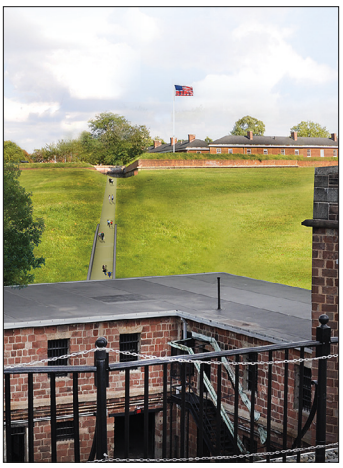
National Park Service
U.S. Department of the Interior



Olmsted Center
for Landscape Preservation

Cultural Landscape Report for Governors Island National Monument

Volume II: Treatment



Even Governors Island, once a smiling garden to the sovereigns of the province, was now covered with fortifications, enclosing a tremendous block house — so that this once peaceful island resembled a fierce little warrior in a big cocked hat, breathing gunpowder and defiance to the world!

Washington Irving, 1809

Cultural Landscape Report for Governors Island National Monument

New York, New York

Volume II: Treatment

Framework for Treatment

Treatment Tasks

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National Park Service, Boston, Massachusetts, 2018

The Olmsted Center for Landscape Preservation promotes the stewardship of significant landscapes through research, planning, and sustainable preservation maintenance. The Center accomplishes its mission in collaboration with a network of partners including national parks, universities, government agencies, and private nonprofit organizations. Techniques and principles of preservation practice are made available through training and publications.

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Cover Photo: Photosimulation of the re-established historic landscape context for Castle Williams. View looking west, 2014, Olmsted Center for Landscape Preservation.

Title Page: Photosimulation of the historic landscape connection reestablished between Castle Williams and Fort Jay. View looking southeast from Castle Williams' terreplein, 2014, Olmsted Center for Landscape Preservation.

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FOREWORD

The following *Cultural Landscape Report for Governors Island National Monument, Volume II, Treatment,* is a significant and welcome accomplishment. Its completion has long been stipulated in the final 2009 *Governors Island National Monument Final General Management Plan and Environmental Impact Statement* as a critical subsequent effort aimed at developing and refining those practical details necessary to successfully meet the expressed purposes, conceptual themes, and approved actions found within that publicly reviewed planning document. Building upon phase one of the cultural landscape report (site history, existing conditions, historical analysis), completed in 2010, this completed second phase now articulates a comprehensive landscape treatment philosophy, as well as specific tasks that are consistent with park legislation and planning, proposing enhancements to landscape character. This report will articulate how to convey the defensive purpose of Fort Jay and Castle Williams; provide visitors with a seamless experience as they navigate National Monument and National Historic Landmark boundaries; and offer myself and future park managers a contextual yardstick for measuring the appropriateness of proposed modifications and new additions to this significant landscape.

Taking special care to ground landscape recommendations in the frame of legislation and approved park plans, Tim Layton and the Olmsted Center for Landscape Preservation project team have worked collaboratively with colleagues from the Northeast Region's Archeological Program and other resource disciplines, as well as park staff, to develop, refine, and present the following treatment recommendations.

The completion of this report does not represent the end of a conversation. Implementing the most ambitious of these recommendations will require the commitment of tremendous resources and many years effort. This document will help to further guide those making myriad decisions regarding funding and implementation over the coming years so that visitors and residents to New York might have a National Park experience of the very highest quality at Governors Island.

Shirley McKinney, Superintendent
Manhattan Sites

ACKNOWLEDGMENTS

It has been our privilege to collaborate with Governors Island National Monument staff, National Park Service Northeast Regional Office staff, and park partners in taking the critical next steps to move elements of the park's *General Management Plan* closer to implementation. This collaboration has paired National Park Service in-house expertise through the Olmsted Center for Landscape Preservation with architects, archeologists, facility managers, interpreters, and park managers to refine the overall directives of the *General Management Plan* into discreet tasks that may be accomplished over time.

We especially thank former Superintendent Patti Reilly for her dedication to advancing the vision of the *General Management Plan* and championing the work of this Cultural Landscape Report Treatment Plan. Superintendent Shirley McKinney coordinated and assisted with the final report publication. Additionally at the park, Mike Shaver, Supervisory Park Ranger, Ed Lorenzini, former Facility Manager, Dena Saslaw, Administrative Officer, and Noah Lumsden, Supervisory Facility Operations Specialist provided research materials, assisted with site visits, reviewed draft reports, and participated in preliminary meetings and presentations to park partners.

As partners in the larger management and preservation of Governors Island, the authors thank Simon Bertrang, The Trust for Governors Island, and John Olsson, Turner Construction Company, for their participation and dialog during presentation of proposed landscape treatment tasks at the National Monument.

In the Northeast Regional Office, a host of specialists worked together to refine a consistent approach to protect and enhance resources at the park. This team includes David Bitterman, Chief, Design and Preservation Planning, Historic Architecture, Conservation and Engineering; Barbara Yocum, former Senior Architectural Conservator, Historic Architecture, Conservation and Engineering; Bill Griswold and Jim Kendrick, Regional Archeologists, Northeast Region Archeology Program; Chuck Smythe, former Ethnography Program Manager; David Uschold, Line Item Construction Compliance Manager and Regional Section 106 Coordinator. The authors would also like to thank Natalya Apostolou, former Cartographer, Park Planning and Special Studies, for providing GIS data on Hurricane Sandy flooding.

At the Olmsted Center, Timothy W. Layton, Historical Landscape Architect, served as lead author with guidance and contributions from Eliot Foulds, Senior Project Manager. Photosimulations illustrating the proposed future conditions of the National Monument were painstakingly prepared, edited, and finalized by Grace Ng, Sasha Bachier, Ashley Braquet, and Angelina Jones, all members of the Olmsted Center's *Designing the Parks* intern program. Charlie Pepper, former Manager, Cultural Landscape Preservation Maintenance and Education joined the regional team in preliminary meetings, and Robert Page, Director, provided overall project guidance and reviewed draft documents.

1. INTRODUCTION

Governors Island National Monument is an irregularly shaped 22.78-acre parcel situated on the north side of Governors Island, New York. The 172-acre island is located one-half mile south of Manhattan and one-third mile west of Red Hook, Brooklyn, at the mouth of the Hudson River. For over two centuries, Governors Island has played a vital role in the defense and development of New York City, primarily shaped by the long occupation of the U.S. Army and U.S. Coast Guard. The National Monument property, created by presidential proclamation in 2001, preserves and protects Castle Williams and Fort Jay—among the best remaining examples of early American coastal fortifications—and interprets them and their role in the defense of New York Harbor and the nation (Figure 1.1).

Park staff, regional specialists, and public participants articulated management goals for Governors Island National Monument in the *Governors Island National Monument Final General Management Plan and Environmental Impact Statement*, approved on April 9, 2009. Supporting research and planning efforts to complete the General Management Plan, the Olmsted Center for Landscape Preservation completed the *Cultural Landscape Report for Governors Island National Monument, Volume I*, in 2010. The report included a narrative site history, an inventory and assessment of existing conditions, and an analysis of significance and integrity using National Register of Historic Places criteria and definitions for the National Monument property. This Volume II report satisfies a key provision of the General Management Plan that called its completion to guide preservation and rehabilitation activities at the National Monument.[1]



Figure 1.1 Fort Jay, Castle Williams, and the majority of the National Monument property on the northern end of Governors Island. Oblique aerial view southwest, circa 2008 (*Governors Island National Monument General Management Plan and Environmental Impact Statement*).

PURPOSE, SCOPE, AND METHODS

The National Park Service uses cultural landscape reports as the primary tool to inform long-term management decisions regarding cultural landscapes. Building on the site history, existing conditions, and analysis and evaluation in the Volume I report, this report serves as a second volume, presenting a treatment plan to guide the implementation of measures that will enhance the historic character of Governors Island National Monument. More specifically, this report provides:

- A treatment philosophy promoting the preservation and long-term care of the National Monument landscape.
- Recommendations for landscape treatment consistent with directives found in park planning documents.
- Updated mapping of existing landscape conditions.
- A strategy for implementing landscape recommendations with the National Park Service Facility Management Software System (FMSS).

This report is also prepared in conformance with guidelines established by the National Park Service Management Policies (2006), Director's Order 28: Cultural Resource Management (1998), NPS 28: Cultural Resource Management Guideline (1997), *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (1996), and *A Guide to Cultural Landscape Reports: Contents, Process and Techniques* (1998).

HISTORIC OVERVIEW

Native Americans of the Manhattan area, a sub-group of the Munsee Delaware tribe, originally used Pagganack, which later became known as Governors Island, as a seasonal fishing camp. In 1637, the island was transferred to the Dutch colonial governor of New Amsterdam, Governor Van Twiller. Van Twiller and his successors, both Dutch and British, used the island as a country retreat, taking advantage of its close proximity to Manhattan. The island's strategic value was realized during the French and Indian War in 1755, when British soldiers became the first military troops stationed on the island. The first substantial defensive elements were constructed at the beginning of the American Revolution when colonial soldiers erected earthen fortifications to fend off British attack. Their efforts were in vain, as the British won control of the island and occupied it for the remainder of the conflict. From this point onward, Governors Island served almost continuously as a military installation.

After the war, Governors Island was briefly abandoned, only to be reinstated as a component of the First American System of New York harbor defenses

in 1794. The First American System, funded by the federal government, was a concerted program of defensive construction along the eastern seaboard. Fort Jay was constructed upon the ruins of Governors Island's prior defenses, largely from earth and vegetative materials. It stood on the highest point of the island, approximately at the center, commanding sweeping views of the harbor. Later improvements, ordered by Congress during the Second American System of harbor defenses in the early 1800s, resulted in the reconstruction and strengthening of Fort Jay, and the construction of Castle Williams—a new, all-masonry, circular fort. These two forts worked in concert with South Battery, constructed prior to the War of 1812 on the east side of Governors Island, Castle Clinton off the southern tip of Manhattan, and Fort Wood, which has come to serve as the masonry base of the Statue of Liberty, defending the upper New York Harbor (Figure 1.2).

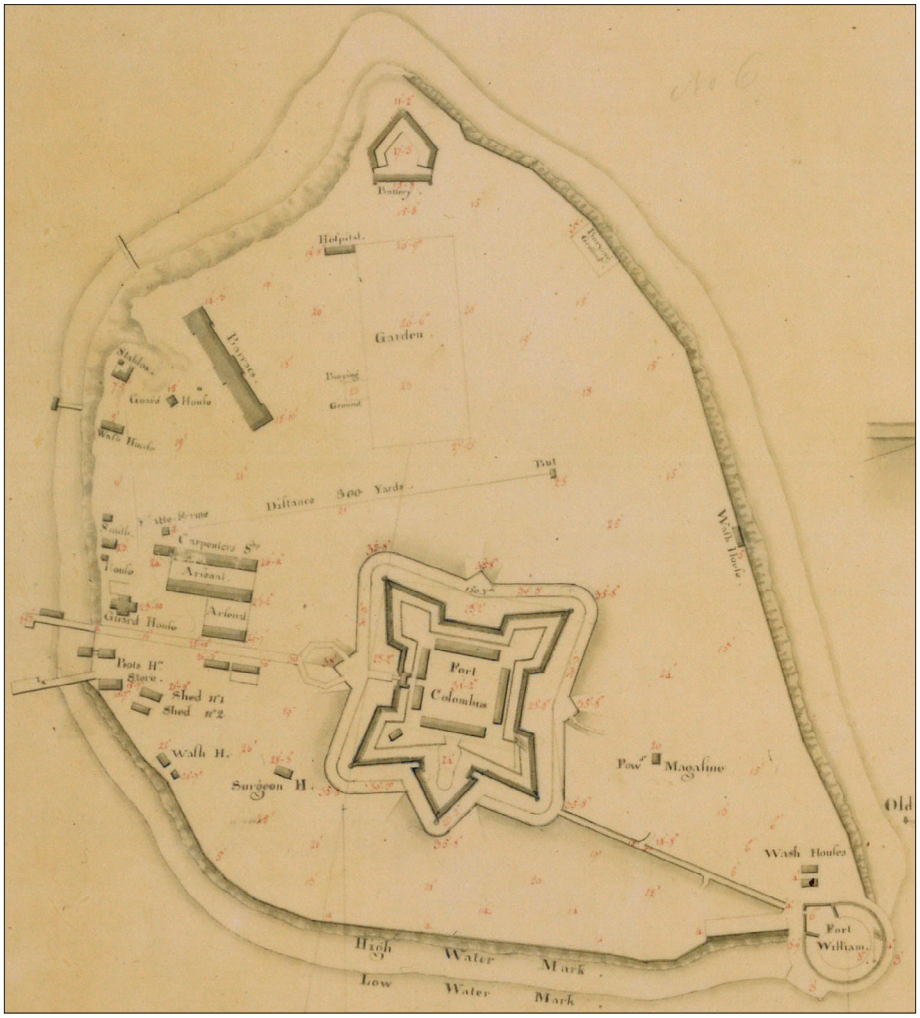


Figure 1.2 ***Plan of defilement of Governor's Island*** **records the fortifications and development on the island during the War of 1812. Plan, 1813 (NARA RG 77 Fortification File, drawer 36, sheet 20A).**

Facilities on Governors Island continued to expand as the post was called upon to house more personnel, military stores, and expanded military functions during the course of the nineteenth century. By the 1830s, as new defenses were constructed closer to the open ocean, inner harbor defenses such as those at Governors Island

grew increasingly obsolete due to advances in naval armament. Starting in the 1830s and in the decades following the Civil War, the U.S. Army began to construct buildings within spaces formerly kept open for effective fields of fire. Changing land use and spatial patterns occurred as the defensive mission at Governors Island was abandoned and the post became designated as a major headquarters for the U.S. Army's activities and facilities in the eastern United States.

One hundred and three acres were added to the island's extents in 1911 when the city of New York placed excavated fill obtained from subway construction upon the tidal flats south of the original island. Associated military activities continued to alter the island through the construction of an airstrip, temporary barracks, and warehouses during the world wars. Recreational facilities were constructed including a polo field and golf course, and permanent contemporary facilities were built to support the island's expanding population. The U.S. Army vacated the island in 1966, relinquishing control to the U.S. Coast Guard which maintained the island as an active base until 1996 (Figures 1.3 and 1.4).



Figure 1.3 Fort Jay, Castle Williams, and development on the northern end of Governors Island when the U.S. Army departed. Oblique aerial view east, 1966 (NARA RG 97s_AHC).

Following the departure of the U.S. Coast Guard, the General Service Administration (GSA) acted as caretaker for the island until January 31, 2003, when the National Monument area was transferred to the Secretary of the Interior for management by the National Park Service. The rest of the island was transferred to the State of New York for administration and management by a joint New York City and State of New York agency, the Governors Island Preservation and Education Corporation (GIPEC). In April 2010, the City and State announced that Governors Island would be transferred from GIPEC to the City of New York and controlled by the Governors Island Operating Entity. The operating entity



Figure 1.4 Fort Jay, center, and Castle Williams, upper left, during the U.S. Coast Guard's tenure. Oblique aerial view northwest, 1982–83 (Library of Congress, http://www.loc.gov/pictures/collection/hh/item/ny0347.photos.118096p/).

was re-named "The Trust for Governors Island" in July 2010. The Trust includes a thirteen-member board, with nine members designated by the Mayor, one by Manhattan Community Board 1, and one each designated by the Governor, the 64th District State Assembly Member, and the 25th District State Senator. On July 14, 2010 the transfer of Governors Island was complete, and the State officially relinquished control.

EVALUATION SUMMARY

During the thirty years between the U.S. Army's 1966 departure and 1996, the U.S. Coast Guard headquartered its Atlantic Area Command on Governors Island. In the early 1980s the U.S. Coast Guard addressed its responsibilities under Section 110 of the National Historic Preservation Act to evaluate and identify significant cultural properties under its stewardship through an agreement with the National Park Service Historic American Buildings Survey (HABS). In turn, the HABS survey informed National Park Service preparation of a National Historic Landmark nomination for the Governors Island National Historic Landmark District that was established in 1985. The survey and nomination provides a comprehensive inventory and analysis of Governors Island historic resources consistent with National Historic Landmark program definitions and criteria for significance.

The Governors Island National Historic Landmark nomination describes the boundaries of an approximately 121-acre historic district following the present

property lines on the west, north, and east (about 50 yards beyond the seawalls), and bounded on the south by Division Road. The nomination states that the district's significance can be understood in the expression of two historic themes. First, "the historic district derives its significance largely from the island's role as a major component in the defense system of one of the country's most important harbors, New York Harbor." Fort Jay and Castle Williams were two of the harbor's largest defense works with Fort Jay begun under the First American System of fortifications. During the Second American System of fortifications in the years preceding the War of 1812, Castle Williams was constructed and Fort Jay redesigned. The National Historic Landmark nomination concludes "both structures are fine examples of their types and exhibit excellent design. They are among the country's best preserved fortifications from an important and innovative period of American military construction."[2] Second, the nomination states "the island is also significant for its role as a major Army administrative center for nearly a century."[3] While the original 1985 National Historic Landmark documentation did not specifically identify a period of significance in the data field reserved for that purpose, the narrative statement of significance provided emphasizes the 1794–1966 period.

The 1985 National Historic Landmark documentation enumerates many historic buildings and structures that reflect and support both the defensive and the administrative theme. Important landscape characteristics such as open spaces and views are described as critical to understanding the operation of the defenses and that also serve as central open space organizing residential development. There are sixty-six contributing resources enumerated and described in the National Historic Landmark documentation. Of these, approximately thirty percent are of twentieth century construction, reflective of Governors Island's role as an Army administrative center. The documentation also identifies forty-five non-contributing resources of pre-1966 construction. These non-contributing buildings and structures within the landmark district are universally of twentieth century construction and further described as supporting utilitarian purposes, or otherwise intended as temporary structures. Thus, evaluations rendered in the National Historic Landmark documentation relative to contributing versus non-contributing status are based upon a qualitative evaluation of the architectural merits of the constructed features. As one part of the Governors Island National Historic Landmark District, these evaluations also apply to resources within Governors Island National Monument boundaries.

ENDNOTES

1 *Governors Island National Monument Final General Management Plan and Environmental Impact Statement* (US Department of the Interior, National Park Service, April 9, 2009), 119.

2 Barbara Hightower and Blanche Higgins, "National Register of Historic Places Inventory – Nomination Form, Governors Island Historic District," 1985, Sect 8:1.

3 Ibid.

2. FRAMEWORK FOR TREATMENT

As defined by the National Park Service, the purpose of a landscape treatment plan is to set forth guidelines for preserving and enhancing historic landscape characteristics and features within the context of contemporary park uses.[1] Treatment describes the future appearance of the landscape at the planning level with preliminary design recommendations. It does not provide construction level details necessary for implementation, nor does it address routine maintenance.

This chapter describes the planning and policy framework within which the landscape treatment guidelines and tasks in this report have been developed. The chapter begins with an overview of applicable regulations and policies, park enabling legislation, and current park planning. Based on this framework, a landscape treatment philosophy is articulated to guide treatment of the Governors Island National Monument landscape, including a primary treatment approach and treatment reference date.

NATIONAL PARK SERVICE REGULATIONS AND POLICIES

The framework for treatment of the Governors Island National Monument landscape is guided broadly by the mission of the National Park Service, defined in the Organic Act of 1916, "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The application of this mission to cultural landscapes is articulated in *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, which in turn is interpreted within a hierarchy of regulations and policies in National Park Service management.

As a cultural resource, management of the Governors Island National Monument landscape is defined by 36 Code of Federal Regulations: Parks Forests and Public Property, Part 2: Resource Protection, Public Use and Recreation (preservation of natural, cultural and archeological resources). The application of these regulations to cultural landscapes is contained within National Park Service Management Policies (2006), Director's Order #28: Cultural Resource Management, and NPS-28: Cultural Resource Management Guideline. Several management standards outlined in NPS-28 provide a broad philosophical base for all four treatment approaches outlined in *The Secretary of the Interior's Standards* and are directly applicable to the Governors Island National Monument landscape:

- Land use activities, whether historic or introduced, do not impair archeological resources.
- Uses addressing programmatic needs or park facilities within a cultural landscape, such as visitor centers, parking, interpretive structures, housing, administrative facilities, maintenance yards, and storage areas, are carefully considered in the context of the significance of the landscape.
- Use is monitored and regulated to minimize both immediate and long-term damage.
- Contemporary facilities do not adversely impact the landscape's physical and visual character. New facilities are compatible with the historic character and material of the landscape.
- Contemporary structures to facilitate access, such as ramps, railings, signs, and curb cuts, are designed and located to minimize adverse impacts on the character and features of a cultural landscape.
- Access to a cultural landscape that is vulnerable to damage from human use is limited, monitored, or controlled.
- All treatment and use decisions reflect consideration of effects on both the natural and built features of a cultural landscape and the dynamics inherent in natural processes and continued use.
- Use of destructive techniques, such as archeological excavation, is limited to providing sufficient information for research, interpretation, and management needs.
- All work that may affect cultural landscapes is evaluated by a historical landscape architect and other professionals, as appropriate.
- All modification, repair, or replacement of materials and features is preceded by sufficient study and recording to protect research and interpretive values.
- New work, materials, and replacement features are identified, documented, or permanently marked in an unobtrusive manner to distinguish them from original work, materials, and features.
- A proposed treatment project is initiated by the appropriate programming document, including a scope of work and cost estimate from a Cultural Landscape Report. Such projects include preservation maintenance as well as major treatment. No treatment is undertaken without an approved Cultural Landscape Report or work procedure specifying the work, and Section 106 compliance.
- A treatment project is directed by a historical landscape architect and performed by qualified technicians.
- Representative features salvaged from a cultural landscape are accessioned and cataloged, provided that they fall within the park's scope of collection statement.
- All changes made during treatment are graphically documented with drawings and photographs. Records of treatment are managed as archival materials by a curator or archivist within the park's museum collection.
- Work on historic structures, including modifications to improve drainage and access, does not harm the character-defining features of a cultural landscape.

ENABLING LEGISLATION

Governors Island National Monument was established by presidential proclamation under the authority of the Antiquities Act of 1906(16 USC 431-433). Officially titled as "An Act for the Preservation of American Antiquities," this legislation authorizes the President of the United States to protect federal property from disposal or inappropriate development, without the approval of Congress. President Theodore Roosevelt first used this authority on September 24, 1906 to protect Devils Tower in northeastern Wyoming.

Proclamation 7402—Establishment of the Governors Island National Monument

President William J. Clinton established Governors Island National Monument on January 19, 2001 (Figure 2.1). President Clinton's proclamation specifically cites that:

> The monument, part of a larger 1985 National Historic Landmark District designation, contains two important historical objects, Castle Williams and Fort Jay. Between 1806 and 1811, these fortifications were constructed as part of the First and Second American Systems of Coastal Fortification. Castle Williams and Fort Jay represent two of the finest types of defensive structures in use from the Renaissance to the American Civil War.

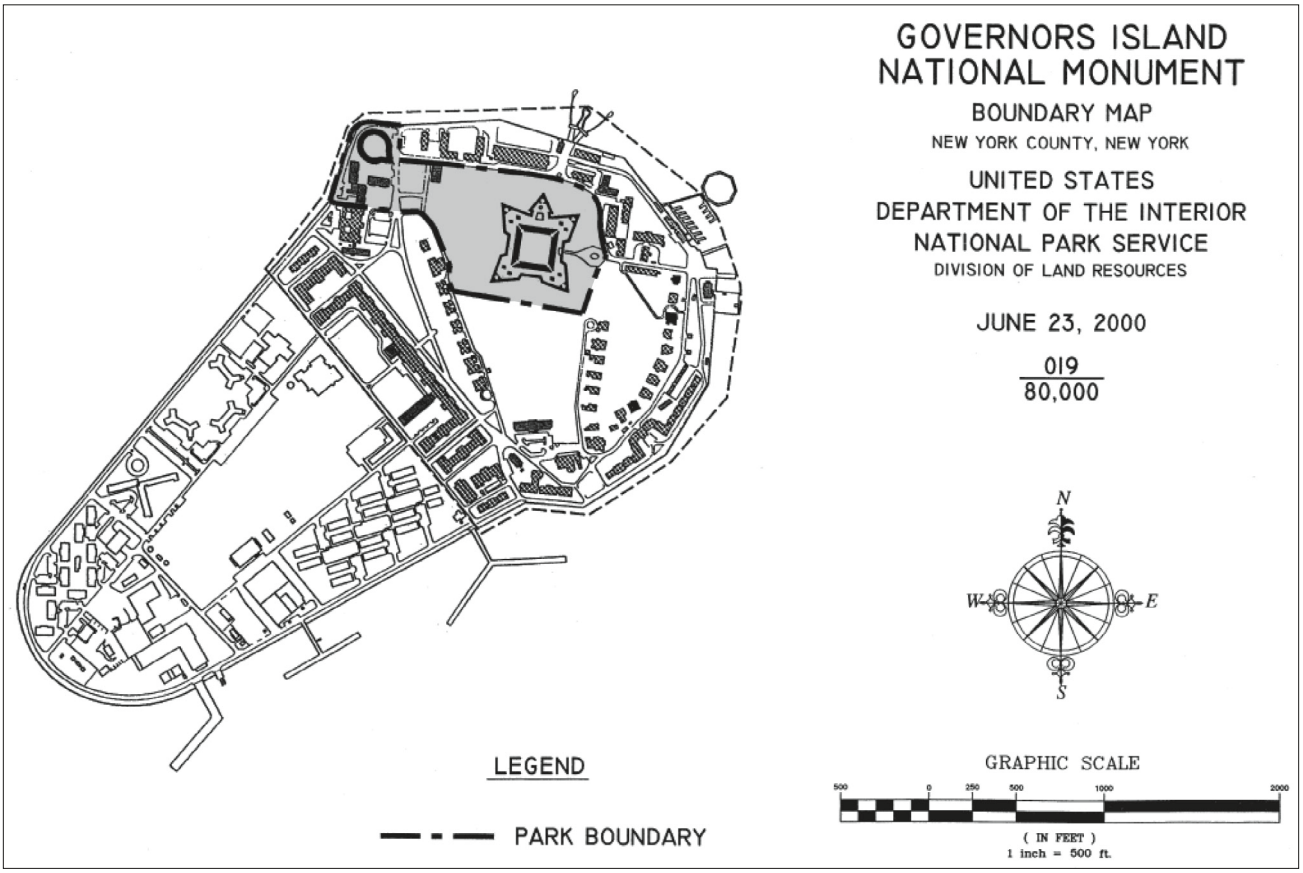


Figure 2.1. National Monument boundary map, 2001. The national monument property, created by President Clinton's proclamation, is highlighted with a gray tone (Federal Register).

Specifying a monument boundary of approximately 20 acres as being the smallest area compatible with the proper care and management of the objects (Fort Jay and Castle Williams) under protection, the proclamation acknowledges important post-Civil War roles of the two fortresses through World War II, yet places emphasis upon the strategic defensive position, as well as upon the "glacis," an engineered defensive landform exterior to the two fortresses, "sloping down to the waterfront." Further emphasizing nineteenth century resources, the presidential proclamation of 2001 also states that the monument "includes a number of associated historical buildings constructed as part of the garrison post in the early part of the nineteenth century." Language included in the proclamation emphasizes that the purpose for the National Monument is to provide "an excellent opportunity for the public to observe and understand the harbor history, its defense, and its ecology."

Proclamation 7647—Establishment of the Governors Island National Monument

Following the legal land transfers and waivers by New York State and New York City, President George W. Bush established a slightly larger Governors Island National Monument on February 7, 2003. President Bush's proclamation added Building 107, Dock 102, and an easement on Building 140 to the National Monument property (Figure 2.2). Additionally, the proclamation revised some

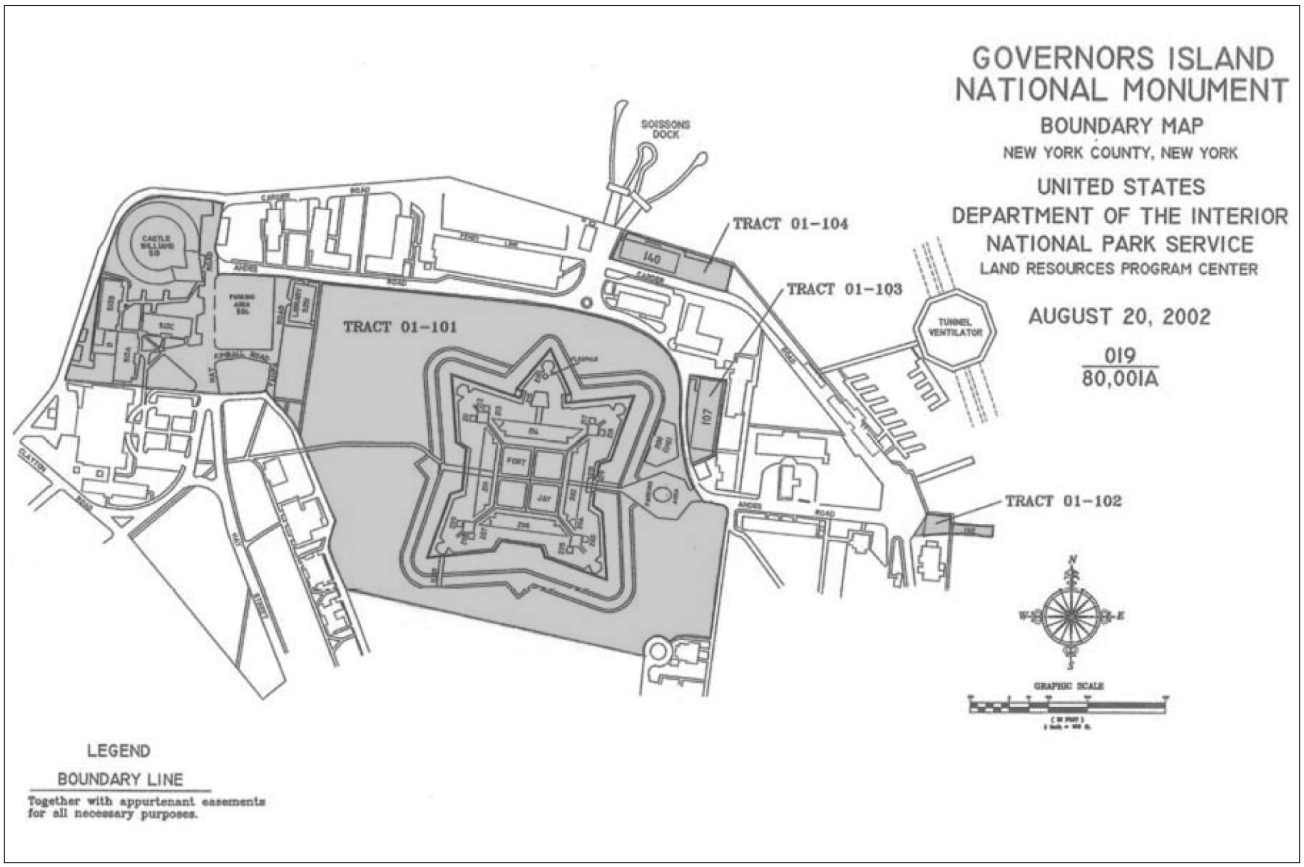


Figure 2.2. National Monument boundary map, 2003. After the legal property transfers, President Bush issued a proclamation with a slightly larger national monument property, highlighted with a gray tone (Federal Register).

of the earlier language and highlighted the importance of Fort Jay and Castle Williams in the first lines stating:

> On the north tip of Governors Island, at the confluence of the Hudson and East Rivers, stand two fortifications that served as an outpost to protect New York City from naval attack. These two important historic objects, Castle Williams and Fort Jay, are part of a National Historic Landmark District designated in 1985. Between 1806 and 1811, these fortifications were constructed as part of the First and Second American Systems of Coastal Fortification. Castle Williams and Fort Jay represent two of the finest examples of defensive structures in use from the Renaissance to the American Civil War.

President Bush's proclamation added to the purpose statement that the monument's "proximity to lower Manhattan also makes it an appropriate location from which to reflect upon the tragic events of September 11, 2001."

Public Law 108-447, 118 Stat. 3068—Consolidated Appropriations Act, 2005

Signed into law on December 8, 2004, Section 136 authorized the Secretary of the Interior to acquire lands, waters, or interests therein for the purpose of operating and maintaining facilities in the support of transportation and accommodation of visitors to Ellis, Governors, and Liberty Islands. The legislation further specifies that the land, waters, or interests may include a pier, dock, or landing located in New York or New Jersey. In accordance with the provisions of this law, the park acquired 0.13 acres of submerged land immediately north of the Dock 102 parcel on January 22, 2013. The Dock 102 parcel is annotated as 01-102 and the submerged land parcel is annotated as 01-106 (Figure 2.3).



Figure 2.3. National Monument Segment Map, 2013 (NPS Land Resources Program).

PARK PLANNING

Cultural Landscape Reports are the implementation document for landscape treatment based on a foundation of park planning, from service-wide initiatives to park-level program plans.

Programmatic Agreement

Following the 1995 U.S. Coast Guard decision to close facilities at Governors Island, the Coast Guard and the General Services Administration (GSA) entered into a Programmatic Agreement spelling out details of the proposed closure and disposal of property as part the federal government's responsibilities for consultation with interested parties under the National Historic Preservation Act of 1966. In addition to the U.S. Coast Guard and the General Services Administration, parties to the 1996 agreement include the Advisory Council on Historic Preservation, the New York State Historic Preservation Officer, the City of New York, and the National Trust for Historic Preservation. A key provision of this agreement was the requirement placed upon the GSA as the "disposal agency" to prepare a "Governors Island Preservation and Design Manual." The purpose of this manual was to establish standards for appropriate future activities within the National Historic Landmark, and to also establish guidelines for application of the standards.

Governors Island Preservation and Design Manual, General Services Administration

The General Services Administration (GSA), working in consultation with the New York City Planning Department, the New York City Landmarks Preservation Commission, the New York State Office of Parks, Recreation, and Historic Preservation, the Advisory Council on Historic Preservation, and the National Trust for Historic Preservation, completed the *Governors Island Preservation and Design Manual* on January 28, 2003. Completion of the *Governors Island Preservation and Design Manual* preceded the legal transfer of Governors Island to the National Park Service and the Governors Island Preservation and Education Corporation (GIPEC) and was intended to guide development of the National Historic Landmark District while ensuring preservation of the historic and architectural resources contributing to the district's significance.[2]

The 2003 *Governors Island Preservation and Design Manual* incorporates broad guidance for the treatment of the cultural landscape under the headings "Standards for Site Development" and "Standards for Landscaping." These standards include preserving significant landscape patterns and features, specifically Fort Jay's glacis, as well as using similar plant materials in similar situations, avoiding known or potential archeological resources, locating utilities below ground with minimal excavations, banning property enclosing fencing, and

locating large-scale communications equipment outside the landmark district. The manual also includes an inventory and evaluation of the historic district's existing buildings and sites and assigns each a classification number based on "individual historic and architectural significance."[3] The classification is presented in four categories that are broadly consistent with resource evaluations previously presented in the 1985 National Historic Landmark documentation (Figure 2.4):

- Category 1 properties are individually listed on the National Register or have been designated as individual landmarks by New York City Landmarks Preservation Commission
- Category 2 properties are contributing resources within the Historic District
- Category 3 properties are non-contributing elements within the Historic District.
- Category 4 properties are intrusions into the Historic District.

