and 6, are now housing subsurface storage tanks as depicted by a plan of the current location of these tanks. The nature of gas-storage tanks is such that they have to be moved and replaced through time. As a result of this there is probably little if any subsurface integrity throughout the entire parcel. Any potential prehistoric or historic remains have undoubtedly been disturbed by extensive subsurface activity associated with the construction of the gas station.

RECOMMENDATIONS

Potential development site 3 did possess, at one time, prehistoric and historic potential. Short term occupation sites throughout the prehistoric period may have been present at this location. In addition, rear yards of tenement buildings may have possessed late-nineteenth century remains. However, the amount and extent of documented subsurface disturbance argues against the potential for in situ cultural deposits. Due to the documented subsurface disturbance, we

do not feel that a full Phase IA archaeological assessment is necessary with future development on the site. Historic land use has been established and documented, and it is estimated that there is little chance of recovering prehistoric or historic cultural remains if further investigation is conducted.

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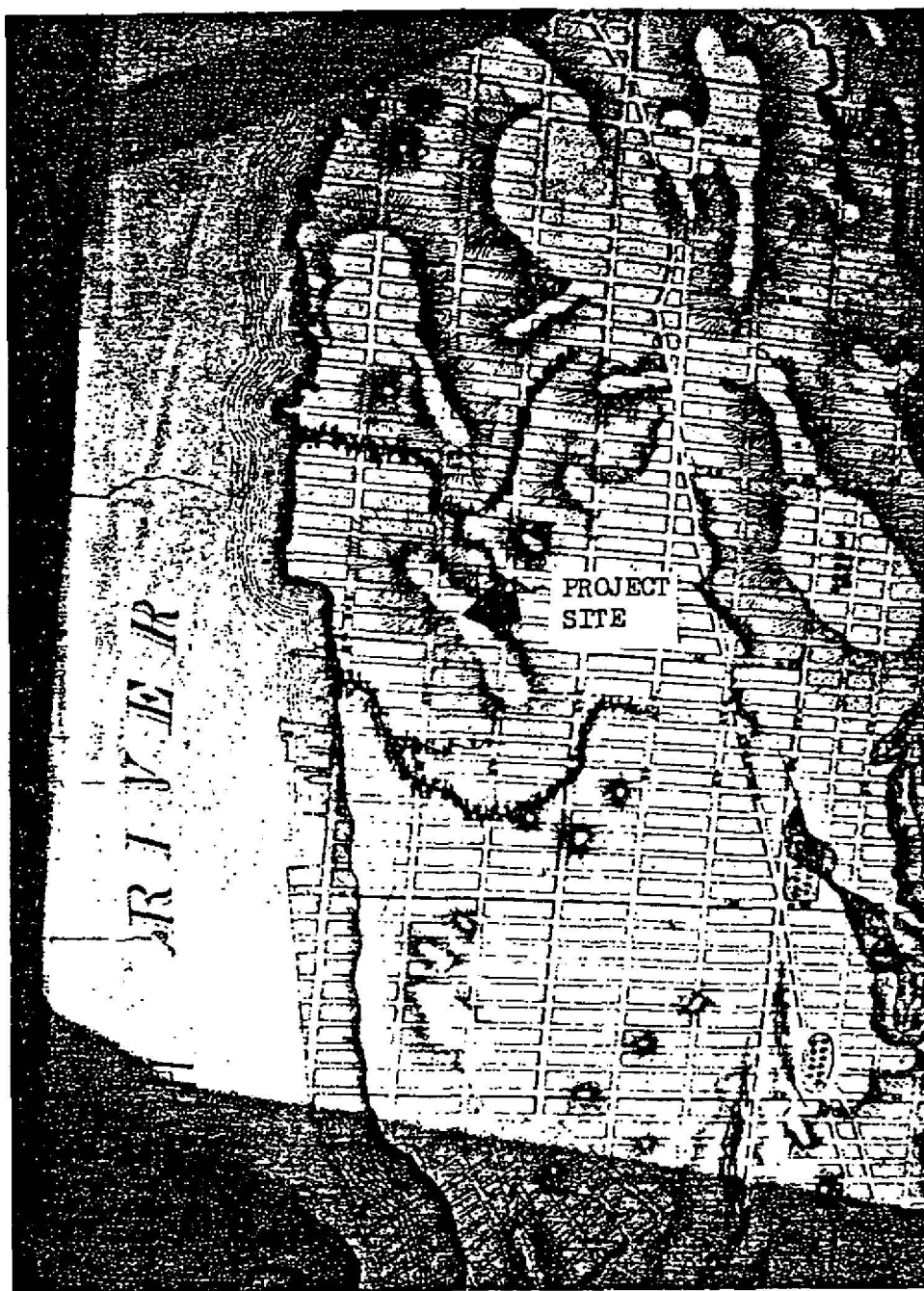
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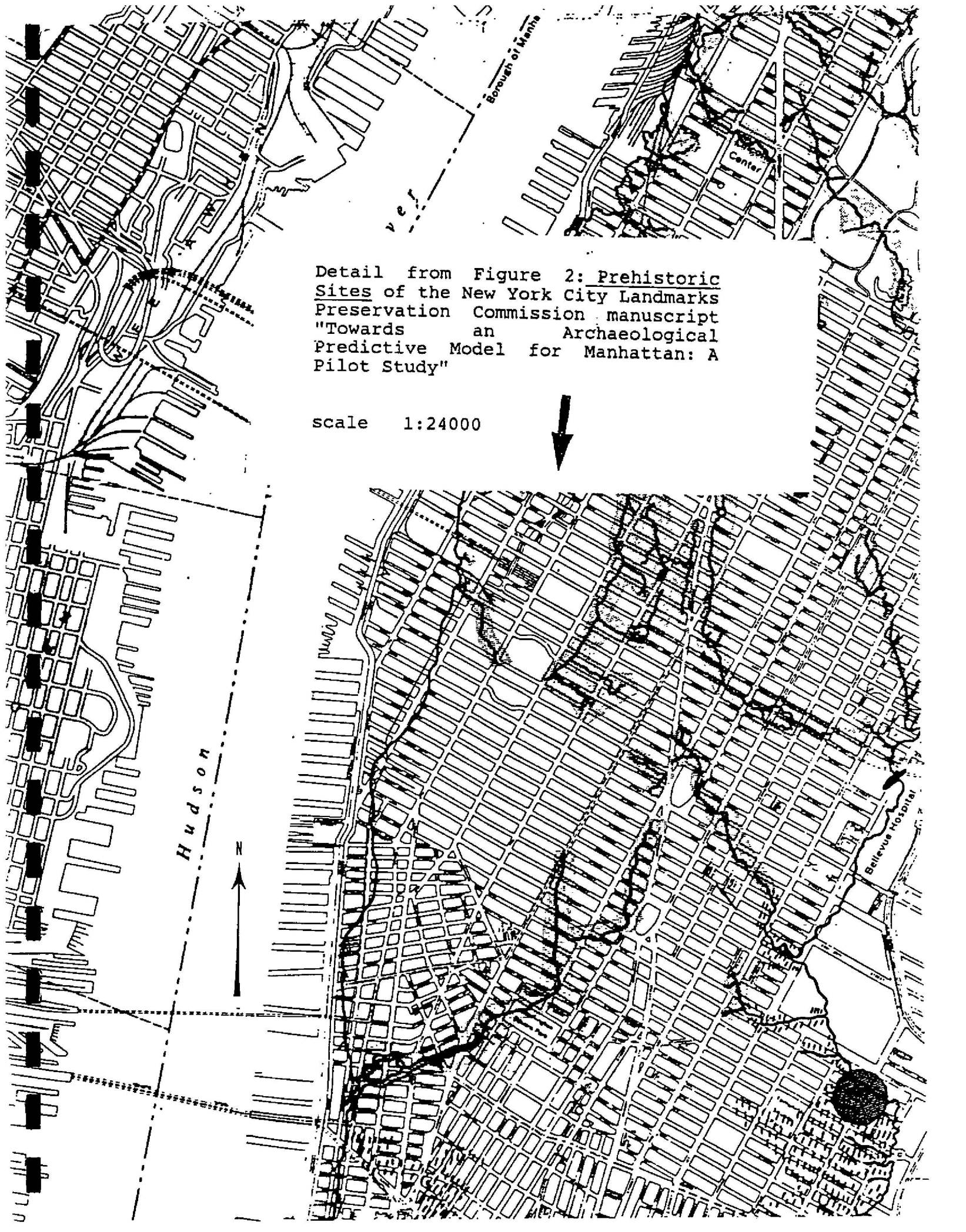
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Viele: 1859 Topographic Map

