

22-38 Cumming Street  
Block 2237, Lots 16 & 18  
Project No. 21BSA055M  
Phase IA Archaeological Assessment



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## 1. EXECUTIVE SUMMARY

This report is an archaeological assessment of the proposed development site on block 2237, lots 16 and 18. The developer is seeking a variance to permit the construction of a nine-story residential building on lot 16 that exceeds the district's 80-foot height restriction and without the required accessory parking because the cost of excavation entailed, through bedrock, would make the project economically unfeasible. However, some subsurface disturbance will still be required for the proposed construction of the lobby, detention tank, and elevator pit. This assessment is therefore mandated in order to determine the likelihood of potential archaeological resources being present on the project site that would be negatively impacted by the proposed construction.

The S/NR-eligible and NYCL-eligible Holy Trinity Church standing on the southern portion of the project site was erected ca. 1929. It is the only building on the site. The proposed development does not entail any physical changes to the church and accordingly, will not result in any significant direct adverse impacts to the site's architectural resources. There is no evidence of a cemetery on the project site associated with the Church that might be negatively impacted by the proposed construction.

In general, archaeological testing is recommended where the investigation of primary and secondary sources of a project site's history reveal that there may be archaeological significant remains on a site not impacted by previous episodes of construction and where proposed future construction will entail in-ground disturbance that may disturb or destroy such remains. This report has determined that the project site may contain archaeological significant remains, that it was not developed until the late 1920s with a church and parish hall that left large portions undisturbed, and that these portions have not been subsequently impacted by building activities on the site. The proposed actions will impact those portions of the site that have not been previously disturbed and where, potentially, remains of prehistoric or historic, pre-20th century era occupation may be found.

The site's topography and environmental setting would have made it attractive to prehistoric peoples and the immediate area of the project site is replete with remains of settlements, burials

and other remains of native American presence. The site is therefore considered sensitive for potential prehistoric remains. Historic maps indicate that a portion of a residential building existed on the project site in the 19th century. Features associated with the building and its occupants may still be present on the site. Since Inwood was sparsely settled before the early 20th century, the rare evidence for its 18th and 19th century inhabitants is historically significant. This report therefore recommends that archaeological testing be conducted on the project site on lot 16 prior to start of the proposed construction in order to test for the presence or absence of both prehistoric and historic remains.

## 2. DESCRIPTION OF THE PROJECT SITE AND PROPOSED DEVELOPMENT

The project site on lots 16 and 18 of block 2237 is in the Inwood section of Manhattan at the south western end of the area that was rezoned as part of the Inwood Rezoning Proposal (passed by the NYC City Council in August 2018).<sup>1</sup> It is located on the northwest corner of Block 2237, which is oriented with its corners to the cardinal directions, i.e. Seaman Avenue is on the northwest side, Cumming Street on the northeast, Dyckman Street on the southwest, and Broadway on the southeast (Report cover and Fig. 2). Lots 16 and 18 together comprise 24,712 sf with approximately 248 feet of frontage along Cumming Street and approximately 120 feet along Seaman Avenue.

Before Cumming Street was opened, the project site block, 2237, extended to Academy Street. The same block number, 2237, is currently used for both blocks either side of Cumming Street.

Except for a small portion of a dwelling mostly located in the line of Cumming Street, the project site was not developed until 1929. In 1927, John Russell Pope was hired to design a gothic church and rectory for the Holy Trinity Episcopal Church, but with the stock market crash of 1929, plans were scaled back and a "makeshift" four-story Parish Hall and one-story church sanctuary with a drill hall, that is, a gym, were erected instead (Holy Trinity 2020; Fig. 4). Additionally, a small shed was built north of the site of the former chapel. The sanctuary was demolished in 2019, along with the church gardens to make way for residential development.

The developer proposes to erect a nine-story, 113,255 gsf residential building set back 10 feet from Seaman Avenue and 15 feet from Cumming Street, allowing for the slope of the rock outcropping on these two sides of the site (Fig. 1). The entire construction would take place on the currently vacant Lot 16. The parish house of the Holy Trinity Episcopal Church and drill hall, both standing on Lot 18, will not be altered or impacted by the proposed construction (Fig. 2).

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<sup>1</sup> The LPC did not flag this site for archaeological sensitivity at that point in time and it was therefore not reviewed in Bergoffen 2016.



The rock formation underlying Lot 16 rises to a maximum height of approximately 54.25 feet above msl. (Figs. 3 and 5). Providing the required seventy accessory parking spaces and complying with the district's 80 foot maximum height allowance would mean excavating into the rock, which would make the project financially prohibitive. The developer is therefore seeking a variance to waive these requirements in order to erect a 94.5 foot high residential building. The proposed actions would entail in-ground disturbance for the building's lobby, detention tank and elevator pit (Fig. 10).

Seaman Avenue rises steeply from Dyckman Street, while the slope of Cumming Street, down to Broadway, is gentler. Sidewalk elevations around the project site vary from approximately 35.5 to 44.5 feet above msl (GEODesign 2021, 5). The highest point of block 2237 is the north corner. Along Seaman Avenue, there is a veritable wall of Inwood marble rising just beyond the sidewalk (Fig. 5). The property is enclosed in both the natural stone and concrete retaining walls together with a chain-link fence. The brick foundations of the former sanctuary, which had a basement, as well as of the shed are visible on the surface of lot 16 (Figs. 6 and 7). Near the north corner of lot 16, a cut was made in the side of the hill, exposing part of its stratigraphy. This consists of a top layer that appears to be weathered Inwood marble over a layer of brown soil, which may be mixed with building debris. The surface of Lot 16 is strewn with building detritus and refuse. It was therefore difficult to determine whether filling material was brought in to level the site or whether the weathered top layer of the rock outcropping was redistributed to accomplish this. A wall of wood panels separates Lot 16 from the apartment building on the adjoining Lot 12, to the southwest.

The area surrounding the project site is generally occupied by apartment buildings, commercial or mixed-use residential and commercial buildings, one and two family homes and public facilities. The retail businesses are characterized primarily by small storefronts with some second story retail and various other commercial uses and a large number of restaurants, bars, and lounges on Dyckman Street and Broadway.

The Landmarked Dyckman House, built in 1785 and restored in 1915-16, stands on Broadway and West 204th Street, two blocks northeast of the project site. Other noteworthy structures are



the early 19th century apartment buildings that sprang up following the opening of Inwood's IRT and IND subway line stations (the 1/9 and A, respectively). Much of the area's built environment has changed little since the period of rapid development after the turn of the 20th century. Today, Inwood remains characterized by early-20th century apartment residences built in relation to the preserved landscape of its public parks.

### 3. GEOLOGICAL AND ENVIRONMENTAL SETTING

Inwood is unique among Manhattan neighborhoods in preserving the island's geological features and topography. Moreover, the neighborhood was developed in relation to the natural terrain, unlike most of the rest of the island, which was largely bulldozed and filled in.

The area's bedrock is composed of gneiss and schist formed in the Precambrian age, approximately one billion years ago. This section of the Manhattan Prong is part of the Appalachian Piedmont. In the western half of Inwood, as seen on the project site, the gneiss and schist form sharp outcroppings interlayered with marble, while the eastern side of Inwood is a flat lowland plain underlain by marble (Merguerian, Merguerian and Cherukupalli 2011). The marble stratum has been deformed into a series of folds that extend northeastwards through New York and Massachusetts to Vermont. Known as "Inwood marble" in northern Manhattan, this metamorphic dolomitic limestone, composed of calcium and magnesium carbonates, is harder than marble composed of calcium carbonate alone and therefore more resilient to weathering. The marble and schist layers are overlain by glacial drift that was deposited during the last glacial period, circa 12,000 to 15,000 years ago at the end of the Pleistocene Epoch. The unsorted till of the glacial material is composed of pebble to boulder- sized rocks intermixed with clay or sorted stratified sand and gravel from the glacial outwash (GRB 2010, 9).

During the excavation for the Harlem ship canal in 1891, Richard Parr Whitfield, former curator of the Department of Geology at the American Museum of Natural History, observed and reported on the stratigraphy below the mean low water level.<sup>2</sup> He noted a layer of sandy clay, approximately 18 inches thick, over the marble bedrock, with a layer of "incipient peat", up to 12 feet thick over the clay. The silty root layer of the salt meadow at the top, growing over the peat, was approximately 4 to 6 feet thick. The clay had been deposited on the bottom of the lake that formed from the melt waters of the last retreating glacier, dammed up by its moraine. This barrier was eventually breached at the Verrazano Narrows, and the huge lake began to drain. The

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<sup>2</sup> R.P. Whitfield, cited in Hartnage and Bishop 1921, 39-40, and Horenstein 1989, 89-90.