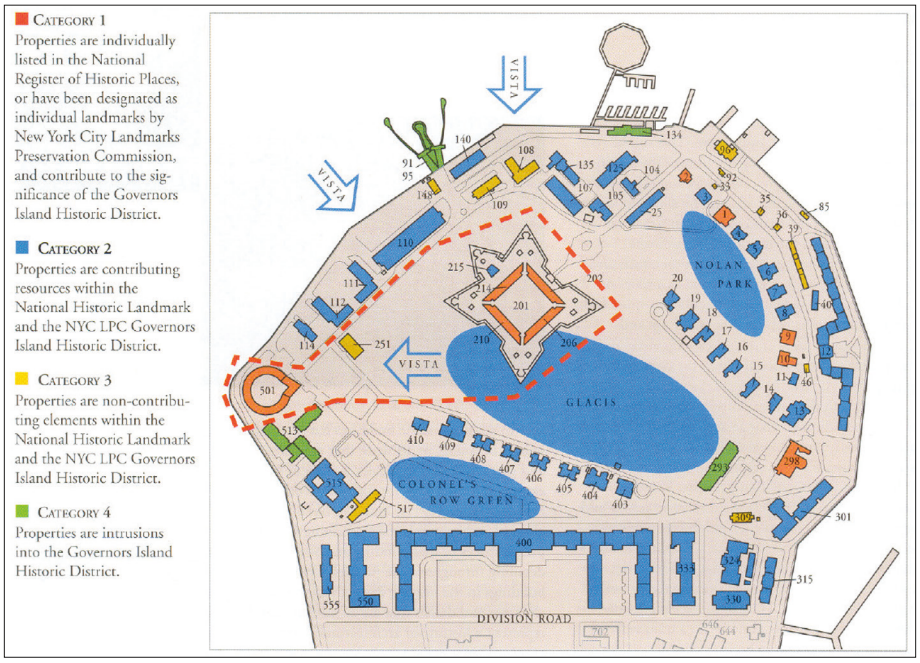


Figure 2.4. Property inventory and classification of existing buildings and sites, 2003. The map illustrates four categories based on individual historic and architectural significance (*Governors Island Historic District Preservation and Design Manual: Part One, Preservation and Design Standards*, General Services Administration).

Acknowledging the evolution of existing conditions over an extended period of time, the manual's presentation of buildings and sites according to these categories relies on prior qualitative evaluations presented in the National Historic Landmark documentation, rather than the construction of buildings or features within a particular timeframe. Individual "Building and Property Summary Sheets" prepared for various Governors Island buildings and sites are consistent with prior evaluations made as part of the National Historic Landmark nomination, providing additional details regarding affiliated landscape and site features. Landscape vistas were not documented individually on separate sheets, but rather detailed as part of the features of individual buildings, especially with regard to Fort Jay as "Building 201" and Castle Williams as "Building 501." On

the chart summarizing the findings of the building and property summary sheets, "Vistas" are identified as important "Category 2" contributing resources. The open spaces of Nolan Park, the Colonel's Row Green, and the historic engineered "Glacis" are provided with individual summary sheets. Similar to the evaluation of vistas, these historic open spaces are identified as important "Category 2" contributing resources.

Balanced Budget Act of 1997

The Balanced Budget Act of 1997 required the General Services Administration to dispose of all rights, titles, and interests of the United States in Governors Island. A quitclaim deed dated January 31, 2003, officially transferred Governors Island from the General Services Administration to the National Trust for Historic Preservation. This transfer facilitated the attachment of restrictive and preservation covenants under New York real estate law. The National Trust for Historic Preservation subsequently transferred approximately twenty acres specified in the 2001 Presidential proclamation to the Department of the Interior and the remainder of the island property to the Governors Island Preservation and Education Corporation (GIPEC). In 2010, GIPEC was dissolved and The Trust for Governors Island, a New York City instrumentality was established as the entity responsible for the roughly 150 acres beyond the National Monument boundary.

The 2003 quitclaim deed requires future owners to "maintain and preserve the interior and exterior features that qualify the "Island Property" and the "Monument Property" respectively for inclusion in the State and National Registers of Historic Places consistent with the *Governors Island Preservation and Design Manual*."[4] Additionally, the 2003 quitclaim deed includes covenants requiring future landowners to consult with the New York State Office of Parks, Recreation, and Historic Preservation and the New York City Landmarks Preservation Commission prior to construction, alteration, modification or any other work which would affect the integrity or the appearance of the significant features and spaces in the National Historic Landmark District.[5]

General Management Plan

In 2009, the National Park Service completed the *Governors Island National Monument General Management Plan and Environmental Impact Statement,* describing future desired resource conditions and visitor experiences. The plan's preferred alternative develops the "National Monument as a Harbor Center"—a hub of activity for visitors wanting to explore Governors Island, New York Harbor, and other harbor attractions.[6] The preferred alternative emphasizes the island's strategic location in the harbor, its historic role in coastal defense, and the relationship between the history and development of the harbor and New York City.

Referencing both presidential proclamations, the General Management Plan cites the National Monument's purpose and role in preserving and protecting Castle Williams and Fort Jay, and the interpretation of the historic fortresses as both objects as well as their relationship to the defense of New York Harbor and the nation. The plan identifies opportunities to educate the public about the evolution of coastal defense and military communities as well as the harbor's rich history and ecology.[7] The historic fortifications, Fort Jay (1794–1809) and Castle Williams (1807–1811), including their engineered landscape features such as the external glacis and covered defile, are the National Monument's most prominent fundamental resources.[8] The *Governors Island National Monument General Management Plan and Environmental Impact Statement* does not specify a treatment date or period as a point of reference for managing landscape character. However, measures meant to expand interpretation of Fort Jay and Castle Williams during their service as active coastal defenses is implied by specific actions outlined in the plan (Figure 2.5). The combined effect of the measures specified in the General Management Plan reestablishes general landscape conditions, including views from Fort Jay to the harbor and the covered defile, that ceased to exist beyond the late nineteenth century.



Figure 2.5. Actions common to all planning alternatives for the National Monument, 2009. Common actions identified during the General Management Plan process are meant to expand interpretation of Fort Jay and Castle Williams during their service as active coastal defenses (*Governors Island National Monument General Management Plan and Environmental Impact Statement*).

Specific actions related to the cultural landscape outlined in the *Governors Island National Monument General Management Plan and Environmental Impact Statement* include:

- Completing a Landscape Treatment Plan as a follow up effort to the 2010 Cultural Landscape Report.
- Removing Building 513 and rehabilitating the landscape to re-establish historical connections and views among the forts and the harbor, to provide for recreational use by visitors, and to re-establish an appropriate setting for Castle Williams.
- Removing Building S-251, parking area 504 and rehabilitating the landscape to interpret the relationship between the two forts and the covered defile that once connected them.
- Developing a new visitor pathway between the west gate of Fort Jay to Castle Williams following the route of the former covered defile. This could be a new pathway following the alignment of the former covered defile, or, potentially a rehabilitation or restoration of the original defile passageway, parts of which have been recently uncovered.
- Rehabilitating the main entrance to Fort Jay to suggest the missing central feature of the barbican, to help visitors better understand the defensive features of the entrance route.
- Removing landscape alterations and constructed features associated with the parade ground's former golf course.
- Preserving significant landscape features and patterns such as tree-lined streets, driveways, and walks, open spaces, and the glacis surrounding Fort Jay.
- Preserving mature trees and removing vegetation that is non-contributing, blocks important views, or is otherwise diseased or dying.
- Installing site or building lighting within the historic district that is appropriately scaled and compatible with the area in which it is installed.[9]
- Avoiding permanent property enclosure fencing or barriers that would separate the National Monument from the adjacent landmark district.[10]

The sum of the landscape related actions listed above accomplish three major purposes. These include treatment of Fort Jay, Castle Williams, and the surrounding landscape in a way that allows visitors to understand their original defensive purpose; accommodates visitor service infrastructure supporting universal accessibility and a positive visitor experience, and; provides a seamless connection between the physical character of the National Monument and the National Historic Landmark district.

Long-Range Interpretive Plan – 2010

In 2010, the *Governors Island Long-Range Interpretive Plan* was completed outlining actions that should occur over the next three to five years for interpretive services, facilities, and media. The plan reiterates park interpretive themes identified in the General Management Plan, describes visitor experience goals, and recommends a wide variety of personal and non-personal interpretive services and outreach activities that will best communicate the park purpose, significance, and themes.[11] The park's interpretive themes, as defined in the General Management Plan, include:[12]

Place in the National Experience: Castle Williams and Fort Jay on Governors Island represent an important early effort to protect and defend the United States through a system of strategically placed coastal fortifications, an effort that continued beyond the life of the forts until the end of the island's military career.

Place in the Local and World Communities: New York City's emergence as a nationally and internationally important city elevated Governors Island's stature, command, and responsibilities, offering those stationed on the island enormous influence on local and global issues.

Place in the Environment: Governors Island—as part of the natural environment of New York Harbor, with its rich and intricate ecosystem of bays, estuaries, rivers, islands, and other geographical features—is an ideal place to observe and study the important role that natural systems and humans play in the development and evolution of New York Harbor and surrounding metropolis.[13]

Guided by the interpretive themes, the *Governors Island National Monument Long-Range Interpretive Plan* identifies fifteen goals for the park's interpretive program. Several goals address visitor engagement and experience such as improving the arrival and orientation experience, expanding interpretive services outside of the park boundary, and improving the park website. These interpretive goals will be periodically reexamined with park partners to best determine the types and timing of actions to be pursued.

GENERAL TREATMENT ISSUES

Through the development of this report and discussions with the park staff and partners, two treatment issues were identified that pertain to the specific tasks detailed in the next chapter, as well as tasks that may arise in the future, but have not been described in this report. For Governors Island National Monument, landscape resiliency and sustainability and archeological review and compliance are general issues relevant to tasks preserving and enhancing the cultural landscape.

LANDSCAPE RESILIENCY AND SUSTAINABILITY

On October 29, 2012, Hurricane Sandy and a massive storm surge hit New York City and Governors Island. This event, resulting in $65 billion of damage in the United States, served as stark reminder of the threats to coastal property as storm events become more frequent and severe and will be exacerbated by future sea-level rise.[14] Working with partners at Gateway National Recreation Area and the regional park planning office, mapping for this report depicts the approximate limit of the Hurricane Sandy flood waters to aid decision making.

Additionally proposed plant materials, including trees, shrubs, and turf, should be evaluated for resiliency to harsh coastal conditions and potential impacts from high visitation. For example trees native to New York, such as black gum (*Nyssa sylvatica*) and seedless cultivars of American sweetgum (*Liquidambar styraciflua*), exhibit air-borne and soil salt tolerance and an adaptability to periodically inundated soils. However, designs should consider the limited and appropriate use of non-native plant material where there is a historical precedent and where tolerating conditions such as salt spray, soil salinity, wind, and periodic flooding will result in a more resilient and sustainable landscape than the routine replacement of failing native plants.

ARCHEOLOGICAL REVIEW AND COMPLIANCE

Many proposed actions to preserve and enhance the National Monument landscape, from infill planting of a historic hedge to removing a non-historic parking lot, will require ground disturbance and will necessitate archeological review and compliance. During the development of this report, NPS Northeast Region cultural resource experts reviewed in detail tasks to re-establish the historic landscape connection between Fort Jay and Castle Williams and proximity to prior archeological investigations.

In 1994, during the U.S. Coast Guard's tenure, Louis Berger and Associates completed an emergency recovery of the partial remains of six Euro-American individuals inadvertently discovered by utility excavations.[15] The recovery, in the vicinity of the Hay and Andes roads intersection, proved to be an isolated discovery and not associated with a graveyard or cemetery. In 2014, The Public Archeology Lab completed Phase IB/II archeological investigations in the area between Castle Williams and Fort Jay (Contract No. P10PPC60542). No human remains, fragmentary or articulated, or features associated with burials were identified in any of the excavated units.[16] Other proposals and projects in specific areas of the National Monument will require archeological review, compliance, and on-site supervision as the details of those projects dictate.

LANDSCAPE TREATMENT PHILOSOPHY

Due to the complexity of preserving and enhancing a cultural landscape such as Governors Island National Monument, a sound philosophy is necessary to guide treatment choices so that they are consistent and justifiable. For historic landscapes, a treatment philosophy defines an overall goal of enhancing historic character and perpetuating those characteristics and features that convey historic significance based on the landscape's historic integrity, park policies and planning, natural and cultural resource protection, park operations, and other resource management issues.

The following landscape treatment philosophy is based on four principles:

1. Landscape treatment will enhance historic landscape character and convey the defensive purpose of Fort Jay and Castle Williams

2. Landscape treatment will promote a seamless visitor experience between the National Monument and National Historic Landmark properties

3. Where necessary, landscape treatment will introduce context sensitive new additions, drawing on longstanding relationships of scale, materials, and geometry

4. Landscape treatment will incorporate environmental resiliency and sustainability

These principles and the following narrative statement are derived from and consistent with the significance of Governors Island National Monument and with the long-term plans expressed in the park's General Management Plan. Together, they may be used as a resource guiding subsequent development or refinement of design guidelines, recommendations, and specific treatment actions.

> Governors Island National Monument was established to preserve and protect Castle Williams and Fort Jay and to interpret their role in the defense of New York Harbor and the nation. These two fortresses dominate the small 22-acre National Monument landscape, serving as focal points within the larger Governors Island National Historic Landmark District. Remnant twentieth century infrastructure is found within the National Monument and throughout Governors Island supporting an administrative and logistical mission following the late nineteenth century obsolescence of inner harbor defenses. The presence of twentieth century buildings and plantings between Fort Jay and Castle Williams currently impedes visitor understanding of their historic defensive purpose. Tactical views are blocked by late twentieth century military housing units. The engineered glacis slope between Fort Jay and Castle Williams is interrupted by an abandoned twentieth century library building, retaining walls, a large parking lot, golf course greens, sand traps, and plantings. Pedestrian circulation within the National Monument is unclear, inconvenient, and difficult for visitors with limited physical abilities.
>
> The Governors Island National Monument landscape will be rehabilitated consistent with the directives of the approved General Management Plan

(2009), preserving Fort Jay, Castle Williams, and external defensive features and facilitating public use and enjoyment within the wider National Historic Landmark District. The rehabilitated National Monument landscape will support educational and interpretive objectives, removing twentieth century buildings that both block historic tactical views and obscure the defensive features present when Fort Jay and Castle Williams defended New York City. The rehabilitated landscape will include reestablished views to the harbor, rehabilitated earthen parapets, engineered slopes, and external defensive features supporting visitor understanding of the operation of the historic defenses. Reestablishment of a flagstaff at Castle Williams will communicate the role of this place in the historic defense of the harbor and the wider development of New York City.

The rehabilitated landscape will support universal accessibility to National Park Service public facilities and programs. Preserving earthen parapets and reestablishing views to the harbor will require the selective removal of existing mature trees. Where tree removals are necessary, these will be replaced with new tree plantings supporting visitor comfort and enjoyment at locations that do not block important views or damage defensive features. Where new visitor infrastructure such as walkways and ancillary structures are judged necessary to facilitate public visitation, barrier-free access, and interpretation of historic resources, the design of these new elements will take cues from former longstanding alignments, geometries, and massing and scale relationships. Small-scale features such as benches, outdoor lighting, signage, and other urban furnishings required for contemporary use will be consistent wherever possible with those prescribed by National Monument partners. The proposed rehabilitation of the Monument's landscape and removal of twentieth century building and landscape features should be considered from a historic district perspective to ensure consistency of maintenance practices and uniform treatment of pedestrian sidewalks, roadways, and urban street plantings. This will promote an overlay of consistent landscape character and a cohesive experience for those visiting Governors Island.

PRIMARY TREATMENT

To implement this landscape treatment philosophy, the recommended primary treatment for Governors Island National Monument is rehabilitation. Rehabilitation was selected as a primary treatment for its capacity to accommodate repair and replacement of deteriorated and missing historic features, while simultaneously accommodating compatible alterations and new additions to the historic property to facilitate its continued use as a unit of the national park system.

Rehabilitation is defined as, "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."[17] The Secretary of the Interior defines the following ten standards under rehabilitation:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right shall be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration required replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatment, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.[18]

Effective rehabilitation facilitates the accommodation of public visitation and reuse of vacant buildings within Fort Jay. While rehabilitation standards allow for such change, the emphasis of treatment should be on preservation of extant historic features and replacement of missing historic features, as defined in standards one through eight. Standards nine and ten are warranted because of the need to adapt the historic landscape to accommodate public visitation and interpretation. Rehabilitation provides the flexibility for adding such features as interpretive waysides and for reestablishing truncated circulation routes in a manner that is compatible with the historic character of the landscape. Rehabilitation also provides the flexibility to accommodate multiple resource objectives, including avoidance of invasive species, and to address contemporary maintenance considerations, such as altering vegetation to mitigate maintenance and disease concerns.

As interpreted in *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, the

standards do not require that landscapes be maintained in a static appearance, but rather that landscapes be managed to preserve and enhance historic character. Managing for historic character means that those fundamental aspects of a landscape that convey its significance will be perpetuated. For Governors Island National Monument, this means perpetuating the park's fundamental landscape resources.

TREATMENT DATE

Identification of a treatment date provides an objective and practical benchmark for managing historic landscape character. An appropriate treatment date may correspond to a time during the historic period when a landscape reached the height of its development or a time that best illustrates a property's significance and interpretive themes. An effective treatment date is not necessarily bound to the end-date of a property's period of significance. For example, at the Home of Franklin Roosevelt (1793–1945) the landscape treatment date is circa 1941. At Gettysburg National Military Park (1863–1936) the approved treatment date has been established as circa 1863. At Hampton National Historic Site (1745–1948), a late 1860s timeframe guides landscape treatment. Given the application of a rehabilitation treatment strategy, the identification of a treatment date is not meant to serve the purposes of carrying out an accurate restoration of former conditions, but rather to serve as a practical point of reference for avoiding the introduction of anachronistic features or qualities which never co-existed on the property at the same point in time.

While a specific treatment date has not been explicitly identified in the approved *Governors Island National Monument Final General Management Plan and Environmental Impact Statement*, building demolitions and landscape rehabilitation stipulated as part of the plan will create general landscape conditions exterior to Fort Jay and Castle Williams that have not existed since the mid-1870s. A late-nineteenth century treatment date such as circa 1875 will focus landscape treatment of the National Monument landscape on the period of time when Fort Jay and Castle Williams remained actively involved in their original defensive purpose. The late-nineteenth century reference point should not be applied within the narrow confines of the Fort Jay interior quadrangle, where extensive alteration to the inward facing building facades occurred during the late nineteenth and early twentieth centuries. An appropriate alternative frame of reference guiding the treatment of the Fort Jay quadrangle is a point in time where it is practical and reasonable to reestablish the former symmetrical relationships and to reinstitute the high level of landscape caretaking and inventory of landscape furnishings and features that projected Fort Jay's military bearing. A reference date of circa 1941, prior to the United States entry into World War II, may appropriately serve this purpose.

FACILITY MANAGEMENT SOFTWARE SYSTEM WORK PLANNING

For the past four decades, the National Park Service has implemented the use of facility management computer software to manage park infrastructure and track costs associated with their care. Accurate organization and timely updates to the National Park Service Facility Management Software System (FMSS) enables parks to prioritize projects and create funding requests that accurately reflect asset value and condition. FMSS hierarchy consists of Sites (e.g. Governors Island National Monument), Asset Types (e.g. Maintained Landscapes), Locations (geographic areas, e.g. Castle Williams Landscape), and Assets (features, e.g. turf).

The Governors Island National Monument cultural landscape is tracked through a number of Asset Types including Roads, Bridges, Fortifications, Maintained Landscapes, Buildings, Water Systems, and Waste Water Systems. A significant number of assets associated with the cultural landscape are tracked under the "Maintained Landscapes" asset type. For the purposes of the FMSS database, a Maintained Landscape typically includes exterior park areas that have been developed and improved to support operations or visitor activities. To be classified as a Maintained Landscape, a landscape must require regular, recurring maintenance and include built features.

Organization of FMSS data varies by park to reflect specific resources for which the park needs to track costs. At the time of writing, Governors Island National Monument's Maintained Landscapes are tracked within three separate locations. These include, "Governors Island Landscape" (70140), "Fort Jay Landscape" (230934), and "Castle Williams Landscape" (230935). Many of the Assets associated with Governors Island Maintained Landscapes are already entered in FMSS, however, additional Asset data will be required as landscape treatment projects are identified and developed. Recommended additions to the existing FMSS data for Governors Island are provided in a table at the end of the Treatment Tasks chapter. Additionally, this table translates the cultural landscape treatment recommendations to FMSS work orders and tasks.

ENDNOTES

1 Robert R. Page, Cathy A. Gilbert, and Susan Dolan, *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington, D.C.: US Department of the Interior, National Park Service, 1998), 81.

2 John Cullinane Associates, *Governors Island Historic District Preservation and Design Manual: Part One, Preservation and Design Standards* (US General Services Administration, January 28, 2003), 1.

3 Ibid., 8.

4 Quitclaim Deed, January 31, 2003, 13, available at: http://landsnet.nps.gov/tractsnet/documents/GOIS/Deeds/gois1.pdf.

5 Ibid.

6 *Governors Island National Monument Final General Management Plan and Environmental Impact Statement* (US Department of the Interior, National Park Service, April 9, 2009), 116.

7 Ibid., 3.

8 Ibid., 25.

9 Ibid., 119-121.

10 Ibid., 121.

11 Harpers Ferry Center Interpretive Planning, *Governors Island National Monument Long-Range Interpretive Plan* (US Department of the Interior, National Park Service, October 2010), 6.

12 Actions identified in the park *Long-Range Interpretive Plan* will be revisited during the completion of the Foundation Document and in light of advances in technology and changes on the island to capitalize on new approaches to foster relevant connections for the visitors.

13 *General Management Plan*, 43-46.

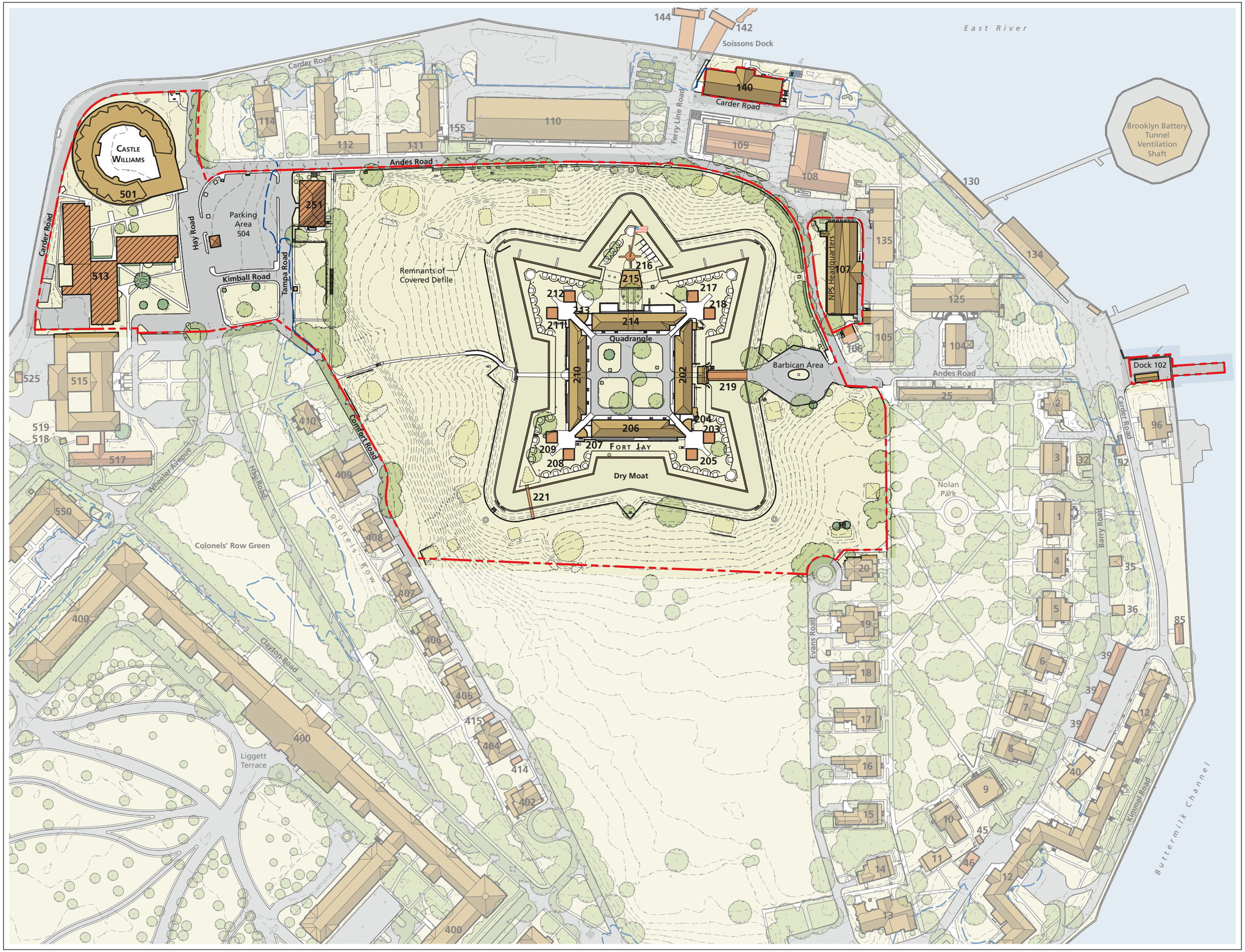
14 National Hurricane Center, "Costliest U.S. Tropical Cyclones Tables Updated," last modified January 26, 2018, https://www.nhc.noaa.gov/news/UpdatedCostliest.pdf.

15 *Emergency Data Recovery and Archaeological Testing and Archaeological Monitoring Site Number 06101.007420* (East Orange, NJ: Louis Berger & Associates, Inc., August 1994), 79-81.

16 Ora Elquist and Holly Herbster, *Phase IB/II Archeological Investigations for the GOIS 2014 A Archeological Inventory of the Area Between Castle Williams and Fort Jay* (Pawtucket, RI: The Public Archaeology Laboratory, Inc., March 2015), 70.

17 Charles A. Birnbaum and Christine Capella Peters, eds., *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington, D.C.: US Department of the Interior, 1996), 48.

18 Ibid., 49.



Cultural Landscape Report

Governors Island National Monument

Governors Island, New York

Existing Conditions Site Wide

National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Governors Island Topographic and Boundary Survey, Langan Engineering & Environmental Services, 2012
2. Title Survey of Governors Island, Montrose Surveying Company, LLP, 2003
3. Ortho Imagery, City of New York Department of Information Technology and Telecommunications, 2010
4. Governors Island Park and Public Space Project Site Plan, West 8 New York, 2013
5. Hurricane Sandy's Impact – Estimated Height of Flood Waters at Governors Island, produced by Natalya Apostolou, GATE, 2012

DRAWN BY

Tim Layton, AutoCAD and Illustrator CS6, 2014

LEGEND

- National Monument Boundary
- Easement on Building 140
- Estimated Limit of Hurricane Sandy Flood Water
- Building / Structure
- Building / Structure Non-contributing per NHL
- Building / Structure to be Removed per GMP
- Paved Vehicular Circulation
- Paved Pedestrian Circulation
- Deciduous Tree
- Evergreen Tree
- Golf Course Green / Tee Box
- Golf Course Sand Trap

NOTES

1. Projection: New York State Plane, Long Island Zone, NAD 83, Feet
2. All features shown in approximate scale and location

0′ 45′ 90′ 180′

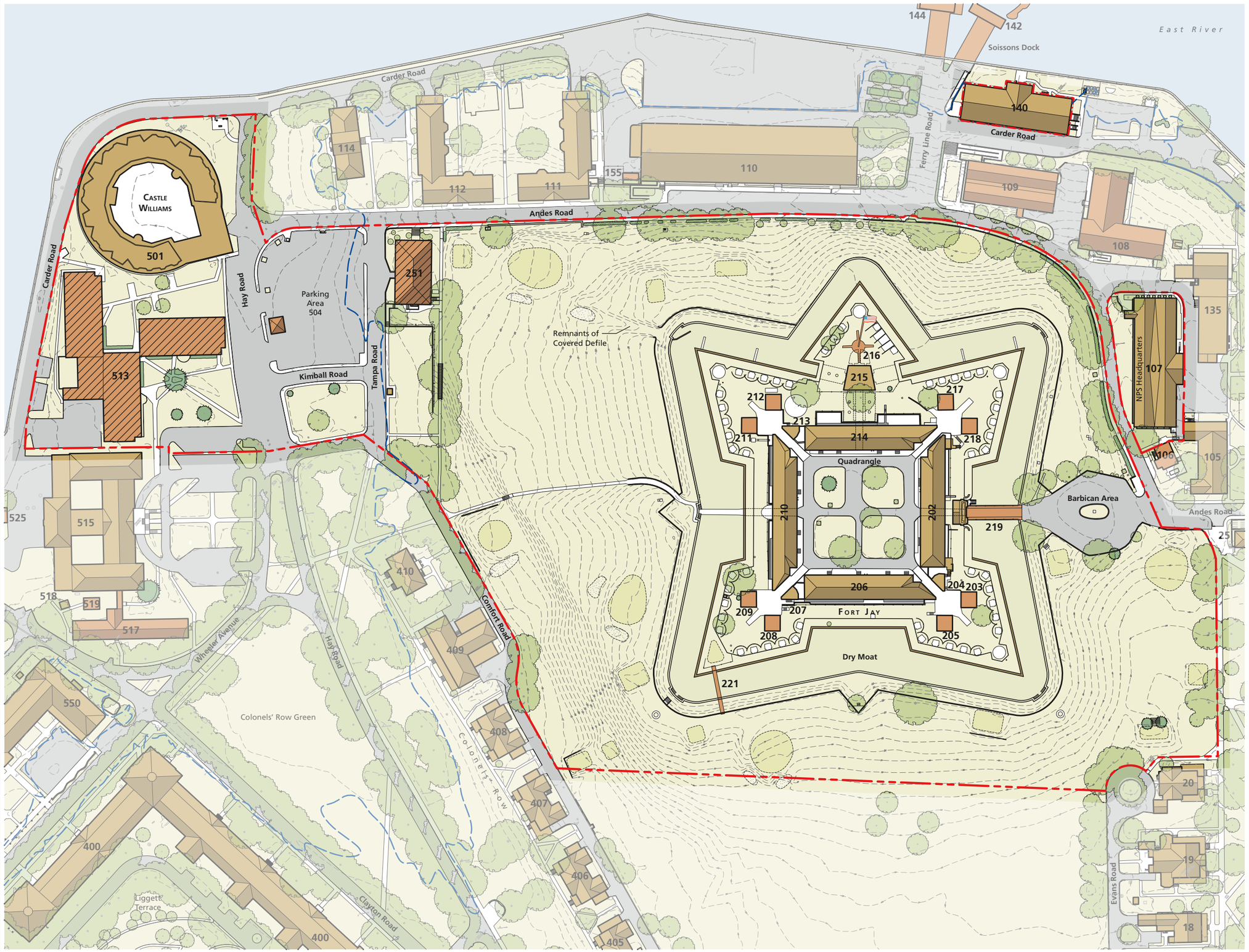
Drawing 1

Cultural Landscape Report

Governors Island National Monument

Governors Island, New York

Existing Conditions National Monument Detail



National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Governors Island Topographic and Boundary Survey, Langan Engineering & Environmental Services, 2012
2. Title Survey of Governors Island, Montrose Surveying Company, LLP, 2003
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DRAWN BY

Tim Layton, AutoCAD and Illustrator CS6, 2014

LEGEND

- National Monument Boundary
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NOTES

1. Projection: New York State Plane, Long Island Zone, NAD 83, Feet
2. All features shown in approximate scale and location

0′ 32.5′ 65′ 130′

Drawing 2

3. Treatment Tasks

This chapter describes landscape treatment tasks recommended for the Governors Island National Monument landscape. The tasks are organized geographically according to four landscape character areas which include: Castle Williams Zone; Fort Jay Glacis Zone; Fort Jay/Barbican Zone, and; Dock 102 and Building 107 Zone. The National Park Service has an easement for approximately 1,000 square feet on the first floor of Building 140, located immediately southeast of the Soissons Dock. The easement is limited to the building and consequently, Building 140 and its surrounding land will not be addressed in the following recommendations.[1] The four zones listed above have been delineated in support of an orderly presentation of landscape treatment recommendations and are independent of other boundaries previously delineated in park planning documents. Grouping landscape treatment tasks together in this way, according to the location of tasks within a geographic area, is intended to convey the physical interrelationship among recommended tasks and also foster greater understanding of the complete scope of proposed work (Figure 3.1).

Within each zone, landscape treatment tasks are further organized according to landscape characteristics addressed. Graphically, each recommendation is keyed to the treatment plan drawing through application of a task code (SO – spatial organization, BL – buildings and structures, TP – topography, CR – circulation, VG – vegetation, and SSF – small-scale features) so that readers may conveniently navigate between narrative recommendations and plan drawings.

Each landscape treatment task narrative is presented consistently in the following order: (*a*) description of the issue or deficiency as well as the desired future condition; (*b*) directives expressed in park planning documents relating to the recommended task; (*c*) background information; (*d*) issues and considerations that must be considered prior to implementation. Preservation is the recommended default treatment approach for circumstances where this report does not identify specific treatment tasks. Preservation, or "the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property," will prevent the loss of historic materials and/or spatial relationships, and ensure that historic features are protected in place.[2]

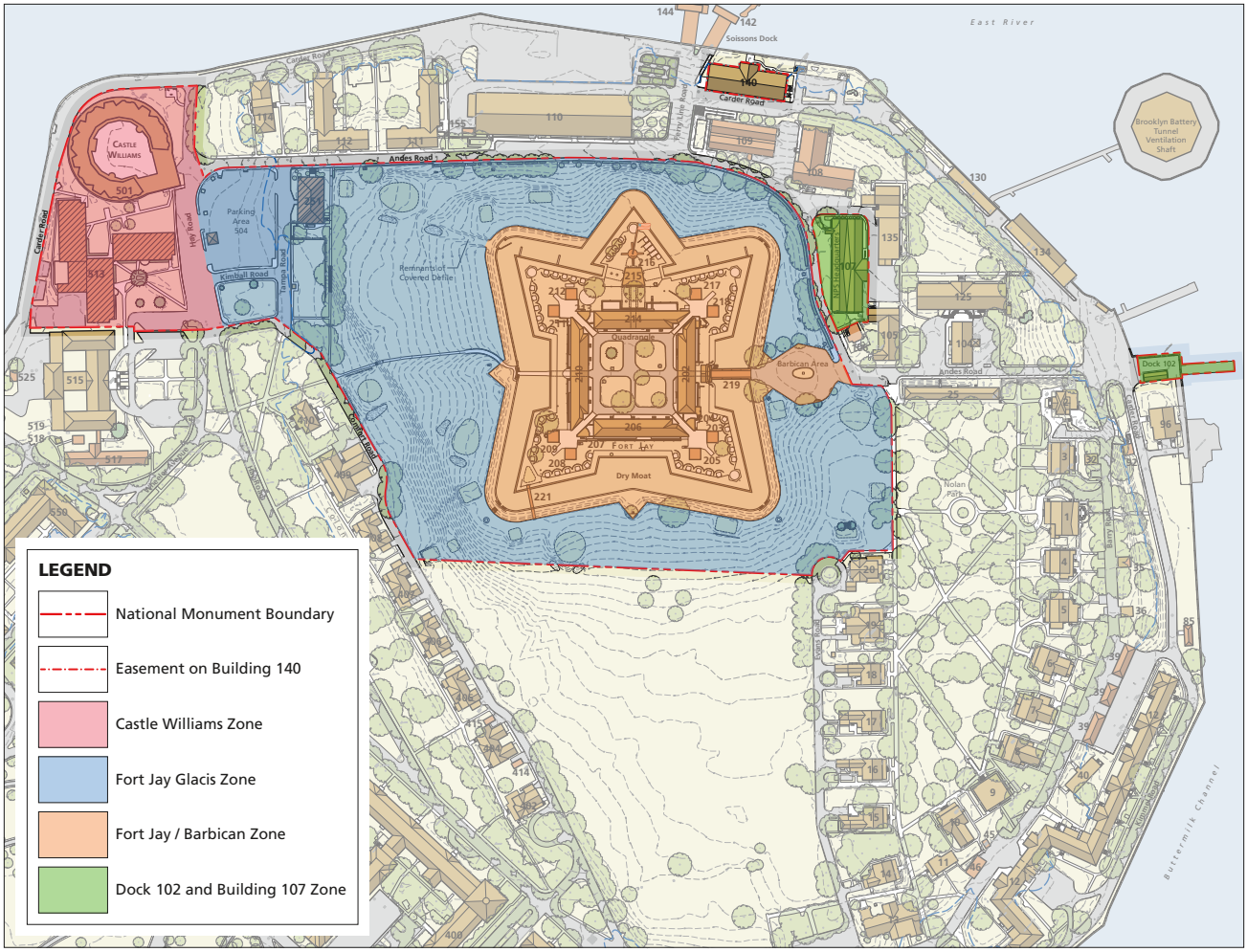


Figure 3.1. Landscape treatment zones. Four zones, independent of other park planning and management boundaries, have been delineated to support an orderly presentation of landscape treatment recommendations. Plan, 2014 (Olmsted Center for Landscape Preservation, hereafter, OCLP).

