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**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
EAST RIVER CSO FACILITY PLANNING PROJECT - CONTRACT II**

**PHASE IA ARCHAEOLOGICAL SURVEY AND DOCUMENTARY
RESEARCH STUDY**

**ALLEY CREEK CSO ABATEMENT FACILITIES PROJECT -
SPRINGFIELD BOULEVARD / 46TH AVENUE CONDUITS
AND OUTFALL SEWER, AND
CSO STORAGE / CONVEYANCE CONDUIT**

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Prepared by

URS Greiner Woodward Clyde

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May 2000

**PHASE IA ARCHAEOLOGICAL SURVEY AND DOCUMENTARY RESEARCH
STUDY, ALLEY CREEK CSO ABATEMENT FACILITIES PROJECT-
SPRINGFIELD BOULEVARD/46TH AVENUE CONDUITS AND OUTFALL
SEWER, AND CSO STORAGE/CONVEYANCE CONDUIT
BOROUGH OF QUEENS, NEW YORK CITY**

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May 2000

New York City Department of Environmental Protection
ALLEY CREEK CSO ABATEMENT FACILITIES PROJECT

May 2000

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New York City Department of Environmental Protection
ALLEY CREEK CSO ABATEMENT FACILITIES PROJECT

May 2000

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I. INTRODUCTION

As a result of facilities planning to prepare a comprehensive combined sewer overflow (CSO) abatement plan for discharges into Alley Creek in the vicinity of existing Outfall TI-7, the New York City Department of Environmental developed a project referred to as the Alley Creek CSO Abatement Facilities Project. The objectives of this project are to: (1) alleviate surcharging of sewers and subsequent street flooding within areas located immediately west and north of Oakland Ravine and Lake, and Alley Park along Springfield Boulevard and 46th and 56th Avenues; and (2) reduce CSOs into Alley Creek in the vicinity of Outfall TI-7.

One aspect of the project, referred to as the Springfield Boulevard/46th Avenue Conduits and Outfall Sewer, includes improvements within the combined sewer system upstream of the existing outfall to increase the hydraulic capacity of the system and to enhance the capability of stormwater runoff to enter the system, thereby alleviating the sewer surcharging and street flooding conditions. In general, these planned improvements include; construction of new combined sewer conduits parallel to existing combined sewers along reaches of Springfield Boulevard and 46th Avenue; constructing a new outfall sewer, consisting of double and triple barrel sections, across Alley Park from the intersection of 223rd Street and 46th Avenue to a location north of Northern Boulevard immediately east of the Cross Island Parkway and Northern Boulevard interchange, and across vacant land to Alley Creek to reinforce the hydraulic capacity of the existing outfall sewer; installing new storm sewers along reaches of 53rd and 56th Avenues, Luke Place, Bell Boulevard and 217th Street in the area immediately west of the intersection of Springfield Boulevard and 56th Avenue; installing additional catch basins in selected areas along 46th and 56th Avenues, Springfield Boulevard, Bell Boulevard and Luke Place; constructing a new outfall structure on Alley Creek to serve the new outfall sewer; performing minor restoration of the existing Outfall TI-7 structure; and restoring the bed of Alley Creek in the vicinity of the existing outfall to minimize potential scour conditions in the future.

The other part of the project, referred to as the CSO Storage/Conveyance Conduit, includes plans to provide 3 million gallons of storage volume required for CSO abatement of discharges into Alley Creek. This volume of CSO will be captured and stored during storm events within the new outfall sewer described above. Following each storm event, captured CSO will be diverted by gravity to Old Douglaston Pumping Station, from which the captured CSO will be returned to the combined sewer system for conveyance to the Tallman Island Water Pollution Control Plant for treatment. To achieve this objective, the facilities consist of a series of in-line inflatable dams installed at three (3) locations within the double and triple barrel sections of the new outfall sewer; a 30-inch diameter sewer extending from the new outfall sewer to the wet well of the Old Douglaston Pumping Station to empty the outfall sewer of captured CSO; and any necessary modifications to the Old Douglaston Pumping Station to allow return of the captured CSO to the combined sewer system.

At present, the improvements will be constructed through two separate contracts. The first phase of the project construction (Springfield Boulevard) is being designed with construction scheduled to commence in July 2001. The second phase (CSO facilities) of the project is scheduled to commence construction in October 2002.

A documentary research study and a Phase IA survey was conducted in order to evaluate the archaeological potential of the Area of Potential Effect (APE) associated with the project. This work was performed following the New York City Landmarks Preservation Commission (LMPC) guidelines. This report presents the results of the documentary research and the Phase IA field effort.

II. DOCUMENTARY RESEARCH

To develop the site history for the project area, research was conducted at the New York Public Library, Main Branch - Map Division; Queens Borough Branch of the New York City Public Library - Archives Department; the New York Historic Landmarks Preservation Commission; and the Museum of New York. Inspection of previous cultural resource survey reports and site forms was conducted at the LMPC. In addition, the site files at the State Preservation Office in Albany, New York were consulted. To ascertain the history of land use for the project area, historic maps of the Borough of Queens, on file at these repositories were also studied.

Prehistory

In general, throughout prehistory, the native inhabitants of Queens utilized the floral and faunal resources present along Little Neck Bay and its associated saltwater and brackish marshes, and tidal creeks. Information from sites dating to the Paleo-Indian Period are rare in the area of Queens considering that they would have been inundated by rising sea levels at the end of the last glacial period. While there is minimal information on Early and Middle Archaic occupations, Late Archaic sites are relatively well represented. Woodland period occupations, especially Late Woodland sites, are also well represented in Queens. Further, there are documented European encounters with Native American settlements located adjacent to the area's riverine and coastal water resources. In essence, undisturbed areas adjacent to the bay have a high potential to contain prehistoric sites.

Prehistoric Sites in the vicinity of the Project Area

Although it is not anticipated that work associated with the proposed action would impact any prehistoric resources within and adjacent to the project area, numerous sites were identified during the documentary research within the general vicinity. These sites are listed below. Future work associated with the Alley Creek CSO Abatement Facilities Project involving the Oakland Ravine Stormwater Treatment System Project will involve archaeological investigations at some of these sites. It is anticipated that later construction efforts may have the potential to impact intact prehistoric archaeological resources in the area.

Prehistoric Site # 721

Prehistoric Site #721 is located on the west side of the southernmost point of Oakland Ravine below Springfield Boulevard and Public School (PS) 203 (Oakland Gardens Elementary

School). Background research indicates that this site was buried in 1968 during the construction of the Queensborough Community College. The site was previously excavated by members of the Metropolitan Chapter of the New York State Archaeological Association. According to Kaeser, the artifacts found are indicative of a Late Archaic occupation which later gave rise to an Early Woodland seasonal residence whose inhabitants exploited the shellfish beds along the bay (Kirkoran 1995:13).

Prehistoric Site #724

Prehistoric site #724 is located on the northwest edge of Oakland Lake, south of 46th Avenue and east of Springfield Boulevard. According to Venuto, archaeological testing identified a temporary campsite with a shell midden containing artifacts dating to the Late Archaic, Transitional, and Early to Late Woodland Periods (Kirkoran 1995:13).

Prehistoric Site #727

This site is located on the east side of the Cross Island Parkway on the Alley Pond Environmental Center (APEC) property. Detailed data are not available for this site, though it is possible that this is the same site recorded by Ralph Solecki circa 1931. He described the site as having a refuse midden, possibly prehistoric, and a colonial burial ground. The construction of the Parkway has since obliterated the site (Kirkoran 1995:13).

Prehistoric Site #4543

Prehistoric Site #4543 was situated both east and west of the Cross Island Parkway. Arthur C. Parker placed the site just west of Alley Creek on the east side of the Parkway and described it as exhibiting "traces" of prehistoric habitation (Kirkoran 1995:12). This would have been an ideal location for prehistoric habitation. The site is near a water source and high enough above it for flooding not to be continually problematic and is therefore expected to be sensitive to disturbance during the project's construction.

History

The eastern portion of the project area includes a section known as "The Alley", so named because it was the only route through the meadows and creek that linked the north shore villages with Flushing. Considered a part of Flushing Village until 1898, Bayside was established as a settlement during the seventeenth century three miles north of Flushing Village. The earliest settlers to the area known as Bayside are believed to have been the Foster family. Puritans from England, the Fosters settled near Alley Creek where Thomas Foster built a stone house (Van Siclen 1991). Thomas Foster also constructed a tidal mill in 1752 that was purchased in the 1820s and renamed Buhrman's Mill. The mill was destroyed by fire in 1926.

In 1641 John and Stephen Hicks arrived from Plymouth Massachusetts. John built his house near Glen Oaks while Stephen, like the Fosters, built his near Alley Creek. The Hicks House, considered to be one of the oldest houses in Queens, was demolished shortly before

the construction of the Cross Island Parkway. Stephen's nephew Thomas inherited the house and was granted approximately 4,000 acres that included present day Little Neck and Douglaston. The Hicks, who were Quaker, built a gristmill in the seventeenth century near Alley Creek. It was operated by water from a nearby spring fed pond (Van Siclen 1991). The mill passed to the Tallman family and was renamed Tallman's Mill. During the early nineteenth century, the mill was known as Helwett's Mill.

George Douglas purchased the mill in 1836 and continued operation until it was destroyed by fire in the nineteenth century. Called the Douglas Mill, the purchase also included the pond, which the local residents named Douglas Pond. During the 1850s, Douglas's son, W.B. Douglas, developed a residential community known as "Marathon." (Figure 1). The venture was not successful, even though it appears on the 1859 Walling Topographic Map. A portion was donated as a station stop for the Long Island Railroad. The station is still extant and the area surrounding it was changed from Little Neck to Douglaston.