FIGURE 1

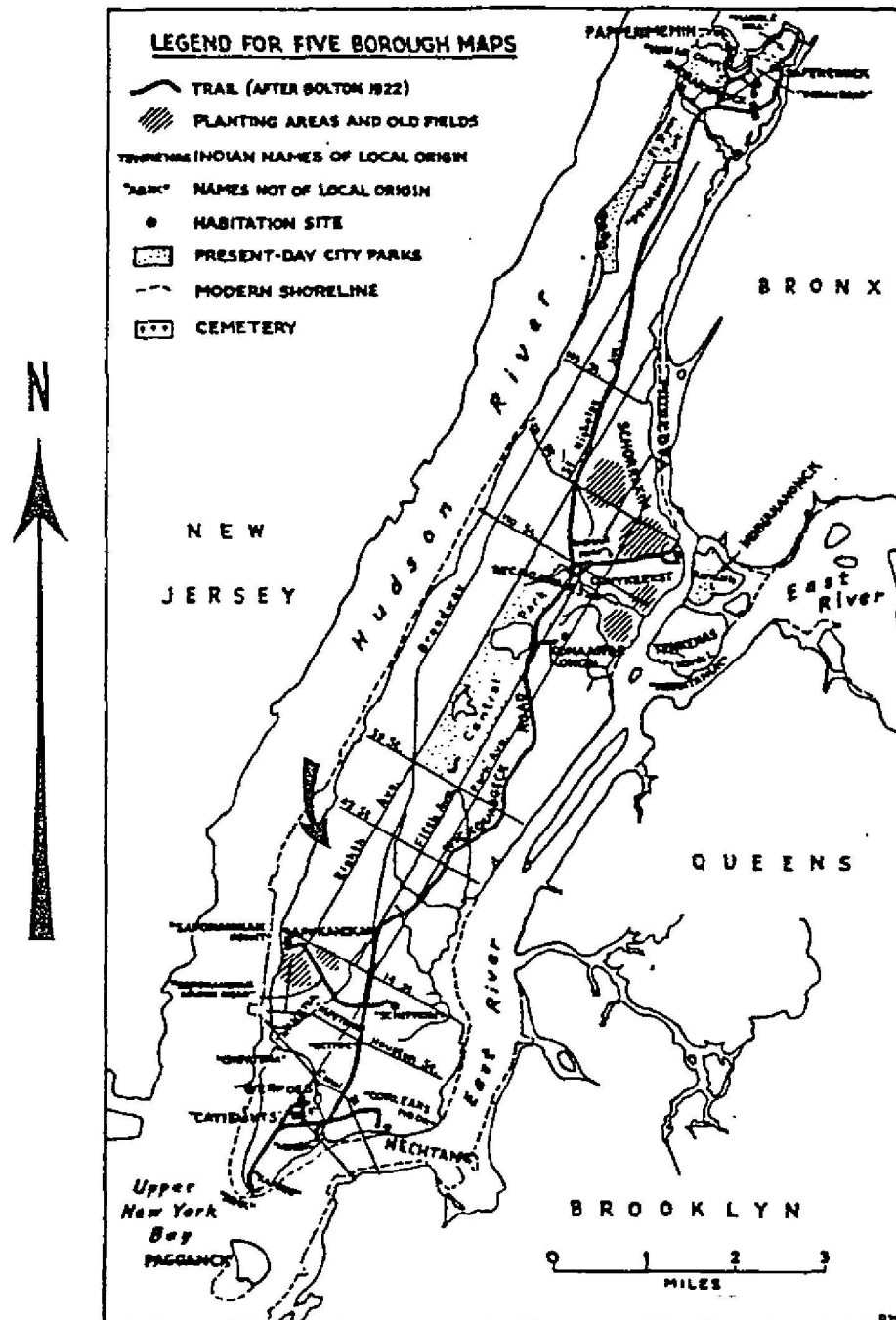


Detail from Figure 2: Prehistoric Sites of the New York City Landmarks Preservation Commission manuscript "Towards an Archaeological Predictive Model for Manhattan: A Pilot Study"