CASTLE WILLIAMS ZONE

SPATIAL ORGANIZATION

Spatial organization refers to the three-dimensional organization of physical forms and visual associations in a landscape, including the articulation of ground, vertical, and overhead planes, that define and create spaces. In the Castle Williams Zone, tasks addressing spatial organization are intended to improve and enhance the historic setting of Castle Williams and to better convey its defensive purpose.

CW-SO-1: Re-establish historic landscape context for Castle Williams through removal of Building 513 and associated site infrastructure

Description

The 1970s era Building 513 complex detracts from the visitor's experience of the National Monument, making it difficult to understand the defensive purpose of Castle Williams. The presence of the Building 513 complex further blocks historical tactical views to the harbor which are central to the combined operation of the two fortresses. Site infrastructure associated with the non-historic building complex includes driveways, sidewalks and parking lots, vegetation, and utility systems that further obfuscate the historic landscape setting (Figure 3.2). The Building 513 complex and associated site infrastructure should be removed and site utility features reconfigured in order to best convey the defensive purpose and strategic location of Castle Williams as part of a harbor-wide defensive system (Figure 3.3).

Relationship to Park Planning

Removal of the Building 513 complex and rehabilitation of the surrounding landscape is one of the central prescriptions of the *Governors Island National Monument General Management Plan*.[3] The *Governors Island Preservation and Design Manual* identifies the Building 513 complex as a Category 4 property, intruding on the district by introducing styles, scale, materials, or designs so inconsistent with the character of the significant properties that it detracts from a person's ability to understand the historic context of the historic district and by physically blocking significant historic views.[4] The design manual concludes the Building 513 complex "can be removed without damage to the significance of the district."[5] The *Governors Island Preservation and Design Manual* further identifies a preference for underground utility distribution systems, stipulating that underground utility delivery is to be provided for all services to existing and new development, and where possible, lines should use existing utility trenches.[6]



Figure 3.2. Building 513, left, to be remove to re-establish historic landscape context for Castle Williams, right. Note inappropriate design of existing temporary visitor services shelter. View looking west, 2014 (OCLP).



Figure 3.3. Re-established historic landscape context for Castle Williams. View looking west, 2014 (OCLP).

Background

The location of the current Building 513 complex formerly consisted of a rocky tidal embankment when the U.S. Army completed Castle Williams in 1811. Early nineteenth century maps document two small structures, labeled as washhouses, immediately south of the Castle Williams' ravelin. No substantive buildings stood in close proximity to Castle Williams, or on the western half of the island. The openness of the landscape at that early date made possible unobstructed tactical views of potential enemies advancing up the harbor toward New York City. Nineteenth century maps continued to indicate the presence of washhouses south of Castle Williams, as well as documented the appearance of stables, workshops and other ancillary buildings as New York's inner harbor defenses grew obsolete. After the expansion of the island completed by 1909, the Army constructed a prison office and prison yard near the current location of the Building 513 complex. The prison office was removed by 1932 and during World War II, several hospital annex buildings filled the area south of Castle Williams.

In 1970, the Coast Guard removed the hospital annex buildings and constructed the Building 513 complex in an effort to provide upgraded living accommodations for enlisted bachelors. The building complex consists of three modern, identical, dormitory buildings arranged in a pinwheel configuration and designated as 513-A, 513-B, and 513-C. A fourth building, one story in height and housing mechanical equipment, stands between the A and B dormitories and is designated as 513-D. Each unit consists of a freestanding three-story, steel-framed, brick-veneered building with cantilevered wraparound balconies at the second and third floors. A low brick parapet around each building conceals a flat roof.[7] In the 1990s, the Coast Guard converted a portion of 513-A for use as medical offices. Following the Coast Guard departure, all bathroom fixtures were removed and the buildings are not presently heated or cooled.[8]

Treatment Considerations

The National Park Service should coordinate demolition of the Building 513 complex, and reconfiguration of utility infrastructure with the larger program of building demolition and infrastructure improvements under development by the Trust for Governors Island.[9] In addition to the building materials that comprise the complex, this task involves the removal of three deciduous trees, three evergreen trees, concrete sidewalks, asphalt parking areas, two cobra-style street lights on Carder Road, one light standard on the north side of 513-C, and three fire hydrants. Modifications effecting utilities include adjusting the rims and covers of an unidentified manhole and two sanitary sewer manholes to meet new grades. Following the removal of the Building 513 complex and associated features, this task entails minor grading to pitch surface runoff away from Castle Williams and direct runoff towards Hay or Carder roads. The graded surface

should be seeded with an athletic turf mixture containing tall fescue turf cultivars (*Festuca arundinacea*). As a turf type, tall fescues generally require less irrigation and fertilizer than Kentucky bluegrass (*Poa pratensis*) and perennial ryegrass (*Lolium perenne*) and provide moderate resistance to soil salinity. Kentucky bluegrass, often the main component of residential turf mixes, is considered quite susceptible to salt damage.[10] Tall fescue cultivars should be specified that exhibit wear tolerance and fast recovery to foot traffic. Using pre-germinated seeds to accelerate initial growth, the area should be hydro-seeded and then have access restricted for a growing season to improve the development and resilience of the lawn area.

BUILDINGS AND STRUCTURES

Buildings are elements constructed primarily for sheltering a form of human activity in a landscape. Structures are elements constructed for functional purposes other than sheltering human activity in a landscape. Engineering systems are also structures. In the Castle Williams Zone, tasks addressing buildings and structures are intended to provide context-sensitive new additions.

CW-BL-1: Provide new visitor services shelter south of Castle Williams

Description

Access to the upper levels and rooftop of Castle Williams is only available through guided tours. Visitors waiting for a tour are permitted to wait within the Castle Williams courtyard and observe the ground level exhibits there until they are greeted by a tour leader at the time scheduled for the tour. Previously, visitors were required to wait for their tour outside of the Castle Williams courtyard, and a large prefabricated gazebo was provided to provide shade for waiting visitors in Parking Area 504. The current open-sided structure remains in use as a program meeting place and informal visitor area. The structure is of a stock Victorian design suitable as a temporary measure, yet inconsistent with the long-term goal of restoring visual connections between Castle Williams and Fort Jay (Figure 3.4). This incompatible feature should be removed, and if judged necessary in support of park operations, replaced with a more appropriate visitor services shelter constructed to serve visitors south of Castle Williams, taking design cues from the historic scale, and proportions of the garrison washhouse formerly at this location (Figure 3.5).



Figure 3.4. View looking northeast from Carder Road, 2014 (OCLP).



Figure 3.5. New visitor services shelter south of Castle Williams. View looking northeast, 2014 (OCLP).

Relationship to Park Planning

Replacing the existing visitor services shelter south of Castle Williams supports the General Management Plan visitor experience goal of providing facilities and services within the National Monument and on the greater island that meet visitors' basic needs and enrich the overall experience, drawing visitors back to the island.[11] Replacing the current shelter with an alternative open-sided structure more in keeping with the historic scale, proportions, and approximate location of the former garrison washhouse supports interpretive objectives and does not impair fundamental resources, nor does this conflict with planning goals to strengthen public understanding of the historic harbor defense roles of Fort Jay and Castle Williams.

Background

As early as 1813, maps of Governors Island record small, ancillary structures immediately south of Castle Williams (Figure 3.6). It is possible that the presence of the washhouses may be attributable to the persuasion of Dr. James Tilton, a former medical officer during the Revolution who at the time of the drawing had been appointed as the nation's first Surgeon General.[12] Washhouses, a stable, and a workshop all appear on nineteenth century maps with the washhouses oriented parallel to the south facade of Castle Williams' ravelin. A 1912 oblique aerial photograph shows the garrison washhouse or a similar structure located to the immediate south of Castle Williams' ravelin (Figure 3.7). By 1921, the Army removed the garrison washhouse and added a prison office further south of Castle Williams. By 1932, an aerial photograph shows the prison office removed and by 1942, temporary hospital annex buildings filled the area south of Castle Williams.

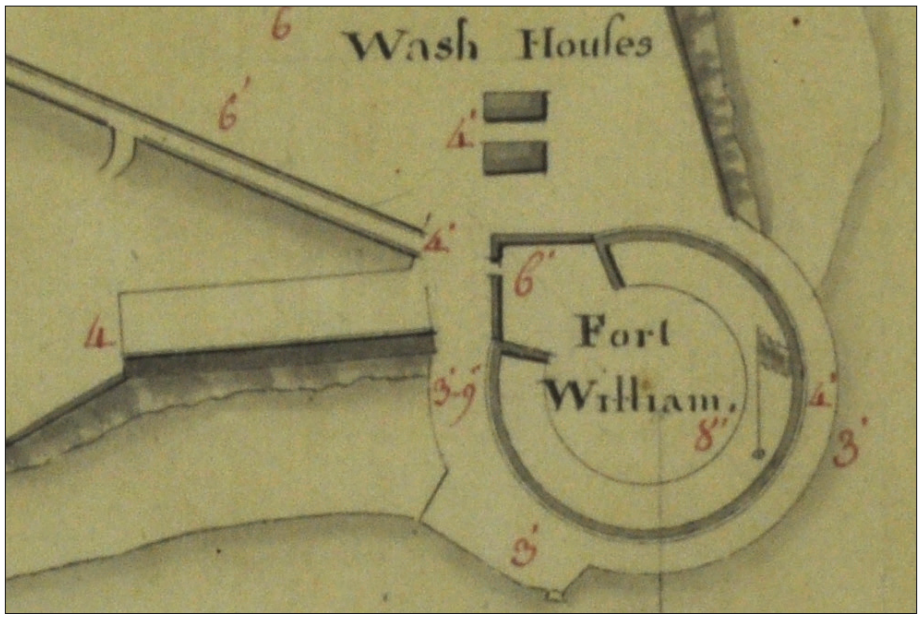


Figure 3.6. Two washhouses located south of Castle Williams. Plan, 1813 (NARA RG 77 Fortification File, drawer 36, sheet 20A).

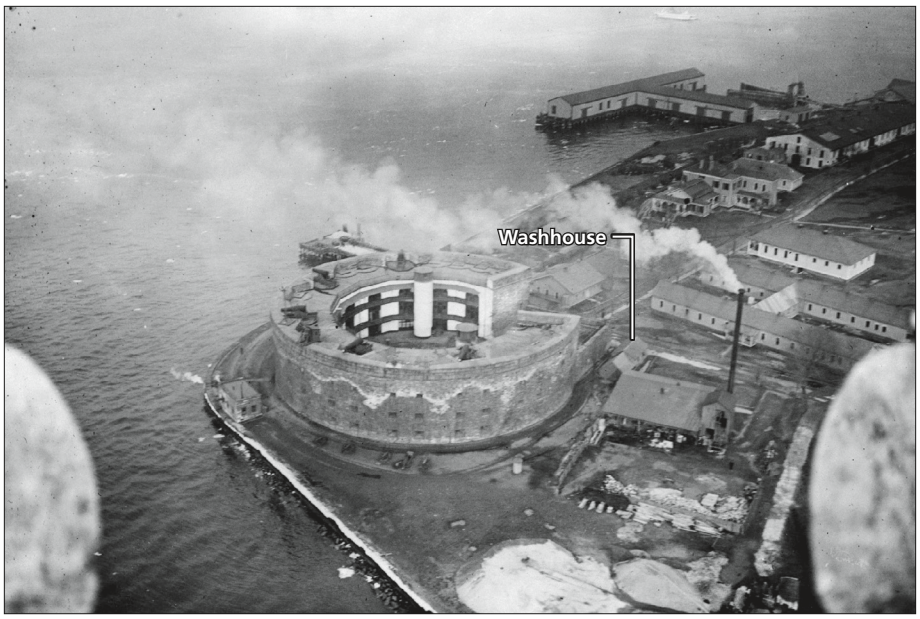


Figure 3.7. Garrison washhouse or similar ancillary structure south of Castle Williams. Aerial oblique view, circa 1912 (Library of Congress, Prints and Photographs Division, LC-USZ62-119973).

Treatment Considerations

Between 2009 and 2010, over 400,000 visitors came to Governors Island annually during a 20-week period from June to October.[13] Considering peak intensity of visitation, in order to provide a safe visitor experience and limit impacts to Castle Williams, tours need to be guided by park staff and limited in size. Within the vicinity of Castle Williams there are no areas of the National Monument landscape that provide shade, shelter from rain, seating or other visitor amenities.

There are potentially many appropriate solutions that may be considered in order to provide islands of shade in this historically open landscape for the comfort of park visitors. Constructing a replacement open-sided visitor services shelter in the historic location, scale, and proportions of the former garrison washhouse is one approach that may be considered as a way to provide helpful visitor infrastructure without detracting from the historic setting of Castle Williams or impacting views to New York Harbor (Figure 3.8). Prior to construction, archeological review of the proposed location may aid in accurately depicting the historic extents of the former garrison washhouse and yield interpretive opportunities to incorporate in the shelter's design. If this proposal is given additional consideration and is developed further, the replacement open-sided shelter should be one story maximum in height, open on at least three sides, and constructed using steel beams and an open steel-truss roofing system. The center of this open structure is sufficiently large to accommodate seating and interpretive media, according to park priorities.

Installing shade trees or shelter structures on the glacis between Fort Jay and Castle Williams, in approximately the same location as the present visitor services shelter, would negatively impact a historic, defensive earthwork identified as a fundamental resource in the General Management Plan.[14] Adding shade trees

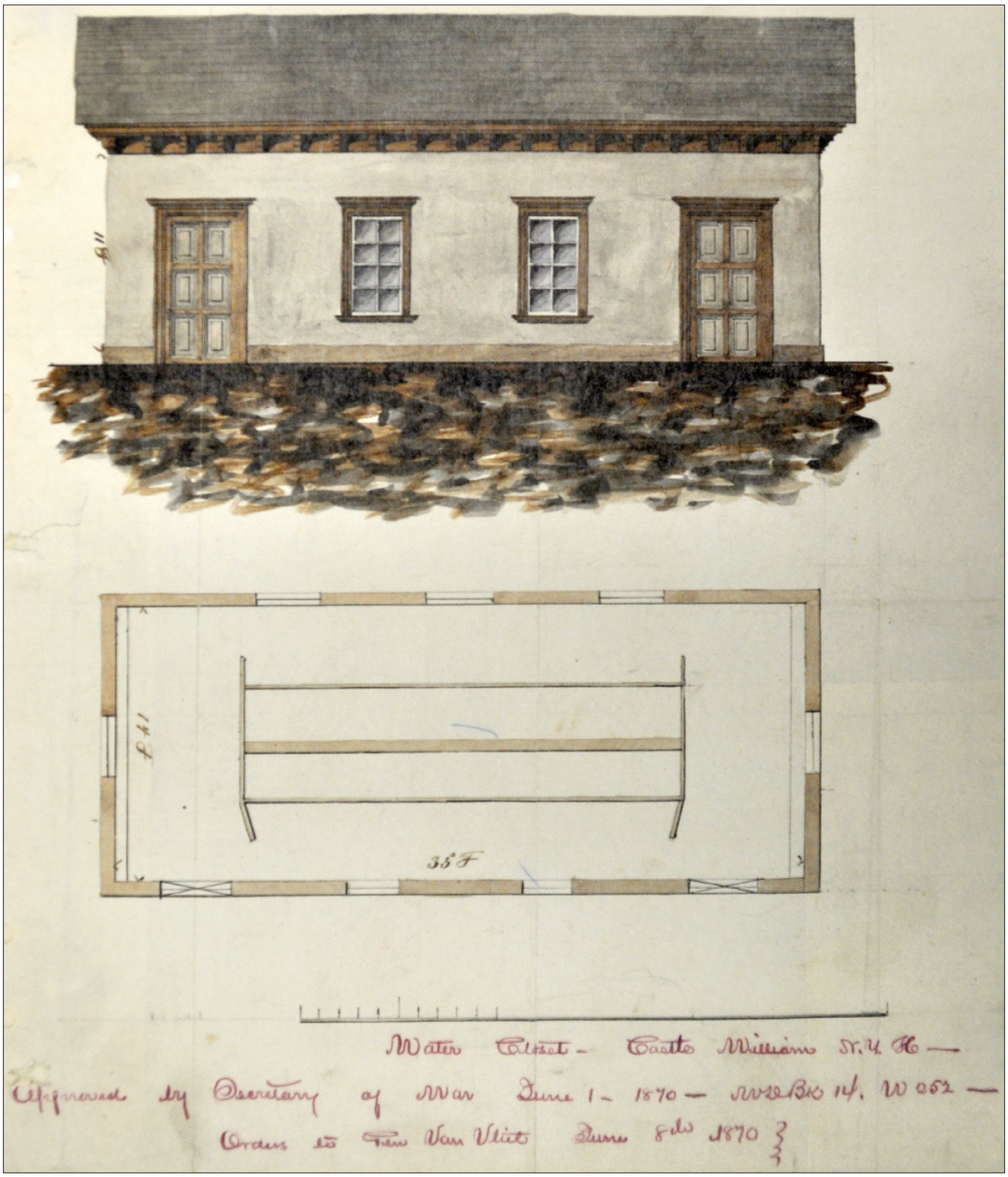


Figure 3.8. Water Closet – Castle Williams N.Y. Harbor. The new visitor services shelter should match the scale and proportions of the historic washhouse, noted here as 35-feet long by 14-feet wide with a height to the cornice of 11-feet. Plan and elevation, 1870 (NARA RG 77 Records of the Office of the Chief of Engineers, Cartographic Records, Miscellaneous Fortifications File, 36).

or shelter structures within the former footprint of Building 513 would impair the view to New York Harbor and diminish the connection between the historic fortifications and the defense of the harbor.

CIRCULATION

Circulation includes the spaces, features, and applied material finishes that constitute the systems of movement in a landscape. In the Castle Williams Zone, tasks addressing circulation are intended to improve and enhance the historic setting of Castle Williams and to provide context-sensitive new additions.

CW-CR-1: Rehabilitate Hay Road to encourage pedestrian use

Description

The portion of Hay Road bisecting the National Monument property has been periodically widened over time in accommodation of automobiles and automobile parking. The wide vacant expanse of bituminous pavement currently found southeast of Castle Williams is much wider than is necessary, and greatly detracts from the historic setting (Figure 3.9). In the vicinity of Castle Williams, Hay Road should be rehabilitated to encourage pedestrian use by narrowing the road width to its historic proportions and resurfacing with materials consistent with adjacent road surfaces along Colonels' Row managed by the Trust for Governors Island (Figure 3.10).

Relationship to Park Planning

The General Management Plan specifically cites Hay Road as a contributing road that would be retained as a pedestrian or limited-use vehicular route, but may be realigned or resurfaced to better accommodate safe visitor use.[15]

Background

With the completion of the South Battery in 1812, an informal circulation route was likely established between Castle Williams and the South Battery that followed the western and southern portion of the island. The Army later developed a dedicated road between the two fortifications and this route appears on an 1871 map. In 1893 the Army initiated construction of a series of officers' quarters, presently known as Colonels' Row, northeast of Hay Road. Following the expansion of the island, largely completed by 1909, the Army shifted Hay Road to the southwest, creating a wider lawn area between Hay Road and the front porches of the adjacent officers' quarters. Around 1934 the Army completed the new hospital, Building 515, south of Castle Williams and added Wheeler Avenue east of the hospital that intersected with Hay Road. Hay Road



Figure 3.9. Hay Road to be rehabilitated to facilitate safe pedestrian and bicycle use. Non-historic "head-in" roadside parking area shown at left to be removed and revegetated. View looking north, 2014 (OCLP).



Figure 3.10. Rehabilitated Hay Road. Note schematic proportions of replacement visitor services shelter at right. View looking north, 2014 (OCLP).

was widened slightly at that time to accommodate the "Wye" intersection with Wheeler Avenue. Between 1972 and 1977, the Coast Guard further widened the west side of Hay Road to accommodate 26 parking stalls east of the Building 513 complex. Hay Road was last resurfaced during 2004.

Treatment Considerations

The preferred surface treatment for Hay Road is an exposed aggregate concrete closely matching the stone sizes and colors seen in the existing concrete surfacing along Colonels' Row (Figure 3.11). It is possible an identical exposed aggregate concrete is present under the current bituminous paving along Hay Road and a sample investigation should determine the underlying materials and implications for carefully removing the bituminous. If new paving materials to match the Colonels' Row paving are selected, an alternative with a less complex installation than exposed aggregate concrete is rolled stone or chipseal surfacing. This surfacing involves applying an asphaltic adhesive over a bituminous concrete base and rolling a graded 1/4-inch stone into the adhesive. The graded stone should match the colors seen in the existing concrete surfacing along Colonels' Row. In order to subtly differentiate this portion of Hay Road within the National Monument, the edge of the new sidewalks on Hay Road may be bound by new bluestone curbing matching the width, length and exposed face of existing bluestone curb sections found north of Building S-251 (Figures 3.12 and 3.13).

Two storm catch basins, at the current Parking Area 504 entries, will need to be relocated and two sanitary sewer manholes will need to have their rims and covers adjusted to meet the new grade. Future maintenance and surfacing repairs to Hay Road should be coordinated between the National Park Service and the Trust for Governors Island to maintain the consistency of a shared resource and maximize cost savings in a combined contract.



Figure 3.11. Precedent image of surface treatment for Hay Road, located within the Trust property. View looking north, 2012 (OCLP).



Figure 3.12. Precedent image of bluestone curbing north of Building S-251 to be installed along rehabilitated Hay Road. View looking southwest, 2012 (OCLP).



Figure 3.13. Detail of Ordnance Sergeant's Quarters showing bluestone curbing installed along the north side of Andes Road. Castle Williams is visible in the upper left. View looking north, 1898 (NARA RG 92 Records of the Office of the Quartermaster General, Still Pictures, Box 4, Folder 15).

CW-CR-2: Install new pedestrian circulation route at Castle Williams

Description

After removing the Building 513 complex, the open lawn area south of Castle Williams will serve as a foreground for views to the harbor and provide space for passive gathering and recreation. It is likely visitors will also want to get close to Castle Williams and walk around the circular fortification. A new pedestrian route should be installed to accommodate this anticipated traffic (Figure 3.14).

Relationship to Park Planning

The General Management Plan identifies specific action items to rehabilitate the cultural landscape, such as rehabilitating the covered defile, while also acknowledging compatible, contemporary actions to accommodate public visitation, exhibit space, operations, temporary housing, and all the accompanying safety and access requirements such as the Americans with Disabilities Act.[16] The new pedestrian circulation route at Castle Williams accommodates contemporary public visitation as opposed to rehabilitating or restoring a feature from an exact moment in time.

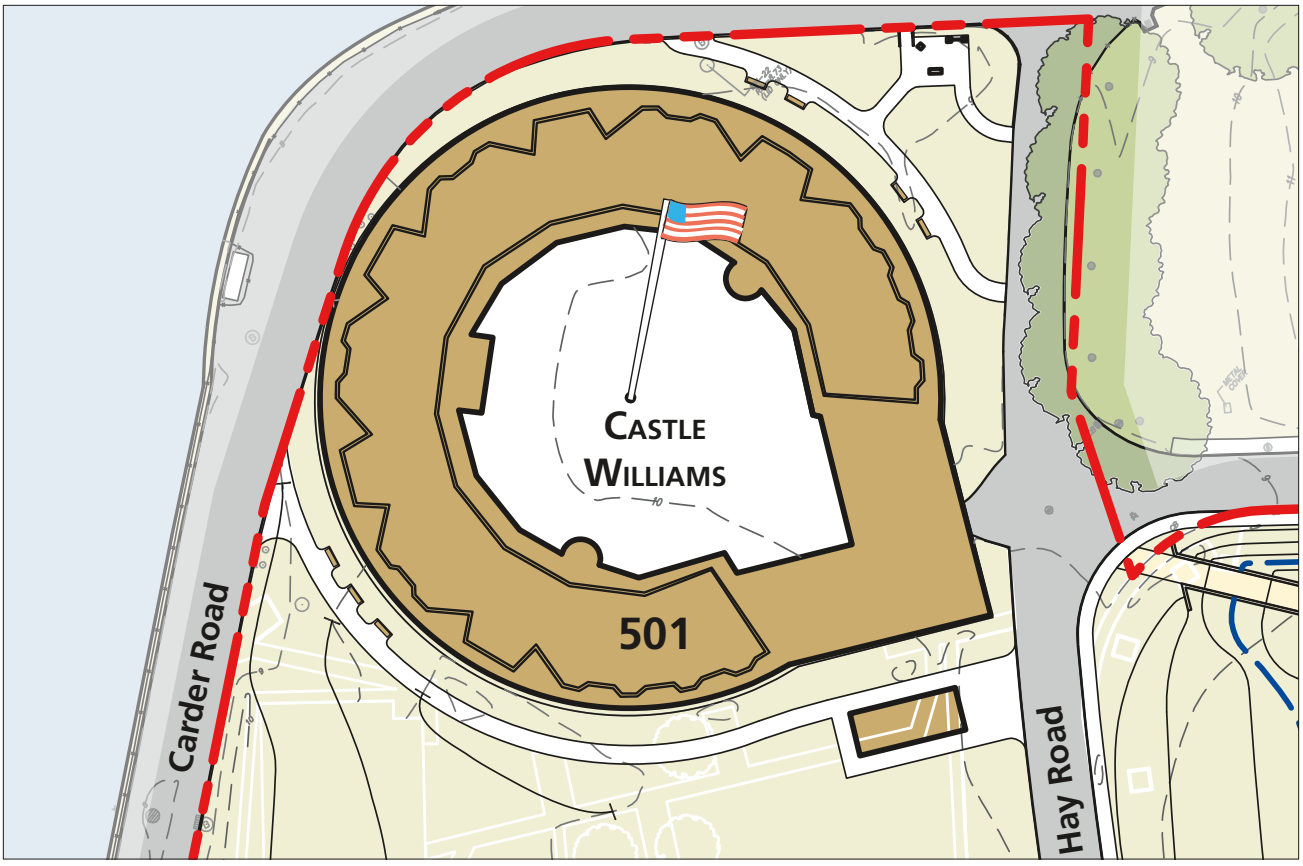


Figure 3.14. Conceptual layout for new pedestrian circulation route at perimeter of Castle Williams. Plan, 2014 (OCLP).

Background

The U.S. Army located Castle Williams on a rocky point that extended into the harbor and by the mid-nineteenth century, had constructed seawalls and filled to create land between the fort and harbor. Maps of Governors Island from 1902 show a vehicular circulation route around Castle Williams branching off of and reconnecting to Hay Road. A worn route around the fortification appears in a circa 1912 aerial oblique photograph as opposed to the formal, paved route depicted on earlier the maps. Four to five pieces of artillery are present on the worn route near the southwest section of Castle Williams (see Figure 3.8). A 1932 aerial oblique shows a route or installation of objects circumscribing Castle Williams (Figure 3.15).

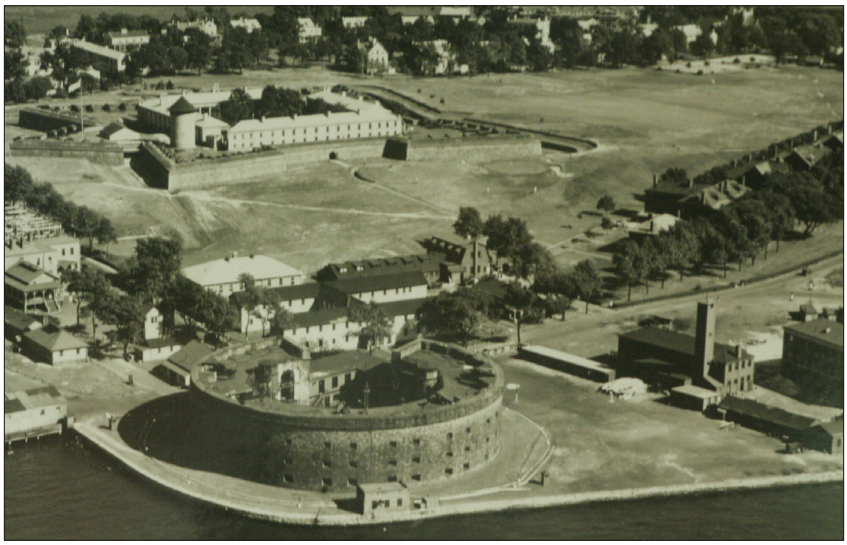


Figure 3.15. A precedent for the new pedestrian circulation route at Castle Williams is seen in this circumscribing pattern. Oblique aerial looking southeast, 1932 (NARA RG 18 Records of the Army Air Forces, Still Pictures, LMU Aerial and Ground Photographs, Box 3).

Treatment Considerations

The current grades around Castle Williams are relatively flat, however, no portion of the new pedestrian route should contain slopes five percent or greater in order to meet accessibility requirements. The width should be six feet for comfortable, two-way pedestrian traffic including adequate passing for individuals with mobility issues. The route should extend from the proposed visitor services shelter south of Castle Williams' ravelin and follow the curve of the fortification. In addition, a segment should connect from the northeast side of Castle Williams to the interpretive display at the Hay and Carder roads intersection.

There is an opportunity to extend pads off of the circulation route to meet accessibility requirements and install benches for visitor comfort and contemplation as one looks out across the harbor. In support of a seamless park experience, the use of benches and park furnishings used elsewhere by the Trust for Governors Island should be considered. The benches should be located near the southwest and northeast sections of Castle Williams so the visual connection between Fort Jay and Castle Williams is uncluttered by contemporary amenities. The earthwork required to install the new route will require archeological review.

CW-CR-3: Install new pedestrian circulation at boundary adjacent to post hospital

Description

Following the removal of the Building 513 complex, the new open lawn area south of Castle Williams will be bounded on the east by Hay Road, on the south by the former post hospital (Building 515), and on the west by Carder Road. While random pedestrian traffic across the lawn area is acceptable, a dedicated pedestrian route should be installed at the National Monument boundary, adjacent to the post hospital, to provide a connection between Hay and Carder roads and limit pedestrian desire lines across the lawn area (Figure 3.16).

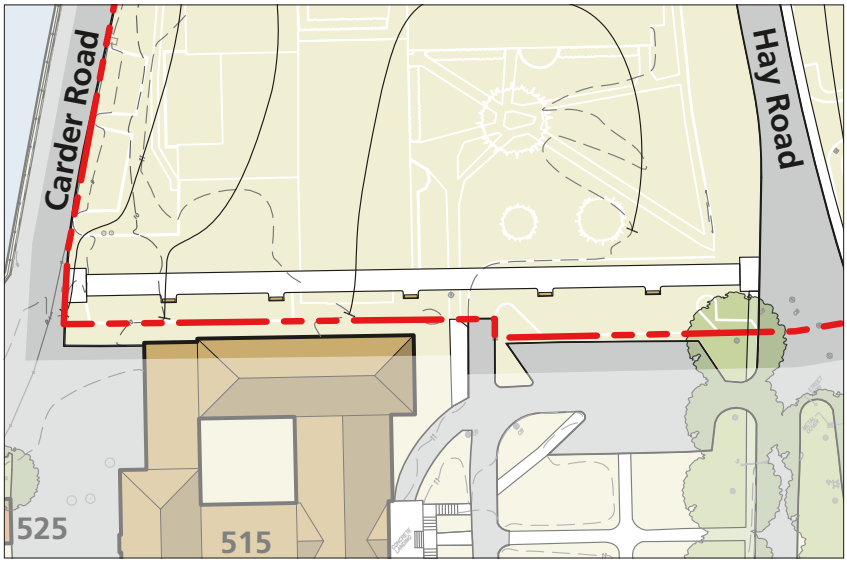


Figure 3.16. New pedestrian circulation at boundary adjacent to post hospital (Building 515). Plan, 2014 (OCLP).

Relationship to Park Planning

The new pedestrian circulation route adjacent to the post hospital accommodates contemporary public visitation as opposed to rehabilitating or restoring a feature from an exact moment in time. The installation of the route is consistent with a rehabilitation treatment for the cultural landscape stated in the General Management Plan.[17]

Background

The architectural firm McKim, Mead, and White prepared designs for Building 515, the post hospital, and in 1935 the Army completed the building's construction. During World War II, the Army added several one-story medical support structures in the area between the hospital and Castle Williams. These buildings stood until 1970 and the construction of the Building 513 complex.

Treatment Considerations

Archeological review and compliance for the removal of the Building 513 complex and associated features should be sufficient for the installation of the pedestrian route. The route's final design and implementation should be coordinated with the Castle Williams task VG-1: Install planting of shade trees at boundary adjacent to post hospital.

VEGETATION

Vegetation includes the deciduous and evergreen trees, shrubs, vines, ground covers, and herbaceous plants, and plant communities, whether indigenous or introduced in a landscape. In the Castle Williams Zone, tasks addressing vegetation are intended to provide context-sensitive new additions.

CW-VG-1: Install planting of shade trees at boundary adjacent to post hospital

Description

Removal of the Building 513 complex to reestablish views to the harbor will also bear the unintended consequence of placing greater visual emphasis on Building 515, the former post hospital. A new planting of shade trees along the National Monument boundary adjacent to the post hospital will mitigate these effects and redirect views to the harbor as intended. This boundary planting of shade trees will also offer visitors a place of respite during hot, sunny weather in an otherwise open expansive landscape (Figures 3.17 and 3.18).

The boundary planting should be planted in a linear configuration and extend approximately east to west from Carder Road to Hay Road. Given the scale of Building 515 and the new open area extending north to Castle Williams, the proposed linear planting should consist of a staggered, double row of trees. The trees should be planted at a roughly 20 to 30 foot on center spacing. Species that exhibit air-borne and soil salt tolerance and an adaptability to periodically inundated soils, such as black gum (*Nyssa sylvatica*) and seedless cultivars of American sweetgum (*Liquidambar styraciflua*), should be selected.

Relationship to Park Planning

As an action item for addressing the resource protection of the cultural landscape, the General Management Plan states that new landscaping will be designed and executed in a manner that preserves the character and fabric of the historic district, and, when appropriate, will use similar plant materials in similar situations.[18] The General Management Plan identifies several topics of mutual interest between the park and Trust for Governors Island, the first of which is to preserve the cultural landscape. Adding shade trees at the interface of Building 515 and the National Monument property is supported by the mutual interest statement to preserve historic spatial relationships, patterns of vegetation, and the campus-like landscape character of the historic district.[19]



Figure 3.17. Shade trees installed at National Monument boundary adjacent to Building 515, the former post hospital. View looking southwest, 2013 (OCLP).



Figure 3.18. Shade trees and new pedestrian circulation installed at National Monument boundary adjacent to Building 515, the former post hospital. View looking west, 2015 (OCLP).

