

**PHASE IB ARCHAEOLOGICAL SURVEY
NORTH END RECIRCULATION SYSTEM
CENTRAL PARK, NEW YORK**

Prepared for:

**Central Park Conservancy
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MANAGEMENT SUMMARY

In April 2025 Hunter Research carried out a program of Phase IB-level archaeological testing in support of the Central Park Conservancy’s planned North End Recirculation System in Central Park. This testing followed an analysis, recommendations and work plan resulting from an earlier Phase IA-level archaeological assessment completed over the winter of 2024-25. The report on this assessment was reviewed and approved by the New York City Landmarks Preservation Commission.

Thirty-five shovel tests were excavated in selected locations within areas of proposed project-related ground disturbance. These tests, for the most part, found park-era fill deposits overlying subsoil and bedrock, although in some instances limited cultural materials were recovered, some of which were associated with soils potentially dating from before the creation of Central Park in the mid-19th century. In three specific locations – alongside the former Kingsbridge Road (today’s East Drive), on Mount St. Vincent and along the western edge of the park between West 98th and West 99th Streets – archaeological monitoring during construction is recommended in the event significant archaeological resources are encountered.

TABLE OF CONTENTS

	<i>page</i>
Management Summary	i
Table of Contents	iii
List of Figures.....	v
List of Photographs and Tables	vii
Acknowledgments.....	ix
1. INTRODUCTION	1-1
A. Project Background and Scope-of-Work	1-1
B. Previous Research and Principal Sources of Information	1-4
2. HISTORICAL BACKGROUND	2-1
A. Land Use History	2-1
B. Historic Map Analysis.....	2-15
3. ARCHAEOLOGICAL TESTING	3-1
A. Methodology	3-1
B. Field Results	3-1
C. Material Culture	3-25
4. CONCLUSIONS AND RECOMMENDATIONS.....	4-1
References.....	R-1
APPENDICES	
A. Summary of Subsurface Testing	A-1
B. Material Culture Inventory.....	B-1
C. Resumes	C-1

LIST OF FIGURES

	<i>page</i>
1.1. Map Showing the Location of the North End Recirculation System within Central Park	1-2
1.2. Aerial Photograph Showing the Location of the North End Recirculation System within Central Park.....	1-3
1.3a-g. North End Recirculation System, Project Plans.....	1-5 to 1-17
2.1. Mackenzie, Advanced Posts – New York Island, 12th Octr. 1776. 1776.....	2-5
2.2. Proctor, “A Military Topographic Map of Haerlem Heights and Plain,” 1814.....	2-7
2.3. John Joseph Holland Associates, Untitled View of Fortifications at McGown’s Pass, 1814	2-8
2.4. Holland, “Gate at McGowan’s Pass,” 1814.....	2-9
2.5. Holland, “View at Fort Clinton, McGowan’s Pass,” 1814	2-10
2.6. Bacon, “Plan of Buildings at Mount St. Vincent,” 1856.....	2-11
2.7. View of Mount St. Vincent, 1861	2-13
2.8. Topographic Map of the Northern Section of Central Park, <i>circa</i> 1865	2-14
2.9. North End Recirculation System, Project Plans Superimposed on the “Randel Farm Maps,” 1818-1820	2-17
2.10. North End Recirculation System, Project Plans Superimposed on <i>Map of the Lands ...</i> <i>June 17, 1856</i>	2-19
2.11. North End Recirculation System, Project Plans Superimposed on “ Plan of Northern Section of the Central Park” 1863.....	2-21
2.12. North End Recirculation System, Project Plans Superimposed on <i>Map of the Central Park</i> , 1865.....	2-23
2.13a-e. North End Recirculation System, Project Plans Superimposed on <i>Topographical Survey of</i> <i>Portion of Central Park</i> , 1935	2-25 to 2-33
3.1. Aerial Photograph Showing the Overall Limits of Proposed Ground Disturbance and Locations of Archaeological Shovel Tests.....	3-3
3.2. Area 1 with Limits of Proposed Ground Disturbance, Locations of Archaeological Shovel Tests and Photographic Views.....	3-7
3.3. Area 2 with Limits of Proposed Ground Disturbance, Locations of Archaeological Shovel Tests and Photographic Views.....	3-9
3.4. Aerial Photograph Showing Area 3 with Limits of Proposed Ground Disturbance, Locations of Archaeological Shovel Tests and Photographic Views.	3-15
3.6. Aerial Photograph Showing Area 5 with Limits of Proposed Ground Disturbance, Locations of Archaeological Shovel Tests and Photographic Views.....	3-23

LIST OF PHOTOGRAPHS AND TABLES

	<i>page</i>
PHOTOGRAPHS	
3.1. Area 1 adjacent to “The Pool”	3-5
3.2. Area 1, Shovel Test 3	3-6
3.3. Area 2, lawn and baseball fields	3-11
3.4. Area 2, Shovel Test 7	3-12
3.5. Southwest portion of Area 3 along the East Drive	3-14
3.6. Northeast portion of Area 3 at the base of Mount St. Vincent	3-17
3.7. Area 4 alongside the East Drive	3-19
3.8. Area 5 alongside the Eighth Avenue boundary wall.....	3-20
TABLES	
3.1. Summary of Historic Artifacts Recovered from Shovel Tests.....	3-26

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With regard to Hunter Research staff involvement, the project was conducted under the overall direction of Richard Hunter and James Lee, Principal Archaeologist. Archaeological fieldwork was performed by Joshua Butchko, Principal Investigator, and Archaeologists Henry McMahon, Anna Trimble and Makena Lurie under the supervision of James Lee. Laboratory processing and cataloging of artifacts were performed by Joshua Butchko, Anna Trimble and Henry McMahon. Report graphics were produced by Evan Mydlowski. Graphic design work and report layout were completed by Patricia Madrigal. This report was written by Richard Hunter and Joshua Butchko.

Richard W. Hunter, Ph.D., RPA
Principal/President

Chapter 1

INTRODUCTION

A. PROJECT BACKGROUND AND SCOPE-OF-WORK

The following report presents the results of a program of Phase IB-level archaeological testing carried out in connection with the planned construction of the North End Recirculation System within Central Park in the Borough of Manhattan, City of New York (Figures 1.1 and 1.2). Archaeological testing was conducted in accordance with a work plan based on an earlier Phase IA-level archaeological assessment reviewed and approved by the New York City Landmarks Preservation Commission (NYCLPC). The Phase IA and IB archaeological investigations were performed by Hunter Research, Inc. under contract to the Central Park Conservancy. Central Park is listed in the National Register of Historic Places and is also designated as a National Historic Landmark and New York City Landmark. In this instance, project compliance with state and municipal historic preservation and land use law requires all archaeological work to be carried out in accordance with NYCLPC regulatory review procedures.

The Central Park Conservancy's planned North End Recirculation System involves a series of drainage and filtration improvements in the northern end of the Park between 99th and 110th Streets. The proposed project involves, from west to east:

- installation of a filtration system in a vault adjacent to "The Pool" (formerly Montayne's Rivulet) between 100th and 101st Streets, along with suction and filter discharge piping (Figure 1.3a);
- installation of recirculation piping across the baseball fields between the West and East Drives (Figures 1.3b and 1.3c);
- installation of recirculation piping east of the East Drive over Mount St. Vincent to a filtration system in a vault near the southern end of Harlem Meer, along with suction and filter discharge piping and an outlet control structure (Figures 1.3c and 1.3d);
- excavation of sediment from Harlem Meer (Figures 1.3d-1.3f);
- installation of a wet well with pump and pressure and discharge piping adjacent to the East Drive between the Adam Clayton Powell, Jr. Boulevard and the Malcolm X Boulevard entries into the Park (Figure 1.3f); and
- installation of a drain just inside the northwest Park boundary wall connecting the Pool to the main in Eighth Avenue at 98th Street (Figure 1.3g).

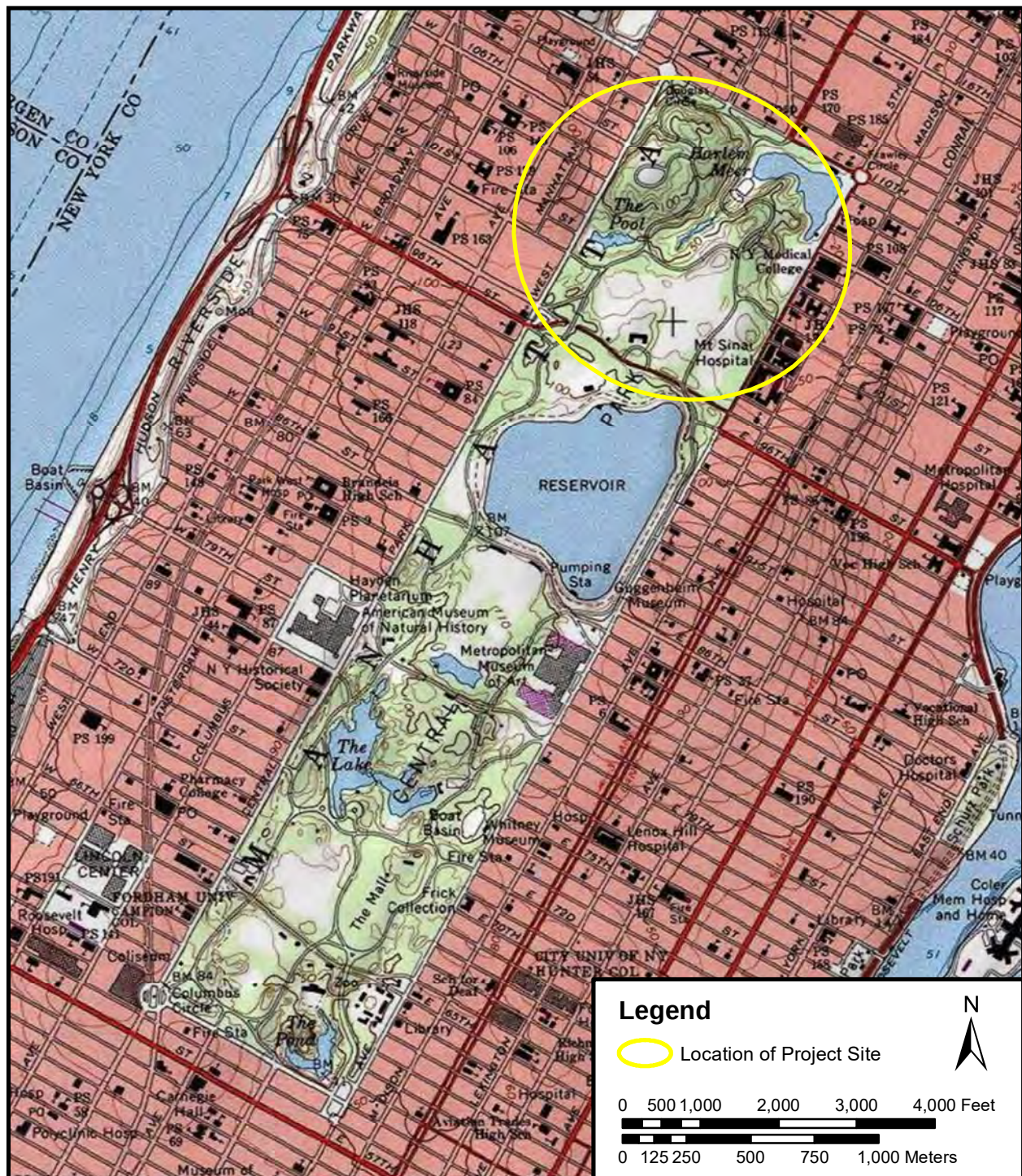


Figure 1.1. Map Showing the Location of the North End Recirculation System within Central Park. Source: 7.5' USGS Central Park, N.Y.-N.J. Quadrangle (1966 [photorevised 1979]).



Figure 1.2. Aerial Photograph Showing the Location of the North End Recirculation System within Central Park. Source: NYS ITS Geospatial Services, Westchester County GIS, 2022.

B. PREVIOUS RESEARCH AND PRINCIPAL SOURCES OF INFORMATION

The Phase IB archaeological survey reported on here draws primarily on the analysis and recommendations of a Phase IA-level archaeological assessment carried out over the winter of 2024-25 (Hunter Research, Inc. 2025). This latter assessment concluded that the chances of encountering intact and significant pre-Park-era (i.e., precontact Native American or earlier historic) archaeological deposits and features in areas of planned ground disturbance associated with the North End Recirculation System were slim at best. A targeted program of manual archaeological testing (shovel tests with provision for deeper probing with a split-spoon auger) was recommended to establish the presence or absence of archaeological deposits of interest and to clarify the extent and depth of Park-era fill deposits. In all, 35 shovel/auger tests were proposed at carefully selected locations across the North End Recirculation System project area. Archaeological monitoring was recommended for Mount St. Vincent where a 400-foot length of planned piping is to be installed within or alongside the trench of an existing water line that was installed and archaeologically monitored in 2013.

Underpinning both the Phase IA and IB studies performed for the North End Recirculation System Project are several earlier archaeological investigations completed by Hunter Research in the northern end of Central Park over the past 35 years. Chief among these is a preliminary historical and archaeological assessment carried out in 1990 for the portion of the Park between 103rd and 110th Streets, which analyzed historic maps, published secondary sources and selected primary archival materials, resulting in the identification of numerous potential archaeological sites (Hunter Research, Inc. 1990). Some of these sites, notably those associated with the Revolutionary War and War of 1812 fortifications overlooking the Harlem Creek, have since been examined in greater detail. In 2014, a follow-up study was completed, which delved more deeply into the archival sources relating primarily to the area's military history and created a cultural resources GIS (geographic information system) supported by a geodatabase containing locational, historical and archaeological information (Hunter Research, Inc. 2014). A key outcome from this study was the delineation of areas of high and moderate archaeological sensitivity and the pinpointing of numerous potential archaeological resources.

Of more specific relevance to the current project is some limited archaeological testing and monitoring that took place in 2013 on the west side of Mount St. Vincent, east of the East Drive, in connection with the installation of a water line (Hunter Research, Inc. 2013a, 2013b). In this instance, shovel testing and excavation of a backhoe trench in the vicinity of the Mount St. Vincent Chaplain's House [Resource 590-12] found no trace of this building, instead encountering 2 to 3 feet of fractured bedrock fill overlying bedrock. Subsequent monitoring of the installation of an approximately 600-foot length of water line extending south from the site of the Chaplain's House confirmed the overall disturbed nature of the soils on this section of Mount St. Vincent, where widespread grading and filling appears to have taken place. The depth of the gravel and bedrock fill ranged from around 2.5 feet at the southern of the water line to less than a foot on the hill summit. In a few places, vestigial remains of a compacted A horizon and subsoil were noted between the fill and the top of the bedrock, but no historic artifacts of interest were retained.

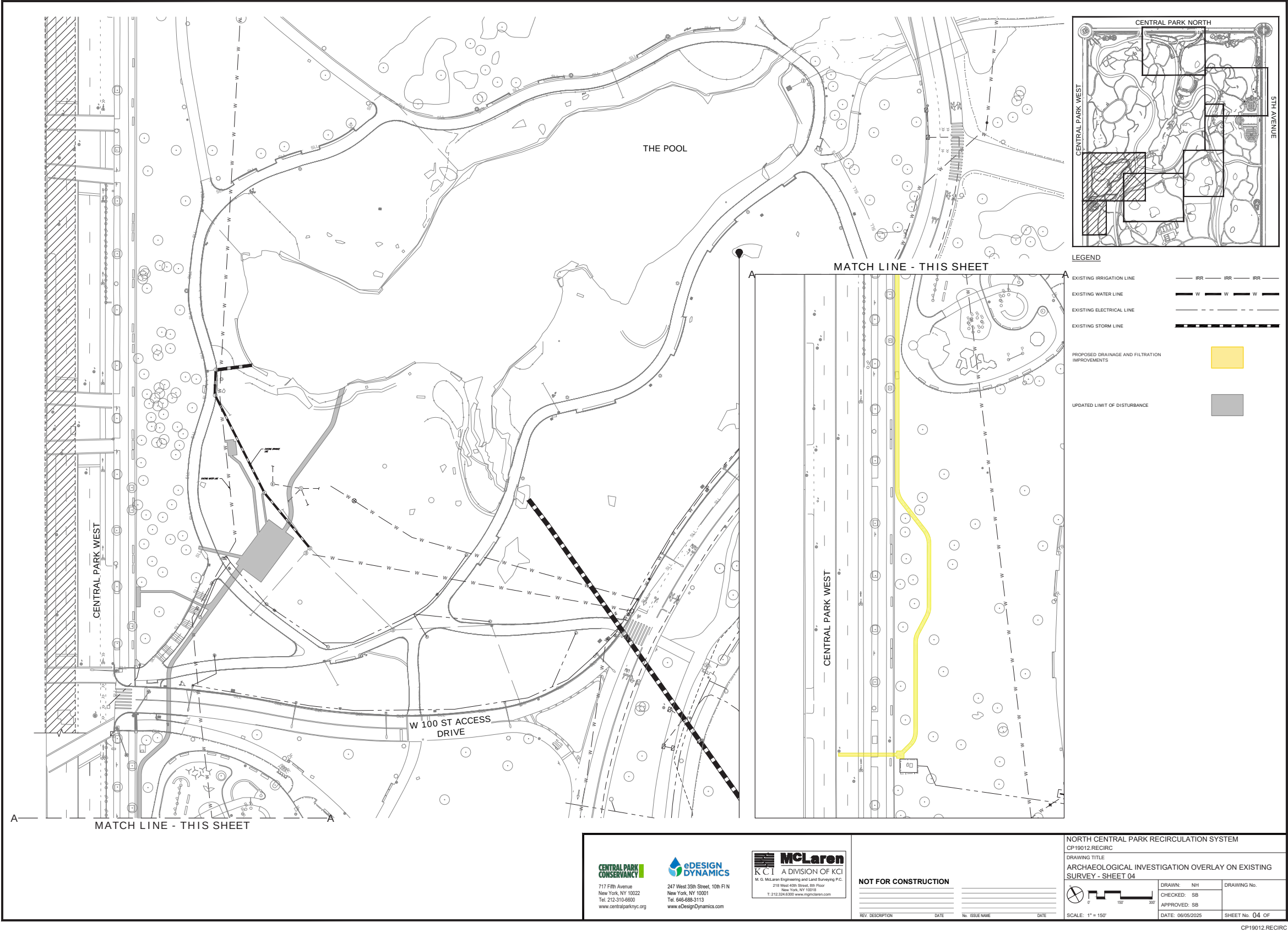


Figure 1.3a. North End Recirculation System, Project Plans – West 100th Street Pool. Source: Central Park Conservancy 2024.

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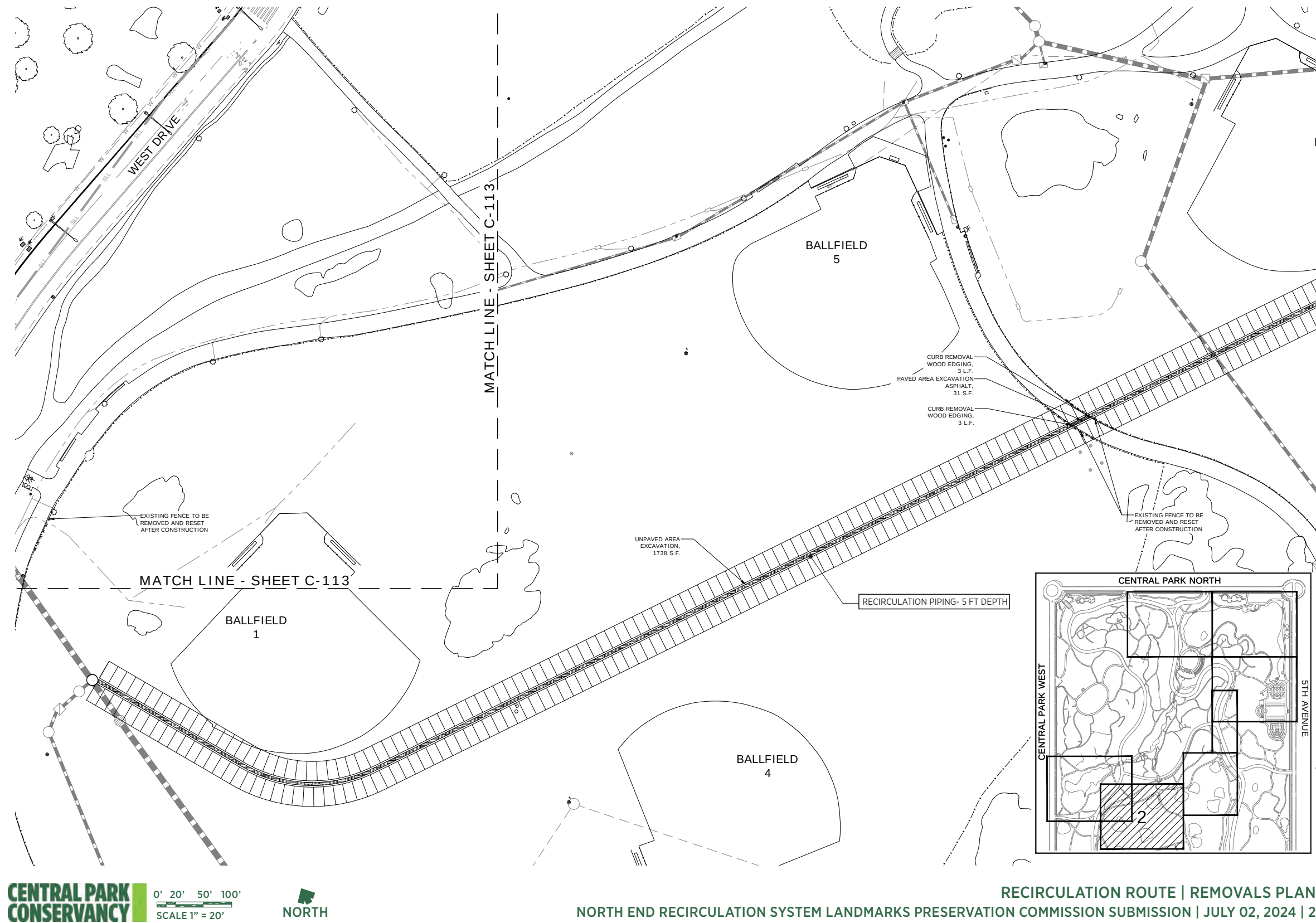


Figure 1.3b. North End Recirculation System, Project Plans – Recirculation Route Across Baseball Fields (West). Source: Central Park Conservancy 2024.

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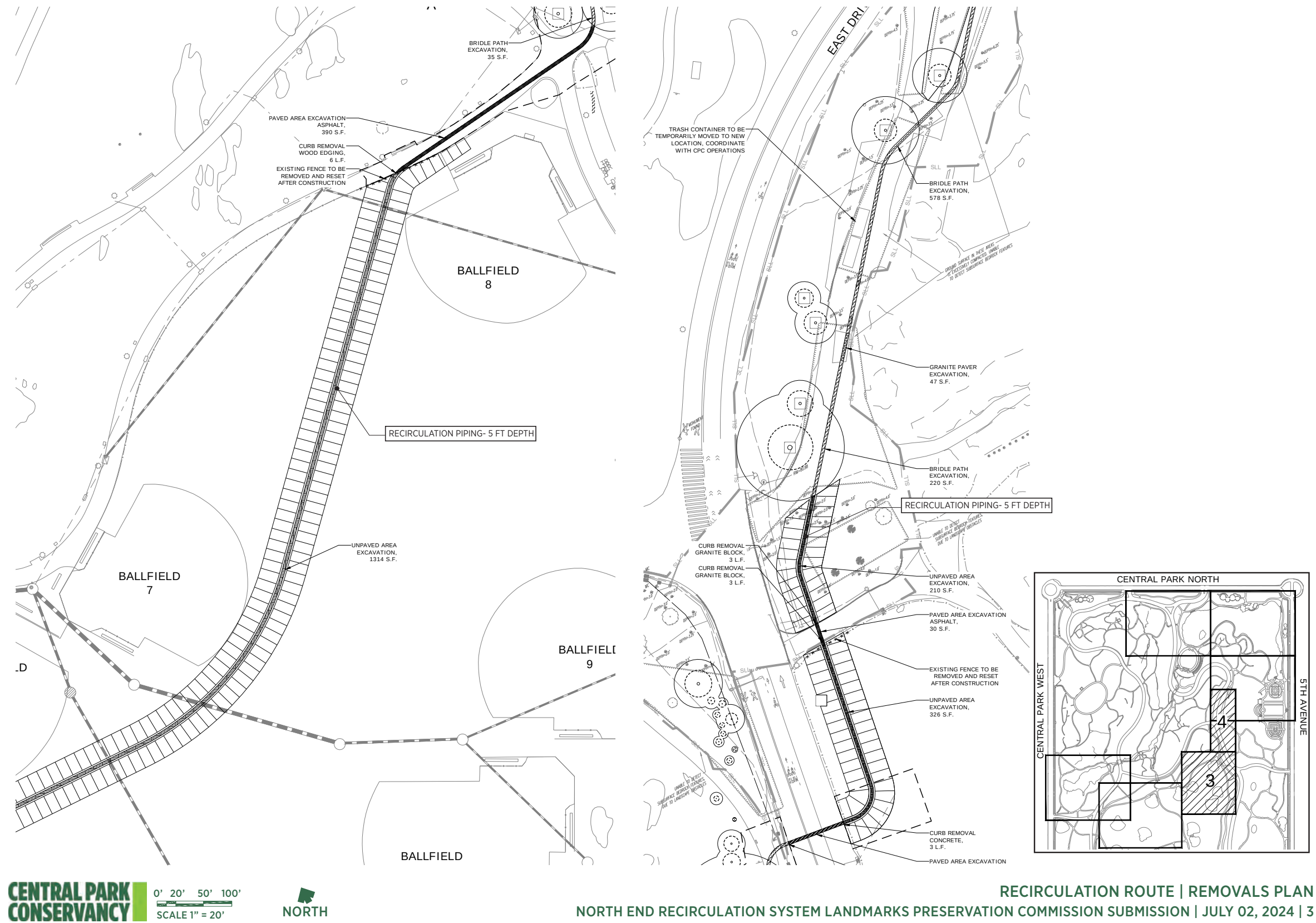


Figure 1.3c. North End Recirculation System, Project Plans – Recirculation Route Across Baseball Fields (East). Source: Central Park Conservancy 2024.

