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REPORT ON
ARCHAEOLOGICAL TESTING
FOR SIX TREE REPLACEMENTS
ON GOVERNORS ISLAND
NEW YORK, NEW YORK



Planted Tree 328 in front of Building #4, facing east

Prepared for: Almstead Tree & Shrub Care
Company
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October 20, 2009

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EXECUTIVE SUMMARY

This is a report on archaeological shovel testing and monitoring at the locations of six tree replacements on Governors Island, New York City. Two locations were shovel tested and four were archaeologically monitored. One shovel test was conducted at the location of Trees 328 in Nolan Park in the planting bed in front of Building #4. This area is near the Nolan Park prehistoric site and is also sensitive for the preservation of 19th- and 20th- century residential deposits. The other shovel test was at Tree 873 in the former Parade Ground, a location near an area of documented demolition debris and also previously determined sensitive for the preservation of possible Native American archaeological resources. The four other tree locations were archaeologically monitored. All are within the boundaries of both the Governors Island National Historic Landmark District (outside of the National Monument) and the New York City Landmark District.

This report is being prepared to comply with environmental review regulations and meets the standards of both the New York State Office of Parks, Recreation and Historic Preservation (SHPO) and the New York City Landmarks Preservation Commission (LPC).

Only the test at Tree 873 unearthed an archaeological deposit. This was demolition debris, part of the deposit previously identified during 2008 monitoring of the removal of the tennis court that once existed in that location. No Native American cultural material was unearthed at any of the tree locations, nor were remains of other archaeological features, although a stratum of coal ash was found in the hole for Tree #A. No further archaeological work is recommended for these tree locations. However, it is recommended the tree locations for this project be recorded in the GIPEC Governors Island GIS database.

REPORT ON ARCHAEOLOGICAL TESTING FOR
SIX TREE REPLACEMENTS
ON GOVERNORS ISLAND, NEW YORK, NEW YORK

Prepared for: Ainstead Tree & Shrub Care Company, Submitted by: Linda Stone, MA, RPA
October 20, 2009

SHPO MANAGEMENT SUMMARY FORM

SHPO Project Review Number (if available):

Involved State and Federal Agencies (DEC, CORPS, FHWA, etc): GIPEC

Phase of Survey: 1B

Location Information

Location: Governors Island, New York City
Minor Civil Division: n/a
County: New York

Survey Area (Metric & English) - Two shovel tests & 4 monitored holes
Length: n/a
Width: ST=1.5 feet (46 cm) diameter, Mon.=4.1 feet (125 cm)
Depth: (when appropriate): ST=1.8 feet (55 cm) average, Mon.=1.8 feet (55 cm)
Number of Acres Surveyed: n/a
Number of Square Meters & Feet Excavated (Phase II, Phase III only): n/a
Percentage of the Site Excavated (Phase II, Phase III only): n/a

USGS 7.5 Minute Quadrangle Map: Jersey City, NJ - NY

Archaeological Survey Overview

Number & Interval of Shovel Tests: 2 (1 per tree replacement location)
Number & Size of Units: n/a
Width of Plowed Strips: n/a
Surface Survey Transect Interval: n/a

Results of Archaeological Survey

Number & name of prehistoric sites identified: n/a
Number & name of historic sites identified: *demolition debris, part of site form dated 11/18/08
for remains located approximately 300 feet from
Buttermilk Channel*
Number & name of sites recommended for Phase II/Avoidance: n/a

Results of Architectural Survey

Number of buildings/structures/cemeteries within project area: n/a
Number of buildings/structures/cemeteries adjacent to project area: n/a
Number of previously determined NR listed or eligible buildings/structures/cemeteries/districts: n/a
Number of identified eligible buildings/structures/cemeteries/districts: n/a

Report Author(s): Linda Stone, RPA

Date of Report: October 20, 2009

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INTRODUCTION

The Governors Island Preservation and Education Corporation (GIPEC) was planning to replace seven trees in the Governors Island Historic District, New York City, six of which contained the potential for preservation of archaeological resources (see Figure 1 and Appendix A: Figures 1 and 2). Tree 328 is at the northern end of Nolan Park in front of Building #4. It is within an area sensitive for the preservation of features related to 19th- and 20th-century residential use. It is also near the Nolan Park prehistoric site and may be sensitive for the presence of Native American archaeological resources. Tree #A is also within Nolan Park, although at the southern end and near the former Post Hospital site and the barracks depicted on the 1813 Mangin Map (see Appendix A: Figure 3). Also in Nolan Park, Tree 261 too is sensitive for remains of the barracks, as well as for Native American resources. Tree 81 is at the edge of the Nolan Park district. Tree 873 is within the former Parade Ground, a location also mapped as sensitive for the preservation of possible Native American archaeological resources and also within the area documented during the demolition of Building #293 for containing a layer of building demolition debris buried only 1.5 feet below ground surface. Tree #B near Colonels' Row is within an area identified as possibly containing the original shoreline.

GIPEC, the New York State Historic Preservation Office (SHPO) and the New York City Landmarks Preservation Commission (LPC) had previously indicated archaeological testing and monitoring of the new tree locations would be appropriate for this project. Appendix A is the approved archaeological work plan for this project.

