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Phase IA Archaeological Assessment
SCA New High School Facility/Art and Leather Factory Building
Block 1600, Lot 61
45-10 94th Street
Elmhurst, Queens County, New York

NYSOPRHP Review Number 05PR04735

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SCA New High School Facility/Art and Leather Factory Building
Block 1600, Lot 61
45-10 94th Street
Elmhurst, Queens County, New York**

NYSOPRHP Review Number 05PR04735

Prepared For:

**AKRF, Inc.
440 Park Avenue South
New York, NY 10016**

Prepared By:

**Historical Perspectives, Inc.
P.O. Box 3037
Westport, CT 06880**

Authors:

**Julie Abell Horn, M.A., R.P.A.
Luc Litwinionek, M.S., R.P.A.**

January 2006

MANAGEMENT SUMMARY

SHPO Project Review Number (if available): **05PR04735**

Involved State and Federal Agencies: **New York City School Construction Authority (SCA)**

Phase of Survey: **Phase IA Archaeological Assessment**

Location Information

Location: **Block 1600, Lot 61, 45-10 94th Street, Elmhurst, Queens County, New York. The project site, an irregular shaped parcel, is bounded by 94th Street on the east, the Long Island Railroad (LIRR) tracks on the north, and private property on the south and west, which fronts Corona Avenue and 91st Place, respectively**

Minor Civil Division: **08101, Queens**

County: **Queens**

Survey Area

Length: **varies, irregularly shaped lot**

Width: **varies, irregularly shaped lot**

Number of Acres Surveyed: **ca. 2.5**

USGS 7.5 Minute Quadrangle Map: **Jamaica**

Archaeological Survey Overview

Number & Interval of Shovel Tests: **N/A**

Number & Size of Units: **N/A**

Width of Plowed Strips: **N/A**

Surface Survey Transect Interval: **N/A, urban area with paved surfaces**

Results of Archaeological Survey

Number & name of precontact sites identified: **None**

Number & name of historic sites identified: **None**

Number & name of sites recommended for Phase II/Avoidance: **None**

Results of Architectural Survey

Number of buildings/structures/cemeteries within project area: **1**

Number of buildings/structures/cemeteries adjacent to project area: **numerous; dense urban area**

Number of previously determined NRHP listed or eligible buildings/structures/cemeteries/districts: **1**

NRHP eligible building (former Durkee Factory building) within project boundaries

Report Authors(s): **Julie Abell Horn, M.A. R.P.A. and Luc Litwinionek, M.S., R.P.A., Historical Perspectives, Inc.**

Date of Report: **January 2006**

EXECUTIVE SUMMARY

The New York City School Construction Authority (SCA) has proposed construction of a new high school facility, at 45-10 94th Street in the Elmhurst neighborhood of Queens, New York (Figure 1). The site is located on Block 1600, Lot 61 (Figure 2). The property, an irregular shaped parcel, is bounded by 94th Street on the east, the Long Island Railroad (LIRR) tracks on the north, and private property on the south and west, which fronts Corona Avenue and 91st Place, respectively. The site presently contains a factory building now known as the Art and Leather Factory, but which was built as the E.R. Durkee & Co. Factory and was later known as the Glidden Company Factory. The four-story concrete factory building, thought to be associated with Detroit designer Albert Kahn or the design firm of Lockwood Greene, has been determined eligible for the National and State Registers of Historic Places by the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) (Bartos 2005).

Historical Perspectives, Inc. (HPI) has undertaken a Phase IA Archaeological Assessment of the SCA New High School Facility/Art and Leather Factory Building project site in order to: 1) identify any potential archaeological resources that might have been present on the site, and 2) examine the construction history of the study site in order to estimate the probability that any such potential resources might have survived and remain on the site undisturbed. Since the proposed construction location on this property has not yet been finalized, the entire project site is considered the Area of Potential Effect (APE).

Results of the Phase IA Archaeological Assessment revealed that the project site does not possess precontact archaeological sensitivity. Although the project site was undeveloped prior to construction of the 1917 factory building that still remains on the property, the Ludlow House was built in 1780 and the Card house was constructed by at least 1844; both of which would have utilized the project site as rear or side yard areas (see Figure 11 for the house locations). The Ludlow House appears to have been rented to a variety of tenants over its 150-year history, whereas the Card house was owned and/or occupied by members of the Card family for over 50 years. For these reasons, HPI concludes that the project site is sensitive for eighteenth- and nineteenth-century historic period archaeological resources. HPI does not believe that any possible remaining subsurface features associated with the NRHP-eligible former Durkee factory building would have any additional research value beyond what is depicted on existing maps and detailed in other documents. The majority of the former structures (such as the tanks and other ancillary equipment) associated with the factory were located in an area that is not part of the present project site.

Historic period archaeological resources such as the remains of wells, privies, cesspools, or cisterns could exist under the paved parking lot on the southern portion of the project site, in proximity to the former Ludlow House and Card family house. Yard features and/or activity areas associated with these former buildings could also exist under the parking lot if they have not been affected by later disturbance. If construction plans for the proposed SCA new high school facility (which have yet to be finalized) will require impacts within the parking lot area in excess of 15-20 feet from the edge of any existing building, then HPI recommends that Phase IB archaeological testing be conducted in those areas of the parking lot in proximity to the former Ludlow House and/or Card family house. Figure 11 illustrates the locations of the former Ludlow House and Card family houses and standing structures on the project site, and indicates the approximate locations of proposed Phase IB excavation trenches. Precise locations of the backhoe trenches would be determined based on field conditions. All Phase IB archaeological testing should be conducted according to applicable archaeological standards (New York Archaeological Council 1994; NYSOPRHP 2005). Professional archaeologists, with an understanding of and experience in urban archaeological excavation techniques, would be required to be part of the archaeological team.

Finally, it should be noted that if final SCA construction plans indicate that there will be no subsurface impacts to the parking lot area of the project site identified as potentially sensitive, then HPI recommends that no additional archaeological investigations would be necessary for historic period resources.

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(Locations and orientations shown on Figure 2)

1. Project site showing northern façade of Art and Leather Factory building with Long Island Railroad tracks in foreground. View looking south from 94th Street overpass.
2. Project site showing paved parking lot south of factory building. Note asphalt paving in foreground, concrete paving in background. View looking west from 94th Street.
3. Project site showing sewer line adjacent to *factory building addition*. View looking north from parking lot.
4. Project site showing sewer line within parking lot and gatehouse at entrance to parking lot. Commercial buildings and used car lot adjacent to project site on south visible in background. Sidewalk along 94th Street is visible on left. View looking south from parking lot.
5. Project site showing sloped bank leading to Long Island Railroad tracks on north side of factory building. View looking west from 94th Street overpass.
6. Project site showing commercial buildings bordering property on the south in background. View looking west from entrance to parking lot on 94th Street.

I. INTRODUCTION

The New York City School Construction Authority (SCA) has proposed construction of a new high school facility, at 45-10 94th Street in the Elmhurst neighborhood of Queens, New York (Figure 1). The site is located on Block 1600, Lot 61 (Figure 2). The property, an irregular shaped parcel, is bounded by 94th Street on the east, the Long Island Railroad (LIRR) tracks on the north, and private property on the south and west, which fronts Corona Avenue and 91st Place, respectively. The site presently contains a factory building now known as the Art and Leather Factory, but which was built as the E.R. Durkee & Co. Factory and was later known as the Glidden Company Factory. The four-story concrete factory building, thought to be associated with Detroit designer Albert Kahn or the design firm of Lockwood Greene, has been determined eligible for the National and State Registers of Historic Places by the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) (Bartos 2005).

Historical Perspectives, Inc. (HPI) has undertaken a Phase IA Archaeological Assessment of the SCA New High School Facility/Art and Leather Factory Building project site in order to: 1) identify any potential archaeological resources that might have been present on the site, and 2) examine the construction history of the study site in order to estimate the probability that any such potential resources might have survived and remain on the site undisturbed. Since the proposed construction location on this property has not yet been finalized, the entire project site is considered the Area of Potential Effect (APE) (Figure 2).

This Phase IA Archaeological Assessment was prepared to satisfy the requirements of New York State's environmental review process and Section 106 of the National Historic Preservation Act, and complies with the standards of the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) (New York Archaeological Council 1994; NYSOPRHP 2005). The HPI project team consisted of Julie Abell Horn, M.A., R.P.A., who conducted research and wrote the report; Katrina Raben, who assisted with the research; Luc Litwinionek, M.S., R.P.A., who prepared the graphics; and Cece Saunders, M.A., R.P.A. who managed the project and provided editorial and interpretive assistance.

II. METHODOLOGY

The present study entailed review of various resources.

- Historic maps were reviewed at the Map Division of the New York Public Library and using various online websites. These maps provided an overview of the topography and a chronology of land usage for the study site.
- Primary and secondary sources relating to the project site, its former occupants, and its vicinity were reviewed at the Long Island Division of the Queens Borough Public Library.
- Selected deeds and other records pertaining to the property were reviewed at the Queens Borough City Register's Office.
- Information about the property at the New York City Department of Buildings (DOB) was reviewed. However, despite the DOB's online database that indicated a number of records for the property, the only file that DOB staff could locate was a permit for duct work within the building in 1973.
- Soil borings were provided by the SCA as part of a Phase II environmental study of the property. These borings are discussed below and included in their entirety as Appendix A.
- A site file search was conducted at the NYSOPRHP and the New York City Landmarks Preservation Commission (LPC) sensitivity study for Queens was reviewed (Boesch 1997).
- Last, a site visit was conducted on October 21, 2005, to assess any obvious or unrecorded subsurface disturbance (Photographs 1-6).

III. BACKGROUND RESEARCH

A. CURRENT CONDITIONS

As described in the Introduction, the project site, a generally level property, supports the Art and Leather Factory building, a four-story with basement rectangular shaped concrete building constructed in 1917, with a one and two story with basement rectangular shaped addition on the southern side, built in 1947 (Photograph 1). A brick

smokestack is located at the western end of the factory building. The remainder of the project site is covered with a paved surface parking lot. Particularly along the southern end of the parking lot, it appears that the original landform may have been raised slightly to form the present level surface, as portions of 94th Street are several feet lower in elevation. Sections of the parking lot nearer the factory building contain a concrete surface; while areas further from the building are paved with asphalt (Photograph 2). Two sewer lines are visible running east-west through the property: one line paralleling the addition which appears to correspond to the former location of Lurting/46th Avenue, and one line through the current parking lot (Photographs 3 and 4). A one-story gatehouse sits at the entrance to the parking lot off 94th Street (Photograph 4). On the northern side of the property, a short sloped bank separates the project site from the active Long Island Railroad tracks (Photograph 5). The project site is bounded on the south by one- and two-story commercial properties and a used car lot (Photograph 6).

B. TOPOGRAPHY AND HYDROLOGY

Early maps of the vicinity of the study area record the topography and environment of the area at the beginning of historic development. Topographical maps made in the late nineteenth and early twentieth centuries show that in its natural condition the project site was approximately 50 feet above sea level and was generally level (Bien and Vermeule 1891; Queens Final Maps 1915). According to modern topographical maps, the property is still about 50 feet above mean sea level, suggesting there has been minimal overall change to the site's elevation. The project site is about 2000 feet west and 2500 feet north of former wetlands that bordered Horse Brook (which in turn fed into Flushing Creek) (Bien and Vermeule 1891). Horse Brook was filled in during the twentieth century and is no longer visible within the urban landscape.

