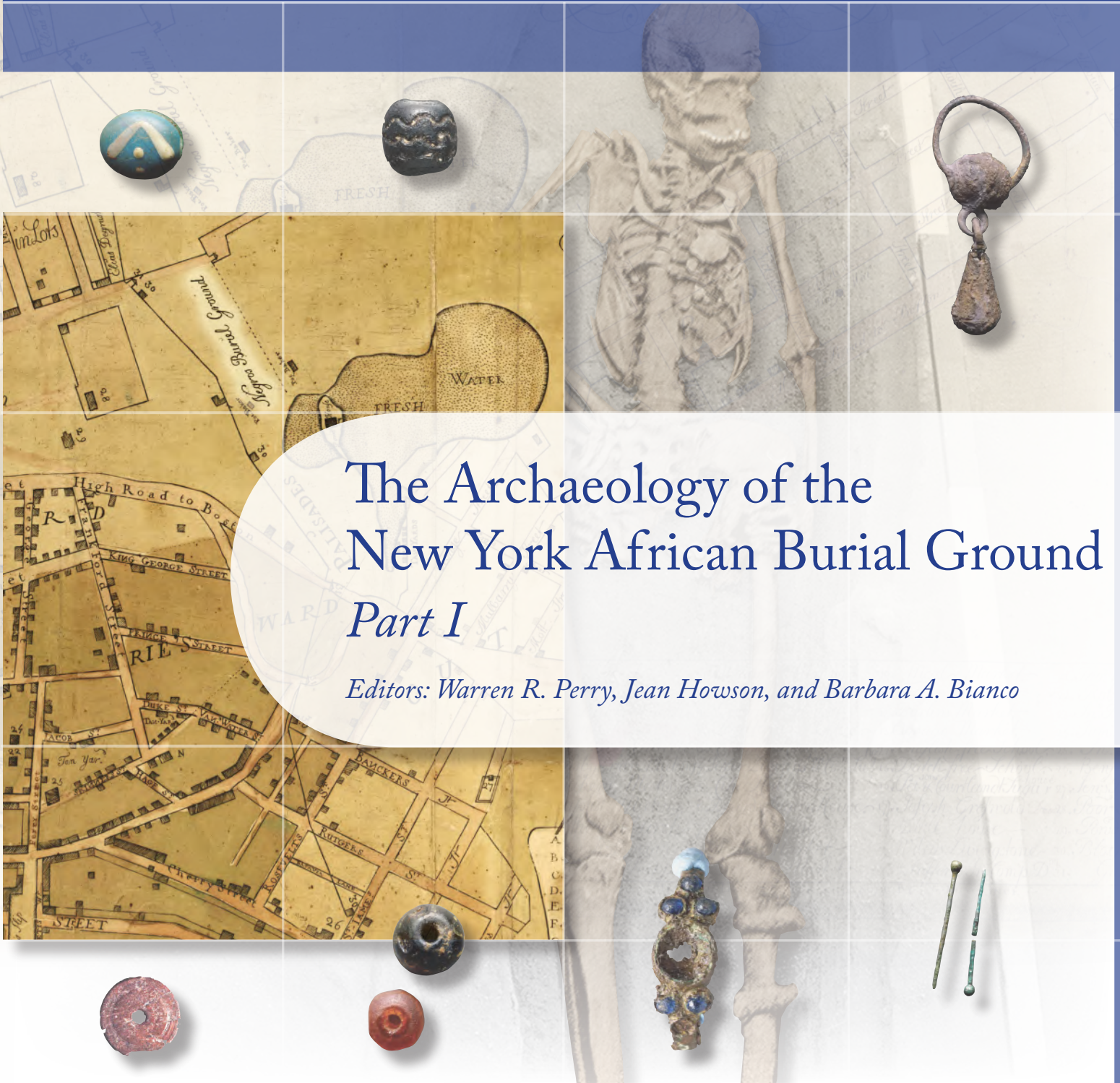




U.S. General Services Administration

THE NEW YORK AFRICAN BURIAL GROUND:
Unearthing the African Presence in Colonial New York

Volume 2



The Archaeology of the
New York African Burial Ground
Part I

Editors: Warren R. Perry, Jean Howson, and Barbara A. Bianco

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Part 1

Warren R. Perry, Jean Howson, and Barbara A. Bianco
Editors

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Foreword

In 1991, during the excavation phase for the construction of the Federal Building now seen at 290 Broadway, New York City, a cemetery was uncovered containing human remains of Africans—most were enslaved, some free—who lived, worked, and died under inhumane conditions in colonial New York. This discovery, the largest bioarchaeological site of its kind, sparked heightened public awareness of an African heritage in the northern states of colonial America. An outcome of this awareness was the public's desire for amending and correcting the history of colonial New York during that period to reflect more accurately the lives and culture of these forgotten Africans and people of African descent and their contributions and roles in economic development. Several initiatives, sponsored by the General Services Administration on behalf of the American people, were launched to accomplish this goal.

The initiative to conduct historical and scientific studies of the remains and artifacts excavated at the site was entrusted to Howard University. There, Dr. Michael L. Blakey, now at the College of William and Mary, designed and implemented a comprehensive, interdisciplinary research program—the New York African Burial Ground Project—to address questions in three main areas: history, archaeology, and skeletal biology. As scientific director of the project, he assembled an international team of scholars, professionals, graduate and undergraduate students, technical staff members, and cultural specialists for various parts of the study.

The New York African Burial Ground: Unearthing the African Presence in Colonial New York serves as the culminating work of this project, reporting the research findings. This multivolume series covers broadly a contextualized historical perspective, details of the archaeological discoveries, and descriptions of the skeletal biology of the unearthed human remains. Each volume documents and validates the lives of African Americans' ancestors who lived and worked in colonial New York. Included in this work are detailed descriptions of the burials excavated, complete with drawings, figures, and tables, as well as a comprehensive appendix of the artifacts found within the burials.

Through the years of this project, membership of the research team changed, but the goal of the project remained constant, that of ensuring that the story of the origins, life, and death of the enslaved Africans of colonial New York would not be absent from the annals of world history.

O. Jackson Cole, Ph.D.

Howard University Executive-in-Charge of the African Burial Ground Project

James A. Donaldson, Ph.D.

Dean, Howard University College of Arts and Sciences

Editorial Method

For the sake of consistency and because this was primarily an archaeological project, all three technical volumes of this series, *The New York African Burial Ground: Unearthing the African Presence in Colonial*

New York, were edited according to the conventions of the same style manuals: the style guide of the Society for American Archaeology and *The Chicago Manual of Style*, 15th edition.

Acknowledgments

The Howard University Archaeology Team is grateful to the community members and the church, civic, and cultural organizations that paid close attention to the African Burial Ground Project over the years. Their support made this work possible, and their questions helped us to sharpen our inquiry.

We gratefully acknowledge Dr. O. Jackson Cole (Office of the President) and Dr. James A. Donaldson (Dean, College of Arts and Sciences) for their efforts in the administration of the project. Also at Howard, Ms. Reba Brewington, Office Manager for the Cobb Laboratory, and Ms. Alma Kemp, Administrative Assistant in the Office of the Dean, College of Arts and Sciences, patiently fielded our questions, facilitated the sharing of information, and routed paperwork and files; Ms. Lori Sweet, Administrative Assistant, Office of the President, helped ensure that the transmission of the draft and final reports went smoothly.

We thank Contracting Officer Mildred Broughton and others on the New York staff of the U.S. General Services Administration for providing laboratory and office facilities, initially at the World Trade Center and later at 1 Bowling Green, and for their efforts in salvaging the laboratory after September 11, 2001. Nancy Brighton of the U.S. Army Corps of Engineers, on behalf of the Contracting Officer's Technical Representative, acted as liaison between the research team, GSA, and advisory agencies; oversaw the transfer of the collections for reburial; and provided helpful comments on the draft report. The staffs of the New York City Landmarks Preservation Commission and the Advisory Council on Historic Preservation provided consultation to the GSA and commented on the draft report.

The archaeology team owes an enormous debt to the African Burial Ground Project's Scientific Director, Dr. Michael L. Blakey. His knowledge, leadership,

generosity, encouragement, and resolve have been a mainstay over the years. We are profoundly grateful to all of the researchers from the Skeletal Biology Team (led by Blakey and Dr. Lesley M. Rankin-Hill) and the History Team (led by Dr. Edna Greene Medford), who helped shape our findings while sharing theirs as the project proceeded.

Dr. Blakey helped us to clarify and share the archaeological findings by organizing a series of multidisciplinary Sankofa Conferences, sponsored by Howard University and the College of William and Mary, that brought together the project's geographically dispersed research teams and other scholars of Africa and the African Diaspora. We wish to thank all of the participants, particularly Selwyn H. H. Carrington, Alan Goodman, Fatimah Jackson, Mark Mack, Edna Greene Medford, and Lesley Rankin-Hill. Kofi Agorsah, Augustin Holl, Bob Paynter, and Chris DeCorse helped formulate and refine archaeological issues. Chris Moore, Grey Gundaker, and T. J. Davis, among others, shared their insights on historical questions raised by the archaeological findings.

We thank the Institute for Historical Biology at the College of William and Mary for providing a second institutional home for the project. We especially appreciate Shannon Mahoney and Autumn Barrett for their research assistance, for answering our last-minute questions about the skeletal data, and for their superb efforts in facilitating the Sankofa Conferences.

Dr. Sherrill Wilson, Director of the New York African Burial Ground Project's Office of Public Education and Interpretation, shared her considerable knowledge of New York's African American history, helped broaden the research by pointing out important sources, opened her library to us, provided the roster on escapee advertisements, read early drafts of the report, and ensured that our findings

were brought to thousands of schoolchildren and the wider public.

Meta Janowitz shared her knowledge of Dutch New York and of the eighteenth-century stoneware that was so ubiquitous at the African Burial Ground site, discussed archaeological issues, read early drafts of several chapters, and generally provided good cheer in the New York laboratory.

The archaeological investigation was begun by the late Edward S. Rutsch of Historic Conservation and Interpretation, and we thank him for first proving that graves were still intact at the African Burial Ground and for assembling the field team. Obviously, without the field records, no analysis would have been possible. We thank Field Director Michael Parrington, Brian Ludwig, and the entire field staff, along with members of the Metropolitan Forensic Anthropology Team, for their efforts in conducting and recording the excavations under difficult conditions. Special thanks go to Margo Schur and the other site artists who carefully drew each burial and to Dennis Seckler for the photographs. Margo also assisted us by answering questions about field recording procedures. Initial laboratory processing of burial related artifacts was under the direction of Linda Stone and subsequently Gary McGowan of JMA. Charles Cheek was in charge of the analysis of the nonburial component of the 290 Broadway site, and we thank him for generously sharing early drafts of his site report and answering our questions as we proceeded with our analysis.

Numerous local libraries and archives yielded resources for our analysis. We thank the staffs of the following for helping us track down materials and answering our questions: the New York Public Library and the Schomburg Center for Research in Black Culture, the New-York Historical Society, the New York State Archives, the Brooklyn Public Library, the New York Genealogical and Biographical Society, the Municipal Archives of the City of New York, the Trinity Church Archives, and the John Street Methodist Church.

Help with specific questions and analyses was received from a number of individuals. Mac Headley of Colonial Williamsburg shared his knowledge of colonial cabinetry and coffin making and pointed us to additional sources. Ed Howson answered questions about joinery. Emily Wilson of Colonial Williamsburg provided information on enameling. Douglas Ubelaker provided information and sources on the rates of decay of human remains. Ann F. Budd, Department of Geology, University of Iowa, provided identifications

of coral specimens from the African Burial Ground. John Boyd of the U.S. Customs Service Federal Crime Laboratory performed spectrograph analysis on the silver pendant. Michelle Gilbert guided us through the literature on adornment in Ghana. Fatimah Jackson, Kofi Agorsah, Muhammad Hatim, and Sylviane Diouf provided information about Islamic burial practices. Cheryl LaRoche answered questions about the conservation of artifacts from the burials. Jason Narvaez and Jennifer Arnett provided technical advice on report graphics.

Howard University provided technical staff for digitizing the site map. We thank Robert Bethea for overseeing the initial digitizing, and technicians Percival Taylor and Marques Roberts, who, along with Ruth Mathis and Iciar Lucena Narvaez, patiently refined, double-checked, and corrected the base mapping.

We thank Dean Susan Pease, Dean of the School of Arts and Science, and Michael Park, Chair of the Department of Anthropology, at Central Connecticut State University for providing release time for Warren Perry and for supporting his work on the project over many years. Janet Woodruff, of Central Connecticut State University's Archaeology Laboratory for African and African Diaspora Studies (ALAADS), has provided energy and advice as well as many hours of her own time. We thank Richard L. Porter of The RBA Group for understanding the importance of the project and making it possible for Jean Howson to contribute much of her time. Thanks also to RBA's Kathy Krumbine for help formatting front matter and appendices, and Ed Zeltmann, who prepared all of the site maps for the report.

This report has benefited greatly from the careful critiques of the members of the Advisory Review Board, Diana DiZerega Wall, Theresa Singleton, and Frank McManamon. We are grateful for their excellent suggestions. The interpretations and any errors or omissions, however, are our own.

Howard University gratefully acknowledges the efforts of the African Burial Ground Project directors, under the leadership of Dr. Michael L. Blakey, and the editors, authors, research team members, and research consultants for their contributions to the Archaeology Final Report. A tremendous debt of gratitude is owed to the three members of the Advisory Review Board, jointly appointed by the U.S. General Services Administration and Howard University, for the excellence and professionalism of the critiques they provided for the several iterations of this report.

Prologue

In 1992, I received a phone call from my friend and colleague, Dr. Michael Blakey, who at the time was on the faculty at Howard University. He was calling to ask me to head up the archaeological component of the African Burial Ground Project. I had mixed emotions: I was flattered and excited but also found the challenge frightening. Would I be able to handle the responsibility for a site important to my discipline of anthropology but also to the African-American community of New York, my city, the city in which I was reared?

I came to archaeology later in life than many of my contemporaries, starting graduate work at City University of New York in the late 1970s. Some of my earliest experiences in the field were at sites associated with nineteenth-century African American communities, including Brooklyn's Weeksville (investigated by Burt Salwen) and the oystering community at Sandy Ground, Staten Island (investigated by Robert Schuyler). These projects helped turn attention within archaeology to the presence of African Americans in New York. As my training continued, it became clear to me that to obtain a greater understanding of Africans in New York and in the Diaspora in general, it would be advantageous to conduct archaeological research in Africa.

While teaching as an adjunct in the Anthropology Department at City College, I had the good fortune of befriending Mpiwa Mbatha, a Zulu who taught sociocultural anthropology. He sparked my interest in the emergence of the Zulu kingdom in the nineteenth century, and with help from him and others I was able to spend 9 months in Swaziland conducting a regional survey. My research was part of a general critique of then-current theories of the rise of the Zulu kingdom, and the settlement data contributed to a revised picture of social upheaval. In the newer thinking, the Zulu

kingdom was part of a series of responses to havoc in the interior of southern Africa caused by late eighteenth-century European penetration spearheaded by an illegal trade in captive Africans. My research allowed me to integrate issues of settlement analysis, the political economy of racism, and forms of domination and resistance, all being discussed by historical archaeologists at that time.