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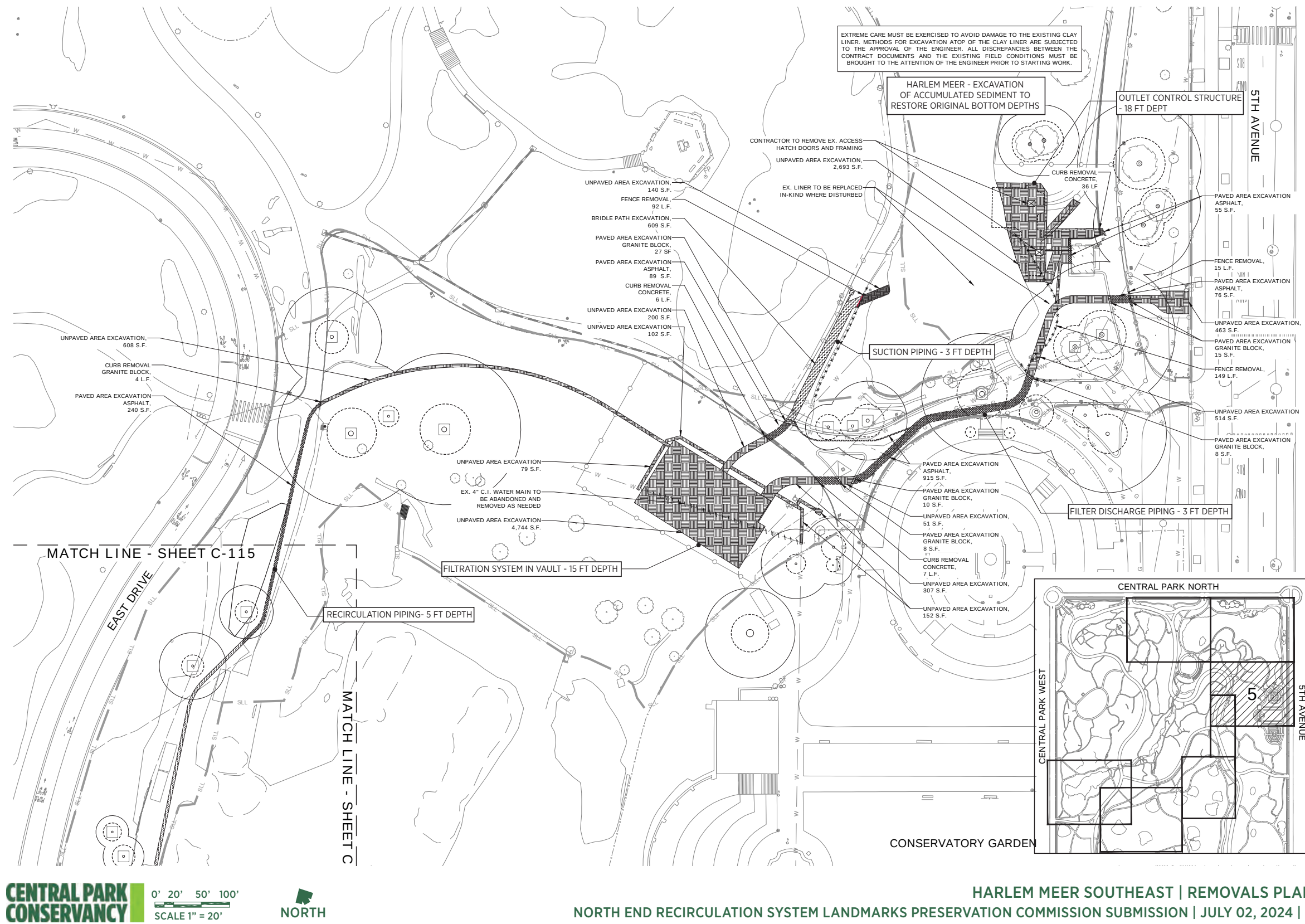


Figure 1.3d. North End Recirculation System, Project Plans – Harlem Meer Southeast. Source: Central Park Conservancy 2024.

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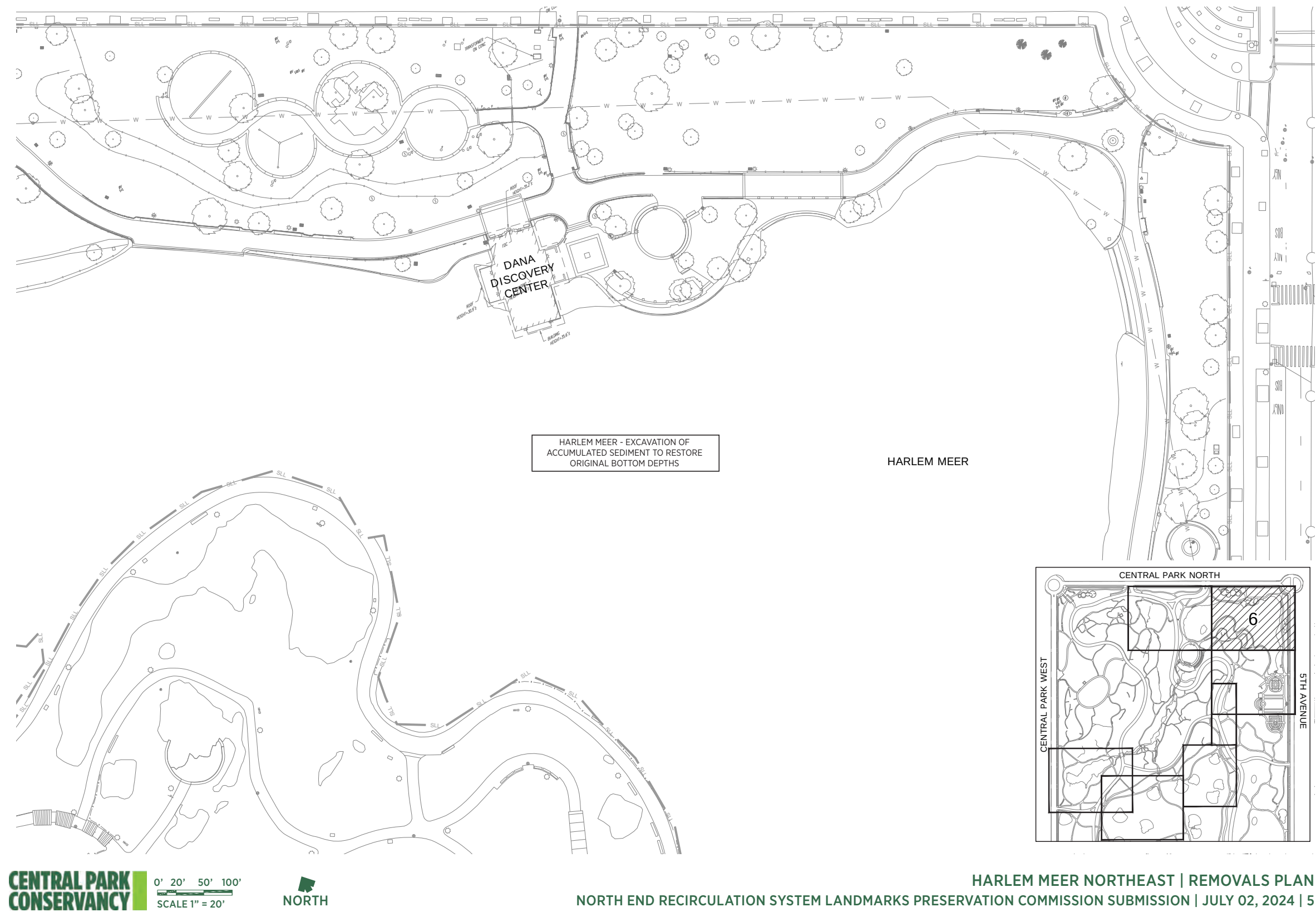
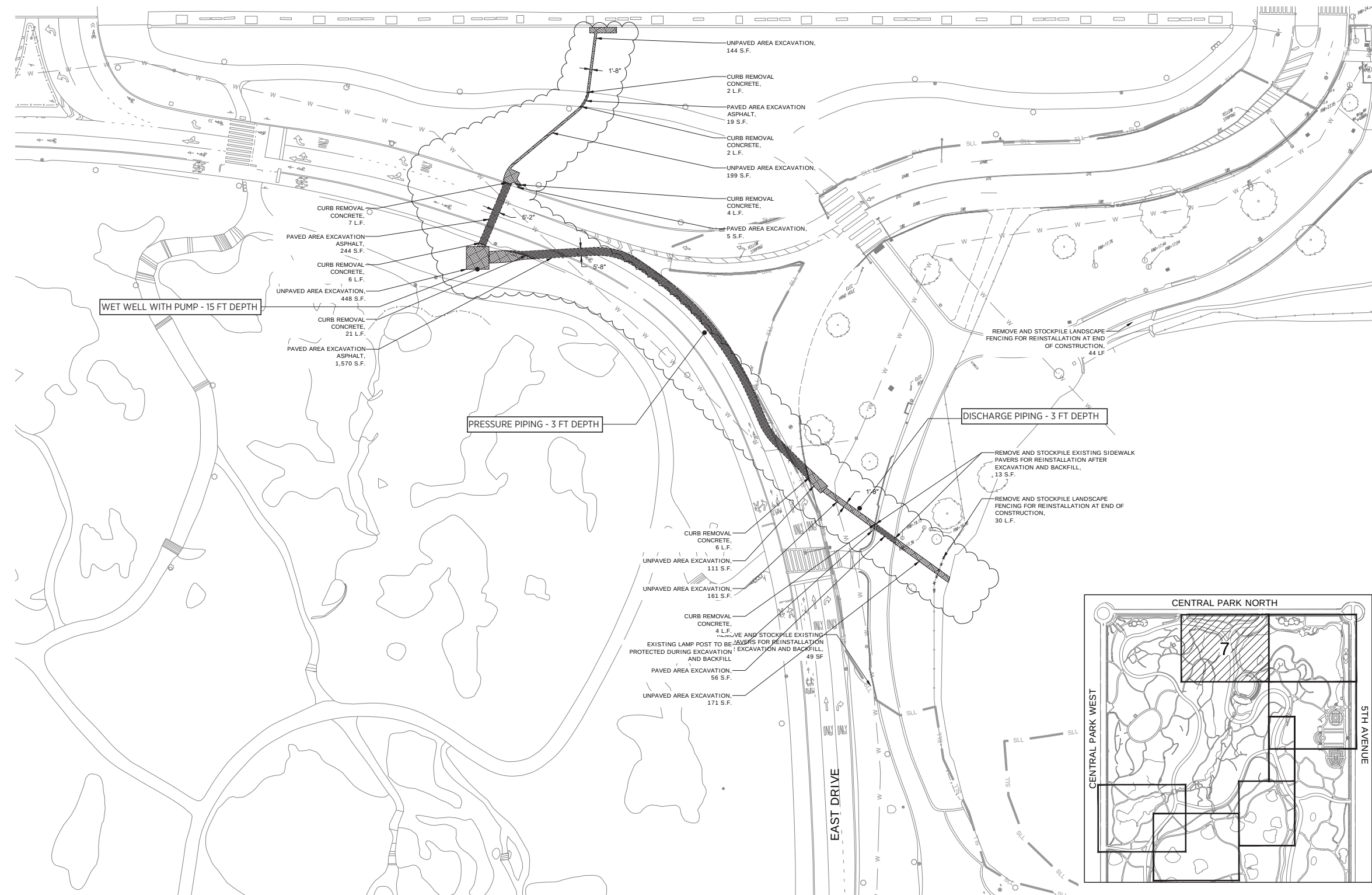


Figure 1.3e. North End Recirculation System, Project Plans – Harlem Meer Northeast. Source: Central Park Conservancy 2024.

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CENTRAL PARK CONSERVANCY

0' 20' 50' 100'

SCALE 1" = 20'



HARLEM MEER NORTHWEST | REMOVALS PLAN

NORTH END RECIRCULATION SYSTEM LANDMARKS PRESERVATION COMMISSION SUBMISSION | JULY 02, 2024 | 6

Figure 1.3f. North End Recirculation System, Project Plans – Harlem Meer Northwest. Source: Central Park Conservancy 2024.

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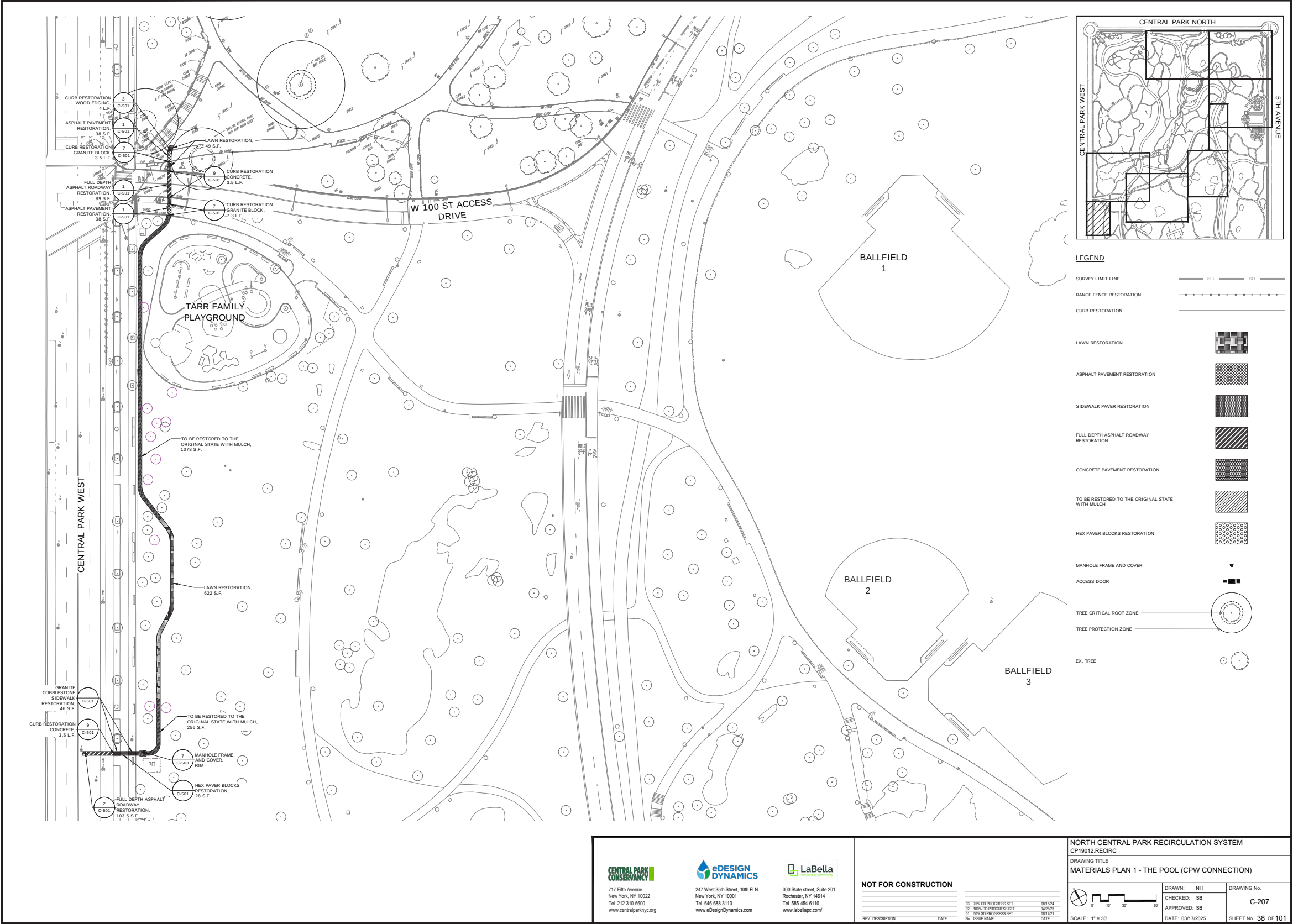


Figure 1.3g. North End Recirculation System, Project Plans – The Pool (CPW Connection). Source: Central Park Conservancy 2024.

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Chapter 2

HISTORICAL BACKGROUND

A. LAND USE HISTORY

The following historical narrative is largely extracted and condensed from the preliminary assessment report completed for the northern end of Central Park in 1990 where more detailed, referenced and site-specific historical information can be found (Hunter Research, Inc. 1990). Selected illustrations (principally maps and reproductions of the water colors of John Joseph Holland and his associates) are also included along with some minor text modifications. Numbers in square parentheses [e.g., 592-2] reference the resource identifications developed in the 1990 report.

1. Native American Occupation

The alignments of the principal Indian trails in the Harlem Creek vicinity and some of the Indian names for local topographic features are fairly well known, but there is considerable confusion over the precise locations of Native American occupation sites in the vicinity of Central Park. Unfortunately, owing to the intensity of 19th- and 20th-century urban development, modern understanding of aboriginal settlement and land use patterns in this section of Manhattan is unlikely to progress much beyond that already achieved in the early part of this century when historians first began considering the prehistory of Manhattan in serious fashion (e.g., Beauchamp 1900; Riker 1904; Bolton 1905; Hall 1905, 1911; Stokes 1916-1928; Parker 1920).

The major aboriginal trail running north-south across Manhattan Island generally followed the course of the later Boston Post Road (also known as Kingsbridge Road) through what is today the northern section of Central Park. Known as the Manhattan Path or the Wickquasgeck trail, this route descended the bluffs to Harlem Creek through what later became known as McGown's Pass, crossed the creek, and then divided into a northeastern and a northwestern branch. The former branch followed the course of the Old Harlem Road; the latter generally followed the alignment of St. Nicholas Avenue (Bolton 1905:Map IV; Hall 1911:397; Stokes 1928 VI:67-b).

Local Indian groups recognized at least three different areas of flats bordering Harlem Creek. The area directly north of the creek and present-day Central Park was referred to as Muscoota, literally meaning "the flats," and was also known in the early historic period as Montagne's Flat. Directly to the east, between the Manhattan Path and the Harlem River on the north side of Harlem Creek, was an area known as Conykeekst or Conymokst (referred to by early Dutch settlers as Otterspoor). On the opposite (southern) side of the creek, the flats were known as Rechawanis, meaning Great Sands. This latter area was known in the early historic period as Montagne's Point, and then later as the Benson or McGown Farm. The upstream portions of the latter two of these zones of flats converged within the northeastern corner of present-day Central Park at the point where the

Manhattan Path crossed Harlem Creek. The southern limits of Muscoota were marked by a tributary of Harlem Creek that flowed from west to east along the base of the bluffs that extends through the Park between 106th and 110th Streets (Riker 1904:122; Bolton 1905:Map IV; Hall 1911:397; Stokes 1916 II:193-194).

At least two, and perhaps as many as four, aboriginal occupation sites have been identified close to – and in two cases, possibly within – the northern end of Central Park. Seemingly, the most precisely located site is a small fishing or shellfish collecting station situated well to the northeast of Central Park in the vicinity of 121st Street and Avenue A on what would have been the shoreline in the later prehistoric period (Bolton 1905:163-164, 168). This site may be the same as that identified in the New York State Museum files as Site 4063, supposedly a village site reported in a statewide survey of aboriginal sites in the early 20th century (Parker 1920). The locations of these two sites are close but do not correspond exactly.

More problematic in terms of its location is the village site traditionally known as Konaande Kongh. Bolton (1905:Map IV) places the location of this site between Park and Lexington Avenues between 98th and 100th Streets. A path is shown branching off to the village from the main Manhattan Path around 96th Street. Stokes, on the other hand (1916 II:193-194), correlates the site of Konaande Kongh with the site of Hendrick De Forest's house, which he believes stood in the Mount St. Vincent area close to McGown's Pass. The two locations are similar in that they both occupy the bluffs overlooking Harlem Creek, but no archaeological finds have been recovered to support one or other of these candidates.

Finally, the New York State Museum files, after Parker (1920), identify an aboriginal site within Central Park somewhere in the vicinity of the North Meadow Maintenance Area. This resource, designated as Site 4062, is recorded as consisting of shell heaps, which is a curious description considering the site's location so far from the Manhattan shoreline and any major pre-Park surface drainage features. One suspects that the description (and perhaps also the location) of this site is in error. So far, no field evidence has been produced to confirm the existence of this site within the Park.

Thus, at this stage, despite unconfirmed secondary reports, no aboriginal sites have been definitely identified within the northern portion of Central Park. This is not to say that such sites may never have existed. Indeed, Central Park, as the major remaining expanse of open space in Manhattan, is one of the few locations where evidence of prehistoric activity might be expected to survive, providing the landscaping of the Park did not entail radical land modification.

On environmental and topographic grounds, the floodplain fringe and the bluff top bordering Harlem Creek would have been attractive to Native American peoples intent on exploiting the food resources of the floodplain itself. Soils along the floodplain margins would have been better drained and could have supported semi-sedentary occupation. Blufftop locations had the added advantage of offering a good view across the valley to the north, an important factor in tracking game and other aboriginal groups. On account of the relatively barren and rocky terrain in this section of Manhattan, horticulture is not likely to have been widely practiced.

2. Pre-Park History

European settlement within the section of Central Park to the north of the 97th Street Transverse began with the establishment of the de Forest/Montagne bowery [Resource 589-12] near the confluence of Harlem Creek and Montagne's Creek in 1636-37. This farmstead was, in fact, the first permanent European settlement activity within the region that later came to be known as Harlem. The agricultural nature of this early habitation was typical of most land use in this section of Manhattan Island up until the time of the creation of Central Park during the mid-19th century (Miller 2022:19-43).

In 1666 the village of New Harlem was established by charter and given various rights relating to the lands of the northern part of Manhattan. A line was drawn to separate these lands from those to be retained by the Corporation of New York and ran diagonally through the present Central Park on a northwesterly course from 96th Street at Fifth Avenue to 110th Street at Eighth Avenue. This line was the source of much controversy, however, since conflicting claims arose as Harlem and New York sought to gain control of lands on either side of the line. The issue was, in fact, not settled until 1775 when a new line was surveyed that was agreeable to both sides. This compromise gave the village of Harlem all of the present Park above the 97th Street Transverse with the exception of the area roughly bounded by the extension of 107th Street on the north and Seventh Avenue on the east (Miller 2022:44-61, 131-148).

All of the property within the Harlem section of the future Park was initially included in what was referred to as the Harlem Common Lands, a term used to describe all the unappropriated land within the village's jurisdiction. These lands were periodically subdivided and distributed to those holding land rights under the village charter. Property within the northern section of the Park was included within several of these subdivisions, notably the Montagne's Flats (Muscoota) subdivision, the division of 1691, and the First Division of 1712. Some of the lands just above the 97th Street Transverse remained as Common Lands until the early part of the 19th century.

As settlement within the northern part of Manhattan expanded there was an associated improvement and expansion of the system of overland transportation. The former aboriginal trail that had been adapted for use by Europeans as the primary route between the growing village on the southern tip of Manhattan and points north was fully developed as an overland transportation corridor during the second half of the 17th century. The original route of this roadway, which ran northwards through the northern end of the Park between Fifth and Sixth Avenues to the vicinity of 108th Street, then angling eastward to pass through the village center of Harlem before resuming its northern course, was formally opened up as a public highway in 1669. In 1703 another road following an Indian trail was laid out for formal public use and ran due north from the main road at 108th Street to follow the present course of St. Nicholas Avenue to a reunification with the old road in the vicinity of 131st Street (this route allowed the village of Harlem to be bypassed). This road, with its Harlem Road (the route to Harlem village) and Harlem Lane (the bypass road) sections, was known most commonly as the Kingsbridge Road (for its crossing of the Harlem River on the northern end of the island) or the Eastern Post Road (for the connections it provided with places such as Boston and Albany) (Miller 2022:44-61).

The importance of this road to the pattern and type of settlement that was seen within the northern section of the present Central Park was considerable. Settlement activity during the 17th and 18th centuries was focused almost exclusively within the eastern third of this section of the Park as proximity to this roadway was obviously a primary consideration. The road also provided a more specific influence on the local economy when the first of a series of taverns serving travelers along this important route was established during the 1680s. The Jansen/Kortwright Tavern, also known as the Half Way House [594-6], was situated on the west side of the Kingsbridge Road just north of the junction of the Harlem Road and Harlem Lane spurs. Taverns remained a presence within the northern section of what later became the Park during the 18th and early 19th centuries as the Black Horse, later McGown's, Tavern [589-12], the Benson/Leggett Tavern [588-3] and the Benson/Kimmel Tavern [593-3] were all active during this period.

The cultural landscape in the Harlem area remained predominantly rural throughout the remainder of the colonial period. The above-mentioned taverns were essentially the only non-agricultural elements in the landscape, and they did little to alter the rural appearance created by a pattern of settlement based on isolated farmsteads surrounded by cultivated fields, pasture and woodlots. During this period a closely interrelated network of land ownership emerged that saw the McGown, Benson, Dyckman, Kortwright and Waldron families dominate land holdings within the region. Many of these families, notably the Bensons and the McGowns, maintained their extensive real property interests in the Harlem area well into the 19th century.

During the American Revolution the heights in the vicinity of Harlem and, specifically, the locality that came to be known as McGown's Pass came to be recognized for their strategic importance. The fortification of the high ground between the Hudson and East Rivers and the area around the pass by British forces occupying Manhattan required that any American offensive launched overland from the north be successfully impeded. Several of the works that were built by British military engineers around McGown's Pass and on the brow of the Great Hill were sited within the present bounds of the northern end of Central Park [694/3] (Figure 2.1). In addition, British and Hessian troops assigned to garrison these works occupied encampment areas on the Great Hill and in the fields that once flanked the Kingsbridge Road to the south of the pass [807-1] (Cohn 1962; Hall 1905).

There was little change in the cultural landscape within the northern section of the future Park during the early Federal period. Tavern-related activities continued at various locations on the road, while elsewhere agriculture remained the dominant activity. Scattered farmsteads of varying sizes were still the principal elements in the landscape, with the Burrowes property [804-5] a noteworthy addition as the first substantial settlement took place within the western half of what is now the Park.

Military considerations again returned to the fore in the McGown's Pass area during the War of 1812 as the City of New York and the United States Army combined forces to design and build a line of fortifications that was, once again, expected to deter a prospective land offensive from the north, this time with the American and British roles reversed. Matters came to a head in the summer of 1814 when fears of an attack on Manhattan reached fever pitch following the British assault and sacking of Washington in August.