scale 1:24000



68 / MANHATTAN



Robert Grumet, 1981

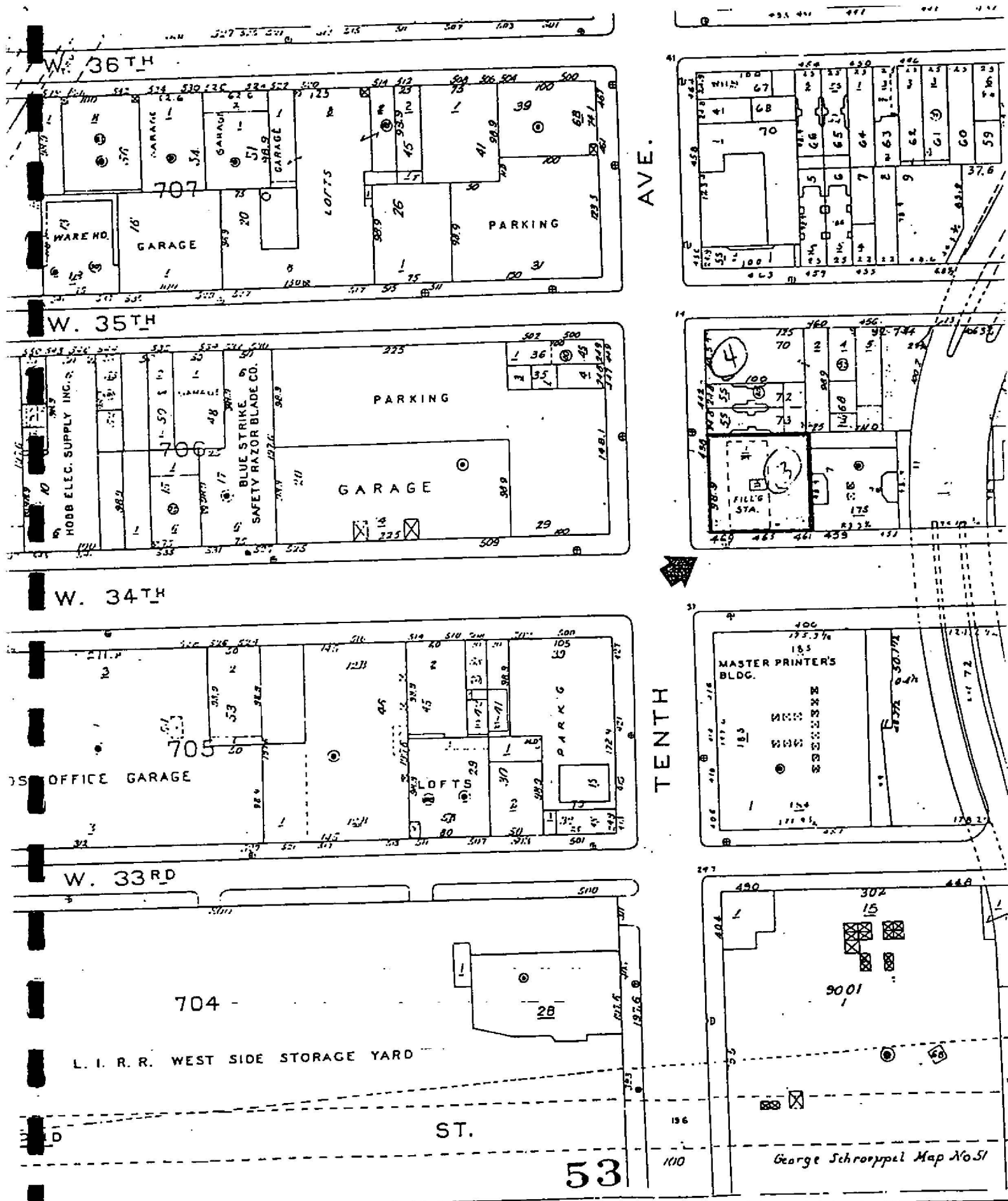
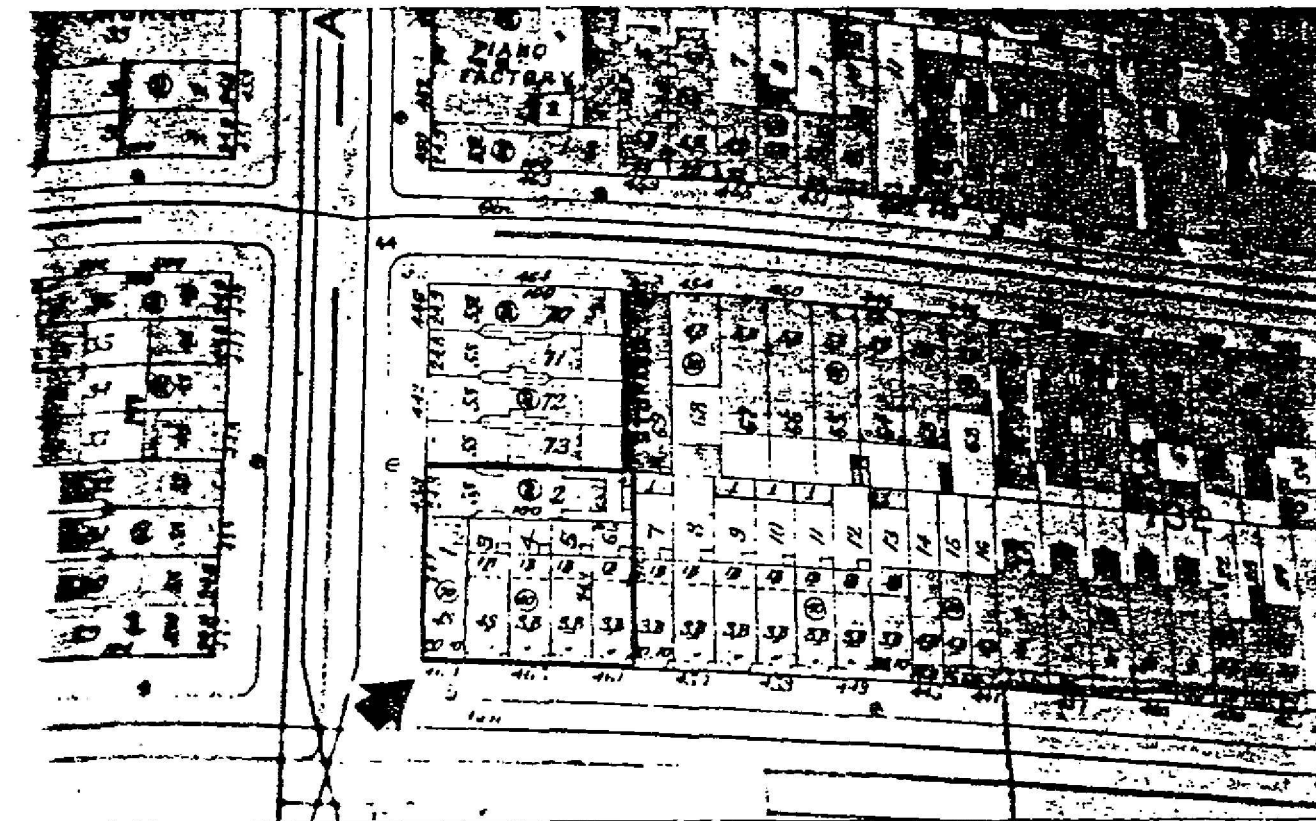


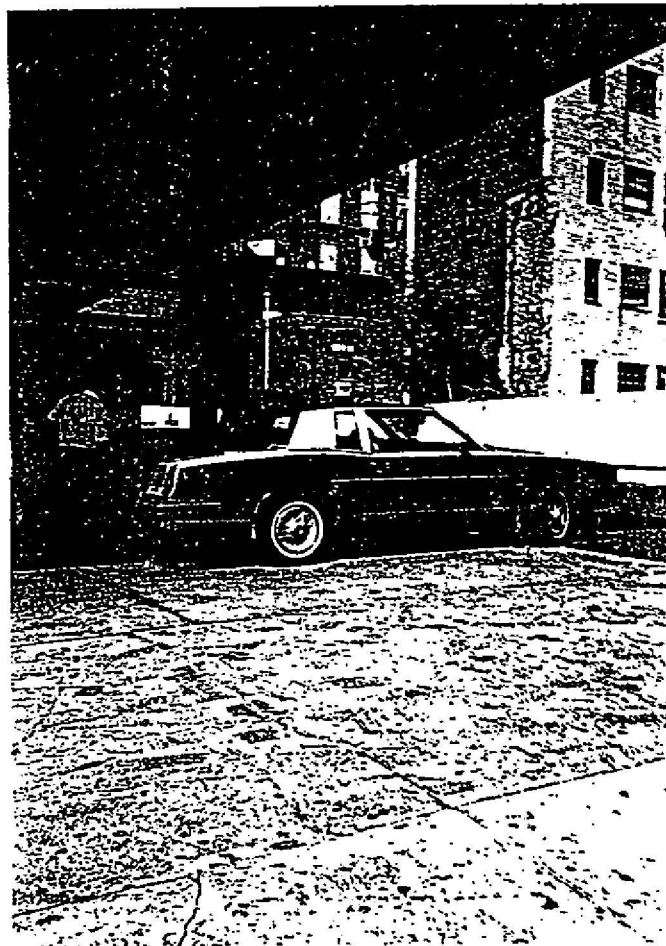
FIGURE 4: Project Site Location



Bromley: Atlas of the City of
New York 1913 corr.
to 1920



FIGURE 5



A. Gas Station currently encompassing all
of potential development site 3, facing
Facing northeast from 34th Street.



34th STREET REZONING
PRELIMINARY ARCHAEOLOGICAL ASSESSMENT
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Bounded by Tenth Avenue to the west, 35th Street to the north, lot 66 to the east, and lots 55 and 7 to the south.

