ARCHAEOLOGICAL TESTING AND MONITORING FORTS LANDSCAPE RECONSTRUCTION PROJECT CENTRAL PARK, BOROUGH OF MANHATTAN, NEW YORK



PREPARED FOR: CENTRAL PARK CONSERVANCY

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MANAGEMENT SUMMARY

Archaeological testing and monitoring were carried out by Hunter Research, Inc. in July and August, 2013 in connection with landscaping improvements that the Central Park Conservancy has recently implemented in the northeastern portion of the Park in an area where Revolutionary War and War of 1812-era fortifications and other 19th-century buildings formerly existed. Following a preliminary archaeological assessment conducted earlier in 2013, pre-construction testing concentrated on three locations: McGown's Pass; an area adjacent to and just southeast of Nutter's Battery; and the site of the Chaplain's House at Mount St. Vincent. Monitoring was also carried out during construction at these same three locations and at several other spots where buried archaeological resources were suspected. Work in McGown's Pass found intact buried remains of the gate-house constructed in 1814 towards the end of the War of 1812 hostilities, when New York City was under threat of British attack, and also of the Kingsbridge Road, the principal historic route north out of the city to Harlem and beyond. No significant archaeological resources were found at the other locations examined through testing and monitoring.

The remains of the gatehouse in McGown's Pass consisted of portions of the schist foundations on either side of the gate opening, which were encountered at depths of between two and three feet below modern grade. These remains correspond well with the structure depicted in a series of watercolors painted by John Joseph Holland and his associates in 1814. Other surface features were also noted on the bedrock outcrops on either side of the pass which correlate with the line of the military fortifications extending southeast to Fort Clinton and northwest to Nutter's Battery. On the southeast side of the pass, a tree fall resulting from Hurricane Sandy in October of 2012 exposed a portion of the rampart adjoining the gatehouse. The Kingsbridge Road was evident in test excavations and contractor trenches as a compact "metalled" surface atop a bed of cobbles and pebbles packed in silty sand. The road extended in part beneath the northwest side of the gatehouse indicating that it dated from a period before the construction of the gatehouse. The landscaping improvements were implemented in such a manner that they avoided damaging the remains of the gatehouse and Kingsbridge Road. These archaeological features were covered with protective plastic sheeting and reburied.

This report describes and interprets the results of the archaeological testing and monitoring, and offers recommendations for future protection, treatment and interpretation of archaeological resources in the northern end of Central Park, with a particular emphasis being given to remains of the War of 1812-era military fortifications.

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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. Archaeological fieldwork was performed by Glen Keeton, Amanda Moutner and Christopher Connallon under the supervision of James Lee. Laboratory processing and cataloging of artifacts were performed Lauren Lembo under the supervision of William Liebeknecht. Report graphics were produced by Katie Rettinger and Elizabeth Cottrell. Graphic design work and report layout were completed by Elizabeth Cottrell under the direction of James Lee. This report was written by Richard Hunter and James Lee.

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

Chapter 1

INTRODUCTION

A. PROJECT BACKGROUND AND SCOPE OF WORK

This report summarizes the results of archaeological testing and monitoring carried out by Hunter Research, Inc. in July and August, 2013 in connection with landscaping improvements that the Central Park Conservancy has recently implemented in the northeastern portion of the Park in an area where Revolutionary War and War of 1812-era fortifications and other 19th-century buildings formerly existed (Figures 1.1 and 1.2). Central Park in its entirety is designated as both a National Historic Landmark and a municipal scenic historic landmark.

The landscaping improvements, referred to as the Central Park Forts Landscape Reconstruction Project, involved grading and drainage, irrigation and lighting work, the majority of which took place along existing pathways and within existing utility trenches (Figures 1.3-1.5). Trenching activity for the improvements typically entailed excavation to depths of 24 to 30 inches below existing grade, much of this occurring along existing utility and drainage alignments. Archaeological testing and monitoring were carried out at selected locations where potential archaeological resources corresponded with anticipated landscaping-related ground disturbance.

All archaeological work was performed with the approval of the New York City Landmarks Preservation Commission (NYCLPC) and was supervised by Richard Hunter and James Lee, both of whom meet the federal standards for qualified professional archaeologists as specified in 36 CFR 66.3(b) (2) and 36 CFR 61. All documentation and artifacts from these studies will be stored at Hunter

Research's offices in Trenton, New Jersey until acceptance of this report by the Central Park Conservancy and relevant review agencies at which point these materials will be transmitted to the Conservancy for safe keeping.

B. PREVIOUS RESEARCH AND PRINCIPAL SOURCES OF INFORMATION

The current round of archaeological work performed in connection with the Forts Landscape Reconstruction Project has been guided by a preliminary historical and archaeological assessment carried out by this firm more than two decades ago that addressed the entire northern portion of Central Park, north of the 97th Street Transverse (Hunter Research, Inc. 1990). This work, involving primarily analysis of maps, other historic imagery and published secondary sources, was supported by limited field inspection that identified the sites of numerous historic features, several of which were considered to possess a measure of archaeological potential. No subsurface testing was performed. Traces of military fortifications, in some places indicative of below-ground archaeological potential, were observed at this time within the area that has been the subject of the recent landscaping improvements.

The archaeological testing and monitoring work reported on in the current document was preceded by an archaeological assessment performed in the spring of 2013 [Hunter Research, Inc. 2013 (appended as a supplement to this report)]. This assessment, which involved review of the study conducted in 1990 supplemented by field inspection, metal detecting, probing with a 4-foot-long steel rod, soil augering and

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Figure 1.1. Location of Central Park Forts Landscape Reconstruction Project. Source: 7.5' USGS Central Park, N.Y.-N.J. Quadrangle (1966 [photorevised 1979]). Scale: 1 inch = 2,000 feet.



Figure 1.2. Aerial Photograph Showing the Location of the Central Park Forts Landscape Reconstruction Project.

shovel testing, examined 10 potential archaeological resource locations (involving 11 potential archaeological resources) (Figures 1.3-1.5). Of these 10 locations, three were removed from further archaeological consideration, four were recommended as needing monitoring during construction and three were recommended as requiring further testing in addition to monitoring. It is this monitoring and testing work that is described and discussed in the current report. One particular location, the McGown's Pass area, receives especially detailed treatment and also includes some additional documentation undertaken in connection with a tree fall on the east side of the pass where a portion of the War of 1812-era fortifications was exposed by Hurricane Sandy.



Figure 1.3. Site Plan Showing Proposed Grading and Drainage Improvements in Relation to Archaeological Resource Locations.

GRADING & DRAINAGE LEGEND

CLL	CONSTRUCTION LIMIT LINE
۲	EXISTING TREE
`	EXISTING 1' CONTOUR
	EXISTING 5' CONTOUR
75	PROPOSED CONTOUR
+ 74.55	PROPOSED SPOT ELEVATION
TW	TOP OF WALL
BW	BOTTOM OF WALL
TC	TOP OF CURB
HP	HIGH POINT
ĿP	LOW POINT
TF	TOP OF DRAINAGE STRUCTURE FRAME
0	proposed manhole 🚯
	proposed catch basin (CB) or (1) drop inlet (DI)
	EXISTING CATCH BASIN
Ø	EXISTING MANHOLE TO REMAIN
12" H.D.P.E TYPE S, TYP.	PROPOSED STORM DRAIN PIPE SIZE, MATERIAL & DIRECTION OF FLOW
5.0%	FLOW ARROW
[]	AREA OF MONITORED EXCAVATION
// // // // // // // // // // //	EXISTING WATER LINE
t t t	EXISTING SUBSURFACE ELECTRICAL LINES
<u>rs</u>	EXISTING SUBSURFACE SEWER LINES
L	CAPPED AND ABANDONED PIPE
<u> </u>	EXISTING WATER SUPPLY LINE
M	ISOLATION VALVE





Location of Archaeological Concern (see table)

1860-1865

War of 1812 Era

1 inch=80 feet





Figure 1.4. Site Plan Showing Proposed Irrigation Improvements in Relation to Archaeological Resource Locations.





Figure 1.5. Site Plan Showing Proposed Lighting Improvements in Relation to Archaeological Resource Locations.

Chapter 2

LAND USE HISTORY

The following historical narrative is largely compiled from the Hunter Research report of 1990 where more detailed, referenced and site-specific historical information can be found. Additional illustrations (principally 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 Hunter Research report of 1990.

A. 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. 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 12lst 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 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.

B. 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.

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.

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).

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.

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 (Figures 2.2-2.5). 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



Figure 2.1. Mackenzie, Frederick. Advanced Posts – New York Island, 12th Octr. 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.







Figure 2.3. "A Plan of the Fortifications at McGowan's Pass." 1814. Scale (approx.): 1 inch = 180 feet. This map depicts Fort Fish [590-13], Fort Clinton [591-3], the McGown's Pass Gatehouse [592-2], Nutter's Battery [592-6] and associated earthworks. Source: Swift 1814.







Figure 2.5. 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.

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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 2.6-2.13). The majority of these sketches were produced by Englishborn 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 (Figure 2.14), 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 2.15). 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).

C. 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.



Figure 2.6. 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 Gate-house [592-2], which is flanked by Fort Clinton [591-3] to the left and Nutter's Battery [592-6] to the right. Be-hind and to the right of Nutter's Battery is Fort Fish [590-13] and beyond and to the left of Fort Fish is the Mc-Gown's Tavern property [589-12]. Source: New-York Historical Society, Luce Center, Object No. 1889.23ab.



Figure 2.7. John Joseph Holland Associates. "Fort Clinton at McGowan's Pass." 1814. This view, looking southwest, shows Fort Clinton (with flag) [591-3] at left with the McGown's Tavern property [589-12] beyond. At right is the McGown's Pass Gatehouse [592-2] with Fort Fish [590-13] beyond and to the left. Source: New-York Historical Society, Luce Center, Object No. 1889.25.


Figure 2.8. Holland, John Joseph. "Works at McGowan's Pass." 1814. This view, looking south, 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. Beyond, between the gatehouse and Nutter's Battery, is Fort Fish [590-13]. Source: New-York Historical Society, Luce Center, Object No. 1889.14.



Figure 2.9. Holland, John Joseph. "Gate at McGowan's Pass." 1814. This view, looking north, shows the Kingsbridge Road passing downhill through the McGown's Pass Gatehouse [592-2]. Source: New-York Historical Society, Luce Center, Object No. 1889.16.



Figure 2.10. Holland, John Joseph. "Forts Fish and Clinton." 1814. This view, looking west, shows Fort Clinton [591-3] at right and Fort Fish [590-13] at left. Source: New-York Historical Society, Luce Center, Object No. 1889.12.



Figure 2.11. 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 2.12. Holland, John Joseph. "Fort Fish from Nutter's Battery." 1814. This view, looking south, shows Nutter's Battery [592-6] in the right foreground, Fort Fish [591-13] at center and the McGown's Tavern property [589-12] at left. Source: New-York Historical Society, Luce Center, Object No. 1889.15.



Figure 2.13. Holland, John Joseph. "View from Fort Fish at McGowan's Pass, looking towards Harlem." 1814. This view, looking north, shows Fort Fish [591-13] in the foreground, Nutter's Battery [592-6] at lower left and Fort Clinton [591-3] at right, beyond the cannon in the foreground. Source: New-York Historical Society, Luce Center, Object No. 1889.13.



Figure 2.14. Randel, John. The City of New York. 1819-20. Scale: 1 inch = 280 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.



Figure 2.15. Bacon, J.B. "Plan of Buildings at Mount St. Vincent." 1856. Scale: 1 inch = 185 feet (approximately).

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 (Figure 2.16). 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 2.17-2.19).

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, Montayne's Rivulet was enlarged to create the Loch, and a series of waterfalls were constructed using rocks in the

landscape. 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.

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 Hagaman 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, both Nutter's Battery and Fort Fish were left



Figure 2.16. Topographical Map of Central Park Extension from 106th to 110th Streets & from V to VIII Ave. *Circa* 1860. Scale: 1 inch = 165 feet (approximately). Detail showing the remains of Fort Fish [590-13], Fort Clinton [591-3], Nutter's Battery [592-6] and associated earthworks.



Figure 2.17. 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.







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untouched. 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 chainlink 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).

Chapter 3

ARCHAEOLOGICAL FIELDWORK

A. FIELD PROCEDURE

Following the completion of the archaeological assessment conducted in the spring of 2013, Hunter Research conducted supplementary archaeological testing at three locations within the Fort Landscape project site that were considered to have archaeological potential: McGown's Pass; an area adjacent to and just southeast of Nutter's Battery; and the site of the Chaplain's House at Mount St. Vincent (Figure 3.1). Archaeological monitoring was also conducted during construction in these three locations and at several other nearby locations of somewhat lesser archaeological sensitivity. Soils and stone rubble exposed by a tree fall on the east side of McGown's Pass were also the subject of a separate episode of field documentation carried out just prior to the field testing.

The archaeological fieldwork involved the manual excavation of four 2.5-by-10 foot excavation units (two units each at the McGown's Pass and Nutter's Battery locations), the mechanical excavation of a 13-foot-long trench at the site of the Chaplain's House, the cleaning down of soils exposed by the tree fall on the east side of McGown's Pass to enable recording of a cross-section, and standard observational monitoring activities (the taking of notes measurements and photographs). The manual excavation of units entailed careful, manual removal of soils by stratigraphic context using picks, shovels and trowels, supplemented as necessary by coring with hand augers into culturally sterile soils. All soils beneath 20th-century fill layers were screened through 1/4-inch wire mesh. Artifacts were retained and bagged according to unit location and stratigraphic context. Context descriptions (soil color and type, structural remains, stratigraphy, etc.) and interpretations were recorded on pre-printed

forms. Subsurface testing data are summarized in Appendix A. An artifact inventory is provided in Appendix B.

B. McGOWN'S PASS

1. Topography and Surface Features

McGown's Pass occupies a narrow cleft in the irregular line of bluffs that extends southeastward from Lasker Pool (positioned in the valley of Montayne's Rivulet) to Fifth Avenue at 106th Street (Photograph 3.1). In some respects the present-day topography in this section of Central Park broadly resembles that which prevailed prior to the Park's creation in the late 1850s and early 1860s. The principal rock outcrops and major slopes have changed little since the early 19th century and correlate well with the landscape shown on early maps, but in a more localized sense the topography today is much less rugged. Hollows and fissures have been filled, grading has been undertaken to facilitate the construction of roads and paths and the installation of utilities, and the creation of Lasker Pool and Harlem Meer has served to deemphasize the once sharply defined, pre-urban river valleys. McGown's Pass, where the Kingsbridge Road descended the bluffs to cross Harlem Creek, was formerly a much more obvious, ravine-like passage down the hillside.

Today, an asphalt-paved path winds down through the pass from south to north between two outcrops of Manhattan schist bedrock (Figure 3.2; Photograph 3.1). Additional paths approach from the southeast and east and connect to the main path in the heart of the pass. The two bedrock outcrops rise between 10 and 15 feet above the main path and their summits are roughly 100 feet apart. Traces of the War of 1812-era defenses at McGown's Pass are visible on both outcrops [Resources 591-2, 591-5, 592-4, 592-5], while the pass itself was formerly guarded by a gatehouse structure [Resource 592-2]. The outcrop exposed on the southeast side of the pass is capped with earth and formerly supported a small redoubt and a linear rampart that extended southeast to Fort Clinton (Photograph 3.2). The outcrop to the northwest has a flat, grassy summit and falls away sharply to the north and northwest. This outcrop similarly supported a small redoubt and a linear rampart that extended northwest to Nutter's Battery (Photograph 3.1). Based on the evidence of late 18th-century maps, these fortifications are also thought to follow the lines of earlier British Revolutionary War-era defenses.

Careful inspection of the outcrops on both sides of the pass reveals that the bedrock has been roughly shaped and quarried. A number of vertical cylindrical drill scars, many of them several feet in length, are visible in cross section on the northwest and northeast faces of the southeast outcrop and on the southeast face of the northwest outcrop (Photograph 3.3). These are apparently the result of modification of the outcrops to allow for emplacement of the gatehouse and adjoining fortifications in 1814. The quarried stone was probably also used in the construction of the fortifications and gatehouse foundations.

Roughly ten feet east of the steps that descend into McGown's Pass from the south, a tree fall caused by Hurricane Sandy on October 29, 2012 exposed an area of rubble and soil on the line of the War of 1812-era rampart that extended southeastward from the gatehouse to the redoubt at Fort Clinton. Prior to archaeological testing in the pass, the rubble and soils at the tree fall location were cleaned down, minimally excavated and documented through scale drawings and photography (Trench 1). As a result of this work part of the earth and rubble base of the fortification on the bedrock outcrop on the southeast side of the pass was recorded in cross section (Figure 3.3; Photographs 3.4 and 3.5). At the northeast end of the trench, roughly laid larger stones [Context 101] appear to have been placed up against the outcrop as fill within what would have been the core of the rampart, while similar concentrations of rubble [100] toward the southwest end of the trench may define the base of the inner face of the fortification. The area in between consisted largely of a silty clay loam with smaller stones [3] interspersed with clusters of larger stones. Very few artifacts (just two sherds of pearlware and one sherd of whiteware) were recovered during the course of this work and these items were not found in securely stratified contexts. The area of the tree fall was not directly affected by the Forts Landscape Reconstruction Project. Upon completion of the archaeological recording, geotextile fabric and a thin cover of soil were placed over the exposed remains.

Probing through the earthen cap of the embankment [1] further to the southeast of the tree fall confirmed that the rubble exposed in Trench 1 continues at roughly the same depth along the line of the fortifications extending southeast toward Fort Clinton. This earthen cap appears to represent the eroded remains of the rampart shown in the Holland watercolors of 1814 (see above, Figures 2.8 and 2.9). Several drill scars are visible in cross section in the sloping face of the bedrock immediately northeast of the tree fall location (Photograph 3.6). These appear to be the result of quarrying activity and probably reflect a rough shaping of the outcrop to facilitate the construction of the fortifications. More drill scars were observed, but not mapped, on the steep northeastern side of the bedrock outcrop facing away from the pass. Additional evidence of drilling may well be present elsewhere on the outcrop in areas that are now obscured by soil cover and vegetation.