Queensborough Community College is located on a former site referred to as "The Oaks" estate. The estate included the nursery operated by the Hicks family during the eighteenth century as well as the Hicks stone residence and mill. The mansion, which once stood on the property south of the Hicks residence, is alleged to have been built in 1847 with Isaac Osgood listed as the owner in the 1850s (Dripps 1852). The mansion appears to have been demolished sometime after 1934. Frederick Newbold Lawrence purchased the property in 1857 and his brother-in-law Ker Boycè built a small yellow house dubbed "Palmetto." It was destroyed by a fire in the 1930s. In 1872, W.H. Sanger, who continued the nursery business, purchased the house. John Taylor and Peter Henderson followed him. Taylor had married Ker Boycè's daughter and was a respected horticulturist while Henderson was known as a first rate seedsman. By 1882, John Taylor was the sole owner and had increased the acreage to 325 acres. It contained twenty-four greenhouses heated by warm water pipes (Munsell 1882:44), (Figure 2). Part of this acreage included the Valentine Estate, which became the Oakland Golf Club in 1890 (Figure 3). The site is now part of the Queensborough Community College Campus. The eastern portion of the Taylor Estate was divided into lots and auctioned in 1925 (Figure 4).

The Bayside Ferry operated from The Alley across Little Neck Bay during the nineteenth century. Prior to 1866, The Alley was considered the commercial center of Bayside. However, by 1868 the commercial center had shifted to Bell Boulevard, two blocks north of Northern Boulevard where the railroad depot was located. Bayside was never extensively settled so that by the mid-nineteenth century, there was a large amount of open land that precipitated an era of subdivisions starting in 1869.

In 1824, Abraham Bell, a wealthy shipping merchant moved to Bayside and purchased a tract of land from Timothy Matlack. The tract extended from the Fort Totten area, south to the western end of the project area. The Bell Farm was in operation until 1900 when it was purchased by Richery Finley and subdivided. The area remained mostly rural until the middle of the nineteenth century when a resort movement occurred. Bayside experienced a wave of popularity and urbanization that lasted from the nineteenth century into the 1920s.

The area experienced a lull until the construction of the Cross Island Parkway when development resumed.

In 1857 John Straiton and A. Storm built a cigar factory on Bell Boulevard. The three-story brick building was destroyed by fire in 1890. A long, two-story factory was subsequently built on the northeast corner of 43rd Avenue and Bell Boulevard. The Bohemian cigar makers lived on the first floor below the factory, which was located on the second floor. As the operation grew, another building was built along the "Back Row" at 214th Place and was used as a dormitory that housed cigar makers. The building is extant and located behind the Bayside Women's Club. Research indicates that during the period 1857-1860 Straiton and Storm added a partner by the name of Schmitt. From 1860-1871, Straiton and Storm were listed as the largest cigar manufacturers in the United States. In 1871, Straiton and Storm offered for sale 591 building lots from the railroad southwest to Broadway (Northern Boulevard) and Bell Boulevard then east to 10th Street (221st Street).

Historic Sites in the Vicinity of the Project Area

Several historic sites have been documented in the vicinity of the project area. The following discussion examines the potential of these sites to be present (as archaeological sites) in the project area since recent development.

Blacksmith Shop

The intersection of Bell Boulevard and Northern Boulevard was the former location of a blacksmith shop. Presently a White Castle restaurant occupies this corner. This area along Northern Boulevard is a heavily developed commercial strip, indicating that the potential for intact archaeological deposits is very low.

Earthen Dam

An earthen dam once located on the east side of Cloverdale Boulevard where it intersects with 46th Avenue, is in an area that has been extensively disturbed (Figure 5). No visible signs of the dam remain at this location today.

The Flushing Water Works

The Flushing Water Works was located at what is presently the southernmost section of the Cross Island Expressway Cloverleaf (Figure 6). The pumping house for the water works was completed in 1874. The facility was updated with the addition of filter beds and newer pumps, thereby increasing their capacities. The water works was vacant from 1934-1951 when the entire facility was moved prior to building the Cross Island Parkway.

Toll House

A site visit was made to the location of a historic tollhouse on the north side of Northern Boulevard between the off ramp of the Cross Island Parkway and 223rd Street. Today there is a simple three-story brick house at this location. Behind the house there is evidence of severe landscape modification which probably resulted from the construction of the Cross Island Parkway. The area is heavily disturbed and is therefore unlikely to yield any intact deposits.

Marathon Estates

The Marathon Estates site was a residential village developed by W.B. Douglas, member of the prominent Douglas family, circa 1859. The village was unsuccessful and in 1876 Douglas donated the land for the purpose of building a railroad station. It is now used by the Long Island Railroad (Kirkoran 1995: 22). The area of the Marathon Estates to the north of Northern Boulevard is open and undeveloped at this time. This area will not be disturbed by the project.

Oaks Plantation

Queensborough Community College is the former site of the Oaks Plantation, which at one time included a seventeenth century residence, a mill and a nursery (Figure 7). The nursery was located on the east side of Cloverdale Boulevard, which is currently the location of a large residential development. The Oaks changed owners and inhabitants several times. The mansion built circa 1847 was painted yellow by one of its owners and called "Palmetto". Palmetto was destroyed by fire in 1936. Today it is the location of a parking lot on the Queensborough Community College grounds. Another residential building that was part of the Oaks Plantation was located where the present day athletic field and track are situated.

III. FIELD INSPECTION

On March 1st and March 2nd, 1999, a field survey was conducted to assess the archaeological potential of the project area. The project's Area of Potential Effect (APE) was divided into sections with regard to geographical location, type of potential impact, and previously recorded sites (Figure 8). Surface inspections were conducted within each section to determine the impacts that modern development and erosion has had on the original landscape. An assessment of the degree of landscape modification and observable disturbance was made at each section. No subsurface archaeological investigations were performed. Video and photographic records of current conditions were generated for each area.

One part of the project, Springfield Boulevard/46th Avenue Conduits and Outfall Sewer of the Alley Creek CSO Abatement Facilities, involves upgrades and improvements to existing drainage/sewer systems as well as the installation of new lines that will facilitate stormwater runoff within existing roadway rights-of-way. The APE associated with this part of the project, where installation of new lines are in existing streets, is limited to these roadway

rights-of-way, extending approximately 15-20 feet from the edge of pavement along both sides of the roadways. For the construction of new combined sewer conduits and additional drainage basins there will be six to nine-foot wide trenches made in the existing streets. When the double and triple barrel sections are constructed, there will be 45 to 65-foot wide trenches made, respectively. Construction of the sections will commence at the intersection of 223rd Street and 46th Avenue to a location north of Northern Boulevard immediately east of the Cross Island Parkway and Northern Boulevard interchange, and across vacant land to Alley Creek. Because the APE is limited to such narrow corridors and is confined to areas already heavily disturbed during the placement of previous utility lines and by residential and commercial development, it is highly unlikely that intact, significant archaeological deposits are present within the planned construction areas.

The other aspect of this project, CSO Storage/Conveyance Conduit of the Alley Creek CSO Abatement Facilities, involves installing in-line inflatable dams inside the double and triple barrel sections of the outfall sewer, placement of a drain line from the outfall sewer to the Old Douglaston Pumping Station, and modifications to the Old Douglaston Pumping Station. Both the inflatable dams and the pumping station modifications will occur in existing structures; therefore there will be no archaeological disturbance associated with this work. The installation of the drain line from the outfall sewer to the pumping station will have a 6-foot wide trench in the same area as the triple barrel section construction and, as previously stated above, the construction is confined to an area already heavily disturbed. It is highly unlikely that intact, significant archaeological deposits are present within this planned construction area.

Auger Borings in the Vicinity of the Project Area

Nineteen (19) test borings associated with the current project were conducted during the period from May 11th, 1999 to May 25, 1999. They were drilled along Bell Boulevard and Luke Place between 51st Avenue and 218th Street; along 56th Avenue between 215th Street and 218th Street; along Springfield Boulevard between 51st Avenue and 46th Avenue; and along 46th Avenue between Springfield Boulevard and 223rd Street. These borings were conducted in areas that correspond to Phase IA Survey Sections 10, 11, 12 and 13 described below. In general, the profiles exposed in these borings and the preliminary information on the various strata provided indicate that the deposits in this area are made up of strata of pavement and fill overlying natural sub-soils, glacial sands and gravel deposits. Information obtained on prehistoric sites identified in the vicinity of the project area indicates that cultural deposits were encountered at relatively shallow depths. This information together with the preliminary information gathered concerning the stratigraphy in the project area indicates that it is unlikely that deeply buried cultural deposits are present in this area.

Project Area Sections Investigated During the Phase IA Archaeological Survey

Section 1

This section runs along 46th Avenue from Bell Boulevard to Springfield Boulevard. This area is completely residential and as such has been heavily modified. Because of the high level of disturbance in this section there is no potential for the presence of intact archaeological deposits within the project corridor.

Section 2

This section runs along 46th Avenue and extends from Springfield Boulevard to 223rd Street with a small section extending north approximately one half block along 220th Street north of 46th Avenue (Figure 9). The area along 220th Street, with the exception of one small parcel of land discussed below, is residential and heavily developed. There is no potential for intact archaeological deposits within the proposed project corridor.

Documentary information indicates that the Douglas homestead once stood just north of the proposed corridor at the northwest corner of the intersection of 46th Avenue and Cloverdale Boulevard. Today, there is a large high rise CO-OP apartment building (Lakeside CO-OP Apartments), (Figure 10). The land surrounding this complex was undoubtedly disturbed during the construction of the apartments. Nothing from the Douglas homestead is visible above grade today. The landscape where it once stood appears to have been altered. The specific extent of any sub-surface disturbance is unknown. If the proposed work would impact this area in any way (such as for the use of a staging area for construction), additional archaeological testing will be incorporated into the project activities prior to construction to determine the extent of any subsurface remains of the Douglas homestead. The area to the south of Section 2 consists of terrain that slopes down towards the Oakland Ravine and Oakland Lake. There are relatively level areas on this slope overlooking Oakland Lake that will require additional archaeological work if they are to be impacted during later Phases of the Alley Creek Project. It is expected that construction or improvements to sewer/drainage lines is confined to the proposed corridor associated with the Phase I of the project, no additional testing is necessary. Because of the level of disturbance in this section of the project corridor, related to the previous placement of utility lines and to landscape modification, there is little potential for the presence of intact archaeological deposits.