C. GEOLOGY

Long Island is the top of a Coastal Plain ridge formation that is covered with glacial drift, in reality an elevated sea bottom demonstrating low topographic relief and extensive marshy tracts. In the last million years, as glaciers advanced and receded three times, the surficial geology of the island, including the project site, was profoundly altered. "The glacier was an effective agent of erosion, altering the landscape wherever it passed. Tons of soil and stone were carried forward, carving and planing the land surface. At the margins of the ice sheet massive accumulations of glacial debris were deposited, forming a series of low hills or terminal moraines" (Eisenberg 1978:19). Circa 18,000 years ago, the last ice sheet reached its southern limit, creating the Harbor Hill moraine that traverses the length of Long Island. The moraine lies several miles south of the project site. North of the moraine, the complex rising and subsidence of the coastal plain, relieved of its glacial burden, and the rising sea level, caused by the volume of melting ice, created the coastline of embayed rivers and estuaries, with extensive marsh tracts, which stabilized approximately 3,000 years ago (Schuberth 1968:195,199).

D. SOILS

No USDA soil survey is available for Queens County. However, as part of the current SCA project a Phase II environmental site investigation was completed which included 12 soil borings on the project site (Shaw Environmental & Infrastructure 2005). These soil borings were submitted to the SCA and copies were provided to HPI. They are included in this report as Appendix A. Of the 12 soil borings, 4 were located on the southern side of the factory building, 2 were located on the western side of the factory building, and the remaining 6 were located on the northern side of the factory building. All of the soil borings were within the paved parking lot areas.

With the exception of one boring located at the western periphery of the property, which was abandoned at 3 feet below grade when the top of an underground basement was encountered, the majority of the remaining soil borings were extended as deep as the water table, which generally was found at 40 feet below grade. However, only 4 of the soil borings (on the north side of the factory building) provided descriptions for the entire soil column; the remaining 7 soil borings presented selected excavation increments and began the recording process at 5 feet below grade. The 4 soil borings that did provide data for the first 5 feet of the soil column indicated an upper layer of silty sand. It is likely that the silty sand stratum was the upper layer of natural soil throughout the site, although since the upper layer of soil was not recorded for the remaining soil borings, this cannot be confirmed. Lower strata recorded on the property generally consisted of sandy soils, often with some silt and gravel or pebbles noted as inclusions. Two of the soil borings, both located in close proximity to the factory building, encountered pockets of brick fill deep within the soil column (one boring found the fill at 25 feet below grade and the other at 37 feet below grade).

This fill may be related to excavation and backfilling activities associated with the initial construction of the building. The fact that the strata above the fill were not also identified as fill suggests that there may have been some isolated tunneling or other intrusive excavations in these areas as the building's basement was constructed.

E. ARCHAEOLOGICAL SITES WITHIN A ONE MILE RADIUS

Research conducted at the NYSOPRHP, the LPC, and the library of HPI revealed no precontact period archaeological sites within the project site. However, two precontact sites have been recorded within one mile of the project site. Boesch (1997) references a site (75A) situated on the north and south banks of Horse Brook, which was excavated by Ralph Solecki in the 1930s, but which has not been relocated since then. Boesch (1997) also references another site (20) originally recorded by Parker (1922) as "traces of occupation" along the west side of Flushing Creek. These sites are summarized in the table, below.

NYSOPRHP Site #	Additional Site #	Distance from APE	Time Period	Site Type
	Boesch 75A	Ca. 0.5 mile south	Unknown	Unknown
	Boesch 20	Ca. 1 mile southeast	Unknown	Traces of Occupation

Based on the proximity of Horse Brook and Flushing Creek, Boesch's sensitivity study for the Borough of Queens (1997), commissioned by the LPC, labels nearly all of the Elmhurst, Corona and Flushing neighborhoods, including the project site, as possessing a high sensitivity for Native American resources. It should be stressed, however, that the identification of such a large urban area as highly sensitive for precontact resources is based primarily on the location of former natural water sources, and does not take into account modern construction and other disturbances to the original landscape. Last, Archaeologist/Historian Robert S. Grumet notes the presence of a Native American trail following the route of Grand Avenue to Roosevelt Avenue, which would have passed very close to the project site, although the map that Grumet provides is at a scale that it is not possible to determine exactly which modern streets correlate to the trail in the project site vicinity. Grumet does not identify any other Native American resources in the project site vicinity (Grumet 1981).

F. HISTORY OF THE PROJECT SITE

The present Elmhurst neighborhood, including the project site, was formerly part of the town of Newtown, whose boundaries once included the entire northwestern quarter of present Queens County, from the East River on the west and north to Flushing River on the east, and the moraine on the south. The village and town boundaries were established in 1652 and named Middleburgh by the Dutch governor, Peter Stuyvesant. Corona Avenue, also known as Union Avenue or Dutch Road, was one of the early colonial roads laid out in Newtown. In about 1663, the Newtown Commons were set aside, which included the project site, and in about 1700 this tract was divided (WPA 1938, Vol. 3:175).

The earliest mention of the project site itself was in relation to the "Ludlow House," a structure that was built by Newtown Village resident Samuel Fish just north of Corona Avenue between the lines of 92nd and 93rd Streets, in about 1780 (WPA 1938, Vol. 3:175). From the 1770s through the 1840s, the property on which the house sat was owned by John R. Ludlow and Gabriel Ludlow (Liber E, 1774:167; Liber 59, 1842:98; Liber 59, 1842:95). This house formerly stood immediately south of the southwestern side of the project site; its yard area would have extended into the parking lot area of the site (see Figure 11 for the house locations). A photograph of the house taken in 1923 (on file at the Queens Borough Central Library's Long Island Division) indicates that it was a two-story frame building with a gabled roof. The eastern end of the house had a brick chimney and a one-story entrance, and presumably was the rear of the structure. In 1929 the house was partially burned, and it was razed in 1930. The house appears to have been rented out for much of its history, and occupancy is not always clear, although for at least a time it was used as a Methodist parsonage (WPA 1938, Vol. 3:175; Federal Census 1850, 1860, 1870, 1880, 1900, 1910).

At least by the 1840s, the project site vicinity had acquired additional houses. One of the earliest available historic maps, the United States Coast Survey from 1844, clearly shows the lines of Corona Avenue and Junction Avenue, which is one block east of the project site (Figure 3). Although the project site itself appears to be undeveloped or

used as farmland, three structures are visible just south of the project site along Corona Avenue. At least two of these buildings, presumably dwellings, were located within the footprint of areas now covered by the adjacent commercial buildings and the used car lot along Corona Avenue. The Sidney map from 1849 mirrors the information shown on the 1844 map, and identifies several of the owners or occupants of the houses just south of the project site (Figure 4). The eastern building is attributed to "C. Card" and the western building to "J.R. Ludlow."

C. Card is an abbreviation for Clark Card, a former Westchester County resident who in 1844 purchased 20 acres of land north of Corona Avenue (then known as Dutch Lane) formerly owned by Benjamin Betts and most recently owned by Daniel Morell (Liber 61, 1844:342). Card built (or perhaps acquired with the property) a house east of the Ludlow House, which appears on the 1840s maps. In 1847 he married his wife Elizabeth, and they and their extended family (including William Card and Isaac Card) lived on and farmed the property (including the project site) for the remainder of the nineteenth century and into the first decades of the twentieth century (Federal Census 1850, 1860, 1870, 1880, 1900, 1910).

The 1852 Conner map, which does not note owners of the houses depicted, does however indicate that the western portion of the project site (part of a larger 70 acre plot) was owned at that time by Samuel Lord (Figure 5). Lord had acquired several properties in the area during the 1840s, including title to the Ludlow House and its tract from the Ludlows in 1842 (Liber 59, 1842:98). He continued to own the property for much of the nineteenth century, and for a time leased the vacant part of the land to the Card family for farming (Liber 508, 1877:235).

The project site vicinity continued to grow during the 1850s. Adjacent Corona was developed in 1854 by a group of speculators from New York City. Additional streets were laid out in relation to the Flushing and North Side Railroad route (now the Long Island Rail Road, just north of the project site), which began service in the same year (Jackson 1995:1142; Munsell 1882:359,397). By issuance of the 1859 Walling map, which also indicated one of the occupants was "C. Card," the railroad tracks that mark the northern boundary of the project site were now shown to be in place.

The 1873 Beers map of Newtown illustrates the Ludlow House (albeit unmarked) and two structures west of Division Street (a road formerly running east of and parallel to 94th Street) (Figure 6). An enlargement of West Flushing shows that the two houses west of Division Street were both attributed to "W[illiam]. Card." The western of the two Card structures fell within the footprint of the used car lot just south of the project site. The 1891 Wolverton map again shows the two houses of the Card family on a 20-acre property straddling both sides of the railroad tracks and labeled "W[illiam]. Eliz[abeth]. Card." The Ludlow House to the west of the Card structures shown on earlier maps is again depicted in 1891, although no owner or occupant is given. The 1902 Sanborn map confirms that the two structures just south of the project site were indeed dwellings. The one formerly located within the present used car lot was two stories high, and the one formerly located within the property now occupied by 92-09 through 92-15 Corona Avenue addresses was two and a half stories high. The present line of 94th Street was shown as a projected street called "Card Avenue." However, according to the Newtown Register, this was a public right-of-way that had been in existence since 1852 (*Newtown Register* Jan. 15, 1914).

The 1903 Hyde map, made the next year, still attributed the eastern of the two houses, which now sat on a two-acre parcel, to "W[illiam]. Card" (Figure 7). The western house (the Ludlow House) sat on a 2.005-acre parcel, but was not labeled as to ownership. The middle section of the project site, including the area extending to Corona Avenue, was a 1.368-acre parcel attributed to "Meyer." The 1915 Sanborn map again showed the two houses just south of the project site, but now indicated the location of "Card Place" and Lurting Avenue (which was an extension of the line of Tulip Street to the east) (Figure 8). According to the Newtown Register, however, Lurting Avenue was never officially opened (*Newtown Register* January 18, 1917).

Until the 1910s, the project site itself was used only as farmland and as rear or side yard areas for the houses along Corona Avenue. For a time, it was thought that the railroad might purchase the property to build a freight yard, but this never occurred. In 1917, the project site irrevocably changed when the food manufacturers E.R. Durkee & Co. acquired the property and made plans to construct their factory building on it. The *Newtown Register* published a description of the proposed building:

The Durkee Co., it is reported, will erect a model factory upon this land, similar to that of the Doubleday-Page Publishing Co. at Garden City. It is to be of artistic construction and will be surrounded by shade

trees and a park. It will prove a decided addition to the beauties of Elmhurst and will be welcomed here. The factory will be a model one in every respect and will only be recognized as a factory by those who know what is there. Its general appearance will be that of an academy. The buildings will contain rest rooms, playgrounds, tennis courts, and a swimming pool for the employees. About 300 people will be employed. There was no opposition to this new factory on the part of the large Elmhurst delegation present when it was announced at the meeting of the Board of Estimate on Friday (*Newtown Register* January 18, 1917).

It is unclear whether all of the proposed amenities were included as part of the finished factory building, although the grounds were extensively landscaped with trees and shrubs brought from the Durkee estate on Long Island (*Newtown Register* January 18, 1917). Photographs of the original factory building on file at the Queens Borough Central Library's Long Island Division illustrate that the area on the south side of the property now occupied by the parking was originally landscaped with grasses and small trees, as was the area immediately east of 94th Street that is now occupied by residences.

As described in the Introduction, the original four-story building, which constitutes the northern portion of the current building on the property, is thought to be associated with Detroit designer Albert Kahn or the design firm of Lockwood Greene. The 1931 Sanborn map shows the footprint of the original factory building, as well as a number of ancillary tanks, a machine shop, and a refinery west of the factory (Figure 9). A portion of the former refinery building, which is no longer standing, falls within the current project site, although the majority of the above-ground tanks and the machine shop are on land west of and no longer part of the project site. The 1931 Sanborn map also shows that Card Place had now been renamed 94th Street, as well as the location of unopened 46th Avenue (Lurting Avenue) which ran south of the factory building in an area now partially covered by the later addition and the current parking lot. Two short railroad spurs were located north of the factory and connected to the Long Island Railroad tracks bordering the project site. The nineteenth-century houses along Corona Avenue were now gone.

