BOARD OF EDUCATION PROJECT:
FINAST SITE
CEQR 88-123 X

ARCHAEOLOGICAL ASSESSMENT REPORT - 1988
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for the

BOARD OF EDUCATION PROJECT: FINAST SITE

CEQR 88 - 123 X

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I. INTRODUCTION

The New York City Board of Education has proposed constructing a number of elementary and intermediate schools in various neighborhoods throughout the city. The New York City Landmarks Preservation Commission (LPC) has requested a preliminary review of several of the parcels selected by the Board of Education for possible development. The particular parcels were selected by LPC due to their potential to possess prehistorical and/or historical archaeological remains. This potential was determined by topographical features and/or the geographical location which may have encouraged occupation of these areas. These preliminary reviews were primarily comparative studies - both horizontally and vertically - of past, present, and proposed building footprints.

The Board of Education's proposed Broadway and 234th Street School has been selected for review. This parcel, referred to as the Finast Site, Lot 1 of Block 2369 in the Kingsbridge section of the Bronx, has 370.79 foot frontage bordering the east side of Broadway and runs 212.08 feet west along 234th Street, runs north 402.03' along Putnam Avenue, then crosses back over to Broadway along a 264.28' span. (See Figure 1) As requested by LPC and in cooperation with Allee King Rosen and Fleming, Inc., a preliminary archaeological review was performed. The research, conducted by Historical Perspectives, Inc., narrowed the potential archaeological testing area of the proposed school site, identifying only a 200 foot by 100 foot portion of the subject parcel as possibly previously undisturbed. Although the initial review did not locate sufficient data to determine the subsurface integrity of the proposed school site, this southeast section of Lot 1 lies in an area of known prehistoric sensitivity.

LPC accepted the preliminary review and requested a second stage of documentary research and a monitored soil boring test to help determine the archaeological sensitivity of the southeast portion of the Board of Education site. (Mark London, Department of City Planning, letter to Dana Gumb, 1/19/88). As of February 26, 1988, Lot 1 contained a Finast supermarket and a street-level paved parking lot. (See Figure 2 for current site photographs.) The southeast portion of Lot 1 is the focus of this study and will hereafter be referred to as the site.*

* The project area's numeric designation has changed several times since the block was lotted during the mid 1800s.
The following archaeological assessment of sensitivity, prepared by Historical Perspectives, Inc., addresses several questions regarding the project site: 1.) is there the potential for prehistoric peoples' exploitation of the surrounding land and water resources; 2.) did historical development cause subsurface disturbance; and, 3.) if subsurface disturbance did occur, to what extent, and in what locations would it have displaced potential remains. The requested soil boring test(s) will be performed and reported on in a separate submission.

Based on manuscript and published maps, atlases, and official municipal plans and profiles of subsurface and surface development, Historical Perspectives concludes that:

1) There is the potential for prehistoric utilization of the site due to its proximity to a major Indian trail, and its location directly along wetlands which is conducive for settlement; and

2) historic construction neighboring the period site, the 200' north-south by 100' east-west parcel in the southeast corner of Lot 1, does not appear to have adversely impacted it. There is a large possibility that neither rural nor urban historical development has disturbed possible evidence of prehistoric occupation.
II. ARCHAEOLOGICAL RESEARCH DESIGN

This cultural resource sensitivity survey was carried out in three stages.

1. Documentary Investigation

In order to identify known or potential prehistoric and historic cultural resources, an intensive search of available literature and cartographic materials was carried out at the New York Public Library, the New York Historical Society, the Bronx County Historical Society and the Office of Borough President, Topographical Bureau. Primary importance was placed on acquiring historical documentation pertinent to the project area. Cartographic resources of the nineteenth and twentieth centuries were examined in detail to provide supporting data. The Anthropological Services division of the New York State Museum yielded data on inventoried archaeological sites. Previous archaeological reports were relied upon heavily, as important information has already been acquired for research projects in close proximity. It is for that reason that Kearns, Kirkorian and Lavin's 1987 "Archaeological Assessment Report for the Tibbett Gardens Project, Bronx, New York" was utilized extensively.

Contacts were made with several individuals knowledgeable in the history and prehistory of the area. Interviews were conducted with historians Rev. William Tieck and John McNamara, and Bronx Borough agency personnel, in order to elicit information about the nature of prehistoric and historic land use within the project area. In summary, primary data was sought from all available resources including historical documentation, archaeological reports and personal knowledge of the area.