On the opposite side of the pass, a line of large roughdressed boulders is evident on the northeast rim of the northwest outcrop (Photograph 3.7). A line of nine drill holes is also evident in the surface of the exposed



Figure 3.1. Plan of the Forts Landscape Project Area Showing the Location of Archaeological Investigations.



Figure 3.2. Plan of McGown's Pass Showing the Detailed Location of Archaeological Investigations and Monitoring.



Photograph 3.1. View facing northwest showing McGown's Pass; the bedrock outcrop in the center of the view supported a small redoubt and rampart flanking the northwest side of the gatehouse that straddled the pass in the foreground (Photographer: Richard Hunter, March 2013 [HRI Neg.#13008/ D1:22]).



Photograph 3.2. View facing southeast showing the southeastern side of McGown's Pass and soils exposed by a tree fall during Hurricane Sandy (to left of figure); the bedrock outcrop in the center of the view supported a small redoubt and rampart flanking the southeast side of the gatehouse that straddled the pass in the foreground (Photographer: Richard Hunter, March 2013 [HRI Neg.#13008/D1:003]).



Photograph 3.3. View facing northwest showing vertical cylindrical drill scars in the bedrock, evidence of quarrying, on the northwest side of McGown's Pass; the gatehouse would have stood in the left foreground of this view (Photographer: Richard Hunter, March 2013 [HRI Neg.#13008/D1:006]).



West





Photograph 3.4. View facing southeast showing the cleaned soil profile in Trench 1 at the location of the tree fall on the southeast side of McGown's Pass; scales in feet (Photographer: James Lee, July 2013 [HRI Neg.#13008/D3:56]).



Photograph 3.5. Detailed view facing southeast showing the cleaned soil profile in Trench 1 at the location of the tree fall on the southeast side of McGown's Pass; note the deliberate placement of rubble [100, 101] on top of the bedrock [5]; scales in feet (Photographer: James Lee, July 2013 [HRI Neg.#13008/D3:14]).



Photograph 3.6. View facing southeast showing vertical cylindrical drill scars in the bedrock on the southeast side of McGown's Pass, evidence of quarrying; the point of the trowel indicates the base of a short scar (Photographer: James Lee, July 2013 [HRI Neg.#13008/D3:40]).



Photograph 3.7. View facing south showing a line of large stones believed to be part of the base of the rampart on the bedrock outcrop on the northwest side of McGown's Pass (Photographer: Richard Hunter, March 2013 [HRI Neg.#13008/D1:010]).



Photograph 3.8. View facing southwest showing a line of drill holes believed to have held iron rods used to anchor the rampart to the bedrock outcrop on the northwestern side of McGown's Pass (Photographer: Richard Hunter, March 2013 [HRI Neg.#13008/D1:011]).

bedrock on the northwest side of the pass (Photograph 3.8). These drill holes are aligned northeast-southwest, perpendicular to the line of boulders. These features correlate well with the projected line of the War of 1812-era fortifications that extended northwest from the gatehouse at McGown's Pass to Nutter's Battery (see above, Figures 2.8 and 2.9). The boulders are interpreted as part of the outer face and base of the rampart, while the drill holes are thought to have held anchor bolts or rods that would have been used to tie the rampart to the bedrock outcrop.

2. Excavation Units 1 and 4

Maps and other historic images show a substantial gatehouse structure with adjoining fortifications in McGown's Pass (see above, Figures 2.2-2.9). As noted above, traces of the fortifications are visible on the rock outcrops on either side of the pass in the form of topographic anomalies reflecting the line of the earthwork defenses, remnant stone walling, and drill holes in the bedrock for iron anchor rods (see above, Photographs 3.1-3.8). Two shovel tests excavated in April 2013, one each on either side of the main path that leads down through the pass, indicated a moderate probability that archaeological remains of the gatehouse/blockhouse structure might survive within the pass itself.

Excavation Unit 1, 2.5 by 10 feet in plan, was placed on the southeast side of the pass just south of Shovel Test 15, near the proposed location of an electrical utilities service box (Figure 3.2; Photograph 3.9). This unit aimed to straddle the rear line of the gatehouse as projected through extrapolation of historic maps on to modern topographic maps. After removing several strata of modern landscaping fill [Contexts 1, 2 and 3] and the trench fill for two iron utility pipes [6, 7 and 11], a thick layer of mottled fill containing 19th-century artifacts was identified [4] (Figure 3.4; Photograph 3.10). This context, which is interpreted as mid- to late 19th-century park landscaping fill, surrounded a thick lens of stone rubble [9] at the northeastern end of the unit. Below this fill layer was a stratum of dark brown humic loam [5], interpreted as the pre-park topsoil, which in turn overlay two thin layers of silty and clayey loam [13 and 14]. Across the base of most of the excavation unit, at a depth of 3 feet below the ground surface, were laid numerous large, roughly coursed, sub-rectangular blocks of schist [12] (Figure 3.4; Photograph 3.11). These blocks displayed a northwest-southeast orientation and appeared to form a corner in the northeastern end of the unit. No artifacts were found in direct association with this masonry, which was left intact and covered with thin geotextile matting before backfilling.

Because of its method of construction, stratigraphic position and orientation relative to the fortification line as shown on maps and in contemporary views, the laid schist feature [12] is interpreted as part of the foundation of the gatehouse built in August and September of 1814. The remains uncovered in Excavation Unit 1 are thought to have supported the portion of the gatehouse located immediately adjacent to the southeast side of the gate opening. The overlying clayey loams [13 and 14] are judged to have accumulated after the dismantling of the gatehouse, which probably took place around or shortly after 1815. Fragments of patinated olive green wine bottle glass were recovered from these contexts along with corroded nails, brick fragments and a piece of coal.

The overlying pre-park topsoil layer [5] produced a variety of early and mid-19th-century artifacts, including sherds of whiteware, porcelain and pearlware and fragments of patinated dark olive green bottle glass. Except for a fragment of clear bottle glass and a small piece of steel screen, which may have been introduced to the context when the 20th-century utility pipes were installed, later 19th-century artifacts were almost entirely absent from this layer. The park-era landscaping fill [4] laid down in the 1860s, yielded mostly redware, creamware, pearlware and whiteware sherds, along with ball clay pipe fragments, a few bottle and



Figure 3.4. McGown's Pass: Excavation Unit 1, South Profile and Plan View.



Photograph 3.9. View facing northwest showing Excavation Units 1 and 4 (indicated with arrows) within McGown's Pass (Photographer: Richard Hunter, August 2013 [HRI Neg.#13025/D3:003]).



Photograph 3.10. McGown's Pass: view facing east showing the southeast profile of Excavation Unit 1 and the schist foundations of the southeast side of the gatehouse [12] in the base of the unit; scales in feet and tenths of feet (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:84]).



Photograph 3.11. McGown's Pass: plan view of Excavation Unit 1 showing the schist foundations of the southeast side of the gatehouse [12] in the base of the unit; scales in feet and tenths of feet (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:70]).

flat glass fragments and corroded nails of indeterminate type. The lens of rubble [9] surrounded by the late 19th-century fill [4] probably derives from the landscaping of the pass in the 1860s and may represent redeposited or slumped earthwork material from the fortifications lying to the southeast of the gatehouse. The rubble yielded a gunflint and a brass button along with a single sherd of creamware. The rather large gunflint, which from its color may be Dutch in origin, would have been used in a flintlock weapon dating from the 18th to mid-19th centuries. The copper-alloy button imprinted with "London Treble Gilt" on its rear face would have been gold plated and dates from the early to mid-19th century. Although buttons of this type were not typically attached to military clothing they could have been used on the garb of a member of a volunteer regiment.

Excavation Unit 4, also 2.5 by 10 feet in plan, was excavated immediately adjacent to the northwest side of the main paved path through the pass, directly opposite Excavation Unit 1 (Figure 3.2; Photograph 3.12). This excavation again aimed to cross the rear line of the gatehouse as projected from historic maps and views, and tested an area where irrigation and electrical utility lines were proposed. After removing a thick topsoil context [1], a mottled landscaping fill [4] was encountered yielding artifacts similar to those found in the late 19th-century landscaping fill in Excavation Unit 1, although in much greater quantity. This layer overlay two sandier loam contexts [5 and 6], which produced no artifacts. Probing through this culturally sterile stratum revealed a relatively level, stony impasse across the base of the unit. With the removal of the sandy loam, a highly compacted surface of silty sandy loam [7] was identified, covering most of the floor of the unit at a depth of 2.5 feet below the ground surface (Figure 3.5; Photographs 3.13 and 3.14]. Large pebbles and small cobbles were evident throughout this context, especially toward the northeastern end of the unit. A 1.5-by-2.5-foot section excavated northwest-southeast through the

compacted surface [7] revealed a thin dense layer of silty sand resting on top of, and in and amongst, a compacted layer of rounded cobbles and pebbles [10] (Photographs 3.15 and 3.16). Together, Contexts 7 and 10 are interpreted as a "metalled" roadbed, i.e., stream bed sands and pebbles had been added to a coarse stone matrix to help bind the road surface together, a common road construction practice prior to the development of paving. No artifacts were found in association with this stratum. Excavation was halted at this level and, after documentation, the stratum was covered with thin geotextile matting before backfilling.

Based on its horizontal and vertical stratigraphic position this roadbed is interpreted as a remnant of the Kingsbridge Road passing down through McGown's Pass. The location of this road surface is thought to lie too far to the northwest for it to have been within the gate opening and consequently it is thought to predate the construction of the gatehouse. It may date to the 18th-century and, if this is correct, it would likely have been covered over by the northwest abutment of the War of 1812-era gatehouse (of which no obvious trace was observed in this excavation unit). The results of the archaeological monitoring of the nearby drainage trench excavations (discussed below) support this interpretation.

3. Monitoring

Archaeological monitoring was conducted in August 2013 during the installation of two catch basins (identified as Catch Basin 5 and Catch Basin 6) and a connecting drainage pipe. Contractor excavations for the catch basins and drainage pipe were carefully observed and archaeological features and stratigraphy relating to the McGown's Pass gatehouse and the Kingsbridge Road were documented. Following consultation, these remains were left in place.


- Silty loam
- Mottled silty san
- Silty sand with g
- Slightly sandy so Sandy silt
- Highly compact water-rolled pebbles with silty sand matrix [road bed]

retation]	Munsell
	10 YR 3/1
ndy loam	10 YR 3/2, 10 YR 5/6
Iravel	10 YR 4/6
bil	10 YR 4/6
	10 YR 4/6
water-rolled	10 YR 5/3



Road bed

Figure 3.5. McGown's Pass: Excavation Unit 4, North Profile and Plan View.



Photograph 3.12. McGown's Pass: view facing north showing Excavation Unit 4 in the early stages of excavation (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:155]).



Photograph 3.13. McGown's Pass: view facing north showing the northwest profile and compacted road surface [7] in the bottom of Excavation Unit 4; scales in feet and tenths of feet (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:210]).



Photograph 3.14. McGown's Pass: view facing southwest showing the compacted road surface [7] in the bottom of Excavation Unit 4; scales in feet and tenths of feet (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:190]).



Photograph 3.15. McGown's Pass: view facing northwest showing the northwest profile and plan view of a section cut through the top of the compacted road surface [7] at the southwest end of Excavation Unit 4; note the bed of cobbles and pebbles [10] forming the roadbed beneath the road surface; scales in feet and tenths of feet (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:225]).



Photograph 3.16. McGown's Pass: close-up view facing northwest showing the section cut through the top of the compacted road surface [7] at the southwest end of Excavation Unit 4; note the silty sand in which the pebbles and cobbles of the roadbed [10] have been laid (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:241]).

Catch Basin 5 was mechanically excavated approximately 25 feet east of Excavation Unit 4 (Figures 3.1 and 3.2; Photograph 3.17). The excavation measured roughly 5 by 4 feet in plan and was excavated to a depth of 4.2 feet in order to accommodate the installation of a precast concrete basin. The northwest and northeast sides of this excavation were cleaned and recorded in profile (Figure 3.6; Photographs 3.18 and 3.19). Solid bedrock [6] was encountered at the base of the excavation overlain by a layer of fragmentary or crushed bedrock material [5], probably produced when the area was graded during the creation of the Kingsbridge Road. In the northwest profile the bedrock was overlain by a stratum of sandy silty loam [10], apparently a natural B horizon, although this did not extend across the full width of the excavation. A well compacted layer of silty sand with pebbles and cobbles [4] rested on top of Contexts 5 and 10 at roughly 2.6 feet below the ground surface. This layer, generally measuring 0.4 to 0.5 feet thick, was similar to that identified and discussed as Context 10 in Excavation Unit 4 and is interpreted as a metalled road surface. A ceramic drain pipe [8], running northeast-southwest, cuts into Context 4 and through the stratum above it [3]. This pipe most likely dates from the 1940s when the current pathway system was created (Photograph 3.19). This suggests that the context that lies around and above the pipe, a sandy silty loam [2], and the silty loam topsoil above that [1], both postdate the 1940s pathway work. No artifacts were recovered from this excavation.

Catch Basin 6 was excavated 95 feet west of the Catch Basin 5, upslope from the pass, again to allow for installation of a precast concrete basin (Figure 3.2; Photograph 3.20). A 7-foot-long profile of the southeast wall of this excavation was cleaned, photographed and documented (Figure 3.7; Photograph 3.21). No bedrock was identified at the base of this excavation. A clayey sand interpreted as the natural B horizon was identified at roughly 2.8 feet below the ground surface. This was overlain by a sandy loam soil [8]

which was probably laid down as fill to support the heavily compacted layer of sandy soil with pebbles and cobbles that lies above it [7]. This latter layer is interpreted as the bed of the Kingsbridge Road. The top surface of this road bed, which lies between 1.9 and 2.2 feet below the modern ground surface, slopes up to the southwest and heads out of McGown's Pass up towards McGown's Tavern on the summit of Mount St. Vincent. A silty compacted sand [6] forms a thin lens on top of Context 7 and probably also part of the road surface. This was in turn overlaid by a mottled clay [5] and a sandy loam with small cobbles [4] very similar to the material in Context 7. Context 4 is likely remnant upcast of Context 7, redeposited as a result of a more modern disturbance. Context 4 was overlaid by three successive darker loam contexts that likely represent historic fill episodes, possibly related to the pathway construction and drainage and lighting improvements of the 1940s. No artifacts were identified in this excavation.

The excavation of the drainage trench between Catch Basins 5 and 6 was also monitored (Figure 3.2). The northeastern end of this trench largely followed an existing drainage feature containing a terracotta pipe leading to a brick catch basin, both installed in the 1940s. At approximately 1.8 feet below the ground surface, immediately southwest of this 1940s catch basin, a compacted surface of cobbles and large subrectangular stones was encountered [4] (Photograph 3.22). Excavation proceeded to the southwest but was restricted to the removal of strata above this surface. It soon became clear that the surface was very similar in character to the stone surface identified as Context 12 in Excavation Unit 1. As the base of the excavation was cleaned down by hand a clear boundary also became apparent between the layer of larger stones and a surface composed of smaller, compacted pebbles and cobbles adjoining to the southeast [5] (Figure 3.8; Photographs 3.23-3.26). The pebble and cobble surface, interpreted as more of the roadbed observed in Excavation Unit 4 and Catch Basins 5 and

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Photograph 3.17. McGown's Pass: view facing west showing the location of Catch Basin 5 (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:60]).



Photograph 3.18. McGown's Pass: view facing northwest showing the northwest profile of the excavation for Catch Basin 5; bedrock [6] is visible at the base of the profile; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:41]).



Photograph 3.19. McGown's Pass: view facing northeast showing the northeast profile of the excavation for Catch Basin 5; note the large ceramic drainage pipe [8] placed into the compacted surface of the Kingsbridge Road [4]; bedrock [6] is visible at the base of the profile; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:57]).







Photograph 3.20. McGown's Pass: view facing north looking down through McGown's Pass from the location of Catch Basin 6 towards the location of Catch Basin 5 (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:103]).



Photograph 3.21. McGown's Pass: view facing east showing the east profile of the excavation for Catch Basin 6; the trowel rests on the clayey sand [9], a natural B horizon, found at the base of the excavation; the bed of the Kingsbridge Road [7] is visible in the profile as a stony layer roughly a foot to 18 inches above this; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:110]).



Photograph 3.22. McGown's Pass: view facing northeast showing the drainage trench excavation in relation to the northwest bedrock outcrop; Catch Basin 5 is at the far right of the view; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:179]).





Photograph 3.23. McGown's Pass: view facing southwest showing the drainage trench excavation between Catch Basins 5 and 6; the excavation for Catch Basin 5 is in the foreground; the larger stones at the right side of the trench [4] are part of the foundation of the northwest side of the gatehouse; the smaller compacted stones at the left side [5] are part of the bed of the Kingsbridge Road within the gate opening; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:194]).



Photograph 3.24. McGown's Pass: view facing southwest showing the portion of the drainage trench excavation between Catch Basins 5 and 6; the larger stones in the foreground represent the southwest edge of the foundation of the northwest side of the gatehouse [4] beyond which are the smaller compacted stones of the bed of the Kingsbridge Road [5]; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:207]).



Photograph 3.25. McGown's Pass: view facing northwest showing a portion of the northwest profile of the drainage trench excavation; the large stones in the base of the trench are part of the foundation of the northwest side of the gatehouse [4]; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:184]).

6, continued beyond the limit of the trench excavation to the southeast towards Excavation Unit 1, across the middle of McGown's Pass. This surface also extended eastward into Catch Basin 5 at the northeast end of the drainage trench where it is thought that the northeastern end of Context 4 was probably dislodged during excavation.