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P.O. BOX 331 RIVERSIDE, CONNECTICUT 06878
(203) 661-0734

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Prehistoric remains recovered in southern New York tend to occur in shallow deposits. However, as stated, asphalt, sidewalks, and other build-up can protect these resources. The potential to recover archaeological resources rests largely on the original topography and subsequent alterations to it. Since the urbanization in the mid 1800s, the original knoll topography in the West 34th Street area has been graded. This destructive activity may have extended to this potential development site. However, the research required to establish such terrain altering activities is beyond the scope of this project.*

* The detailed information of the nineteenth century landscape changes on neighboring Block 757, the 34th Street Project Site, was available only because the New York Institute for the Education of the Blind was a state-funded school required to file itemized annual reports with the state legislature. It is highly unlikely that such disturbance records could be located for this potential development site.

HISTORIC OVERVIEW

This area of New York was originally part of rural Bloomingdale, farmed by the Dutch to provide supplies to the city at the southern tip of Manhattan. During the middle of the eighteenth century, land surrounding and including this parcel was referred to as "Newfoundland" (Stokes Vol.4, p.688). The southern portion of the Weylandt patent, traced to 1677, became part of the 'Glass House' Farm, established in the mid 1700s. This 30 acre farm, situated between 32nd and 41st Streets, housed a short-lived glass manufacturing industry which eventually was purchased by the Chemical Manufacturing Company. When the Glass House farm was sold in 1762, much of the land was subsequently transferred to the Rapelje family in 1779.

The Rapelje farm house was east of 11th Avenue between 34th and 35th Streets, with the Hudson River coming up to its garden and boundaries. Smaller farms adjacent to the Rapelje estate also became established at this time. Farms belonging to Isaac Moses and Samuel Watkins bordered the Rapelje estate to the east. Potential development site 4 fell within land owned by the Rapelje estate. At that time, and through the 1860s, the land remained rural and undeveloped as shown on nineteenth century maps (Colton 1836; Dripps 1852). Also at this time, Fitzroy Road crossed the westerly side of 8th Avenue between 31st and 32nd Streets and continued northwest to about 42nd Street. The road was eventually closed in 1832, with the advancement of the 1811 grid system from lower Manhattan (Stokes Vol.6, p.1000).

In the early 1800s, this area was generally characterized as residential, agricultural and industrial, in that order (NYCLPC, Neighborhood Maps). In 1850 the area is listed as residential and undeveloped, with industrial and waterfront shipping and transportation complexes being south of 33rd Street (Ibid). An 1844 description of the terrain characterizes it as rising ground overlooking the Hudson River and New Jersey (Wait, p. 3). A survey of landmarks in Manhattan by Stokes (Vol.3, plate 175) supports that this parcel was not occupied during earlier times including the Colonial or Revolutionary periods, and has never been occupied by a landmark structure.

In 1833 the streets and avenues in the neighborhood had not been opened and regulated, as it was a short distance beyond the paved part of the city (Wait, p. 3). By this time much of this section of Manhattan had been divided into lots resulting from the adoption of the city plan in 1811 (WPA, p.147). By 1836, 8th, 9th and 10th Avenues as well as 34th Street were constructed and facilitated travel (Stokes Vol.3, pp. 998,1006,1010). This portion of Manhattan was part of a growing residential belt "from the Twenties to the Fifties between Eighth and Tenth Avenues" housing rows of brick tenements (WPA, p.145). Beginning in the 1840s, north of the project area, Hell's Kitchen was predominantly occupied by Irish, as was Chelsea to the south (Ibid, p.145). The

introduction of railways in the mid-nineteenth century, and increased traffic on the Hudson created industrial sections, with unskilled laborers often being forced into nearby slums.

An 1866 report on the sanitary conditions for the vicinity states that out of 417 tenements in the district, 105 were not hooked into the public sewer at that time (Citizens Assoc. of New York, p.257). Laws existed regulating when privies should be cleaned, however these were often violated. Privies were to be emptied as soon as they were full, but this was often ignored and they were left in horrible states (Ibid, p.261). The overall condition of this district was considered poor, with the nicer buildings being located east of 8th Avenue.

SITE SPECIFIC LANDUSE

BLOCK 732

Potential development site 4 is located on the southeast corner of 35th Street and 10th Avenue (Fig. 4). Sewer lines were available on 10th Avenue between 34th and 35th Streets by 1859, with water lines following in 1878. On 35th Street, sewer lines were available by 1853. The earliest records for water lines on 35th Street indicate lines were in by 1936. Likely this late date is erroneous and is due to misplaced data or the lack of earlier records.*

It is unclear when each building utilized the public sewer and water lines, even though they were available. A 1902 permit for 458 West 35th Street, Lot 68, states "new water closets are required to replace the pan water closets...making it necessary to intersect into present soil pipes and waste pipe lines" (ALT1104). A 1903 memo for the same building states "Remove accumulation of fecal matter from bowl of W.C. in yard etc.". An alteration permit dating to 1920 for the same building is for the removal of "toilets from yard" (ALT16). Presumably the presence of water and sewer lines did not guarantee their usage. It appears, as in this case, that even if a building had some indoor water closets, they may have continued to have outside ones as well.

The following analysis of development on the parcel is presented chronologically in numerical sequence by lot numbers. The lot numbers referenced are those depicted on the 1913 Bromley atlas corrected to 1920 (Fig. 5).

Lot 67

The first development on lot 67 took place between 1852 and 1868 (Dripps 1852, 1868). By 1868 two structures were located on the lot, one on the north side fronting 35th Street, and another at the south end of the lot. By 1883 a brick structure appears to span the entire lot, except for a small alley at the rear of the building on the south end of the lot (Robinson 1883). The building continued to stand, and has remained the same through today (Photo A) (Hyde 1906 corr. to 1950; Bromley 1955 corr. to 1967). In 1940 the building is listed as a 5 story multiple dwelling structure, measuring to 25'x76' with a full cellar.

*

For a full discussion of the issue of utility installation see the Nineteenth Century Homelot Archaeological Potential section of the "Phase 1A Archaeological Assessment, 34th Street Rezoning Project", 1988. Ms. on file with Allee King Rosen and Fleming, Inc.

Lot 68

Lot 68 was first constructed upon between 1852 and 1868 (Dripps 1852, 1868). In 1883 the structure is shown as a brick building covering the northern 3/4 of the lot, fronting 35th Street (Robinson 1883). By 1920, the same structure is shown as a four story brick building with a basement. In addition, at the south end of the lot behind this structure, is another brick building (Bromley 1913 corr. to 1920). At this time, permits indicate that the rear building measuring to 25'x20' and the front building measuring to 25'x50', were both used as tenements (ALT16-20). The permit also states that a shed should be removed from the yard, and a clear space would be maintained. As previously mentioned, there is a 1920 permit for this lot to remove the toilets from the yard (ALT16). Both buildings continued to stand through 1967 (Hyde 1906 corr. to 1950, Bromley 1955 corr. to 1967). A visual inspection confirmed that the front building is still standing, although the rear one could not be seen as the view was obstructed. It is not clear whether the rear building had a basement (Photo A).

Lot 69

The first structure on lot 69 appears to have been built by 1852, and covered the entire lot (Dripps 1852). By 1868 the building is listed as a Methodist Church (Dripps 1868). In 1875 the building belonged to the City Church Missionary Society. The 25'x80' brick building had a one story stone extension measuring 13'x16' on the easterly rear (ALT666-1875). In 1888 the addition was extended to the westerly rear as well (ALT1458). Neither of these extensions had a cellar or basement, nor was one mentioned for the main building. A 1920 atlas shows the building covered the entire lot, and was utilized for storage (Bromley 1913 corr. to 1920). ALT2589 in 1923 indicates the storage building was built on dry hard clay. A 1924 Certificate of Occupancy (7887) has no mention of a cellar or basement. The building continues to stand, and is currently housing a business (Photo B). There is no visible indication of a cellar.