2. Site Investigation

A walk-over reconnaissance of the Finast Site was conducted in an attempt to locate and identify any existing cultural resources and to evaluate the archaeological potential of this site. This included attempting to evaluate subsurface disturbance caused by building construction activities. Obvious signs of disturbance were noted, and a photographic record of project area conditions was made.
3. Analysis of Environmental Factors

Prehistoric site locations tend to vary with regard to a number of environmental factors. Thus the prediction of site locations involves the use of various kinds of information including environmental, archaeological, historic and ethno-historic data. Environmental geomorphological conditions are an important factor in developing an hypothesis regarding the presence or absence of prehistoric cultural resources. In making this determination, the following environmental factors were considered:

a. Topography: Variables within this category include landform and elevation. This information was primarily derived from historic maps, the U.S.G.S. topographic map, and our own field reconnaissance.

b. Geology and Soils: The factors considered here are type and areal extent of bedrock formation and soils. The permeability of the soil within the site was also considered.

c. Water: Under this category are variables concerning the nature and location of water supply. The proximity to a fresh water source would have been a primary determinant in site location for prehistoric people.

d. Availability of Floral and Faunal Resources: The availability and utilization of the natural resources within the area would have been of crucial importance to prehistoric groups. Prehistoric peoples' search for subsistence resources was constant; they naturally chose those areas in which food resources appeared in greatest abundance.

e. Paleoenvironmental Conditions: The environmental context in which prehistoric peoples lived must be considered in the search for prehistoric occupation zones within the project area.

f. Availability of Technological Raw materials: The availability of the raw materials needed to fashion

*The standard methodology from which the following list was abstracted was written by Ed Lenik for Historical Perspectives' "Resource Recovery Project: Barretto Point Site," a 1986 Phase IA documentary study.
tools and other items is an important consideration in the assessment of an area for likelihood of occupation.

g. Historic and Current Land Use: As previously noted, known land alterations must be considered in order to assess the extent of potential disturbances to any cultural remains that may have been deposited over thousands of years by prehistoric peoples. Such environmental factors could equally affect the cultural deposits of the more recent historic populations as well. (Lenik, 1986:4-5)
III. ENVIRONMENTAL SETTING

The Bronx surface exhibits topographic features caused by extensive glacial activity. As the glacier advanced and receded during the last million years, the land surface was altered considerably. As a result of this activity "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 series of low hills or terminal moraines." (Eisenberg, 1978; p. 19). Of these north-south running ridges, the Riverdale Ridge lies between the Hudson River and Fordham. The rocks of the Borough consist mainly of gneiss, schist and white crystalline limestone. Also prevalent are the metamorphic Hudson River Shales. (Scharf, 1886; p. 6) The project area itself is located between the Inwood Ridge and the Fordham Ridge. (See Figures 3, 4) Here the bedrock is predominantly Inwood marble which is easily weathered, unlike the material in the surrounding ridges. (Schuberth, 1968: 85-86).

The rivers and streams, which were important factors to both European and prehistoric settlement patterns, drain to the south and southeast. Tibbett's Brook, which ran from Van Cortlandt Park north of the project site, and drained to the south into Spuyten Duyvil Creek, was one of the main water courses in the area. A small, unnamed stream ran southeast out of Tibbett's Brook and was in close proximity to the project area.

Unlike much of the surrounding area, the Board of Education project site was not inundated during historic times. Early Kingsbridge consisted of salt marshes, fresh water marshes, swamps, shallow mud flats, meadows and forested uplands. (Kearns, et al, 1987:10). However, the desire to develop lands led to extensive land filling activity during the historic period. As a result, the original vegetation and available resources have been altered or obliterated. Natural and man-made land filling has changed the shape of Kingsbridge. Since this site appears to be in the forested upland section, land filling may not have had a drastic effect.

Currently the topography of the site is gently sloping to the west. The eastern side along "Putnam Avenue" appears at a slightly higher elevation. Since the entire site is paved, little vegetation is growing on it. Deciduous trees exist bordering Putnam Avenue, which is unpaved. Tibbetts Brook and the small stream no longer exist, as they have both been filled in.
IV. PREHISTORIC FRAMEWORK

A Cultural Framework for Interpreting West Bronx Prehistory

The term "prehistory" refers to the time span before the advent of written records. In coastal New York, it applies to the chronology and lifeways of the local American Indian cultural groups prior to European settlement of the region. There is no published synthesis of the prehistory of the Spuyten Duyvil or Kingsbridge section of the Bronx. In fact, a search of the literature revealed no publication of a professional archaeological excavation in the West Bronx. (Kearns, et al, 1987: 6).

However, a number of avocational archaeologists have been active in this, as well as other sections of the Bronx. This data, together with regional data, provides an interpretative framework for understanding the cultural sequence of this area.

Temporal sequences have been established by archaeologists working in eastern North America. These periods have been discerned based upon projectile point and pottery styles and/or the addition or subtraction of distinct artifacts. Three main stages have been identified: Paleo-Indian, Archaic, and Woodland, with the latter two being further divided into temporally distinct cultural periods. (Figure 5 summarizes this chronology.)

Paleo-Indian Stage (10,000 - 7,000 B.C.)

The Paleo Indian period represents the earliest known human occupation in North America. Although it is controversial as to the exact timing and route of Paleo Indians into North America, it is generally believed that they crossed over the Bering Land Plain that connected Siberia to Alaska during one or more of the glacial maxima, when sea levels were at their lowest, and the plain was exposed as dry land. During this time period, an open spruce Woodland with scrub birch and alder dominated the post glacial environment. It is postulated that small bands of hunters nomadically roamed large territories, relying predominantly on post-plesitocene megafauna for subsistence. Artifacts attributed to the Paleo Indian tradition include diagnostic Clovis type fluted projectile points and processing tools such as end and side scrapers, gravers and drills. Relatively little is known about PaleoIndians in the Northeast as few sites have been found. No fluted points have been reported from the West Bronx, however a mastodon tusk was recovered from an ancient bog (Tieck, 1968: 134) indicating the availability of big-game.
Archaic Stage (7,000 - 1,000 B.C.)