Just north of 46th Avenue along Section 2, extending north past Northern Boulevard, is the area where the Douglas homestead and a historic tollhouse were once located. Again, it appears that no disturbance to archaeological deposits will occur if work is confined to the narrow project corridor.

Section 3

This section, which includes areas under Phase II: Outfall Sewer of the Alley Creek CSO Abatement Facilities Project: Springfield Avenue and 46th Avenue Combined Sewers. Section 3 extends east from the intersection of 46th Avenue and Cloverdale Boulevard along

the general alignment of the existing outfall sewer extending to Outfall TI-7 on Alley Creek. This section continues across the Cross Island Parkway through Alley Pond Park to Alley Creek. The area on the west side of the Parkway consists of a disturbed landscape occupied by small trees and brambles. The ground surface is wet in this area. There is an existing sewer manhole visible on the surface.

The Flushing Water Works was located at what is presently the southernmost section of the Cross Island Expressway Cloverleaf in Section 3. At the time of this survey, the area was occupied by construction trailers and excavation machinery. Evidence of large-scale excavation activities were apparent based on the presence of large mounds of freshly dug soil and fill as well as deep backhoe tracks. If anything from the water works remains at this location it would be under a substantial amount of fill which was provided during the construction of the Parkway (Kirkoran 1995:4). Due to the obvious landscape modification in the area near the parkway, there is little potential for intact archaeological deposits. If work related to later phases of the Alley Creek Project is proposed in the location of the existing outfall sewer extending to Outfall TI-7, no further archaeological investigations would be necessary.

On the east side of the Cross Island Parkway, within Alley Pond Park, the land is primarily salt marsh and meadow exhibiting typical marshland vegetation. This area is saturated in most locations with the exception of a dry area where clamshell pieces were visible on the surface. Though this area, in general, has a high potential to contain prehistoric sites, the proposed work is all within the existing disturbed outfall sewer right-of-way. Therefore, no further archaeological work is necessary in this section.

Section 4

This section runs along Springfield Boulevard from 46th Avenue to 47th Avenue. This area is residential on the west side of Springfield Boulevard. On the east side of Springfield Boulevard there is a chain link fence along the road. Beyond this fence, the landscape slopes severely down towards Oakland Lake and Oakland Ravine. If construction or related activities associated with Phase I of the current undertaking is going to impact the Ravine or east side of Section 4 beyond the currently proposed corridor, additional archaeological work will be necessary to determine if archaeological sites are present on the high banks overlooking Oakland Lake. Such work will be performed in accordance with CEQR Technical Manual field testing guidelines as described in Section 512.1 and may include shovel testing, trenching, and or soil borings.

Section 5

This section extends west along 47th Avenue from Springfield Boulevard to Bell Boulevard. The area is entirely residential and heavily developed with houses and apartment complexes occupying both sides of the street (Figure 11). Due to the development in this section, there is little potential for archaeological resources.

Section 6

This area extends south along Springfield Boulevard from 47th Avenue to 48th Avenue. The west side of the street is residential and heavily developed; therefore, no further archaeological work in this area is necessary. The slope of the Oakland Ravine is located on the east side of Springfield Boulevard. If the proposed work is to be confined to the proposed corridor, no additional archaeological work will be necessary. If any impact is to be made to the edge of the Ravine, additional archaeological testing may be necessary to determine if there are any intact archaeological sites in this area. All field-testing will follow CEQR Technical Manual guidelines as stipulated for other areas above.

Section 7

This section extends west along 48th Avenue from Springfield Boulevard to 217th Street. Both sides of the street are residential and heavily developed. No further archaeological work is necessary in Section 7 due to the extensive development and landscape modifications that have occurred in this area.

Section 8

This section extends south from 48th Avenue along Springfield Boulevard to 51st Avenue. The west side of the street is residential while the east side consists of the Ravine slope. The Ravine slope is abrupt and has been visibly subjected to erosion from flooding. Additional archaeological field-testing is not necessary in this location if work associated with Phase I of the project is confined to the proposed corridor.

Section 9

Section 9 extends south from 51st Avenue to 56th Avenue along Springfield Boulevard (Figure 12). The landscape rises at the location of PS 203 at 53rd Avenue. There is a heavily developed residential neighborhood on the west side of Springfield Boulevard. PS 203 is on the east side of the street. Behind the school, the Ravine slopes dramatically. There is no potential for intact archaeological deposits in Section 9 due to previous disturbance. Therefore, no additional archaeological work is recommended.

Section 10

This area extends south along Bell Boulevard and Luke Place from 51st Avenue to the intersection of 56th Avenue and 218th Street. Background research indicates that a nineteenth century schoolhouse was located at the intersection of Luke Place, Bell Boulevard and 216th Street. The Phase IA archaeological survey showed that the location is currently occupied by a private residence of early to mid twentieth century construction. There is no visible evidence of the schoolhouse. This area is residential and appears to have been heavily disturbed and modified by development. Therefore, there is little potential for the presence of archaeological sites within the project area.

Section 11

This section extends east from 218th Street to Springfield Boulevard along 56th Avenue. This area is residential and appears to have been heavily disturbed and modified by development. Therefore, there is little potential for the presence of archaeological sites. No additional archaeological work is necessary.

Section 12

This section extends east from 215th Street to 218th Street along 56th Avenue. There is a grassy median dividing the north and south sides of the street. This area is residential and appears to have been heavily disturbed and modified by development. Therefore, there is little potential for the presence of archaeological remains. No additional archaeological work is necessary.

Section 13

This section extends south on 218th Street from 56th Avenue to 58th Avenue. This area is residential and appears to have been heavily disturbed and modified by development. Therefore, there is little potential of archaeological sites within the project corridor. No additional archaeological work is necessary.

Section 14

Section 14 extends from 58th Avenue north along Springfield Boulevard to approximately 100 feet south of 56th Avenue. The west side of the street is residential while Benjamin Cordoza High School occupies the east side. This area has been heavily disturbed and modified by development. Therefore, there is little potential for the presence of archaeological remains. No additional archaeological work is necessary.

Section 15

This section begins at the end of Section 14 and extends approximately 100 feet east along 56th Avenue. The south side of 56th Avenue and the east side of Springfield Boulevard is occupied by Benjamin Cordoza High School. Queensborough Community College is located on the north side of 56th Avenue. At the intersection of 56th Avenue and Springfield Boulevard there is an area of disturbed land that slopes down towards Oakland Ravine. This area is covered with brush, small trees, construction rubble and trash, and has an associated history of the Oaks Plantation which was located in and around this area of the Community College campus. Proposed work will not impact this portion of land; therefore, no further archaeological work will be necessary as there is little potential for the presence of cultural deposits given the placement of previous utility lines in the area.

Section 16

This section extends east along 56th Avenue from the end of Section 15 to 223rd Street. Queensborough Community College and Benjamin Cordoza High School occupy the north and south sides of 56th Avenue, respectively. This area has been heavily disturbed and modified by development. Therefore, there is little potential for the presence of archaeological sites. No additional archaeological work is necessary.

Section 17

This wooded section is located between Sheffield Road and the Cross Island Expressway extending along the same alignment as 46th Avenue and running just north of a baseball diamond. The road bed for Sheffield Road is built up throughout this area and there appears to have been some cutting and filling along the road edge. There is also evidence of cut and fill operations in the wooded area where push piles and debris scatters were also identified. The ground surface is obscured by dense vegetation so a clear assessment of the depth of disturbance to this area was unobtainable. Manhole covers associated with the existing outfall sewer were identified in the field. This area has been completely disturbed by previous construction, therefore, no further archaeological work is necessary.

Section 18

This section occupies the area occupied by the Cross Island Expressway. The alignment runs just south of a major cloverleaf across a landscape that appears to have been built for the road. The entire area appears to be disturbed. Consequently, no archaeological field-testing is recommended in this area.

Section 19

This section runs along the western edge of the Alley Pond Environmental center between an off ramp and the pond. The landscape in this area is low-lying and wet and the large portions of the ground surface are covered with gravel and cobbles. Vegetation consists of ragweed, sumac and other waste and bank plants as well as wetland plants.

In the 1970s the property now owned by Alley Pond Environmental Center was the location of a tire dump and gas station. Today there is no visible evidence of either. There is evidence of extensive landscaping including a berm constructed parallel to the exit ramp and a pond created three years ago to provide wetland habitat for waterfowl. Spoils from the construction of the pond are located on the property as a ten to fifteen foot high mound on the eastern edge of the pond.

The northern end of Section 19 crosses Northern Boulevard traversing the remains of a concrete industrial foundation. This area is also broken with push piles, debris scatters and evidence of cut and fill activities. Due to the extensive disturbance no archaeological field-testing is recommended for this section.

Section 20

This section starts on the north side of Northern Boulevard just north of the concrete foundation identified in Section 19. And runs northeast to the edge of Alley Creek. There are low, wet areas marked by wetland vegetation as well as evidence of cutting and filling activities. A large portion of the road front is paved. Trees and weed growth protrude through cracks in the asphalt. Further east, the terrain rises and becomes more level. This portion of the landscape becomes more uneven with push piles, debris scatters (containing 19th century ceramics and bottle glass), and surfaces dominated by dense weed growth (sumac, oleander, multi-flora rose, etc.). Along Alley Creek, bottles are eroding out of the bank along with a petroleum type of seepage. The route toward Northern Boulevard bridge is covered with eroding landfill debris. Close to the bridge there are exposed pilings that are either part of an abandoned dock structure or perhaps the remains of bridge construction activities. All sections of this area appear to have been heavily disturbed and modified by development, much of it likely to have occurred within and around the development formerly known as the Bayside Supply Company. The Bayside Supply Company shows on Sanborn Insurance Maps of the early to mid-twentieth century (Figures 13 and 14). Auger borings taken in this area also show evidence of deep disturbances to the landscape. Due to the extensive disturbance in this area, no further archaeological work is necessary.