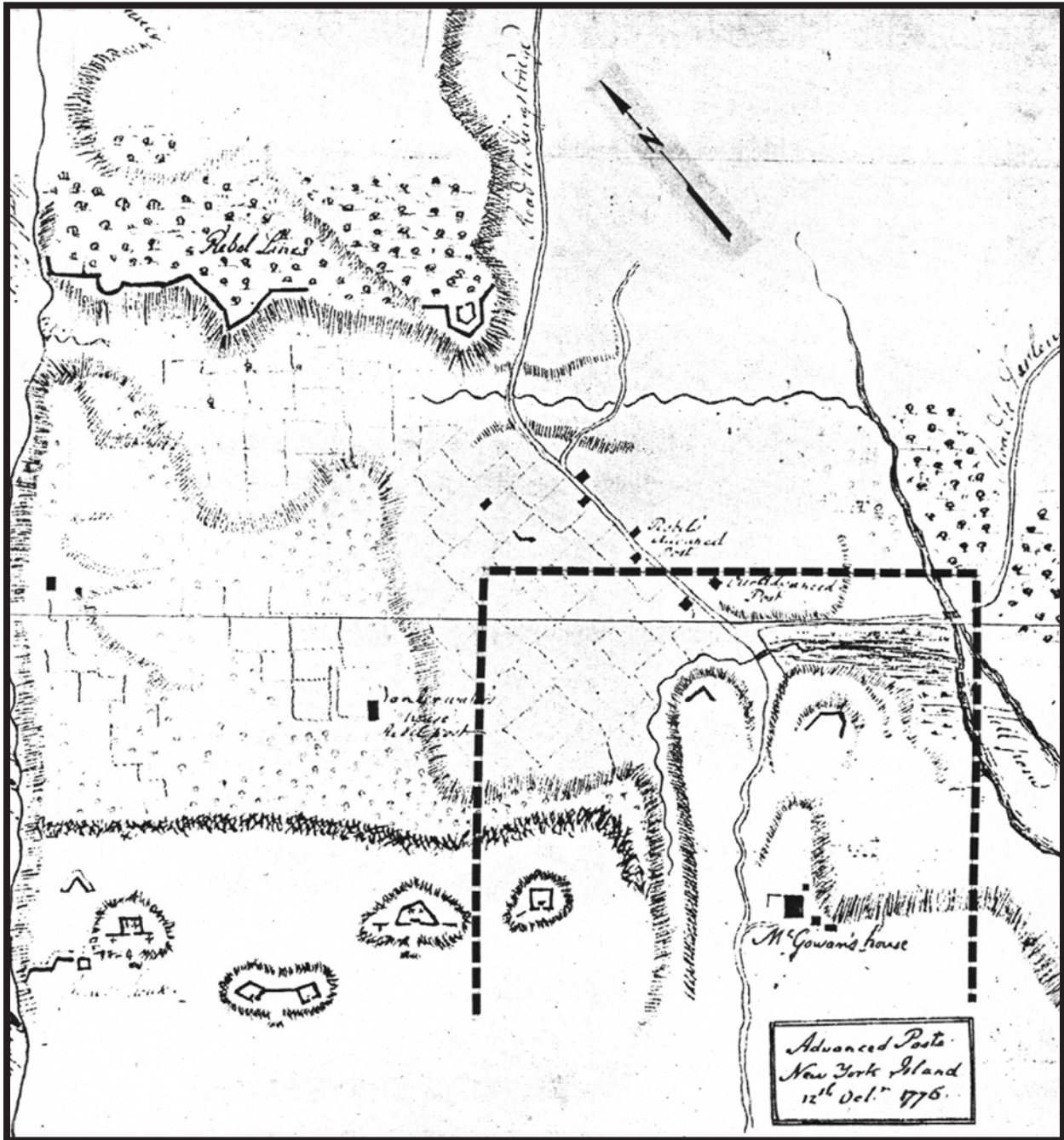


Figure 2.1. Mackenzie, Frederick. Advanced Posts – New York Island, 12th Oct. 1776. 1776. Scale (approx.): 1 inch = 935 feet. Approximate bounds of the northern end of Central Park outlined. This map depicts British fortified positions in the Harlem area. Source: *Diary of Frederick Mackenzie* 1930:76.

The construction of defenses at McGown's Pass and on the surrounding bluffs took place under the direction of Colonel Joseph G. Swift, Chief Engineer of the United States Army, from mid-August through the end of September, 1814, with some additional work continuing into early November. The pass, as had been the case only 40 years earlier, again became the focus of a complex system of redoubts and earthworks that protected the Kingsbridge Road approach into the city (Figure 2.2). The heights to the west of the pass were secured by the erection of a series of four blockhouses, with the easternmost of these still standing today in the northwest corner of the Park [809-2]. In the pass itself, a gatehouse [592-2] was constructed between two prominent bedrock outcrops, each of which held a small redoubt [591-2 and 592-5], with ramparts [591-4 and 592-3] extending southeast to Fort Clinton [591-3] and northwest to Nutter's Battery [592-6].

This extensive system of fortifications was manned for several weeks in the fall and early winter of 1814 by militia units that encamped in the vicinity of the pass and on the Great Hill, probably using cantonment sites that had been occupied by British and Hessian units during the American Revolution. The British threat to Manhattan receded toward the end of 1814 following the successful American defense of Fort Mchenry and Baltimore in mid-September, and hostilities eventually ceased with the signing of the Treaty of Ghent on December 24. It is uncertain when the defenses at McGown's Pass were dismantled, although this likely occurred in the following year or soon thereafter (Lossing 1868; Guernsey 1889, 1895; Hall 1905; Hunter Research, Inc. 1990:D-135 through D-139).

An exceptional series of watercolors of the fortifications in the McGown's Pass area survives from the War of 1812 era and is held by the Luce Center at the New-York Historical Society (Figures 2.3-2.5). The majority of these sketches were produced by English-born artist John Joseph Holland (1776-1820) and are remarkably accurate in terms of their rendering of architectural features and earthworks. Others, more impressionistic and less believable in their exactness, are thought to have been painted by associates of Holland, possibly by his military contemporary Captain James Renwick (an engineer/architect, professor at Columbia College and father of the noted architect of the same name) or one of several lieutenants posted at the pass (James Gadsden, Isaac E. Craig, Daniel Turner, Lewis Gustavus De Russy, Kemble or Oothout). All of these images are believed to date from the fall of 1814.

Although a "paper" street grid, intended as a guide for urban growth, was superimposed over Manhattan Island early in the 19th century (see below, Figure 2.9), it was not until the latter part of the first half of the 19th century that the first signs of the extensive urban development that was drastically altering the landscape of lower Manhattan came to be perceived within what was to become the far northern end of Central Park. During this period there was a proliferation of marginal subsistence farmsteads, small dwellings, and rented or illegally erected shanties. Another noteworthy development during this period was the establishment in the late 1840s of the Mount St. Vincent Academy by the Catholic Sisters of Charity of the Diocese of New York in the northern end of what was soon to become the Park (Figure 2.6). However, despite the increasing intensity of land use, this growth still did not radically alter the rural nature of the local landscape. Indeed, it was the area's surviving, if threatened, rural landscape that contributed to its selection for incorporation within the new Central Park during the middle decades of the 19th century (*A Descriptive and Historical Sketch of the Academy of Mount St. Vincent ...* 1884).



Figure 2.2. Proctor, William James. "A Military Topographic Map of Haerlem Heights and Plain." 1814. Scale: 1 inch = 200 feet (approximately). This portion of the map depicts the McGown's Tavern property [589-12], Fort Fish [590-13], Fort Clinton [591-3], the McGown's Pass Gatehouse [592-2], Nutter's Battery [592-6] and associated earthworks. Source: New-York Historical Society, Luce Center, Object No. 1889.28.



Figure 2.3. John Joseph Holland Associates. Untitled View of Fortifications at McGown's Pass. 1814. This view, looking southeast, shows the Kingsbridge Road in the foreground leading up to the McGown's Pass Gatehouse [592-2], which is flanked by Fort Clinton [591-3] to the left and Nutter's Battery [592-6] to the right. Behind and to the right of Nutter's Battery is Fort Fish [590-13] and beyond and to the left of Fort Fish is the McGown's Tavern property [589-12]. Source: New-York Historical Society, Luce Center, Object No. 1889.23ab.



Figure 2.4. Holland, John Joseph. "Gate at McGowan's Pass." 1814. This view, looking north, shows the Kingsbridge Road passing downhill through the McGowan's Pass Gatehouse [592-2]. Source: New-York Historical Society, Luce Center, Object No. 1889.16.



Figure 2.5. Holland, John Joseph. "View at Fort Clinton, McGowan's Pass." 1814. This view, looking northeast, shows Fort Clinton [591-3] at left and a rock outcrop on Mount St. Vincent at right. Source: New-York Historical Society, Luce Center, Object No. 1889.11.

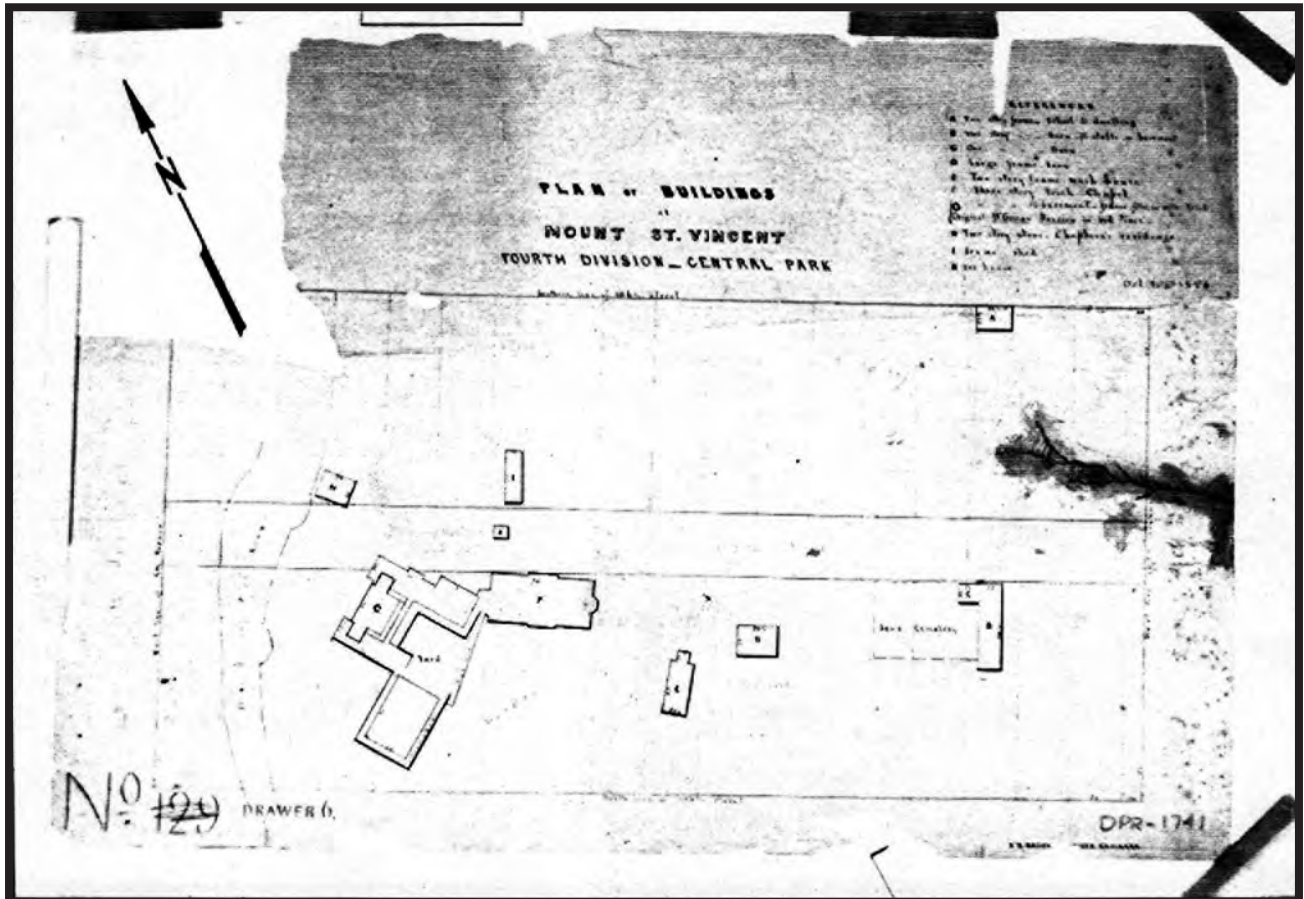


Figure 2.6. Bacon, J.B. "Plan of Buildings at Mount St. Vincent." 1856. Scale: 1 inch = 185 feet (approximately).

3. The Park

After ever louder calls in the 1840s and 1850s for New York City to create a great urban park for its rapidly expanding population, the State of New York appointed a Central Park Commission to oversee its development. In 1857 the Commission organized a landscape design competition, won in the following year by Frederick Law Olmsted and Calvert Vaux with their inspired naturalistic design known as the *Greensward Plan*. Influenced by contemporary park designs in England, New England and elsewhere in New York, the *Greensward Plan* was idyllic and rustic in tone and made use of separate circulation systems for pedestrians, horseback riders and pleasure vehicles. Crosstown commercial traffic was removed from view in sunken roadways (today's "Transverses"), screened with vegetation. A series of 36 bridges, all designed by Vaux and each one unique, ranged from rough-dressed stone spans to delicate neo-Gothic structures in cast iron. The Mall, with its allees of elms culminating in the Bethesda Terrace and Fountain set within a broader lake and woodland setting, formed the centerpiece of the design in the southern part of the Park (Miller 2022:323-435).

Olmsted and Vaux's *Greensward Plan* of 1858 only extended as far north as 106th Street and the design emphasis was placed on the section of the Park lying to the south of the Old Reservoir. The portion above the 97th Street Transverse, with its more rugged and undeveloped terrain, received far less attention and would ultimately retain much of its original topography. In 1857-58, to make way for the Park, some 1,600 residents, many living in shanties, were evicted through eminent domain and construction began in earnest. The Mount St. Vincent Academy relocated out of the Park to the Bronx at this time, leaving the buildings to be absorbed into the Park's infrastructure following a brief period as a military hospital during the Civil War (Figures 2.7 and 2.8).

Olmsted initially worked as the park's superintendent overseeing construction, but he was forced out in the fall of 1859. However, he remained instrumental in extending the designs for the Park northward to include the 65-acre area between 106th and 110th Streets where the line of bluffs with its former military fortifications overlooked the swampland along Harlem Creek. During this period consideration was already being given to integrating the fortifications into the park design. In the 1861 annual report it was noted that "the old fortifications ... will continue to be preserved within the boundaries of the people's pleasure ground" (*Fourth Annual Report* ... 1861:131). By 1863, the land in this northerly extension had been acquired and the grounds, drives and walks below 102nd Street were open to the public. The fortifications were by now clearly recognized as a cultural asset: "[t]he remains of these works, that so much enhance the interest of this section of the Park, will, as far as practicable, be preserved" (*Seventh Annual Report* ... 1864). Attention was soon turned to the water resources in the Park's northern end where the 12-acre lake known as Harlem Meer was created from the swampland along Harlem Creek, the Ravine and Waterfall were carved out of rock outcrops along Montayne's Rivulet, and additional walks were constructed. By 1873, when the Park was officially completed, some ten million cartloads of earth and stone had been taken out of the Park, some 18,500 cubic yards of topsoil had been imported from New Jersey, and more than four million trees, shrubs and plants had been put in place, all at a cost of around \$14 million.

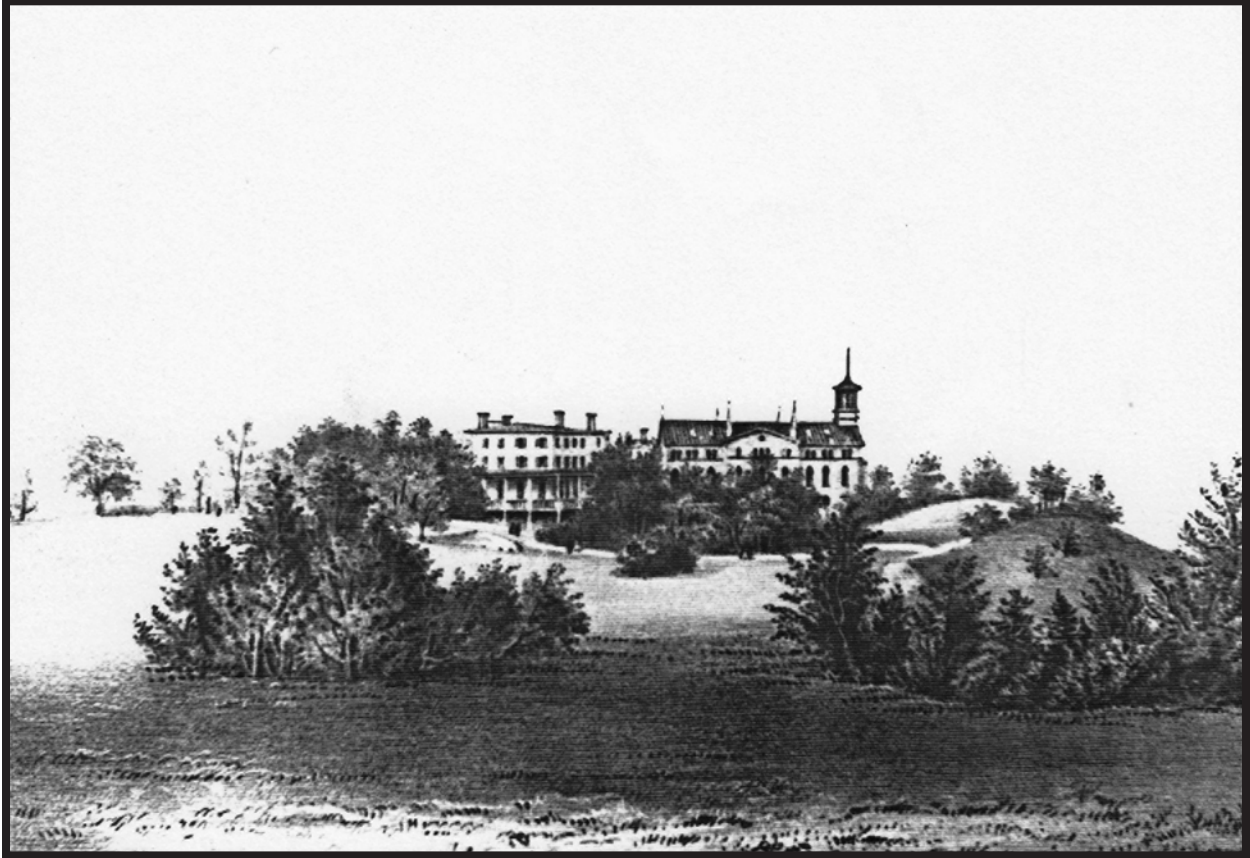


Figure 2.7. View of Mount St. Vincent. 1861. This view, looking north, shows the Mount St. Vincent Academy [589-12] at left and Chapel [589-8] at right. Source: *Valentine's Manual of Old New York* 1861.

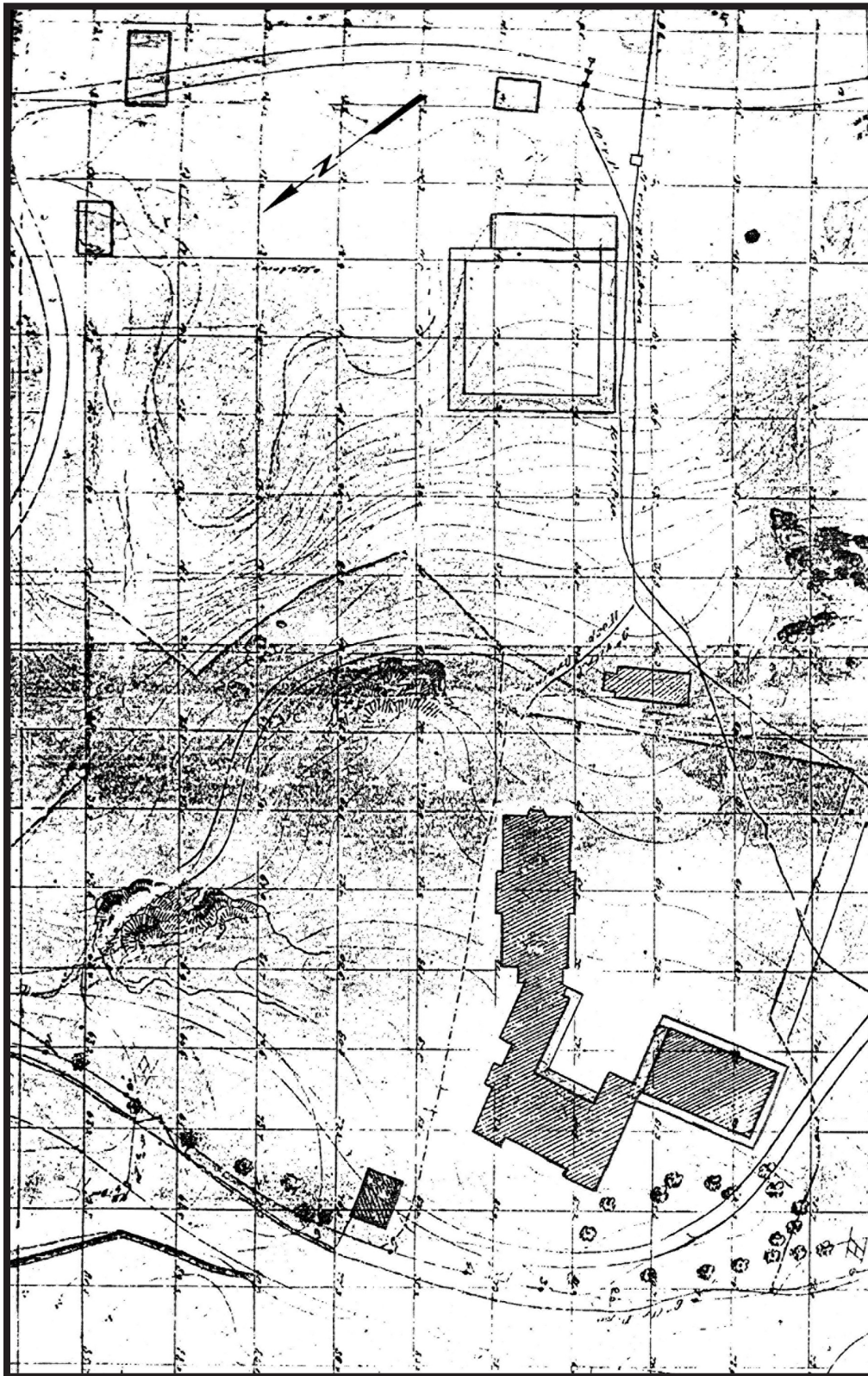


Figure 2.8. Topographic Map of the Northern Section of Central Park. Circa 1865. Scale 1 inch = 95 feet. This map depicts the former Mount St. Vincent Academy complex [589-12].

Since its creation Central Park has experienced several periods of decline and rebirth, in large part driven by economic fluctuation. The Park thrived in the late 19th century and was for the most part well maintained in accordance with the original vision of Olmsted and Vaux, despite political pressure and heavy usage. Some Beaux Arts influences crept into the architecture of the Park's structures during the City Beautiful Movement in the early 20th century, but grand monumentalizing were mostly restricted to the southwestern and southeastern entrances. Recreational facilities were added during this same period and became increasingly well organized in terms of programming.

In the northeastern corner of the Park, where the Forts Landscape Reconstruction Project is located, some of the buildings associated with the former Mount St. Vincent were adapted to provide visitor accommodation and serve refreshments, and then later became exhibit and office space. The complex was largely destroyed by fire, however, on January 2, 1881. In 1905, publication of Edward Hagan Hall's *McGown's Pass and Vicinity* advocated for interpretation of the remains of the military fortifications on either side of the pass and in the following year a pair of cannons, at the time thought to be of War of 1812 vintage (but now recognized as ships' armament dating from the Revolutionary War era recovered [Miller 2004]), were installed on a granite base at Fort Clinton. Although Fort Clinton was subjected to a measure of historic interpretation at this time, it is unclear whether Nutter's Battery and Fort Fish were recognized in any fashion. The surrounding landscape on the bluff slopes remained wooded and overgrown with no formal pathways, stairs or lighting (Warsh 2013).

The Park suffered from lack of maintenance during the Depression, with the northern section becoming shabby in appearance and the path to Fort Clinton falling into disrepair. In 1934, ten-foot-high chain-link fencing was installed in some areas where the military fortifications formerly existed, partly to create bird sanctuaries, but also to better control human access. Finally, in the early 1940s, during the Robert Moses era, a Works Progress Administration (WPA) improvement project was implemented for the northern end of the Park, making it more formally accessible to the public for the first time. The main thrust of this work occurred in 1945 when the chain link fence was removed and new paths, stairs and ramps were constructed. It was at this time that a path was first constructed around the southern shore of the Harlem Meer and an overlook was created at Nutter's Battery. At Fort Clinton, a concrete curb with a four-foot-high wrought iron concrete curb was erected. In general terms, the WPA project created the landscape that is essentially still visible today almost 70 years later (Warsh 2013).

Another period of relative neglect occurred in the late 1960s and early 1970s, but since the designation of the Park as a National Historic Landmark in 1963 and a municipal scenic historic landmark in 1974, and the establishment of the Conservancy in 1980, the condition of the Park has been steadily enhanced by an ongoing program of improvement and restoration (Rogers *et al.* 1987; Rosenzweig and Blackmar 1992; Miller 2004; Warsh 2013).

B. HISTORIC MAP ANALYSIS

By the early 19th century, when John Randel was surveying his street grid over the undeveloped portions – the greater part – of Manhattan Island, the project vicinity was likely largely cleared of woodland and terrain that could be cultivated would have been in active agricultural usage. The extraordinarily detailed Randel Farm

Maps of 1818-1820 show clearly the drainage and rock outcrops in the northern end of the Park as well as the course of the Kingsbridge Road, buildings, fortifications and many property boundaries, some of which appear to have been marked by fences (Figure 2.9). Superimposing the planned North End Recirculation System on to the Randel maps shows the bulk of the project as falling within areas of open, probably cleared farmland. Only alongside the Kingsbridge Road and on Mount St. Vincent does the project come into close proximity to the sites of former 18th/early 19th-century buildings.

As the 19th century wore on and the pressure of the city's growing population caused both formal and informal settlement to spread northward across the island, more houses and outbuildings were erected in the project vicinity. The Viele topographic survey of the area of the soon-to-be created Central Park, produced in the summer of 1856, shows many more buildings scattered across the landscape between Fifth and Eighth Avenues above 98th Street as far as 106th Street (Figure 2.10 [the map unfortunately does not extend north of 106th, since that represented the then-planned limit of the Park]). A cluster of buildings is evident near the western end of the proposed piping alignment in the baseball fields, while another building is shown close to this alignment on the west side of the West Drive. Several additional buildings are in place within the Mount St. Vincent complex and a structure is visible south of 106th Street (projected), just west of Fifth Avenue, not far from the site of the proposed outlet control structure. Yet another building is shown just east of Eighth Avenue between 98th and 99th Streets close to the projected alignment of the drain connecting the Pool to the main running down Eighth Avenue.

