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REPORT ON ARCHAEOLOGICAL TRENCHING AT TWO LOCATIONS IN THE GOLF COURSE/ FORMER PARADE GROUND ON GOVERNORS ISLAND NEW YORK, NEW YORK

Trench B facing west southwest after completion.

Prepared for: Governors Island Preservation and Education Corporation
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February 19, 2007

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EXECUTIVE SUMMARY

This report presents the results of the archaeological trenching conducted in the former parade ground on Governors Island, New York City, within the Governors Island National Historic Landmark District and the New York City Landmark district. This archaeological report is being prepared to meet part of the mitigation requirement set by the review agencies after reconstruction of the golf course in July 2006, located in the former parade ground, inadvertently damaged the buried defile which once connected Fort Jay to Castle Williams.. An archaeological field strategy was developed by the National Park Service for the sections of the golf course within the National Monument. This same strategy was applied to the two holes within the property managed by the Governors Island Preservation and Education Corporation (GIPEC). All work conducted for this project meets the standards of both the New York State Office of Parks, Recreation and Historic Preservation (SHPO) and New York City Landmarks Preservation Commission.

This work was done to identify the extent of the disturbances from the July golf course reconstruction and to see if any intact buried surfaces exist in these areas and were damaged by that work. This archaeological project consisted of placing two trenches to identify the potential disturbance and any archaeological deposits.

The level of disturbance from the July work within Trench A was relatively minimal, 1.5 feet (46 cm) or less. Trench B was more extensively disturbed back in July 2006. As much as 3.5 feet (107 cm) was excavated and/or redistributed at that time. Additionally, Trench A excavations exposed a historic brick feature and documented a stratum of cinder. A preliminary evaluation of the historic maps shows the area of the brick feature and cinder layer was a garden in 1813.

This report concludes that the July 2006 golf course reconstruction did not disturb any buried surfaces. However the identification of the brick feature in Trench A constitutes a potentially significant finding which would require further exploration and research should this area of the golf course require additional ground disturbing actions. Furthermore, archaeological oversight of additional redistribution of soil in this part of the golf course is recommended so that such below ground work does not extend to depths below the earlier incarnations of the golf course and destroy potential archaeological resources.

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)
- Length: 145 feet (44.2 m) combined trench length
- Width: 2 feet (61 cm)
- Depth: (when appropriate): 1 – 3.8 feet (30 – 116 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: n/a
- 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: n/a
- Number & name of sites recommended for Phase II/Avoidance: 1 brick feature

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

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INTRODUCTION

Governors Island Preservation and Education Corporation (GIPEC) held a fund raising golf tournament in November 2006 on Governors Island. A golf course was formerly located in what had been the parade ground surrounding Fort Jay and it was reconstructed for the event. Figure 1 in Appendix A depicts the location of Governors Island within New York City. Figure 2 in Appendix A depicts the golf course plan. The reconstruction done in July 2006 inadvertently damaged part of the defile which once connected Fort Jay to Castle Williams. That portion of the golf course is located within the National Monument and under the jurisdiction of the National Park Service and is not part of this report. However, after the damage had been evaluated by the National Park Service (NPS), they met with GIPEC, the State Historic Preservation Office (SHPO) and the Landmarks Preservation Commission (LPC) to develop a mitigation strategy. Aside from the archaeological strategy for the defile, to be conducted by NPS, a plan was developed to assess the other areas of the reconstructed greens and sand traps to determine if the previously identified buried A-horizon exists and, if so, was it was affected by the golf course reconstruction. Although previous archaeological testing in the GIPEC sections of the golf course concluded buried surfaces in the southern part of the golf course (GIPEC area) have been disturbed by landscaping of the golf course and no buried surfaces were identified (PAL 1997:67; 1998:14), GIPEC proposed to use the same strategy on the two holes within its property that NPS is planning to use (see Figure 4 in Appendix A). Previous testing nearby uncovered Native American artifacts, although "recovered in disturbed deposits mixed with historic debris" in these areas. The possibility exists that similar materials may be recovered from undisturbed contexts should original topsoil be identified (PAL 1997:67).

A detailed archaeological work plan was submitted to GIPEC on November 17, 2006 (see Appendix A). It proposed archaeological trenching in two areas (see Figure 4 in Appendix A). The trenches were to be about three feet wide, the width of the backhoe bucket and excavated in small increments ensure minimal impact to any archaeological deposits that may be present. The use of incremental excavation would also enable the archaeologist to enter the trench frequently to examine the deposits and any potential archaeological resources. The lengths and locations of the two trenches were determined in the field prior to excavation in order to evaluate whether the size and/or location of the sand traps had been altered during the recent golf course reconstruction. The field reconnaissance was conducted on November 28, 2006. The recommendations were written as an addendum to the original November 17 work plan. The addendum is attached here as Appendix B. Trench A was expected to be about 60 feet in length and Trench B about 80 feet. The locations of the proposed trenches are depicted on Figure 3 in Appendix B. Trench depths were to be determined during excavation based on findings.

This report presents the results of the archaeological trenching conducted in the former parade ground on Governors Island. The work has been conducted 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 Lind Stone, RPA for GIPEC. The archaeological fieldwork described in this report was conducted by Ms. Stone with the assistance of Patience Freeman on December 12 and 13, 2006. The weather was clear on December 12 and partially clear with intermittent drizzle on December 13. The machine operator was Kevin Waldron of Turner Construction, formerly with the Coast Guard for sixteen years on Governors Island. The author would like to acknowledge the support to Claire Kelly of GIPEC for facilitating this project.

SITE HISTORY AND ARCHAEOLOGICAL POTENTIAL

The golf course on Governors Island was built after World War II when the Island was occupied by the Army (UMass 2003: 71, 79, 151). "Construction of the golf course south and west of Fort Jay also probably affected some archaeological sites. Construction of this nine-hole course mostly involved landscaping for sand traps, tees, and putting greens. The extent of this disturbance is currently unknown, but is likely extensive in particular areas" (UMass 2003: 142).

PAL conducted archaeological testing of parts of the golf course in 1997. They placed 50 cm diameter tests in 30 meter blocks containing 13 tests each. Block 4 was located just to the north of the area of Trench B and Block 5 was to the north of the Trench A area. Block 8 was located between the two trenches. PAL also excavated a trench within Block 8. The PAL trench "exposed the footing for an historic post and associated fill lenses capping undisturbed dark yellowish brown (10YR4/6) subsoil at circa 80 cmbs" (PAL 1997:31). The report doesn't detail individual test stratigraphy, but rather provides a stratigraphic section for the Island. This depicts the upper meter of soils as dark brown fine sandy loam underlain by demolition rubble or gravel and coal. That is generally underlain with dark yellowish brown/yellowish brown mottled fine sandy loam and then by strong brown sandy loam (PAL 1997: 33). Artifacts recovered from Block 4 and 5 tests include historic ceramic and glass sherds, historic calcined bone, brick fragments and quartz debitage.

METHODOLOGY

The work plan for archaeological trenching and its addendum are attached as Appendices A and B. The basic approach was to direct the machine to excavate in small increments, inspecting the deposits as the work progressed. If potentially significant deposits were encountered the operator would be asked to stop. The process would be photographed and documented in field drawings and notes. Upon completion of excavation, a continuous profile would be drawn before backfilling. This plan was adhered to. Figure 1 depicts the locations of the two trenches on the infrared aerial photograph. The backhoe had a two foot wide bucket.

Trench A

In the area of Trench A, the shape of the two traps currently appears reconfigured from the aerial photographs taken before the golf course reconstruction. The western trap is currently more dumbbell shaped and doesn't extend as far toward the southwest as the original sand trap did (see Photos 1 – 3 in Appendix B). Because the western trap is smaller and within the footprint of the original, the recent reconstruction did not likely disturb the trap. Therefore there was no need to put the trench through that sand trap. The eastern trap is currently more kidney shaped than it was originally (see Photos 4 – 6 in Appendix B). It also now has a sizable rise in elevation toward the south west, the inside of the kidney shape. Therefore, the trench was located to examine that part of the trap. Trench A extended from a point between the western trap and the green almost due eastward to the center of the eastern trap (see Figure 1). This location would enable evaluation of the amount of disturbance the recent reconstruction caused in the eastern trap as well as in the green. Trench A was 57 feet (17.4 m) long.