IV. RECOMMENDATIONS

Given the results of documentary research and a thorough surface inspection of the current conditions within the sections of the project area, there is no potential for significant, intact prehistoric and historic deposits and archaeological features. For Springfield Boulevard, 46th Avenue, and the associated streets, all sewer extension construction and improvement activities are confined to a proposed corridor on either side of the roadways discussed above; therefore, no additional work in the form of archaeological field-testing is recommended. For the areas located near the Cross Island Parkway and Northern Boulevard, construction activities for the new outfall sewer will take place in areas that are already heavily disturbed. It is highly unlikely that intact, significant archaeological deposits are present within this planned construction area and additional archaeological field-testing is not recommended. The same recommendation can be made for the construction of the 30-inch drain line extending from the outfall sewer to the wet well of the Old Douglaston Pumping Station. Due to the fact that the area is already heavily disturbed, it is highly unlikely that intact, significant archaeological deposits are present within this planned construction area. Therefore, no further archaeological field-testing work is recommended.

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1859 Topographic Map of Kings and Queens

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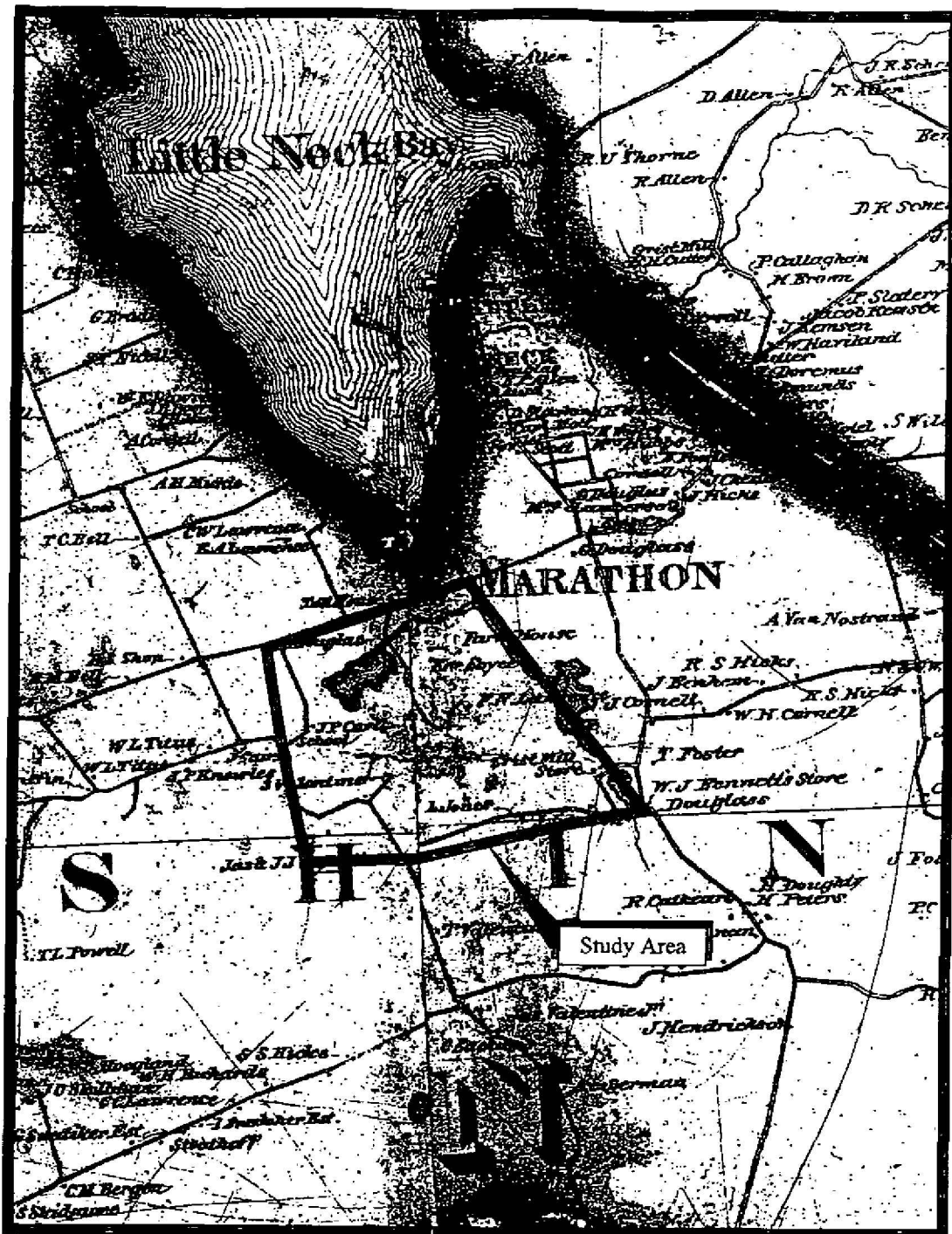


Figure 1 Walling's Topographic Map of Kings and Queens, 1859.

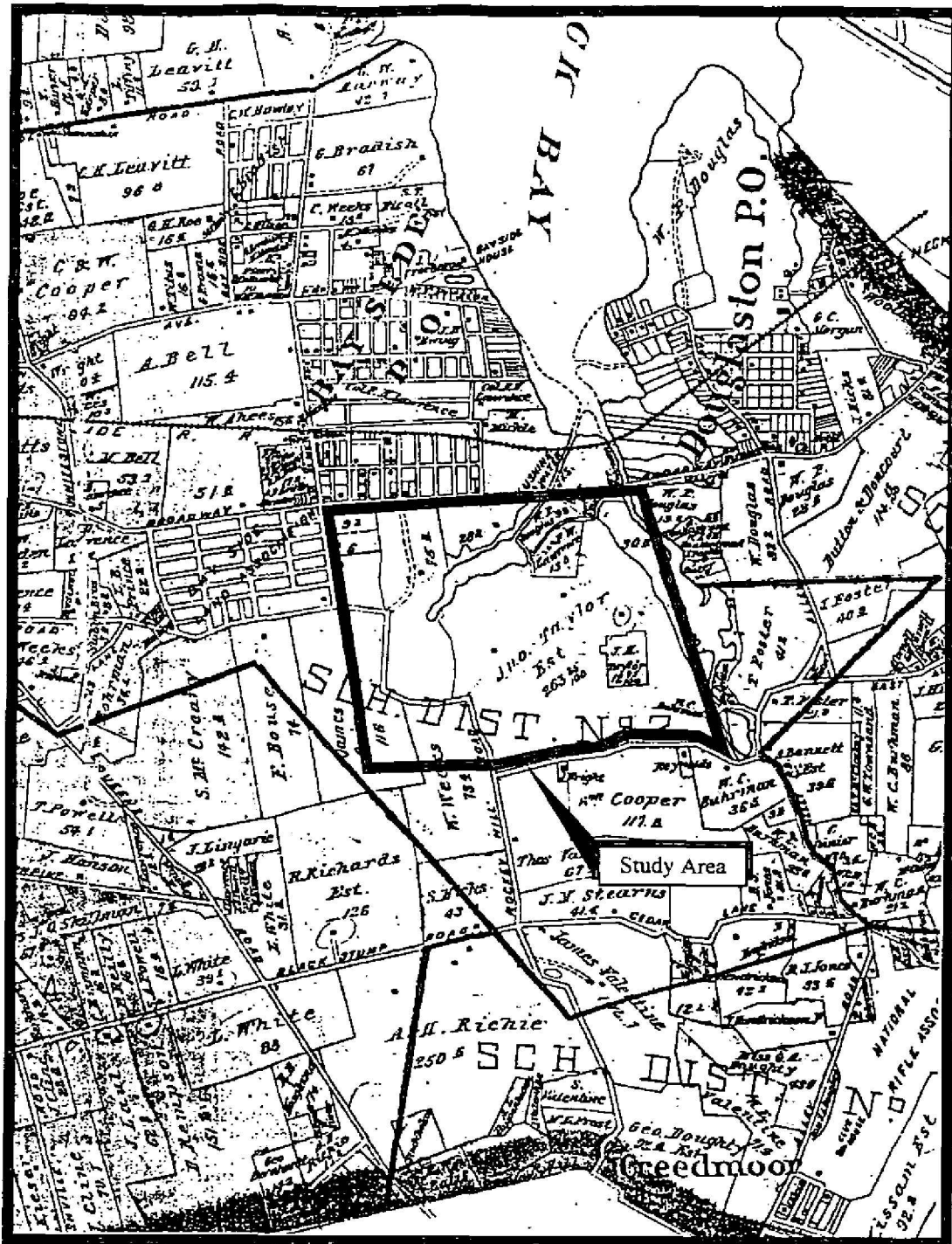


Figure 2 Chester Wolverton Atlas of Long Island, 1891.