Lot 70

Lot 70 appears to have first been constructed upon by 1852 (Dripps 1852). At this time there is a structure covering most of the western portion of the lot, fronting 10th Avenue. In 1879 two structures are shown, one on each the east and west ends of the lot, with a small gap between the two (Bromley 1879). In 1883 a wooden structure covered the entire lot (Robinson 1883). By 1920 this had been replaced by a 5 story brick building fronting 10th Avenue (Bromley 1913 corr. to 1920). By 1950 the building was removed and replaced by a parking lot, as it is today (Photo C) (Hyde 1906 corr. to 1950, ALT1902-52). There is no indication that the previous building had a cellar. Demolition permit 238 in 1941 indicates the building was 25'x95' while the lot was 25'x100', suggesting there may have been a 5' wide rear yard on the east end of the lot at that

time.

Lot 71

Lot 71 was not developed until sometime between 1852 and 1868 (Dripps 1852, 1868). In 1883 there was a brick building on the west portion of the lot fronting 10th Avenue, and a wooden building on the east portion of the lot, abutting the Church on lot 69 (Robinson 1883). By 1920 the lot housed a brick 5 story building on the west side fronting 10th Avenue. At this time the eastern end of the lot was a vacant rear yard (Bromley 1913 corr. to 1920). The building stood through 1967 and has since been removed (Photo C) (Hyde 1906 corr. to 1950, Bromley 1955 corr to 1967). There is no information available to support the presence or absence of a cellar.

ARCHAEOLOGICAL POTENTIAL

Potential development site 4 lies in a sensitive area for prehistoric cultural remains. The land would have afforded ample opportunities for resource procurement, and it is likely that some form of prehistoric utilization did take place on this parcel. Extended habitation is doubtful as the strong northerly winds coming down the Hudson would have deterred this. Short term habitation sites are most apt to be represented in such an area. The majority of leveling activities during urbanization of the neighborhood were probably confined to land southeast of the parcel. A 1979 U.S.G.S. topographic map does show the height of potential development site 4 to be greater than the land to the east and the current elevations for the site neighborhood approximate the 1811 elevations. It is possible that the rise under this parcel may not have been totally removed.

The preliminary review documented historic era subsurface disturbance including construction of below grade cellars and basements. The majority of the block appears to have experienced sub-surface disturbance. However, the initial review of the cartographic data and information acquired at the Buildings Department, Block and Lot files, suggests that there may be existing undisturbed areas.

On lot 67 a small rear yard at the south end of the lot appeared vacant in 1883 and on. However, the presence of an earlier building whose foundation would have been directly on this spot, probably caused sufficient subsurface disturbance to consider potential remains obliterated. On lot 68 a rear yard in the south portion was not developed. In addition, the rear building on the south end of the lot appears to have not had a basement, and may have caused little, if any, subsurface disturbance. The building on the front of the lot, currently standing, has a full basement. It has been documented that the rear yard of this lot once contained outdoor water closets. While remnants of these historic activities may be intact, the presence of such resources likely disturbed potential prehistoric remains. In addition, by at least 1866 privies were required to be emptied on a regular basis and thus would probably not possess fill representing this period.

Lot 69 has a building currently spanning the entire lot. There is no evidence to suggest the original building or subsequent extensions have had a cellar. The majority of this lot may have retained subsurface integrity. However it is probable that no back yard features are present. Since the entire lot was developed at an early date, there would not have been enough room in a back yard for historic features to be present.

In addition, lots 70 and 71 have also been developed, although neither of the buildings constructed appear to have possessed cellars or basements. Lot 70 possessed a back yard on the east end, that was probably disturbed by earlier construction activities. Lot 71 retained a back yard that

also was undoubtedly disturbed by the construction of an earlier building. Subsurface disturbance may have been limited to the actual location of foundations. It is possible that potential prehistoric cultural remains, initially below the slab foundations, are buried with debris caused by the demolition of these buildings. Currently lots 70 and 71 are both paved parking lots.

Potential historic archaeological resources are limited to mid to late nineteenth century remains. The lack of occupation prior to this period supports that there is no potential to recover earlier remains. Sewers appear to have been available after the time of earliest construction, with water lines being available on 10th Avenue by 1878. Therefore, we can not predict the possible presence of nineteenth century back yard features commonly investigated by archaeologists, e.g., cisterns, privies and wells.

RECOMMENDATIONS

Potential development site 4 may possess prehistoric remains. The site would have provided a wealth of resources attractive for Native American utilization. It is likely that the site was occupied at some time prehistorically, for the extraction of resources. Potential remains would likely represent short term habitations for this purpose. The potential to recover these remains exists where back yard areas were located historically, or beneath the sites of existing or previous standing structures without cellars. This limitation is due in large part to the massive earth moving undertaken in the nineteenth century. Clement Clarke Moore, a nearby nineteenth century landowner, described the changes brought about by the 1811 Commissioners Survey: "The great principle which governs these plans is, to reduce the surface of the earth as nearly as possible to a dead level. The natural inequities of the ground are destroyed..." (Cohen, p. 2511). However, the present day elevations roughly correspond to those taken by the street surveyors prior to leveling. Therefore, the question of the depth of intact soil stratigraphy on the potential development site remains unanswered. The archaeologists reliance on soil boring logs for a glimpse at subsurface conditions will, in this case, not be helpful since they can not reveal the amount of "missing" pre-1811 A horizon or B horizon soil.

For those spaces beneath buildings having no basements, the case is not clear cut. Even the slab foundation technique creates a degree of disturbance, although to what degree is unknown in this instance. Thus lots 69, 70 and 71, on which there are no documented cellars, may possibly possess prehistoric potential. However, the specific locations of the foundations of these buildings would have caused limited subsurface disturbance. Potentially sensitive areas are currently either buried beneath fill and rubble from the demolition of buildings on these lots, or remain under standing structures with slab foundations.

Remnants of historic lifeways are limited, as there was nothing constructed on this site prior to the mid nineteenth century. Documentation supports that the only area with the potential to yield historic remains is the rear yard on the south end of lot 68. There was once an outdoor water closet on this lot, although the archaeological significance of this remains questionable. Based on nineteenth century sanitation reports and health violation records from neighboring blocks, there is no reason to believe that each tenement was connected to available sewers. If the water closet mentioned was not connected to the sewer system, it was required to be emptied regularly, according to late nineteenth century health code regulations. Periodic cleanings would have destroyed any archaeologically significant deposits.

It has been impossible to ascertain the exact nature of an individual tenement's earliest water supply and, in consideration of the in-depth research expended on the 34th Street Rezoning Project for this same information, we do not feel that further documentary research will provide this evidence. Although there was municipal water in the immediate area shortly after the earliest construction, there may also be capped wells and cisterns in the back yard of lot 68. It must be kept in mind that the building associated with this back yard space was classified as a tenement, indicating multiple families that were possibly unrelated and transient. The presence of privy, cistern and well features does not guarantee they will provide additional information on historic lifeways. If we were to proceed on the limited possibility of back yard features/deposits, further research would have to be conducted to establish the possible significance to the archaeological record of such features (e.g., long term occupation by one family or ethnic group).

This vertical and horizontal analysis of past and present building footprints was designed to establish potentially sensitive areas for archaeological remains. This preliminary analysis was not designed to provide sufficient data to determine the need for field investigations but to recommend whether or not a full Phase 1A study was warranted. Based on their research goals and priorities, NYCLPC may want to consider the possibility of further investigations on a portion of this site, the rear yard of lot 68 for historic resources and lots 69, 70 and 71 for prehistoric resources (Fig. 6). However, a full Phase 1A archaeological analysis may not be appropriate for this potential development site because it is doubtful if further documentary research could give definitive assurance that potential resources, in fact, exist.