This report presents the findings of the archaeological work conducted for the tree replacements. The work has been done in accordance with the guidelines of both the New York State Office of Parks Recreation and Historic Preservation and the New York City Landmarks Preservation Commission. This report was prepared by Linda Stone, RPA for Almstead Tree & Shrub Care Company. The archaeological fieldwork described in this report was conducted by Ms. Stone on October 1, 2009. The author would like to acknowledge the assistance of Justin Rawson of Almstead Tree & Shrub Care Company and Claire Kelly of GIPEC for facilitating the archaeological component of this project.

SITE HISTORY AND ARCHAEOLOGICAL POTENTIAL

Pre-Contact Period

There are three documented Native American sites on Governors Island and Native American cultural material has been found on the Island in many other redeposited contexts (PAL 1996: 11; PAL 1997: 63-64; Stone 2006: 4-5, 10; UMass 2003: 110-111). Tree 328 is near one of those sites and also near other testing that unearthed a Native American artifact prompting consideration of the possibility the Nolan Park Prehistoric Site boundaries could be re-evaluated when additional below ground work was proposed in that vicinity (Stone 2008a: 9). The locations of Trees #A, 81, 261, and 873 have also been determined sensitive for possible the preservation of Native American archaeological resources (see Appendix A: Figure 2).

Historic Period

The Phase 1A Archaeological Assessment of Governors Island indicates there are several areas of archaeological sensitivity for historic period resources (see Appendix A: Figure 2). Tree 328 is within the Quarters 1 zone and is sensitive for the preservation of features related to 19th- and 20th-century residential use. Tree #A is within Nolan Park near the former Post Hospital. It also maps near the barracks depicted on the 1813 Mangin Map (see Appendix A: Figure 3). Tree 261 is within the part of Nolan Park designated for sensitivity for the preservation of possible remains of the "barracks and other structures depicted on the 1813 Mangin Map" (PAL 1996:33). Tree 873 is within the former Parade Ground near post-1890 demolition debris of unknown origin (Stone 2008b: 6). Tree #B is within an area identified as possibly containing the original shoreline.

METHODOLOGY AND RESULTS

The scope of work for this project is attached as Appendix A. The shovel testing methodology used was standard stratigraphic excavation with all removed soils screened for artifact recovery. Stratigraphy within the monitored locations was also recorded, although not screened for artifact recovery (see Appendix B for the stratigraphy). All excavations were preceded by detection for unexploded ordinance (UXO) hazards. After completion of field work, the two trees which did not have numbers on the original tree survey were assigned letter designations, A and B, for the purposes of reporting.

Some non-diagnostic artifacts were noted in the field, but not retained. All recovered artifacts were washed and rinsed in tap water and left to air dry before labeling and rebagging in clean 4-mil perforated zip-lock bags. Recovered artifacts were individually labeled with the site abbreviation "GI" and project identifier "TR" and the context number (tree number with a decimal subdivision representing stratum). All zip bags were labeled with the same information as well as the excavation date. All recorded artifacts are listed in the "Comments" column of Appendix B. Governors Island is the current repository for all artifacts recovered during the conduct of work described in this report. Artifacts will be transferred there from the archaeological consultant upon acceptance of this report by the review agencies.

Tree 328

Tree 328 was located on the west side of Building #4 in the planting bed (see Figure 2 and cover photo). Since the location was within the planting bed, there was limited room for excavation. The shovel test was placed at the center of the planting bed and virtually at the base of the stump, therefore it was not a surprise that the excavation was impeded by a root of the old tree. This occurred in Stratum 2 of the excavation, dark brown silty sand. No artifacts were retained from either Stratum 1, very dark brown silty loam, or Stratum 2. However, one corroded nail was found in Stratum 2, noted and not retained. Once the hole was impeded at 1.1 feet below ground surface, excavation stopped in lieu of the stump grinding machine (see Photo 1). The soil exposed during stump grinding was very dark grayish brown sand. It was not screened for artifact recovery, but one pipe stem fragment was recovered. The hole was ultimately 1.5 feet (46 cm) deep. No other archaeological evidence was present.

Tree #A

Tree #A was located in the southeastern end of Nolan Park, in front of Building #s 7 and 8 (see Figure 2). The new tree was to be planted in the exact location of the old tree, therefore the stump grinder was used to excavate. Upon completion of grinding, part of the hole was trowel scraped and stratigraphy was recorded¹. Three strata were present. Grass and very dark gray loam were Stratum 1. Stratum 2 was dark yellowish brown clean sand fill that extended to one foot (30 cm) below ground surface. Stratum 3 was dark brown silt with coal ash. It contained a large amount of coal, a few brick fragments and one corroded nail, none of which were retained. One whiteware spall was present and retained. No Native American artifacts were present. The presence of coal ash is indicative of historic period waste and several former buildings were located nearby. However, the limited footprint of the excavation, coupled with the lack of diagnostic artifacts present, prohibit associating the deposit with a particular structure or time period.