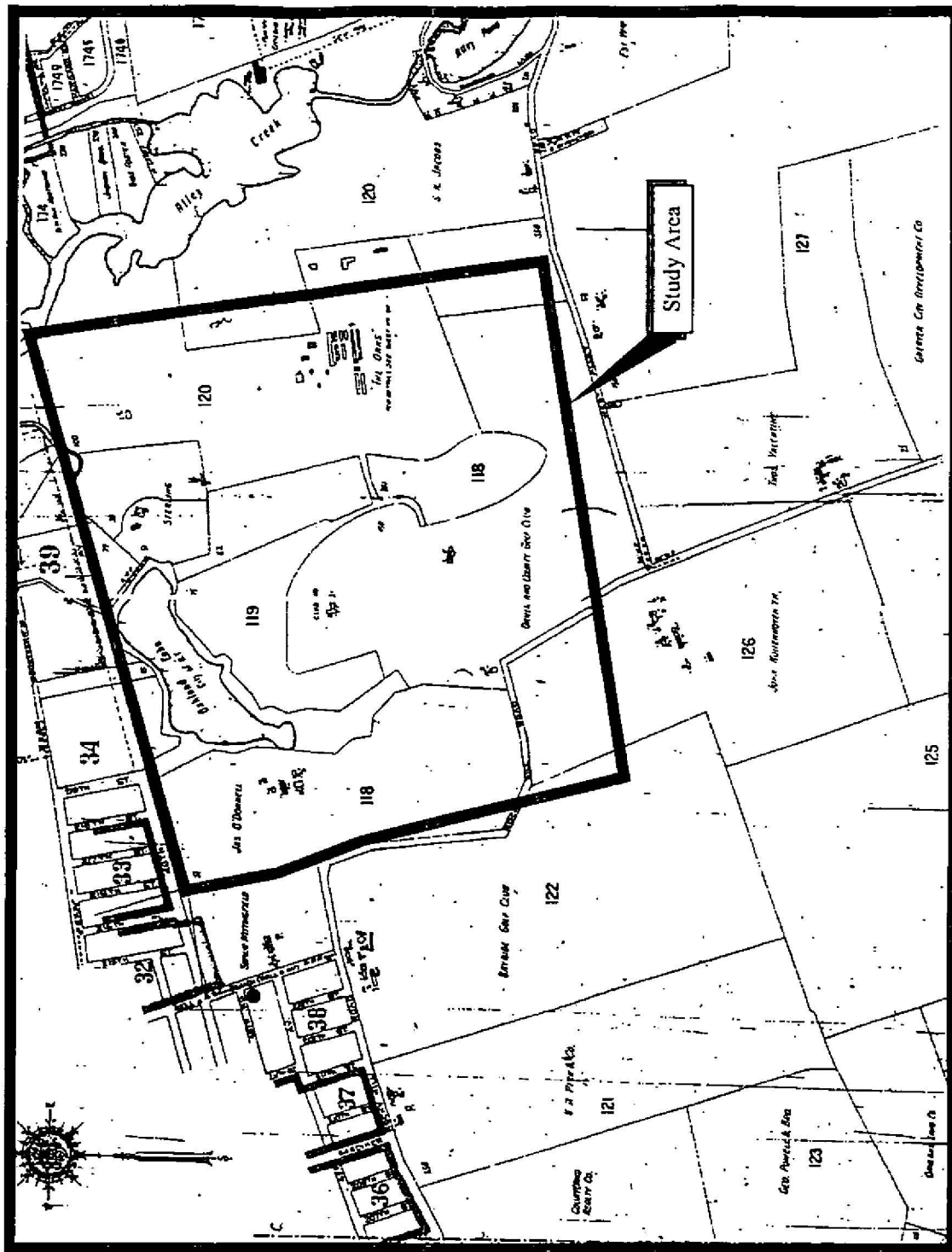


Figure 3 Sanborn Insurance Map 1917 - Oakland Lake Area.

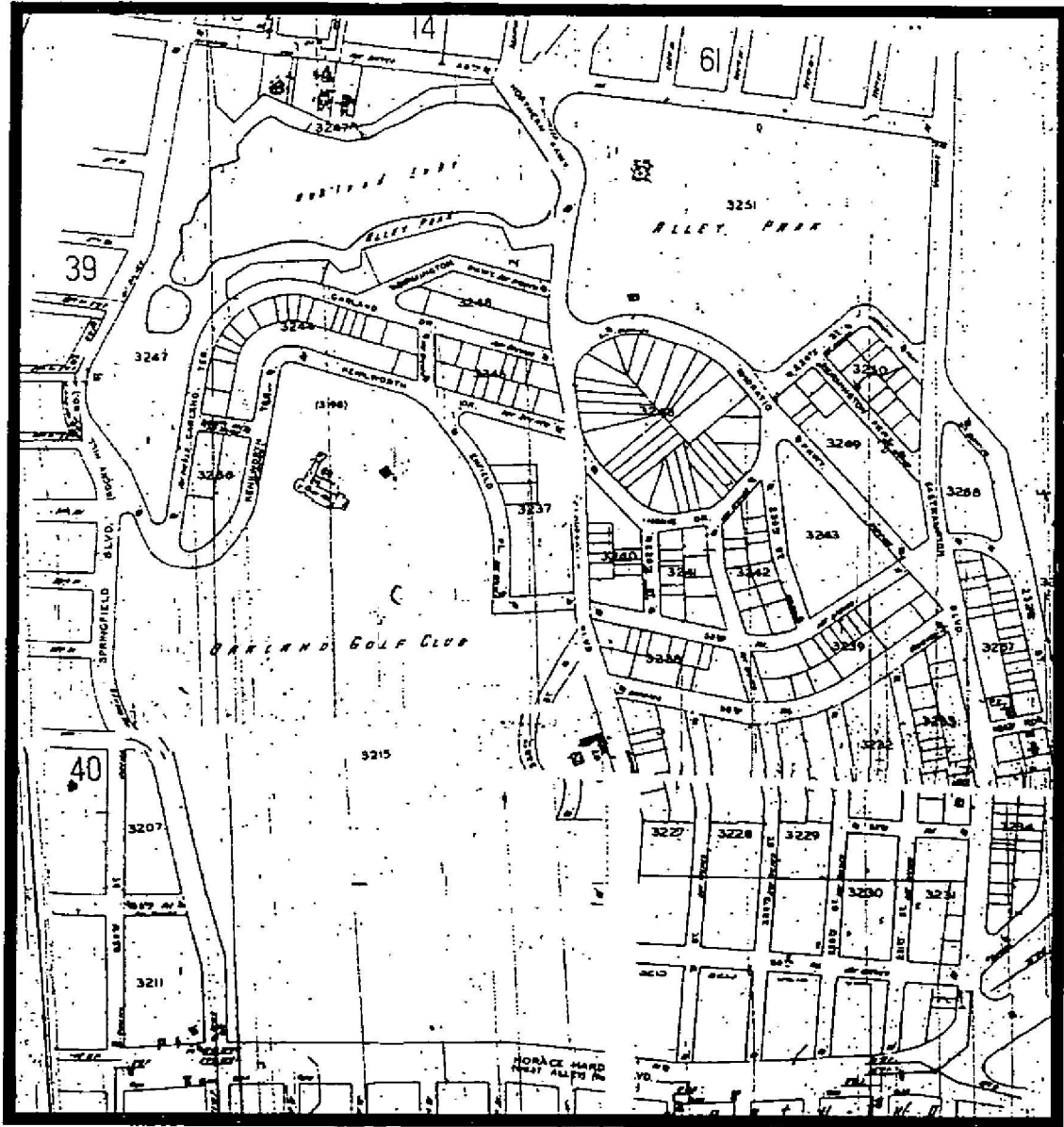


Figure 4 Sanborn Insurance Map 1934 - Oakland Lake Area.

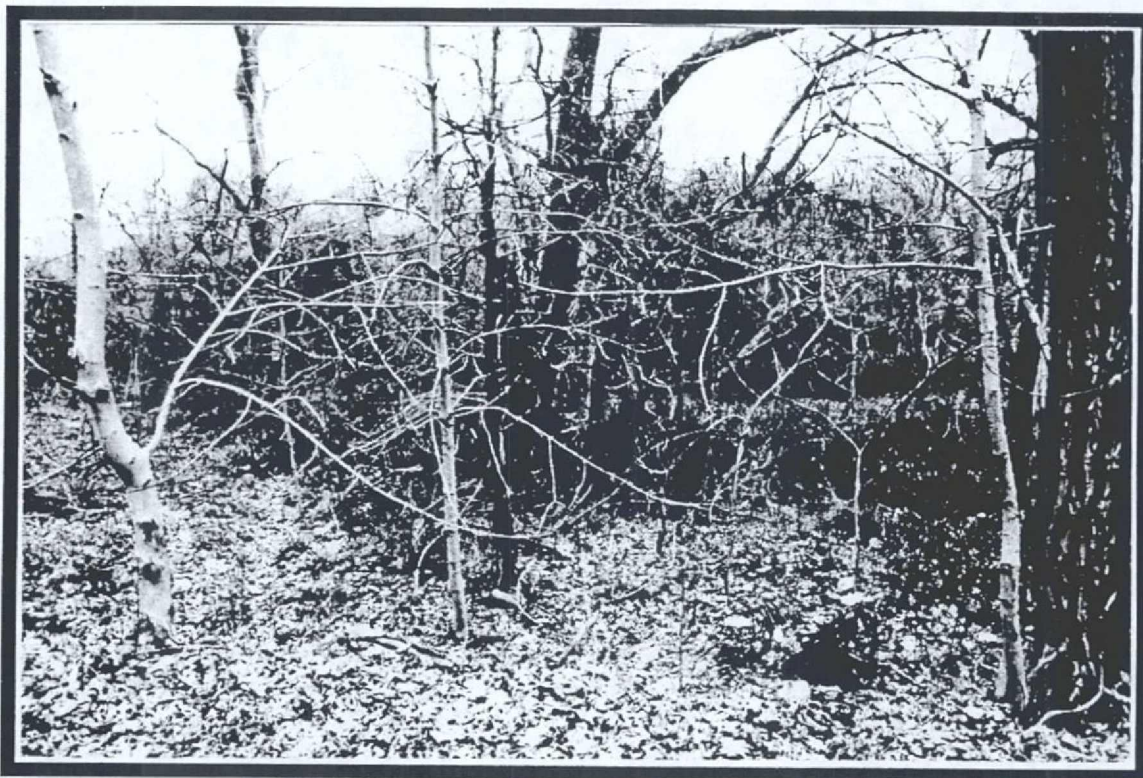


Figure 5 View of the Previous Location of an Earthen Dam now Heavily Disturbed.

