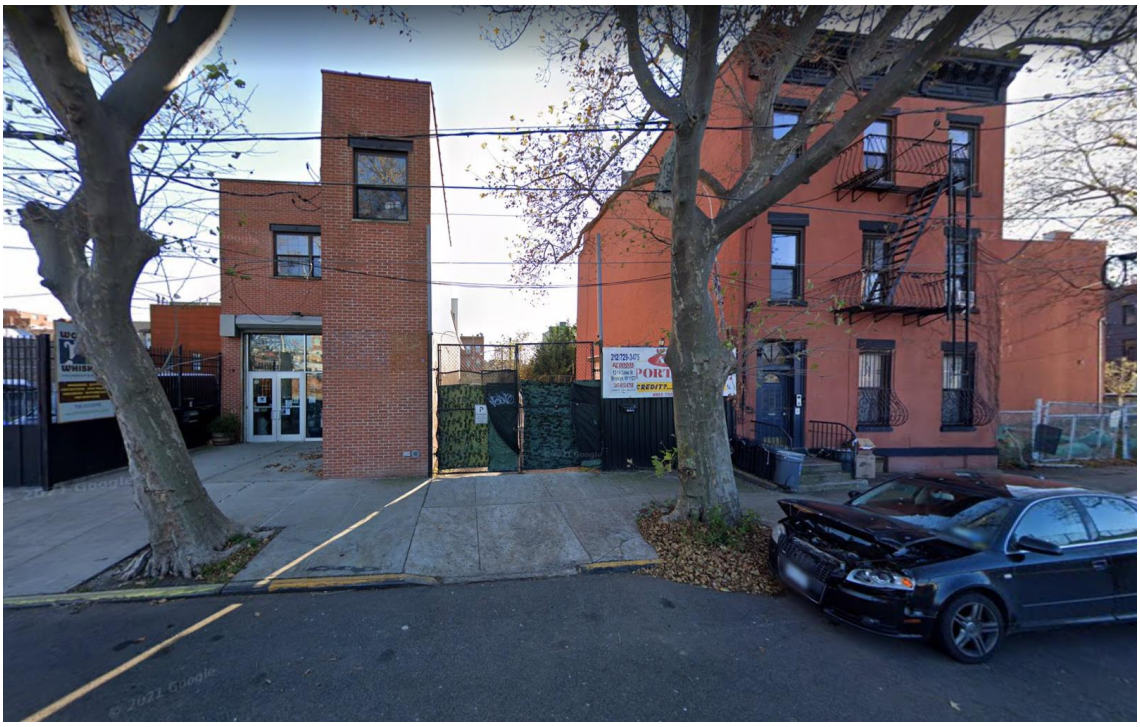
Phase IA Documentary Study and Archaeological Assessment for the Ficesco Sites (12 Coles Street, 13 Luquer Street, 375 Columbia Street), Brooklyn, Kings County, New York, Block 513, Lots 2, 12 and 45



Prepared for:
City of New York – Landmarks Preservation Commission
and
J & F Refrigeration, Brooklyn, New York

Prepared by:
Alyssa Loorya, Ph.D., R.P.A.
and
Eileen Kao, Elissa Rutigliano

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and
Christopher Ricciardi, Ph.D., R.P.A.

August 2021 (Revised May 2024)

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I. INTRODUCTION

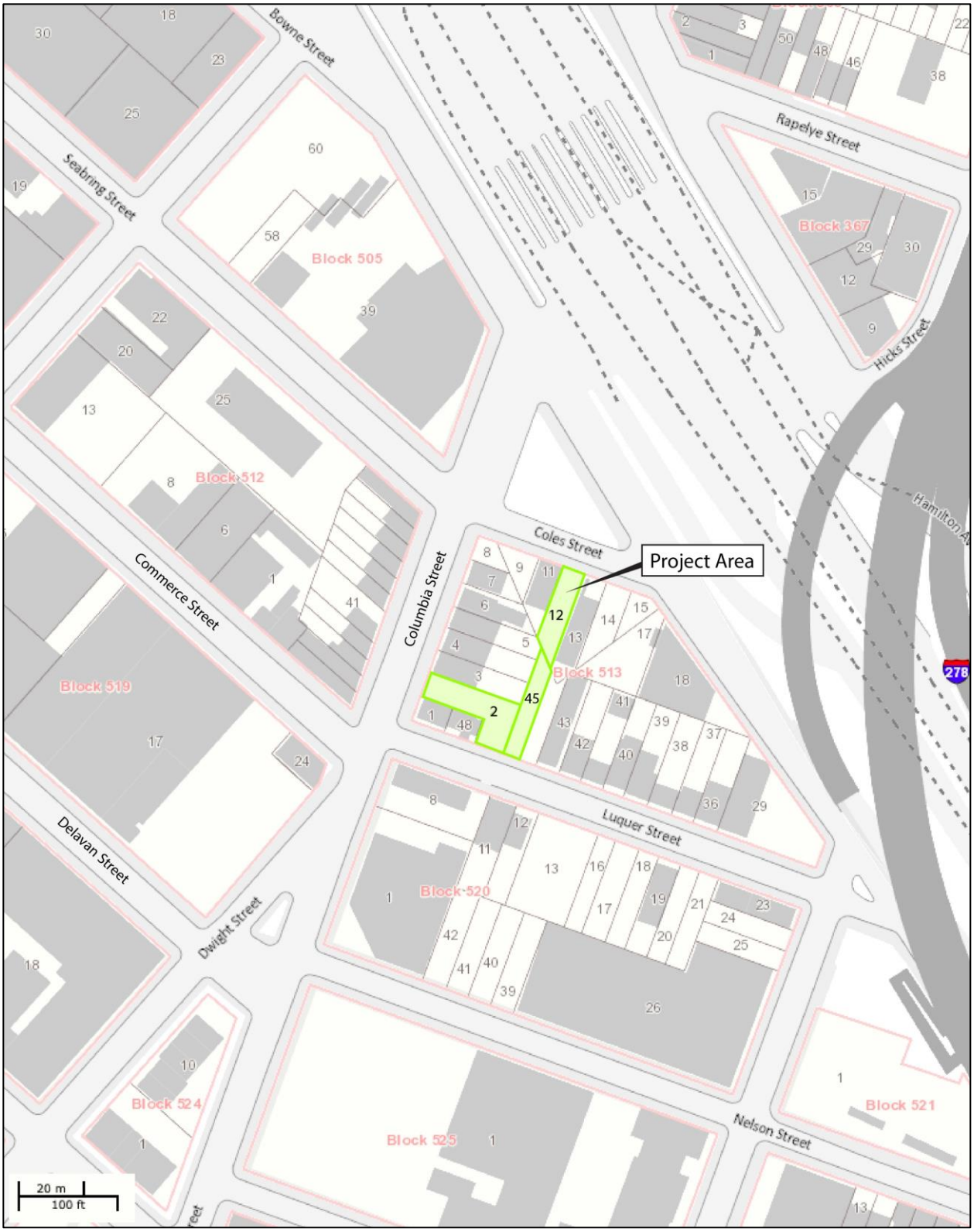
Chrysalis Archaeological Consultants, Inc (Chrysalis) was retained by J & F Refrigeration, Brooklyn, New York, to undertake a Phase IA Documentary Research and Archaeological Assessment report for the project area commonly known as the Ficesco Sites in Brooklyn, Kings County, New York – which includes: 12 Coles Street, 13 Luquer Street, and 375 Columbia Street. The City of New York – Landmarks Preservation Commission (NYC LPC) determined that the project area has potential archaeological significance and recommended this survey. A factor in the area's potential archaeological sensitivity is the site's possible usage during nineteenth century periods of significance for the surrounding industrial urban area (NYC LPC Environmental Review 29 April 2021).

The purpose of this Phase 1A study is to provide basic documentary history and information to determine the potential for the project area to contain significant precontact and historic buried cultural resources that would be compromised by the proposed development. This report also provides a recommendation for further study should the potential for disturbance of buried significant archaeological resources exist.

All work for this study was conducted in accordance with the NYC LPC's Guidelines for Archaeological Work in New York City (NYC LPC 2018) and the New York State Office of Parks, Recreation and Historic Preservation (NY SHPO) guidelines (New York Archaeological Council [NYAC] 1994; 2000; 2002), which are subsequent to the National Historic Preservation Act (NHPA) of 1966, as amended, the Advisory Council on Historic Preservation's "Protection of Historic and Cultural Properties" (36 CFR 800), the New York State Historic Preservation Act (SHPA), the (New York) State Environmental Quality Review Act (SEQRA), the (New York) City Environmental Quality Review Act (CEQRA).

Alyssa Loorya, Ph.D., R.P.A., Eileen Kao, and Elissa Rutigliano authored the report. It was edited by Lisa Geiger, M.A., R.P.A. and Christopher Ricciardi, Ph.D., R.P.A.

Map 01: Detail of composite of USGS Jersey City, NJ and Brooklyn, NY 7.5" Topographic Quads (USGS 2019)



Map 02: OASIS street map highlighting Project Area (OASIS 2021)

PROJECT DESCRIPTION

The project area is located in the Red Hook neighborhood of Brooklyn, southwest of the Gowanus Canal (Map 1). Block 513, Lot 2, Lot 12, and Lot 45 form the entirety of the Area of Potential Effect (APE) and the basis for the client's application. Block 513 is bound by Columbia Street, Coles Street, Luquer Street, Hicks Street, and partially by Hamilton Avenue (Map 2). Lot 2 is a 25'x100' irregular lot with a 25' frontage on Columbia Street; Lot 12 is a 25'x100' L-shaped lot with a 25' frontage on Coles Street, and Lot 45 is a 16.75'x100' irregular lot with a 33.8' frontage on Luquer Street (Images 01-03).

PROJECT INFORMATION

Project Name	Ficesco Sites (12 Coles Street, 13 Luquer Street, 375 Columbia Street), Brooklyn, New York
Street Address	12 Coles Street, 13 Luquer Street, and 375 Columbia Street
Borough/Block/Lot	Brooklyn Block 513: Lots 2, 12 and 45
Applicant Name	J & F Refrigeration, Brooklyn, New York
Principal Investigator	Alyssa Loorya, Ph.D., R.P.A.

Image 01: 12 Coles Street

Image 02: 13 Luquer Street

Image 03: 375 Columbia Street

II. SYNTHESIS OF PREVIOUS WORK

Multiple cultural resource management studies have documented the history of the Gowanus area and South Brooklyn in Kings County. A survey of previous studies relevant to and within .5 miles of the project area on file with the Cultural Resource Information System (CRIS) maintained by NY SHPO and NYC LPCis provided in Table 1. This table also summarizes the conclusion of each of these studies.

Among the earliest studies in the area was a Phase 1A Documentary Study of the Columbia Street Urban Renewal Area conducted by Tracker Archaeology Services in 1995. The study encompassed nine lots spanning three blocks, including two lots on President Street (Block 341, Lots 59 and 61), five lots on Union Street (Block 335, Lots 37 through 41), and two lots on Columbia Street (Block 335, Lot 35 and Block 319, Lot 28). The study concluded that the project area had a high potential for recovering precontact material due to its location being near a large waterway, near or within marshland, and on a small neck or peninsula and its proximity to three other precontact sites within a 1-mile radius. As a result, further investigation was recommended for seven of the nine lots evaluated, including those located on Columbia Street. In addition, archaeological monitoring was recommended for all seven lots if construction activity continued below the level of recorded fill (Camissa 1995:1, 5).

In 2002, Jo-Ann McLean and Eugene Boesch undertook a Phase 1A archaeological investigation of the Gowanus Facilities Upgrade project area (Block 411, Lots 14 and 53) to assess the likelihood of potential significant cultural resources within the area. As the project area comprised wetlands before mid-nineteenth century development, the site was not considered sensitive for the presence of Native American cultural resources. The early 1850s had filled in the project area, and mild development of the site occurred through the early twentieth century. Several industrial structures related to the Gowanus Canal Flushing Tunnel were constructed on the site. It was determined that potentially significant cultural deposits associated with activities occurring at these structures were unlikely. Any deposits present would likely have been disturbed by the installation of storm/waste sewers and the filling of the adjacent Gowanus Canal. However, the report concluded that architectural or historical value could be assigned to the structures and recommended that the appropriate agencies consult with an industrial historian or historic preservation specialist to make the proper determinations (McLean & Boesch 2002:36-38).

In 2004, Hunter Research, Inc., Raber Associates, and Northern Ecological Associates, Inc. evaluated the Gowanus Canal and Bay eligibility for inclusion in the National Register of Historic Places. A cultural resource assessment of the area was also undertaken. The report concluded that the Gowanus Canal from Butler Street to Percival Street and the associated bridges and industrial buildings were eligible for the National Register of Historic Places as a historic district.Further archaeological investigation was not recommended without additional planned work (Hunter & Lee 2004:5.1).

In 2005, Chrysalis undertook a Phase 1A Archaeological Documentary Study ahead of the proposed residential development at 63-65 Columbia Street in the Gowanus neighborhood of Brooklyn. precontactThe study determined that no significant precontact or historic archaeological cultural or stratigraphic remains were present on site. Historic maps dating to the mid-nineteenth century showed the site as being located in and inundated by the Buttermilk Channel. Any extant

cultural remains related to the industrial and later residential development in the area would be insignificant, as these industries had been thoroughly documented. Therefore, no further cultural resource work was recommended for the site (Loorya & Ricciardi 2005:17).

In 2009, the Louis Berger Group and Historical Perspectives, Inc. undertook a Phase 1A Cultural Resource Assessment of twenty-five blocks within the Gowanus neighborhood to prepare a proposed rezoning amendment by the New York City Department of City Planning (DCP). The project consisted of twenty-six projected development sites and forty potential development sites laid out by the DCP within a 70-acre area. The projected and potential development sites comprised a total of 142 individual lots. In addition, the study evaluated sixteen lots directed by the Landmarks Preservation Commission for their potential archaeological and historic resources. The study concluded that thirteen of the lots evaluated had the potential to yield intact nineteenth-century Gowanus Canal bulkhead deposits. The remaining three lots were determined to have the potential to yield mid-nineteenth-century domestic deposits (Fortugno et al. 2009:237).

In 2012, Chrysalis undertook a Cultural Resource Management Survey of the Gowanus Canal neighborhood on behalf of the Friends and Residents of the Greater Gowanus (FROGG), a local not-for-profit community organization. The study was not considered a typical Phase 1A Documentary Historical Survey and Archaeological Assessment Report, as the Request for Proposal (RPF) outlined a report that contained a summary overview of the current information and addenda providing updated information or research not previously reported on. The study concluded that several individual landmarked and National Register-eligible sites existed within the Gowanus District. It further concluded that historic and archaeological resources are likely to still exist beneath the levels of landfill. However, to reach these historic levels, it was determined that anywhere between 10' – 18' of fill would first need to be removed (Loorya et al. 2012:66).

In 2013, Langan Engineering, Environmental, Surveying, and Landscape Architecture, D.P.C. (Langan) undertook an archaeological field investigation of the Gowanus Canal bulkhead and cribbing at 365 Bond Street and 400 Carroll Street in preparation of proposed site redevelopment. The investigation consisted of two 10' by 12' test pits to assess the bulkhead wall and cribbing system condition. The investigation concluded that different types of cribbing were used at each property and that further investigation of properties along the Gowanus Canal would be necessary to understand better the different styles and dates of cribbing used in the Canal's construction (Audin 2013:28).

In 2015, AKRF, Inc. undertook a Phase 1A Archaeological Documentary Study of 280 Richards Street in Red Hook to advance a proposed stabilization to the bulkhead surrounding the site. The study determined that extensive disturbance would have occurred to the project site from construction and demolition as a result of the project site being "extensively developed throughout the late 19th and early 20th centuries as part of its transformation from a waterfront pier with warehouses to an area of importance for the sugar refining industry." Therefore, the study concluded that no additional archaeological analysis was warranted (Meade et al. 2015:14).

Table 01: Archaeological Reports within a .5-mile radius of the project area.

YEAR	TITLE/SITE	AUTHOR	CONCLUSIONS
1995	Phase IA Archaeological Documentary Study for the Proposed Columbia Street Urban Renewal Area, Borough of Brooklyn, New York City, Kings County, New York	Tracker Archaeology	The study concluded that the project area had a high potential for recovering precontact material. Therefore, further investigation was recommended for seven of the nine lots evaluated, including located on Columbia Street. In addition, archaeological monitoring was recommended for all seven lots if construction activity continued below the level of recorded fill.
2002	Phase IA Archaeological Investigation of the Gowanus Facility Upgrade Project Area – Block 411, Lots 14 and 53, Borough of Brooklyn, New York	Jo-Ann McLean and Eugene J. Boesch	The study concluded that the presence of potentially significant cultural deposits was unlikely, and any present deposits were likely disturbed by the mid-to- late-nineteenth century installation of storm/waste sewers and filling of the Gowanus Canal.
2004	Draft Report – National Register of Historic Places – Eligibility Evaluation - Cultural Resource Assessment for the Gowanus Canal, Borough of Brooklyn, Kings County, New York	NEA and Hunter Research	The report concluded that the Gowanus Canal from Butler to Percival Street and the associated bridges and industrial buildings were eligible for the National Register of Historic Places as a historic district. Further archaeological investigation was not recommended.
2005	Phase IA Archaeological Documentary Study for the proposed development of 63-65, Columbia Street, (Block 299, Lots 7 and 8), Brooklyn (Kings County), New York – BSA 04BSA005K	Chrysalis Archaeology	The study concluded that the project area had been located and inundated with water up to the mid-nineteenth century. Any extant cultural remains related to the later industrial and residential development that occurred within the project area would be insignificant these industries had been thoroughly documented. No further cultural resource work was recommended for the site.
2009	Gowanus Canal Corridor Rezoning Project – Gowans, Brooklyn, New York – Phase IA Cultural Resource Assessment	Louis Berger Group	The study concluded that thirteen of sixteen evaluated lots could yield intact nineteenth-century Gowanus Canal bulkhead deposits. The remaining three lots were determined to have the potential to yield mid-nineteenth-century domestic deposits.
2012	The History and Archaeology of the Gowanus Canal Neighborhood, Brooklyn, Kings County, New York	Chrysalis Archaeology	The study concluded that historic and archaeological resources are likely to still exist beneath the levels of landfill. However, to reach these historic levels, it was determined that anywhere between 10’ – 18’ of fill would first need to be removed.
2013	Gowans Canal Bulkhead and Cribbing – Documentation at Carroll	Langan Engineering	The investigation assessed the condition of the bulkhead wall and cribbing system associated with the Gowanus Canal. It concluded that

YEAR	TITLE/SITE	AUTHOR	CONCLUSIONS
	Gardens, 365 Bond Street and 400 Carroll Street, Brooklyn, Kings County, New York		further investigation of adjacent properties would be necessary to fully understand the different architectural styles of cribbing used in the Canal's construction.
2015	Phase 1A Archaeological Documentary Study - 280 Richards Street - Brooklyn, Kings County, New York	AKRF	The study determined that extensive disturbance would have occurred on the project site and concluded that no additional archaeological analysis was warranted.

III. CONTEXT AND RESEARCH DESIGN

HISTORIC ENVIRONMENTAL CONTEXT

The project area is in western Long Island, near the Upper Hudson Bay and New York Harbor. Long Island comprises two spines of glacial moraine, with a broad, sandy outwash plain beyond. These moraines consist of gravel, and loose rock left behind during the two most recent pulses of Wisconsin glaciation 21,000 years ago. The northern moraine, which directly abuts the North Shore of Long Island at points, is known as the Harbor Hill moraine. The more southerly moraine, known as the Ronkonkoma moraine, forms the "backbone" of Long Island; it runs primarily through the center of Long Island. The land to the south of this moraine, including the project area, is the outwash plain of the last glacier (Schuberth 1968; Eisenberg 1978; Campanella 2019).

From the end of the Wisconsin Period to the mid-nineteenth century, the project area was situated within intermittently flooded marshland near the waters of the Upper Hudson Bay, as shown on maps from as early as 1767 until 1838 (Map 4, Map 20). The late-1830s development of the area street grid and landfilling to level and divide the subsequent city blocks, as well as construction of the Atlantic Basin wharf and shipyard, completed in 1847 approximately .5 miles west of the project area, irrevocably altered the physical landscape of the neighborhood. The Atlantic Basin is opposite Governor's Island and consists of forty acres of manufactured harbor waters within approximately three miles of manmade wharfs. The project area was landfilled in the 1830s and 1840s as the area was leveled to eliminate tidal streams and marshland, a process necessary to continue construction of commercial and residential development in support of harbors and wharfs created along the Red Hook water boundaries. With the development of the Brooklyn Marine Terminal and warehouse district south of the project area in the late nineteenth to early twentieth centuries, the South Brooklyn landscape became increasingly developed for commercial and industrial activity, beginning to take on its current dense urban appearance.