Dr. Blakey's invitation would allow me to continue investigating the hidden and marginalized histories of the African Diaspora, participate in an increasingly important sub-field within American archaeology, bring the themes of domination and resistance to a new set of data, and to work with my people. It was also a time, the 1990s, when archaeologists in North America increasingly worked closely with descendant communities, in part because of the Native American Graves Protection and Repatriation Act. I knew that the African American community of New York City had been instrumental in shaping the project's direction. And I knew, in ways that I suspected others did not know, about the complexity of this community and about the damage caused from having our history hidden from us.

Growing up in the South Bronx, I was taught in elementary school during the late 1940s and early 1950s that I was fortunate to live in New York City and not in the south, because black folks were enslaved in the south but were "free" in the north. This "fortune" was belied when I looked around the school and saw no teachers or administrators, let alone principals, who were people of color. The only people of color were black women working in the lunchroom and one black man who was a maintenance worker. Almost all of the students were of African descent, and a few were Puerto Rican. I never knew if we were supposed to be oblivious to

this disjuncture, or to accept secondary status and be thankful that we lived in the north.

Our received vision of Africa was no different. I remember being shown a cartoon of loincloth-clad African men with bones in their noses and negatively exaggerated lips and eyes, holding spears and dancing around two white men with pith helmets in a pot of boiling water. The message was clear: I was fortunate to have been descended from Africans who were brought to New York and “saved” by Lincoln, rather than left in the “jungles” of Africa with those cannibalistic “savages,” my ancestors. It was painful to be black in New York City and subjected to an educational system that taught us that Africans had no history until Europeans rescued us from ourselves.

On the other hand, I had parents and grandparents who instilled black pride in my brother and me, and demonstrated to us that we *did* have a history beyond, and in spite of, captivity in the United States. They taught us about our own family, in particular my great-grandfather, Christopher J. Perry I, who in 1884 founded Philadelphia’s first black newspaper, *The Philadelphia Tribune*. They introduced us to the achievements of W. E. B. DuBois, Marcus Garvey, Paul Robeson, Marion Anderson, Sojourner Truth, and other black leaders who were not part of the New York City school curriculum.

I received another lesson in African Diaspora history in 1963, when I heard Malcolm X speak about the link between Africa and African-Americans at a Black Muslim rally on 125th Street (or 25th Street, as it was known to young, streetwise black youth). During his speech, a listener taunted him: “I ain’t left nothing in Africa!” Malcolm replied, “You left your mind in Africa.” I understood Malcolm’s reply to mean that Europeans had attempted, through coercion and control, to remove African Diaspora peoples from their African heritage, history, and identity. Since that time, I have drawn strength from the memory of Malcolm’s passion and commitment as I delved into the relationship between Africa and the African Diaspora. I resolved to learn the truth about African people in Africa and the Diaspora and to challenge the Eurocentric conceptions of who we were and what our history had been.

In 1991, I was a doctoral candidate at the City University of New York’s Graduate Anthropology Program, specializing in archaeology. At that time there were only three postdoctoral-level archaeologists of color in the United States (Warren Barber, Theresa Singleton, and Laura Henley Dean). Late one

night I was awakened by a knock at the door of my South Bronx apartment. Errol Maitland, my friend and former City College student, and an acquaintance from the Patrice Lumumba Coalition, had come to discuss the newly rediscovered African Burial Ground. They urged me, as a black archaeologist, to become involved in the project. I was deeply immersed in my doctoral dissertation and despite my commitment to the principles embodied in the project, I could not dedicate the time and effort it would require. I recommended that they contact Dr. Blakey. When I received Blakey’s phone call in 1992, however, I committed to joining the project as soon as I had completed my Ph.D. In 1993, Howard University took control of the project, and in 1994 I became the Associate Director for Archaeology.

I knew that I could not accomplish such a daunting and important task without capable, dedicated colleagues. Early in my association with the project, I attended an interfaith service at the New York African



Egunfemi Adegbolola, Chief Alagba of New York, commemorating the ancestors in a Yoruba ceremony at the African Burial Ground (photograph by Dennis Seckler).

Burial Ground site. I stood on the sacred ground that held my ancestors and asked them for help and guidance in retelling the lost histories of their lives. I soon received a response as, one by one, the colleagues I asked to join the team accepted what I see as a calling from the ancestors.

I feel proud and privileged to have been asked to be a part of a multidisciplinary research undertaking aimed at telling the world the story of the ancestors. I am committed to the New York African Burial Ground Project both as a member of the descendant

community and as a member of the academic community, and there are very few people in that zone of overlap. I stood and still stand with my feet in each world: this project, with all its stresses and rewards, has allowed me to be whole.

The significance of the African Burial Ground extends beyond its importance to the African American community. The history of this cemetery and of those buried here speaks to the complex history of the United States, with all its diverse populations, and to

an even larger, world history. Understanding is diminished when African people, women, and subaltern or working class communities are marginalized; their omission from our collective historical consciousness has negative implications for all.

Warren R. Perry
New Britain, Connecticut
February 2006

CHAPTER 1

Introduction

Jean Howson, Leonard G. Bianchi, and Warren R. Perry

This volume is one of three disciplinary volumes on the New York African Burial Ground Project. One volume focuses on the skeletal biological analysis of the remains recovered from the site (see Volume 1 of this series, *Skeletal Biology of the New York African Burial Ground* [Blakey and Rankin-Hill 2009a]). Another focuses on the documentary history, from a diasporic perspective, of Africans who lived and died in early New York (see Volume 3 of this series, *Historical Perspectives of the African Burial Ground: New York Blacks and the Diaspora* [Medford 2009]). The present volume, consisting of three parts, presents the archaeological research on the New York African Burial Ground. General background on the New York African Burial Ground project is presented in the beginning of the skeletal biology component volume (Blakey and Rankin-Hill 2009a). Here we provide background information that is specifically relevant to the excavated site, the archaeological fieldwork undertaken in 1991–1992 (its planning, personnel, extent, duration, termination, etc.), and the analysis and disposition of nonskeletal material from the excavation.¹

First, we review briefly the history of the project (from a regulatory standpoint), list the questions posed in the research design for archaeology, and explain the organization of this report. The subsequent sections provide a description of fieldwork, with a summary of burials recovered, and a discussion of laboratory procedures and methods. The impact of the September 11, 2001, attack on World Trade Center (where the archaeological laboratory was housed) and the decision-making and logistical efforts that went into the reburial of archaeological collections in October 2003 are described.

¹ The site included historical archaeological components that were not related to the cemetery. A separate report on the history, archaeological excavation, and analysis of these components is in preparation by John Milner Associates (JMA) for the GSA (Cheek 2003).

Project Background and Organization of the Report

The Site, the Section 106 Process, and the Memoranda of Agreement

The African Burial Ground is located in lower Manhattan, New York City and County. The portion of the cemetery that has been investigated archaeologically (the New York African Burial Ground) is located on Block 154, which is bounded on the north by Duane Street, on the south by Reade Street, on the west by Broadway, and on the east by Elk Street (Figure 1). It lay within the proposed construction site for the 290 Broadway Federal Office Building, part of the Foley Square Project of the General Services Administration (GSA). During the planning process for the construction undertaking, GSA addressed a series of environmental regulatory issues and retained the services of an engineering firm, Edwards and Kelcey Engineers, to prepare an environmental impact statement. Among the tasks performed under that contract was archaeological research, pursuant to the instructions and intents set forth by Section 106 of the National Historic Preservation Act and the National Environmental Policy Act. The firm hired a cultural resources subconsultant, Historic Conservation and Interpretation (HCI) in 1989, and HCI prepared a “Stage 1A” documentary study in order to determine the potential for archaeological resources within the Foley Square project areas, including Block 154 (Ingle et al. 1990).²

² A second component of the Foley Square Project was the new Federal Courthouse, located on Block 160 several blocks east of the 290 Broadway site. The Courthouse archaeological investigation resulted in excavation of the Five Points Site (Yamin 2000).

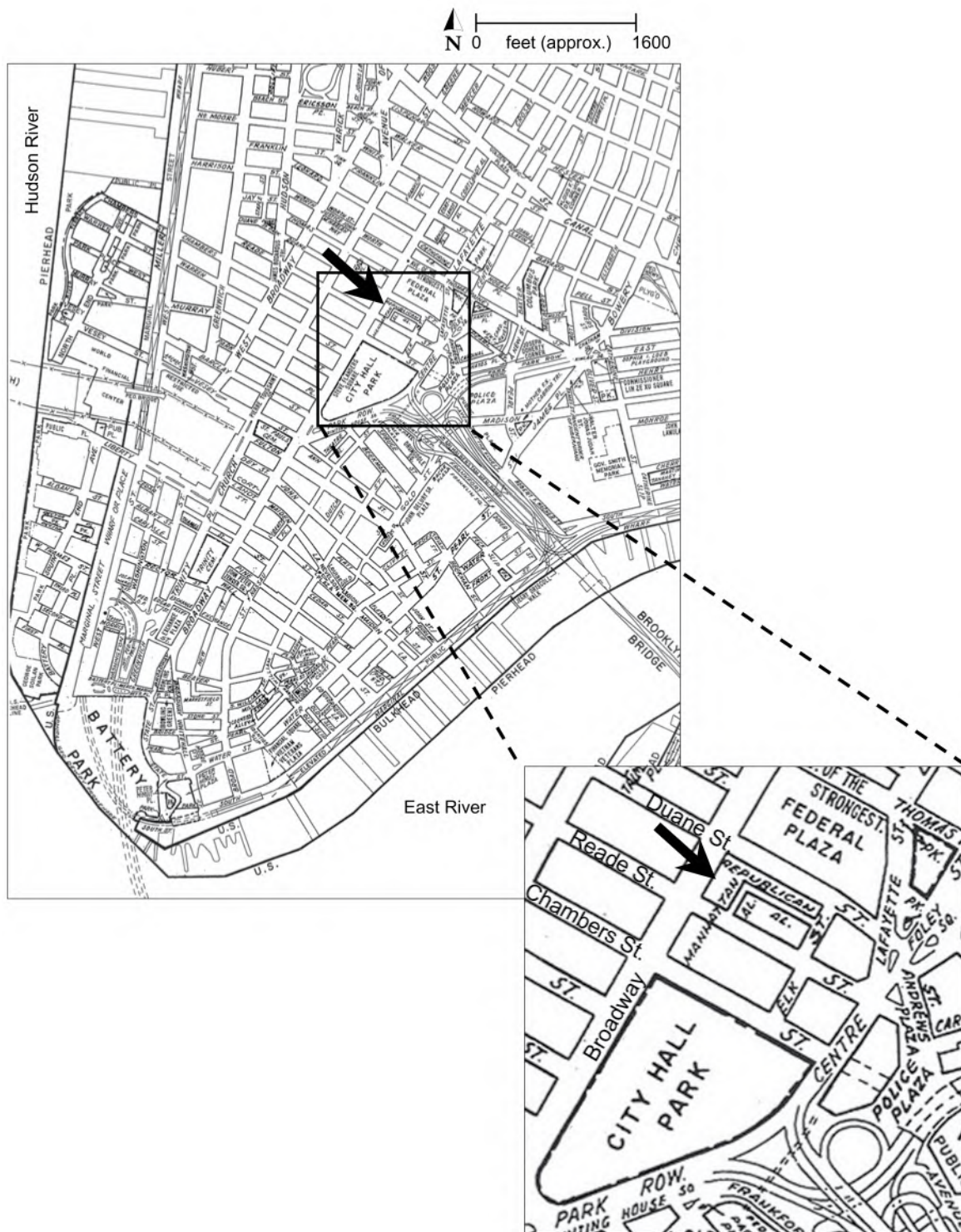


Figure 1. Location of African Burial Ground archaeological excavation site in lower Manhattan, New York. Arrows point to Block 154. New York City Mapped Streets, Section 12, 1997. (New York City Mapped Street: Section 12—Borough of Manhattan, New York County used with permission of the New York City Department of City Planning. All rights reserved.)

That background study, which was incorporated into the Foley Square Project Draft Environmental Impact Statement, indicated the possible presence of remains associated with the New York African Burial Ground within the project's footprint and recommended a limited program of archaeological testing.³ In brief, although much of the block was thought to have been thoroughly disturbed by several phases of building construction, three areas were thought to have been left undisturbed or minimally disturbed: the alignment of Republican Alley (an alley that had been laid out in the late eighteenth century and never built upon), former Lot 12, and portions of former Lots 20/20½/21 (Figure 2). These three areas were targeted for archaeological testing. Even though preservation potential was considered fairly low, it was argued that any extant remains of the cemetery would be highly significant and eligible for listing in the National Register of Historic Places (NRHP).

A Memorandum of Agreement (MOA) was signed by the Advisory Council on Historic Preservation (ACHP) and GSA in March 1989. The MOA stipulated that archaeological investigations would be conducted at the project area in accordance with a research design (to be prepared by GSA with consultation) that would establish categories of historic significance; that should archaeological materials be found, they would be evaluated and treated in accordance with the *Secretary of the Interior's Standards and Guidelines for Archaeological Documentation* (48 FR 44734-37) and the *Section 110 Guidelines*, in conformance with the research design and for purposes of Section 106 compliance; that such features and materials would be considered eligible for listing in the NRHP; and that GSA, with consultation, would determine appropriate levels of mitigation.

Although the MOA was in place, archaeological fieldwork failed to proceed within the usual phased framework, in which testing designed to determine the extent and integrity of resources would have been followed by evaluation and consultation on mitigation or avoidance. The full horizontal and vertical extent of the intact graves was never determined in a "testing" phase. Rather, when archaeological testing conducted by GSA's consultant HCI beginning in

May 1991 revealed the presence of intact burials at the rear of Lot 12, GSA adopted full archaeological excavation as the mitigation strategy. At first, it was assumed that only a small area would contain intact graves, but ultimately graves were found to extend from the former north-south leg of Republican Alley to the eastern extent of the project site. The initial documentary research, as well as analysis of subsequent test borings, had failed to adequately determine the full depth of fill—as much as 25 feet in the eastern area at Elk Street—covering the original site. This fill had protected hundreds of graves, and the discovery of this level of preservation came as a surprise.

Mitigation through full data recovery continued to be pursued until July 1992, when, in the face of mounting public pressure, the field excavations were shut down by GSA. In the meantime, an amendment to the MOA was signed in December 1991 by the ACHP, the New York City Landmarks Preservation Commission (LPC), and GSA. This amendment stipulated, in part, that a research design would be prepared by GSA's consultant, HCI; that burial excavations would continue once field safety issues were addressed; that GSA, in consultation with the ACHP, LPC, and interested parties, would determine the appropriate level of analysis of the human remains; that GSA, in consultation with interested parties and the City of New York, would ensure the respectful and dignified treatment of all human remains recovered; that human remains would be reburied; and that GSA would commemorate the cemetery with a memorial, develop exhibit space in 290 Broadway, and produce a video documentary on the project. The GSA remained, and still remains, the agency responsible for compliance with Section 106 and implementation of the MOA as amended.