A warmer and drier climate during this period provided an abundance of flora and fauna. The stabilizing environment provided predictable, seasonal resources. With the extinction of big-game, and the introduction of mast-eaters such as the white-tailed deer and wild turkey, hunting small and medium sized game as well as fishing and gathering became the new means of subsistence. The subsistence and settlement systems of Archaic peoples were based on a restricted wandering system involving seasonal movements to base camps located near available resources.

Little is known about the Early and Middle Archaic periods in Coastal New York. By the late Archaic period, shellfish exploitation was prevalent in the lower Hudson Valley (Brennan: 1974). Shellfish middens (refuse piles of discarded shells) still found today in the northwest Bronx are a result of this activity. The recovery of an atlate (spear thrower) weight at 232nd Street on the Hudson River indicates Archaic occupation near the study area. (Kearns, et al 1987: 7). The Late Archaic is also marked by the introduction of soapstone bowls.

Woodland Stage (1,000 B.C. - European Settlement)

The Woodland period differs from the earlier Archaic period with the introduction of ceramics. Crude, conical based ceramics eventually gave way to elaborate and ornate rounded pots, stylistically differing between the regions. During this period maize was introduced from Meso-America, and along with beans and squash, provided a new means of subsistence horticulture. Large semi-permanent and permanent villages were established, and pipes as well as the bow and arrow came into existence. Extensive trade networks were established as evidenced by an increase of non-local lithic materials. Fragments of prehistoric pottery vessels found at numerous sites in the vicinity of the project area indicates it was occupied through the Woodland period and on into the historic period.
West Bronx Prehistory

The goals of this study with regard to prehistoric cultural resources are (1) to identify known prehistoric sites and areas with a high potential for prehistoric occupation, (these are areas that possess physical attributes which would have attracted aboriginal populations, and have thus far remained undetected) and (2) to assess the impact of proposed construction on these potentially important and irreplaceable cultural resources. The information required to determine these assessments has been obtained by: conducting a literature search; reviewing various archaeological research; determining physical environmental conditions; and performing a field reconnaissance. The following synthesis is presented accordingly.

Literature Search

Relevant literature includes early ethnohistoric accounts by European explorers, traders and settlers, legal documents, site reports, and maps relating to the study area. Research was conducted at the Bronx County Historical Society, the Bronx Borough President's Office, The New York Public Library, and the New York Historical Society. With the aid of resources acquired and previous research conducted nearby, prehistoric occupation within the West Bronx can be demonstrated.

The earliest documented evidence for aboriginal habitation of the study area is the Hendricks Map of 1616, which shows the Wikagyl (Wiechquaesgeek) Indians inhabiting the southern New York mainland just north of the Manhattes Indians on Manhattan Island. The Wiechquaesgeek (with several variations on the spelling of the name) are identified as the group of Indians living in northern Manhattan, Bronx County, and southern Westchester County in a number of seventeenth century Dutch and English manuscripts, deeds, treaty, and maps. (Bolton, 1934:p. 128b; Grumet, 1981:p. 59-60). Wiechquaesgeek villages are mentioned often in these documents. According to seventeenth and eighteenth century documents at least five major settlements are though to have been located within or near the Tibbett Gardens study area. (Kearns, et al, 1987:8-9). They are:

(1) Shorakapkock: near 230 Street and Broadway or on Tibbett's or Berrien's Neck. (Tieck, 1968:p. 56; Bolton, 1920:p. 307; Fluhr, 1960:p. 10; Jenkins, 1912:p. 21; McNamara, 1984:p. 497)

(2) Nipinichsen: a palisaded fort variously located on Tibbett's Neck, Riverdale area, and Spuyten Duyvil Hill -
which, according to the official Bronx Historian William Tieck, was the hill located west of Johnson Street overlooking 230 Street. (Bolton, 1906, 1920, 1934:p. 140; Fluhr, 1960: p. 10; Jenkins, 1912: p. 21; Skinner, 1915: p. 56)


(4) Keskeskick: in Van Cortlandt Park. (Bolton, 1934: p. 141)

(5) Saperewack: located on the Harlem River in the Marble Hill area. (Grumet, 1981: pp. 49, 68)

The review of literature based on ethnographic reports indicates that Broadway, the western border of the project area, was once a major Indian trail (See Figure 7), known as the Weckquaesgeek, which ran from the lower end of Manhattan up the entire length of the island, across Spuyten Duyvil Creek, and into Kingsbridge. Here the path connected with another which ran up the Hudson to the Mohawk region of New York. (Bolton, 1920, 1934: 61-62) The importance of this path lies in its connecting coastal and interior groups, facilitating trade.