Tree 81

Tree 81 was located at the southwestern end of Nolan Park, on the lawn between Building #s 15 and 16 (see Figure 3 and Photo 1). The new tree was planted in the exact location of the old tree, in the hole created by the stump grinder. In this case the new tree required a smaller hole than that left by the stump grinder, therefore only the wood

¹ As a general note, the stump grinding machine creates a mix of wood chips with some of the soil matrix. It is not a neat process. What remains is a loose pile of this material on top of the hole it creates at the former stump location. The material was removed and void cleaned with a shovel to create a hole of the necessary size for new tree planting. When the hole needed for the new tree was larger than the hole created by the stump grinder, additional soil was removed, but if the new tree required a smaller hole, only the soil matrix – wood chip mix was documented.

chip matrix remained. This was brown sandy silt mixed with the wood chips. Artifacts noted, but not retained, include some coal and one brick fragment. No Native American artifacts were present.

Tree 261

Tree 261 was also located at the southwestern end of Nolan Park, across the walkway to the east of Building #15 (see Figure 3). The stump grinder was used at this location, however additional excavation was required to excavate the hole to the proper size for the tree planting. It ultimately measured 1.7 feet (52 cm) deep and 3.8 feet (116 cm) in diameter. Three strata were recorded. The upper stratum was grass in very dark grayish brown loam and contained two modern bottle glass sherds and one fragment of window glass, none of which were retained. Stratum 2 was very dark grayish brown silty loam to 0.9 feet (27 cm) below ground surface. One clam shell fragment was noted, but not retained. The basal stratum was dark yellowish brown silt and contained no cultural material. No Native American artifacts were recovered and no remains of the former barracks or other historic structures were present in this location.

Tree 873

Tree 873 was located in the former Parade Ground, south of Fort Jay, to the west of Evans Road and Building #16 (see Figure 3). The new tree at this location was approximately 14 feet (4.3 m) south of the old tree. This was the second of the two planned shovel test locations. The shovel test here contained five strata. Stratum 1 was grass in very dark grayish brown loam and did not contain any cultural material. Stratum 2 was very dark brown mottled silty loam and contained a plastic coffee lid and one modern bottle glass sherd that were not retained. Stratum 3 was a coal ash deposit in a matrix of dark gray silt. The base of Stratum 3 was 1 foot (30 cm) below ground surface. At this depth, chunks of cut stone demolition debris were encountered impeding the excavation. Therefore the hole was expanded to 4 feet (122 cm) in diameter (see Photo 2). This provided an opportunity to screen additional Stratum 3 soil. In addition to much cinder and slag, this stratum also contained a few brick fragments and one amber bottle glass sherd, none of which were retained. The expanded excavation also provided the opportunity to examine the stones and their placement. The stones themselves were ascribed to Stratum 4, although very little soil matrix was present, like Stratum 3, this too was dark gray silt. The stones were predominantly schistose/gneissose and cut approximately 0.3 feet (9 cm) thick. They ranged in size up to 0.8 feet (24 cm) across. No pattern in their placement was observed. In fact it was clear they were dumped there and perhaps spread before being covered with the coal ash, since only one or two layers of stone were present, as opposed to a pile of stones. The base of Stratum 4 was 1.4 feet (43 cm) below ground surface, little more than width of one stone. No artifacts were recovered from amongst the stones. The shovel test was resumed once a sufficient amount of stone was removed. The basal stratum was dark yellowish brown compact silt and was devoid of any cultural material. The remainder of the hole was monitored with the same result. No Native American artifacts were recovered from the shovel test for Tree 873. Remains of demolition debris, previously identified as dating post-1890, were examined further. No indication of the source of the material or further refinement of the deposition date were possible.

Tree #B

Tree #B was located along Colonels' Row, in the grass across the walkway to the west of Building #404 (see Figure 4). This location was excavated by the stump grinder, with a cut exposed enabling documentation of stratigraphy. Four strata were present. Stratum 1 was grass in very dark gray loam. Stratum 2 was very dark grayish brown loamy sand. Stratum 3 was yellowish brown sand and Stratum 4 was very dark grayish brown loam. No cultural material was observed. The presence of loam at Stratum 4 indicates the upper levels, at least, are comprised of fill. The potential archaeological resource at this location was original shore line. It was not encountered, although it could be present at deeper elevations.

CONCLUSIONS AND RECOMMENDATIONS

Archaeological work was conducted at the locations of six tree replantings on Governors Island. Shovel tests were excavated in advance of tree replacements at two locations and the other four were monitored. Four of the locations were in Nolan Park, one was in the former Parade Ground and the other along Colonel's Row. Potential archaeological resources included Native American resources, remains of former buildings in Nolan Park, demolition debris of unknown origin in the Parade Ground, and early shoreline near Colonel's Row. No Native American artifacts were recovered and no structural remains of buildings were identified. However, additional demolition debris in the Parade Ground, in an area that was previously investigated, was unearthed and examined at Tree 873. No additional information about the date or source of the demolition debris was present. The presence of coal ash was documented at the base of the hole for Tree #A. This is indicative of historic period waste, however the absence of diagnostic artifacts and the small size of the excavation limit the ability to draw further conclusions regarding that deposit.

Stratigraphy throughout was not entirely uniform, partially due to the use of the stump grinder to create the holes for new plantings at five of the locations. Of the Nolan Park locations, only the stratigraphy within the Tree 261 location was consistent with previous testing in that area. The Parade Ground tree was unique because of the presence of demolition debris and the Colonels' Row tree location was indicative of fill.

In any case, no potentially significant archaeological resources were present no further archaeological fieldwork is recommended. Should additional locations be needed for tree plantings, they should be evaluated for their archaeological potential. It is also recommended the tree locations for this project are recorded in the GIPEC Governors Island GIS database.

