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HISTORICAL
PERSPECTIVES INC.



PHASE IA DOCUMENTARY STUDY

**QUEENS CROSSING MIXED USE DEVELOPMENT
PROJECT SITE**

BLOCK 4978, LOT 101

**BOUNDED BY MAIN STREET, 38TH AVENUE, 39TH
AVENUE, AND 138TH STREET**

FLUSHING, QUEENS COUNTY, NEW YORK

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EXECUTIVE SUMMARY

TDC Development & Construction Corporation has proposed construction of a new building on a privately owned lot, located in the Flushing neighborhood of Queens County, New York. The project site is designated Block 4978, Lot 101, and falls within the block bounded by Main Street, 38th Avenue, 39th Avenue, and 138th Street. The property consists of 43,596 square feet, and has a 70-foot frontage along Main Street, 175 feet along 38th Avenue, 304 feet along 39th Avenue, and 196 feet along 138th Street. The former Queen's County Savings Bank (QCSB) building, at 38-25 Main Street, is presently located at the Main Street and 39th Avenue corner of the project site. The bank building, which was built in 1955, is a three-story building with a basement. The remainder of the project site is a paved surface parking lot. As part of the proposed project, the QCSB building will be demolished.

In accordance with New York City Environmental Quality Review (CEQR) regulations and procedures, Landmarks Preservation Commission (LPC) has required a Phase IA Documentary Study for this undertaking, referred to as the Queens Crossing Mixed Use Development project. This report complies with the guidelines of the New York City Landmarks Preservation Commission (LPC) (CEQR 2001; LPC 2002).

This Phase IA documentary study describes conditions on the project site (including soil and geological boring data and known disturbances to the property), previous cultural resources investigations undertaken adjacent to the project site, the history of the property, and based upon the preceding sections, the site's sensitivity for the recovery of archaeological resources. The Area of Potential Effect (APE) will be referred to throughout this report, and constitutes the footprint of planned construction and disturbance on the site.

The Phase IA study concluded that despite the presence of previously recorded precontact archaeological sites in the general vicinity, there is a low potential for the recovery of precontact/contact period archaeological resources within the Queens Crossing project site APE itself, based upon the level of disturbance associated with historic use of the land. No archaeological field testing is recommended for precontact/contact period resources.

Archival research documented that the APE had been continuously occupied by the Bloodgood/Garretson families from the second half of the 1600s through about 1910. The property supported both a family house, which was enlarged several times over the years as needs required, a seed house or warehouse, from where Garretson's seed business was conducted, and several other smaller structures that are depicted at various times on historic maps. While the family house was not located within the project site (it was situated immediately northwest, on an adjacent lot), the seed house was located at the northwest corner of the project site, along the 38th Avenue frontage. Potential shaft features predating the introduction of public water and sewer may survive at discrete locations within the project site. Due to their fragility, there is a lesser chance that other historic period archaeological resources have survived, such as fence lines,

paths, traces of landscaping and sheet midden scatter, but if disturbance is minimal (such as in former open yard areas that were never built over), these resources could still be present.

Although shaft features could be present even under areas subjected to later construction and demolition episodes, in keeping with recent LPC rulings that indicate archaeological resources are less likely to be found in areas that later supported multiple story buildings, the project team has assigned those portions of the Queens Crossing project site APE that either were never built over, or had only one-story buildings on them a high sensitivity for the recovery of historic period archaeological resources, and has assigned the remainder of the project site, which had two-story structures or other disturbances (such as installation of an underground fuel tank) a low archaeological sensitivity.

Based upon these conclusions, it is recommended that a program of archaeological testing be undertaken within the project site, at locations to be determined based upon the sensitivity ranking generated by this report, but chosen by the archaeological consultant in consultation with the LPC. The sampling protocol might include a series of backhoe trenches at selected locations, and depending on the results of the trenching, supplemented with archaeological monitoring during construction. All archaeological testing should be conducted according to applicable archaeological standards (LPC 2002), and in consultation with the LPC. RPA-certified professional archaeologists, with an understanding of and experience in urban archaeological excavation techniques, would be required to be part of the archaeological team.

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I. INTRODUCTION

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This Phase IA documentary study describes conditions on the project site (including soil and geological boring data and known disturbances to the property), previous cultural resources investigations undertaken adjacent to the project site, the history of the property, and based upon the preceding sections, the site's sensitivity for the recovery of archaeological resources. The Area of Potential Effect (APE) will be referred to throughout this report, and constitutes the footprint of planned construction and disturbance on the site. It is assumed for the purposes of this survey that the footprint of proposed development will cover the entire project site. For brevity's sake, the "Queens Crossing Mixed Use Development Project Site" may be shortened to the "Queens Crossing project site."

The Historical Perspectives, Inc. project team consisted of Julie Abell Horn, M.A., R.P.A., who supervised the project research and wrote this report; Tina Fortugno, M.A., who conducted the majority of the historical research and performed the site walkover, and Cece Saunders, M.A., R.P.A., who provided interpretive and editorial assistance. Tim Mancl, M.A., R.P.A., created the graphics.

II. METHODOLOGY

Preparation of this archaeological study involved using documentary, cartographic, and archival resources. Repositories visited (either in person or by using their on-line electronic resources) or contacted included the Queens County City Register; the New York City Municipal Archives; the Queens County Department of Buildings; the New York City Department of Design and Construction; the New York City Department of Environmental Protection; the Long Island Division of the Queens Borough Public Library; the LPC; and the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP). Urbitran Associates, Inc. provided current site data, geotechnical data, and various maps.

A site walkover was undertaken on February 11, 2004 by Tina Fortugno of HPI. David Tang provided site access. Conditions were cold and dry, although in some portions of the project site snow still remained on the ground from a prior storm. Ms. Fortugno made notes and took photographs of buildings, structures, and existing ground conditions.

III. ENVIRONMENTAL SETTING

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 proposed Queens Crossing 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 approximately three miles south of the Queens Crossing site, along the Grand Central Parkway. 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 (Schubert 1968:195,199). The project area was probably inundated and an extension of the Flushing Bay estuarine ecosystem at the end of the Pleistocene. Glacial till and outwash, consisting of clay, sand, gravel, and boulders were deposited by the melting ice sheet. The fertile sandy loam, composed of fragments of decomposed boulders of granite, feldspar, and greenstone traprock from the Flushing area was instrumental in the town's important horticultural development (Valles 1938:5).

Although the extensive Flushing Bay and Flushing River water system is approximately 2,000-2,500 feet to the west and north of the project parcel, there is no definite indication that a substantial fresh water course or extensive wetland existed on or immediately adjacent to the project parcel after approximately 10,000 years ago. The Innes 1908 "reconstruction" of early Flushing is the only depiction of a stream within the immediate project area (Figure 3). This is contradicted by all the additional cartographic evidence reviewed, such as the 1838 U.S.G.S. topographic map. Throughout the twentieth century, the Block 4978 parcel has been mapped as a relatively flat terrace with a dominant elevation of 35-45 feet above mean high water (Figure 4).

In 2003, a series of geotechnical and soil borings was excavated within the parking lot portion of the project site (Converse Engineering Consultants 2004). All of the borings were situated within areas formerly containing twentieth century structures. The soil profiles that these borings revealed were strikingly similar. The upper stratum, which ranged from the top of the parking lot to 3-6 feet below grade, depending on the location, consisted of historic fill, presumably associated with construction and demolition of the structures on the property. Beneath the fill layer was an undisturbed, very deep layer of glacially deposited silty sand. At about 60 feet below the current grade, the borings encountered an underlying stratum of firm clay. At the time that the soil borings were excavated (December 2003), the water table was encountered between 33 and 39 feet below grade.

IV. BACKGROUND RESEARCH/HISTORICAL OVERVIEW

A. Previously Recorded Archaeological Sites

Records available at the LPC and the NYSOPRHP reveal that the project site is in close proximity to a number of previously recorded precontact and contact era sites. Among both historians and archaeologists, there is widespread consensus that the Flushing area once supported a substantial precontact population. Most of the documented precontact sites in Queens were located along extensive water systems, such as Jamaica Bay, Little Neck Bay, and Newtown Creek. In the Flushing vicinity, numerous precontact sites have been recorded along Flushing Bay and Flushing Creek, most notably in the College Point area, north of the Queens Crossing project site. The line of Northern Boulevard, once called Broadway, is thought to follow portions of a former Native American trail (Grumet 1981).

Although many have written about precontact sites in Queens, a recent study commissioned by the LPC attempts to summarize much of this data into one source. In this comprehensive work, Eugene Boesch evaluates the archaeological sensitivity for all of Queens, based on previous research by earlier scholars, and identifies documented precontact sites, some more precisely than others (Boesch 1997). Boesch rates all of downtown Flushing and its vicinity (an area spanning several miles in any direction) as highly sensitive for the recovery of precontact sites, based on the identification of various precontact sites in the area. Boesch does not pinpoint exact locations of precontact sites in his study, but rather uses his own numbering system to map general areas where precontact sites have been recorded.

Boesch's study identifies one precontact site as immediately adjacent to the Queens Crossing project site, designated Site 2. He writes:

Two alternative locations for this mortuary site (former Linnaean Gardens); 15 burials recovered from a circular area 30 feet in diameter; heads oriented to the east; musket balls and nails associated with some burials suggesting Contact Period component. Description vague as to whether musket balls are grave goods or indicative of gunshot wounds.

Boesch identifies this site as NYSM #4524; and cites the following primary sources as his references: Beauchamp 1900:1; Bolton 1922; Bolton 1934: Site 127; Furman 1874: 97-98; Parker 1922; Mandeville 1860.

In order to confirm whether the Queens Crossing project site APE is in fact adjacent to this precontact site, the primary sources he cites were reviewed. Interestingly, all but the 1922 Parker study refer directly to the 1874 Furman publication, and present no new data (the 1860 Mandeville book did not appear to contain any specific reference to this site). For comparison, the 1874 Furman is presented here. Of note, the number of burials differs between the two descriptions:

In the month of July, 1841, eleven human skeletons were unearthed in excavating the ground to run a road through the Linnaen Garden, at Flushing, in Queens County. The place where they were found has been for fifty years used as a horticultural nursery. They were within a circle of thirty feet, their heads all lay to the east, and some nails and musket-balls were found with them. Conjecture has been foiled in speculating upon the circumstances under which they were inhumed (Furman 1874:97-98).

The former Linnean Gardens were located on the north side of Northern Boulevard, between Farrington and Prince Streets, approximately three blocks north of the Queens Crossing project site APE. Boesch's site location map does not show Site 2 as north of Northern Boulevard, but instead situated along Main Street and along Lawrence Street (now College Point Boulevard), which is approximately two blocks west of Main Street.

The one source that differs from the Furman account in locating this precontact site is the Parker 1922 publication, which identifies a "burial site" between Avery Avenue and Fowler Avenue, west of the Queens Botanical Gardens. Most of the NYSM site numbers were assigned based upon the Parker study, including NYSM #4524, which Boesch attributes to this site. The confusion in associating this location with the burial site may be that the Prince family, who owned the Linnean Gardens north of Northern Boulevard, also owned land here, which may have also been referred to as the Linnean Gardens. However, comparison of historic maps made in the 1840s and 1850s, contemporary to the time that the burials were found, suggests that it is the gardens north of Northern Boulevard that the site was on, as the Prince holdings west of Lawrence Avenue are shown to be largely undeveloped through 1852, while roads have clearly been laid through the property north of Northern Boulevard, which matches the description of discovering the burials in the Furman publication (Smith 1841; Conner 1852).

Compounding the confusion concerning NYSM#4524 is the fact that archaeologist Ralph Solecki documented a precontact site at the approximate location of Parker's "burial site," between Fowler Avenue and Sanford Avenue, west of College Point Boulevard. Here, Solecki photographed the remains of an "Indian Spring," and several other loci designated "archaeological sites" although it appears he did not attempt to have this area given a unique site identification number. It is possible that Solecki was in fact redocumenting Parker's NYSM#4524. The 1852 Conner map appears to show a small spring or body of water in this location, confirming Solecki's claim.

In addition to Boesch's Site 2, the following precontact sites also fall within a mile of the Queens Crossing project site. The majority of them were located along College Point Boulevard, in direct proximity to the former Flushing Bay and Flushing Creek shorelines. They are listed according to their distance from the project site, with those nearest listed first.

Boesch Site 60 (NYSM 4545). A campsite and traces of occupation, reported by Parker 1922 and Solecki 1941, which is also given three locations on the map, all surrounding College Point Boulevard.

Boesch Site 75 (NYSM 4524). An unspecified site discovered by Solecki in 1941 that was destroyed by construction of the Van Wyck Expressway. Appears to be in the same approximate location as Boesch Site 2.

Boesch Site 3 (NYSM 4526). Mortuary site on former Thomas Duryea Farm; Contact Period village also located there, possibly associated with the Matinecock. Description provides only general location information for the site. In approximate location of Northern Boulevard and Murray Street (Parker 1922).