Two years before the publication of the 1931 Sanborn map, the Glidden Company, well-known manufacturers of paint and varnish, branched out and began acquiring a number of food companies, including E.R. Durkee & Co. After that, the newly formed Glidden food division was marketed under the Durkee name (Shurtleff and Aoyagi 2004). The 1950 Sanborn map noted that the original Durkee factory was now called the Glidden Company Durkee Plant (Figure 10). The 1947 addition to the building, along the southern side of the structure, is clearly shown on this map. In order to build the addition, however, it appears that 46th Avenue had to be closed. The roadway is no longer shown on the 1950 map. A number of the commercial buildings located along Corona Avenue, just south of the project site, are also shown by the 1950 map edition. Updates to the Sanborn maps, made in 1968 and 1972, show no appreciable change to the factory building footprint, although by this time the Glidden Company no longer occupied the building and the former factory was labeled as "Lofts." Additionally, by this time part of the property had been sold so that now most of the area formerly occupied by the above-ground tanks and the machine shop were no longer part of the project site. In 1986, the Art and Leather Manufacturing Company began leasing the factory building, and continues to be its occupant.

IV. CONCLUSIONS

A. PRECONTACT SENSITIVITY

From what is known of precontact period settlement patterns in Queens, most habitation and processing sites are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water (Boesch 1997). Although Boesch's sensitivity model for Queens (1997) identifies the project site and vicinity as sensitive for precontact resources due to the former locations of Horse Brook and Flushing Creek in the general area (in fact, he identifies a very large amount of land including virtually all of the Elmhurst, Corona and Flushing neighborhoods), it should be stressed that the project site is approximately 2000 feet from these natural water sources, and therefore was probably not a suitable area for precontact occupation. Although there was a Native American trail in the vicinity of the project site, its exact location (and distance from the project site) cannot be pinpointed. For these reasons, HPI concludes that the project site does not possess precontact archaeological sensitivity.

B. HISTORIC PERIOD SENSITIVITY

As described above, although the project site was undeveloped prior to construction of the 1917 factory building that still remains on the property, the Ludlow House was built in 1780 and the Card house was constructed by at least 1844; both of which would have utilized the project site as rear or side yard areas (see Figure 11 for the house locations). The Ludlow House appears to have been rented to a variety of tenants over its 150-year history, whereas the Card house was owned and/or occupied by members of the Card family for over 50 years. For these reasons, HPI concludes that the project site is sensitive for eighteenth- and nineteenth-century historic period archaeological resources. HPI does not believe that any possible remaining subsurface features associated with the NRHP-eligible former Durkee factory building would have any additional research value beyond what is depicted on existing maps and detailed in other documents. The majority of the former structures (such as the tanks and other ancillary equipment) associated with the factory were located in an area that is not part of the present project site.

Privies, wells, and cisterns, which are often filled with contemporary refuse related to the dwellings and their occupants, can provide important stratified cultural deposits for the archaeologist and frequently provide the best remains recovered on sites. Since the Elmhurst/Corona neighborhood had not been provided with piped water or sewers at the time that the houses along Corona Avenue were initially constructed, occupants of the households would have relied on these shaft features exclusively for a number of decades (the 1902 Sanborn map does not yet indicate water pipes under Corona Avenue, suggesting that the houses may never have been hooked up to city water before their demolition). Frequently, wells or cisterns would be located in reasonably close proximity to a house, for use in washing or cooking (additional wells and/or cisterns might be located further away from a house for other uses, such as watering horses). Privies often were situated further away from the house, for sanitary purposes. Portions of these shaft features are often encountered on residential lots because their deeper and therefore earlier layers remain undisturbed by subsequent construction, and in fact, construction often preserves the lower sections of the features by sealing them beneath structures and fill layers. Wells would have been excavated as far as the water table, and cisterns and privies often were dug up to 10-15 feet below grade. Other commonly occurring but more fragile backyard remains include fence lines, paths, traces of landscaping and sheet midden scatter.

The level of disturbance to the project site, which is not well understood, would not necessarily preclude the recovery of truncated shaft features within the former yards areas of the property. The soil borings indicated that the current water table is about 40 below grade. The modern water table and the historic water table are not necessarily the same. Usually the historic water table was higher, and over the years it sank lower, due to changes brought about by later earthmoving activities and constant use of private wells. The water table also can fluctuate due to natural conditions such as precipitation and time of year. Nonetheless, it seems reasonable to assume that because the historic water table generally was higher than the modern water table, any wells on the property would not have been excavated much beyond this 40 foot depth, and more likely were shallower in extent.

C. DISTURBANCE RECORD

All portions of the project site within the footprint of the factory building should be considered to be extensively disturbed from its construction. Because the factory building has a deep basement, it can also be assumed that areas ca. 15-20 feet out from the walls of the building have been disturbed from builder's trenches and other construction activity associated with the structure. Within the parking lot area, there appears to be localized disturbance from installation of sewer and drainage and possibly other utility lines. Additionally, it is possible that portions of the parking lot, particularly along the southern periphery, have been raised from the original elevation, since 94th Street is several feet lower in elevation than the now level parking lot. While filling does not necessarily constitute a disturbance, if there was grading completed in tandem with the filling, then original soils could have been disturbed. As described in the Soils section, the soil boring data for the southern portion of the parking lot does not include information for the upper five feet of the soil column, so the degree of disturbance to the ground immediately under the parking surface cannot be confirmed. However, it should be assumed that areas of the parking lot immediately adjacent to the commercial buildings along Corona Avenue will be disturbed to some degree from builder's trenches associated with their construction.

V. RECOMMENDATIONS

A. PRECONTACT RESOURCES

As described above, HPI assigned the project site a low precontact sensitivity. As such, HPI recommends no additional archaeological investigations are necessary for precontact resources.

B. HISTORIC PERIOD RESOURCES

Historic period archaeological resources such as the remains of wells, privies, cesspools, or cisterns could exist under the paved parking lot on the southern portion of the project site, in proximity to the former Ludlow House and Card family house. Yard features and/or activity areas associated with these former buildings could also exist under the parking lot if they have not been affected by later disturbance. If construction plans for the proposed SCA new high school facility (which have yet to be finalized) will require impacts within the parking lot area in excess of 15-20 feet from the edge of any existing building, then HPI recommends that Phase IB archaeological testing be conducted in those areas of the parking lot in proximity to the former Ludlow House and/or Card family house. Figure 11 illustrates the locations of the former Ludlow House and Card family houses and standing structures on the project site, and indicates the approximate locations of proposed Phase IB excavation trenches. Precise locations of the backhoe trenches would be determined based on field conditions. All Phase IB archaeological testing should be conducted according to applicable archaeological standards (New York Archaeological Council 1994; NYSOPRHP 2005). Professional archaeologists, with an understanding of and experience in urban archaeological excavation techniques, would be required to be part of the archaeological team.

Finally, it should be noted that if final SCA construction plans indicate that there will be no subsurface impacts to the parking lot area of the project site identified as potentially sensitive, then HPI recommends that no additional archaeological investigations would be necessary for historic period resources.

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- 1900 Elmhurst, Borough of Queens.

1910 Borough of Queens.

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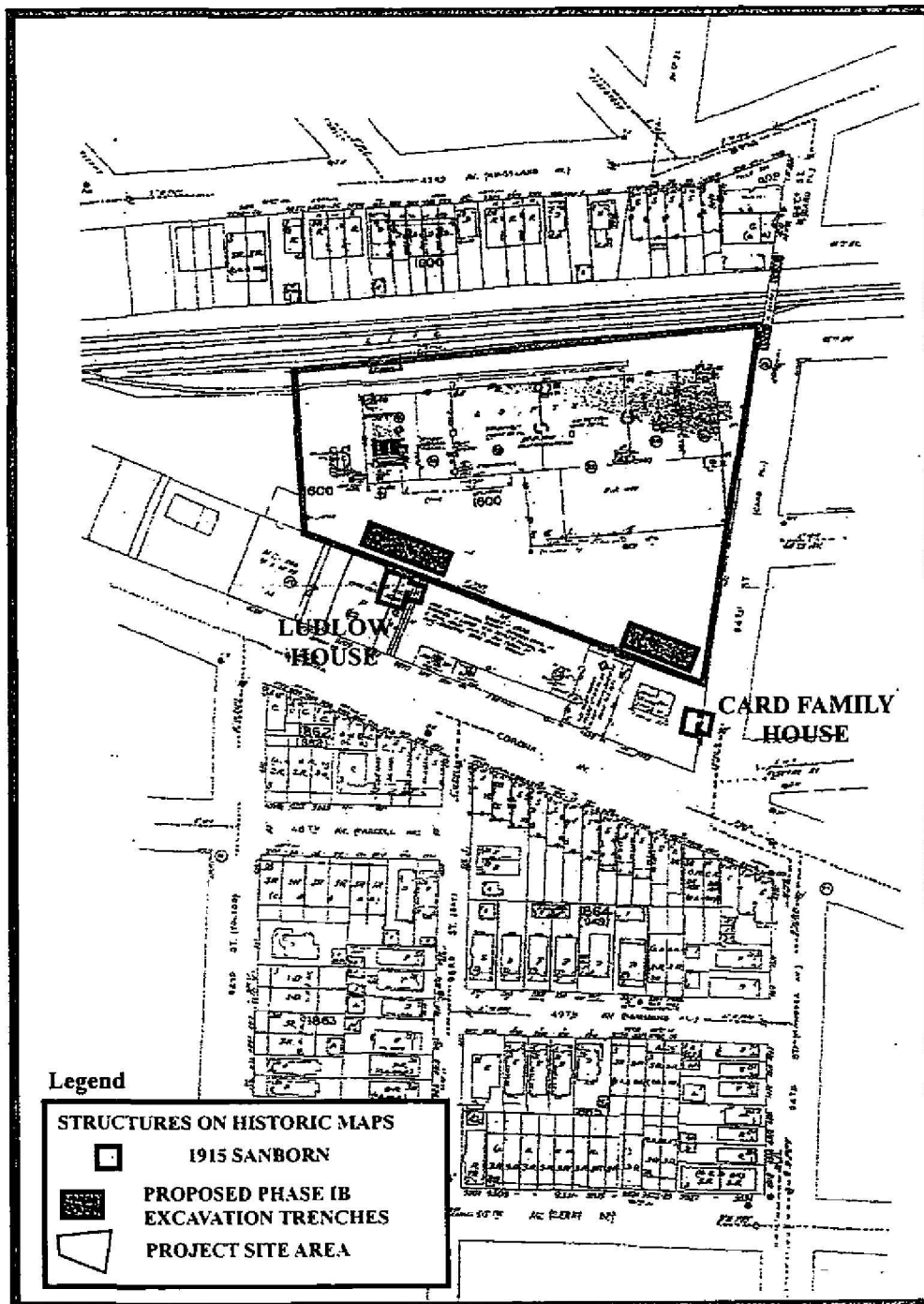
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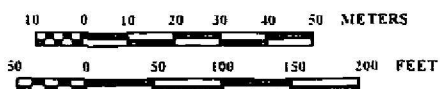
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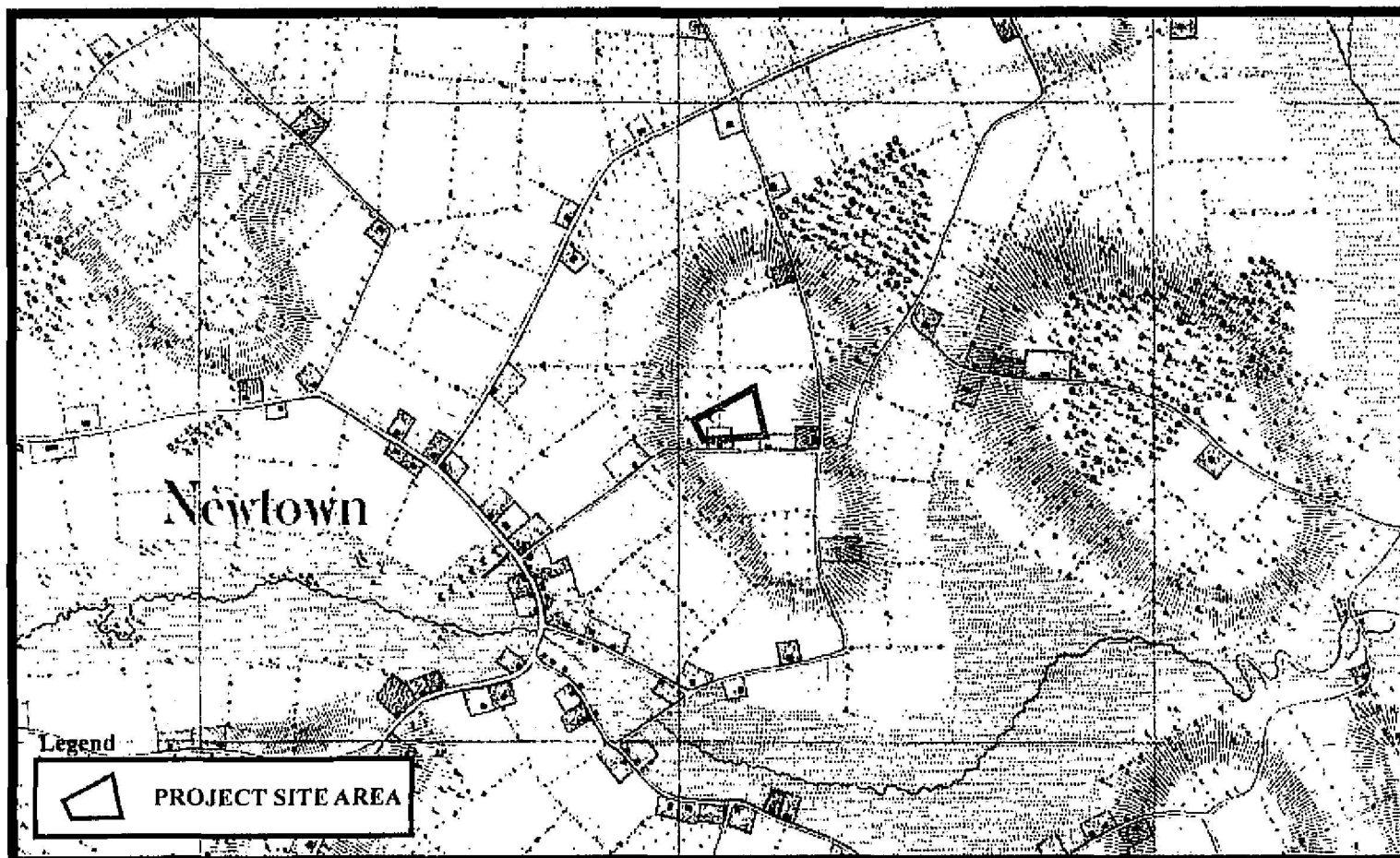