Whitfield's original report was not located.

peat layer was formed from the vegetation that filled the lake around 13,000 years ago. Meanwhile, the melting glaciers gradually raised the sea level, which reached its present height about 6,000 years ago. The peat deposits yielded Paleo-Indian remains in three different sites in Inwood (see Section 5 below).

The project site is located on a hilltop composed of the Inwood schist / marble that continued approximately to the line of Academy Street. The land rises some 44.0 to 54.0 feet above msl on the north side of the valley that once provided a pass along the present-day line of Dyckman Street to the Hudson River at the promontory formerly called Tubby Hook, which was also the old name for Inwood. Although some unrecorded grading may have taken place on the top of the project site and the Cumming Street side was cut out when that road was created, the general elevation is approximately the same as that recorded on the King's Bridge map of 1860, except for the valley along Dyckman Street, which was filled in to create the roadway. Seaman Avenue was laid in a valley that originally separated the project site's hill from the higher eminence to the north in present-day Inwood Park. The former level of the land at the intersection of Broadway and Dyckman was recorded as 4 feet in 1873 (NY Department of Parks) and as 21 feet on the 1913 Sanborn map. As recorded on 1782 British Headquarters map and still in existence into the early 20th century, the low-lying land from approximately Sherman and Dyckman Streets to Nagel Avenue and Arden Street, was a swamp covered in cattails (Calver 1932).

Inwood was dotted with several natural springs that made the area attractive to native Americans and European settlers (Smith 1938). Adjacent to the project site was a stream bordered by swampy ground, which ran through the Dyckman Street valley to the Hudson River (British Headquarters 1782; Adams 1795; Sackersdorff 1815). The 1854 Dripps map records a brook rising near the intersection of Dyckman Street and Broadway, but no streams are recorded on the 1873 topographic or later maps (NY Department of Parks). According to Bolton, streams "broke from the hill" at the corner of Academy Street and Seaman Avenue (Bolton 1915, 461) In the mid- late- 19th century, the stream was dammed to create a large pond east of Broadway (Fiftieth Anniversary 1908). Bolton describes, at this crossing, two brooks issuing from springs that ran east and west, which could be "easily crossed by a few stones" (Bolton 1922, 80; Bolton 1924, 56).

On the opposite side of the valley, west of the project site and on the southwest side of Dyckman Street, approximately along the line of present-day Payson Avenue, there was a small, steep-sided hill also rising to approximately fifty-four feet in height (Bolton 1918). South of the project site, across the intersection of Dyckman Street and Broadway, was another larger hill known locally as "The Knoll", where both prehistoric and Revolutionary War Period remains were discovered (see below). These topographic features help to locate the project site on the 1782 British Headquarters map.

#### 4. BORING DATA AND SEISMIC REFRACTION SURVEY DATA

Boring and other geophysical testing methods may determine the type and stratigraphy of soil, silt, clay, sand or other layer compositions, the depth of bedrock, and the height of the water table. If a site is considered sensitive for archaeological remains, these data are used, in conjunction with other historic and cartographic research, in order to determine the location, spacing and, potentially depth, of test pits and trenches.

Twelve test borings (B-2 to B-9, B-12, and GB-1 to GB-3) and three test pits (TP-1 to TP-3) were excavated on the project site by GEODesign Inc. (GEODesign 2021, Fig. 2). Based on GEODesign's boring data together with Hager-Richter Geoscience Inc.'s seismic refraction survey data, the latter firm created a model of the bedrock topography underlying the project site (GEODesign 2021, Figs. 3 and 4). In order better to evaluate the significance of the boring locations and the contours of the bedrock relative to the areas of subsurface disturbance involved in the proposed construction, Fig. 10 combines GEODesign's plan of its boring locations, Hager-Richter Geoscience's model of the bedrock's topography and the plan of the basement level of the proposed construction created by GF55 Architects.

The borings generally revealed a fill layer of sand, gravel and building detritus varying in depth from 2.5 to 14.0 feet. Stratum 2, where present, was an up to approximately 10.0 foot thick layer of fine to coarse brown sand with some silt and gravel. Stratum 3 was the white and gray inwood marble and dark gray schist bedrock.

The object of the test pits located along the south edge of the project site, adjacent to the parish hall, was to study the underpinnings of that building. They showed that it is founded on bedrock varying in depth from approximately 2.0 feet to 6.4 feet at TP3.

Seismic refraction is a method for determining the density of subsurface features by calculating the velocity at which a seismic wave travels through the material. The wave is generated by hitting the ground at one point with a sledgehammer. Geophones, laid out in straight lines or other geometric array and connected to a seismograph and computer, register the energy of the

hammer impact and provide a very precise measurement of the time it takes for the wave to travel from its source to the geophones. From these data, the velocity of the wave is measured. The velocity varies according to the density of the material through which the wave travels: faster through dense material like solid rock, more slowly through soft or friable deposits. The data from the seismic refraction survey, combined with the more precise data obtained from soil borings may then be used to create a three-dimensional model of a site's subsurface topography.

GEODesign's seismic refraction survey determined that the schist / marble bedrock on the project site ranges in depth from about 2.5 to 15.5 feet below ground surface with a standard deviation of +/- 10% or 2 feet, whichever is greater (GEODesign 2021, Appendix D). The company's report states that its model is a "good overall estimate" of the rock elevations although it may differ in places from the actual contours due to the limitations of the method (GEODesign 2021, 9; Appendix D, 2-3). Note that the color scheme of the model reproduced in Fig. 10 is the reverse of conventional topographic maps: the reds and oranges represent the greatest depths of the bedrock surface while the blue edges are the highest. Thus, the model shows that the bedrock layer dips in the approximate center of the site and generally slopes towards Seaman Avenue. While groundwater was not reached in the borings, GEODesign's authors observed that a considerable amount of water might be trapped above the relatively impermeable bedrock, in particular, at the center of the site where its elevation is lower (GEODesign 2021, 9, 16).

Although any building activity on an archaeologically sensitive site may disturb archaeological deposits, Fig. 10 shows that in the areas where impacts will be most significant, the excavations for the lobby, detention tank, and elevator pit, the top of the bedrock is not close to the surface but that there are accumulated strata above the bedrock varying in thickness from approximately six to twelve feet. This includes substantial layers of the uncontaminated sand and silt stratum below the potentially mixed deposits in the layer of fill at the top, which could potentially yield prehistoric or historically significant archaeological remains.

## 5. PREHISTORIC TO CONTACT PERIODS

During the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, before the neighborhood was paved over and the streets graded and opened, Inwood was replete with archaeological remains of Manhattan's Native American inhabitants. Indeed, this part of Manhattan island has yielded more prehistoric finds than any other. The former marshes, bays and streams that characterized the area were ideal for fishing and shell-gathering, while the thickly wooded areas offered rich hunting grounds for many kinds of game. Inwood's multiple sources of fresh water, welling up in springs or flowing in creeks and streams -- like the brook running through the former valley along Dyckman Street -- will have also attracted Native Americans to the area.

In archaeological assessments, determinations of prehistoric sensitivity are made based on whether a site's natural resources and topography were favorable for prehistoric uses and whether prehistoric sites or artifacts have been discovered within a one-mile radius of the site being assessed. The preceding sections demonstrated that the former criterion was amply met. Regarding prehistoric finds within a one-mile radius of the project site, this would include all of Inwood, Washington Heights and the shores of the Bronx around the Spuyten Duyvil Creek and the East River. A site file search of the New York State Museum (NYSM) and the Office of Parks, Recreation and Historic Preservation (OPRHP) records for this entire area was conducted for the Inwood Rezoning assessment (Bergoffen 2016) and the tables listing the sites are reproduced here from that report (Tables I and II, pp. 21 and 22). Our knowledge of Inwood's native American past specifically is largely based on the excavations and publications of W.L. Calver, R.P. Bolton, A. Skinner and others who explored the area in the late 19th and early 20th centuries. The records of their findings account for most of the material from Inwood included in the files of NYSM and the OPRHP.

The following section describes the main archaeological features associated with the successive periods of native American culture in the northeastern United States and details the finds in the immediate neighborhood of the project site most relevant for assessing its potential archaeological sensitivity for prehistoric remains.