The layer of large sub-rectangular stones is considered to be part of the northwest foundation of the gatehouse, the equivalent of the stone foundation identified in Excavation Unit 1. The fact that this layer does not continue into Excavation Unit 4, just a few feet to the northwest suggests that the stones are part of a linear foundation, no more than 4 feet wide, built to support the northwest side of the structure holding the gatehouse above the pass. The stones extended for a distance of approximately 20 feet, compared to the 8 feet of exposed masonry in Excavation Unit 1. As noted above, if this interpretation is correct, the roadbed identified in Excavation Unit 4 would predate the construction of the fortifications and gatehouse in 1814 because it is in an area that would have been covered by the gatehouse structure. To the southwest of the gatehouse foundation, excavation of the drainage trench was halted at the top of a compacted sandy pebble and cobble layer [6] that extends the length of the trench westward to Catch Basin 6. This layer is interpreted as the roadbed continuing up out of the pass (Photograph 3.24). A representative section of the trench profile was cleaned and documented (Figure 3.8; Photograph 3.25). A thin stratum of silty clay [3] lay just above the stones, overlain by a mottled silty loam [2] and a dark silty loam with fragments of asphalt [1], which lay just below the mid-20th-century pathway.

C. NUTTER'S BATTERY AREA

1. Topography and Surface Features

The site of Nutter's Battery occupies an outcrop at the northwestern end of the irregular bluff line of exposed bedrock that runs from northwest to southeast from Montayne's Rivulet to 106th Street at Fifth Avenue. The ground slopes away steeply from the outcrop to the northwest and much more gradually to the southeast, where its slopes are grass covered and crossed by asphalt paths, one of which circles around the east, north and west sides of Nutter's Battery just below its summit. On the top of the rock outcrop that supported Nutter's Battery a circular, paved area is surrounded in part by a low stone parapet. The bedrock outcrop breaks this low perimeter wall and pavement at the northern end of the landform. One bent-over iron rod projects from the bedrock outcrop at the very top of this area. This may have fulfilled a similar rampartanchoring function as suggested for the rods thought to have been set in the drill holes in the McGown's Pass area.

2. Excavation Units 2 and 3

Units were excavated along the line of the Revolutionary War/War of 1812-era fortifications just south of Nutter's Battery [Resources 592-3 and 592-4] (Excavation Unit 2) and at the Wilkins Shanty or Outbuilding Site [Resource 592-7] (Excavation Unit 3), a mid-/late 19th-century structure that formerly stood in the level grass-covered area immediately southeast of the base of the Nutter's Battery outcrop. Two shovel tests excavated in April 2013 indicated some prospect of archaeological resources surviving in this area relating either to the shanty or to Revolutionary War/War of 1812-era fortifications.



Photograph 3.26. Nutter's Battery Area: view facing northwest showing Excavation Unit 2 in relation to the bedrock outcrop at Nutter's Battery (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:101]).

Excavation Unit 2, 2.5 by 10 feet in plan and oriented northeast-southwest, was excavated just to the east of Shovel Test 10 (Figure 3.9; Photograph 3.26). This unit aimed to straddle the rear line of the earthwork fortifications as projected from historic maps and to assess the archaeological potential along a proposed irrigation line. A line of three stones [6] running northwest-southeast approximately midway along the unit's length was identified after the removal of the topsoil [1] and a portion of the underlying fill context [2] (Figure 3.10; Photograph 3.27). These stones were aligned roughly with the projected rear line of the fortifications. Excavation to the northeast of these stones, i.e., within the projected body of the earthwork fortifications, yielded fill soils directly overlying bedrock [5], which was encountered at only 1.3 to 2 feet below the ground surface. To the southwest of the line of stones the stratigraphy appeared to show a natural soil sequence with both B and C horizon soils represented [3 and 4]. These natural soils sloped down just below the line of stones to meet the bedrock just underneath them. Additional mottled fill soils were identified below the line of stones after the largest block was moved. While these stones do appear to be oriented correctly for them to be a part of the rear line of the earthworks it remains uncertain whether or not they represent remnants of the military fortifications. The stones were not well coursed and other stones of similar size were recovered from the fill of the unit. No artifacts were found in direct association with these stones, and only 15 historic artifacts were recovered from this entire excavation unit. These consisted of a ball clay marble and a creamware sherd from the topsoil [1], bottle glass, brick and window glass fragments from the underlying fill [2] and clear bottle glass fragments from the top of the B horizon [3].

Excavation Unit 3, also 2.5 by 10 feet in plan and oriented northeast-southwest, was excavated 4 feet south of Shovel Test 9 (Figure 3.9). It was placed in this location in part to further examine a possible stone feature noted in the shovel test. It was not exca-

vated precisely at the shovel test location because of a new planting. The excavation of this unit identified several layers of fill [1-4], including a context with a substantial amount of fragmentary bedrock and pieces of ceramic sewer pipe [2] at the same depth as the possible feature identified in Shovel Test 9. This suggests that the shovel test had not encountered a feature related to the Wilkins Shanty, but rather a lens of 20th-century fill (3.11; Photograph 3.28). The thinner bands of fill [3] below this context included a dark silty sand lens that appeared to be derived from an organic alluvial context such as a pond. This overlay a thicker fill [4] context with a large number of bricks, some of which may be of early 18th-century date, randomly situated and likely brought in with fill from elsewhere (Figure 3.11; Photograph 3.29). A natural soil horizon [5] underlay these fill layers. Embedded at the interface were 19th-century artifacts, including several large brick fragments, suggesting the natural horizons had been removed and truncated prior to the deposition of fill. No evidence of a shanty or outbuilding was identified.

Compared to Excavation Unit 2, Excavation Unit 3 yielded a much larger number of artifacts, 162 in total. The assemblage was dominated by glass bottle fragments (51 examples, most of which were clear) and brick fragments (35). Ceramic sherds (27 total) consisted of whiteware (19), buff-bodied stoneware (4), buff-bodied earthenware (1), pearlware (1), porcelain (1) and ironstone china (1). These ceramic types reflect a strongly mid-19th-century date for the deposits, suggesting that the soils were laid down during the construction of the park in the 1860s. A total of 22 metal objects (mostly corroded nails or indeterminate ferrous metal fragments) were retained along with 4 modern items. All of these artifacts were recovered from contexts interpreted as fill and their precise relationship with activities at this location is unclear.



Figure 3.9. Plan of Nutter's Battery Area Showing the Detailed Location of Archaeological Investigations and Monitoring.



Photograph 3.27. Nutter's Battery Area: view facing north showing the northwest profile and exposed bedrock in Excavation Unit 2 (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:110]).



Figure 3.10. Nutter's Battery Area: Excavation Unit 2, Northern Profile and Plan View.



Photograph 3.28. Nutter's Battery Area: view facing west showing the layer of rubble encountered in Excavation Unit 3 (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:127]).



Photograph 3.29. Nutter's Battery Area: view facing west showing the northwest profile of Excavation Unit 3 (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:144]).



Excavation Unit 3 North Profile

~		
(0)	ntext	List

Context	Description [Interpretation]	Munsell
1	Silty loam	10 YR 3/4
2	Mottled silty loam	10 YR 3/4, 10YR 5/6
3	Mottled silty loam	10 YR 3/4, 10YR 4/3
4	Mottled silty loam [layered 20th-century fill deposits, including possible dredge material]	10 YR 3/1, 10 YR 3/2 10 YR 2/2, 10 YR 3/4
5	Silty loam [truncated B horizon]	10 YR 4/4



East

3. Monitoring

Catch Basin 1 was installed just west of Nutter's Battery near the line of the fortification extending south from Nutter's Battery to Fort Fish [Resource 592-9]. This basin replaced an earlier, extant basin built under a landing for the pathway stairs in the 1940s (Figure 3.9; Photograph 3.30). This 4-foot-deep excavation was conducted entirely within 20th-century fill and no significant archaeological features or deposits were observed. The base of a lamp fixture dating from the 1940s that was situated adjacent to the excavation was also removed at the same time. The lamp post had "N.Y. CITY" embossed in its base (Photograph 3.31).

Catch Basin 2 was installed southeast of Nutter's Battery near the site of the Wilkins Shanty or Outbuilding [Resource 592-7], 10 feet northwest of an existing catch basin (Figure 3.9; Photograph 3.32). This roughly 4-foot-square excavation encountered bedrock at a depth of 2.9 feet below the ground surface. The northern profile of the excavation was cleaned, photographed and documented (Figure 3.12; Photograph 3.33). A sandy silt subsoil lay above the bedrock. This appeared truncated and was overlain by a mottled silty loam and two other strata of silty loam fill. No artifacts were identified in this excavation. In order to reach the appropriate depth for the installation of the precast concrete basin the bedrock was removed with a jack hammer. This latter activity was not monitored.

Catch Basin 3 was excavated northeast of Catch Basin 2, beneath the asphalt path that loops east and north around Nutter's Battery in the vicinity of Revolutionary War/War of 1812 fortifications that extended southeast from Nutter's Battery to McGown's Pass [Resources 592-3 and 592-4] (Figure 3.9). This excavation measured roughly 8 by 5 feet in plan and extended to a depth of 4.9 feet below the ground surface in order to create the appropriate slope for the drainage system (Photograph 3.34). Through probing, bedrock was established as lying just below

the base of the excavation with a thin silty sand natural horizon directly above it. This was overlain by a thick stratum of silty sandy loam that graded from dark brown to strong brown with increasing depth. The grading suggests this was a natural B horizon. A dark topsoil capped the profile.

A trench was excavated southwestward through a planting bed from Catch Basin 3 to Catch Basin 2 to accommodate a drain pipe. This trench, generally 2.5 feet wide by 3 feet deep, encountered bedrock at varying depths and was overlain by a silty sand B horizon and a dark silty loam topsoil with a large number of roots (Photograph 3.35). At the western end of this trench near Catch Basin 2 bedrock rose to approximately 1 foot below the ground surface (Photograph 3.36). Two iron pipes crossed this trench parallel to the adjacent pathway.

Unlike the catch basin excavations, several artifacts were recovered from the top context of this trench including several mid- to late 19th-century whiteware and ironstone sherds, an early 20th-century faceted, clear bottle and a number of cobalt blue bottle glass fragments. These artifacts may be evidence of the late 19th-century occupation of the shanty/outbuilding site identified through background research, but they were not recovered from an archaeologically "intact" context. The topsoil in this location had been heavily disturbed by plantings and may even have been brought into the site to create the planting bed.

Catch Basin 4 was located north of Catch Basin 3 just below and southeast of the bedrock outcrop of Nutter's Battery (Figure 3.9; Photograph 3.37). The soil profile in this area was very thin with bedrock at less than 2 feet below the ground surface and overlain intermittently by a mottled sandy clay loam and a stratum of topsoil (Photograph 3.38). The southwest profile of this excavation was cleaned, photographed and documented. No artifacts were recovered. To accommodate the catch basin, some of the bedrock was removed with a jack hammer.



Photograph 3.30. Nutter's Battery Area: view facing northwest showing the completed excavation of Catch Basin 1; scale in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:018]).



Photograph 3.31. Nutter's Battery Area: view of lamppost removed from next to the excavation of Catch Basin 1; the base of the post is embossed "N.Y. CITY;" scale in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:016]).



Figure 3.12. Mount St. Vincent: Catch Basin 2, Northern Profile.


Photograph 3.32. Nutter's Battery Area: view facing north showing the completed excavation of Catch Basin 2 in relation to Nutter's Battery and the existing catch basin; scales in feet (in the fore-ground) (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:026]).



Photograph 3.33. Nutter's Battery Area: view facing north showing the north profile of the excavation for Catch Basin 2; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:022]).



Photograph 3.34. Nutter's Battery Area: view facing northwest showing the west and north profiles of the excavation for Catch Basin 3; scale in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:044]).



Photograph 3.35. Nutter's Battery Area: view facing southwest showing the drainage trench excavation between Catch Basins 2 and 3; note the bedrock visible at the base of the profile in the foreground; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:048]).



Photograph 3.36. Nutter's Battery Area: view facing northeast showing the drainage trench excavation between Catch Basins 2 and 3; note the bedrock and utility pipes visible at the base of the profile; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:090]).



Photograph 3.37. Nutter's Battery Area: view facing northwest showing the excavation for Catch Basin 4 in relation to Nutter's Battery; note the bedrock visible at the base of the profile in the foreground; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:068]).



Photograph 3.38. Nutter's Battery Area: view facing southwest showing the southwest profile of the excavation for Catch Basin 4; note the bedrock visible at the base of the profile in the foreground; scales in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:065]).

D. MOUNT ST. VINCENT

1. Topography and Site Features

The southern portion of the Forts Landscape project area crosses the west side of Mount St. Vincent and lies within and alongside a gravel road and lot used by park personnel to dispose of brush and leaves. The locations of the Black Horse Tavern, McGown's Tavern and the bulk of the Mount St. Vincent Academy complex all lie to the east of this road. A large bedrock outcrop is situated to the northeast overlooking Fort Clinton and the southern end of Harlem Meer. To the south of the gravel road, beyond the access road to the leaf and brush stockpile area on Mount St. Vincent, the terrain flattens out in an expanse of lawn bordering the east side of the East Drive.

2. Trench 2

Two shovel tests excavated in April 2013 had indicated the possible survival of intact archaeological remains on the site of a two-story stone house built in 1848 for the chaplain and for Tighe Davy, the manager of the Mount St. Vincent property [Resource 590-12]. This building is thought to have been torn down in the late 1870s. A 13-foot-long, 4-foot-wide backhoe trench (Trench 2) was excavated extending south from Shovel Test 2 through the area where historic maps indicated the building was located (Photograph 3.39). The impasse encountered in the shovel test was exposed and determined to be a compacted gravel driveway or road surface. Excavation continued through this stratum and identified 2 to 3 feet of fractured bedrock fill overlying bedrock (Photograph 3.40). The fractured bedrock showed no signs of having been used as masonry. A single brick and a cellophane candy wrapper were recovered from amongst the bedrock fragments, suggesting this context was deposited in the mid-20th century or later and that the chaplain's house site had been recently disturbed.

3. Monitoring

Although no significant archaeological deposits or features were identified during trenching or shovel testing at the site of the Chaplain's House (Resource 590-12) or during shovel testing at the approximate location of a Revolutionary War-era military camp site (Resource 589-13), the excavation of a water supply line through these areas was monitored in August 2013. Excavations commenced at the southern terminus of the water line where a combination of machine and hand excavation was conducted to identify the terminus of a previously installed water line (Photograph 3.41). As expected soils in this area had been disturbed previously and the connection was located at approximately 2.5 feet below the ground surface. As the excavation of the new water line trench proceeded northward the excavators encountered bedrock at a depth of approximately 2.5 feet overlain by a silty loam subsoil and a compacted silty loam A horizon (Photograph 3.42). These soils were inspected by the archaeologist for historic-period artifacts while they were being excavated. This area, located just south of the gravel lot that now occupies the top of Mount St. Vincent, appears to have been graded and leveled, with only the lower portions of a truncated B horizon subsoil remaining. As excavation progressed still further north the bedrock was identified at increasingly shallow depths of less than 1 foot. Within the gravel lot a compacted gravelly fill was encountered directly overlying bedrock (Photograph 3.43). As the trench approached and crossed the high point of its route across Mount St. Vincent, the gravel drive was underlain by fractured bedrock fill in a sand and gravel matrix (Photograph 3.44). No significant archaeological deposits or features were identified during the course of this monitoring effort on Mount St. Vincent.



Photograph 3.39. Mount St. Vincent: view facing south showing the location of Trench 2 at the site of the Chaplain's House; scale in feet (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:176]).



Photograph 3.40. Mount St. Vincent: view facing northeast showing the east profile of Trench 2 at the site of the Chaplain's House; note the bedrock at the base of the profile; scale in feet (Photographer: James Lee, July 2013 [HRI Neg.#13025/D1:166]).



Photograph 3.41. Mount St. Vincent: view facing south showing the water line trench excavation on Mount St. Vincent at the southern end of the project area; scale in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:142]).



Photograph 3.42. Mount St. Vincent: view facing north towards the top of Mount St. Vincent showing the water line trench excavation at the southern end of the project area; note the bedrock at the base of the trench; scale in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:139]).



Photograph 3.43. Mount St. Vincent: view facing north showing the water line trench excavation on Mount St. Vincent; scale in feet (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:156]).



Photograph 3.44. Mount St. Vincent: view facing north showing crushed bedrock from the water line trench excavation on Mount St. Vincent (Photographer: James Lee, August 2013 [HRI Neg.#13025/D2:160]).

Chapter 4

DISCUSSION

A. McGOWN'S PASS

Topographic analysis, inspection of the bedrock outcrops and a recent tree fall, and limited subsurface testing have combined to show that tantalizing remains of the gatehouse and defenses at McGown's Pass, erected in 1814, still survive in the landscape today (Figure 4.1). The bedrock outcrop on the southeast side of the pass displays faint traces of the redoubt and rampart that flanked the southeast side of the gatehouse [Resources 591-2 and 591-4]. This takes the form of a low, lightly vegetated earth and rubble ridge, roughly 15 feet wide, extending southeast along the bluff rim for some 150 feet to Fort Clinton. Several drill scars visible both on the northwest and northeast faces of the southeast outcrop and on the southeast face of the opposing outcrop on the northwest side of the pass are witness to the quarrying that took place to shape the topography for military construction purposes. On the summit of the northwest outcrop a line of large boulders survives, reflecting the rampart base and outer northeast face of the redoubt on the northwest side of the gatehouse [Resources 592-4]. Running northeast-southwest and extending perpendicular to the northwest end of the line of boulders is a series of nine drill holes believed to have formerly held iron rods used to anchor the rampart to the bedrock outcrop.