CURRENT CONDITIONS

The project area is currently within a highly urbanized area of Brooklyn's Red Hook neighborhood. The area immediately surrounding the project area contains a mix of predominantly commercial and mixed-use structures, including neighborhood retail, light industrial use, and residential. Columbia Street – a moderately trafficked northeast/southwest roadway – forms the project area's northwestern/western boundary. Columbia Street and the nearby Hamilton Avenue are the principal thoroughfares in the area.

In the immediate surrounding area, Coles Street, which forms the northeastern boundary of the project area, is developed with several two and three-story brick commercial/office and residential multi-family buildings, two parking lots, and two vacant lots. Columbia Street is predominantly mixed residential and commercial with two and three-story buildings containing ground floor neighborhood retail. Luquer Street, which forms the southwestern boundary of the project area, is developed with two and three-story buildings, primarily residential with two buildings dedicated to industrial/manufacturing uses.

The project area APE consists of Lots 2, 12, and 45 on Block 513. Lot 2 is a 25'x100' L-shaped lot with a 25' frontage along Columbia Street and consists of 3,309 square feet. Lot 12 is a 25' by 100.58' irregular-shaped lot with a 25' frontage along Coles Street and consists of approximately 2,191 square feet. Lot 45 is a 16.75' by 115.08' irregular-shaped lot with a 16.75' frontage along Luquer Street and consists of approximately 1,750 square feet. All three lots comprising the APE are currently vacant and partially concrete-paved, with low grass overgrowth around concrete edges and a fence separating each lot from the street. The entire APE is mapped by the USDA soil survey as Urban land, which consists of human modified landscapes (Table 2).

Table 02: USDA Soil Survey Results

MAP UNIT SYMBOL	MAP UNIT NAME	ACRES IN AOI	PERCENT OF AOI
URA	Urban land, reclaimed substratum, 0 to 3 percent slopes	0.7	100%

RESEARCH DESIGN

This Phase IA documentary study has been designed to determine the history of the project area and its potential to contain significant archaeological resources. Among these are potential Native American (precontact) and historic resources. NYC LPC's review of archaeological sensitivity models explicitly highlighted potential for remains of nineteenth century occupation in relation to the project area properties (NYC LPC Environmental Review 29 April 2021). This study includes an assessment of the project area's precontact context and review of known nearby precontact archaeological sites to determine precontact archaeological sensitivity based on its landscape, surrounding precontact site density, recorded and mapped historic development, and landscape modification.

IV. PROJECT METHODS

Standard documentary research methodologies were utilized in gathering information for this study. This included a review of existing cultural resource reports within the repositories of the NYC LPC and NY SHPO via the NY CRIS GIS system. In the course of this investigation, the following repositories were utilized: the Library of Congress, New York State Archives, the New York Public Library, the Brooklyn Public Library, the Brooklyn Historical Society, the New York City Municipal Archives, the New York City Tax Assessor's Office and the Kings County City Register's Office. In addition, previous documentary studies of the area were also surveyed to supplement this report.

Both primary and secondary source documents were consulted. Primary source records included historical maps from 1690-1920, Sanborn Fire Insurance Maps from 1950-2007, historic Brooklyn will and deed records from 1698-1934, the United States and New York State census records, and genealogical and biographical information available from online sources (e.g., New York City Register of Births/Deaths). Brooklyn will and deed records of the late seventeenth century were the earliest sources located at the above repositories that detail land use in the project area. Other sources include histories and family genealogies covering the seventeenth through nineteenth centuries, published 1836-1915 (See Section VIII. References).

It is noted that some records were not accessible or were available with limited accessibility due to public safety precautions put in place due to the current COVID-19 pandemic.

V. DOCUMENTARY RESEARCH RESULTS

PRECONTACT CONTEXT

The precontact era begins with the first human occupation of North America and terminates at indigenous contact with European settlers. There is evidence of aboriginal presence in the northeastern United States since approximately 15,000 B.P. following the Laurentide Ice Sheet retreat, which covered the area during the Late Wisconsin Glaciation (Kraft 1986).

A chronological framework for pre-Columbian North America has been constructed from the archaeological record, which classifies stages of cultural similarity, bookended by significant shifts in tradition, as a distinct cultural period. The sequence of precontact occupation in North America is divided into three significant cultural periods: Paleo-Indian (circa 13,000 – 8,000 B.P.), Archaic (circa 8,000 - 3,000 B.P.), and Woodland (circa 3,000 B.P.-A.D. 1670). Archaeological evidence has been uncovered in New York for each period, with most identified belonging to the Late Archaic and Woodland periods.

THE PALEO-INDIAN PERIOD

The first people in North America were nomadic tribes that crossed the Bering Strait from Russia to Alaska when the climate was cooler and sea levels were much lower than in the present. The climate remained calm during the Paleo period as it immediately followed the last ice age. Occupying what was still tundra, these people gradually spread out on the continent, following prey and subsisting on whatever seasonal terrestrial or marine life was available as subsistence resources were scattered across the landscape. When the meat was not available, the early inhabitants supplemented their diet with whatever they could forage from the surrounding plants.

The earliest Paleo inhabitants in New York were presumably small bands of organized and highly mobile hunter-gatherers. They did not establish permanent settlements but moved seasonally according to resource availability. Because of the need for mobility, these early inhabitants maximized efficiency by producing practical and portable objects for their use. As a result, Paleo-Indian tools, objects, and other material cultures were not overly complicated or extensive (which in turn lends to the ephemeral nature of Paleo sites in the archaeological record).

Paleo-Indian sites tend to reflect temporary occupation camps at elevated locations (offering optimal vantage opportunity for hunting) or alongside streams and rivers (Fagan 2005). Elevated locations were well drained and favorably situated to identify and observe the movements of game (Ritchie & Funk 1971). Their subsistence economy would have been comprised of Pleistocene megafauna, small game, nuts, berries, and vegetal foods (Fletcher & Kintz 1979: 12). Rivers, lakes, salt marshes, and other coastal environments were utilized for the abundant fish, shellfish, fowl, plant life, and other aquatic resources that could be easily procured there (Fagan 2005). Lithic assemblages associated with Paleo-Indian are Eastern Clovis Tradition, characterized by flaked tools and fluted lanceolate projectile points. Lithic processing sites are often found alongside streams and rivers where food was procured (Fagan 2005).

Archaeological evidence of Native American settlement and activity within New York City extends back to the Paleo-Indian period. Few Paleo-Indian period sites have been excavated and recorded by modern archaeologists due to these sites' ephemeral nature and subsequent centuries of post-contact land disturbances.

THE ARCHAIC PERIOD

The Archaic period in the mid-Atlantic region is generally characterized by the continual adaptation of Native Americans to the environment through hunting, gathering, and fishing activities. Archaeologists tend to view this period in three consecutive stages: Early Archaic, Middle Archaic, and Late Archaic.

Environmental transformations and rising sea levels marked the close of the Paleo-Indian period and the onset of the Early Archaic period. Settlement patterns remained semi-mobile as the available resources shifted throughout the year, but there was a trend towards increasingly more extended amounts of time spent in one location as water sources stabilized. Groups established base camps and moved periodically throughout a more limited territory as resources became available (McManamon et al., 2009). The disappearance of megafauna and migration of large game northwards led to a focus on plants and smaller animals – such as elk, deer, bear, turtles, and fish. The Early Archaic toolkit featured lithic assemblages comprised of hammer and anvil stones, notched pebble net sinkers, and new variations of stemmed and corner-notched projectile points (Kraft & Mounier 1982).

Environmental changes further transformed the landscape, creating intertidal flats, coastal lagoons and marshes, swamps, lakes, and estuaries. Main population concentrations began to center around river valleys that offered a wealth of diverse plant and animal resources, such as turkey, migratory waterfowl, and fish (Fagan 2005). The exploitation of wetland resources reflects the onset of the Middle Archaic period (Kraft & Mounier 1982). During the Middle Archaic period, the human occupation of New York, which continued to evolve from that of a hunter-gatherer economy, is possibly indicative of "specialized adaptations" of individuals to their environment (Fletcher & Kintz 1979:12). In New York, "Settlement patterns of these hunter-gatherer-fishermen reflect the utilization of the varied resources from shore to the forest" during the Middle Archaic period (Fletcher & Kintz 1979:12). Eventually, this acclimation to specific environments led to the diversity of regional specializations and cultural adaptations (Kraft & Mounier 1982, Kraft 1986). Archaeological evidence for diversity in cultural adaptations is present in more diverse and complex tool kits than Paleo-Indian technology. Specialized fishing equipment and implements for food production – such as griding stones, mortars, and pestles – appeared (Kraft & Mounier 1982). Tools were more refined and displayed more variety. Woodworking skills and new implements, like ground stone axes, celts, and gouges, appeared. Areas of occupation within Long Island and New Jersey have also offered evidence of bone and copper use in tool production (Kraft & Mounier 1982).

Larger precontact populations characterized the Late Archaic period with markedly more complex settlement activity forms and trade relations. Late Archaic groups fully utilized all environment niches in their upland and lowland settings. Specialized sites for resource procurement were established – hunting and butchering camps, fishing posts, and wild food collection stations – and they were occupied on a recurring seasonal basis (Fletcher & Kintz 1979:12-13). The purpose and

function of lithic tools adapted to fit the new dynamics of a growing population, and there was a marked increase during the Late Archaic in the manufacture of grinding stones, heavy food processing tools, milling equipment, adzes, and stone axes. The Late Archaic archaeological record further reflects a growing complexity in social development and structure – as the population became more sedentary, the foundations for trade and exchange networks emerged.

THE WOODLAND PERIOD

The introduction of agriculture, the appearance of permanent settlements, the introduction and advancement of ceramic technology, and the prevalence of more elaborate and diverse tools typically characterize the precontact population's cultural evolution into the Woodland Period.

Large rivers remained central to indigenous territories, utilized for their rich resources and transportation and communication between scattered peoples. There is evidence that riverine environments could have supported semi-permanent occupations that utilized the coastal resources. However, these sites represent base camps of small, dispersed groups rather than fully articulated agricultural sites (Kraft 1986). The small groups possibly consisted of a few hundred people, with this number being a seasonal aggregate rather than a constant population. Many adaptive strategies developed during the Archaic period in the northeastern woodlands continued into the Woodland period. Woodland groups that inhabited the area would have followed the same general settlement and subsistence patterns as the archaic groups before them but made intricately decorated ceramic vessels (Kraft & Mounier 1982, Kraft 1986). Cord-marked ceramic vessels and collared ceramic vessels appeared during this period (Abell Horn 2020:5). The introduction of clay pottery in the Woodland allowed for cooking and food storage. Sites evolved through the Woodland period to include various storage and pit features – used for cooking or as refuse receptacles – and specialized work areas (Kraft & Mounier 1982).

The advent of horticultural activities and the domestication of plants and animals is a critical factor in enabling groups to settle in one place and develop into more complex societies (Bolton 1922, Furman 1875). The Woodland populations of New York centered their agricultural activities around the cultivation of maize, beans, and squash, and the production of plant and processing tools increased as harvesting became a more common activity (Fletcher & Kintz 1979:12, Abell-Horn 2020: 5). Subsistence activities also centered heavily on exploiting marine-based resources (Fletcher & Kintz 1979:12). "It is apparent that Woodland period inhabitants of the coastal New York region relied heavily on abundant shellfish resources of the coastal bays. Shell midden sites are ubiquitous in coastal zones of the lower Hudson Valley" (Affleck et al., 2005:4.6).

Stone tools continued to evolve, and in New York, narrow points characterized much of the Woodland period toolkit (Fagan 2005). Projectile points were made of various locally sourced and non-local traded stone materials. The Meadowood-type projectile point dominated the early Woodland, followed by Jacks Reef, Fox Creek, and Rossville-type projectile points. Triangular projectile points of the Levanna and Madison types dominated the later Woodland era (Abell Horn 2020:5).

PRECONTACT CONTEXT OF THE PROJECT AREA

The end of the Woodland period saw the most advanced precontact societies; these groups represent the first peoples that early European settlers would have encountered during their explorations to the area (Ritchie & Funk, 1971).

Before the arrival of Europeans in North America, the Algonquin populated the land along the Atlantic, stretching as far west as the Mississippi River (Leng & Davis 1930:71). The Algonquin people comprised roughly thirty nations, each speaking a dialect of the same language and sharing similar customs. One such Algonquin nation was the Lenni-Lenape, meaning "original people" (Leng & Davis 1930:71). The Lenni-Lenape were divided into three bands – the Munsee, the Unami, and the Unalacthigo. The scope of their territory covered New Jersey, New York Harbor, and the Lower Hudson Valley, extending west into eastern Pennsylvania and east through Long Island (Skinner 1909:30).

At the time of contact, Native peoples of the Munsee dialect resided on Long Island. The main groups on western Long Island were the Merric along the southern shore of Nassau County; the Rockaway, who dwelled in the cities which now bear their name; and the Canarsee. The Canarsee were a tribe who had migrated to New York from Delaware and New Jersey. They were dubbed *Souwenos* (meaning "people of the Southwest") by the Natives of Long Island and reportedly took control of the southwestern portion of Long Island by force prior to European contact. The Canarsee established their village *Keshkechqueren* (meaning "at the bay") on what is today known as Jamaica Bay. They continued to settle across modern-day Kings County and portions of Queens County.

Throughout western Long Island, archaeological investigations of Native American sites have revealed a precontact settlement pattern organized around fresh-water resources, arranged proximate to tidal creeks, tidal marshes, stream banks, estuaries, and wetland areas. These locations were most likely utilized as hunting areas and collection stations for plant-based food resources. South Brooklyn was thus an ideal location for habitation. "At one time, there were undoubtedly numerous aboriginal sites in Kings County on the western end of Long Island in coastal New York, especially along the shoreline of the East River, the Narrows, Gowanus Bay, and the Bays of Gravesend, Jamaica, and Sheepshead. Today, however, Kings County, better known as Brooklyn, forms part of the busy skyscraper metropolis of Greater New York City" (Lopez & Wisniewski 1978:208).

Before the mid-nineteenth century, the project area consisted of marshland intermittently flooded due to its position near the edges of tidal high water points. This marshy area included drainages into nearby creeks that would come to be called Gravers Kill and Koetics Kill after European settlement (Map 4, Map 20). The creeks and wetlands were later modified in the eighteenth century and more comprehensively filled during the mid-nineteenth century. Native Americans would have utilized adjacent localized areas of dry ground or upland areas near resource-bearing waterways. Indeed, the earliest evidence for a Native American presence in Gowanus and Red Hook areas comes from a Dutch ground-brief issued on May 27, 1640, to Frederick Lubbertsen. In this brief, the then-Director General mentions that part of property intended for Lubbertsen was,

at the time, actively occupied by Native American maize lands[1]. However, semi-permanent or permanent Native American sites would not likely have formed on the project area itself, as project area marshlands were intermittently flooded due to high tides and seasonal weather changes. Furthermore, no precontact sites or New York State Museum sites have been identified within a 1-mile radius of the project area, according to a June 2021 review of NY CRIS records, indicating poor preservation of precontact activities in the project area, historical destruction, or lack of substantial precontact land usage.

HISTORIC CONTEXT

The project area is located in the Red Hook neighborhood of Brooklyn, Kings County. The history of Red Hook and the nearby Gowanus area of South Brooklyn is rich unto itself, apart from greater New York City. From prehistory to colonialism and the American Revolution to industrialism, the history of the canal and the surrounding neighborhoods spans multiple stages of Brooklyn and greater New York City's urbanization and development. Regional historical events and larger economic, social, and environmental contexts helped shape the Red Hook and Gowanus neighborhoods as part of the larger metropolitan area.

The following history is by no means exhaustive. Such a history would require several volumes. Instead, it focuses on highlighting significant events in Red Hook and Gowanus - an area that was known as South Brooklyn - and the western region of Long Island from its colonization to modern times. This history also identifies some central themes within the historical events of the study area to provide a general context for the area. These include economic interdependency with Manhattan, population increase and immigration, and reliance on the local waterways.

CONTACT PERIOD

Long Island was part of the original New Netherland colony established by the Dutch. Europeans first "discovered" Long Island in 1524, when Florentine explorer Giovanni da Verrazzano and a crew of fifty sailed the ship, *La Dauphine*, into New York's harbor. Verrazzano had been commissioned by several wealthy investors, principally funded by the French monarch Francis I. to discover a new passage to Asia (Brevoort 1873:177; Ieradi 2001:10).

Nearly one century later, the first Europeans set foot on New York's shores. Henry Hudson, an English explorer, was commissioned by the Dutch East India Company to chart a new course for Asia via the Arctic Ocean. Hudson's ship, *De Halve Maen*, reached Coney Island in September of 1609. Hudson's brief visit to Brooklyn launched several consequent expeditions to the New World sponsored by the Dutch East India Company and its later iteration, the Dutch West India Company (Ieradi 2001:8-11). "(Hudson's) account of the resources of the country he had seen and its trade opportunities were not lost in a community whose merchants were then the most far-reaching and enterprising in the world" (Ross 1902:45).

[1] The maize lands cultivated by Native Americans are presumed to have been located between present-day Atlantic and Baltic Streets, east of Court Street (Camissa 1995:8; Stiles 1867:63-64)

Fur traders from the Netherlands informally settled the Hudson Valley and western Long Island in the early seventeenth century. Although it allowed access to the lands, their charter did not confer any political powers to the explorers. It was not until The Dutch West India Company was established that serious attempts were made to colonize the Hudson Valley area. In 1622, the West India Company finally received its charter and established a clear title to New Netherland. New Amsterdam was established as the capital of New Netherland and became an official Dutch province in 1624.

Ten years later, Dutch colonists ventured into the greater New Netherland colony and began settling farms on western Long Island outside the city proper. The farmsteads were situated linear to the East River on the "westernmost edge" of the island.

The earliest record for land granted on western Long Island dates to June 16, 1636. The deeds, or Dutch ground-briefs, were for three adjoining "Flats" or tracts of land, which taken together constituted one large tract known by the Canarsee as *Castateauw* or *Keskateuw*. The 'Flats' comprised roughly fifteen thousand acres in present-day Kings County and were purchased from indigenous Canarsee by Jacob Van Corlaer, Andries Hudde, Wolfert Gerritsen Van Kouwenhoven, and then-Director General Wouter Van Twiller (Thompson 1918:128; Van Wyck 1924:15).

The initial purchases made by Corlaer, Hudde, Kouwenhoven, and Van Twiller proved to be a catalyst for rapid Dutch exploration and settlement of western Long Island. The Dutch administration was eager to establish the colony beyond the capital city of New Amsterdam. For years, the Dutch administration strategized ways to attract new settlers to the outlying areas (Campanella 2019:42). To incentivize settlement, the Dutch West India Company instituted a policy in 1638 that offered land to all potential colonists, which they could hold in free "allodial proprietorship" in return for its cultivation (Bailey 1949:36). Within the following year, Van Twiller's successor, Director-General Willem Kieft, put the policy into practice. Kieft ambitiously acquired almost all of western Long Island for the Dutch West India Company; their holdings extended throughout Kings County and from Rockaway Bay to the Great South Bay in Fire Island. By the close of the decade, all the lands comprising modern-day Kings, Queens, and Nassau Counties had been purchased and generally prepared for cultivation and stock-raising.

Six townships were settled under Dutch administration in present-day Kings County during the seventeenth century: *Amersfoort* (Flatlands), *Breuckelen* (Brooklyn), *Boswyck* (Bushwick), *Gravenzande* (Gravesend), *Midwout* (Flatbush), and New Utrecht. The earliest settlement, Amersfoort, began with Wolfert Gerritse Van Kouwenhoven and Andries Hudde's purchase of the "Little Flat" on June 16, 1636. The remaining townships were established over the next two decades (Stiles 1867:29).

REGIONAL HISTORY – SEVENTEENTH CENTURY

The project area is located within the original township of Breuckelen, which was founded with a 930-acre purchase in 'Gowanus' by Dutch colonists William Adriaense Bennet and Jacques Bentyn in 1636 from the Canarsee (Stiles 1867:23-24). The purchase included land that the Native Americans in the area had used to grow maize for many generations, and were previously controlled by a Canarsee leader named *Gouwanes* (Bolton 1922). The Dutch colonists who orchestrated the 1636 purchase established the first houses in Brooklyn, located in what would become the village of Gowanus.