Background

Designed by McKim, Mead, and White, the Army completed Building 515 in 1935. The Army added several one-story medical support structures between Castle Williams and Building 515 during World War II. By 1970, the Coast Guard removed the support structures and completed construction of the Building 513 complex.

Treatment Considerations

Archeological review and compliance for the removal of the Building 513 complex and associated features should be sufficient for digging the new tree planting holes identified in this task. Final planting design and implementation should be coordinated with the Castle Williams task CR-3: Install new pedestrian circulation at boundary adjacent to post hospital.

SMALL-SCALE FEATURES

Small-scale features are the elements providing detail and diversity for both functional needs and aesthetic concerns in a landscape. In the Castle Williams Zone, tasks addressing small-scale features are intended to improve and enhance the historic setting of Castle Williams and to better convey its defensive purpose.

CW-SSF-1: Reestablish working flagstaff in the Castle Williams' courtyard

Description

Lacking a flag and other insignia that once communicated identity, hazards, and even specific messages within New York's harbor, the relationship of Castle Williams to other harbor defenses is difficult to perceive. Until the early twentieth century, Castle Williams featured its own flagstaff in support of these purposes, independent of the flagstaff mounted upon Fort Jay. Reestablishing a working flagstaff at Castle Williams will emphasize the role of this fortress as a primary visitor resource, and further reinforce the historic relationship between Castle Williams and Fort Jay (Figure 3.19). Installing a flagstaff and flying the United States flag from Castle Williams as was done historically, will assist visitors in visually and thematically connecting the two fortresses, as well as further reinforcing Castle Williams' identity in the harbor and its relationship to Castle Clinton on lower Manhattan (Figures 3.20 and 3.21).



Figure 3.19. Flagstaff reestablished in Castle Williams' courtyard. View looking south from the ferry, 2013 (OCLP).

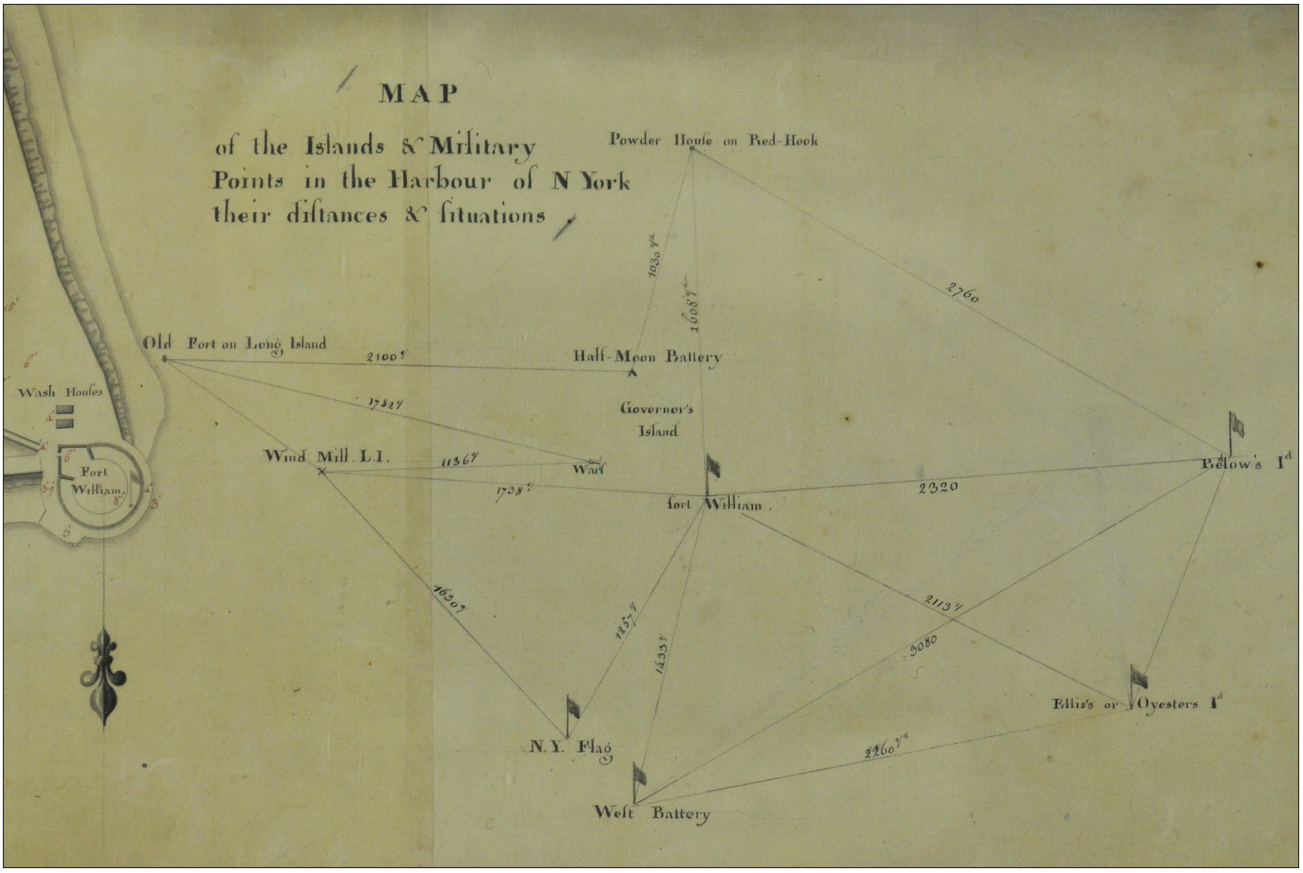


Figure 3.20. Flagstaffs marking the islands and military points in New York Harbor. Included in diagram are Castle Williams (Fort William), Castle Clinton (West Battery), and the Statue of Liberty (Bedloe's Island). Plan, 1813 (NARA RG 77 Fortification File, drawer 36, sheet 20A).

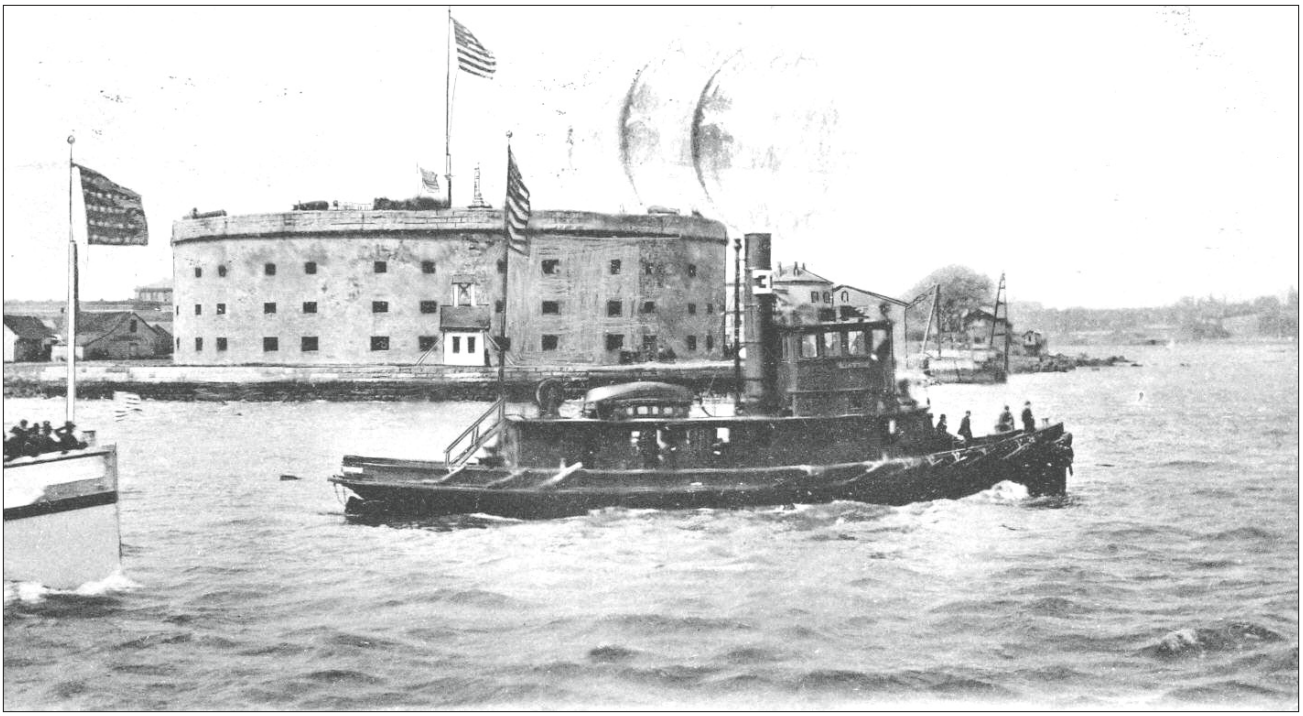


Figure 3.21. Reestablishing a working flagstaff in Castle Williams' courtyard will further reinforce the fort's identity in the harbor. View looking southeast, 1904 (Center for Military History, RG 100 S Crasci Collection).

Relationship to Park Planning

Governors Island National Monument has three primary interpretive themes and based on public input supporting the General Management Plan and Long Range Interpretive Plan processes, the "Place in the National Experience" theme and the associated harbor defense stories should be emphasized.[20] The General Management Plan further directs that Castle Williams would be the island's main exhibition and interpretive center and would host exhibits and programs that highlight the history of the island and its fortifications and their place in the harbor.[21] These planning decisions as well as the fundamental values outlined in the park Foundation Document support the installation of a working flagstaff at Castle Williams' to highlight the fortification's location the relationship to the harbor and harbor defenses.

Background

The earliest drawings of Castle Williams, from 1813, show a flagstaff mounted on the elevated terreplein. Based on a cross-section drawing prepared for Castle Williams, the flagstaff stood roughly 27 feet above the terreplein. Plan drawings subsequently prepared in 1839 document the flagstaff as located between casemates six and seven toward the inside edge of the circular structure. By 1879, a plan drawing indicates the Army moved the flagstaff to Castle Williams' courtyard. Photographs from the late nineteenth and early twentieth centuries indicate the courtyard-mounted flagstaff stood 100 to 110 feet above the courtyard or 50 to 60 feet above the terreplein. The courtyard-mounted flagstaff does not appear in an oblique aerial photograph from circa 1912 or in subsequent historic imagery and is considered to have been absent by the mid-twentieth century.

Treatment Considerations

Installing a flagstaff within the Castle Williams' courtyard is the preferred location since it would not require modifications to the Castle Williams structure or otherwise conflict with electronic aids to navigation mounted nearby. The new flagstaff should be installed near the historic location following investigation by archeologists and the installation details reviewed by a qualified engineer. It may be desirable for programmatic use of the courtyard space to locate the replacement flagstaff slightly north-east of the historical location so to avoid impacting an archeological remnants of the former flagpole base, as well as to provide additional usable space within the courtyard. The new working flagstaff feature may appropriately feature a hollow column and automated mechanism to raise and lower the flag. A photo-sensitive sensor may be employed to activate the mechanism and raise the flag at sunrise and lower it at sunset. Otherwise, the flag should be appropriately lit during the evening hours. The flag should be sufficiently large, 19 feet long by 10 feet high in keeping with War Department dimensional standards for a post flag.[22] This recommendation and the installation should be reviewed and coordinated with the U.S. Coast Guard for compatible operation of the navigational beacon presently operating on the terreplein.

FORT JAY GLACIS ZONE

SPATIAL ORGANIZATION

Spatial organization refers to the three-dimensional organization of physical forms and visual associations in a landscape, including the articulation of ground, vertical, and overhead planes, that define and create spaces. In the Fort Jay Glacis Zone, tasks addressing spatial organization are intended to improve and enhance the historic setting of the fortifications and to better convey their defensive purpose.

FJG-SO-1: Re-establish historic landscape connection between Fort Jay and Castle Williams through removal of Building S-251, Parking Area 504, and other non-historic site infrastructure.

Description

Building S-251, Parking Area 504, and associated non-historic site infrastructure truncate Fort Jay's engineered glacis slope and former covered defile that once connected Fort Jay with Castle Williams. These circumstances block the critical visual connections between Fort Jay and Castle Williams and Fort Jay and the harbor, impeding the ability of these two fundamental resources to convey their combined defensive purpose and strategic location (Figure 3.22). Building S-251, Parking Area 504, and other non-historic site infrastructure should be removed or otherwise reconfigured to re-establish the landscape connection between Fort Jay and Castle Williams and to clearly convey the defensive purpose and strategic location of the fortifications in New York Harbor (Figure 3.23).

Relationship to Park Planning

Removal of Building S-251, Parking Area 504 and subsequent rehabilitation of the surrounding landscape to reestablish historic visual relationship between Fort Jay and Castle Williams is one of the central prescriptions of the Governors Island National Monument General Management Plan.[23] The General Management Plan notes that between 1976 and 1996, the Coast Guard removed four non-contributing buildings [S-116, S-253, S-504, and S-510] adjacent to Building S-251, effectively destroying the building's context. In addition, the building is in poor condition, possessing inoperable mechanical systems requiring significant funding to repair or replace.[24]

The *Governors Island Preservation and Design Manual* identifies Building S-251 as a Category 3 property that does not contribute to the significance of the historic district and further cites that numerous modifications have destroyed any historic or architectural integrity of the building.[25] In making this determination,



Figure 3.22. Historic landscape connection between Castle Williams and Fort Jay to be reestablished. View looking southeast from Castle Williams' terreplein, 2012 (OCLP).



Figure 3.23. Historic landscape connection reestablished between Castle Williams and Fort Jay. View looking southeast from Castle Williams' terreplein, 2014 (OCLP).

the preservation and design manual reiterates the findings of the National Historic Landmark district nomination that identified Building S-251 as non-contributing.[26] The presence of the building, as well as nearby deciduous trees extending south along an associated concrete walk, block the view between Fort Jay and Castle Williams, as well as the view from Fort Jay across its external glacis slope to the harbor. The preservation and design manual identifies these views as Category 2 resources that contribute to the historic district.[27] Since Building S–251 is a non-contributing resource with impacts upon contributing resources, the preservation and design manual concludes that the building may be demolished.[28]

For site development projects, the preservation and design manual identifies a standard for utility distribution systems citing that current services within the historic district are delivered to buildings and structures underground. Underground utility delivery is to be provided for all services to existing and new development, and where possible, lines should use existing utility trenches.[29]

Background

The Army's development of Building S-251 and its surrounding area began in 1902 with completion of two hospital pavilions southeast of Castle Williams, a non-commissioned officer's quarters south of the pavilions, and a post YMCA east of the quarters. These buildings and their subsequent additions and expansions would be later identified as Building 504, Building S-510, and Building S-253 respectively. The Army constructed Building S-251 during the first decade of the twentieth century, reportedly as a temporary Quartermaster storehouse and workshop. No reliable documentation has yet been found identifying the original use of the building, however, it later served as a post exchange (PX) from 1918 to 1958. During the Coast Guard's tenure, the building served as a library and was designated the "Tampa Memorial Library." The building was re-sided with asbestos shingles at an unknown date, however, cement-asbestos shingle siding was in widespread use on light wood frame structures during the late 1940s.[30]

West of Building S-251, the Army added Tampa Road between 1932 and 1937 replacing a north-south pedestrian path connecting Andes Road to Comfort Road. A 1921 map shows a loop road circumscribing Building S-510, but this road is not present on a 1932 aerial photograph. In circa 1940, the Army constructed Kimball Road to provide access to Building S-253 and essentially created a vehicular circulation loop using Hay, Comfort, Tampa, and Kimball roads. East of Building S-251, a 1932 aerial photograph shows no circulation features or planting added, however, a 1948 map shows a walkway installed connecting Andes and Comfort roads. By 1966, an oblique aerial indicates deciduous trees were planted in a row east of Building S-251, paralleling the walkway. By 1976, the Coast Guard removed Building 504 and installed a 77-car parking lot west of Building S-251 (Figure 3.24).



Figure 3.24. Parking Area 504 installed southeast of Castle Williams by 1976. View looking northwest, 1977 (GOIS, Frank Bennett photograph).

Treatment Considerations

For practical efficiency and cost savings, the park may seek to coordinate demolition activities with the Trust for Governors Island.[31] The proposed realignment of the southeast corner of the Andes and Hay Road intersection lay just beyond the Governors Island National Monument boundary. These circumstances require that this task be reviewed and coordinated with the Trust for Governors Island. Relocating electrical transformers, access panels, and other underground utilities will also require close coordination with utility providers.

This task also involves the removal of ten deciduous trees, two evergreen trees, nine shrubs, concrete sidewalks, brick sidewalks and steps, concrete and brick retaining walls, asphalt parking areas, nine light standards, one fire hydrant, and eight catch basins associated with Parking Area 504. Modifications affecting utilities include relocating three electric transformers, two catch basins, and one light standard as well as adjusting the rims and covers of eight sanitary sewer manholes, three electric manholes, and one telephone manhole to meet new grades. Existing trees that have substantially declined should be removed as needed for public safety prior to the other removals defined in this task. Following the removal of the Building S-251 and associated features, this task entails grading that is detailed in the subsequent task, CR-1: Rehabilitate historic covered defile connecting Fort Jay and Castle Williams. The new grades for the covered defile will meet a new brick sidewalk on the south side of Andes Road. Tree removals may be phased over time.

TOPOGRAPHY

Topography is the three-dimensional configuration of the landscape surface characterized by features and orientation. In the Fort Jay Glacis Zone, tasks addressing topography are intended to better convey the defensive purpose of the glacis and later harbor defenses and to improve and enhance the historic setting of Fort Jay.

FJG-TP-1: Rehabilitate Fort Jay's glacis slope by recontouring topographic features of the former golf course

Description

Topographic features of the former golf course interrupt the formerly consistent slope of Fort Jay's glacis and diminish the ability of the glacis to convey its historic, defensive purpose (Figure 3.25). Rehabilitating the glacis and recontouring protruding and depressed golf course topography with a uniform slope will better convey the defensive purpose of a fundamental park resource that was an integral component of Fort Jay's design (Figures 3.26 and 3.27).



Figure 3.25. Topographic features of the former golf course interrupting the consistent slope of Fort Jay's glacis. An orange cone is visible alerting visitors to the abrupt grade change of a former sand trap. View looking northeast, 2014 (OCLP).

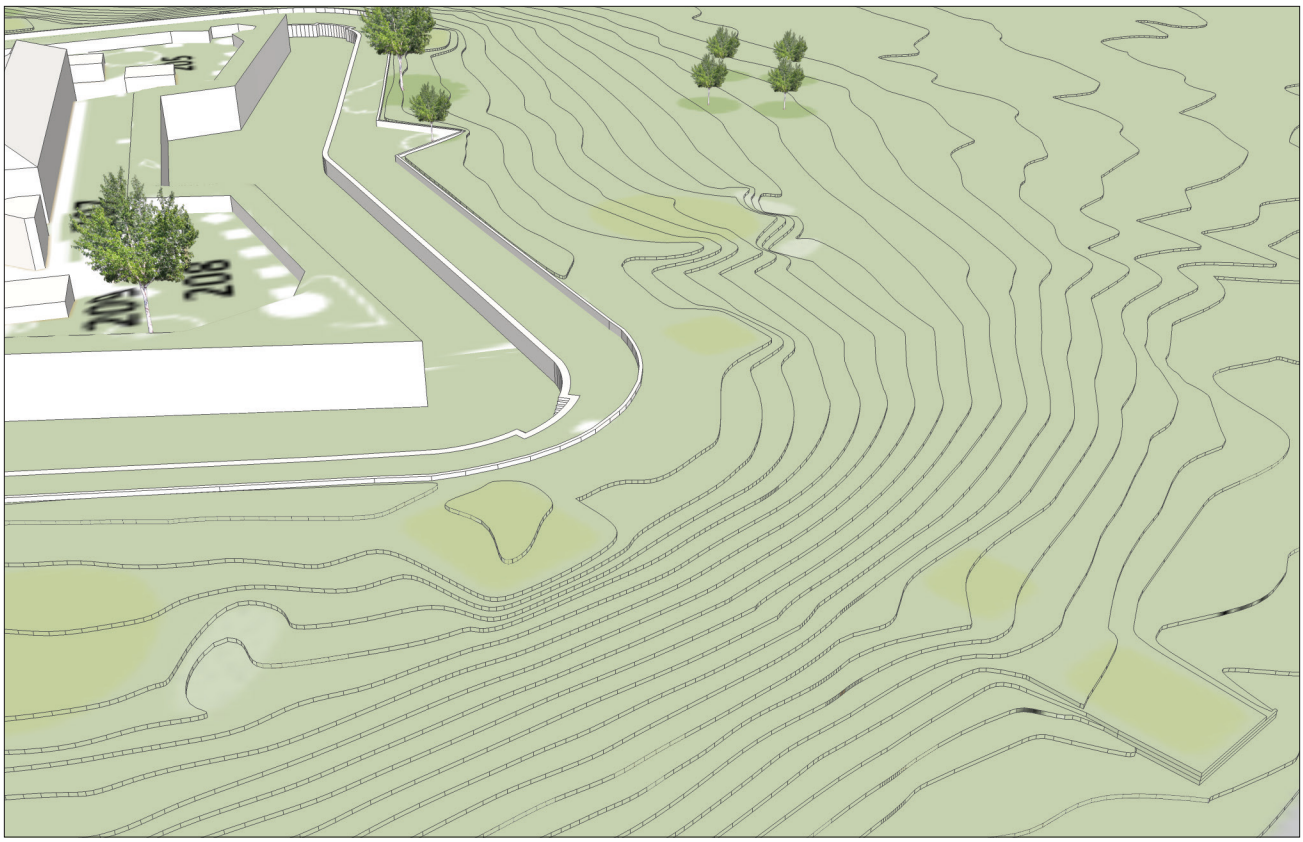


Figure 3.26. Fort Jay's glacis to be rehabilitated by recontouring topographic features of the former golf course. View looking southeast, 2013 (OCLP).

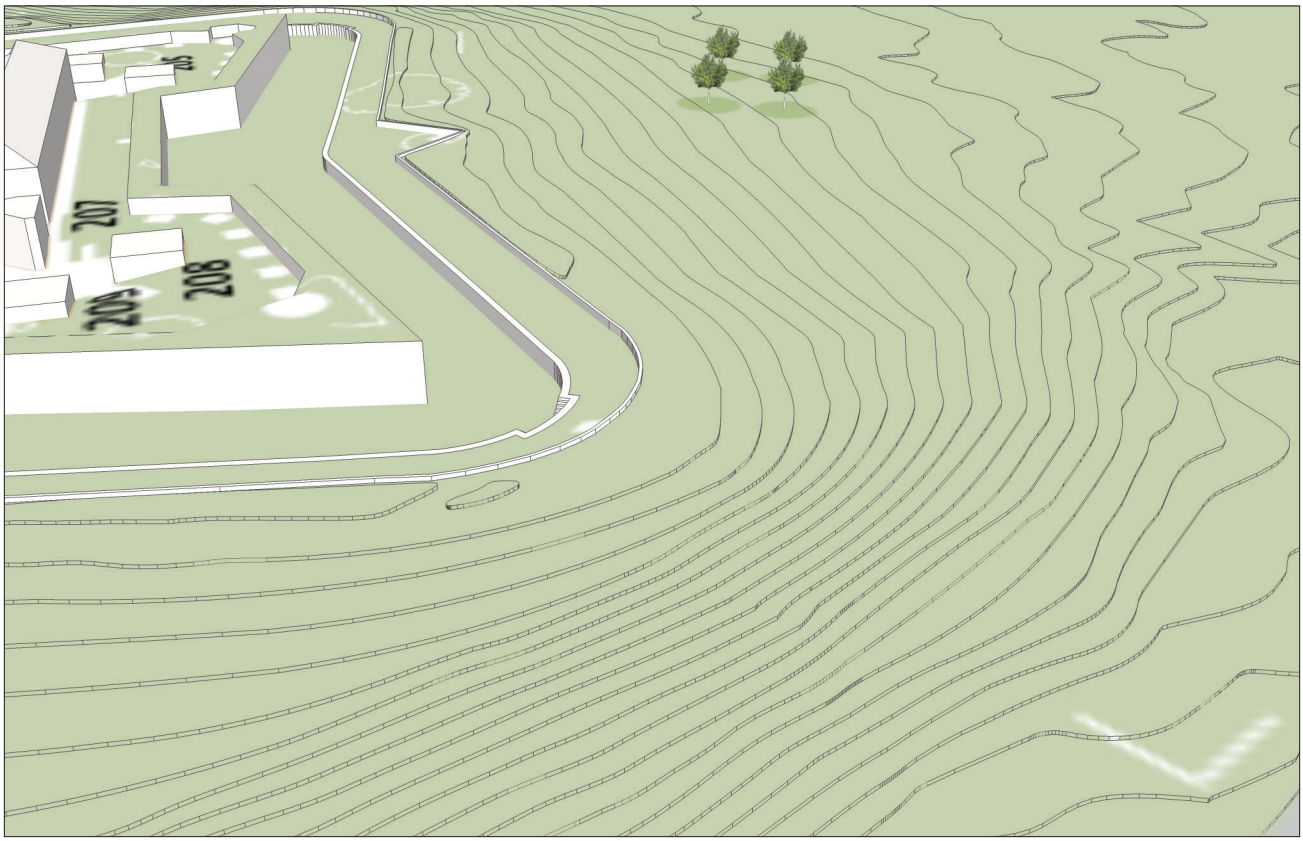


Figure 3.27. Rehabilitated Fort Jay's glacis by recontouring topographic features of the former golf course. View looking southeast, 2013 (OCLP).

Relationship to Park Planning

The Governors Island General Management Plan identifies that the historic fortifications, Fort Jay (1794–1809) and Castle Williams (1807–1811), including their associated features such as the external glacis and covered defile, are the National Monument's most prominent fundamental resources.[32] The *Governors Island Preservation and Design Manual* identifies the glacis as a Category 2 feature contributing to the significance of the National Historic Landmark and New York City Landmarks Preservation Commission districts.[33] Given that the glacis is a fundamental resource and contributing feature to the National Historic Landmark, the General Management Plan directs that topographic contours and other infrastructure associated with the former golf course are to be removed.[34]

Background

In 1887, a *New York Times* article reported that the parade ground, an area south of the glacis and presently on the Trust for Governors Island property, was used for golf links.[35] During the early twentieth century this area was also alternately used as a polo field. By 1925, the Army established a formal golf course on the parade ground and glacis featuring nine holes. The greens for the first and fifth holes were located in Fort Jay's dry moat and to play the fifth hole, players routinely ricocheted the ball off the walls of Fort Jay.[36] A 1932 aerial photograph documents components of the course adjacent to Fort Jay, including greens, tee boxes, and sand traps created by locally modifying surrounding topography. In 1962, the Army modified the course by adding and removing certain sand traps, adding hose bibs and drinking fountains, and adding a second tee box for holes 2, 3, 5, 7, 8, and 9 permitting players to tee off from different distances or to play the nine-hole course twice. The golf course continued to be used through the end of the U.S. Coast Guard's tenure in 1996 (Figure 3.28).



Figure 3.28. Coast Guard personnel golfing on Fort Jay's glacis. View looking northwest, circa 1990s (General Services Administration, Office of Real Property Utilization and Disposal, Governors Island loose files).

Treatment Considerations

In order to achieve a consistent and even slope, re-grading the golf course features requires blending surrounding and adjacent grades beyond the precise footprint of the extant golf course feature. Graphically, this is depicted on schematic grading sheets as a Limit of Grading line (Figure 3.29). The re-grading task

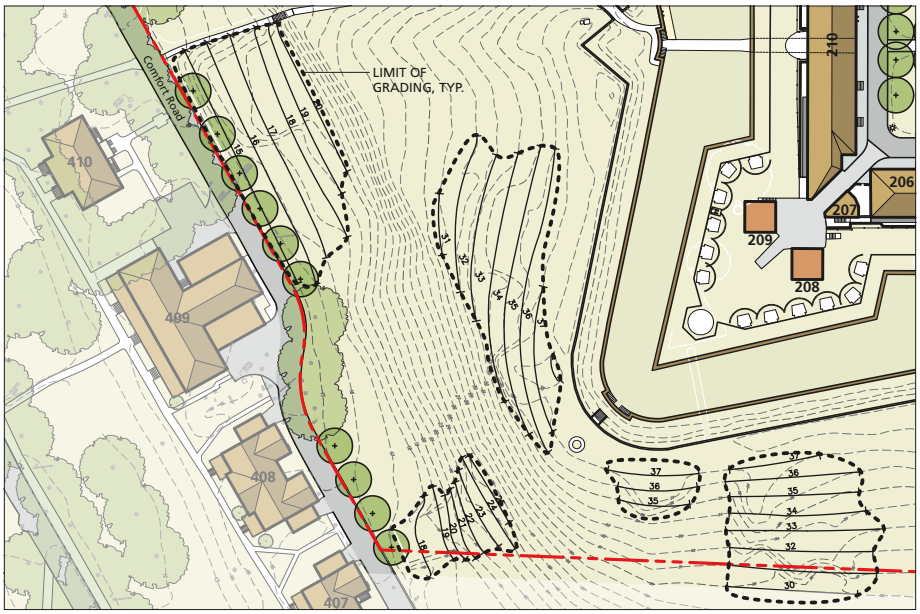


Figure 3.29. Schematic grading to recontour Fort Jay's glacis. Plan, 2013 (OCLP)

also includes removing wood timbers installed to retain soil for tee boxes and other golf course features. West of Building 25, the task could involve removing an existing concrete wall located along Andes Road and the western edge of Nolan Park. The wall was installed to retain a knoll north of a golf course green. Alternatively if structural sound, the wall could remain and have soil removed from its face on the glacis side. In addition to retaining structures, the task includes grinding evergreen stumps, a total of twenty-four, removed in 2009. Following approval of an archeologist, tree stumps should be ground to a depth no greater than three inches to minimize potential damage to archeological resources. Alternately, the stumps could be left to decay in place accelerated by drilling a series of holes and filling the holes with a mixture of compost, soil, and organic fertilizer such as cottonseed meal.[37] All proposed work within the Limit of Grading line requires the review of a regional archeologist.

FJG-TP-2: Preserve topographic feature associated with the New Barbette Battery

Description

The steeply engineered slope raking the western portion of Fort Jay's glacis should not be confused with non-historic golf course topography. This slope is a remnant of the unfinished "New Barbette Battery" partially constructed during the 1870s. This topographic feature should be preserved and interpreted as an area prepared

for a new generation of coastal artillery planned between the conclusion of the Civil War and publication of the Endicott Board recommendations (Figure 3.30).

Relationship to Park Planning

Governors Island National Monument has three primary interpretive themes and based on public input supporting the General Management Plan and Long Range Interpretive Plan processes, the "Place in the National Experience" theme and the associated harbor defense stories should be emphasized.[38] The planning, design, and construction of the New Barbette Battery on Governors Island represents a shift in U.S. harbor defense strategy from casemated masonry structures such as Castle Williams to open concrete platforms protected by engineered earthen slopes. This shift, ultimately resulting in the obsolescence of Fort Jay and Castle Williams, is an important harbor defense story in the park's interpretive themes.

Background

In 1869, the Army proposed constructing an "earthen barbette battery for heavy guns" on the glacis of Fort Jay and requested a $104,000 appropriation followed by an additional $52,000 the following year.[39] A drawing prepared in 1871 shows the planned "New Barbette Battery" that capitalized on the pre-existing slope exterior to Fort Jay. The proposed new battery was to be equipped with twenty-seven emplacements and thirteen magazines paralleling the harbor shoreline along the southwest portion of the island (Figure 3.31). Each emplacement would likely receive a 10-inch or 15-inch Rodman gun mounted on a front-pintle carriage (Figure 3.32). Accompanying the 1871 plan is the Army's Report of the Chief Engineer explaining that by July 1871, "eight traverse magazines have been built, the parapet has been partially constructed the whole length of the battery, excavations have been made for the terreplein, for road in rear of terreplein, and



Figure 3.30. Topographic feature associated with the New Barbette Battery to be preserved. View looking southeast, 2014 (OCLP).



Figure 3.31. Plan and Sections of New Barbette Battery, 1869 (top) and Governors Island, New York, 1906 (bottom). The top plan shows the proposed design for 30 gun emplacements, indicated by red semi-circles, and their adjacent magazines. Construction of the New Barbette Battery required cutting into the consistent slope of the glacis and truncated the covered defile. Although not completed, the earthwork required to start the New Barbette Battery is captured on the bottom plan as a series of tightly stacked contour lines near Fort Jay's southwest bastion that extend across the end of the shortened defile (NARA RG 77 Fortification File, Drawer 37, Sheet 59 and RG 77 War Department Map Collection, 60-New York).



Figure 3.32. The New Barbette Battery was likely to receive Rodman guns mounted en barbette as seen in this photograph from Fort Moultrie, South Carolina (Courtesy of Rick Hatcher, Fort Sumter National Monument).

for foundations for the remaining eight magazines."[40] The following year, the parapet was completed, the terreplein was graded to the proper level, and six of the magazines had their exteriors coated with Portland cement.[41]

Based on subsequent Chief Engineer's reports, major work on the New Barbette Battery ceased after 1872. The Army applied another coating of cement and hung temporary doors on the magazines during 1875. The eight completed magazines appear on a plan drawing dated 1879. In 1885, the Chief Engineer reported the New Barbette Battery remained unfinished, but that the "slopes and platforms are generally in good condition, and the magazine dry and serviceable" (Figure 3.33).[42] The piecemeal progress and unfinished status of the New Barbette Battery follows a pattern for coastal artillery projects across the United States during the 1870s and 1880s. Experiments with new and various artillery for coastal defenses resulted in coastal defense projects receiving limited, if any, funding from 1875 until the adoption of the Endicott Board recommendations in 1886.[43] In addition, sea wall construction appears to be a primary concern at Governors Island and the focus of advocating for Federal appropriations.[44] Construction on the first of eight officers' quarters along Hay Road, presently known as Colonels' Row, began in 1893. Later that year, the Army removed infrastructure associated with the New Barbette Battery, leaving only the forward engineered slope in place.[45]

Treatment Considerations

The steep engineered slope constructed to serve Fort Jay's New Barbette Battery extends across the western portion of Fort Jay's glacis and is located about 100 feet northeast from Comfort Road. The feature begins roughly 125 feet south of Building 251 and continues southeast for approximately 370 feet. The feature is marked by a steep slope, varying between a 1.5:1 and 3:1 ratio that is inconsistent with the surrounding glacis. Topographic remnants of Fort Jay's New Barbette Battery are not associated with the non-historic golf course and should be preserved to every practical extent when undertaking work to recontour golf course features.

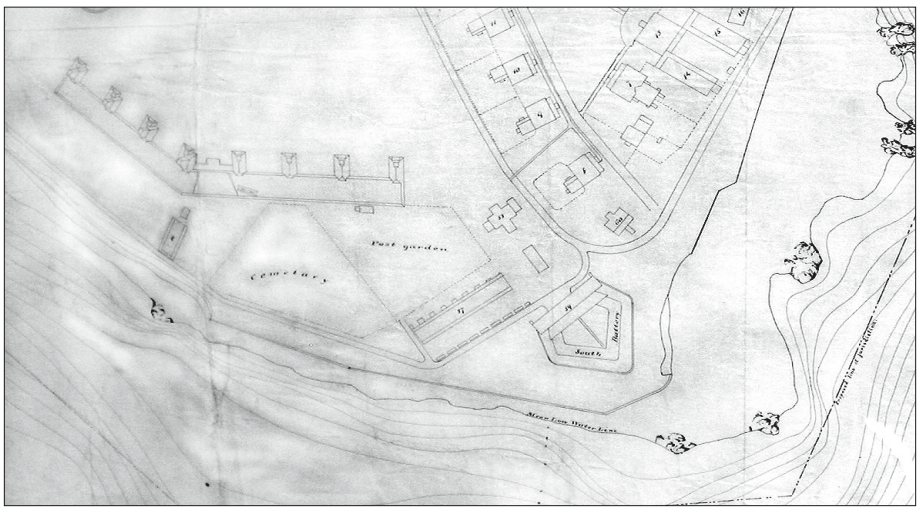


Figure 3.33. Completed portion of the New Barbette Battery, 1879 (NARA RG 77 Records of the Office of the Chief of Engineers, Drawer 37, Sheet 63).