Native American prehistory is divided into a Paleo-Indian Period (ca. 12,000 to 7,000 B.P.); Archaic Period (ca. 7,000 to 1,000 B.C.E.), Woodland Period (ca. 1,000 B.C.E. to 1500 C.E.), and Contact Period (ca. 1,500 to 1700 C.E.)

The Paleo-Indian Period corresponds to the end of the Wisconsin glaciation and the decline of the mastodon in North America. These animals became extinct around 10,000 to 11,000 years ago, at the end of the Pleistocene Epoch. Their demise has been attributed to over-hunting by the Clovis people, who are named after their large, fluted spear heads, the diagnostic artifact for this period. The Paleo-Indians were nomadic, and their encampments, food processing, and tool-making stations were temporary. In the northeastern United States, the ephemeral archaeological remains of this period have been primarily found in well-drained areas near streams or wetlands.

Archaeological evidence of the Paleo-Indian Period from Inwood -- though not of human occupation -- consists of a mastodon tusk found in the salt marshes near Broadway during excavations for the Harlem Ship Canal in 1891 (see Section 3, above). It was buried in a layer of peat approximately 16 feet below mean low water. In 1885, a mastodon tusk measuring approximately 15 inches long by 4 inches in diameter at its widest, was discovered near the project site in a drainage ditch that was being cut through the Dyckman Street valley near Broadway, also in the peat layer (R.P. Whitfield, quote in Hartnage and Bishop 1922, 40; Horenstein 1989, 98). Finally, "The lower jaw, teeth, and limb bone fragments of a young mastodon" were uncovered in 1925 on the west corner of the project site block during the excavation for a new apartment building at the intersection of Dyckman Street and Seaman Avenue (Horenstein 1989, 97). These remains were embedded in the peat layer as well, about 21 feet below grade. Because of the elevation of the bedrock forming the project site and given the data from the soil borings, it is highly unlikely that the peat layer would be encountered (see above, Section 4). If present, it would lie at a depth beneath any potential impacts from the proposed construction.

Like their predecessors, the Archaic Period inhabitants exploited "riverine, coastal marine, and lacustrine species" in environments like the swamps and mudflats that emerged after the vast lake once covering most of Inwood subsided (Boesch 1997, 12, and see Section 3, above). Sites of the

Archaic Period have been found on islands, at the head of coastal estuaries, or by the seashore, as well as by streams in the interior. In the northeastern United States, mixed forests of hickory, oak, beach, elm and chestnut, augmented by the earlier conifers, provided a habitat for edible plants, white-tailed deer, wild turkey and moose, while the wetlands supported migratory wild fowl and beaver. Though still nomadic, the native Americans invented a wider range of plant processing tools such as grinding stones, mortars and pestles, indicating the increased importance of At the end of the period, during the Late Archaic (ca. 1,500 to 1,000 B.C.E.) they began carving stone vessels and living in semi-permanent villages.

The earlier part of the Archaic Period is not well represented in New York City outside of Staten Island. The Late or Transitional Phase, on the other hand, is marked by a large increase in the number of sites. In Inwood, this period is represented by chance finds. It is uncertain which sites, of those listed in the files of the NYSM and OPRHP may have yielded Archaic era remains, since they are not dated, nor has the material recovered in the late 19th and early 20th centuries, primarily by Bolton and Calver, been systematically studied and published. The Late Archaic Period is however represented in the area, as evidenced by a Late Archaic bannerstone (a weight for a throwing stick, also called an atlatl), found at the northern shoreline of Manhattan, near the Columbia University boathouse (Solecki 2006, 70). This object was associated with a fire hearth, a bone awl and several fragmentary points (Solecki 2006, 72). Other finds of this period illustrated by Parry (2001) include: a quartz spear point from Inwood, of unknown provenance (Collection of the Dyckman Farm House Museum); a second bannerstone found at 213th Street near the Harlem River; a Late Archaic spear point from an unrecorded site in Inwood (Collection of the Dyckman Farm House Museum); Late Archaic spear points from near the corner of Seaman Avenue and Isham Street (Collection of the Museum of the American Indian; Bolton 1914, 12), and a Late Archaic point found near 181st Street in Washington Heights (Collection of the New York Historical Society).

During the Woodland Period, bows and arrows were used in hunting instead of the earlier spears and throwing sticks, and fired pottery replaced the Archaic Period's carved stone vessels. Smoking pipes appeared. Huge piles of discarded shells called middens evince a rise in shell gathering, with lengthy periods spent in harvesting localities. The introduction of agriculture towards the end of this period allowed for the creation of permanent or semi-permanent,

palisaded settlements but Woodland Period groups also still traveled seasonally to their hunting or fishing camps.

The Woodland period ends with the arrival of the Europeans. At that time, the Algonkian-speaking Wickquaesgeck Indians, one of the Delaware groups, were camped in Upper Manhattan. By the end of the 17<sup>th</sup> century, the Europeans had purchased or appropriated all of their lands in northern Manhattan (Finch 1909, 73; Parker 1922, 11; Bolton 1934, 78). Near the rock shelters in Inwood Park is a plaque commemorating Dutch Governor General Peter Minuit's "purchase" of Manhattan Island in 1626. The last land purchase from the Native Americans, in Inwood, occurred in 1688, and the last title transfer was completed in 1715 (Bolton 1909, 108; Rubinson and Winter 1988, 14).

The Woodland Period is well represented in Inwood in rock shelters, human and dog pit burials, shell middens, small camp sites and chance finds. The largest and most elaborately decorated Woodland Period pottery jar ever unearthed in Manhattan was discovered on West 214<sup>th</sup> Street, about 100 feet east of Tenth Avenue (Calver 1932; NYSM 4055). Another unique object from Inwood, a rectangular stone pipe with human face on the front of the bowl, came from an unspecified location (Skinner 1915, 31). The best known of the Woodland Period sites in Inwood are the rock shelters in Inwood Hill Park, one of which is still extant (Finch 1909, 69; Skinner 1915, 46).

In general, the most abundant evidence for the area's prehistoric occupants are the many shell heaps found along the brooks and riversides and in coves such as "Little Sand Cove" on the Hudson River at the foot of Dyckman Street (Fig. 11; Bolton 1922, 80-81; Parker 1922, 629; probably NYSM 4051 and 4053). This five-foot deep shell midden was a short distance from a Woodland Period village and shell heap (dated by the presence of pottery) that extended further north along the Hudson River shore between 209<sup>th</sup> and 211<sup>th</sup> Streets on "Dyckman Hill" (Bolton 1922, 81). Bolton also noted "deposits of shells" along the brook leading to the cove (Bolton 1922, 80).

A block north of the project site, at Academy Street and Seaman Avenue, the ground was covered with a thick layer of shells (Skinner 1915, 43). Bolton's maps also record a shell heap either near the corner of Academy and Cooper Streets or between Cooper Street and Seaman Avenue, partly in the line of Academy Street (Fig. 11). This was associated with an "Indian encampment" or "camp" extending to Seaman Avenue. A number of skeletons are shown on these plans in the roadways of Academy Street and Seaman Avenue (Figs. 10 and 11) and within the block bounded by Academy and 204th Streets and Cooper Street and Seaman Avenue, including a "dog pit". There were "many relics", both "Indian" and "Military", the latter from a British Revolutionary War encampment (Ibid.; Fig. 11) In the same block were also found many chips of a red, jasper-like stone but no finished implements, leading Skinner to suggest that there was a workshop here (Skinner 1915, 45). The American Museum of Natural History's (AMNH) collection of prehistoric artifacts from Inwood, which numbers in the hundreds, includes seventeen stone arrows, a hammerstone, a stone axe, a slate ornament, a stone club, and two stone sinkers from the site at Cooper Street near Academy Street.<sup>3</sup> A stone pestle was found on the opposite, west side of Academy Street on the portion of block 2273 east / northeast of Cumming Street.

Bolton identified as "the principal station", a village site located a little further along, near Prescott Avenue (Payson Avenue) south of 204th Street, approximately two blocks north of the project site (Bolton 1905; Bolton 1932, 10). A number of burials were connected with this settlement (OPRHP 3). It is dated to the Woodland Period by the presence of pottery, but the site could also have been inhabited in earlier periods (Skinner 1915, 43).