Boesch Site 4. Contact Period (Matinecock) habitation site. Near Parsons Boulevard and Roosevelt Avenue. May be the same as Boesch Site 3 (Bolton 1975).

Boesch Site 61 (NYSM 4544). A campsite reported by Parker in 1922. Two locations are given for this number, in the vicinity of Shea Stadium.

Boesch Site 30 (NYSHPO A081-01-0133). The Grantville Site (also called "the woods"), an Archaic and Woodland habitation site located on a narrow promontory at the southwestern corner of College Point (Smith 1950).

Boesch Site 17. Traces of occupation. At approximate intersection of College Point Boulevard and Whitestone Expressway (Parker 1922).

Boesch Site 59 (NYSM 4542). Camp site along College Point Boulevard north of the Whitestone Expressway. May be the same as Boesch Site 17 (Parker 1922).

Analysis of the Native American site locations described above reveals that all of the precontact era sites were located in very close proximity to natural water sources, namely Flushing Bay and Flushing Creek. The few Contact period sites were located a bit further inland (Boesch's Sites 3 and 4), and appear to be located near the known Indian trail along Northern Boulevard. Based upon these data, it appears evident that the Queens Crossing project site APE, being a little more than ¼ mile east of Flushing Creek, and several blocks south of the former Indian trail along Northern Boulevard, does retain some Native American archaeological sensitivity, but does not possess as high a sensitivity as other areas located immediately adjacent to water sources or the Indian trail.

Additionally, while there is still some debate as to the actual location of the burial site associated with the former Linnean Gardens (Boesch's Site 2), it seems clear that the Queens Crossing project site was not part of this discrete site.

Several Phase IA archaeological assessments have been completed in the Queens Crossing project site vicinity, although because none involved archaeological testing, no additional archaeological sites were documented as a result of these studies. The Phase

IA investigations include the Flushing Center project (Kearns et al. 1988), located immediately adjacent to the Queens Crossing project site APE on the block bounded by 37th Avenue, 39th Avenue, 138th Street, and Union Street; and the Downtown Flushing Rezoning Project, located west of College Point Boulevard and several blocks west of the Queens Crossing project site APE (Geismar 1996).

B. Site History

1. Precontact Period

The precontact era on the north shore of western Long Island can be divided into three time periods, based on Native Americans' adaptations to changing environmental conditions. These are generally known as the Paleo-Indian (c.12,000 to 10,000 years ago), the Archaic (c.10,000 to 2,700 years ago) and the Woodland (c.2,700 to 300 years ago). In order to be able to assess the project site's potential for precontact exploitation, it is first necessary to review these time periods and their associated settlement patterns.

Paleo-Indian Period (c.12,000 y.a. - 10,000 y.a.)

Toward the end of the Wisconsin Glaciation, during the Late Pleistocene Epoch, the first humans wandered across the exposed land bridge which connected Siberia and Alaska. These small groups of hunters were probably following the roaming herds of megafauna which were their chief prey. The distinctive weapon in their chipped stone tool kit was the fluted point, which has been found in association with mammoth, mastodon, bison and horse remains at various sites in the southwestern United States. Although none of these "kill sites" is located east of the Mississippi, the discovery of campsites such as that at Port Mobil, Staten Island, suggest a scattered, highly mobile population in bands of approximately 20 individuals, who ranged across a vast area necessary to support lifeways organized around the hunting of migratory game (Ritchie 1980:1-3, 13). In the Northeast, the glacially lowered sea level exposed a broad coastal plain of which Long Island was a part. "This large area apparently contained abundant big game resources and provided access along the entire length of the south shore to the area that is present day Long Island" (Saxon 1978:251).

The fluted, lanceolate points, two to five inches in length with a concave base and channeled or fluted faces, presumably to facilitate hafting, exhibit a considerable range in shape and size. They were usually made from a high-grade silicious stone, often exotic to the region in which they are recovered, a function of their makers' seasonal migrations. Other artifacts in the Paleo-Indian tool kit include scrapers, knives, borers and gravers, tools which indicate extensive handiwork in wood, bone and leather (Ritchie 1980:3, 6).

From the locations of recorded sites in the Northeast, Paleo-Indians exhibited a marked preference for well-elevated situations. However, 30% of sites were found on or near the margins of swampy ground. Environmental characteristics which appear to have been attractive to Paleo-Indians include the proximity of major waterways, large fertile valleys and the coastal plain, where the densest population of desired food animals was supported (Ritchie 1980:7). However since 10,000 years ago, the rise in sea level estimated to be from 75 to 80 feet, has submerged large numbers of these sites.

The retreat of ice from Long Island approximately 18,000 years ago and a global warming trend circa 14,000 years before present, encouraged Paleo-Indian settlement in the

Northeast. The post-glacial environment of spruce and pine underwent a gradual modification in favor of deciduous hardwoods such as oak and hickory, which have greater importance in terms of nutritional value to both animals and humans than do conifers. By 8,000 B.C., these deciduous species dominated forests along the eastern seaboard. In addition, the megafauna on which Paleo-Indian diet was based "were rapidly becoming extinct, and were being replaced by the temperate-climate fauna that are indigenous today" (Gwynne 1982:190-191).

Archaic Period (c.10,000 y.a. - 2,700 y.a.)

The warming trend at the end of the last glaciation completely transformed the northeastern coastal environment from tundra and conifer-dominated forests, to the present deciduous woodlands with generally modern distributions of fauna. Due to the dwindling contribution of meltwater from disappearing glaciers, the reduced flow of streams and rivers promoted the formation of swamps and mudflats. These wetlands created a congenial environment for migratory waterfowl, and a host of edible plant species and shellfish. The new mixed hardwood forests of oak, hickory, chestnut, beech and elm attracted such mast-eating fauna as white-tailed deer, wild turkey, moose and beaver.

Although the Archaic diet was still based on hunting and gathering, due to the greater variety of plants available and exploited, excavated Archaic sites yield a wide array of plant processing tools, including grinding stones, mortars and pestles. The diagnostic tool was the grooved axe. In the coastal areas of New York, have been found numerous, small "nearly always multi-component sites variously situated on tidal inlets, coves and bays, particularly at the heads of the latter, and on fresh-water ponds on Long Island" (Ritchie 1980:143). By the Late Archaic, these areas provided shellfish, small game, fish, salt hay and tuberous grasses, making larger more permanent settlements possible. Semi-nomadic life is still indicated, but wandering occurred within well-defined territorial limits, with seasonal movements between camps near exploitable resources. A dietary shift to shellfish in coastal New York near the end of the Archaic suggests a scarcity of large game, and a change from the early Archaic inland adaptation of forest hunting. Coastal sites show a principal reliance upon shellfish, especially oysters, hard and soft shell clams and bay scallops, which were easily gathered all around Long Island. Characteristic of the Late Archaic were "fish-tailed" projectile points and soapstone bowls (Ritchie 1980:142,166, 167, 171). In contrast to conditions during the Paleo-Indian, Early and Middle Archaic, "by Late Archaic times sea level was so close to present levels that its subsequent small rise has failed to obliterate much of what remains on Long Island from that period" (Gwynne 1982:192). Hence the Late Archaic Wading River complex, four sites on the north shore of Suffolk County, was found at the edge of a salt marsh, on dry ground ranging only two to seven feet above mean high water (Wyatt 1982:71).

Woodland Period (c.2,700 y.a. - 300 y.a.)

Pottery use became widespread following the use of soapstone vessels in the Late Archaic, and although copper tools were utilized during that period, the earliest copper ornaments,

tubular beads, made their appearance during the Woodland. Stone or clay smoking pipes were also an Early Woodland innovation (Ritchie 1980:179-180)

Settlement patterns were substantially altered with the introduction of agriculture, the systematic cultivation of maize, beans and squash possibly beginning as early as 1000 A.D. During this time large villages within palisaded enclosures developed for the use of a semi-sedentary people, with groups moving seasonally, depending on exploitable food resources, between villages and camps of varying population concentrations. Preferred village/camp sites were in protected, elevated locations at the confluence of two water systems. Nearly all the permanent sites are situated on tidal streams and bays on the second rise of ground above water. Despite the advent of agriculture, shellfish and small game remained an important component of the Woodland diet. Shellfish refuse heaps, termed "middens," reached immense proportions, covering from one to over three acres. Deer, turkey, raccoon, muskrat, ducks and other game were stalked with bow and arrows, replacing the spear and javelin, while dug-out boats, bone hooks, harpoons and nets with pebble sinkers were employed in fishing (Smith 1950:101; Ritchie 1980:180,267).

The first recorded visit to the Flushing area by a European was probably that of the trader/explorer Adriaen Block, in the ship *Onrust*, who sailed up Long Island Sound and explored the bays on either side in 1614 (Waller 1899:5). Contact with Europeans had far-reaching effects on Native American cultures. European goods such as metal and glass began to replace traditional materials. Trade for these and other goods probably encouraged a more sedentary lifestyle, and larger villages developed into permanent settlements. The population of these villages would expand and contract with the seasonal availability of natural food resources, and maize agriculture contributed surplus food which could be stored to bolster their already rich diet. Tragically, these cultural developments were cut short, as natives were exposed to European diseases against which their bodies had no resistance. The Native American population was decimated (Kearns, Kirkorian and Schaefer 1989:10).

Due to these tremendous stresses, the socio-political situation of Long Island's Native Americans was extremely fluid, with groups splitting and combining in complex ways, which are only beginning to be understood. Most nineteenth century histories of Flushing and Queens County identify the seventeenth century inhabitants of the Flushing area as being Matinecock Indians (Waller 1899:17). The Matinecock claimed jurisdiction over northern Long Island east of Newtown and as far west as Smithtown in Suffolk. They are described as being once numerous in northeastern Queens, with their settlements in Little Neck and Bayside and a large one in Flushing, where they made wampum, and dried oysters and clams for winter use (Munsell 1882:19, 76).

Others record the original sellers of the land as the Massapequa, despite recording the presence of the Matinecock's Flushing settlement (Thompson 1918:I 126,III 3), or Canarsee or even Rockaway (Kearns and Kirkorian 1985:6). At present, it is generally believed that western Long Island was inhabited by Munsee-speaking Canarsee Indians, members of the Delaware culture group. According to the research of Robert Grumet and Reginald Bolton,

the divisions or sub-divisions known as the Matinecock and the Massapequa had fairly close ties. They were allies during the late seventeenth century, and eventually combined in 1676, and went to live in the Rockaways. The Massapequa sachem signed treaties with the Dutch in the name of other groups such as the Rockaway on more than one occasion, and when he was killed the Matinecock sachem signed an agreement representing his own and some of the Massapequa's towns. Thus, there existed a complex relationship between the Indian groups on Long Island which is yet to be explained sufficiently (Grumet 1981:5-6, 30-33).

2. Historic Period

Many English colonists found the orthodox religious atmosphere of Puritan New England too stifling, and for some "heretics" it was dangerous. As a result many colonists fled to Rhode Island, and others settled in New Netherland, which was desperately in need of settlers since the disastrous Indian wars of 1640s. Thus, Flushing was one of several English towns founded in New Netherland, including Hempstead, Newtown and Jamaica. Director General Kieft granted a patent for approximately 16,000 acres east of Flushing Creek to a group of English emigrants, including Thomas Farrington, John Lawrence and Thomas Stiles in October 1645. The Dutch called the settlement Vlissingen, after an important town in the Dutch province of Zeeland, and eventually the English corrupted the name to Flushing (Brodhead 1853:410).

As was the practice of the Dutch West India Company, rather than appropriate native property, title was secured by purchase. This had been accomplished in 1639 when the area which was later the Towns of Flushing and Jamaica (now the eastern half of Queens County) was purchased from an Indian delegation headed by Mechowod, sachem of the "Massapeague," accompanied by his cousin Piscamoe, Worttewoockhow, Kackpohor and Ketachquawars. The liberal terms allowed Mechowod's people to "remain to dwell, to plant Indian corn, to fish and to hunt in the said lands" (Thompson 1918:III, 3-4).

Before the English conquest of New Netherland in 1664, the Village of Flushing was quite definitely a thorn in the side of the Dutch Director General. The charter declared the patentees would "enjoy the liberty of conscience according to the custom and manner of Holland, without molestation or disturbance from any magistrate, or magistrates, or any ecclesiastical minister." In religious matters, the Netherlands in the seventeenth century was the most tolerant country in Europe, allowing even Roman Catholics to set up "secret" churches. Such toleration was not written into law, and not always uniformly observed in all areas, but evolved as the prevailing custom, especially in the province of Holland. In colonial possessions such as New Netherland, the Director General made the rules, as influenced by the local Reformed minister. In the case of Peter Stuyvesant, an extremely orthodox Calvinist, even other Protestants such as New Amsterdam's Lutherans were prohibited from organizing congregations.

When a ship from Rhode Island brought a group of Quakers to Jamaica and Flushing under the leadership of Robert Hodgson in 1651, Stuyvesant took immediate action, levying a

heavy fine against anyone who sheltered a Quaker for the night. Vessels that brought Quakers were confiscated. Many Flushing residents were sympathetic to the Quakers, and others were appalled by Stuyvesant's measures, and therefore 28 Flushing residents and 2 from Jamaica banded together to sign the Flushing Remonstrance, refusing to lift a hand against the Quakers (Brodhead 1853:637).