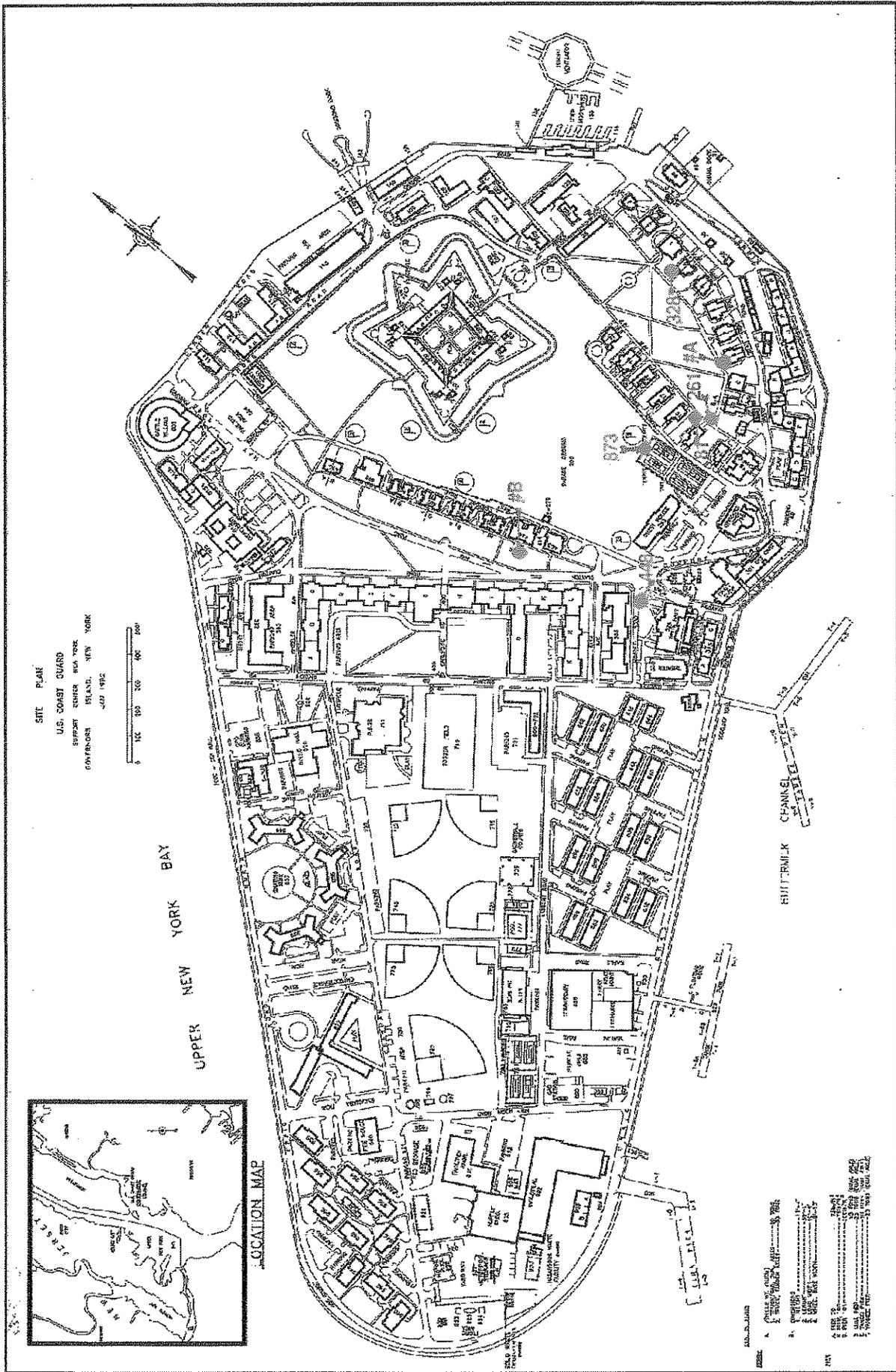


Figure 1 Locations of the six tree replacements on Governors Island.