One year later, Dutch colonist John Jansen de Rapalie purchased '*Rennegackonk*,' a tract of land in the bend of Wallabout Bay. Together these purchases formed the basis for the original settlement of the Town of Breuckelen, out of which the City of Brooklyn grew (Stiles 1867:47). Settlement and growth of Breuckelen township steadily progressed following the initial purchase made by Bennet and Bentyn (Stiles 1867:44). A ferry service was established in 1642 to accommodate regular transportation across the East River into New Amsterdam, and a ferry road was laid leading southeast from the bay into Flatbush Road, later named Fulton Street, approximately 1.25 miles north of the project area. By 1646 small hamlets and neighborhoods sprung up throughout Breuckelen, known respectively as '*The Gowanus*,' '*The Waal-bogt*,' and '*The Ferry*' (Stiles 1867:44).

Agriculture was the earliest of European activities on Long Island. The terrain of South Brooklyn, especially around the Gowanus Creek, consisted of extensive marshes filled with salt hay that the farmers favored for use by livestock. The cattle preferred to eat the salty hay over regular grass. In addition to the marshes, there were meadows upland from the creek that was also good for pasture (Fraser 1909:31). One of the first agricultural settlements of Brooklyn is attributed to Cornelius Lampertsen Cool on land given to him in 1642 by Governor Kieft (Brodhead, Berthold, and O'Callaghan 1883:39).

Much of the early development of South Brooklyn area began under the leadership of Willem Kieft, who succeeded Van Twiller as Governor of New Netherland in 1638. Before that time, Manhattan had been neglecting its farmsteads. When Kieft assumed the role as governor, "the six boweries or farms on Manhattan Island were without tenants or stock, the windmills were broken, and the fort needed repair" (Anderson and Flick 1902:17). As trade boomed, the then-small town of New Amsterdam became overly concentrated on fur trading. The few farms were not providing enough supply to support the population. Since Long Island was predominantly an agricultural settlement, Dutch *boers*, farmers, and their *bouweries* became responsible for producing and shipping fruits, vegetables, meats, and cheeses to New Amsterdam to sustain the city. Brooklyn's early towns became the capital's "saviors" (Weld 1967). The Gowanus Creek and South Brooklyn waterways served as launch points for the delivery of Brooklyn's produce to New Amsterdam. This early example of the relationship between Manhattan and Brooklyn foreshadowed the beginning of modern industrialization in the Gowanus and Red Hook neighborhoods during the nineteenth century (O'Callaghan 1846).

Trade between Brooklyn and Manhattan persisted throughout the late seventeenth and eighteenth centuries. The ferry that was established in 1642 made trade between Brooklyn and Manhattan easier. Ferry service first began when Dirckson Hoogland, who owned an inn at Peck Slip on Manhattan, began supplementing his earnings by operating boat service from the slip to the end of the Old Ferry Road. His son aided him, and eventually they purchased land in the area of Brooklyn that became the westernmost end of Fulton Street in Downtown Brooklyn (Stiles 1884).

Governor Kieft established new policies for trading and land ownership in the mid seventeenth century. The monopoly on fur trade was dissolved, and land ownership was made available to the public so that even foreigners from the surrounding areas began to settle in New Netherland. In addition, any new and willing farmer was given animals, tools, a house, and a farm for low rent on the promise of being loyal to the Dutch government. This new manner of business led large companies to establish themselves in the colony (Anderson and Flick 1902:17).

With the growing population, the early landowners of the area decided to consolidate. One of the reasons for doing so was communal protection against the native population. The residents petitioned Kieft "to found a town at their own expense" (Ross 1902:59). Kieft agreed, and in 1646 the first community of *Breukelen* was established, named after the original Breukelen in Utrecht, Holland. Jan Evertsen Bout and Huyck Aertsen were recognized as *Schepens,* or municipal authorities, responsible for consolidating the small settlements and hamlets within its boundaries. This first community only encompassed today's Downtown area; South Brooklyn was incorporated into Breukelen after 1664, when the British took control of New Netherland (Stiles 1867).

Governor Kieft's actions regarding New Netherland were not always beneficial to the colony. During the period of growth, Kieft led the relatively new settlement into the first of the Dutch-Indian Wars, known as Kieft's War. A combination of events led to the start of the war. A frequent occurrence that put constraints on Dutch and Native American relations was killing Dutch livestock by the native peoples. Since the Dutch farmers allowed their animals to roam, the animals would often wander over to the neighboring native territories. The animals were sometimes killed to prevent damage to crops or were hunted for food. In either instance, the animal would become a meal for the tribe, angering the animal's owners. Another factor in the start of the war was Kieft's many attempts to coerce the native population to pay a tax to the New Netherland on maize, furs, and shell beads. Kieft was generally unsuccessful in his attempts and only anger the native tribes (Burrows and Wallace 1999).

The most influential catalyst for the war occurred in 1643 when Governor Kieft ordered a massacre of sleeping Native Americans taking refuge with the Dutch. Up until this attack, which killed 129 Dutch soldiers and 120 Native Americans, including many women and children, the Dutch only engaged in brief skirmishes with the Native Americans. This action, however, caused an uprising of all the tribes in southern New Netherland, including those whom the Dutch had always considered friends.

Kieft's War lasted until 1645, when a treaty was finally signed at Fort Amsterdam. The war resulted in approximately 1600 Native Americans being killed and a decimated Dutch population; some settlers fled the fighting while others died. Few *bouweries* remained, leading to a colony almost incapable of supporting itself. Additionally, the West India Company was almost bankrupt from financing the war. Eventually, this led to a demand for Kieft's termination as governor and his replacement by Peter Stuyvesant in 1647. Under Stuyvesant, New Netherland recovered from the massive loss and experienced renewed growth (Anderson and Flick 1902).

During the area's re-growth, South Brooklyn saw the trend towards increasing industry and business continuity. While *bouweries* were being re-established in the area, a few mill operations sprang up along the Gowanus Creek to buy and process the grain they produced. These grain mills began the tradition of adapting the creek's properties for industrial advantage, secondary production, and distribution; they also brought about new roads and public access areas (Stiles 1869:178).

The first historic land modifications near the project area took place in the mid seventeenth century. In 1664, Adam Brouwer, who operated a mill at the Gowanus Creek approximately .5 miles southeast of the project area location, petitioned the local government to dredge a local unnamed creek that ran across the marshlands between the Gowanus Creek and the East River in order to render it navigable to local grain, timber, and wool trading vessels (Stiles 1867:68). This canal is marked on Ratzer's 1767 Brooklyn map as the Bull Creek Canal (Map 4).

In 1664, as a result of the Second Dutch-Anglo War, Dutch Director-General Peter Stuyvesant surrendered the New Netherland colony to English rule. In an endeavor to restructure the colony, the English issued the Duke's Laws in 1665, which consisted of a series of guidelines for the provincial government. In accordance with the Laws, the First General Assembly implemented a territorial partition of Long Island into three Ridings (Armbruster 1912:27). Gowanus was incorporated into the village of Breuckelen and placed within the West Riding. Two years later, in 1667, the village of Breuckelen was recognized under English rule. The name was anglicized to Brookland, and the village was officially given charter under English Governor Colonel Richard Nicolls.

REGIONAL HISTORY – EIGHTEENTH CENTURY

Economic and political tensions grew between the British colonies and the British government in the mid-eighteenth century. After the Treaty of Paris was signed in 1763 and the French and Indian War ended, the British government was left with a war debt of approximately £150,000,000. To pay off this debt, the British government enacted new taxes affecting colonial holdings. These funds were also designed to share the expense of protecting the Empire, mainly the American colonies, from future attacks by the native populations and foreign adversaries (Barck 1931:20).

A series of prohibitive acts passed by the English government that restricted colonists' liberty and economy prompted open rebellion. The Stamp Act of 1765 was the final incident that propelled colonists into action. By taxing all stamps (which every document required at that time), the government put a strain on colonists of all economic levels, not just the merchants. As a result, in 1765, one of the earliest congresses was held to petition the British government. Twenty-eight delegates from across the colonies gathered in New York City to protest "taxation without representation," Perhaps the most important outcome was the unity that followed. As Oscar

Theodore Barck states in *New York City during the War for Independence*, "it sprang spontaneously from American sentiment…it was extra-legal, a meeting called for the first time by the colonies themselves and not by royal sanction" (Barck 1931:23).

Up until the Stamp Act, colonial rebellion was isolated to minor disturbances. For a period, there were only a few minor skirmishes between the Americans and the British: royal store houses were broken into, boats seized and burned, and on occasion, British warships fired upon the city. Despite these minor incidents, the atmosphere was still relatively quiet until 1776. In that year, it was anticipated that the "scene of operations must shift from Boston to New York, because of the latter's central and strategic position" (Barck 1931:45). To prepare, the construction of forts was ordered, and George Washington sent forces to be stationed throughout the city. Estimations were correct, and in the middle of the year, the British Navy arrived at Jamaica Bay. In the late summer, General Howe of the British Army landed 15,000 of his men near Gravesend (Gallagher 1999).

New York was strategically important during the Revolutionary War. Its central position between the southern colonies and New England meant that the British could control the Hudson River and block trade and communication, thereby isolating and dividing the colonies. After the Redcoats placed themselves around the southern tip of Long Island, they made landfall in Brooklyn on August 27, 1776. Here, the first major battle of the War for Independence, following the signing of the Declaration of Independence, commenced (Gallagher 1999).

The Battle of Long Island was a contest of uneven numbers, and it became clear the approximately 18,000 American soldiers could not defeat the nearly 30,000 British troops. General Washington issued orders to retreat by way of the Gowanus Creek. Washington asked General William Alexander, also known as Lord Stirling, to cover the retreat with his forces from Pennsylvania, Maryland, and Delaware. While General Washington and others retreated, the Pennsylvania, Delaware, and Maryland soldiers fought to hold back the British troops. Eventually, the Pennsylvania and Delaware lines suffered heavy losses, and Lord Stirling ordered their retreat. However, Stirling decided a diversion was needed if the British were to be held back long enough to ensure a successful retreat for Washington and his forces, and he positioned the Maryland soldiers under his command at the Old Stone House as a last effort to delay British forces (Burrows and Wallace 1999).

After the valiant efforts by the Maryland soldiers and a successful retreat, the Continental army lost the battle. Inevitably, on September 15, 1776, the British captured New York. Defeated, the Americans retreated further north into Harlem. Throughout the rest of the war, the British Army occupied the colony. It was not until November 25, 1783, a few months after the signing of the Treaty of Paris that the last British troops remaining in the United States left New York (Burrows and Wallace 1999).

The Battle of Long Island was the largest battle during the Revolutionary War until the British surrendered at Yorktown in 1781. It is also considered to be one of the bloodiest battles of the war. Of the 18,000 American soldiers fit to fight, there were over 1,000 casualties, including the Maryland soldiers who sacrificed themselves at the Old Stone House to allow General Washington's retreat. However, this was also seen as the battle that served as a rallying point that

led to unity amongst American troops that eventually won the war. Following the Battle of Brooklyn, enrollment in the American militias dramatically increased (O'Callaghan 1848-1851).

South Brooklyn played a part in the Battle of Long Island, hosting hostilities southeast of the project area and General Washington's retreat along the Gowanus Creek. "American troops fleeing northward ahead of the British crossed Gowanus Creek at the Freeke's mill dam, and the mill and bridge were burned by the Americans" (Hunter & Lee 2004:2.6). The retreating forces trekked through the marshlands south and southwest of the project area. Americans killed in battle were reportedly buried on marshland approximately 1.1 miles southeast of the project area, at present-day Third Avenue between Seventh and Eighth Streets (Map 5).

REGIONAL HISTORY – NINETEENTH CENTURY

Following the Revolutionary War and the War of 1812 and throughout the early nineteenth century, the western shore of Long Island dominated the local commercial sector. Brooklyn became a major industrial hub within the United States. When the Erie Canal was built in 1825, New York harbor saw an opportunity to expand its shipping enterprises to Western industrial areas as a link between international naval trade and the newly accessible inland areas of northern North American. Increased shipping traffic meant a need for more extensive and better ports in New York to handle the increased cargo loads. By then, Manhattan ports were already crowded with little room for large ships. Brooklyn, still under-developed, had miles of open waterfront and was the most logical area for development. Since most of Manhattan's imported goods were distributed via ports and docks in lower Manhattan, the southern waterfront neighborhoods of Gowanus and Red Hook were ideal locations to develop Brooklyn's industrial coastline (Brooklyn Historical Society 2000:8).

Waterfront development strongly affected industrial and residential development. Brooklyn's population and waterfront activity accelerated during the 1820s and 1830s. Development, however, was haphazard, and property was utilized for various industrial, commercial and residential purposes. After 1840, a more considered and systematic development of the Gowanus area and Red Hook waterfront began, with the handling of bulk cargo becoming the primary use of the land. It was the construction of the Atlantic Basin, later known as Atlantic Docks, between 1841–1847 that was a catalyst for this transformation. The shoreline and marshland were filled in to create level land across the previously tidally flooded and creek-crossed lands around the project area, and Red Hook was connected to the Brooklyn mainland by extensive tracts of sound land (Map 7, Map 8). An 1846 ferry line docking at Hamilton Avenue, northwest of the project area, augmented trade and passage routes to Manhattan. "Atlantic Basin became the center of a new industrial and residential area on Red Hook, aided by the Hamilton Avenue ferry established in 1846 with help from the Basin owners" (Hunter & Lee 2004:2.9, 2.13).

Throughout the 1840s, boiler shops, coal yards, foundries, lead works, lumber yards, machine shops, and various smithies arose across Gowanus and Red Hook. The labor was completed primarily by Irish immigrants. Irish immigrants also initially organized dock labor at the Atlantic Basin in the mid-1840s. The Atlantic Dock Company, who controlled the Basin, attempted to break the Irish stranglehold on labor in 1846 by bringing in two boats of low-wage German workers. The attempt to disrupt dock labor caused a riot at Atlantic Basin, broken up over the course of a week by local police. German and Irish dock workers were eventually both employed at the docks

and housed in shanties alongside Atlantic Basin and down Van Brunt Street, two blocks west of the project area (*Brooklyn Daily Eagle* 2 December 1872).

Despite the labor disputes, Irish immigrants continued to flock to South Brooklyn, especially following an 1848 Irish famine. Irish labor was the primary force behind the levelling of Bergen Hill northeast of the project area. Soil from Bergen Hill was transported south to fill low-lying lands along Hicks Street, possibly at and around the project area, around 1846 (*Brooklyn Daily Eagle* 2 December 1872).

Low wage dock and construction laborers lived in the blocks surrounding the project area in the mid-to-late-nineteenth century. They were largely known as "squatters," and many lived in single-story shanty houses constructed from scrap. The project area lays at the north side of Tinkersville, an immigrant neighborhood which extended southwest from Hamilton Avenue and Columbia Street toward the Atlantic Basin docks. The almost exclusively Irish-inhabited area was still prone to flooding during high tides in the 1850s, due to poor water control and incomplete landfilling of the former marshes (*New York Times* 22 August 1856). To the southeast of the project area lay Slab City, another predominantly Irish shanty town that extended to modern Creamer Street from Hamilton Avenue in the 1840s (*Brooklyn Daily Eagle* 2 December 1872). An 1886 Sanborn map shows squatters and shanties continued to lay across blocks west of Columbia Street and south of Nelson Street by the late-nineteenth century (Map 24). By 1904, many of these blocks had been developed with brick buildings, and shanties and squatters' areas are no longer depicted (Map 25).

In 1848, the Common Council decided to develop the Gowanus Creek into the Gowanus Canal. Construction of the canal would drain the surrounding marshland and create an industrial waterway that allowed access to all the inland industries at the end of the Gowanus Creek. Most of the canal was completed by 1855; however, at that time, it was only 100 feet wide and inadequately shored. A few years later, the state dispensed funds to widen the canal further and lengthen it to 1.5-miles long, running from the Gowanus Bay to Butler Street (Brooklyn Historical Society 2000:9). Already located on Butler Street was one of Brooklyn's few publicly funded port facilities. In 1867, work began on expanding the canal (Stiles 1870:582). Major David Douglass of the Army Corp of Engineers headed the dredging for the canal, and in two years, it was completed, allowing further industrial development in the region.

Throughout the 1860s, Red Hook and Gowanus had the area's most extensive and modern shipping facilities in the Atlantic Basin and the Erie Basin, a similar manufactured wharf constructed in the 1870s more than .5 miles south of the project area. With the addition of the Gowanus Canal, the area gained further prominence as an industrial center (Map 14, Map 17). Hamilton Avenue, the most significant thoroughfare in the area and an extension of the 1846 ferry line, had been successfully opened for over a decade by the onset of the 1860s, and by 1864 trolley tracks for the 'Hamilton Avenue Line' had been installed (Map 14, Map 19). By 1870, Stiles writes, "the hum of machinery and the evidences of industry and activity are unceasing, and this section of the city already possess sufficient material in population, property, manufacturers, schools, churches and other requisites to constitute a tolerable municipality" (Stiles 1870:582).

Even before the Canal brought expanded industry to the area, Brooklyn was already growing so rapidly "that population figures were out of date as soon as they were compiled" (Weld 1967:48). Between 1848 and 1849 around 800 homes, boarding houses, warehouses, factories were built in the Gowanus and Red Hook areas alone (Brooklyn Historical Society 2000:11). Brooklyn's earliest industries included shipping, warehousing, ship repair, shipbuilding, distilleries, glassworks, farming, leather shops, and metal works. As the factory and wage system replaced earlier master apprenticeship systems, it became easier to establish new businesses, resulting in more workers being drawn to Brooklyn. This increase in employment opportunities and the anticipation of further development from the canal increased the flood of German, Irish, and Jewish immigration to the Gowanus and Red Hook areas (Stiles 1884).

REGIONAL HISTORY – TWENTIETH CENTURY

South Brooklyn's industrial character continued into the beginning of the twentieth century and was supported by prominent New York City engineer and developer John W. Ambrose. The Gowanus and Red Hook neighborhoods were already filled with vital industries, and Ambrose had the vision to increase its potential. In 1894, Ambrose penned a report highlighting reasons why South Brooklyn's waterfront was the perfect location for further development. He stated that the natural landscape of Gowanus Bay was ready for development and would allow "immediate use without further expense or labor" (Ambrose 1894:2). Regarding the underwater area, Ambrose praised it as the only property within the New York Harbor that had a depth of 35' below water at low tide, which would allow "better facilities than any other property for accommodating vessels of the deepest draft, which bring the most lucrative trade" (Ambrose 1894:3).

The waste management problems of the Gowanus lasted into the twentieth century. Serious efforts to clean the canal began as early as 1911 when the city installed a flushing tunnel at Butler Street running between New York Bay and the canal. The tunnel was designed so that the foul water would be sucked out of the canal, and cleaner water from the Buttermilk Channel would rush in. However, around the First World War, the canal became even busier, transporting cargo and war materials to and from an increasing number of factories along the canal, and the rate of pollution became too intense. The sewage deposited into the canal made navigation difficult, so the city decided to attempt dredging. After 1955, the dredging and other attempts at maintaining the canal were stopped. By this time, industry had grown away from the canal due to more efficient transportation methods. Following the disuse of the canal and a poor economic climate, the area became a dumping ground. Little effort was made to maintain it until relatively recently. In 1999, the New York Department of Environmental Protection reactivated the Butler Street flushing tunnel. However, the tunnel was only active for 11 hours a day due to the tide, and water improvement was only measurable during these brief periods (Brooklyn Historical Society 2000)

Pollution was not the only problem to arise from the increased activity in South Brooklyn. Crime also came to define the neighborhood. As marine industries sprang up, the neighborhoods filled with seamen and longshoremen, served by taverns/pubs on Smith Street. The area, at one time nicknamed the "gashouse district" after gasworks located at the canal, became associated with "gashouse gangs." Two rival groups, in particular, were the *Pointers* from Red Hook Point and the *Creekers* from Gowanus Creek, who often fought in the streets (Bergen 1881).

Some changes came around 1927 when the New York State's Crime Commission issued a report stating that Red Hook had the third-highest number of juvenile delinquents of any comparable area worldwide. This determination by the state led to awareness regarding the state of affairs in all of South Brooklyn. In addition to better housing, it was decided that the neighborhood needed more and better recreational facilities in order to keep children out of the streets and prevent them from leading deleterious lives. This movement led to an overhaul of the city parks and construction of new facilities, such as public pools and bathhouses. The parks and facilities improved so much that their development is credited with influencing the Brooklyn Dodgers to move their practice facility into the area. As part of the park renewal project, the Parks Department rebuilt the Old Stone House in 1935, using stones recovered from the demolition of the original house. Today the reconstructed house is located on Third Street between Fourth and Fifth Avenues, in James J. Byrne Park, named after the owner of the original Brooklyn Dodgers team (Stiles 1867).