SOURCE: SANBORN INSURANCE MAP

PHASE IA ARCHAEOLOGICAL ASSESSMENT
SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING
BLOCK 1600, LOT 61, 45-10 94th STREET
ELMHURST, QUEENS COUNTY, NEW YORK

FIGURE 11. COMPOSITE MAP DOCUMENTED STRUCTURE AND STANDING STRUCTURES MAP WITH LOCATION OF PROPOSED PHASE IB EXCAVATION TRENCHES.





SOURCE: UNITED STATES COAST SURVEY 1844; *MAP OF NEW-YORK BAY AND HARBOR AND THE ENVIRONS*

PHASE IA ARCHAEOLOGICAL ASSESSMENT

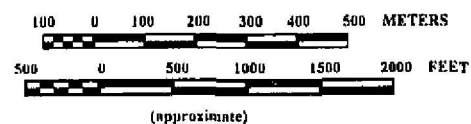
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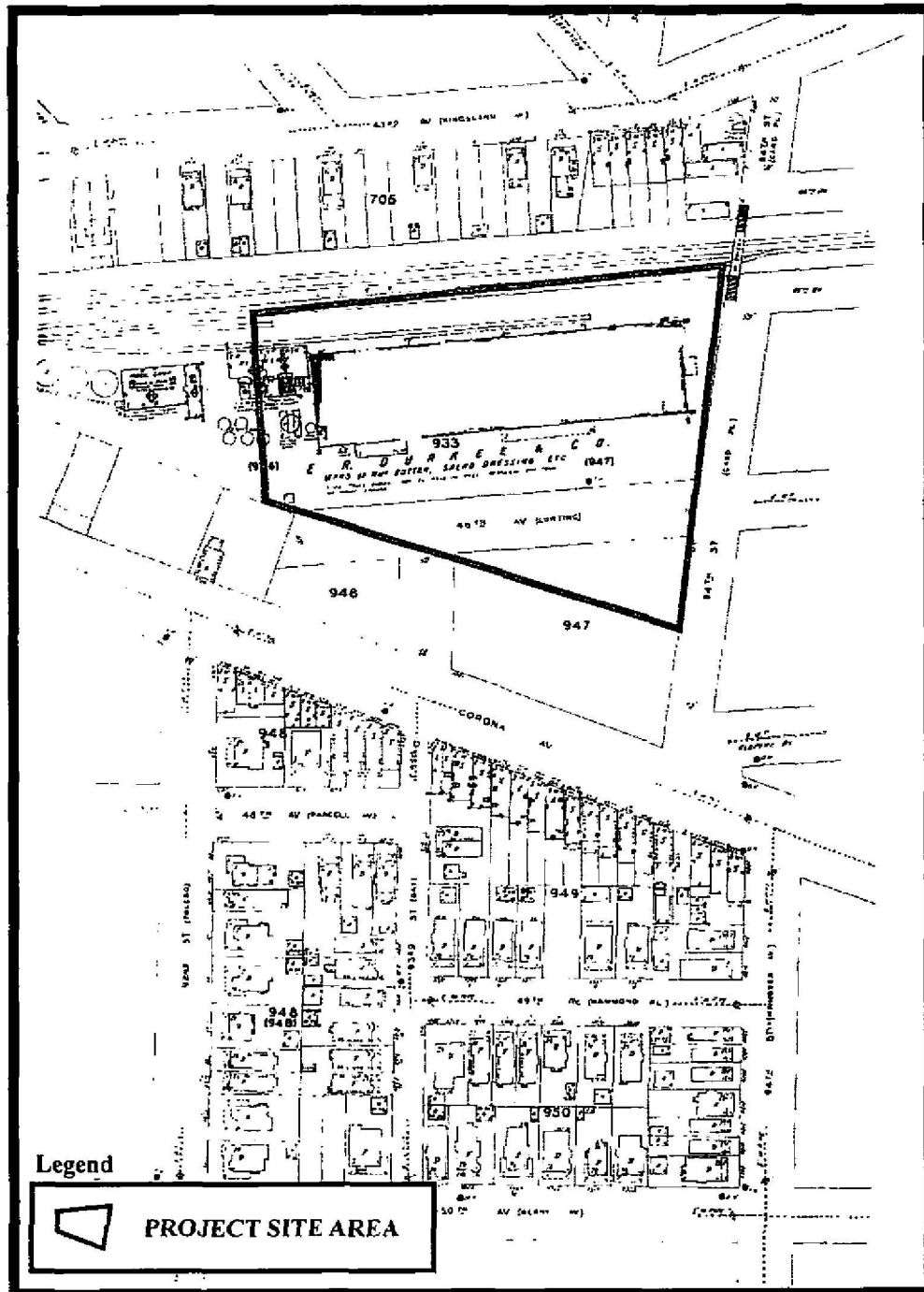
BLOCK 1600, LOT 61, 45-10 94th STREET

ELMHURST, QUEENS COUNTY, NEW YORK



FIGURE 3. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING PROJECT SITE ON 1844 UNITED STATES COAST SURVEY MAP.





SOURCE: SANBORN 1931; *INSURANCE MAPS OF THE BOROUGH OF QUEENS*

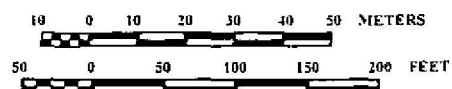
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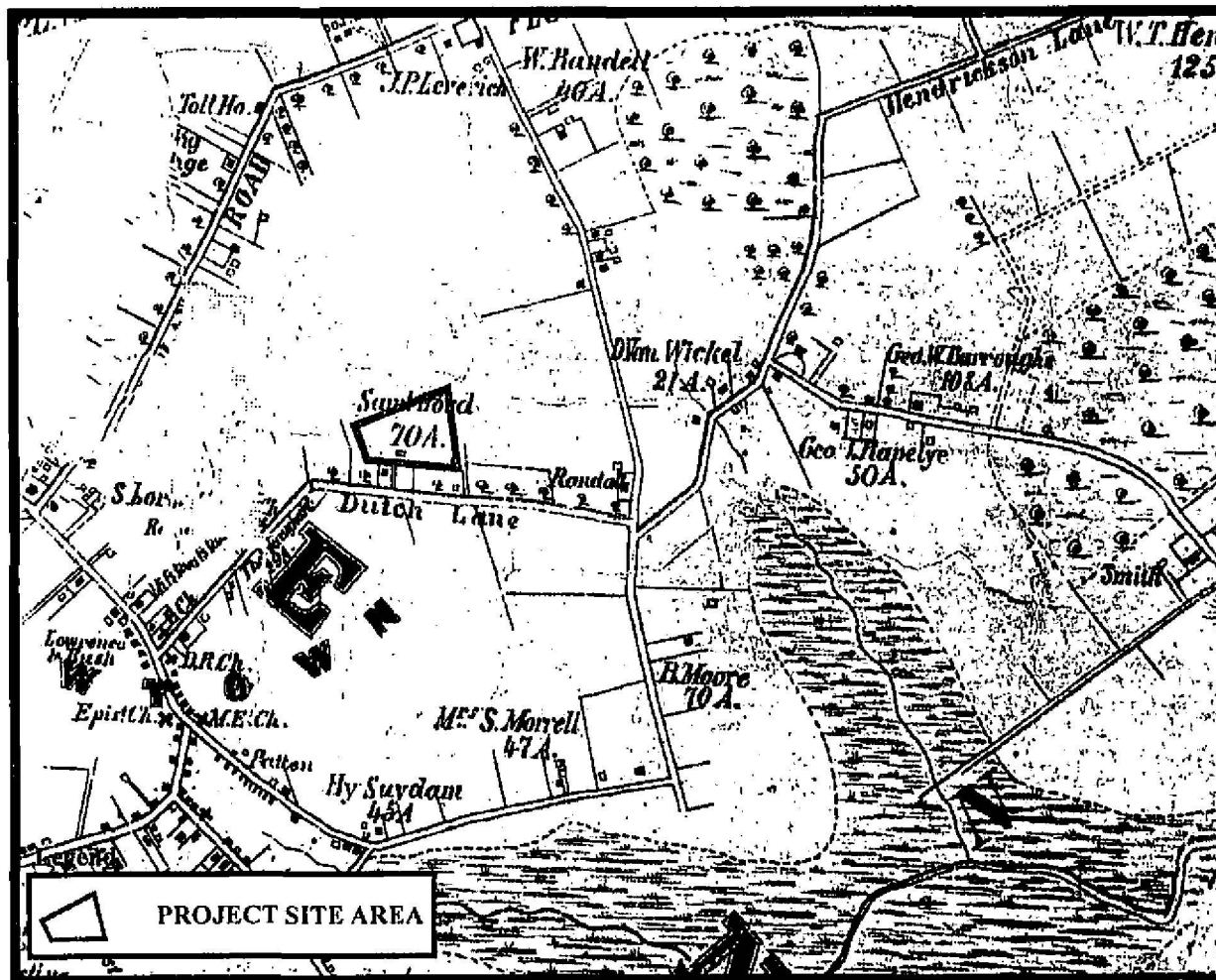
SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY
BUILDING

BLOCK 1600, LOT 61, 45-10 94th STREET

ELMHURST, QUEENS COUNTY, NEW YORK

FIGURE 9. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY
BUILDING PROJECT SITE ON 1931 SANBORN MAP.

