



Phase 1A Archaeological Documentary Study

**Capital Project SEQ200463:
College Point North Outfall and Infrastructure Improvements
Queens County, New York**

Prepared for:

The New York City Department of Design + Construction



and

The New York City Department of Environmental Protection



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Management Summary

SHPO Project Review Number: 13PR01416 (College Point North/SEQ000463 Only)

Involved Agencies: New York City Department of Transportation
New York City Department of Environmental Protection
New York City Department of Parks and Recreation
New York State Department of Environmental Conservation
New York State Department of State
United States Army Corps of Engineers (USACE)

Phase of Survey: Phase 1A Documentary Study

Location Information

Location: College Point, Queens, New York
Minor Civil Division: 08101
County: Queens County

USGS 7.5 Minute Quadrangle Map: Flushing

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Summary of Findings:

The following Phase 1A Archaeological Documentary Study was designed to determine the likelihood that the project site was occupied during the precontact (i.e., Native American) and/or historic periods and to determine if intact archaeological resources associated with that occupation could still be present.

As described in greater detail below, the precontact sensitivity of project sites in New York City is generally evaluated by a site's proximity to level slopes, water courses, well-drained soils, and previously identified precontact archaeological sites. The project site is situated on a peninsula near tidal marshland and high ground, and would therefore have been an ideal site for camping or hunting and gathering, or permanent occupation. At least six Native American archaeological sites have been identified within one mile of the project site, including four burial locations, one of which appears to have been located on the project site itself.

The project site has experienced substantial disturbance as a result of the construction, grading, and paving of streets, the installation of utilities, and the construction of bulkheads and retaining walls. The locations of the proposed outfall and the proposed wetland restoration area are determined to have no sensitivity for precontact archaeological resources as a result of previous disturbance. In addition, the portions of streetbeds that have been disturbed for utility installation are determined to have low sensitivity for precontact archaeological resources. However, the portions of the streetbeds that have not been disturbed for the installation of utilities are determined to have moderate sensitivity for archaeological resources associated with the Native American occupation of College Point, including human remains.

With respect to historic period archaeological resources, College Point was not extensively settled until after the Revolutionary War. The area surrounding the project site streetbeds was largely occupied by large estates until the late-19th and early-20th centuries, around the time when water and sewer networks appear to have become available in the area. There are several locations where modern streetbeds were

constructed in the locations or in the immediate vicinity of map-documented structures or through the rear yards of historic estates. These streetbeds include:

- 7th Avenue between 119th Street and College Place;
- 12th Avenue between 119th and 120th Streets;
- 118th Street between 9th and 12th Avenues; and
- 120th Street between 9th Avenue and 9th Road.

The homes in these locations appear to have been constructed before the availability of water and sewer lines. The residents of these homes, including members of some of College Point's most influential families, would have relied on shaft features (e.g., privies, cisterns, and wells) for the purposes of water-gathering and sanitation. These deeply buried features may still be present within undisturbed portions of the modern roadbeds. Therefore, these four streetbeds are considered to have moderate sensitivity for historic period archaeological resources. The remaining streetbeds and the highly-disturbed location of the proposed outfall are determined to have low sensitivity for archaeological resources dating to the historic period.

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A. INTRODUCTION

The New York City Department of Design + Construction (DDC), on behalf of the New York City Department of Environmental Protection (NYCDEP), is proposing Capital Project No. SEQ200463, the College Point North Outfall and Infrastructure Improvement Project (see **Figure 1**). The project site is located within several streetbeds in the neighborhood of College Point, Queens (see **Figures 2 and 3**). The project site, which is currently served by a combined (stormwater and sanitary) sewer system, is in a low-lying area and is therefore subject to street flooding and ponding. The proposed infrastructure improvements would reduce this flooding through new the installation of new storm sewers and the installation of a new outfall at the northern terminus of College Place. The proposed improvements to the combined sanitary collection sewers would also bring that component of the sewer system into conformance with the current NYCDEP standards. In addition, the proposed water main installation would replace old, unlined cast iron pipe water mains, thereby improving and upgrading water distribution and supply in the project area.

The proposed project would require several permits or approvals from local, state, and federal agencies, including NYCDEP, the New York City Department of Transportation (NYCDOT), the New York City Department of Parks and Recreation (NYCDPR), the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of State (NYSDOS), and the United States Army Corps of Engineers (USACE). The proposed project is therefore subject to City Environmental Quality Review (CEQR), the State Environmental Quality Review Act (SEQRA), and Section 106 of the National Historic Preservation Act (NHPA). NYCDEP is serving as lead agency in fulfilling the requirements of the environmental review process, including performing a coordinated review with the involved agencies (e.g., NYSDEC).

The proposed project also includes the restoration of tidal wetlands that would be temporarily impacted during construction of the proposed outfall. The site of the proposed wetland restoration was previously analyzed in a Phase 1A Archaeological Documentary Study of the College Point West project site (Capital Project SEQ200464), which was prepared by AKRF, Inc. in July 2013.¹ The site was determined to have no sensitivity for archaeological resources dating to either the precontact or historic periods, and no further archaeological work was recommended. In comment letters issued July 31 and August 1, 2013, respectively, the New York State Historic Preservation Office (SHPO) and the New York City Landmarks Preservation Commission (LPC) concurred with the conclusions and recommendations of the Phase 1A study for College Point West. As such, the proposed wetland restoration site is not included in this Phase 1A Archaeological Documentary Study.

¹ AKRF, Inc. (July 2013): Phase 1A Archaeological Documentary Study Capital Project SEQ200464: College Point West Outfall and Infrastructure Improvements Queens County, New York. Prepared for: The New York City Department of Design and Construction and the New York City Department of Environmental Protection.

B. PROJECT LOCATION AND DESCRIPTION

The proposed project would involve the construction of new stormwater collection sewers and water mains as well as other street improvements (e.g., final paving). The proposed storm sewer collection system would include new catch basins designed with sumps to capture floatables and sediments. The proposed sewer system would also include the installation of new high-level storm sewers that would separate storm flows from the combined system. The proposed action would also include the relocation of sanitary sewers and water mains, where necessary, in order to install the proposed storm sewers, as well as a restoration plan for tidal wetlands at a nearby off-site location (see below).

The following streetbeds are included within the project site (see **Figure 2**):

- Poppenhusen/5th Avenue between 119th Street and 121st Street;
- 6th Avenue between 119th Street and College Place;
- 7th Avenue between 119th Street and College Place;
- 8th Avenue between a mapped easement on Block 3939, Lot 14 and College Place;
- 9th Avenue between 118th and 120th Streets;
- 12th Avenue between 119th and 120th Streets;
- College Place between the East River (Block 3914, Lot 1) and 8th Avenue;
- 118th Street between 9th and 12th Avenues;
- 119th Street between Poppenhusen and 12th Avenues; and
- 120th Street between 9th Avenue and 9th Road.

C. RESEARCH GOALS AND METHODOLOGY

The following Phase 1A Archaeological Documentary Study of the Capital Project SEQ200463 project site has been designed to satisfy the requirements of the New York State Historic Preservation Office (SHPO) and the New York City Landmarks Preservation Commission (LPC), and it follows the guidelines of the New York Archaeological Council (NYAC). The study documents the development history of the proposed project site as well as its potential to yield archaeological resources, including both precontact and historic cultural resources. In addition, this report documents the current conditions of the project site and previous cultural resource investigations that have taken place in the vicinity.

This Phase 1A Archaeological Documentary Study has four major goals: (1) to determine the likelihood that the project site was occupied during the precontact (i.e., Native American) and/or historic periods; (2) to determine the effect of subsequent development and landscape alteration on any potential archaeological resources that may have been located at the project site; (3) to make a determination of the project site's potential archaeological sensitivity; and (4) to make recommendations for further archaeological analysis, if necessary. The steps taken to fulfill these goals are explained in greater detail below.

The first goal of this documentary study is to determine the likelihood that the project locations were inhabited during the precontact or historic periods and identify any activities that may have taken place on the project site that would have resulted in the deposition of archaeological resources. In order to determine the likelihood of the project site's occupation during the precontact and historic periods, documentary research was completed to establish a chronology of the project locations' development, landscape alteration, to identify any individuals who may have owned the land or worked and/or resided there, and to determine if buildings were present on the project locations in the past. Data was gathered

from various published and unpublished primary and secondary resources, such as historic maps, topographical analyses (both modern and historic), historic photographs, newspaper articles, local histories, and previously-conducted archaeological surveys. These published and unpublished resources were consulted at various repositories, including the Main Research Branch of the New York Public Library (including the Local History and Map Divisions). File searches were conducted at LPC, SHPO, and the New York State Museum (NYSM). Online textual archives, such as Google Books and the Internet Archive Open Access Texts, were also accessed.

The second goal of this Phase 1A study is to determine the likelihood that archaeological resources could have survived intact on the project site after development and landscape alteration (i.e., erosion, grading, filling, etc.). Potential disturbance associated with paving and utility installation was also considered. Historic maps documenting structures on the project location were analyzed; in addition, historic and current topographical maps were compared to determine the extent to which the project locations have been disturbed. After identifying the likelihood that archaeological resources were deposited on the project site and the likelihood that they could remain intact given subsequent development and landscape alteration, a sensitivity determination was made for the project locations for both precontact and historic period resources. As described by NYAC in their Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State, published in 1994 and subsequently adopted by SHPO (see page 2):

An estimate of the archaeological sensitivity of a given area provides the archaeologist with a tool with which to design appropriate field procedures for the investigation of that area. These sensitivity projections are generally based upon the following factors: statements of locational preferences or tendencies for particular settlement systems, characteristics of the local environment which provide essential or desirable resources (e.g., proximity to perennial water sources, well-drained soils, floral and faunal resources, raw materials, and/or trade and transportation routes), the density of known archaeological and historical resources within the general area, and the extent of known disturbances which can potentially affect the integrity of sites and the recovery of material from them.

The third goal of this study was to make a determination of the project site's archaeological sensitivity. As stipulated by the NYAC standards, sensitivity assessments should be categorized as low, moderate, or high to reflect "the likelihood that cultural resources are present within the project area" (NYAC 1994: 10). For the purposes of this study, those terms are defined as follows:

- **Low:** Areas of low sensitivity are those where the original topography would suggest that Native American sites would not be present (i.e., locations at great distances from fresh and salt water resources), locations where no historic activity occurred before the installation of municipal water and sewer networks, or those locations determined to be sufficiently disturbed so that archaeological resources are not likely to remain intact.
- **Moderate:** Areas with topographical features that would suggest Native American occupation, documented historic period activity, and with some disturbance, but not sufficient disturbance to eliminate the possibility that archaeological resources are intact on the project site.
- **High:** Areas with topographical features that would suggest Native American occupation, documented historic period activity, and minimal or no documented disturbance.