Trench B

The area of Trench B contains three sand traps (see Figure 1). The western and southern traps are almost identical in location and shape to the originals, therefore it appears no excavations were done for those to reconstruct the golf course. The northern trap is currently configured in a modified kidney shape (see Photos 9 – 10 in Appendix B), as opposed to an egg shape shown in Figure 1. Because it is currently larger and extends more toward the south, Trench B was placed to cut through it. Figure 1 depicts the location of the trench beginning to the east of the western trap and extending northeast through the green and through the southern part of the northern trap. The total length of Trench B is 88 feet (26.8 m).

Artifact Processing

Unique context numbers were assigned for each field bag of artifacts recovered. The context numbers for this project are alphanumeric and begin with either A or B for the trench identifier. All contexts are keyed at the end of the artifact inventory (see Appendix C). 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.

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. Artifacts were individually labeled with the abbreviated project name "GI Golf" and the context number. All zip bags were labeled with the same information. Bags containing glass were not perforated.

RESULTS

Trench A

Excavation of Trench A began at the eastern end of the trench in the sand trap. The machine operator stated he has worked on Governors Island for some time and recalled the topography before the recent golf course reconstruction. He felt the area of Trench A had been altered quite significantly by adding fill to the green and berms adjacent to the sand traps. The differential in elevation can be seen in Photos 1 – 6 of Appendix B. This was kept in mind during excavation by removing additional soil incrementally to identify the buried pre-July 2006 golf course surface. The area of the sand trap was excavated to a depth of about a foot (see Figure 2). A deposit containing a large amount of cinder was encountered below the brown sandy silt that underlays the sand trap (see Photo 1). As the topography rose adjacent to the trap, the operator was instructed to remove soil incrementally to roughly the same elevation. The base of the cinder deposit was encountered as the berm rose is elevation. The deposit encountered beneath the cinder layer was strong brown fine silt, the subsoil previously identified elsewhere on the Island. It was at that point the depth of excavation was revaluated. This was because the extent of the disturbance of the recent golf course reconstruction did not show signs of disturbing the subsoil. The trench was continued incrementally at a slightly shallower depth, exposing the cinder stratum but not extending any deeper.

At about 14 feet along the trench, a set of three wires (likely a temporary electrical line since the wires were not encased in a conduit) was exposed at about 1.5 feet (46 cm) below ground surface (bgs). It had been previously disturbed, perhaps during the golf course reconstruction work. There was no evidence of a trench for the wires, therefore it is probable the soils at higher elevations were disturbed after the wires were installed. These are both indications of some prior disturbance. It is likely the golf course work was at least to this depth.

A clearly identifiable pre-July 2006 golf course surface was never encountered in Trench A. After exposing the western end of the cinder deposit and excavating to a maximum depth of 3.5 feet (107 cm), the depth of the trench was reduced to 1.2 feet (37 cm) at the green. The assumptions about the amount of disturbance created during the golf course reconstruction are discussed below.

The trench excavations continued toward the west. At about 44 feet along the profile, a brick feature was identified in the base of the trench. The operator was asked to stop excavations while the feature was examined. This feature can be seen in the profile drawing from 44.5 to 46.5 feet. It is also depicted in plan view (see Figure 3) and in Photo 2. Seven bricks were exposed or partially exposed. None were marked. There was no mortar attached to or associated with the bricks. The feature continued into the south profile of the Trench A. The base of the trench was trowel scraped to see if the feature or any related deposits extended to the east or west. They did not. The base of excavation was homogeneous throughout this part of the trench and no other bricks or related deposits were identified in Trench A. Trench A excavations continued as far west as the western edge of the green. Upon completion of Trench A, the continuous profile was drawn and the trench was backfilled. The brick feature was preserved in place. Its location is depicted in this report and was later documented with a global positioning system (GPS) unit to be incorporated into the Governors Island GIS database currently under development.

Artifacts

Potentially diagnostic artifacts were collected when observed during inspections while the backhoe was asked to stop for archaeological purposes. Very few artifacts were found in Trench A. They were collected from only three contexts (see Appendix C). Two of these were from within the cinder stratum (A1 and A2) and the other was a short distance away from the brick feature (A3). The specific artifacts are discussed below.

Stratigraphy

As stated above, the pre-July 2006 golf course surface was not clearly identified during excavations of Trench A. However, it was later inferred and the pre-July surface is pointed to on Figure 2 at about one foot bgs at the top of the berm between the green adjacent to the eastern sand trap. This identification is based on several factors relating to the stratigraphy and findings recorded in Trench A and elaborated here.

The stratigraphy within the green, depicted on Figure 2 between 24 – 57 feet, consists of only two strata beneath the level of the new sod. Directly below the sod is very dark grayish brown silty loam. The basal stratum was dark yellowish brown silt. These two strata were also observed in the berm, seen from 11 – 24 feet on Figure 2. The berm appears to have been built up on this base. The very dark grayish brown silty loam was overlaid by brown coarse sand and very dark grayish brown sandy loam and then covered with new sod during the recent golf course reconstruction. The exposed wires noted at 14 feet on the profile lacked evidence of a trench which would have resulted from the excavations associated with their original installation. The wires are at the interface of the very dark grayish brown silty loam that extended throughout most of Trench A and the overlying course sand. This indicates these overlying soils were added at some point in time after the initial wire installation. However their shallow depth at about 1.5 feet (46 cm) bgs would indicate the pre-July golf course surface was either at or above this level since no new utilities are known to have been installed during the reconstruction and the wires pre-date the July 2006 work. Therefore the disturbance from the recent reconstruction did not extend very deeply as demonstrated in Trench A, no more than 1.5 feet (46 cm) on the berm and less, if at all , on the green.

Two other factors contributed to the interpretation of the elevation of the pre-July golf course. One is the presence of small grass roots within the upper part of the dark brown silty loam. These roots represent what remains from the previous grass. Because they had not yet degraded, they could not have been buried for very long (i.e. maybe since the July 2006 reconstruction). However, these roots were only observed in one small section of Trench A (at about 15 – 17 feet on Figure 2). The other factor contributing to the interpretation of the pre-reconstruction ground surface is the relationship of the brick feature to the surrounding soil deposits. The feature (discussed in more detail below) was found at the base of excavation within the soil stratum that was underneath the very dark grayish brown silty loam. This feature is not associated with any recent activity on the golf course and likely pre-dates the golf course entirely. Therefore the stratum that covers the soil deposit associated with the brick feature would have been the only possible base for the sod of the golf course unless very large scale removal was done in July 2006. Large scale removals reportedly did not take place at that time.

The excavation of the sand trap and the most of the berm exposed part of a large deposit of cinders. This can be seen on the profile drawing between 2 – 17 feet on Figure 2. Because the excavations began within the sand trap and extended westward, the initial interpretation of the cinder deposit was that it was used as a base for the sand trap and golf course since it would have enabled good drainage. It contained only a few artifacts. The location of recovered ceramic and glass sherds is depicted on Figure 2 at 11.5 feet. An additional glass sherd was recovered from 3.2 feet (31 cm) along the trench. These artifacts indicate the cinder deposit could date from as early as the mid- to late-nineteenth century, based on multiple sherds from a torpedo-type bottle (see Photo 3) and a finish from another bottle. The one section of Trench A where the base of the cinders was exposed shows it was underlain with subsoil. No buried pre-July 2006 ground surface was identified.