Ultimately, the field excavations were halted prior to the preparation of an acceptable research design—partly because of the lack of such a document—at the end of July 1992. For background on the political struggles surrounding the burial excavations, see Chapter 1 of *Skeletal Biology of the New York African Burial Ground* (Blakey 2009). On July 1, 1992, HCI was replaced as GSA's archaeological consultant by JMA, and biocultural anthropologist Dr. Michael Blakey, then of Howard University and currently of the College of William and Mary, had consulted at the site and participated in GSA's public meetings. Some portions of the project site had had all burials removed. In other portions, graves were either known still to be in place or were presumed to be in place (see Chapter 3 for a discussion of site conditions before,

³ Other potential resources identified in the "1A" report included remains associated with eighteenth-century potteries and with residential development dating to the end of the eighteenth and early nineteenth centuries. Subsequent archaeological research on the nonburial components of the 290 Broadway site is detailed in a separate report (Cheek 2003).

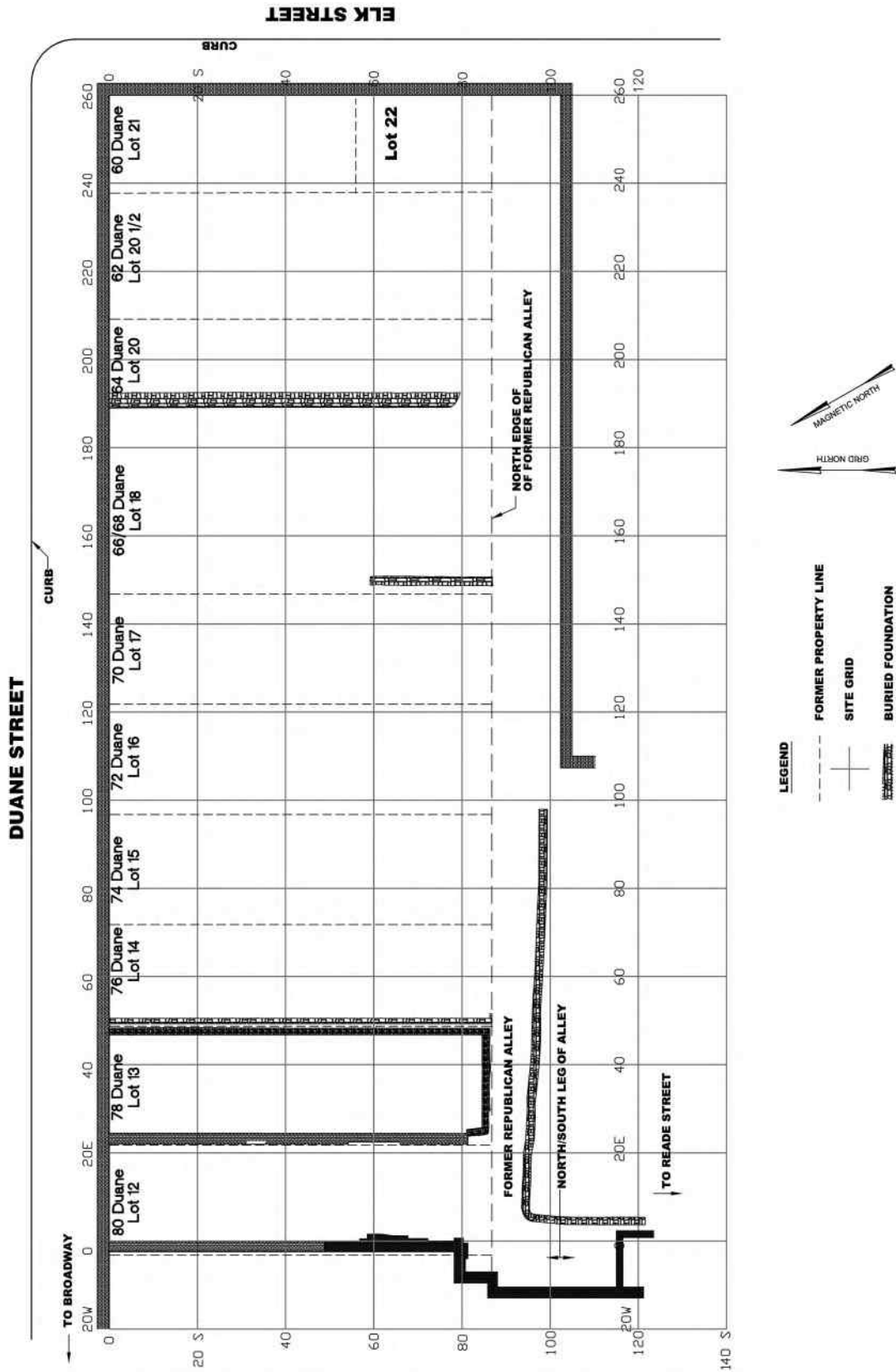


Figure 2. Plan of archaeological excavation area showing former property lines and alley in relation to streets.

during, and after the project). The footprint of the 34-story office tower had been completely excavated, but the “Pavilion” area, the proposed site of a smaller structure, had not. Thus, owing to the timing of the cessation of excavation, construction of the main tower building could proceed.

Research Design

In late 1992, Blakey was appointed scientific director of the New York African Burial Ground Project, and in 1993, Howard University received a contract to conduct the postexcavation research. A research design prepared by Howard University and JMA was accepted by GSA, after comments had been received from consulting agencies (the LPC and the ACHP), in spring of that year. This document covered both the New York African Burial Ground and the non-burial-ground components of the 290 Broadway project site. It stated that the New York African Burial Ground meets two of the evaluation criteria for listing in the NRHP: Criterion a (association with the broad patterns of our history) and Criterion d (having the potential to yield important information about the past)—and indeed, the site was designated a National Historic Landmark (NHL) in April 1993 (Howson and Harris [1992], reproduced in Appendix A, Part 3 of this volume). A finding of “No Adverse Effect” was not possible even with full archaeological data recovery, as both Criteria a and d were cited. Partial mitigation of the adverse effects of the construction of 290 Broadway was to include programs of data analysis, curation, and education.

The research design listed numerous research questions to be addressed in the data recovery program. It specified the following for the nonskeletal archaeological analysis (Howard University and JMA 1993: 41–47):⁴

- What spatial variation can be seen in burial types in the New York African Burial Ground and what cultural explanations can be offered for this variation?
- What taphonomic forces have acted upon the cemetery and how have they affected the skeletal database?

⁴ Beyond posing these questions, the bulk of the research design for archaeology described field methods (after the fact) and outlined methods for specific materials analysis. It should be noted that none of the authors of the current report participated in the preparation of the Research Design.

- What can be learned about the distribution of different types of coffins, coffin size differences, coffin decoration, and coffin manufacturing techniques?
- What cultural and temporal information can be obtained from the study and analysis of artifacts found in grave pits and in coffin fills?

These questions and many others are addressed in subsequent chapters of this report. In addition to goals of the research design, however, the project team has had a complementary agenda that emerged from the process of public engagement. Four topics of overarching concern to the community were identified during this process: (1) the cultural background and origins of the burial population, (2) the cultural and biological transformations from African to African American identities, (3) the quality of life brought about by enslavement in the Americas, and (4) the modes of resistance to enslavement. Our archaeological analyses ultimately are designed to provide information relevant to these issues. They are addressed as appropriate throughout this report as described in the following section.

Report Organization

Our approach begins with due attention to and respect for the individual graves that archaeologists excavated during 1991 and 1992. There were no mass graves at the New York African Burial Ground, and few were shared by more than one person. The “making of the African Burial Ground” involved funeral after funeral, carried out for individuals by their survivors one by one, week after week, year in and year out. In keeping with the Howard University team’s respect for the gravity of excavating such a cemetery archaeologically, the disinterment of each individual grave at the cemetery is described in Part 2 of this volume. By providing basic information on how each burial was found, what the grave contained, the condition of the remains, the age and sex of the individual, and whether and how it overlapped with other graves, a partial and admittedly inadequate reconstruction of the original interment is made possible.

Part 1 of this volume is organized as follows. The remainder of Chapter 1 describes the fieldwork (including a list of burials excavated) and laboratory methods; the impact of the destruction of the World Trade Center on September 11, 2001; and the reburial of archaeological materials. Chapter 2 provides histor-

ical background and context. It consists of two parts: first, a document-based chronological history of the burial ground (including its origin, the development of its surrounds, and its closing), and second, a comparison of documentary evidence about African funeral practices in New York and in the African diaspora. In Chapter 3, we describe the archaeological site as such, including the original landform, postcemetery development of the parcel, the condition of the graves, and the limits of excavation. Next, Chapter 4 presents our methodology for arriving at four temporal groupings of the graves—namely, Early, Middle, Late-Middle, and Late Groups—that were excavated at the site. Before turning to each temporal group, Chapter 5 presents an overview of the mortuary population, burial practices, and spatial arrangement of the New York African Burial Ground, as observed through the archaeological investigation. Attention is paid to the use of coffins, grave orientation, body position, co-interment, shrouding and clothing the dead, and the presence of personal adornment and other items in association with the dead. Chapters 6–9 discuss the burials by temporal group, providing overviews of the town of New York, population figures, and discussions of the material culture and spatial arrangement of burials. Selected unique and unusual graves from each group are described. Chapters 10–14 describe specific categories of mortuary material culture: coffins, pins and shrouding, clothing, adornment, and other burial items. Throughout the chapters, we address interpretive themes of social identity, enslavement and resistance to bondage, mortuary practice and spiritual and cultural agency, and the role of the African Burial Ground in creating and sustaining a community. Chapter 15 provides a conclusion. All appendixes (A–J) are provided in Part 3 of this volume.

Archaeological Fieldwork

Archaeological testing commenced in May 1991 in Lot 12 (see Figure 2). A backhoe was used to excavate test trenches within the front portion of the lot and within the former footprint of Republican Alley, where African Burial Ground graves were considered most likely to have survived. Human remains, which subsequently were determined likely to be from the eastern half of Burial 1 and from other disturbed burials in the area, were discovered during excavation of “Trench D” within Republican Alley in June. At that time, machine excavation of the immediate surround-

ing area was halted until GSA decided to proceed with hand excavation of burials and arrangements for appropriate site preparation—including the shoring of the excavation perimeter and construction of an access ramp—could be made. Subsequently, fieldwork proceeded with a combination of machine-aided clearing and hand excavation, and shelters were constructed to protect the exposed graves and the excavators. These temporary structures were heated and lit once fieldwork progressed into the winter months (Figures 3–6). As each successive shelter was constructed (each was progressively more substantial), it was designated with a letter from “Structure A” to “Structure G” (hence many of the field records, including artifact-bag labels, included a structure letter).

HCI conducted the field excavations through the end of June 1992, when JMA assumed the project as GSA’s new archaeology consultant. Most of the burial ground field staff was retained, including Site Director Michael Parrington. Excavation personnel are listed in the acknowledgments.

No member of the Howard University Archaeology Team participated in the fieldwork at the site, although members of the skeletal biology staff did so for brief periods. The lack of continuity of personnel between the fieldwork and analytical phases of research is common in public archaeology and can result in loss of information. Every effort has been made to minimize such loss in the current project. Procedures followed for the excavation of burials have been reconstructed from records kept by HCI and JMA, with the aid of the description contained in the 1993 research design. In addition, we consulted with various members of the field staff regarding methods, both during the period when our staffs overlapped at the laboratory and later during the preparation of this report.

Procedures

Survey and Mapping

A site grid was established aligned with the street grid and property lines. The north-south base line (grid coordinate 0 feet East) was the west edge of Lot 12, along the interior (east) side of an extant concrete wall. The east-west base line (0 feet South) was located where the north-south line intersected the front edge of Lot 12, along Duane Street. Drawings and maps were plotted with reference to east and south coordinates on this grid, and all horizontal measurements were taken in feet and tenths of feet.



Figure 3. Backhoe clearing adjacent to temporary archaeological excavation shelter early in the fieldwork (photograph by Dennis Seckler).



Figure 4. Excavation shelter erected to allow night and winter work (photograph by Dennis Seckler).



Figure 5. Archaeologists working under lights. Teams of two worked on each burial excavation, and the density of the graves made for close quarters inside the shelters (photograph by Dennis Seckler).



Figure 6. Construction of the 290 Broadway Federal building during archaeological fieldwork; the archaeological excavation shelter is visible at the rear. The view is toward the southeast (photograph by Dennis Seckler).

A site datum designated “A” was established with an elevation measured at 27.50 feet above mean sea level (AMSL; measurements per Sandy Hook, where sea level is measured for the New York City area). A series of subdatum points was used throughout the excavations. Grid coordinates were recorded for some, and for each, the depth below the site datum was recorded (see Appendix B, Part 3 of this volume). All depths recorded in the field for burial features were taken from these subdatum points and therefore can be converted readily to absolute elevations relative to sea level. Vertical measurements in the field were taken in feet, tenths of feet, and hundredths of feet. Depths recorded on the field drawings and forms simply needed to be subtracted from the elevations of the datum points listed for each burial. All elevations referred to in this report are absolute elevations, not excavation depths.

Clearing

Clearing of the massive amounts of fill and building material overlying the graves was accomplished by machine (excavators and backhoes). In some areas, this task resulted in damage to graves, discussed in Chapter 3. Once overburden was removed to a level believed to be just above burials, or once burial outlines or tops of coffins were exposed, hand clearing commenced. In some areas, historical features post-dating the burial ground were encountered before the graves and were excavated first or in conjunction with adjacent burials (see the report on the 290 Broadway nonburial site component in Cheek [2003]). The need to construct excavation shelters and shoring facilities, safety issues, and, of course, the construction activity for 290 Broadway carried out simultaneously with the archaeological fieldwork complicated the excavation strategy. Building-construction access ramps, perimeter walls, and underpinning for adjacent 22 Reade Street caused delays and damage during the clearing of burial ground areas. As each shelter was built, or, in some cases, as it was dismantled, graves located beneath its sills had to be identified and excavated.

In general, the site was cleared for archaeological excavation from west to east, beginning with the rear of Lot 12 and the north-south leg of Republican Alley. As the months of fieldwork progressed, GSA identified a “Critical Area” for priority excavation, that being the footprint of the tower building. This area was cleared more speedily by machine than the westernmost area had been to provide quicker access for the archaeological team. There is no question that

site clearing was accomplished under less than optimal standards from the point of view of archaeological investigation. The pressure to move forward with building construction forced compromises with the scientific program, such that historical features above the level of the graves were often stripped, and the opportunity to examine the site carefully for remnants of the original ground surface was lost. It is probably no accident that the only portion of the site for which an extant eighteenth-century-cemetery surface was identified was the first area excavated, the north-south leg of Republican Alley. Here, the upper few feet of fill were mechanically removed, but lower layers of fill were excavated by hand with shovels.

In parts of the site (Lot 12, the westernmost section of Republican Alley, and Lots 20½ and 22), numbered excavation units (5- or 10-foot squares) were opened. When excavation of these units revealed burial outlines, the burial excavation proceeded separately from the rest of the unit. Nonburial excavation units are described in a separate report (Cheek 2003).