As mentioned above, the fourth goal of this study was to make recommendations for additional archaeological investigations where necessary. According to NYAC standards, Phase 1B testing is generally warranted for areas determined to have moderate sensitivity or higher. Archaeological testing is designed to determine the presence or absence of archaeological resources that could be impacted by a proposed project. Should they exist on the project locations, such archaeological resources could provide

new insight into the precontact occupation of College Point, Queens, the transition from Native American to European settlement, or the historic period occupation of the project site.

A. GEOLOGY AND TOPOGRAPHY

The borough of Queens is found within a geographic bedrock region known as the Atlantic Coastal Plain Province. This has been described as “that portion of the former submerged continental shelf which has been raised above the sea without apparent deformation” (Reeds 1925: 3). Soils on Long Island, on which Queens County is located, are composed of glacial till or undifferentiated sediments such as sand and clay. The Atlantic Coastal Plain is typified by “flat, low-lying” ground “that slopes very gently toward the sea” (Isachsen, et al. 2000: 149).

The glacial till making up the upland portions of Queens County was deposited by the massive glaciers that retreated from the area towards the end of the Pleistocene (1.6 million years before present [BP] to approximately 10,000 years BP). There were four major glaciations that affected New York City, culminating in a northeast-southwest direction (Homburger 1994). The deposition of glacial till in the wake of the retreating glaciers resulted in the creation of sand hills, known as kames, across New York City, some of which rose to heights of one hundred feet.

The original shoreline on the western shore of College Point was in the approximate location of modern 115th Street. Other areas along the coast of the peninsula have been expanded through the addition of landfill, although the majority of the project site appears to be located on what was originally fast land. Historic topographical maps of the area show that the coastal areas of College Point were generally at lower elevations than the central portion, where the ground surface rose to a peak to the southwest of the project site near the intersection of modern 14th Avenue and College Point Boulevard. The location of modern MacNeil Park was one of the areas of highest elevation in the vicinity of the project site, featuring high bluffs rising steeply to elevations of approximately 50 to 60 feet above sea level. The remainder of the project site sloped gently upward to the east from the shoreline at approximately 115th Street. Current USGS maps (see **Figure 1**) indicate that the surface topography of the area is generally similar to that seen on historic maps, such as the 1891 USGS map (see **Figure 4**) with the slope rising to the south and east.

B. HYDROLOGY

The project site is situated at the northern end of College Point and is bordered to the north by the East River. Historically, the southern half of College Point was partially isolated from mainland Queens by a thick tract of tidal marsh punctuated by brooks and streams that drained into Flushing Bay (see **Figure 4**). Additional marshland was present to the east of the project site surrounding Powell’s Cove and separating the area now known as Tallman Island from the mainland. No streams or water courses are depicted on current or historic maps within the project site. However, a small pond is shown on some historic maps (Connor 1852; Dripps 1872; Beers 1873) to the east of what is now 115th Street and south of Poppenhusen Avenue.

C. SOILS

The *New York City Soil Reconnaissance Survey* published by the National Resource Conservation Service (2005) indicates that the soils within the project site and in the immediate vicinity belong to the following three soil complexes:

- **Pavement and Buildings-Laguardia-Ebbets:** makes up the majority of the inland portion of College Point in the vicinity of the project site; found in generally level areas (zero to eight percent slopes) containing both natural soils and fill made from construction debris, 80 or more of which is covered with pavement and/or buildings;
- **Pavement and Buildings-Foresthills-Canarsie:** makes up portions of the inland portion of College Point in the vicinity of the project site including the southern portions of the project site; found in steeply sloping (eight to 15 percent) urban areas “that have been cut and filled with natural soil materials, mostly for residential use” (New York City Soil Survey Staff 2005: 11); and
- **Montauk-Foresthills:** along the shoreline of College Point; found in generally level areas (zero to eight percent slopes) that are “partially filled with natural soil for cemeteries, golf courses, or athletic fields with some patches of woods” (New York City Soil Survey Staff 2005: 11).

D. PALEOENVIRONMENT

Due to the extended glacial period that left the Northeast blanketed in thick ice sheets for thousands of years, the area was not inhabited by humans until approximately 11,000 years ago. As temperatures increased, a variety of flora and fauna spread through the region. At this time, large open forests of spruce, fir, pine, and other tree species expanded across the Northeast, interspersed with open meadows and marshland. A wide variety of animal life could also be found, including large mammals such as mammoth, mastodon, caribou, musk ox, moose, as well as smaller mammals such as fox, beaver, hare, and many kinds of marine animals.

Climate changes continued to reshape the environment of the Northeast as time progressed. As the climate grew increasingly warmer, jack pine, fir, spruce, and birch trees were replaced with hardwood forests of red and white pine, oak, and beech (Ritchie 1980). Furthermore, a decrease in glacial runoff resulted in the creation of small bodies of water such as lakes as well as, later on, low-lying marshes and swampy areas. By the time of the Early Archaic period, beginning approximately 10,000 BP, there was “considerable environmental diversity, with a mosaic of wetlands, oak stands, and a variety of other plant resources...[making it]...an attractive and hospitable quarter for both human and animal populations” (Cantwell and Wall 2001: 53). Warmer temperatures forced the herds of large mammals to travel north before eventually dying out. The new surroundings attracted other animals such as rabbit, turkey, waterfowl, bear, turtles, and white-tailed deer. The expanded water courses became home to a variety of marine life, including many varieties of fish, clams, oysters, scallops, seals, and porpoises, among others (ibid).

E. CURRENT CONDITIONS

The majority of the project site is occupied by active streetbeds (see **Photographs 1 through 8**). The location of the proposed outfall at the northern terminus of College Place is located at the East River Waterfront to the east of MacNeil Park. The eastern side of the park is lined with a concrete bulkhead and a riprap wall. Portions of the proposed outfall location are occupied by salt marsh and an extension of the rip rap wall (see **Photographs 9 and 10**). An existing outfall is present in this location.

A. PRECONTACT CONTEXT

Archaeologists have divided the time between the arrival of the first humans in northeastern North America and the arrival of Europeans more than 10,000 years later into three periods: Paleo-Indian (11,000-10,000 BP), Archaic (10,000-2,700 BP), and Woodland (2,700 BP–AD 1500). These divisions are based on certain changes in environmental conditions, technological advancements, and cultural adaptations, which are observable in the archaeological record.

As mentioned in Chapter 2, human populations did not inhabit the Northeast until the glaciers retreated some 11,000 years ago. These new occupants included Native American populations referred to by archaeologists as Paleo-Indians, the forbearers of the Delaware—also called the Lenape Indians—who would inhabit the land in later years. Archaeological evidence suggests that the Paleo-Indians were likely highly mobile hunters and gatherers who utilized a distinct style of lithic technology, typified by fluted points. They appear to have lived in small groups of fewer than 50 individuals (Dincauze 2000) and did not maintain permanent campsites. In addition, most of the Paleo-Indian sites that have been investigated were located near water sources. Because of the close proximity of Paleo-Indian sites to the coastline, few have been preserved in the New York City area.

The Archaic period has been sub-divided into three chronological segments, based on trends identified in the archaeological record which reflect not only the ecological transformations that occurred during this period, but the cultural changes as well. These have been termed the Early Archaic (10,000–8,000 BP), the Middle Archaic (8,000–6,000 BP) and the Late Archaic (6,000–2,700 BP) (Cantwell and Wall 2001). The Late Archaic is sometimes further divided to include the Terminal Archaic (3,000-2,700 BP). The abundance of food resources which arose during this period allowed the Archaic Native Americans to occupy individual sites on a permanent or semi-permanent basis, unlike their nomadic Paleo-Indian predecessors. Fishing technology was developed during the Middle Archaic in response to an increasing dependence on the area's marine resources. Tools continued to be crafted in part from foreign lithic materials, indicating that there was consistent trade among Native American groups from various regions in North America throughout the Archaic period. Few Early and Middle Archaic archaeological sites have been identified in New York City, although numerous Late Archaic sites have been identified in the area.

The Woodland period represents a cultural revolution of sorts for the Northeast. During this time, Native Americans began to alter their way of life, focusing on a settled, agricultural lifestyle rather than one of nomadic hunting and gathering. Social rituals become visible in the archaeological record at this time. Composite tools, bows and arrows, domesticated dogs, and elaborately decorated pottery were introduced to Native American culture at this time and burial sites grew increasingly complex. Woodland-era sites across North America indicate that there was an overall shift toward full-time agriculture and permanently settled villages. Archaic sites in New York City, however, suggest that the Native Americans there continued to hunt and forage on a part-time basis. This was most likely due to the incredibly diverse environmental niches that could be found across the region throughout the Woodland period (Cantwell and Wall 2001; Grumet 1995).

The Woodland period ended with the arrival of the first Europeans in the early 1600s. At that time, College Point and the surrounding vicinity was included within the territory of a group of Native Americans known as the Matinecock (Bolton 1922). A large Matinecock village was located in what was

then the town of Flushing, at the southern end of College Point (Bolton 1922 and 1975). After the Dutch settled the colony of New Amsterdam in the early 17th century, they quickly began to purchase large areas of land from the Native Americans. Some Native Americans continued to reside in the vicinity of Powell’s Cove through the end of the 17th century (Hecht 1974).

While relatively few Native American burials have been encountered in the New York City region, as discussed below, several burial sites have been identified in the College Point area (Bolton 1934). Local burial sites “were often well-defined spaces, selected for the purpose by reason of their suitable soil and the natural drainage of the surface” (Bolton 1934: 117). Native American burials have typically been identified in shallow (two to three feet in depth) “oval-shaped excavation[s]” that were “scraped out by hand,” sometimes re-purposed food storage or cooking pits (ibid: 116). In addition, burials were usually in flexed positions to minimize space and burial shafts were often lined with oyster shells although few grave goods were present (ibid).

B. PREVIOUSLY IDENTIFIED NATIVE AMERICAN ARCHAEOLOGICAL SITES

Site file searches at LPC, SHPO and NYSM indicate that at least six precontact archaeological sites have been identified within approximately one mile of the project site (see **Table 1**). The majority of the sites represented precontact villages and burial sites. While some of these sites were observed in the vicinity of the project site, most were identified more than one mile to the south of the project site, along the shores of Flushing Bay and Flushing Creek near the southern end of College Point opposite Willet’s Point. The presence of several precontact archaeological sites in the northern portion of College Point confirms that Native Americans were active in the vicinity of the project site.