For this Remonstrance, Flushing is celebrated as the birthplace of religious freedom in the United States. However, incensed at this behavior, Stuyvesant arrested the magistrates, and Tobias Feake, the schout (sheriff) who delivered the 'impudent' epistle, was demoted, fined 200 Flemish pounds and threatened with banishment. Despite the severity of Stuyvesant's measures, Quaker meetings were still held in the woods, and John Bowne and his Quaker wife, who had settled in Flushing after 1651, allowed them to meet in his home. Bowne was eventually arrested and fined 25 Flemish pounds, imprisoned three months and sent to Amsterdam in 1663, where he protested to the directors of the West India Company. They exonerated Bowne, and rebuked Stuyvesant for his intolerance, namely because the colony, then being threatened by bellicose New Englanders, needed all the settlers it could get, Quaker or no (Waller 1899:39-45). Bowne's house, erected in 1661, now a museum on present Bowne Street, and the Quaker Meeting House on Northern Boulevard, with sections dating to 1694, still stand in downtown Flushing. It is possible that Stuyvesant's unpopularity contributed to the early overthrow of Dutch hegemony over the English towns on Long Island when a force of about 100 Englishmen under the leadership of Anthony Waters of Hempstead and John Coe of Middelburgh 'liberated' Flushing in 1663. Until the official conquest of New Netherland in 1664, Flushing, renamed Newarke, and the other English towns were quasi-independent entities (Waller 1899:50).

Despite the religious controversy during the Colonial Period, Flushing developed into a thriving agricultural area, with Flushing village at its center. Before the Revolution, Flushing was already famous for its wheat production, and the farmers tended their animals and crops, producing "corn, beef, pork, butter, tobacco and staves, which they exchange for liquors and merchandise," with the assistance of black slaves (Munsell 1882:82, 91). At the end of the seventeenth century, the population of the entire town was 660, of which 130 were slaves. Although some Quakers did own slaves, by 1716 the first agitation against slavery was recorded at the yearly meeting (Waller 1899:85, 92, 96). Due to the continued strong Quaker influence in the area during the early nineteenth century, Flushing later became a haven for free blacks.

The market for Flushing produce was New York City, since it was easier to transport goods to Manhattan by canoe than west by overland routes through the marshes around Flushing Creek. Aside from being a barrier to communication, the marshes, which included part of the project area, were a valuable resource for the inhabitants. Oysters, clams and other shellfish were gathered (Munsell 1882:77), and the salt hay that grew in the marsh was a valuable source of horse and cattle feed, and was later used as packing material and bedding for animals (Thompson 1918:I 13; Sheel 1963:8). The occupation of Flushing by British and Hessian troops during the Revolution, although a difficult period for most residents, was a time of economic prosperity, because the farmers had a ready market for their grain

and livestock, and production increased. The population grew to 1,601 in 1790, and 2,820 in 1830 (Mandeville 1860:26). With all the grain produced, a tidal grist mill was erected in 1797 along Ireland Creek. It was acquired by Stephen Cornell Bowne, direct descendent of John Bowne, in 1800, and was apparently passed down through the Bowne family until it was demolished in 1925 (Lawson 1952:180).

During the 1680s Huguenot refugees from the persecutions of Louis XIV settled in Flushing and introduced an industry for which Flushing was to be famous until the 20th century: horticulture. The earliest commercial nursery in the United States, the Old American Nursery, was founded in Flushing by Samuel Prince c.1725, where he sold fruit and nut trees, and later expanded into shade trees, berries and grapes. The gardens were so famous that when General Howe's redcoats occupied Flushing in 1776, they were specifically ordered not to damage Prince's nursery. In 1793 his grandson William Prince bought additional property, and formed the Linnean nursery, leaving the Old American to his brother Samuel. Eventually the two combined. During the nineteenth century, other nurseries were established in Flushing, including Samuel Parson's Nursery in 1838, and G. R. Garretson's seed farm in 1836 (Sheel 1964:19; Munsell 1882:92-94).

Flushing's prosperity led to the village's incorporation in 1837, and the raising of \$25,000 for grading and opening the streets. By 1855 the village had a population of 3,488, which was about half the population of the entire town. This growth was spurred by the improvement of transportation links with New York City and other towns on Long Island. William Prince was responsible for many improvements, including the first bridge over Flushing Creek in 1800 (at present Northern Boulevard), and the construction of the Flushing-Newtown Turnpike. The first stage service was started in 1801 by William Mott, which took passengers to Brooklyn via Newtown for 5 cents. Ferries also served the town, and the first steam ferry was introduced in 1823. Flushing Creek remained an important waterway, as evidenced by the fact that between 1833 and 1881 it was dredged and deepened five times. In 1854 the Flushing & North Shore (or Side) Railroad was opened, running along the same route the Long Island Railroad takes today, 1,500 feet north of present Fowler Street (Munsell 1882:103).

Better transportation connections and the beautiful countryside, which was enhanced by the varied nursery plantings, spurred the erection of country houses for those trying to escape hectic city life. Flushing took on an aristocratic tone, which it retained into the 20th century. "There are many charming sites for genteel residences, and they are rapidly being taken up and occupied by gentlemen of leisure, or of business from the city" (Mandeville 1860:74-75). After the Civil War (to which Flushing sent a company) expansion pushed the borders eastward and southward. By the 1880s the town was known for its large number of stately homes.

When Flushing entered New York City as part of the Borough of Queens, commercial development began. The trolley came in 1898 with a five-cent fare to Long Island City. The whole character of the village began to change with the opening of the subway in 1928. The low fare brought hordes of home buyers and heavy commercialization to Main Street.

The 1939 World's Fair built on the Flushing Meadows further spurred this process. During the twentieth century, the importance of the village and the growth of nearby Brooklyn, Williamsburg and New York City brought light industry to Flushing Creek, where building materials, coal and grain were stockpiled and loaded for shipment. After World War II, Flushing rapidly lost its residential character. The large private homes disappeared to be replaced by apartments.

3. History of the Project Site

The project site originally was part of the Bloodgood family homestead, which was acquired, probably by early Flushing settler Franz (or Francis) Bloodgood (or Bloctgoot), in the second half of the 1600s, although archival sources differ as to the exact year (Munsell 1882:90; Anonymous n.d.:16; Chapman Publishing 1896:1192). Soon after the Bloodgoods purchased the land, though, a house was constructed on the east side of what would become Main Street, within modern Block 4978. This house, later known as the Garretson House, after descendant Eliza Bloodgood's husband, Garret R. Garretson, stood just north of the project site, within modern Lots 104 and 107, until its demolition in 1911.

The core of the house was a small structure, presumably dating to the original construction, but over time the house was lengthened and rooms added, as need warranted. The length of the house paralleled Main Street. A description of the house during the 1880s, which by then had become one story with a garret, indicated the first floor had seven rooms (including two kitchens, three bedrooms, a parlor, a living room, a dining room, and a large hall) and the second floor had three large bedrooms and a garret. The front of the house, facing Main Street, originally had a sloping lawn, but this feature was truncated when Main Street was widened, and a low retaining wall was built in front of the house to hold back the cut bank, with steps leading up from the street. A thick hedge capped the retaining wall, and rose vines obliterated much of the house's façade (Lawson 1952:163-165). A photograph of the house illustrates these features (Figure 5).

Although the Garretson house was just outside the project site, the homestead associated with the house covered all of Lot 101, as well as portions of modern 39th Avenue and 138th Street. Presumably, descendants of Franz Bloodgood lived on the property from the second half of the 1600s through the early 1800s, but little is known of them, other than their family name. It appears that Eliza Bloodgood's father, Daniel Bloodgood, headed a household and occupied the property by 1800 and until at least 1830. Federal census records made in 1800, 1810, 1820, and 1830 list Daniel Bloodgood as the head of a household that included from six to eleven people, depending on the year. Daniel Bloodgood was a fruit grower, specializing in cherry trees (Lawson 1952:163-165). The 1820 federal census, however, indicates three members of Daniel Bloodgood's household were engaged in manufacturing, suggesting that the Bloodgoods may have held other occupations as well.

Occupation of the homestead during the remainder of the nineteenth century is well documented, owing primarily to the success of Garret Garretson, who married Eliza

Bloodgood and took over her family's land. Garretson was born in New Jersey in 1807, and moved to New York at age 16 to work as the overseer for William R. Prince's nursery, which later became one of the largest nurseries in the country, if not the world. In 1836, Garretson opened his own business growing and selling seeds. At the time, there were only three other seed businesses in the country. Garretson had a 100-acre farm, where he grew most of the seeds, on Jamaica Road, east of Flushing. His business flourished, and he ultimately sold his seeds all over the world. Within the project site, along 38th Avenue, Garretson had a seed store, or warehouse, from which he sold and stored his stock. It was a long frame building, known as Garretson's Seed House, which endured until 1910, when it was razed (Chapman Publishing Co. 1896:1191-1192; *Flushing Evening Journal* March 24, 1910). The Garret Garretson household is documented in federal censuses from 1840 through 1880. The household included Garretson, listed variously as a seedsman or seeds merchant, his wife Eliza, and their children: Alonzo, Imogene, Susannah, Charles, Frank, and Jane. The household also usually included one or two female servants, who were often Irish immigrants.

Several other structures were present on the Garretson estate, as evidenced by nineteenth century maps. A map made by Elijah Smith in 1841 is the first to show the estate in detail (Figure 6). Here, three buildings are shown on the property: the larger structure set back from Main Street is the Garretson house, the seed store building is shown along Liberty Street (later Lincoln Street, and now 38th Avenue), and a third small structure, south of the house along Main Street, may be what a 1859 map refers to as an "office" (Walling 1859; Figure 7). Lawson (1952:77) suggests that this structure was one story high, and removed in 1867, in anticipation of laying out Locust Street (now 39th Avenue), which had been proposed as early as 1859, but not carried out until 1875 (Kearns et al. 1988:16). Thus, the former footprint of this structure appears to lie under the roadbed of 39th Avenue, and not within the project site. The 1873 Beers map shows that the structure south of the house had been removed by this time; no other buildings besides the house and the seed store were present on the Garretson property (Figure 8).

By far the most detailed series of maps showing the project site is the Sanborn Fire Insurance Company maps, the first edition of which was published in 1886 (Figure 9). The 1886 Sanborn map shows that the Garretson property contained the house (with its various additions), the seed warehouse, and two additional structures. A one-story stable sat to the west of the seed warehouse (within modern Lot 110, outside of the project site), and a two-story building labeled "meat" was located on the corner of Main Street and Lincoln Street (now 38th Avenue), within modern Lot 109, also outside the project site. Lawson (1952:77) identifies this building as a meat market, which sat on a small parcel of land that was no longer owned by the Garretsons. The remainder of the project site was undeveloped. Of note, the 1886 Sanborn map also indicates that all of the adjacent streets now had water mains laid beneath them.

Garret Garretson died in 1887; for the next five years his son Alonzo managed the family seed business, until he, too, passed away. Next, Alonzo's brother Charles took over the business, but as he was already established as a local pharmacist (his drug store was across

Main Street), he could not continue both professions concurrently. By the turn of the twentieth century, Charles Garretson had given up running the seed business (Chapman Publishing Co. 1896:1191-1192; *Flushing Evening Journal* March 24, 1910).

As the Garretson seed business waned, so too did the family homestead property become disused, and finally sold off. The 1892 Sanborn map shows that at 110 Locust Street (now 39th Avenue), a house lot had been sectioned off and a two and a half story dwelling built (Figure 10). The 1900 federal census indicates that this house was owned and occupied by Rae Smith, who was a mason, his wife and three children. Charles Garretson and his sister Imogene were listed as living in the family house on Main Street, along with a family of three boarders. The 1910 and 1920 federal censuses show that the house at 110 Locust Street was later owned and occupied by Joseph Burns, a newspaper reporter, his wife and son.

The 1897 Sanborn map shows no changes to the project site from the earlier edition, but by issuance of the 1903 Sanborn map, a second two and a half story dwelling had been constructed immediately to the east of the house at 110 Locust Street, and was numbered 112 Locust Street (Figure 11). A stable was located at the rear of 112 Locust Street. These lots are now part of modern Lot 101, within the project site. The 1910 federal census indicates the house was owned and occupied by James Anderson, a plumber, his wife and daughter, and a male lodger. In 1920, the federal census shows the house was now rented by John Barry, a stair builder, his wife and three daughters. Interestingly, later that same year, John Barry's daughter Mary acquired the property from James Anderson's wife Bessie (Liber 2294, 1920:35). The 1903 Sanborn map also indicates that by this year, the Garretson seed warehouse was vacant.