HISTORIC LAND USE OF THE PROJECT AREA

The first known landowner for the project area is Frederick Lubbertsen. Lubbertsen was born in 1609 in Amsterdam, Holland. A sailor by trade, he entered into the service of the Dutch West India Company in 1633. Three years later, on November 13, 1636, Lubbertsen requested permission from the Company to emigrate to the New World with his wife, Styntje (Christina), and his daughter, Rebecca. He arrived in the New Netherland colony on March 28, 1638, aboard the *Herring*, alongside then-Director General Willem Kieft (Historical Society of the New York Courts 2019).

Lubbertsen found early success in New Amsterdam as the boatswain to Director-General Kieft. He resided in New Amsterdam until late May of 1640, when he was granted a patent for land at Gowanus Cove[2], making him one of the earliest landholders in Kings County (Bergen 1881:194, Eno 1915:222). His patent encompassed the whole neck of land stretching from the East River to the Gowanus Creek, northeast of present-day Red Hook. It was described in 1915 as being loosely bound by present-day Degraw Street west of Court Street, the East River, and Hamilton Avenue[3] (Eno 1915:222; Camissa 1995:8). West of Hamilton Avenue, the area was comprised of marshland and wetlands, most of which was also included in Lubbertsen's purchase in a less defined way. "Lubbertsen's patent appears to have covered a large tract of upland in that portion of Brooklyn adjoining the salt meadows and marsh which formerly separated Red Hook from the mainland, extending from the East River opposite Governor's Island to Gowanus Cove and the Mill Creek, including a portion of the surrounding salt meadows" (Bergen 1876:130).

Lubbertsen remained active in the early colony's politics throughout his life. In 1641, he became one of the first Twelve Men, a representative assembly for the colony of New Netherland. In 1653, Lubbertsen first moved onto his Gowanus property with his family. That year, he was chosen to represent the village of Brooklyn in the convention held at New Amsterdam to represent the state

[2] Lubbertsen's primary residence was at his plantation on "Smits Vly" in or near the village of Brooklyn, which he had acquired on September 4, 1645 (Historical Society of the New York Courts 2019).

[3] A confirmatory patent was granted to Lubbertsen by English Governor Colonel Richard Nicolls on March 28, 1667, which validated the Gowanus property with the same boundaries intact (Bergen 1876:130).

of the colony to the Directors of the Dutch West India Company in Holland. Additionally, Lubbertsen was appointed magistrate of Brooklyn and held the position until 1655 (Bergen 1876:127; Historical Society of the New York Courts 2019).

In 1657, Lubbertsen married his second wife, Tryntje (Catharine) Hendricks, and became stepfather to her three sons, Cornelis, Peter, and Hendrick Corsen-Vroom (Bergen 1881:194). Their first daughter, Elsje , was born the following year. They had their second daughter, Aeltje (Alice), in 1660 (Bergen 1876:129).

In 1661, Lubbertsen was elected as a candidate for Burgomaster in New Amsterdam. In 1664, he was once again appointed magistrate for the village of Brooklyn. In 1665, Lubbertsen acted as a delegate for Brooklyn to the Hempstead Convention, the first representative assembly under English rule. He resumed the position of the magistrate for the village of Brooklyn in 1671 and remained active in the role until 1674 (Bergen 1876:127; Historical Society of the New York Courts 2019, para. 3).

Lubbertsen controlled the marshlands and unnamed creek that Adam Brouwer petitioned to modify in 1664 to create the area's first canal. Brouwer's petition was supported by the signatures of over a dozen local Dutch merchants, and specifically noted the canal would be easy to dig and could both aid trade and alleviate flooding problems during storms (Stiles 1867:68). The canal was marked as the Bull Creek Canal on Ratzer's 1767 map (Map 4). The canal's apparent route approximately one block south of the project area, crossing Columbia and Commerce Street, is shown on the 1846 Butt map, although it appears to have been filled by 1849 according to the Colton map (Map 8, Map 9).

Lubbertsen and Tryntje's 1679 will divided their properties in Brooklyn and Manhattan among their daughters and stepchildren. The will was probated in 1680, and five commissioners were appointed to the division of Lubbertsen's estate, where the Gowanus plantation, with a one-mile frontage on the East River, was devised to Aeltje (Liber 1, p. 215, Wills, New York County; Bergen 1876:131).

In 1682, Aeltje married Cornelius Sebring, a resident of Flatbush (Bergen 1876:127). They had ten children, five sons and five daughters, between the years 1683 and 1702. Sebring continued to add a property to the family's portfolio during their marriage. Their homestead was roughly on the line of present-day Huntington Street, between Hicks and Columbia Streets. Their lands extended a mile along the water's edge (Map 4) (Fowler 1888:22).

In 1689, Sebring and his brother-in-law, Peter Corsen, entered into an agreement with John Marsh of New Jersey to construct a water mill on Lubbertsen's property. The agreement stipulated that Marsh could operate the mill as his own business. "The structure appears to have been a one-story building with an upper story in a gabled roof" (Camissa 1995:8). The mill was built on the southeast side of Gravers Kill, on meadowland that both Sebring and Corsen held in common. 'Sebring's Mill' was the among the first industrial structures to grace the waterfront near the project area. Its location roughly corresponded to present-day Columbia Street and Tiffany Place, approximately .5 miles north of the project area, based on Ratzer's 1767 map (Map 4) (Eno 1915:223).

Like his father-in-law, Sebring was active in politics – he was a member of the Colonial Legislature in Kings County and a representative in the Provincial Assembly from 1695 to 1723. On March 20, 1698, Peter Corsen conveyed the Lubbertsen inheritance and his brother, Hendrik, to Cornelius Sebring (Eno 1915:222-223). The conveyance was for a one-hundred-acre plantation on "Lubbertse's Neck," bound east by the property of Elsje's husband, Jacob Hansen Bergen, west by Red Hook, and north by the land owned by Sebring.

Sebring died on May 23, 1723, and his estate was divided amongst his ten children. His son, Isaac, inherited the property just north and northwest of the project area, which "extended for a mile or more along the waterfront" (Fowler 1888: 25). Isaac Sebring was baptized on May 14, 1693, at the Dutch Church of Brooklyn. He married Catryntie (Catharine) Lefferts and had five children, one son, and four daughters. As indicated in his will, written September 14, 1771, the farm and mill were occupied by Isaac and had remained within his family throughout his lifetime (Map 4). Isaac Sebring's will was proven on May 3, 1784. However, it appears that the property had passed out of his immediate family by this time and was owned by the Cornell family.

There is slight uncertainty as to how Cornell had acquired the property. Abstracts of Isaac Sebring's will show that the estate was devised to his dependents and left in equal shares to his daughter Elizabeth, who was impaired, and to his orphaned grandchildren (Liber 36, p. 443, Wills, New York County). Alternatively, Camissa (1995) posits that the estate was part of the inheritance left to Isaac's daughter, Margaret, who had married Whitehead Cornell. Camissa stated that the inheritance included three hundred acres with a one-mile frontage along the East River and the Sebring Mill, which Whitehead continued to operate. Whitehead subsequently purchased the adjoining parcels of property and ultimately took possession of the entire Sebring estate (Camissa 1995:9). A third alternative was given by Stiles (1872), who believed that the Sebrings had lost their estate during the troubles of the Revolutionary War: "The Sebrings, who were Whigs, left the island with or shortly after the departure of the American troops, in August 1775. The Cornelius Sebring house and mill were burned or partially destroyed by the British and owing to this and the length of the war, they found themselves, on their return, much impoverished, and were obliged to dispose of their property, which was purchased by their neighbors and relations, the Cornells" (Stiles 1872:306).

By all accounts, after the close of the Revolution, the Sebring property was owned by Whitehead Cornell. Whitehead Cornell was born March 12, 1731, in Hempstead. An affluent businessman, Whitehead moved to Brooklyn circa 1755. He died on February 5, 1810 (Cutter 1915:367).

The 1767 Ratzer map indicates the "Frederick Lubbertsen House" lay approximately 1 mile northeast of the project area. The surrounding lands that belonged to his estate, which had been cleared and prepared for cultivation by the mid-eighteenth century, are depicted in Map 4. The "Sebring's Mansion", presumably the developed version of the earlier seventeenth century homestead, is located approximately .5 miles northeast of the project area. The Cornelius Sebring/John Marsh mill is depicted approximately .5 miles north of the project area, at the East River shoreline. The project area at this time is depicted as undeveloped land on marshlands further inland from the river and harbor waterways.

Lot 2 and Lot 45

Whitehead Cornell divided his estate amongst his three sons, John, Isaac, and William. John inherited the part of the estate associated with the project area Lots 2 and 45 (Map 6). John Cornell was the eldest son of Whitehead Cornell and Margaret Cornell (nee Sebring). He was described as a large landowner and active in ecclesiastical and church affairs, being the first vestryman at St. Ann's Church, which his father had helped found. In 1787, John became one of the incorporators of the Episcopal Church in Brooklyn. He was elected by the Protestant Episcopal Church four times as a delegate to the diocesan convention throughout his life. He died in Brooklyn on January 21, 1820 (Cutter 1915:367). His inheritance included sixty acres and the former Sebring/Marsh mill business, which he had continued to operate during his lifetime (Camissa 1995:9).

Thirteen years after his death, Cornell's widow, Sarah, and her children sold the remaining property to Charles Kelsey and Anson Blake. By March 22, 1834, Charles Kelsey and Anson Blake, who shared the property as tenants in common, had the property surveyed and partitioned into salable building lots (Map 6). Kelsey had begun selling off the property to different owners by January 11, 1839, when Blake and his wife, Elizabeth, conveyed their interest in the property to Kelsey.

By 1843, the marshland comprising the project area had begun to be filled in, and Columbia, Coles, Luquer, and Hicks Streets had been laid out (Map 7, Map 8). On October 12, 1850, Kelsey sold the property that comprised Lots 2 and 45 to Patrick Farley.

The first mapped structures appeared on Lot 2 in 1855. Fronting Columbia Street was one large dwelling comprised of three communicating framed structures. Two smaller framed dwellings adjoined it in the rear. Additionally, two framed dwellings were situated in the rear of the lot fronting Luquer Street; and one framed dwelling was situated in the southeast corner of the lot. Lot 45 remained vacant (Map 13). Construction of these buildings corresponds with infilling of the area surrounding Block 513 in the 1840s, possibly with material from the 1846 leveling of Bergen Hill and the pre-1849 complete infilling of the Bull Creek Canal to the south of the project area.

On May 2, 1866, Farley and his wife, Mary, conveyed the property to Edward Reynolds. Within four years, on October 11, 1870, Reynolds and his wife, Margaret, sold the property to Daniel and Catherine McCarthy.

By 1880, Lot 2 had one frame or wood structure at 375 Columbia Street and one wood or frame structure that fronted 11 Luquer Street upon it. The remainder of the lot was mapped as vacant. That same year, the first structure appears on Lot 45 as one wood or frame dwelling fronting 13 Luquer Street (Map 21, Map 22).

By 1886, Lot 2's 375 Columbia Street featured a two-story mixed dwelling/store frame building with a shingle roof and basement. Along the eastern border of Lot 2 was a stable building consisting of one large frame structure bookended by two one-story frame structures. An additional one-story frame stable sat in the southeast corner of the lot. Lot 2 at 11 Luquer Street also featured a two-story frame dwelling with a slate or tin roof. Like its neighbor, Lot 45 at 13 Luquer Street

featured a three-story frame dwelling with a slate or tin roof that fronted the street. In addition, one frame building with a shingle roof was situated in the rear of Lot 45 (Map 24).

By 1904, Lot 2's one-story southeastern building fronting 11 Luquer Street had been replaced wth a larger three-story frame dwelling with brick or stone foundation fronting 33' of Luquer Street (Map 25). Lot 2 remained relatively unchanged in 1907. By this time, Lot 45 featured a three-story frame dwelling with a brick or stone foundation. The frame building that had once been in the rear of Lot 45 had either been removed or was not depicted (Map 26).

On December 16, 1920, Catherine deeded her son, Daniel J. McCarthy, both Lots 2 and 45. The last record of conveyance for Lot 2 before 1970 shows the property belonging to Joseph and Sophie Pallonetti, whom McCarthy had conveyed the property to on August 23, 1924. The last record of conveyance for Lot 45 before 1970 shows the property belonging to Sophie Pallonetti, whom McCarthy had conveyed on January 11, 1934. See Table 3 for a full accounting of conveyances for Lots 2 and 45.

The Sanborn Insurance Maps from 1950–2007 show the devolution of the property on the lots into vacant land (Maps 28–33). Expansion of Hamilton Avenue between 1940 and 1950 for construction of the Brooklyn Battery Tunnel Plaza impacted the northeast side of Block 513, but it did not affect the project area lots. The Lot 2 structure at 375 Columbia Street, depicted as early as 1886 through 1916, had been razed by 1950, while the lot's Luquer Street-facing structure remained in place. Lot 45 retained its Luquer Street-facing structure in 1950. By 1969 the Lot 45 Luquer Street-facing structure had been razed, while Lot 2's Luquer Street-facing structure remained in place. The Lot 2 Luquer Street-facing structure was razed by 1977. Lots 2 and 45 remained vacant through the late twentieth century to present.

Table 03: Deed Conveyances for Lot 2 and Lot 45

GRANTORS	GRANTEES	DATE RECORDED OR PROBATED	LIBER, PAGE
Willem Kieft	Frederick Lubbertsen	May 27, 1640	--
Frederick Lubbertsen and wife, Tryntje	Aeltje Sebring (nee Lubbertsen) and husband, Cornelius	November 16, 1685	Wills: 1, 215 Deeds: 1, 130
Peter Corsen Cornelius Sebring	John Marsh	September 25, 1691	Deeds: 1, 271
Peter Corsen	Cornelius Sebring	March 28, 1698	Deeds: 2, 162
Cornelius Sebring	Isaac Sebring	March 25, 1723	Wills: 9, p. NA
Isaac Sebring	Heirs of	May 3, 1784	Wills: 36, 443
Isaac Cornell and wife, Hannah	John Cornell	August 14, 1832	Deeds: 34, 79
Whitehead J. Cornell and wife, Juliett	Sarah Cornell	April 20, 1833	Deeds: 35, 444
Sarah Cornell, widow of John Cornell, et al.	Charles Kelsey Anson Blake	March 22, 1834	Deeds: 40, 106
Sarah Cornell	Charles Kelsey	April 16, 1853	Deeds: 320, 234
Charles Kelsey Anson Blake	Anson Blake (trustee) Charles Kelsey (trustee)	December 28, 1836	Deeds: 67, 131
Charles Kelsey	Anson Blake (trustee)	June 19, 1837	Deeds: 71, 107

GRANTORS	GRANTEES	DATE RECORDED OR PROBATED	LIBER, PAGE
Anson Blake	Charles Kelsey (trustee)		
Anson Blake and wife, Elizabeth	Charles Kelsey	January 11, 1839	Deeds: 79, 164
Charles Kelsey and wife, Helen G.	Patrick Farley	October 12, 1850	Deeds: 227, 270
Patrick Farley and wife, Mary	Edward Reynolds	May 2, 1866	Deeds: 705, 427
Charles Kelsey (ex'r. of)	Edward Reynolds	July 3, 1873	Deeds: 1115, 489
Edward Reynolds and wife, Margaret	Daniel McCarthy Catherine McCarthy	October 11, 1870	Deeds: 967, 10
Daniel McCarthy	Catherine McCarthy	April 10, 1909	Deeds: 3131, 526
Catherine M. McCarthy	Daniel J. McCarthy	December 16, 1920	Deeds: 4011, 102 (Lot 2) Deeds: 4011, 103 (Lot 45)
Daniel J. McCarthy	Joseph Pallonetti Sophie Pallonetti	August 23, 1924	Deeds: 4443, 245 (Lot 2)
Daniel J. McCarthy	Sophie Pallonetti	January 11, 1934	Deeds: 5357, 551 (Lot 45)

Lot 12

Whitehead Cornell divided his estate amongst his three sons, John, Isaac, and William. Isaac inherited the part of the estate associated with the project area Lot 12. Isaac was born circa 1758 and married Hannah Cortelyou in 1783. Together they had eleven children. Upon Isaac's death in 1825, the property was passed to his sons Daniel and Simon Cornell (Map 9, Map 11).

On April 25, 1825, Daniel, Simon, and Simon's wife, Maria, conveyed the property to Henry W. Warner. That same day, Isaac's widow, Hannah Cornell (nee Cortelyou), and his children released their right and interest in the property to Warner.

Three years later, on January 16, 1828, Warner sold the property to William Holly, Charles Hoyt, Hervey Ely, and Azore S. Marvin. By October 22, 1831, the property was solely in Hoyt's possession. That same month, Hoyt conveyed a portion of the property to Russell H. Nevins of Brooklyn.

By 1843, the marshland comprising the project area had begun to be filled in, and Columbia, Coles, Luquer, and Hicks Streets had been laid out (Map 7, Map 8). On May 24, 1845, Hoyt and his wife, Mary, conveyed the remaining property to Nevins. Six days later, on May 30, Nevins sold a portion of the property to John Pentz.

The first mapped structures to appear on individual lots near the project area occurred in 1855 when three frame buildings were constructed on Lot 13, adjacent to Lot 12, and Lot 2 was developed (see above). Lot 12 itself remained vacant (Map 13).

By July 1, 1870, as indicated by the descriptions laid out in the Kings County Register Conveyance books, some interest in the property had passed into the hands of Edward and Margaret Reynolds. On that date, the Reynolds conveyed the property to James Wade. Ten years later, in 1880, a single frame or wood building is the first structure to appear on Lot 12 (Map 21). In 1886, the structure was depicted as a three-story frame dwelling with a slate or tin roof (Map 24).

Eleven years later, on February 19, 1897, James Wade conveyed the property to Catherine Wade, who deeded it to Catherine L. Malone the following year. By 1904, a one-story frame dwelling with a composite roof had been constructed in the rear of the lot, with small outbuilding or shed along the southwest side of the property rear (Map 25). In 1907, Lot 12 had a three-story frame dwelling with a basement and a brick or stone foundation fronting Coles Street. An L-shaped shed or "old building" abutted the southwest property rear, perhaps an expansion of the smaller outbuilding depicted in 1904 (Map 26). In 1916, the lot remained unchanged. The last record of conveyance before 1970 shows the property belonging to Michelle and Carmela Punziano, to whom Malone had conveyed the property on September 5, 1924. See Table 4 for a full accounting of conveyances for Lot 12.