Two additional maps from the early/mid-1860s, following the creation of the Park and its extension northward to 110th Street, show that most of the buildings depicted on the Viele map less than decade earlier had been removed in the course of landscaping (Figures 2.11 and 2.12). In the immediate project vicinity, only structures on Mount St. Vincent remained standing, while the two manmade water bodies, "The Pool" and Harlem Meer, both extend into locations where the North End Recirculation System will be constructed. It is a reasonable assumption that the radical transformation of the landscape which occurred in the creation of the Park resulted in extensive, and in many cases total, destruction of structural remains and soil deposits associated with pre-Park cultural features.

The effects of the Park's original construction and subsequent alteration on the pre-Park landscape can be studied at an even more granular level by comparing the detailed topographic survey of the Park made in the mid-1930s (Figures 2.13a-e) with the Randel Farm Maps of 1818-1820 and the Viele survey of 1856 (Figures 2.9 and 2.10). Overlaying the locations of the proposed filtration system and piping near "The Pool" over the 1935 topographic mapping reveals that this area had been re-contoured, graded and filled, and that the bottom of "The Pool" was "being excavated as of Nov. 26, 1934" (Figure 2.13a). In the North Meadow, although some rock outcrops still protrude and serve as reference points for understanding the pre-Park landscape, it is obvious that widespread filling has occurred to create the level lawns and playing fields that have long characterized this section of the Park (Figure 2.13b). The overall shape of the pre-Park landscape is perhaps least altered in the area of the Kingsbridge Road and Mount St. Vincent, but the construction of the East Drive along the Kingsbridge Road alignment will have widened and changed the grade of the roadway. The 1935 topographic mapping shows major re-contouring, grading and filling has occurred to form the southern end of Harlem Meer and lay out the paths around its perimeter (Figure 2.13c). Similarly, the construction of the northwest perimeter



Figure 2.9. North End Recirculation System, Project Plans Superimposed on the “Randel Farm Maps.” Source: Randel 1818-1820.

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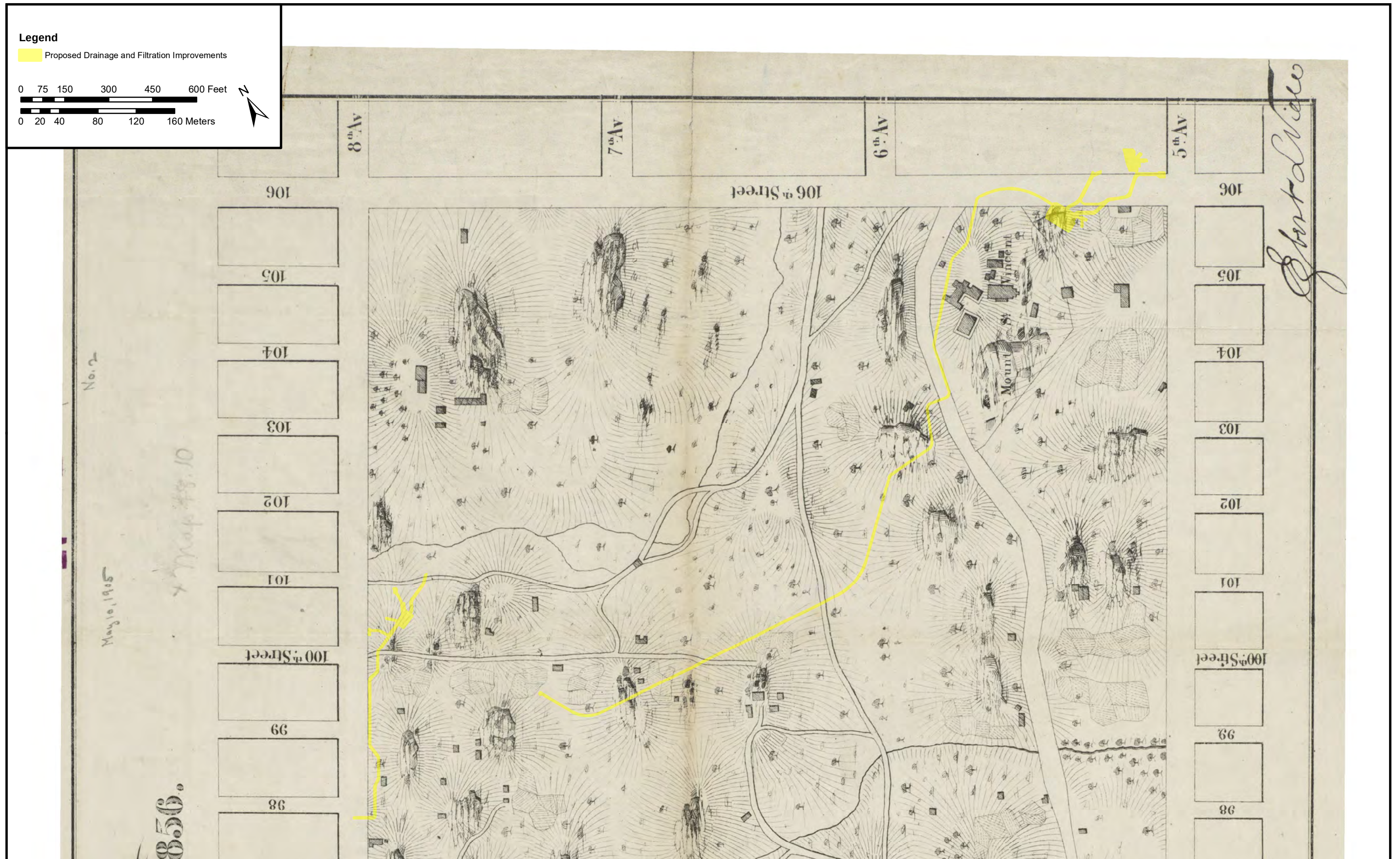


Figure 2.10. North End Recirculation System, *Project Plans Superimposed on Map of the Lands Included in The Central Park, from a Topographical Survey, June 17, 1856.* Source: Viele 1856.

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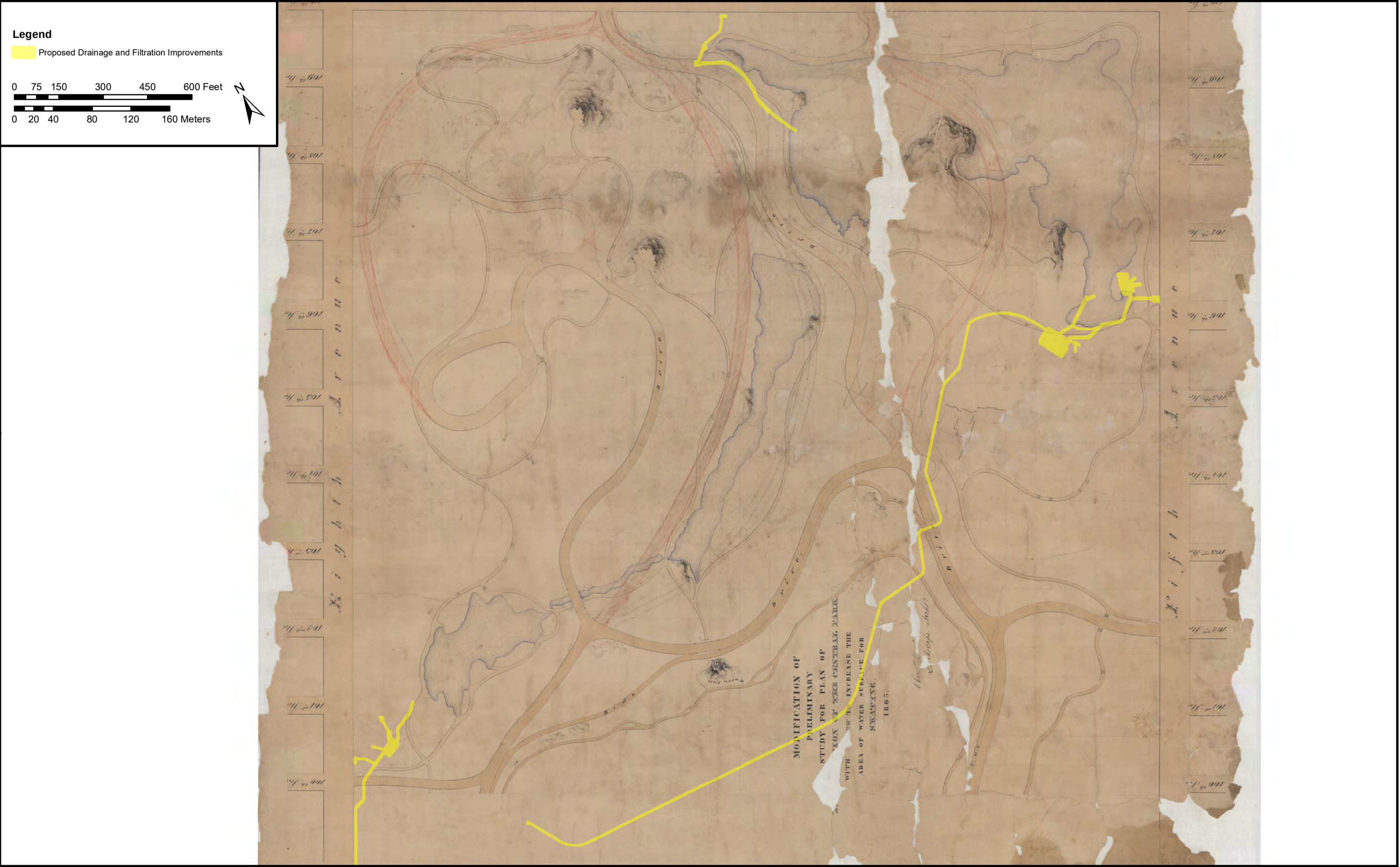


Figure 2.11. North End Recirculation System, Project Plans Superimposed on the “Modification of Preliminary Study for Plan of Northern Section of the Central Park with View to Increase the Area of Water Surface for Skating.” Source: Olmsted 1863.

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Figure 2.12. North End Recirculation System, Project Plans Superimposed on *Map of the Central Park*. Source: Board of Commissioners of the Central Park 1865.

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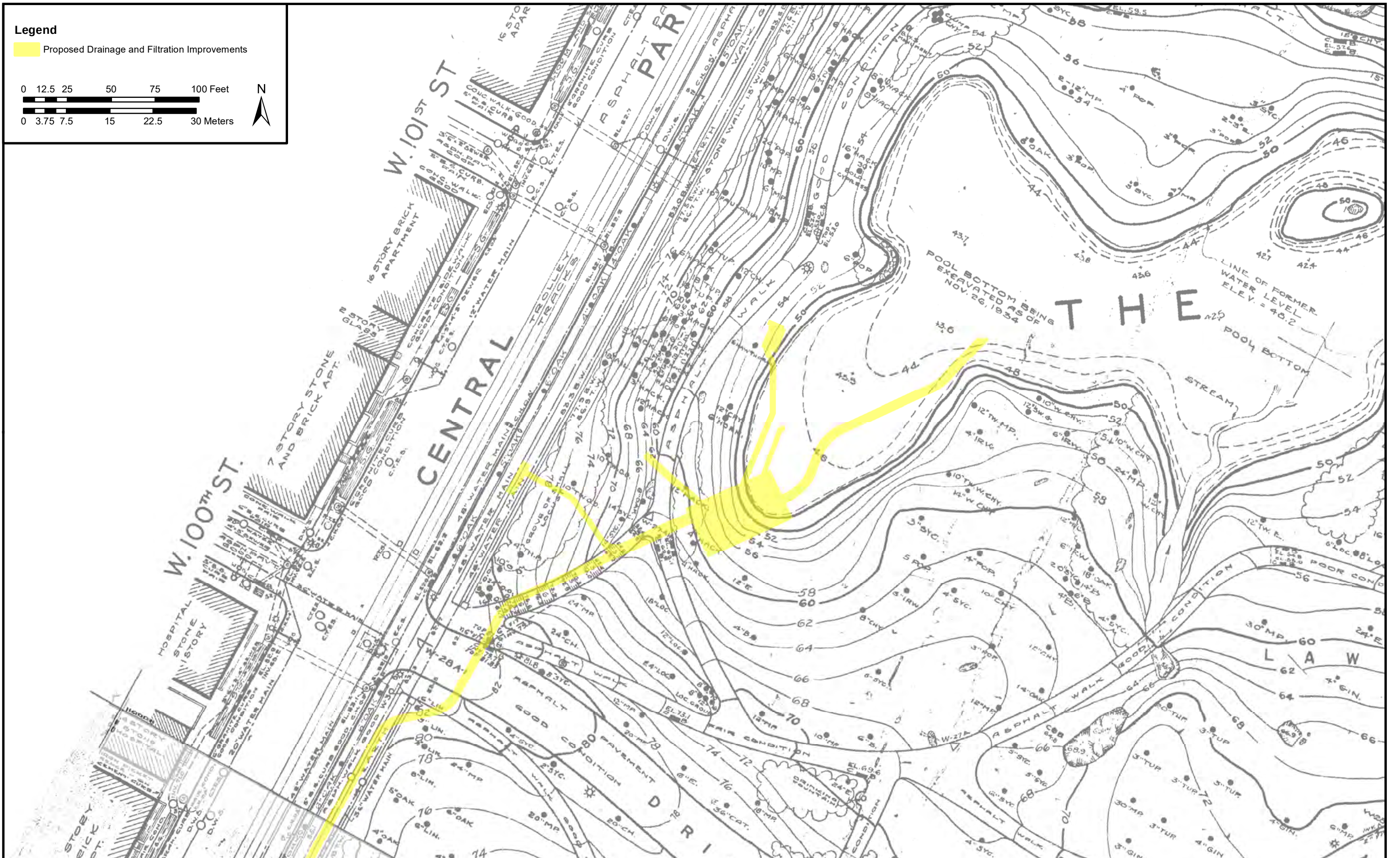


Figure 2.13a. North End Recirculation System, Project Plans, West 100th Street Pool, Superimposed on *Topographical Survey of Portion of Central Park, Boro of Manhattan*. Source: City of New York, Department of Parks 1935: Sheet M-T-10-105.

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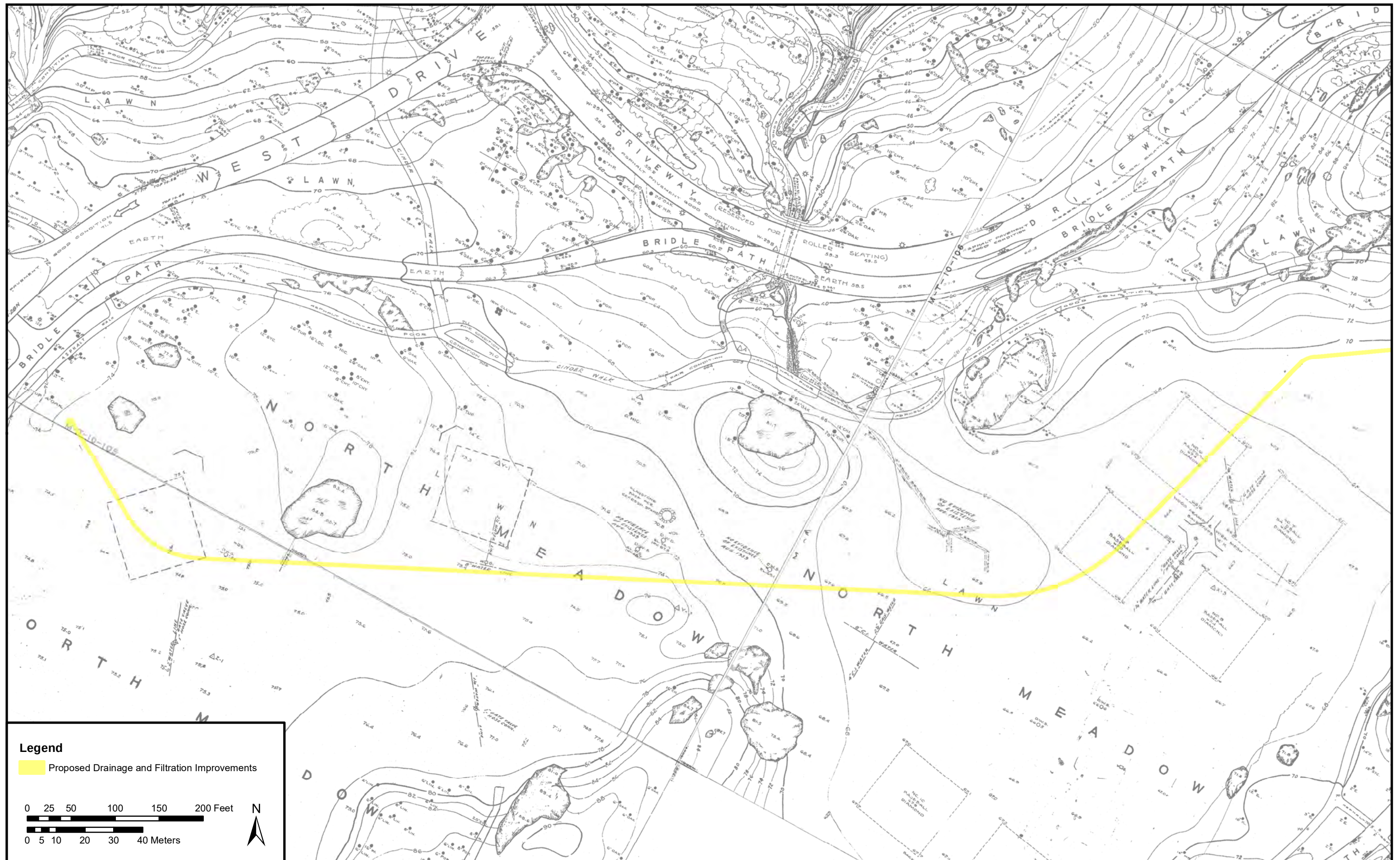


Figure 2.13b. North End Recirculation System, Project Plans, Baseball Fields, Superimposed on *Topographical Survey of Portion of Central Park, Boro of Manhattan*. Source: City of New York, Department of Parks 1935:Sheet M-T-10-104, 105 and 106.

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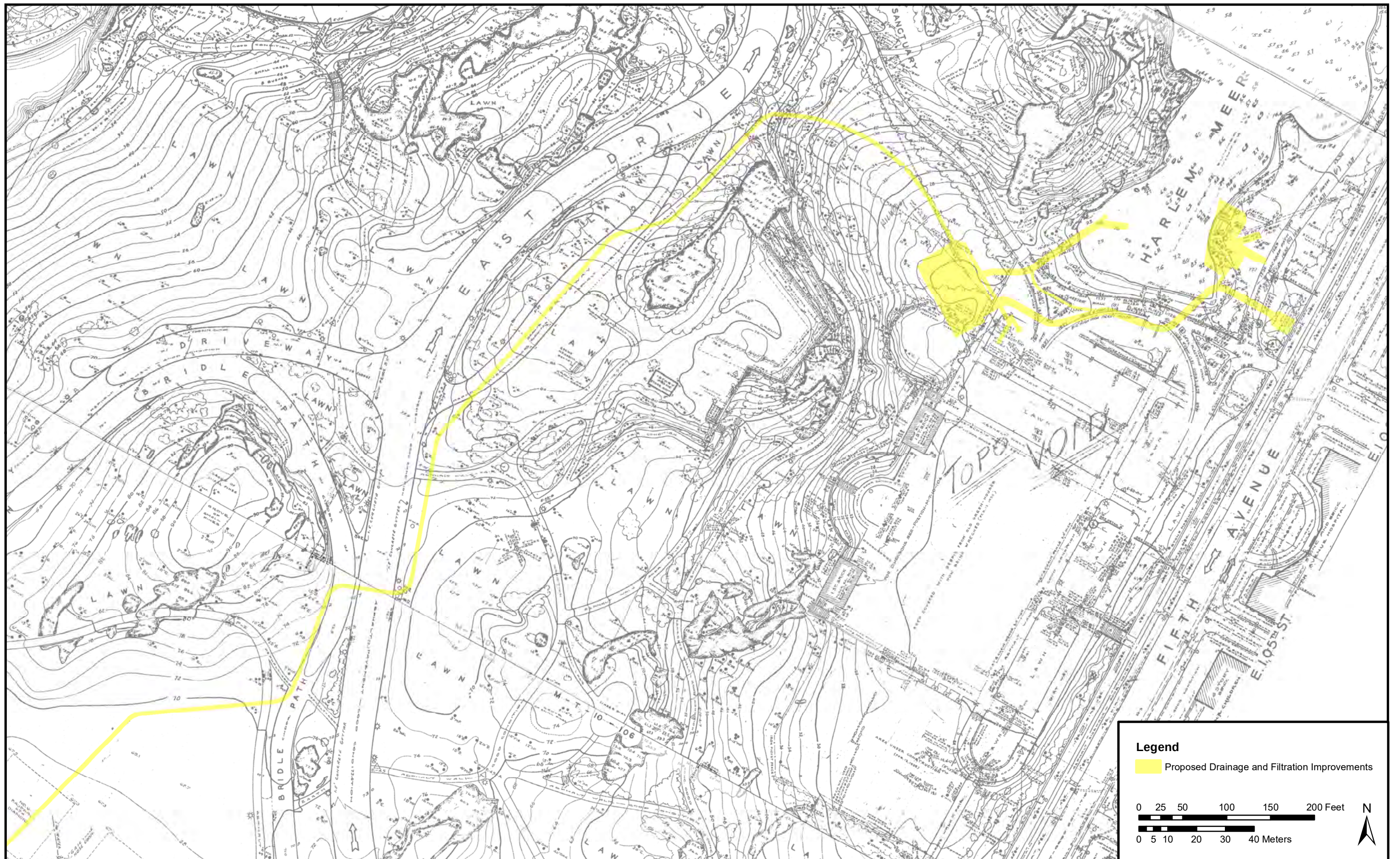


Figure 2.13c. North End Recirculation System, Project Plans, Mount St. Vincent and Harlem Meer Southeast, Superimposed on *Topographical Survey of Portion of Central Park, Boro of Manhattan*. Source: City of New York, Department of Parks 1935: Sheet M-T-10-102, 103, 104 and 106.

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Figure 2.13d. North End Recirculation System, Project Plans, Harlem Meer Northwest, Superimposed on *Topographical Survey of Portion of Central Park, Boro of Manhattan*. Source: City of New York, Department of Parks 1935: Sheet M-T-10-101 and 102.

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of Harlem Meer and the East Drive, as evidenced by the mid-1930s topography, pre-supposes extensive modification of the pre-Park landscape and its related drainage (Figure 2.13d). The extent to which the creation of the Park affected the pre-Park topography alongside Eighth Avenue between 98th and 101st Streets is less clear, although filling would appear to have occurred reducing the area of exposed bedrock in this area (Figure 2.13e).

Chapter 3

ARCHAEOLOGICAL TESTING

A. METHODOLOGY

Archaeological testing for the planned recirculation system in the north end of Central Park was carried out by a three- to four-person crew on three days in April 2025 (April 17, 18 and 23). Fieldwork involved a thorough surface inspection of the five areas slated for archaeological testing and the excavation of 35 shovel tests (Figure 3.1). Testing locations were based on a work plan generated by the earlier Phase IA-level archaeological assessment and were placed where proposed ground disturbance coincided with areas of archaeological potential. Tests were typically spaced at intervals of 25, 50 or 200 feet along the alignment of the proposed recirculation system (Hunter Research, Inc. 2025).

All test locations were laid out using a handheld Trimble GPS survey device. All shovel tests were at least 18 inches in diameter and excavated manually using round-bladed shovels, supplemented where necessary with a Montana sharpshooter shovel to penetrate dense or compacted soils. Excavated soils were screened through ¼-inch hardware mesh in order to recover cultural materials. Artifacts were bagged and tagged by stratigraphic context. Details of the stratigraphy of each test (soil color, texture and any other observations) were recorded on standardized forms. Munsell charts were used to classify soil color. Following excavation, all shovel tests were backfilled and the ground restored as closely as possible to its pre-excavation condition.

A summary of stratigraphic data is provided in Appendix A. An inventory of cultural materials recovered during this testing program is included as Appendix B. All artifacts, field records and other project data were transported to the Hunter Research offices in Trenton, New Jersey, for processing and analysis. Upon final acceptance of this report, all artifacts and relevant project documentation will be returned to the Central Park Conservancy for transfer to the New York City Archaeological Repository.

B. FIELD RESULTS

The soil profile was somewhat variable across the full extent of project alignment, with disturbed soils evident in the center of the park (Areas 2 and 3) and more intact soils still in place to the northwest (Areas 1 and 5) and northeast (Area 4). All of the shovel tests typically opened with the removal of surficial sod and layer of dark brown silty loam varying in thickness between 0.3 and 0.9 feet, which was generally interpreted as a topsoil [Context 1].

Area 1 (*Filtration System and Piping near “The Pool” between 100th and 101st Streets*). This area, presently a gently sloping, grassy swale, was rated as having a low potential for yielding significant prehistoric and historic archaeological resources on account of an extensive re-working of the landscape that occurred when the Park was created (Photograph 3.1).

Fieldwork involved the excavation of six shovel tests (Shovel Tests 1-6) laid out at 25-foot intervals within the proposed area of ground disturbance (Figure 3.2). The terrain was lightly wooded with a sloping lawn situated extending between paved pathways to the southwest and the edge of “The Pool” to the northeast. In these tests, excavation began with the removal of a layer of sod and silty loam with organic matter [Context 1] that measured approximately 0.5 feet thick. In most of the tests, the topsoil [1] overlaid one or more fill deposits of varying thickness comprised of clayey, silty, mottled silty and sandy loam. These fill deposits yielded a moderate quantity of mixed and fragmentary cultural material, including plastic, ceramic and glass. In Shovel Test 3, a mottled sandy loam fill [2] overlaid two blocky pieces of micaceous schist [3] (Photograph 3.2). Review of historic maps for this location suggested that “The Pool” was historically much larger than at present and its southwestern edge lay in the vicinity of Shovel Test 3. The stones encountered in Shovel Test 3 may relate to a boundary defining this edge, perhaps a retaining wall for the pool itself or a former pathway around its perimeter.

In Shovel Tests 1, 2, 4 and 6, these fill deposits overlaid a rocky impasse at depths ranging between 1.5 and 4.0 feet below the ground surface. In Shovel Test 5, the fill deposits ran especially deep and included a mottled, wet clay loam containing plastic and glass [5] which extended from 3.8 to 5.2 feet below the ground surface. This fill [5] overlaid a 0.3-foot-thick layer of mottled, wet coarse sand [6], which was interpreted as a disturbed B horizon deposit, a layer which produced two fragments of colorless glass and a sherd of redware. This layer [6] overlaid a rock impasse, possibly bedrock, encountered approximately 5.7 feet below the ground surface.