Table 1
Previously Identified Precontact Archaeological Sites

Site Number	Approximate Distance from Project Site	Time Period	Site Type and Information	Reference(s)
NYSM: 4527 Parker: 4	Project site partially overlaps with site	Precontact	Village and burial site	Parker (1922)
NYSM: 4540	0.5 miles	Precontact	Camp site with burials	Parker (1922) Solecki (1941)
NYSM: 4541	1 mile	Precontact	Traces of Occupation	Parker (1922)
The Wilkins Site SHPO: 08101.007355	1 mile	Possible Paleo-Indian; Late Archaic/Early Woodland; Late Woodland; Contact	Multi-component site with evidence of a Native American village, campsite, and burials.	Smith (1950) RBA Group (2000)
Graham Court NYSM: 719	1 mile	Late Woodland	Village site with burials and shell middens	Parker (1922) Solecki (2006)
Grantville Site SHPO: A081.01.0133	2 miles	Archaic and Woodland	Habitation site	Smith (1950)
NYSM 4542	1.5 Miles	Precontact	Campsite	Parker (1922)
NYSM 4524	0.5 miles	Precontact	Burial Site on Thomas P. Duryea’s Farm, discovered 1881	RBA Group (1997)
Nassau County Museum: 128	0.5 miles	Precontact	Shell Midden	RBA Group (1997)

Source: Site files of LPC (Boesch 1997), SHPO, and NYSM.

Several of these sites were discovered in the early 20th century by avocational archaeologists and were reported by author Arthur C. Parker (1922). Unfortunately, few of these sites were well-documented and little is known about the precontact sites’ exact locations, extent, or artifact collections. The map of Native American sites included in Parker’s (1922) *The Archaeological History of New York* depicts a

village and two burial sites on College Point. Only one of these (now identified as NYSM site 4527) is described in Parker's work. Parker described the area as a, "village and burial site at College Point on the E. Platt Stratton estate. Skeletons were found in 1861, when excavating for the foundation of Knickerbocker Hall" (1922: 672). HPI (1999) states that this site was located near the intersection of 10th Avenue and 117th Street, and maps of the site included in SHPO's site files indicate that the site covered a portion of the project site.

Bolton's 1922 work documenting the Native American sites and trails in New York depicts only a large habitation site more than one mile to the south of the project site at the southern end of College Point along Flushing Creek. Bolton does, however, document the large Native American village *Snakapins* at Clason's Point, in the Bronx directly opposite the project site across the Long Island Sound. Several Native American sites have been identified in this location, which is approximately one mile north of the project site.

Three sites in College Point have been well-documented and/or excavated using modern archaeological techniques: the Graham Court Site; the Wilkins Site; and the Grantville Site. These three Native American sites are discussed in greater detail below.

THE GRAHAM COURT SITE (NYSM #719)

The Graham Court site was initially excavated in 1934 by archaeologist Dr. Ralph Solecki—when he was just 16 years old—after a human burial was encountered during construction (Solecki 2006). The site at the time was situated on an eroding bluff 20 feet above the beach lining the western shore of College Point (ibid). The human remains were encountered on Graham Court between 121st and 122nd Streets (ibid). Dr. Solecki excavated additional disturbed and intact human burials as well as other Native American artifacts and numerous storage pits and middens (ibid). A dog burial was later encountered near the Graham Court site, one of several Late Woodland dog graves that have been discovered in New York City (Solecki 2006; Cantwell and Wall 2001).

THE WILKINS SITE

The Wilkins Site was identified approximately one mile east of the project site near the eastern shore of Powell's Cove. The site was described by archaeologist Carlyle Smith as having been "situated near the head of a small tidal cove on Fourteenth Avenue...[and] was excavated by the field party of the Flushing Historical Society in 1939 and 1940" (Smith 1950: 177). As originally identified, the site was composed of shell middens containing hundreds of decorated ceramic sherds—associated with the Bowmans Brook stamped and incised and East River cord marked pottery traditions—ceramic pipes, bone tools, and lithic tools and debitage (ibid). During excavations in the 1950s, amateur archaeologists and professional archaeologists from the American Museum of Natural History excavated burials from this site after they were encountered during construction (RBA 1997).

The Wilkins site has been subject to modern archaeological investigation, most notably by the RBA group in the late 1990s. Archaeological testing at the site was completed by the RBA group in 2000, which identified components dating between the Late Archaic and Late Woodland periods, as well as one potential Paleo-Indian fluted point (RBA Group 2000). This field investigation determined that the "site was a multi-component and multi-functional...camp site probably oriented chiefly to the exploitation of resources associated with Powells Cove" (ibid: 12-13). While stone tool production was also evident at the site, RBA determined that the site was likely occupied on a temporary basis and that the individuals interred at the campsite were "occupying the site at the time of their death [and] were quickly interred" (ibid: 13).

THE GRANTVILLE SITE (A081.01.0133)

This site—which was investigated in the 1930s by M.C. Schreiner and later by archaeologist Ralph Solecki—was “situated on a narrow promontory at the southwestern corner of College Point” on the shore of the Flushing Bay (Smith 1950: 173). Pottery recovered from this site were determined to be associated with the Bowman’s Brook and Clason’s Point traditions, the latter having been named for a site located along the southern shore of the Bronx directly opposite College Point (Smith 1950). While some non-ceramic traditions were observed among the Grantville site collections, Smith (1950) determined that they could not be identified as belonging to a “pre-pottery” culture, and as such it is assumed that the Grantville site dates to the Woodland period.

A. HISTORICAL CONTEXT OF COLLEGE POINT**DISCOVERY AND COLONIZATION**

New York was “discovered” by Giovanni de Verrazano in 1524 and explored by Henry Hudson in 1609, thus marking the beginning of European occupation in the area. Queens quickly became the home of the European fur trade in the New World. In 1621, the States-General in the Netherlands chartered the Dutch West India Company (WIC) to consolidate Dutch activities in the New World. It was at this time that the WIC began to purchase large tracts of land from the Native Americans. In exchange for furs, entrepreneurs and government officials supplied Native Americans with a wide range of goods.

Dutch Director-General William Kieft purchased all of what is now Queens County from the local Native Americans in 1639. Shortly thereafter, settlements began to be established, albeit by English citizens fleeing religious persecution rather than the Dutch (Burrows and Wallace 1999). The first settler in the College Point area was William Lawrence, who was granted a 900 acre plot of land in 1645 (Copquin 2007). The area had previously been known as Tew’s Neck, after a settler named Michael Tew, who appears to have lived nearby but not on College Point itself, which soon became known as Lawrence’s Neck (Hecht 1974). While some sources (USACE 2003) suggest that Lawrence constructed a home on the site of modern MacNeil Park circa 1645, a different home occupied by the Lawrence family was located further to the east on modern 14th Avenue that may have been the original Lawrence home (Hecht 1974). That house was moved to the Old Bethpage Restoration Village on Long Island in the late-20th century (Lederer 2004).

A large English population grew throughout Queens and all of New Netherlands, and soon the English outnumbered the Dutch, making it easy for them to seize the colony in 1664. Although the Dutch were able to re-take the colony—which had been re-named “New York”—in 1673, they traded it back in 1674 for “the far more lucrative colony of Surinam” (Cantwell and Wall 2001: 181). New York would remain under British control for the next hundred years. During the British period, Queens experienced significant expansion. The Dongan Charter of 1683 officially recognized it as a county and further divided it into five townships: Flushing, which included College Point, Newtown, Jamaica, Hempstead, and Oyster Bay (the land that makes up modern Nassau County was included within Queens at that time). Although Jamaica became the county seat of Queens, Newtown became more populated due to its close proximity to Manhattan while Flushing remained a relatively rural agricultural community, in part due to its inaccessibility. In fact, members of the Lawrence family were the only settlers of European descent living on College Point before the Revolutionary War (Hecht 1974).

Under British rule, Queens’ open farmland and vast coastline became essential for the production of agricultural goods and the harvesting of marine resources for export to the city. The colony’s progress was both hindered and facilitated in the mid-18th century during the French and Indian War, which concluded in 1763. Although the region experienced the economic side effects of being at war, thousands of British armed forces were stationed throughout the New York City area, bringing money to the region while at the same time increasing its population (Burrows and Wallace 1999).

REVOLUTION

By the late 18th century, political troubles had led to a schism between American patriots and British loyalists. After the retreat of General Washington after the loss of the Battle of Long Island, Queens became important to the British during the war, as many British troops were stationed there throughout the war's duration. Although many Queens residents fled to Connecticut after the British took control of the city, many more stayed and vowed to remain faithful to the crown (Burrows and Wallace 1999). During the war, British soldiers were stationed throughout Queens, wreaking havoc on the private citizens by burning farms and stealing from private citizens (Stankowski 1977). The owner of College Point, William Lawrence, was an American patriot who suffered at the hands of the marauding British Army and as a result, he had to sell a portion of his land on College Point after the close of the war (Hecht 1974). A map published by William Stewart in 1795 (not reviewed as part of this assessment) allegedly "illustrated a building and flag in a position corresponding with either Tallman's Island [on the eastern shore of College Point] or the northern tip of College Point," which were interpreted as possible representations of "the Lawrence house or a military installation on Tallman's Island" and "a notation that seemed to indicate a burial plot in this area" (USACE 2003: 3-39). The exact location of these developments is unknown.

Despite the loyalty of Queens County to the British, the Americans prospered, and Queens soon adapted to the new American government. The availability of land brought about another surge in development in what are now the outer boroughs. Queens continued to grow steadily over the next few decades, fueled by events such as the opening of the Erie Canal in 1825, the end of the Civil War in 1865, and the relocation of the Long Island Rail Road (LIRR) headquarters to Queens in 1861 (Burrows and Wallace 1999). As stated above, William Lawrence sold land after the close of the Revolutionary War to pay off his debts. The purchaser, Eliphalet Stratton, established an estate in southern College Point, which soon became known as "Strattonport" (Hecht 1974). A portion of that land was later sold to John A. Flammer and Peter W. Longley, and a neighborhood known as "Flammersburg" was established (ibid). These smaller communities were united as a single village under the name "College Point" in 1867 (ibid).

19TH CENTURY DEVELOPMENT

One of the first major developments on College Point was that of Saint Paul's College for Seminarians, a school established for the purpose of training Episcopalian ministers and from which the area received its name (Hecht 1974). The seminary was built on a 175-acre tract of land purchased by William Muhlenberg of Saint George's Episcopal Church in Flushing and the cornerstone for the main school building was laid in 1836 (Hecht 1974). After financial troubles, the school was constructed on a reduced scale—containing a chapel, dormitory, and school constructed using wood rather than stone—opened in 1839 and ceased operations before 1850 (Hecht 1974; Lederer 2004). Muhlenberg had used his own funds to construct a plank walk across the impassable marshland to the south to connect the village of Flushing with College Point and the college (Von Skal 1908). This road was replaced with a formal causeway in 1855; both roads ran in the vicinity of modern College Place (Von Skal 1908; USACE 2003).

Early maps of the area (e.g., Burr 1839, Mather 1842, and Smith 1844 and 1847) are relatively inaccurate, but they depict a cluster of development centered around what is now College Place on the historic projection of land formerly known as Lawrence Point (now MacNeil Park). These structures likely represent the buildings of Saint Paul's College, which had been constructed on the site in the late-1830s. J.C. Sidney's 1849 *Map of Twelve Miles around New York* is one of the first detailed maps of the region. While not particularly accurate, the map depicts several structures in the vicinity of the project site including two buildings on the projection known as Lawrence's Point, which by that time was renamed College Point as a result of the construction of Saint Paul's College. To the south, the homes of Dr. Muhlenberg and I. Nichols were present along College Place north of 14th Avenue.