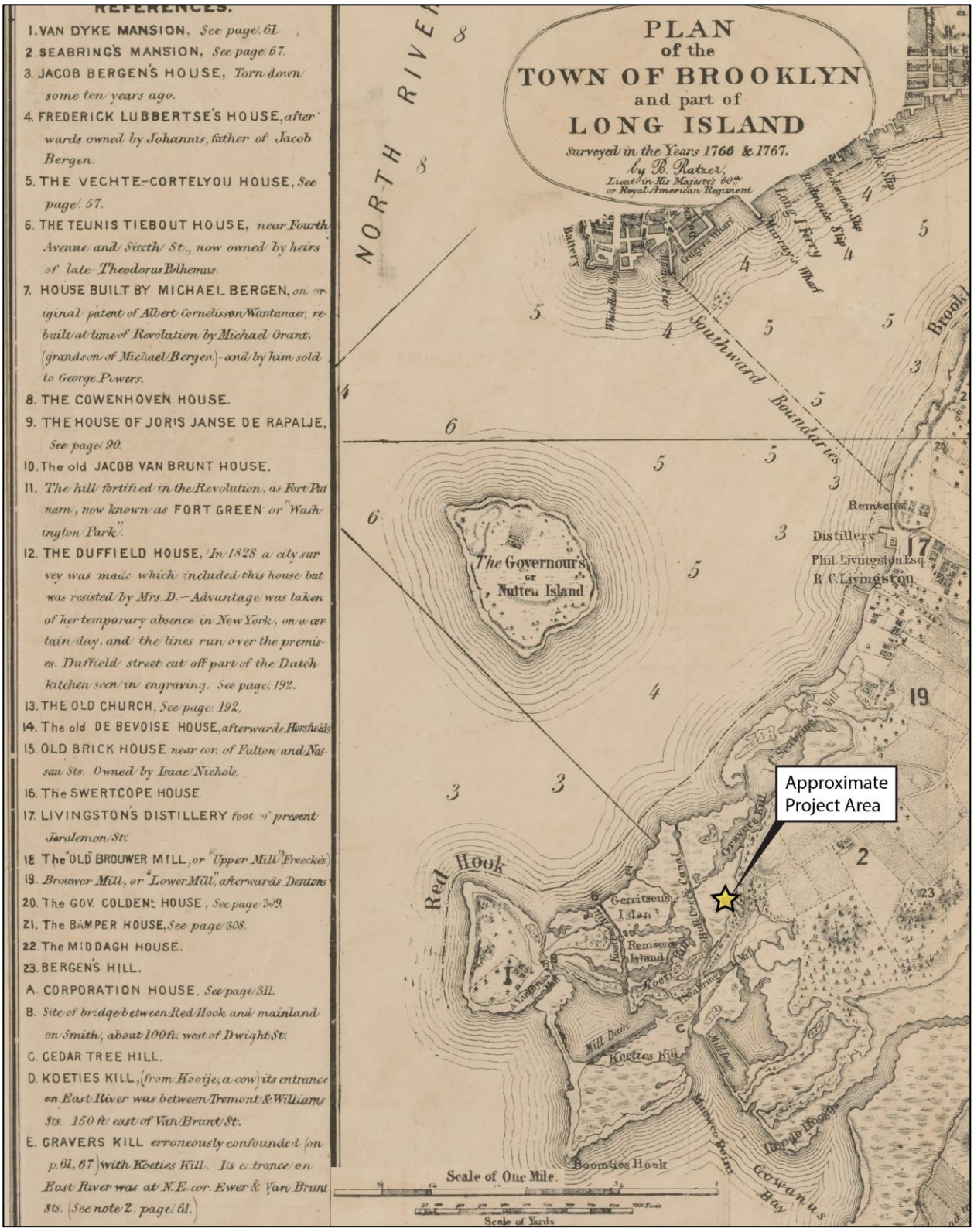
The Sanborn Insurance Maps from 1950 – 2007 show the devolution of the property on the lot into vacant land (Maps 28–33). Expansion of Hamilton Avenue between 1940 and 1950 for construction of the Brooklyn Battery Tunnel Plaza impacted the northeast side of Block 513, but it did not affect the project area lots. Lot 12 was depicted in 1950 with its structure fronting Coles Street in place at its north side, but no outbuildings are shown (Map 28). By 1969, the remaining Lot 12 structure had been razed. Lot 12 remained vacant through the late twentieth century to present.

Table 04: Deed Conveyances for Lot 12

GRANTORS	GRANTEES	DATE RECORDED OR PROBATED	LIBER, PAGE
Willem Kieft	Frederick Lubbertsen	May 27, 1640	--
Frederick Lubbertsen and wife, Tryntje	Aeltje Sebring (nee Lubbertsen) and husband, Cornelius	November 16, 1685	Wills: 1, 215 Deeds: 1, 130
Peter Corsen Cornelius Sebring	John Marsh	September 25, 1691	Deeds: 1, 271
Peter Corsen	Cornelius Sebring	March 28, 1698	Deeds: 2, 162
Cornelius Sebring	Isaac Sebring	March 25, 1723	Wills: 9, p. NA
Isaac Sebring	Heirs of	May 3, 1784	Wills: 36, 443
Simon Cornell Maria Cornell Daniel Cornell	Henry Warner	May 4, 1825	Deeds: 16, 448
Isaac Cornell (widow of)	Henry Warner	May 4, 1825	Deeds: 16, 451A
Ann Cornell Margarit Johnson Teunis Johnson Peter Cornell	Henry Warner	May 4, 1825	Deeds: 16, 451B
Henry Warner and wife, Anna	Cornelius J. Bogert	September 17, 1827	Deeds: 22, 500
Cornelius Bogert	Henry Warner	January 16, 1828	Deeds: 23, 355

GRANTORS	GRANTEES	DATE RECORDED OR PROBATED	LIBER, PAGE
and wife, Susan			
Henry Warner	William Holly Charles Hoyt Harvey Ely Azore S. Marvin	January 16, 1828	Deeds: 23, 358
William Holly and wife, Ann. G., Charles Hoyt and wife, Eliza, Harvey Ely and wife, Caroline A., Azore S. Marvin and wife, Delia M.	Peter Radcliff Adrian Van Sinderen Leffert Lefferts	April 14, 1828	Deeds: 24, 113
Peter Radcliff and wife, Elizabeth H., Adrian Van Sinderen, and wife, Mary, Leffert Lefferts and wife, Maria	Charles Hoyt	October 22, 1831	Deeds: 31, 453
Charles Hoyt	Russell H. Nevins	October -- 1831	Deeds: 31, 456
Charles Hoyt and wife, Mary	Russell H. Nevins	May 24, 1845	Deeds: 131, 505
Russell H. Nevins	John Pentz	May 30, 1845	Deeds: 132, 79
Charles Hoyt	James J. Hoyt (as trustee for Charles Hoyt)	March 20, 1847	Deeds: 161, 90
Charles Hoyt	Jesse Hoyt (as trustee for Charles Hoyt)	June 11, 1857	Deeds: 452, 145
Edward Reynolds, and wife, Margaret	James Wade	July 1, 1870	Deeds: 955, 20
John Pentz	Will	September 9, 1893	Deeds: 2198, 542
James Wade	Catherine Wade	February 19, 1897	Deeds: 7, 29
Catherine Wade	Catherine L. Malone	December 16, 1898	Deeds: 12, 94
Catherine L. Malone	Michelle Punziano Carmela Punziano	September 5, 1924	Deeds: 4444, 127

Map 03: *Novi Belgii Novaeque Angliae nec non partis Virginiae tabula: multis in locis emendata* (Visscher & Schenk 169-?)



Map 04: *Plan of the Town of Brooklyn and part of Long Island* (Ratzer 1767)

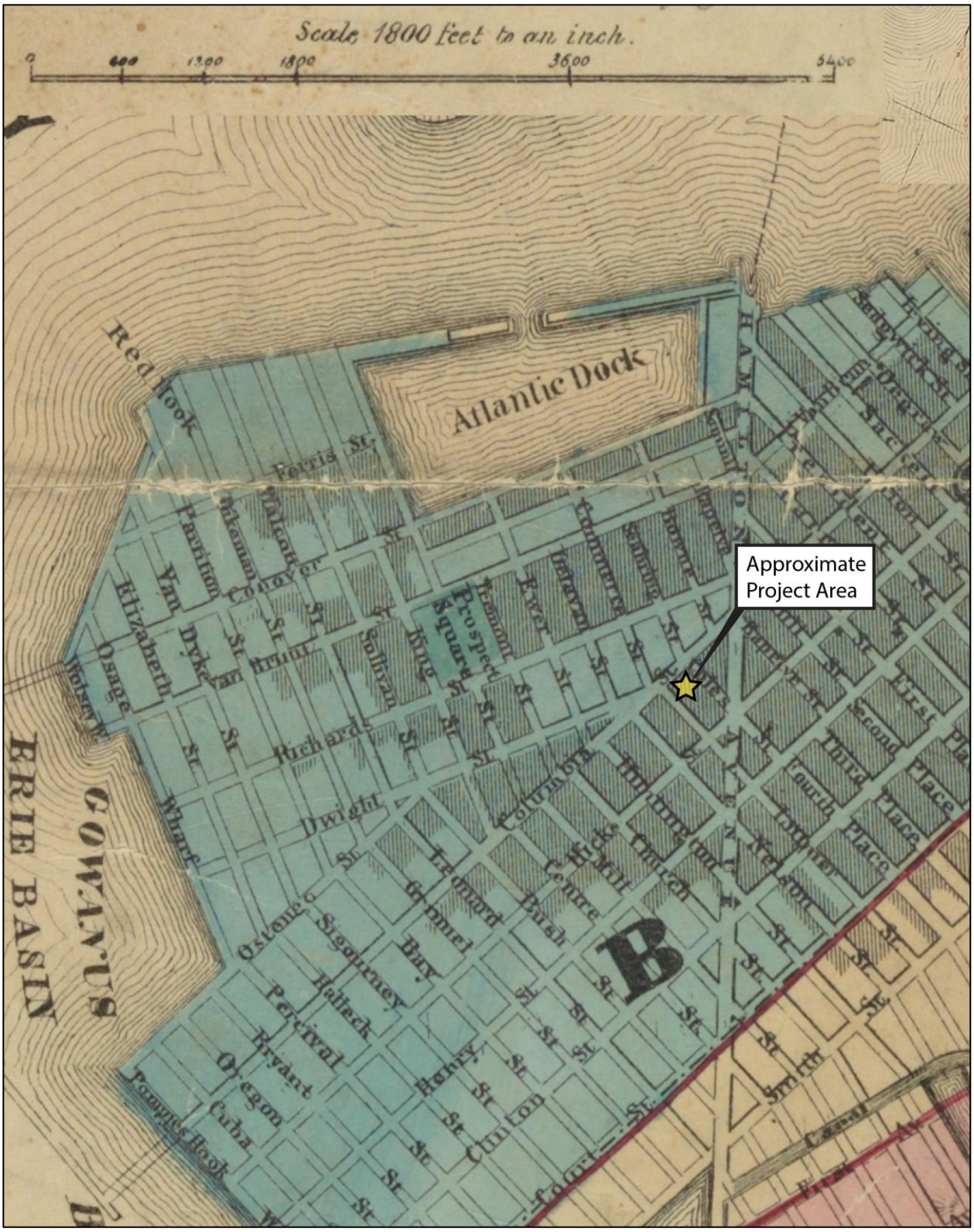
Map 05: *Map of Brooklyn during the Battle of Long Island* (unknown author)

Map 06: *Map of property in the Sixth Ward of the city of Brooklyn belonging to Kelsey, Blake and others, late of the heirs of John Cornell, deceased*. (Tolford & Day 1838)

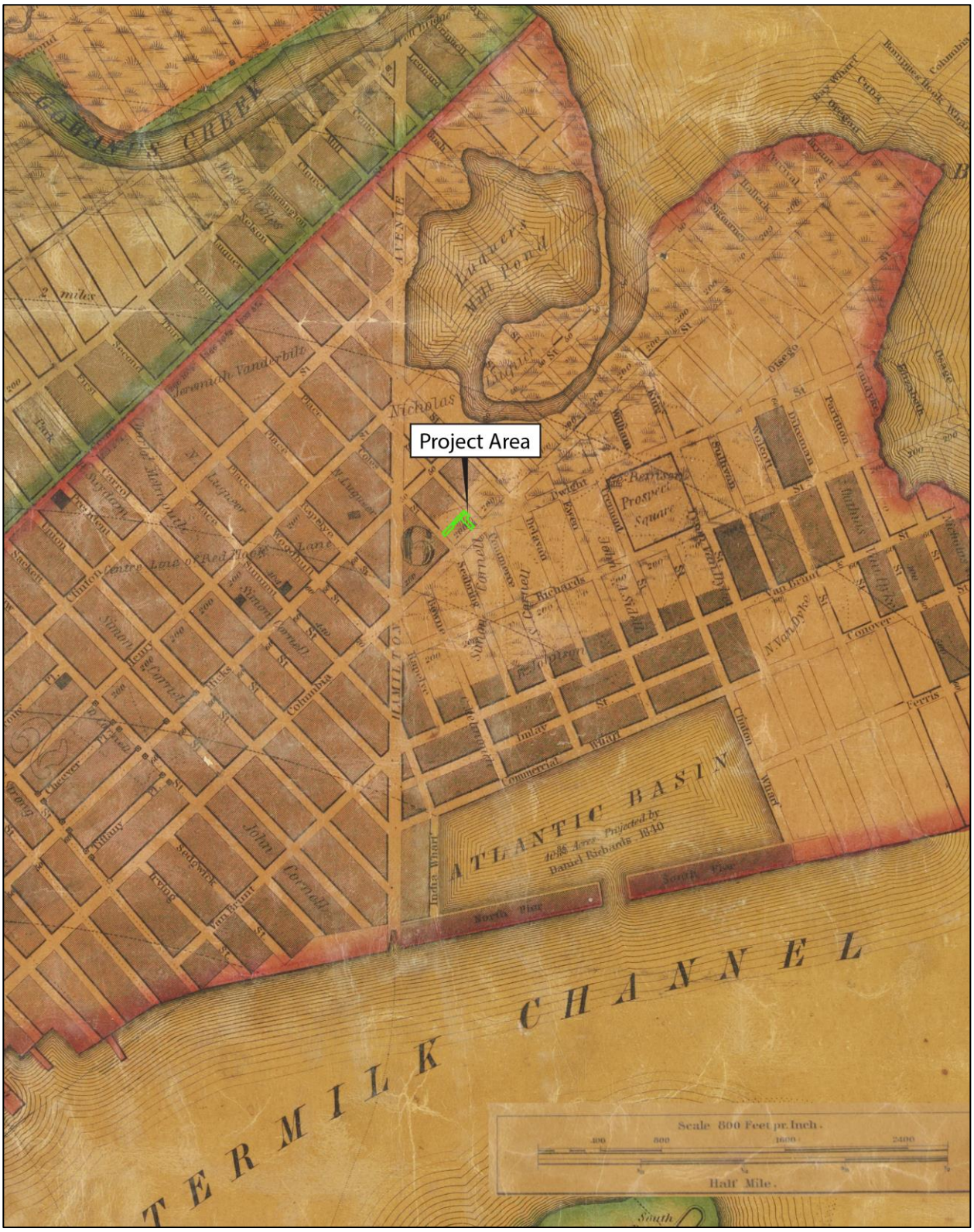
Map 07: *Hayward's Map of the City of Brooklyn : copied from the Commissioner's map* (Hayward 1843)

Map 08: *Map of the City of Brooklyn, and village of Williamsburg* (Butt 1846)

Map 09: *Map of the City of Brooklyn, as laid out by the Commissioners* (Colton 1849)



Map 10: *Map of the cities of Brooklyn, Williamsburg, and Township of Bushwick* (Dripps 1850-1859)

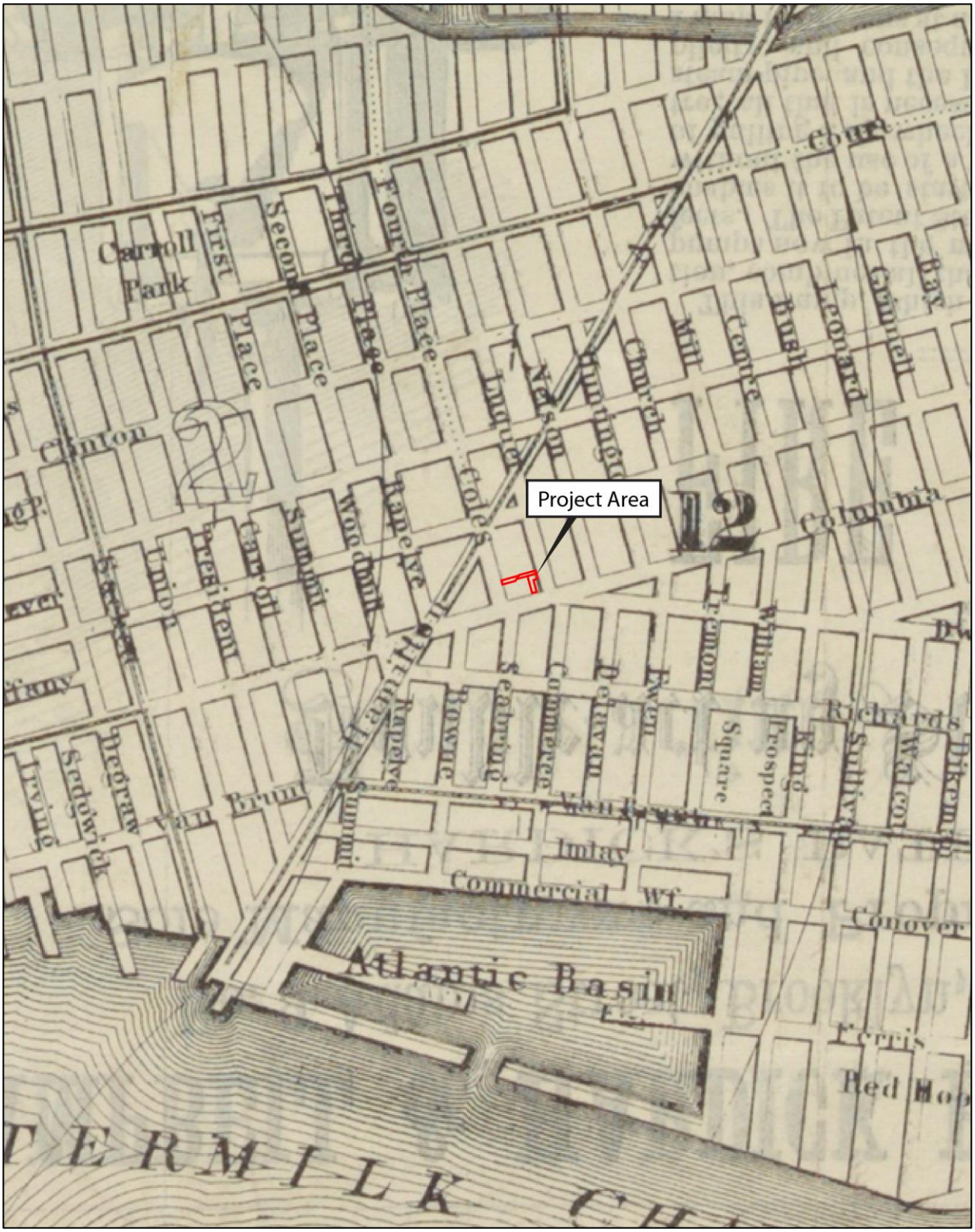


Map 11: *Map of the City of Brooklyn as laid out by Commissioners* (Stiles 1851)

Map 12: *Topographical map of the City of Brooklyn* (Dripps 1855)

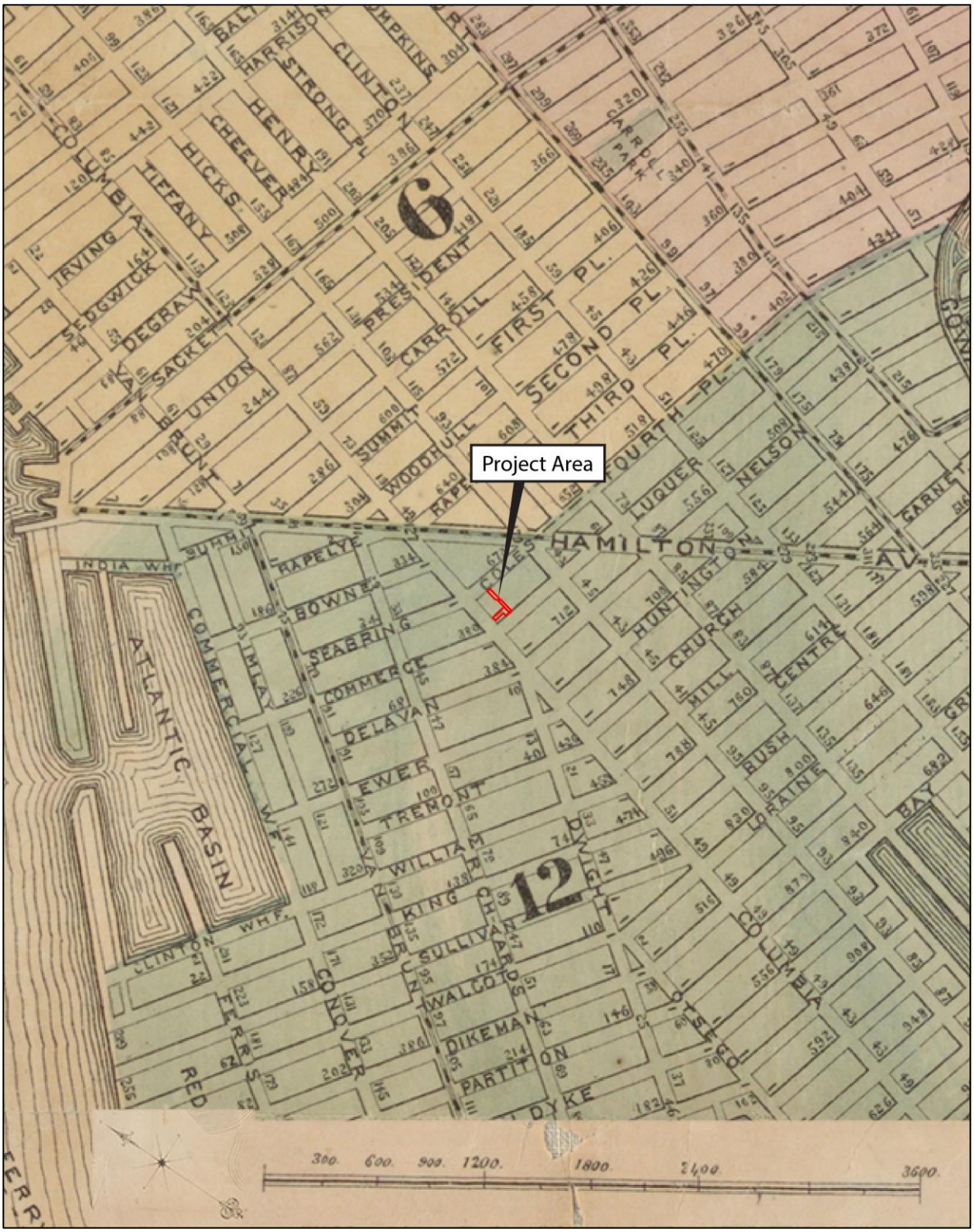
Map 13: 12th Ward. Vol. 1, Plate 34. In *Maps of the City of Brooklyn* (Perris 1855)