Brick Feature

The brick feature was found in the base of excavation, about 0.8 feet (24 cm) bgs from 44.5 – 46.5 feet along the trench, as seen in the profile (Figure 2). The feature is also shown on Figure 3 in plan view and in Photo 2. Only five whole and three partial bricks were exposed, therefore the pattern is not entirely discernable. However, the bricks appear to be laid in a modified basket weave pattern, possibly with a border of bricks. The exposed portion represents one end of the brick feature. It is possible the feature is a square of brick, as in a footing, or it could be the end of a narrow and longer brick feature, such as a border or walkway. No artifacts were found in the immediate vicinity of the feature, however a sherd of whiteware was found in the base of Trench A about three feet away (see Figure 3). The bricks themselves measure 8 ¼ x 3 ½ x 2 ½ inches with slight variation in size. As stated above, there was no mortar associated with the brick feature and the bricks were not marked. However, during trowel scraping of the feature and soil matrix, it seemed the soil was more compacted on top of and around the feature than it was just a few inches away. Nevertheless, the feature soil matrix was the same Munsell color and texture at the entire basal stratum of Trench A from 17 feet onward, dark yellowish brown silt. Once photographed, measured and drawn, the brick feature was left in place and later buried when Trench A was backfilled.

Trench B

Excavation of Trench B began at the eastern end of the trench within the eastern sand trap (see Figure 1). As with Trench A, the excavations began from east to west and were conducted incrementally. However unlike Trench A, the pre-July 2006 golf surface was very clear in Trench B. Once it was identified, excavations were continued only as deep as the base of this disturbance and partially into the underlying loam. This resulted in trench depths of about 1.5 feet (46 cm) on the green and slightly more on the berms.

The western berm is at a substantially higher elevation than the western sand trap (see Photo 7 in Appendix B). This, coupled with the standing water in the trap, prevented the backhoe from excavating the trench continuously from east to west. The trench was excavated as far west as 68 feet (20.7 m) before the backhoe needed to reposition on the western side of the sand trap. The arm of the backhoe could not reach as far as the 68 foot point along the trench and therefore there is an unexcavated gap in Trench B from 68 – 72 feet along the profile (see Figures 4 and 5). Trench B was ultimately excavated to 88 feet (26.8 m). At that point a piece of buried PVC pipe was exposed and excavations stopped. No features were identified during excavation of Trench B. The profile was documented and the trench was backfilled.

Artifacts

As with Trench A, potentially diagnostic artifacts were also collected from Trench B and there were not very many of them either. Artifacts were collected from four contexts (see Appendix C). In addition to the artifacts collected, a Budweiser can with a pull tab was observed in the fill of the eastern berm and it was not retained. A piece of pearlware was recovered from a context representing the recently added fill (B1), therefore a disturbed context. A burned ceramic sherd, possibly a waster, was recovered from the stratum that was churned up during the recent golf course reconstruction (B2). Porcelain and stoneware sherds were recovered from contexts representing the loam that was not disturbed by the July 2006 golf course work (B3 and B4).

Stratigraphy

The stratigraphy in Trench B was quite a bit more straightforward because of the identification of the stratum that was disturbed by the July 2006 golf course reconstruction. This stratum was a very dark grayish brown sandy loam with pieces of sod mixed in. The sod was obviously the pre-July ground surface and was mixed into the underlying matrix when the earth was redistributed to recreate the golf course. Within Trench B, this stratum was generally underlain with very dark grayish brown sandy loam that had no pieces of sod mixed in (see Figures 4 and 5 and Photo 4). In a couple of places, including a section of Photo 4, the brown fine sandy silt subsoil was exposed. Of note was a strong odor of possible fertilizer in the eastern half of Trench B.

CONCLUSIONS AND RECOMMENDATIONS

This archaeological project consisted of placing two trenches to evaluate both the amount of disturbance from the July 2006 golf course reconstruction and to determine if that work disturbed any intact buried surfaces which may contain significant archaeological deposits. The level of disturbance from the July work within Trench A was relatively minimal, 1.5 feet (46 cm) or less. Trench A excavations exposed a historic brick feature and documented a stratum of cinder. It seems likely relatively little was dug up in July and soil may have been added to the berm at that time. Trench B was more extensively disturbed back in July 2006. As much as 3.5 feet (107 cm) was excavated and/or redistributed at that time.

A preliminary evaluation of the historic maps shows the area of the brick feature was a garden in 1813. It is possible the feature was related to the garden. More research and evaluation of historic maps and documents would be needed to firmly establish this identity.

The July 2006 golf course reconstruction did not disturb any buried surfaces. However the identification of the brick feature in Trench A constitutes a potentially significant finding which would require further exploration and research should this area of the golf course require additional ground disturbing actions. Furthermore, archaeological oversight of additional redistribution of soil in this part of the golf course is recommended so that such below ground work does not extend to depths below the earlier incarnations of the golf course and destroy potential archaeological resources.

Figure 1 Location of the two trenches excavated through golf course on Governors Island.

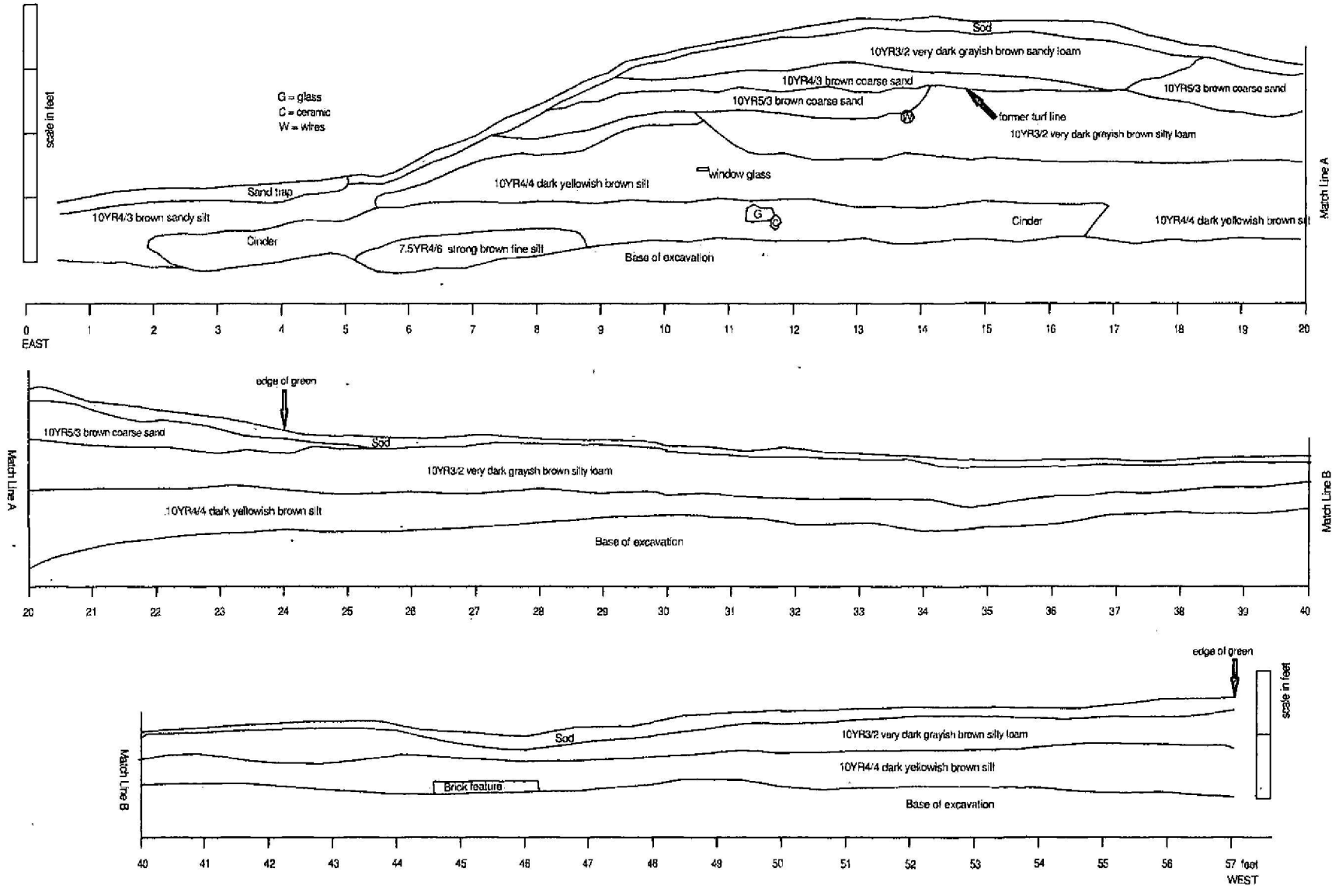

Figure 2 South profile of Trench A.