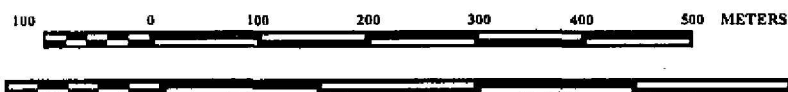


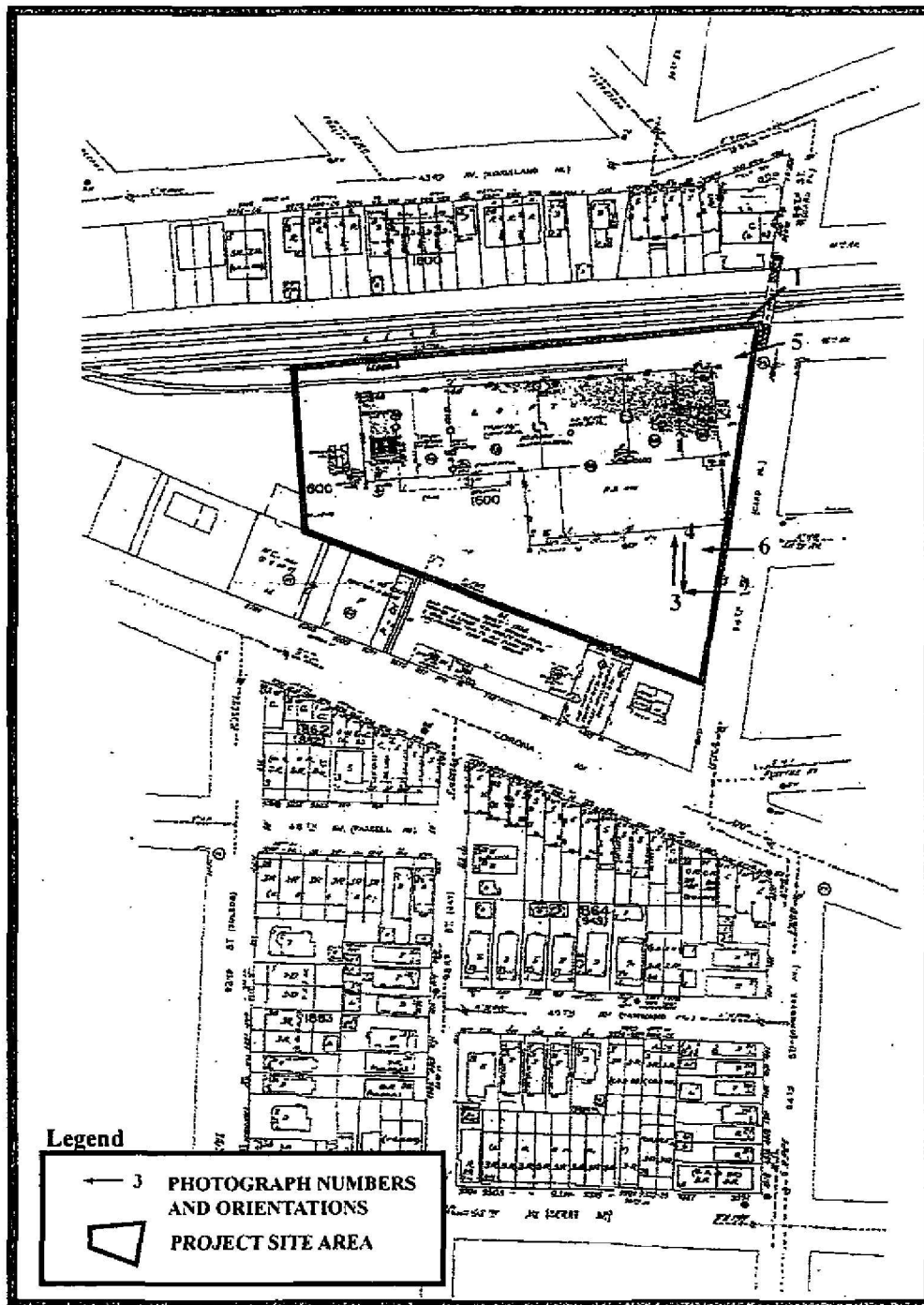


SOURCE: CONNER 1852; MAP OF KINGS AND PART OF QUEENS COUNTIES, LONG ISLAND, N.Y.

PHASE IA ARCHAEOLOGICAL ASSESSMENT
 SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING
 BLOCK 1600, LOT 61, 45-10 94 STREET
 ELMHURST, QUEENS COUNTY, NEW YORK

FIGURE 5. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING
 PROJECT SITE ON 1852 CONNER MAP.



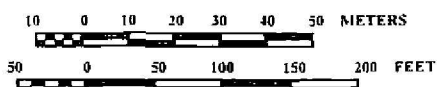


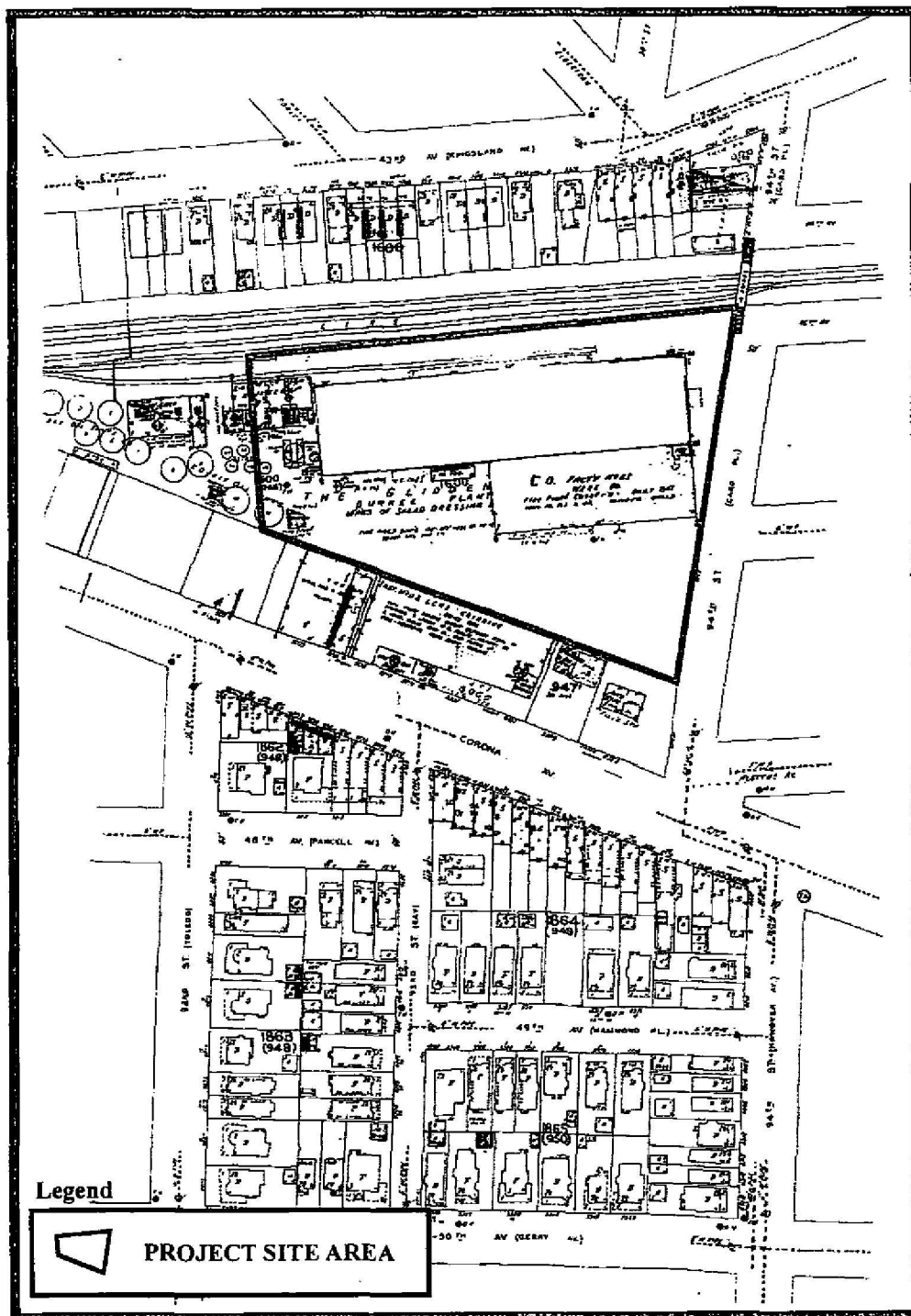
SOURCE: SANBORN INSURANCE MAP

PHASE IA ARCHAEOLOGICAL ASSESSMENT
SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY
BUILDING
BLOCK 1600, LOT 61, 45-10 94th STREET
ELMHURST, QUEENS COUNTY, NEW YORK



FIGURE 2. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING PROJECT SITE AND PHOTOGRAPH LOCATIONS ON MODERN SANBORN MAP.