Map 14: *Higginson's plan of the City of Brooklyn, L.I.* (Higginson 1864)



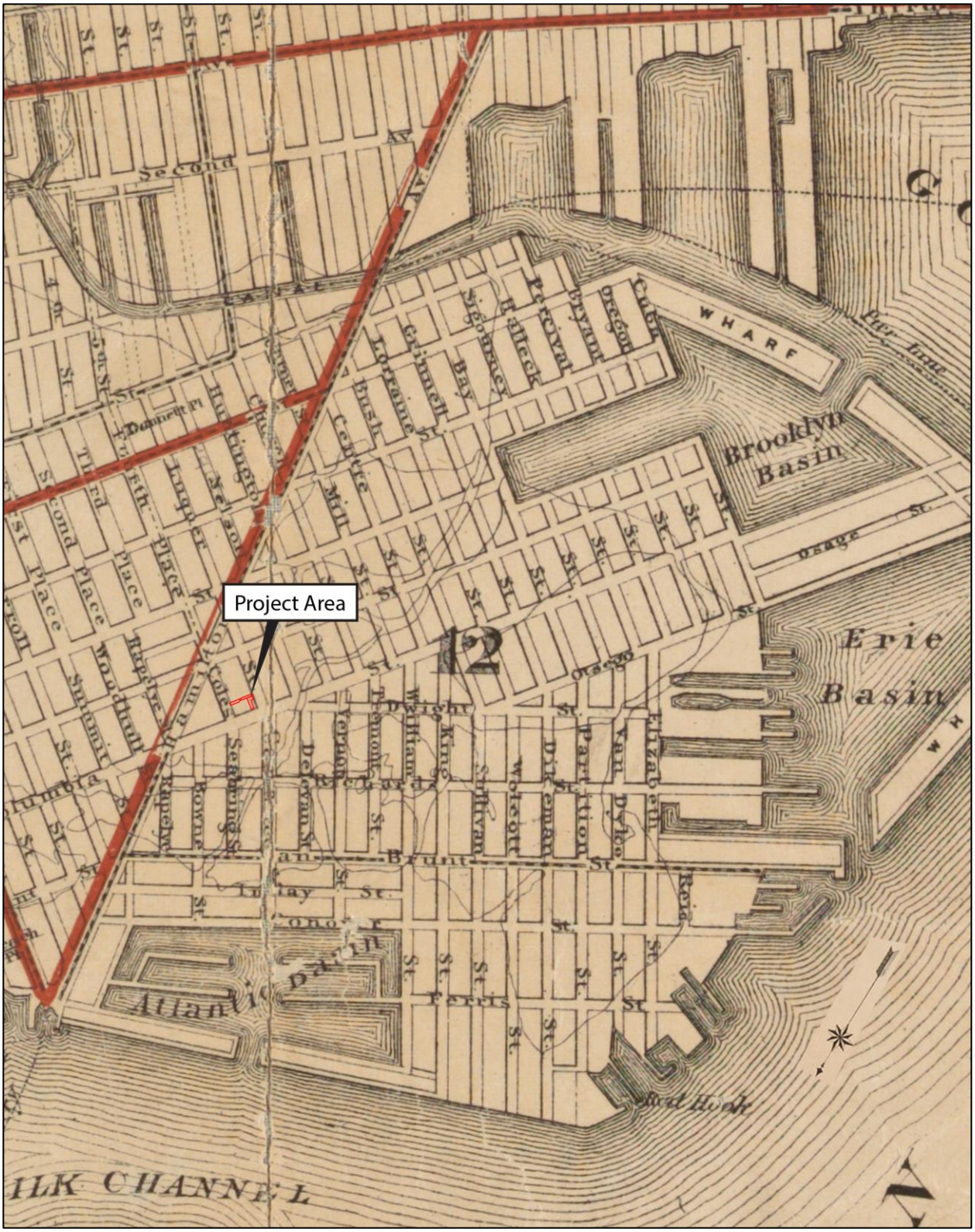
Map 15: *Map of the City of Brooklyn* (Phelps 1864)

Map 16: Map encompassing Red Hook, Cobble Hill, Carroll Gardens and Gowanus Canal. Sheet 5. In *Map of the City of Brooklyn* (Dripps 1869)



Map 17: *Map of the city of Brooklyn, New York* (Dripps 1873)

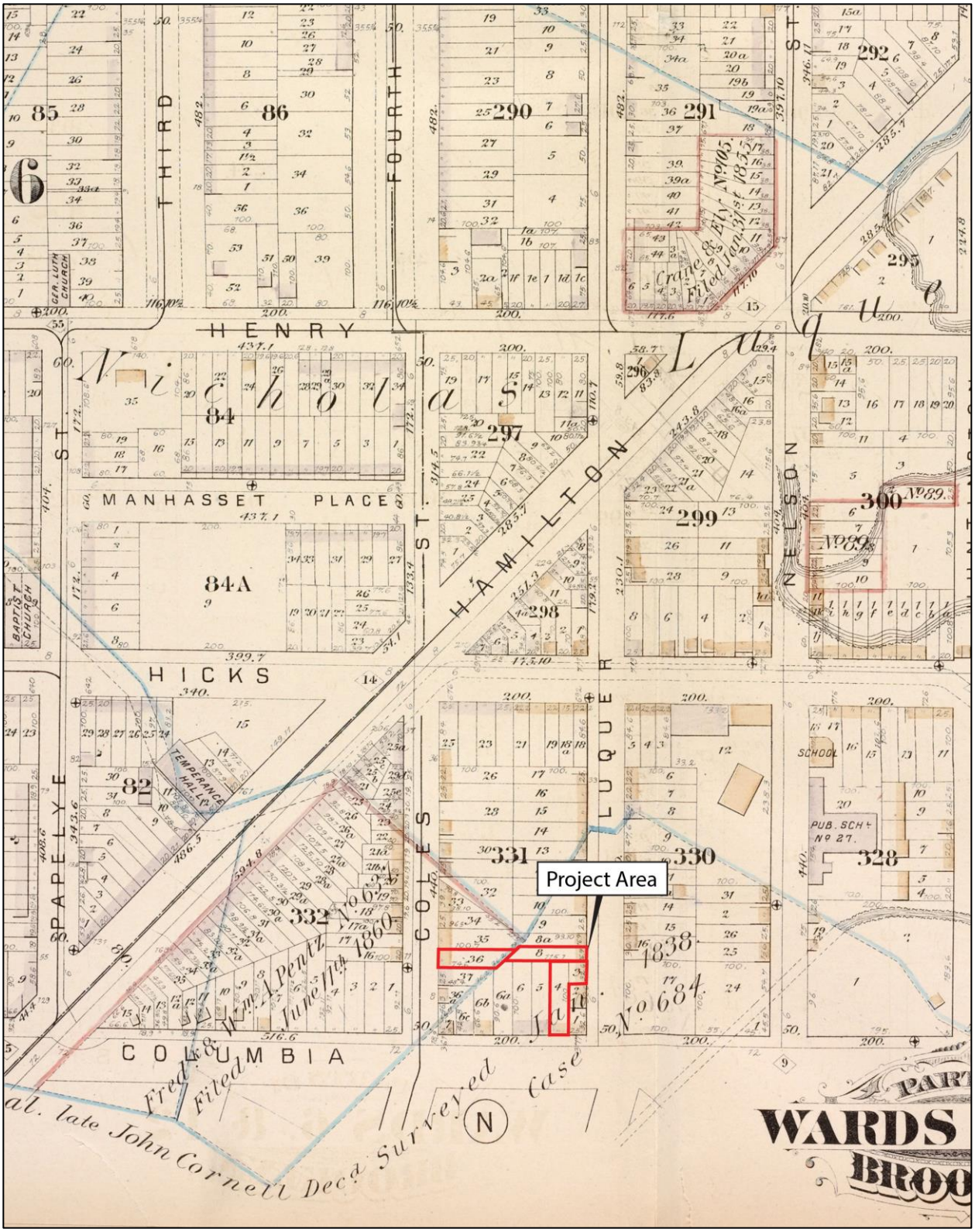
Map 18: Brooklyn. Double Page Section 2. In *Farm Line Map of the City of Brooklyn, from official records and surveys* (Beers 1874)



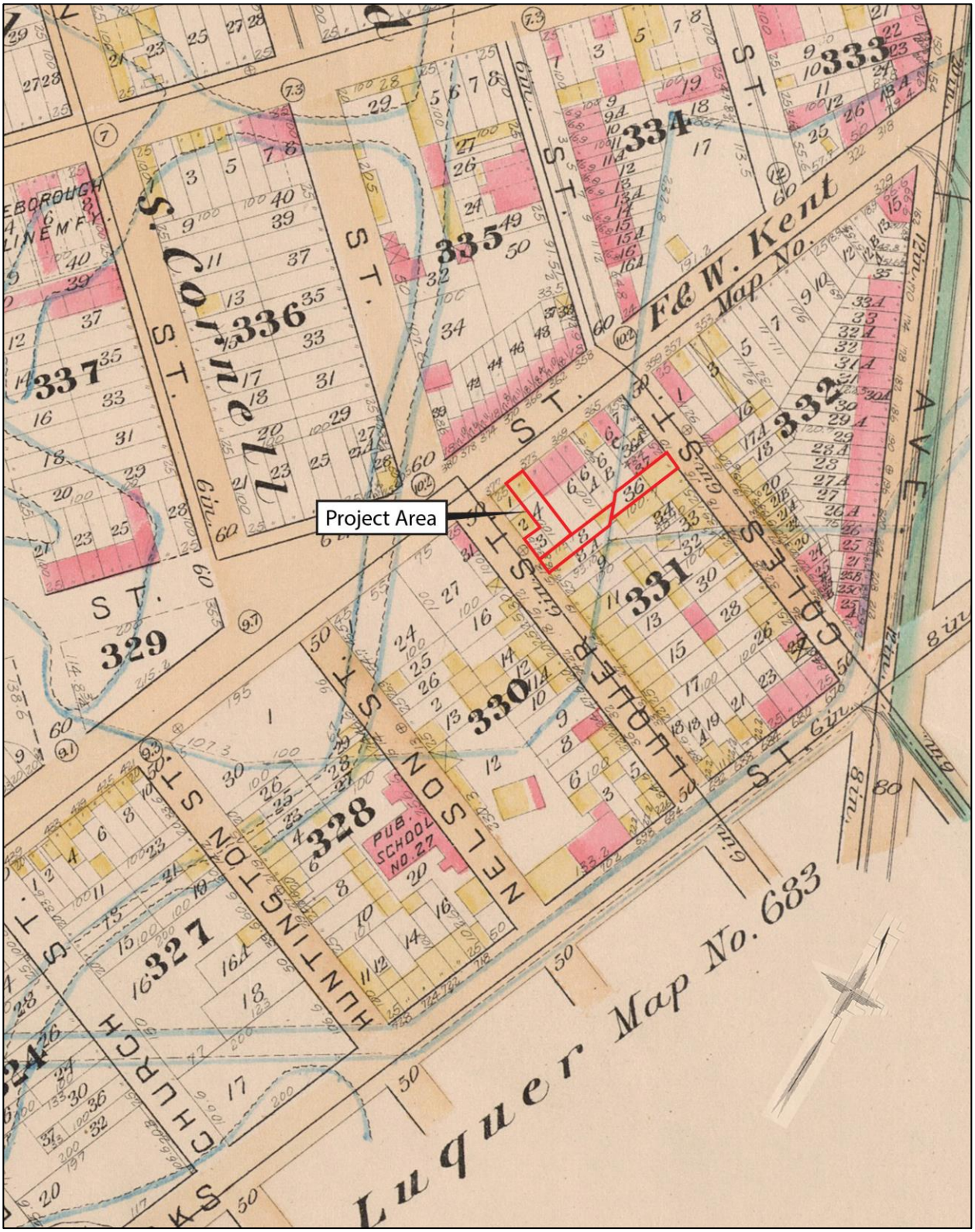
Map 19: *Brooklyn*, for the Brooklyn City Rail Road Company (Beers 1874)

Map 20: *Map showing the original high and low grounds, salt marsh and shorelines, in the City of Brooklyn* (New York State, Board of Health 1876)

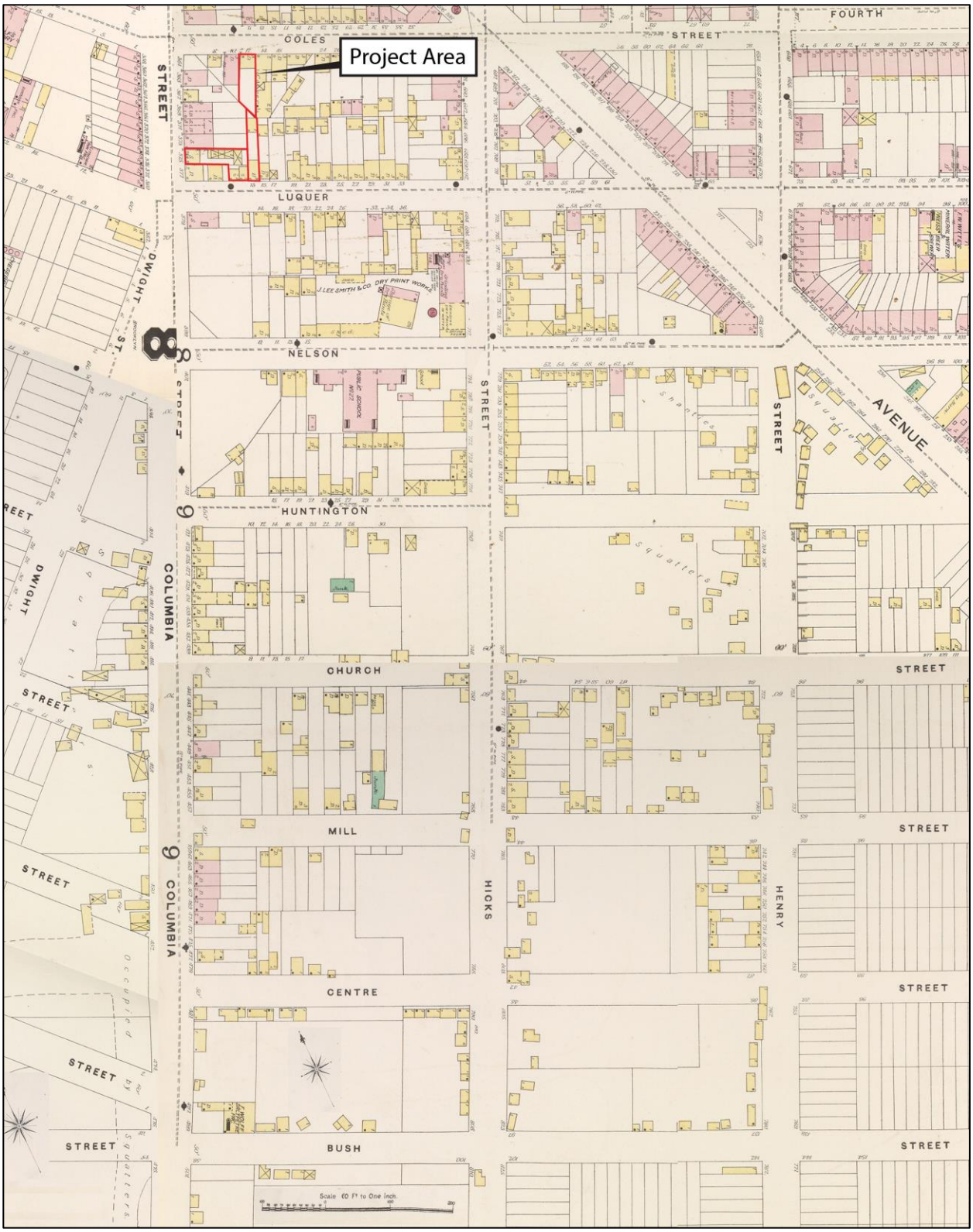
Map 21: Part of Wards 6 & 12. Plate 16. In *Atlas of the entire city of Brooklyn, complete in one volume. From actual surveys and official records* (Bromley 1880)



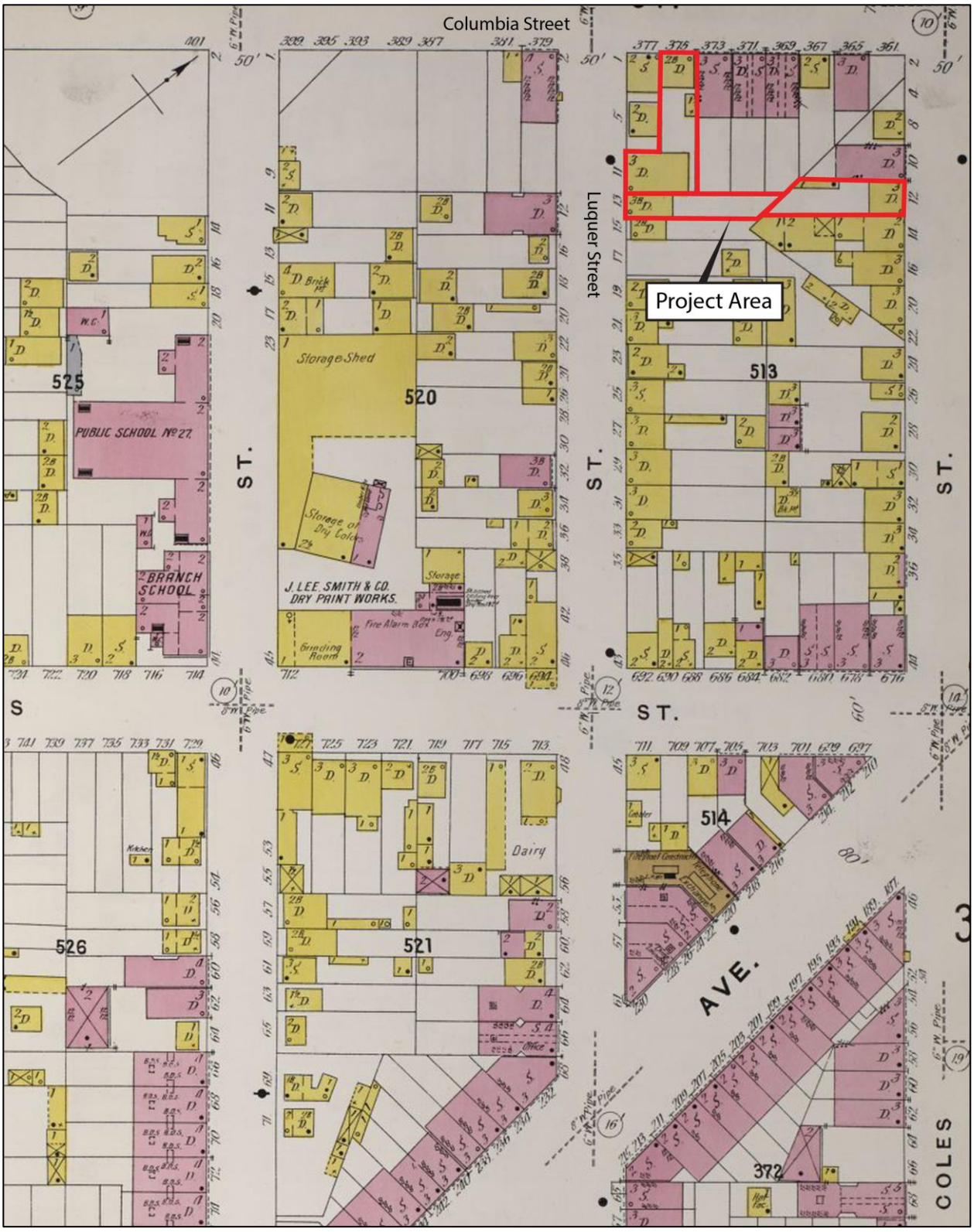
Map 22: Parts of Wards 6 & 12, Brooklyn. Vol. 5, Plate O. In *Detailed estate and old farm line atlas of the city of Brooklyn* (Hopkins 1880)