During the 1910s, the project site changed considerably. In 1910, the seed warehouse was demolished and the land it stood on leveled off. That same year, foundations were excavated for a brick building immediately west of the former seed warehouse, to be used as a carriage and wheelwright business owned by D. Sylvester and Son. The last surviving Garretson resident of the property, Imogene Garretson, moved from the estate about the same time; it was anticipated that the old Garretson house would be razed soon (*Flushing Evening Journal* March 24, 1910).

Throughout 1910, the Garretson family transferred their long-held property, in various sub-parcels, to an assortment of buyers, but primarily to the Deed Realty Company (Liber 1668:261, 265; Liber 1680:271; Liber 1693:105; Liber 1726:206). The 1917 Sanborn map shows that the former homestead now contained a variety of new buildings (Figure 12). The carriage and wheelwright shop described above (labeled as a "wagon works") was located at 97-99 Lincoln Street, within modern Lot 110, immediately adjacent to the project site. Along the north frontage of the project site, the Empire State Dairy had buildings at 107-109 Lincoln Street, and a plumbing business was located immediately to the east, at 111 Lincoln Street. There were several structures within the project site along Locust Street as well, including a garage, an Odd Fellows Hall, a carpenter shop, and the two houses described above.

The 1934 Sanborn map illustrates that the project site now contained several additional structures within Lot 101 (Figure 13). Along 38th Avenue, the former wagon yard west of the dairy now had a warehouse on it, and several additional stores had been built along the Main Street frontage of the lot. The 1951 Sanborn map notes that the building at the corner of Main and 39th Avenue was occupied by the Queens County Savings Bank, and included space formerly occupied by a garage on 39th Avenue (Figure 14). The 1980 Sanborn map shows the project site as it appears today: the Queens County Savings Bank building (now an electronics store), which replaced the older bank building in 1955, is shown at the corner of Main and 39th Avenue (Figure 15). The remainder of the project site is illustrated as a parking lot. Of note, 138th Street is now shown as the eastern edge of the project site.

4. Disturbance Record

In places where late nineteenth and twentieth century building and demolition has occurred on the Queens Crossing project site APE, potential archaeological resources may have been disturbed or destroyed. Building footprints and former footprints are known from historic maps (see Figures 6-15), but depths of disturbance, from excavation of foundations and basements, are less well known. A request was made for documents pertaining to the project site at the Queens Borough Department of Buildings office, which houses records pertaining to construction, alteration, demolition of structures in Queens from 1898-present. However, as of this writing the materials on file at this agency were not available for review.

Although building and demolition records for the property currently are unavailable, some quantification of disturbance can be gleaned from soil boring data. The soil borings that were excavated in December 2003 revealed that in areas of the project site that once supported historic buildings (but are now covered by the surface parking lot), historic fill extended from about 3-6 feet below grade, depending on location, and that under the fill was naturally occurring glacial sand. This relatively shallow depth of fill suggests that the former buildings on the property did not have deeply excavated basements. In some cases, it appears the buildings did not have basements at all, but rather rested on shallowly dug foundations. Of particular note, a soil boring placed at the northwest corner of the project site, in the vicinity of the former Garretson seed house, indicated only 3 feet of historic fill, suggesting that this area of the site still may be relatively undisturbed, despite later construction of a warehouse there.

In contrast to the portion of the project site now covered by the surface parking lot, the section of the property that supports the former Queens County Savings Bank building (at the southwest end of the block) appears to have generated more disturbance than the rest of the site. The building, which now houses an electronics store, has a full basement that spans the entirety of the building footprint (Photographs 1 and 2). Although the specific depth of the basement was not provided to the project team, nor available at the Queens Borough Department of Buildings, the site visit suggested that this basement extends at least 10 feet below grade. In addition to the disturbance from basement construction, there

is a buried 5,000 gallon fuel tank, located immediately east of the building, and surrounded by the asphalt parking lot (EEA, Inc. 2003). Other subsurface utilities are also located in this area (Photograph 3).

The site visit documented that the surface parking lot currently is several feet above the adjacent 38th Avenue street level, and is accessed on the north by a short set of stairs (Photograph 4). The remainder of the parking lot is at about the same level as the adjoining streets (Photographs 5 and 6). Historic accounts of the Garretson property also noted that Main Street and 38th Avenue were lower in elevation than the land on which the house and other structures sat (see Figure 5), and that the ground surface naturally sloped from east to west. It appears that the area now supporting the parking lot has not been significantly graded from its original height. However, the uneven surface of the parking lot suggests that subsurface features (which when backfilled later could create potholes or ruptures in the surface) are likely to be found beneath the asphalt.

5. Precontact Archaeological Sensitivity

Although the Flushing area is well documented to have once hosted a sizable precontact period population, and a number of precontact archaeological sites have been recorded in the general vicinity of the project site, the level of disturbance associated with historic use of the land has likely destroyed any remnants of this occupation. A previous archaeological study in the downtown Flushing area indicated that the original ground surface (or upper horizon) where precontact deposits would be most likely to be found, extended only 8-14 inches below the present ground surface (Ceci 1985:20). Soil borings for the Queens Crossing project site APE showed that in locations once supporting historic buildings, fill layers covered the natural ground surface, and would have destroyed any precontact resources. Even in areas of the project site that may not have been impacted by building construction or demolition, basic historic use of the property would likely have disturbed or destroyed any potential precontact resources located at such a shallow depth.

Additionally, although precontact/contact period burials have been documented within several blocks of the project site, there is no reason to believe that this burial site extended beyond the discrete boundaries documented in the historic accounts of the discovery. Finally, the locational pattern for precontact resources in the Flushing area strongly suggests that these sites were situated in very close proximity to perennial water sources, such as Flushing Creek and Flushing Bay, or along a Native American trail. The Queens Crossing project site APE, although within a quarter mile of these water sources and several blocks from the former Native American trail, is not close enough to any of these resources to warrant a designation of high precontact/contact period archaeological potential.

6. Historical Archaeological Sensitivity

The Queens Crossing project site was home to the Bloodgood and Garretson families from the second half of the 1600s through about 1910, and at least during the nineteenth century, it appears there were no known interruptions in occupancy. The property supported both a family house, which was enlarged several times over the years as needs required, a seed house or warehouse, from where Garretson's seed business was conducted, and several other smaller structures that are depicted at various times on historic maps. While the family house was not located within the project site (it was situated immediately northwest, on an adjacent lot), the seed house was located at the northwest corner of the project site, along the 38th Avenue frontage.

The Queens Crossing project site APE primarily represents the open, interior yard portion of the once much larger homestead. The Main Street and 38th Avenue facades of the project site represent close to the original north and west boundaries of the property (street widening and sidewalk construction along both roads has truncated some of the original plot), but the south and east edges of the original property are now under 39th Avenue the western end of the block bounded by 138th Street, 38th and 39th Avenues (the line of 138th Street passed through the eastern portion of the Bloodgood/Garretson land).

Dwellings, along with their associated outbuildings and yards, have the potential to contain resources which may furnish information about past lifeways, urban residential settlement patterns, socio-economic status, class distinctions, ethnicity and consumer choice issues. Such resources could be preserved in privies, cisterns or wells, which in the days before the construction of municipal services - namely sewers and a public water supply - would probably be located in the yard behind the dwelling. Once the abovementioned services were provided by the city, these shafts, no longer in use for their original purposes, would be quickly filled with refuse, providing a valuable time capsule of stratified deposits for the modern archaeologist. They frequently provide the best domestic remains recovered on urban sites. 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.

Exact dates when public water and sewer became available to the Bloodgood/Garretson property are not available. It is known that Flushing was hooked up to a public piped water system in 1874, but many houses did not receive service until the 1880s (Lawson 1952:29). Sewers generally were installed later than piped water; again the exact dates are unknown, but it is presumed to have occurred during the first decades of the twentieth century. Knowing that the initial occupation of the project site occurred at some point during the second half of the 1600s, and extended through the end of the 1800s, it becomes clear that the residents of the property had to rely on wells, cisterns, and privies for over two centuries.

The level of disturbance to the project site would not necessarily preclude the recovery of shaft features within the former yards areas of the property. The soil borings indicated that historic fill ranged from 3-6 feet below grade, and the borings were located exclusively in areas that once contained buildings. Of note, the boring that had the least amount of fill fell within the former footprint of a one-story building, and the boring with the most amount of fill was within the former footprint of a two-story building. None of the borings were located in former open yard areas. The soil borings also indicated that the current water table falls between 33 and 39 feet 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 33-39 foot depth, and more likely were shallower in extent.

Where former occupants of the project site chose to place their wells, cisterns, and privies within their large property cannot be known at this time. Frequently, water sources (such as wells and cisterns) were located close to the dwelling, to ease collection for domestic use, but often there were supplemental wells or cisterns on other parts of properties, used for non-residential purposes, such as watering horses in rear stables. In general, during the nineteenth century privies often were located in the rear of city lots, away from the living areas and in places that were accessible to those who periodically cleaned them out. However, this pattern is not necessarily the case for earlier periods, and it seems reasonable to assume that location of privies may have been more random during the seventeenth and eighteenth centuries. Finally, although wells and cisterns could have been used for many years, privies eventually filled up, and if they were not emptied at regular intervals, would outlive their utility. It seems likely that on a large property such as the Bloodgood/Garretson homestead, there may have been multiple locations for privies over the period of time the various generations lived on the land. Some of these locations may fall within the current project site.

V. CONCLUSIONS AND RECOMMENDATIONS

A. Precontact Period Resources

As the preceding sections have described, there is a low potential for the recovery of precontact/contact period archaeological resources within the Queens Crossing project site APE. No archaeological field testing is recommended for precontact/contact period resources.

B. Historic Period Resources

Potential shaft features predating the introduction of public water and sewer may survive at discrete locations within the project site. Due to their fragility, there is a lesser chance that other historic period archaeological resources have survived, such as fence lines, paths, traces of landscaping and sheet midden scatter, but if disturbance is minimal (such as in former open yard areas that were never built over), these resources could still be present.

Although shaft features could be present even under areas subjected to later construction and demolition episodes, in keeping with recent LPC rulings that indicate archaeological resources are less likely to be found in areas that later supported multiple story buildings, the project team has assigned those portions of the Queens Crossing project site APE that either were never built over, or had only one-story buildings on them a high sensitivity for the recovery of historic period archaeological resources, and has assigned the remainder of the project site, which had two-story structures or other disturbances (such as installation of an underground fuel tank) a low archaeological sensitivity. Figure 16 depicts the areas of the project site designated highly sensitive.

Based upon these conclusions, it is recommended that a program of archaeological testing be undertaken within the project site, at locations to be determined based upon the sensitivity ranking generated by this report, but chosen by the archaeological consultant in consultation with the LPC. The sampling protocol might include a series of backhoe trenches at selected locations, and depending on the results of the trenching, supplemented with archaeological monitoring during construction. All archaeological testing should be conducted according to applicable archaeological standards (LPC 2002), and in consultation with the LPC. RPA-certified professional archaeologists, with an understanding of and experience in urban archaeological excavation techniques, would be required to be part of the archaeological team.

REFERENCES

Anonymous

n.d. *A Brief History of Flushing, Long Island*. On file at the Queens Borough Public Library.

Beauchamp, William M.

1900 "Aboriginal Occupation of New York." *New York State Museum Bulletin*, No. 32, Vol. 7 (article reprinted in 1976). Albany.

Beers, F.W.

1873 *Atlas of Long Island, New York*. New York.

Boesch, Eugene J.

1997 *Archaeological Evaluation and Sensitivity Assessment of the Prehistoric and Contact Period Aboriginal History of the Borough of Queens, New York City*. Mss on file at the New York City Landmarks Preservation Commission.

Bolton, Reginald Pelham

1922 "Indian Paths in the Great Metropolis." *Indian Notes and Monographs*, Museum of the American Indian, Misc. 23.

1934 *Indian Life of Long Ago in the City of New York*. New York.

1975 *New York City in Indian Possession*. Museum of the American Indian, Heye Foundation, New York.

Brodhead, John Romeyn

1853 *History of the State of New York*, vol.1. Harper and Brothers, New York.

Ceci, Lynn

1985 *Historical Archaeology at the John Browne House*. Department of Anthropology, Queens College, CUNY, Flushing.

Chapman Publishing

1896 *Record of Queens County*. Chapman Publishing Co.

City Environmental Quality Review (CEQR)

2001 *City Environmental Quality Review Technical Manual*. City of New York, Mayor's Office of Environmental Coordination. October, 2001.

City of New York, Borough of Queens, Department of Finance, City Register (City Register)

1910 Liber 1668, pages 261 and 265.

1910 Liber 1680, page 271.

1910 Liber 1693, page 105.

1910 Liber 1726, page 206.

1920 Liber 2294, page 35.

Conner

1852 *Map of Long Island.*

Converse Engineering Consultants

2004 *Geotechnical Investigation Report for Mixed Use Development (QCSB 39th Avenue Development) Project, 38-25 Main Street, Flushing, New York.* Prepared for TDC Development & Construction Group.

EEA, Inc.

2003 *Environmental Site Assessment of the Property Located at 38-25 Main Street, Block 4978, Lot 101, Flushing, New York.* Prepared for TDC Development & Construction Corporation, 133-32 41st Road, Flushing, New York.