In the cleft of the pass, two archaeological excavation units, one on either side of the main path, and monitoring of the excavation of a drainage trench directly under the path, have revealed intact remains of both the gatehouse foundations and the Kingsbridge Road [Resource 592-2]. On the southeast side of the path, the gatehouse foundations, composed of large blocks of schist, were encountered at a depth of roughly three feet below the modern ground surface. On the northwest side of the path, the gatehouse foundations and the bed of the Kingsbridge Road occurred somewhat higher in the soil profile, between one-and-a-half and three feet below the surface. A small quantity of artifacts, mostly recovered from later, disturbed soil contexts, testify to pre-park occupation of this area in the late 18th and early/mid-19th centuries. The only object found of potential military attribution is a gunflint retrieved from a concentration of rubble within a layer of landscaping fill probably laid down in the 1860s when the northern section of Central Park was created. The rubble may represent material redeposited from the War of 1812-era ramparts.

Although the excavations and monitoring conducted to date only provide a glimpse of the archaeology within the pass, the results correlate well with the detailed watercolors of the gatehouse and defenses produced by John Joseph Holland in the fall of 1814 (Figures 4.2 and 4.3) and with contemporary maps (see above, Figures 2.2-2.5). The broad outlines of this correlation are illustrated in Figure 4.1 where a gate opening, approximately 20 feet in width and length and rhomboidal in plan, is positioned centrally within the pass and bordered on each side by stone foundations, roughly 20 feet long and four feet wide. The rhomboidal footprint of the gate opening, which requires stronger archaeological confirmation, is hinted at in at least two of the historic maps (Figures 2.2 and 2.5) and appears to be dictated by the underlying topography of the pass and its adjoining bedrock outcrops.

Stone footings for the gatehouse probably also extended northwest and southeast from the ends of the foundations defining the two sides of the gate opening, connecting to the bedrock outcrops on either side, since it appears from the Holland images that the northeast and southwest sides of the supporting structure of the gatehouse on either side of the gate opening were formed in masonry to a height of perhaps 12 or 15 feet. This is something that further archaeological exploration could help to resolve, along with establishing whether or not interior stairways gave access from the road level to the timber-framed superstructure above.

From the Holland watercolors the gate opening appears to have been framed with heavy timbers with a set of gates pivoted midway along the sides of the passage, opening uphill to the southwest, i.e., inward to the defended city. In Figure 4.2 these gates are clearly propped open with large stones or pieces of lumber. The two gates were likely each around ten feet wide and 12 to 15 feet high. The Holland views looking both uphill and downhill show that the downhill or outer face of the lower portion of the gatehouse was sloping. This is evident in the timber framing in Figure 4.2 and in what appears to be some form of plank covering on either side of the opening in Figure 4.3. It is also possible that a second set of gates existed at the downslope side of the gatehouse, possibly in form of a pair of sliding doors or doors that opened outwards. Again, archaeological investigation may, through the identification of post settings, clarify the design and construction of the gates and their related components.

The upper portion of the gatehouse offers no direct archaeological manifestation, but the field evidence combined with the Holland watercolors and historic maps enables its basic character to be reasonably well understood. This was a substantial frame "blockhouse" structure with a hipped roof, measuring perhaps 30 feet in width from northeast to southwest by 40 to 45 feet in length from northwest to southeast. It was set on large timber joists running northeastsouthwest and cantilevered beyond the top of the supporting masonry construction beneath. The plank siding on its exterior was pierced with two openings for look-out purposes on its outer, northeast side. No openings were evidently felt to be necessary on the opposite in-town side. Presumably door openings on the northwest and southeast sides allowed access to the adjoining ramparts, and window openings may also have been included in these walls. The roof, probably wood shingle, has what appears to be a pair of trapdoor-like openings (both shown as being closed), possibly vents for air circulation or to allow smoke to escape from interior fireplaces. The structure is sufficiently large that it almost certainly had interior partitioning and may also have included provision for interior heating.

Excavation Unit 4 and monitoring of the drainage trench excavated between Catch Basins 5 and 6 found extensive traces of the Kingsbridge Road at depths of between 18 inches and 3 feet below the modern ground surface. The roadbed, roughly six inches in thickness, comprised a densely packed layer of pebbles and cobbles set in a silty sand with a highly compacted "metalled" surface. The full width of the roadway was not determined but was at least 25 feet. It extended northwest beyond the foundation defining the northwest side of the gatehouse passageway, showing not only that the road predates the gatehouse but also that it was made narrower when the pass was fortified in 1814. How far the roadbed survives upslope and downslope of the gatehouse remains unclear, although it was traced and left intact within the drainage trench for most of the 100-foot distance separating Catch Basins 5 and 6. As the principal route leading north from the city to Harlem and beyond, the Kingsbridge Road dates from at least the mid-17th century and likely existed as an aboriginal trail before this time. The age of the roadbed surviving within McGown's Pass is uncertain but it was likely constructed in the late 18th or very early 19th century, if not earlier.







Figure 4.2. Holland, John Joseph. Detail of "Gate at McGowan's Pass." 1814. This view, looking north, shows the Kingsbridge Road passing downhill through the McGown's Pass Gatehouse [592-2]. Source: New-York Historical Society, Luce Center, Object No. 1889.16.



Figure 4.3. Holland, John Joseph. Detail of "Works at McGowan's Pass." 1814. This view, looking south, shows the Kingsbridge Road in the foreground leading up to the McGown's Pass Gatehouse [592-2]. Source: New-York Historical Society, Luce Center, Object No. 1889.14.

B. NUTTER'S BATTERY AREA

Archaeological testing in the area to the southeast of Nutter's Battery was largely unrewarding. No clear traces of either the Revolutionary War/War of 1812 defenses [Resources 592-3 and 592-4] or the Wilkins Shanty or Outbuilding [Resource 592-7] were observed and the locations tested appear to have been thoroughly reworked down to bedrock and natural soils during and since the creation of Central Park. The bedrock knoll where Nutter's Battery [Resource 592-6] was situated may yet retain some archaeological potential within the summit area defined by the outcrops of bedrock, both in ground now covered by grass and vegetation and beneath the parapet walls and paved surfaces. Also of some potential archaeological interest is the area between the bedrock outcrop on the northwest side of McGown's Pass and Nutter's Battery to the south of the east-west path that bisects these two promontories. In this zone, where slopewash and vegetation may have stabilized portions of the pre-park landscape one may expect to find further traces of the Revolutionary War/War of 1812 defenses [Resources 592-3 and 592-4], most likely in the form of the earth and rubble base of the rampart.

C. MOUNT ST. VINCENT

Archaeological te sting and monitoring on the west side of Mount St. Vincent, between the East Drive and summit of the mount, yielded no remains of historical interest. The site of the Mount St. Vincent Chaplain's House [Resource 590-12] has been extensively disturbed by park-related grading to the point where no intact structural remains or deposits were observed. No evidence was noted of the Revolutionary War encampment [Resource 589-13] that lay in the area to the south of Mount St. Vincent. This site probably lies further to the south beyond the access road leading from the East Drive to the composting facility on the summit of Mount St. Vincent. It remains unclear whether the area to the east of the current archaeological testing and monitoring, closer to the summit of Mount St. Vincent where the academy buildings and the earlier Black Horse/McGown's Tavern [Resource 589-12] and numerous other structures were situated, retains substantive and meaningful archaeological integrity. The above-ground survival of portions of the Mount St. Vincent Chapel [Resource 589-8] and segments of retaining walls [e.g., Resource 590-3] would suggest that there may be significant survival of archaeological resources in at least some parts of this area.

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

Through a combination of pre-construction testing and monitoring during construction, the Forts Landscape Reconstruction Project has appropriately addressed the potential for adverse effects on archaeological resources within areas where grading and drainage, irrigation and lighting work involved ground disturbance. For the most part, archaeological investigations encountered little of historical interest in locations where archaeological resources were suspected and landscape reconstruction proceeded smoothly. However, in one location, McGown's Pass, significant buried remains of the War of 1812era gatehouse and the Kingsbridge Road were found during both archaeological testing and monitoring. Following coordination among Conservancy staff, the contractor and Hunter Research archaeologists, it was determined that utilities installation and landscaping improvements could take place without serious damage occurring to archaeological resources. The remains in question (the gatehouse foundations and the bed of the Kingsbridge Road) were exposed, documented, covered in protective plastic sheeting, left in situ and reburied. They are described and interpreted in this report.

In this instance, the Central Park Conservancy followed a clear archaeological resource management procedure that has identified and safeguarded critical buried remains for future reference. Using the results of a historical and archaeological assessment of the north end of Central Park produced in 1990 as a guide and coordinating with the New York City Landmarks Preservation Commission (NYCLPC), preliminary archaeological investigations were carried out in April 2013 in locations where proposed project actions coincided with the sites of potential historic archaeological resources. The results of these initial investigations led to further coordination between the Conservancy and the NYCLPC and the more carefully targeted testing and monitoring described in this report. This is in turn led to the identification and protection of significant remains in McGown's Pass, while the remaining resource locations were removed from further archaeological consideration, allowing the project to proceed with minimal delay. This procedure has worked effectively and can serve as a useful model for future treatment of archaeological resources in Central Park.

B. GENERAL RECOMMENDATIONS FOR LANDSCAPE IMPROVEMENTS IN THE NORTHERN END OF CENTRAL PARK

1. Mapping of Historic Resource Data

The current studies have demonstrated that important vestiges of pre-Park land use, notably those relating to the defensive systems put in place in 1814 (and possibly also during the Revolutionary War), are still visible in the present-day landscape. These include traces of ramparts and redoubts, drill holes for anchor rods and evidence of quarrying. Recognition of such features, especially when viewed within the context of the surviving blockhouse on the bluffs west of Montayne's Rivulet, will greatly enhance our understanding and appreciation of the military use of the landscape. The surface traces of historic resources in the northern end of the Park have not been systematically inventoried or mapped. It is recommended that consideration be given to a comprehensive field mapping project using global positioning system (GPS) technology and to the development of a cultural resource geographic information system (CRGIS). The field mapping work would be best accomplished in late fall or early spring when vegetation cover is minimal and the ground is neither frozen nor snow-covered. Limited probing or shovel testing could also be incorporated into this work to provide a higher level of archaeological clarity. Creation of a CRGIS would have value for planning and landscape management and would help to ensure protection of historic resources.

2. Additional Archival Study

Archival study will help to inform our understanding of the historic landscape in the northern end of Central Park, in particular the various military installations developed on the bluffs. Considerable effort has already been expended by Conservancy staff and scholars in researching the history of the Park. Most relevant archival sources in repositories in the New York area (e.g., the New-York Historical Society, the New York Public Library, the New York Municipal Archives, the Department of Parks and Recreation, the Manhattan Borough President's Office) have been thoroughly examined. However, the holdings of the National Archives and the Library of Congress merit a more exhaustive search, particularly for construction documents and orders pertaining to the War of 1812era defenses within the Park. Other repositories holding records of British Revolutionary War-era military occupation (William L. Clements Library, Ann Arbor, Michigan), past U.S. Army engineers (Lilly Library, Indiana University, Bloomington, Indiana), the New York State militia (New York State Archives, Albany) and Colonel Joseph Gardner Swift (New York Public Library and New-York Historical Society) may also bear closer examination.

3. Archaeological Resource Management Procedure

Where Conservancy projects in the northern end of the Park entail major ground disturbance it is recommended that the historical and archaeological assessment document prepared in 1990 and the results of any future mapping and archival studies (as suggested in #s 1 and 2 above) be taken into account to establish whether the sites of known or suspected archaeological resources may be affected. Where appropriate, archaeological testing should be conducted to identify and evaluate buried resources and assess project effects. If adverse effects to archaeological resources cannot be avoided, mitigation measures should be developed. Coordination with the NYCLPC should be an integral part of this procedure.

C. RECOMMENDATIONS FOR MCGOWN'S PASS

The intact archaeological remains of the War of 1812era gatehouse and the Kingsbridge Road discovered in McGown's Pass merit consideration for further research and for more detailed historic interpretive planning. The gatehouse was an impressive, if shortlived structure whose basic outlines are known from contemporary watercolors and historic maps, but many questions still linger about its precise dimensions, the details of its construction, how it was used and how long it remained standing. There is also uncertainty about the width and mode of construction of the Kingsbridge Road, and the relationship of the road to the gatehouse. Further historical and archaeological study would enable many of these questions to be addressed. In addition, the future treatment of the archaeological remains of the gatehouse and roadway deserves careful consideration, with a range of potential approaches, from preservation-in-place to reconstruction, being feasible.

Further archival study has been recommended above for historic resources throughout the northern end of the Park, and most especially for the War of 1812 and Revolutionary War military fortifications. The sources and repositories identified above will likely yield additional information on the gatehouse. Expanded archaeological excavation can also assist in clarifying the dimensions, layout and mode of construction of the gatehouse and the character of the Kingsbridge Road. The extent to which further excavation is conducted, however, should be driven by how the Conservancy chooses to interpret McGown's Pass in the modern landscape and how best to protect the archaeological remains contained there.

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Appendix A

APPENDIX A

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
McGowan's Pass	Trench	1	100	-			Historic Fired Clay - Ceramic
McGowan's Pass	Excavation Unit	1	1	1.25 - 1.7f	mottled silty loam [Dark humic modern fill layer]	7.5YR 4/6, 10YR 3/4	Historic Fired Clay - Ceramic
	l						Historic Fired Clay - Non- ceramic
							Historic Glass
							Indeterminate Stone
							Modern Composite
			2	1.7 - 2.3	silty loam [Pre-2012 topsoil]	10YR 2/2	Historic Composite
	-						Historic Fired Clay - Ceramic
							Historic Fired Clay - Non- ceramic
							Historic Glass
							Modern Glass
							Modern Metal
			3	2.3 - 2.8	silty loam [1870s to mid 20th-century landscaping topsoil]		Historic Composite
							Historic Fired Clay - Ceramic
							Historic Fired Clay - Non- ceramic
							Historic Glass
							Historic Metal
							Indeterminate Fauna
			4	2.8 - 3.3	mottled silty sand loam [19th-century landscaping fill]	7.5YR 4/6, 10YR 2/2	Historic Fired Clay - Ceramic
							Historic Fired Clay - Non- ceramic
							Historic Glass
							Historic Metal

APPENDIX A (Cont.)

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
McGowan's Pass	Excavation Unit	1	4	2.8 - 3.3	mottled silty sand loam [19th-century landscaping fill]	7.5YR 4/6, 10YR 2/2	Indeterminate Stone
			5	3.3 - 3.5	clay silt loam [Pre-park topsoil]	10YR 3/3	Historic Composite Historic Fired Clay - Ceramic
		I				l	Historic Fired Clay - Non- ceramic
							Historic Glass Historic Metal Indeterminate Mineral
			6	2.8 -	[Electrical utility pipe lines up with visible lamp posts]		Indeterminate Stone
		1	7	2.1 - 3.3	[Cut for pipe trench]		
			8		silty loam [Fill for pipe trench (7)]	10YR 3/3	Historic Fired Clay - Ceramic
							Historic Glass
							Historic Metal
	I		9	3.1 - 3.2	silty clay loam with stone [Stone concentration]	7.5YR 4/6	Historic Fired Clay - Ceramic
		I					Historic Fired Clay - Non- ceramic
							Historic Metal
							Historic Stone
							Indeterminate Fauna
			10	3.3 - 3.5	clay silt loam [Humic layer]	10YR 3/3	Historic Fired Clay - Ceramic
		I				I	Historic Fired Clay - Non- ceramic
							Historic Glass
							Historic Metal
							Indeterminate Fauna

APPENDIX A (Cont.)

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
McGowan's Pass	Excavation Unit	1	11	3 -			
			12	3.3 -	[Stone pavement or foundation]	Manhattan schist	
			13	3.75 -	silty loam [Humic]	10YR 2/1	Historic Glass
			14	3.7 - 3.8	clay loam	7.5YR 5/6	Historic Fired Clay - Non- ceramic
							Historic Glass
							Historic Metal
							Indeterminate Mineral
			15	-	sandy silt loam [Possible natural soil under embankment and adjacent to gatehouse foundation (12)]	10YR 3/6	Historic Fired Clay - Non- ceramic
McGowan's Pass	Excavation Unit	4	1	0.8 - 1.8	silty loam	10YR 3/1	Historic Fired Clay - Ceramic
							Historic Glass
			2	1.1 - 1.5	[Road cut]	10YR 3/3	
			3		[Fill from cut (2)]		
			4	2.1 - 2.75	mottled silty sand loam	10YR 3/2, 10YR 5/6	Historic Fired Clay - Ceramic
				l		1	Historic Fired Clay - Non- ceramic
							Historic Glass
							Historic Metal
							Indeterminate Mineral
			5	2.75 - 2.8	silty sand with gravel	10YR 4/6	
			6	2.8 - 3.1	sandy silt with pebbles		
			7	3.1 - 3.35	sandy silt		
			8	1.7 - 2.7	[Concrete feature cut]		
			9		[Concrete feature]		
			10	-	compact silty sand with pebbles	10YR 5/3	Historic Fired Clay - Non- ceramic
							Historic Metal

APPENDIX A (Cont.)

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
McGowan's Pass	Excavation Unit	4	10 11	-	compact silty sand with pebbles compact silty sand with cobbles	10YR 5/3	Indeterminate Stone
Nutter's Battery Area	Excavation Unit	2	1	0.7 - 1.3	sandy silt loam	10YR 3/4	Historic Fired Clay - Ceramic
						l	Historic Fired Clay - Non- ceramic
		1				1	Historic Metal
							Modern Composite
							Modern Metal
			2	1.3 - 2.1	clay silt loam	10YR 5/6	Historic Fired Clay - Non- ceramic
							Historic Glass
			3	1.55 -	silty sand loam	7.5YR 5/6	Historic Glass
			4	- 2.7	laminated silty sand	10YR 5/3, 10YR 5/6	
			5	-		Manhattan schist	
Nutter's Battery Area	Excavation Unit	3	1	0.8 - 1.7	silty loam	10YR 3/4	Historic Fired Clay -
	1	1	1	l	I	I	Historic Glass
							Historic Metal
							Historic Stone
							Indeterminate Mineral
							Modern Composite
							Modern Metal and Composite
			2	1.7 - 1.9	mottled silty loam [20th-century fill with rubble]	10YR 3/4, 10YR 5/6	Historic Fired Clay - Ceramic
						l	Historic Fired Clay - Non- ceramic
		1				1	Historic Glass
							Historic Stone
			3	1.9 - 2	mottled silty loam [20th-century fill]	10YR 4/6, 10YR 4/3	Historic Fired Clay - Ceramic
APPENDIX A (Cont.)