Burial Identification and Numbering

When a presumed burial was discovered or soon after, it was given a number. Burial numbering was consecutive. All records and objects related to the burial were assigned this number, including recordation forms, artifact boxes and bags, and wrapped skeletal remains. A total of 435 burial numbers were assigned during the fieldwork at the New York African Burial Ground, but there were not this many actual interments. Some of the contexts referred to by these numbers subsequently were determined not to be burials, or were determined to be parts of other burials. In addition, some of the burials excavated contained no surviving human remains. This was a result of either complete decay or, as appears to be the case for at least two graves, an instance in which the coffin was placed in the ground empty or remains were removed in the past. Table 1 summarizes the cases with no human remains. The total number of graves identified was 424, and the total number of individuals for whom any skeletal remains could be inventoried numbered 419. All burials that could be identified as such, whether or not human remains had survived, were included in the archaeological analysis to the extent possible (e.g., they were considered in the stratigraphic, spatial, and chronological analyses and in the distributions of artifacts, where such survived). In a few interments—Burials 199, 301, 329, 391, and 420—skeletal analysis revealed the presence of remains from more than one individual within a burial context.

Table 1. Assigned Burial Numbers with No Discrete Human Remains Associated

| Burial No. | Explanation for Lack of Human Remains |
|-------------------|--|
| 62 | Remains were determined to be from Burial 76. |
| 74 | There were no extant remains (empty child coffin?). |
| 92 | Remains were determined to be from Burial 96. |
| 129 | There were no extant remains (burial with empty coffin; adult size, hexagonal). |
| 139 | Soil stain was determined not to be a burial. |
| 140 | Soil stain was determined not to be a burial. |
| 141 | Soil stain was determined not to be a burial. |
| 145 | There were no extant remains (burial with empty coffin; adult size, hexagonal). |
| 206 | There were no extant remains (infant coffin). |
| 220 | There were no extant remains (infant coffin). |
| 231 | There were no extant remains (infant coffin). |
| 232 | There were no extant remains (infant coffin). |
| 233 | There were no extant remains (infant coffin). |
| 261 | There were no extant remains (adult coffin, disturbed). |
| 269 | Remains were determined to be from Burial 293. |
| 296 | There were no extant remains (infant coffin). (A tooth bud was later found in the laboratory.) |
| 359 | There were no extant remains (partial coffin). |
| 360 | There were no extant remains. |
| 378 | Burial left in place in 1992. |
| 381 | Burial left in place in 1992. |
| 401 | Coffin remains only; determined to be from burial 352. |
| 407 | Determined not to be a burial. |
| 409 | Determined not to be a burial. |
| 411 | Soil stain was determined not to be a burial. |
| 421 | Soil stain was determined not to be a burial. |
| 422 | Possible coffin remains only; no human bone. |
| 423 | Grave with coffin was identified but no human remains exposed in situ, left in place in 1992. |
| 426 | Grave with coffin was identified but no human remains exposed, left in place in 1992. |
| 429 | Grave with coffin was identified but no human remains exposed, left in place in 1992. |
| 430 | Grave with coffin was identified but no human remains exposed, left in place in 1992. |
| 433 | Burial left in place in 1992. |
| 434 | Burial left in place in 1992. |
| 435 | Burial left in place in 1992. |

Basic burial data are contained in Appendix C, Part 3 of this volume. A list of the excavated burials is provided in Table 2, which should be used along with Figure 7 (the site plan); a full description of the disinterment of each burial will be found in Part 2 of this volume.⁵

In addition to the burial number, a catalog number was assigned during field excavation. The catalog number is also a consecutive number that in theory provides a way to differentiate specific field contexts, such as stratigraphic levels, from one another. However, at the New York African Burial Ground, only one catalog number was used for each burial, so that the material from the grave-shaft fill, coffin remains, material from within the coffin, skeletal remains, and all recovered samples had the same number. The only possible record, then, of where within a burial context any given item or sample came from might be the label on the bag or box used in the field to collect the material or on field drawings that depicted specific items that were then bagged or boxed separately with specific labeling. Typically, the information retained on containers was sufficient to determine which materials were from the grave shaft, which from within the coffin, etc., but there was no way to efficiently track these proveniences in a database when first brought to the lab, nor were all containers sufficiently labeled for us to determine exactly where items or samples were collected. For instance, because all nail bags had the same number for any given burial, we could not distinguish coffin nails from any “extra” nails found in the grave or shaft. Likewise, if shell was found in the grave shaft and also on or in a coffin, we could not readily determine which shells were from which location. Because grave shafts were excavated as single units with just one catalog number, there was no way to determine whether diagnostic artifacts were recovered from the upper part of the shaft, alongside the coffin, or beneath the coffin.

Excavation of Burials

Where visible, grave shafts were delineated on the ground and then excavated in full in a single layer until a coffin lid or bones were encountered. The grave-

shaft-fill soils were screened through 1/4-inch-wire mesh, and notes indicate that sometimes the soil was water-screened (there is no general record of which burials were wet-screened or how they were selected). Typically, a team of two excavators worked on each burial through to completion, although in some cases, teams were switched in the course of a burial or extra excavators were recruited. When a coffin lid or evidence of a coffin outline was encountered, elevations were taken, and sometimes the burial was drawn and/or photographed at this stage (see description of recording). Where feasible, wood samples were taken (although, in many cases, the only recoverable “wood” samples consisted of wood-stained soil). Excavators endeavored to leave coffin sides and all coffin nails in place during the excavation of the skeletal remains. Additional wood samples were taken from the sides and finally the bottoms of coffins where feasible.

Usually, skeletal remains were visible at the same level as coffin lid remains. One excavator began working to expose the cranium while the second began trying to locate the femurs. Once the general disposition of the remains was established, the standard order of excavation was legs and arms, chest, hands and feet, and finally the facial and pelvic areas. Soil from among the bones was screened for artifacts, although typically, artifacts were identified during excavation of the bones and left in place until they could be recorded in situ along with the skeleton.

Field assessments were conducted by the Metropolitan Forensic Anthropology Team (MFAT), a team of physical anthropologists based at Lehman College hired by GSA’s consulting archaeologists. Assessments included condition of remains as well as preliminary evaluations of age, sex, and pathologies. Once each burial was fully exposed, one of the MFAT specialists performed an assessment of the physical remains. In some cases, the MFAT members assisted with excavations as well. MFAT personnel are listed in the acknowledgments.

All bones were left in place for recordation, then were removed individually and wrapped (initially using newspaper, but in July 1992, acid-free paper was adopted by the JMA field team) and packed in boxes. Once the skeletal remains were removed, the remaining grave-shaft fill was excavated and screened. All human remains were transferred directly from the site to Lehman College laboratories in the Bronx for storage. Artifacts found with burials in direct association with skeletal remains (i.e., with the exception of coffin remains and grave-shaft-fill contents) were

⁵ The site maps used in this report include the nineteenth–twentieth-century lot lines and numbers for Block 154. The individual lots were identified in the Stage 1 research in order to trace development of the block over time; the lots were subsumed within a larger tax parcel at the time the project commenced. The former lot boundaries are useful, however, for understanding the excavation strategy and differential preservation and for locating archaeological site areas.

Table 2. Excavated Burials with Age, Sex, and Location

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|-----------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 1 | adult | 20 | 25 | female? | 82.5 | 2 | 9.13 |
| 2 | adult | 27 | 42 | male | 43.5 | 11 | |
| 3 | adult | 25 | 35 | male | 107 | 2 | |
| 4 | adult | 30 | 40 | male | 86.5 | 11 | |
| 4A | adult | 20 | 25 | male? | 86.5 | 11 | |
| 5 | subadult | 0.5 | 1 | undetermined | 86.5 | 9 | 8.17 |
| 6 | adult | 25 | 30 | male? | 87.5 | 15 | 6.98 |
| 7 | subadult | 3 | 5 | undetermined | 80.5 | 15 | 7.29 |
| 8 | infant | 0 | 0.5 | undetermined | 82.5 | 5 | 6.58 |
| 9 | adult | 35 | 45 | male | 89.5 | 25 | 5.44 |
| 10 | adult | 40 | 45 | male | 82.5 | 20 | 6.04 |
| 11 | adult | 30 | 40 | male? | 83.5 | 12 | 6.73 |
| 12 | adult | 35 | 45 | female | 89.5 | 12 | 6.13 |
| 13 ^d | | | | | 103.5 | -5 | 6.37 |
| 14 | infant | 0 | 0.5 | undetermined | 89.5 | 12 | 6.10 |
| 15 | subadult | 11 | 18 | undetermined | 103.5 | -5 | 7.27 |
| 16 | adult | 50 | 60 | female | 107 | 0 | 6.03 |
| 17 | subadult | 4 | 6 | undetermined | 83.25 | 20 | 4.94 |
| 18 | adult | 35 | 45 | female? | 81.5 | 12 | 4.53 |
| 19 | subadult | | | undetermined | 81.5 | 20 | 6.36 |
| 20 | adult | 45 | 50 | male | 85 | 0 | 8.68 |
| 21 | subadult | | | undetermined | 87.5 | 20 | 6.42 |
| 22 | subadult | 2.5 | 4.5 | undetermined | 96.5 | -1.5 | 6.97 |
| 23 | adult | 25 | 35 | male | 87.5 | 8 | 5.48 |
| 24 | subadult | 3 | 6 | undetermined | 87.5 | 5 | 7.88 |
| 25 | adult | 20 | 24 | female | 87.5 | 20 | 6.07 |
| 26 | subadult | 8 | 12 | undetermined | 83 | 20 | 3.74 |
| 27 | subadult | 1.4 | 2.8 | undetermined | 88.5 | 5 | 6.73 |
| 28 | subadult | | | undetermined | 83 | -2 | 8.58 |
| 29 | adult | 35 | 45 | male? | 97.5 | 0 | 3.92 |
| 30 | subadult | 7 | 11 | undetermined | 86 | 10 | 5.48 |
| 31 | adult | 14 | 16 | undetermined | 103.5 | -1 | 6.47 |
| 32 | adult | 50 | 60 | male | 86.5 | 23.5 | 5.74 |
| 33 | adult | | | undetermined | 87.5 | 10 | 5.48 |
| 34 | adult | | | undetermined | 87.5 | 15 | 6.02 |
| 35 | subadult | 8 | 10 | undetermined | 87.5 | 15 | 6.08 |
| 36 | adult | | | female | 87.5 | -5 | 8.17 |
| 37 | adult | 45 | 55 | male | 65 | 20 | 7.44 |
| 38 | adult | 12 | 18 | female | 86 | 10 | 5.18 |
| 39 | subadult | 5 | 7 | undetermined | 81.75 | 40 | 4.69 |

Table 2. Excavated Burials with Age, Sex, and Location (*continued*)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|-----------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 40 | adult | 50 | 60 | female | 65 | 10 | 7.88 |
| 41 | adult | | | undetermined | 99.5 | -11 | 7.57 |
| 42 | infant | 0 | 2 | undetermined | 91.5 | 45 | 4.92 |
| 43 | subadult | 2.5 | 4.5 | undetermined | 105 | -7 | 6.42 |
| 44 | subadult | 3 | 9 | undetermined | 85.5 | 21.5 | 5.54 |
| 45 | subadult | 2.5 | 4.5 | undetermined | 103.5 | -5 | 6.77 |
| 46 | adult | | | female? | 95.5 | 0 | 5.27 |
| 47 | adult | 35 | 45 | male | 103.5 | 0 | 6.42 |
| 48 | adult | | | undetermined | 87.5 | 20 | 4.89 |
| 49 | adult | 40 | 50 | female | 87.5 | 40 | 3.76 |
| 50 | subadult | | | undetermined | 87.5 | 30 | 5.81 |
| 51 | adult | 24 | 32 | female | 75 | 10 | 8.58 |
| 52 | undetermined | | | undetermined | 87.5 | 25 | 4.69 |
| 53 | subadult | 0.25 | 0.75 | undetermined | 87.5 | 0 | 7.85 |
| 54 | adult | | | undetermined | 92 | -4 | 7.63 |
| 55 | subadult | 3 | 5 | undetermined | 92.20 | 0 | 7.65 |
| 56 | adult | 30 | 34 | female | 87.5 | 17 | 5.64 |
| 57 | subadult | 0.88 | 2.16 | undetermined | 87.5 | 25 | 5.27 |
| 58 | subadult | 3.5 | 4.5 | undetermined | 65 | 15 | 7.42 |
| 59 | infant | 0 | 0.25 | undetermined | 65 | 15 | 6.58 |
| 60 | subadult | 0.25 | 0.75 | undetermined | 95 | -1 | 7.73 |
| 61 | undetermined | | | undetermined | 87.5 | 45 | 5.53 |
| 63 | adult | 35 | 45 | male | 70 | 15 | 7.12 |
| 64 | subadult | 0.38 | 0.88 | undetermined | 92.5 | 45 | 5.25 |
| 65 | infant | 0 | 0.49 | undetermined | 75 | 10 | 8.58 |
| 66 | infant | 0 | 0.16 | undetermined | 93.5 | 25 | 5.23 |
| 67 | adult | 40 | 50 | male | 94 | 0 | 7.28 |
| 68 | adult | 21 | 25 | male | 91 | 3.5 | 5.93 |
| 69 | adult | 30 | 60 | male | 89 | -3.5 | 6.53 |
| 70 | adult | 35 | 45 | male | 92.5 | 10 | 5.98 |
| 71 | adult | 25 | 35 | female | 75 | 10 | 7.86 |
| 72 | subadult | 1 | 2 | undetermined | 87.5 | 34 | 6.29 |
| 73 | adult | 20 | 30 | female? | 79 | 10 | 7.28 |
| 74 ^e | | | | | 80 | 15 | 5.73 |
| 75 | infant | 0 | 0 | undetermined | 92.5 | 34 | 5.99 |
| 76 | adult | 25 | 55 | male | 75 | 10 | 8.33 |
| 77 | subadult | 0.67 | 1.3 | undetermined | 88.5 | 35 | 5.26 |
| 78 | adult | 16 | 19 | undetermined | 91 | 10 | 4.31 |
| 79 | subadult | 0.25 | 0.75 | undetermined | 82 | 6 | 7.88 |
| 80 | subadult | | | undetermined | 87.5 | 40 | 3.61 |