Numerous prehistoric sites within and near the study area are reported in more recently published literature, supporting the ethnohistoric documentation listed above. It is most probable that certain of these recently discovered sites are, in fact, part of the same camps and/or villages reported on in the earliest sources. They include:

(1) Kingsbridge Post Office, 5517 Broadway (near 230 Street): projectile points (that is, the tips of arrows, spears, and darts), pottery, shell, and an Indian burial were uncovered. Tieck suggests that it might be the site of the "lost" village of Shorakappock. (Tieck, 1968: p. 56; See Figure 9)

(2) 231 Street, Kingsbridge section: a hearth containing a prehistoric clay pot was found. (Bolton, 1934:p. 12)

(3) Ewen Park, along the 231 Street line: "shell and ashes" were reported. Nearby, on the William Muschenheim estate, close to the Henry Hudson monument, a "food pit" was uncovered. (Bolton, 1934:p. 140)

(4) Marble Hill: shell and prehistoric artifacts have been found near and at "the Wading Place," approximately Broadway at 230 Street. (Bolton, 1934:p. 135)
(5) Paparinemin Island: large site on high ground that was originally Paparinemin Island, near 231 Street. Smaller temporary prehistoric sites are also reported for the Island area, but their exact location is not given. (Bolton, 1934:pp. 134, 139)

(6) Tibbett's Neck: "very extensive shell middens" were located below the bluffs. (Jenkins, 1912: p. 329; Parker, 1922: 490)

(7) Spuyten Duyvil Hill: several small shell deposits were found. (Skinner, 1915: p. 56; Suggs, 1966:10)

(8) Van Cortlandt Park: several sites were located, including extensive two to three foot thick shell middens and burials covering fourteen acres in the southwestern section of the park, and shell pockets near the mansion. The parade ground once had been Indian planting fields. Pit features, pottery, and stone tools were reported. (Bolton, 1934: p. 141; Tieck, 1968: p. 3; Skinner, 1915: p. 55)


Native Americans are reported as occupying the vicinity as late as 1817. Indians were apparently occupying the Marble Hill area during this period (Skinner, 1919:157). In addition, numerous other sites have been recorded spanning the pre- and proto-historic periods, from other sections of the Bronx.

**Previous Archaeological Research**

Previous archaeological research conducted in the Bronx, and specifically in the Kingsbridge, Spuyten Duyvil area, has provided a wealth of information pertinent to the Board of Education site. Specifically, collections analysis conducted for the Tibbett Garden project, located less than one-half mile southwest of the project site, are applicable to this project area. The following material is from that project.

The following archaeological facilities were contacted for information on sites/artifact collections within the study area: New York State Office of Parks, Recreation and Historic Preservation, Albany, New York; New York State Museum, Albany, New York; Museum of the American Indian, Heye Foundation, New York City. Analysis of the data provided by these institutions substantiates and expands upon the published information. Site files and artifact catalogs at the Heye Foundation were researched as
were artifacts from the area on display at the Museum of the American Indian.

Ten sites were located on the Bronx side of the Harlem River. Two are Van Cortlandt Park loci, discussed previously in the published literature section. The other eight sites are apparently unpublished. They are:

From the Heye Foundation
(1) Hudson River at 232 Street: a bannerstone, or atlatl weight (used to weigh down a spear or dart shaft to increase accuracy) was unearthed.

(2) Henry Hudson and Kappock Street: a hammerstone and a pottery fragment were found.

(3) St. Giles and 235 Street: a point and a musketball were recovered.

(4) Harlem Canal, near Broadway: 15 Indian pottery fragments were found.

(5) Broadway and 230 Street: a projectile point and a chipped stone blank or preform (from which finished tools are manufactured) were discovered.

From the New York State Museum
(6) #709: referred to as the Kappock site, located somewhere in the vicinity of 227 Street, Kappock Street and Henry Hudson Parkway. This site may be the same site as referenced above in (2).

(7) #5320: located somewhere in the vicinity of Edsall Avenue, Johnson Avenue, and the Harlem River.

(8) #2838: located somewhere between Edgehill Avenue, 230 Street and 227 Street, most of which is in the project site. This was a village site reported by Arthur C. Parker in the early twentieth century. Based on Parker's information, the Museum is only able to locate this site in a broad and approximate manner. (Kearns, et al, 1987:11)
Physical Environmental Conditions

Prior to European settlement and development, the Spuyten Duyvil and Kingsbridge areas were comprised of forested uplands, swamps, various wetlands, and meadows. Many of these landforms existed through the early twentieth century. (Figure 8). The project area was located along marshland associated with a small stream to the east. (Figure 12). The site appears to have been adjacent to rather than in marshland. The stream connecting Tibbett's Brook with the Harlem River was said to be tidal. Its presence rendered the project area on an island, previously known as Paparinamin. This meadowed island, according to Fluhr (1960:5) was probably used for planting corn by the Indians.

It must also be noted that the proximity to major water routes, such as the Hudson and Harlem Rivers, and lesser creeks including Tibbett's and Spuyten Duyvil, may have rendered this location a strategically advantageous place. Natural coastal and upland resources would have been bountiful in this environment. Salt and fresh water resources such as fish, shellfish and migratory waterfowl, as well as a diversity of plant species, provide a broad subsistence base. The number of sites already reported in close proximity to the project area are indicative of this.

Archaeological surveying in the circum-Long Island Sound region, by Carlyle Smith indicated that Indian settlements were located near bays and tidal streams, such as the conditions prehistorically present to the southwest of the project area. The availability of resources, and easy access to transportation routes such as the Hudson River, would have made this an ideal area to occupy. The physical and environmental characteristics of the project site make it an ideal location for prehistoric habitation.