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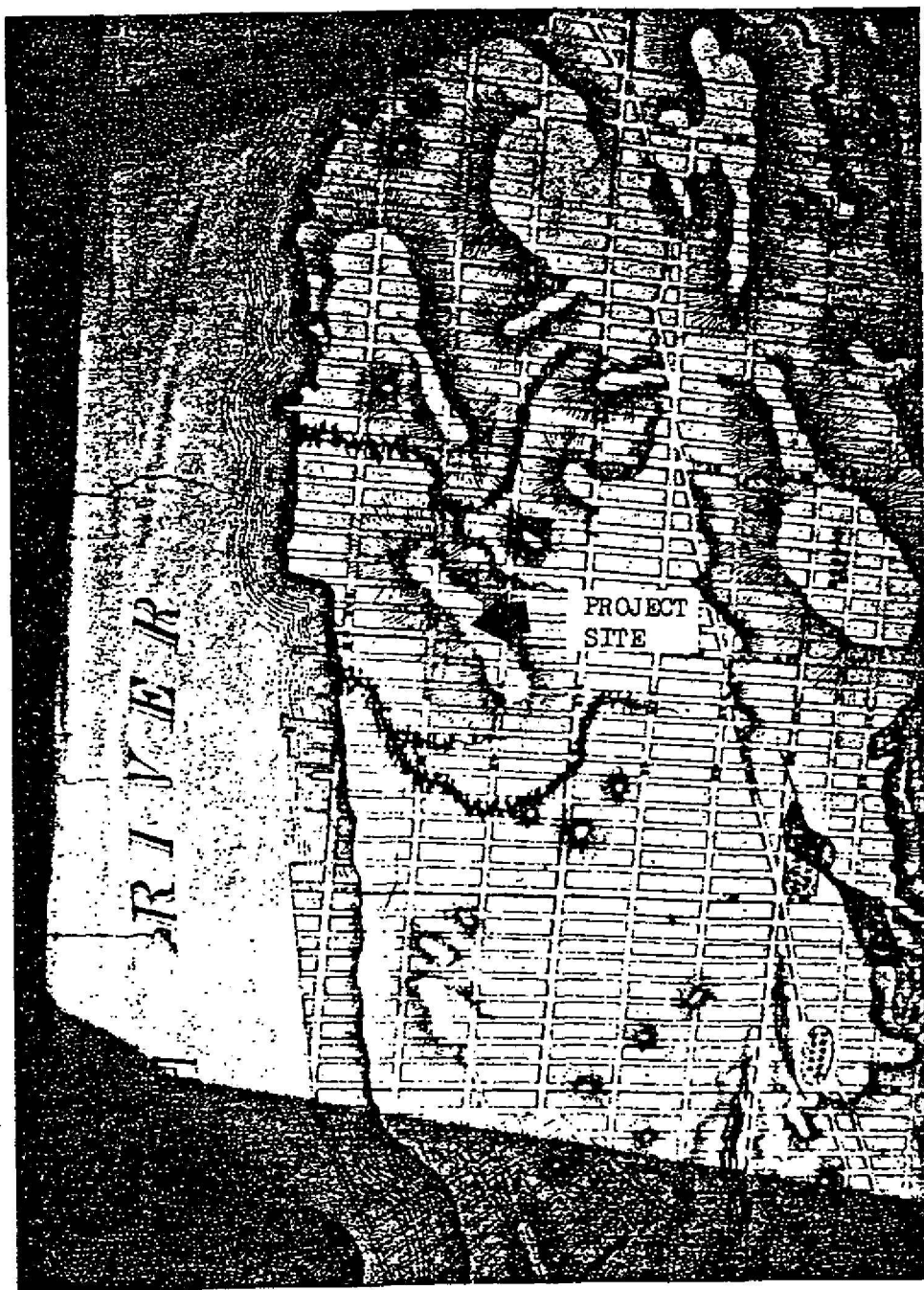
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