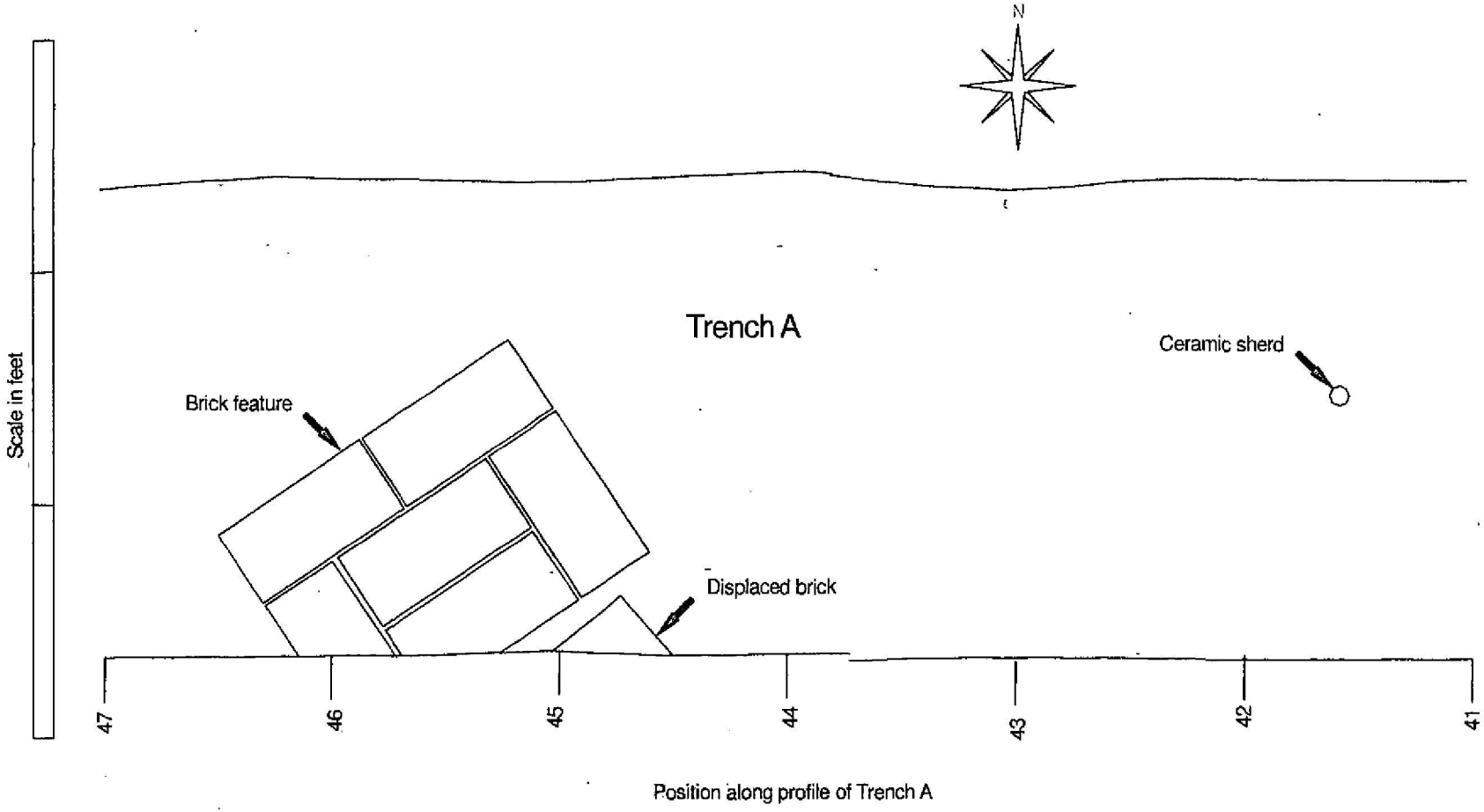

Figure 3 Plan view of brick feature found in Trench A.

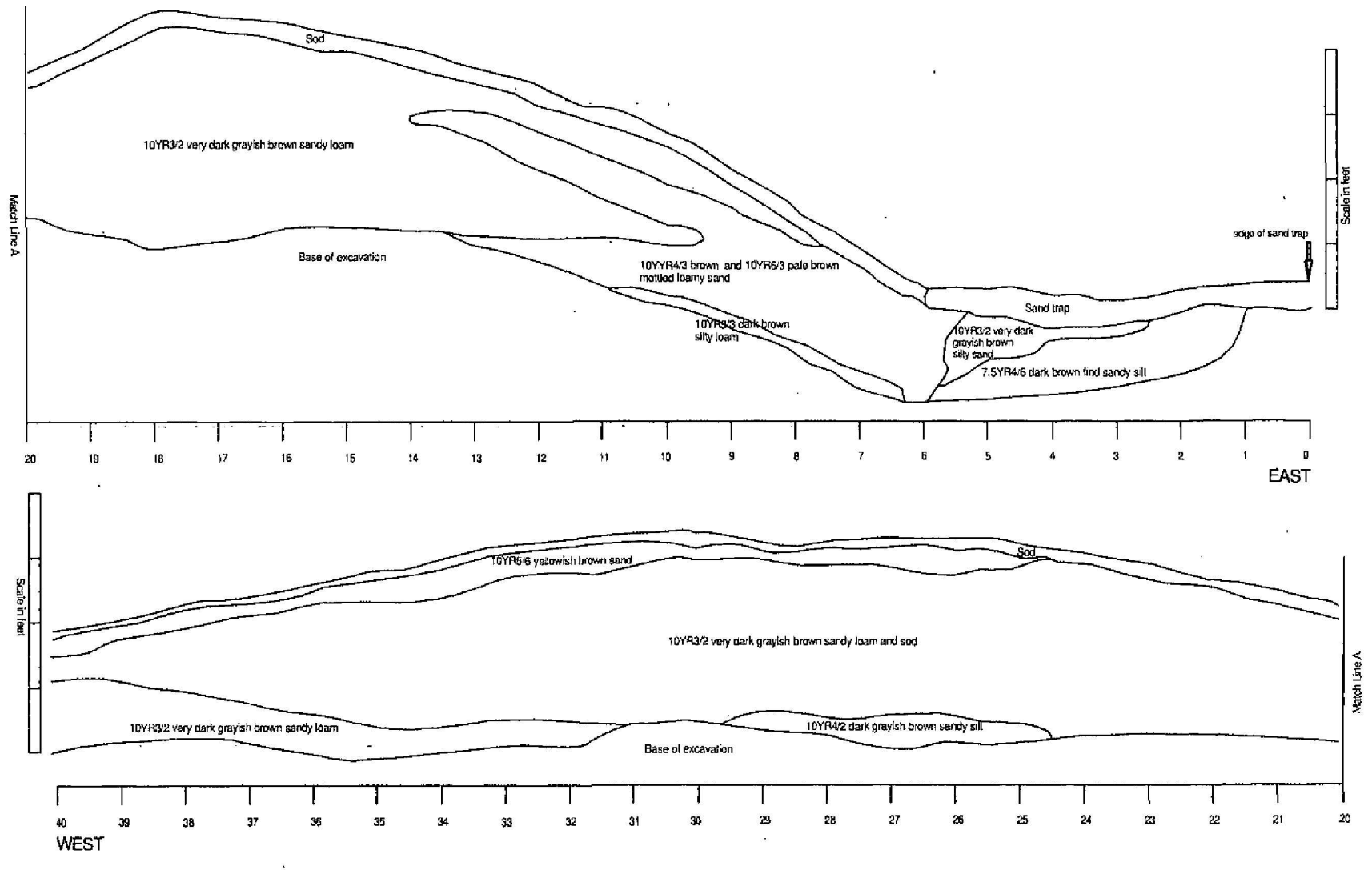

Figure 4 North profile of Trench B, eastern half.