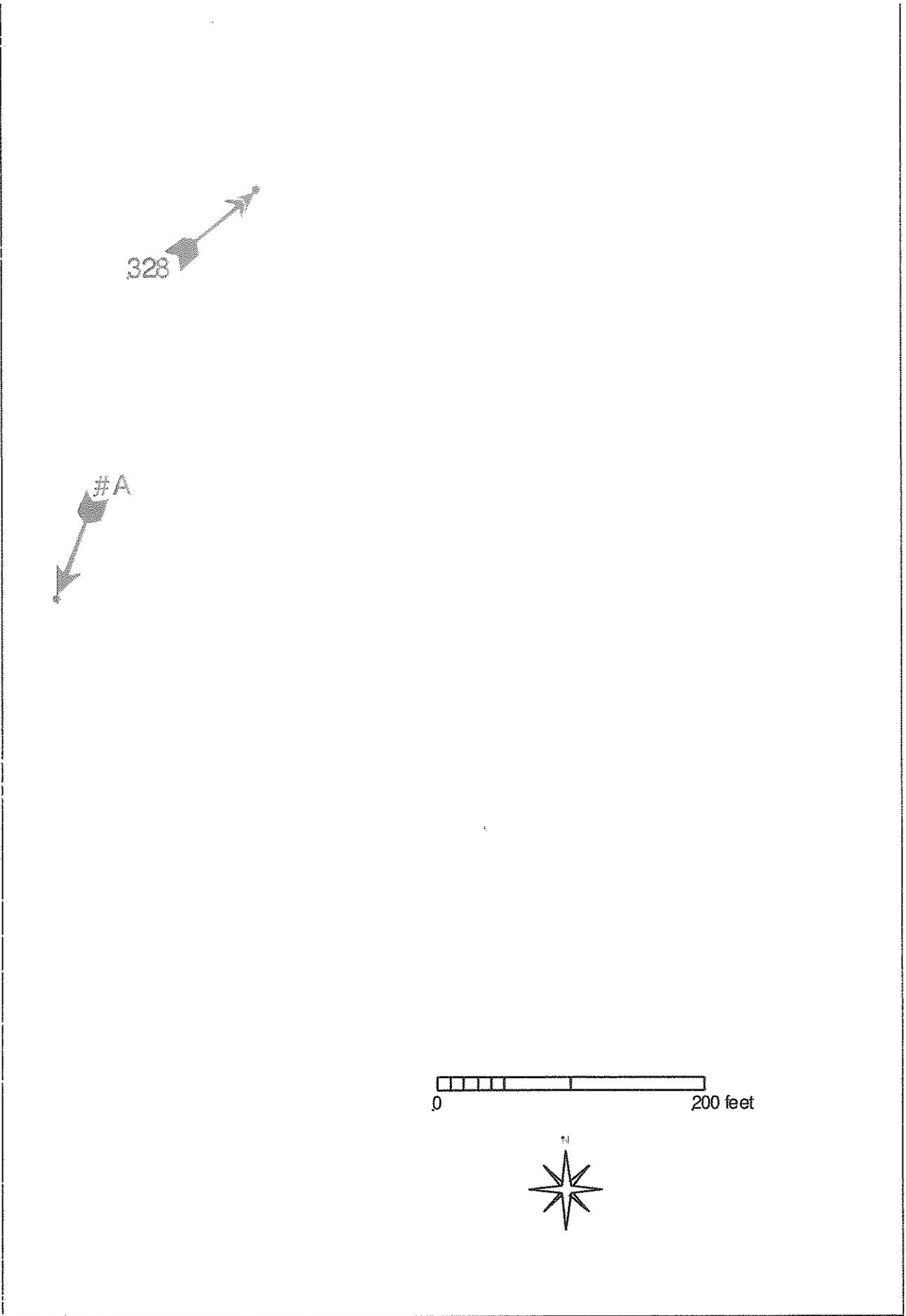


Figure 2 Location of Trees 328 and # A shown on a section of the 2003 Montrose survey of Governors Island.