In the mid-19th century, around the time that the college closed, Queens began expanding at an astonishing rate. Between 1840 and 1880, the population of Queens tripled, echoing similar increases in Manhattan and the other future boroughs. As Manhattan's population became denser, industries were relocated to the surrounding counties, including Queens (Stankowski 1977). Connor's 1852 map of Queens depicts the area in greater detail, showing Saint Paul's College on the eastern side of College Point (now MacNeil Park) and the mansion of William E. Chisholm on the west half of College Point. Chisholm, who was married to Reverend Muhlenberg's niece, had been a student at Saint Paul's College. After the school was closed, his mother-in-law acquired the land constructed a home for Chisholm and her daughter as a wedding present using unused materials that had been purchased for the school's construction but had not been used (Hecht 1974). In 1924, the former Chisholm estate was sold to the City of New York so that a park could be established in the site (*ibid*). The mansion was left in place and used as a summer home by Mayor Fiorello LaGuardia before it was demolished in the 1940s (*ibid*).

The Connor map depicts other buildings associated with the Chisholm estate on the large property, which covered the northern portion of the project site. In addition to the main Chisholm mansion, which was located within the boundaries of MacNeil Park, the map depicts several smaller structures, dirt roads, and a pond in the area now bounded by Poppenhusen Avenue, College Place, what would later be known as Avenue E, along the line of modern 8th Avenue. A property line in the vicinity of what would later be the line of modern 8th Avenue separated the Chisholm estate from the 60-acre property to the south, which the map indicates was inhabited by Nichols, Robert B. Carter, and Henry Carey.

One of the first accurate maps of the project site is an 1855 Coastal Survey prepared by F.H. Gerdes (see **Figure 5**). Within what is now MacNeil Park, the map depicts the structures formerly making up Saint Paul's College and the Chisholm mansion at the top of a hill. Smaller structures were depicted to the south at the base of the hill in the vicinity of modern Poppenhusen Avenue. To the south, the land making up the remainder of the project site was occupied by large estates and cultivated fields. The map also depicts modern 14th Avenue as a formal road bisecting the northern and southern halves of College Point. A similar—but less detailed—coastal survey was prepared by C. Rockwell in 1858.

Beginning in the mid-19th century, College Point became a small industrial hub, aided in large part to the establishment of Conrad Poppenhusen's Enterprise Rubber Works on the southwestern shore of College Point in 1854 (Copquin 2007). Poppenhusen, a wealthy German immigrant, had an arrangement with Goodyear to exclusively produce their hard rubber products and the factory was extremely successful (Lederer 2004). As a result of Poppenhusen's "advanced social ideas," he made great efforts to develop College Point to provide housing and other amenities for the individuals he employed, many of them fellow German immigrants (*ibid*: ii). Among the advancements introduced by Poppenhusen were paved streets and gas and water connections for individual homes (Hecht 1974). Historically, 14th Avenue (then called First Avenue) divided the northern portion of College Point—occupied by wealthy landowners, farmers, and factory owners—from the working class housing that was constructed to the south of the avenue (Lederer 2004). The Poppenhusen Institute, located near the intersection of 15th Avenue and 114th Street, was originally constructed for use as a school, town hall, jail, and other municipal purposes (*ibid*). Poppenhusen's factory closed in the late-19th century, by which time many other industrial enterprises had established themselves in College Point (Copquin 2007).

INDUSTRIAL DEVELOPMENT AND INTRODUCTION OF THE RAILROAD

Access to the area increased dramatically with the introduction of railroad lines in the 1860s. The Flushing and North Side Railroad was founded in 1868 and tracks—now part of the LIRR's Port Washington line—were constructed to connect College Point with the Village of Flushing and points west shortly thereafter (Hinsdale 1898; Walsh 2006). College Point soon became a sandy resort area known for its beaches (Hecht 1974). The area did not lose its rural nature, however, and by 1876, few streets in College Point were paved and most were dirt roads (Hecht 1974). As described in greater detail below,

many of the streetbeds making up the project site were not constructed until the first half of the 20th century, when the large estates were divided for residential development beginning in the late-19th century.

The region's prosperity caused Manhattan and its surrounding counties to become increasingly co-dependent, both economically and culturally. It was therefore suggested that the counties surrounding Manhattan—including Queens—be consolidated under the name "New York City." With only moderate resistance from some Queens residents, the county officially became a city borough on New Year's Day, 1898 (Burrows and Wallace 1999). As part of the consolidated city, Queens flourished throughout the 20th century. Increased mass transit connected the boroughs and intensified their union, allowing more people to live outside of Manhattan while still having access to its varied resources. As the population exploded, the area was forced to augment its development in order to accommodate the rapidly increasing population.

B. THE DEVELOPMENT OF THE PROJECT SITE

While a general development context for the project site has been provided above, a specific discussion of the historic development of each portion of the project site is included below.

PROPOSED OUTFALL LOCATION

The Lawrence family may have established a home as early as 1645 in the vicinity of the project site on the site of today's MacNeil Park. By the 1830s, Saint Paul's College had been established on the eastern shore of the park, to the northwest of the proposed outfall location. Historic maps and photographs suggest that to the south of the proposed outfall location, the shoreline was originally a sandy beach that led to the water. The outfall location appears to be situated in an area of landfill.

College Place is one of the oldest roads in the area, although historic maps suggest that it was not formally constructed or paved north of College Point Boulevard until after the publication of the 1873 Beers atlas (see **Figure 6**). Dripps' 1872 map of New York City depicts the continued presence of the buildings of the former Saint Paul's College—now owned by T.W. Ogden—although no structures were depicted in the immediate vicinity of the proposed outfall. The 1873 Beers and 1891 Wolverton maps (see **Figure 7**) depict an irregular shoreline along the waterfront with the line of a proposed road superimposed along the water's edge, suggesting that landfill and road construction was planned for that area.

While Wolverton's atlas depicts the area as vacant, subsequent maps depict a small building at the northwest corner of what is now Poppenhusen Avenue and College Place. The wood frame building, located southwest of the location of the proposed outfall, is identified on the 1903 Sanborn map (see **Figure 8**) as a "boat building." No maps indicate that any structures were present in the immediate vicinity of the proposed outfall. While some historic maps suggest that College Place continued north of Poppenhusen Avenue, the "Final Maps" of the Borough of Queens, prepared by the Queens Topographical Bureau in 1914, do not identify a mapped or built street in that location. The 1916 Sanborn map depicts the entire eastern portion of what is now MacNeil Park as vacant. No subsequent maps indicate the presence of any historic structures in the location of the proposed outfall or in the immediate vicinity.

PROPOSED SEWERS IN STREETBEDS

POPPENHUSEN/5TH AVENUE BETWEEN 119TH STREET AND 121ST STREET

As described previously, Poppenhusen Avenue—formerly known as "Avenue G" to the west of College Place and "North Boulevard" to the east—at one time divided the northern and southern halves of the Chisholm estate. The road now serves as the southern boundary of MacNeil Park. Several nautical charts published in the 1860s as well as the 1872 Dripps map depict a dashed or single line (rather than the two

solid lines typically used to identify the location of a built road) along portions of the approximate route of the modern road, suggesting that it may have originated as a dirt path rather than a formal road.

The 1855 Gerdes coastal survey (see **Figure 5**) may depict a structure to the south of the road between what is now 119th Street and College Place although the road itself was not yet constructed. The 1873 Beers atlas is the first to depict it as a partially developed street to the west of College Place (which was itself not formally constructed) and as a mapped street or dirt road to the east. The only structure in the vicinity of the streetbed on that map is a small outbuilding on the former college property to the north. The 1891 Wolverton atlas depicts the entire stretch of road as fully constructed, but with no adjacent structures.

By the publication of the 1903 and 1916 Sanborn maps, some lots to the north and south of the road east of College Place had been developed with dwellings on small lot and a waterline was present in that portion of the streetbed. The areas to the west remained large estates and no developments were immediately adjacent to the streetbed. An aerial photograph taken in 1924¹ indicates that the western portion of the street, then still part of the Chisholm estate, was lined with trees on either side, while the eastern part was more residential. By the publication of the 1951 Sanborn map, the entire length of the street was fully constructed and developed with water lines.

6TH AVENUE BETWEEN 119TH STREET AND COLLEGE PLACE

What is now the streetbed of 6th Avenue was historically part of the previously described Chisholm estate. The 1855 Gerdes map appears to depict a structure on that property to the southeast of the streetbed. The 1873 Beers and 1891 Wolverton maps both depict the area as vacant, although the 1903 and 1916 Sanborn maps indicate that a 2.5-story dwelling had been constructed just north of the eastern terminus of the proposed sewer line in this location. Ullitz's 1908 atlas of Queens (updated through 1913) depicts a circular driveway around the dwelling that led to College Place to the northeast, suggesting that the 6th Avenue portion of the project site is located to the rear of the map-documented structure. This driveway is also depicted on a 1924 aerial photograph of New York City, which suggests that this portion of the project site was a vacant lawn with trees. By the publication of the 1943 Sanborn map, 6th Avenue had been cut through, and the surrounding land had been divided into smaller lots and developed with houses. Water lines were present within the street by that time.

7TH AVENUE BETWEEN 119TH STREET AND COLLEGE PLACE

As with 6th Avenue to the north, 7th Avenue was not constructed until the first half of the 20th century. Prior to that, the land now occupied by the streetbed was included within a larger estate. As described above, a structure may be depicted in the vicinity of the proposed sewer between 6th and 7th Avenues on the 1855 Gerdes map. The Beers map of 1873 more clearly depicts the area and shows that the approximate line of what is now 7th Avenue was in the immediate vicinity of the southern boundary of the former Chisholm estate. The property to the south, which appears to include the location of the modern streetbed, was at that time owned by the Gelpke family, whose home was to the south near the northeast corner of modern 119th Street and 8th Avenue. To the east was the property of H. Ogden, which was developed only with a small structure in the northwest corner of the estate, in the line of 7th Avenue but east of the terminus of the proposed sewer.

The 1891 Wolverton atlas depicts the site in a similar manner, although it suggests that the Gelpke home was located further to the northeast, closer to the project site. The small home on the former Ogden property to the east is also depicted, and both dwellings are shown to have been surrounded by circular or semi-circular driveways. The buildings are more clearly depicted on the 1903 Sanborn map, which

¹ Accessible through: <http://maps.nyc.gov/doitt/nycitymap/>.

suggests that the former Ogden dwelling was further to the east and south, at a slightly greater distance from the project site. The 1924 aerial photograph depicts this area as wooded. By the publication of the 1943 Sanborn map, 7th Avenue had been cut through and the surrounding land had been divided into smaller lots and developed with houses. Water lines were present within the street by that time.