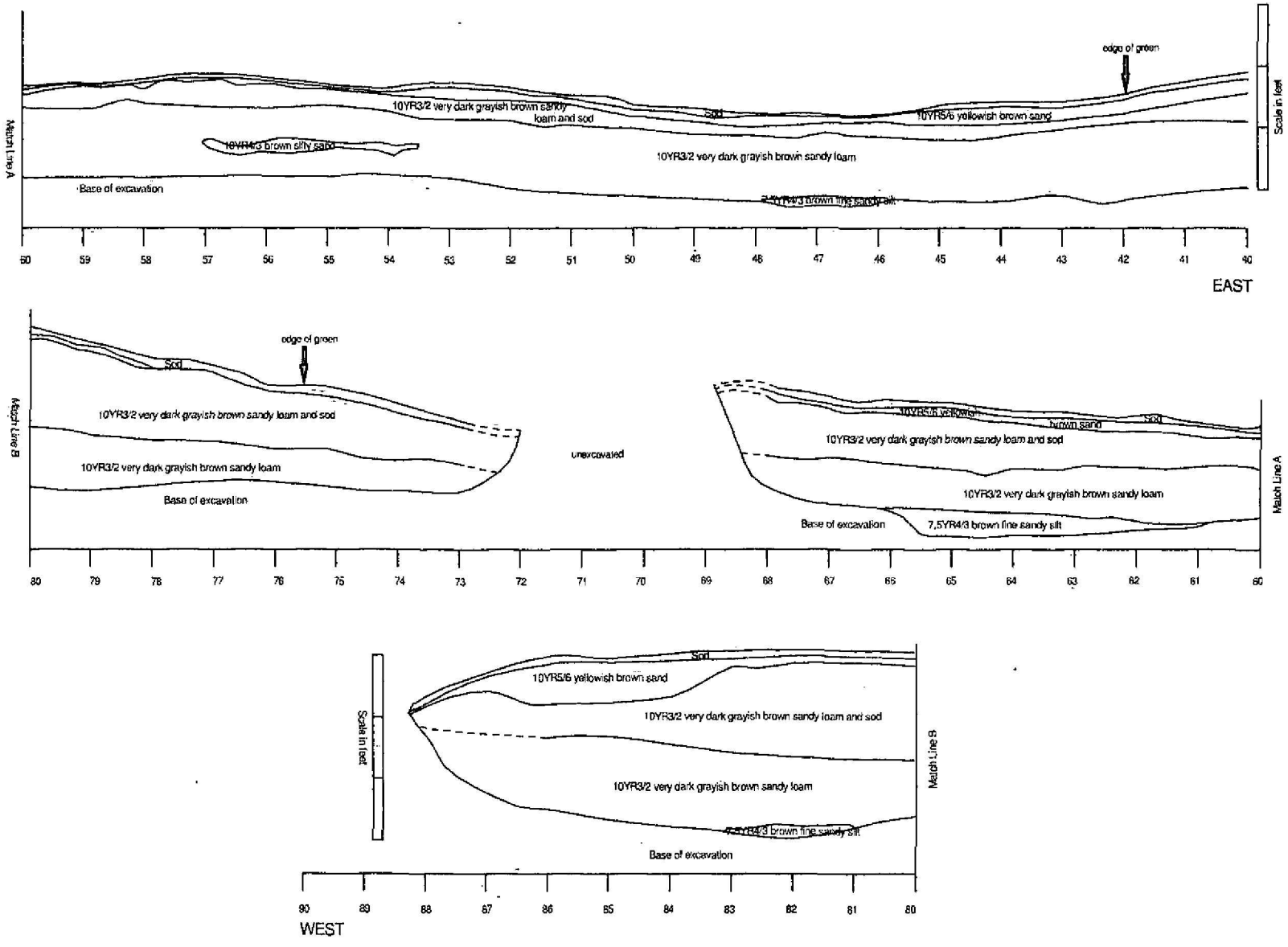

Figure 5 North profile of Trench B, western half.

Photo 1 Trench A from 7 to 13 feet on the profile drawing.

Photo 2 Brick feature found at the base of excavation in Trench A from 44.5 to 46.5 on the profile drawing.

Photo 3 Possible torpedo bottle recovered as from Trench A.

Photo 4 Trench B from 42 to 49 feet on the profile drawing.

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Appendix A

WORK PLAN

ARCHAEOLOGICAL WORK PLAN FOR
ARCHAEOLOGICAL TESTING
OF SOUTH END OF THE GOLF COURSE
ON GOVERNORS ISLAND
NEW YORK, NEW YORK

November 17, 2006

The Governors Island Preservation and Education Corporation (GIPEC) held a fund raising golf tournament earlier this month on Governors Island. A golf course was formerly located in what had been the parade ground surrounding Fort Jay and was reconstructed for the event. Figure 1 depicts the location of Governors Island within New York City. Figure 2 depicts the golf course plan. The reconstruction done in July 2006 inadvertently damaged part of the defile which once connected Fort Jay to Castle Williams. That portion of the golf course was located within the National Monument and under the jurisdiction of the National Park Service. Figure 3 shows Governors Island with the National Monument clearly marked. After the damage had been evaluated by the National Park Service (NPS), they met with GIPEC, the State Historic Preservation Office (SHPO) and the Landmarks Preservation Commission (LPC) to develop a mitigation strategy. Aside from the archaeological strategy for the defile, a plan was developed to assess the other areas of the reconstructed greens and sand traps to determine if the previously identified Buried A-horizon exists and, if so, was it was affected by the golf course reconstruction. Although previous archaeological testing in the GIPEC sections of the golf course concluded buried surfaces in the southern part of the golf course (GIPEC area) have been disturbed by landscaping of the golf course and no buried surfaces were identified (PAL 1997:67; 1998:14), GIPEC proposes to use the same strategy on the two holes within its property (see Figure 4). This is partially because the previous testing did find Native American artifacts, although "recovered in disturbed deposits mixed with historic debris" in these areas. The possibility exists that similar materials may be recovered from undisturbed contexts should original topsoil be identified (PAL 1997:67).

The method of testing will be mechanically assisted archaeological trenching. This will involve using a backhoe and operator under direct control of the archaeologist for the purposes of identifying potential archaeological deposits and resources. One trench will be excavated in each of the two areas; A and B as depicted on Figure 4. The trenches will each be about three feet wide, the width of the backhoe bucket. They will be excavated in small increments ensure minimal impact to any archaeological deposits that may be present. This will also enable the archaeologist to enter the excavation frequently to examine the deposits and any potential archaeological resources. The maximum length and depth of the trenches will be dependent on the findings. However, no trench will exceed four feet deep. This is because there does not appear to have a disturbance any greater than four feet deep and that is also the safest depth for trench excavation without shoring. The length of each trench will be a maximum of the diameter of the green and associated sand traps, about 100 feet in both cases. However, if it is clear that individual sand traps were not altered during the recent golf course reconstruction, then the length of the trench will be reduced accordingly. In such a case, an addendum to this document will be prepared once a comparison of current to previous conditions is completed and provide justification for a reduction in trench size.

The archaeological work recommended here will be conducted in a manner consistent with the New York Archaeological Council's Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State (1993) and the New York City Landmarks Preservation Commission's Guidelines for Archaeological Work in New York City (2002).

If an *in situ* archaeological deposit, including original topsoil or buried A-horizon, is encountered, trench excavations will stop. The deposit will be archaeologically documented. Stratigraphy will be recorded, measurements will be taken for field drawings and it will be photographed. The NPS plan for identification of a buried A-horizon is to take samples of soil for flotation and C-14 dating. The same strategy would be applied to the GIPEC locations. Samples of the soil will also be screened for artifact recovery. This would only be done if taking additional soils does not disturb the deposits any further. If another type of feature is identified, excavations will also stop so that GIPEC can notify SHPO and LPC. However in such an instance, the feature would be documented and most likely preserved in place.

If no archaeological features are encountered, the archaeologist will enter the excavation upon completion to document the stratigraphy. This will include taking photographs and measurements for drawings. Stratigraphy will be recorded using Munsell Soil Color descriptions.

If artifacts are recovered, standard methods of artifact processing, labelling, identification, evaluation and documentation will be done on the recovered materials. Upon completion of all archaeological work specified in this work plan, the archaeologist will provide a written report detailing the results of the field testing to GIPEC for submission to SHPO and LPC. Map(s) at a scale of at least 1"=20' will be provided indicating results from these investigations with locations of the work and of archaeological resource identified, if any.