Field Survey

A walkover survey was conducted to observe the current state of the site, in order to assess site integrity. The site is currently paved, and a portion of the Einast supermarket is located upon it. No other structures are standing. Due to the nature of the current condition, it was not possible to assess the potential for archaeological remains. It should be noted that Putnam Avenue is not paved. Subsurface testing would be required to determine possible impact of nineteenth century railroad grading and construction along Putnam Avenue on the integrity of the project site.
Summary

The prehistoric archaeology of coastal New York is still in its frontier stage. Unlike other regions of North America, the cultural chronology, lifeways, and even the cultural affiliations of the Indians who inhabited the area are poorly understood. The often cited synthesis of prehistoric archaeology in the region is Smith's doctoral dissertation THE ARCHAEOLOGY OF COASTAL NEW YORK, which is over 35 years old and predates such presently standard techniques as radiocarbon dating, use wear analysis, regional point typology, geochemical analysis for source identification of stone materials used in tool making, and subsistence/settlement studies, to name a few. Although much of the work is still relevant, it could and should be refined and elaborated upon. (Kearns, et al, 1987:13)

One of the major reasons for the lack of more recent archaeological research has been the urbanization and industrialization of coastal New York during the last two decades. Unfortunately much of the construction and destruction of the land happened prior to the time when people realized the value of archaeological resources. Currently, there remain few places that have retained integrity and can provide valuable information on prehistoric lifeways. The Board of Education site may provide an opportunity for furthering knowledge of prehistory.

The survey of literature, current archaeological research in the vicinity, and walkover survey indicate a high number of archaeological remains have been recovered from the immediate area. None appear to have been within the project site. The high density of aboriginal remains nearby, especially from the Woodland and early historic periods, as well as the environmental potential for high resource availability, suggests this is a sensitive area. Its proximity to a major Indian trail supports this conclusion.
V. HISTORIC FRAMEWORK.

In 1609 Henry Hudson sought refuge from the currents and weather along the Hudson, and dropped anchor in Spuyten Duyvil Creek. At this time, the land along Spuyten Duyvil Creek had a very different configuration than it does today. Tibbett's Brook ran through Kingsbridge with several off-shooting streams. In the course of time, streams and marshes were filled to create additional land space for development. The project site was along one such stream that underwent filling. In the 1800s the construction of the nearby New York-Boston-Montreal Railway was completed along the eastern side of the project parcel. Eventually the elevated train, or IRT, was constructed along Broadway. In the 1950s a supermarket was constructed on this lot, and although modified, still stands today.

The area that is now the Bronx was originally called Keskeskeck or Weckquaeskeek, which was the Indian term for "the Birch Bark country." (Scharf, 1886:76; Figure 9). In 1639 this land was purchased from the Indians by the Dutch West Indian Company. Two years later a Scandinavian, Jonas Bronk, became the first white settler in this region, purchasing 500 acres between the Harlem River and the Aguahung, later known as the Bronx River. (Scharf, 1886:745).

In what is today the Kingsbridge, Riverdale, Spuyten Duyvil section or northwest Bronx where the project site is located, the political and property divisions have been almost as confusing as the geographical changes. "The first European to settle north of the Harlem River-Spuyten Duyvil Creek [was] Adriaen van der Donck. With practically the whole Hudson valley to choose from he selected an immense tract extending northward from Spuyten Duyvil to be Donck's Colony, or 'Colendonk,' the name he gave to the patroonship which he patented in 1646." (Tieck, 1968:p. 3).

"The tract selected by Van der Donck extended north about eight miles from the mouth of Spuyten Duyvil Creek along the east bank of the Hudson, thence easterly to the Bronx River, which was the eastern boundary; the southern boundary ran from the eastern entrance of Spuyten Duyvil Creek east to the Bronx River; the southern boundary was Spuyten Duyvil Creek. The boundaries were about the same as those of the township of Yonkers as formed by the Legislature of 1788. The tract was called 'Nepperhaem' in the deed; but was known popularly as 'Colen Donck' (Donck's Colony), and sometimes as 'De Jonkheer's,' which later by natural corruption became Yonkers, the 'J' in Dutch being pronounced 'Y'." (Jenkins, 1912:p. 33). But according to J.H. French, nineteenth century author, Yonkers "is
a Dutch word signifying 'gentleman,' or 'country nobleman,' - a title of respect applied first in this place to Adrien Van der Donck, the patentee and first proprietor." (French, 1860:p. 707). At any rate, the Township of Yonkers in the County of Westchester encompassed the study area from 1788 until 1874-5 when it became part of the Annexed District of New York City." (Kearns, et al, 1987:17)

By the late 1600s, land had been subdivided, with the project area being part of the Phillips Manor. (Figure 10) The property existed on an island, or on high ground just north of the island, and east then called Paparinemmin.* At the southern tip of this island was the "wading place" at which Indians and early settlers crossed from the island of Manhattan at low tide. Here, in 1669, Johannes Verveelen established a ferry service and constructed a bridge over the meadows to the village of Fordham. At about the same spot [Broadway below 229th Street] the old King's Bridge was erected in 1693. Twenty years later it was moved westward to the foot of Marble Hill, where it played a prominent part in the American Revolution as the main passage from New York City to the mainland. (Fluhr, 1960:p.6). In 1673 the original Indian trails had been widened forming Broadway and the Albany and Boston Postal roads.