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<sup>3</sup> The catalogue numbers of the objects in the AMNH's collection, donated by R.P. and listed as from "Cooper Street, Academy Street vicinity, Site: Cooper Street, near Academy" are: 20.0/ 5166, 5167, 5168, 5169, 5170, 5171, 5172, 5172, 5173, 5174, 5175, 5176, 5177, 5178, 5179, 5180, 5181, 5182, 5182, 5183. I would like to thank Anna Semon for furnishing the AMNH's inventory list of its prehistoric artefacts from Inwood and David Hurst Thomas for kindly allowing this writer to consult it.

The Knoll, rising south of the intersection of Dyckman and Broadway and partly cut away, presumably during road construction, may be dated to the Woodland Period by the Native American pottery recovered on the site (Fig. 12; Calver n.d., 4-5; Bolton ca. 1918). A.C. Chenoweth also found a number of burials here, including those of "Colonial settlers" (Calver n.d., 4-5).

Closest of all to the project site was a skeleton discovered at the edge of Broadway next to block 2273, recorded on Bolton's plans (Figs. 11 and 12).

The foregoing discussion demonstrates that extensive evidence exists for the presence of Native American activity in the immediate environs of the project site, including habitations, human and dog burials and stray finds, amply fulfilling the criterion for the determination of prehistoric sensitivity that prehistoric remains be discovered within the one-mile radius of the site under assessment.

Table I - Previously Identified Prehistoric Sites within or within a one-mile radius of the project site

## Site Files of the New York State Museum (NYSM)

File #	Location	Reporter	Bibliography	Description
709	Kappock, Bronx	None		None
711	Payson Ave. & Broadway	None		None
2838	Bronx	Parker	Parker 1922	Prehistoric - Village
2839	Bronx	Parker	Parker 1922	Prehistoric - Village
4051	Inwood - Hudson River shore	Parker		Prehistoric - Village / shell midden
4052	<b>Not recorded</b>	Parker		Prehistoric - Shell midden destroyed by Harlem ship canal
4053	Hill near Harlem River	Claver	Parker	Prehistoric - Village / shell midden, canine burials
4054	Seaman Ave / Isham Ave.	Bolton? Skinner?	Parker	Prehistoric - Village
4055	214th Street & 10th Avenue	Bolton? Skinner?	Parker	Prehistoric - Chance find, large ceramic vessel
4056	Inwood / Spuyten Duyvil Creek	Parker	Bolton? Skinner?	Prehistoric - Trail
4066	Washington Heights - East side	Parker	Bolton? Skinner?	Prehistoric - Village / fields
4067	Washington Heights - West side	Parker	Bolton? Skinner?	Prehistoric - Shell middens
4068	Inwood - foot of Fort George Hill	Parker	Bolton? Skinner?	Prehistoric - Village
4069	<b>Not recorded</b>	Parker	Bolton? Skinner?	Prehistoric - ?
5320	Bronx / Spuyten Duyvil	Parker	Parker 1922	Prehistoric - Traces of occupation
5321	Bronx / Kingsbridge	Parker	Parker 1922	Prehistoric - Traces of occupation
5322	Bronx / University Heights	Parker	Parker 1922	Prehistoric - Traces of occupation - 3 sites
7250	Washington Heights - West side	Parker	Parker 1922	Prehistoric - Villages / fishing station, shell midden, destroyed by bridge
8368	Inwood Park	Parker	Parker 1922	Prehistoric - Rock shelters
8369	<b>Not recorded</b>	Parker	Parker 1922	Prehistoric - Shell middens
8370	Inwood - foot of Fort George Hill	Parker	Parker 1922	Prehistoric - Camp site
8371	<b>Not recorded</b>	Parker	Parker 1922	Prehistoric - Camp site
8375	Bronx / Spuyten Duyvil	Parker	Parker 1922	Prehistoric - Nipnichsen Village



**Table II - Previously Identified Prehistoric and selected Historic Sites within or within a one-mile radius of the Project site**  
**Site Files of the Office of Parks, Recreation and Historic Preservation (OPRHP)**

File # / Site	Location	Reporter	Bibliography	Description
061.01.000113	220th St. & Kingsbridge Rd.	Neafie, Chenoweth 1886	Finch 1909; Skinner 1915, 186; Parker 1922, 629; Bolton 1924	Shell midden, destroyed by the canal
061.01.000114	209th-211th St. E. of 10th Ave.	Calver, Bolton & Hall	Finch 1909, 66-73; Parker 1922, 629; Skinner 1915, 187	Shell midden, dog burials
061.01.000115	212th Street & 10th Avenue	Photographs at NY Hist. Society	Finch 1909; Bolton 1924; /Evening Telegram 3-14-1903	Historic: Negro graveyard, Colonial period
061.01.000116	194th Street & Broadway	Bolton	Bolton 1909	Brook crossing camp site
061.01.000118	183rd Street & Bennett Ave.		Clinton Map	No visible evidence
061.01.000119	196-219th Sts. W. of Broadway	Calver & Bolton 1908	Bolton 1909, III:77; 1922, 224-225	Muscoota Village / Cemetery, shell midden,
061.01.000121	Inwood Park		Finch 1909; Bolton 1924; Skinner	Rock shelters
061.01.000123	Fort Tryon Park	Michael Cohn		Dongan Place shell heap
061.01.000552	Near 207th Street & Broadway	Chenoweth 1895 / Skinner 1918-19	Bolton 1909, 77; 1920, 307; Skinner 1915; 1920.	"Shorakapkok" / Cold Spring, cave & kitchen midden
061.01.000553	213th Street	Bolton & Carver 1909	Parker 1922, 630	Village - miscellaneous artifacts
061.01.000534	Islah Street & Seaman Ave.	Calver	Skinner 1915, 186; Parker 1922, 630	Village - Shell midden
005.01.00069	Bronx, Riverdale Park	V. Decarlo & N.A. Rothschild	Rothschild, N.A. & J.P. Fenton "Riverdale Park Survey", on file, NYC Dept of Cultural Affairs & Wave Hill	Shell midden



## 6. HISTORICAL PERIODS

By the end of the 17th century, European settlers Jan Dyckman and Jan Nagle had acquired much of the land in what is now Inwood. They and their descendants used the area for farming and planted orchards of cherry, pear, and apple trees. The area also contained meadows and salt marshes. Broadway, known then as the Kingsbridge Road (also called the Post Road), was the principal artery connecting Inwood to Lower Manhattan and for traveling north to Boston and Albany.

In 1677, Governor Nicolls bestowed on the residents of New Haerlem in Upper Manhattan a tract of land extending from 74<sup>th</sup> Street and the East River, to 130<sup>th</sup> Street at the Hudson River. This huge charter was then divided into five sections that were allotted to Vermilye, Boch, Nagel, and Dyckman, but the last two bought out the others (Bolton 1909, 107). In the late 18th century, the project site was part of the farm of Jan Dyckman's descendant, Jacobus Dyckman. For this early period there are no instruments of record (Deeds and conveyances). Several maps of northern Manhattan created during the Revolutionary War Period to record the positions of the British and American troops in Washington Heights and Inwood. The scale of these maps is rather small and consequently, they are not very detailed or perhaps very accurate with respect to the location of dwellings since these were of secondary interest to the cartographer. No dwellings are indicated on the project site on any of the Revolutionary War maps (n.a. 1776; Sauthier 1777, Skinner and Taylor 1781; British Headquarters 1782). The earliest dwelling verified in the course of research for this assessment is the Dyckman farm house on 204th Street (formerly Hawthorne Street) shown on the 1815 Sackersdorff map. However, there were encampments and a great deal of military activity in the immediate area of the project site during that conflict, and many archaeological remains of that period have been found.

During the Revolutionary War, Washington Heights and Inwood were strongly fortified to block the British army from advancing up the Hudson. The Americans were however unable to stop the British General Sir William Howe from defeating them at the Battle of Fort Washington on November 16, 1776. Hessian and British troops captured the American positions on Fort Cockhill, perched on a hilltop overlooking the Spuyten Duyvil Creek; Fort George, located south

of Sherman Creek and the loop of Fort George Avenue; Fort Tryon, in present-day Fort Tryon Park, and the main stronghold, Fort Washington, commanding Manhattan's highest eminence at 184th Street. All four appear on the 1782 British Headquarters map, the last renamed by the British Fort Knyphausen, after the German general, Wilhelm von Knyphausen, who took part in the British attack on this fort. The numerous other American and later British positions in Inwood included batteries, redoubts, huts in encampments, and barriers.