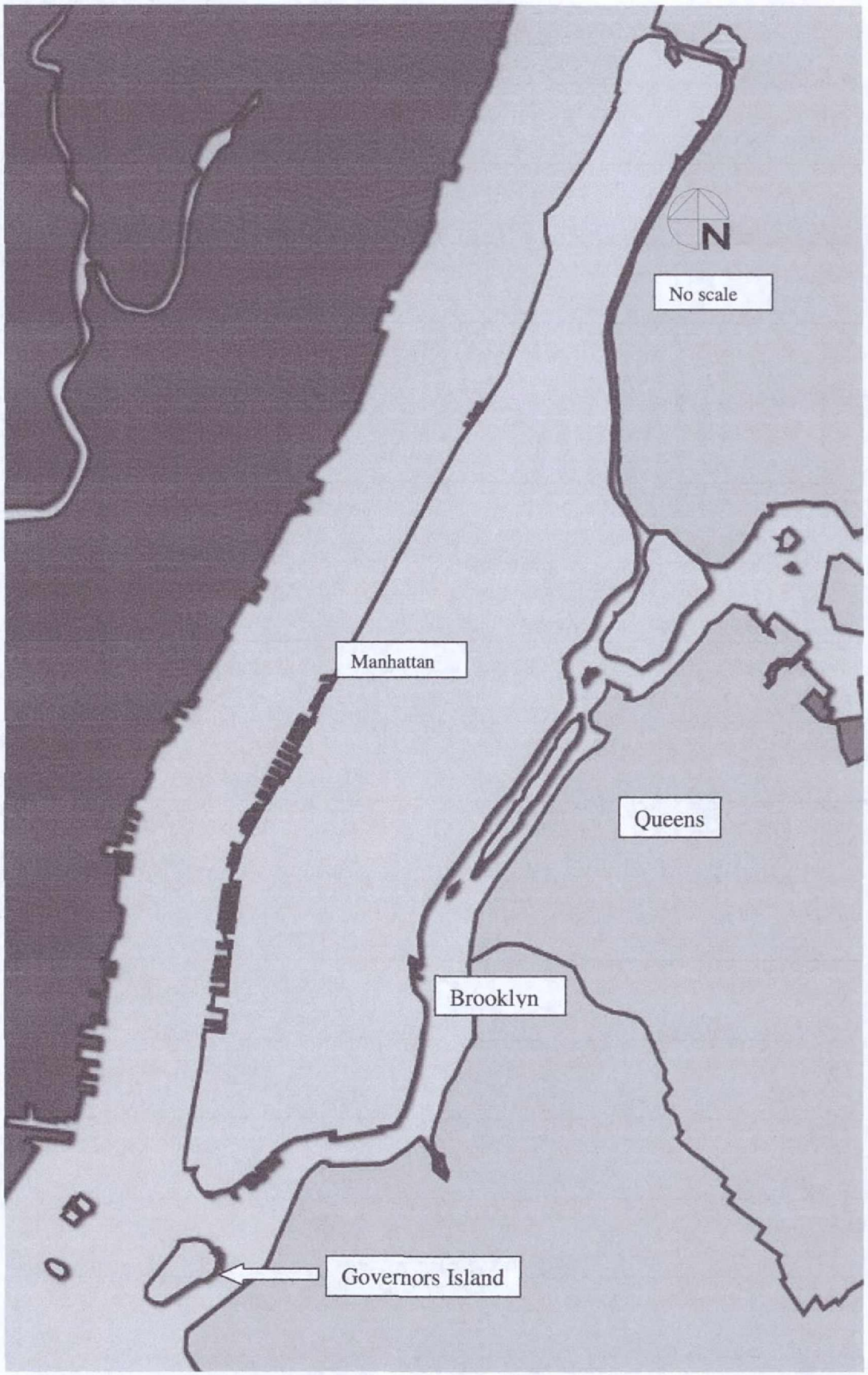

Figure 1 Location of Governors Island in New York City.

6-27-06

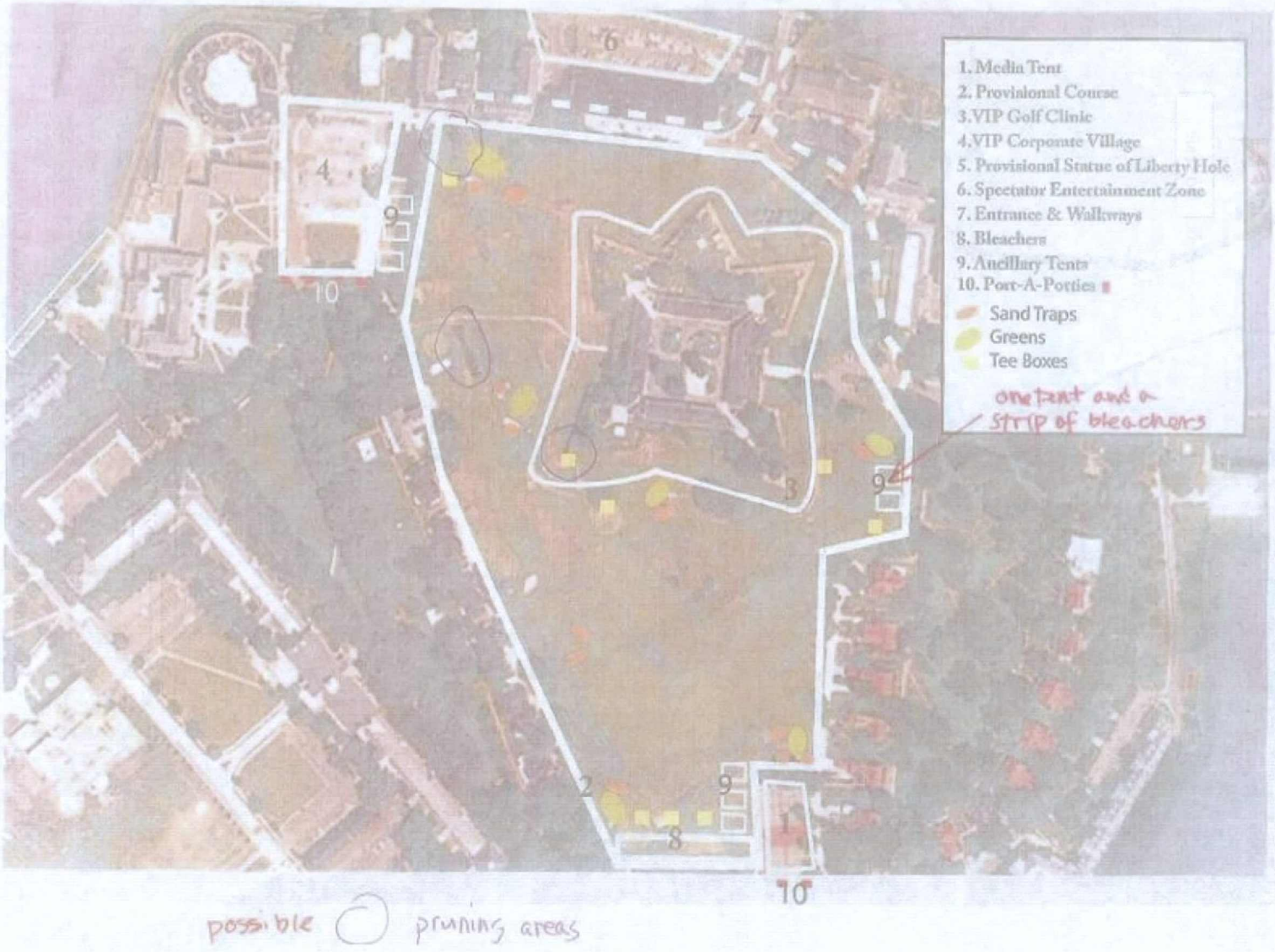

Figure 2 Golf course plan.