Eisenberg, Leonard

1978 "Paleo-Indian Settlement Patterns in the Hudson- Delaware River Drainages." *Occasional Publications in Northeastern Anthropology*, No. 4.

Federal Census for New York City

1800 On microfilm and available electronically at the New York Public Library.

1810 On microfilm and available electronically at the New York Public Library.

1820 On microfilm and available electronically at the New York Public Library.

1830 On microfilm and available electronically at the New York Public Library.

1840 On microfilm and available electronically at the New York Public Library.

1850 On microfilm and available electronically at the New York Public Library.

1860 On microfilm and available electronically at the New York Public Library.

1870 On microfilm and available electronically at the New York Public Library.

1880 On microfilm and available electronically at the New York Public Library.

1900 On microfilm and available electronically at the New York Public Library.

1910 On microfilm and available electronically at the New York Public Library.

1920 On microfilm and available electronically at the New York Public Library.

Final Maps of the Borough of Queens, City of New York, Office of the President of the Borough of Queens, Topographical Bureau.

1911 Sections 39 and 40.

Flushing Evening Journal

1910 "Old Landmark is Torn Down." *Flushing Evening Journal*, March 24, 1910.
Page 6.

Furman, Gabriel

1874 *Antiquities of Long Island*. J.W. Bouton, New York.

Geismar, Joan H.

1996 *1A Archaeological Assessment, Downtown Flushing Rezoning Project, Flushing, Queens County, New York - Soft Sites A3, B1, B2, C1, C2.*
95DCP052QUSF 1788.

Grumet, Robert Steven

1981 *Native American Place Names in New York City*. Museum of the City of New York.

Gwynne, Gretchen Anderson

1982 "Prehistoric Archaeology at Mount Sinai Harbor, Suffolk County, New York." In *The Second Coastal Archaeology Reader*, volume V. James E. Truex, editor. SCAA, Stony Brook, New York.

Innes, J.H.

1908 *Old Flushing Village*.

Kearns, Betsy and Cece Kirkorian

1985 *Phase I-A Archaeological Impact Report for the Sportsplex Project*. Ms. on file with AKRF, Inc., NYC.

Kearns, Betsy, Cece Kirkorian, Vincent Seyfried and Richard Schaefer

1988 *Phase IA Archaeological Assessment Report for the Flushing Center Project, Queens, New York, CEQR 86-337Q*. Prepared by Historical Perspectives, Inc. for AKRF, Inc.

Kearns, Betsy, Cece Kirkorian and Richard Schaefer

1989 *Phase 1A Archaeological Assessment Report for the Newtown Creek Water Pollution Control Plant Upgrading, Greenpoint, New York, CEQR No.89-170K.* Ms. on file with Greeley and Hansen, NYC.

Landmarks Preservation Commission (LPC)

2002 *Landmarks Preservation Commission Guidelines for Archaeological Work in New York City.*

Lawson, Harriet Dondero

1952 *Olde Flushing.* Dondero-Lawson Co., New York(?).

Mandeville, G. Henry

1860 *Flushing Past and Present: A Historical Sketch.* Home Lecture Committee of 1857-8, Flushing.

Munsell

1882 *History of Queens County, New York.* W.W. Munsell and Co., New York.

Parker, Arthur

1922 *The archeological history of New York.* University of the State of New York, Albany.

Ritchie, William A.

1980 *The Archaeology of New York State.* Revised edition. Harbor Hill Books, New York.

Sanborn Map Company

1886 *Insurance Maps of the Borough of Queens.* New York.

1892 *Insurance Maps of the Borough of Queens.* New York.

1903 *Insurance Maps of the Borough of Queens.* New York.

1917 *Insurance Maps of the Borough of Queens.* New York.

1934 *Insurance Maps of the Borough of Queens.* New York.

1951 *Insurance Maps of the Borough of Queens.* New York.

1980 *Insurance Maps of the Borough of Queens.* New York.

Saxon, Walter

1978 "The Paleo-Indian on Long Island." *New York State Archaeological Bulletin* 57(3).

Schuberth, Christopher J.

1968 *The Geology of New York City and Environs*. Natural History Press, Garden City,
New York.

Sheel, John B.

1963 "The 1964 World's Fair Area as it was in the Early 1900's," *Nassau County Historical Society Journal*. Vol. XXIV, 4, Fall pp1-13.

1964 "The 1964 World's Fair Area as it was in the Early 1900's, Part II," *Nassau County Historical Society Journal*. Vol. XXV, 1, Winter p11-22.

Smith, Elijah

1841 *Map of the Village of Flushing, Queens County, New York*.

Smith, Carlyle Shreeve

1950 *The Archaeology of Coastal New York*, Anthropological Papers of the American Museum of Natural History, 43(2), New York.

Solecki, Ralph

1941 "The Indians Lived Here." *So This is Flushing*, Newsletter, Flushing Historical Society, October.

Thompson, Benjamin Franklin

1918 *History of Long Island from its Discovery and Settlement to the Present Time*, 3 vol., 3rd edition. Robert H. Dodd, New York.

United States Coast and Geologic Survey

1838 *Topographical Map of New York*.

Valles, Madeleine Barbara

1938 *A History of Flushing*. J.H. Ridenour, Flushing.

Waller, Henry D.

1899 *History of the Town of Flushing, Long Island, New York*. 1975 Reprint, Harbor Hill Books, Harrison, NY.

Walling, Henry Francis

1859 *Topographic Map of the Counties of Kings and Queens, New York*.

Wyatt, Ronald J.

1982 "The Archaic on Long Island." In *The Second Coastal Archaeology Reader*, volume V. James Truex, editor. SCAA, Stony Brook, New York.

FIGURES

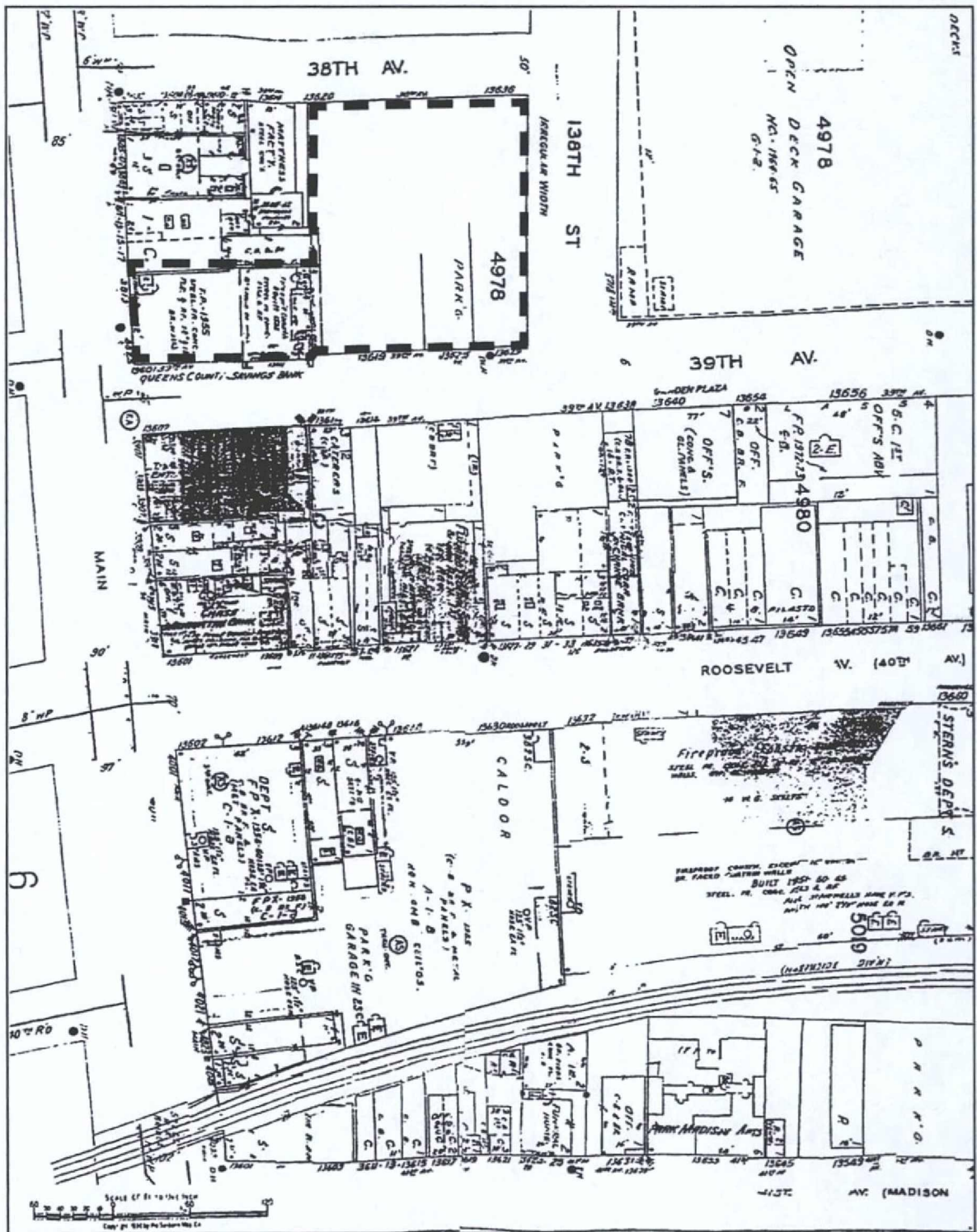


Figure 2: Queens Crossing Mixed Use Development Site APE. [Sanborn 1995].
(Project site outlined with a dashed line)

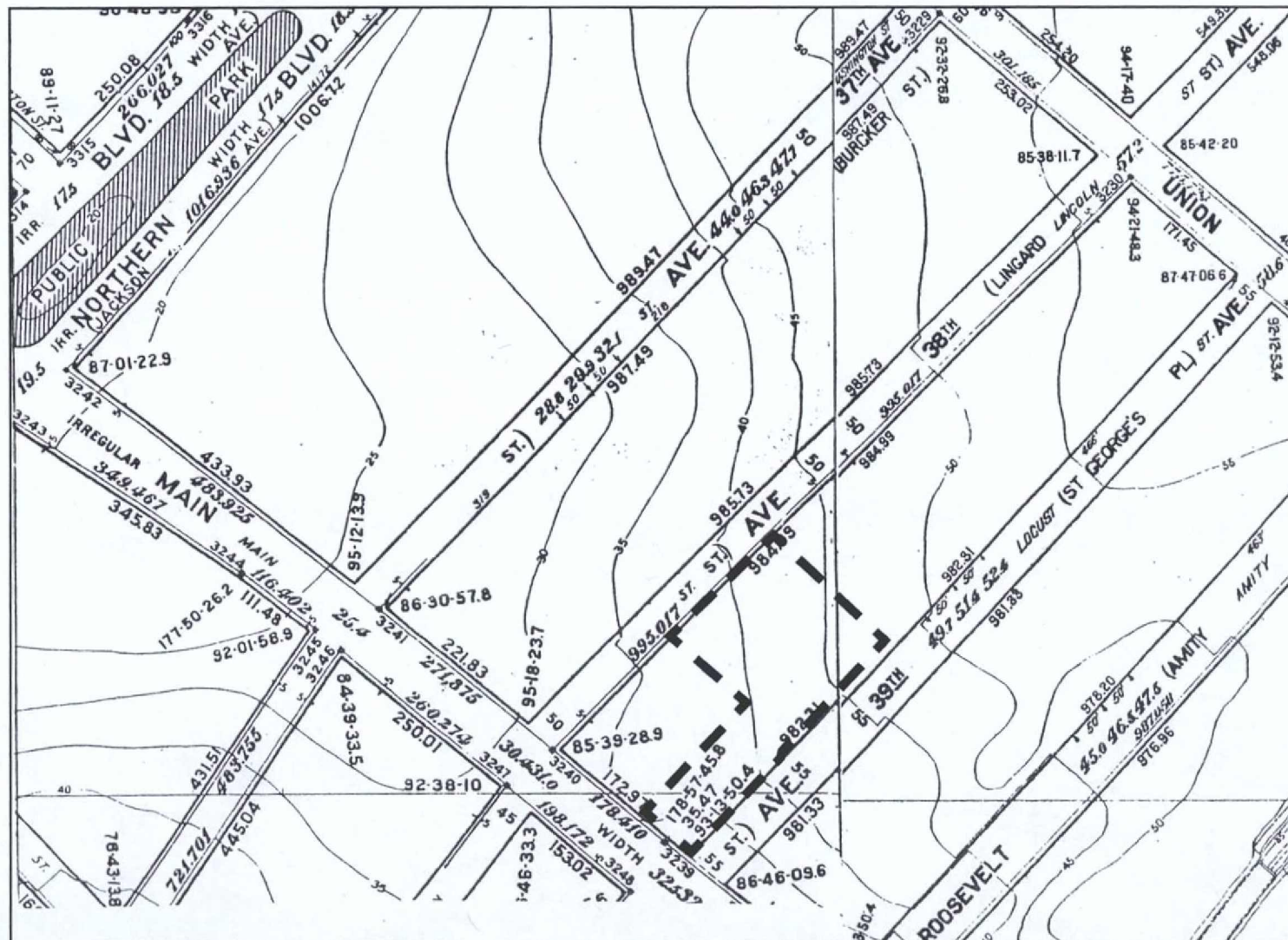


Figure 4: *Final Maps of the Borough of Queens*. Queens Borough Topographical Bureau 1911.
(Project site outlined with a dashed line)