8TH AVENUE BETWEEN A MAPPED EASEMENT ON BLOCK 3939, LOT 14 AND COLLEGE PLACE

Modern 8th Avenue was originally constructed as Avenue E and is one of the oldest streets in College Point. A precursor to the street appears to be shown on the 1855 Gerdes map, although the map's inaccuracies may make it appear to have been located further to the north, closer to modern 7th Avenue. As with many of the surrounding streets, the 1873 Beers map depicts Avenue E as an informal or dirt road rather than a formally constructed street. No structures are depicted in the immediate vicinity of the road on that map or on the 1891 Wolverton atlas. By the publication of the 1903 Sanborn, however, the land near the western terminus of the road—now occupied by Block 3939, Lot 14—had been developed with several small structures, including a small dwelling, three sheds or stables, and a coop. The 1916 Sanborn map shows that additional structures, including a wagon shed, had been constructed to the east. Neither map indicates that 8th Avenue had been formally constructed at that time. The road was constructed and developed with water lines by the publication of the 1943 Sanborn map. The western terminus of 8th Avenue, at Lot 14, was redeveloped with a single, large residence and the blocks to the north and south of the street had also been divided into smaller lots and developed.

9TH AVENUE BETWEEN 118TH AND 120TH STREETS

What is now 9th Avenue between 118th and 120th Streets was historically the dividing line between three historic properties. As depicted on the 1873 Beers atlas, west of 119th Street, the location of the modern streetbed was situated near the boundary of the large estate of P. Cassidy and the smaller estate of C. Streuli. No structures are depicted on the map in the location of the streetbed. To the east of 119th Street, the map depicts 9th Avenue as an informal road, then known as Avenue D, with no structures in the immediate vicinity of the project site. The 1891 Wolverton atlas and 1903 Sanborn map depict the project site in a similar manner, although it indicates that the former Cassidy property had been sold to the Beck family. By the publication of the 1916 Sanborn map, the street had been extended to the west and developed with water lines.

12TH AVENUE BETWEEN 119TH AND 120TH STREETS

East of what is now 119th Street, modern 12th Avenue was historically included within the large estate of A.C. Poppenhusen, Conrad Poppenhusen's son. The 1873 Beers atlas identifies the property as a large 95-acre property developed with a large dwelling, a windmill, and a greenhouse. The Poppenhusen residence was formerly located within what is now the Streetbed of 12th Avenue near the eastern terminus of the proposed sewer. The 1891 Wolverton atlas also depicts the dwelling within the path of the streetbed, and depicts a circular driveway around the home, with four branches that led to College Place to the east, to the other dwellings to the north and south, and to the west along the line of 12th Avenue to what is now 119th Street.

The 1903 Sanborn map depicts no changes to the property in the vicinity of the proposed sewer line. However, by the publication of the 1909 Bromley atlas, the former Poppenhusen mansion had been demolished and the division of the estate into smaller properties had begun. Although minimal development had occurred in the surrounding lots, the map indicates that a stretch of 12th Avenue—then known as Monument Avenue—had been constructed between 119th Street and College Place. The 1916 Sanborn map does not depict any water lines within the streetbed, although they had been installed by the publication of the 1943 Sanborn map.

COLLEGE PLACE BETWEEN THE EAST RIVER (BLOCK 3914, LOT 1) AND 8TH AVENUE

College Place is one of the oldest streets in College Point and was originally constructed to allow access to the college located within what is now MacNeil Park. The road is depicted on the 1855 Gerdes coastal survey, which may depict a structure near the southeast corner of its intersection with what is now 5th Avenue. The 1873 Beers atlas depicts the road with a dashed line, suggesting that it was still unpaved or otherwise not formally constructed. No buildings are depicted in the vicinity of the streetbed on that map, nor on the 1891 Wolverton atlas, which depicts College Place as a built street. The 1903 Sanborn map indicates that water lines were present within the streetbed by that time.

118TH STREET BETWEEN 9TH AND 12TH AVENUES

As with 9th Avenue, a portion of this stretch of 118th Street extended through the former Cassidy/Beck estate. The former dwelling on that property was located within or in the immediate vicinity of the modern streetbed. As seen on the 1873 Beers and 1891 Wolverton maps, a historic road known as “Avenue C” formerly ran to the north of modern 12th Avenue. South of that road was the historic estate of E. Greef. Maps do not depict any buildings within the project site on that estate; however, the home of the Greef family was located to the east and other outbuildings to the west, with the path of 118th Street running through the estate’s center yard.

The 1903 Sanborn map does not depict any structures within the immediate path of 118th Street, although the former Cassidy/Beck home appears to be depicted further to the west of what is now the streetbed. The 1909 Bromley atlas depicts an outbuilding near the project site just north of the former line of Avenue C, which is not depicted on that map. By the publication of the 1916 Sanborn map, the former estate had been divided and 118th Street, formerly known as Elizabeth Street, had been cut through. The former Cassidy/Beck mansion is depicted on a block to the west of the streetbed on that map. No utilities are depicted within the streetbed on any historic maps.

119TH STREET BETWEEN POPPENHUSEN AND 12TH AVENUES

Though not as old as College Place, what is now 119th Street was also one of College Point’s earliest roads. The 1855 Gerdes atlas does not depict the street and instead shows land that now makes up the streetbed as passing through farmland and historic estates. The 1873 Beers atlas depicts the road as a constructed road, then known as 10th Street. Historic estates were located on either side of the street, and only a small outbuilding on the former A.C. Poppenhusen Estate (just north of what is now 12th Avenue) was located in close proximity to the road. Fire hydrants are depicted within the streetbed on the 1903 Sanborn map, suggesting the presence of the water lines that are shown on the 1916 Sanborn.

120TH STREET BETWEEN 9TH AVENUE AND 9TH ROAD

What is now the streetbed of 120th Street between 9th Avenue and 9th Road was historically included within one of College Point’s historic estates. The 1855 Gerdes coastal survey suggests that the modern roadbed crossed undeveloped land and a historic driveway that at one time connected the former Cassidy/Beck estate to College Place. The 1873 Beers atlas depicts the streetbed as running through the center of a smaller estate owned by Hugo Funke, who owned an extensive amount of land in northern College Point at the time. Funke’s residence and other small buildings were located to the east, closer to College Place. The 1891 Wolverton atlas—which identifies the estate’s owner as A.L. Poppenhusen—does not depict any structures in the path of the streetbed, although it does indicate that a driveway was partially located within the modern roadbed. No changes appear in the area on the 1903 and 1916 Sanborn maps, the 1909 Bromley atlas, or the 1924 aerial photograph. By the publication of the 1943 Sanborn map, the street had been fully constructed and developed with water lines.

A. SENSITIVITY ASSESSMENT

As part of the background research for this Phase 1A Archaeological Documentary Study, various primary and secondary resources were analyzed, including historic maps and atlases, historic photographs and lithographs, newspaper articles, and local histories. The information provided by these sources was analyzed to reach the following conclusions.

DISTURBANCE ASSESSMENT*PROJECT SITE STREETBEDS*

The locations of the project site streetbeds have all been disturbed to some extent as a result of the construction of the streets and grading and paving associated with street maintenance. It is assumed that all of the streetbeds are disturbed to depths of approximately 1 to 1.5 feet below the existing streetbeds. In addition, all of the project site streetbeds have been disturbed to greater depths during the installation of utilities. However, portions of some of the streetbeds may not contain utility lines or may feature large gaps between existing utility lines and may therefore contain undisturbed soils.

While plans depicting existing utilities are not yet available, it is assumed that the locations of any existing utilities are considered to be disturbed from the ground surface to a depth of one to two feet below the bottom of the utility line and to a distance of one to two feet on either side, beyond the outer edges of each utility line, representing the trench that was likely dug as part of the line's installation. Any location where no utilities are present or where there is a space of five feet or more between the outer edges of existing utilities should be considered undisturbed. Those locations beneath the disturbed portions of existing utility trenches are also considered undisturbed.

PROPOSED OUTFALL

The location of the proposed outfall has experienced disturbance as a result of the construction of the infrastructure and bulkhead. The modern shoreline appears to have been created through the addition of landfill deposits.

PRECONTACT SENSITIVITY ASSESSMENT

The precontact sensitivity of project sites in New York City is generally evaluated by a site's proximity to level slopes, water courses, well-drained soils, and previously identified precontact archaeological sites. The project site is situated on a peninsula near tidal marshland and high ground, and would therefore have been an ideal site for camping or hunting and gathering, or permanent occupation. At least six Native American archaeological sites have been identified within one mile of the project site, including four burial locations, one of which appears to have been located on the project site itself.

The project site has experienced substantial disturbance as a result of the construction, grading, and paving of streets, the installation of utilities, and the construction of bulkheads and retaining walls. The location of the proposed outfall is determined to have no sensitivity for precontact archaeological resources as a result of previous disturbance. In addition, the portions of streetbeds that have been disturbed for utility installation are determined to have low sensitivity for precontact archaeological resources. However, the portions of the streetbeds that have not been disturbed for the installation of

utilities are determined to have moderate sensitivity for archaeological resources associated with the Native American occupation of College Point, including human remains.

HISTORIC SENSITIVITY ASSESSMENT

College Point was not extensively settled until after the Revolutionary War. The area surrounding the project site streetbeds was largely occupied by large estates until the late-19th and early-20th centuries, around the time when water and sewer networks appear to have become available in the area. There are several locations where modern streetbeds were constructed in the locations, in the immediate vicinity of map-documented structures, or through the rear yards of historic estates. These streetbeds include:

- 6th Avenue between 119th Street and College Place;
- 12th Avenue between 119th and 120th Streets;
- 118th Street between 9th and 12th Avenues; and
- 120th Street between 9th Avenue and 9th Road.

The homes in these locations appear to have been constructed before the availability of water and sewer lines. The residents of these homes, including members of some of College Point's most influential families, would have relied on shaft features (e.g., privies, cisterns, and wells) for the purposes of water-gathering and sanitation. These deeply buried features may still be present within undisturbed portions of the modern roadbeds. Therefore, these four streetbeds are considered to have moderate sensitivity for historic period archaeological resources. The remaining streetbeds and the highly disturbed location of the proposed outfall are determined to have low sensitivity for archaeological resources dating to the historic period.

B. RECOMMENDATIONS

The undisturbed portions of the project site (i.e., those locations where no utility lines are present or where there are gaps of more than five feet between existing utilities) are determined to have moderate sensitivity for precontact archaeological resources (including human burials), and four streetbeds are determined to have moderate sensitivity for historic period archaeological resources (see **Figure 9**).

Archaeological monitoring during construction is recommended for those undisturbed areas that would be impacted as a result of the construction of the proposed project. However, because the project plans have not yet been finalized and maps of existing utilities have not yet been prepared, it cannot yet be determined where archaeological resources may be impacted as a result of the proposed project and, therefore, where archaeological monitoring will be necessary.