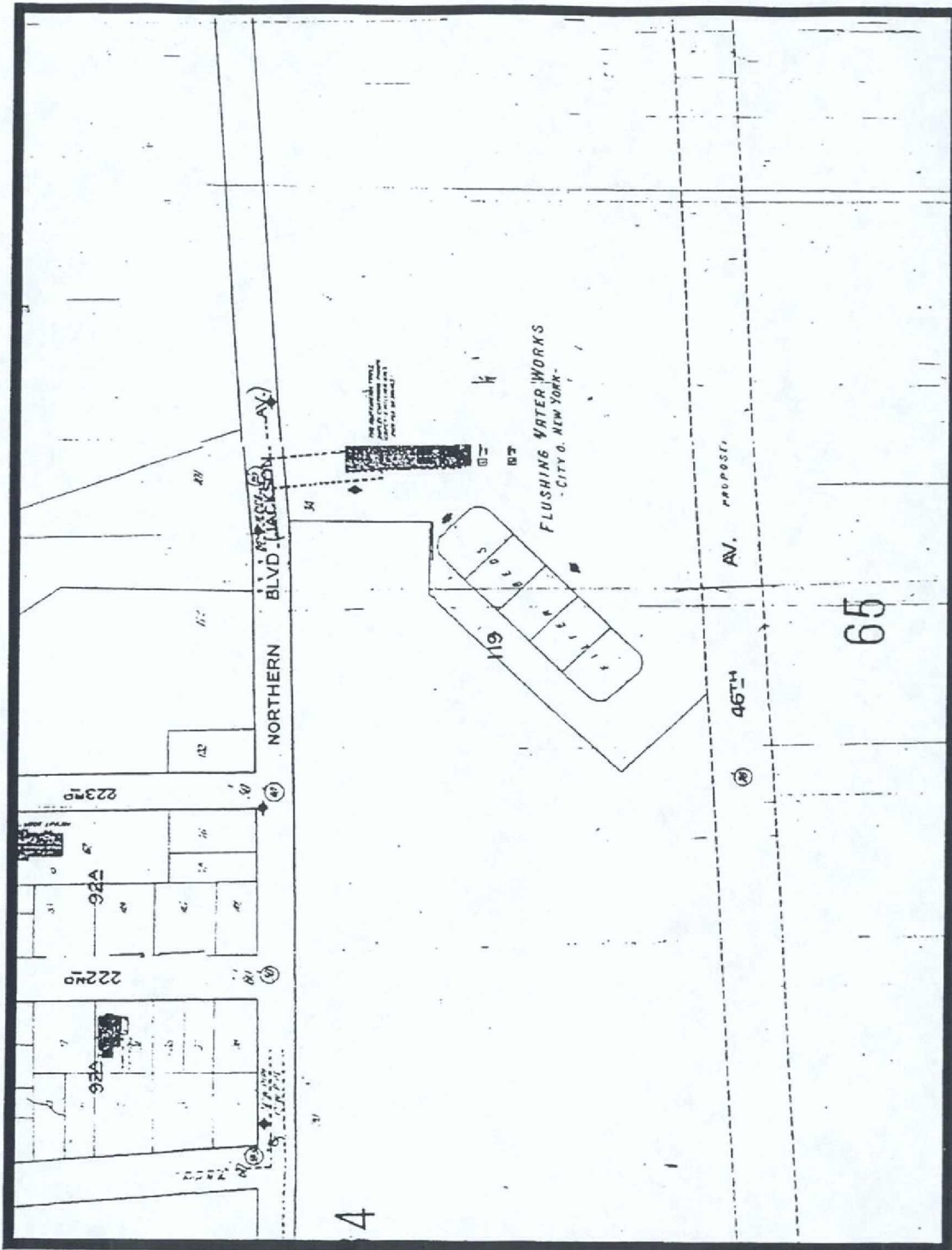


Figure 6 Sanborn Insurance Map 1917 - Flushing Water Works Area.

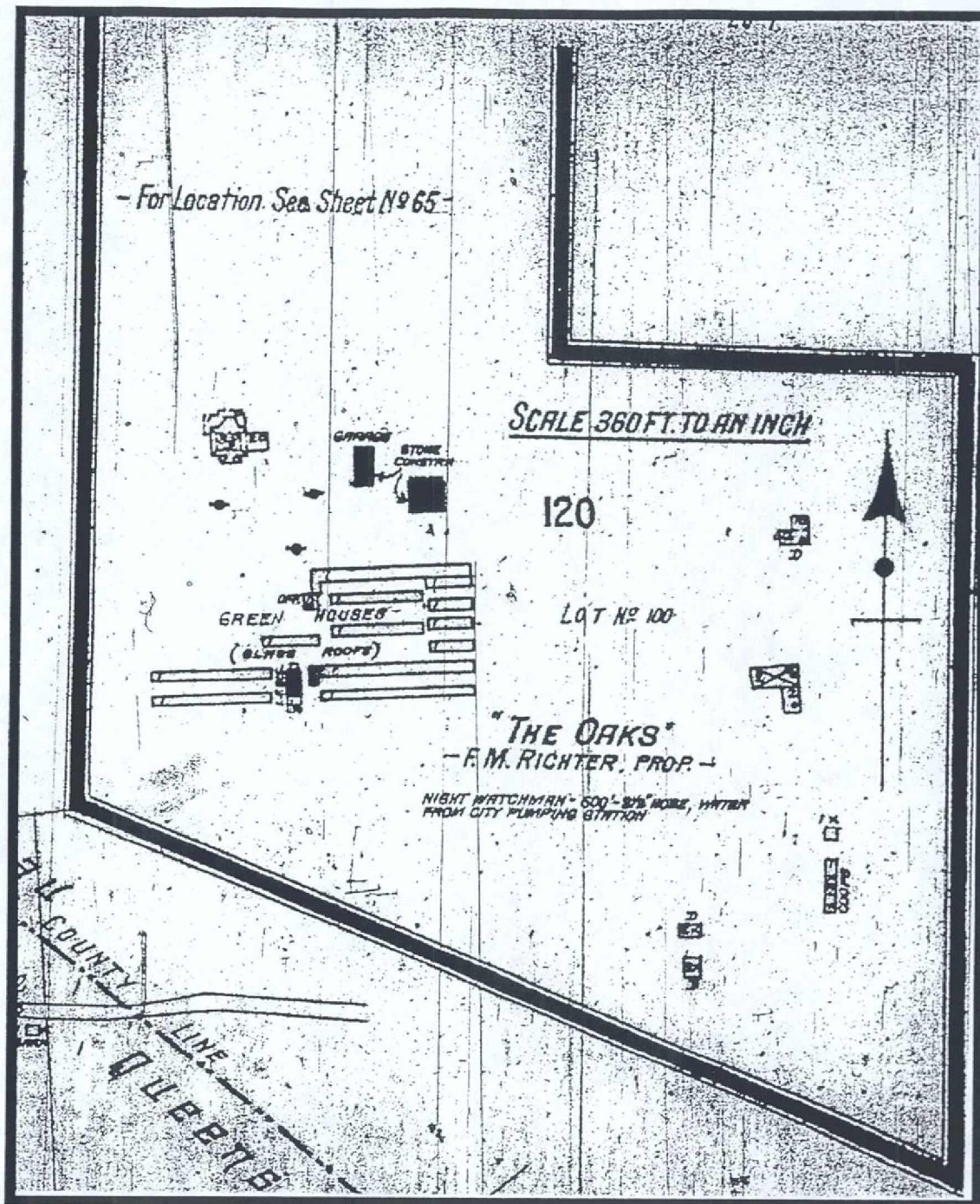


Figure 7 Sanborn Insurance Map 1917 - The Oaks Estate.

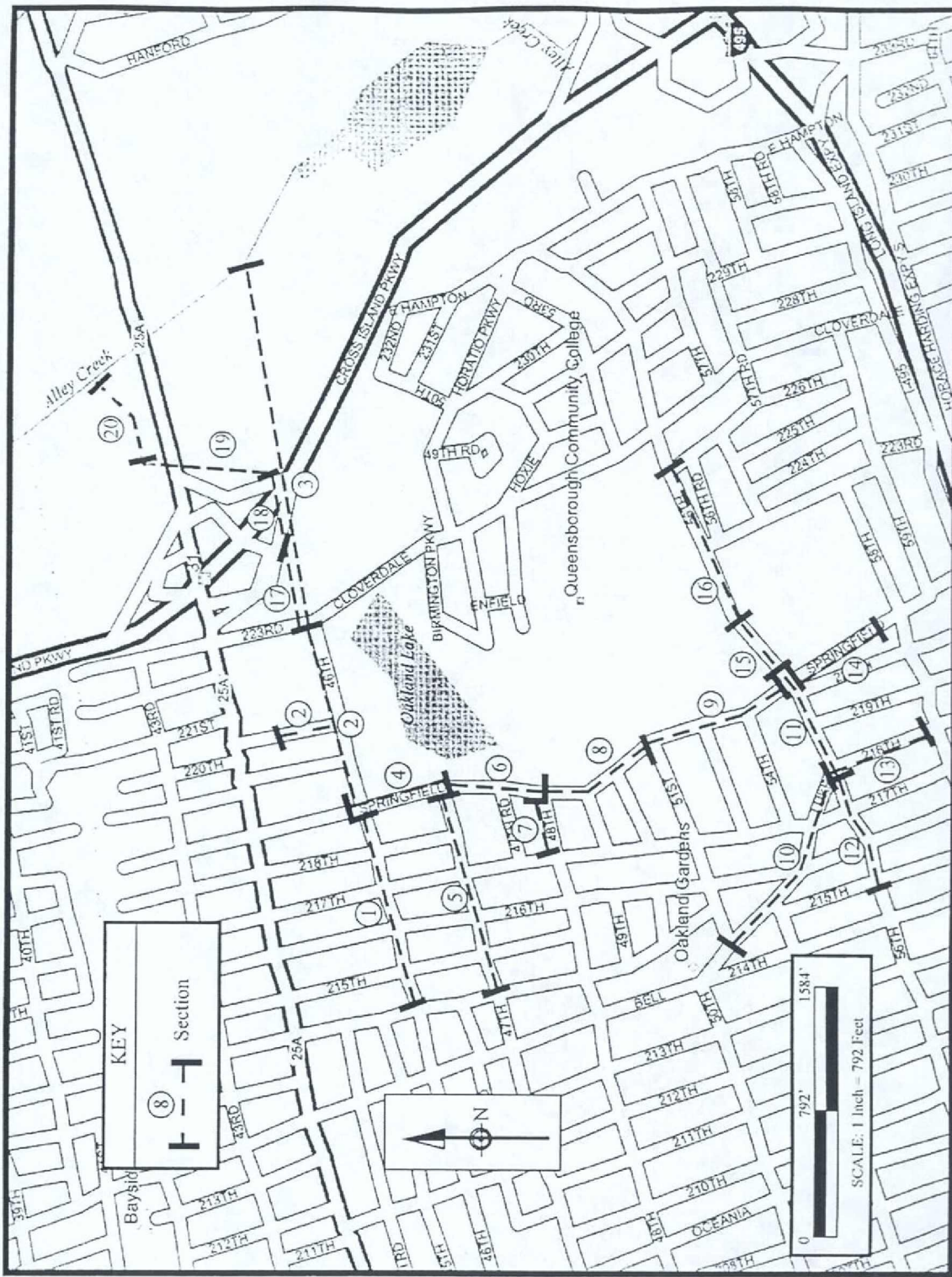


Figure 8 Project Area Map Showing the Sections Established to Facilitate the Phase IA Archaeological Survey.