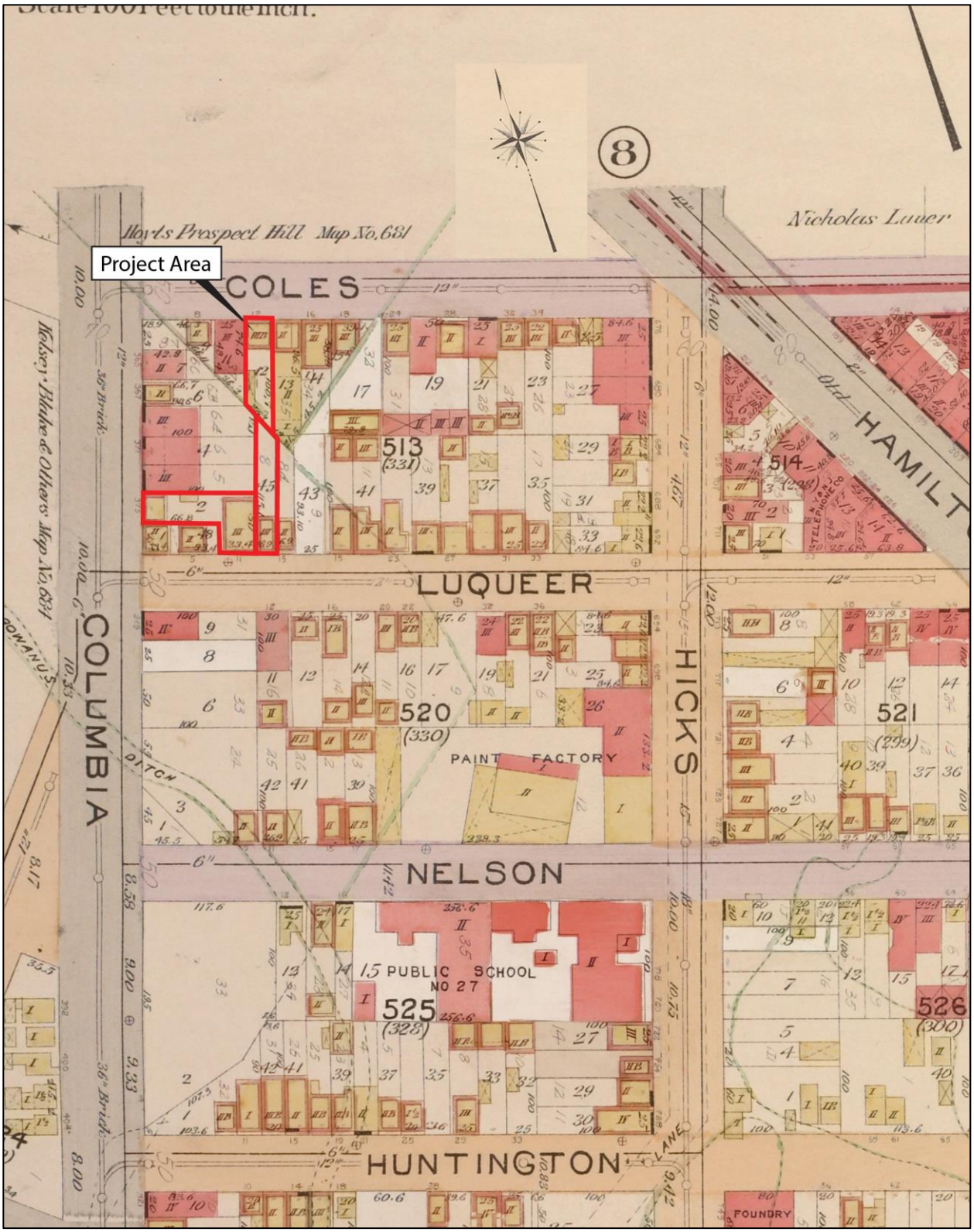
Map 23: Part of Ward 12. Brooklyn, N.Y. Plate 30. In *Robinson's Atlas of the City of Brooklyn, New York* (Robinson 1886)



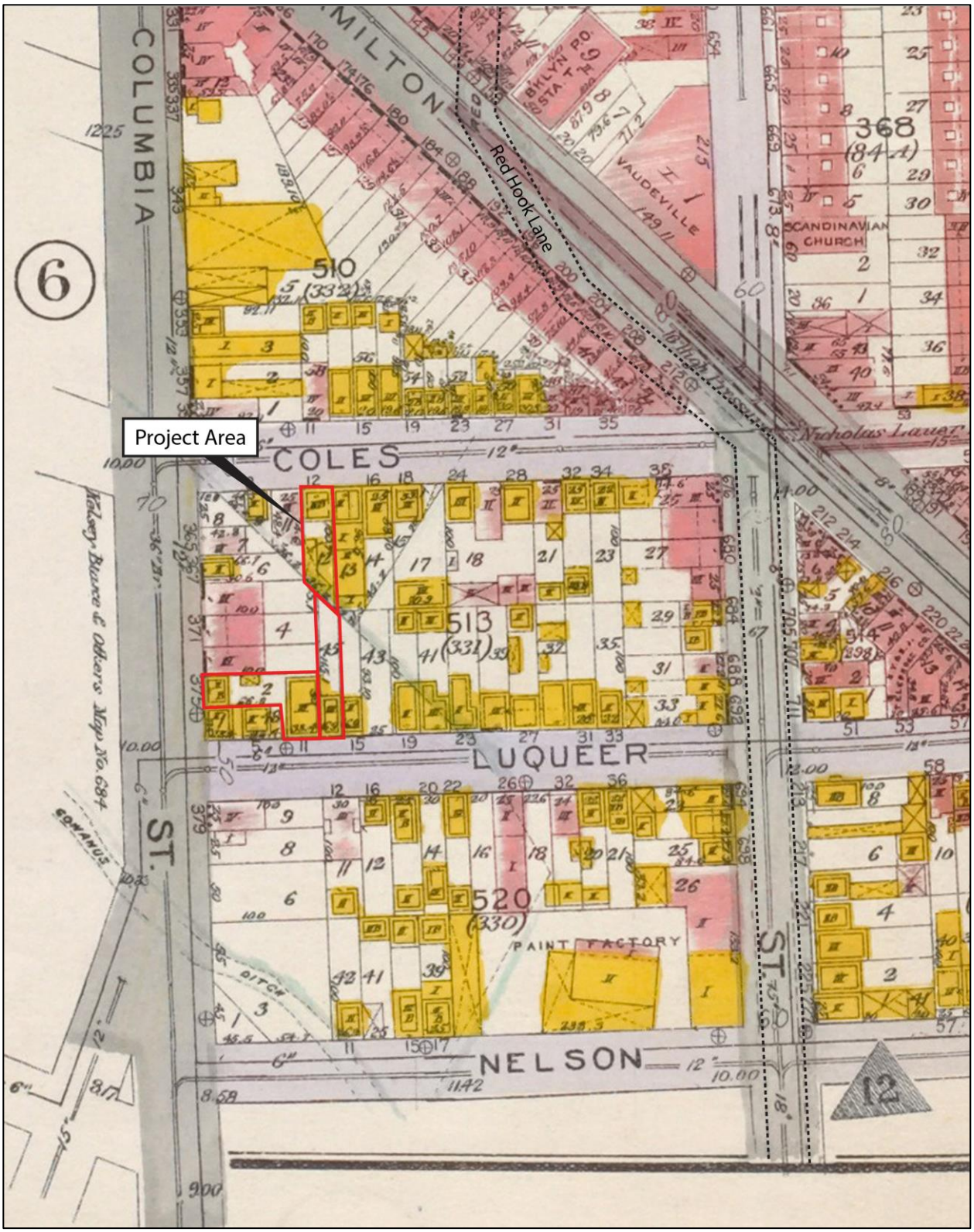
Map 24: Brooklyn. Vol. 1, Plate 13. In *Sanborn Fire Insurance Map from Brooklyn, Kings County, New York* (Sanborn 1886)



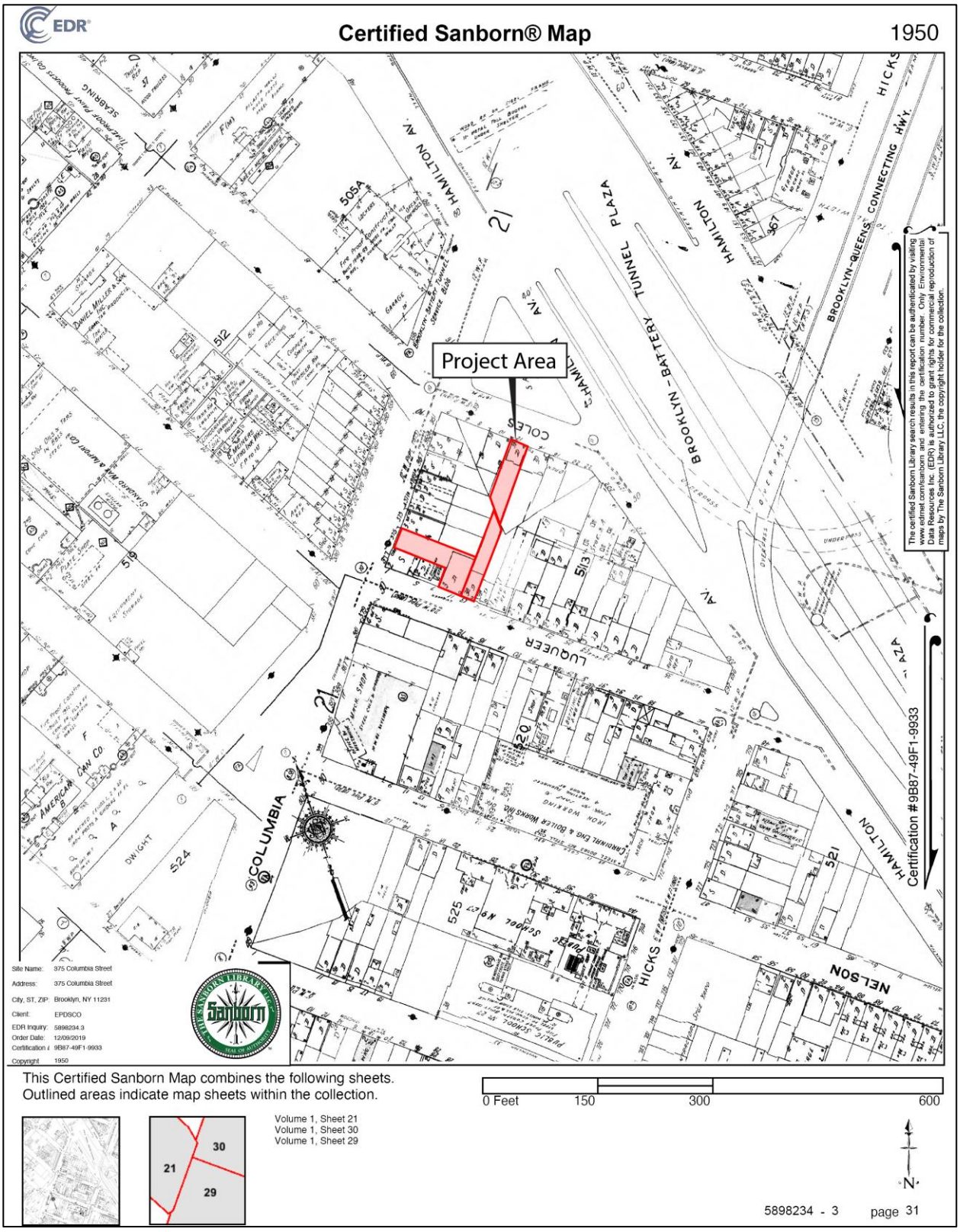
Map 25: Brooklyn. Vol. 1, Plate 29. In *Sanborn Fire Insurance Map from Brooklyn, Kings County, New York* (Sanborn 1904)



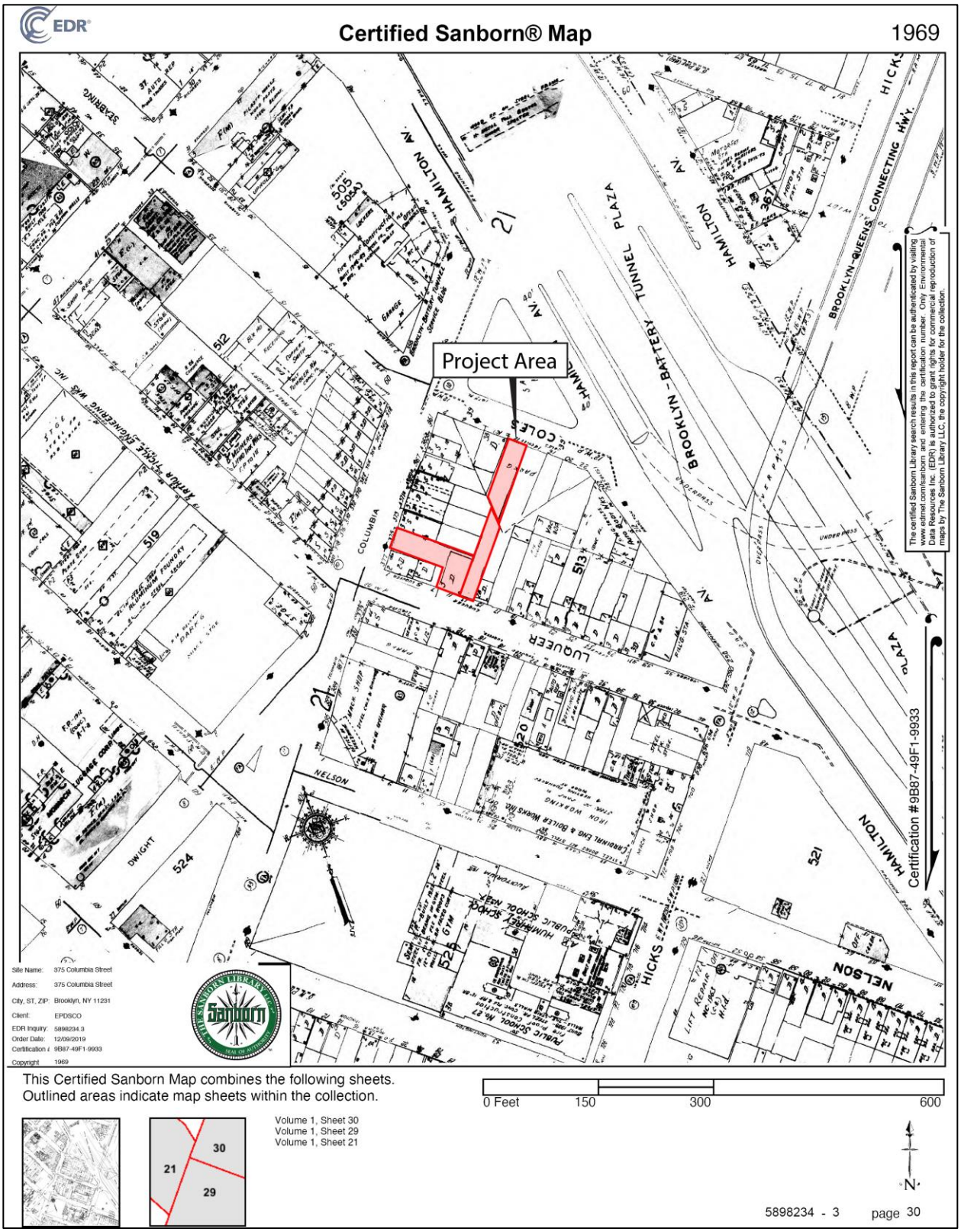
Map 26: Part of Wards 6, 10 & 12, Section 2. Brooklyn, Vol. 1, Double Page Plate No. 10. In *Atlas of the Borough of Brooklyn, City of New York* (Belcher 1907)



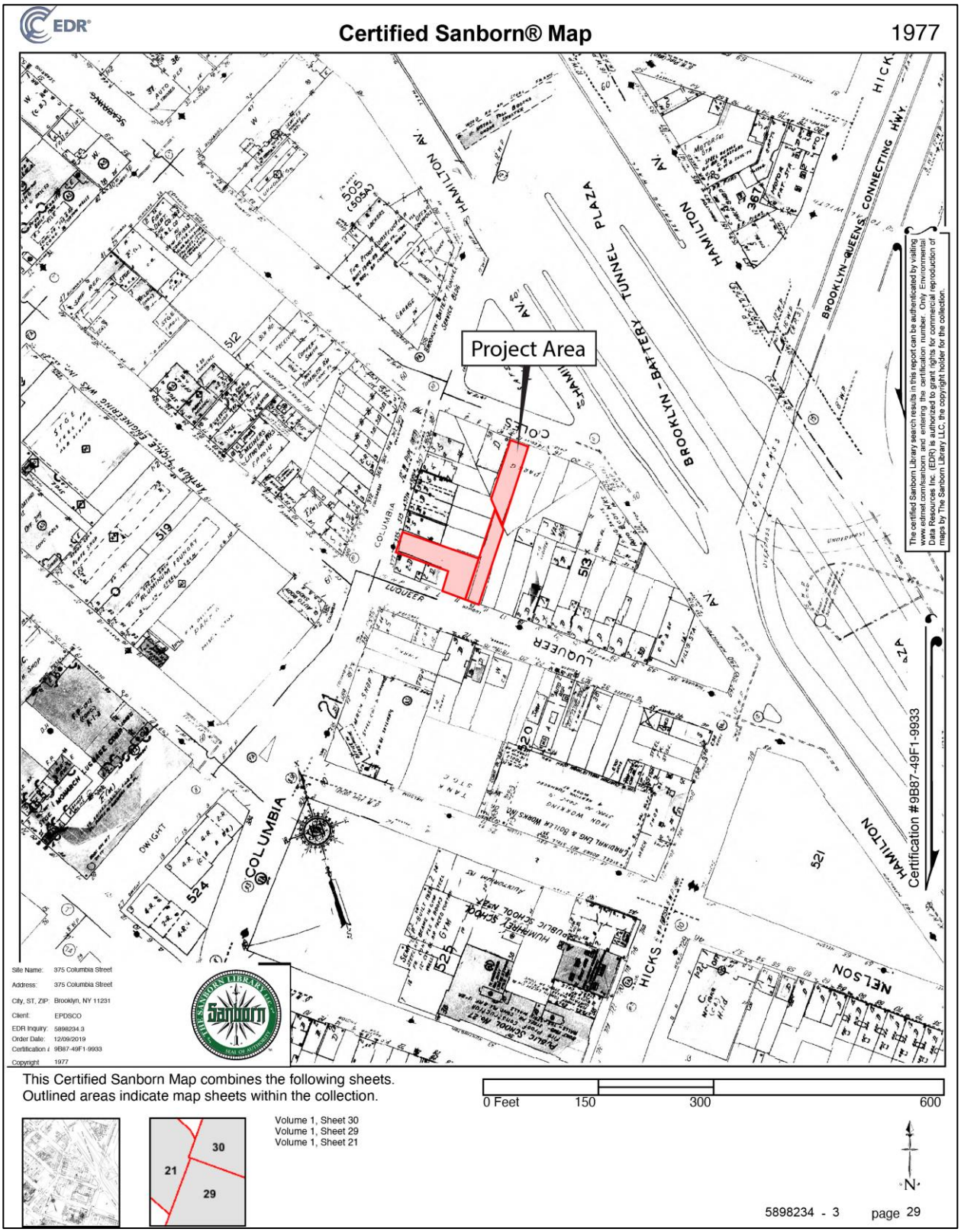
Map 27: Part of Wards 6, 10 & 12, Section 2. Brooklyn, Vol. 1, Double Page Plate No. 4. In *Atlas of the Borough of Brooklyn, City of New York* (Hyde 1916)