During the 1700s, the Kingsbridge area was surrounded by activity. During the American Revolution the "Kings Bridge" crossed Spuyten Duyvil Creek near the current 230th Street and Kingsbridge roads, and provided military access to Manhattan. Several British forts were built or occupied nearby, although no major battles took place within the Bronx. Fort Independence was located approximately 1 mile west of the project site along "Albany Road."

As mentioned above, the King's Bridge was a principal artery for both sides of the conflict. Washington's defeated army retreated to Westchester from Manhattan over it in 1776, followed shortly by Hessians. In 1783 the victorious Americans re-crossed the bridge, this time heading south to re-occupy Manhattan. In his account of military camp life, Reginald Bolton said that a camp of the Yager corps (Hessians) was located "at the head of the Farmer's Bridge, which is now buried under Muscoota Street or 225th Street" south of the project site. (Bolton, 1915:p. 498). These mercenaries were called "Skinners" and skirmished continuously with American gangs (some soldiers) called "Cowboys." Most historians agree that both

* Variously spelled on maps and documents, including Paparinamin, Paperinemo, and Paparlamin.
groups were marauders who preyed on the civilian population as well as each other. (For example, Comfort, 1906:p. 18).

In nearby Van Cortlandt Park, the massacre of the Stockbridge Indians took place in 1775. This, and several other small scale encounters persisted throughout the war. After this period there was a little change in the village/farming way of life in the Kingsbridge area from the close of the Revolution until the middle of the nineteenth century, though there were important property transactions. "In 1789, Alexander Macomb purchased the whole island of Kingsbridge [Paparinemin] ...It was later inherited by his grandson, Robert Macomb." (McNamara, 1984:p. 412). In 1847 this estate, including the land north and east of Paparinemin was subdivided by Mary Macomb as shown on a property map reproduced in Rev. Tieck's book. (Figure 11). This marked the beginning of the village of Kingsbridge.

In the 1800s the New York-Montreal-Boston Railroad was built. Historically known as the Putnam Line, the railroad right-of-way was in part, where Putnam Avenue lies, hence the road's name. Although the construction of the rail line was immediately adjacent to the project site, apparently it did not affect the property conditions or elevations. An 1873 topographic map shows elevations at the corner of Broadway and 234th (then Varian Street) at 14.5', and elevations of the site at 22'. (Figure 12, 13)

A current map of elevations (Figure 14) indicates that the elevation at Broadway and 234th Streets has remained the same, while the corner of Putnam Avenue and 234th Street has only risen from 22 feet to 24.5 feet above the seal level datum. This indicates that massive land filling activities have not taken place within the last 100 years. This is consistent with the rather low amount of construction activity associated with the site historically. No pre-railroad construction elevations were located. It is assumed that filling of the neighboring marsh was necessary for the rail lines but the degree of impact on the project site is unknown.

The first structures that existed on the proposed school site appear on an 1868 map of Yonkers. (Figure 15). The two structures also show up on the 1872 map of Westchester County (Figure 16). The names associated with these houses are Thomas Cooper, straddling lots 21 and 23, and W. Tompkins directly to the south on lot 14 according to both maps. It should be noted that neither of these fall on the specific 200 x 100 foot lot in the southeast corner which has been targeted for project research. An 1873 topographic map (Figure 12) shows both houses resting on the 10 foot contour interval, above a small stream.
As this map indicates, there is a small outbuilding associated with the Tompkins house. Both the houses appear in the 1882 and 1900 Bromley atlases (Figure 17), it is not until 1904 that the outbuildings appear.

According to the 1904 Bromley Atlas and owners names (Figure 17), each house had an associated outbuilding, perhaps a shed or outhouse. The houses, both 2½ stories, as well as the outbuildings, were of frame construction. The house on Lot 1 is listed as belonging to Abel Dennison, and the house on Lot 17 belonged to Frederick Coudert. The house and outbuilding on Lot 17, and the outbuilding on Lot 1 were removed by 1912, but the house on Lot 1 still stood. For the first time, the house is documented as having a basement (Figure 17). House size is estimated at 45' x 45' with the basement running the full course of the house. Lot 1 was also vacant by 1924. (Figure 18)

Conveyance records were reviewed to substantiate cartographic data, and to gain additional information. While real estate transactions were reviewed, no mention was made of house size or layout, and structures were only mentioned in passing as "the building(s) thereon". (1912 Conveyance Record, Liber 37, p. 4)

Lot 17 was sold by T. Cooper to W. Preston in 1876, in 1889, W. Preston sold it to A. Ferris, and in 1901 F. Coudert purchased it from W. Andrews. In the next 2 decades, the lot changed hands about four times, eventually being purchased by the Columbia Oval Corporation in 1929. No mention of land use or alteration was mentioned.