Table 2. Excavated Burials with Age, Sex, and Location (continued)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 81 | adult | | | female | 93 | -3 | 6.93 |
| 82 | adult | 18 | 25 | female | 93 | 3 | 6.03 |
| 83 | subadult | | | undetermined | 87.5 | 31 | 5.53 |
| 84 | adult | 17 | 21 | female | 87.5 | 35 | 4.45 |
| 85 | subadult | 0.25 | 0.75 | undetermined | 80.5 | 15 | 6.79 |
| 86 | subadult | 6 | 8 | undetermined | 74 | 18 | 7.89 |
| 87 | subadult | 4 | 6 | undetermined | 94 | 3 | 6.88 |
| 88 | undetermined | | | undetermined | 93.5 | -4 | 6.36 |
| 89 | adult | 50 | 60 | female | 90.5 | 48 | 4.8 |
| 90 | adult | 35 | 40 | female | 81.5 | 4 | 6.81 |
| 91 | subadult | 0.67 | 1.3 | undetermined | 95 | 48 | 4.95 |
| 93 | adult | | | undetermined | 85 | -3 | 6.98 |
| 94 | subadult | | | undetermined | 92.5 | 47 | 4.75 |
| 95 | subadult | 7 | 12 | undetermined | 94.5 | 51 | 4.85 |
| 96 | adult | 16 | 18 | male | 94.5 | 47 | 5.33 |
| 97 | adult | 40 | 50 | male | 81 | 20 | 6.73 |
| 98 | subadult | 1 | 2 | undetermined | 81 | 20 | 6.23 |
| 99 | subadult | 6 | 10 | undetermined | 91.5 | 70 | 4.92 |
| 100 | subadult | | | undetermined | 80.5 | 20 | 5.44 |
| 101 | adult | 26 | 35 | male | 88.5 | 49 | 4.32 |
| 102 | subadult | 1.33 | 2.67 | undetermined | 79.5 | 20 | 5.93 |
| 103 | subadult | | | undetermined | 79.5 | 20 | 5.83 |
| 104 | adult | 30 | 40 | female | 89.5 | 61 | 3.89 |
| 105 | adult | 35 | 45 | male | 95 | 60 | 4.37 |
| 106 | adult | 25 | 35 | female? | 90.5 | 71 | 3.85 |
| 107 | adult | 35 | 40 | female | 90 | 48 | 3.94 |
| 108 | subadult | 0.25 | 0.75 | undetermined | 87 | 53 | 5.4 |
| 109 | subadult | 0.67 | 1.33 | undetermined | 90.5 | 54 | 4.32 |
| 110 | infant | -0.17 | 0.17 | undetermined | 90 | 78 | 5.33 |
| 111 | subadult | 0.67 | 1.33 | undetermined | 91.5 | 53 | 4.87 |
| 112 | subadult | 0.25 | 0.75 | undetermined | 89 | 82.5 | 4.52 |
| 113 | adult | | | undetermined | 91.5 | 60 | 3.62 |
| 114 | adult | 45 | 50 | male | 94.5 | 91 | 3.79 |
| 115 | adult | 25 | 35 | female | 89.5 | 89 | 3.81 |
| 116 | adult | 45 | 55 | male | 95.5 | 81.5 | 3.64 |
| 117 | infant | 0 | 0 | undetermined | 91.5 | 77 | 4.14 |
| 118 | adult | | | undetermined | 94.5 | 55 | 4.18 |
| 119 | adult | 35 | 45 | male | 88.5 | 72 | 3.79 |
| 120 | adult | 25 | 34 | female | 88.5 | 70 | 3.54 |
| 121 | subadult | 2.5 | 4.5 | undetermined | 86 | 70 | 4.19 |

Table 2. Excavated Burials with Age, Sex, and Location (*continued*)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|------------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 122 | adult | 18 | 20 | female | 93 | 61 | 3.53 |
| 123 | subadult | 0.67 | 1.33 | undetermined | 89.5 | 80 | 4.04 |
| 124 | adult | | | undetermined | 91.5 | 95 | 5.09 |
| 125 | adult | | | female? | 64.5 | 52 | 3.96 |
| 126 | subadult | 3.5 | 5.5 | undetermined | 88 | 80.5 | 3.4 |
| 127 | subadult | 0.67 | 1.33 | undetermined | 90 | 95 | 3.71 |
| 128 | infant | 0 | 0.17 | undetermined | 92.5 | 83 | 3.45 |
| 129 ^f | | | | | 91.5 | 95 | 4.54 |
| 130 | subadult | 1 | 2 | undetermined | 92 | 56 | 3.27 |
| 131 | subadult | | | undetermined | 91.5 | 76.5 | 3.83 |
| 132 | adult | 25 | 30 | male | 64.5 | 61.5 | 4.01 |
| 133 | subadult | 1 | 2 | undetermined | 96 | 78 | 4.06 |
| 134 | adult | 40 | 50 | female | 62.5 | 85 | 2.23 |
| 135 | adult | 30 | 40 | male | 70 | 70 | 2.81 |
| 136 | subadult | | | undetermined | 95 | 86.7 | 4.09 |
| 137 | adult | 25 | 35 | undetermined | 63 | 75 | 3.86 |
| 138 | subadult | 3 | 5 | undetermined | 67.5 | 86 | 4.13 |
| 142 | adult | 25 | 30 | female | 88 | 90 | 4.05 |
| 143 | subadult | 6 | 10 | undetermined | 88 | 80.5 | 3.11 |
| 144 | infant | 0 | 0.17 | undetermined | 88 | 90 | 3.8 |
| 145 ^f | | | | | 73.5 | 74 | 4.93 |
| 146 | infant | 0 | 0 | undetermined | 73.5 | 74.5 | 4.72 |
| 147 | adult | 55 | 65 | male | 70.5 | 56.5 | 3.88 |
| 148 | adult | 12 | 18 | undetermined | 91.5 | 70 | 3.27 |
| 149 | subadult | 0.5 | 1 | undetermined | 88 | 90 | 3.85 |
| 150 | adult | 20 | 28 | female | 70.5 | 80 | 4.43 |
| 151 | adult | 35 | 45 | male | 67.5 | 83 | 3.84 |
| 152 | undetermined | | | undetermined | 55.5 | 67 | 1.90 |
| 153 | adult | | | female? | 54.5 | 74 | 1.48 |
| 154 | adult | 25 | 29 | female | 95.5 | 75 | 3.43 |
| 155 | adult | | | undetermined | 92 | 75 | 3.14 |
| 156 | adult | 30 | 60 | female | 66.5 | 115 | 2.35 |
| 157 | adult | | | female? | 53.5 | 81.5 | 1.87 |
| 158 | adult | 20 | 30 | male | 63 | 92 | 2.17 |
| 159 | adult | 25 | 35 | female | 73.5 | 90 | 3.43 |
| 160 | subadult | 3.5 | 5.5 | undetermined | 73 | 98.5 | 3.10 |
| 161 | subadult | | | undetermined | 74.5 | 90 | |
| 162 | adult | 35 | 45 | male | 55 | 51.5 | 2.31 |
| 163 | adult | 18 | 24 | male? | 74.5 | 99 | 2.18 |
| 164 | subadult | 8 | 13 | undetermined | 52.5 | 91 | 1.47 |

Table 2. Excavated Burials with Age, Sex, and Location (continued)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 165 | adult | | | undetermined | 62.5 | 73 | |
| 166 | subadult | 0.5 | 1 | undetermined | 55.5 | 92.5 | 2.10 |
| 167 | subadult | 8.5 | 12.5 | undetermined | 86.5 | 65 | 2.56 |
| 168 | adult | | | male | 95.5 | 68.5 | 4.87 |
| 169 | subadult | 5.5 | 9.5 | undetermined | 91.5 | 81 | 2.67 |
| 170 | subadult | 7 | 11 | undetermined | 96 | 65 | 4.33 |
| 171 | adult | 44 | 60 | male | 53.5 | 99.5 | 1.05 |
| 172 | adult | 25 | 35 | female | 40.5 | 88 | 1.61 |
| 173 | subadult | 0.25 | 0.75 | undetermined | 57 | 101 | 0.55 |
| 174 | adult | 17 | 18 | male | 60.5 | 90 | 2.31 |
| 175 | adult | 24 | 28 | male | 72 | 64.5 | 4.44 |
| 176 | adult | 20 | 24 | male | 74.5 | 65.5 | 3.10 |
| 177 | adult | 30 | 60 | undetermined | 91.5 | 80 | 2.23 |
| 178 | adult | | | male | 62 | 57 | 4 |
| 179 | adult | 25 | 30 | male | 46.5 | 98 | -0.30 |
| 180 | subadult | 11 | 13 | undetermined | 50 | 97.5 | 0.12 |
| 181 | adult | 20 | 23 | male | 66 | 115 | 2.23 |
| 182 | subadult | 7.5 | 12.5 | undetermined | 94 | 69 | 3.81 |
| 183 | subadult | 0.63 | 1.13 | undetermined | 50 | 113.5 | 0.33 |
| 184 | subadult | 1 | 1.5 | undetermined | 52 | 108.5 | 0.44 |
| 185 | adult | 21 | 23 | male | 54.5 | 122 | 0.85 |
| 186 | infant | 0 | 0.17 | undetermined | 47.5 | 110 | 0.09 |
| 187 | subadult | 1.5 | 4 | undetermined | 52.5 | 119.5 | 0.94 |
| 188 | adult | 26 | 32 | undetermined | 58.5 | 52.5 | 3.85 |
| 189 | adult | | | undetermined | 95.5 | 65.5 | 3.42 |
| 190 | subadult | 0.38 | 0.88 | undetermined | 55 | 100.5 | 0.57 |
| 191 | adult | 25 | 30 | male | 56.5 | 87.5 | 1.83 |
| 192 | adult | 40 | 60 | female | 67 | 101.5 | |
| 193 | adult | 30 | 48 | male | 65.5 | 101.5 | |
| 194 | adult | 30 | 40 | male | 50.5 | 84 | 0.95 |
| 195 | adult | 30 | 40 | female | 81.5 | 63 | |
| 196 | adult | 20 | 24 | undetermined | 83 | 56 | 4.14 |
| 197 | adult | 45 | 55 | female | 76 | 57.5 | 4.05 |
| 198 | subadult | | | undetermined | 86.5 | 80 | 3.61 |
| 199 | adult | 30 | 40 | female | 73.5 | 80 | 3.39 |
| 200 | adult | | | male | 75.5 | 77 | 3.57 |
| 201 | subadult | 1.5 | 3.5 | undetermined | 59.5 | 70.5 | 3.25 |
| 202 | adult | 12 | 18 | female? | 85.5 | 70 | 3.4 |
| 203 | adult | 12 | 18 | undetermined | 59 | 77 | 4.04 |
| 204 | adult | | | female? | 77.5 | 98 | 3.81 |

Table 2. Excavated Burials with Age, Sex, and Location (continued)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|------------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 205 | adult | 18 | 20 | female | 59.5 | 102 | 0.41 |
| 206 ^e | | | | | 75.5 | 93 | 3.31 |
| 207 | adult | 25 | 35 | female? | 78.5 | 95 | 3.76 |
| 208 | subadult | 0.5 | 1 | undetermined | 77 | 96 | 3.70 |
| 209 | adult | 40 | 50 | male | 42 | 94 | 0.43 |
| 210 | adult | 35 | 45 | male | 46 | 116 | 0.22 |
| 211 | adult | | | male? | 77 | 79.5 | 3.93 |
| 212 | subadult | 4.5 | 5.5 | undetermined | 82.5 | 55 | 3.85 |
| 213 | adult | 45 | 55 | female | 84.5 | 85.5 | 3.93 |
| 214 | adult | 45 | 55 | male | 79.5 | 63.5 | 4.84 |
| 215 | infant | 0 | 0.16 | undetermined | 81.5 | 72.5 | 4.57 |
| 216 | infant | 0 | 0.16 | undetermined | 78.5 | 57 | 4.47 |
| 217 | adult | 17 | 19 | male | 64.5 | 122.5 | 1.34 |
| 218 | subadult | 0.5 | 3.5 | undetermined | 89 | 73 | 3.48 |
| 219 | subadult | 4 | 5 | undetermined | 71.5 | 122 | 2.20 |
| 220 ^e | | | | | 78 | 92 | 3.75 |
| 221 | adult | 30 | 60 | male | 83.5 | 77 | 3.55 |
| 222 | adult | | | male? | 76.5 | 118 | 0.24 |
| 223 | adult | 25 | 35 | female | 66.5 | 76.5 | 2.69 |
| 224 | subadult | 0.5 | 1.33 | undetermined | 77.5 | 97 | 2.39 |
| 225 | subadult | 0.5 | 1.25 | undetermined | 64.5 | 95.5 | |
| 226 | infant | 0 | 0.17 | undetermined | 83 | 77 | 3.69 |
| 227 | undetermined | | | undetermined | 77 | 84 | 4.22 |
| 228 | adult | | | male? | 86 | 55 | 4.20 |
| 229 | subadult | 6.75 | 11.25 | undetermined | 83.5 | 72 | 4.22 |
| 230 | adult | 55 | 65 | female | 45.5 | 106 | 0.73 |
| 231 ^e | | | | | 77.5 | 97 | 2.90 |
| 232 ^e | | | | | 77.5 | 97 | 2.41 |
| 233 ^e | | | | | 73 | 127 | 1.84 |
| 234 | infant | 0 | 0.5 | undetermined | 77.5 | 96.5 | 2.24 |
| 235 | adult | 28 | 42 | female | 71.5 | 123 | 1.44 |
| 236 | subadult | 4 | 5 | undetermined | 84.5 | 53.5 | 3.86 |
| 237 | undetermined | | | undetermined | 80 | 55.5 | 4.11 |
| 238 | adult | 40 | 50 | male | 78.5 | 62 | 3.43 |
| 239 | subadult | 1.5 | 3.5 | undetermined | 83.5 | 70 | 3.8 |
| 240 | subadult | 0.88 | 2.66 | undetermined | 79.5 | 95.5 | 2.73 |
| 241 | adult | 55 | 65 | female | 54.5 | 121 | -0.18 |
| 242 | adult | 40 | 50 | female | 49.5 | 117 | -0.30 |
| 243 | adult | 40 | 50 | male | 57.5 | 121 | 0.10 |
| 244 | subadult | 5 | 9 | undetermined | 51.5 | 90 | 0.88 |