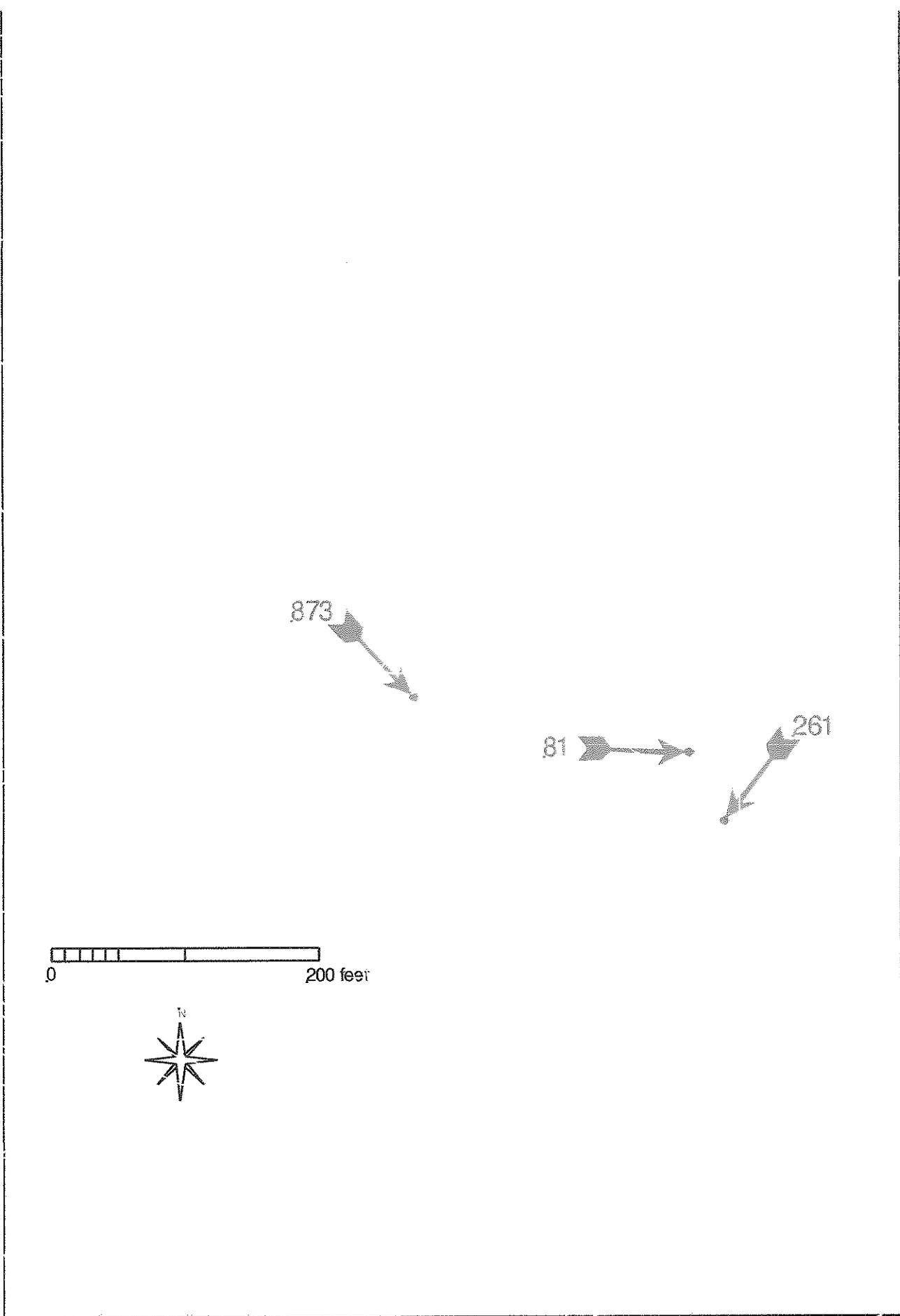


Figure 3 Location of Trees 81, 261 and 873 shown on a section of the 2003 Montrose survey of Governors Island.

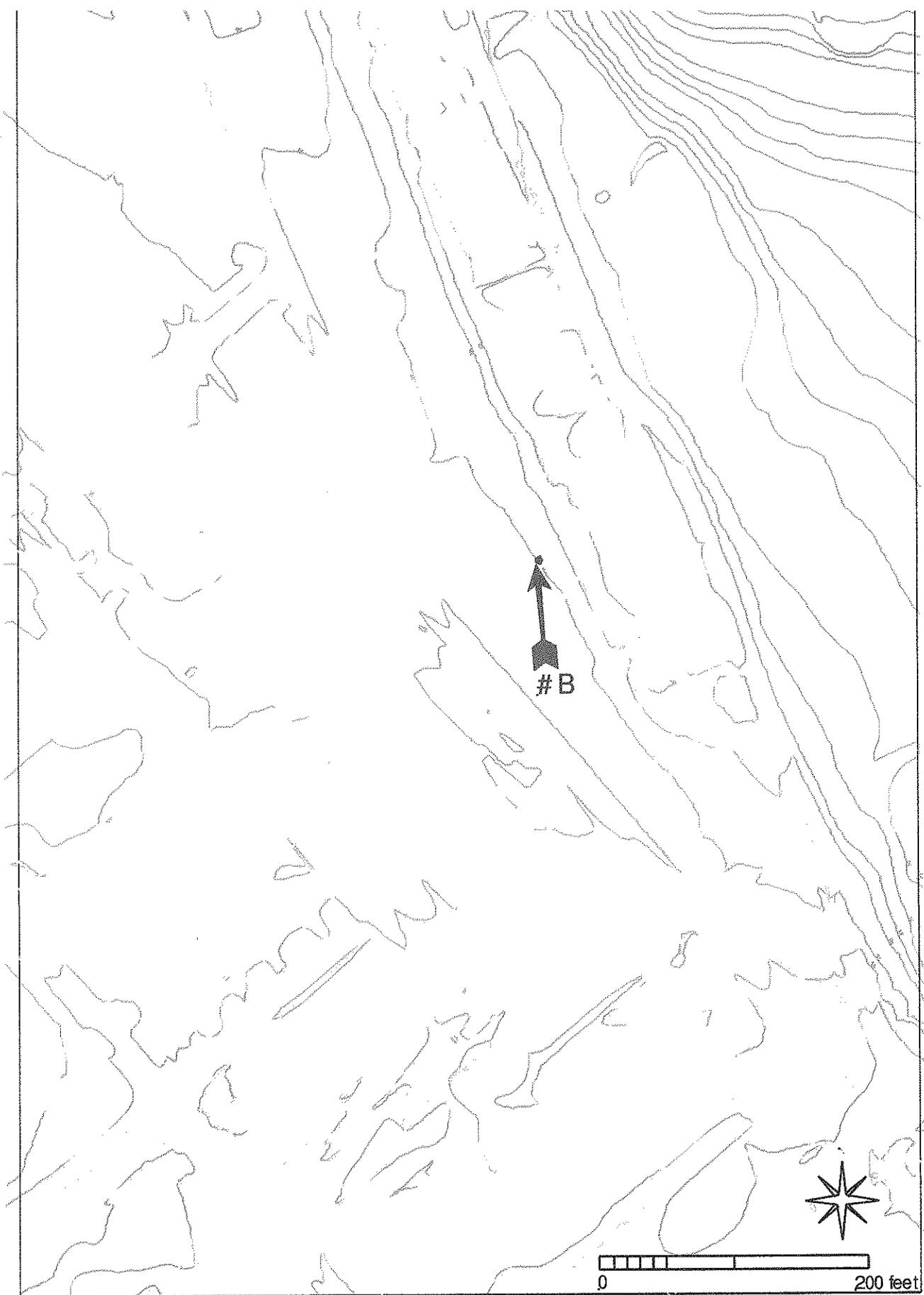


Figure 4 Location of Tree # B shown on a section of the 2003 Montrose survey of Governors Island.