Lot 1, originally W. Tompkins', was eventually purchased by W. Dennison during the early 1910s. By 1912, E. Gagnebin purchased the property, and eventually sold it to G. Salzman in the 1920s. In 1926, it was, in turn, sold to the Columbia Oval Corporation. Again no mention of land use or alteration was made.

The physical layout of Block 3269 has changed through time. The original size of the lots was reduced considerably by the course of Putnam Avenue. When it was laid out by 1900, the lots were reduced in depth to what they are today. Lot numbers have also changed since the original division (Figures 17, 18). As early maps indicate, what is now Lot 1, was originally divided and numbered 21, 23, 25, 27 and 29. In 1900 these were consolidated to form Lots number 1 and 17. They stayed this way until Lot 17 was subdivided and labeled Lot 17 and 20 sometime during the 1930-50s. By 1969 the Lot was re-consolidated and labeled Lot 1.
Upon examining the Buildings' Department Block and Lot file, the first entry regarding the construction of "five mobile steel garages" in 1921 (#1752) was in error. The original request for building these garages on Block 3269, on the east side of Broadway, was amended to read "on the west side of Broadway" (letter dated 10/26/21). Thus the garages were never built upon this lot. The first construction on the lot, documented by these files, was a 1951 building permit for a Safeway Supermarket. (Figure 18) According to the application, no buildings were to be demolished prior to its construction, supporting the cartographic data.

The Safeway Supermarket was issued a certificate of Occupancy in 1954, and in 1960 was refurbished. The plans, for new-floor-drains, and a dual ejector pressure sump/pump hole under the old basement level, listed the existing cellar floor at 11'5" below grade. The Alteration permit request #56962, places the building (approximately 90' by 170') on lot 1. In the late-1970s the grocery store (Finast #423, 5716 Broadway) underwent renovations. Alteration permits (#3374/77, #33374/79) indicate that the northern extension of the store - to the northern property line - eliminated vehicular parking spaces. The subsurface disturbance was apparently limited to a partial cellar - for a generator, gas lines and a vent stack, and trench drains and sewer connections at Broadway. None of these alterations affected the targeted 200 x 100 foot parcel in the southeast corner of the lot. (Figure 19)

In an attempt to confirm the impact of historic and recent development activities, previous soil borings were sought to establish stratigraphy. Local historians John McNamara and Rev. William Tieck were both contacted to seek information. Neither had additional knowledge of historic or subsurface integrity. The Transit Authority was contacted to obtain information regarding railroad and elevated train construction. Mr. Herbert Klaus of the Tracks and Yards division cited that no projects have recently been completed in the area and that it was virtually impossible to locate records of hypothetical soil borings completed at the time of the railway construction. Apparently the records of plans are very difficult to locate, and many no longer exist. The Office of Borough President, Topographic Bureau confirmed Mr. Klaus' information. They were not aware of any records of soil borings associated with this lot. In addition, the Buildings' Department Blocks and Lots Division also had no information. Thus the proposed soil boring will assist in determining project area conditions, and the impact of historic use.
VI. CONCLUSIONS AND RECOMMENDATIONS

The following conclusions have been drawn from the archaeological assessment outlined above:

1) There is the potential for prehistoric utilization of the site due to its proximity to a major Indian trail, and its location directly along wetlands, which is conducive for settlement; and

2) Historic construction adjacent to the 200 foot north-south by 100 foot east-west project site parcel in the southeast corner of Lot 1, Block 2369 does not appear to have adversely impacted it. There is a large possibility that neither rural nor urban historical development has disturbed evidence of prehistoric occupation.

The findings of this assessment aid in planning the soil boring test(s) required by the LPC. A properly located continuous tube sample test will further aid the assessment of the degree of subsurface disturbance and will help determine prehistoric land conditions, and thus the potential for the likelihood that the site was occupied prehistorically. The archaeological records show that specific soil types (e.g. sandy loam) were more likely to have supported habitation sites and/or burial grounds than other soil conditions (e.g. clay, bedrock).

It is not the practice of responsible archaeologists to recommend the excavation of an urban site just because something might be there. In order to justify investigation, there must be the reasonable and demonstratable valid expectation of obtaining data that would fill an important gap or make a substantial contribution to the archaeological record. The western portion of the Bronx has a high frequency of artifact finds, and there is always the possibility of recovering a random artifacts from the prehistoric era. However, excavations designed to seek out such tentative resources would be untenable.

It has been established that the Kingsbridge area of the Bronx has a high degree of archaeological sensitivity, both for prehistoric and historic remains. Much of the available information on the prehistory of this area is obtained from early twentieth century excavations and reports. However, archaeological field and laboratory techniques have changed over the last century, with the introduction of refined methods for collection and analysis. There are still many unanswered
questions regarding the seasonal cycles and settlement patterns of the prehistoric period that current, advanced archaeological methods can address. The proposed subsurface soil boring test(s), together with this assessment, can provide information regarding the project site's potential for addressing some of these issues and helping to close a gap in the understanding of prehistoric lifeways in the Bronx.
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<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title and Location</th>
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Figure 1

Portion of U.S.G.S. map, showing location of the project area
Photograph 1
Finast Supermarket
view: southwest to northeast
from corner of 234th Street and Broadway

Photograph 2
Finast Supermarket
view: south to north
from Project Site at the corner of Putnam Avenue and
234th Street
Photograph 3
Finast Supermarket parking lot, Broadway, and the El view: east to west from the Project Site
Figure 3
Geologic Map of the Northern Part of Manhattan, West Bronx, and Eastern Bergen County, New Jersey

from Schuberth 1968: 75
- site location (not to scale)
Figure 4 Fluhr, 1960. Photocopy from Fluh, 1960.