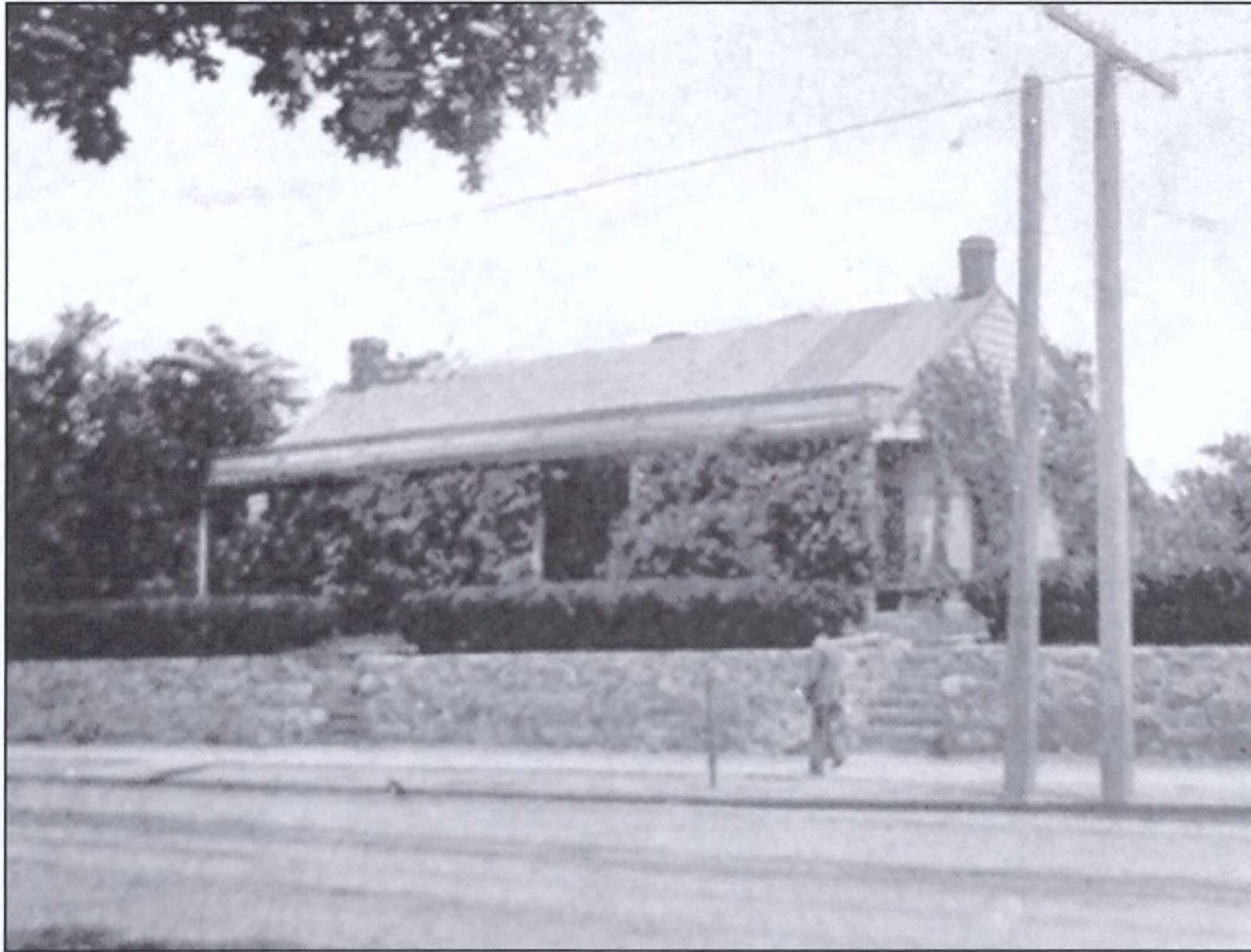


Figure 5: *A Brief History of Flushing, L. I.* (Plate IV, 4) Anonymous n.d.

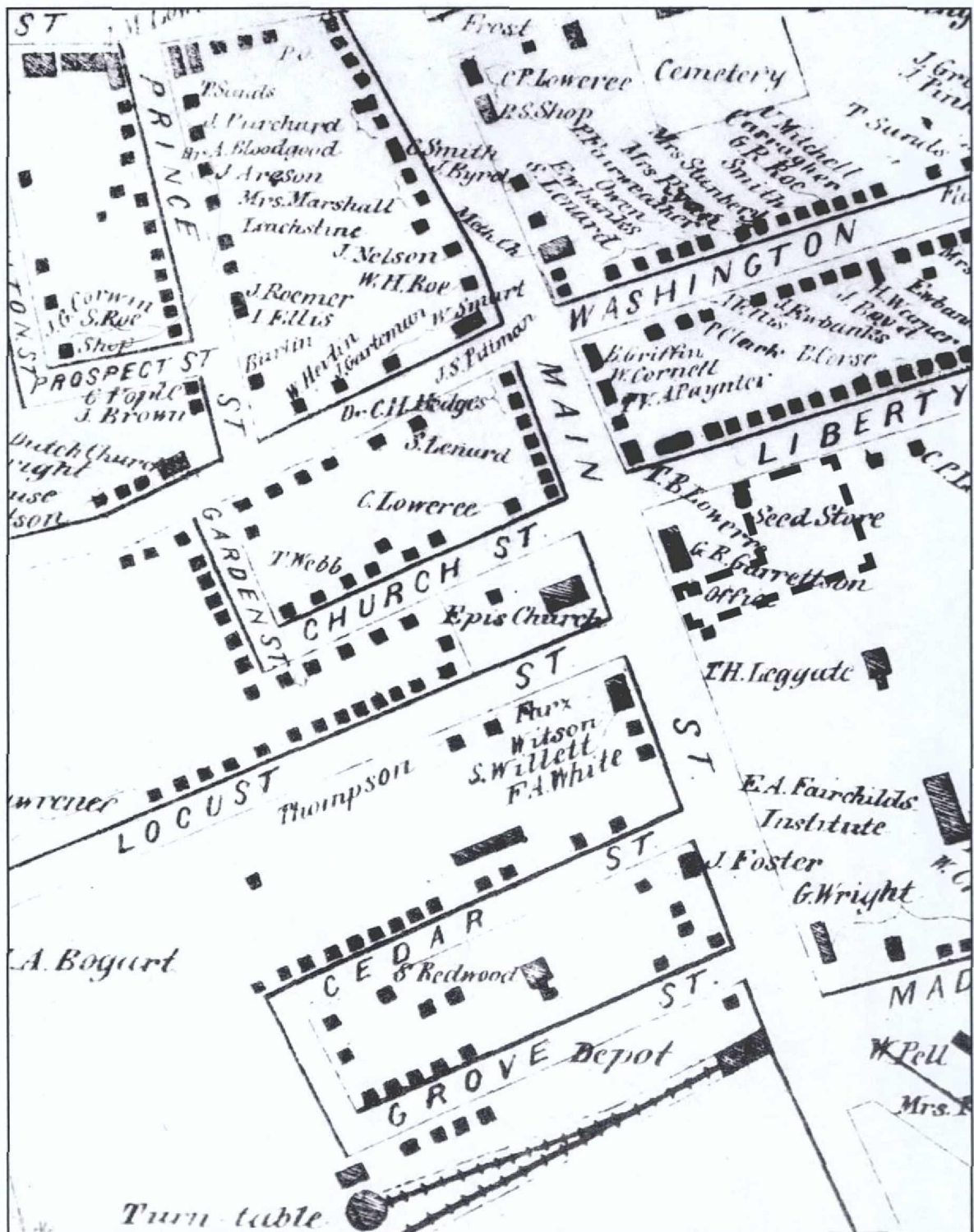


Figure 7: Topographic Map of the Counties of Kings and Queens, New York. Walling 1859.
(Project site outlined with a dashed line)

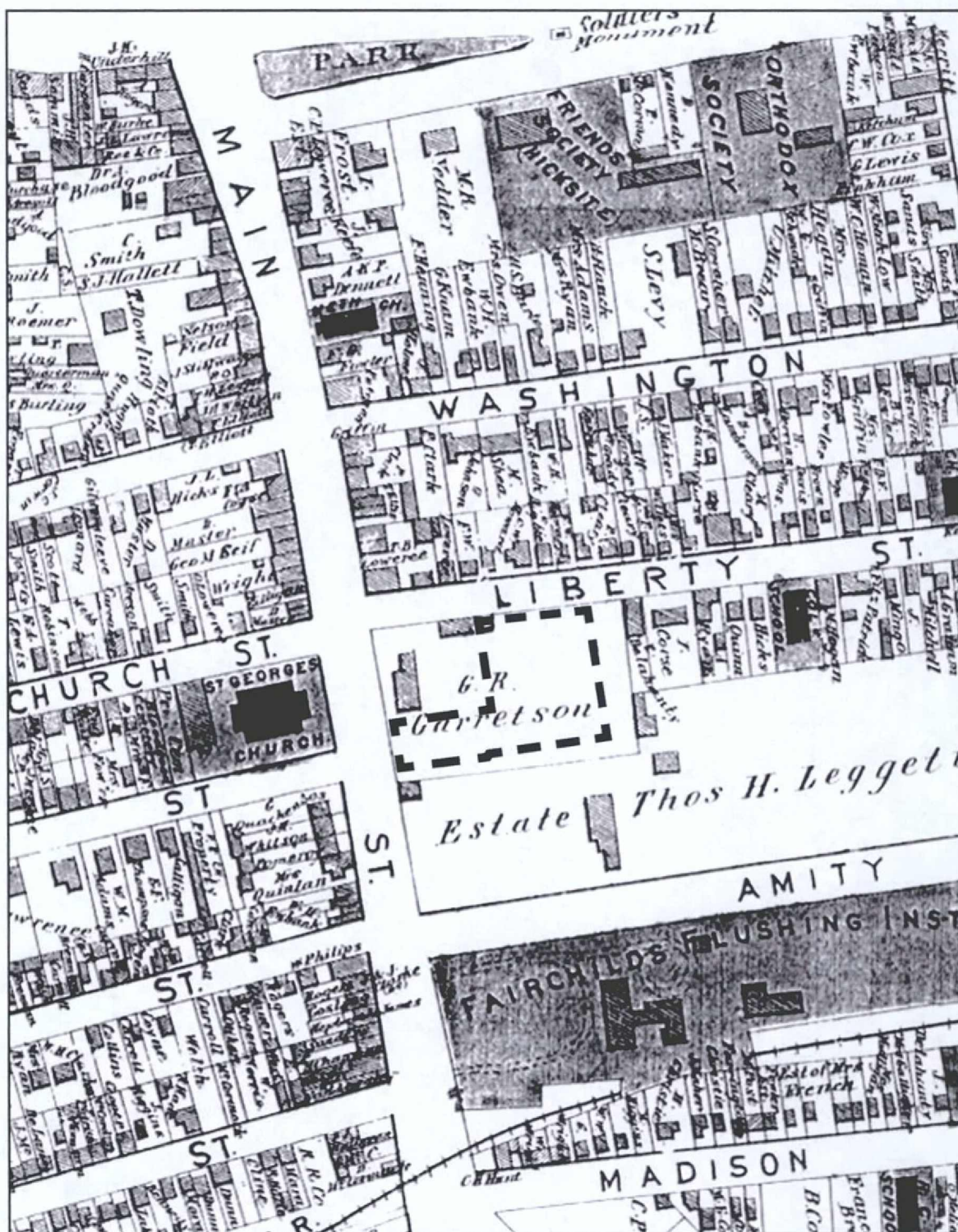


Figure 8: *Atlas of Long Island*. Johnson 1873.
 (Project site outlined with a dashed line)