Photo 1 Stump grinder at Tree 81, facing southeast.



Photo 2 Expanded test at Tree 873, facing north.

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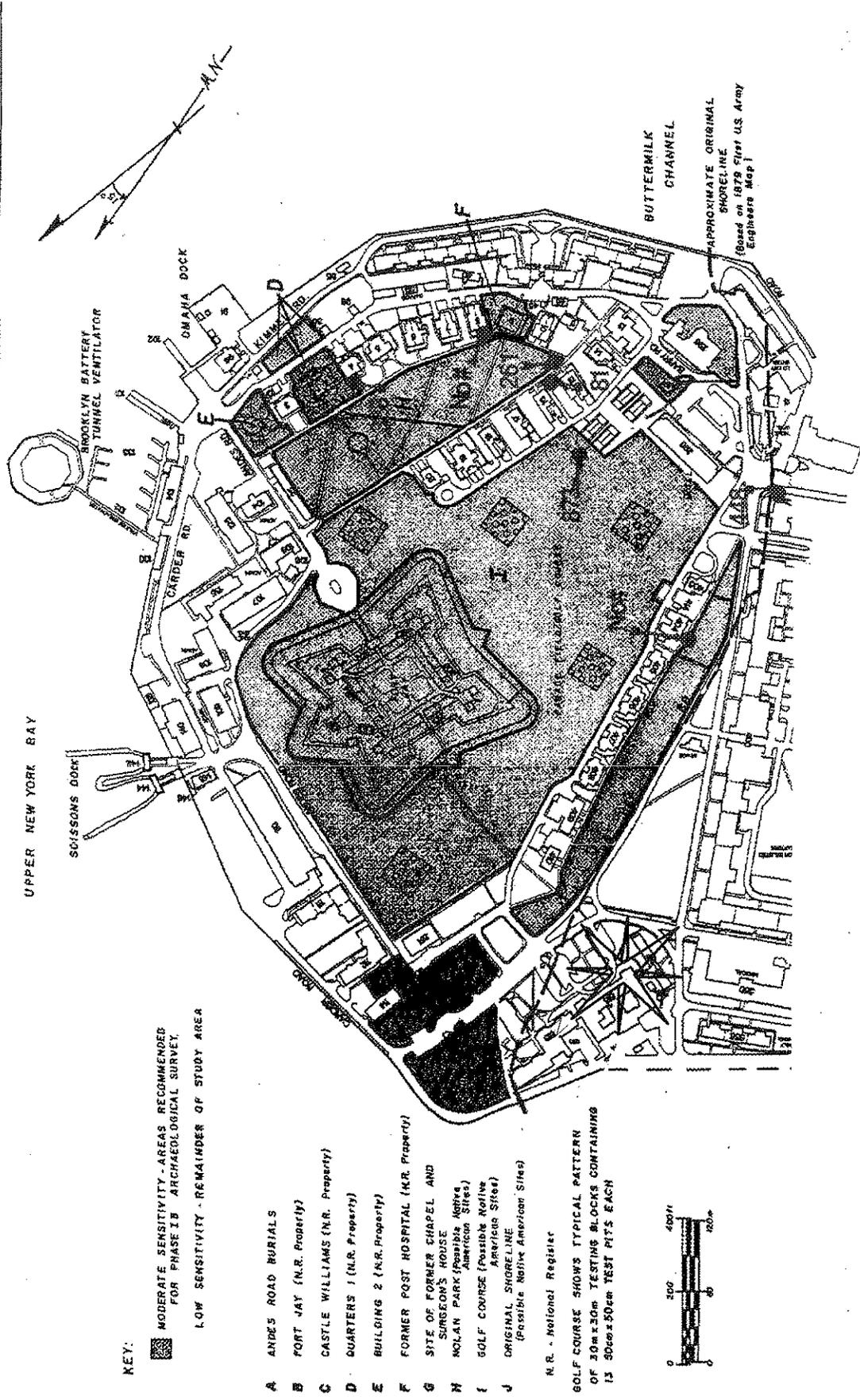


Figure 2 PAL 1996 Figure 4.1 showing the areas of archaeological sensitivity on Governors Island with the 7 tree locations.