Area 2 (Recirculation Piping Alignment across the Baseball Fields between the West and East Drives). This area, presently comprising well-maintained lawn and baseball fields, was rated as having a low potential for yielding significant prehistoric and historic archaeological resources on account of extensive filling of the landscape that occurred when the Park was created (Photograph 3.3). Historic map analysis indicated that grades in this area have not substantially changed since *circa* 1860.

Fieldwork involved the excavation of eight shovel tests (Shovel Tests 7-14) which were laid out along the line of proposed ground disturbance at approximately 200-foot intervals (Figure 3.3). These tests revealed a soil sequence that consisted of sod and a dark brown topsoil over multiple, variable sandy and silty loam fill deposits. The fill deposits in these tests yielded variable amounts of cultural material, including ceramic sherds, glass fragments and plastic. In all but one of these tests, the fill deposits overlaid a rock impasse, potentially bedrock, which was reached with the help of a bucket auger at depths between 1.8 and 3.3 feet below the ground surface (Photograph 3.4). Shovel Test 10, however, revealed a sandy loam initially encountered at 0.9 feet below the ground surface. This soil layer was interpreted as B Horizon subsoil and overlaid a bedrock impasse encountered at 1.8 feet below the ground surface.

Area 3 (Recirculation Piping Alignment Across the East Drive and over Mount St. Vincent; Filtration System, Outlet Structure and Piping at Southern End of Harlem Meer). The section of the East Drive that crosses over the west side of Mount St. Vincent follows a portion of the route of the Kingsbridge Road. Both frontages of the Kingsbridge Road and Mount St. Vincent itself are considered highly sensitive from an archaeological standpoint.

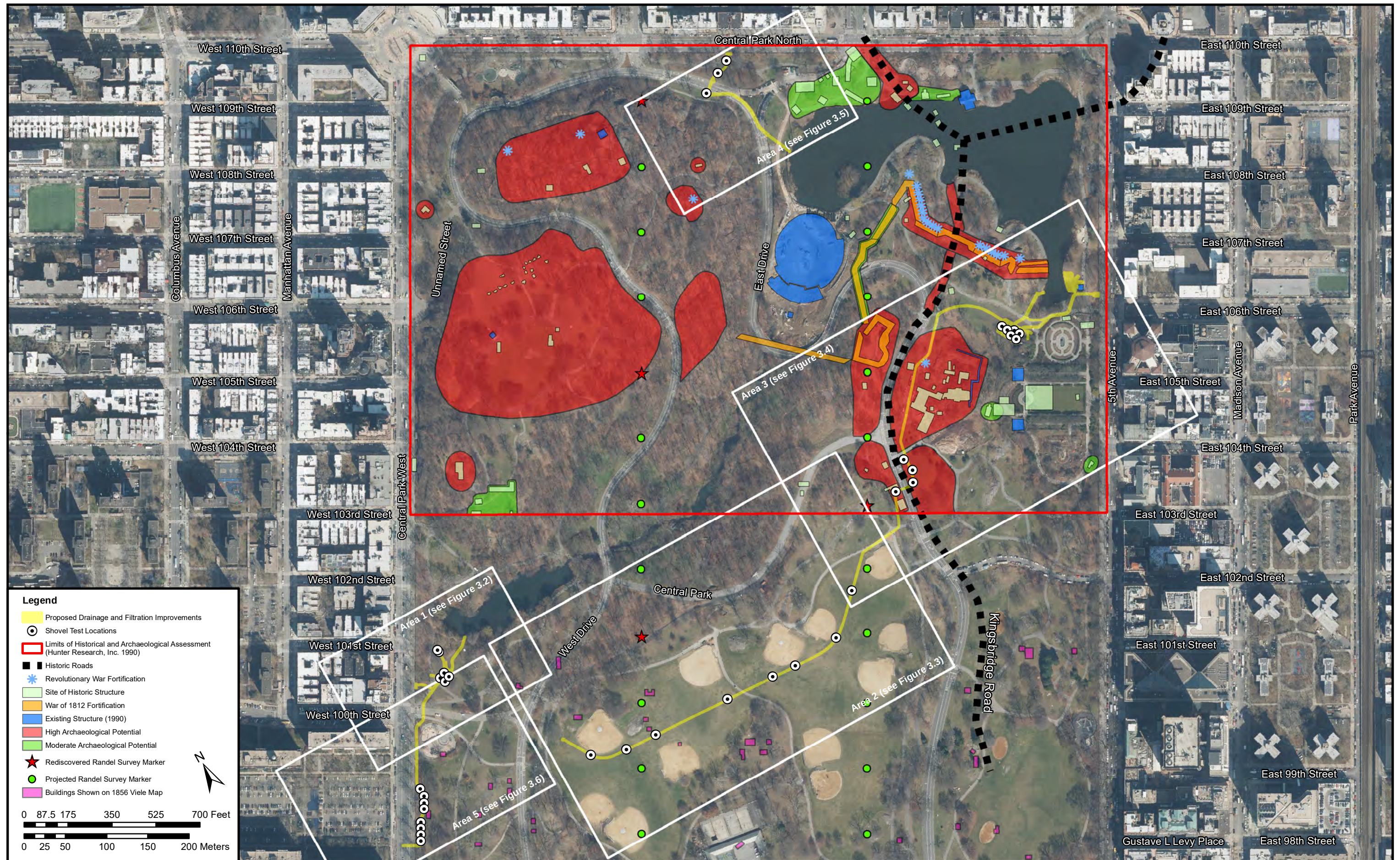


Figure 3.1. Aerial Photograph Showing the Overall Limits of Proposed Ground Disturbance and Locations of Archaeological Shovel Tests.

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Photograph 3.1. View looking northeast showing Area 1 adjacent to “The Pool” on the west side of the park between 100th and 101st Streets (Photographer: Joshua Butchko, April 2025) [HRI Neg.# 25026/D1:027].



Photograph 3.2. View looking northwest showing Shovel Test 3 (Photographer: Joshua Butchko, April 2025) [HRI Neg.# 25026/D1:032].



Figure 3.2. Aerial Photograph Showing Area 1 with Limits of Proposed Ground Disturbance, Locations of Archaeological Shovel Tests and Photographic Views.

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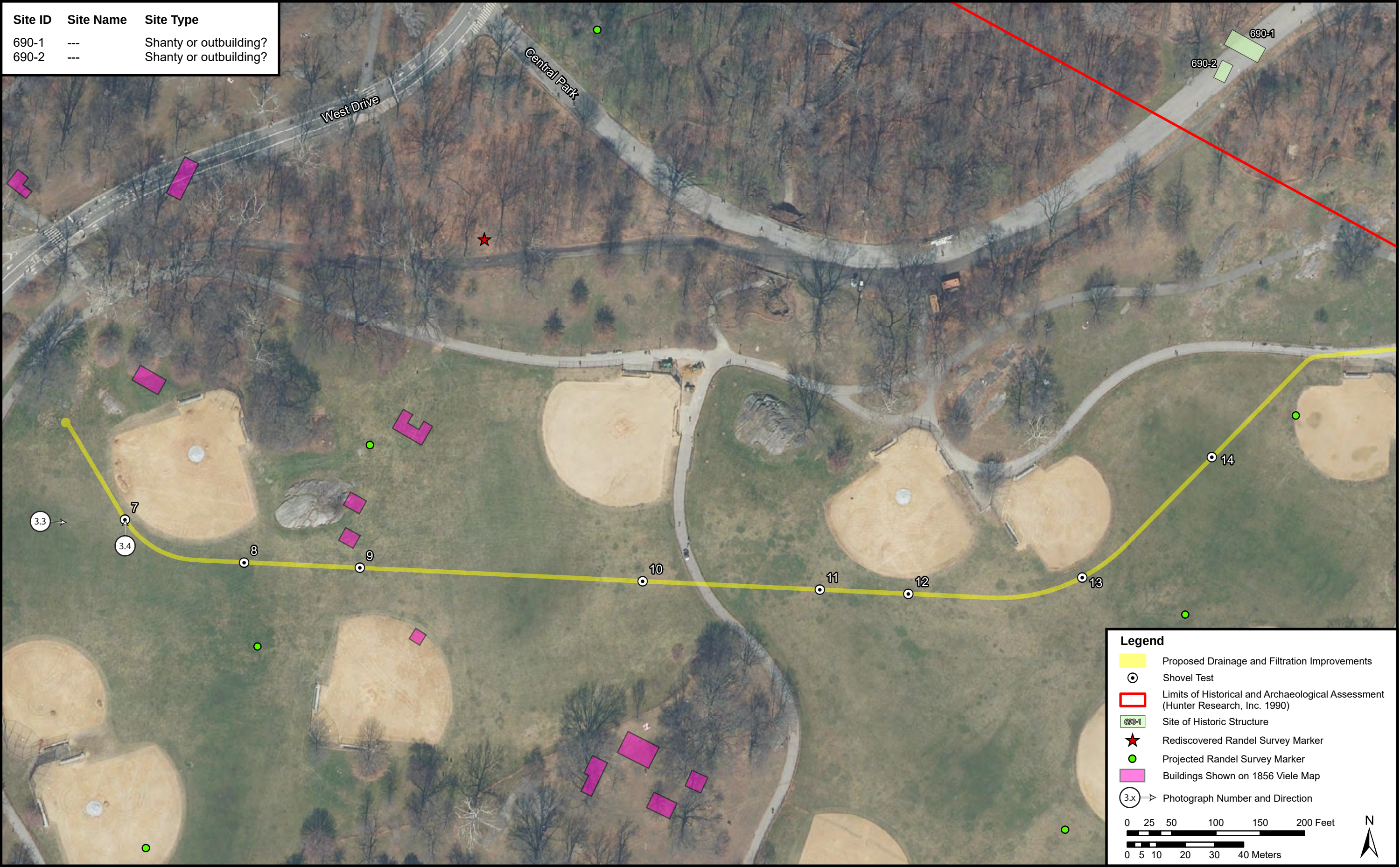


Figure 3.3. Aerial Photograph Showing Area 2 with Limits of Proposed Ground Disturbance, Locations of Archaeological Shovel Tests and Photographic Views.

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Photograph 3.3. View looking east-northeast showing Area 2, which consists mostly of lawn and baseball fields between the East and West Drives (Photographer: Joshua Butchko, April 2025) [HRI Neg.# 25026/D1:002].



Photograph 3.4. View looking north showing Shovel Test 7 (Photographer: Joshua Butchko, April 2025) [HRI Neg.# 25026/D1:012].

Along the west side of the East Drive, the proposed piping alignment for the North End Circulation System is routed close to and between the projected sites of an early 19th-century dwelling [588-2] and the colonial and Revolutionary War-era Benson/Leggett Tavern [588-3]. Although this area has likely been impacted by the original construction and later modification of the East Drive and the bridle path, and also by utilities installation, there appears to have been deposition of fill to achieve the present-day grades. Archaeological deposits and features may conceivably lie sealed beneath fill.

On the opposite side of the East Drive, the North End Circulation System piping alignment runs roughly parallel to the route of the former Kingsbridge Road, passing just west of the summit of Mount St. Vincent on which lie the sites of various academy buildings [589-8 through 589-12, 590-4 through 590-11] and their predecessor, the Black Horse Tavern/McGown's Tavern [589-12] (Photograph 3.5). The site of the academy Chaplain's House [590-12] on the west side of Mount St. Vincent is also located just to the northwest of the piping alignment. The piping is to be installed alongside an existing water line for roughly 400 feet of its length, the trenching for which was archaeologically monitored in 2013, revealing only late 19th- and 20th-century fill. Archaeological monitoring, as opposed to pre-construction archaeological testing, was considered an appropriate approach for the northern portion of this segment of the North End Circulation System piping, but shovel testing was recommended for the southern portion.

Historic maps for the area around the southern end of Harlem Meer, where a filtration system, suction and filter discharge piping and an outlet control structure are proposed, show no evidence for earlier buildings or structures. While this entire area has been heavily modified, both during the original Park construction (e.g., the creation of the Meer, which involved re-contouring of the historic drainage, and paths), and in subsequent episodes of utilities installation, landscaping and pathway upgrades, there is some possibility that intact pre-Park archaeological deposits may survive in the flatter area at the base of Mount St. Vincent on its northeast side where the filtration system will be positioned (Photograph 3.6).

Ten shovel tests (Shovel Tests 15-24) were laid out in areas of proposed disturbance to the southwest and northeast of Mount St. Vincent (Figure 3.4). Tests to the southwest (Shovel Tests 15-18) were placed in lawn or alongside paved pathways on either side of East Drive. Tests to the northeast (Shovel Tests 19-24) were placed in a sloping lawn at the base of the Mount adjacent to the Conservatory Garden. These latter tests were laid out at 25 and 50-foot intervals and offset, where necessary, to avoid existing utilities. In all these tests, excavation began with the removal of sod and dark brown silty loam with organic matter [Context 1]. In most of these tests, the topsoil [1] overlaid multiple, variable fill deposits of mottled silty, sandy and clayey loams. These fill deposits produced a moderate quantity of fragmentary cultural material, chiefly plastic and glass. In Shovel Tests 15 and 23, the fill deposits overlaid a rock impasse at a depth of approximately two feet below the ground surface. In Shovel Test 16, a dense, mottled clay fill layer extended to a depth of 3.6 feet below the ground surface. In Shovel Tests 17, 19-22 and 24, the fill overlaid a loamy sand or clay loam between 1.0 and 3.5 feet below the ground surface, a layer that was interpreted as the B Horizon subsoil. In Shovel Test 18, the upper fill layers overlaid a coarse sand with gravel that was interpreted as a C Horizon subsoil. This extended from two feet below grade to a depth of 2.6 feet.



Photograph 3.5. View looking northeast showing the southwest portion of Area 3 along the east side of the East Drive, which in this area roughly follows the course of the former Kingsbridge Road; Mount St. Vincent is at the upper right (Photographer: Joshua Butchko, April 2025) [HRI Neg.# 25026/D1:023].

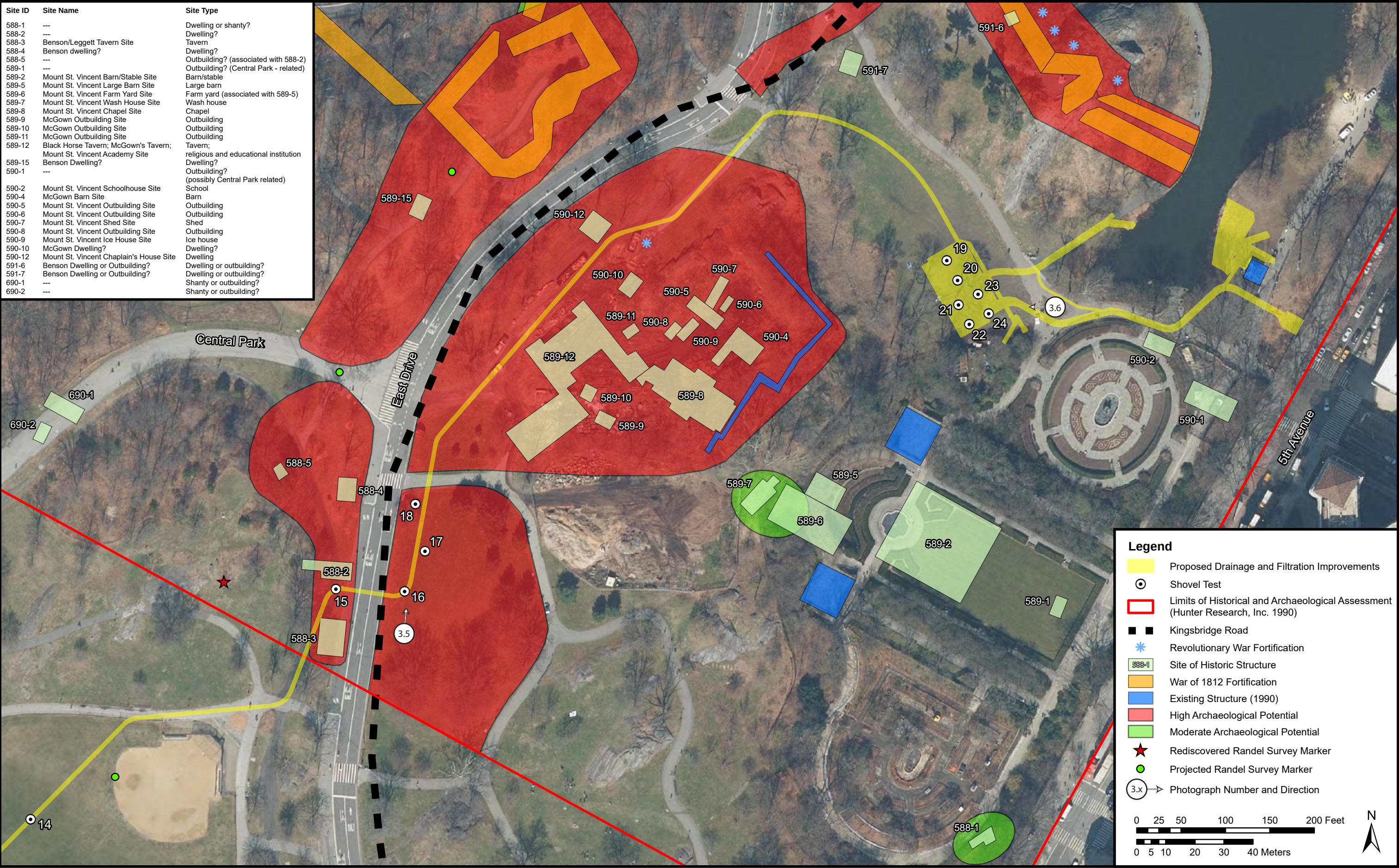


Figure 3.4. Aerial Photograph Showing Area 3 with Limits of Proposed Ground Disturbance, Locations of Archaeological Shovel Tests and Photographic Views.

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Photograph 3.6. View looking west showing the northeast portion of Area 3 at the base of Mount St. Vincent on its northeastern side next to the southern end of the Harlem Meer (Photographer: Joshua Butchko, April 2025) [HRI Neg.# 25026/D1:039].

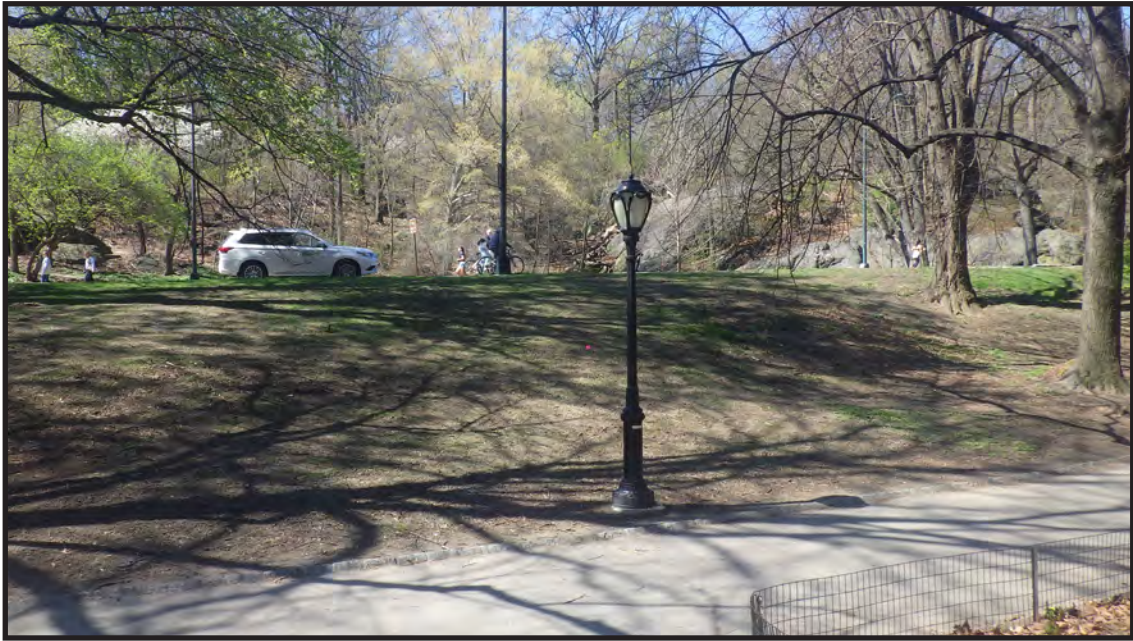
Area 4 (*Wet Well, Pump and Piping adjacent to the East Drive at the Northern End of the Park*). Northwest of Harlem Meer, adjacent to the East Drive between the Adam Clayton Powell, Jr. Boulevard and the Malcolm X Boulevard entries into the Park, where a wet well with pump and pressure and discharge piping are to be installed, is an area where historic maps show no evidence for earlier buildings or structures (Photograph 3.7). This location lies near the base of the bluffs, well to the west of the main focus of the Montagne/Kortwright/Nutter farm, and prior to the Park's creation was probably poorly drained, wet ground close to the confluence of Montayne's Rivulet and Harlem Creek. Creation of the Park appears to have entailed extensive filling of the valley of Harlem Creek to raise the grades of the East Drive and asphalt walks almost to the level of 110th Street.

Fieldwork involved the excavation of three shovel tests (Shovel Tests 25-27) which were laid out in the area of proposed ground disturbance (Figure 3.5). These tests were situated in sloping or level areas of lawn or garden beds along the northern and southern edges of the East Drive close to the northern edge of the park. In these tests, excavation began with the removal of sod and silty loam with organic matter [Context 1] measuring approximately 0.7 feet in thickness. In Shovel Test 25, this topsoil [1] overlaid two 0.9-foot-thick layers of silty loam which were considered fill. In Shovel Tests 26 and 27, the topsoil [1] overlaid a silty loam with dense roots, which was interpreted as an A Horizon. In Shovel Test 26, this deposit produced a small quantity of glass; in Shovel Test 27, it produced a few more pieces of glass and a bottle cap.

A B horizon subsoil, comprised of fine loamy sand, was encountered between 1.2 to 2.5 feet below the ground surface across this area. In Shovel Test 27, this deposit produced a single fragment each of glass and brick, both of which were considered to be intrusive finds resulting from root disturbance. In Shovel Test 26, which was dug to a greater depth with the help of a bucket auger, the B horizon overlaid a 1.9-foot-thick layer of sand loam interpreted as the B2 horizon. This layer overlaid a 0.7-foot-thick layer of mottled loamy sand with gravel that was interpreted as an interfacial B/C horizon. This, in turn, overlaid a fine loamy sand C horizon that was encountered 4.6 feet below the ground surface and continued to a depth of at least 6.25 feet.

Area 5 (*Drain inside the northwest Park boundary wall connecting the Pool to the main in Eighth Avenue at 98th Street*). The planned alignment for the drain connecting "The Pool" to the main in Eighth Avenue at 98th Street passes between the Tarr Playground and the park boundary wall from 100th Street to just below 99th Street. This segment of the connecting line is considered to have negligible archaeological potential since ground has likely been heavily disturbed by wall and playground construction. However, the roughly 200-foot-long stretch of the alignment extending southwest from the point just south of 99th Street where it veers southward further into the park and then parallels Eighth Avenue to the bend where it turns northwest at 98th Street, is of some archaeological concern (Photograph 3.8). There is a possibility that intact pre-Park historic and prehistoric cultural deposits could survive beneath Park landscaping fill in this area and the alignment also passes close to a building shown on the Viele map of 1856 (see above, Figure 2.10).

Fieldwork involved the excavation of comprised eight shovel tests (Shovel Tests 28-35) laid out at roughly 25-foot intervals along the line of proposed ground disturbance (Figure 3.6). These tests revealed a soil sequence that consisted of sod and topsoil over an intact A horizon and a series of B horizon subsoil deposits. In one instance (Shovel Test 32), a layer of mottled sandy loam, interpreted as fill, was present between the topsoil



Photograph 3.7. View looking southwest showing Area 4; the vehicle is traveling along the East Drive and the base of the bluff is just visible in the trees beyond (Photographer: Joshua Butchko, April 2025) [HRI Neg.# 25026/D1:014].



Photograph 3.8. View looking southwest showing Area 5; the park boundary wall along the east side of Eighth Avenue is at right (Photographer: Joshua Butchko, April 2025) [HRI Neg.# 25026/D1:030].



Figure 3.5. Aerial Photograph Showing Area 4 with Limits of Proposed Ground Disturbance, Locations of Archaeological Shovel Tests and Photographic Views.

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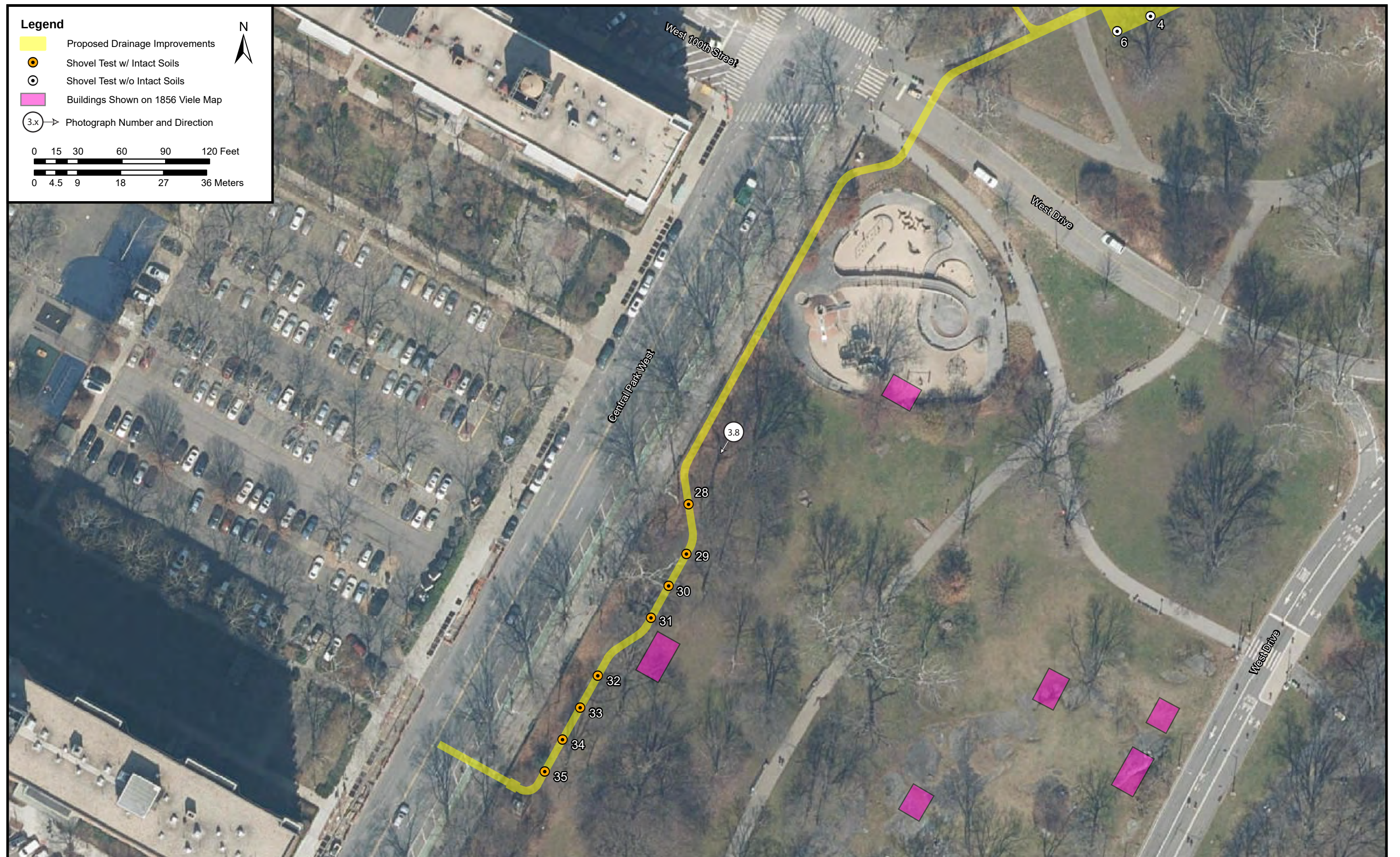


Figure 3.6. Aerial Photograph Showing Area 5 with Limits of Proposed Ground Disturbance, Locations of Archaeological Shovel Tests and Photographic Views.