Table 2. Excavated Burials with Age, Sex, and Location (*continued*)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|------------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 245 | subadult | 2.5 | 4.5 | undetermined | 75 | 85.5 | 3.55 |
| 246 | subadult | 0.5 | 2.9 | undetermined | 82.5 | 70 | 3.77 |
| 247 | adult | 35 | 49.9 | male? | 84.5 | 90 | 3.69 |
| 248 | subadult | 14 | 15 | undetermined | 71.2 | 118.5 | 1.14 |
| 249 | subadult | 0.67 | 1.33 | undetermined | 81 | 87 | 4.16 |
| 250 | adult | | | undetermined | 80.5 | 84 | 4.07 |
| 251 | subadult | 12 | 14 | undetermined | 79.5 | 79 | 3.73 |
| 252 | subadult | 1 | 2 | undetermined | 64.5 | 95.5 | |
| 253 | subadult | 13 | 15 | undetermined | 82.5 | 65.5 | 4.02 |
| 254 | subadult | 3.5 | 5.5 | undetermined | 79.5 | 97.5 | 2.08 |
| 255 | infant | 0 | 0.17 | undetermined | 79.3 | 117.9 | 1.81 |
| 256 | adult | 40 | 60 | male | 77.5 | 79 | 2.82 |
| 257 | adult | 30 | 40 | male | 72.1 | 64.5 | 3.21 |
| 258 | infant | 0 | 0.5 | undetermined | 85.5 | 78 | 3.21 |
| 259 | adult | 17 | 19 | female? | 40.5 | 102 | 0.47 |
| 260 | undetermined | | | undetermined | 84.5 | 53.5 | 3.89 |
| 261 ^e | | | | | 87.5 | 80 | 3.5 |
| 262 | adult | 15 | 17 | male? | 38.5 | 120 | -0.31 |
| 263 | subadult | | | undetermined | 88.5 | 74 | 3.20 |
| 264 | adult | | | undetermined | 80 | 55 | 4.15 |
| 265 | subadult | 0.5 | 1 | undetermined | 82 | 120 | 1.74 |
| 266 | adult | 25 | 35 | female | 38.5 | 113.5 | -0.59 |
| 267 | adult | | | undetermined | 82.5 | 94 | 4.09 |
| 268 | infant | 0 | 0.5 | undetermined | 74.5 | 125.5 | 0.4 |
| 269 | | | | | | | |
| 270 | adult | | | male | 84.5 | 123.5 | 1.44 |
| 271 | adult | 45 | 57 | male | 76.5 | 65 | 3.70 |
| 272 | subadult | 0.25 | 0.75 | undetermined | 88.5 | 74.5 | 2.8 |
| 273 | undetermined | | | undetermined | 81.5 | 52.5 | 4.27 |
| 274 ^g | | | | | 79.5 | 70 | 3.55 |
| 275 | adult | | | female? | 81 | 50 | 3.36 |
| 276 | adult | 20 | 24 | female | 35.5 | 118.5 | 0.5 |
| 277 | subadult | | | undetermined | 77.5 | 51 | 4.01 |
| 278 | adult | 45 | 55 | male | 42 | 103 | -0.34 |
| 279 | adult | | | undetermined | 76.5 | 75.5 | 3.32 |
| 280 | adult | | | female? | 83 | 70 | 2.8 |
| 281 | adult | | | male? | 79.5 | 75 | 3.78 |
| 282 | adult | 32.5 | 42.5 | male | 77.5 | 71.5 | 3.35 |
| 283 | subadult | 0.33 | 0.67 | undetermined | 76 | 123 | 1.16 |
| 284 | adult | 21 | 28 | male | 80.5 | 115.5 | 2.09 |

Table 2. Excavated Burials with Age, Sex, and Location (continued)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 285 | adult | 20 | 30 | female | 80.5 | 64 | 3.57 |
| 286 | subadult | 4.4 | 8.5 | undetermined | 75 | 126 | 0.61 |
| 287 | adult | 18 | 20 | male | 73.5 | 53 | 3.63 |
| 288 | adult | | | undetermined | 74.5 | 120 | 1.61 |
| 289 | subadult | 5 | 9 | undetermined | 81 | 125 | 1.73 |
| 290 | adult | 45 | 55 | male | 84 | 114 | 2.32 |
| 291 | subadult | 3 | 5 | undetermined | 82.5 | 94 | 4.01 |
| 292 | adult | | | undetermined | 72.5 | 121 | 1.93 |
| 293 | adult | | | male? | 82.5 | 94 | 3.55 |
| 294 | subadult | 0.5 | 1 | undetermined | 88 | 86.5 | 4.19 |
| 295 | adult | 30 | 50 | female | 82 | 70 | 2.59 |
| 296 | infant | 0.5 | 2.9 | undetermined | 84 | 98 | 4.20 |
| 297 | adult | 30 | 40 | male | 62.5 | 117.5 | 0.04 |
| 298 | subadult | 0.67 | 1.33 | undetermined | 66.5 | 123 | 1.99 |
| 299 | adult | 40 | 50 | male | 68.5 | 123.5 | 1.32 |
| 300 | infant | | | undetermined | 76 | 125.5 | 0.82 |
| 301 | adult | | | undetermined | 86 | 100.5 | 4.17 |
| 301a | undetermined | | | undetermined | 86 | 100.5 | |
| 302 | adult | | | female? | 88.5 | 99.5 | 3.96 |
| 303 | subadult | 0.5 | 1 | undetermined | 73.5 | 76.5 | |
| 304 | subadult | 3 | 5 | undetermined | 81.5 | 109 | 1.97 |
| 305 | infant | -0.33 | 0.33 | undetermined | 57 | 122 | -1.11 |
| 306 | adult | 28 | 44 | male | 76.5 | 125 | 0.10 |
| 307 | adult | 45 | 55 | male? | 82.5 | 115.5 | 2.02 |
| 308 | subadult | | | undetermined | 84.5 | 109 | 1.31 |
| 309 | adult | 20 | 25 | male | 62 | 143.5 | 1.89 |
| 310 | adult | 44 | 52 | female | 75.5 | 60 | 2.49 |
| 311 | subadult | 0.25 | 0.75 | undetermined | 88.5 | 99.5 | 3.41 |
| 312 | infant | 0 | 0.3 | undetermined | 75 | 67 | 3.38 |
| 313 | adult | 45 | 55 | male | 31.5 | 114.5 | -1.5 |
| 314 | adult | 40 | 50 | male | 82 | 134 | |
| 315 | adult | 30 | 40 | female | 83 | 127 | 1.41 |
| 316 | adult | 18 | 20 | female | 88.5 | 99.5 | 3.02 |
| 317 | adult | 19 | 39 | male? | 91.5 | 220 | 2.21 |
| 318 | subadult | 7.5 | 14 | undetermined | 78 | 144 | 1.95 |
| 319 | adult | | | female | 88.5 | 249 | 2.25 |
| 320 | subadult | 2 | 4 | undetermined | 90 | 251.5 | 1.73 |
| 321 | subadult | 1 | 2 | undetermined | 79.5 | 143 | 0.39 |
| 322 | adult | | | female | 64.5 | 140 | 2.47 |
| 323 | adult | 19 | 30 | male | 45 | 128.5 | |

Table 2. Excavated Burials with Age, Sex, and Location (*continued*)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|------------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 324 | adult | 25 | 35 | female | 69 | 132 | 1.83 |
| 325 | adult | 25 | 35 | male | 63.5 | 137.5 | 0.89 |
| 326 | adult | 45 | 55 | male | 73.5 | 135 | |
| 327 | adult | 35 | 45 | male | 48.5 | 129 | |
| 328 | adult | 40 | 50 | female | 84.5 | 241 | |
| 329 | adult | | | male | 56 | 128.5 | |
| 329.1 | adult | | | undetermined | 56 | 128.5 | |
| 330 | adult | 28 | 58 | male | 58.5 | 140 | 0.72 |
| 331 | adult | 30 | 35 | undetermined | 58 | 137 | 0.52 |
| 332 | adult | 35 | 40 | male? | 80.5 | 126 | 0.67 |
| 333 | adult | 45 | 55 | male | 81.5 | 230.5 | 1.14 |
| 334 | subadult | | | undetermined | 89 | 251 | 1.63 |
| 335 | adult | 25 | 35 | female | 84.5 | 248 | 0.36 |
| 336 | subadult | 0.5 | 1 | undetermined | 83 | 125.5 | 0.68 |
| 337 | adult | 40 | 50 | male | 37 | 130 | -0.67 |
| 338 | adult | 33 | 65 | female | 84.5 | 133.5 | 0.69 |
| 339 | subadult | | | undetermined | 83 | 123 | 1.39 |
| 340 | adult | 39.3 | 64.4 | female | 88.5 | 236.5 | 0.27 |
| 341 | adult | | | male | 87.5 | 229.5 | 1.26 |
| 342 | adult | 25 | 35 | female? | 50 | 129 | -0.73 |
| 343 | adult | 19 | 23 | male | 59.5 | 130 | -0.02 |
| 344 | adult | 25 | 35 | male? | 87.5 | 255 | 0.84 |
| 345 | adult | | | undetermined | 74.5 | 254 | 0.52 |
| 346 | adult | 50 | 70 | female | 57.5 | 138.5 | -0.25 |
| 347 | subadult | 0.5 | 1 | undetermined | 73.5 | 130 | 0.97 |
| 348 | subadult | 1 | 2 | undetermined | 66 | 138 | 1.62 |
| 349 | infant | 0 | 0.5 | undetermined | 72 | 132 | 1.64 |
| 350 | undetermined | | | undetermined | 82 | 133.5 | 1.18 |
| 351 | adult | 50 | 60 | male | 84.5 | 145 | 0.39 |
| 352 | adult | | | male | 67.5 | 131 | 1.47 |
| 353 | adult | 24 | 34 | male | 84.5 | 230 | 1.13 |
| 354 | adult | 35 | 45 | male | 44.5 | 129.5 | -1.16 |
| 355 | adult | | | undetermined | 74.5 | 235 | 3.19 |
| 356 | subadult | | | undetermined | 84.5 | 248 | -0.01 |
| 357 | adult | 45 | 65 | male | 72 | 228.5 | -0.31 |
| 358 | adult | | | female? | 89.5 | 230 | 1.93 |
| 359 ^e | | | | | 84.5 | 127.5 | 1.47 |
| 360 ^e | | | | | 75.5 | 235 | 0.24 |
| 361 | adult | 33 | 57 | male | 88.5 | 249 | 0.77 |
| 362 | adult | | | undetermined | 69.5 | 235 | -0.81 |

Table 2. Excavated Burials with Age, Sex, and Location (*continued*)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 363 | subadult | 1 | 2 | undetermined | 49.5 | 135 | -0.35 |
| 364 | adult | 25 | 35 | male | 44.5 | 143.5 | -0.23 |
| 365 | adult | | | female | 79.5 | 257.5 | -0.06 |
| 366 | adult | 34 | 62 | undetermined | 78 | 224 | 0.73 |
| 367 | adult | 25 | 35 | female? | 72 | 130 | 2.08 |
| 368 | subadult | 10.5 | 13.5 | undetermined | 80.5 | 246.5 | 0.86 |
| 369 | adult | 40 | 50 | male | 54 | 131 | -0.21 |
| 370 | subadult | 2 | 4 | undetermined | 82 | 146.5 | 0.79 |
| 371 | adult | 25 | 35 | female | 69 | 235 | -2.88 |
| 372 | adult | 25 | 35 | female | 81 | 235 | 1.91 |
| 373 | adult | 45 | 60 | female | 70.5 | 132 | -0.97 |
| 374 | infant | 0 | 0.25 | undetermined | 72 | 132.5 | 1.36 |
| 375 | adult | 16 | 18 | female | 74.5 | 253 | -0.4 |
| 376 | adult | 45 | 65 | male | 77 | 134.5 | 0.45 |
| 377 | adult | 32.6 | 57.8 | female | 75.5 | 235 | -0.44 |
| 378 | undetermined | | | undetermined | 75.5 | 235 | -0.28 |
| 379 | adult | 30 | 40 | male | 71.5 | 215 | 0.16 |
| 380 | adult | 40 | 60 | male | 85 | 241 | 0.51 |
| 381 | undetermined | | | undetermined | 75.5 | 235 | -0.68 |
| 382 | subadult | 4 | 5 | undetermined | 71.5 | 215 | 0.17 |
| 383 | adult | 14 | 18 | female | 79 | 245 | -0.76 |
| 384 | adult | 25 | 45 | female | 91.5 | 248 | 0.59 |
| 385 | adult | 40 | 60 | female | 86 | 251.5 | 0.83 |
| 386 | infant | 0 | 0.3 | undetermined | 48 | 121.5 | 0.37 |
| 387 | adult | 34 | 44 | male | 78 | 227 | -0.25 |
| 388 | adult | 29 | 57 | female | 75.5 | 222 | -0.38 |
| 389 | adult | | | female | 82 | 220 | 1.87 |
| 390 | adult | 25 | 35 | male | 71.5 | 140 | 1.41 |
| 391 | adult | 16.5 | 19.5 | male | 68 | 140.5 | 1.69 |
| 392 | adult | 42.5 | 52.5 | male | 71.5 | 140 | 1.04 |
| 393 | infant | -0.17 | 0.17 | undetermined | 84 | 211 | 2.54 |
| 394 | adult | 16 | 25 | undetermined | 59.5 | 185 | -0.59 |
| 395 | adult | 43 | 53 | male | 76.5 | 135.5 | -1.11 |
| 396 | subadult | 6.5 | 8.5 | undetermined | 82.5 | 224 | 1.43 |
| 397 | adult | 30 | 40 | female | 87 | 229 | 0.51 |
| 398 | adult | 25 | 35 | undetermined | 93 | 255.5 | 0.67 |
| 399 | infant | 0 | 0.3 | undetermined | 78 | 213 | -0.08 |
| 400 | adult | 25 | 35 | male | 65.5 | 130 | 2.09 |
| 402 | adult | | | undetermined | 84.5 | 235 | 1.06 |
| 403 | adult | 39 | 65 | male | 93 | 255.5 | 1.12 |

Table 2. Excavated Burials with Age, Sex, and Location (*continued*)

| Burial No. | Age Category ^a | Low Age | High Age | Sex ^b | Grid South ^c | Grid East ^c | Elevation ^c |
|------------------|---------------------------|---------|----------|------------------|-------------------------|------------------------|------------------------|
| 404 | adult | | | female | 79.5 | 165 | |
| 405 | subadult | 6 | 10 | undetermined | 83.9 | 211.8 | 2.22 |
| 406 | infant | 0 | 0.5 | undetermined | 68.25 | 253.5 | 0.02 |
| 408 | adult | | | male? | 79.5 | 158 | 0.5 |
| 410 | adult | | | female | 69.5 | 178 | 1.05 |
| 412 | infant | 0 | 0 | undetermined | 78.5 | 218.5 | 2.10 |
| 413 | adult | 50 | 70 | female | 62.5 | 175.5 | 0.97 |
| 414 | adult | 39 | 59 | male | 74 | 165 | 0.97 |
| 415 | adult | 35 | 55 | male | 81 | 215 | 1.81 |
| 416 | adult | | | undetermined | 71.5 | 142 | 1.28 |
| 417 | subadult | 9.5 | 14.5 | undetermined | 64.5 | 165 | 1.14 |
| 418 | adult | 30 | 55 | male | 64.5 | 163 | 0.86 |
| 419 | adult | 48 | 62 | male | 71.5 | 206.5 | 0.4 |
| 420 | adult | 35 | 45 | male | 69.5 | 186.5 | 0.63 |
| 422 ^e | | | | | 86.5 | 212.5 | 2.22 |
| 423 ^h | | | | | 67 | 162 | 0.74 |
| 424 | adult | | | undetermined | 76 | 220 | -1.07 |
| 425 | adult | | | female | 79.1 | 253 | 0.35 |
| 426 ⁱ | | | | | 69.5 | 141 | 1.52 |
| 427 | adult | 16 | 20 | male? | 69.5 | 179 | 0.28 |
| 428 | adult | 40 | 70 | female | 66.5 | 147.5 | 1.57 |
| 429 ⁱ | | | | | 64.5 | 215 | |
| 430 ⁱ | | | | | 84.5 | 215 | |
| 431 | adult | | | undetermined | 79.5 | 162 | 0.48 |
| 432 | adult | | | undetermined | 78 | 220 | -0.89 |
| 433 ^h | | | | | 79.5 | 160.5 | |
| 434 ^h | | | | | 79.5 | 155 | |
| 435 ^h | | | | | 84.5 | 205 | 2.64 |

^a Low and high ages reflect the range of possible ages determined by the skeletal biological team. Blanks indicate age range could not be determined from the remains. To be consistent with the skeletal analysis, in this table, “infant” includes individuals calculated as 6 months of age or less; “subadult” includes those over 6 months and under 15 years of age. Age calculation is described in Chapter 4 of Volume 1 of this series, *Skeletal Biology of the New York African Burial Ground*.