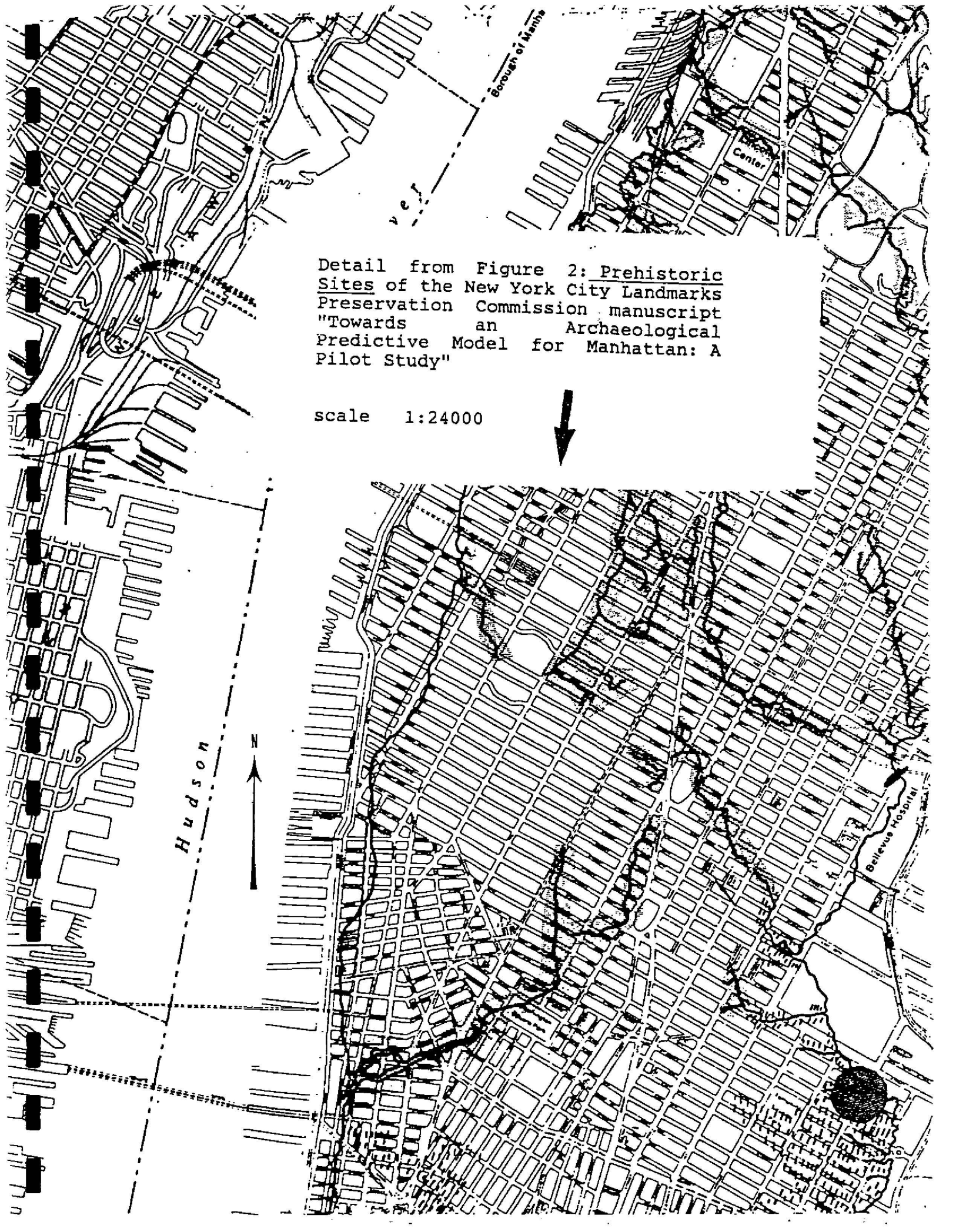
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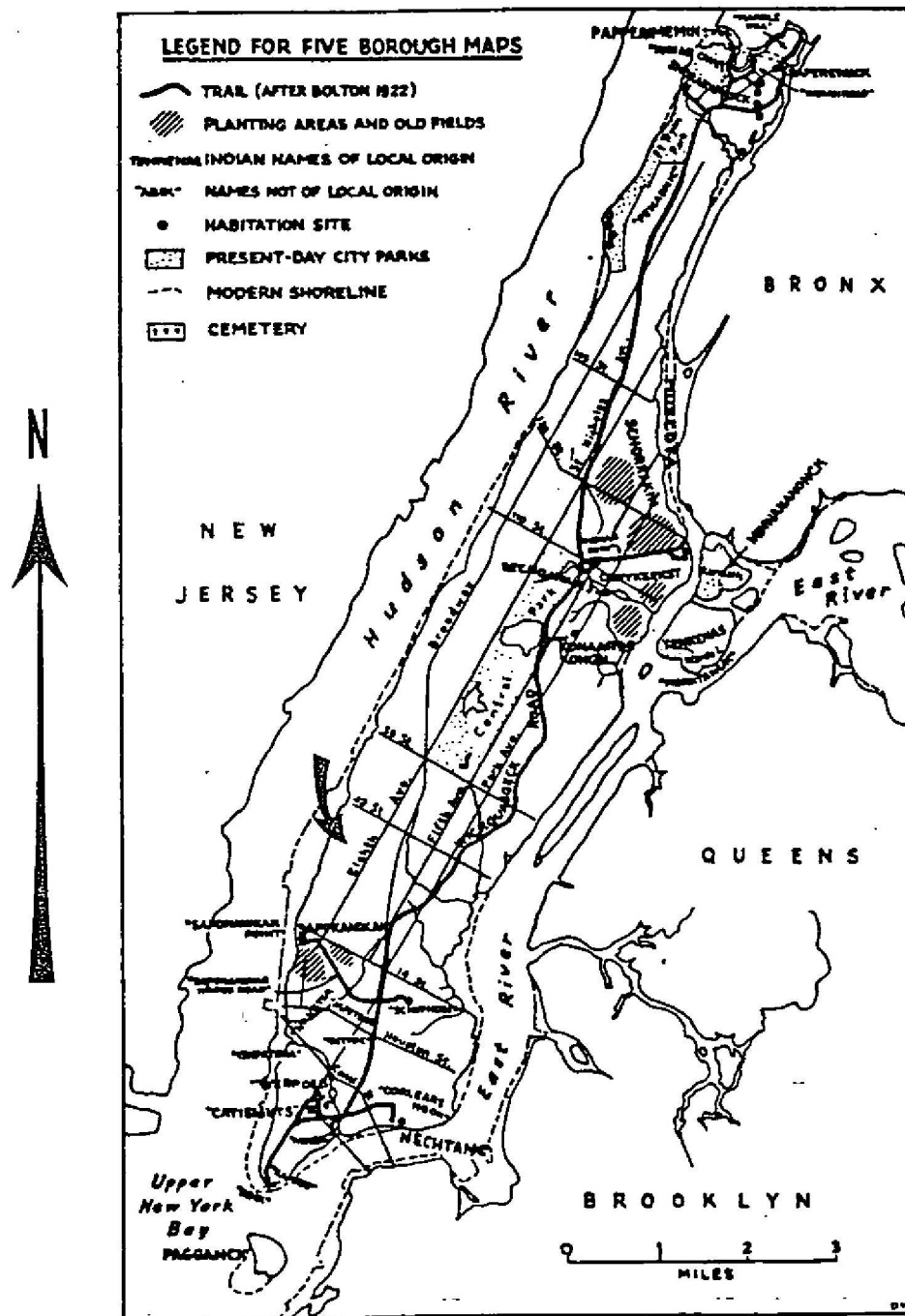
Viele: 1859 Topographic Map