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and the buried A horizon. The A horizon in this area was typically between 0.4 to 0.9 feet thick and contained a moderate amount of fragmentary historic materials, such as glass, brick and metal. A few notable artifacts were retrieved from this layer including single tobacco pipe stem fragments from Shovel Tests 28 and 33 and a leather shoe fragment from Shovel Test 34. The tests in this area encountered the B horizon subsoil layers at a relatively shallow depth (0.7 to 1.6 feet below ground surface) in comparison with other locations sampled during this survey. Two tests (Shovel Tests 31 and 34) revealed a layer of strong brown fine sand underneath the B2 deposits; this sand was interpreted as C Horizon subsoil.

C. MATERIAL CULTURE

In total, 439 artifacts were recovered during archaeological testing (426 historic and 13 modern items). Other modern cultural materials (plastic, glass and metal domestic refuse fragments) were also noted in the topsoil during the fieldwork but were not retained. The retained **modern assemblage** is limited to plastic debris (6 items), bottle caps (3), a fishing lure (1), utility wire (1), asphalt (1) and a 2012 U.S. dime (1). These items were mostly recovered from lower fill deposits and were retained to verify the disturbed nature of these layers. Nondiagnostic historic architectural debris and other waste materials (brick, coal, window glass and indeterminate corroded iron fragments) were selectively sampled. **No precontact cultural materials** were recovered nor were any significant Native American archaeological deposits or features identified.

The **historic assemblage** (426 items) was widely distributed across the shovel test locations and is considered to have been mostly dispersed through grading and filling associated with the 19th century development of the site and subsequent landscaping improvements and utilities installations (Table 3.1). Area 3 produced the most historic cultural material with 215 artifacts recovered (50% of the total historic assemblage). Area 1 yielded the second most with 94 artifacts (22%). Areas 2 and 5 were relatively comparable in historic artifact yield (52 and 48 objects respectively or about 12% each of the total). Area 4 only produced 17 historic artifacts (4%).

Only a limited number of historic cultural materials were recovered from the topsoil across the project site (7 artifacts or 1.6% of the total historic assemblage). A total of 46 historic artifacts were recovered from A horizon deposits across the site (11%). The majority of the historic assemblage (371 artifacts [87%]) was recovered from grading fill or disturbed deposits across the site. Three 18th-century ceramic sherds – a sherd of creamware [1762-1820] and two sherds of pearlware [1780-1830] – represent the oldest datable historic cultural material in the assemblage. Otherwise, most of the historic assemblage can be attributed to the mid-19th- through early 20th-century use of the park.

Glassware: Historic vessel glass is dominant in this assemblage (295 artifacts or 69% of the overall historic assemblage). Glass color is a useful general indicator of age. Broadly speaking, darker colored glass, especially olive green, was more commonly manufactured in the 18th and early 19th centuries. Other colors, like amber, aqua and blue variants are more characteristic of the 19th century and ultimately give way to the more refined and commonly produced clear glass of the later 19th and 20th centuries. Of the glass vessel fragments recovered from this investigation, the majority are colorless (190 pieces). Small quantities of brown (26), green (27),

Table 3.1. Summary of Historic Artifacts Recovered from Shovel Tests

	Area 1	Area 2	Area 3	Area 4	Area 5	Grand Total
Glass	78	30	155	15	37	315
bottle	69	11	41	3	11	135
indeterminate vessel	8	18	103	9	22	158
window	1	1	11	3	4	20
Fired Clay	7	19	39	2	7	74
Earthenware	4	1	10		2	17
Buff Bodied		1				1
Redware	4		10		2	16
Porcelain	1		5			6
Refined Earthenware		2	9	1		12
Creamware [1762-1820]			1			1
Pearlware [1780-1830]			2			2
Whiteware [1815-1940]		2	6	1		9
Stoneware		1				1
Personal					2	2
smoking pipe					2	2
Structural	2	15	15	1	3	36
drainage			1			1
brick	2	15	14	1	3	35
Metal	6	3	10		2	21
Aluminum Alloy	2	2	2			6
pull tab	2	2	1			5
indeterminate type			1			1
Ferrous metal	4	1	8		2	15
nail	4		1		2	7
slag			1			1
wire		1				1
indeterminate type			6			6
Mineral			4		1	5
Coal			4			4
Mica					1	1
Composite			2		1	3
light bulb			1			1
shoe					1	1
concrete			1			1
Fauna			3			3
indeterminate shell			3			3
Stone	1		2			3
architectural stone	1		1			2
indeterminate flint			1			1
Synthetic	2					2
Battery part	2					2
Grand Total	94	52	215	17	48	426

aqua (16), olive green (7), and lime green (5) glass are also present, along with single pieces of amber, black, blue and white or milk glass. Based on the preponderance of colorless glass, the glass assemblage is mostly representative of later 19th and 20th century occupation.

Ceramics: Historic ceramics are typically the most informative class of material in archaeological collections with regard to date, function and socio-economic status. In this instance, they account for 36 artifacts (8% of the historic assemblage).

Refined earthenware, common from the late 18th century onward, is present in the ceramic assemblage (12 sherds). As noted above, earlier refined earthenware in the assemblage comprises one sherd of creamware [1762-1820] and two of pearlware [1780-1830]. Whiteware, the manufacture of which broadly dates from 1815 to 1940, is represented by nine sherds. Ironstone, typically produced from 1840 to 1950, absent from the assemblage.

Redware, a coarse earthenware commonly found on historic archaeological sites owing to its cheap and prolific production and widespread use, is also represented (17 sherds). These items mostly comprise common lead or manganese glazed or unglazed vessel fragments which are typical of utilitarian planting or kitchen storage vessels. These were commonly manufactured from the 19th century down to the present day. One small fragment of indeterminate buff-bodied ware is also included in the earthenware assemblage.

Porcelain is poorly represented in the assemblage, comprising six sherds of a common, nondescript hard paste type likely dating to the late 19th century. Stoneware is also poorly represented with only one sherd being recovered.

Architectural Debris: Architectural debris is represented by a variety of fired clay (36), glass (20), ferrous metal (8) and other (4) objects. The fired clay artifacts consist of 35 pieces of brick and one stoneware drainpipe fragment. The glass is comprised of aqua (14) and colorless (6) window glass. Of the seven nails retained, most are heavily corroded and of indeterminate type (5); only one machine-cut and one wire nail are recognizable. Other objects include light bulb, concrete and architectural stone fragments.

Fauna: Very few faunal remains were recovered from the testing, consisting of three indeterminate shell fragments.

Other Small Finds: Five aluminum can pull tabs, two carbon battery core fragments, two small clay tobacco pipe stem fragments were retained. An indeterminate flint spall, pieces of mica, ferrous slag and aluminum, and a leather shoe heel fragment were also recovered. The remainder of the historic assemblage consists of four fragments of coal retained as sample material.

Chapter 4

CONCLUSIONS AND RECOMMENDATIONS

Phase IB-level archaeological testing has been performed in areas of projected ground disturbance in advance of the Central Park Conservancy's construction of the North End Recirculation System. Testing involved the excavation of 35 manually-dug shovel tests in locations determined by an earlier Phase IA-level archaeological assessment.

Overall, testing encountered cultural stratigraphy of limited archaeological interest. No Native American artifacts were recovered and no soils bearing Native American artifacts were observed. Shovel tests in Areas 1, 2 and 3 mostly revealed topsoil overlying recent landscaping and park-era fill deposits, which in turn overlaid culturally sterile subsoil or bedrock. In some instances, the upper part of the B horizon subsoil had been disturbed and yielded small quantities of artifacts. Otherwise, the majority of cultural materials recovered from the tests in these three areas were derived from the fill deposits.

Testing in Areas 4 and 5 did encounter a buried A horizon beneath the fill deposits which may represent evidence of pre-park cultural stratigraphy. In the case of Area 4, the buried A horizon contained dense roots and yielded only a few fragments of glass and plastic. There are no known historic buildings or features nearby. In Area 5, however, the A horizon occurred in tests close to where the Viele map of 1856 (see above, Figure 2.10) shows a building and some of these tests produced small quantities of domestic artifacts some of which may be of mid-19th-century date. The Randel map of 1818-20 shows no structures in this location (see above, Figure 2.9) and the likelihood is that the building on the Viele map is a house or shanty dating from the second quarter of the 19th century. The buried A horizon and the artifacts recovered from this soil layer may be associated with the occupation of this building.

The following recommendations are keyed to the five areas and the related recirculation system project components:

Area 1 (*Filtration System and Piping near "The Pool" between 100th and 101st Streets*) – Subsurface testing in this area found no archaeological resources of concern. No further archaeological investigation or monitoring during construction is recommended.

Area 2 (*Recirculation Piping Alignment across the Baseball Fields between the West and East Drives*) – Subsurface testing in this extensively graded area found fill overlying subsoil and bedrock and no archaeological resources of concern. No further archaeological investigation or monitoring during construction is recommended.

Area 3 (*Recirculation Piping Alignment Across the East Drive and over Mount St. Vincent; Filtration System, Outlet Structure and Piping at Southern End of Harlem Meer*) – While subsurface testing alongside the East Drive found no evidence of pre-park historic archaeological resources,

this area remains of potential archaeological concern owing to the former presence of structures along the west side of the Kingsbridge Road (the course of which is today followed by the East Drive). Archaeological monitoring during construction is recommended for the 150-foot length of proposed piping heading west and south from the western edge of the East Drive toward the nearest baseball diamond (see above, Figure 3.4).

As noted in the earlier Phase IA-level assessment, the summit of Mount St. Vincent is also considered archaeologically sensitive and archaeological monitoring during construction is likewise recommended for the approximately 600-foot length of proposed piping alignment extending along the east side the East Drive to the northern rim of the Mount (see above, Figure 3.4).

Testing of the area of the proposed filtration system and outlet structure north of Mount St. Vincent, south of Harlem Meer, found no archaeological resources of concern. No further archaeological investigation or monitoring during construction is recommended for this northerly portion of Area 3.

Area 4 (*Wet Well, Pump and Piping adjacent to the East Drive at the Northern End of the Park*) – Subsurface testing in this area found no archaeological resources of concern. No further archaeological investigation or monitoring during construction is recommended.

Area 5 (*Drain inside the northwest Park boundary wall connecting the Pool to the main in Eighth Avenue at 98th Street*) – The portion of the proposed drain alignment from West 100th Street south to West 99th Street has been disturbed through playground construction and is not considered archaeologically sensitive. However, subsurface testing along the southernmost 250 feet of the alignment yielded artifacts from a buried A horizon that may represent a pre-park cultural deposit associated with a building (a possible dwelling) shown on the Viele map of 1856. Archaeological monitoring during construction is recommended for this segment of the piping alignment (see above, Figure 3.6).

Archaeological monitoring as recommended above should be conducted in accordance with a monitoring plan approved by the New York City Landmarks Preservation Commission (NYCLPC). The monitoring plan should lay out procedures to be followed by the Conservancy and its contractors and make the necessary provision for observation and documentation of archaeological resources encountered during construction. The plan should also include procedures to be followed in the event of unanticipated discoveries made during construction when an archaeological monitor is not present on site. All monitoring should be reported upon as per NYCLPC guidelines.

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Appendix A

SUMMARY OF SUBSURFACE TESTING

APPENDIX A **SUMMARY OF SUBSURFACE TESTING**

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 1	Shovel Test	1	1	0 - 0.4ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.4 - 1.2ft	silty loam with rocks, modern plastic (not retained) [fill]	10YR 5/6	Historic Fired Clay
			3	1.2 - 2.4ft	mottled sand loam [fill]	10YR 5/1, 10 YR 2/1	Historic Glass
			4	2.4 - 3.7ft	sandy clay loam [fill]	10YR 2/2	Historic Metal
			5	3.7 - ft	rocky impasse	--	Historic Glass
Area 1	Shovel Test	2	1	0 - 0.6ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	Historic Glass
			2	0.6 - 2.4ft	silty loam [fill]	10YR 3/4	Historic Glass
			3	2.4 - 2.7ft	silty clay loam [fill]	10YR 4/1	--
			4	2.7 - ft	rocky impasse	--	--
Area 1	Shovel Test	3	1	0 - 0.55ft	silty loam [modern sod and topsoil]	10YR 3/3	--
			2	0.55 - 1.5f	mottled silty loam with brick/rock rubble, modern plastic (not retained) [fill]	10YR 4/3, 10YR 2/2	Historic Fired Clay
							Historic Glass
			3	1.5 - ft	blocky stone (micaceous quartz) impasse [possible historic path or retaining wall along former southwest edge of pool]	--	Historic Stone
Area 1	Shovel Test	4	1	0 - 0.3ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.3 - 3ft	silty loam with rocks, modern plastic (not retained) [fill]	10YR 3/4	--
			3	3 - ft	rocky impasse	--	Historic Glass
Area 1	Shovel Test	5	1	0 - 0.5ft	silty loam [modern sod and topsoil]	10YR 3/3	Historic Metal
Area 1	Shovel Test						--

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 1	Shovel Test	5	2	0.5 - 0.9ft	silty loam with modern plastic (not retained) [fill]	10YR 4/4	Historic Fired Clay
			3	0.9 - 2ft	mottled silty loam with modern plastic (not retained) [fill]	10YR 3/3, 10YR 5/6	Historic Glass Historic Metal Historic Fired Clay
			4	2 - 3.8ft	wet silty loam [fill]	10YR 3/3	Historic Glass
			5	3.8 - 5.2ft	mottled, wet clay loam with modern plastic (not retained) [fill]	10YR 5/1, 10YR 7/1	-- Historic Glass
			6	5.2 - 5.7ft	mottled, wet coarse sand [disturbed B horizon]	10YR 6/8, 10YR 4/6	Historic Fired Clay
			7	5.7 - ft	rocky impasse	--	Historic Glass --
Area 1	Shovel Test	6	1	0 - 0.3ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.3 - 2.3ft	silty loam with modern plastic (not retained) [fill]	10YR 3/4	Historic Fired Clay
							Historic Glass Historic Metal Historic Synthetic
			3	2.3 - 4ft	mottled silty loam [fill]	10YR 3/3, 20YR 5/6	--
			4	4 - ft	rocky impasse	--	--
Area 2	Shovel Test	7	1	0 - 0.4ft	silty loam with organics [modern sod and topsoil]	10YR 3/4	--
			2	0.4 - 0.9ft	sand loam [fill]	10YR 3/3	-- Historic Fired Clay Historic Glass
			3	0.9 - 1.9ft	mottled silty loam [fill]	10YR 3/4, 10YR 5/6	Historic Fired Clay Historic Glass
			4	1.9 - 2.4ft	mottled loamy silt [fill]	10YR 3/6, 7.5YR 5/8	--

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 2	Shovel Test	7	5	2.4 - 3ft	sand loam [fill]	7.5YR 5/8	--
			6	3 - ft	rocky impasse	--	--
Area 2	Shovel Test	8	1	0 - 0.2ft	silty loam with organics [modern sod and topsoil]	10YR 3/4	--
			2	0.2 - 0.4ft	silty loam with modern plastic (not retained) [fill]	10YR 3/3	Historic Fired Clay
			3	0.4 - 0.9ft	sand loam with modern plastic (not retained) [fill]	10YR 5/8	Historic Fired Clay
			4	0.9 - 1.2ft	mottled sand loam [fill]	10YR 4/4, 10YR 5/8	Historic Glass Historic Fired Clay
			5	1.2 - 3.3ft	mottled loamy sand with modern plastic (not retained) [fill]	10YR 5/1, 10YR 3/6	Historic Glass Historic Fired Clay
			6	3.3 - ft	rocky impasse	--	Historic Glass Modern Composite --
Area 2	Shovel Test	9	1	0 - 0.2ft	sand loam with organics [modern sod and topsoil]	10YR 3/4	Historic Glass
			2	0.2 - 0.4ft	sand loam [fill]	10YR 3/3	--
			3	0.4 - 0.9ft	mottled sand loam [fill]	10YR 4/4, 10YR 5/8	Historic Fired Clay
			4	0.9 - 1.2ft	sand loam with modern plastic (not retained) [fill]	10YR 2/2	Historic Fired Clay
			5	1.2 - 3.3ft	mottled loamy sand [fill]	10YR 5/1, 10YR 3/6	Historic Glass Historic Metal --
			6	3.3 - ft	rocky impasse	--	--
Area 2	Shovel Test	10	1	0 - 0.3ft	sand loam with organics [modern sod and topsoil]	10YR 3/4	--
			2	0.3 - 0.7ft	sand loam [fill]	10YR 4/4	Historic Glass
			3	0.7 - 0.9ft	mottled sand loam [fill]	10YR 4/4, 10YR 5/8	Historic Fired Clay Historic Glass

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 2	Shovel Test	10	4	0.9 - 1.8ft	sand loam [B horizon]	7.5YR 5/8	--
			5	1.8 - ft	bedrock impasse	--	--
Area 2	Shovel Test	11	1	0 - 0.4ft	silty loam with organics [modern sod and topsoil]	10YR 3/4	--
			2	0.4 - 0.7ft	silty loam [fill]	10YR 3/3	--
			3	0.7 - 0.9ft	loamy sand with modern plastic (not retained) [fill]	10YR 5/8	Historic Glass
			4	0.9 - 2.5ft	sand loam with modern plastic (not retained) [fill]	10YR 2/2	Historic Glass
			5	2.5 - ft	rocky impasse	--	Historic Metal --
Area 2	Shovel Test	12	1	0 - 0.3ft	sand loam with organics [modern sod and topsoil]	10YR 3/4	--
			2	0.3 - 0.9ft	silty loam [fill]	10YR 3/3	--
			3	0.9 - 2ft	sand loam [fill]	10YR 2/2	Historic Fired Clay Modern Synthetic
			4	2 - ft	rocky impasse	--	--
Area 2	Shovel Test	13	1	0 - 0.6ft	silty loam with organics [modern sod and topsoil]	10YR 3/4	--
			2	0.6 - 1.3ft	silty loam [fill]	10YR 3/3	--
			3	1.3 - 1.9ft	sand loam [fill]	10YR 2/2	Historic Glass
			4	1.9 - ft	rocky impasse	--	--
Area 2	Shovel Test	14	1	0 - 0.6ft	silty loam with organics [modern sod and topsoil]	10YR 3/4	--
			2	0.6 - 1.55f	loamy sand [fill]	10YR 6/4	--
			3	1.55 - 2.5f	sand loam [fill]	10YR 2/2	Historic Glass
			4	2.5 - ft	rocky impasse	--	--
Area 3	Shovel Test	15	1	0 - 0.3ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.3 - 1ft	sand loam with pebbles [fill]	10YR 6/4	Historic Glass

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 3	Shovel Test	15	2	0.3 - 1ft	sand loam with pebbles [fill]	10YR 6/4	Historic Metal
			3	1 - 1.9ft	sand loam with rocks [fill]	7.5YR 5/8	Historic Fauna
			4	1.9 - ft	rocky impasse	--	--
Area 3	Shovel Test	16	1	0 - 0.65ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.65 - 1.7f	mottled silty loam [fill]	10YR 5/6, 10YR 6/4	Historic Fired Clay
			3	1.7 - 3.6ft	mottled, compact clay [fill]	10YR 4/4, 10YR 2/2, 10YR 7/1, 10YR 6/8	Historic Glass Historic Fired Clay
							Historic Metal Modern Synthetic
Area 3	Shovel Test	17	1	0 - 0.8ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	Historic Fired Clay
			2	0.8 - 1.8ft	mottled silty loam [fill]	10YR 5/6, 10YR 6/4	Historic Fired Clay
			3	1.8 - 2.2ft		10YR 4/4, 10YR 5/6	--
			4	2.2 - 3.15f	clay loam [B horizon]	10YR 6/4	--
Area 3	Shovel Test	18	1	0 - 0.8ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.8 - 2ft	mottled silty loam [fill]	10YR 4/4, 10YR 5/6	Historic Fired Clay
			3	2 - 2.6ft	coarse sand with gravel [disturbed C horizon]	10YR 6/3	Historic Glass Historic Fired Clay
			4	2.6 - ft	bedrock impasse	--	Historic Glass --
Area 3	Shovel Test	19	1	0 - 0.3ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.3 - 0.85f	silty loam with pebbles, modern plastic (not retained) [fill]	10YR 4/3	Historic Glass
							Historic Metal Modern Synthetic

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 3	Shovel Test	19	3	0.85 - 1ft	mottled silty loam with modern plastic (not retained) [fill]	10YR 3/3, 10YR 5/8	Historic Glass
			4	1 - 2.7ft	mottled loamy sand [B horizon]	10YR 3/4, 10YR 5/8	--
			5	2.7 - ft	rocky impasse	--	--
Area 3	Shovel Test	20	1	0 - 0.6ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.6 - 1.5ft	silty loam with pebbles, modern plastic (not retained) [fill]	10YR 4/3	Historic Fired Clay
			3	1.5 - 2.55f	mottled silty loam [fill]	10YR 3/3, 10 YR 5/8	Historic Glass Historic Fired Clay Historic Glass
			4	2.55 - 3.5f	mottled clay loam [fill]	10YR 5/8, 10YR 3/3	--
			5	3.5 - 3.8ft	loamy sand [B horizon]	10YR 3/4	--
			6	3.8 - ft	rocky impasse	--	--
Area 3	Shovel Test	21	1	0 - 0.4ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.4 - 1ft	loamy silt with dense root and pebbles [fill]	10YR 4/3	Historic Fired Clay
			3	1 - 1.9ft	silty loam with dense root and pebbles [fill]	10YR 5/6	Historic Glass Historic Metal Historic Fired Clay
			4	1.9 - 2.5ft	loamy sand [B horizon]	10YR 3/4	Historic Glass Historic Mineral Historic Stone Modern Synthetic
			5	2.5 - ft	rocky impasse	--	--
Area 3	Shovel Test	22	1	0 - 0.6ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 3	Shovel Test	22	2	0.6 - 1.9ft	silty loam with pebbles, modern plastic (not retained) [fill]	10YR 4/3	Historic Fired Clay
							Historic Glass
							Historic Metal
							Modern Metal
							Modern Synthetic
			3	1.9 - 3ft	silty loam with pebbles [fill]	10YR 4/6	Historic Glass
			4	3 - 3.15ft	loamy sand [B horizon]	10YR 3/4	Historic Mineral
			5	3.15 - ft	rocky impasse	--	--
Area 3	Shovel Test	23	1	0 - 0.2ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.2 - 0.6ft	silty loam with pebbles, modern plastic (not retained) [fill]	10YR 4/3	Historic Fauna
							Historic Fired Clay
							Historic Glass
							Historic Metal
			3	0.6 - 2.4ft	loamy silt with pebbles, modern plastic (not retained) [fill]	10YR 5/6	Historic Composite
							Historic Fauna
							Historic Fired Clay
							Historic Glass
							Historic Metal
							Historic Mineral
							Historic Stone
							Modern Composite
							Modern Synthetic
			4	2.4 - ft	rocky impasse	--	--
Area 3	Shovel Test	24	1	0 - 0.1ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 3	Shovel Test	24	2	0.1 - 1.3ft	silty loam with pebbles, modern plastic (not retained) [fill]	10YR 4/3	Historic Composite
							Historic Fired Clay Historic Glass Historic Mineral Modern Composite Modern Metal
			3	1.3 - 2ft	loamy sand with modern plastic (not retained) [disturbed B horizon]	10YR 3/4	Historic Fired Clay
			4	2 - ft	rocky impasse	--	--
Area 4	Shovel Test	25	1	0 - 0.8ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.8 - 1.7ft	silty loam with modern plastic (not retained) [fill]	10YR 3/4	Historic Glass
			3	1.7 - 2.5ft	silty loam [fill]	10YR 2/2	Historic Fired Clay Historic Glass
			4	2.5 - 3.8ft	clay loam [B horizon]	7.5YR 5/8	--
			5	3.8 - 5ft	fine loamy sand with micaceous flaking [C horizon]	10YR 4/3	--
			6	5 - ft	bedrock impasse	--	--
Area 4	Shovel Test	26	1	0 - 0.6ft	silty loam with organics, modern plastic (not retained) [modern sod and topsoil]	10YR 3/3	Historic Glass
			2	0.6 - 1.2ft	silty loam with dense roots [A horizon]	10YR 4/6	Historic Glass
			3	1.2 - 2ft	silty loam with dense roots [B horizon]	7.5YR 5/8	--
			4	2 - 3.9ft	sand loam [B2 horizon]	7.5YR 5/6	--
			5	3.9 - 4.6ft	mottled loamy sand with gravel [BC horizon]	7.5YR 5/2, 7.5YR 5/6	--
			6	4.6 - 6.25f	fine loamy sand [C horizon]	7.5YR 4/6	--