SOURCE: SANBORN 1950; INSURANCE MAPS OF THE BOROUGH OF QUEENS

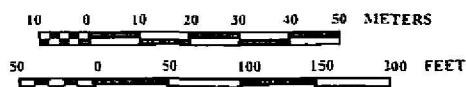
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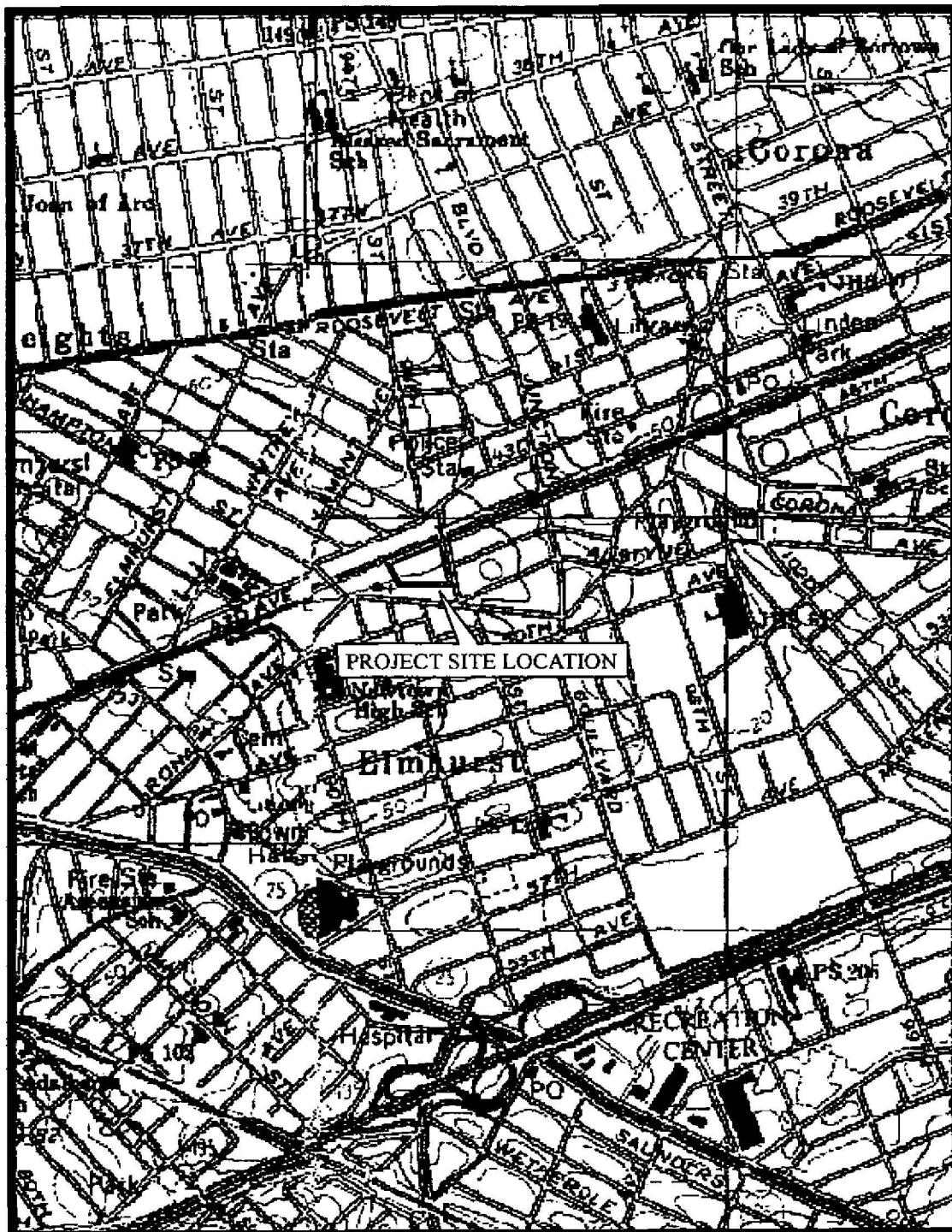
SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING

BLOCK 1600, LOT 61, 45-10 94th STREET

ELMHURST, QUEENS COUNTY, NEW YORK

FIGURE 10. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING PROJECT SITE ON 1950 SANBORN MAP.

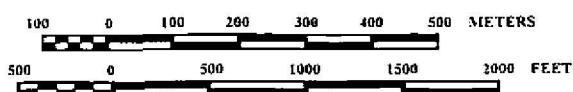


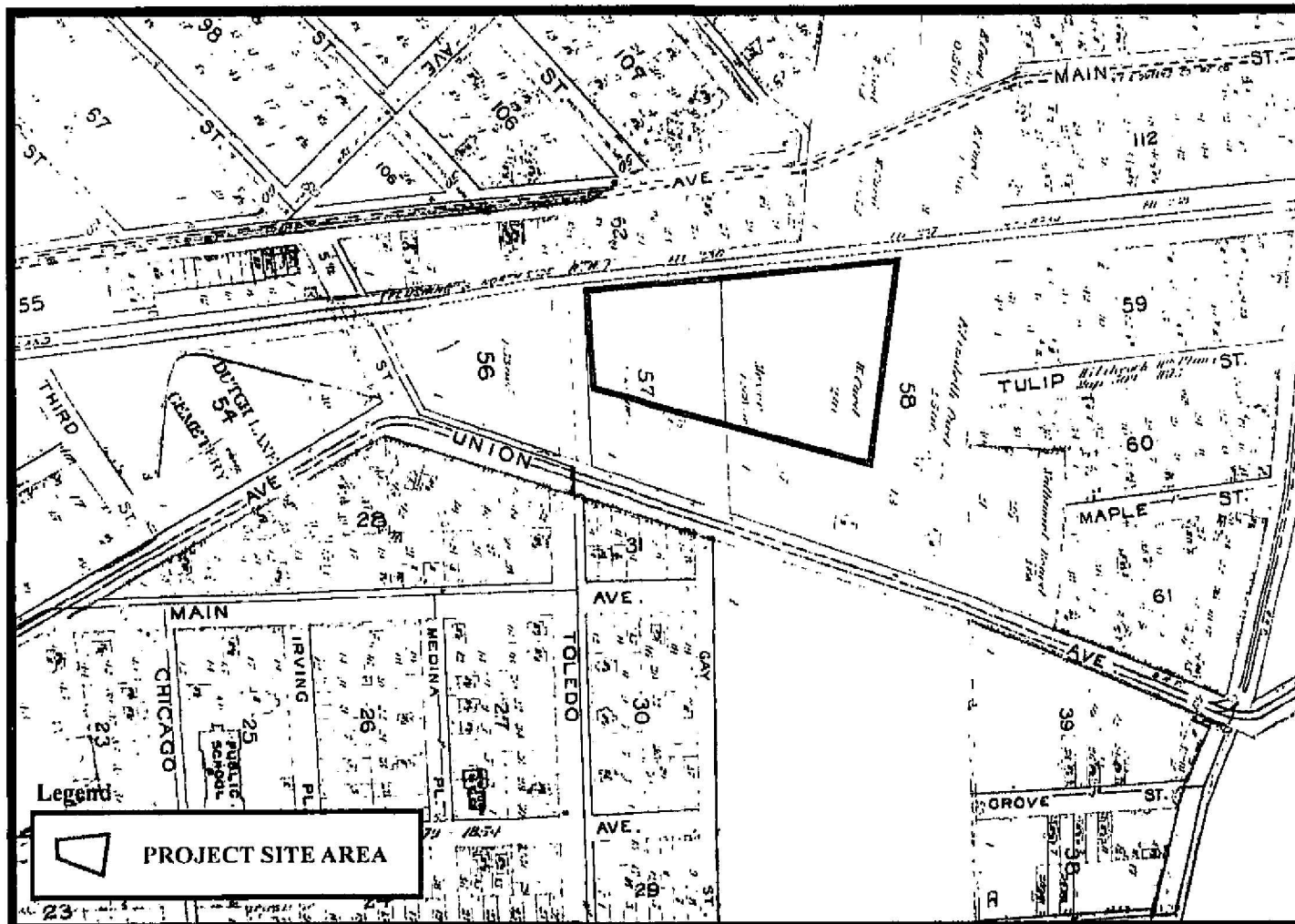


SOURCE: USGS TOPOGRAPHIC QUADRANGLES, 7.5' SERIES, JAMAICA, NY 1979; BROOKLYN, NY 1995; FLUSHING, NY 1999; CENTRAL PARK, NY-NJ 1999

**PHASE IA ARCHAEOLOGICAL ASSESSMENT
SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING
BLOCK 1600, LOT 61, 45-10 94th STREET
ELMHURST, QUEENS COUNTY, NEW YORK**

**FIGURE 1. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY
BUILDING PROJECT SITE ON USGS MAP.**



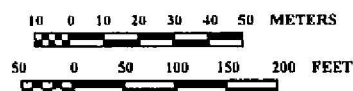


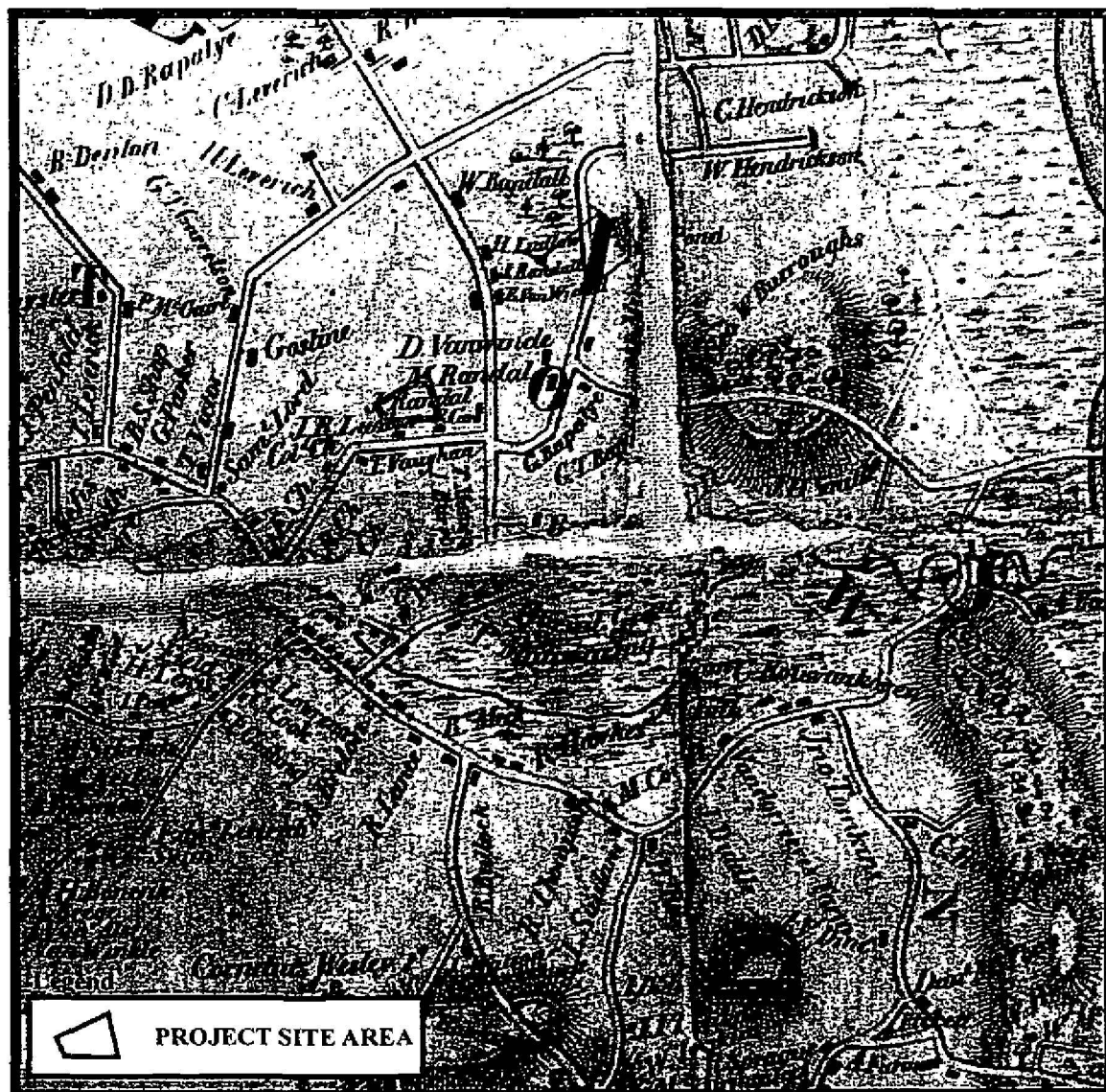
SOURCE: HYDE 1903; ATLAS OF THE BOROUGH OF QUEENS

PHASE IA ARCHAEOLOGICAL ASSESSMENT
 SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING
 BLOCK 1600, LOT 61, 45-10 94th STREET
 ELMHURST, QUEENS COUNTY, NEW YORK



FIGURE 7. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING ON 1903 HYDE MAP.