FIGURE 1

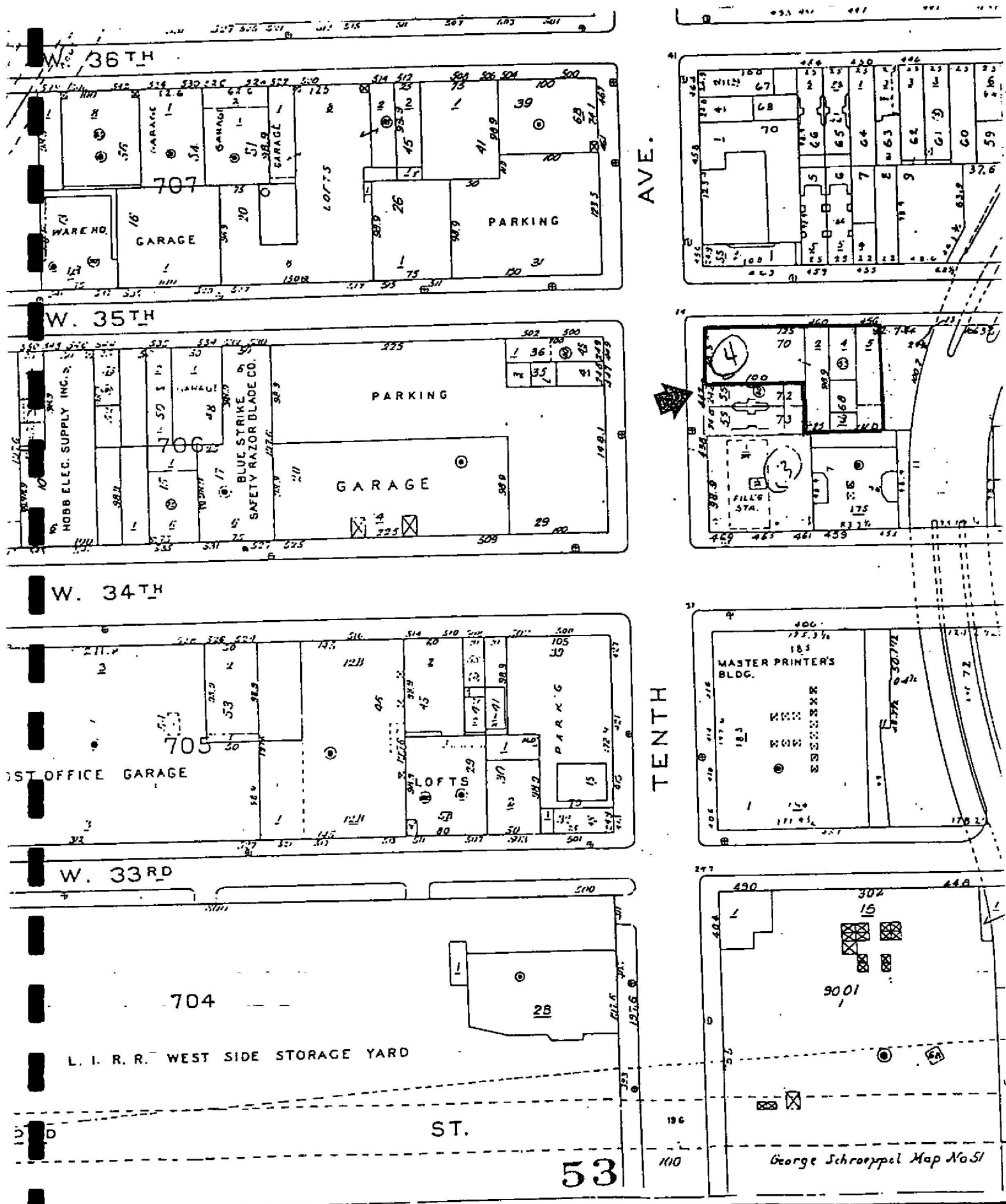


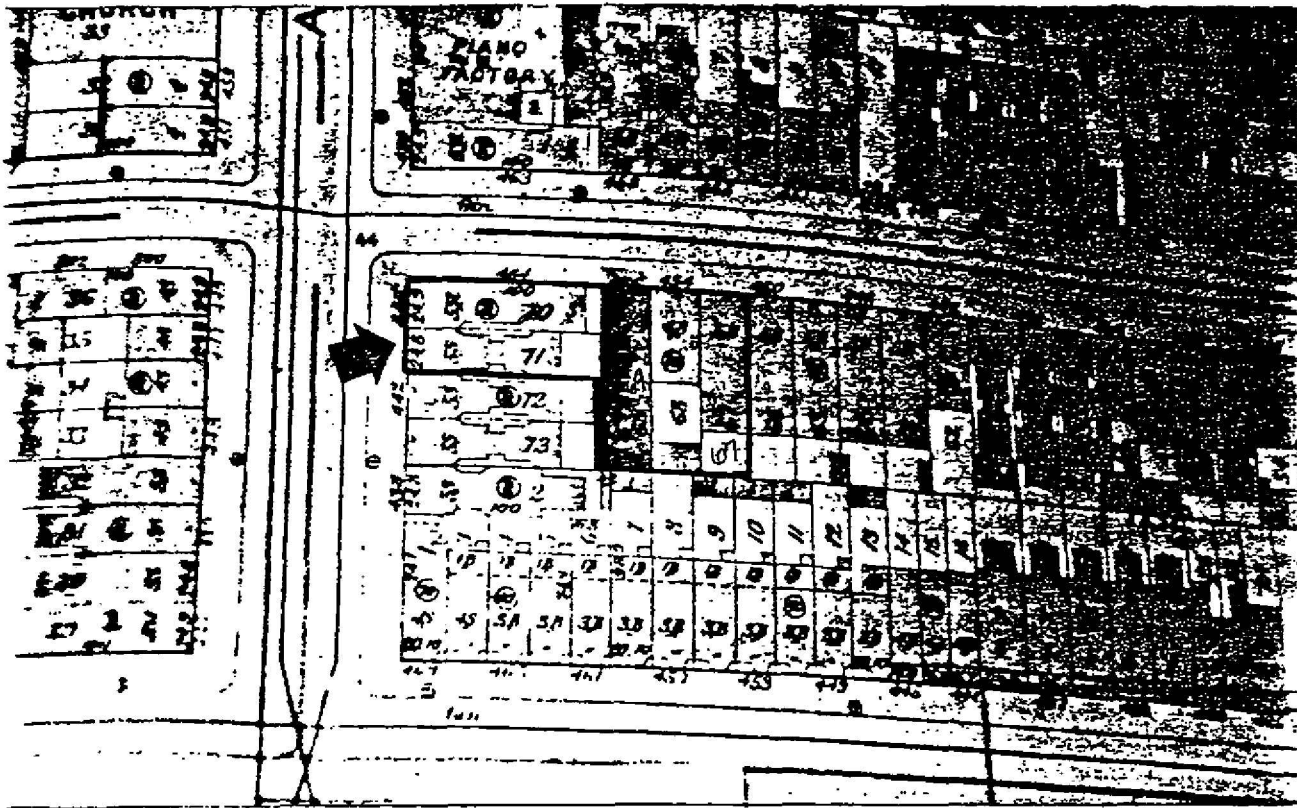
Detail from Figure 2: Prehistoric Sites of the New York City Landmarks Preservation Commission manuscript "Towards an Archaeological Predictive Model for Manhattan: A Pilot Study"

scale 1:24000



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FIGURE 5

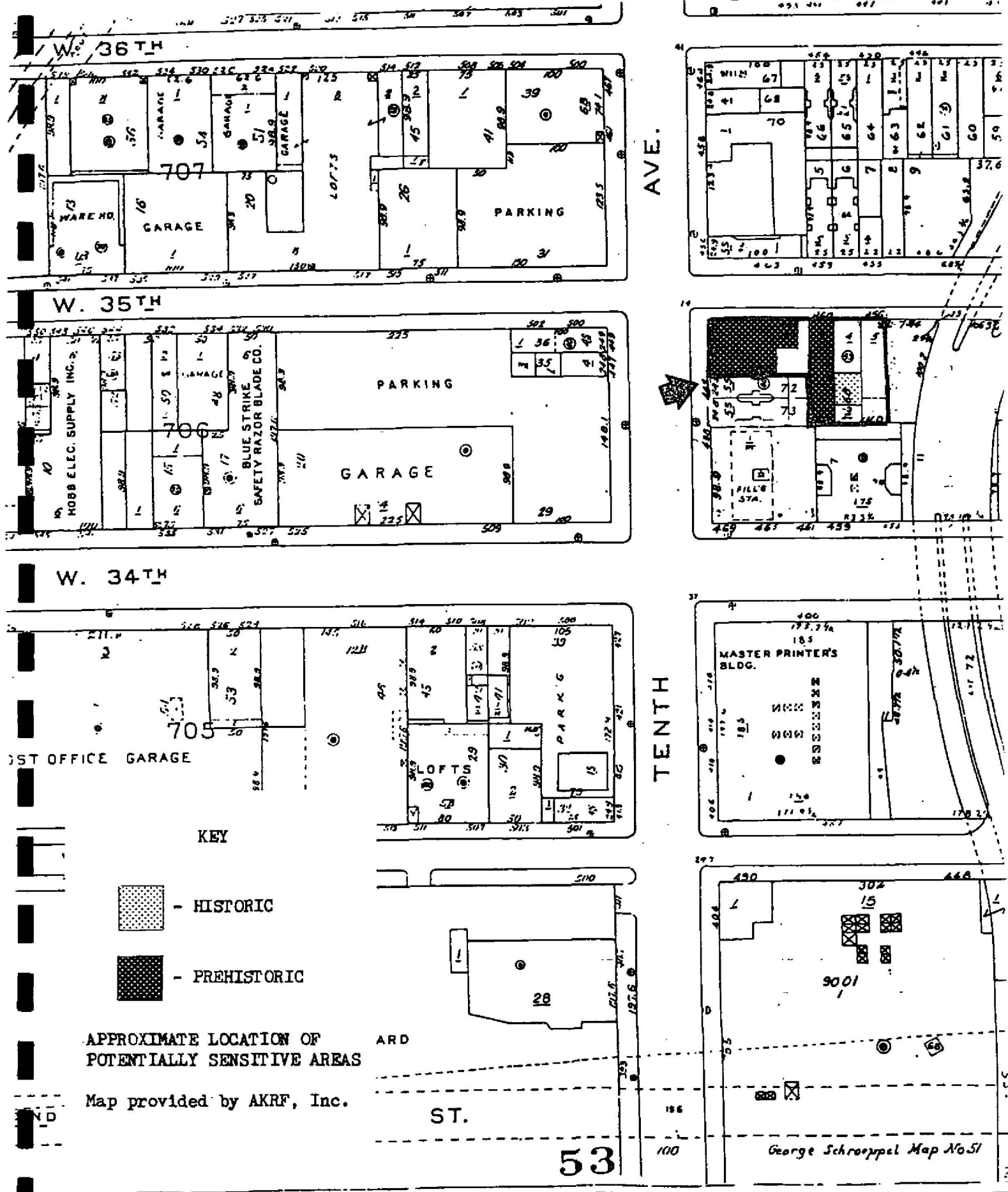


FIGURE 6 Project Site Location
With Sensitive Areas Shown