CIRCULATION

Circulation includes the spaces, features, and applied material finishes that constitute the systems of movement in a landscape. In the Fort Jay Glacis Zone, tasks addressing circulation are intended to improve and enhance the historic setting of the fortifications and to better convey their defensive purpose.

FJG-CR-1: Rehabilitate historic covered defile to serve as segment of contemporary system of pedestrian circulation

Description

The above-ground characteristics of the former covered defile once connecting Fort Jay and Castle Williams is barely discernible as either a circulation route or as a defensive feature (Figure 3.34). Subtle topographic signatures extend from Fort Jay's northwest counterscarp wall to suggest the alignment and outline of the defile, but the continuous, linear form of the feature is interrupted by golf course features, Building S-251, and Parking Area 504. These circumstances, as well as the widths, and grades of pedestrian routes beyond the National Monument boundaries, make it difficult for those with mobility impairments to successfully navigate the distance between Fort Jay and Castle Williams. In remedy to this, the covered defile should be rehabilitated to serve as a critical segment in a contemporary system of accessible pedestrian walkways. Rehabilitation of the defile may also utilize grading and low retaining walls to interpret the former defensive purpose of this resource to park visitors and to further emphasize the historic operational connections between Fort Jay and Castle Williams (Figure 3.35).

Relationship to Park Planning

The Governors Island General Management Plan directs that landscape rehabilitation would include developing a pathway from the west gate of Fort Jay to Castle Williams. This could be a new pathway along the alignment of the former historic covered defile, or, potentially a rehabilitation or restoration of the original passageway, parts of which have been recently uncovered.[46]

Background

During the early nineteenth century, tense relations with Britain led the United States to make preparations to defend New York City. In November 1808, Colonel Jonathan Williams planned for a new defensive feature at Governors Island located:

"In the Wall of the covert way [counterscarp wall] on the west side directly opposite to & protected by the western Flank of the Ravelin, a space of about 8



Figure 3.34. Historic covered defile to be rehabilitated. View looking northwest, 2012 (OCLP).



Figure 3.35. Rehabilitated historic covered defile. View looking northwest, 2014 (OCLP).

feet is left unbuilt from which a zig- zag covered defile will be made to the Castle at the western point of the Island hereafter mentioned, so that the communication may be preserved in perfect safety during action with some maritime Force."[47]

By December 1809, the Army completed the covered defile connecting Fort Jay and Castle Williams. However, maps from 1813 indicate the covered defile was constructed as straight route between the two fortifications rather than the "zig-zag" form described by Williams (Figure 3.36). A corresponding cross-section drawing of that time labels the defile as a, "Covered Way of Communication." This annotation along with Williams' prior description suggests that the route was to intended serve as an active connector between the two fortresses and not simply as a protected escape route should Castle Williams come under attack.

Between 1869 and 1870, the Army began construction on the "New Barbette Battery," paralleling the harbor shoreline along the southwest portion of the island. Excavations to create a level platform for the battery's artillery and depositing fill for a protective earthen slope likely removed the northwestern portion of the covered defile near Castle Williams (Figure 3.37). The Army did not complete, nor arm, the New Barbette Battery, but continued to truncate and obscure the former covered defile by building auxiliary hospital structures and post support facilities between 1902 and 1919 (Figure 3.38). Utility maps prepared by the U.S. Army in 1962 and the U.S. Coast Guard in 1980 indicate telephone lines, water mains, electrical lines were all routed across the former defile, near Fort Jay's northwest counterscarp wall (Figure 3.39). Archeological investigations in 1998 identified surviving underground remnants of cobblestone paving and brickwork retaining walls.[48] Maintenance hastily undertaken on golf course features in the early 2000s uncovered brick and sandstone blocks in the vicinity of the visible remnants of the former feature.

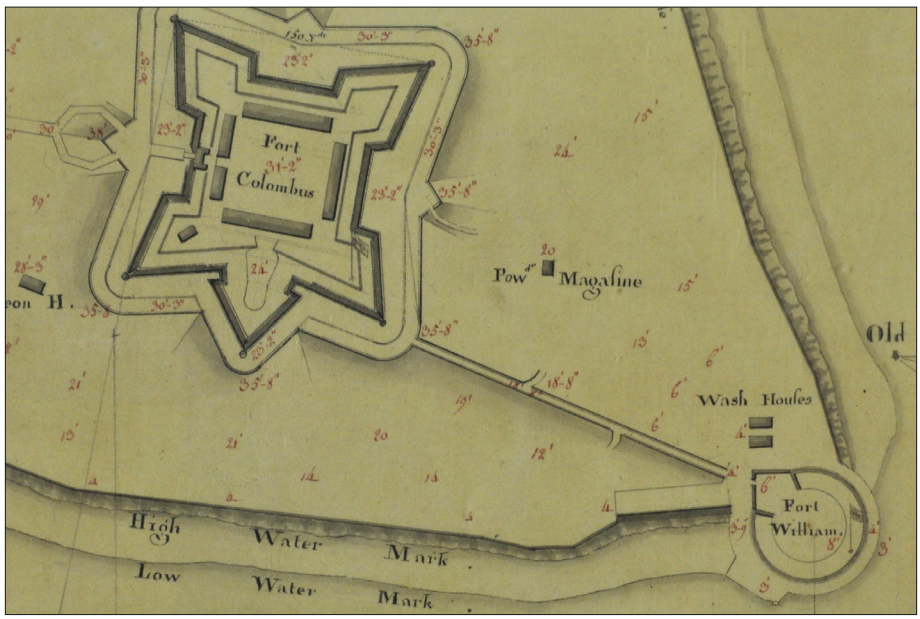


Figure 3.36. The Army constructed the defile as a straight route between the two fortifications. Plan, 1813 (NARA RG 77 Fortification File, drawer 36, sheet 20A).

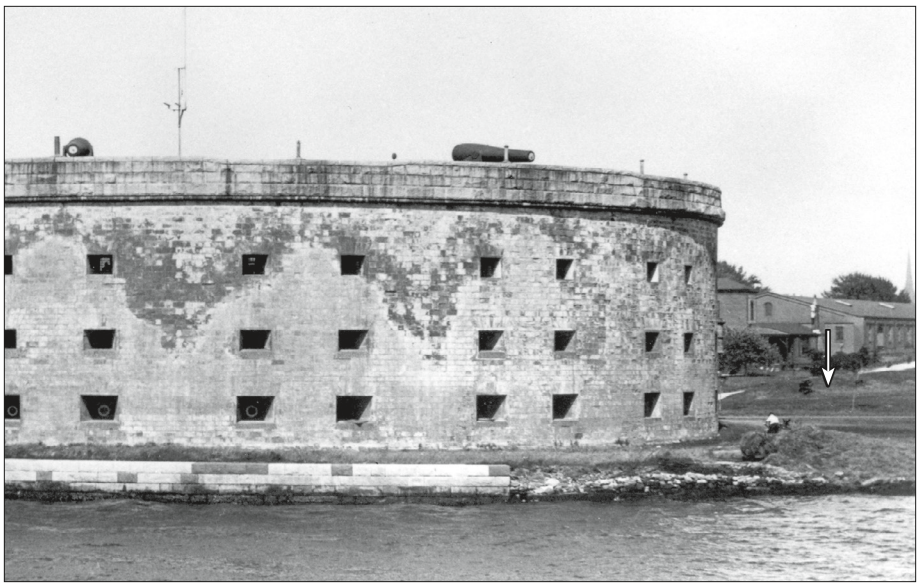


Figure 3.37. Late nineteenth century truncated defile. The arrow indicates where walls or a structural component of the covered defile should be located, but were likely removed with initial construction of the New Barbette Battery. View looking northeast, circa 1880s (Museum of the City of New York, http://collections.mcny.org/Collection/"Castle Williams" Governor's Island N.Y.-2F3XC5I4JS9Q.html).



Figure 3.38. Auxiliary hospital structures and post support facilities truncating the defile between the two fortifications. View looking east, 1966 (NARA RG 97s_AHC).

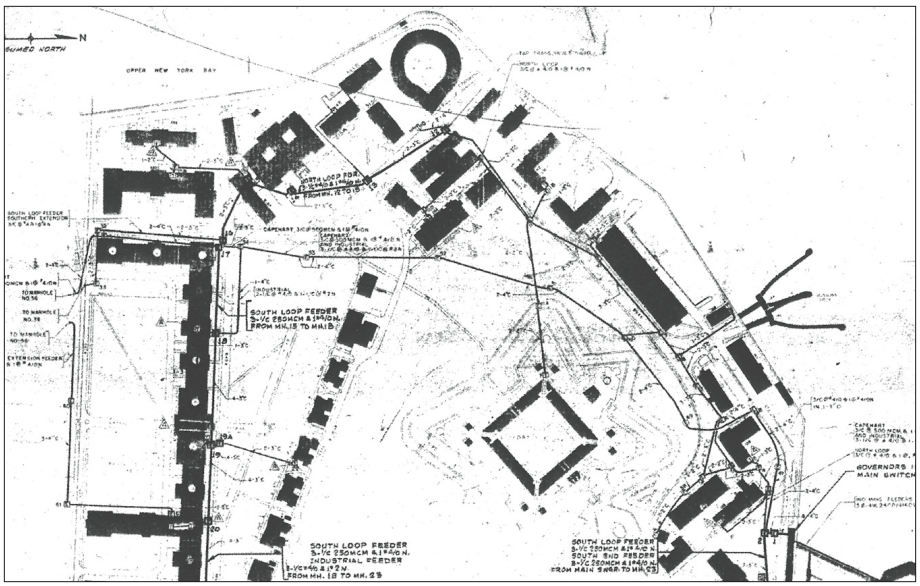


Figure 3.39. U.S. Coast Guard map showing two underground electrical lines cutting through the defile near Fort Jay's northwest bastion. Plan, 1980 (FILE0001.TIF in GOIS files, Cabinet #14, Miscellaneous).

Treatment Considerations

All proposed work to rehabilitate the covered defile involves significant ground disturbance and will require additional archeological investigation as well as on-site construction supervision of a regional archeologist. The first steps in implementing this task are to complete a topographic field survey, perform additional archeological investigations, and prepare a final design based on this information. A complete topographic field survey should be conducted for the entire covered defile route and adjacent areas to verify existing conditions, utility locations, and grades. The findings of additional, new archeological investigation should inform the subsequent design of the walking surface and the side walls. In conjunction with these findings, permeable paving systems should be considered for the walking surface to reduce surface water runoff and the need for new underground drainage structures.

Based on currently available information, the preliminary design of the rehabilitated covered defile should consist of a new walking surface, new low retaining walls, and a mounded earthen parapet. Beginning at the opening in the northwest counterscarp wall, the walking surface should be eight feet wide and graded at a consistent slope of less than five-percent to its terminus near the intersection of Hay and Andes roads. Starting near the current location of Building S-251 and extending to the intersection of Hay and Andes roads, the defile route may be supplemented with new low retaining walls extending no more than 30 inches above grade at both edges of the walking surface. This section of the rehabilitated defile extends over Parking Area 504 where presently, subbase material is settling and the bituminous concrete surface is cracking and sinking. Prior to placing fill material over Parking Area 504, the existing bituminous concrete surface—an impervious surface at least four inches thick—should be removed. Existing subbase material should be reviewed by an engineer and as deemed necessary, removed, supplemented, and compacted to a required density.

It is recommended, as proposed in this treatment plan, that the grading for the entire defile route be primarily fill placed over the existing surface grades. There will likely be isolated areas where shallow amounts of cut are necessary to create a uniform, level walking surface and to blend proposed earthwork into existing topography. Filling over the existing surface grades is strongly recommended for two reasons. First, filling will not impact nor expose archeological resources and affect their potential to yield important information. Second, underground high-voltage transmission lines and other utilities currently cross the defile route near Fort Jay's northwest counterscarp wall and suggest that the proposed walking surface at this location must be placed at or above existing surface grades (Figures 3.40 and 3.41).

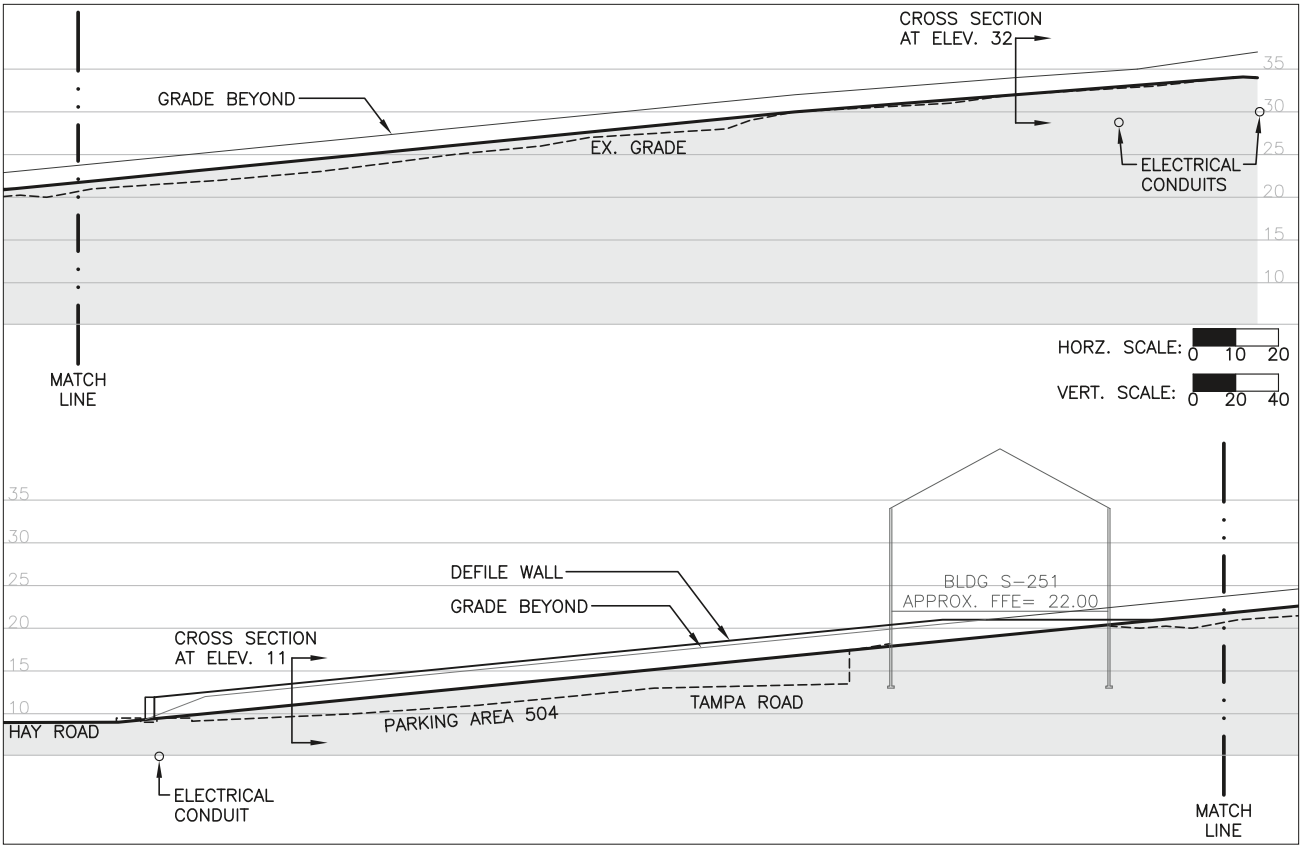


Figure 3.40. Longitudinal section through the proposed defile. The vast majority of the rehabilitated defile will be formed by filling over the existing grade. The location and depth of electrical conduits are based on a 1980 U.S. Coast Guard map and are approximate. The vertical scale has been exaggerated by a factor of two. Section, 2014 (OCLP).

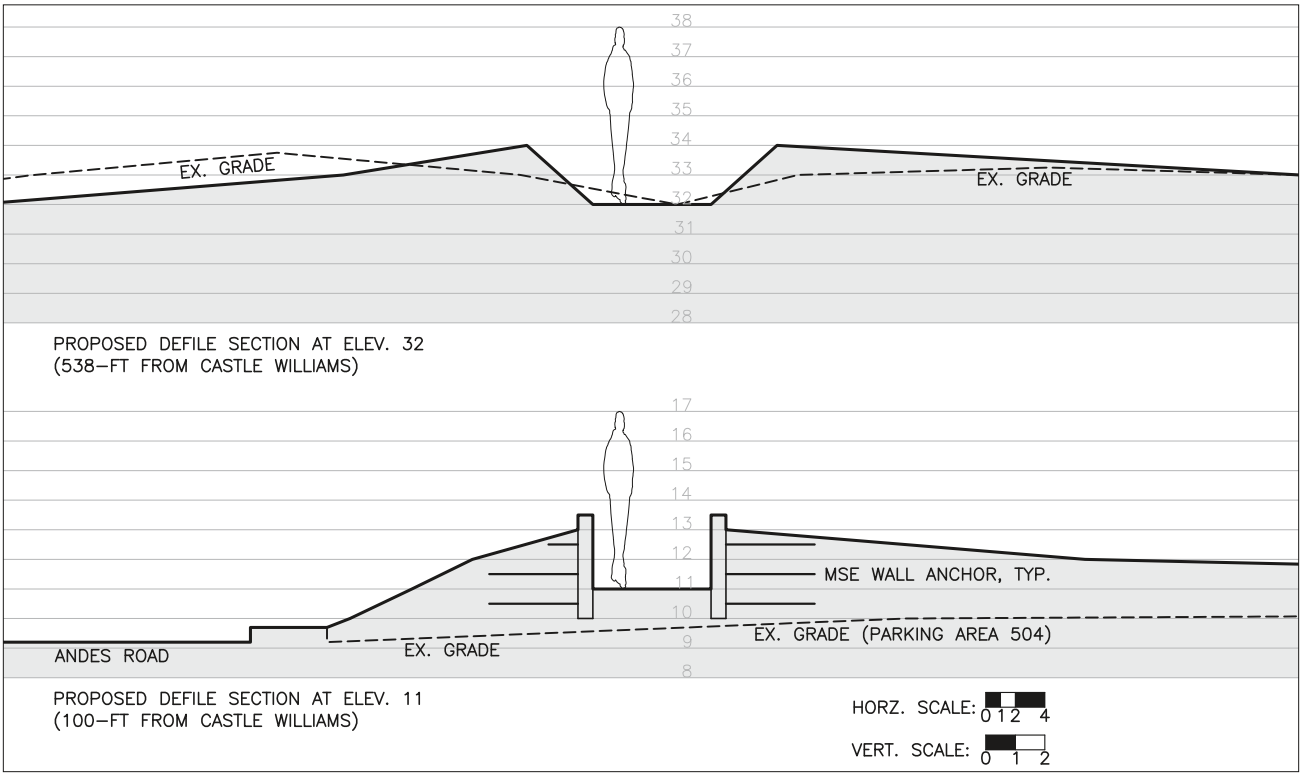


Figure 3.41. Cross section through the proposed defile at elevation 11 and 32. The vast majority of the rehabilitated defile will be formed by filling over the existing grade. The vertical scale has been exaggerated by a factor of two. Sections, 2014 (OCLP).

FJG-CR-2: Repair/replace brick sidewalks along Andes Road

Description

The brick sidewalk along Andes Road lacks a uniform surface and consistent paving materials required for safe pedestrian access (Figure 3.42). The sidewalk within the National Monument property parallels the west and south edges of Andes Road from Fort Jay's barbican site to the intersection Andes and Hay Roads near Castle Williams. This deteriorated brick sidewalk should be repaired or replaced in order to provide a safe consistent walking surface for visitors and staff and to maintain an overlay of consistent landscape character within the larger National Historic Landmark district (Figure 3.43).



Figure 3.42. Brick sidewalk to be repaired or replaced along Andes Road. Detail view, 2012 (OCLP).



Figure 3.43. Repaired or replaced brick sidewalk along Andes Road. Detail view, 2013 (OCLP).

Relationship to Park Planning

The Governors Island General Management Plan states that to the greatest extent possible, existing, significant landscape features and patterns will be preserved, such as tree-lined streets, driveways, and walks. A second action item specifically identifies that existing circulation routes within the National Monument will be maintained.[49] The General Management Plan identifies several points of mutual interest between the National Park Service and the Trust for Governors Island. Repair or replacement of the brick sidewalk along Andes Road is supported by the mutual interest statement to treat cultural landscape features of the historic district, including the glacis/Parade Ground, adjacent areas such as Nolan Park and Colonels' Row, and the waterfront esplanade in a comprehensive and seamless manner.[50] Finally, the *Governors Island Preservation and Design Manual* supports this task stating existing unit masonry streets, driveways, and walks within the Governors Island Historic District, and seawall north of Division Road, will be preserved in-place, and, where necessary repaired.[51]

Background

A 1902 Army map of Governors Island documents a sidewalk paralleling the west and south edges of Andes Road from Fort Jay's barbican to the intersection with Hay Road. This map shows patterning on the Andes Road walk, as well as walks in Nolan Park, indicating brick or another type of unit paving (Figure 3.44). Based on the contrast of materials seen in historic photographs from the late 1910s, 1920s, and 1930s, the sidewalk along Andes Road was concrete. A 1942 photograph clearly captures that the Andes Road sidewalk was surfaced with brick in a running bond pattern.



Figure 3.44. Sidewalks in Nolan Park, left, Fort Jay's barbican, center, and along Andes Road, right, feature a patterning indicating brick or another type of unit paving. The proposed Commanders Quarters drawn in red were never built. Plan, 1902 (NARA RG 92 Records of the Office of the Quartermaster General, Cartographic Records, Blueprint File, 24-55).

Treatment Considerations

A more extensive replacement strategy, resulting in a more durable sidewalk, involves removing the current bricks, pouring a concrete base slab over a compacted aggregate base, installing an asphalt setting bed over the concrete base, and adhering the removed bricks to the setting bed with a neoprene tack coat. This construction practice is often used for high-traffic, urban sidewalks and was implemented at Statue of Liberty National Monument. Brick sidewalk repairs requiring the installation of new compacted aggregate base material will require the review of a regional archeologist.

The current brick sidewalks feature pressed bricks with yellow striations in the clay set in a running bond pattern. Non-historic pavers used as infill, such as wire-cut brick and precast concrete, and other paving materials such as asphalt, should be removed and properly disposed. Historic bricks in displaced sections require resetting and should be removed and inspected. Bricks that are cracked or defective should be culled. Setting beds or aggregate base course may be inadequate for the sidewalk and should be replaced or supplemented if necessary. If new bricks are needed, they should match the existing in size, color range, and texture.

VEGETATION

Vegetation includes the deciduous and evergreen trees, shrubs, vines, ground covers, and herbaceous plants, and plant communities, whether indigenous or introduced in a landscape. In the Fort Jay Glacis Zone, tasks addressing vegetation are intended to present a seamless visitor experience between the National Monument and National Historic Landmark properties.

FJG-VG-1: Add street trees along eastern and northern edges of Comfort Road

Description

The removal of Building S-251, Tampa Road, and associated features will create an abrupt edge between the National Monument and Trust for Governors Island properties. Additional street trees should be in-filled along the eastern and northern edge of Comfort Road as a unifying landscape feature between the National Monument and Trust for Governors Island properties (Figures 3.45 and 3.46).

New trees should be added along the northern edge and gaps in the current planting filled along the eastern edge at roughly 20-30 foot on center spacing. Species of oak (*Quercus*) such as red oak, scarlet oak, and/or chestnut oak are recommended due to their round to oval-shaped growth habit that provides shade as well as their ability to tolerate drier soils.



Figure 3.45. Street trees to be added along the eastern edge of Comfort Road. View looking southwest, 2014 (OCLP).



Figure 3.46. Street trees added along the eastern edge of Comfort Road. View looking southwest, 2014 (OCLP).

Relationship to Park Planning

As an action item for addressing the resource protection of the cultural landscape, the General Management Plan states that new landscaping will be designed and executed in a manner that preserves the character and fabric of the historic district, and, when appropriate, will use similar plant materials in similar situations.[52] The General Management Plan identifies several topics of mutual interest between the park and Trust for Governors Island, the first of which is to preserve the cultural landscape. Adding shade trees along the eastern and northern edge of Comfort Road is supported by the mutual interest statement to preserve historic spatial relationships, patterns of vegetation, and the campus-like landscape character of the historic district.[53]

Background

A 1962 Army map, "General Tree-Cover and Recreation Map," does not show street trees on the east side of Comfort Road across from Building 410 and Building 408. Additionally, street trees did not continue along Comfort Road as it joined Hay Road, likely due to the intersection with Tampa Road and the presence of Building S-510. The Army constructed Building S-510 in circa 1942 as a Red Cross Recreation facility and medical storehouse and the structure was identified as non-contributing in the National Historic Landmark nomination.[54] In the late 1980s, the U.S. Coast Guard removed Building S-510.

Treatment Considerations

Replacing trees in-kind or replacing a specific tree that existed at a specific date is less critical for this task than the objective to improve cohesive landscape character between the National Monument and Trust for Governors Island properties. Replacement street tree plantings should be selected in consultation with the Trust for Governors Island. New or replacement tree planting holes for this task will also require the review of a regional archeologist.

FJG-VG-2: Rehabilitate street tree planting along Andes Road

Description

The western and southern edges of Andes Road, fully within the National Monument boundaries, lacks consistent street tree planting that would serve as a unifying element of landscape character within the National Historic Landmark district (Figure 3.47). The existing street tree planting at this location should be rehabilitated to unify landscape character between the National Monument and Trust for Governors Island properties (Figure 3.48).



Figure 3.47. Street tree planting and privet hedge to be rehabilitated along Andes Road. View looking south, 2014 (OCLP).



Figure 3.48. Street trees and privet hedge rehabilitated along Andes Road. View looking south, 2014 (OCLP).

Street trees along Andes Road include mature specimens and recently planted young trees. Additionally, there are gaps where no trees are present, interrupting the intended continuity. Mature trees should receive routine inspections by a certified arborist and be subjected to recommended procedures. Young trees should also be monitored and receive routine care to encourage vigorous growth. Gaps in the street tree planting should be in-filled at roughly 20 to 30 foot on center spacing with new trees. Species of oak (*Quercus*) such as red oak, scarlet oak, and/or chestnut oak are recommended due to their round to oval-shaped growth habit that provides shade as well as their ability to tolerate drier soils.

Relationship to Park Planning

As an action item for addressing the resource protection of the cultural landscape, the General Management Plan states that to the greatest extent possible, existing, significant landscape features and patterns will be preserved, such as tree-lined streets.[55] The General Management Plan identifies several topics of mutual interest between the park and Trust for Governors Island, the first of which is to preserve the cultural landscape. Rehabilitating the street tree planting along Andes Road is supported by the mutual interest statement to preserve historic spatial relationships, patterns of vegetation, and the campus-like landscape character of the historic district.[56]

Background

The Army planted street trees along the western and southern edges of Andes Road in circa 1910.[57] The trees are documented in a circa 1913 photograph taken from Brooklyn and by 1928, formed a consistent canopy cover as one approached Castle Williams at the intersection of Andes and Hay Roads. Recent removal of failing red oaks presented an opportunity to count tree rings, and indicated many of the present Andes Road street trees were planted as late as the 1960s. The spacing and tree cover along Andes Road appears consistent with street tree plantings along Evans Road at the perimeter of Nolan Park and along Hay Road at the perimeter of Colonels' Row. The columnar fastigate variety maple trees located north of Fort Jay's ravelin were planted during the Coast Guard period of management and are inconsistent with pre-1966 Army era plantings on Andes Road.

Treatment Considerations

In addition to species of oaks, selecting suitable trees for Governors Island should consider exposure to salt spray generated by high winds from storm events such as Hurricane Sandy. No tree can withstand prolonged exposure to salt spray, however, Japanese scholar tree (*Sophora japonica*), London planetree (*Platanus* × *acerifolia*), and ginkgo (*Ginkgo biloba*) are adaptable to some degree of salt spray and also tolerate drier soil conditions. Replacement street tree plantings planned

for Andes Road should be selected in consultation with the Trust for Governors Island. New or replacement tree planting holes for this task will require the review of a regional archeologist.

FJG-VG-3: Replace failing trees at Nolan Park's western boundary

Description

Deciduous shade trees along the western edge of Nolan Park and inside the National Monument property show evidence of disease, damage, and in general are reaching the end of their life cycle. These failing trees should be removed and replaced with disease-resistant American elm cultivars that will be consistent in character with the mature shade trees along the National Monument boundaries at Evans Road, Comfort Road, and Andes Road (Figures 3.49 and 3.50).

Relationship to Park Planning

The General Management Plan identifies several topics of mutual interest between the park and Trust for Governors Island, the first of which is to preserve the cultural landscape. Replacing the failing trees at Nolan Park's western boundary is supported by the mutual interest statement to preserve historic spatial relationships, patterns of vegetation, and the campus-like landscape character of the historic district.[58] The *Governors Island Preservation and Design Manual* identifies Nolan Park's brick walkways and mature trees lining those walkways as defining features.[59]

Background

Nolan Park was formed through the construction of primarily residential quarters between circa 1811 and 1902. The east side of the open space is defined by Buildings 1 through 10 and the southern half of west side by Buildings 15 through 20. The northern half of the west side lacks buildings and is marked by the end of Fort Jay's glacis and its consistent, defensive slope. The southern end of the park tapers to a point enclosed by Building 11 and Building 14 and the northern end is defined by Building 25. Brick pedestrian walkways line the perimeter of Nolan Park and several diagonal walks transect the open space and connect the east and west sides. Early 1910s photographs indicate deciduous trees separated the western walkway and Fort Jay's glacis and by 1928, these trees are distinctly seen in an oblique aerial photograph (Figure 3.51). A 1962 U.S. Army map indicates the planting was retained along Nolan Park's west boundary, although with some gaps are present.



Figure 3.49. Failing trees to be replaced at Nolan Park's western boundary. View looking east, 2014 (OCLP).



Figure 3.50. Trees replaced at Nolan Park's western boundary. View looking east, 2014 (OCLP).

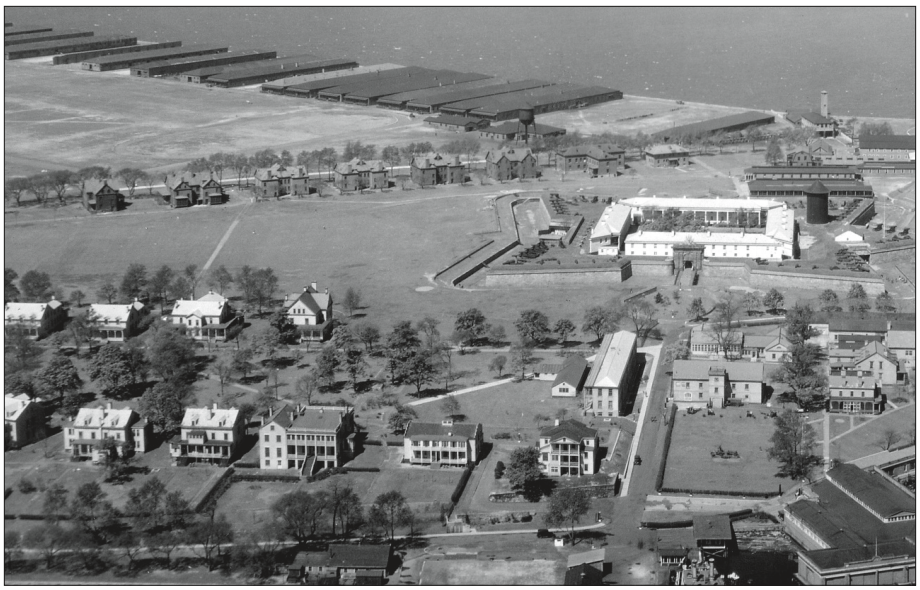


Figure 3.51. Deciduous shade trees along the western edge of Nolan Park. View looking west, 1928 (NARA RG 77 Records of the Office of the Chief of Engineers, Textual Records, entry 393, box 102).

Treatment Considerations

American elms, a species presently found in Nolan Park, should be selected for the new tree planting at the western boundary. The new tree planting should be spaced at roughly 20 to 30 feet on center and where possible, align across from an existing tree on the east side of the brick walkway. American elms are susceptible to Dutch elm disease, a fungus brought to the tree by the Dutch elm beetle, and the disease has decimated many individual and group plantings of elms. Research conducted by U.S. National Arboretum showed the American elm cultivar 'Valley Forge' had the best resistance to Dutch elm disease.[60] In 2013, the Olmsted Center selected the elm cultivar 'Jefferson' to replace the historic elm at Frederick Law Olmsted National Historic Site. Both of these cultivars form wide-spreading canopies and are preferred selections for this task. Replacement street tree plantings identified for the Nolan Park area should be selected in consultation with the Trust for Governors Island. New or replacement planting holes for this task will require the review of a regional archeologist.

FJG-VG-4: Rehabilitate privet hedge along Andes Road

Description

The privet hedge along the west and south edge of Andes Road features gaps and lacks the consistent form that serves as a unifying element of landscape character within the National Historic Landmark district. Additionally, the present gaps encourage visitor foot traffic from Andes Road onto Fort Jay's glacis and result in erosion of the historic, defensive earthwork (see Figure 3.46). The privet hedge along Andes Road should be rehabilitated to promote the appearance of a well-maintained landscape throughout the National Historic Landmark district and to further protect the glacis, a fundamental resource, from erosion (see Figure 3.47).

Relationship to Park Planning

As an action item for addressing the resource protection of the cultural landscape, the General Management Plan states that to the greatest extent possible, existing, significant landscape features and patterns will be preserved, such as tree-lined streets.[61] The General Management Plan identifies several topics of mutual interest between the park and Trust for Governors Island, the first of which is to preserve the cultural landscape. Rehabilitating the privet hedge along Andes Road is supported by the mutual interest statement to preserve historic spatial relationships, patterns of vegetation, and the campus-like landscape character of the historic district.[62]

Background

A 1928 oblique aerial photograph shows hedges planted on the north and east sides of Andes Road, near Building 107, and on the north side of Andes Road heading west from Dock 102 to Fort Jay. Hedges are not visible along the south and west edges of Andes Road. During the 1930s, the Army planted the hedges along the south and west edges of Andes Road and a young hedge, approximately one-foot wide by one-foot high, is documented in a 1933 photograph of Building 251.[63] Until the U.S. Coast Guard terminated its operations on Governors Island, this hedge was protected from foot traffic by an eight-foot high woven wire fence that protected passersby from errant golf balls. The National Park Service removed the protective fence around 2008.

Treatment Considerations

Existing hedge sections that are thin or in poor condition should receive rejuvenative pruning. This pruning practice removes a third of the existing material every year so the hedge is comprised of all new growth after three years. An option for rejuvenative pruning is to remove all of the hedge growth at once and let new growth develop. With this option, a temporary fence should be installed behind the hedge consisting of wood posts and black, nylon mesh. The fence is necessary to prevent foot traffic from trampling over the hedge as new growth emerges and to limit impacts to the glacis. A three-foot high railing may also be installed to protect the hedge from foot traffic as the plants mature. This has been accomplished elsewhere at Governors Island with excellent results (Figure 3.52). A similar use of low pipe railing is documented in mid-twentieth century photographs of Andes Road near Castle Williams (Figure 3.53). However, as the park gains experience with new pedestrian traffic patterns following reestablishment of the covered defile linking Fort Jay with Castle Williams, it may be necessary to design dedicated gaps in the hedge and railing where it is discovered that pedestrians cannot be deterred.