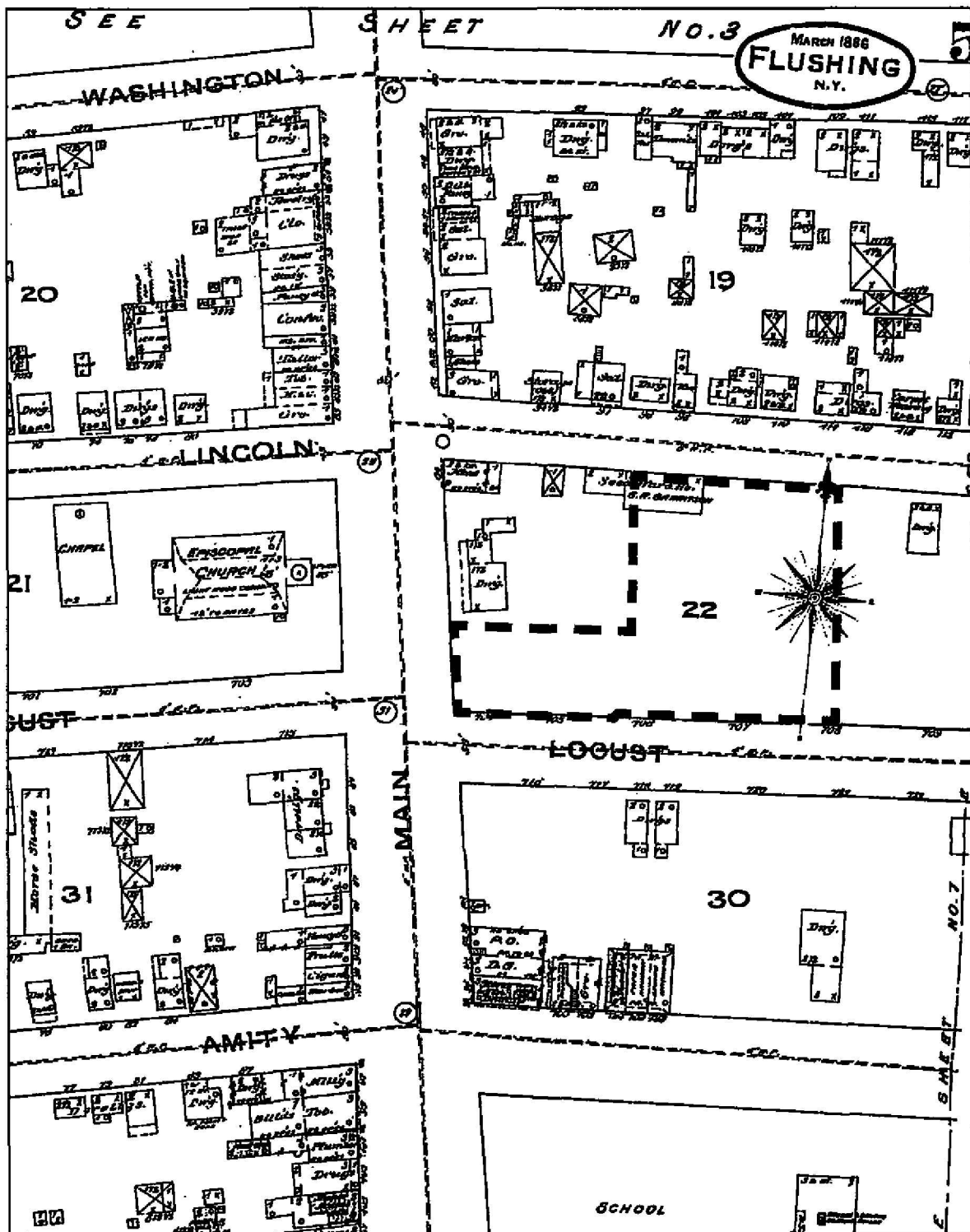


Figure 9: *Insurance Maps of the Borough of Queens*. Sanborn 1886.
(Project site outlined with a dashed line)

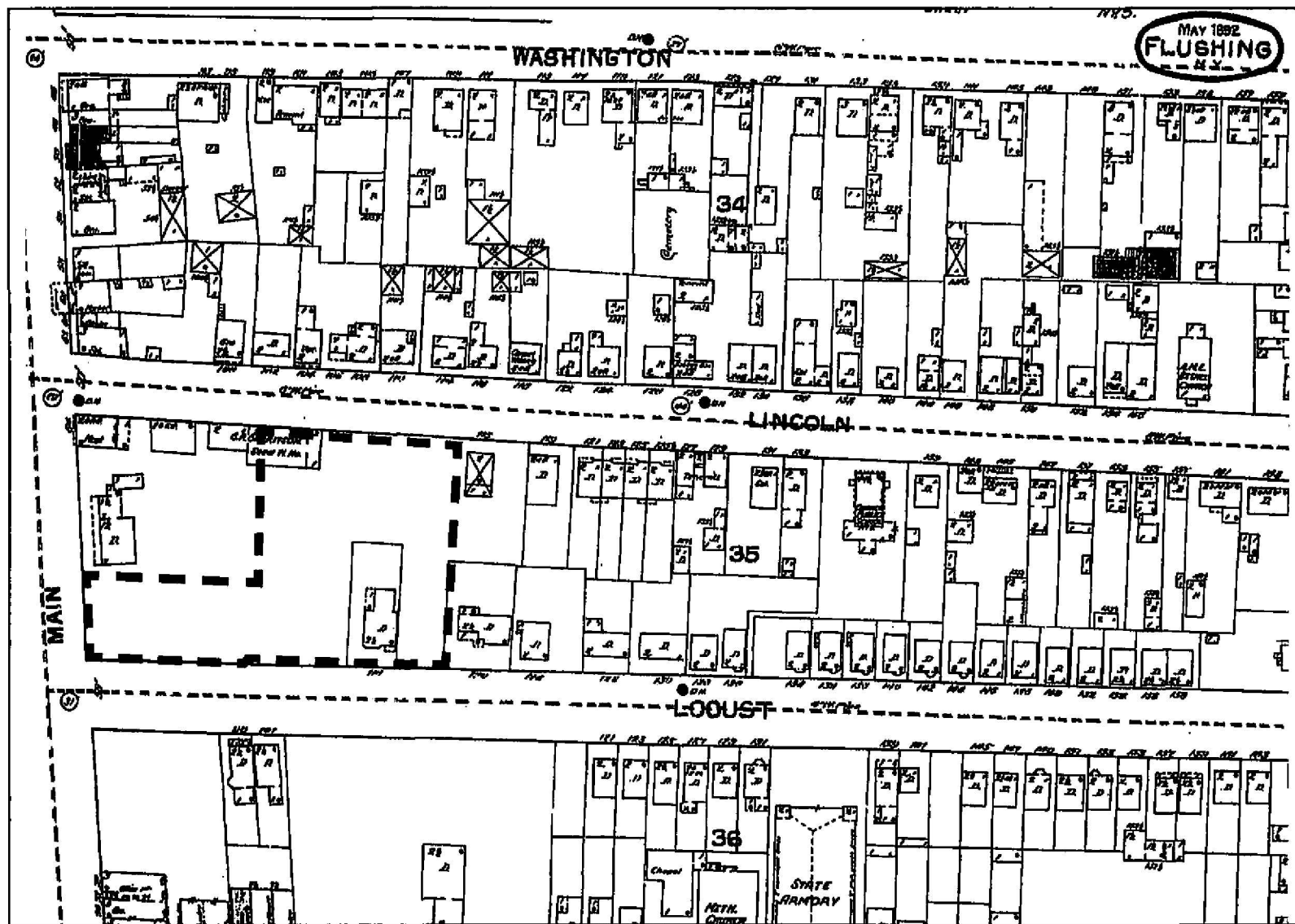


Figure 10: *Insurance Maps of the Borough of Queens. Sanborn 1892.*
 (Project site outlined with a dashed line)

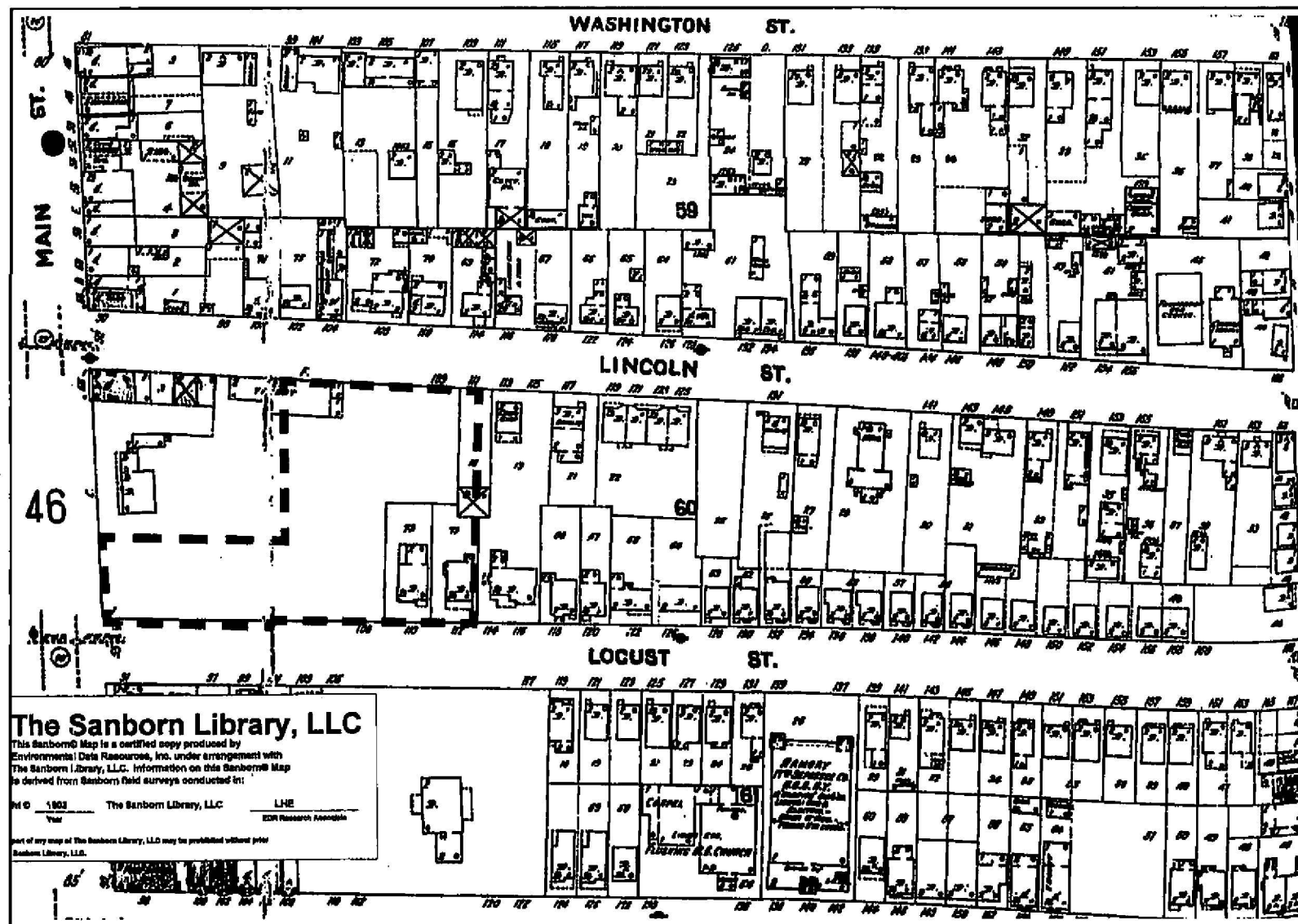


Figure 11: *Insurance Maps of the Borough of Queens*. Sanborn 1903.
 (Project site outlined with a dashed line)

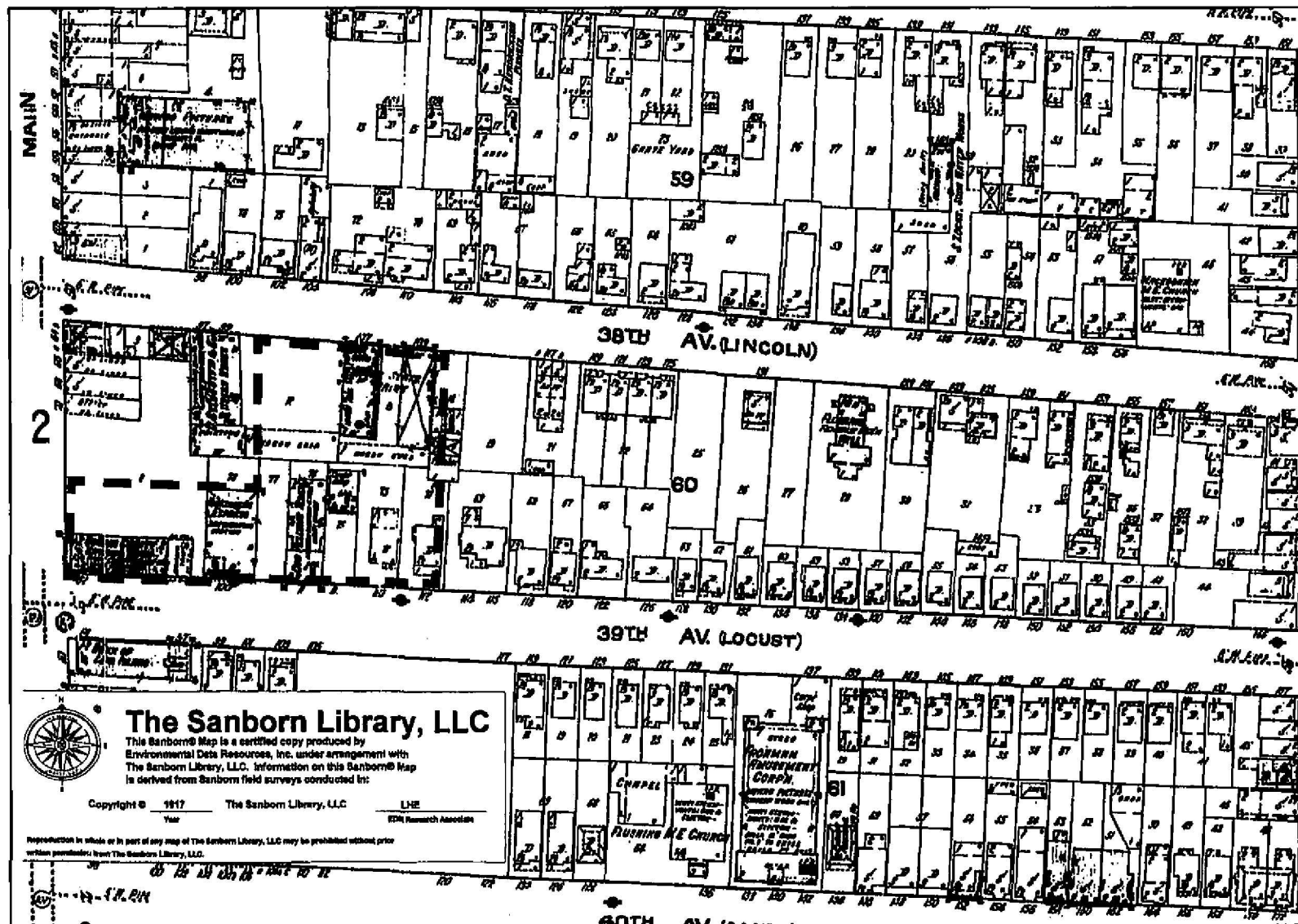


Figure 12: Insurance Maps of the Borough of Queens. Sanborn 1917.
(Project site outlined with a dashed line)