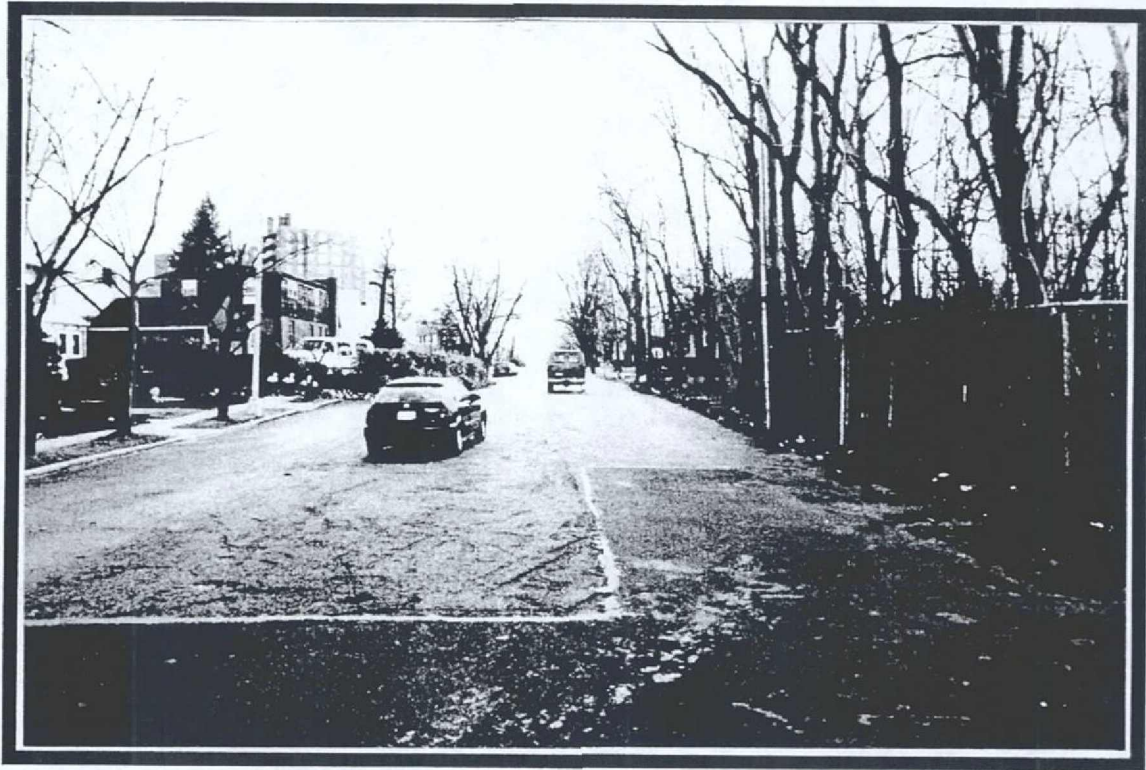


Figure 9 View Facing East Along 46th Avenue in Section 2.

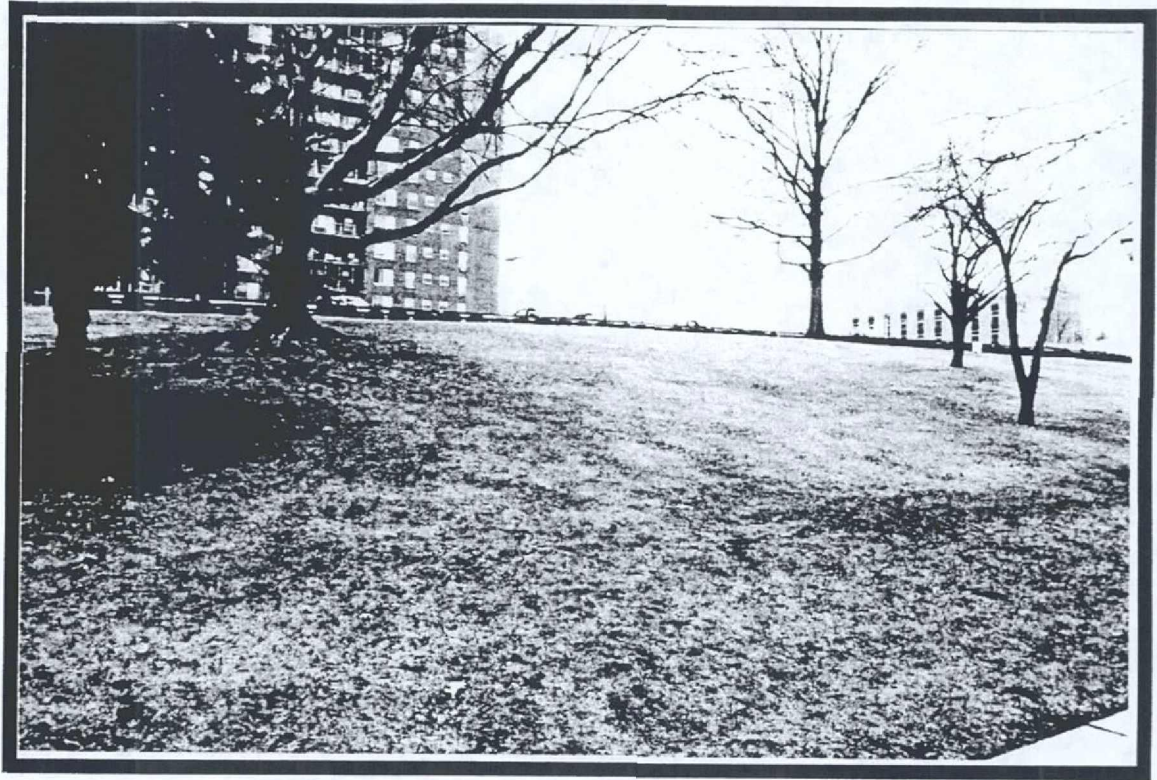


Figure 10 View Facing North Showing the Previous Location of the Douglas Homestead.

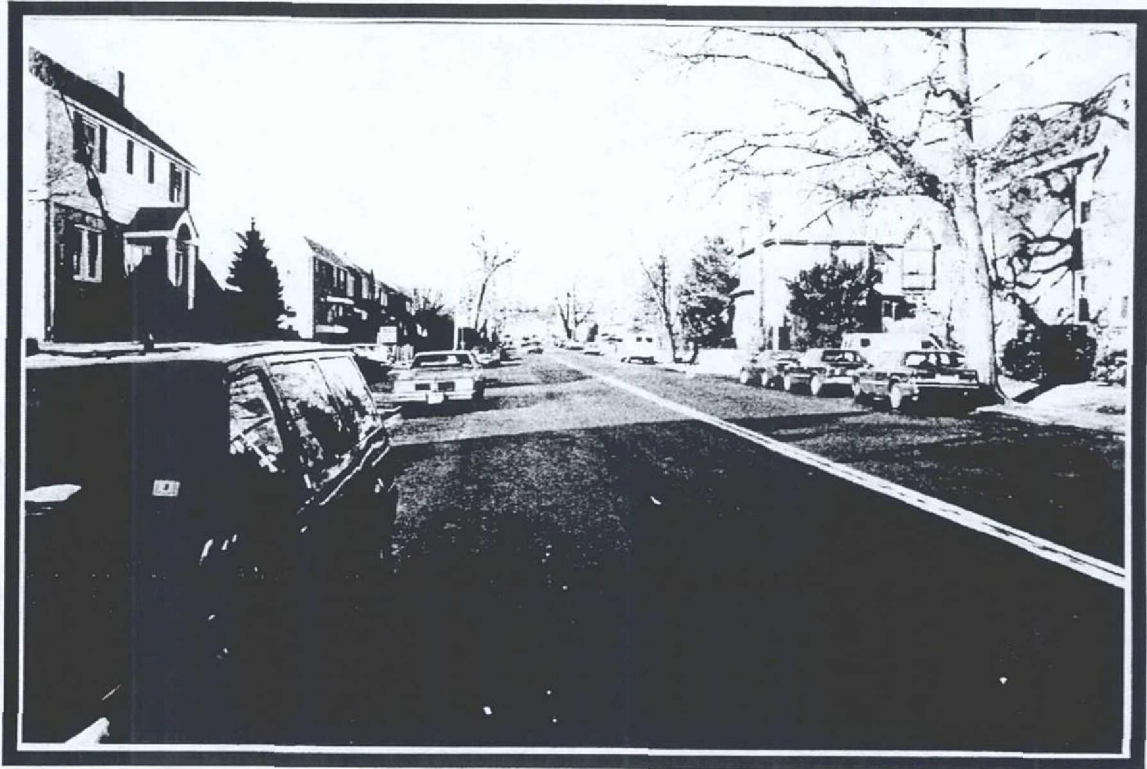


Figure 11 View Facing West Along 47th Avenue Showing Heavy Residential Development in Section 5.