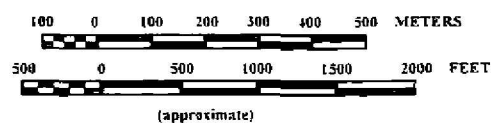
SOURCE: SIDNEY 1849; *SIDNEY'S MAP OF TWELVE MILES AROUND NEW-YORK*

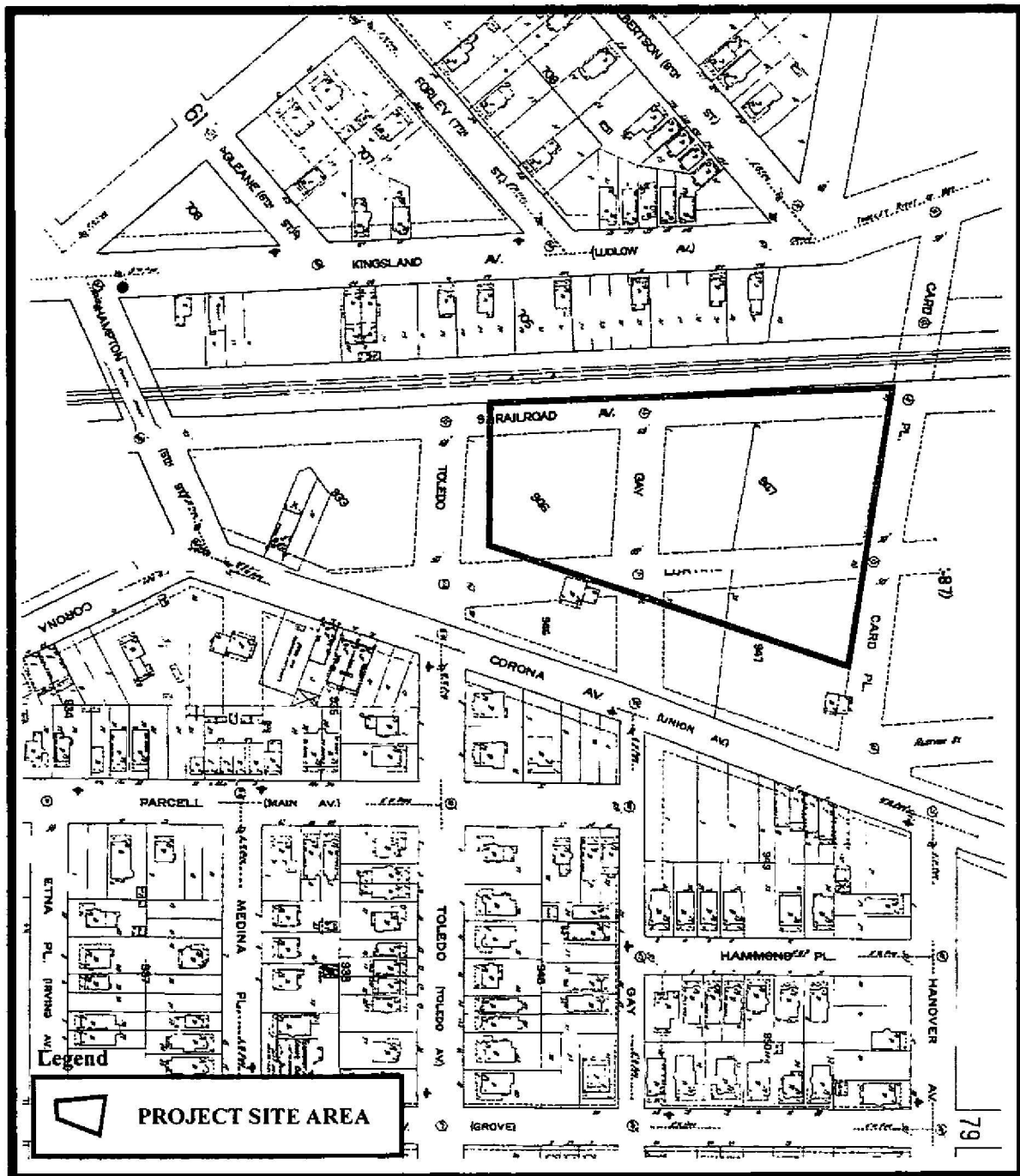
PHASE IA ARCHAEOLOGICAL ASSESSMENT

**SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING
BLOCK 1600, LOT 61, 45-10 94th STREET
ELMHURST, QUEENS COUNTY, NEW YORK**



FIGURE 4. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING PROJECT SITE ON 1849 SIDNEY MAP.

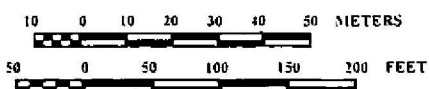


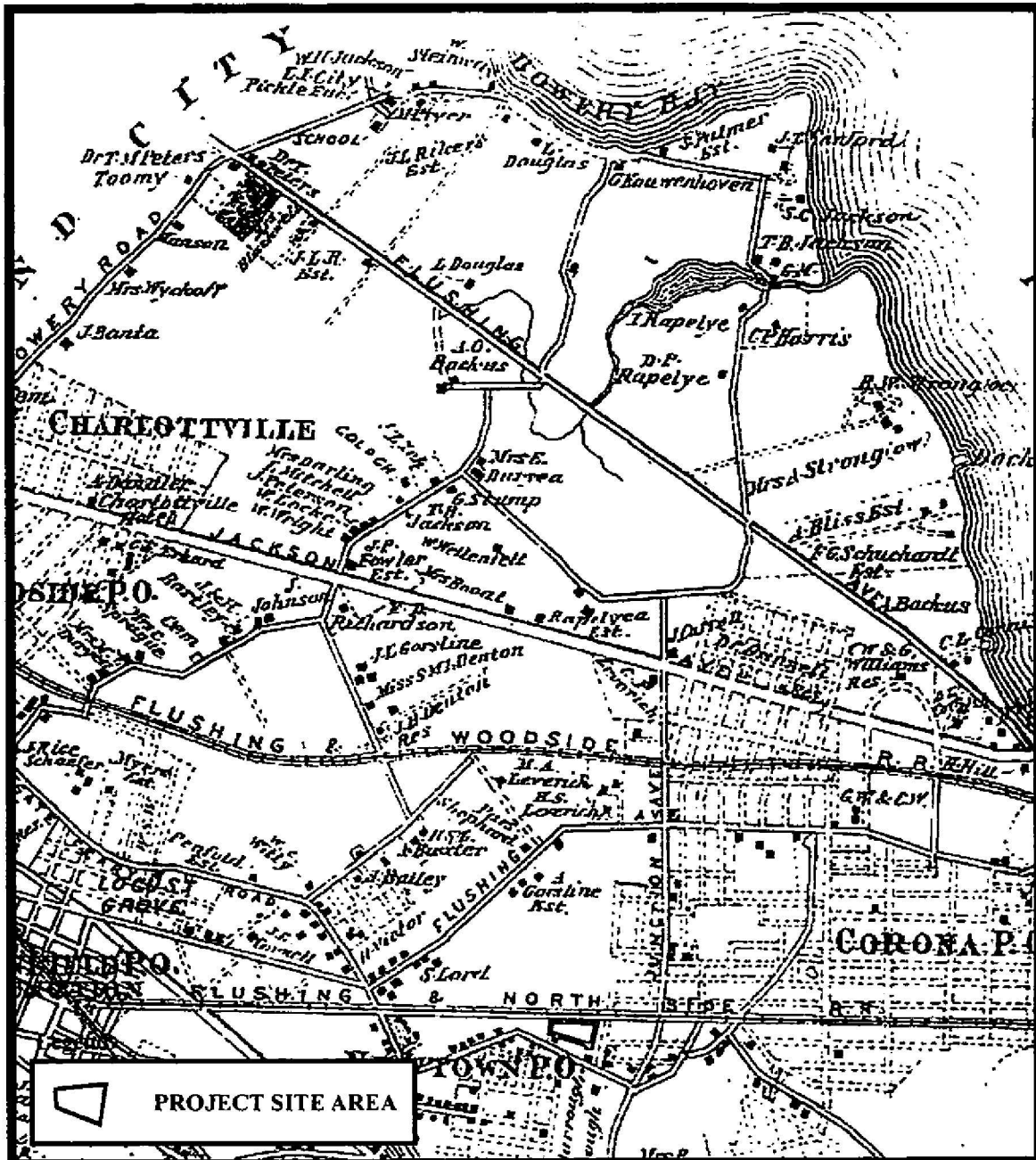


SOURCE: SANBORN 1915; INSURANCE MAPS OF THE BOROUGH OF QUEENS

**PHASE IA ARCHAEOLOGICAL ASSESSMENT
SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING
BLOCK 1600, LOT 61, 45-10 94th STREET
ELMHURST, QUEENS COUNTY, NEW YORK**

**FIGURE 8. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY
BUILDING PROJECT SITE ON 1915 SANBORN MAP.**

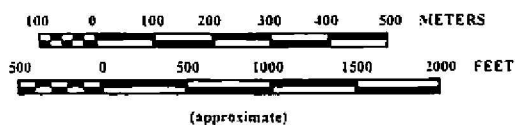




SOURCE: BEERS 1873; ATLAS OF LONG ISLAND, NEW YORK

**PHASE IA ARCHAEOLOGICAL ASSESSMENT
SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY BUILDING
BLOCK 1600, LOT 61, 45-10 94th STREET
ELMHURST, QUEENS COUNTY, NEW YORK**

**FIGURE 6. SCA NEW HIGH SCHOOL FACILITY/ART LEATHER FACTORY
BUILDING PROJECT SITE ON 1873 BEERS MAP.**

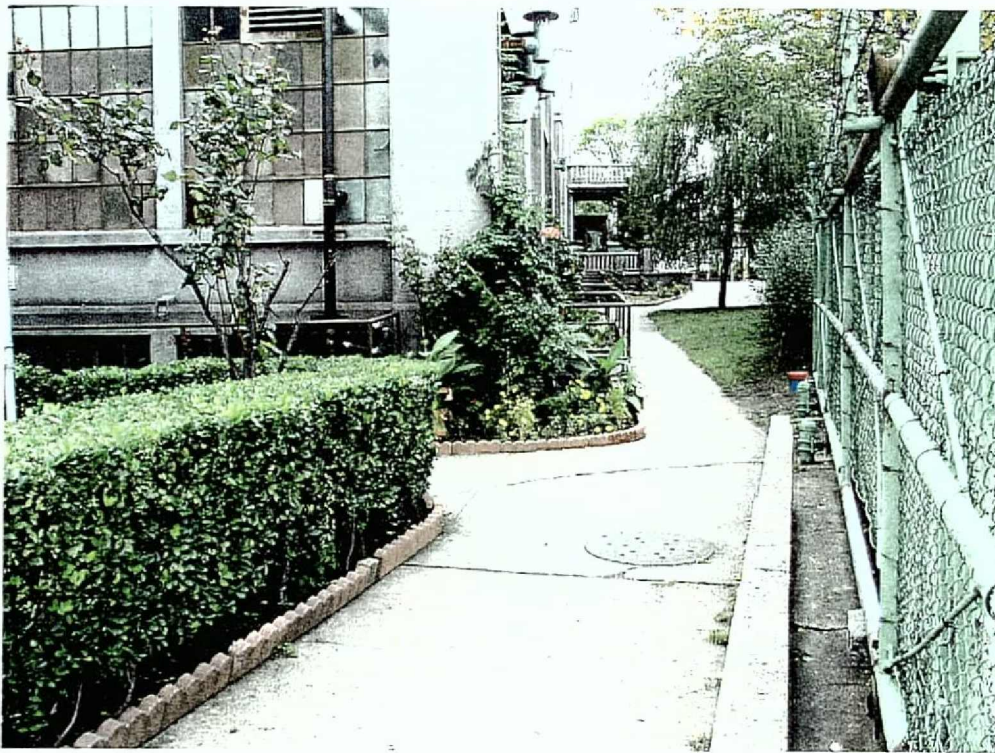




Photograph 1: Project site showing northern façade of Art Leather Factory building with Long Island Railroad tracks in foreground. View looking south from 94th Street overpass.