The best known Revolutionary War relic in the project site area is the reconstructed Hessian (German mercenary) hut in the backyard of the Dyckman House museum. This was near the northern end of an encampment of dug-out huts and fire pits that extended southwest about to the line of Academy Street, along the gentle terrain at foot of the hill in Inwood Park (labeled "North River Hill" on Bolton's 1905 map). As noted in the previous section, this area had previously been the site of a Native American village. The site was attractive because it was sheltered from the north and west winds by the hills and had a ready supply of water. The Revolutionary War encampment, discovered by Calver in 1890, is thought to have been built by the Americans at the start of the war but the finds were associated with various British and Hessian regiments that occupied the site from 1776 on, primarily the British Seventeenth (Fig. 11; Stokes 1915 V, 1027). The artifacts recovered included buttons, belt buckles, insignia, rum and wine bottles, gun-flints and bullets (Bolton 1915, 461; Skinner 1915, 45). Another important Revolutionary War era encampment was located south and east of The Knoll, south of the intersection of Broadway and Dyckman Street (Bolton 1916, 136-137). Stray finds were also discovered in the immediate area of the project site on the south side of Broadway, opposite block 2237 (Fig. 12).

In the early 19th century, the 250-acre farm of Jacobus Dyckman encompassed most of the land north of the Kingsbridge Road, including the project site block. On the 1815 Sackersdorff map, the Dyckman farm house is one of only two buildings in the area, the other being the Black Horse tavern, a "roadside inn" built in 1805 west of the intersection of Dyckman Street and the Kingsbridge Road (Bolton 1924, 74; but 1812 on Bolton 1918). The 1795 Adams and 1815 Sackersdorff map (the latter based on the former) also shows the bridge in the Kingsbridge Road crossing the stream running along the line of Dyckman Street. The 1836 Colton map records only one building on the north side of Broadway, presumably the Dyckman farm house.

This remote and thinly populated part of Manhattan was reached by a stage that ran from the battery only as far as Harlem, whence travelers continued by their own means to Tubby Hook (Golden Day 1896, 22). Throughout the mid- to late-19th century, even after the coming of the railroad, Inwood remained undeveloped woods and farmland with a few large country estates constructed, for the most part, in the hilly western section, which was never leveled and was eventually turned into Inwood Park, in 1926 (1860 Kingsbridge Section; 1873 NY Department of Parks; 1879 Bromley map). West of the Kingsbridge Road, Dyckman Street was called Inwood Street after the dense woods that covered this part of the district. Inwood Street led to the old village of Tubby Hook (Dripps 1864; Bolton 1914, 7), which was also the name generally applied to Inwood and to the Hudson River railroad station at the foot of the street, which opened in 1847 (Figs. 11 and 12; Dripps 1854). The railroad station was renamed after the street in 1864 and the district in the ensuing years (Thompson 2018).

Although there are no instruments of record for Block 2237 Lot 18 for the period 1654 to 1834, Jacobus Dyckman's will of 1832 records that he left his property in equal parts to his sons Isaac and Michael. These two conveyed the western portion to Samuel Thompson in 1835, and his executors then conveyed the property to George J.S. Thompson in 1853 and 1854. Thompson's house may be the one depicted on the 1854 Dripps map, which is the earliest record of a building on block 2237. In 1855, Michael devised his share of his father's bequest to Isaac, who sold the central portion, which includes the project site, to John P. Cumming in 1857 (Fig. 13; Deeds and conveyances, Block 2237, Lot 18, January 22, 1857, Liber 725 Page 189). Cumming Street was named after this prominent family. The *New York Times* (1941) credits John P. with building "the High Bridge over the Harlem River, of many of the roads in Central Park and other civic improvements." His father, Thomas Cumming, was "a founder and member of the original board of trustees of the Greenwich Savings Bank" (Ibid.)

The first mention of a house on Cumming's 7.5 acre property is in the 1858 tax assessments. Note that Cumming's plot extended to present Academy Street, including the area later occupied Cumming Street, which was not opened until ca. 1922. Lot 18 originally comprised the entire portion of Cumming's property south of Seaman Avenue, including present-day lots 16, 18, 75,

12 and part of 1R. To trace the chain of title for lot 16 alone therefore required cross-referencing the deeds and conveyances with historic maps, city directories and census data.

On the 1860 King's Bridge Section map and the 1867 Dripps map, John P. Cumming is recorded as the owner of a large house on an estate that included the area of the project site, extending northwest across Payson Avenue and well into the area of present-day Inwood Hill Park (Figs. 13 and 14). A private drive along present-day Academy Street led to the dwelling, which was set well back from the Kingsbridge Road. "Geo. Thompson" appears next to the house west of Cumming's, on the west side of block 2237 (Fig. 13).

In 1860, according to the City Directory, John P. Cumming was a "Contractor" working on West 57th near Broadway and living at the corner of Broadway and 205th. This is rather confusing because the street did not yet exist, but the 1879 Bromley map shows its planned course running over the house formerly belonging to George Thompson! In the 1862-63 City Directory, John P. Cumming was a comm'r - commissioner - at Castle Garden, living in Tubby Hook. In 1865-66, his latest listing in the City Directory, he was a supt. (superintendent) at 3 Bowling gr. (Green) and a commr (*sic*) at Castle Garden, residing at the still non-existent 206th Street near Broadway. Clearly, one cannot place too much stock in these various addresses.

The last listing of Cumming's 7.5 acres property and house in the tax assessments was in 1867. In the 1869 and 1870 tax assessments, Cumming's property is reduced to 4 1/4 acres and no house is listed.

Although there are no instruments of record for the years 1868 to 1870 and 1872 to 1875, a land auction map of 1871 depicts the project site within the holdings of J. Stewart, while the tax assessments record that in 1869 he acquired 3 1/4 acres within the same tract as Cumming, originally owned by Isaac Dyckman, farm number 44. He was also taxed for a two-story house measuring 32 by 30 feet, and a stable, perhaps one of the frame buildings on the property shown on the 1879 Bromley map at the foot of Seaman Avenue. In the New York City Directories, John Stewart was listed as a "Straw goods" or "Fancy goods" dealer (the latter abbreviated "Fcygds"),

and also, in 1872, as "Stewart John & Co. hats". His residence, from ca. 1869 to 1876, was listed merely as "Inwood."

In 1877, there was a dispute between John Stewart et. al. as defendants, and Robert Bonner, whose name appears on the property depicted on the 1879 Bromley map (Fig. 15). Unfortunately, the microfilm copy of the record was illegible (Deeds and conveyances Liber 1542, Page 144). Robert Bonner was the owner and publisher of the *New York Ledger* and an avid breeder and racer of trotting horses. His residence is listed in the New York City Directories as West 56th Street and no evidence was found of his ever having lived in Inwood. He sold the property, including the house, to Alexander M. and his wife Mary E. Hays in 1880. Alexander, an importer of China and "fancy goods" (U.S. Census 1880), also did not reside in Inwood, but Daniel Hays, a laborer, his wife Catherine, and their six children, probably did occupy the house on the project site, since they are listed in the 1880 U.S. Census next door to Geo. F. Gantz, an importer of chemicals, who lived in the house on the south side of block 2237 near the corner of the Kingsbridge Road and Dyckman Street, from ca. 1866 until at least 1880-81 (Dripps 1867; New York City Directories 1880-81; U.S. Census 1880). Alexander and Mary deeded the property in 1883 to William H. Hayes (Deeds and conveyances, May 3, 1883, Liber 1711, Page 466). Alex and Mary's son Willie was only 11 in 1880, a bit young to take on the responsibility of a property, at about 14 years of age (1880 U.S. Census). The 27-year-old son of Daniel and Catherine was a plumber (1880 U.S. Census), while William H., in the 1884-85 City Directory, was listed not only as broker, but also as "Pres." 828 Eighth Av and 814 Ninth Av indicating that he was involved in real estate. Moreover, William H. may have been dead by 1892, since his property was sold by his executors and trustees in that year to William Johnston (Deeds and conveyances, December 1, 1892, Liber 3, Page 94).