After the plans are finalized, they should be reviewed by an archaeologist to determine those locations that require archaeological monitoring. Prior to the completion of the monitoring, an Archaeological Monitoring Plan should be prepared to document the steps that will be taken during the monitoring effort to document and protect any archaeological resources observed during construction, including potential human remains. No archaeological monitoring is recommended for those areas that have been identified as previously disturbed. However, it is recommended that a Plan for the Unanticipated Discoveries of Human Remains be prepared for the entire project site to outline the procedures that would be followed to ensure the proper management of human remains in the event that such remains are encountered anywhere on the project site the construction of the proposed project. Both the Archaeological Monitoring Plan and the Unanticipated Discoveries Plan should be submitted to LPC and SHPO for review and approval before the start of construction.

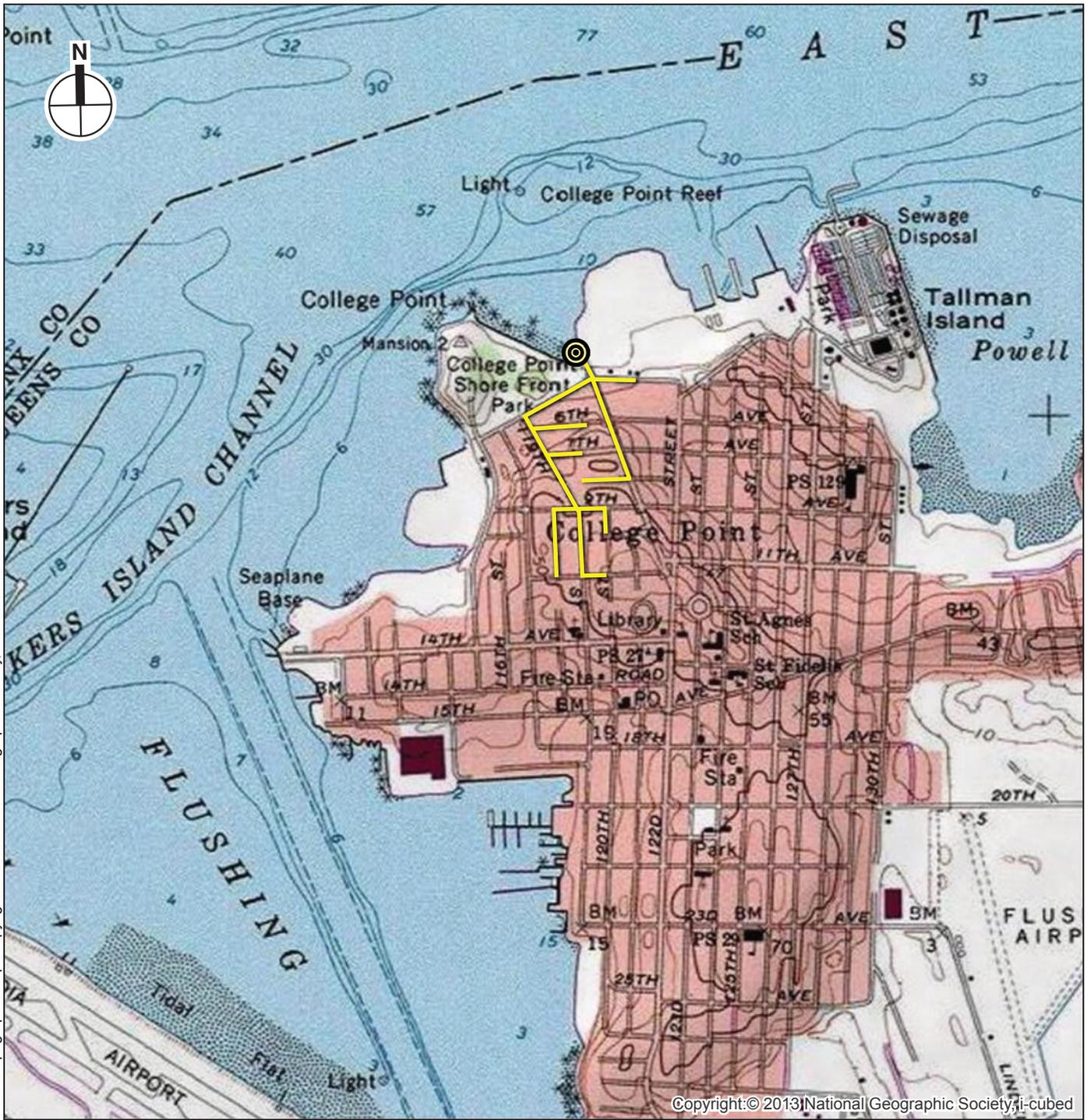
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Figures