SUMMARY OF SUBSURFACE TESTING

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Nutter's Battery Area	Excavation Unit	3	3	1.9 - 2	mottled silty loam [20th-century fill]	10YR 4/6, 10YR 4/3	Historic Fired Clay - Non- ceramic
							Historic Metal
			4	2 - 2.2	mottled silty loam [Layered 20th- century fill deposits, including possible dredge material]	10YR 3/1, 10YR 3/2, 10YR 2/2, 10YR 3/4	Historic Fired Clay - Ceramic
							Historic Fired Clay - Non- ceramic
							Historic Glass
							Historic Metal
							Modern Composite
	I		5	2.2 - 2.95	silty loam [Truncated B horizon]	10YR 4/4	Historic Fired Clay - Ceramic
	l			l			Historic Fired Clay - Non- ceramic
							Historic Glass
							Historic Metal
							Indeterminate Fauna
							Indeterminate Mineral
	I		6	2.95 - 3.0	sandy silt loam [20th-century pit with debris fill]	10YR 3/6	
	I		7	l	sandy silt loam [Cut for 6]		Historic Fired Clay - Non- ceramic
						1	Indeterminate Mineral
			8	3.05 - 3.5	sandy silt loam [Natural subsoil horizon]	10YR 5/6	Historic Fired Clay - Ceramic
	I		I	l		1	Historic Fired Clay - Non- ceramic

Appendix B

ARTIFACT INVENTORY

APPENDIX B ARTIFACT INVENTORY

McG	Gowan's Pass, Excavation Unit 1, Context 1	Catalog #	23
М	odern		
1	Composite, Plastic Fragment, Clear/uncolored	Row #	8
1	Composite, Plastic Fragment, Purple	Row #	7
In	determinate		
3	Stone, Mica Fragment, Muscovite	Row #	20
Hi	istoric		
1	Fired Clay - Ceramic, Refined Earthenware, Creamware, Hollow ware Body fragment	Row #	13
1	Fired Clay - Ceramic, Refined Earthenware, Ironstone, Hollow ware Body fragment, Remnant floral transfer print	Row #	11
1	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Hollow ware Body fragment	Row #	12
4	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Body fragment	Row #	14
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Body fragment, Blue underglaze	Row #	15
1	Fired Clay - Ceramic, Stoneware, Orange and tan bodied, Hollow ware Body fragment, Salt-glazed exterior, cobalt s Albany interior, Locally made	ip, Row #	18
1	Fired Clay - Ceramic, Stoneware, Orange and tan bodied, Hollow ware Body fragment, Salt-glazed exterior, unglazed interior, Impressed partial lettering infilled with cobalt, Locally made, possibly a jug	1 Row #	17
1	Fired Clay - Ceramic, Stoneware, White salt-glazed, Hollow ware Body fragment	Row #	16
1	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	19
3	Glass, Curved, Bottle Body fragment, Light aqua	Row #	6
1	Glass, Curved, Bottle Body fragment, Lime green	Row #	5
38	Glass, Curved, Bottle Body fragment, Embossed, Clear/uncolored	Row #	1
4	Glass, Curved, Bottle Body fragment, Green	Row #	4
4	Glass, Curved, Bottle Body fragment, Dark green	Row #	3
4	Glass, Curved, Bottle Body fragment, Brown	Row #	2
2	Glass, Curved, Fuse Fragment, Clear/uncolored	Row #	9
3	Glass, Flat, Window Fragment, Clear/uncolored	Row #	10
	Total Artifacts in Context 1: 76		
McG	owan's Pass, Excavation Unit 1, Context 2	Catalog #	24
Μ	odern		
4	Glass, Curved, Bottle Body and base fragment, Embossed, Lime green	Row #	2
1	Metal, Aluminum, Bottle cap Whole, Threaded	Row #	3
Hi	istoric		
2	Composite, VCT, Unidentified form	Row #	4
1	Fired Clay - Ceramic, Ball Clay, Smoking pipe, Stem Fragment, D 4/64	Row #	9
3	Fired Clay - Ceramic, Earthenware, Redware, Hollow ware Body fragment, Lead glazed interior and exterior, Inscril linear decoration	bed Row #	5
1	Fired Clay - Ceramic, Stoneware, Buff bodied, Bottle Body fragment, Albany glazed interior and exterior	Row #	6
1	Fired Clay - Ceramic, Stoneware, Gray bodied, Hollow ware Body fragment, Salt-glazed exterior, Albany slip interior	r Row #	8
1	Fired Clay - Ceramic, Stoneware, White bodied, Hollow ware Body fragment, Salt-glazed brown exterior, white inter	ior Row #	7
1	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	10
6	Glass, Curved, Bottle Body fragment, Clear/uncolored	Row #	1
	Total Artifacts in Context 2: 21		
McG	owan's Pass, Excavation Unit 1, Context 3	Catalog #	25
In	determinate		
1	Fauna, Shell - artifact, Oyster Fragment	Row #	12
Hi	istoric		

1	Composite, Mortar Fragment	Row #	16
3	Fired Clay - Ceramic, Ball Clay, Smoking pipe, Bowl Fragment	Row #	11
1	Fired Clay - Ceramic, Earthenware, Redware, Hollow ware Body and rim fragment, Glazed both surfaces, Albany s	lip Row #	8
1	Fired Clay - Ceramic, Earthenware, Rockingham, Hollow ware Body fragment, Manganese glaze, both surfaces	Row #	10
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Body fragment	Row #	7
1	Fired Clay - Ceramic, Stoneware, Orange and tan bodied, Hollow ware Body fragment, Salt-glazed exterior, partial Albany slip interior, Inscribed with decoration, Locally made	Row #	9
8	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	17
1	Glass, Button Whole, White, Four holes	Row #	13
19	Glass, Curved, Bottle Body fragment, Embossed, Lime green	Row #	3
3	Glass, Curved, Bottle Body fragment, Olive green	Row #	4
3	Glass, Curved, Bottle Body fragment, Light aqua	Row #	2
42	Glass, Curved, Bottle Body fragment, Clear/uncolored	Row #	1
6	Glass, Curved, Bottle Body fragment, Brown	Row #	5
1	Glass, Flat, Window Fragment, Clear/uncolored	Row #	6
1	Metal, Copper/nickel, Coin Whole, Indian head penny, 1859-1864, Corroded	Row #	14
8	Metal, Ferrous metal, Nail Fragment, Corroded	Row #	15
7	Total Artifacts in Context 3: 101		
MaCo	wen's Dass Exception Unit 1 Contact 4	Catalog #	26
MCGO	wan's rass, Excavation Onit 1, Context 4	Catalog #	20
Inde	eterminate		
1	Stone, Mica Fragment, Muscovite	Row #	17
Hist	toric		
1	Fired Clay - Ceramic, Ball Clay, Smoking pipe, Bowl Fragment, Fluted	Row #	19
2	Fired Clay - Ceramic, Ball Clay, Smoking pipe, Stem Fragment, D 5/64	Row #	20
2	Fired Clay - Ceramic, Earthenware, Redware, Flower pot Body fragment	Row #	16
2	Fired Clay - Ceramic, Earthenware, Redware, Hollow ware Body and rim fragment, Albany slip, both surfaces, scalloped rim.	Row #	14
2	Fired Clay - Ceramic, Refined Earthenware, Creamware, Unidentified form Body fragment	Row #	11
1	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Hollow ware Body fragment, Cobalt decorative wash	Row #	7
4	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Hollow ware Body fragment, Cobalt floral and annular decoration	Row #	8
1	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Hollow ware Body fragment, Annular, brown decoration	Row #	9
1	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Unidentified form Base and rim fragment	Row #	6
9	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Unidentified form Body fragment	Row #	10
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Body fragment, Annular	Row #	13
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Handle fragment	Row #	15
7	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Body fragment	Row #	12
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Fragment, Blue and gold decoration	Row #	5
2	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	21
8	Glass, Curved, Bottle Body fragment, Embossed, Clear/uncolored	Row #	1
1	Glass, Curved, Bottle Body fragment, Olive green	Row #	3
1	Glass, Flat, Unidentified Fragment, Yellow-brown	Row #	2
3	Glass, Flat, Window lead Fragment, Clear/uncolored	Row #	4

Total Artifacts in Context 4: 57

McGo	wan's Pass, Excavation Unit 1, Context 5	Catalog #	27
Inde	eterminate		
1	Mineral, Lime Fragment	Row #	9
1	Stone, Limestone Fragment	Row #	10
Hist	toric		
1	Composite, Unidentified, Unidentified form Fragment, Green	Row #	8
1	Fired Clay - Ceramic, Porcelain, Unidentified form Fragment, Blue decoration	Row #	7
1	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Hollow ware Rim fragment	Row #	4
1	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Plate Body fragment	Row #	3
6	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Plate Body and rim fragment	Row #	5
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Fragment, Blue and gold decoration	Row #	6
6	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	14
1	Glass, Curved, Bottle Body fragment, Embossed, Clear/uncolored	Row #	2
4	Glass, Curved, Bottle Body fragment, Olive green	Row #	1
1	Metal, Ferrous metal, Buckle Whole, Corroded, L 1.75in, W 1.75in, T 0.25in	Row #	11
4	Metal, Ferrous metal, Nail Fragment	Row #	12
3	Metal, Stainless steel, Pipe screen Whole, Smoke damage	Row #	13
7	Fotal Artifacts in Context 5: 32		
McGo	wan's Pass, Excavation Unit 1, Context 8	Catalog #	28
Hist	toric		
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Body fragment	Row #	4
2	Glass, Curved, Bottle Fragment, Brown	Row #	2
1	Glass, Curved, Chimney lamp Fragment, Clear/uncolored	Row #	3
3	Glass, Flat, Window Fragment, Clear/uncolored	Row #	1
3	Metal, Ferrous metal, Nail Fragment, Corroded	Row #	5
7	Fotal Artifacts in Context 8: 10		
McGo	wan's Pass, Excavation Unit 1, Context 9	Catalog #	29
Inde	eterminate		
1	Fauna, Bone - remains Fragment	Row #	3
Hist	toric		
1	Fired Clay - Ceramic, Refined Earthenware, Creamware, Unidentified form Fragment	Row #	5
11	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	4
1	Metal, Copper alloy, Button Whole, Flat front, "LONDON TREBLE GILT" on back, Corroded, Circa 1810s-1830s, possible New York militia affiliation. Disc. Soldered eye missing.	Row #	2
3	Metal, Ferrous metal, Hardware Fragment, Corroded	Row #	7
10	Metal, Ferrous metal, Nail Fragment, Cut, Corroded	Row #	6
1	Stone, Flint, Gun flint Whole, L 1.3in, W 1in, T 0.4in, Probably Dutch. Long dane or cannon size. Long margins exhi	ibit Row #	1
_	use.		
1	Total Artifacts in Context 9: 28		
McGo	wan's Pass, Excavation Unit 1, Context 10	Catalog #	30
Inde	eterminate		
1	Fauna, Bone - remains Fragment	Row #	7
Hist	toric		
1	Fired Clay - Ceramic, Earthenware, Redware, Unidentified form Fragment	Row #	6
1	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Unidentified form Fragment	Row #	2
	B-3		

1 Fired Clay - Ceramic, Refined Earthenware, Unidentified Fragment	Row #	3
5 Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Reddish brown, Underfired, possible manufacturing discar	rd Row #	5
3 Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	4
7 Glass, Curved, Bottle Base and body fragment, Dark olive green, Pontil base	Row #	1
9 Metal, Ferrous metal, Nail Fragment, Corroded	Row #	9
1 Metal, Ferrous metal, Unidentified form Fragment, Corroded	Row #	8
Total Artifacts in Context 10: 29		
McGowan's Pass, Excavation Unit 1, Context 13	Catalog #	31
Historic		
3 Glass, Curved, Bottle Fragment, Olive green	Row #	1
Total Artifacts in Context 13: 3		
McGowan's Pass, Excavation Unit 1, Context 14	Catalog #	32
Indeterminate		
1 Mineral, Coal Fragment	Row #	2
Historic		
3 Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	3
2 Glass, Curved, Bottle Base fragment, Dark olive green, Fragments mend. Pontil base, domed kick-up. Mallet shaped	. Row #	1
3 Metal, Ferrous metal, Nail Fragment, Corroded	Row #	4
Total Artifacts in Context 14: 9		
McGowan's Pass, Excavation Unit 1, Context 15	Catalog #	33
Historic		
2 Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	1
Total Artifacts in Context 15: 2		
Total Artifacts in McGowan's Pass Excavation Unit 1 : 368		
McGowan's Pass, Excavation Unit 4, Context 1	Catalog #	44
Historic		
1 Fired Clay - Ceramic, Porcelain, Unidentified form Fragment	Row #	2
1 Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Rim fragment, Cobalt blue rim, painted pink floral underglaze	Row #	1
2 Glass, Curved, Bottle Fragment, Light aqua	Row #	3
Total Artifacts in Context 1: 4		
McGowan's Pass, Excavation Unit 4, Context 4	Catalog #	45
Indeterminate		
1 Mineral, Coal Fragment	Row #	23
Historic		
1 Fired Clay - Ceramic, Ball Clay, smoking pipe, Bowl Fragment	Row #	16
1 Fired Clay - Ceramic, Earthenware, Redware, Unidentified form Fragment, Unglazed	Row #	19
3 Fired Clay - Ceramic, Earthenware, Redware, Unidentified form Fragment, Lead glazed exterior	Row #	18
1 Fired Clay - Ceramic, Porcelain, Unidentified form Fragment	Row #	17
2 Fired Clay - Ceramic, Refined Earthenware, Creamware, Unidentified form Fragment	Row #	7
9 Fired Clay - Ceramic, Refined Earthenware, Pearlware, Hollow ware Fragment	Row #	9
1 Fired Clay - Ceramic, Refined Earthenware, Pearlware, Unidentified form Fragment, Green scalloped shell edge	Row #	15

2	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Unidentified form Fragment, Green shell edge	Row #	14
2	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Unidentified form Fragment, Blue shell edge	Row #	11
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Fragment, Black transfer print, interior and exterior, Floral/geometric	Row #	10
18	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Fragment	Row #	6
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Fragment, Blue floral transfer print	Row #	12
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Fragment, Green painted decoration	Row #	13
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Fragment, Blue annular decoration	Row #	8
1	Fired Clay - Ceramic, Refined Earthenware, Yellowware, Unidentified form Fragment	Row #	5
4	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	21
1	Glass, Button Whole, White, Four holes	Row #	22
2	Glass, Curved, Bottle Fragment, Olive green	Row #	2
2	Glass, Curved, Bottle Fragment, Light aqua	Row #	1
1	Glass, Curved, Unidentified form Fragment, Cobalt blue	Row #	3
3	Glass, Flat, Window Fragment, Clear/uncolored	Row #	4
10	Metal, Ferrous metal, Hardware Fragment, Corroded	Row #	20
	Total Artifacts in Context 4: 69		
McG	owan's Pass, Excavation Unit 4, Context 10	Catalog #	46
Inc	leterminate		
1	Stone, Quartzite Fragment	Row #	1
His	storic		
2	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	2
8	Metal, Ferrous metal, Unidentified form Fragment, Corroded, Slag encrusted in small pebbles and sediment	Row #	3
	Total Artifacts in Context 10: 11		
To	tal Artifacts in McGowan's Pass Excavation Unit 4 : 84		
McG	owan's Pass, Trench 1, Context 100	Catalog #	47
His	storic		
2	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Unidentified form Fragment, Cobalt blue decoration	Row #	1
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Body fragment	Row #	2
	Total Artifacts in Context 100: 3		
To	tal Artifacts in McGowan's Pass Trench 1 : 3		
Nutto	ar's Rottery Area Evenyation Unit 2 Context 1	Catalog #	3/
M	adarn	Catalog "	54
2	Composite Destin Unidentified form Fragment Mint green	Pow #	5
1	Matal Aluminum Can/lid Whole "Olda English "800" "	Row #	1
і Ц:	storie	NUW #	4
1	Fired Clay - Ceramic Ball Clay Marble Whole	Dow #	1
1	Filed Clay - Ceramic, Dali Clay, Matthe Wildle Wildle	KOW #	1
1	Fired Clay Non coronic, Earthonware, Drick Enormant, Daddish because Underfined massible manufacturing discussion	KOW #	2
1	Filed Ciay - INOI-Ceramic, Earthenware, Brick Fragment, Reddish brown, Underfired, possible manufacturing disca		0
3	Metal, remous metal, Nall Fragment, Corroded	KOW #	3

Total Artifacts in Context 1: 9

Nutte	r's Battery Area, Excavation Unit 2, Context 2	Catalog #	35
His	storic		
3	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	4
1	Glass, Curved, Bottle Fragment, Embossed, Light aqua	Row #	1
1	Glass, Curved, Bottle Fragment, Clear/uncolored	Row #	2
1	Glass, Flat, Window Fragment, Clear/uncolored, -0	Row #	3
	Total Artifacts in Context 2: 6		
Nutter's Battery Area, Excavation Unit 2, Context 3		Catalog #	36
His	storic		
2	Glass, Curved, Unidentified form Fragment, Clear/uncolored	Row #	1
	Total Artifacts in Context 3: 2		
To	al Artifacts in Nutter's Battery Area Excavation Unit 2 : 17		
Nutte	r's Battery Area, Excavation Unit 3, Context 1	Catalog #	37
Mo	odern		
1	Composite, Plastic, Cutlery Handle, Embossed, Yellow, On back: "Diplomat TM VB Clinton Mass. USA"	Row #	6
1	Composite, Plastic, Unidentified form Fragment, Black	Row #	8