Four years later, in 1896, Johnston sold all or a portion of the property including lot 18 to the Third Avenue Railroad (Deeds and conveyances). There are no instruments of record for 1898 to 1900. In the ensuing years, the property changed hands several times, but because of the lack of a street address and the involvement of developers such as J. McCreery Realty, Central Realty Bond & Trust Co., Bankers Investing Co. and Dyckman Estates and Assets Liquidation Company, all of which are listed as grantees between 1896 and 1915, it is difficult to trace who

was actually living in the house on the project site, if anyone, in the early 20th century (Deeds and conveyances). According to the map evidence, Cumming Street was planned by 1916 (Bromley 1916), but not opened until ca. 1922 (Bromley 1921-23), when the house, which lay squarely in the roadway, was demolished, including the small portion that overlapped the northeast edge of the project site. The shafts of the backyard privy that were undoubtedly used by the buildings' occupants from ca. 1858 to the end of the 19th or early 20th century could potentially, however, be located on the project site.

In 1906, the opening of the Interborough Rapid Transit (IRT) elevated train stations at West 207th and West 215th Streets offered an incentive to building, resulting in the speculative development of six and seven story apartment buildings in Neo-Classical, Italianate and Tudor revival styles on land purchased from farms and private estates. Examples are the Solano and Monida apartment houses at 207 and 209 Dyckman Street, built in 1906 (Historic Districts, 2012, 2). Working-class immigrants of diverse cultural origins, seeking better living conditions than those of cramped tenements downtown, moved to Inwood to reside in new, spacious, and more affordable apartments. With the new buildings, new streets opened or were regularized, including two of those bounding the project site: Cumming Street and Seaman Avenue. Seaman Avenue was named after the Seaman family, who originally settled in Long Island in 1653. In 1855, their descendants built a marble house on a hill overlooking Broadway. The Seaman-Drake arch, at 216th Street, once stood at the entrance to the drive that led to the house (Gray 1988, 14). With the arrival of the Independent Subway line (the A train) in the late 1920s, the old Mount Washington Presbyterian Church, located opposite the project site block, on the south side of Dyckman Street, was forced to move to its present location at 80-4 Vermilyea Avenue (Historic Districts 2012, 3).

Although the 1900 Sanborn map shows Seaman Avenue laid out to Academy Street, Bolton (1914, 7) records that was only opened in 1908 and extended in 1912 to join the old Bolton Road that curved around the block 2237's northwestern to southwestern sides, meeting Broadway at the block's south corner. The Bromley maps indicate that the present-day straight section of Seaman Avenue between Academy Street and Dyckman Street replaced the old Bolton Road between 1913 and 1916 (Fig. 16; Sanborn 1913, Bromley 1916). The new section of Seaman

Avenue along the northwest side of the project site followed the course of the old Bolton Road and did not impact the project site, or only minimally.

The pace of development stimulated the creation of City parkland, to preserve the natural beauty of the landscape and provide open space for new residents. In 1911, Julia Isham Taylor donated land from her family's estate to create Isham Park. Spurred by her gift in 1916, the City finalized the purchase of adjacent land to the west for Inwood Hill Park, which covers approximately 196 acres and contains the last remnant of primeval forest in Manhattan. The park opened on May 8, 1926.

The Board of Managers of the Diocesan Missionary & Church Extension Society of the Protestant Episcopal Church first acquired land on lot 18 in 1922 (Fig. 17; Deeds and conveyances May 26, Liber 3412, Page 498). According to the church's website, John Russell Pope was hired to design a new church after the congregation merged with The Mission of the Redeemer Church in Inwood in 1927 (Holy Trinity 2020). Due to the stock market crash of 1929, the plans were scaled back and a "makeshift sanctuary," no longer standing, and the parish house, were built instead of the planned "grand Gothic church and Rectory" (Ibid.) Both the parish house and the church appear already on the 1927 Bromley map.

The complex was a representative example of the "institutional church" configuration that was adopted by many urban Episcopal congregations in the early-20th century seeking to provide parishioners with a broad range of activities beyond worship. The four-story parish house and a multi-purpose gym are the only extant buildings from the original church complex. The Church Sanctuary building and adjacent gardens on Lot 16 were demolished in 2019. The buildings are constructed of brick with limestone trim and large, copper gable roofs. An ashlar retaining wall forms the northern base of the parish hall, and its main (northern) entrance contains a pointed-arched surround and double-leaved doors. Pointed-arch and mullioned casement windows glazed with clear leaded glass are set in deep limestone reveals and articulate the facades along with limestone stringcourses. Deeply fired clinker bricks, randomly laid throughout the facades, add additional texture to the elevations. A small, copper cupola crowns the drill hall roof.



Aside from the demolition of the sanctuary in 2019, there has been no new building on the project site since the erection of sanctuary and parish hall in the 1920s (Sanborn maps 1935, 1951, 1968, 1977, 1988, 2005, 2015; every year in between these was included in BBC Environment 2019). Thus, there have not been any negative impacts to potential archaeological resources on the project in the undeveloped portions of the site around the former sanctuary. The foregoing discussion has demonstrated that the site may contain historic resources from the Revolutionary Period and 19th century, and that these will not have been disturbed or destroyed by subsequent episodes of construction on the site. The project is therefore considered sensitive for historic archaeological remains.

## 7. CONCLUSIONS AND RECOMMENDATIONS

Since the construction in the late 1920s of the sanctuary (demolished in 2019) and the parish hall of the Holy Trinity Church, which did not cover the entire project site but rather left large areas undisturbed, there have been no subsequent building on the site that could have negatively impacted these areas. Accordingly, any potential archaeological remains that may be present on the site will not have been disturbed or destroyed.

The concentration of Native American remains in the immediate vicinity of the project site and the site's favorable situation atop a low hill at the edge of a brook make it likely that evidence of prehistoric activities or settlement remains may be found on the site. The potential discovery of additional prehistoric remains in Inwood from controlled archaeological testing and excavation would make a significant contribution to our knowledge as most of the material that we have recovered over a hundred years ago and understandably, methods of recording the location and context of sites and finds, as well as their classification and dating, have evolved a great deal in the intervening decades. New finds could potentially help to elucidate Bolton, Calver and other early explorers' accounts of sites, as well as the interpretation of prehistoric artifacts preserved in the collections of the AMNH and the Dyckman House.

Similarly, the site's topography and its proximity to Revolutionary War encampments as well as stray finds of that era indicate that the site is sensitive for archaeological remains of the Revolutionary era.

Before the arrival of the subway, Inwood was a remote and largely pastoral area. Residences would have been equipped with privies and cisterns in their backyards. Part of a dwelling stood on the project site from ca. 1858 to the undeveloped area until ca. 1922 and archaeological remains of these features connected with this building may be preserved in the western portion of the project site.

In sum, the project site is considered archaeologically sensitive for remains of the prehistoric and Revolutionary War eras, and 19th to early 20th century habitation.

It is therefore recommended that a plan for testing the project site for the presence or absence of archaeological from these period should be sensitivity that will involve the excavation, by hand, of test pits as well as possibly the use of mechanical testing with a backhoe, will be devised based on the above-described boring and seismic refraction survey data, on the historic map data, and in consultation with the Landmarks Preservation Commission.

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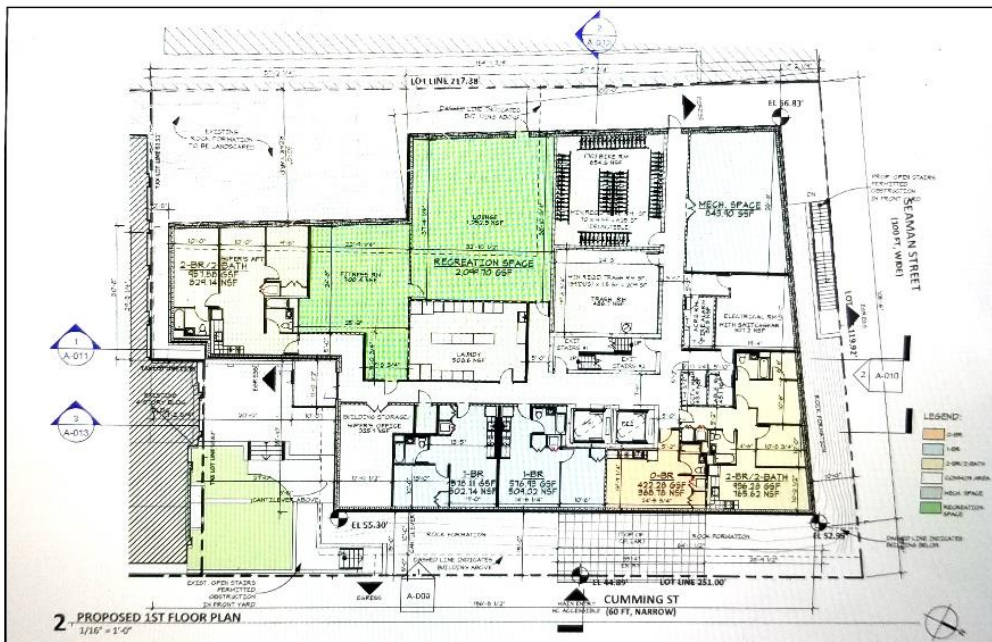