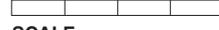


Proposed Outfall



Proposed Storm Sewer

0 1000 2000 FEET

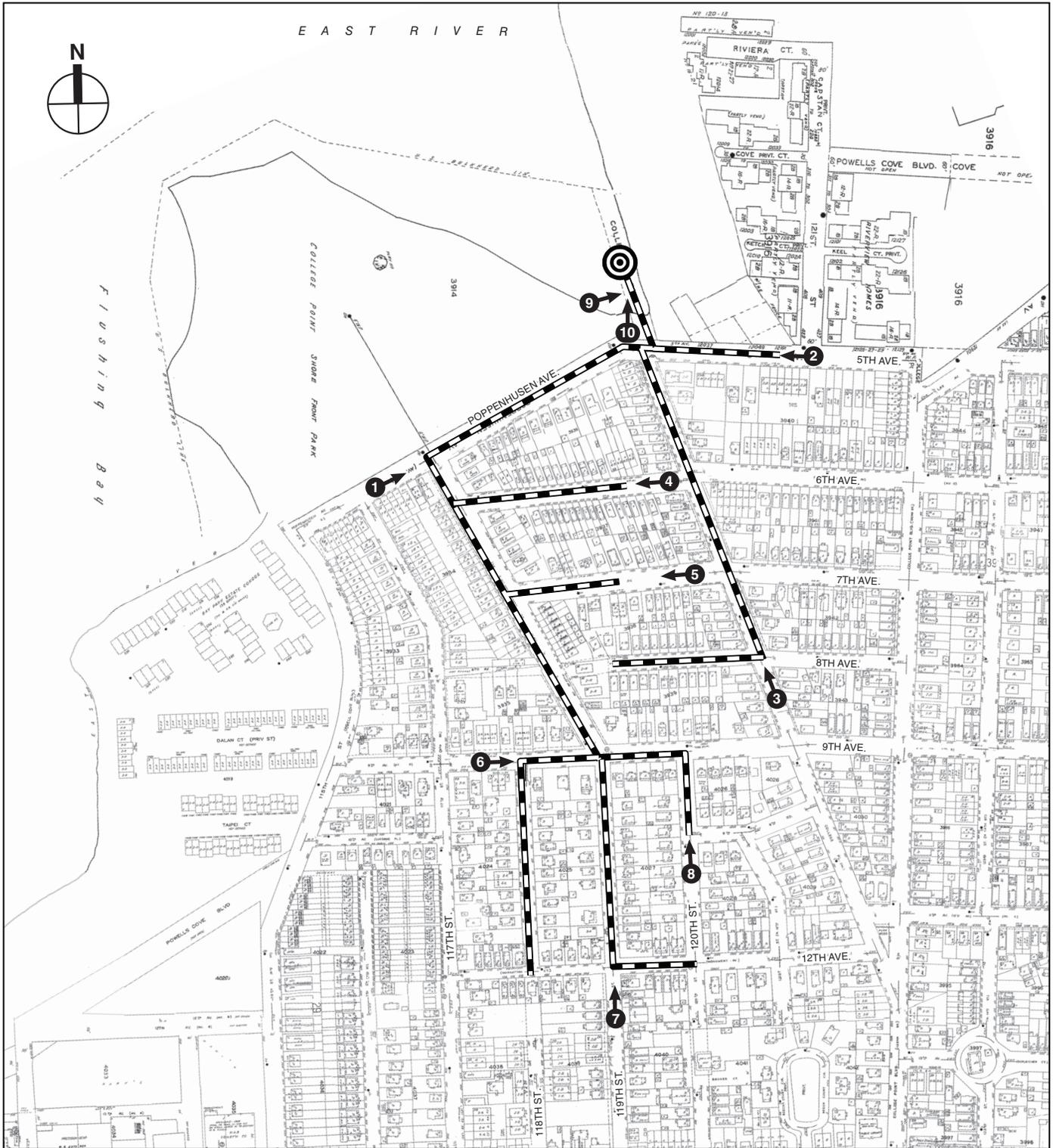


SCALE



USGS 7.5 Minute Topographic Map
Flushing Quad

Figure 1



Proposed Outfall



Proposed Storm Sewer



Photograph View Direction and Reference Number

0 500 FEET

SCALE

**Project Area Sanborn Map:
College Point North Capital Project**
Figure 2

EAST RIVER



-  Proposed Outfall
-  Proposed Storm Sewer

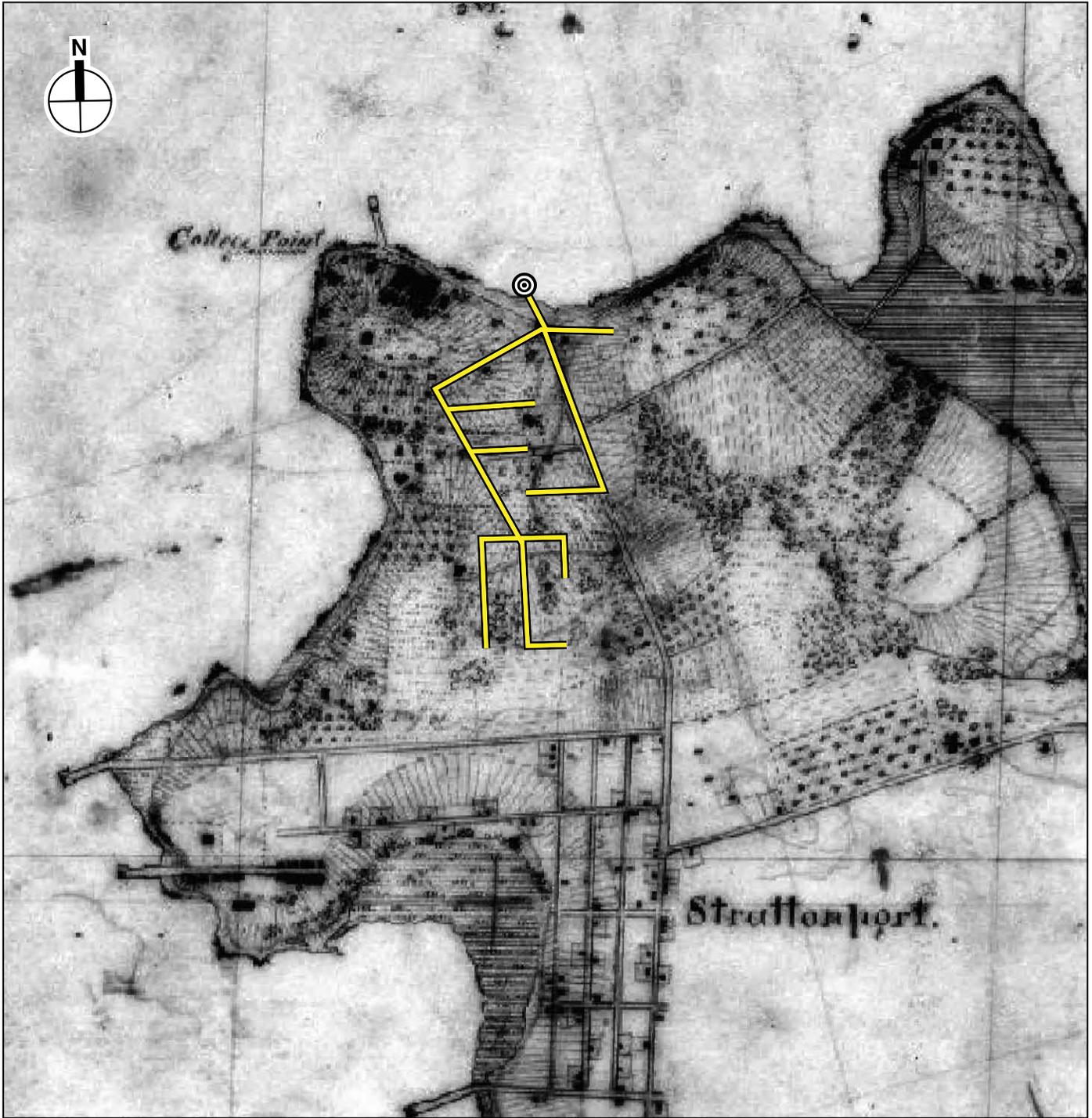


**Project Area Aerial Photograph:
College Point North Capital Project**
Figure 3



-  *Proposed Outfall*
-  *Proposed Storm Sewer*



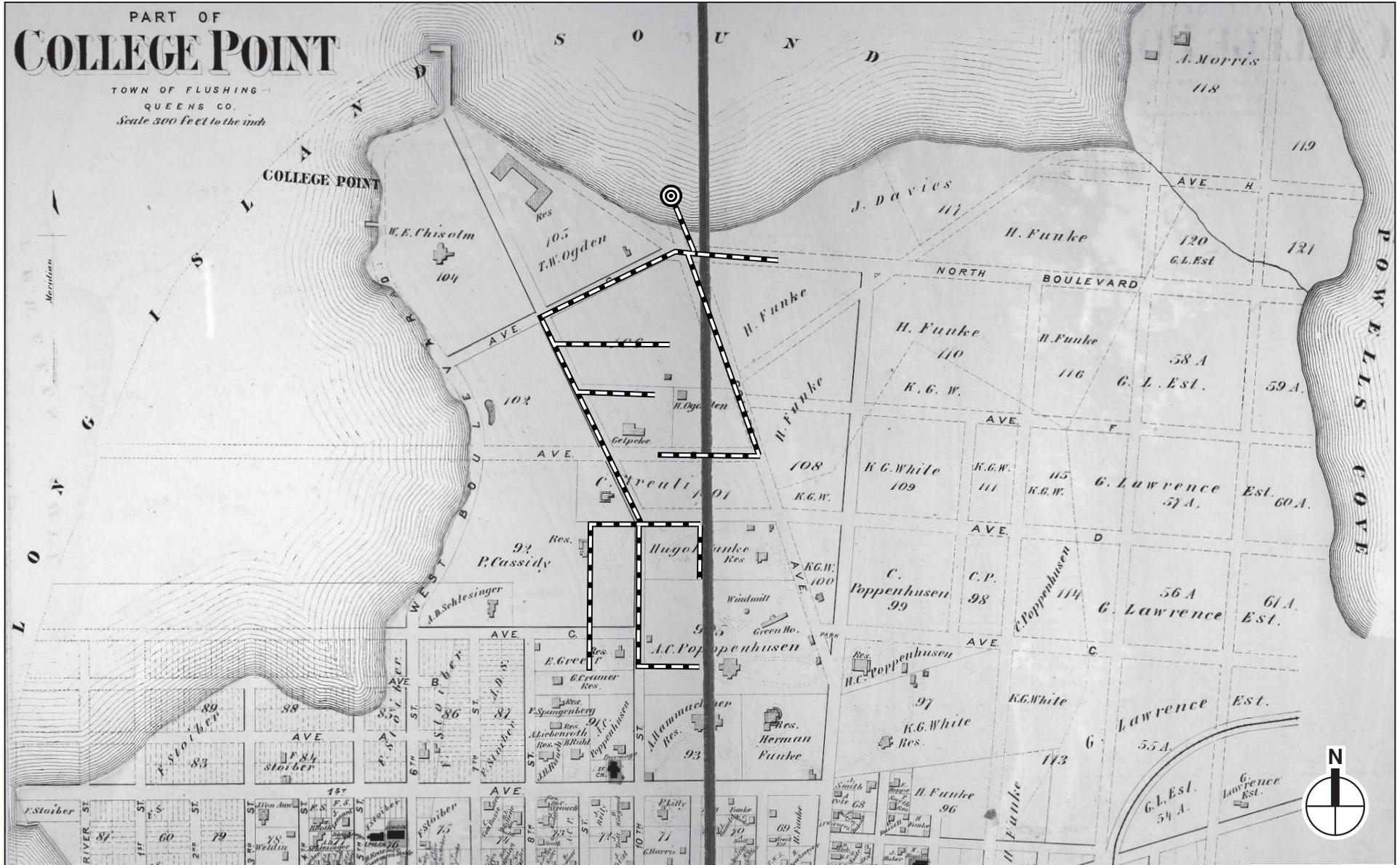


⊙ *Proposed Outfall*

— *Proposed Storm Sewer*

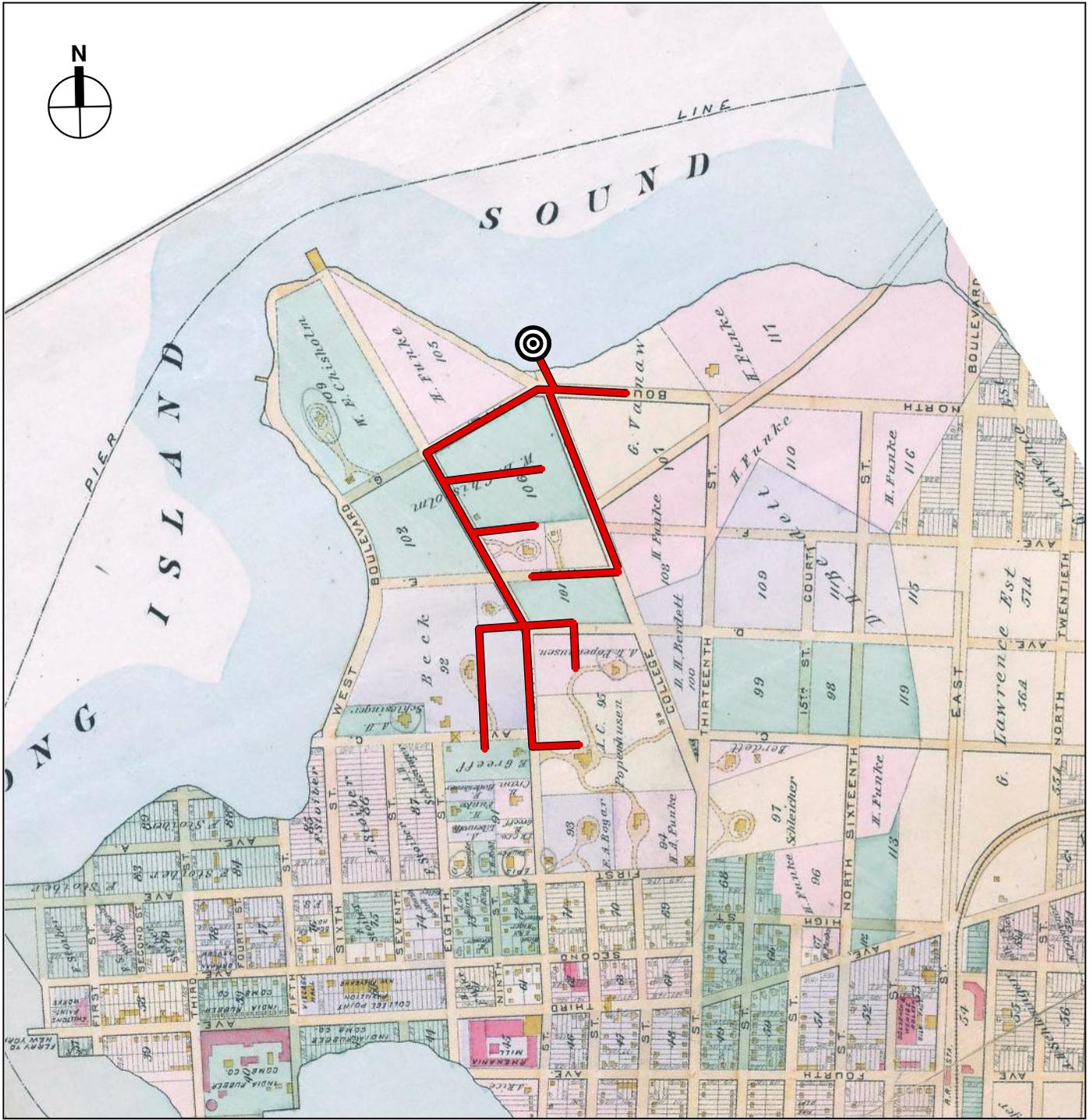
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SCALE

NOTE: This map was georeferenced to align the historic and modern streets; due to inaccuracies in the original map, the project site location may appear to be incorrectly aligned in some places