^b In the Sex column, a question mark indicates a probable assignment.

^c Grid coordinates (see the site map, Figure 7) are in feet, and elevations are feet above mean sea level (AMSL) for the highest skeletal element (or coffin remains if no skeletal elements were present).

^d Remains appear to belong with Burial 43.

^e No remains extant.

^f This coffin was empty.

^g Remains appear to belong to Burial 280.

^h Remains were left in place.

ⁱ Remains were left in place (presumed adult).

packed in bags or small containers and sent to the project conservators (see below). Shaft fill artifacts and coffin remains (nails and wood) were bagged and sent to the HCI laboratory facility (until July 1992) or to a storage space provided by GSA.

Soil samples were taken from the grave-shaft-fill soil (as a “control” sample), the coffin lid area, the stomach area, the thoracic area, the pelvic area, and the sacrum. Not all of these samples were taken from all burials. Thoracic samples were added to the field protocol in late May 1992. The control samples were taken so that (1) soils could be tested for plant remains, providing information on the historic landscape, and (2) to obtain pH levels and observe any insect remains in the soil as aids to understanding bone condition.⁶ The other samples were taken so that macrobotanical, palynology, and parasitology analyses could be conducted to provide potential information about the diet and health of the deceased and about plants that might have been used in mortuary practices.

Specific locations of control samples were generally not recorded, and it is often not known for individual burials whether these were taken from above, below, or alongside the coffin or skeleton, although the date of the sample, if recorded, can inform us as to whether it was taken before or after the skeleton was exposed and recorded. During the cataloging of samples, bag labels (which were somewhat inconsistent) provided the only information on sample locations. Samples were sent from the field site to HCI or JMA laboratory facilities for storage.

Certain in-field conservation procedures were designed to minimize damage to human bone and artifacts that occurred once they were exposed to the air. Very fragile bones, including frequently those of infants and young children, were “pedestaled” during excavation—that is, the soil surrounding them was left in place and removed as a block. If soil showed signs of bacterial microbes, a mild biocide (70 percent ethanol) was applied to the pedestal. In a few cases, a consolidant, polyvinyl acetate (PVA) emulsion, was used for long bones. In some instances, field notes indicate that wet paper towels were placed on skeletal

remains to keep them moist during excavation and recording of the burial, but it is not known whether this was standard procedure. Artifacts that were particularly fragile were frozen along with surrounding soil. Plastic was first placed over the bone, then dry ice was applied to the artifact, and the block, when frozen, was lifted out and transported to freezers in the laboratory facility. There is no list of items for which dry ice was used, although some instances are described in the field records for individual burials and are noted in the descriptions in Part 2 of this volume.

Fieldwork was halted on July 29, 1992, and GSA decided to preserve remaining graves at the project site rather than excavate further. However, at that time, 16 burials had been identified in the ground but had not been removed; in some, the skeletal remains were partially exposed. These burials were covered with vermiculite and soil pending GSA’s decisions, in consultation with the project archaeologists, as to whether they would be removed or left in place. Excavation of 11 partially exposed burials was resumed in September 1992, and their skeletal remains were removed for analysis.

Field Recording

As at any archaeological site, field recording varied with the individual excavators. At the New York African Burial Ground, there was also an evolution in recordation standards: the first burials recovered were not always drawn adequately, for example, and field forms specifically designed for burial removal were adopted only midway through the project. On the other hand, later in the field project, some burials had only the minimum data recorded on the site forms, with no additional notes.

Each burial was recorded on its own forms and drawings, and individual drawings were then transferred to site maps. The maps were sometimes, but not always, clear as to superposition of burials. The stratigraphic relationships among groups of overlapping burials were not usually mentioned in the excavators’ notes, which focused on the individual burial. There are no extant field notes taken by the archaeologists who supervised burial excavations, which might have discussed overall site stratigraphy. Soil descriptions were sometimes, but not always, provided on field forms, but the grave-shaft-fill soil was not differentiated from the coffin in-fill, and the surrounding soil matrix is rarely described.

⁶ Neither testing of pH levels nor insect identification was undertaken. Chemical analysis was deemed unfeasible because too much time had elapsed between the initial collection and the initiation of the subcontracting work. Insect remains were not identified in the soil analysis conducted thus far, but their study through future analysis of retained light fractions may be possible if specific questions about decomposition need to be addressed (none was posed by the current research team).

Forms

Forms were completed for every burial excavated, but several different forms were adopted over the course of the project. Examples of forms used by HCI, JMA, and MFAT are provided in Appendix D, Part 3 of this volume. The field forms are retained in the project archive; HCI and JMA forms also were transcribed into a database and are available in the digital archive. Up until mid-April 1992, each burial was recorded on both a “Provenience Sheet” and a “Burial Form.” The Provenience Sheet also provided a grid for a sketch, and in many cases the excavators produced here a rough sketch of the grave outline, the coffin top, or even the skeletal remains. A “Burial Procedures Checklist” was added in April 1992. This form listed all possible samples and indicated whether they had been collected; it also included specific information on how associated artifacts were stored. Unfortunately, the “Provenience Sheet” was discontinued, and although most information was contained on other forms, some items were no longer recorded, including soil descriptions and opening sketches.

MFAT field-assessment forms provided an overall descriptive assessment of the condition and position of remains and also listed individual skeletal elements, noting presence/absence and condition. These forms also included preliminary sex, age, “race,” and pathology assessments.

Drawings

A scaled plan drawing was made for each burial in situ, after skeletal remains had been exposed and cleaned, prior to removal (see Part 2 of this volume for drawings). Early in the fieldwork, each excavator prepared his or her own burial plan drawings. Subsequently, crew members with particular ability were assigned work as field artists with responsibility for the in situ drawings. One artist/archaeologist in particular, Ms. Margo Schur (now Margo Meyer of the Anthropological Studies Center at Sonoma State University), executed drawings of exceptional quality and detail. In addition to the final burial drawings, in some cases opening sketches or detail sketches were drawn by excavators, most often on the field forms as noted above. On occasion, schematic drawings of coffins were executed. Field drawings were produced using a scale of 1 inch to 1 foot (with only a few exceptions).

For most burial drawings, individual skeletal elements and other items (coffin remains and, in some

cases, artifacts) were plotted vertically as well as horizontally. As noted, vertical measurements were taken in hundredths of feet from a series of site subdatum points. Depths below datum for skeletal remains were typically taken at the cranium, shoulders, elbows, innominates (hipbones), sacrum, knees, ankles, feet, and central vertebrae. Vertical measurements also were taken typically for the top and bottom of the coffin (either wood remains or nails) and for some artifacts found with skeletal remains. The complete list of field drawings is included in the project database.

As noted, individual burial drawings were traced onto larger site maps, also at a scale of 1 inch to 1 foot. In the western part of the cemetery, skeletal drawings were traced, but later in the excavation (i.e., farther east) only grave-shaft and coffin outlines were traced onto the maps. The earliest of these maps also show depths below datum points and give descriptions of soils intervening between graves, but most do not. A problem with the site maps is the difficulty in resolving issues of superposition; it is not always possible to tell which burial underlay another when more than one interment overlapped. In some parts of the site, maps were made of broad areas prior to excavation of graves, showing suspected grave-shaft outlines, surrounding soil, and coffin stains where visible. These are useful for reconstructing some of the soil descriptions for burials and for checking burial relationships. Unfortunately, the text on the surviving copies of these maps is mostly illegible (see section on September 11, 2001).

Photographs

Field photographs were taken of each burial in situ at the New York African Burial Ground. Redundant sets of 35-mm slides and black-and-white negatives were produced. Each photograph has a menu board with the burial number and date, a trowel pointing to grid north, and a range pole marked in feet. In some cases, detail photographs were also taken of particular artifacts or skeletal elements in situ. The complete list of field photographs is included in the project database. Photographs were retained in the archaeological laboratory and used for site analysis.

Laboratory Processing and Analysis

A laboratory facility for nonskeletal material was provided by GSA at the World Trade Center in Sep-

tember 1992, following the close of fieldwork.⁷ Prior to that, artifacts from the burials had been stored at HCI's facility in New Jersey, with the exception of items that were found in direct association with skeletal remains, including pins, buttons, beads, textile fragments, jewelry, and other metal objects. These had been sent to the South Street Seaport's laboratory in lower Manhattan. The museum's conservator, Gary McGowan, conducted initial conservation where necessary; he later became JMA's laboratory director at the World Trade Center. Material stored at the Seaport and the HCI facility was brought to the new laboratory in September 1992.

The laboratory was staffed and directed by JMA, which was responsible under the terms of its contract with GSA for the processing of all collections from the Foley Square Project. When the Howard University Archaeology Team began work on the project in 1993, JMA continued to conduct the laboratory processing. Warren Perry of Central Connecticut State University was appointed associate director for archaeology for the Howard team in 1996 and took over supervision of the processing along with Laboratory Director Leonard Bianchi. Jean Howson, a member of the research team, was added as a co-director of the laboratory in 1998.

The New York African Burial Ground archaeological analysis required different procedures and a separate database from those being developed for the rest of the Foley Square Project, which were of necessity more geared to the extremely artifact-rich Courthouse (Five Points) Site. The burial ground assemblage was relatively small in size, and artifact categories were completely different because of the mortuary context. For example, domestic artifact categories (e.g., "food preparation" or "health and hygiene"), along with the myriad functional, typological, and stylistic subcategories used for a large domestic assemblage, were irrelevant to the analysis of burials and burial-related artifacts. The burial ground procedures had to be designed to ensure that individual graves or components of graves could be distinguished from others or grouped for various kinds of analysis, to ensure that everything from each grave could ultimately be reunited, and to ensure that only those items meant to accompany the deceased were reinterred with

the remains. Moreover, we deliberately chose not to assign broad functional categories to artifacts, as we wished to remain open—and leave our assemblage open—to interpretation. Eventually, a number of the tasks originally assigned to JMA were transferred to Howard University, including completion of New York African Burial Ground artifact inventories and samples processing. Procedures were overhauled so that all collections made during the excavations and all records associated with them could be accurately tracked. An easily accessible database using a standard commercial application was deemed adequate for our tracking and data management needs and was used in lieu of the complex and proprietary database developed by a JMA subconsultant for the Five Points site.

Procedures

Provenience Controls

As noted, a single catalog number was used to label all material from any given burial, whether from the grave surface, shaft fill, coffin, or coffin interior, including all soil samples. This kind of lumping is highly unusual in archaeological practice. Because analysis and, importantly, eventual reburial required differentiation of all of these kinds of excavation contexts, a plan was developed by the Howard University Archaeology Team to assign numbers to all items and samples in the collection that would serve as indices to more precise provenience. The catalog numbers were retained and extensions added as listed in Table 3. Our goal was to prevent further loss of provenience information as processing progressed.

The need for adequate provenience controls for the collection was related to the need for an adequate database with which to record collections information. With the catalog numbers assigned, it would be possible to track artifacts and samples for individual burials and to retrieve information on similar contexts for all burials. The database is described in a subsequent section.

Artifacts that were directly associated with skeletal remains were not physically labeled with provenience indicators. These items were slated for eventual reburial and were not physically altered in any way other than to stabilize them.⁸ JMA laboratory staff did

⁷ Collections from excavations at both of the Foley Square sites the Broadway block—Block 154, including burial and nonburial contexts—and the Courthouse block—Block 160 and the Five Points Site—were processed and analyzed at the 6 World Trade Center facility. For the Five Points Site, see Yamin (2000).

⁸ The single exception was a silver pendant that was sampled to determine metallic content (see Chapter 13).

Table 3. Explanation of Catalog Numbers

| Extension | Provenience | Explanation |
|-----------|-----------------|---|
| -B | burial | This extension was used for the skeletal remains themselves and for all items believed to be in direct association with skeletal remains. Examples are pins, buttons, or beads. |
| -CL | coffin lid | This extension was given to items that were recorded as being on the coffin lid. Examples are tacks and pieces of shell. |
| -CH | coffin hardware | Designates iron nails, tacks, and other hardware that clearly came from the coffin of the deceased. Discrete lots (bags) of nails were assigned consecutive letters, as in -CHA, -CHB, -CHC, in order to retain all possible provenience information. The letters were assigned in order of the date on the bag. |
| -CW | coffin wood | This was used for wood samples or soil scrapings from wood stains that clearly came from the coffin of the deceased. Discrete lots (bags) of wood were given consecutive letters, as in -CWA, -CWB, -CWC, in order to retain all possible provenience information. The letters were assigned in order of the date on the bag; individual bags sometimes indicated whether the sample was from the lid, sides, or bottom. |
| -GF | grave fill | This was used to designate material that was in the grave-shaft-fill soil rather than in direct association with the skeletal remains or inside the coffin. |
| -S | soil sample | This was used for all soil samples from a burial. Discrete soil samples were given consecutive letters, as in -SA, -SB, -SC, to reflect soil taken from different places within a burial. The letters were assigned in order of the date on the bag; individual bags typically indicated where the sample was from. Soil samples that were processed by flotation were in turn given an “L”, “H”, or “U” as well, to designate light fraction, heavy fraction, or unflotated subsample (thus -SAL, -SAH, -SAU). |

label artifacts from grave-shaft-fill contexts, which were not expected to be reburied, except for kiln waste, kiln furniture, and items less than approximately 1 inch in size. Labels were written in black ink and include the site number (6980), catalog number (without extension), and burial number. Items with and without labels were retained in polyethylene bags with full catalog numbers written on the bags, as were soil samples.

Cleaning, Conservation, and Storage

Project conservators were Gary McGowan and Cheryl LaRoche of JMA. Conservation procedures for each category of material are described in appropriate artifact chapters (Chapters 10–14) and in a draft report prepared by JMA.⁹ Typically, conservators examined and cleaned only those items that

were recovered from within coffins or in direct association with skeletal remains (these items came to be referred to as “burial artifacts”), although they oversaw the processing of grave-shaft and coffin materials as well. In addition, the conservators examined a selection of wood samples from coffins. Many of the wood samples (apparently the best ones from each burial) along with other organic samples were stored in freezers when first brought in from the field.¹⁰ The freezers and their contents were brought to the World Trade Center laboratory in September 1992.

“Burial artifacts” were placed in inert polyethylene boxes with inert packing, and many were placed in display cases in the laboratory once stabilized. Items that were not on display were kept in metal storage cabinets.

⁹ The report (LaRoche 2002) was made available for use by the Howard University team during our analysis.

¹⁰ Many boxes of wood samples were not frozen, and these consisted in large part of soil with wood fragments, probably scraped off as samples during excavation.