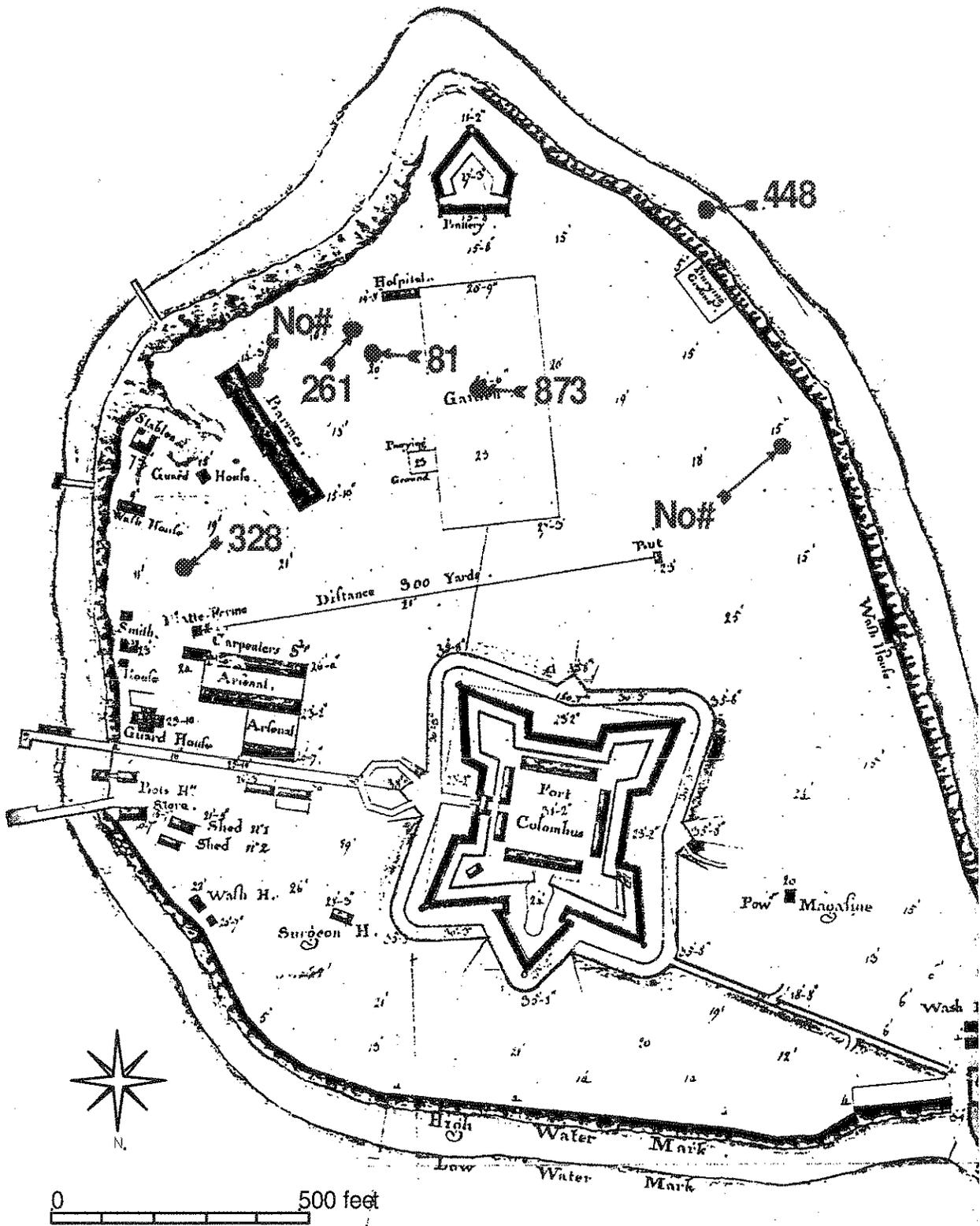


Figure 2 Mangin Map of 1813 showing the 7 tree locations.

APPENDIX B

STRATIGRAPHY & ARTIFACTS

Governors Island Tree Replacement Project Stratigraphy

Tree Stratum	Depth	Munsell	Color	Texture	Comment
328 . 1	0.5	10YR 2/2	very dark brown	silty loam	
328 . 2	1.1	10YR 3/3	dark brown	silty sand	1 corroded nail, impeded by roots and switched to stump grinder
328 . 3	1.5	10YR 3/2	very dark grayish brown	sand	1 pipe stem retained
.....					
A . 1	0.7	10YR 3/1	very dark gray	turf and loam	
A . 2	1.0	10YR 4/4	dark yellowish brown	clean sand	
A . 3	1.6	10YR 3/3	dark brown	coal ash	lots of coal, 1 corroded nail, few brick fragments, 1 ceramic sherd retained
.....					
81 . 1	2.0	10YR 4/3	brown	silty sand	all mixed with wood chips; 1 brick frag., some coal
.....					
261 . 1	0.3	10YR 3/2	very dark grayish brown	turf and loamy topsoil	2 modern bottle glass sherd, 1 clear window glass sherd
261 . 2	0.9	10YR 3/2	very dark grayish brown	silty loam	1 clam shell frag.
261 . 3	1.7	10YR 4/6	dark yellowish brown	silt	ncm
.....					
873 . 1	0.4	10YR 3/2	very dark grayish brown	turf and loam	
873 . 2	0.9	10YR 2/2	very dark brown	mottled silty loam	1 plastic coffee lid
873 . 3	1.0	10YR 4/1	dark gray	silty coal ash	much slag & cinders, 1 amber bottle glass sherd, few brick frags.
873 . 4	1.4	10YR 4/1	dark gray	silty coal ash with cut stone	stones appx. 0.3' thick & up to 0.8' thick, very little matrix
873 . 5	2.0	10YR 4/4	dark yellowish brown	compact silt	ncm
.....					
B . 1	0.3	10YR 3/1	very dark gray	turf and loam	
B . 2	0.9	10YR 3/2	very dark grayish brown	loamy sand	
B . 3	1.4	10YR 5/6	yellowish brown	sandy	
B . 4	2.0	10YR 3/2	very dark grayish brown	loam	