1	Composite, Flastic, Ondentified form Fragment, Black	KOW #	0
1	Metal and Composite, Plastic, Pen Fragment, Bic	Row #	7
Ind	eterminate		
15	Mineral, Charcoal Fragment	Row #	12
His	storic		
1	Fired Clay - Ceramic, Ball Clay, Smoking pipe, Stem Fragment, D 7/64	Row #	9
1	Fired Clay - Ceramic, Refined Earthenware, Ironstone, Unidentified form Fragment	Row #	4
1	Fired Clay - Ceramic, Stoneware, Buff bodied, Bottle Body fragment, Salt-glazed exterior, Albany slip interior	Row #	5
6	Glass, Curved, Bottle Fragment, Embossed, "ch Wine C", Clear/uncolored	Row #	1
2	Glass, Curved, Bottle Body and top fragment, Light aqua	Row #	2
1	Glass, Curved, Unidentified form Fragment, White	Row #	3
1	Metal, Ferrous metal, Nail Fragment, Wire Cut, Corroded	Row #	10
3	Metal, Ferrous metal, Unidentified Fragment, Corroded	Row #	11
1	Stone, Ballast Flint, Ballast Fragment, Tan, Possibly Dutch, cortex present	Row #	13
	Total Artifacts in Context 1: 35		
Nutte	r's Battery Area, Excavation Unit 3, Context 2	Catalog #	38
His	storic		
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Rim fragment	Row #	3
5	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	5
1	Fired Clay - Non-ceramic, Earthenware, Vitrified clay, Pipe Fragment, Glazed interior and exterior, Brown	Row #	6
2	Glass, Curved, Bottle Body fragment, Brown	Row #	2
4	Glass, Curved, Milk bottle Body and top fragment, Embossed, Clear/uncolored	Row #	1
1	Stone, Ballast Flint, Ballast Fragment, Black, English, cortex present	Row #	4
	Total Artifacts in Context 2: 14		
Nutte	r's Battery Area, Excavation Unit 3, Context 3	Catalog #	39
ц			
пв	storic		
1	storic Fired Clay - Ceramic, Porcelain, Unidentified form Fragment	Row #	1

1	Fired Clay - Ceramic, Whiteware, Unidentified form Rim fragment	Row #	2
1	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	4
2	Metal, Ferrous metal, Unidentified form Fragment, Corroded	Row #	3
	Total Artifacts in Context 3: 5		
Nutte	er's Battery Area, Excavation Unit 3, Context 4	Catalog #	40
Μ	odern		
1	Composite, Asphalt Fragment	Row #	10
Hi	storic		
1	Fired Clay - Ceramic, Ball Clay, Smoking pipe, Stem Fragment, D 7/64	Row #	7
1	Fired Clay - Ceramic, Earthenware, Tan bodied, Unidentified form Rim fragment, Blue-gray exterior slip	Row #	5
5	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Fragment, Annular	Row #	6
5	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red, Underfired	Row #	8
1	Glass, Button Whole, White, Two holes	Row #	12
23	Glass, Curved, Bottle Fragment, Embossed, Clear/uncolored	Row #	1
6	Glass, Curved, Bottle Fragment, Light aqua	Row #	2
1	Glass, Curved, Bottle Fragment, Light green	Row #	3
1	Glass, Curved, Bottle Fragment, Green	Row #	4
1	Metal, Copper alloy, Wire Fragment	Row #	11
2	Metal, Ferrous metal, Unidentified form Fragment, Corroded	Row #	9
	Total Artifacts in Context 4: 48		
Nutte	er's Battery Area, Excavation Unit 3, Context 5	Catalog #	41
Inc	leterminate		
1	Fauna, Bone - remains Fragment	Row #	9
1	Mineral, Coal Fragment	Row #	13
Hi	storic		
1	Fired Clay - Ceramic, Refined Earthenware, Pearlware, Unidentified form Fragment	Row #	5
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Fragment, Annular	Row #	7
4	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Fragment, Annular	Row #	6
6	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Fragment	Row #	4
3	Fired Clay - Ceramic, Stoneware, Buff bodied, Jug Fragment, Salt-glazed gray exterior	Row #	8
2	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Glazed header, Red, W 0.39in, T 0.22in, Fragments meno	d Row #	15
1	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	14
1	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Glazed header, Red, W 0.37in, T 0.2in	Row #	16
1	Fired Clay - Non-ceramic, Earthenware, Brick Whole, Red, L 0.8in, W 0.37in, T 0.19in	Row #	17
1	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Reddish brown, Underfired, possible manufacturing disca	rd Row #	13
2	Glass, Curved, Bottle Fragment, Olive green	Row #	3
1	Glass, Curved, Bottle Fragment, Clear/uncolored	Row #	2
1	Glass, Curved, Bottle Fragment, Embossed, Clear/uncolored	Row #	1
2		D "	12
	Metal, Copper, Twisted wire Fragment	Row #	12
10	Metal, Copper, Twisted wire Fragment Metal, Ferrous metal, Hardware Fragment, Corroded	Row # Row #	11
10 1	Metal, Copper, Twisted wire Fragment Metal, Ferrous metal, Hardware Fragment, Corroded Metal, Ferrous metal, Nail Fragment, Corroded	Row # Row # Row #	11 10

Nutte	er's Battery Area, Excavation Unit 3, Context 7	Catalog #	42
Inc	leterminate		
2	Mineral, Coal Fragment	Row #	4
His	storic		
9	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red and tan mottled, W 0.33in, T 0.14in, Locally produced underfired. Fragments mend. Possible paver.	d, Row#	3
1	Fired Clay - Non-ceramic, Earthenware, Brick Whole, Red, L 0.64in, W 0.33in, T 0.16in, Local manufacture, early brick, vitrification across the break. Warped, overfired, shows striking marks on top surface.	Row #	2
2	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red, Fragments mend	Row #	1
	Total Artifacts in Context 7: 14		
Nutte	er's Battery Area, Excavation Unit 3, Context 8	Catalog #	43
His	storic		
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Unidentified form Fragment	Row #	1
5	Fired Clay - Non-ceramic, Earthenware, Brick Fragment, Red	Row #	2
	Total Artifacts in Context 8: 6		
To	tal Artifacts in Nutter's Battery Area Excavation Unit 3 : 162		
Nutte	er's Battery Area, General Provenience Surface Collection	Catalog #	48
His	storic		
1	Fired Clay - Ceramic, Refined Earthenware, Ironstone, Hollow ware Body fragment, Ribbed	Row #	1
3	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Body fragment	Row #	2
4	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Body and rim fragments	Row #	3
5	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Hollow ware Body and rim fragments, Cobalt linear and floral/ivy decoration, Possible serving dish	Row #	4
3	Fired Clay - Ceramic, Refined Earthenware, Whiteware, Shallow dish Body and rim fragments, Cobalt floral/grape r design, center landscape	im Row#	5
1	Glass, Curved, Bottle Whole, Multi-faceted, Clear/uncolored, Dip molded, L 4.5, W 2, T 1.75, Possible medicine or perfume	Row #	6
1	Glass, Curved, Bottle Base/body fragment, Embossed, Cobalt blue, Pontil base	Row #	7
1	Glass, Flat, Window Fragment, Clear/uncolored	Row #	8
	Total Artifacts in Context 0: 19		

Total Artifacts in Nutter's Battery Area General Provenience : 19

Total Number of Artifacts: 653

* Item Discarded in Laboratory

Appendix C

RESUMES

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, and report preparation 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.
1999-present	Faculty Member, Certificate in Historic Preservation Office of Continuing Education, Drew University, Madison, NJ
1983-1986	Vice-President/Archaeologist Heritage Studies, Inc., Princeton, NJ
1981-1983	Principal Archaeologist Cultural Resource Group, Louis Berger & Associates, Inc., East Orange, NJ
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
1974-1977	Archaeological Field Officer Northampton Development Corporation, Northampton, England
1969-1970	Research Assistant Department of Planning and Transportation, Greater London Council

SELECTED PUBLICATIONS

"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).

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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

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1997-2001	 Principal Investigator/Project Manager Cultural Resource Consulting Group, Highland Park, New Jersey overall site direction and day-to-day management development and implementation of research, excavation and analysis strategies for prehistoric and historic archaeological sites report and proposal preparation hiring and supervision of personnel
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PROJECT ADMINISTRATIVE DATA

APPENDIX D

Project Administrative Data

HUNTER RESEARCH, INC.	
PROJECT SUMMARY	
Project Name:	Archaeological Testing and Monitoring, Forts Landscape
	Reconstruction Project, Central Park, Borough of Manhattan
	New York
Level of Survey:	II 12025
HRI Project Reference:	13025 October 2012
Date of Report:	October 2013
Client:	central Park Conservancy
Prime:	
Review Agency:	New York City Landmarks Preservation Commission
Agency Reference:	n/a
Artifacts/Records Deposited:	Hunter Research, Inc., Trenton, N.J. to be transferred to the
	Central Parks Conservancy
PROJECT CHRONOLOGY	
Date of Contract Award:	2/6/2013
Notice to Proceed:	2/6/2013
Background Research:	March-September 2013
Fieldwork:	March, April, July and August 2013
Analysis:	April 2013 and September 2013
Report Written:	September-October 2013
PROJECT PERSONNEL	
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Background Researcher(s):	n/a
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Analyst(s):	Lauren Lembo and William Liebeknecht
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Supplement

PRELIMINARY ARCHAEOLOGICAL ASSESSMENT CENTRAL PARK FORTS LANDSCAPE RECONSTRUCTION PROJECT BOROUGH OF MANHATTAN, NEW YORK CITY

HUNTER RESEARCH

PRELIMINARY ARCHAEOLOGICAL ASSESSMENT CENTRAL PARK FORTS LANDSCAPE RECONSTRUCTION PROJECT

BOROUGH OF MANHATTAN, NEW YORK CITY

Prepared for:

Central Park Conservancy

Prepared by:

Richard Hunter, Principal James Lee, Principal Investigator

JUNE 2013

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PRELIMINARY ARCHAEOLOGICAL ASSESSMENT CENTRAL PARK FORTS LANDSCAPE RECONSTRUCTION PROJECT BOROUGH OF MANHATTAN, NEW YORK CITY

1. INTRODUCTION

This report summarizes the results of a single day of exploratory archaeological fieldwork carried out by Hunter Research, Inc. on April 10, 2013 in connection with landscaping improvements that the Central Park Conservancy is about to implement in the northeastern portion of the Park in an area where Revolutionary War and War of 1812-era fortifications and other 19thcentury buildings formerly existed (Figures 1 and 2). These archaeological explorations were the subject of a permit application submitted to the New York City Landmarks Preservation Commission on March 5, 2013 and approved shortly thereafter. Central Park in its entirety is designated as both a National Historic Landmark and a municipal scenic historic landmark.

The archaeological work described here was conducted by Richard Hunter and James Lee, both of whom meet the federal standards for qualified professional archaeologists as specified in 36 CFR 66.3(b) (2) and 36 CFR 61. All documentation and artifacts from these studies will be stored at Hunter Research's offices in Trenton, New Jersey until acceptance of this report by the Central Park Conservancy and relevant review agencies at which point these materials will be transmitted to the Conservancy for safe keeping.

The proposed landscaping improvements, referred to as the Central Park Forts Landscape Reconstruction Project, involve grading and drainage, irrigation and lighting work, the majority of which will take place along existing pathways and within existing utility trenches (Figures 3-5). Trenching activity for the proposed improvements will typically entail excavation to depths of 24 to 30 inches below existing grade, much of this occurring along existing utility and drainage alignments. Archaeological testing was carried out at selected locations where potential archaeological resources corresponded with anticipated landscapingrelated ground disturbance.



Figure 1. Location of Central Park Forts Landscape Reconstruction Project. Source: 7.5' USGS Central Park, N.Y.-N.J. Quadrangle (1966 [photorevised 1979]). Scale: 1 inch = 2,000 feet.



Figure 2. Aerial Photograph Showing the Location of the Central Park Forts Landscape Reconstruction Project.



Figure 3. Site Plan Showing Proposed Grading and Drainage Improvements in Relation to Archaeological Resource Locations.

GRADING & DRAINAGE LEGEND

CLL	CONSTRUCTION LIMIT LINE
۲	EXISTING TREE
`	EXISTING 1' CONTOUR
	EXISTING 5' CONTOUR
75	PROPOSED CONTOUR
+ 74.55	PROPOSED SPOT ELEVATION
TW	TOP OF WALL
BW	BOTTOM OF WALL
TC	TOP OF CURB
HP	HIGH POINT
ĿP	LOW POINT
TF	TOP OF DRAINAGE STRUCTURE FRAME
0	proposed manhole 🚯
	proposed catch basin (CB) or (1) drop inlet (DI)
	EXISTING CATCH BASIN
Ø	EXISTING MANHOLE TO REMAIN
12" H.D.P.E TYPE S, TYP.	PROPOSED STORM DRAIN PIPE SIZE, MATERIAL & DIRECTION OF FLOW
5.0%	FLOW ARROW
[]	AREA OF MONITORED EXCAVATION
// // // // // // // // // // //	EXISTING WATER LINE
t t t	EXISTING SUBSURFACE ELECTRICAL LINES
<u>rs</u>	EXISTING SUBSURFACE SEWER LINES
L	CAPPED AND ABANDONED PIPE
<u> </u>	EXISTING WATER SUPPLY LINE
M	ISOLATION VALVE





Location of Archaeological Concern (see table)

1860-1865

War of 1812 Era

1 inch=80 feet




Figure 4. Site Plan Showing Proposed Irrigation Improvements in Relation to Archaeological Resource Locations.





Figure 5. Site Plan Showing Proposed Lighting Improvements in Relation to Archaeological Resource Locations.

2. PROJECT BACKGROUND

In 1990, Hunter Research carried out a preliminary historical and archaeological assessment of the northern portion of Central Park, north of the 97th Street Transverse (Hunter Research, Inc. 1990). This work, involving primarily analysis of maps, other historic imagery and published secondary sources, was supported by limited field inspection that identified the sites of numerous historic features, several of which were considered to possess a measure of archaeological potential. No subsurface testing was performed. Traces of military fortifications, in some places indicative of below-ground archaeological potential, were observed at this time within the area currently slated for landscaping improvements.

The current archaeological assessment was based on a review of the earlier Hunter Research report and correlation of potential archaeological resource locations identified in 1990 with the locations of the proposed forts landscape improvements. Ten archaeological resource locations (involving 11 potential archaeological resources) were pinpointed where it was judged that ground disturbance might encounter archaeological remains (Figures 3-5; Table 1).

An initial site visit was conducted on March 1, 2013 when a preliminary visual analysis was made of each location with regard to the feasibility and appropriateness of pre-construction archaeological testing (Photographs 1-5). In most instances, it was difficult to predict the archaeological integrity of each of the ten locations based solely on visual inspection of the terrain. Although it was felt that existing utilities and earlier episodes of grading could well have compromised archaeological resources in several locations, a brief one-day program of archaeological fieldwork was recommended to obtain a preview of archaeological conditions and evaluate the need for more extended testing. The current report describes the results of this fieldwork.

3. LAND USE HISTORY

The following historical narrative is excerpted from the Hunter Research report of 1990 where more detailed, referenced and site-specific historical information can be found.

A. 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. 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).



Photograph 1. View looking south and upslope at McGown's Pass. The Kingsbridge Road, the main route heading north from New York City to Boston and Albany, passed through this narrow gap in the bluffs overlooking Harlem Creek. This critical point in the landscape was fortified both by the British during the Revolutionary War and by the United States during the War of 1812. See Figures 6 and 7 for a view of the elaborate gatehouse structure and ramparts that existed here during the War of 1812 (Photographer: Richard W. Hunter, March 1, 2013) [HRI Neg. #13008/D1:005].



Photograph 2. View looking southeast across McGown's Pass towards Fort Clinton from the rock outcrop on the west side of the pass. Fort Clinton is on the farthest rise in the middle distance. In the center of the view, to the left of the steps, a recent tree fall has exposed stone rubble that is believed to represent the base of the War of 1812-era earthwork fortifications that extended southeast to Fort Clinton. These fortifications may also incorporate predecessor earthworks erected by the British during the Revolutionary War. The rock outcrops on either side of the pass display cylindrical drill holes for iron rods that would have anchored the fortifications (Photographer: Richard W. Hunter, March 1, 2013) [HRI Neg. #13008/D1:009].



Photograph 3. View looking southeast towards Fort Clinton from the east side of McGown's Pass. The slight ridge in the foreground may represent the base of the War of 1812-era earthwork fortifications that extended southeast from McGown's Pass to Fort Clinton (Photographer: Richard W. Hunter, March 1, 2013) [HRI Neg. #13008/D1:021].



Photograph 4. View looking northwest towards Nutter's Battery from the west side of McGown's Pass. Nutter's Battery is located on the top of the rock outcrop in the middle distance. The line of fortifications ran roughly from the lower left to the set of stairs in the center of the view and then on to the rock outcrop beyond (Photographer: Richard W. Hunter, March 1, 2013) [HRI Neg. #13008/D1:012].



Photograph 5. View looking north northeast from the slope below Fort Fish towards Nutter's Battery. The battery was located on the top of the outcrop in the center of the view within the stone wall enclosure. The fortifications extending between Fort Fish and Nutter's Battery followed the line of view, connecting several smaller outcrops (Photographer: Richard W. Hunter, March 1, 2013) [HRI Neg. #13008/D1:018].