 Proposed Outfall

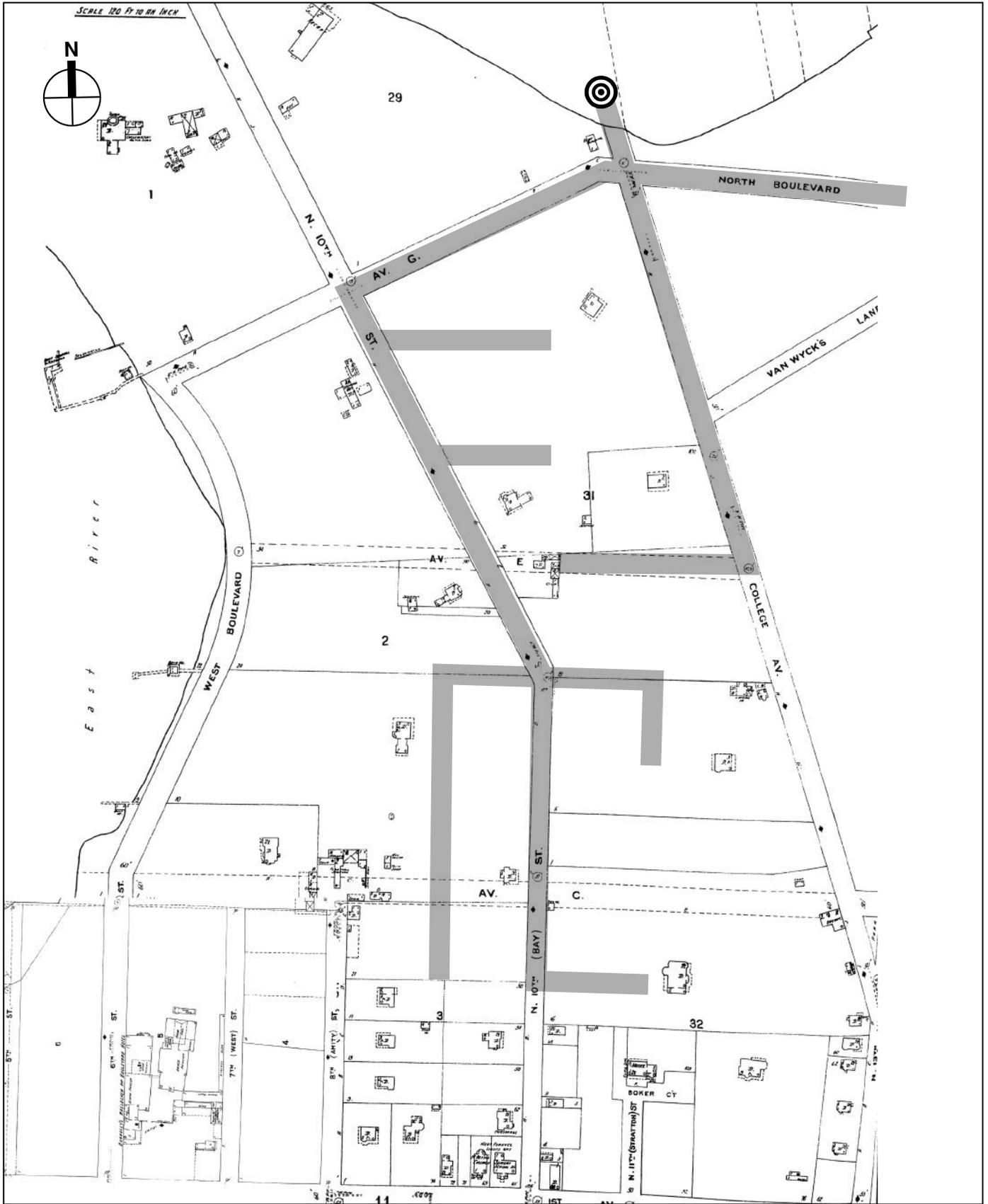
 Proposed Storm Sewer



-  Proposed Outfall
-  Proposed Storm Sewer



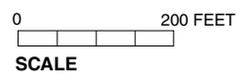
NOTE: This map was georeferenced to align the historic and modern streets; due to inaccuracies in the original map, the project site location may appear to be incorrectly aligned in some places



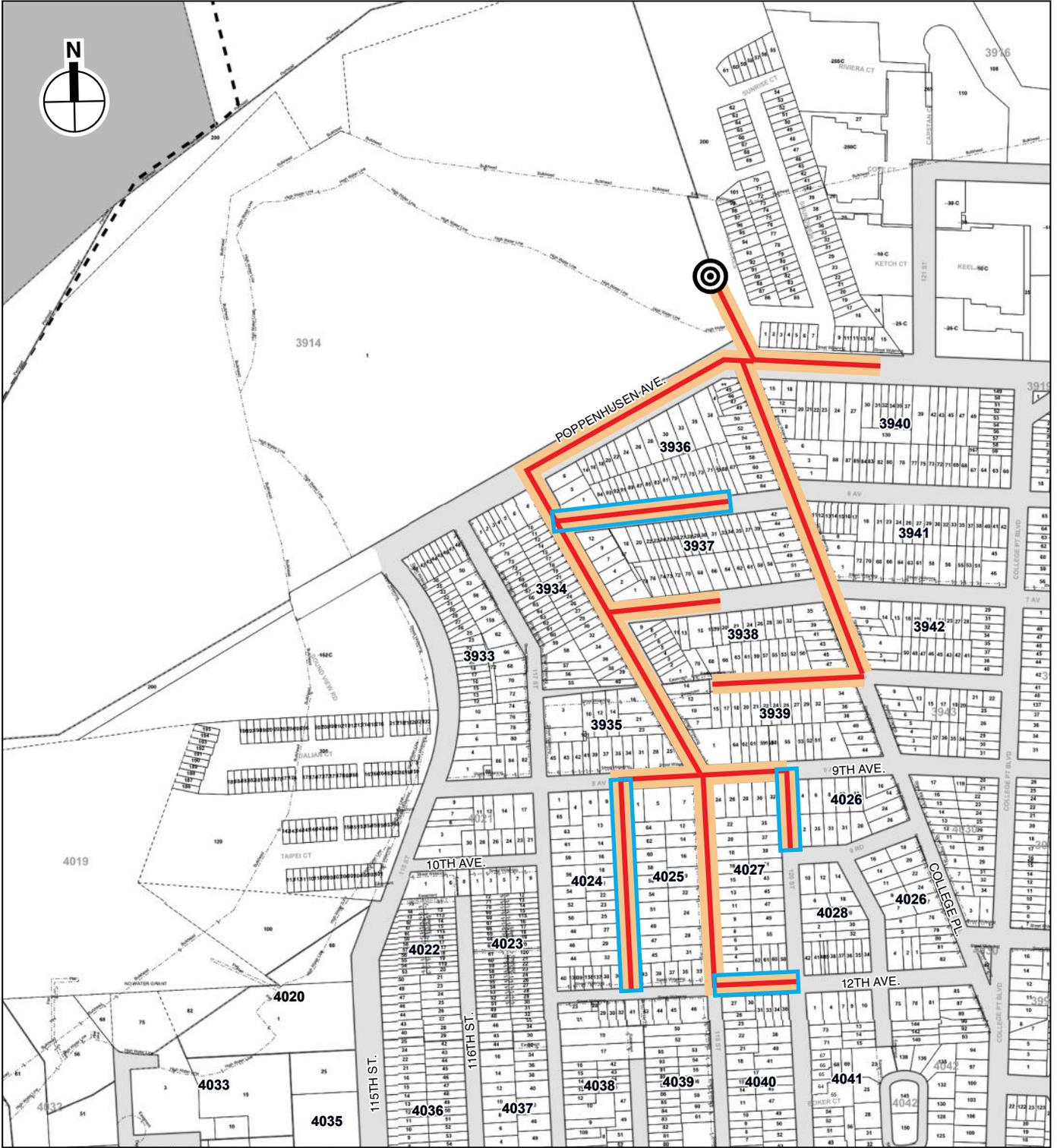
Proposed Outfall



Proposed Storm Sewer



1903 Sanborn Map
Figure 8



-  Proposed Outfall
-  Street Beds with Moderate Precontact Archaeological Sensitivity
-  Proposed Storm Sewer
-  Street Beds with Moderate Historic Archaeological Sensitivity
- 3933** Block Number
-  Approximate Locations of Historic Cemeteries
- 37** Lot Number

0 200 400 FEET
SCALE

Areas of Archaeological Sensitivity

Figure 9

Photographs



View east along Poppenhusen Avenue near its intersection with 119th Street. Macneil Park is to the left of the photograph 1



The eastern limits of the project site, looking west along 5th Avenue towards College Place 2



Looking north along College Place from 8th Avenue 3



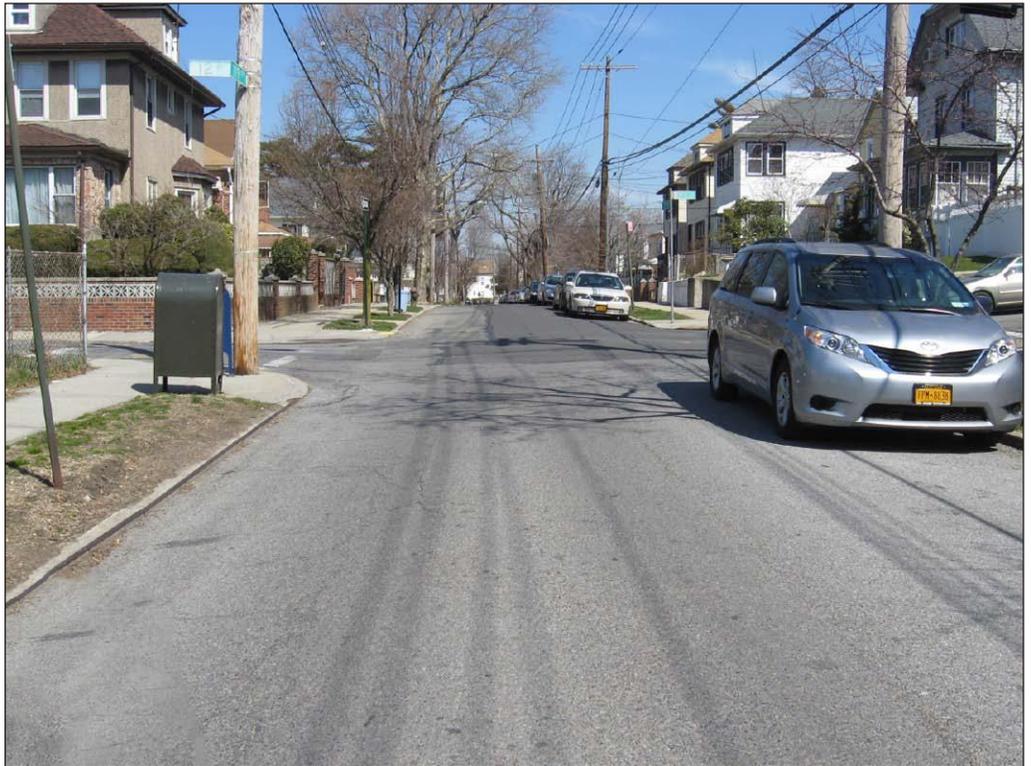
View along 6th Avenue west of College Place 4



View along 7th Avenue west of College Place 5



Looking east at the intersection of 118th Street (at right) and 9th Avenue (center) 6



View north along 119th Street near its intersection with 12th Avenue 7



Looking north along 120th Street near its intersection with 9th Road 8



View of shoreline with rip rap and saltmarsh cordgrass outfall, facing east 9



View of shoreline near proposed outfall with rip rap and saltmarsh cordgrass, facing north 10