Items from grave-shaft-fill contexts and coffin remains were cleaned, sorted and bagged by material—wood, glass, metal, ceramic, and faunal—and placed in cardboard storage boxes. Bags were of polyethylene, and tyvek tags were placed in each bag indicating burial number and material. Ceramics, nails, and glass were washed in a weak nonionic detergent solution and rinsed in plain water, then cleaned with a soft-bristle brush. For shell, adhering soil was soaked in a 50 percent ethanol solution and removed.

Inventory

All artifacts examined by the project conservators (i.e., those found in direct association with skeletal remains) were inventoried by them and entered into a conservation data table (this was ultimately converted to Microsoft Access and merged with the artifact inventory data table currently in use). Coffin hardware and material from grave-shaft-fill soils were identified and inventoried by Howard University laboratory staff under the direction of Leonard Bianchi. Bianchi also reexamined and further described artifacts that had been inventoried by the conservators. Animal bone from grave-shaft contexts was examined and inventoried by JMA subconsultant Marie Lorraine Pipes. All inventories are contained in Appendix E, Part 3 of this volume. Stoneware from grave shafts was further examined, and subconsultant Meta Janowitz made a more detailed inventory (see Appendix F, Part 3 of this volume).

Unique artifacts deriving from contexts in direct association with skeletal remains (typically those treated by conservators) were given consecutive arbitrary numbers (“point numbers”) within each provenience that can be appended to the catalog number and allow reference to unique items. For example, individual unique artifacts from Burial 6 were assigned Catalog Nos. 219-B.001, 219-B.002, 219-B.003, etc. These numbers do not necessarily correspond to the numbers assigned by conservators, because the latter were given to groups of artifacts rather than to individual items, and, in many cases, the archaeologists wished to further differentiate the items and describe them in greater particularity. (In some cases, groups of identical items still share a number.) Whenever possible, burial artifact “point numbers” assigned in the field were used as the artifact numbers for the inventory.

Soil Samples

Many hundreds of soil samples were taken during field excavations, and three different teams were

involved in analyzing them (Appendix G, Part 3 of this volume contains the methods and results of the various reports). Some of the samples from burial contexts were processed by William Sandy of HCI from December 1991 through July 1992 (a total of 428 samples). These samples were from coffin lids and interiors and stomach and pelvic areas. A drum flotation device was used. Heavy and light fractions were sorted, and inventory and analysis was underway as of the end of June 1992, when HCI was replaced by JMA as GSA’s consulting archaeological firm. Bone fragments recovered in heavy fractions were sent to the Lehman laboratory (those later determined to be animal bone rather than human were returned to the New York laboratory for faunal analysis). Artifacts from heavy fractions and bags containing the light fractions were stored at the World Trade Center laboratory along with the other collections from the excavation. These were subsequently inventoried by Howard University laboratory staff.¹¹

The hundreds of soil samples that were not floated by HCI, including all control samples, were stored at the World Trade Center laboratory. These were inventoried by the Howard University Archaeology Team laboratory staff. Soil that had not been screened at all in the field was screened in the laboratory through ¼-inch mesh in order to recover artifacts and human bone. Human bone was sent to the Skeletal Biology Team at Howard University, and artifacts were inventoried. Under the direction of the Howard University archaeologists, all as-yet-unfloated soil samples were next divided into two parts, one for flotation and one to remain unfloated for other types of analysis. The “-U” (unfloated) portions were typically less than 1 liter in size. If a sample was too small to partition, it was retained unfloated. The inventory was updated to indicate the splitting of samples. JMA retained New South Associates to complete the flotation of all soil samples.

New South Associates was also retained for macrobotanic, palynology, and parasitology pilot studies. The samples used in the pilot studies were selected by Howard University’s Project Scientific Director

¹¹ William Sandy analyzed and inventoried 43 of the samples that he had floated (i.e., he “picked” or sorted and then identified botanical remains from the light fractions). This inventory was not salvaged after the collapse of the World Trade Center on September 11, 2001, and no copy is known to exist (William Sandy, personal communication 2003). The fractions selected subsequently by Howard University for analysis were therefore reinventoried by New South Associates.

Blakey. No parasite data were preserved in any of the samples studied. However, both macrobotanical and pollen studies proved useful in identifying species of plants from coffin lid and pelvic contexts. The Howard University Archaeology Team decided to pursue both macrobotanical and pollen analyses for a larger sample of burials. Individual soil samples (some already floated) were selected by the Howard University Archaeology Team laboratory staff during the spring and summer of 2003. The samples were selected using several criteria, specifically site location, age and sex of the deceased, hypothesized period of interment, and confidence in the sample provenience. Our aim was to obtain an accurate subsample of the burial population along all of these parameters. Leslie Raymer of New South Associates performed the macrobotanical study, and Pat Fall (Arizona State University) and Gerald Kelso performed the pollen study. Data are incorporated into the analysis presented in the body of the report, specifically in Chapters 3–5 and 14.

Records

Database

Archaeological analysis requires integration of data on artifacts with data on archaeological contexts. The database designed for the archaeological component of the New York African Burial Ground project includes a number of data tables that contain uncoded information on individual burials, artifacts, and samples and can be linked by burial number or by catalog number. The basic burial, artifact, and photography logs originally created by JMA in dBase were subsequently converted to Paradox and substantially altered and enlarged by the Howard University Archaeology Team's laboratory staff. These tables were finally converted to Microsoft Access in 2003, during the final phase of analysis. Key tables in the current database are listed in Table 4, and their structures are explained in Appendix H, Part 3 of this volume. The database will be available along with all project records at the Schomburg Center for Research in Black Culture in New York.

Artifact Photographs

Selected artifacts (typically items conservators referred to as “burial artifacts” that had been found in direct association with skeletal remains, excluding coffin

wood and hardware) were photographed by staff of JMA during laboratory processing and analysis from 1992 to 1995. Some were photographed before, during, and after conservation treatment. In addition to 35-mm slides and black-and-white negatives, microscopic digital photographs were produced to aid in identification for a few items, for example, textile/hair fragments and wood samples.

A second set of artifact photographs, consisting of 35-mm slides and black-and-white negatives, was taken during 1997 at the World Trade Center laboratory by JMA staff. Only one set of the slides and one set of negatives were produced. Neither was recovered after the collapse of the World Trade Center on September 11, 2001.

In the summer of 2001, GSA planned reburial of skeletal remains and “burial artifacts,” prompting the production of a third and final set of 35-mm photographic slides. This was considered necessary because, in the opinion of the Howard University Archaeology Team, the previous sets of artifact photographs were inadequate as a record of the items that could serve future research and exhibit purposes once the materials themselves were reburied. Preparations for the reburial were rushed (though ultimately the planned August 17, 2001, date was cancelled), and little time was allowed for the final inventory and photo-recording of artifacts. The services of photographer Jon Abbott were secured, and he produced a full set of high-quality color slides, although typically just one or two photos were taken for each item.

Finally, prior to the 2003 reburial, digital photographs were taken of a large subset of the artifacts from direct burial contexts. The high-resolution digital technology now available (through Jon Abbott) made it possible to produce numerous digital images of each artifact, from several angles. These are now available for future research. An example is produced in Figure 8. Artifact photographs are included in the project archive, which will be housed at the Schomburg Center for Research in Black Culture in New York.

Artifact photographs reproduced in this report include images from 35-mm slides as well as digital images. In some cases, the ruler placed in the photographic frame to provide scale (there were at least three separate rulers used during the various photo sessions) is visible in its entirety, but in most of the close-up photographs, only the tick marks on the ruler are visible. The smallest tick-mark interval on the rulers is 0.5 mm, unless otherwise noted. In some photographs this interval is all that shows. In other

Table 4. Data Tables in Archaeological Database

| Table Name | Contents |
|-------------|--|
| ABGCAT | Provenience catalog for the Broadway site, including all burial and nonburial contexts. This is a list of catalog numbers and all of the provenience data they represent (features, burials, dates of excavation, excavators, etc.). |
| ABG_DPTS | Locations and elevations of temporary subdatum points used in the field. |
| add faun | Inventory of animal bone from grave-shaft-fill contexts. |
| ARTPHOTOS | List of photographs of artifacts taken in 1998 (destroyed September 11, 2001). |
| burial4 | Basic data on each burial. |
| Coffin size | Coffin dimensions for each burial. |
| conbur 3 | Inventory of all artifacts that were directly associated with skeletal remains, coffin hardware, and material (other than floral and faunal remains) from grave fill contexts. |
| DRAWINGS | List of all numbered drawings from the Broadway site. |
| NewPinTable | List of straight pins from burials by location. |
| NOTES | Transcribed information and notes from burial-excavation field forms. |
| PHOTOBKS | List of photographs of in situ burials. |
| PHOTOLOG | List of photographs taken in the field and of conserved artifacts. |
| SHELLFLOR | Inventory of shell and seeds from burial contexts. |
| Stoneware | Inventory of local stonewares from grave-shaft-fill contexts. |
| SOILSAMP | Inventory of all soil samples with information on processing to date. |
| TOTWOOD | Inventory of wood samples from coffins. |

photographs, the 1-mm, 0.5-cm, and 1-cm ticks are also visible. We have left the rulers in the images, but rather than label the tick marks on each, we have provided the size of the photographed item or items in the caption. Where no single dimension was measurable, we have stated the ruler interval in the caption.

Replicas

In August 2003, shortly before the planned reburial, archaeologists from the National Park Service (within their capacity as consultants to GSA on the future Interpretive Center for the African Burial Ground) solicited bids for replication of artifacts. Only items that had been found in direct association with the deceased—and among these, only items that were sufficiently intact to possibly be used in interpretation—were included in the assemblage targeted for potential replication. Colonial Williamsburg was contracted to prepare replicas; they selected a limited subset based on their resources and expertise (Table 5). Full recordation of the items was completed by the specialists who made the replicas. Because of the timing of preparations for the reinter-

ment, these items were not photographed digitally.

Insufficient time remained to solicit subcontractors to replicate the remaining artifacts or record them for replication prior to the reburial. However, photographs and descriptive information can be used as the basis for future replication of additional artifacts. Some artifacts were not given priority for replication because they are types that can be represented by virtually identical, and readily obtainable, examples. This is the case for the beads and the coins. An example of one of the replications, copper alloy straight pins, is shown in Figure 9. Several replicas were made of each item selected.

September 11, 2001

The New York African Burial Ground archaeological laboratory in the subbasement level of 6 World Trade Center was left partially intact following the collapse of the towers and other surrounding buildings on September 11, 2001. In October 2001, in advance of

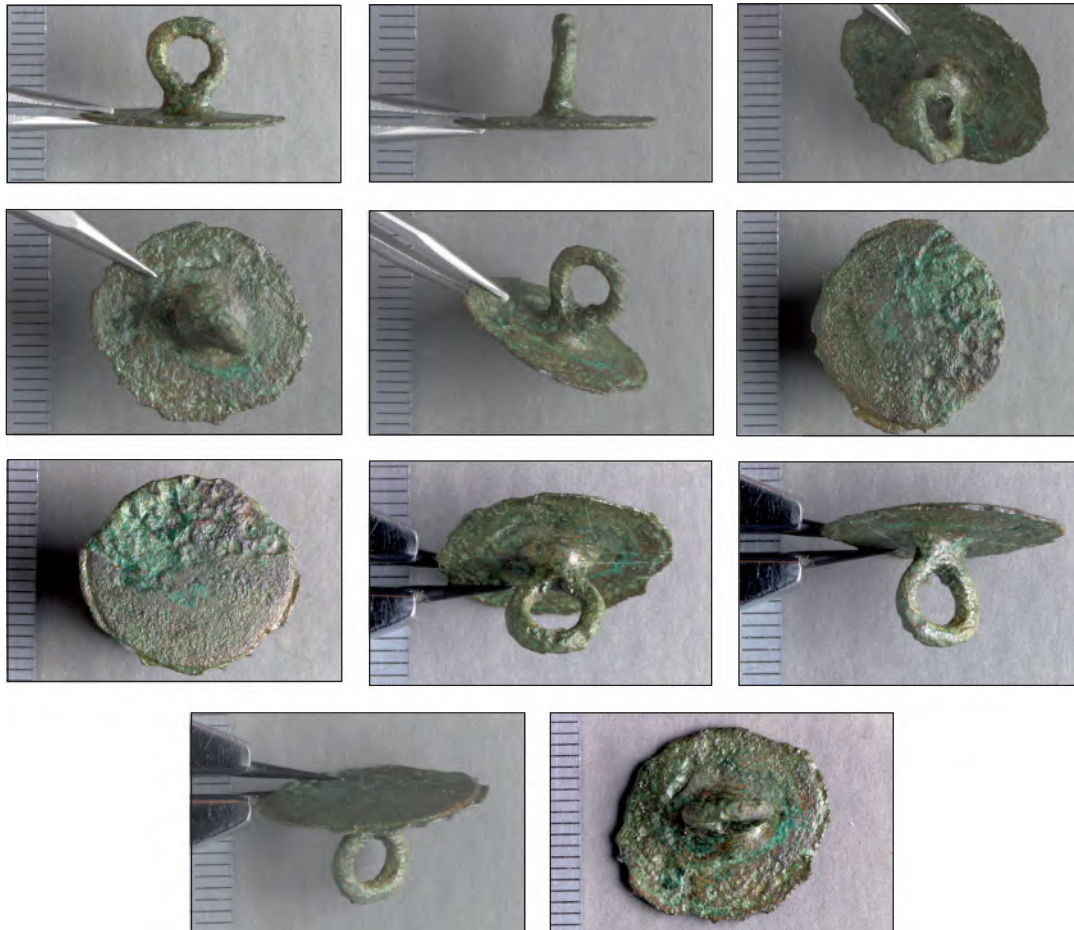


Figure 8. Example of a digital photographic series of an artifact (Burial 366, Catalog No. 1830.002). The images shown here are from low-resolution copies; high-resolution digital images are part of the project archive (photographs by Jon Abbott).

demolition of the damaged structure, GSA and the Federal Emergency Management Agency coordinated efforts to recover material from the laboratory. A salvage team entered the facility and retrieved many boxes of artifacts and surviving documents. The degree of retrieval is considered remarkable, considering the overall damage to the space; however, some artifacts and documents were not salvaged. Categories of materials that are known to have been lost are enumerated in Table 6. Individual items that were lost (but had already been inventoried) are identified in the artifact inventory, Appendix E, Part 3 of this volume.

Archaeological materials that were salvaged were decontaminated, rebagged in some cases (original bags were retained, however, and kept with the materials), and reboxed by a GSA contractor. Records that were salvaged (namely the slide and photo negative collections) were also decontaminated and placed in new

binders. A new laboratory was set up at 1 Bowling Green in New York. When the Howard University team resumed archaeological work in 2003, the boxes were examined, and some errors made by the decontamination team when labeling the new bags were noted and corrected.

Fortunately, as of July 31, 2001, items that had been selected by GSA at that time for reburial had been packed and shipped off-site (to Artex, an arts-handling firm with facilities in Landover, Maryland). These included the artifacts thought to have been placed directly with the deceased in each burial, and thus all such items were saved. However, some of the materials left behind in the laboratory and later lost on September 11 belonged to categories of material that were subsequently added to the reburial plans (see below), such as coffin remains and excess soil from samples. Therefore, when ultimately reburied on October 4, 2003,