Resource # (Hunter Research, Inc. 1990)	Resource Name	Period	Grading & Drainage	Irrigation	Lighting
589-13	Revolutionary War Camp Area	Revolutionary War		х	
590-12	Mount St. Vincent Chaplain's House Site	Mid-19thc		Х	
591-7	Benson Dwelling or Outbuilding	Late 18thc	х	х	Х
592-2	McGown's Pass and Blockhouse	War of 1812			Х
592-3/592-4	Earthworks (McGown's Pass to Nutter's Battery)	Revolutionary War/War of 1812	х	Х	Х
592-7	Wilkins Shanty or Outbuilding	Late 19thc			х
592-8	Military Structure	Revolutionary War	х		
592-9	Earthworks (from Nutter's Battery to south)	War of 1812			Х
694-1	Wilkins Shanty or Outbuilding	Late 19thc	х	Х	
694-2	Wilkins Shanty or Outbuilding	Late 19thc	х	х	

TABLE 1. POTENTIAL ARCHAEOLOGICAL RESOURCES AFFECTED BY FORTS LANDSCAPE RECONSTRUCTION.

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 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 The southern limits of Muscoota were Creek. 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 12lst 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 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.

B. 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 Central Park during the mid-19th century.

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 to 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.

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 and angled 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).

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 sited 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 Bensen/ 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 family 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]. 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 [592-2]. 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 (Figures 6 and 7). T he 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]. This extensive system of fortifications was manned for several weeks 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 (Lossing 1868; Guernsey 1889, 1895; Hall 1905).

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 ParkDuring 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. 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).

C. 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.

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.

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



Figure 6. "Works at McGowan's Pass, N.Y." 1814. View looking southwest showing, from left to right, Fort Clinton [591-3], the McGown's Pass Gatehouse [592-2], Fort Fish [590-13] and Nutter's Battery [592-6] (Source: *Valentine's Manual of Old New York* 1860).

PRELIMINARY ARCHAEOLOGICAL ASSESSMENT: CENTRAL PARK FORTS LANDSCAPE, NEW YORK CITY



Figure 7. "Gate at McGowan's Pass. 1814." 1814. View looking northeast showing the McGown's Pass gate-house [592-2] and associated earthworks (Source: *Valentine's Manual of Old New York* 1856).

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.

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 Hagaman 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 chainlink 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).

4. ARCHAEOLOGICAL FIELD INVESTIGATIONS

A. Methodology

Fieldwork initially made use of a combination of techniques (metal detecting; probing with a 4-foot-long steel rod; soil augering; and shovel testing). Metal detecting and probing were both attempted but soon abandoned since the uppermost 18 to 24 inches of soil comprised recent landscaping deposits, which prevented effective detection of objects or structures in the underlying soils. Numerous metal detecting "hits" were recorded, all of which, when "ground-truthed" with a shovel or trowel, proved to derive from shallow-buried modern trash or deeper-buried utilities.

The principal means of investigation was shovel testing, supplemented with soil augering. The shovel test locations are shown in Figure 8. Shovel testing involved the excavation of roughly 18-inch diameter holes, deepened as necessary with a hand auger. A summary of the stratigraphy observed in these tests is provided in Appendix A. Artifacts found during subsurface testing were recorded in terms of their cultural stratigraphic context. An inventory of artifacts recovered is provided in Appendix B. All tests were backfilled upon completion and the ground returned as closely as possible to its pre-excavation condition. The locations of all shovel and soil auger tests were plotted on to base topographic mapping. Field activities were recorded through digital photography, the taking of notes in field notebooks and the annotation of maps.

B. Results

Resource 589-13, Revolutionary War Camp Area (Shovel Test 1) – this test was placed at the northern end of approximate area of the British military encampment of 1782. The main focus of this encamp-



Photograph 6. View looking northeast showing Shovel Test 3 in progress on the site of the Mount St. Vincent Chaplain's House [590-12] (Photographer: Richard W. Hunter, April 10, 2013) [HRI Neg. #13008/D2:004].



Figure 8. Site Plan Showing Locations of Archaeological Tests and Resource Locations in Relation to Proposed Irrigation Improvements.

9	
/	
(
	IRRIGATION LEGEND
/	
	 EXISTING 1-1/2" QUICK COUPLER VALVE IN VALVE BOX
	EXISTING ISOLATION VALVE
	EXISTING IRRIGATION MAIN, PIPE SIZE &
	MATERIAL AS NOTED UN PLAN
	3" OR LARGER LINE: GATE TYPE VALVE
	PROPOSED IRRIGATION LINE, SIZE AS
	NOTE:
	1. LUCARLE, IDENTIFY, DISCONNECT & SEAL/ CAP OFF UTILITIES THAT ARE INDICATED TO BE ARANDONED/REFLOYED ON THE PLAN
0	2. PROPOSED IRRIGATION PIPE ROUTING TO BE
\odot	APPROVED IN THE FIELD BY LANDSCAPE ARCHITECT.
/	3. ALL WATER SUPPLY LINES TO LIMIT THE USE OF BENDS IN THE LINE, (ESPECIALLY 90 DEGREE
	BENDS) TO MINIMIZE FRICTION LOSS.
	4. VERIFY LOCATION IN THE FIELD OF EXISTING LINES TO BE CONNECTED. LOCATIONS ON DRAWNIC ARE BEST AVAILABLE FROM AS-BILLIT
	DRAWINGS BUT MAY HAVE DISCREPANCIES.
///	
///	
	\sim /
	Shovel Test
	•
	Location of Archaeological
	Concern (see table)
	Were (1012 Fre
	war of 1812 Era
	0 40 80
	Feet
	control to the park
	RECONSTRUCTION OF
	THE FORTS LANDSCAPE
5/13 30'	IRRIGATION PLAN 7₀-14

PRELIMINARY ARCHAEOLOGICAL ASSESSMENT: CENTRAL PARK FORTS LANDSCAPE, NEW YORK CITY



Photograph 7. View looking southeast and down across McGown's Pass from the rock outcrop on the west side of the pass. Shovel Test 14 in the foreground was dug on the site of the War of 1812 gatehouse structure [592-2] (Photographer: Richard W. Hunter, April 10, 2013) [HRI Neg. #13008/D2:022].

ment probably lay further to the south. Testing encountered fill directly on top of bedrock. It was concluded that this location has a low probability of yielding significant archaeological resources.

Resource 590-12, Mount St. Vincent Chaplain's House Site (Shovel Tests 2 and 3) [Photograph 6] – these tests were excavated on the site of a twostory stone house built in 1848 for Tighe Davy, the manager of the Mount St. Vincent property. This building is thought to have been torn down in the late 1870s. Shovel Test 2 encountered fill down to an impasse (apparently not bedrock) at a depth of two feet. Shovel Test 3 encountered fill overlying a possible mixed demolition layer on top of bedrock. It was concluded that this site has a moderate probability of yielding archaeological remains of the Chaplain's House.

Resource 591-7, Benson Dwelling or Outbuilding (Shovel Test 4) – a reassessment of historic maps and site inspection suggested that this location, on a narrow strip of ground adjacent to the course of the Kingsbridge Road, is unlikely to have contained a building. Testing found fill directly overlying bedrock. This location has a low probability of yielding significant archaeological resources.

Resource 592-2, McGown's Pass and Blockhouse (Shovel Tests 14 and 15) [Photograph 7] – maps and other historic images show a substantial gatehouse structure with adjoining fortifications at this location (see above, Figures 6 and 7). Traces of the fortifications are visible on the outcrops on either side of the pass in the form of slight topographic anomalies, drill holes for iron rods to anchor earthworks and a tree fall which has exposed in cross-section what appears to be an earthwork segment. Testing focused on the ground on either side of the pathway in the pass itself. Both tests encountered a clayey sand/clayey sandy loam with brick flecks beneath landscaping fill (at depths of 1.8 feet in Shovel Test 14 and 1.4 feet in Shovel Test 15). This layer [context 3] in Shovel Test 15 yielded a redware sherd and a nail fragment; this may be a historic construction deposit related to the gatehouse/blockhouse structure at McGown's Pass. It was concluded that there is a moderate probability of archaeological resources surviving within the pass.

Resources 592-3 and 592-4, Revolutionary War and War of 1812 Earthworks (McGown's Pass to Nutter's Battery) (Shovel Tests 7 and 8) – map analysis indicates that the line of these fortifications would have crossed the pathway at an existing stair location. Testing was consequently concentrated on either side of the stair. Both tests encountered disturbed soils and landscaping fill. No evidence was observed, above or below ground, of surviving fortifications, which were probably removed during the construction of the stairs in 1945 as part of the Works Progress Administration project that modified portions of the landscape bordering the southern side of the Harlem Meer. This location is judged to have a low probability of yielding significant archaeological resources.

Resource 592-7, Wilkins Shanty or Outbuilding (Shovel Tests 9 and 10) [Photographs 8 and 9] -These tests were placed in a level grass-covered area at the base of the Nutter's Battery outcrop where maps indicate that a mid/late 19th-century shanty or outbuilding was situated. Field inspection suggested that this location had strong archaeological potential. Shovel Test 9 encountered a layer of laid schist, possibly a surface or wall, at a depth of 1.2 feet. This may relate to the 19th-century shanty or outbuilding at this location. Shovel Test 10 encountered a sand layer with gravel, pebbles and brick fragments from 2 to 2.5 feet below the surface. This may be a historic construction deposit related to either the shanty or perhaps to the War of 1812 fortifications. This location was judged to hold a moderate probability of yielding significant archaeological resources.

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Photograph 8. View looking north northwest showing Shovel Test 9 in progress on the site of the Wilkins Shanty or Outbuilding [592-7] (Photographer: Richard W. Hunter, April 10, 2013) [HRI Neg. #13008/D2:012].



Photograph 9. View looking down into Shovel Test 9 showing a layer of schist that may represent a surface or wall associated with the site of the Wilkins Shanty or Outbuilding [592-7] (Photographer: Richard W. Hunter, April 10, 2013) [HRI Neg. #13008/D2:014].

Resource 592-8, Military Structure (Shovel Tests 5 and 6) – testing aimed to examine the site of a possible Revolutionary War-era military structure, although its location is difficult to pinpoint from the available small-scale historic maps. Testing was focused on an area considered the most likely to yield intact stratigraphy based on topographic analysis. Both shovel tests encountered landscaping fill directly over bedrock at a depth of 2.1 feet below the surface. This location was judged to hold a low probability of yielding significant archaeological resources.

Resource 592-9, War of 1812 Earthworks (Nutter's Battery to Fort Fish) (Shovel Test 11) – this location has likely been disturbed by Park-related landscaping and the chances of earthworks remains being found was considered slight. Landscaping fill was found to directly overlie bedrock at 3.8 feet below the surface. This location has a low probability of yielding significant archaeological resources.

Resource 694-1, Wilkins Shanty or Outbuilding (Shovel Test 12) – testing was undertaken on a sloping hillside that has been heavily landscaped in an area where historic maps show the former existence of mid/late 19th-century shanty or outbuilding. The chance of archaeological remains being found was considered to be slight. Testing found fill directly on top of bedrock. This location has a low probability of yielding archaeological resources.

Resource 694-2, Wilkins Shanty or Outbuilding (Shovel Test 13) – testing was undertaken on a sloping hillside that has been heavily landscaped in an area where historic maps show the former existence of mid/late 19th-century shanty or outbuilding. The chance of archaeological remains being found was considered to be slight. Testing found fill directly on top of bedrock. This location has a low probability of yielding archaeological resources.

5. CONCLUSIONS AND RECOMMENDATIONS

Of the ten archaeological resource locations that may potentially be affected by the proposed landscaping improvements, three have produced evidence of possible significance, four yielded no archaeological data of interest but are judged sufficiently sensitive so as to require monitoring during construction, and three produced no archaeological data of interest and do not merit further archaeological consideration (Figure 8; Table 2).

At the site of McGown's Pass [592-2], where a fortified blockhouse/gatehouse was built during the War of 1812, shovel tests on both sides of the pathway that runs down through the pass encountered a deposit at a depth of 1.4 to 1.8 feet below the surface that may be related to the early 19th-century military construction. Manual archaeological excavation of a 2.5 x 10-foot trench, aligned north-south, is recommended at each of these shovel test locations to further investigate and more fully characterize this deposit.

Similarly, one shovel test encountered a possible 19th-century stone surface or wall and another found a possible 19th-century deposit at the site of the Wilkins shanty or outbuilding [592-7] on a patch of level ground just southeast and below Nutter's Battery. There is also a possibility that these remains may be related to the War of 1812 or Revolutionary War fortifications in this area. Manual archaeological excavation of a 2.5 x 10-foot trench, aligned northeast-southwest, is recommended at each of these shovel test locations to further investigate and more fully characterize these remains.

On the site of the mid-19th-century Mount St. Vincent's Chaplain's House [590-12] shovel testing was inconclusive and excavation of an archaeologically supervised backhoe trench along the line of the proposed irrigation improvements is recommended to

Resource #		Potentially Affecting Project Action				_	
(Hunter Research, Inc. 1990)	Resource Name	Grading & Drainage		Lighting	Shovel Testing Results	Recommendations	
589-13	Revolutionary War Camp Area		х		ST1: fill on bedrock	monitoring during construction	
590-12	Mount St. Vincent Chaplain's House Site		x		ST2 & 3: possible demolition deposit	archaeologically supervised trenching for proposed irrigation line	
591-7	Benson Dwelling or Outbuilding	x	х	х	ST4: fill on bedrock	no further archaeological work	
592-2	McGown's Pass and Blockhouse			x	ST14 & 15: possible military construction deposit	manually excavated 2.5 x 10- foot trench on either side of path through pass	
592-3/592-4	Earthworks (McGown's Pass to Nutter's Battery)	x	х	х	ST7 & 8: disturbed soils and fill	monitoring during construction	
592-7	Wilkins Shanty or Outbuilding			х	ST9 & 10: possible 19th- century construction deposit	two manually excavated 2.5 x 10-foot trenches along proposed irrigation line	
592-8	Military Structure	х			ST5 & 6: fill over bedrock	monitoring during construction	
592-9	Earthworks (from Nutter's Battery to south)			х	ST11: fill over bedrock	monitoring during construction	
694-1	Wilkins Shanty or Outbuilding	х	х		ST12: fill over bedrock	no further archaeological work	
694-2	Wilkins Shanty or Outbuilding	x	х		ST13: fill over bedrock	no further archaeological work	

TABLE 2. SUMMARY OF SHOVEL TESTING AND RECOMMENDATIONS.

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investigate whether intact remains still survive within the project corridor. Any remains encountered should be documented prior to construction; it is unlikely that further archaeological investigation would be necessary beyond this episode of trenching.

Testing at four resource locations (the Revolutionary War encampment [589-13]; the earthworks between McGown's Pass and Nutter's Battery [592-3/592-4]; an unidentified Revolutionary war-era military structure [592-8]; and the earthworks extending south from Nutter's Battery to Fort Fish [592-9]) found no archaeological data of interest, but owing to their overall sensitivity, it is recommended that archaeological monitoring of construction-related ground disturbance take place in areas where the proposed improvements coincide with the suspected archaeological resources. Monitoring should be performed by a qualified historical archaeologist and should involve in-field documentation of any remains encountered along with recovery of artifacts.

Three resource locations (the site of the Benson dwelling or outbuilding [591-7] and two Wilkins shanty/ outbuilding sites [694-1 and 694-2]) were tested and produced no evidence for intact archaeological remains. No further work is necessary at these locations.

Where additional archaeological excavation and monitoring are recommended, the fieldwork results will require reporting and artifacts will require analysis and cataloging to professional standards currently acceptable to the New York City Landmarks Preservation Commission.

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APPENDIX A

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Central Park, Area 589/13	Shovel Test	1	1	0 - 0.7ft	silty loam [topsoil]	10YR 2/2	
			2	0.7 - 1.7ft	mottled silty loam	10YR 2/2, 10YR 4/3	
			3	1.7 - 2.25f	silty loam with decayed bedrock	10YR 5/4	
			4	2.25 - ft	schist bedrock impasse		
Central Park, Area 590/12	Shovel Test	2	1	0 - 0.7ft	silty loam [topsoil]	10YR 2/2	
	1		2	0.7 - 2ft	silty loam	10YR 5/4	Historic Fired Clay - Ceramic
							Indeterminate Stone
							Modern Metal
			3	2 - ft	impasse		
Central Park, Area 590/12	Shovel Test	3	1	0 - 0.8ft	silty loam [topsoil]	10YR 2/2	Historic Fired Clay - Ceramic
						l	Historic Fired Clay - Non- ceramic
							Historic Glass
			2	0.8 - 2.2ft	silty loam	10YR 5/4	Historic Glass
			3	2.2 - 3.3ft	mottled clayey silty loam with gravel and sand	7.5YR 4/6	Historic Fired Clay - Non- ceramic
							Modern Composite*
			4	3.3 - ft	bedrock impasse		
Central Park, Area 591/7	Shovel Test	4	1	0 - 0.9ft	mottled silty loam [topsoil]	10YR 2/2	Historic Fired Clay - Ceramic
							Historic Glass
			2	0.9 - 1.9ft	sandy silty loam	10YR 5/4	Historic Fired Clay - Ceramic
							Historic Glass
			3	1.9 - 2.11f	sandy gravelly loam	10YR 5/8	
			4	2.11 - ft	eroded bedrock impasse		
Central Park, Area 592/2	Shovel Test	14	1	0 - 1.1ft	silty loam [topsoil/fill]	10YR 2/2	Historic Glass
·			2	1.1 - 1.8ft	silty loam	10YR 5/4	Historic Glass

APPENDIX A (Cont.)