Figure 3.52. Precedent image of railing installed east of Building 110 protecting privet hedge from foot traffic. View looking southwest, 2012 (OCLP).



Figure 3.53. Railing installed along Andes Road sidewalk. View looking northwest, 1942 (NARA RG 77 Records of the Records of the Office of the Chief of Engineers, Entry 393, Box 102).

Existing hedge gaps should be planted with new privet that is full, dense, and matches the adjacent material in height. If necessary, plant two rows of new privet to match the width of the existing hedge. New or replacement hedge planting holes for this task will require the review of a regional archeologist.

SMALL-SCALE FEATURES

Small-scale features are the elements providing detail and diversity for both functional needs and aesthetic concerns in a landscape. In the Fort Jay Glacis Zone, tasks addressing small-scale features are intended to provide context-sensitive new additions for visitor safety and interpretive purposes.

FJG-SSF-1: Replace safety railing north of Fort Jay's ravelin

Description

The guardrail north of Fort Jay's ravelin has large openings below a top and an intermediate horizontal rail that do not adequately protect all visitors (Figure 3.54). The guardrail should be replaced to meet life safety requirements and minimizes visual intrusion on the cultural landscape (Figure 3.55).

Relationship to Park Planning

The General Management Plan identifies actions items to rehabilitate the cultural landscape these include actions to accommodate public visitation, exhibit space, operations, temporary housing, and all the accompanying safety and access requirements.[64]

Background

In 1958, the Army prepared a drawing calling for new fencing north of the ravelin, on top of the earthen parapet, and around the window wells at Building 202, 206, and 210.[65] Prior to 1983, the fence had been replaced with the present guardrail which is documented in an oblique aerial photograph taken for the Historic American Buildings Survey. Although the exact installation date of the guardrail is not known, the green paint strongly suggests the guardrail was installed during the Army's tenure.

Treatment Considerations

The current guardrail extends for approximately 270 linear feet following the outline of the ravelin. If possible, a new guardrail should be installed matching the number and spacing of vertical posts on the current guardrail and thereby minimizing ground disturbance and archeological review. Any new holes for



Figure 3.54. Safety railing to be replaced north of Fort Jay's ravelin. View looking southwest, 2012 (OCLP).

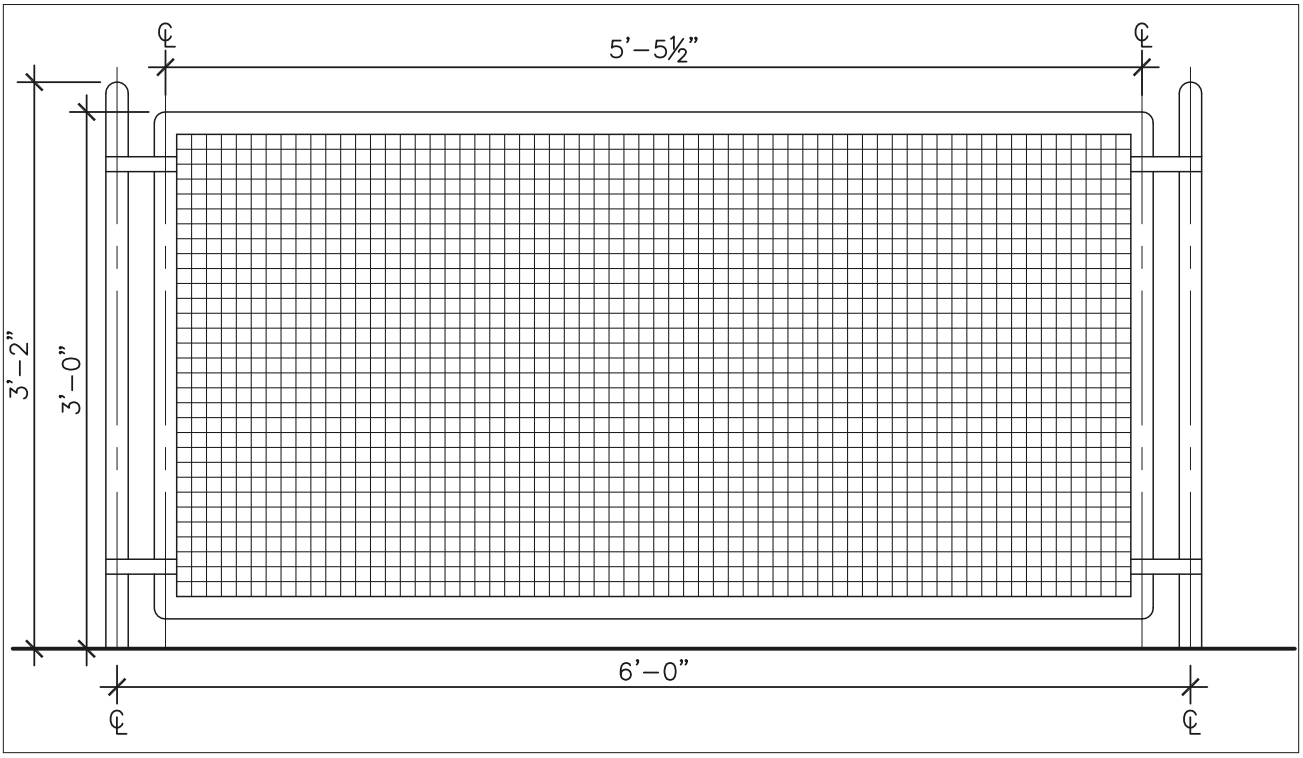


Figure 3.55. Replaced safety railing detail. Elevation, 2013 (OCLP).

this task will require the review of a regional archeologist. An alternative to a new guardrail would involve repairing horizontal or vertical members that are damaged or failing on the existing guardrail and retrofitting the large openings with a vinyl-coated, welded wire mesh infill. The wire mesh should form between 1-inch and 2-inch square openings and be finished with a black vinyl coating. The mesh should be attached to the existing guardrail with black vinyl-coated wire ties.

At Fort Jay's ravelin, the vertical change is roughly thirteen feet between the top of the glacis and the bottom of the dry moat. In order to prevent a small child from falling through a guardrail, most building codes require that a four-inch sphere must not be able to pass through any opening in the railing design. A guardrail design incorporating a metal mesh panel between the posts and rails satisfies life safety requirements without incorporating heavy vertical and horizontal members that call attention to the feature. For the guardrail to recede in its setting, and to reduce future maintenance requirements, the new design should be finished with a black color-galvanized coating. The color-galvanized coating, especially in a waterfront setting, will last longer and require less maintenance than traditional prime and paint finishes.

FJG-SSF-2: Mark location of Fort Jay's external magazine

Description

During Fort Jay's service as a harbor defense fortification, a rectangle magazine stood on the glacis west of the fort and south of the covered defile. The structure is no longer extant and its location should be marked with a cut stone band, set flush with the surrounding grade, for interpretive purposes (Figure 3.56).



Figure 3.56. Fort Jay's external magazine marked on the glacis by a white cut stone band. View looking west, 2014 (OCLP).

Relationship to Park Planning

The General Management Plan and Long Range Interpretive Plan identify three primary interpretive theme, and with the support of public input during the planning process, concluded the "Place in the National Experience" theme and the associated harbor defense stories should be emphasized.[66] Marking the location of Fort Jay's external magazine provides an interpretive opportunity to describe the physical arrangement and function of the harbor defense fortifications and support structures during their years of active use.

Background

An 1800 drawing of Fort Jay shows the fortification's first magazine located in the northeast bastion. This magazine also appears on an 1813 map of the island and at this time, had been supplemented with an external magazine located on the glacis west of Fort Jay (see Figure 3.36). In the 1830s, the Army completed a subterranean court, accessed from a central passageway in Building 214, that led to magazines under Fort Jay's ravelin. By 1839, a plan drawing confirms the magazine was removed from the northeast bastion.

A circa 1898 photograph records the external magazine, surrounded by a white picket fence, on the glacis west of Fort Jay with the former post hospital, located north of Andes Road, visible behind it (Figure 3.57). In 1919, the Army completed construction of hospital wards and a mess hall on the glacis west of Fort Jay, however, the Army's 1921 *Report of Completed Works* and an aerial oblique photograph from 1922 show that the magazine was retained. By 1932, with construction started on the McKim Mead and White-designed new post hospital south of Castle Williams, the wards, mess hall, and magazine had been removed.

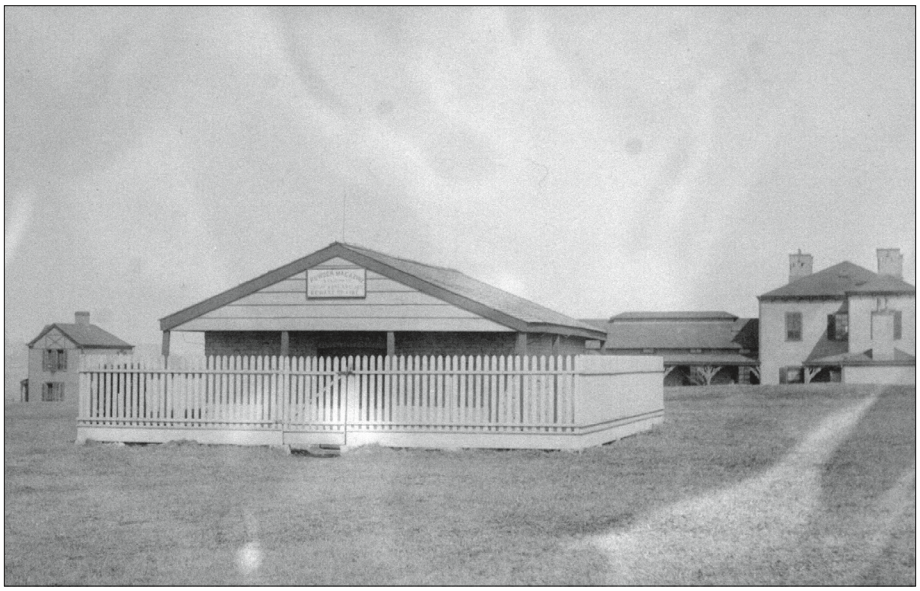


Figure 3.57. Magazine on Fort Jay's glacis. View looking north, circa 1898 (NARA RG 92 Records of the Office of the Quartermaster General, Box 4, 15-12).

Treatment Considerations

Archeological geophysics should be undertaken in the vicinity of the former magazine to determine and verify the location and dimensions of this structure. Based on this information, the outline of the structure should be depicted at the surface with two-foot wide, white granite pieces that will contrast with the surrounding turf. According to historic imagery, this outline should be 18 feet wide by 34 feet long with the length set parallel to the west wall of Fort Jay's northwest parapet. The outline could be further delineating by installing two-foot square by two-foot high granite blocks at each of the corners. The top of each block should be slightly tapered to form a low pyramid and shed water.

The granite may be dry set on a stonedust leveling course and compacted aggregate base that would require below surface excavations of roughly ten inches. Alternatively, a more durable installation could be achieved by mortar setting the granite on a reinforced concrete base. This construction method would require excavating roughly 12.5 inches below the surface. Either type of installation would require the on-site supervision of a regional archeologist.

FORT JAY/BARBICAN ZONE

BUILDINGS AND STRUCTURES

Buildings are elements constructed primarily for sheltering a form of human activity in a landscape. Structures are elements constructed for functional purposes other than sheltering human activity in a landscape. Engineering systems are also structures. In the Fort Jay/Barbican Zone, tasks addressing buildings and structures are intended to improve and enhance the historic setting of Fort Jay and to better convey its defensive purpose.

FJB-BL-1: Rehabilitate the Fort Jay barbican in support of effective interpretation

Description

The current small parking lot, between the bridge at the Fort Jay sally port and Andes Road, occupies the location of a former First System defensive feature that survived intact up to the mid-twentieth century. Surviving above ground features of the former barbican may be observed as the existing perimeter brick walls enclosing two defiles and a central inclined plane. The current small parking lot at this location is redundant, and is not required to satisfy the purposes of the National Monument. Existing conditions at this location detracts from the ability of Fort Jay to convey its defensive purpose to park visitors (Figure 3.58). The missing central feature of the barbican, specifically designed to repel advancing soldiers, should be rehabilitated between the sally port bridge and Andes Road (Figure 3.59).

Relationship to Park Planning

The General Management Plan specifies changes to Fort Jay's main entrance that include the removal of existing parking at this location, proposing to reconfigure the space so that visitors may better understand the purpose and meaning of the various defensive landscape features surrounding Fort Jay.[67]

Background

The Fort Jay barbican originally possessed a central feature consisting of an inclined plane bound by brick retaining walls reflecting the geometries and materials of adjacent surviving walls enclosing the current small parking area. The former central feature may be characterized as a roughly diamond-shaped inclined plane sloping upwards from Andes Road. The central feature of the barbican was intended to expose enemy soldiers approaching Fort Jay up the inclined plane to musket fire. Narrow access routes, or defiles, on either side of the inclined plane



Figure 3.58. Fort Jay's barbican to be rehabilitated. View looking west, 2014 (OCLP).



Figure 3.59. Rehabilitated Fort Jay's barbican. View looking west, 2014 (OCLP).

featured three angular turns providing defenders cover and exposing an attacking force to a fusillade of cannon fire (Figures 3.60 and 3.61). Following World War II the Army removed the central inclined plane feature of the barbican and paved the area to improve vehicular access. The center of the resultant space features a raised elliptical traffic island with a small display of four cannonballs stacked to form a small pyramid.



Figure 3.60. Barbican access routes converging at the bridge over Fort Jay's dry moat. View looking northeast, circa 1920 (NARA RG 111 Signal Corps Records, 67360 8 12).



Figure 3.61. Angular access routes, a defensive landscape feature protecting Fort Jay, were created by the barbican's central feature which the Army removed after World War II. View looking east, 1944 (Center for Military History, RG 239 S Grunert Collection P. 36).

Treatment Considerations

Options for rehabilitating the missing central feature of the Fort Jay barbican include providing new walls retaining the central incline plane constructed with compatible exterior finishes matching the historic footprint and height of the central feature. New walls retaining the central inclined plane could also be constructed conforming to the historic footprint at either the documented original height of the central feature, or as an alternative, finished at a consistent height of eighteen inches above the ground to form a continuous bench for sitting. Finally, different paving materials could be installed to highlight the extents of the barbican without requiring an elevation change from the current ground plane.

The option offering the greatest support for the National Monument's interpretive and educational objectives is the complete rehabilitation of the central barbican feature, making modest accommodations to provide for a slightly wider vehicular lane to meet contemporary requirement. The larger automobiles of the 1940s were able to navigate the historic dimensions of this defensive feature.

It is likely that the foundation walls belonging to the central incline plane feature of the barbican survive below grade. Improvements in geophysical technologies, such as ground penetrating radar, soil resistivity, and magnetic resonance may be helpful in determining the location of the foundation walls of the barbican central feature.

FJB-BL-2: Rehabilitate the Fort Jay sally port bridge deck and railings for visitor safety and to interpret defensive features

Description

The existing concrete bridge deck leading to the Fort Jay sally port is in serviceable condition, but obscures a former drawbridge span that survived into the mid-twentieth century and served as an important defensive feature of the fort (Figure 3.62). The NHL documentation, sponsored during the Coast Guard's stewardship of Governors Island, identified the Fort Jay bridge (Structure 219) as non-contributing and put the structure in the same category as the Building 513 complex. The concrete bridge deck rests on sandstone piers and although not distinguished in the NHL, the piers are present in an 1890 photograph and should be preserved. As the existing concrete bridge deck deteriorates over time and requires significant new investment, it should be replaced with a bridge deck and code-compliant hand railing system providing safe passage and highlighting for visitors the defensive features of the Fort Jay sally port (Figure 3.63).



Figure 3.62. Existing concrete bridge crossing Fort Jay's dry moat. View looking northwest, 2012 (OCLP).

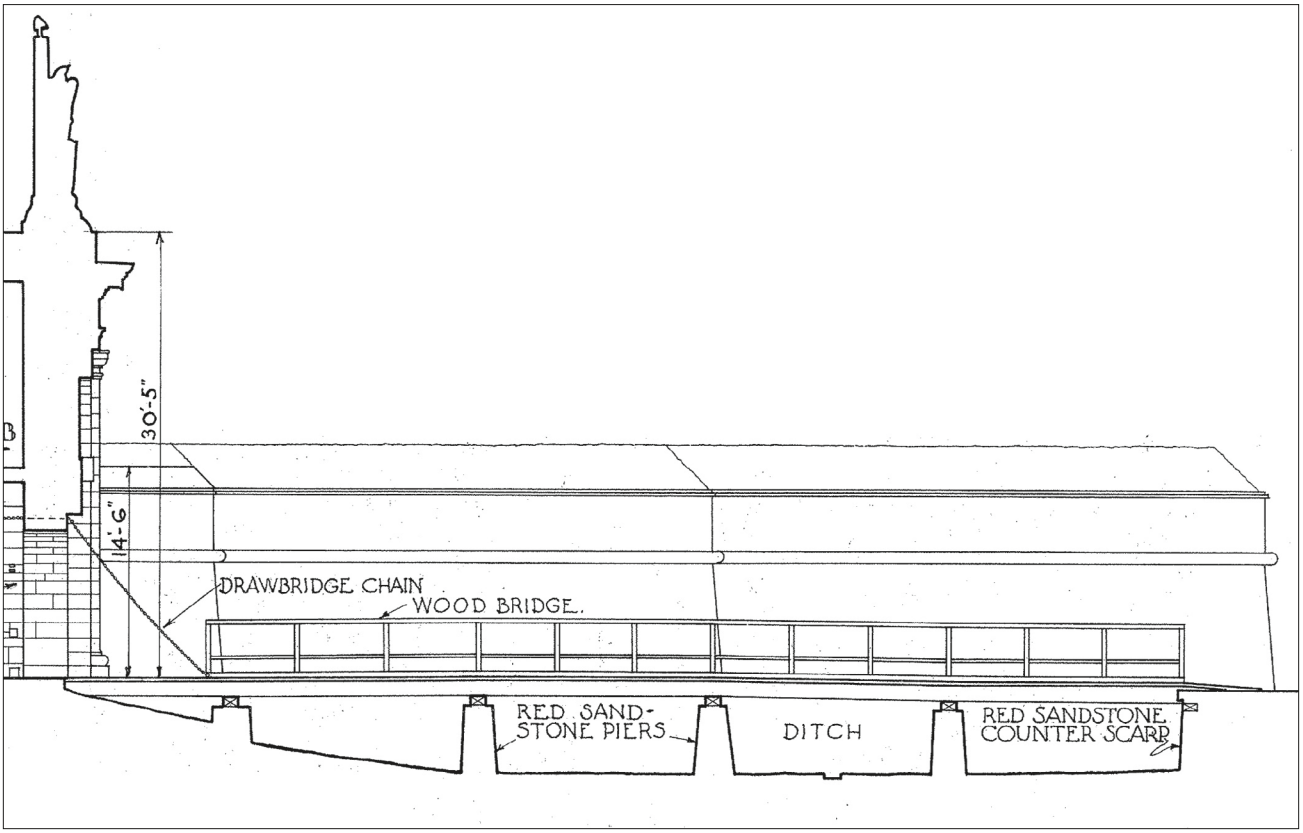


Figure 3.63. Fort Jay sally port bridge crossing the dry moat. Section looking north, 1934 (Library of Congress, http://www.loc.gov/pictures/item/ny0347.sheet.00006a/).

This project will repair the Fort Jay moat bridge which is the only vehicular access route to Fort Jay. Repairs include patching the spalled concrete on the topside (15%) and underside (30%) of the bridge deck, repointing the masonry piers, and repairing the curb. It will also repair the bridge's expansion joints and bearing plates to enhance the bridge's ability to expand and contract. By extending and improving the existing drainage system the project will halt further water damage. Finally, this project allows for the site work that is necessary to protect the historical fabric of the bridge and the adjacent cultural landscape. Development of this future project could take advantage of the opportunity to rehabilitate the drawbridge span in order to interpret this defensive feature (Figure 3.64).

Relationship to Park Planning

The Governors Island General Management Plan identifies both Castle Williams and Fort Jay as the National Monument's two primary resources. The rehabilitation of the bridge deck and railing system may be justified for both visitor safety and in support of effective interpretation.

Background

The earliest known drawing of Fort Jay, prepared by Joseph Mangin in January 1801, indicates a bridge crossing the dry moat on the east side and that a short length extending from the sally port could be raised as a draw bridge. An 1856 letter indicates the Army replaced extensive portions of the bridge due to decay. A 1864 photograph shows the wooden bridge deck fitted with raised walkways on either side of the vehicular way (Figure 3.65). A wood guardrail featuring diagonal cross braces is seen adjacent to the walkways. An 1890 photograph shows a similarly configured bridge deck set on masonry piers, the image further indicating the presence of the drawbridge chain at this time (Figure 3.66). In 1952, the Army replaced the wood bridge deck with a concrete bridge deck featuring guardrails of strap and channel iron construction. The bridge deck was last resurfaced during 2004–2005.

Treatment Considerations

A rehabilitated sally port bridge consistent with former dimensions should be twenty-one-feet wide including sidewalks, with a central vehicular way being twelve feet wide. The central portion may be surfaced with decking set horizontally across the twelve foot width. Pedestrian walkways, 4.5-feet wide, should flank either side of the central vehicular way. Where wood decking may be considered in the work, for the walkways should be roughly 6-inches higher than the central portion and run perpendicular to central decking. Beams should be either steel concealed by a wood face or treated structural timbers, providing adequate support to vehicular loads. The guardrails should be wood and feature the double-diagonal bracing consistent with the details and proportions of the guardrails documented in historic images.



Figure 3.64. An iron wheel is part of the extant mechanisms present in the sally port that were used to raise and lower Fort Jay's drawbridge. View looking east, 2012 (OCLP).



Figure 3.65. Raised walkways on both sides of the bridge. View looking west, 1864 (*Fort Jay Historic Structure Report*).

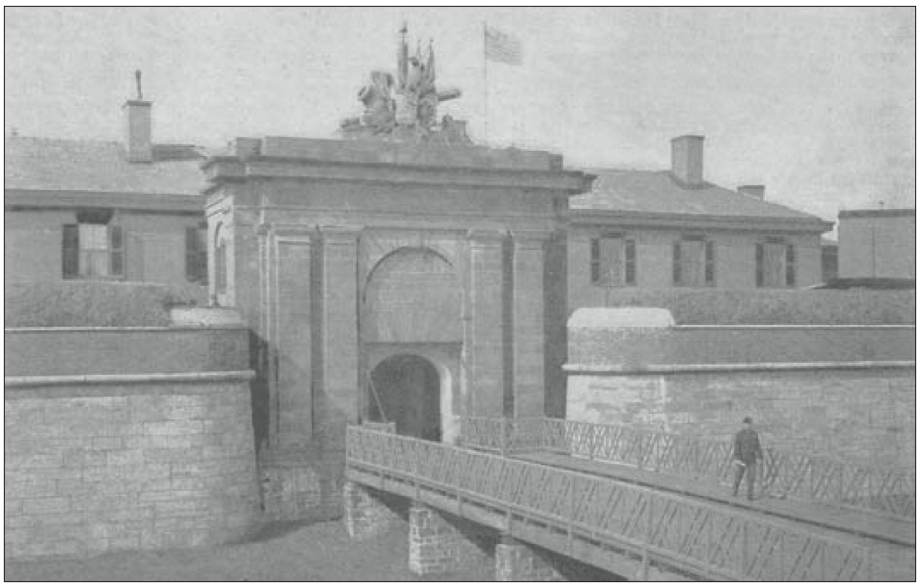


Figure 3.66. Wood guardrail adjacent to bridge walkways. View looking northwest, 1890 (*Fort Jay Historic Structure Report*).

FJB-BL-3: Rehabilitate Fort Jay's terreplein and southwest bastion

Description

Fort Jay's southwest bastion features the remnants of a golf course tee box obscuring the military objective of defending the primary shipping channel in the Upper Harbor (Figure 3.67). The southwest bastion should be rehabilitated—including removal of the remaining piers that once supported a wooden golf course footbridge—in order to present and interpret the defensive function of Fort Jay to park visitors. The terreplein, maintained as a roughly level area between the gun emplacements and the barracks, was excavated beginning in 1921 to create window wells for the quarters' basement levels. If architectural and engineering studies determine it necessary to protect historic building fabric and to remediate drainage problems, the terreplein grade should be rehabilitated.

Relationship to Park Planning

Rehabilitating Fort Jay's southwest bastion is supported by the park's General Management Plan and Long-Range Interpretive Plan. Both documents call for improving visitors' understanding of the island's strategic location in the harbor and its historical military and defensive role.[68] The General Management Plan also identifies removing former golf course features as an action item for addressing the resource protection of the cultural landscape. In addition to specific golf course features such as tee boxes, associated features such as chain-link fencing erected for the course are identified for removal.[69]



Figure 3.67. Fort Jay's southwest bastion to be rehabilitated. View looking southwest, 2014 (OCLP).

Background

The field of fire for Fort Jay's southwest bastion covered the primary shipping channel in the Upper Harbor as large ships avoided the shallow waters of Buttermilk Channel and maneuvered between Bedloe's Island (now Liberty Island) and Governors Island towards the Hudson River, Lower Manhattan, and the East River. Presently, the southwest bastion features brick infill added to close a hexagonal recess and retain soil for the tee box. Chain-link fence is erected along the south side of the bastion and features a gate leading to wood steps and a bridge over the dry moat. The fence, gate, and steps are overrun by Boston ivy and Japanese honeysuckle. The fence and gate should be removed and the invasive vines removed and treated with a selective woody herbicide. The brick infill added to close the recess should be carefully removed without damaging adjacent historic brick and mortar. Hand excavation and equipment no larger than a skid-steer tractor should be used to remove the soil added for the tee box. The uncovered brick and mortar should be inspected and cleaned and repaired according to the recommendations of an architectural conservator. The hexagonal recess at the bastion's tip, historically mounting large Rodman gun, is likely beneath the tee box fill. Repair or reconstruction of brickwork forming the hexagonal recess may be necessary. Prior to implementation, this task will require review and consultation with regional archeologists.

Treatment Considerations

The foundations for the two brick bridge piers and two sets of wood braces in the dry moat should be carefully removed to a minimum depth of six inches. The voids should be filled with sterile topsoil to match the surrounding finish grade and then seeded with a turf mix that is compatible with the character of turf in the dry moat. This task should also include removing the six-foot high chain-link fence installed around the former tee box in Fort Jay's southwest bastion.

FJB-BL-4: Relocate utility transformers on Fort Jay's northwest bastion

Description

Utility transformers within Fort Jay are presently located in a frequently visited portion of the historic fortress (Figure 3.68). Park records indicate the transformers are part of the Trust for Governors Island utility systems. In coordination with the Trust, and as funding and other priorities allow, this infrastructure should be moved to a less prominent location. Practical options include installing the transformers to a new underground utility vault nearby, or alternately relocating the transformers to inside of the adjacent garage (Building 212).



Figure 3.68. Utility transformers to be relocated from Fort Jay's northwest bastion. View looking northeast, 2012 (OCLP).

Relationship to Park Planning

Relocating the transformers from a frequently visited area is consistent with planning goals to strengthen public understanding of the historic harbor defense roles of Fort Jay and Castle Williams. Additionally, the *Governors Island Preservation and Design Manual* identifies a preference for underground utility distribution systems, stipulating that underground utility delivery is to be provided for all services to existing and new development, and where possible, lines should use existing utility trenches.[70]

Background

Documentation prepared between 1982 and 1983 by the National Park Service Historic American Buildings Survey (HABS) indicates no electrical transformers located near Garage 212 within Fort Jay (Figure 3.69). The U.S. Coast Guard added the three existing utility transformers on a concrete pad during the mid-1980s, north of Building 212 (garage).



Figure 3.69. Fort Jay's northwest bastion without utility transformers. View looking northwest, 1982-83 (Library of Congress Prints and Photographs Division, Historic American Buildings Survey, http://www.loc.gov/pictures/collection/hh/item/ny0347.photos.118096p/).

Treatment Considerations

The utility transformers may be appropriately relocated to an alternative inconspicuous area accessible to crane service, where service and maintenance can be performed without bringing vehicles and equipment into Fort Jay. Underground vaults may be an option for locating the transformers and would be consistent with the General Services Administration's *Preservation and Design Manual* recommendations on utilities. As a practical measure, the location of an underground utility vault should be placed nearby the existing transformer features. This would require prior archeological investigation and clearance.

FJB-BL-5: Replace non-historic rear decks at Fort Jay barracks buildings

Description

Two pressure-treated lumber decks extend off the east facade of Building 202 lacking handrails and safety barriers that meet current requirements (Figure 3.70). One deck is located at the northeast end of Building 202 and the other stands at the southeast end. Both decks should be removed to eliminate a potential hazard to visitors and subsequently replaced with decks of new designs and materials more consistent with the aesthetic character of Fort Jay and its barracks.

Relationship to Park Planning

The General Management Plan states that Fort Jay barracks would be rehabilitated to serve as a compound for in-residence research, to exhibit the domestic life of former military officers, and to support public use and to provide for future National Park Service staff housing and overnight accommodations for preservationists and others working on National Monument projects.[71]



Figure 3.70. Non-historic deck to be removed from Fort Jay's barrack. View looking south, 2012 (OCLP).

Additionally, the General Management Plan directs that selected structures and features that are safety hazards or that do not contribute to the significance of the National Monument would be removed.[72]

Background

Based on photographic documentation, the Coast Guard added the pressure-treated lumber decks by 1982–83.

Treatment Considerations

The decks presently provide a second means of egress from second floor apartments in Building 202. The rehabilitation of Building 202 should consider future programming requirements outlined by the General Management Plan and architectural treatments that would meet egress requirements through the building interior. The Coast Guard added the decks after the end of the period of significance and their removal does not directly affect historic building fabric. Indirectly, special care should be taken removing ledgers and other deck material and connectors affixed to Building 202. The removal of footings and other below grade components will require the review of a regional archeologist. If necessary, the design of the replacement decks should be undertaken through collaboration with a historical architect.

CIRCULATION

Circulation includes the spaces, features, and applied material finishes that constitute the systems of movement in a landscape. In the Fort Jay/Barbican Zone, tasks addressing circulation are intended to provide context-sensitive new additions for universal access and to improve and enhance the historic character of the Fort Jay quadrangle.



Figure 3.71. Existing ramp from Fort Jay's courtyard to be rehabilitated as part of an accessible route from the fort's sally port to the covered defile, 2012 (OCLP).

FJB-CR-1: Provide accessible route from the Fort Jay sally port to the covered defile

Description

Steps connecting to the counterscarp and glacis and a steep ramp connecting to Fort Jay's courtyard limit access to Fort Jay's dry moat and impede a desirable route from the courtyard, to the dry moat, through the rehabilitated defile, and on to Castle Williams (Figure 3. 71). A universally accessible route should be installed leading from the Fort Jay courtyard to the covered defile so visitors may seamlessly experience the historic relationship between these three fundamental park resources (Figures 3.72, 3.73, and 3.74).



Figure 3.72. Fort Jay's dry moat to receive an accessible route connecting the sally port to the defile. View looking southeast, 2014 (OCLP).



Figure 3.73. Fort Jay's dry moat with an accessible route connecting the sally port to the defile. View looking southeast, 2014 (OCLP).

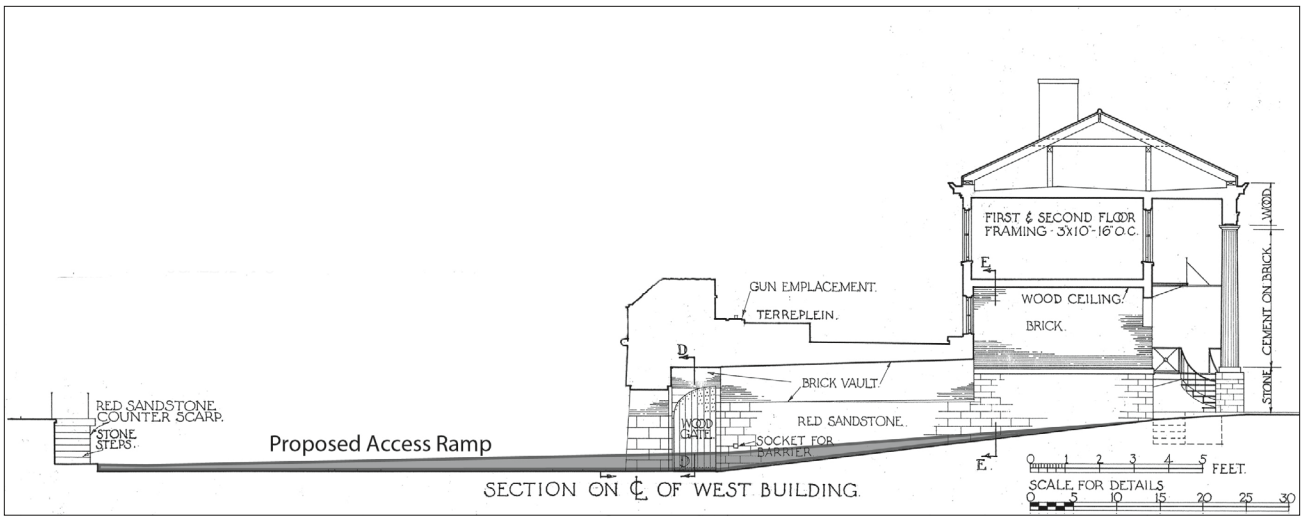


Figure 3.74. An accessible route to the defile includes fill, shown in gray, over the ramp connecting Fort Jay's courtyard to the dry moat. Section looking north, 2013 (Library of Congress, http://www.loc.gov/pictures/item/ny0347.sheet.00006a/, edited and annotated by OCLP).

Relationship to Park Planning

The General Management Plan identifies action items with the intent to rehabilitate the cultural landscape. The goal of these actions is to accommodate public visitation, provide space for exhibits, operations, temporary housing, all while providing safe public access, including compliance with the Americans with Disabilities Act.[73] The *Governors Island Preservation and Design Manual* identifies three guidelines for implementing universal accessibility within the National Historic Landmark district:

1. It is the intent to provide full access to programs and resources in a manner that does not damage the character or integrity of the historic district or individual contributing properties;

2. The method of providing access should be a well thought out, permanent solution; and,

3. The method of providing access should be inconspicuous, and made an integral part of the building or site design.[74]

Background

An 1839 drawing of Fort Jay documents five sets of steps leading from the level of the dry moat up to the counterscarp level. Each set of steps consisted of a mirrored pairing of granite, monolithic treads set into recesses in the moat wall. One set was installed opposite the rear sally port and the remaining four sets were installed opposite each of the four bastions. By 1952, the Army modified the steps at the northwest moat wall that led to the defile. A narrow brick wall, with a cast-in-place concrete cap, extended northeast from the sandstone moat wall and retained earth to fill the steps and create a ramp up to the counterscarp. This ramp was presumably fashioned in order to provide convenient access to wheeled lawn mowing equipment.

Treatment Considerations

The mapping for this cultural landscape treatment plan utilizes plans generated from aerial mapping and field surveys that concentrated on the Trust for Governors Island property. A complete topographic field survey should be conducted for the entire proposed route to verify existing conditions and grades. Design proposals should be reviewed and refined according to the information in this new survey. Removing the current earthen ramp at the northwest moat wall will require archeological review.

FJB-CR-2: Rehabilitate Fort Jay quadrangle pedestrian and vehicular surfaces

Description

Preservation of isolated paving features, such as a small section of bluestone, and incremental repairs have resulted in a patchwork of paving materials in the Fort Jay quadrangle inconsistent with the military bearing of a former U.S. Army installation. Pedestrian and vehicular paving in the Fort Jay quadrangle should be rehabilitated to consist of uniform materials that clearly distinguish pedestrian versus vehicular routes and reinforce the symmetrical arrangement of the quadrangle space (Figures 3.75 and 3.76).