Photograph 2: Project site showing paved parking lot south of factory building. Note asphalt paving in foreground, concrete paving in background. View looking west from 94th Street.



Photograph 3: Project site showing sewer line adjacent to factory building addition. View looking north from parking lot.



Photograph 4: Project site showing sewer line within parking lot and gatehouse at entrance to parking lot. Commercial buildings and used car lot adjacent to project site on south visible in background. Sidewalk along 94th Street is visible on left. View looking south from parking lot.

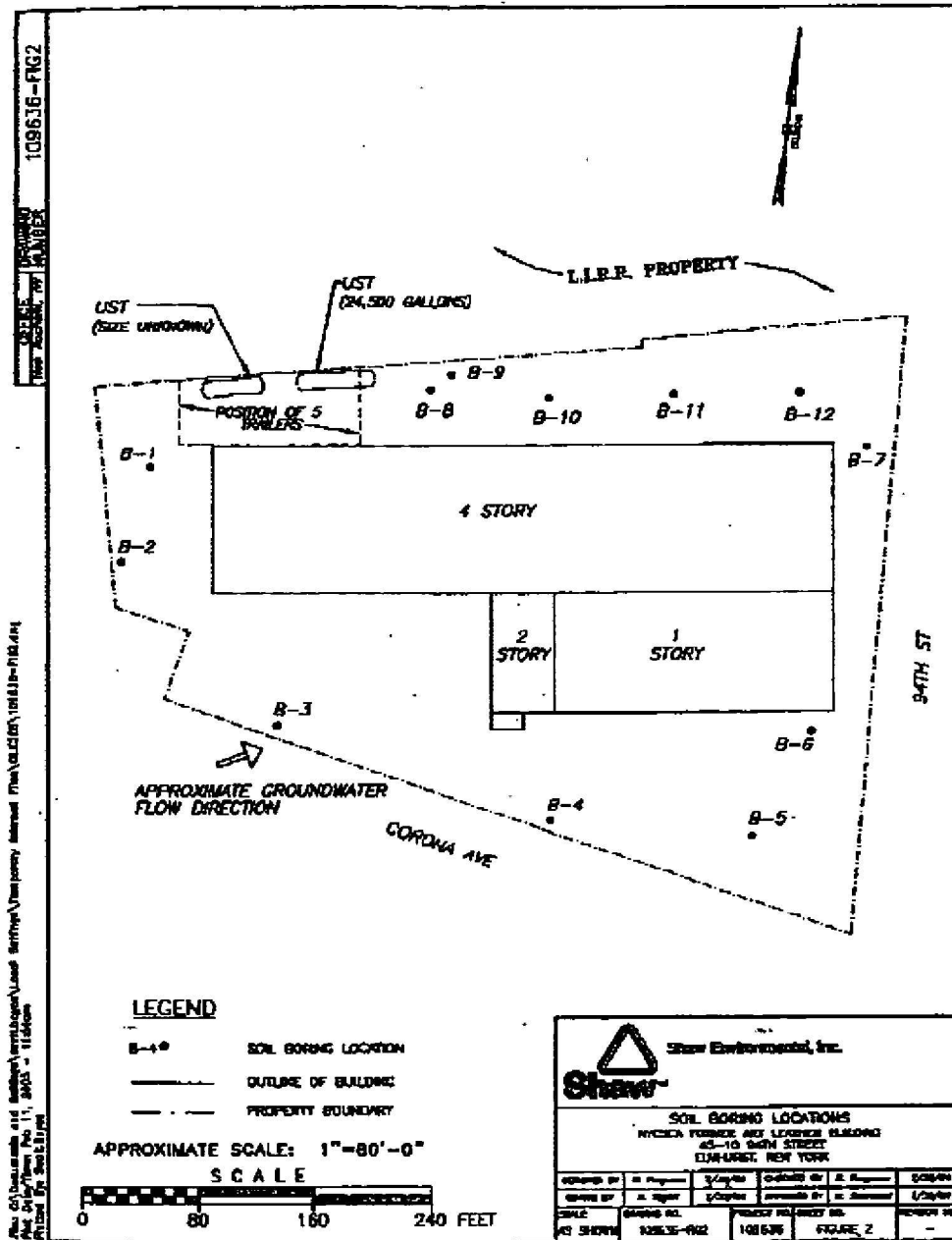


Photograph 5: Project site showing sloped bank leading to Long Island Railroad tracks on north side of factory building. View looking west from 94th Street overpass.



Photograph 6: Project site showing commercial buildings bordering property on the south in background. View looking west from entrance to parking lot on 94th Street.

APPENDIX A: SOIL BORING DATA



ASME **AMERICAN SOCIETY OF MECHANICAL ENGINEERS**
 345 E. 57th St., New York, N.Y. 10022
 212/512-2000

Boring No. 8-4

Sheet No. 1 of 1

Data Started 1/18/05


Date Finished 1/19/05

Weather 15, clear

Shaw Geologist RO/R

Drill Company ADT Driller C. Stratten
Drill Method Drill Rig / Auger
Rig Type CME75 Sampler Type bailler
Total Boring Depth _____ Boring Diameter 4 1/4"
Well Depth 42' Well Diameter 2"
Screen length/size: _____

1

Soil Boring Log				 <small>Environmental & Engineering of New York, P.C. 40 South Street Brooklyn, NY 11201</small>				
Project # <u>100961</u> Project Name <u>SCA Art Leather</u> Site # <u> </u> Site Name <u> </u> Site Address <u>45-10 94th Street</u> Elmhurst, NY <u> </u>				Boring No. <u>B-0</u> Sheet No. <u>1</u> of <u>1</u> Date Started <u>1/17/05</u> Date Finished <u>1/17/05</u> Weather <u>20, snow</u> Show Geologist <u>DD</u>				
LEGEND <input checked="" type="checkbox"/> Grout <input checked="" type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Filter Pack				Drill Company <u>ADT</u> Driller <u>C. Stratton</u> Drill Method <u>Drill Rig / Auger</u> Rig Type <u>CMF75</u> Sampler Type <u>baier</u> Total Boring Depth <u> </u> Boring Diameter <u>4 1/4"</u> Well Depth <u>47'</u> Well Diameter <u>2"</u> Screen length/sizes <u> </u>				
Depth (ft)	Depth Interval (ft)	X Rec./Blows/ft	USCS	SOIL DESCRIPTION/LITHOLOGY	Lab Sample	PID (ppm)	Moist-ure	WELL CON-STRUCTION
5-7	25	4,5,6,6	SM	dark brown SILTY SAND. ROCK fragments		0.3		
10-12	50	4,5,5,3	SW	light yellow brown fine SAND, some medium SAND and fine GRAVEL		0.7		
15-17	75	4,3,4,6	SW	yellow brown fine SAND, some medium SAND, few fine GRAVEL		0.7		
20-22	75	8,10,11,6	SW	same as above		1.2		
25-27	100	13,18,21,23	SM FILL	BRICK and ROCK fragments throughout light brown fine SAND and SILT		1.1		
30-32	80	23,30,30,24	SM	top 8" - light brown SILTY SAND bottoms 1" - ROCK fragments		1.2		
35-37	100	9,9,10,7	SM SW	top 1" - light brown SILTY SAND some medium SAND bottom 1" - yellow brown medium SAND		0.8		
40-42	100	10,14,20,21	SW	light brown fine SAND, very wet		0.6	wet	

Soil Boring Log					 <small>NEW CASTLE & ASSOCIATES ENGINEERING & CONSTRUCTION OF NEW YORK 127 HUNTERS ROAD NEW YORK, NY 10044</small>				
Project # <u>100961</u> Project Name <u>SCA Art Leather</u> Site # _____ Site Name _____ Site Address <u>45-10 84th Street</u> Elmhurst, NY					Boring No. <u>B-8</u>				
Sheet No. <u>1</u> of <u>2</u>					Date Started <u>1/12/05</u>				
Date Finished <u>1/12/05</u>					Weather <u>rain, 36</u>				
Show Geologist <u>DD and JF</u>									
LEGEND <input checked="" type="checkbox"/> Grout <input checked="" type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Filter Pack					Drill Company <u>AGI</u> Driller <u>C. Stratton</u> Drill Method <u>Drill Rig / Auger</u> Rig Type <u>CNC75</u> Sampler Type <u>boiler</u> Total Boring Depth _____ Boring Diameter <u>4 1/4"</u> Well Depth <u>45'</u> Well Diameter <u>2"</u> Screen length/size _____				
Depth (ft)	Depth Interval (ft)	# Rec./	Blends/b-	USCS	SOIL DESCRIPTION/LITHOLOGY	Lab Samples	PID (ppm)	Moist- ure	WELL CON- STRUCTION
	0-3			SM	yellow brown SILTY fine SAND, few fine GRAVEL		0		
	5-7	50	2,3,2,4	SM	same as above	W	30.3		
	7-9	50	2,3,2,4	SM	same as above		14.5		
	9-11	75	3,1,1,2	SM	same as above		24.4		
	11-13	25	3,3,0,5	ML	orange brown SILT, some fine CLAY and fine SAND, little fine GRAVEL		19.6		
	13-15	17	4,7,6,5	SM	yellow brown medium SAND, some SILT, few fine GRAVEL		8		
	15-17	62.5	3,3,6,5	SM	yellow brown medium and fine SAND, little SILT		24.5		
	17-18	100	0,7,11,13	SM	yellow brown medium SAND, some fine GRAVEL and fine SAND		6.5		
	19-21	75	7,8,10,11	SM	yellow brown to brown medium SAND, some fine GRAVEL		7.2		

Soil Boring Log					<div style="display: inline-block; vertical-align: middle; font-size: 0.8em;"> Engineering & Construction 1000 10th Ave. S.E. Everett, WA 98201 </div>			
Project # <u>109961</u> Project Name <u>SCA Art Leather</u> Site # <u> </u> Site Name <u> </u> Site Address <u>45-10 94th Street</u> Elmhurst, NY					Boring No. <u>B-10</u> Sheet No. <u>1</u> of <u>2</u>			
LEGEND <input checked="" type="checkbox"/> Grout <input checked="" type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Filter Pack					Drill Company <u>ADJ</u> Driller <u>C. Stratton</u> Drill Method <u>Drill Rig / Auger</u> Rig Type <u>CME75</u> Sampler Type <u>Boiler</u> Total Boring Depth <u> </u> Boring Diameter <u>4 1/4"</u> Wall Depth <u>37</u> Wall Diameter <u>2"</u> Screen length/size <u> </u>			
					Date Started <u>1/12/05</u> Date Finished <u>1/13/05</u> Weather <u>rain, 38</u> Show Geologist <u>DD and PK</u>			
Depth (ft)	SAMPLE	% Rec./Blows/ft	USCS	SOIL DESCRIPTION/LITHOLOGY	Lab Sample	MO (ppm)	Metals	WELL CONSTRUCTION
0-3			SM	yellow brown fine SAND and SILT		7.2		
5-7	50	3,7,11,13	SM	same as above	26	8.4		
7-9	50	8,7,10,13	SM	yellow brown fine and medium SAND. BRCK fragments		3.7		
9-11	50	11,7,6,3	SW	yellow brown medium SAND. some fine SAND and fine GRAVEL		1.2		
11-13	75	3,3,4,6	SM	yellow brown to brown fine SAND and SILT		1.5		
13-15	33	6,8,6,6	SW	yellow brown fine and medium SAND		1.2		
15-17	50	8,7,9,11	SW	same as above		1.4		
17-19	100	9,13,20,24	SW	brown fine and medium SAND. little fine GRAVEL		2.1		
25-27	50	15,22,34 (per 8")	SW	brown SILTY SAND. little fine to medium GRAVEL		0		