Fig. 1. Ground plan of proposed building on Block 2237, Lot 16 (GFF Architects LLP)

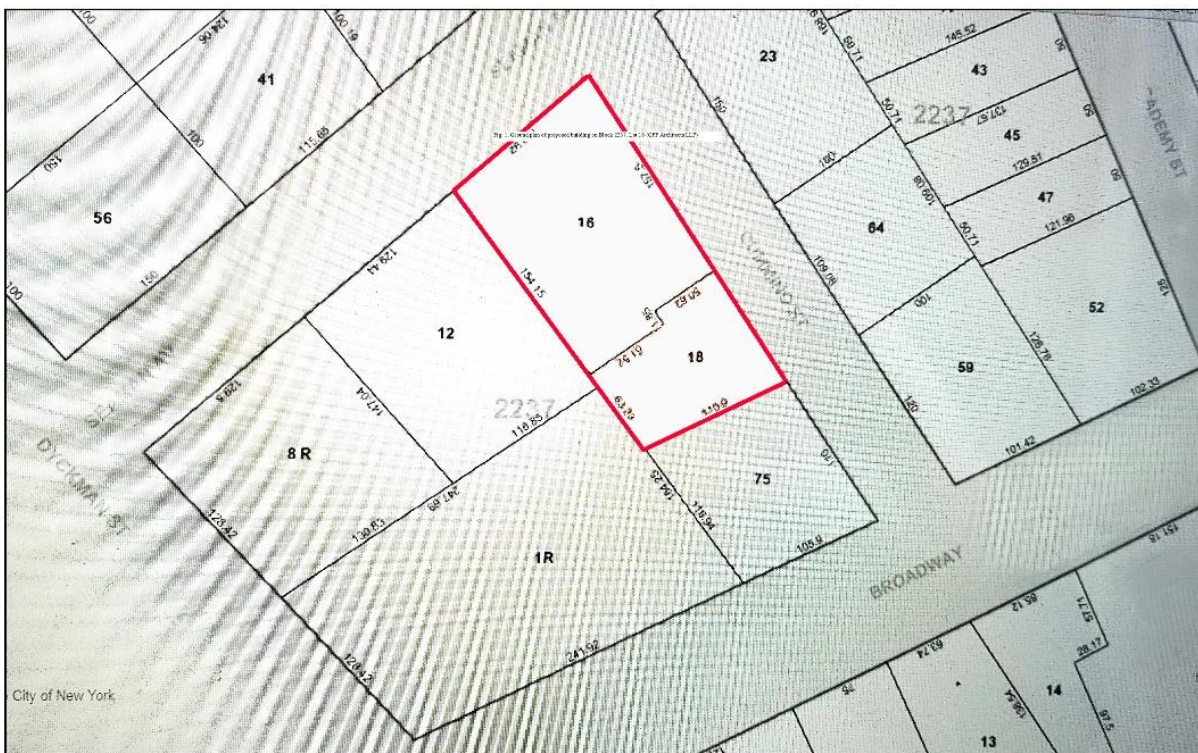


Fig. 2. Tax map of block 2237 showing the location of the project site





Fig. 3. View of the project site looking south, Seaman Avenue at right, Cumming Street at left



Fig. 4. View of the Parish Hall from Cumming Street



Fig. 5. View of the Seaman Avenue side of the project site to Dyckman Street from the corner of Cumming Street





Fig. 6. View of Lot 16 of the project site looking southeast towards the parish hall



Fig. 7. View of Lot 16 of the project site looking northwest towards Seaman Avenue



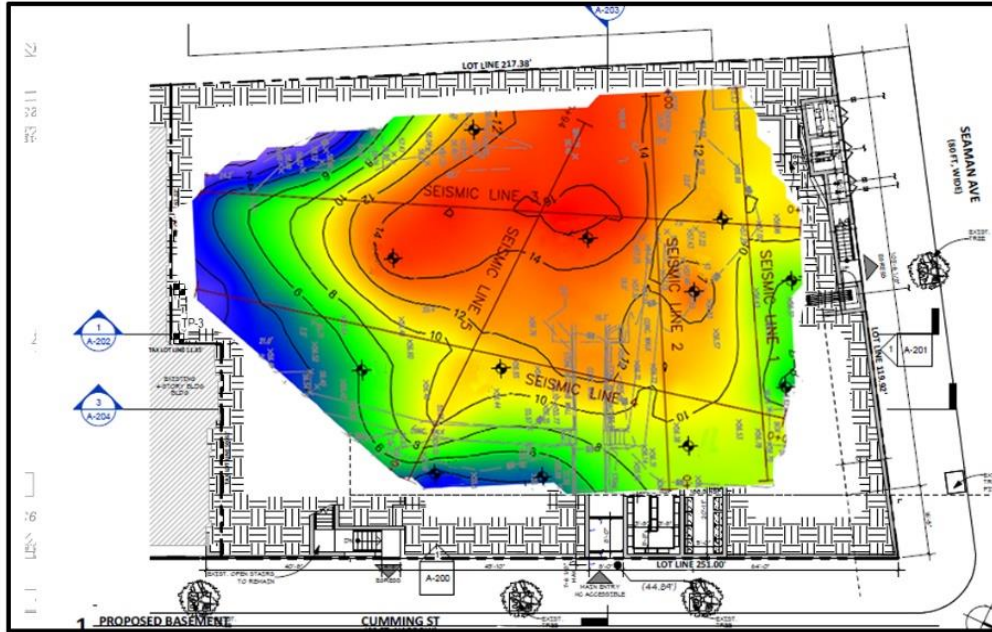


Fig. 10. Superimposition of three plans showing the relative positions of the basement plan of the proposed construction, the location of soil borings and test pits, and the model of the project site's subsurface topography (GFF Architects LLP, GEODesign Inc. and Hager-Richter Geoscience Inc., respectively)

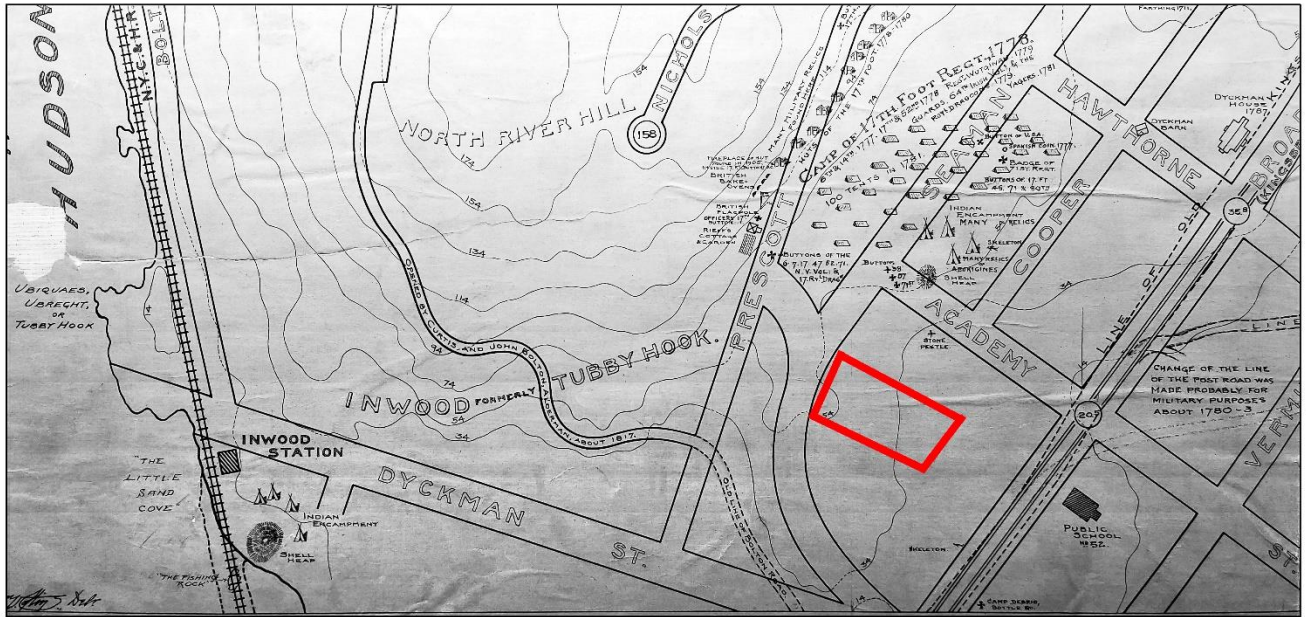


Fig. 11. 1905 Bolton map showing prehistoric and historic sites in Inwood in the area of the project and the location of the project site