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 4	Shovel Test	27	1	0 - 0.8ft	silty loam with organics and dense roots [modern sod and topsoil]	10YR 3/3	--
			2	0.8 - 2ft	silty loam with dense roots, modern plastic (not retained) [A horizon]	10YR 4/6	Historic Glass
			3	2 - 2.8ft	fine loamy sand with gravel [disturbed B horizon]	7.5YR 5/8	Modern Synthetic Historic Fired Clay
			4	2.8 - ft	rocky impasse	--	Historic Glass --
Area 5	Shovel Test	28	1	0 - 0.3ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.3 - 0.8ft	silty loam [A horizon]	10YR 3/4	Historic Historic Fired Clay Historic Glass
			3	0.8 - 2.2ft	silty loam [B horizon]	7.5YR 5/8	--
			4	2.2 - 2.7ft	silty clay loam [B2 horizon]	7.5YR 5/6	--
Area 5	Shovel Test	29	1	0 - 0.45ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	Historic Glass
			2	0.45 - 1.1	silty loam [A horizon]	10YR 4/6	Historic Glass Historic Metal
			3	1.15 - 3ft	silty loam [B horizon]	7.5YR 5/8	Historic Fired Clay Historic Glass
			4	3 - 3.4ft	silty clay loam [B2 horizon]	7.5YR 5/6	--
Area 5	Shovel Test	30	1	0 - 0.4ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.4 - 1ft	silty loam [A horizon]	10YR 4/6	Historic Fired Clay Historic Glass
			3	1 - 2.1ft	silty loam [B horizon]	7.5YR 5/8	--
			4	2.1 - 3ft	silty clay loam [B2 horizon]	7.5YR 5/6	--
Area 5	Shovel Test	31	1	0 - 0.4ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 5	Shovel Test	31	2	0.4 - 0.9ft	silty loam [A horizon]	10YR 4/6	Historic Glass
			3	0.9 - 2ft	silty loam [disturbed B horizon]	7.5YR 5/8	Historic Mineral
			4	2 - 4ft	silty clay loam [B2 horizon]	7.5YR 5/6	--
			5	4 - 4.2ft	fine sand [C horizon]		--
Area 5	Shovel Test	32	1	0 - 0.55ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	Historic Fired Clay
							Historic Glass
							Historic Metal
			2	0.55 - 0.7f	mottled sand loam [fill]	7.5YR 5/8, 10YR 4/4	--
			3	0.7 - 1.6ft	silty loam [Buried A horizon]	10YR 4/6	--
			4	1.6 - 2.2ft	silty loam [B horizon]	7.5YR 5/8	--
Area 5	Shovel Test	33	5	2.2 - 2.6ft	sand loam [B2 horizon]	7.5YR 5/6	--
			6	2.6 - ft	rocky impasse	--	--
			1	0 - 0.4ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.4 - 0.9ft	silty loam [A horizon]	10YR 4/6	Historic Fired Clay
Area 5	Shovel Test	34	3	0.9 - 1.5ft	silty loam [B horizon]	7.5YR 5/8	Historic Glass
			4	1.5 - 2.5ft	silty clay loam [B2 horizon]	7.5YR 5/6	Historic Metal
							--
							--
Area 5	Shovel Test	35	1	0 - 0.3ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.3 - 0.7ft	silty loam [A horizon]	10YR 4/6	Historic Composite
			3	0.7 - 0.9ft	silty loam [B horizon]	7.5YR 5/8	Historic Glass
			4	0.9 - 1.1ft	silty clay loam [B2 horizon]	7.5YR 5/6	--
			5	1.1 - 1.9ft	fine sand [C horizon]		--
Area 5	Shovel Test	35	1	0 - 0.7ft	silty loam with organics [modern sod and topsoil]	10YR 3/3	--
			2	0.7 - 1.55f	silty loam with organics [A horizon]	10YR 4/6	Historic Glass

APPENDIX A (Cont.)
SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Area 5	Shovel Test	35	3	1.55 - 2.3f	silty loam with organics [B horizon]	7.5YR 5/8	--
			4	2.3 - 2.9ft	sand loam [B2 horizon]	7.5YR 5/6	--
			5	2.9 - ft	rocky impasse	--	--
* Discarded							

Appendix B

MATERIAL CULTURE INVENTORY

APPENDIX B

MATERIAL CULTURE INVENTORY

Area 1, Shovel Test 1, Context 2	Catalog #	1
Historic		
1 Fired Clay, Porcelain, Hard Paste, hollow ware body fragment	Row #	1
1 Glass, Vessel, bottle body fragment, colorless, mold seam, embossed partial lettering reads "T"	Row #	6
8 Glass, Vessel, bottle body fragment, colorless	Row #	5
1 Glass, Vessel, bottle body fragment, colorless, embossed partial lettering reads "[...]4 QUA[RT]"	Row #	4
2 Glass, Vessel, bottle base fragment, colorless	Row #	3
2 Glass, Vessel, bottle body fragment, orange peel, colorless	Row #	2
2 Glass, Vessel, indeterminate vessel fragment, green	Row #	7
1 Glass, Vessel, indeterminate vessel fragment, lime green	Row #	8
1 Metal, Aluminum Alloy, pull tab fragment, corroded	Row #	9
<i>Total Artifacts in Context 2: 19</i>		
Area 1, Shovel Test 1, Context 3	Catalog #	2
Historic		
1 Glass, Vessel, bottle finish/neck fragment, orange peel, colorless	Row #	2
1 Glass, Vessel, bottle body fragment, colorless	Row #	1
<i>Total Artifacts in Context 3: 2</i>		
<i>Total Artifacts in 1 Shovel Test 1 : 21</i>		
Area 1, Shovel Test 2, Context 1	Catalog #	3
Historic		
1 Glass, Vessel, indeterminate type fragment, lime green	Row #	1
<i>Total Artifacts in Context 1: 1</i>		
Area 1, Shovel Test 2, Context 2	Catalog #	4
Historic		
1 Glass, Vessel, bottle body fragment, orange peel, colorless	Row #	2
1 Glass, Vessel, bottle body fragment, brown, mold seam	Row #	1
<i>Total Artifacts in Context 2: 2</i>		
<i>Total Artifacts in 1 Shovel Test 2 : 3</i>		
Area 1, Shovel Test 3, Context 2	Catalog #	5
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Glass, Vessel, bottle finish/neck fragment, colorless	Row #	5
3 Glass, Vessel, bottle body fragment, colorless	Row #	4
1 Glass, Vessel, bottle body fragment, colorless, embossed partial lettering reads "[...]OF[...]"	Row #	3
1 Glass, Vessel, indeterminate vessel fragment, brown	Row #	2
1 Stone, Micaceous Quartz, architectural stone sample fragment	Row #	6
<i>Total Artifacts in Context 2: 8</i>		
<i>Total Artifacts in 1 Shovel Test 3 : 8</i>		

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

Area 1, Shovel Test 4, Context 3		Catalog #	0
Historic			
1	Glass, Vessel, bottle body fragment, orange peel, colorless	Row #	12
1	Glass, Vessel, bottle body fragment, olive green, embossed partial lettering reads "[...]NO[...]"	Row #	15
1	Glass, Vessel, bottle body fragment, colorless, embossed partial lettering reads "[...]ART 4"	Row #	13
1	Glass, Vessel, bottle body fragment, colorless, pattern molding, embossed partial lettering reads "PE[...]"	Row #	7
4	Glass, Vessel, bottle finish/neck fragment, aqua	Row #	3
1	Glass, Vessel, bottle body fragment, colorless, embossed partial lettering reads "[...]CO[...]", "[...] E [...]"	Row #	11
1	Glass, Vessel, bottle base fragment, cylindrical body, colorless	Row #	5
1	Glass, Vessel, bottle body fragment, colorless, pattern molding	Row #	6
1	Glass, Vessel, bottle base fragment, colorless	Row #	10
1	Glass, Vessel, bottle base fragment, colorless, embossed partial lettering unidentifiable	Row #	8
1	Glass, Vessel, bottle base/body fragment, colorless, pattern molding	Row #	9
7	Glass, Vessel, bottle body fragment, colorless	Row #	14
1	Glass, Vessel, bottle body fragment, aqua, embossed partial lettering reads "[COCA] COLA", "[REG]ISTERED", "[#] OZS."	Row #	1
1	Glass, Vessel, bottle body fragment, aqua	Row #	2
1	Glass, Vessel, indeterminate vessel body fragment, colorless, pattern molding	Row #	4
3	Metal, Ferrous metal, nail fragment, indeterminate	Row #	16
Total Artifacts in Context 3: 27			
Total Artifacts in 1 Shovel Test 4 : 27			
Area 1, Shovel Test 5, Context 2		Catalog #	7
Historic			
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1	Glass, Vessel, bottle body fragment, brown	Row #	2
1	Glass, Vessel, bottle body fragment, lime green	Row #	4
1	Glass, Vessel, bottle body fragment, colorless, embossed partial lettering unidentifiable	Row #	3
1	Metal, Aluminum Alloy, pull tab fragment, corroded	Row #	5
Total Artifacts in Context 2: 5			
Area 1, Shovel Test 5, Context 3		Catalog #	8
Historic			
1	Fired Clay, Earthenware, Redware, indeterminate vessel rim fragment, burnt	Row #	2
1	Fired Clay, Earthenware, Redware, indeterminate vessel body fragment, glazed, surface missing	Row #	1
1	Glass, Vessel, bottle finish fragment, green	Row #	7
1	Glass, Vessel, bottle base fragment, colorless, mold seam, embossed pattern with "K"	Row #	5
1	Glass, Vessel, bottle body fragment, colorless	Row #	6
1	Glass, Vessel, bottle body fragment, brown	Row #	3
2	Glass, Vessel, indeterminate vessel body fragment, colorless, pattern molding	Row #	4
Total Artifacts in Context 3: 8			
Area 1, Shovel Test 5, Context 5		Catalog #	9
Historic			
1	Glass, Vessel, bottle fragment, aqua	Row #	1
1	Glass, Vessel, bottle body fragment, colorless, pattern molding	Row #	2

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

Total Artifacts in Context 5: 2

Area 1, Shovel Test 5, Context 6	Catalog #	10
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Historic

- | | | |
|---|-------|---|
| 1 Fired Clay, Earthenware, Redware, indeterminate vessel body fragment, surface missing | Row # | 1 |
| 2 Glass, Vessel, bottle body fragment, colorless | Row # | 2 |

Total Artifacts in Context 6: 3

Total Artifacts in 1 Shovel Test 5 : 18

Area 1, Shovel Test 6, Context 2	Catalog #	11
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Historic

- | | | |
|---|-------|----|
| 1 Fired Clay, Earthenware, Redware, indeterminate vessel body fragment, surface missing | Row # | 1 |
| 1 Glass, Structural, window fragment, aqua | Row # | 2 |
| 1 Glass, Vessel, bottle body fragment, colorless, mold seam | Row # | 8 |
| 2 Glass, Vessel, bottle body fragment, green | Row # | 9 |
| 1 Glass, Vessel, bottle base fragment, colorless, pattern molding, embossed partial lettering reads "3 * * [...]" | Row # | 7 |
| 5 Glass, Vessel, bottle body fragment, colorless | Row # | 6 |
| 1 Glass, Vessel, bottle base fragment, orange peel, colorless, pattern molding, embossed design with "C" | Row # | 5 |
| 1 Glass, Vessel, bottle base fragment, orange peel, colorless, mold seam, embossed partial numbering reads "371[...]" | Row # | 4 |
| 1 Glass, Vessel, bottle body fragment, brown | Row # | 3 |
| 1 Metal, Ferrous metal, nail fragment, machine cut, corroded and encrusted | Row # | 10 |
| 1 Synthetic, Carbon, battery part fragment | Row # | 11 |
| 1 Synthetic, Paper, carbon and indeterminate metal, battery part fragment, corroded and encrusted | Row # | 12 |

Total Artifacts in Context 2: 17

Total Artifacts in 1 Shovel Test 6 : 17

Area 2, Shovel Test 7, Context 2	Catalog #	12
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Historic

- | | | |
|---|-------|---|
| 1 Fired Clay, Structural, Earthenware, brick fragment | Row # | 1 |
| 1 Glass, Vessel, bottle body fragment, olive green, embossed partial lettering unidentifiable | Row # | 3 |
| 1 Glass, Vessel, indeterminate vessel fragment, colorless | Row # | 2 |

Total Artifacts in Context 2: 3

Area 2, Shovel Test 7, Context 3	Catalog #	13
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Historic

- | | | |
|--|-------|---|
| 1 Fired Clay, Refined Earthenware, Whiteware, Transfer Printed - Black, container lid fragment, probable jelly or ointment jar, printed crest/coat-of-arms with lion and horse; partial lettering reads "No.2.", "H[...]RATE[...]", "[...]ER[...]", "[...]ILITY", 1815 - 1864 | Row # | 2 |
| 2 Fired Clay, Structural, Earthenware, brick fragment | Row # | 1 |
| 3 Glass, Vessel, bottle base fragment, colorless, pattern molding, mold seam, embossed numbering reads "9", unidentifiable | Row # | 4 |
| 2 Glass, Vessel, bottle base fragment, colorless, pattern molding, mold seam, embossed numbering reads "5" | Row # | 5 |
| 1 Glass, Vessel, indeterminate vessel body fragment, brown | Row # | 3 |

Total Artifacts in Context 3: 9

Total Artifacts in 2 Shovel Test 7 : 12

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

Area 2, Shovel Test 8, Context 2	Catalog #	14
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
<i>Total Artifacts in Context 2: 1</i>		
Area 2, Shovel Test 8, Context 3	Catalog #	15
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Glass, Vessel, bottle body fragment, green	Row #	2
<i>Total Artifacts in Context 3: 2</i>		
Area 2, Shovel Test 8, Context 4	Catalog #	16
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Glass, Vessel, indeterminate vessel fragment, green	Row #	2
<i>Total Artifacts in Context 4: 2</i>		
Area 2, Shovel Test 8, Context 5	Catalog #	17
Modern		
1 Composite, Metal and rubber, wire, utility fragment, coated	Row #	4
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Glass, Vessel, bottle body fragment, green	Row #	3
2 Glass, Vessel, indeterminate vessel fragment, colorless	Row #	2
<i>Total Artifacts in Context 5: 5</i>		
<i>Total Artifacts in 2 Shovel Test 8 : 10</i>		
Area 2, Shovel Test 9, Context 1	Catalog #	18
Historic		
1 Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	1
<i>Total Artifacts in Context 1: 1</i>		
Area 2, Shovel Test 9, Context 3	Catalog #	19
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	3
2 Fired Clay, Structural, Earthenware, brick fragment	Row #	2
<i>Total Artifacts in Context 3: 4</i>		
Area 2, Shovel Test 9, Context 4	Catalog #	20
Historic		
1 Fired Clay, Earthenware, Buff Bodied, indeterminate vessel base fragment, mottled lead glazed	Row #	4
1 Fired Clay, Refined Earthenware, Whiteware, indeterminate vessel rim fragment, 1815 - 1940	Row #	3
2 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	2
1 Glass, Vessel, bottle body fragment, colorless, embossed partial lettering reads "[...]EFF[...]"	Row #	6
1 Glass, Vessel, indeterminate vessel fragment, colorless	Row #	7

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

1	Glass, Vessel, indeterminate vessel body fragment, aqua	Row #	5
1	Metal, Aluminum Alloy, pull tab fragment, corroded	Row #	8
1	Metal, Aluminum Alloy, pull tab whole, corroded	Row #	9

Total Artifacts in Context 4: 10

Total Artifacts in 2 Shovel Test 9 : 15

Area 2, Shovel Test 10, Context 2		Catalog #	21
Historic			
1	Glass, Vessel, bottle body fragment, colorless	Row #	2
1	Glass, Vessel, indeterminate vessel body fragment, orange peel, colorless, pattern molding, embossed partial lettering reads "[...]ER"	Row #	3
1	Glass, Vessel, indeterminate vessel fragment, brown	Row #	1

Total Artifacts in Context 2: 3

Area 2, Shovel Test 10, Context 3		Catalog #	22
Historic			
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	2

Total Artifacts in Context 3: 2

Total Artifacts in 2 Shovel Test 10 : 5

Area 2, Shovel Test 11, Context 3		Catalog #	23
Historic			
3	Glass, Vessel, indeterminate vessel body fragment, brown	Row #	2
1	Glass, Vessel, indeterminate vessel body fragment, green	Row #	3
1	Glass, Vessel, indeterminate vessel body fragment, blue, embossed partial lettering "[...]RU[...]"	Row #	1

Total Artifacts in Context 3: 5

Area 2, Shovel Test 11, Context 4		Catalog #	24
Historic			
1	Glass, Vessel, indeterminate vessel body fragment, aqua	Row #	1
1	Metal, Ferrous metal, wire fragment, corroded	Row #	2

Total Artifacts in Context 4: 2

Total Artifacts in 2 Shovel Test 11 : 7

Area 2, Shovel Test 12, Context 3		Catalog #	25
Modern			
1	Synthetic, Plastic, indeterminate type fragment, tan	Row #	2
Historic			
1	Fired Clay, Stoneware, Buff Bodied, indeterminate vessel body fragment, salt glazed, surface missing	Row #	1

Total Artifacts in Context 3: 2

Total Artifacts in 2 Shovel Test 12 : 2

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

Area 2, Shovel Test 13, Context 3	Catalog #	26
Historic		
1 Glass, Structural, window fragment, colorless	Row #	2
1 Glass, Vessel, indeterminate vessel fragment, colorless	Row #	1
<i>Total Artifacts in Context 3: 2</i>		
<i>Total Artifacts in 2 Shovel Test 13 : 2</i>		
Area 2, Shovel Test 14, Context 3	Catalog #	27
Historic		
1 Glass, Vessel, bottle body fragment, colorless, pattern molding	Row #	1
<i>Total Artifacts in Context 3: 1</i>		
<i>Total Artifacts in 2 Shovel Test 14 : 1</i>		
Area 3, Shovel Test 15, Context 2	Catalog #	28
Historic		
1 Glass, Vessel, bottle finish/neck, green, mold seam, weathered	Row #	1
1 Metal, Ferrous metal, slag fragment, corroded and encrusted	Row #	2
<i>Total Artifacts in Context 2: 2</i>		
Area 3, Shovel Test 15, Context 3	Catalog #	29
Historic		
1 Fauna, Shell - remains, indeterminate type fragment	Row #	1
<i>Total Artifacts in Context 3: 1</i>		
<i>Total Artifacts in 3 Shovel Test 15 : 3</i>		
Area 3, Shovel Test 16, Context 2	Catalog #	30
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Glass, Vessel, indeterminate vessel base/body fragment, colorless, pattern molding, embossed with unidentifiable partial letterings	Row #	2
<i>Total Artifacts in Context 2: 2</i>		
Area 3, Shovel Test 16, Context 3	Catalog #	31
Modern		
1 Synthetic, Plastic, fitting, utility whole, white, weathered	Row #	3
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Metal, Ferrous metal, nail whole, wire, corroded and encrusted	Row #	2
<i>Total Artifacts in Context 3: 3</i>		
<i>Total Artifacts in 3 Shovel Test 16 : 5</i>		

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

Area 3, Shovel Test 17, Context 1	Catalog #	32
Historic		
1 Fired Clay, Earthenware, Redware, indeterminate vessel body fragment	Row #	1
<i>Total Artifacts in Context 1: 1</i>		
Area 3, Shovel Test 17, Context 2	Catalog #	33
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
<i>Total Artifacts in Context 2: 1</i>		
<i>Total Artifacts in 3 Shovel Test 17 : 2</i>		
Area 3, Shovel Test 18, Context 2	Catalog #	34
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Glass, Vessel, bottle body fragment, olive green	Row #	2
<i>Total Artifacts in Context 2: 2</i>		
Area 3, Shovel Test 18, Context 3	Catalog #	35
Historic		
1 Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1 Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	2
<i>Total Artifacts in Context 3: 2</i>		
<i>Total Artifacts in 3 Shovel Test 18 : 4</i>		
Area 3, Shovel Test 19, Context 2	Catalog #	36
Modern		
1 Synthetic, Plastic, film fragment, colorless, weathered	Row #	21
Historic		
5 Glass, Vessel, bottle body fragment, brown	Row #	4
1 Glass, Vessel, bottle base/body, colorless, mold seam, embossed partial numbering reads "[...] 390"	Row #	5
1 Glass, Vessel, bottle finish fragment, colorless	Row #	6
1 Glass, Vessel, bottle base finish, colorless, mold seam, embossed partial numbering "[...]0[...]"	Row #	7
1 Glass, Vessel, bottle finish/neck fragment, colorless	Row #	8
1 Glass, Vessel, bottle body fragment, colorless, embossed partial lettering reads "[...] OFF[...]"	Row #	9
1 Glass, Vessel, bottle body fragment, light blue	Row #	1
1 Glass, Vessel, bottle finish/neck fragment, green	Row #	16
1 Glass, Vessel, bottle body fragment, colorless, embossed partial lettering reads "[...]NY[...]"	Row #	15
2 Glass, Vessel, indeterminate vessel body fragment, orange peel, colorless, pattern molding	Row #	10
1 Glass, Vessel, indeterminate vessel fragment, lime green	Row #	18
1 Glass, Vessel, indeterminate vessel fragment, green	Row #	17
1 Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	14
1 Glass, Vessel, indeterminate vessel body fragment, colorless, pattern molding	Row #	13
5 Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	11
1 Glass, Vessel, indeterminate vessel body fragment, brown, pattern molding	Row #	3
1 Glass, Vessel, indeterminate vessel fragment, olive green	Row #	19

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

1	Glass, Vessel, indeterminate vessel body fragment, colorless, embossed with unidentifiable lettering	Row #	12
1	Glass, Vessel, indeterminate vessel body fragment, aqua	Row #	2
2	Metal, Ferrous metal, indeterminate type fragment	Row #	20

Total Artifacts in Context 2: 31

Area 3, Shovel Test 19, Context 3 Catalog # 37

Historic

3	Glass, Vessel, bottle fragment, colorless, embossed partial lettering reads "B[...]"	Row #	2
1	Glass, Vessel, indeterminate vessel fragment, aqua	Row #	1
1	Glass, Vessel, indeterminate vessel fragment, orange peel, colorless	Row #	3
2	Glass, Vessel, indeterminate vessel fragment, light blue	Row #	4

Total Artifacts in Context 3: 7

Total Artifacts in 3 Shovel Test 19 : 38

Area 3, Shovel Test 20, Context 2 Catalog # 38

Historic

1	Fired Clay, Porcelain, Hard Paste, indeterminate vessel rim fragment, gold trim on rim	Row #	2
1	Fired Clay, Porcelain, Hard Paste, indeterminate vessel body fragment, pattern molding	Row #	3
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	1
2	Glass, Vessel, bottle body fragment, green, mold seam	Row #	8
3	Glass, Vessel, indeterminate vessel body fragment, brown	Row #	7
21	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	6
1	Glass, Vessel, indeterminate vessel body fragment, colorless, embossed with unidentifiable lettering	Row #	4
2	Glass, Vessel, indeterminate vessel body fragment, colorless, mold seam	Row #	5

Total Artifacts in Context 2: 32

Area 3, Shovel Test 20, Context 3 Catalog # 39

Historic

1	Fired Clay, Porcelain, Hard Paste, indeterminate vessel body fragment, pattern molding	Row #	3
1	Fired Clay, Refined Earthenware, Whiteware, indeterminate vessel body fragment, surface missing, 1815 - 1940	Row #	1
1	Fired Clay, Refined Earthenware, Whiteware, indeterminate vessel body fragment, 1815 - 1940	Row #	2
1	Glass, Vessel, indeterminate vessel body fragment, colorless, pattern molding	Row #	7
2	Glass, Vessel, indeterminate vessel body fragment, aqua	Row #	4
1	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	6
1	Glass, Vessel, indeterminate vessel body fragment, colorless, pattern molding	Row #	8
5	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	5

Total Artifacts in Context 3: 13

Total Artifacts in 3 Shovel Test 20 : 45

Area 3, Shovel Test 21, Context 2 Catalog # 40

Historic

1	Fired Clay, Porcelain, Hard Paste, Hand Painted - Polychrome, indeterminate vessel rim fragment, green, pink, yellow	Row #	5
1	Fired Clay, Refined Earthenware, Creamware, indeterminate vessel body fragment, 1762 - 1820	Row #	3
1	Fired Clay, Refined Earthenware, Whiteware, indeterminate vessel body fragment, 1815 - 1940	Row #	4
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	1

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

1	Fired Clay, Structural, Earthenware, brick fragment	Row #	2
1	Glass, Vessel, bottle base fragment, green	Row #	10
2	Glass, Vessel, bottle body fragment, green	Row #	11
1	Glass, Vessel, bottle body fragment, aqua	Row #	6
4	Glass, Vessel, bottle body fragment, brown	Row #	9
1	Glass, Vessel, indeterminate vessel body fragment, colorless, pattern molding	Row #	7
4	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	8
1	Glass, Vessel, indeterminate vessel body fragment, lime green	Row #	12
1	Metal, Ferrous metal, indeterminate type fragment, corroded and encrusted	Row #	13

Total Artifacts in Context 2: 20

Area 3, Shovel Test 21, Context 3

Catalog # 41

Modern

1	Synthetic, Plastic, indeterminate type fragment, corroded and encrusted	Row #	11
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Historic

1	Fired Clay, Earthenware, Redware, indeterminate vessel fragment	Row #	2
1	Fired Clay, Earthenware, Redware, indeterminate vessel body fragment	Row #	1
1	Fired Clay, Porcelain, Hard Paste, indeterminate vessel fragment, blue	Row #	4
1	Fired Clay, Refined Earthenware, Pearlware, indeterminate vessel fragment, 1780 - 1830	Row #	3
8	Glass, Structural, window fragment, aqua	Row #	5
1	Glass, Vessel, bottle base fragment, colorless, mold seam	Row #	7
1	Glass, Vessel, indeterminate vessel body fragment, brown	Row #	6
2	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	8
1	Mineral, Coal, indeterminate type fragment	Row #	9
1	Stone, Flint, English, indeterminate type fragment, brown	Row #	10

Total Artifacts in Context 3: 19

Total Artifacts in 3 Shovel Test 21 : 39

Area 3, Shovel Test 22, Context 2

Catalog # 42

Modern

1	Metal, Aluminum alloy, bottle cap whole, white and blue, corroded and encrusted, "Corona Extra"	Row #	22
1	Metal, Nickel alloy, U.S. dime (10 cents), coin whole, 2012	Row #	19
1	Synthetic, Plastic, indeterminate type fragment, yellow, tennis racket	Row #	23

Historic

3	Fired Clay, Earthenware, Redware, Indeterminate vessel fragment	Row #	1
1	Fired Clay, Refined Earthenware, Whiteware, Hand Painted - Orange, indeterminate vessel body fragment, indeterminate linear pattern, 1815 - 1940	Row #	3
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	2
1	Glass, Structural, window fragment, aqua	Row #	4
2	Glass, Vessel, bottle finish fragment, colorless	Row #	11
1	Glass, Vessel, bottle body fragment, brown, embossed design unidentifiable	Row #	5
1	Glass, Vessel, bottle body fragment, brown, pattern molding, embossed partial lettering reads "[...]RE[...]"	Row #	6
1	Glass, Vessel, bottle body fragment, brown, pattern molding	Row #	7
1	Glass, Vessel, bottle finish fragment, brown	Row #	8
1	Glass, Vessel, indeterminate vessel body fragment, green, clouded	Row #	16
1	Glass, Vessel, indeterminate vessel body fragment, aqua, clouded	Row #	17