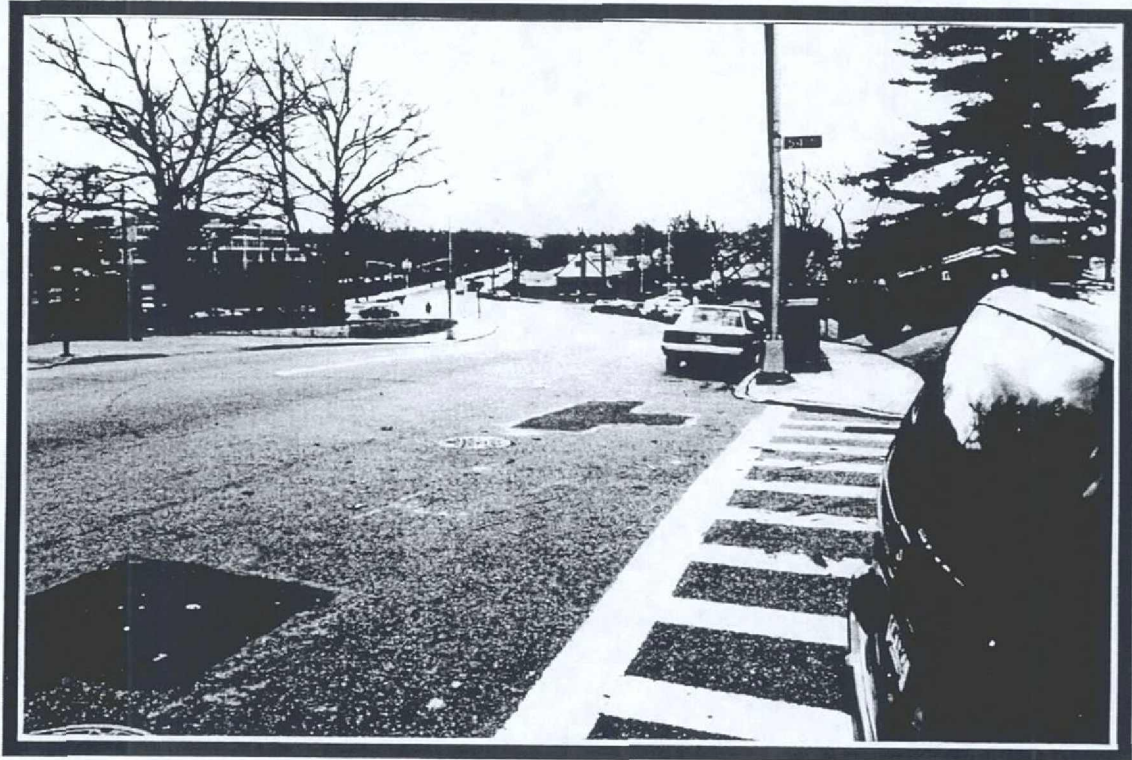


Figure 12 View Facing South Along Springfield Boulevard in Section 9.

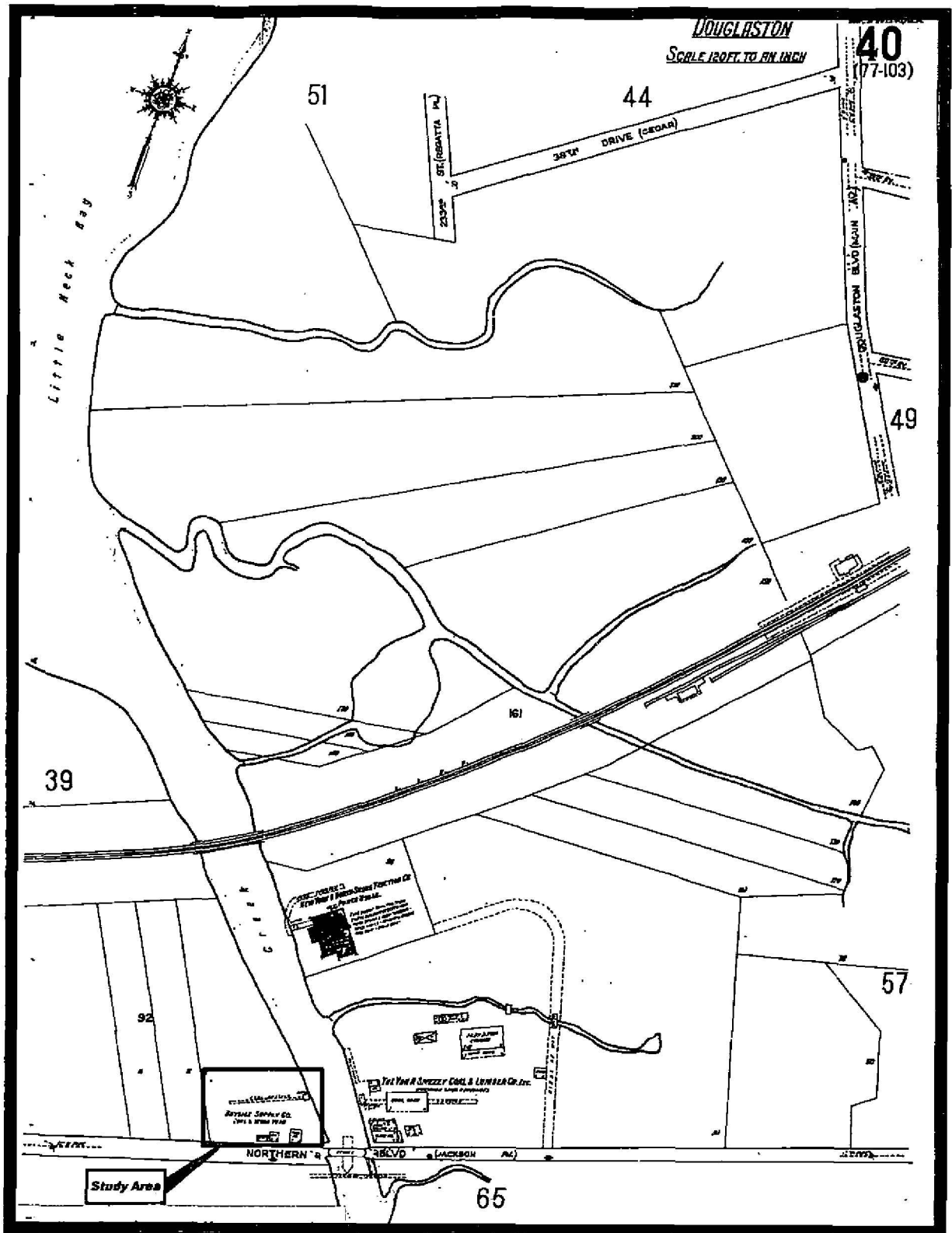


Figure 13 Sanborn Insurance Map 1917 - Bayside Supply Company Area.

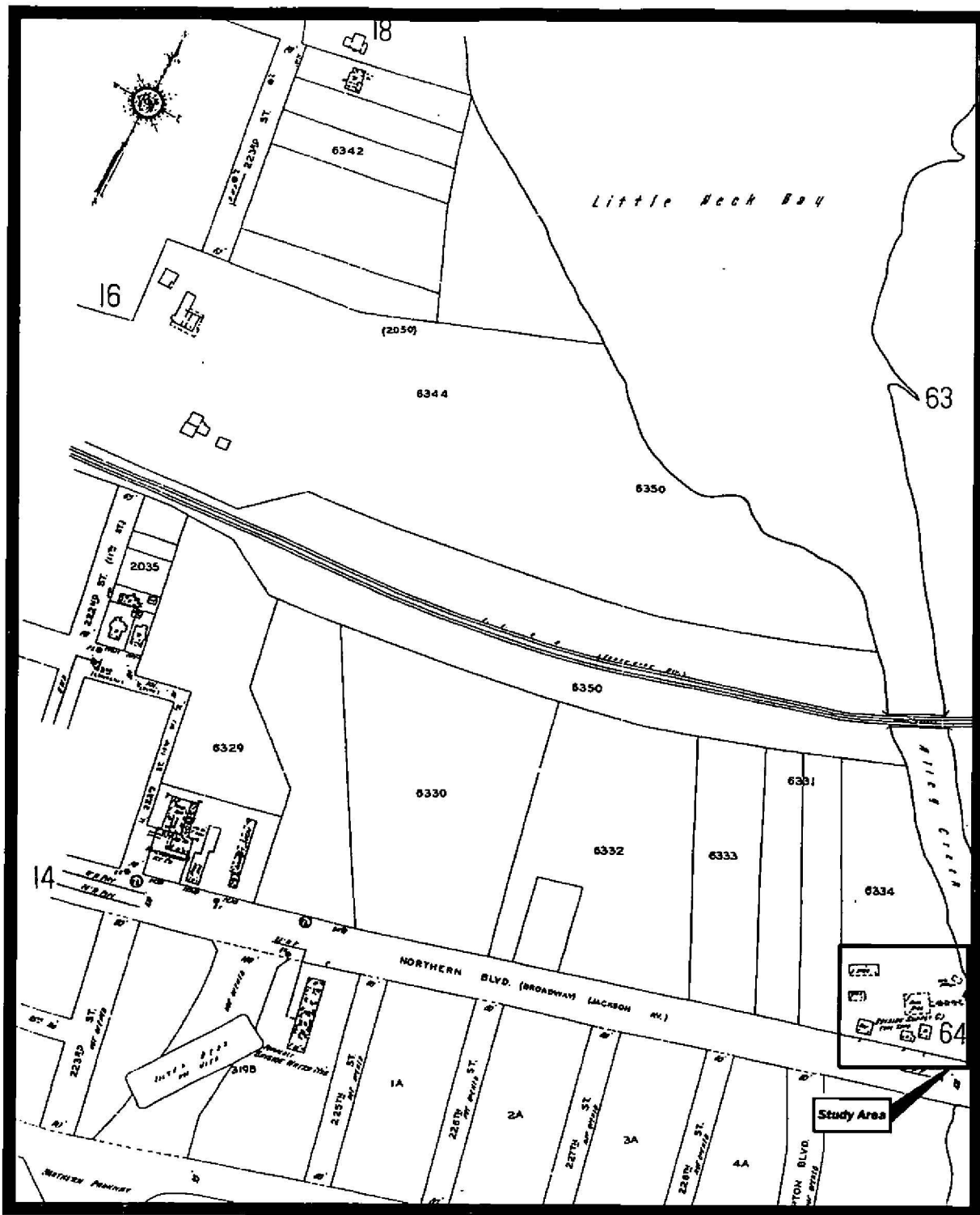


Figure 14 Sanborn Insurance Map 1934 - Bayside Supply Company Area.