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials
Central Park, Area 592/2	Shovel Test	14	3	1.8 - 2.9ft	clayey sand with brick flecking	10YR 5/6	
			4	2.9 - ft	eroded bedrock impasse		
Central Park, Area 592/2	Shovel Test	15	1	0 - 0.8ft	silty loam with roots [topsoil]	10YR 2/2	
	1		2	0.8 - 1.4ft	silty loam with rocks	10YR 3/4	Historic Fired Clay - Ceramic
							Historic Fired Clay - Non- ceramic
			3	1.4 - 2ft	clayey sand loam	10YR 5/4	Historic Fired Clay - Ceramic
							Historic Metal
			4	2 - ft	bedrock impasse		
Central Park, Area 592/3, 592/4	Shovel Test	7	1	0 - 2.3ft	mottled sand loam	10YR 2/2, 10YR 5/4	Historic Glass
			2	2.3 - 2.9ft	silty clay loam	10YR 5/4	
			3	2.9 - ft	root impasse		
Central Park, Area 592/3, 592/4	Shovel Test	8	1	0 - 0.6ft	silty loam	10YR 2/2	
			2	0.6 - 1.7ft	mottled sand loam	10YR 2/2, 10YR 5/4	
			3	1.7 - ft	rock impasse		
Central Park, Area 592/7	Shovel Test	9	1	0 - 0.9ft	silty loam	10YR 2/2	Historic Glass Modern Composite*
			2	0.9 - 1.2ft	mottled silty loam	10YR 2/2, 10YR 5/4	Historic Glass
			3	1.2 - ft	dry-laid schist block footing		
Central Park, Area 592/7	Shovel Test	10	1	0 - 1ft	silty loam [topsoil]	10YR 2/2	Historic Glass Historic Metal Indeterminate Mineral
							Modern Composite*
							Modern Metal*
			2	1 - 2ft	silty loam	10YR 5/4	Historic Metal
			3	2 - 2.5ft	sand with gravel and pebbles	10YR 4/6	Historic Fired Clay - Non- ceramic
			4	2.5 - ft	bedrock impasse		

APPENDIX A (Cont.)

Location	Unit Type	No.	Context	Depth	Soil Description [Interpretation]	Munsell	Cultural Materials		
Central Park, Area 592/8	Shovel Test	5	1	0 - 0.6ft	silty loam [topsoil]	10YR 2/2			
			2	0.6 - 2.1ft	mottled silty loam	10YR 2/2, 10YR 5/4	Historic Glass		
							Indeterminate Stone		
							Modern Composite*		
			3	2.1 - ft	bedrock impasse		-		
Central Park, Area 592/8	Shovel Test	6	1	0 - 1ft	silty loam [topsoil]	10YR 2/2	Historic Glass		
							Historic Metal		
							Modern Composite*		
			2	1 - 2.1ft	mottled silty loam	10YR 2/2, 10YR 5/4	Modern Composite*		
			3	2.1 - ft	bedrock impasse				
Central Park, Area 592/9	Shovel Test	11	1	0 - 1ft	silty loam	10YR 2/2	Historic Glass		
			2	1 - 2ft	mottled silty loam	10YR 2/2, 10YR 5/4			
			3	2 - 3.8ft	clay loam	10YR 5/4			
			4		rock impasse				
Central Park, Area 694/1	Shovel Test	12	1	0 - 1.2ft	silty loam [topsoil]	10YR 2/2			
			2	1.2 - 2.2ft	sandy gravelly loam with brick flecking	5YR 2.5/2			
			3	2.2 - ft	bedrock impasse				
Central Park, Area 694/2	Shovel Test	13	1	0 - 0.6ft	silty loam [topsoil]	10YR 2/2	Historic Glass		
							Historic Metal		
			2	0.6 - 2ft	mottled sandy gravelly loam	10YR 5/4, 5YR 2.5/2			
			3	2 - ft	bedrock impasse				
	* Discarded								
Appendix B

ARTIFACT INVENTORY

APPENDIX B ARTIFACT INVENTORY

Central Park, Area 590/12, Shovel Test 2, Context 2	Catalog #
Modern	
1 Metal, White Metal, screw whole, flat head, corroded, L 32mm	Row #
Indeterminate	
1 Stone, Quartzite, cobble fragment, thermally-altered	Row #
Historic	
1 Fired Clay - Ceramic, Earthenware, Redware, flower pot body fragment, unglazed	Row #
Total Artifacts in Context 2: 3	
Total Artifacts in 590/12 Shovel Test 2 : 3	
Central Park, Area 590/12, Shovel Test 3, Context 1	Catalog #
Historic	. "
1 Fired Clay - Ceramic, Earthenware, Redware, flower pot body fragment, unglazed	Row #
Fired Clay - Non-ceramic, Earthenware, Redware, tile fragment Class, Curried hellow ware hady fragment, class(upselered)	Row #
1 Glass, Curved, hollow ware body fragment, clear/uncolored	Row #
The late if a single show ware body magnetic, emoossed, clear/uncolored	ΚΟ₩ #
Total Artifacts in Context 1: 4	
Central Park, Area 590/12, Shovel Test 3, Context 2	Catalog #
Historic	
1 Glass, Flat, window fragment, clear/uncolored	Row #
Total Artifacts in Context 2: 1	
Central Park, Area 590/12, Shovel Test 3, Context 3	Catalog #
Modern	
1 Composite, Plastic fragment *	Row #
Historic	
2 Fired Clay - Non-ceramic, Earthenware, Redware, brick fragment	Row #
Total Artifacts in Context 3: 3	

Total Artifacts in 590/12 Shovel Test 3 : 8

Centr	Central Park, Area 591/7, Shovel Test 4, Context 1 Cata		5
His	toric		
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, hollow ware body fragment, 1815 - 2013	Row #	ŧ 1
2	Glass, Curved, hollow ware body fragment, clear/uncolored	Row #	ŧ 3
1	Glass, Curved, hollow ware body fragment, embossed, clear/uncolored, solarized, purplish hue, partial mark: "[]: $Y[$ }"	EW Row #	∉ 4
4	Glass, Curved, hollow ware body fragment, aqua	Row #	ŧ 5
1	Glass, Curved, small hollow ware body fragment, clear/uncolored	Row #	ŧ 2
,	Total Artifacts in Context 1: 9		
Centr	ral Park, Area 591/7, Shovel Test 4, Context 2	Catalog #	6
His	toric		
1	Fired Clay - Ceramic, Refined Earthenware, Pearlware, hollow ware body fragment, hand painted, polychrome, 17 1840	90 - Row #	ŧ 1
1	Fired Clay - Ceramic, Refined Earthenware, Whiteware, hollow ware body fragment, 1815 - 2013	Row #	ŧ 2

1 Glass, Curved, small hollow ware body fragment, clear/uncolored	Row #	3
Total Artifacts in Context 2: 3		
Total Artifacts in 591/7 Shovel Test 4 : 12		
Central Park, Area 592/2, Shovel Test 14, Context 1	Catalog #	19
Historic		
1 Glass, Curved, bottle basal fragment, aqua	Row #	4
1 Glass, Curved, bottle basal fragment, clear/uncolored	Row #	3
1 Glass, Curved, hollow ware body fragment, clear/uncolored	Row #	2
1 Glass, Flat, indeterminate type fragment, clear/uncolored	Row #	1
Total Artifacts in Context 1: 4		
Central Park, Area 592/2, Shovel Test 14, Context 2	Catalog #	20
Historic		
1 Glass, Curved, wine bottle basal fragment, olive green, deep concave pontil	Row #	1
Total Artifacts in Context 2: 1		
Total Artifacts in 592/2 Shovel Test 14 : 5		
Central Park, Area 592/2, Shovel Test 15, Context 2	Catalog #	21
Historic		
1 Fired Clay - Ceramic, Refined Earthenware, Pearlware, hollow ware body fragment, 1790 - 1840	Row #	3
1 Fired Clay - Ceramic, Refined Earthenware, Whiteware, hollow ware body fragment, 1815 - 2013	Row #	4
1 Fired Clay - Non-ceramic, Earthenware, brick fragment	Row #	1
1 Fired Clay - Non-ceramic, Mortar fragment	Row #	2
Total Artifacts in Context 2: 4		
Central Park, Area 592/2, Shovel Test 15, Context 3	Catalog #	22
Historic		
 Fired Clay - Ceramic, Earthenware, Redware, hollow ware body fragment, manganese glazed Metal Ferrous metal nail fragment encrusted and corroded 	Row #	1
Total Artifacts in Contact 2, 2		-
Total Artifacts in 592/2 Shovel Test 15 : 6		
Control Dark Area 502/2 502/4 Surface Collection	Catalog #	10
Untraine	Catalog #	10
nisione	Row #	1
The lattice is a fine of the standard channel of the standard standa	Row #	1
Total Artifacts in Suface Collection: 1		
Total Artifacts in 592/3, 592/4 Surface Collection : 1		
Central Park, Area 592/3, 592/4, Shovel Test 7, Context 1	Catalog #	11
Historic 1 Glass, Curved, bottle body fragment, dark brown	Row #	1
· Shass, Sarrou, Bottle Body Augment, dark brown		1

Total Artifacts in Context 1: 1

Total Artifacts in 592/3, 592/4 Shovel Test 7 : 1

Central Park, Area 592/7, Shovel Test 9, Context 1 Catalog #		12
Modern		
3 Composite, Plastic fragment *	Row #	1
Historic		
1 Glass, Curved, hollow ware body fragment, embossed, clear/uncolored	Row #	3
2 Glass, Curved, small hollow ware body fragment, clear/uncolored	Row #	2
Total Artifacts in Context 1: 6		
Central Park, Area 592/7, Shovel Test 9, Context 2	Catalog #	13
Historic		
1 Glass, Curved, hollow ware body fragment, embossed, green	Row #	1
Total Artifacts in Context 2: 1		
Total Artifacts in 592/7 Shovel Test 9 : 7		

Centr	entral Park, Area 592/7, Shovel Test 10, Context 1 Catalog #		14
Mo	dern		
3	Composite, Plastic fragment *	Row #	1
2	Metal, Aluminum fragment *	Row #	2
Ind	eterminate		
1	Mineral, Coal fragment	Row #	8
His	toric		
1	Glass, Curved, hollow ware body fragment, green	Row #	4
3	Glass, Curved, hollow ware body fragment, clear/uncolored	Row #	3
1	Metal, Ferrous metal, bolt fragment, encrusted and corroded, corroded washer attached	Row #	7
1	Metal, Ferrous metal, bolt whole, hexagonal head, threaded, encrusted and corroded, L 50mm	Row #	6
1	Metal, Ferrous metal, nail fragment, machine cut, encrusted and corroded	Row #	5
2	Fotal Artifacts in Context 1: 13		
Centr	al Park, Area 592/7, Shovel Test 10, Context 2	Catalog #	15
His	toric		
1	Metal, Ferrous metal, spike whole, machine cut, encrusted and corroded, L 110mm	Row #	1
1	Total Artifacts in Context 2: 1		
Centr	al Park, Area 592/7, Shovel Test 10, Context 3	Catalog #	16
His	toric		
2	Fired Clay - Non-ceramic, Earthenware, brick fragment, burned	Row #	1
1	Total Artifacts in Context 3: 2		
Tot	al Artifacts in 592/7 Shovel Test 10 : 16		
Centr	al Park, Area 592/8, Shovel Test 5, Context 2	Catalog #	7

Modern			
1	Composite, Asphalt fragment, black	Row #	9
1	Composite, Plastic fragment *	Row #	1

Indeterminate			
3	Stone, Mica fragment	Row #	8
Hist	oric		
1	Glass, Curved, bottle basal fragment, embossed, clear/uncolored, partial mark: "2"	Row #	3
2	Glass, Curved, bottle basal fragment, clear/uncolored, mold blown, solarized, purplish hue, pontil scar	Row #	4
13	Glass, Curved, hollow ware body fragment, clear/uncolored	Row #	2
1	Glass, Curved, hollow ware body fragment, dark olive	Row #	5
2	Glass, Curved, hollow ware body fragment, dark brown	Row #	6
4	Glass, Curved, hollow ware body fragment, green	Row #	7
T	Total Artifacts in Context 2: 28		
Tote	ıl Artifacts in 592/8 Shovel Test 5 : 28		

Centu	Central Park, Area 592/8, Shovel Test 6, Context 1 Ca		8
Mo	bdern		
1	Composite, Plastic fragment *	Row #	1
His	storic		
1	Glass, Curved, bottle basal fragment, embossed, clear/uncolored, partial mark: "[]O BE REFILLED"	Row #	2
1	Glass, Curved, hollow ware body fragment, green	Row #	4
1	Glass, Curved, hollow ware body fragment, dark brown	Row #	3
1	Metal, Ferrous metal, nail body fragment, encrusted and corroded	Row #	5
	Total Artifacts in Context 1: 5		
Cent	ral Park, Area 592/8, Shovel Test 6, Context 2	Catalog #	9
Mo	odern		
1	Composite, Plastic fragment *	Row #	1
	Total Artifacts in Context 2: 1		
To	tal Artifacts in 592/8 Shovel Test 6 : 6		

Centra	al Park,	Area 592/9, Shovel Test 11, Context 1	Catalog #	17
Hist	toric			
2	Glass,	Curved, bottle basal fragment, embossed, dark brown	Row #	3
1	Glass,	Curved, hollow ware body fragment, clear/uncolored	Row #	1
1	Glass,	Curved, hollow ware body fragment, aqua	Row #	2
2	Glass,	Curved, hollow ware body fragment, dark brown	Row #	4
7	Total Art	ifacts in Context 1: 6		

Total Artifacts in 592/9 Shovel Test 11: 6

Centr	al Park, Area 694/2, Shovel Test 13, Context 1	Catalog #	18
His	toric		
1	Glass, Curved, hollow ware body fragment, clear/uncolored	Row #	1
1	Metal, White Metal, U.S. 10 cent piece, coin whole, corroded, 2006	Row #	2
7	Total Artifacts in Context 1: 2		

Total Artifacts in 694/2 Shovel Test 13 : 2

Total Number of Artifacts: 101

* Item Discarded in Laboratory

Appendix C

RESUMES

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, and report preparation 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.
1999-present	Faculty Member, Certificate in Historic Preservation Office of Continuing Education, Drew University, Madison, NJ
1983-1986	Vice-President/Archaeologist Heritage Studies, Inc., Princeton, NJ
1981-1983	Principal Archaeologist Cultural Resource Group, Louis Berger & Associates, Inc., East Orange, NJ
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
1974-1977	Archaeological Field Officer Northampton Development Corporation, Northampton, England
1969-1970	Research Assistant Department of Planning and Transportation, Greater London Council

SELECTED PUBLICATIONS

"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).

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"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]

"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]

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

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

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

Registry of Professional Archeologists (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) Professional Archaeologists of New York City (PANYC) Society for Historical Archaeology Society for Industrial Archaeology Society for Post-Medieval Archaeology Council for Northeast Historical Archaeology Archaeological Society of New Jersey (Life Member)

Mount Hope Historical Conservancy (Board Member, 1995 - 2000)

OTHER AFFILIATIONS

Trenton Downtown Association (Board Member, 1998 – present; Board Chair 2007-2008) Port of Trenton Museum Foundation (Board Member 2003-present) Hopewell Township Historic Preservation Commission (Member, 1998 – 2006; Chair 2003-2004)

JAMES S. LEE, III Principal Investigator, M.A., RPA

EDUCATION

M.A., Archaeology, University of Durham, Durham, United Kingdom, 1996

B.A., Anthropology and History, Rutgers University, New Brunswick, New Jersey, 1995

EXPERIENCE

2001-present	Principal Investigator/Report Manager Hunter Research, Inc., Trenton, NJ
	 Technical and managerial responsibilities for survey, evaluation and mitigation of selected archaeological projects. Technical and managerial responsibility for report production. Participation in: overall site direction and day-to-day management development and implementation of research, excavation and analysis strategies for prehistoric and historic archaeological sites report and proposal preparation supervision of cartographic and GIS product, graphic design and report layout hiring and supervision of personnel
2001	Crew Chief Kittatinny Archaeological Research, Stroudsburg, Pennsylvania • survey and excavation • supervision of field personnel • stratigraphic and artifact analysis
1997-2001	 Principal Investigator/Project Manager Cultural Resource Consulting Group, Highland Park, New Jersey overall site direction and day-to-day management development and implementation of research, excavation and analysis strategies for prehistoric and historic archaeological sites report and proposal preparation hiring and supervision of personnel
1997-2000	Laboratory Supervisor Cultural Resource Consulting Group, Highland Park, New Jersey Technical and managerial responsibilities for laboratory components of archaeological projects. Participation in: • management of laboratory operations • supervision of laboratory personnel • computerization of artifact data • prehistoric and historic ceramic analysis • preparation of artifact inventories and writing of artifact sections of reports

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1996-1997 Field Technician Cultural Resource Consulting Group, Highland Park, New Jersey

PROFESSIONAL AFFILIATIONS

Society for Industrial Archaeology Archaeological Society of New Jersey, Recording Secretary Society for Pennsylvania Archaeology New York State Archaeological Association Canal Society of New Jersey Warren County Morris Canal Committee Society for Industrial Archeology Eastern States Archaeological Federation Appendix D

PROJECT ADMINISTRATIVE DATA

APPENDIX D

Project Administrative Data

HUNTER RESEARCH, INC.	
PROJECT SUMMARY	
Project Name:	Preliminary Archaeological Assessment, Central Park Forts Landscape Reconstruction Project, Borough of Manhattan, New York City
Level of Survey:	Ι
HRI Project Reference:	13008
Date of Report:	June 2013
Client:	Central Park Conservancy
Review Agency:	New York Landmarks Conservancy
Artifacts/Records Deposited:	Hunter Research, Inc. Trenton, NJ to be transferred to Central
PROJECT CHRONOLOGY	
Date of Contract Award:	2/6/2013
Notice to Proceed:	2/6/2013
Background Research:	February-March 2013
Fieldwork:	March-April 2013
Analysis:	April 2013
Report Written:	May-June 2013
PROJECT PERSONNEL	
Principal Investigator(s):	Richard Hunter, James Lee
Background Researcher(s):	Richard Hunter
Field Supervisor(s):	n/a
Field Assistant(s):	n/a
Analyst(s):	Joshua Butchko
Draftperson(s):	Katie Rettinger, Lauren Lembo
Report Author(s):	Richard Hunter