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

1	Glass, Vessel, indeterminate vessel body fragment, colorless, pattern molding	Row #	15
1	Glass, Vessel, indeterminate vessel base fragment, orange peel, colorless	Row #	14
1	Glass, Vessel, indeterminate vessel fragment, colorless, pattern molding	Row #	13
2	Glass, Vessel, indeterminate vessel fragment, colorless, clouded	Row #	12
3	Glass, Vessel, indeterminate vessel body fragment, colorless, mold seam	Row #	10
1	Glass, Vessel, indeterminate vessel body fragment, lime green	Row #	18
10	Glass, Vessel, indeterminate vessel body fragment, colorless, clouded	Row #	9
1	Metal, Ferrous metal, indeterminate type fragment	Row #	20
1	Metal, Ferrous metal, indeterminate type fragment, corroded and encrusted	Row #	21
<i>Total Artifacts in Context 2: 38</i>			
Area 3, Shovel Test 22, Context 3			Catalog # 43
Historic			
1	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	1
1	Mineral, Coal, indeterminate type fragment	Row #	2
<i>Total Artifacts in Context 3: 2</i>			
<i>Total Artifacts in 3 Shovel Test 22 : 40</i>			
Area 3, Shovel Test 23, Context 2			Catalog # 44
Historic			
1	Fauna, Shell - remains, indeterminate type fragment	Row #	10
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1	Glass, Vessel, bottle body fragment, colorless, pattern molding, embossed partial lettering reads "[...]N[...]"	Row #	4
1	Glass, Vessel, bottle body fragment, lime green, clouded	Row #	7
1	Glass, Vessel, indeterminate vessel body fragment, brown, clouded	Row #	2
1	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	3
1	Glass, Vessel, indeterminate vessel body fragment, colorless, mold seam	Row #	5
1	Glass, Vessel, indeterminate vessel body fragment, green	Row #	6
1	Metal, Aluminum alloy, bottle tab whole, corroded	Row #	9
1	Metal, Ferrous metal, indeterminate type fragment, corroded and encrusted, wire	Row #	8
<i>Total Artifacts in Context 2: 10</i>			
Area 3, Shovel Test 23, Context 3			Catalog # 45
Modern			
1	Composite, Structural, asphalt fragment	Row #	16
1	Synthetic, Plastic, indeterminate type fragment, grey	Row #	17
Historic			
1	Composite, Structural, concrete fragment	Row #	12
1	Fauna, Shell - remains, indeterminate type fragment	Row #	11
2	Fired Clay, Earthenware, Redware, indeterminate vessel fragment	Row #	2
1	Fired Clay, Refined Earthenware, Whiteware, Transfer Printed - Black, indeterminate vessel body fragment, printed partial lettering reads "[...]UND[...]", 1815 - 1864	Row #	5
1	Fired Clay, Structural, Buff Bodied Earthenware, drainage fragment, deep brown glaze	Row #	4
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	3
2	Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1	Glass, Vessel, bottle finish fragment, colorless	Row #	8

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

1	Glass, Vessel, indeterminate vessel body fragment, brown	Row #	6
1	Glass, Vessel, indeterminate vessel body fragment, colorless, clouded	Row #	7
1	Glass, Vessel, indeterminate vessel fragment, lime green	Row #	10
1	Glass, Vessel, indeterminate vessel body fragment, colorless, clouded	Row #	9
1	Metal, Aluminum Alloy, indeterminate type fragment	Row #	13
1	Mineral, Coal, indeterminate type fragment	Row #	14
1	Stone, Shale, architectural stone fragment	Row #	15

Total Artifacts in Context 3: 19

Total Artifacts in 3 Shovel Test 23 : 29

Area 3, Shovel Test 24, Context 2 Catalog # 46

Modern

1	Composite, Plastic and metal, lure, fishing fragment, two-part minnow body, hooks missing	Row #	17
1	Metal, Aluminum alloy, bottle cap whole, gold, red and white, corroded, printed partial lettering reads "OLDE ENGLI[SH] [80]0"	Row #	15

Historic

1	Composite, Glass and metal, light bulb fragment	Row #	18
1	Fired Clay, Earthenware, Redware, indeterminate vessel fragment	Row #	1
1	Fired Clay, Refined Earthenware, Pearlware, Transfer Printed - Medium Blue, indeterminate vessel body fragment, indeterminate geometric pattern, 1784 - 1830	Row #	4
1	Fired Clay, Refined Earthenware, Whiteware, indeterminate vessel rim fragment, scalloped, 1815 - 1940	Row #	3
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	2
2	Glass, Structural, window fragment, colorless	Row #	12
1	Glass, Vessel, bottle base fragment, brown, pattern molding, mold seam, embossed partial lettering reads "DH", partial numbering reads "56-50" and "7"	Row #	8
1	Glass, Vessel, bottle base fragment, green, clouded	Row #	13
1	Glass, Vessel, bottle body fragment, colorless, printed partial lettering reads "[PE]PSI"	Row #	11
1	Glass, Vessel, indeterminate type fragment, black	Row #	6
1	Glass, Vessel, indeterminate vessel fragment, olive green	Row #	14
1	Glass, Vessel, indeterminate vessel body fragment, brown	Row #	7
1	Glass, Vessel, indeterminate vessel body fragment, colorless, clouded	Row #	10
1	Glass, Vessel, indeterminate vessel fragment, aqua	Row #	5
1	Glass, Vessel, indeterminate vessel fragment, orange peel, colorless	Row #	9
1	Mineral, Coal, indeterminate type fragment	Row #	16

Total Artifacts in Context 2: 19

Area 3, Shovel Test 24, Context 3 Catalog # 47

Historic

1	Fired Clay, Earthenware, Redware, indeterminate vessel fragment	Row #	1
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Total Artifacts in Context 3: 1

Total Artifacts in 3 Shovel Test 24 : 20

Area 4, Shovel Test 25, Context 2 Catalog # 48

Historic

1	Glass, Vessel, bottle body fragment, brown	Row #	1
2	Glass, Vessel, bottle finish/neck fragment, colorless	Row #	2

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

1	Glass, Vessel, indeterminate vessel body fragment, white	Row #	6
1	Glass, Vessel, indeterminate vessel fragment, lime green	Row #	5
1	Glass, Vessel, indeterminate vessel body fragment, green	Row #	4
1	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	3
<i>Total Artifacts in Context 2: 7</i>			
Area 4, Shovel Test 25, Context 3		Catalog #	49
Historic			
1	Fired Clay, Refined Earthenware, Whiteware, Dipped, indeterminate vessel body fragment, cat's eye cabling, blue, orange, white, 1815 - 1900	Row #	1
1	Glass, Structural, window fragment, aqua	Row #	3
1	Glass, Vessel, indeterminate vessel fragment, colorless	Row #	2
<i>Total Artifacts in Context 3: 3</i>			
<i>Total Artifacts in 4 Shovel Test 25 : 10</i>			
Area 4, Shovel Test 26, Context 1		Catalog #	50
Historic			
1	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	1
<i>Total Artifacts in Context 1: 1</i>			
Area 4, Shovel Test 26, Context 2		Catalog #	51
Historic			
1	Glass, Vessel, indeterminate vessel body fragment, colorless	Row #	1
<i>Total Artifacts in Context 2: 1</i>			
<i>Total Artifacts in 4 Shovel Test 26 : 2</i>			
Area 4, Shovel Test 27, Context 2		Catalog #	52
Modern			
1	Synthetic, Metal and plastic, bottle cap complete, white	Row #	4
Historic			
1	Glass, Structural, window fragment, aqua	Row #	1
1	Glass, Structural, window fragment, aqua, patination	Row #	2
1	Glass, Vessel, indeterminate vessel body fragment, lime green	Row #	3
<i>Total Artifacts in Context 2: 4</i>			
Area 4, Shovel Test 27, Context 3		Catalog #	53
Historic			
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1	Glass, Vessel, indeterminate vessel fragment, colorless	Row #	2
<i>Total Artifacts in Context 3: 2</i>			
<i>Total Artifacts in 4 Shovel Test 27 : 6</i>			
Area 5, Shovel Test 28, Context 2		Catalog #	54
Historic			
1	Fired Clay, Earthenware, Redware, indeterminate vessel fragment, lead glazed	Row #	3

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

1	Fired Clay, Earthenware, Redware, indeterminate vessel fragment, mottled lead glazed	Row #	1
1	Fired Clay, Personal, ball clay, smoking pipe stem fragment	Row #	4
1	Fired Clay, Structural, Earthenware, brick fragment	Row #	2
1	Glass, Structural, window fragment, colorless	Row #	13
1	Glass, Structural, window fragment, colorless	Row #	9
1	Glass, Vessel, bottle base fragment, colorless	Row #	11
1	Glass, Vessel, bottle body fragment, light blue, clouded, embossed partial lettering reads "[...] KL[...]"	Row #	17
3	Glass, Vessel, bottle body fragment, green	Row #	16
1	Glass, Vessel, bottle body fragment, colorless, pattern molding	Row #	12
1	Glass, Vessel, bottle base fragment, colorless, pattern molding	Row #	8
1	Glass, Vessel, indeterminate vessel body fragment, brown	Row #	7
3	Glass, Vessel, indeterminate vessel fragment, colorless	Row #	14
1	Glass, Vessel, indeterminate vessel fragment, brown, embossed partial lettering reads "[...] LAW [...]"	Row #	6
1	Glass, Vessel, indeterminate vessel fragment, colorless	Row #	5
1	Glass, Vessel, indeterminate vessel fragment, colorless, printed partial lettering reads "[...]8", "FR[...]", "86", "NO S[...]", "NO PR[...]"	Row #	15
1	Glass, Vessel, indeterminate vessel fragment, light blue, clouded	Row #	18
1	Glass, Vessel, indeterminate vessel body fragment, colorless, pattern molding	Row #	10

Total Artifacts in Context 2: 22

Total Artifacts in 5 Shovel Test 28 : 22

Area 5, Shovel Test 29, Context 1 Catalog # 55

Historic

3	Glass, Vessel, indeterminate vessel fragment, colorless	Row #	1
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Total Artifacts in Context 1: 3

Area 5, Shovel Test 29, Context 2 Catalog # 56

Historic

1	Glass, Vessel, indeterminate vessel fragment, green	Row #	1
1	Metal, Ferrous metal, nail whole, indeterminate, corroded and encrusted	Row #	2

Total Artifacts in Context 2: 2

Area 5, Shovel Test 29, Context 3 Catalog # 57

Historic

1	Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1	Glass, Structural, window fragment, aqua	Row #	2

Total Artifacts in Context 3: 2

Total Artifacts in 5 Shovel Test 29 : 7

Area 5, Shovel Test 30, Context 2 Catalog # 58

Historic

1	Fired Clay, Structural, Earthenware, brick fragment	Row #	1
1	Glass, Structural, window fragment, colorless	Row #	2
1	Glass, Vessel, indeterminate vessel fragment, olive green	Row #	4
1	Glass, Vessel, indeterminate vessel fragment, colorless	Row #	3

APPENDIX B (Cont.)

MATERIAL CULTURE INVENTORY

Total Artifacts in Context 2: 4

Total Artifacts in 5 Shovel Test 30 : 4

Area 5, Shovel Test 31, Context 2	Catalog #	59
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Historic

- 1 Glass, Vessel, indeterminate vessel fragment, amber

Row # 1

Total Artifacts in Context 2: 1

Area 5, Shovel Test 31, Context 3	Catalog #	60
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Historic

- 1 Mineral, Mica, indeterminate type fragment, silver

Row # 1

Total Artifacts in Context 3: 1

Total Artifacts in 5 Shovel Test 31 : 2

Area 5, Shovel Test 33, Context 2	Catalog #	62
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Historic

- 1 Fired Clay, Personal, ball clay, smoking pipe stem fragment
- 1 Glass, Vessel, bottle body fragment, colorless, embossed partial lettering reads "[...]AT NO[...]", "[...]IN[...]"
- 1 Glass, Vessel, indeterminate vessel fragment, colorless, pattern molding
- 1 Glass, Vessel, indeterminate vessel fragment, olive green
- 1 Glass, Vessel, indeterminate vessel body fragment, colorless
- 1 Metal, Ferrous metal, nail fragment, indeterminate, corroded and encrusted

Row # 1
Row # 3
Row # 4
Row # 5
Row # 2
Row # 6

Total Artifacts in Context 2: 6

Total Artifacts in 5 Shovel Test 33 : 6

Area 5, Shovel Test 34, Context 2	Catalog #	63
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Historic

- 1 Composite, Leather and metal, shoe heel fragment, brown, corroded, small metal shoe hardware attached
- 1 Glass, Vessel, bottle body fragment, brown, mold seam
- 1 Glass, Vessel, bottle base fragment, colorless, embossed partial lettering reads "F[...]"
- 1 Glass, Vessel, indeterminate vessel fragment, colorless
- 2 Glass, Vessel, indeterminate vessel fragment, green

Row # 5
Row # 1
Row # 2
Row # 3
Row # 4

Total Artifacts in Context 2: 6

Total Artifacts in 5 Shovel Test 34 : 6

Area 5, Shovel Test 35, Context 2	Catalog #	64
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Historic

- 1 Glass, Vessel, bottle base/body fragment, colorless, embossed partial lettering reads "[...]NC[...]"

Row # 1

Total Artifacts in Context 2: 1

Total Artifacts in 5 Shovel Test 35 : 1

APPENDIX B (Cont.)
MATERIAL CULTURE INVENTORY

Total Number of Artifacts: 439

Appendix C
RESUMES

JOSHUA J. BUTCHKO
Principal Investigator/Laboratory Supervisor, M.A., RPA

EDUCATION

M.A. Public History, Rutgers-The State University of New Jersey, Camden, NJ, 2012

B.A. Anthropology and Classics, Drew University, Madison, NJ, 2003

EXPERIENCE

2012-present Principal Investigator and Laboratory Supervisor
Hunter Research, Inc., Trenton, NJ

Technical and managerial responsibilities for survey, evaluation and mitigation of selected archaeological projects. Technical and managerial responsibility for archaeological collections including laboratory, curatorial, and transport components of all archaeological projects. Responsible for company safety policy, training and development as Company Safety Officer. Participation in:

- overall site direction and day-to-day management of Archaeological Monitoring Programs and Phase I, II and III Archaeological Investigations
- coordination and management of public archaeology programs
- development and implementation of research, excavation and analysis strategies for prehistoric and historic archaeological sites
- report writing and proposal preparation
- management of laboratory operations and supervision of personnel
- preparation and computerization of artifact inventories, data and analysis
- assistance in artifact display assembly

2008-2012 Laboratory Supervisor and Senior Archaeologist
Hunter Research, Inc., Trenton, NJ

Technical and managerial responsibilities for laboratory components of archaeological projects. Participation in:

- management of laboratory operations
- supervision of personnel
- management of field equipment and site logistics
- computerization of artifact data
- historic ceramic analysis
- preparation of artifact inventories
- writing artifact section of reports

2006-2008 Senior Archaeologist
Hunter Research, Inc., Trenton, NJ

Technical and supervisory responsibilities for selected field, laboratory, drafting operations and report preparation. Participation in:

- on-site project management
- survey and excavation
- stratigraphic and artifact analysis
- supervision of personnel
- field photography
- report preparation
- supervision of mechanically assisted excavation
- guidance and instruction at on-site public archaeology service days

2003-2006 Field Assistant
Hunter Research, Inc., Trenton, NJ

Worked on various archaeological field projects in New Jersey, Delaware, New York, Pennsylvania, and Washington, DC. Participation in:

- excavation and survey
- field recording
- laboratory processing of artifacts

2003 Volunteer
Monmouth University Archaeological Field School

Technical and supervisory responsibilities for selected field operations at the Abraham Staats House in Bound Brook, NJ. Participation in:

- survey and excavation
- stratigraphic and artifact analysis

2002 Field Assistant
Drew University Archaeological Field School in Ecuador

Worked at multiple sites in the Los Congrejitos area. Participation in:

- survey and excavation
- stratigraphic and artifact analysis
- field photography
- artifact processing and analysis

SAMPLE OF PRESENTATIONS/PAPERS

Eastern States Archaeological Federation, 81st Annual Conference, Solomons MD, October 2014
Commodore Stockton's Morven Greenhouse: Form and Function c. 1852 to c.1890

Society for Historical Archaeology, 49th Annual Conference, Washington D.C. January 2016
Examining Cemetery Investigations at the First Presbyterian Church of Elizabeth and First Reformed Dutch Church of New Brunswick, New Jersey: A Discussion of Remembrance and Regulation

CERTIFICATIONS

HAZWOPER 40 Hour Certification
HAZWOPER 8 Hour Supervisor Training
HAZWOPER 8 Hour Confined Space Entrant Certification
NJ DEP SHPO 7 Hour CRM Essentials Training Program

AFFILIATIONS

Registered Professional Archaeologist (RPA)
National Council on Public History (NCPH)
Society for Historical Archaeology (SHA)
Archaeological Society of New Jersey (ASNJ)

RICHARD W. HUNTER
President/Principal Archaeologist, Ph.D., RPA

EDUCATION

Ph.D., Geography, Rutgers University, New Brunswick, New Jersey, 1999
Dissertation Title: *Patterns of Mill Siting and Materials Processing: A Historical Geography of Water-Powered Industry in Central New Jersey*

M.A., Archaeological Science, University of Bradford, England, 1975

B.A., Archaeology and Geography, University of Birmingham, England, 1973

EXPERIENCE

1986-present President/Principal Archaeologist
Hunter Research, Inc., Trenton, NJ

Founder and principal stockholder of firm providing archaeological and historical research, survey, excavation, evaluation, report preparation, historic exhibit development, preservation planning and public outreach services in the Northeastern United States. Specific expertise in historical and industrial archaeology (mills, iron and steel manufacture, pottery manufacture), historical geography, historic landscape analysis, historic interpretive design and public outreach products. Participation in:

- Project management, budgeting and scheduling
- Proposal preparation and client negotiation
- Hiring and supervision of personnel
- Supervision of research, fieldwork, analysis and report preparation
- Historic exhibit development, popular and academic publications and public presentations

1999-2004 Faculty Member, Certificate in Historic Preservation
Office of Continuing Education, Drew University, Madison, NJ

Courses: The Role of Archaeology in Preservation
25 Years of Public Archaeology in New Jersey

1983-1986 Vice-President/Archaeologist
Heritage Studies, Inc., Princeton, NJ

Principal in charge of archaeological projects. Responsibilities included:

- Survey, excavation, analysis, and reports
- Client solicitation, negotiation, and liaison
- Project planning, budgeting, and scheduling
- Recruitment and supervision of personnel

1981-1983 Principal Archaeologist
Cultural Resource Group, Louis Berger & Associates, Inc., East Orange, NJ

Directed historical and industrial archaeological work on major cultural resource surveys and mitigation projects in the Mid-Atlantic region. Primary responsibility for report preparation and editing.

- 1979-1981 Archaeological Consultant, Hopewell, NJ
- 1978-1981 Adjunct Assistant Professor, Department of Classics and Archaeology, Douglass College, Rutgers University, NJ
- 1978-1979 Research Editor
Arete Publishing Company, Princeton, NJ
- Prepared and edited archaeological, anthropological, and geographical encyclopedia entries (*Academic American Encyclopedia*, 1980).
- 1974-1977 Archaeological Field Officer
Northampton Development Corporation, Northampton, England
- Supervised archaeological salvage projects executed prior to development of the medieval town of Northampton (pop. 230,000).
- Experience included:
- Monitoring of construction activity
 - Supervision of large scale urban excavations
 - Processing of stratigraphic data and artifacts
 - Preparation of publication materials
- 1969-1970 Research Assistant
Department of Planning and Transportation, Greater London Council

SPECIAL SKILLS AND INTERESTS

- water-powered mill sites
- canals and urban water powers
- iron and steel manufacture
- pottery manufacture
- historic cartography
- Revolutionary War in the Middle Atlantic region
- historic sites interpretation and public outreach

SELECTED PUBLICATIONS

"Who Lies Where? A Land and Air-Based Survey Methodology for Documenting Historic Cemeteries." In *Innovation and Implementation: Critical Reflections on New Approaches to Historic Mortuary Data Collection, Analysis, and Dissemination*, edited by Harold Mytum and Richard Veit. Berghahn, New York and Oxford [2023] (with James S. Lee III, Alexis Alemy, and Evan Mydlowski).

"New York's Urban Archaeology. The Forts Landscape Reconstruction Project: Central Park's Revolutionary War Forts." *Archaeological Institute of America, New York Society News*, Winter 2015:6-8.

Sartori to Sacred Heart: Early Catholic Trenton. Sacred Heart Church [2014] (with Patrick Harshbarger).

"Historical Archaeology in Trenton: A Thirty-Year Retrospective." In *Historical Archaeology of the Delaware Valley, 1600-1850*, edited by Richard Veit and David Orr. University of Tennessee Press, Knoxville, Tennessee [2013] (with Ian Burrow).

"A Sugar Bowl of William Young & Sons or William Young's Sons." *Trenton Potteries* 13 (1):1-3

"Internal Oxidation of Cast Iron Artifacts from an 18th-century Steel Cementation Furnace." *Journal of Archaeological Science* XXX, 1-8 [2012] (with Colin Thomas and Robert Gordon).

"Steel Away: the Trenton Steel Works and the Struggle for American Manufacturing Independence." In *Footprints of Industry: Papers from the 300th Anniversary Conference at Coalbrookdale, 3-7 June 2009*, edited by Paul Belford, Marilyn Palmer and Roger White. *BAR British Series* 523 [2010] (with Ian Burrow).

"Early Milling and Waterpower." In *Mapping New Jersey: An Evolving Landscape*, edited by Maxine N. Lurie and Peter O. Wacker, pp. 170-179. Rutgers University Press [2009].

"On the Eagle's Wings: Textiles, Trenton, Textiles, and a First Taste of the Industrial Revolution." *New Jersey History* 124, Number 1, 57-98 [2009] (with Nadine Sergejeff and Damon Tvaryanas).

"The Historical Geography and Archaeology of the Revolutionary War in New Jersey." In *New Jersey in the American Revolution*, edited by Barbara J. Mitnick, pp.165-193. Rutgers University Press [2005] (with Ian C.G. Burrow).

"Lenox Factory Buildings Demolished." *Trenton Potteries* 6 (2/3):1-9 [2005].

Fish and Ships: Lambertton, the Port of Trenton. New Jersey Department of Transportation and Federal Highway Administration [2005] (28-page booklet).

Power to the City: The Trenton Water Power. New Jersey Department of Transportation and Federal Highway Administration [2005] (24-page booklet).

Rolling Rails by the River: Iron and Steel Fabrication in South Trenton. New Jersey Department of Transportation and Federal Highway Administration [2005] (24-page booklet).

Quakers, Warriors, and Capitalists: Riverview Cemetery and Trenton's Dead. New Jersey Department of Transportation and Federal Highway Administration [2005] (24-page booklet) (with Charles H. Ashton).

"Keeping the Public in Public Archaeology." In: *Historic Preservation Bulletin*, pp. 6-9. New Jersey Department of Environmental Protection, Division of Parks and Forestry, Historic Preservation Office [2004].

"A Coxon Waster Dump of the Mid-1860s, Sampled in Trenton, New Jersey." In: *Ceramics in America*, edited by Robert Hunter, pp. 241-244. University Press of New England [2003] (with William B. Liebeknecht and Rebecca White).

"The Richards Face – Shades of an Eighteenth-Century American Bellarmine." In: *Ceramics in America*, edited by Robert Hunter, pp. 259-261. University Press of New England [2003] (with William B. Liebeknecht).

"The Pottery Decorating Shop of the Mayer Arsenal Pottery Company." *Trenton Potteries* 4(2):1-7 [2003].

"Minutes of the Potters Union (Part 2)." *Trenton Potteries* 4(1):1-5 [2003].

"Minutes of the Potters Union (Part I)." *Trenton Potteries* 3(4):1-5 [2002].

"Eighteenth-Century Stoneware Kiln of William Richards Found on the Lambertton Waterfront, Trenton, New Jersey." In: *Ceramics in America*, edited by Robert Hunter, pp. 239-243. University Press of New England [2001].

"William Richards' Stoneware Pottery Discovered!" *Trenton Potteries* 1(3):1-3 [2000]. Reprinted in *Bulletin of the Archaeological Society of New Jersey* 59:71-73 [2004].

"Trenton Re-Makes: Reviving the City by the Falls of the Delaware." *Preservation Perspective* XVIII (2): 1, 3-5 [1999]

"Mitigating Effects on an Industrial Pottery." *CRM* 21(9):25-26 [1998] (with Patricia Madrigal).

From Teacups to Toilets: A Century of Industrial Pottery in Trenton, Circa 1850 to 1940, Teachers Guide sponsored by the New Jersey Department of Transportation, 1997 (with Patricia Madrigal and Wilson Creative Marketing).

"Pretty Village to Urban Place: 18th Century Trenton and Its Archaeology." *New Jersey History*, Volume 114, Numbers 3-4, 32-52 [Fall/Winter 1996] (with Ian Burrow).

Hopewell: A Historical Geography. Township of Hopewell [1991] (with Richard L. Porter).

"Contracting Archaeology? Cultural Resource Management in New Jersey, U.S.A." *The Field Archaeologist* (Journal of the Institute of Field Archaeologists) 12, 194-200 [March 1990] (with Ian Burrow).

"American Steel in the Colonial Period: Trenton's Role in a 'Neglected' Industry." In *Canal History and Technology Proceedings IX*, 83-118 [1990] (with Richard L. Porter).

"The Demise of Traditional Pottery Manufacture on Sourland Mountain, New Jersey, during the Industrial Revolution." Ch. 13 in *Domestic Potters of the Northeastern United States, 1625-1850*. Studies in Historical Archaeology, Academic Press [1985].

PROFESSIONAL AFFILIATIONS

Register of Professional Archaeologists (RPA) [formerly Society of Professional Archeologists] (accredited 1979; certification in field research, collections research, theoretical or archival research)

Preservation New Jersey (Board Member, 1994-2003)

New Jersey State Historic Sites Review Board (Member, 1983-1993)

Society for Historical Archaeology

Society for Industrial Archaeology

Society for Post-Medieval Archaeology

Council for Northeast Historical Archaeology

Professional Archaeologists of New York City

Archaeological Society of New Jersey (Life Member; Fellow, 2011)

OTHER AFFILIATIONS

Mercer County Cultural & Heritage Commission (Commissioner, 2011 – present)

Trenton Downtown Association (Board Member, 1998-2018; Board Chair, 2007-2008)

Trenton Museum Society, (Trustee, 2011-2017)

Hopewell Valley Historical Society (Trustee, 2014 – 2022; President 2019-2021)

Hopewell Township Historic Preservation Commission (Member, 1998-2006, 2015-2018; Chair 2003-2004)