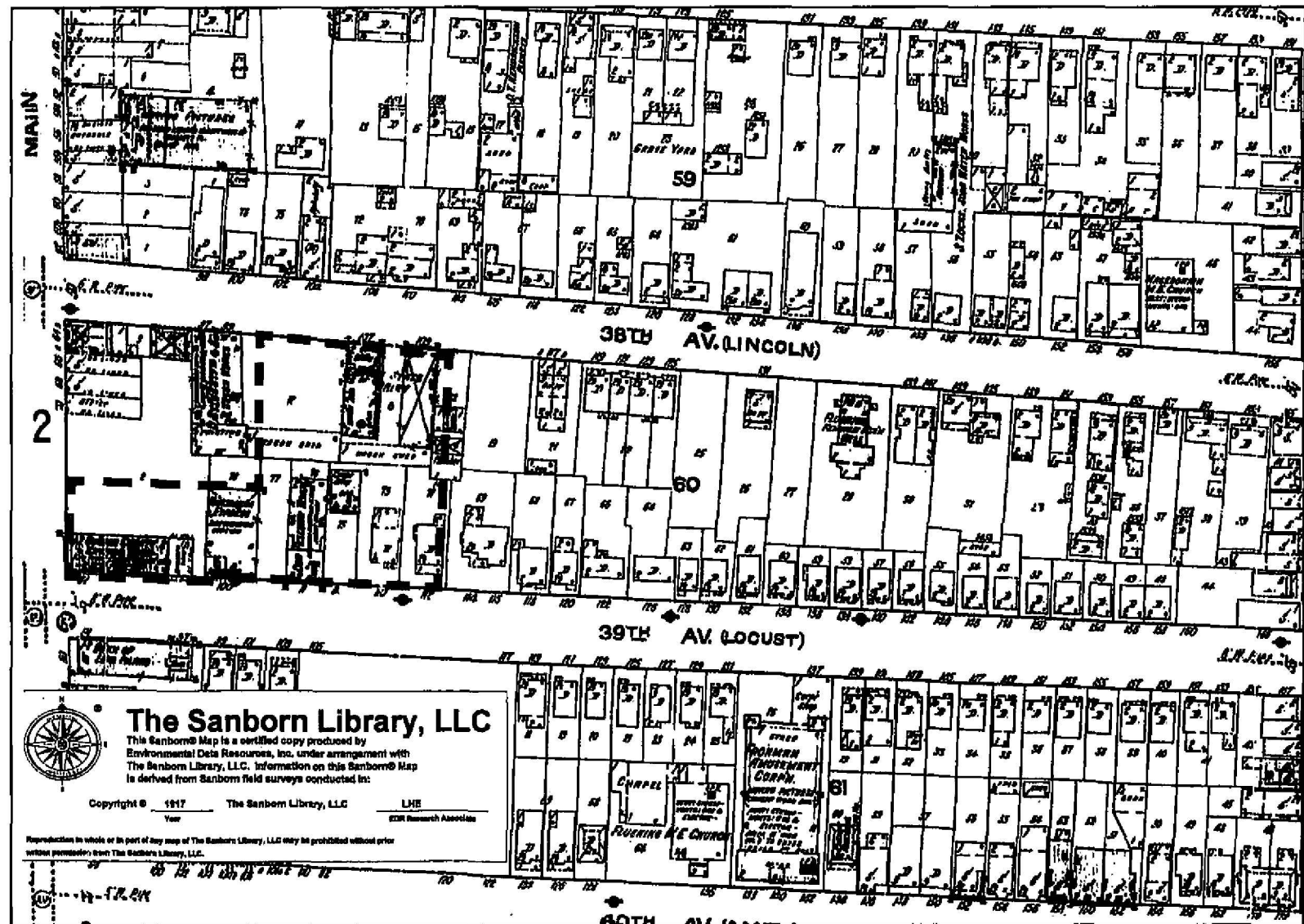


Figure 13: Insurance Maps of the Borough of Queens. Sanborn 1934.
(Project site outlined with a dashed line)



Figure 14: Insurance Maps of the Borough of Queens. Sanborn 1951.
(Project site outlined with a dashed line)

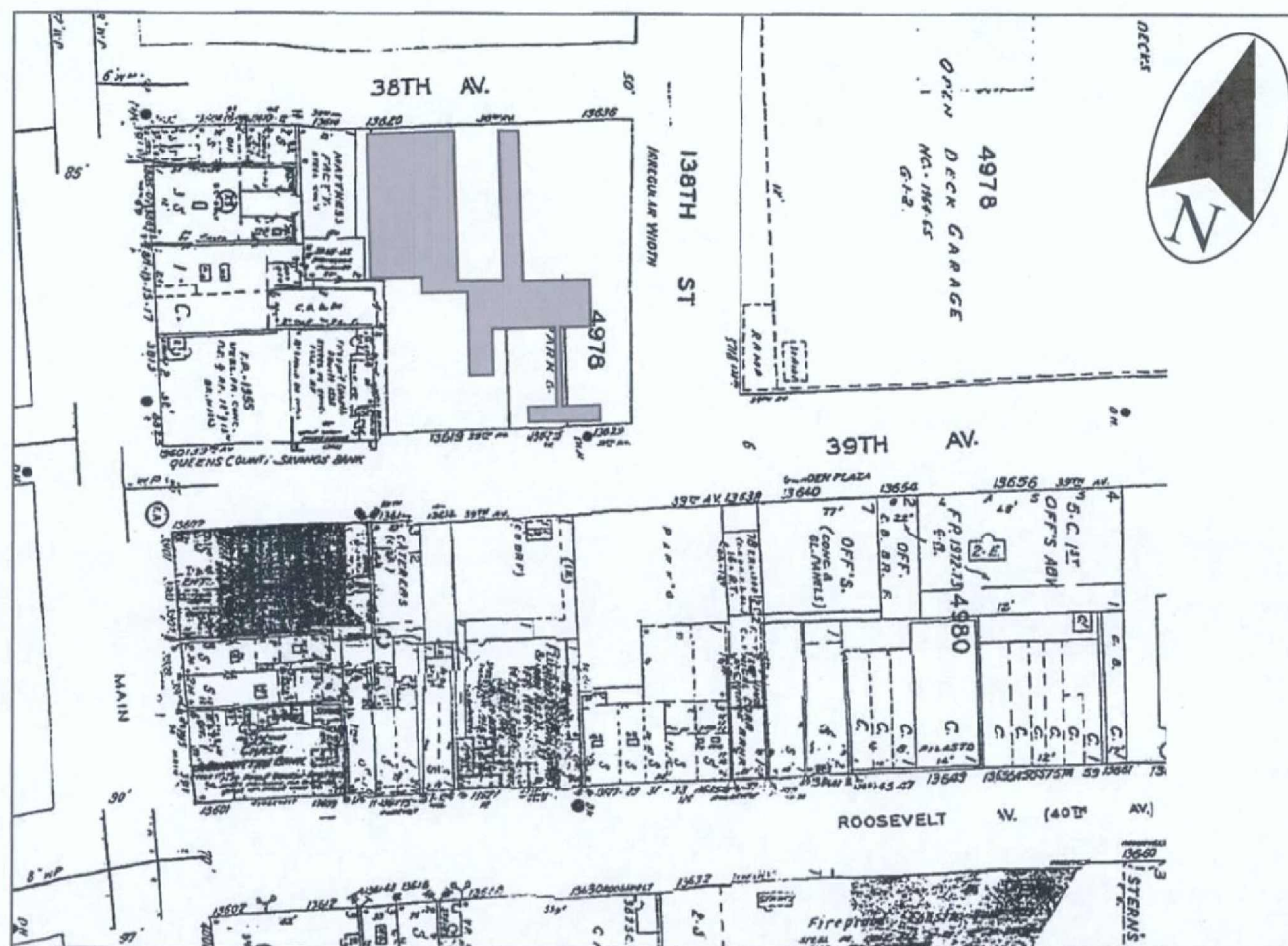


Figure 16: Queens Crossing Mixed Use Development Site APE with archaeologically sensitive areas delineated by the shaded box. [Sanborn 1995].



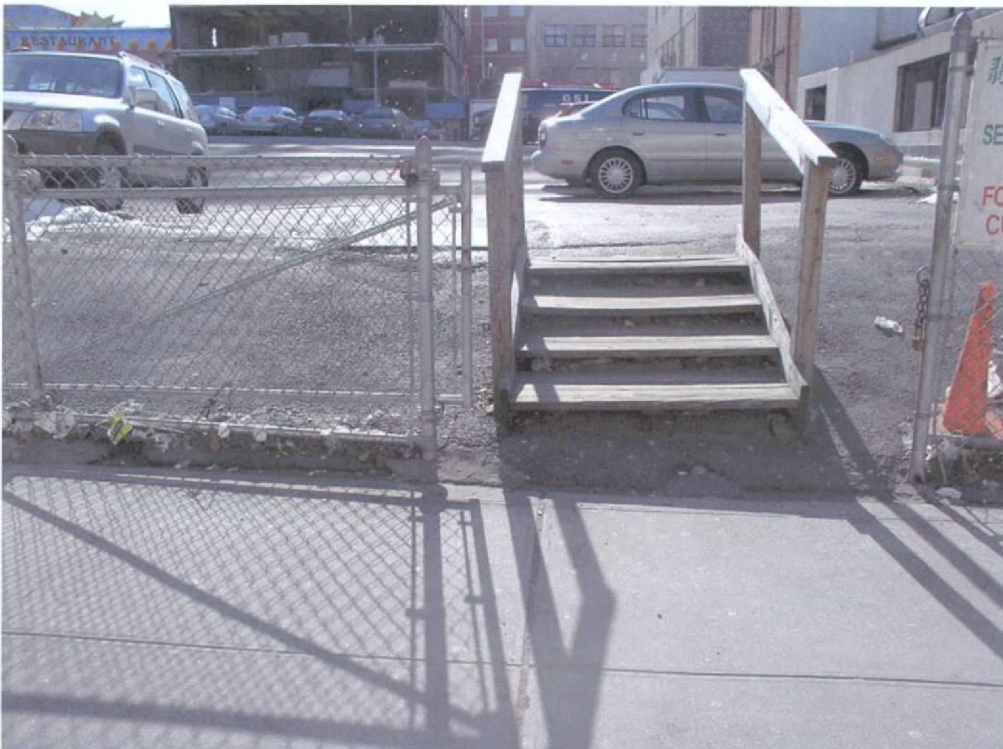
Photograph 1: Former Queens County Savings Bank (now an electronics store) at southwest corner of Main Street and 39th Avenue, looking east.



Photograph 2: Former Queens County Savings Bank (now an electronics store) at southwest corner of Main Street and 39th Avenue, looking north.



Photograph 3: Southeast corner of former Queens County Savings Bank building showing subsurface utilities within parking lot, looking west.



Photograph 4: Stairs leading up to parking lot along 38th Avenue, looking south.



Photograph 5: Parking lot with former Queens County Savings Bank building in background, looking west along 39th Avenue sidewalk.



Photograph 6: Looking northwest across parking lot. Buildings along north side of 38th Avenue in background.