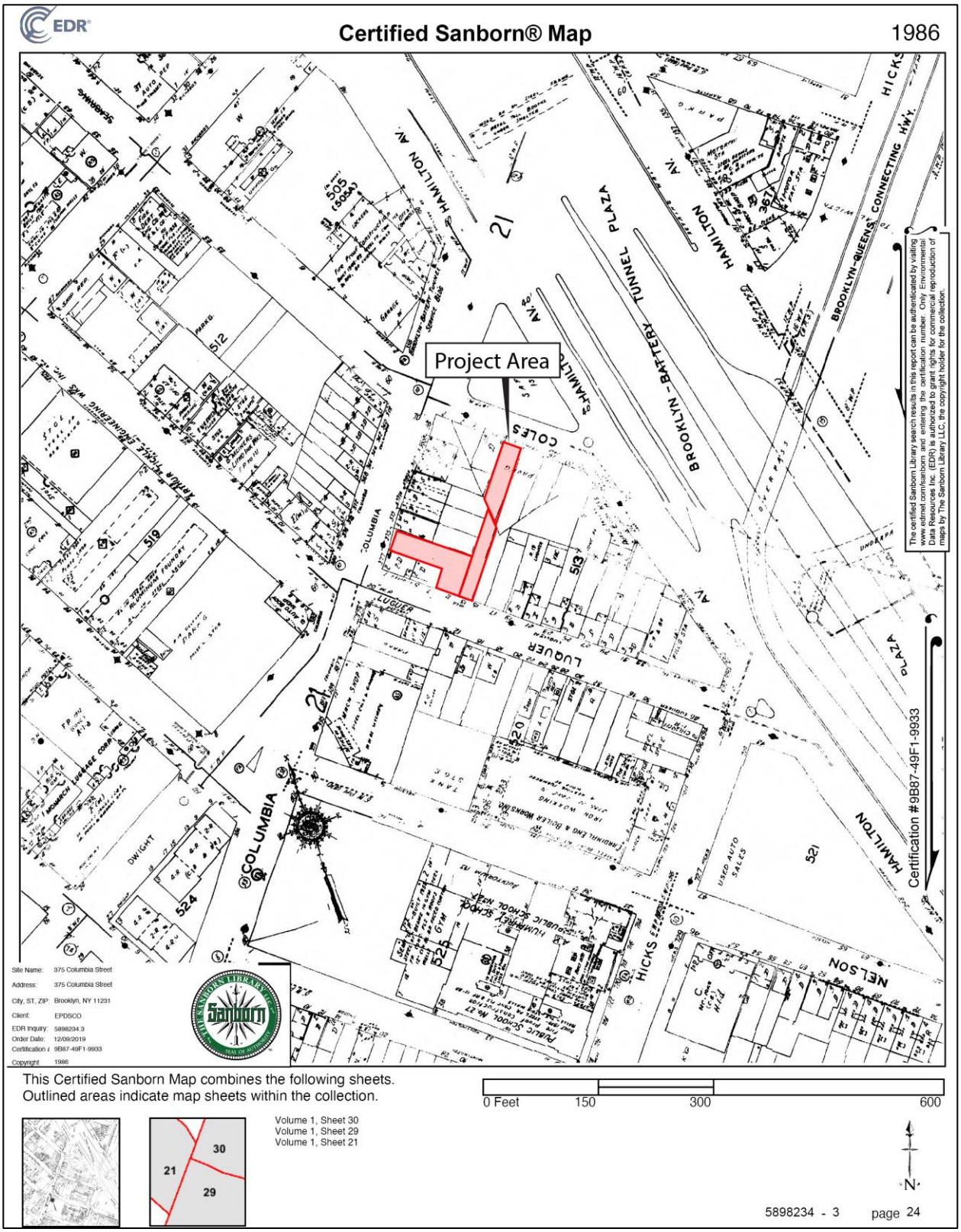
Map 28: Insurance Map, Detail showing the APE in 1950 (Sanborn 1950)



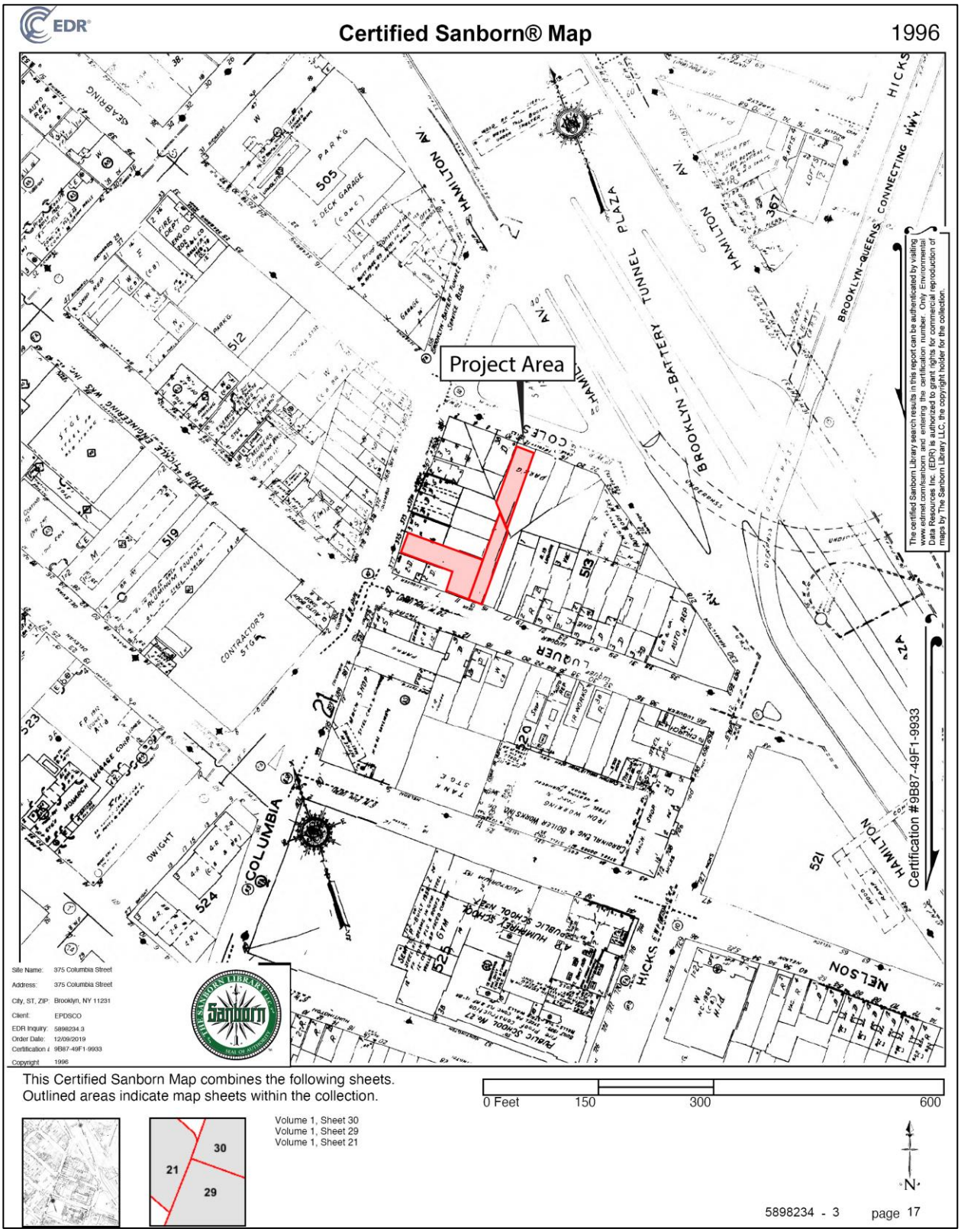
Map 29: Insurance Map, Detail showing the APE in 1969 (Sanborn 1969)



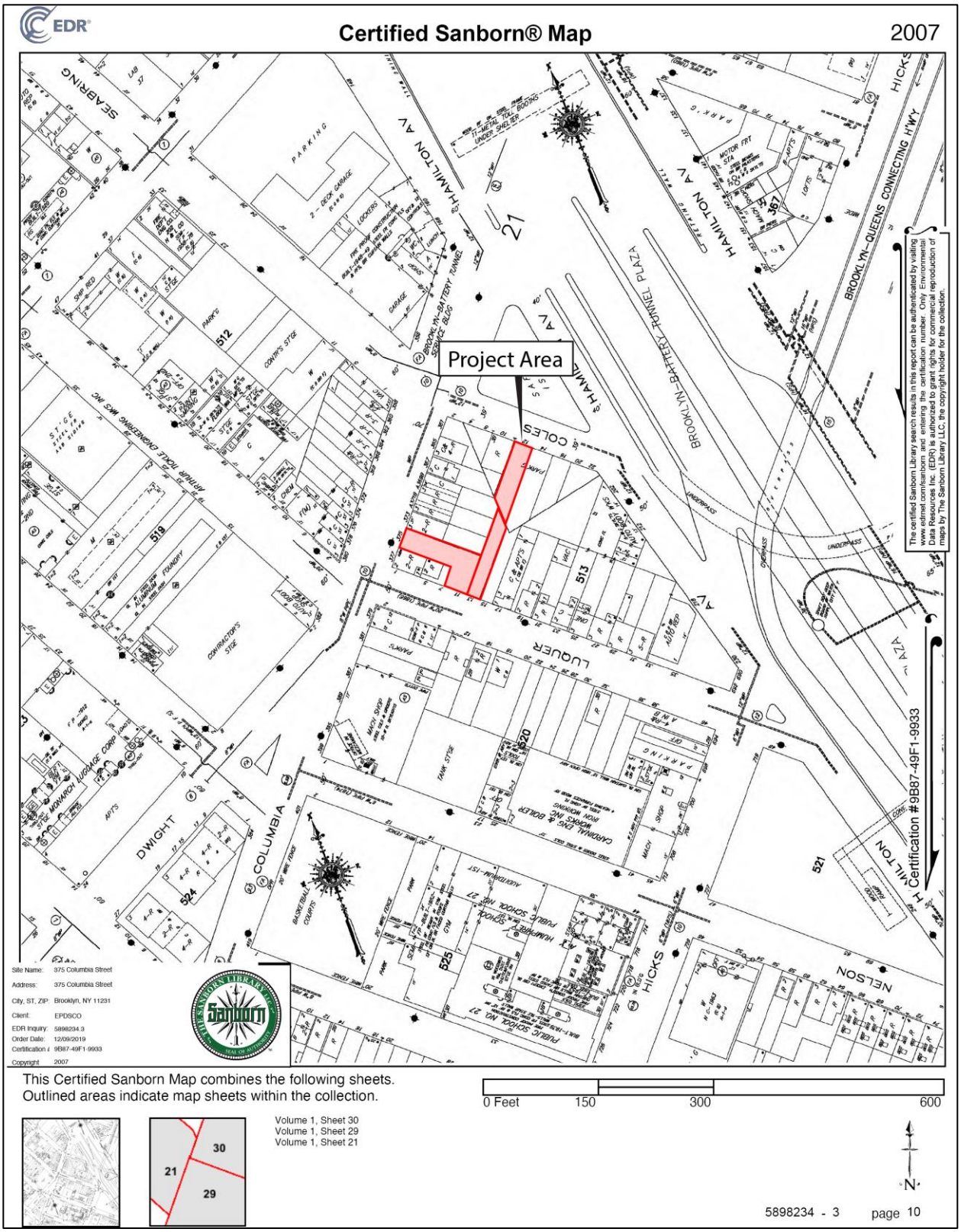
Map 30: Insurance Map, Detail showing the APE in 1977 (Sanborn 1977)



Map 31: Insurance Map, Detail showing the APE in 1986 (Sanborn 1986)



Map 32: Insurance Map, Detail showing the APE in 1996 (Sanborn 1996)



Map 33: Insurance Map, Detail showing the APE in 2007 (Sanborn 2007)

VI. CONCLUSIONS

Based on the information collected, this report determines there is low probability the property area contains potentially significant precontact archaeological materials. The project area was located in marshland that was near the limits of high tide waters at the close of the precontact era, as documented by early colonial settlement maps. While Native Americans utilized South Brooklyn for planting and habitation, and liminal tidal areas might be attractive for resource gathering, this environment would not be suitable for settlement or habitation. Further, historic land modification and landfilling for the creation of housing lots on the west side of Block 513 by 1838; landfilling for the opening of Columbia, Coles, Luquer, and Hicks Streets by 1843; and construction across the project area lots beginning in 1855 likely impacted any potential intact precontact resources in the project area. This type of land modification and historical development as the city urbanized is likely the reason few precontact archaeological sites have been identified in this portion of South Brooklyn.

This report determines there is a high probability the project area contains historical archaeological material related to nineteenth century occupation. Block 513 was laid out with individual lots across its west side by 1843. The first documented land filling of the area occurred after the 1846 leveling of Bergen Hill and filling of Hicks Streets, followed by complete infilling of the Bull Creek Canal to the south by 1849. The first structures mapped in the project area appear in 1855 in Lot 2, with one structure fronting Columbia Street, two structures fronting Luquer Street, three attached rear stable outbuildings extending east from the Columbia Street structure, and one freestanding outbuilding to the northern rear of the Luquer Street structures (Map 13). By 1880, Lots 12 and 45 had been developed with structures fronting Coles Street and Luquer Street, and the Lot 2 rear outbuildings were no longer depicted (Map 22). A single outbuilding at the north side of Lot 45 was depicted on the 1886 Robinson map, with additional Lot 2 outbuildings - perhaps the same as those shown in 1880 - depicted on the 1886 Sanborn map (Map 23, Map 24). By 1904 the Lot 2 outbuildings complex was razed and replaced with a smaller single outbuilding, Lot 2's 11 Luquer Street building was replaced with a larger three-story dwelling, the Lot 45 outbuilding was razed, and Lot 12 gained a southern rear outbuilding (Map 25). All three project lots were fully razed between ca.1950 and 1977, and they remained vacant until present.

This development history indicates foundations from dwellings constructed as early as 1843, and at least by 1855, may be present in Lot 2. Dwelling foundations dating as early as 1880 may be present in Lots 12 and 45. Outbuildings were present at various times in each lot, depicted as early as 1855 in Lot 2. These outbuildings included documented stables in the rear of Lot 2's 375 Columbia Street property, and possibly also include privies and/or waste pits that might contain refuse materials related to the documented lot owners or tenant residents. Documentary history indicates this area was populated by large numbers of new German, Irish, and Jewish immigrants after the mid-1800s, especially after the 1841–1847 construction of the Atlantic Basin west of the project area and 1855 construction of much of the Gowanus Canal east of the project area. The project area lays at the northern historic boundaries of the 1840s–1850s Tinkersville and Slab City Irish shanty towns. There is no evidence of mapped shanties or "squatter" habitation of the project area. It is expected ephemeral shanty structures would have left few archaeological remains; however, the more permanent buildings post-1855 and their outbuildings are likely to be preserved

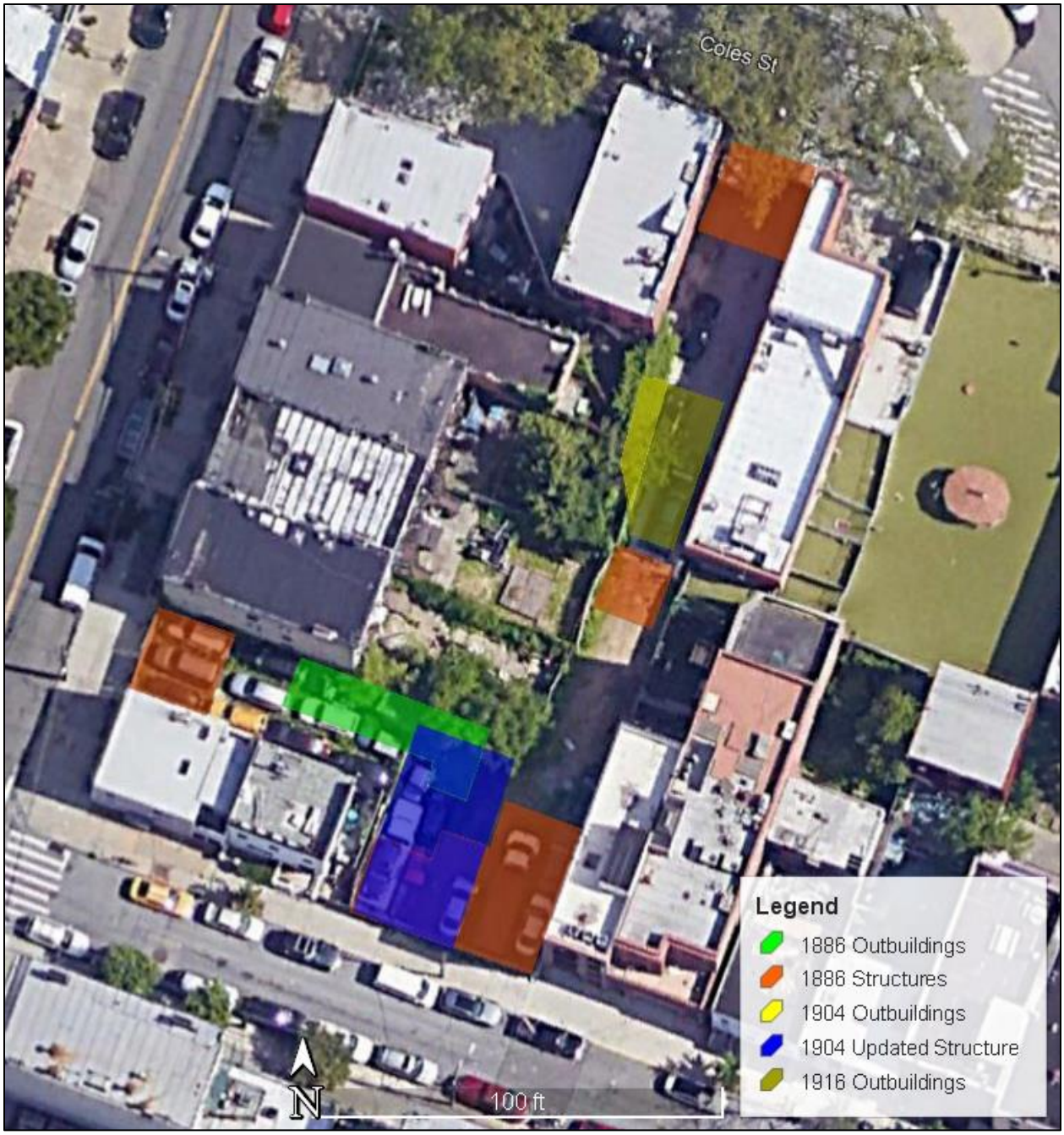
in the archaeological record. Materials from residents might shed light on the lifeways, purchasing habits, and employment of Red Hook immigrant laborer in the mid- to late-nineteenth century.

The project area is not considered sensitive for pre-nineteenth century historic archaeological materials. There is no documented development in the project area before the industrialization of the Red Hook and Gowanus areas. Prior to the nineteenth century, this area was primarily marshland located southwest of agricultural areas of South Brooklyn and north of the Bull Creek Canal. It is expected nineteenth century landfilling and development would have destroyed any remains of non-documented land development from the earlier historic period in the project area.

VII. RECOMMENDATIONS

Based on the information gathered, archaeological testing to determine the presence or absence of historic archaeological materials within the project area is recommended. Due to the overgrowth and partial concrete paving across the project area, it is recommended testing incorporate mechanical stripping to expose portions of the APE subsurface below these modern surfaces. As expected, archaeological materials include nineteenth century privies, wells, or cisterns, trenching is recommended at the rear of historic structures and at the rear of the project area lots, per NYC LPC's 2018 testing guidelines (NYC LPC 2018: C.6 51). Approximate historic structure boundaries and historic outbuilding locations from 1886 through 1917, as depicted on Maps 23–27, are shown in Map 34.

Additionally, the project lead has informed the archaeological team, that a Restrictive Declaration for the overall project is being developed and will be submitted to the appropriate City Agencies at this time. It is anticipated that the next phase of the Cultural Resource Management/Archaeological process, the development of the Archaeological Work Plan (AWP) for the project area and the Phase IB Archaeological Field Test will be undertaken in mid to late 2024. Per the NYC LPC's Guidelines for Archaeological Work in New York City (NYC LPC 2018), all archaeological work must be completed, and approved, by the NYC LPC prior to the lifting of the Restrictive Declaration.



Map 34: Approximate historic structure and outbuildings locations 1886–1917, based on historic atlases and Sanborn maps (Google Earth 2021).

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