Figure 3.75. Pedestrian and vehicular surfaces to be rehabilitated in the Fort Jay quadrangle. View looking south, 2012 (OCLP).

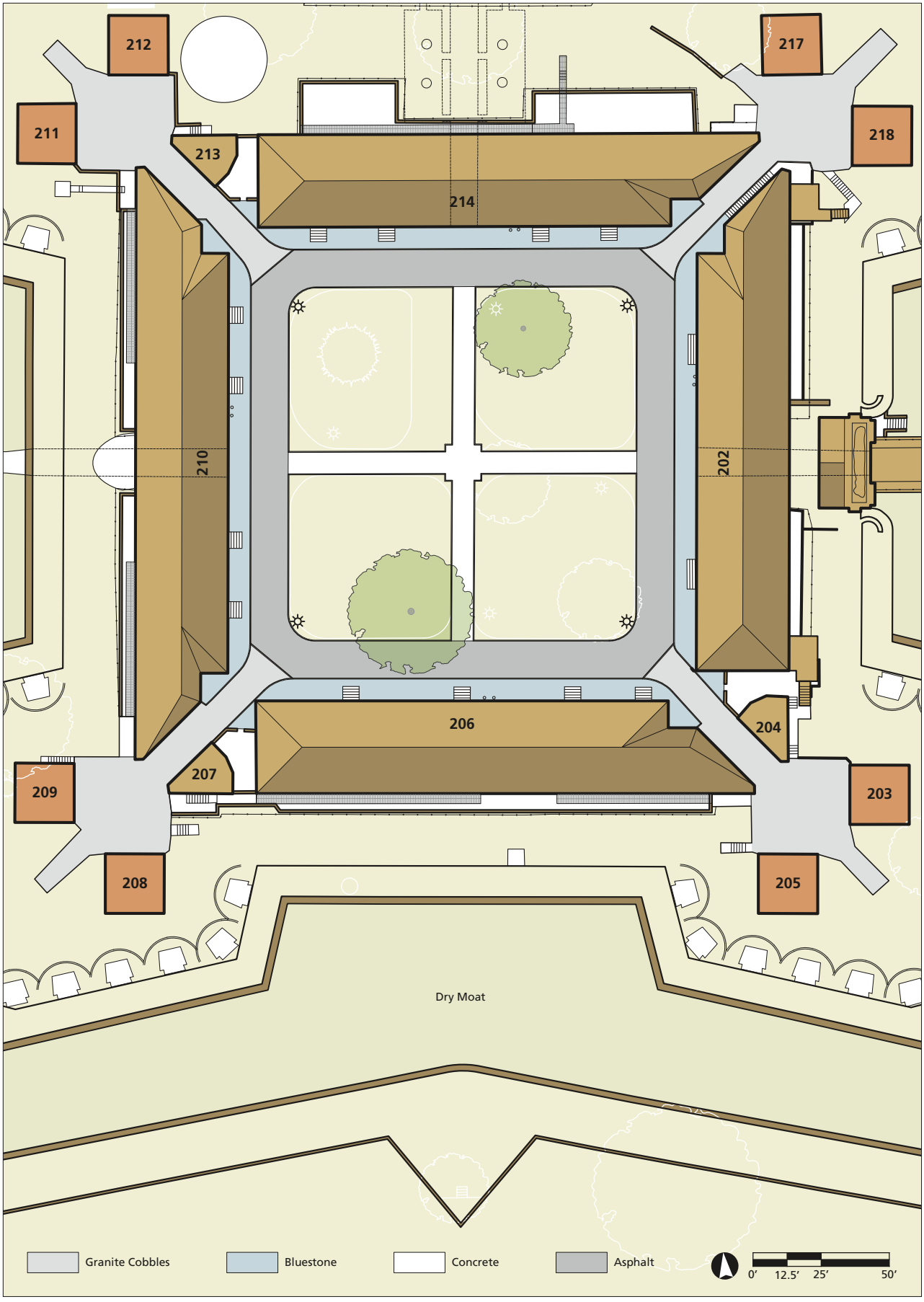


Figure 3.76. Rehabilitated pedestrian and vehicular surfaces in the Fort Jay quadrangle. Plan, 2014 (OCLP).

Relationship to Park Planning

The General Management Plan states that the overall cultural landscape of the Governors Island National Historic Landmark District was created by a design of walkways, open spaces, buildings, and recreational areas that provide a cohesive environment. The plan further asserts that the National Park Service will preserve the landscape features and patterns that are historically and aesthetically important in defining the character of the National Monument, and all work will avoid or minimize damage to significant landscapes or site features.[75]

Background

Fort Jay evolved from a series of defensive earthworks erected by Continental troops between 1775 and 1776, to a First American System fortification designed by French engineer Charles Vincent and completed in 1796. In ruinous condition ten years later, Fort Jay was reconstructed under the direction of Colonel Jonathan Williams, with the work completed by December 1809. The reconstructed fort featured masonry and earth construction and consisted of four bastions, brick barracks, and a stone and brick magazine. Based on an 1813 drawing by Joseph Mangin, at that time, the quadrangle lacked any formal paving, featuring a well and pump at the center of an open courtyard (Figure 3.77).[76]

In the 1830s, the Army replaced the barracks with new brick barracks featuring triangular structures at each end. The location and symmetrical arrangement of the barracks would define the quadrangle space from this time until the present. An 1839 plan drawing noted "pavement flagging stone" extending from the front of a barrack and meeting a wide gutter. The same drawing and another from 1839 indicates the presence of ramps between the triangular structures leading from the central quadrangle to each bastion and paved with broken stone, cobbles, or some other hard, reinforcing material. In 1861, Confederate officer Thomas Sparrow, held prisoner of war at Fort Jay, recorded in a journal entry that the quadrangle "is divided into four grand plots by walks crossing at right angles in the centre, where stands a pump." The configuration of four equal-area lawn panels, defined by central pedestrian walks between the barracks, persisted until after World War II. An 1864 photograph shows three or four courses of rectangular cut stone paving extending outward from the barracks, a wide gutter formed from cut stone pieces set in a "V," a compacted earth route between the gutter and lawn panels, and granite cobbles laid at the start of a ramp to a bastion (see Figure 3.76).

Photographs from circa 1898 also document the presence of ramps paved with granite cobbles and in addition, suggest the compacted earth route around the lawn panels had been paved by this time. Two courses of rectangular, cut stone paving form the pedestrian walks between the barracks and by 1890, the wide gutter had been replaced with flush cut stone curb sections. Photographic documentation of the 1930s (HABS), confirms the use of asphalt paving for the

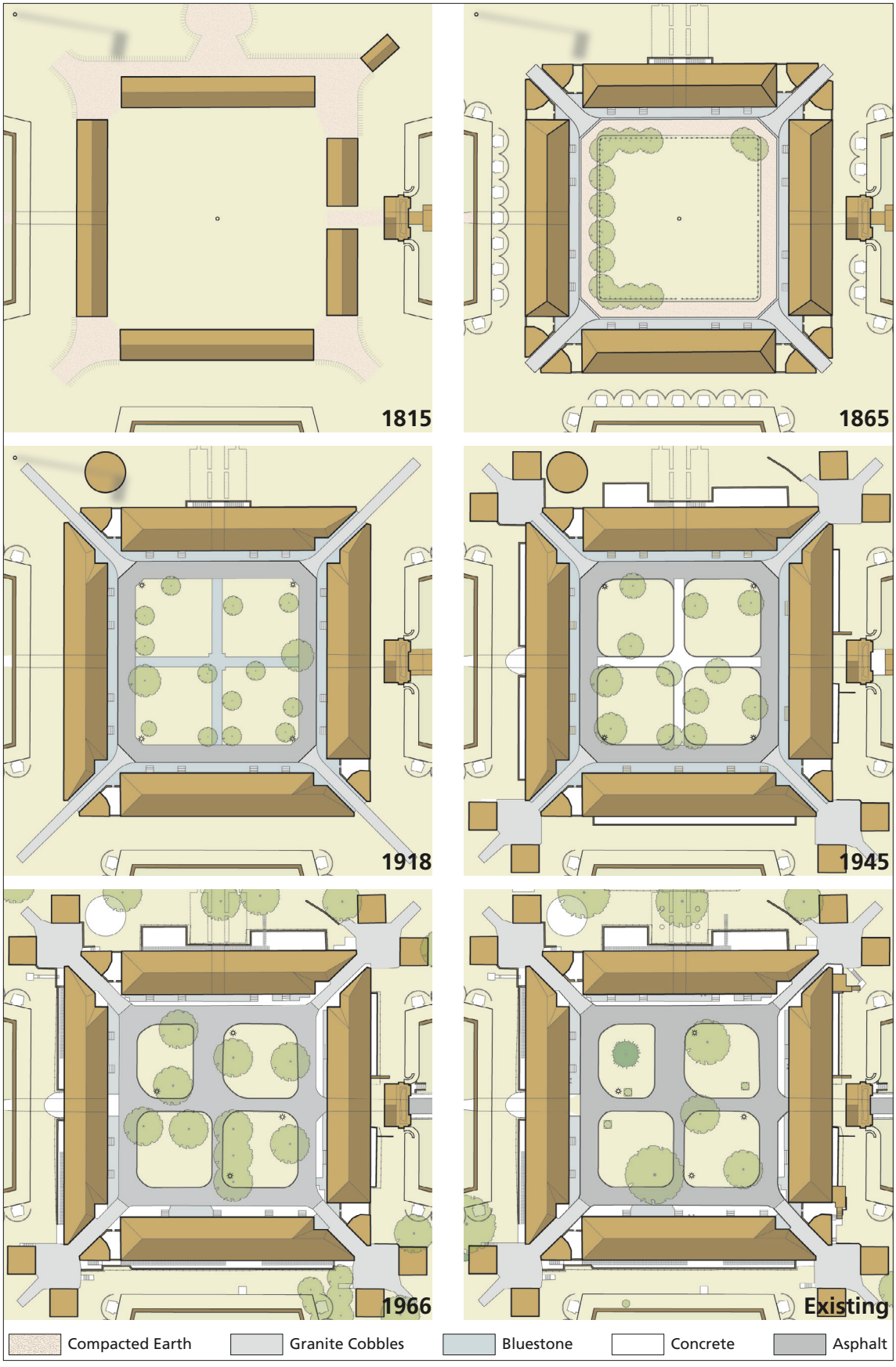


Figure 3.77. Period plans for the Fort Jay quadrangle. The plans depict the quadrangle at the end of five major periods—1815, 1865, 1918, 1945, and 1966—identified in the *Cultural Landscape Report for Governors Island National Monument, Volume 1*, as well as existing conditions. Plan, 2014 (OCLP).

perimeter route around the lawn panels, the flush cut stone curb sections marking the end of the barracks paving, and the central pedestrian walks finished with concrete (see Figure 3.76).

Between 2011 and 2012, the National Park Service has pursued the rehabilitation of the pavement and masonry surfaces and subsurface drainage infrastructure within the Fort Jay quadrangle (PMIS 95524, 178697, and 179102). These projects have corrected incidence of standing or ponding water on sidewalks and roadways, reset stone pavers to eliminate tripping hazards yet did not repair the subsurface drainage system. Work to date has brought the drainage system from "Poor" condition to "Fair" condition, requiring a substantially greater investment in order to evaluate the condition of this infrastructure as "Good." Future work to repair the subsurface drainage system will require the partial dismantling and demolition of sidewalks, curbing, and paved surfaces.

Treatment Considerations

Bluestone sidewalk paving should extend eight feet from the face of each barrack building and end at a flush, four-inch wide bluestone curb (Figure 3.78). In contrast to the random rectangular pattern presently seen at the quadrangle sidewalks (see Figure 3.75), historic imagery from the 1930s shows large, rectangular stone pieces set in consistent courses or bands (Figures 3.79 and 3.80). A finalized layout should incorporate consistent courses and utilize bluestone paving that is two inches thick and represent a full range of natural colors. Existing bluestone paving pieces may be re-used and reset, however, broken and irregular edges should be saw cut to form square or rectangular pieces conforming to the proposed layout.

From the flush bluestone curb, asphalt (bituminous concrete) pavement with a chip-seal finish coat should extend 13'-8" to a four-inch wide curb around each of the four lawn panels. Curb sections at the perimeter of the lawn panels may be of grey tinted precast concrete having dimensions similar to existing curbing. Sections of the existing concrete curbs are spalling and crumbling and cannot be salvaged. The new curbing at the lawn panels should be installed to maintain the existing grade, promote positive drainage, and limit disturbance of potential archeological resources. New concrete sidewalks within the interior lawn panels should be installed to form the pedestrian connectors between the barracks. The walks should be eight feet wide and centered on each building. The cobble ramps to each bastion should extend into the quadrangle slightly from their present location with the first course set parallel against a four-inch wide, flush bluestone curb. The curb will form a chamfered perimeter between the cobbles and asphalt paving. Rehabilitating the quadrangle pedestrian and vehicular surfaces should be coordinated with other Fort Jay quadrangle tasks that include VG-2: Rehabilitate Fort Jay quadrangle tree plantings and SSF-3: Furnish Fort Jay quadrangle with representative period site fixtures.

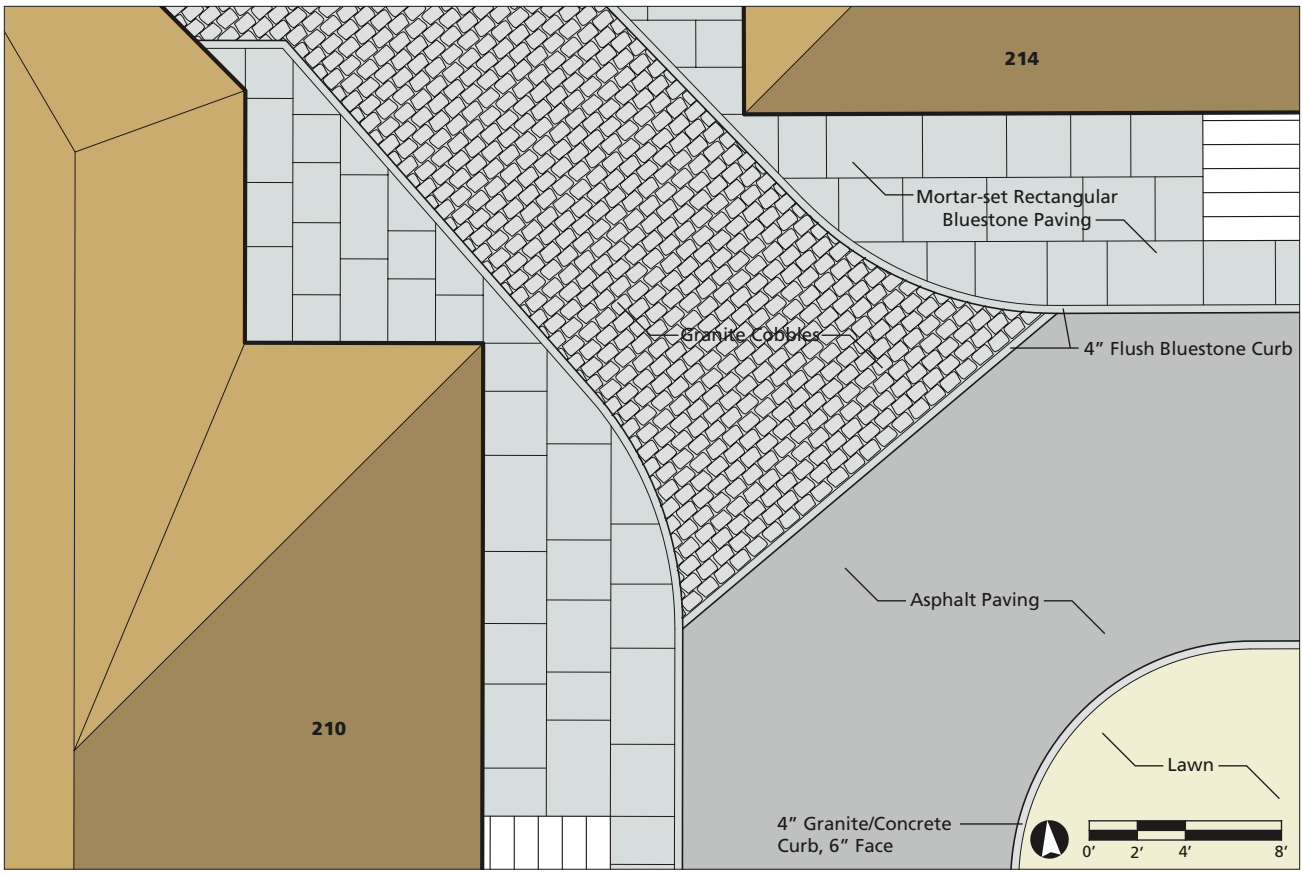


Figure 3.78. Detail of paving materials and layout for rehabilitating pedestrian and vehicular surfaces in the Fort Jay quadrangle. Plan, 2014 (OCLP).



Figure 3.79. Coursed, rectangular bluestone paving in front of Building 210. A consistent first course is clearly visible extending from a flush curb toward the building facade. Several of the large rectangular pieces are cracked. View looking north at Building 214, circa 1933 (NARA RG 111 Signal Corps Records, B802, b).



Figure 3.80. Coursed, rectangular bluestone paving in front of Building 206. The courses or bands incorporate smaller pieces to meet the curved edge of the cobble ramp. View looking southeast at Building 204, 1934 (Library of Congress, http://www.loc.gov/pictures/item/ny0347.photos.118091pu).

Assuming base material is sound and in good condition, there should be no need to excavate and install new base courses. With archeological monitoring, existing paving materials should be carefully removed and new surface paving materials installed over existing bases.

VEGETATION

Vegetation includes the deciduous and evergreen trees, shrubs, vines, ground covers, and herbaceous plants, and plant communities, whether indigenous or introduced in a landscape. In the Fort Jay/Barbican Zone, tasks addressing vegetation are intended to improve and enhance the historic character of Fort Jay and its quadrangle.

FJB-VG-1: Remove woody plant material on Fort Jay beyond the interior quadrangle

Description

Woody vegetation growing out of the parapet, counterscarp, and gun mounts and in close proximity to fort's buildings and structures threaten both earthen and masonry structures and should be removed (Figures 3.81 and 3.82).

Relationship to Park Planning

The General Management Plan specifically states that Fort Jay is historically and architecturally important as an individual feature and as a part of a larger harbor defense system. The fortification will be treated in a manner that ensures its preservation and use.[77] An immediate threat to the preservation of historic engineered earthworks and masonry structures is woody plant material growing on and in close proximity to these features.

Background

During Fort Jay's active use as a harbor defense fortification, the Army did not permit woody vegetation to grow on the parapet, terreplein, or ravelin over the underground magazines, since this vegetation would hinder and obstruct defensive function (Figure 3.83). More important than the presence of woody vegetation at a specific point in time is the current threat posed to resources from penetrating tree roots, from a tree being toppled and displacing a large volume of soil, or from falling material impacting a feature.



Figure 3.81. Woody vegetation to be removed growing above Fort Jay's underground magazine. View looking southeast, 2012 (OCLP).



Figure 3.82. Woody vegetation to be removed growing on Fort Jay's parapet. View looking northeast, 2014 (OCLP).

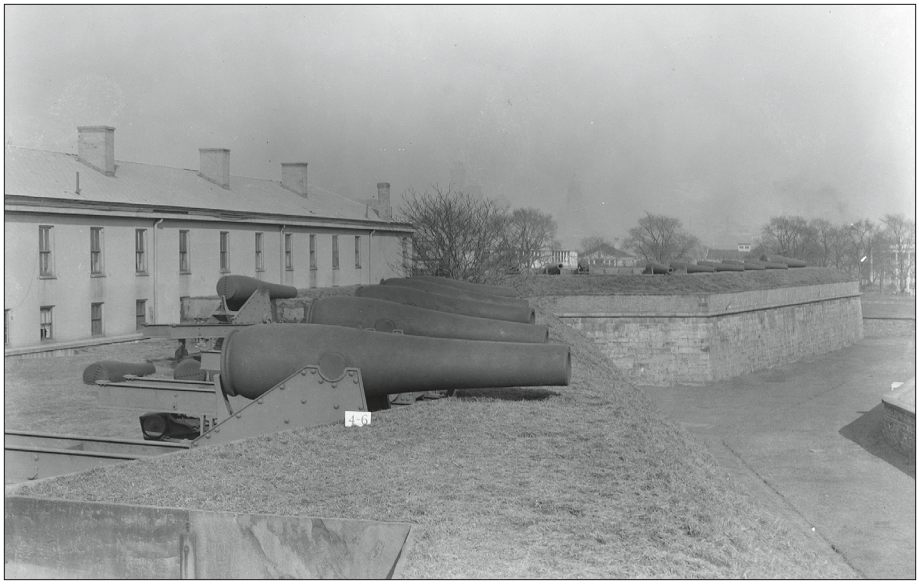


Figure 3.83. Fort Jay's parapet free of woody vegetation. View looking east, 1934 (Library of Congress Prints and Photographs Division, Historic American Buildings Survey, http://www.loc.gov/pictures/item/ny0347.photos.118088p/).

Treatment Considerations

Woody vegetation should be removed from Fort Jay's historic earthworks and buildings and structures in order to prevent damage to these engineered features. Woody vegetation should be cut flush to the ground and the stumps of deciduous species need to be treated to prevent sprouting and regrowth. Since grubbing out or grinding the woody stumps would cause damage to the historic earthwork, the stumps should be treated with a triclopyr herbicide (Garlon™ brand or approved equal) to kill the root system and prevent resprouting. After woody vegetation has been removed and treated from the earthen parapet, the mowing frequency of the parapet should be reduced to between one and three times per growing season. A less manicured appearance of the parapet turf is consistent with the character during the fortification's active use and will better preserve the resource by limiting the number of workers and equipment on the parapet. Any new, emerging woody vegetation should be promptly removed with hand pruning shears or loppers and spot treated with a triclopyr herbicide.

FJB-VG-2: Rehabilitate Fort Jay quadrangle tree plantings

Description

The current tree planting in the Fort Jay quadrangle is haphazard, inconsistent with the expected maintenance standards, and failing to convey the military bearing of such an historical location in the U.S. Army command. The existing tree plantings include an individual evergreen tree that is located in an interior lawn panel and other random deciduous trees that together obstruct the formerly strong diagonal sight lines between the fort's bastions. The quadrangle tree planting should be rehabilitated, preserving the practical utility of this important gathering place. The rehabilitation of these plantings should use only deciduous species, similar in character and habit, compatible with the cultivation of turf, and laid out to maximize lawn space for passive visitor use, provide light shade, and to reinforce the visual and geometric layout of the quadrangle and its surrounding buildings (Figure 3.84).

Relationship to park Planning

The General Management Plan states that the overall cultural landscape of the Governors Island National Historic Landmark District was created by a design of walkways, open spaces, buildings, and recreational areas that provide a cohesive environment. The current conditions present within the Fort Jay quadrangle, its plantings, site furnishings and paved surfaces fail to render the desired cohesive setting described by the General Management Plan. The National Park Service will preserve the landscape features and patterns that are historically and aesthetically important in defining the character of the National Monument,

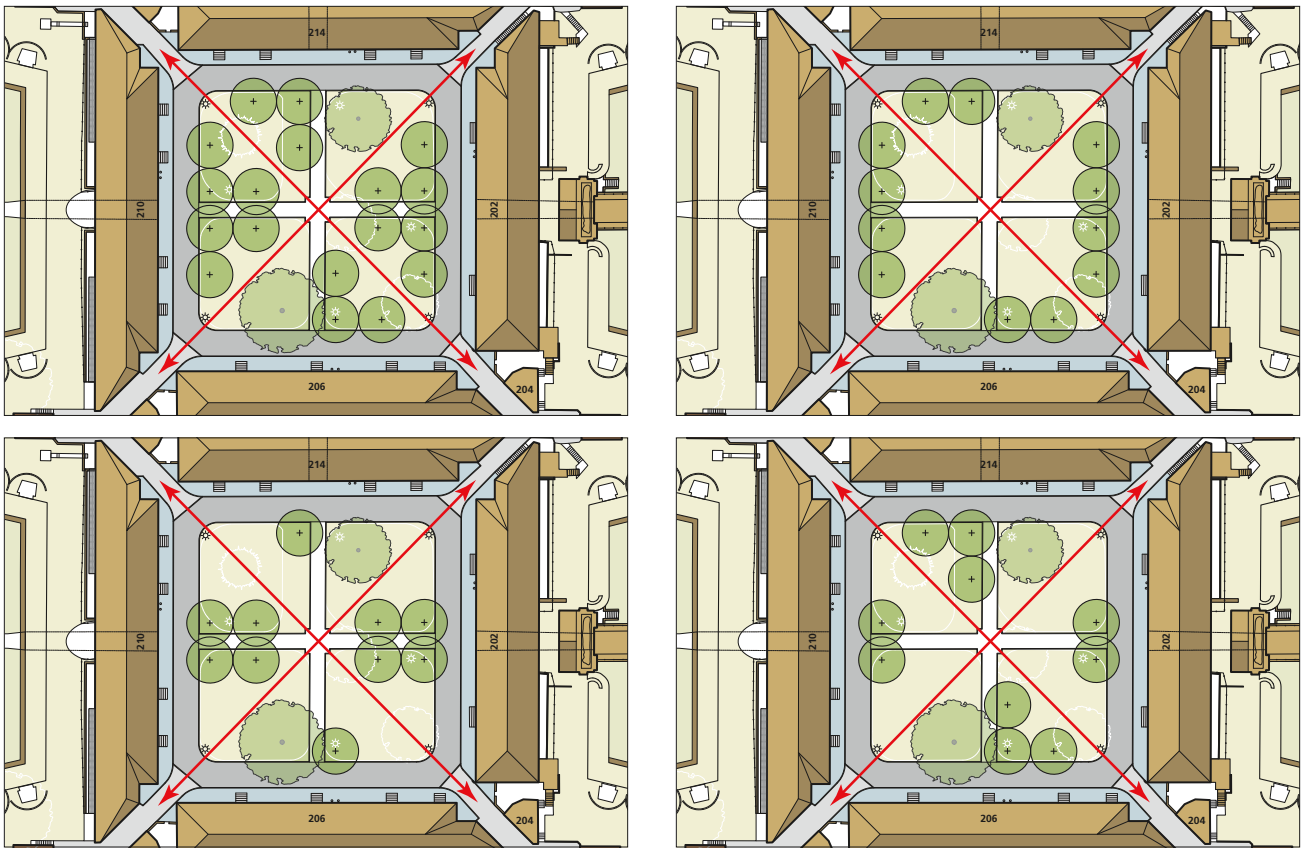


Figure 3.84. Rehabilitated Fort Jay quadrangle tree planting options. The planting adheres to the perimeters of the lawn panels and maintains diagonal sight lines between the bastions. Tree species should be selected which cast light shade, permitting the growth of turf. Final location and numbers of trees to be determined. Plan, 2014 (OCLP).

including the Fort Jay quadrangle. All rehabilitation work will avoid or minimize damage to significant landscapes or site features.[78]

Background

Many episodes of change have been documented within the Fort Jay quadrangle during the long-term operation of this military facility (Figures 3.85 and 3.86). Originally characterized as a spare open courtyard equipped at its center with a communal pump, by the beginning of the Civil War in 1861, the Fort Jay courtyard had become a more restful quadrangle, furnished with shade trees and interior walkways. During the subsequent hundred years, each decade of photographic documentation of this area indicates great variability in the layout of tree plantings, following no persistent design concept or plan. A U.S. Army drawing of the quadrangle from 1962 indicates ten deciduous trees including elms, maples, a poplar, a honey locust, and a European horsechestnut.[79]

Treatment Considerations

This task will require the removal or relocation of three American Chestnut cultivars planted during the 1990s as a field trial of disease resistant American Chestnuts. These chestnut trees, if they are permitted to grow and reach maturity, will cast a dense shade, discouraging the growth of turf, and will drop spiny nut husks incompatible with visitor enjoyment of this central open space.



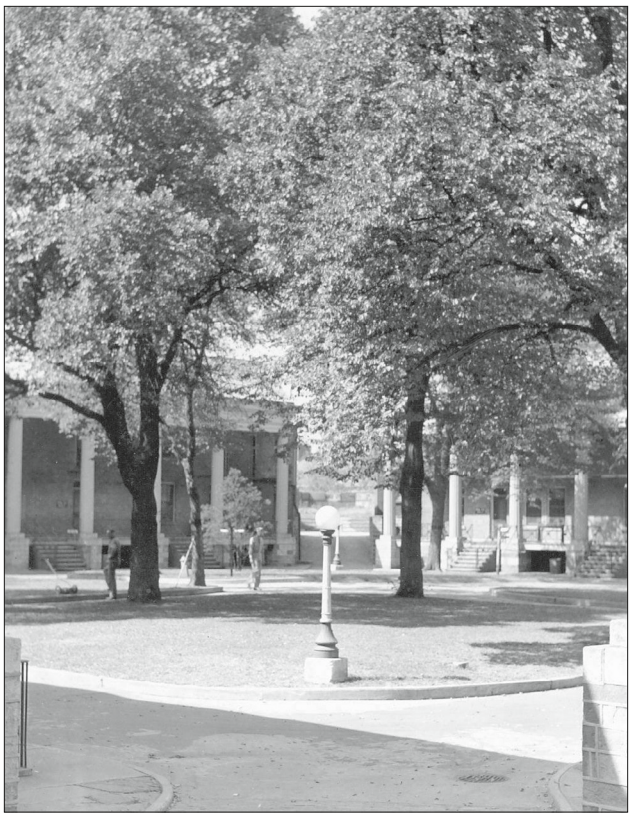


Figure 3.85 (top left). Sight line across quadrangle to Fort Jay flagstaff. The rehabilitated quadrangle tree planting is informed by historic imagery showing a deciduous tree and light standard located off of a direct visual line from the southeast ramp to the flagstaff. View looking northwest, 1890 (*The Illustrated American*, GOIS Museum/Reference Collection).

Figure 3.86 (top right). Sight line across Fort Jay quadrangle. Even after the Army relocated the flagstaff to the ravelin, quadrangle tree planting continued to respect a sight line between the southeast and northwest bastions. View looking northwest, 1944 (Center for Military History, RG 239 S, Grunert Collection, P.37 (2)).

In their place, trees having similar mature height and habit should be planted in a pattern as approximately indicated in order to preserve diagonal sight-lines. The numbers of trees planted may be adjusted to allow for practical use of this important central open space. Recommended tree species include those that cast a light shade, under which will turf may thrive. Surface rooted trees such as maples are to be avoided. Promising species deserving of consideration for use in the Fort Jay quadrangle include thornless honey locust (*Gleditsia triacanthos* var. *inermis*) and willow oak (*Quercus phellos*). New or replacement tree planting holes will require the review and supervision of a regional archeologist. Rehabilitating the quadrangle tree planting should be coordinated with other Fort Jay quadrangle tasks that include CR-2: Rehabilitate Fort Jay quadrangle pedestrian and vehicular surfaces and SSF-3: Furnish Fort Jay quadrangle with representative period site fixtures.

SMALL-SCALE FEATURES

Small-scale features are the elements providing detail and diversity for both functional needs and aesthetic concerns in a landscape. In the Fort Jay/Barbican Zone, tasks addressing small-scale features are intended to convey the defensive purpose of the fortifications and to improve and enhance the historic character of Fort Jay and its quadrangle.



Figure 3.87. Existing flagstaff erected in Fort Jay's ravelin. View looking northwest, 2014 (OCLP).

FJB-SSF-1: Relocate flagstaff to Fort Jay's northwest bastion

Description

The Fort Jay flagstaff was formerly located atop the northwest bastion in order to make the flag and other insignia there more visible to ships in the harbor. When the fort's defensive mission was replaced with a more administrative purpose during the early twentieth century, the Fort Jay flagstaff was relocated atop the ravelin, from that position, more prominently visible to merchants and government contractors located across the channel on lower Manhattan (Figure 3.87). In order to best interpret both the defensive purpose of this infrastructure and the former concerted operations of Fort Jay and Castle Williams to park visitor, the flagstaff should be relocated to its former location at the northwest bastion (Figures 3.88 and 3.89).

Relationship to Park Planning

Governors Island National Monument has three primary interpretive themes and based on public input supporting the General Management Plan and Long Range Interpretive Plan processes, the "Place in the National Experience" theme and the associated harbor defense stories should be emphasized.[80] Relocating the flagstaff is an important physical and visual connector between the park's two fundamental resources and a tangible link to the harbor defense story.

Background

The U.S. Army relocated the Fort Jay flagstaff eastward to atop the ravelin between 1925 and 1928 (Figure 3.90).[81] Army property records suggest the flagstaff was moved in 1926. An oblique aerial photograph taken in 1928 confirms the flagstaff was installed in its current location atop the ravelin.

Treatment Considerations

Archeological geophysics should be undertaken in the vicinity of the former flagpole base to determine the presence of an anomaly suggesting the surviving presence of the flagpole base. If such an anomaly is encountered, follow up archeological investigation should be undertaken in order to verify the location and dimensions of the flagpole base. Subsequent to archeological verification, the design of the new flagstaff footing should be reviewed with a professional engineer to determine the proper diameter, depth, and reinforcement. Excavation for installing the new flagstaff will require review and consultation with regional archeologists. The relocated flagstaff should reference the overall dimensions and proportions of the existing flagstaff, but may incorporate contemporary materials and mechanisms in support of effective park operations.

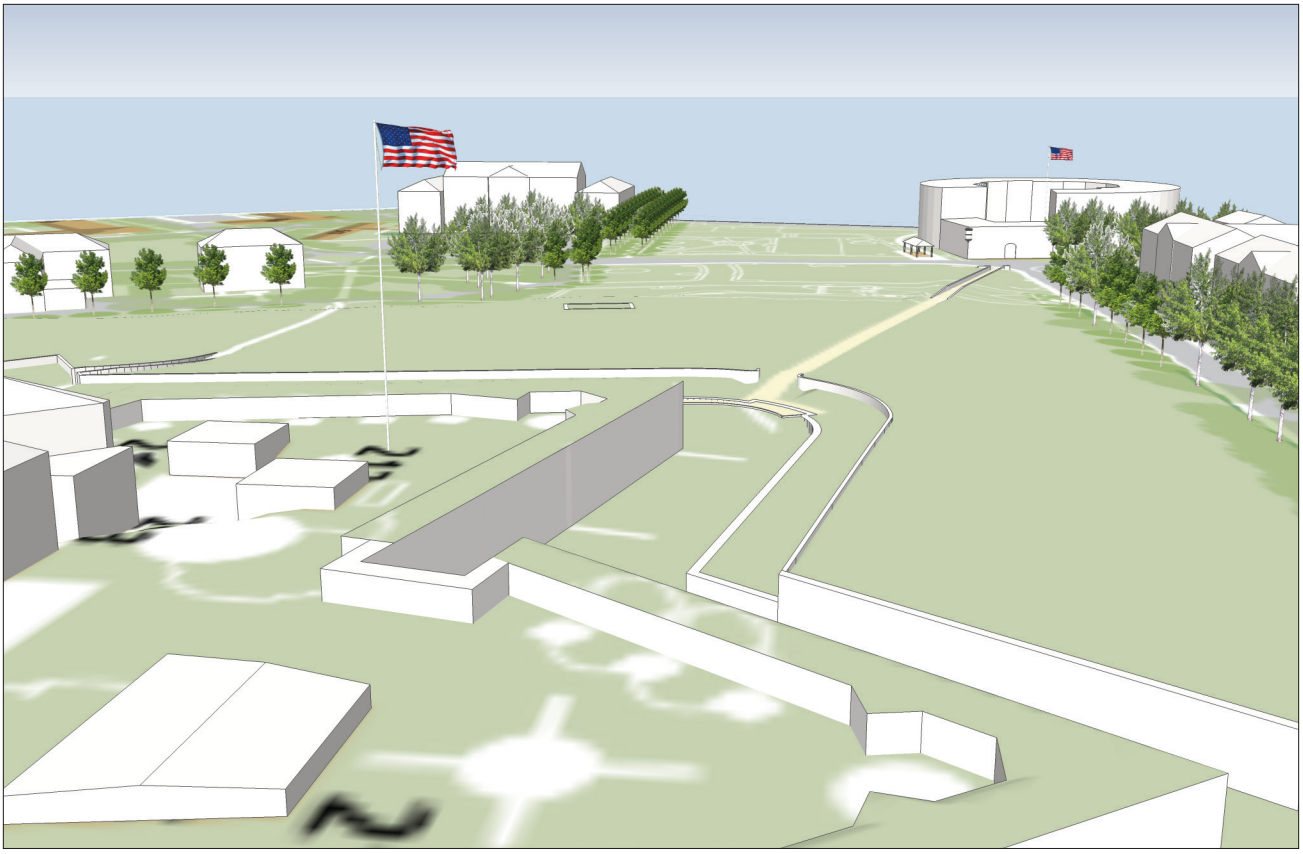


Figure 3.88. Relocated flagstaff to Fort Jay's northwest bastion. View looking southwest, 2013 (OCLP).