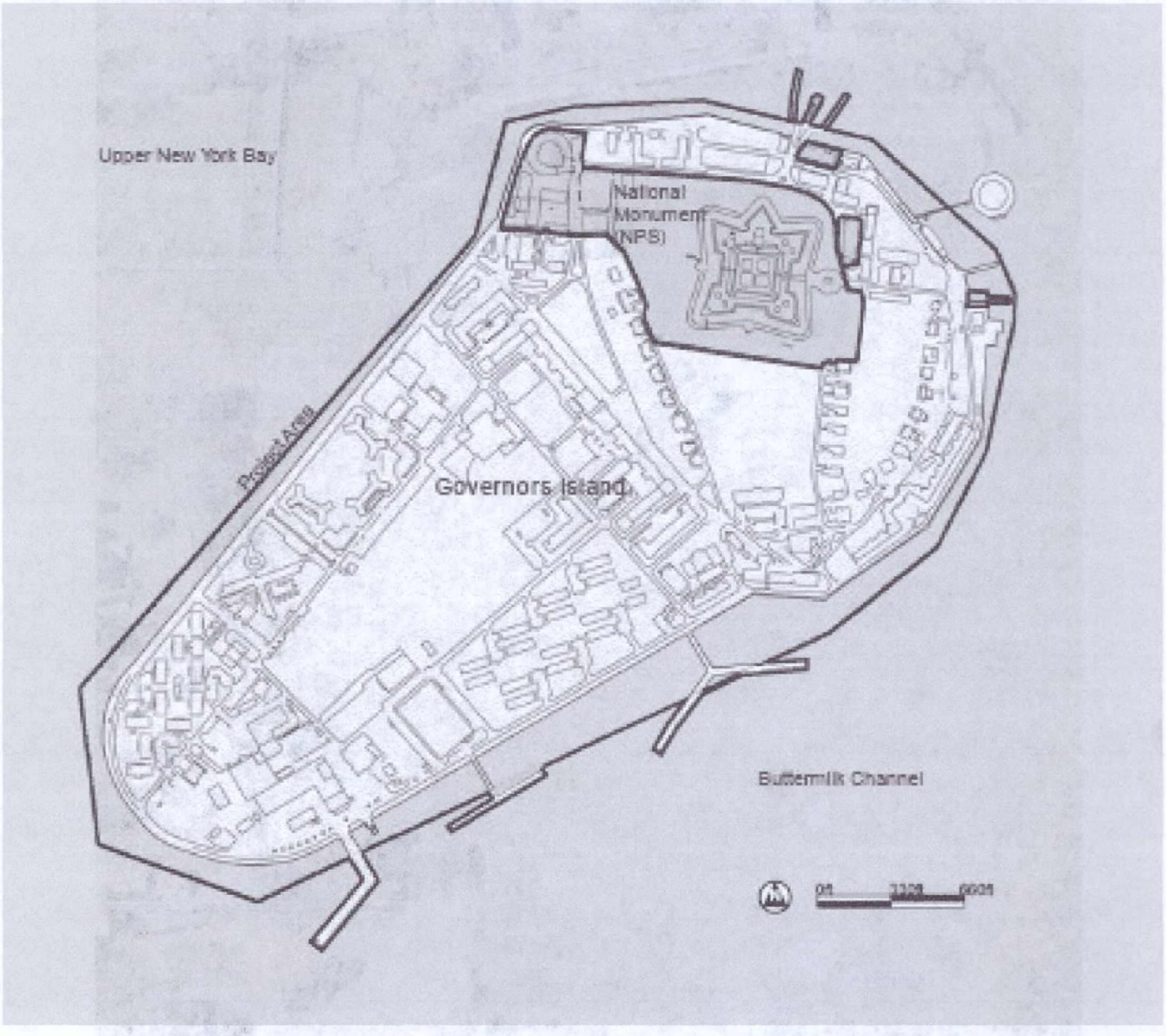

Figure 3 Governors Island District Map.

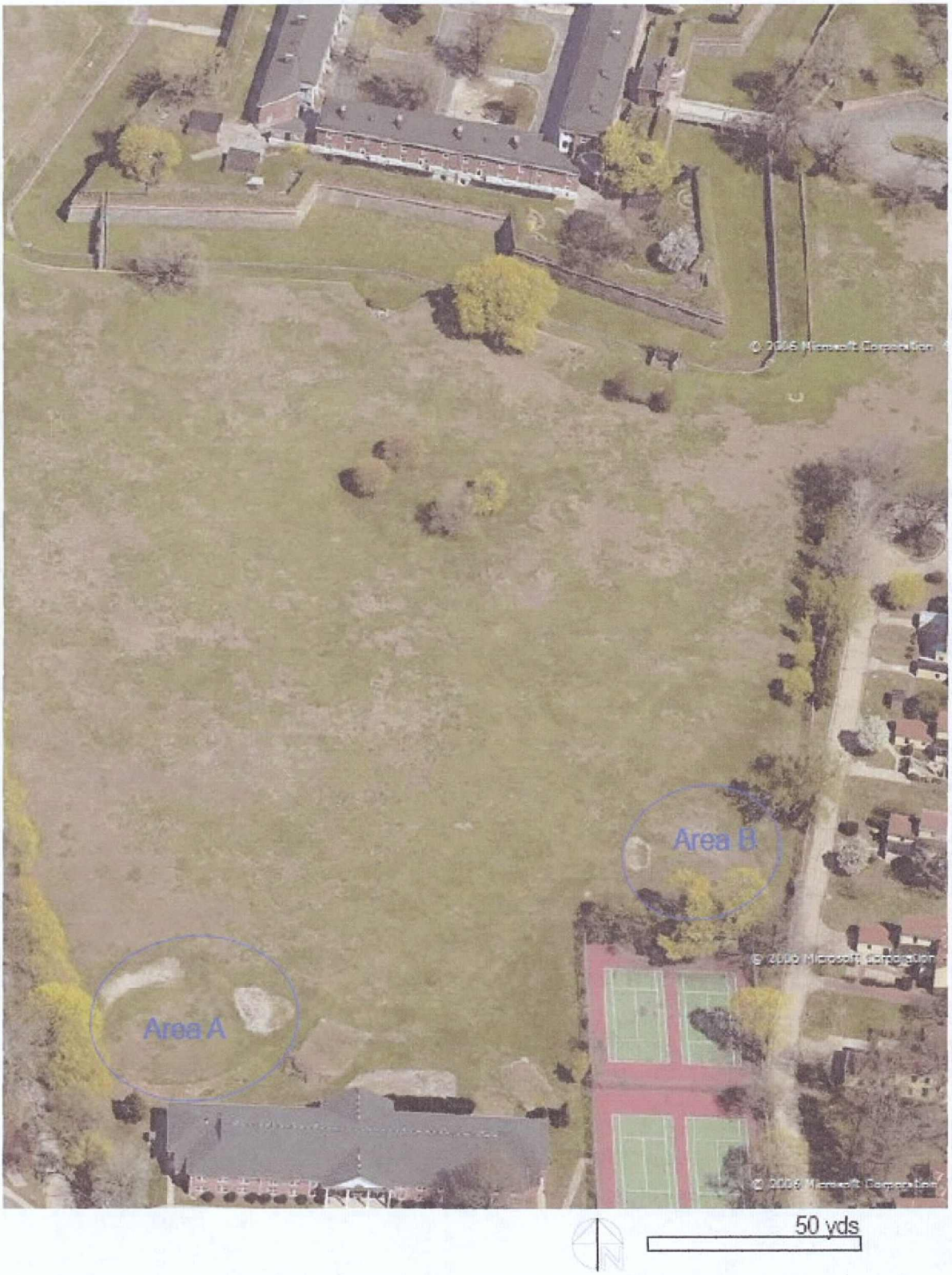

Figure 4 Location of the two areas of the former golf course where archaeological trenching is proposed.

Appendix B

WORK PLAN ADDENDUM

ADDENDUM TO
ARCHAEOLOGICAL WORK PLAN FOR
ARCHAEOLOGICAL TESTING
OF SOUTH END OF THE GOLF COURSE
ON GOVERNORS ISLAND
NEW YORK, NEW YORK

November 28, 2006

This is an addendum to the November 17, 2006 approved work plan for archaeological testing at the south end of the golf course on Governors Island. All protocols for the work will be as approved. This purpose of this addendum is to evaluate the most effective placement and size of the two planned trenches.