Historical Geography of the West Bronx.
<table>
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<th>TIME SPAN</th>
<th>PERIODS</th>
<th>HORIZONS/TRADITIONS</th>
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<td>A.D. 1633</td>
<td>HISTORIC</td>
<td>Hackney Pond stage</td>
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<td>FINAL WOODLAND</td>
<td>Niantic Shantok stage</td>
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<td>A.D. 1500</td>
<td>LATE WOODLAND</td>
<td>Clason's Point stage, Bowman's Brook stage</td>
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<td>MIDDLE WOODLAND</td>
<td>Sebonac stage</td>
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<td>10,000 B.C.</td>
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PREHISTORY OF CONNECTICUT NATIVE AMERICANS.
Figure 6
Photocopied from Bolton, 1934. INDIAN LIFE
OF LONG AGO IN THE CITY OF NEW YORK.
Figure 7
Photocopy of
MAP DEPICTING INDIAN PATHS IN THE GREAT METROPOLIS,
from
As late as 1906, when this picture was taken, tidewater Tibbetts Brook meandered back and forth across the Kingsbridge meadows just as it did in the days of the Indian. Salt grass abounds. The view is southwest from the vicinity of modern 238th Street and Broadway, with Spuyten Duyvil Hill in the background.

Figure 8
Photocopied from Tieck, 1971
SCHOOLS AND SCHOOL DAYS.
The Borough at the End of the Dutch Period.

Figure 9
Photocopied from Jenkins, 1912. THE STORY OF THE BRONX.
Historical Sketch Map

OF
KINGS BRIDGE
1645—1793
Compiled by
Thomas Henry Edsall.

Figure 10
Photocopied from Scharf, 1886:
THE HISTORY OF WESTCHESTER COUNTY
The extensive shaded area is the land subdivided by Mrs. Macomb. At the lower corner of the nine-and-a-half-acre "K" parcel, which was purchased by Joseph H. Godwin, is the Macomb-Godwin mansion. The stream labeled "Creek" is Tibbitts Brook; the "2 Rod Road" leading from the brook to the King's Bridge is 230th Street; the "Paul Road from New York to Albany" is Broadway; the "Old Post Road" is Albany Crescent-Bailey Avenue; and the vertical "2 Rod Road" is Conlear Avenue.

Figure 11
Photocopied from Tieck, 1968.
RIVERDALE, KINGSBRIDGE, SPUYTEN DUYVIL.
Figure 12
Sketch copy of a portion of an 1873 TOPOGRAPHIC MAP. Commissioner of Public Parks
Figure 13
Tracing of a portion of TOPOGRAPHIC ATLAS OF THE CITY OF NEW YORK, 1847
Figure 14
Map of Current Elevations,
GRADE SECTIONS,
Office of Borough President
Figure 15
Photocopied from Tieck, 1968.
RIVERDALE, KINGSBRIDGE, SPUYTEN DUYVIL.
Figure 16
1872 Map of Westchester County
J & B Beers, New York,
ATLAS OF WESTCHESTER COUNTY
Figure 17

1882
- Old lot lines
- New lot lines

Part of block 177 (later 3269)
24th Ward of New York City
Bromley 1882
Plates 0 and 0

1900
Lots 14-17 of block 3269
Ward 24
Bromley 1900
Plate 32

2½-story frame house on lot 17
(no basement indicated)
removed between 1900-1911

1904
- New lot lines
- Old lot lines
Block 3269
24th Ward of NYC
G.W. Bromley
Atlas and Owners Names, Borough of the Bronx.

- Wood shed or outbuilding

1912
Block 3269
Lots 1+17
Ward 24 Sect. 12
G.W. Bromley
Vol II (The Bronx)
1911 corr. to 1912
Plate 34

2½-story frame house
with basement
approx. 45' x 45'. No longer standing 1928.
(see Bromley 1928 corr. to 1932, plate 32)
1924
Block 3269
G. W. Bromley
Atlas of the City of New York
Borough of the Bronx, 1924
Plate 32

1950
Block 3269
Ward 24 Sect. 12
G. W. Bromley  G. W. Bromley
vol II  vol II
1938 corr. to 1950 1939 corr. to 1957
plate 32  plate 32

- No alterations in project area between 1929-50. No standing bids until 1950-57.
- Safeway added 1950-57.
- See also: Bromley, 1928 corr. to 1932, plate 32.

1969
Block 3269
Ward 24 Sect 12
Belcher Hyde  Belcher Hyde
vol II (The Bronx) vol II (The Bronx)
1901 corr. to 1969 1901 corr. to 1969
plate 42  plate 42
Figure 19
Aerial photograph of Planning District 7 from PLAN FOR NEW YORK CITY, 1969