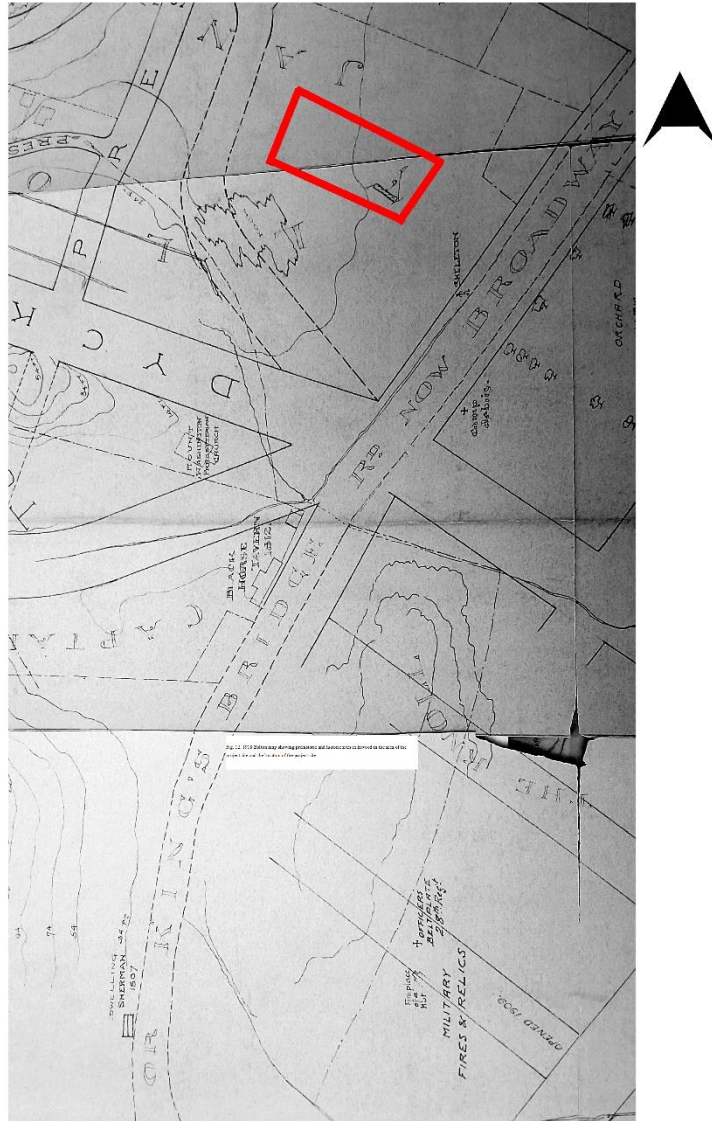


Fig. 12. 1918 Bolton map showing prehistoric and historic sites in Inwood in the area of the project site and the location of the project site





Fig. 13. 1860 Kingsbridge map showing the location of the project site







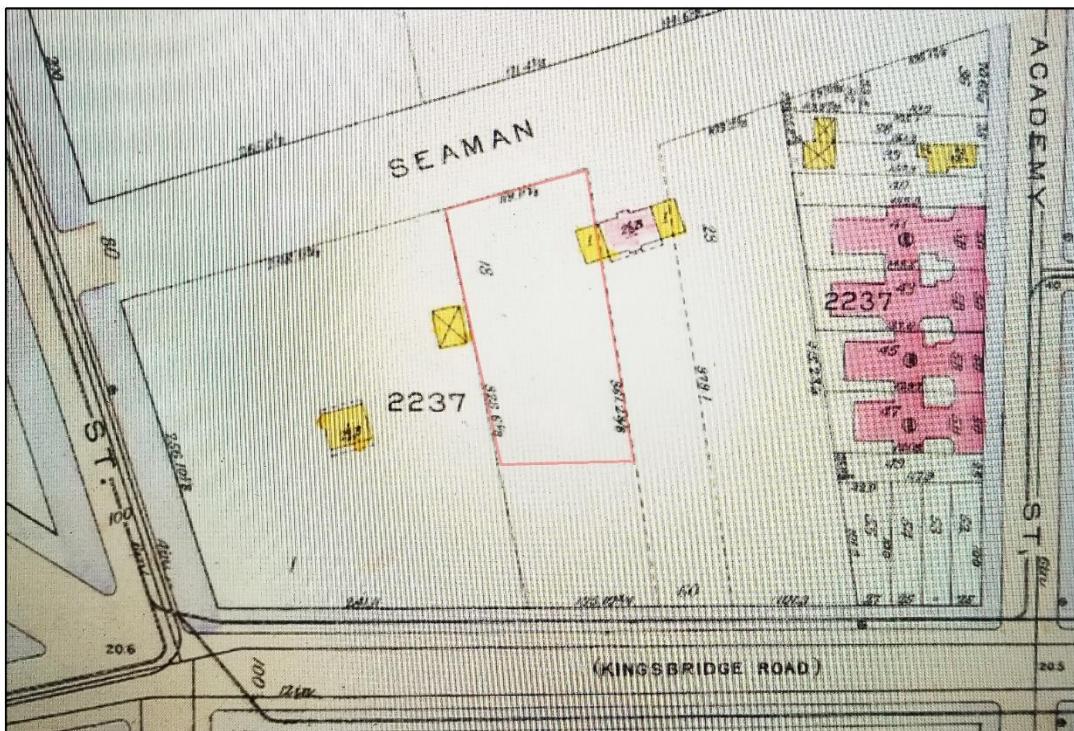


Fig. 16 . 1916 Bromley map showing the location of the project site

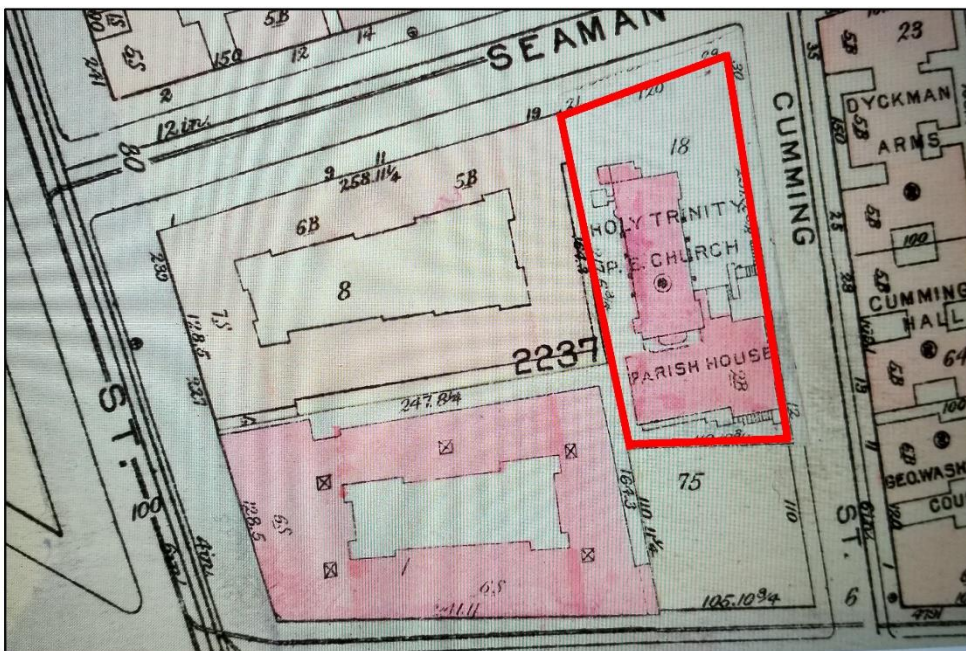


Fig. 17. 1925 Bromley map showing the location of the project site