A field reconnaissance was conducted today to determine if the size and/or location of the sand traps had been altered during the recent golf course reconstruction. Measurements and photographs were taken and compared with the aerial photographs. Figure 1 is the oblique angle aerial photograph included in the original work plan showing the locations of the two areas where the golf course was reconstructed and archaeological testing will take place. Figure 2 is the aerial photograph with the same information. The main difference is the angle of the photograph and its clearer depiction of the sand traps associated with Area B. Both images were taken before the recent reconstruction.

In Area A, the shape of the two traps currently appears reconfigured from the aerial photographs. The western trap is currently more dumbbell shaped and doesn't extend as far toward the southwest as the original sand trap did (see Photos 1-3). Because the western trap is smaller and within the footprint of the original, the recent reconstruction did not likely disturb the trap. Therefore there is no need to put the proposed test trench through that sand trap. The eastern trap is currently more kidney shaped than it was originally (see Photos 4-6). It also now has a sizable rise in elevation toward the south west, the inside of the kidney shape. Therefore, the proposed trench should examine that part of the trap. Figure 3 depicts the locations of the proposed trenches. Trench A is proposed to extend from a point between the western trap and the green and extend almost due eastward to the center of the eastern trap. This will allow an evaluation of the amount of disturbance the recent reconstruction caused in the eastern trap as well as in the green. This trench will be a total length of about 60 feet. There is the possibility this trench may cross the path of the sprinkler system based on the observed locations of the valve and one of the sprinklers. The pipe would be avoided.

Area B contains three sand traps although Figure 1 only depicts one of them (see Figure 2 and Photos 7-8). The western and southern traps are almost identical in location and shape to the originals, therefore it appears no excavations were done for those to reconstruct the golf course. The northern trap is currently configured in a modified kidney shape (see Photos 9-10), as opposed to an egg shape shown in Figure 2. Because it is currently larger and extends more toward the south, the proposed trench will cut through it. Figure 3 depicts the location of the proposed trench beginning to the east of the western trap and extending northeast through the green and through the southern part of the northern trap. This total length is about 80 feet.

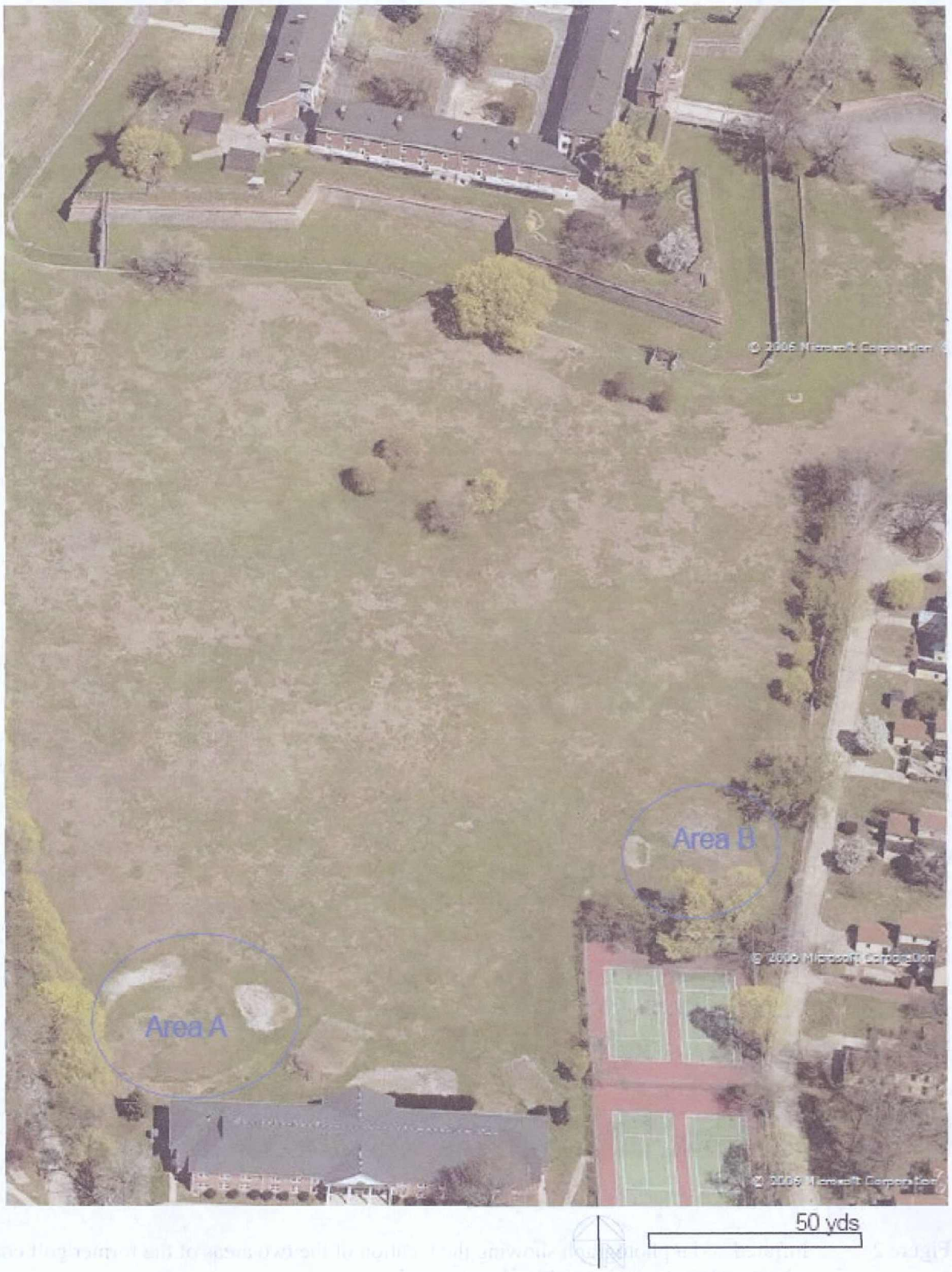

Figure 1 Location of the two areas of the former golf course where archaeological trenching is proposed.

Figure 2 Infrared aerial photograph showing the location of the two areas of the former golf course where archaeological trenching is proposed.

Photo 1 Area A West Trap facing east.

Photo 2 Area A West Trap facing west.

Photo 3 Area A West Trap facing south.

Photo 4 Area A East Trap facing south.

Photo 5 Area A East Trap facing southeast.

Photo 6 Area A East Trap facing west.

Photo 7 Area B West Trap facing south.

Photo 8 Area B South Trap facing southeast.

Photo 9 Area B North Trap facing east.

Photo 10 Area B North Trap facing southwest.

Figure 3 Proposed locations of the two archaeological trenches.

Appendix C

ARTIFACT INVENTORY

Governors Island - Golf Course Trenching Artifact Inventory

Context	Material	Identity	Form	Color	Count	Description	DateRange
A1	Glass		bottle finish	amber	1	mold seam on neck, hand finished	1870-c.1930s
A2	Ceramic	redware		red	1	unglazed	c.1750-1900
	Glass		curved	green	7	mends; bottle type; possible torpedo bottle	1840s - 1910s
	Glass		flat	aqua	1		
	Metal	iron			1	corroded; possible nail	
A3	Ceramic	whiteware	rim	white	1		early 19th C.-1900+
B1	Ceramic	pearlware		white	1	blue transfer print interior	c.1780-early 20th C.
B2	Ceramic	refined earthenware		white	1	burned; unglazed?; possible waster	
B3	Ceramic	porcelain	rim	white	1		
B4	Ceramic	stoneware		gray	1	brown slip exterior; dark brown interior	c.1800-present
				Total Artifact Recovered =	16		

Context Key
A1 - Trench A at 3.2 feet
A2 - Trench A at 11-12 feet
A3 - Trench A BOE at 41 feet (east of brick feature)
B1 - Trench B in north profile 0.6 feet BGS at 84.5 feet
B2 - Trench B BOE at 30 feet
B3 - Trench B 1.2 feet BGS at 50.3 feet
B4 - Trench B BOE at 79.5 feet