Figure 3.89. Relocated flagstaff to Fort Jay's northwest bastion. View looking northwest, 2014 (OCLP).

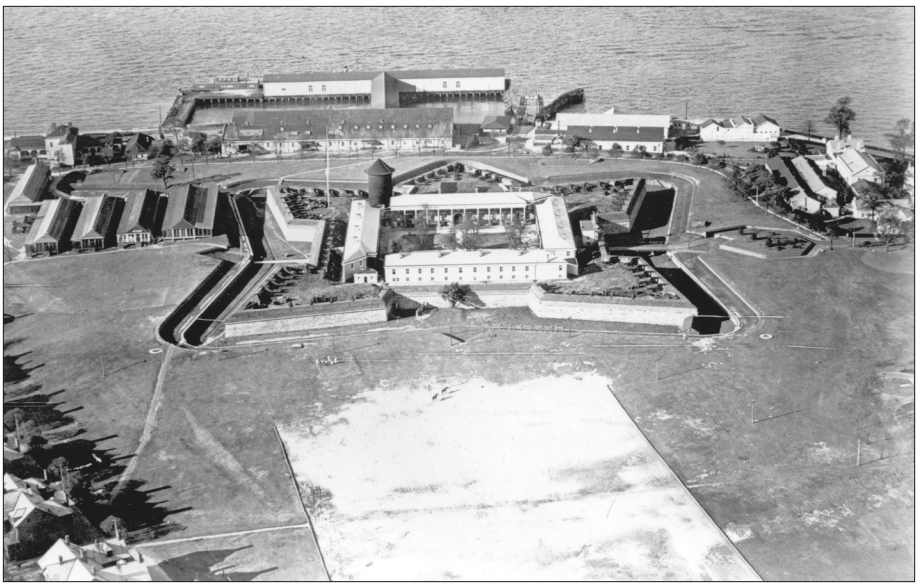


Figure 3.90. Fort Jay's flagstaff erected in the northwest bastion. Aerial oblique looking north, 1922 (Collection of the New-York Historical Society).

FJB-SSF-2: Remove public address speakers and mounting poles from Fort Jay's bastions

Description

Contemporary public address speakers and mounting poles are not operational and serve no purpose following removal of the golf course. This non-historic infrastructure should be removed (Figure 3.91).

Relationship to Park Planning

The General Management Plan directs that selected structures and features that are safety hazards or that do not contribute to the significance of the National Monument would be removed.[82]



Figure 3.91. Public address speakers to be removed from Fort Jay's bastions. View looking northwest, 2014 (OCLP).

Background

The U.S. Coast Guard installed public address speakers and a mounting pole at each of Fort Jay's bastions between 1968 and 1977.

Treatment Considerations

The speakers and poles should be removed in sections to minimize potential damage to surrounding resources. Any footing or below-grade extension of the poles should be carefully removed to a minimum depth of six inches. The voids should be filled with sterile topsoil to match the surrounding finish grade and then seeded with a turf mix that is compatible with the character of turf in the bastions.

FJB-SSF-3: Furnish Fort Jay quadrangle with appropriate site fixtures

Description

The landscape furnishings and fixtures currently found within the Fort Jay quadrangle fail to convey the cohesive environment advocated by the park General Management Plan (Figure 3.92).

Relationship to park planning

The park General Management Plan states that the overall cultural landscape of the Governors Island National Historic Landmark District was created by a design of walkways, open spaces, buildings, and recreational areas that provide a cohesive environment. The plan further asserts that the National Park Service will preserve the landscape features and patterns that are historically and aesthetically important in defining the character of the National Monument, and all work will avoid or minimize damage to significant landscapes or site features.[83] The rehabilitation of the central open space of Fort Jay's quadrangle is consistent with planning directives promoting a cohesive environment within the Governors Island National Historic Landmark District.

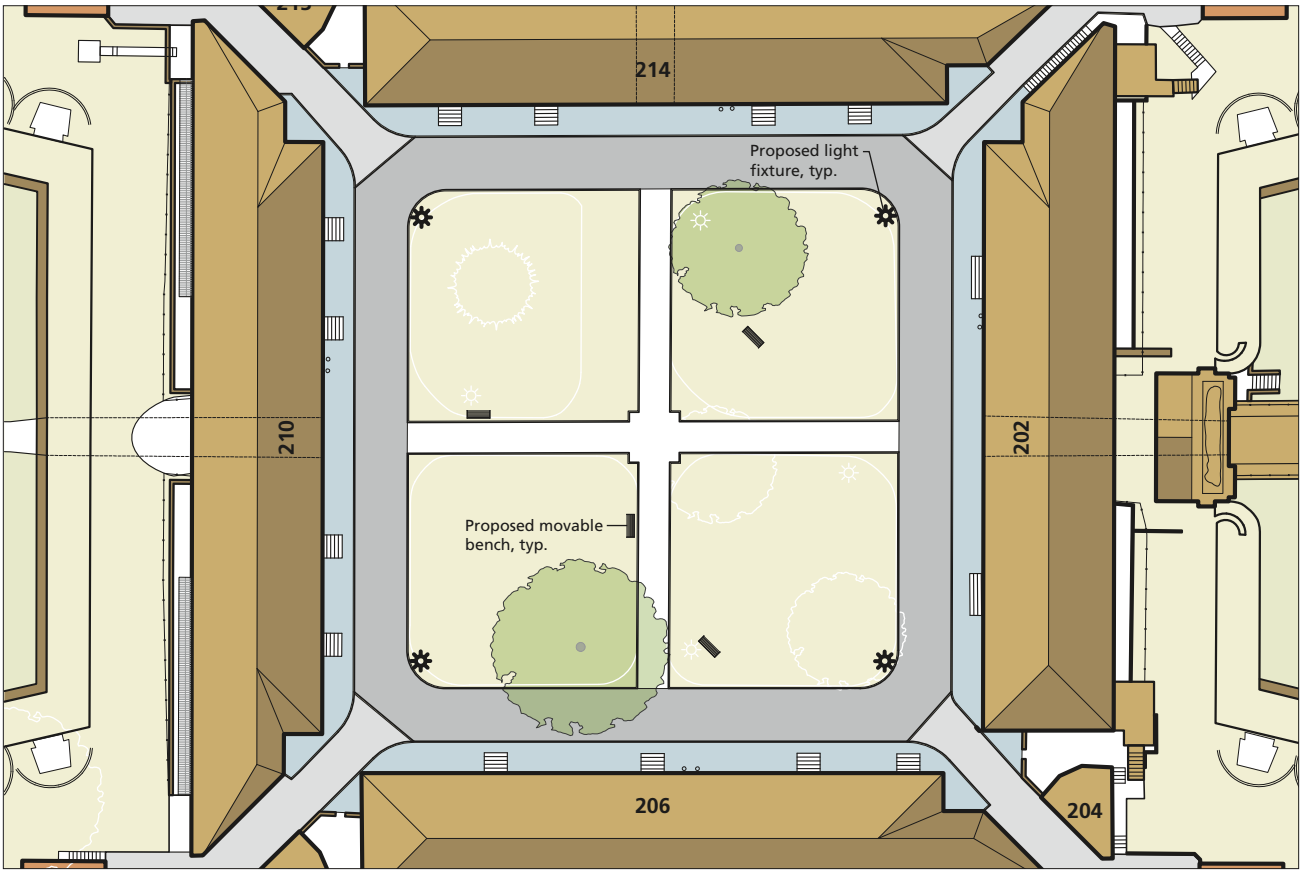


Figure 3.92. Representative period site fixtures added to the Fort Jay quadrangle. Plan, 2014 (OCLP).

Background

During the course of Fort Jay's lengthy history, there have been a variety of site furnishings found within the confines of the Fort Jay quadrangle. Prior to World War II domestic scrap drives, the perimeter roadways were lined with an assortment of cannonballs and other projectiles to prevent vehicles from driving on the turf. This central space was also at various times equipped with a pump, railings, benches, a reviewing stand, and various streetlight designs and configurations (Figure 3.93).

Treatment Considerations

The purpose of re-equipping the Fort Jay quadrangle with useful site furnishings is not to evoke a precise time in its lengthy history, but to make this central space into a desirable location for visitors to pause and enjoy the experience of their surroundings. The goal in choosing among the vast array of choices site furnishings available, such as lighting, benches, and waste receptacles is that these items not overtly draw attention to themselves as singular objects. Particular caution should be taken so as to not over-light the Fort Jay quadrangle with lighting fixtures beyond the four free-standing units indicated at the corners. Lighting fixtures should use energy saving LED bulbs. Incidental lighting from porch lighting should be factored into the lighting calculus, and where



Figure 3.93. Precedent image of a bench and cannonballs lining the turf panels in the Fort Jay quadrangle. View looking southeast from Building 214, circa 1933 (NARA RG 111 Signal Corps Records, B802, c).

found absolutely necessary, supplementary lighting may be added through inconspicuous building mounted fixtures (Figure 3.94). Furnishing the quadrangle with representative site fixtures should be coordinated with other Fort Jay quadrangle tasks that include CR-2: Rehabilitate Fort Jay quadrangle pedestrian and vehicular surfaces and VG-2: Rehabilitate Fort Jay quadrangle tree plantings.



Figure 3.94. Representative site fixtures to be considered for installation within the Fort Jay quadrangle. While site furnishings elsewhere should be chosen for consistency with those installed by the Trust for Governors Island, within the limited confines of the Fort Jay quadrangle, alternative choices may be made to better reflect the historic character of this central open space. 2014 (OCLP).

DOCK 102 AND BUILDING 107 ZONE

CIRCULATION

Circulation includes the spaces, features, and applied material finishes that constitute the systems of movement in a landscape. In the Dock 102 and Building 107 Zone, tasks addressing circulation are intended to provide context-sensitive new additions pertaining to universal accessibility.

DB-CR-1: Provide accessible route from Dock 102 to Fort Jay

Description

The primary route following Andes Road or its sidewalks from Dock 102 to Fort Jay's barbican is too steep to meet universally accessible requirements and provide access for all visitors (Figure 3.95). A universally accessible route should be installed to connect a major arrival point with a park fundamental resource while limiting the impacts to cultural resources (Figure 3.96).

The mapping for this cultural landscape treatment plan utilizes plans generated from aerial mapping and field surveys. The following discussion is based on information and accuracy of those plans. A universally accessible route following a walk, as opposed to a ramp with required landings and handrails, has a slope of less than 5 percent. The start of a route from Dock 102, beginning at the west end of the waiting shelter, and heading west towards Andes Road has an average existing slope of 2.7 percent. From the start of Andes Road to the entry to Buildings 104 and 125, the average existing slope increases to 7.2 percent. From the entry to Fort Jay's barbican the average existing slope returns to a moderate 3.2 percent. The second portion of the route, from the start of Andes Road to the



Figure 3.95. Accessible route to be installed from Dock 102 to Fort Jay. View looking west at the Andes and Carder roads intersection, 2012 (OCLP).

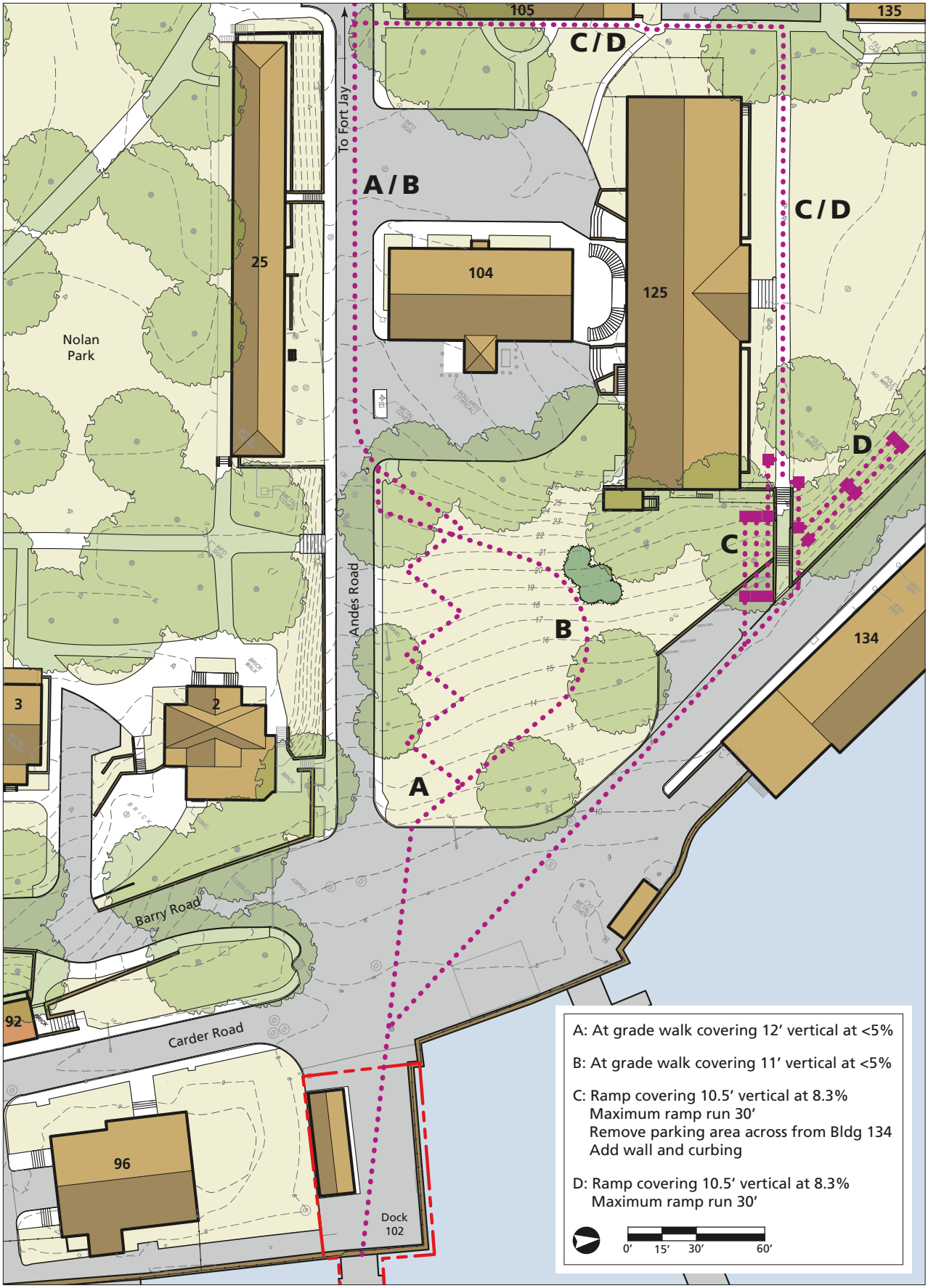


Figure 3.96. Diagrammatic accessible route options from Dock 102 to Fort Jay. The section from the start of Andes Road to Buildings 104 and 125 requires an alternative route to meet accessibility requirements. Plan, 2014 (OCLP).

entry to Buildings 104 and 125, is too steep. An alternate route can be installed along one of two configurations, labeled A and B, in a relatively large and open area of lawn east of Building 104 and north of Andes Road. Either of these routes can be maintained at a consistent slope, less than 5 percent, and avoid the vertical intrusions of handrails required on ramps. In addition to these walks ramp alternatives at a maximum 8.3 percent slope, labeled C and D, could be installed west of Building 134 and then follow an existing sidewalk north of Building 125 and east of Building 105 that reunites with Andes Road.

Relationship to Park Planning

The General Management Plan identifies actions items to rehabilitate the cultural landscape these include actions to accommodate public visitation, exhibit space, operations, temporary housing, and all the accompanying safety and access requirements such as the Americans with Disabilities Act.[84] The *Governors Island Preservation and Design Manual* identifies three guidelines for handicap accessibility in the National Historic Landmark district:

1. It is the intent to provide full access to programs and resources in a manner that does not damage the character or integrity of the historic district or individual contributing properties;

2. The method of providing access should be a well thought out, permanent solution; and,

3. The method of providing access should be inconspicuous, and made an integral part of the building or site design.[85]

Background

The area for the proposed accessible walk includes the former location of Building S-103. The Army constructed the building in 1942 as one of many temporary structures added to support World War II efforts. The National Historic Landmark nomination identified Building S-103 as non-contributing and noted the U.S. Coast Guard using the structure for a Search and Rescue School.[86] By 1994, the U.S. Coast Guard removed the building.

Treatment Considerations

A complete topographic field survey should be conducted for the area between Dock 102 and Fort Jay to verify existing conditions and grades. Design proposals should be reviewed and refined according to the information in this new survey. The area between Dock 102 and Fort Jay is outside the National Monument property and this task needs to be reviewed and coordinated with the Trust for Governors Island. Earthwork required to install the new walk will require archeological review.

DB-CR-2: Install new curb ramps and crosswalk to Building 107

Description

The current curb ramp at the entry to Building 107, the park Headquarters, is located in close proximity to a brick retaining wall and directs pedestrians into an alleyway and parking area for Building 108 (Figure 3.97). A new curb ramp to Building 107, a crosswalk across Andes Road, and a new curb ramp on the west side of Andes Road should be installed to reduce potential pedestrian and vehicular conflicts and provide better access to those with mobility issues (Figure 3.98).



Figure 3.97 (right). Access to Building 107 to receive new curb ramps and crosswalk. View looking south, 2014 (OCLP).

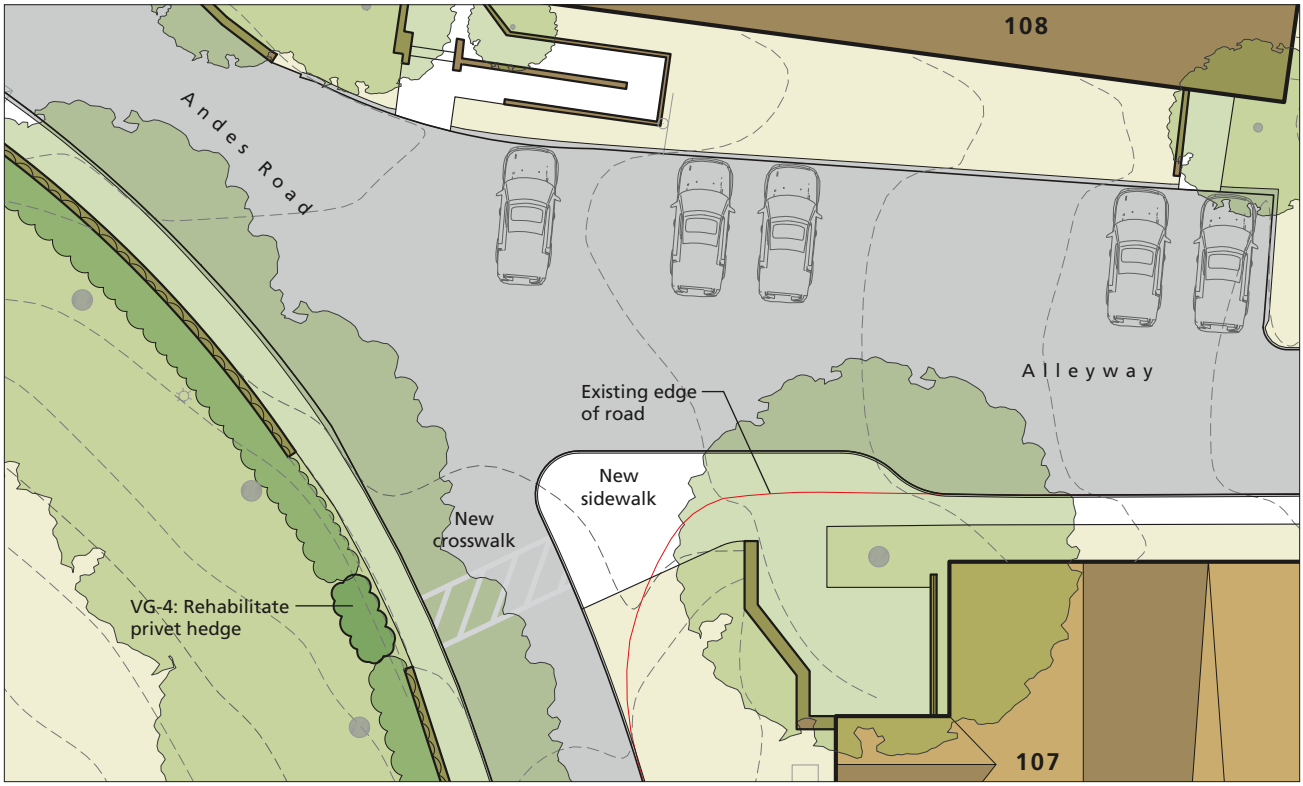


Figure 3.98 (bottom). Diagrammatic plan for new curb ramps and crosswalk to Building 107, 2013 (OCLP).

In 2013, the park replaced concrete paving around the entry to Building 107 to correct uneven sidewalk segments, however, the curb ramp was not reconfigured This task recommends extending the existing sidewalk north into the alleyway and relocating the curb ramp to Andes Road. New concrete paving and new concrete curb sections should match the existing materials. A new concrete curb ramp should be installed where the sidewalk meets Andes Road and crosswalk striping added on street. A new brick curb ramp, using brick that matches the brick sidewalk, should be added on the west side of Andes Road.

Relationship to Park Planning

The General Management Plan identifies specific action items to rehabilitate the cultural landscape, such as rehabilitating the covered defile, while also acknowledging compatible, contemporary actions to accommodate public visitation, exhibit space, operations, temporary housing, and all the accompanying safety and access requirements such as the Americans with Disabilities Act.[87]

Background

The Army constructed Building 107 in circa 1850 as a storehouse for the New York Arsenal facility on Governors Island.[88] The present brick vestibule that extends from the west facade was added after 1993 and the associated concrete paving and brick retaining wall were likely added at that time to formalize an entry for the building off of Andes Road.

Treatment Considerations

Extending the sidewalk north from its present location requires work outside the National Monument property and this task needs to be reviewed and coordinated with the Trust for Governors Island. The mapping for this cultural landscape treatment plan utilizes plans generated from aerial mapping and field surveys that concentrated on the Trust for Governors Island property. A complete topographic field survey should be conducted for the Building 107 entry area and include a sufficient area for the proposed crosswalk and brick curb ramp on the west side of Andes Road to verify existing conditions and grades. Design proposals should be reviewed and refined according to the information in this new survey. Ramp and crosswalk designs should follow the requirements of the New York State DOT manual.

ENDNOTES

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29 *Governors Island Preservation and Design Manual: Part Two*, 29.

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36 *New York Times*, July 5, 1925, cited in Nowak, *Cultural Landscape Report*, 105.

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67 *General Management Plan*, 119.

68 *General Management Plan*, 116; *Long-Range Interpretive Plan*, 43.

69 *General Management Plan*, 120.

70 *Governors Island Preservation and Design Manual: Part Two*, 29.

71 *General Management Plan*, 118-19.

72 Ibid., 121.

73 Ibid., 193.

74 *Governors Island Preservation and Design Manual: Part Two*, 50.

75 *General Management Plan*, 119.

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1865—1861 Engraving, Figure 29 in HSR, Harpersweekly.com, 1864 Photograph, Figure 31 in HSR, NARA Still Pictures Branch #165- C- 1088, 1864 Photograph, Figure 32 in HSR, NARA Still Pictures Branch #165- C- 1094A, 1867 Plan, Barnard Survey, NARA RG 77 Fortification File dr 37 st 55;
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Table 1: Summary of Landscape Treatment Tasks

Task ID	Task	Explicitly Directed in 2009 General Management Plan
Castle Williams Zone		
CW-SO-1	Re-establish historic landscape context for Castle Williams	Yes
CW-BL-1	Provide new visitor services shelter south of Castle Williams	No
CW-CR-1	Rehabilitate Hay Road to encourage pedestrian use	Yes
CW-CR-2	Install new pedestrian circulation route at Castle Williams	No
CW-CR-3	Install new pedestrian circulation at boundary adjacent to post hospital	No
CW-VG-1	Install planting of shade trees at boundary adjacent to post hospital	No
CW-SSF-1	Reestablish working flagstaff in Castle Williams' courtyard	No
Fort Jay Glacis Zone		
FJG-SO-1	Re-establish historic landscape connection between Fort Jay and Castle Williams	Yes
FJG-TP-1	Rehabilitate Fort Jay's glacis slope	Yes
FJG-TP-2	Preserve topographic feature associated with the New Barbette Battery	No
FJG-CR-1	Rehabilitate historic covered defile	Yes
FJG-CR-2	Repair/replace brick sidewalks along Andes Road	No
FJG-VG-1	Add street trees along eastern and northern edges of Comfort Road	No
FJG-VG-2	Rehabilitate street tree planting along Andes Road	No
FJG-VG-3	Replace failing trees at Nolan Park's western boundary	No
FJG-VG-4	Rehabilitate privet hedge along Andes Road	No
FJG-SSF-1	Replace safety railing north of Fort Jay's ravelin	No
FJG-SSF-2	Mark location of Fort Jay's external magazine	No
Fort Jay / Barbican Zone		
FJB-BL-1	Rehabilitate the Fort Jay barbican	Yes
FJB-BL-2	Rehabilitate the Fort Jay sally port bridge deck and railings	No
FJB-BL-3	Rehabilitate Fort Jay's terreplein and southwest bastion	No
FJB-BL-4	Relocate utility transformers on Fort Jay's northwest bastion	No
FJB-BL-5	Replace non-historic rear decks from Fort Jay barracks buildings	No
FJB-CR-1	Provide accessible route from the Fort Jay sally port to the covered defile	No
FJB-CR-2	Rehabilitate Fort Jay quadrangle pedestrian and vehicular surfaces	No
FJB-VG-1	Remove woody plant material on Fort Jay beyond interior quadrangle	No
FJB-VG-2	Rehabilitate Fort Jay quadrangle tree plantings	No
FJB-SSF-1	Relocate flagstaff to Fort Jay's northwest bastion	No
FJB-SSF-2	Remove public address speakers and mounting poles from Fort Jay's bastions	No
FJB-SSF-3	Furnish Fort Jay quadrangle with appropriate site fixtures	No
Dock 102 and Building 107 Zone		
DB-CR-1	Provide accessible route from Dock 102 to Fort Jay	No
DB-CR-2	Install new curb ramps and crosswalk to Building 107	No

Table 2: Glossary of Relevant FMSS Work Types and Sub-types

Work Type/ Sub-Type	Definition	Key
Facility Maintenance Work Type		
Facility Maintenance	Day-to-day activities, as well as the planned work required to preserve an asset in such a condition that it may be used for its designated purpose over its expected life cycle. Examples include routine replacement of HVAC filters, repairing a roof that was damaged in a storm, and building a ramp to meet accessibility laws.	FM
Relevant Facility Maintenance Sub-types		
Component Renewal	The planned replacement of a component or system that will reach the end of its useful life based on condition and life cycle analysis within the facility's lifetime.	CR
Demolition	Removal of an asset that has been determined to be unsafe or no longer meets mission goals. Removal of an NPS asset is determined by management in conjunction with NPS planning procedures.	DEM
Deferred Maintenance	Maintenance that was not performed when it should have been, or was scheduled and was put off or delayed. Continued deferment of maintenance will result in deficiencies.	DM
Legis. Mandate Accessibility	Deficiencies that must be corrected in response to regulatory requirements. These activities include retrofitting for accessibility.	LM
Preventative Maintenance	Regular scheduled periodic maintenance activities (within 1 year) on selected equipment.	PM
Facility Operations Work Type		
Facility Operations	Work activities performed on a recurring basis related to the normal performance or function of an asset throughout the year which intends to meet daily operational needs and activities for which a facility or item of Installed Building equipment (IBE) is intended to be used. Typical work performed under operations includes janitorial and custodial services, snow removal, purchase of utilities (water, sewer, electricity), grounds keeping, waste management, etc.	FO
Relevant Facility Operations Sub-type		
Grounds Care	Official definition forthcoming from the FMSS Maintained Landscape Work Group, but likely to capture short-timed tasks performed in the landscape that are required to meet daily operational needs, such as sweeping, raking, and dead-heading.	GC
Capital Improvements Work Type		
Capital Improvements	Alterations or new construction that helps an asset better meet its intended purpose. Examples include paving an unpaved parking area and replacing portable restrooms with a permanent facility in a frequently visited area.	CI
Relevant Capital Improvements Sub-type		
New Construction	Construction that adds to the existing footprint of an asset, or creates a new asset.	NC

Table 3: Landscape Treatment Tasks and the Governors Island National Monument FMSS Hierarchy

CLR Treatment Task/FMSS Work Order	CLR Treatment Task Component/FMSS Task	Units of Material	FMSS Asset Type	FMSS Location	FMSS Asset	FMSS Work Type/ Sub-Type	Recurring Maintenance Needed
Castle Williams Zone							
CW-SO-1: Re-establish historic landscape context for Castle Williams	1. Remove Building 513 Complex	1 LS	Building (4100)	Building 513A (70156); Building 513B (70158); Building 513C (70160); Building 513D (70145)	Various	FM / DEM	N/A
	2. Remove concrete sidewalks	7,500 SF	Maintained Landscapes (3100)	Castle Williams Landscape (230935)	Land Surface, Surface, Concrete (1041965)	FM / DEM	N/A
	3. Remove asphalt parking areas	7,000 SF	Parking Area (1300)	513 Rear Parking Area (240775)	N/A	FM / DEM	N/A
	4. Remove existing trees	6 EA	Maintained Landscapes (3100)	Castle Williams Landscape (230935)	Building 513 Vege-tation (1041971)	FM / DEM	N/A
	5. Remove light standards	3 EA	Site/Area (0000)	Governors Island Roads Area (70137)	Light pole, alum. (359226)	FM / DEM	N/A
	6. Remove fire hydrants	3 EA	N/A Non-NPS property	N/A	N/A	N/A	N/A
	7. Adjust rim and cover on manholes	3 EA	N/A Non-NPS property	N/A	N/A	CI	N/A
	8. Regrade area	68,000 SF	Maintained Landscapes (3100)	Castle Williams Landscape (230935)	N/A	CI / NC	N/A
	9. Fine grade, loam, and seed	68,000 SF	Maintained Landscapes (3100)	Castle Williams Landscape (230935)	Castle Williams Turf (1041969)	CI / NC	Overseed lawn
CW-BL-1: Construct new visitor shelter south of Castle Williams	1. Develop design and construction documents, complete compliance and construction	1 LS	Building (4100)	Location record needed (future)	Asset records needed (future)	CI / NC	

Table 3: Landscape Treatment Tasks and the Governors Island National Monument FMSS Hierarchy

CLR Treatment Task/FMSS Work Order	CLR Treatment Task Component/FMSS Task	Units of Material	FMSS Asset Type	FMSS Location	FMSS Asset	FMSS Work Type/ Sub-Type	Recurring Maintenance Needed
CW-CR-1: Rehabilitate Hay Road to encourage pedestrian use	1. Remove asphalt surfacing	21,700 SF	Roads (1100)	Hay Road (70170)	Traffic Surface (359094)	FM / DEM	N/A
	2. Remove concrete curbs	1,080 LF	Roads (1100)	Hay Road (70170)	Asset record needed	FM / DEM	N/A
	3. Relocate storm catch basin	2 EA	N/A Non-NPS property	N/A	N/A	N/A	N/A
	4. Adjust rim and cover on sanitary sewer manhole	2 EA	N/A Non-NPS property	N/A	N/A	N/A	N/A
	5. Install bluestone curbs	840 LF	Roads (1100)	Hay Road (70170)	Asset record needed (future)	FM / DM	N/A
	6. Install exposed aggregate or chipseal surfacing	11,000 SF	Roads (1100)	Hay Road (70170)	Traffic Surface (359094)	FM / DM	Repair or replace defective / failing surfaces
CW-CR-2: Install new pedestrian circulation route at Castle Williams	1. Install pedestrian surfacing	3,200 SF	Maintained Landscapes (3100)	Castle Williams Castle Williams Landscape (230935)	Surface (G203003)	CI / NC	Replace defective / failing surfaces
	2. Install benches	3 EA			Asset record needed (future)	CI / NC	Touch-up finish surface as needed
CW-CR-3: Install new pedestrian circulation at boundary adjacent to post hospital	1. Install pedestrian surfacing	3,500 SF	Maintained Landscapes (3100)	Castle Williams Landscape (230935)	Surface (G203003)	CI / NC	Replace defective / failing surfaces
	2. Install benches	5 EA	Maintained Landscapes (3100)	Castle Williams Landscape (230935)	Asset record needed (future)	CI / NC	Touch-up finish surface as needed
CW-VG-1: Install planting of shade trees at boundary adjacent to post hospital	1. Plant deciduous trees, mulch below	25 EA	Maintained Landscapes (3100)	Castle Williams Landscape (230935)	Castle Williams Trees (1041970)	CI / NC	Prune trees
CW-SSF-1: Reestablish working flagstaff in Castle Williams' courtyard	1. Develop engineered footing and construction documents, complete compliance and construction	1 LS	Maintained Landscapes (3100)	Castle Williams Landscape (230935)	Asset record needed (future)	CI / NC	Service mechanical parts according to manufacturer; Replace flag

Table 3: Landscape Treatment Tasks and the Governors Island National Monument FMSS Hierarchy

CLR Treatment Task/FMSS Work Order	CLR Treatment Task Component/FMSS Task	Units of Material	FMSS Asset Type	FMSS Location	FMSS Asset	FMSS Work Type/ Sub-Type	Recurring Maintenance Needed
Fort Jay Glacis Zone							
FJG-SO-1: Re-establish historic landscape connection between Fort Jay and Castle Williams	1. Remove Building S-251	1 LS	Building (4100)	Building S-251 – Library (71448)	Various	FM / DEM	N/A
	2. Remove Parking Area 504 – Asphalt	26,000 SF	Parking Area (1300)	GOIS Parking Area 504 (70173)	Traffic Surface (359096)	FM / DEM	N/A
	3. Remove Parking Area 504 – catch basins	8 EA	Parking Area (1300)	GOIS Parking Area 504 (70173)	Drop Inlet (359100)	FM / DEM	N/A
	4. Remove Tampa Road	8,000 SF	Roads (1100)	Tampa Road (70166)	Traffic Surface (359091)	FM / DEM	N/A
	5. Remove Kimball Road	2,520 SF	Roads (1100)	Kimball Road (70168)	Traffic Surface (359093)	FM / DEM	N/A
	6. Remove retaining walls	490 LF	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Cinder Block Retaining Wall (1041978)	FM / DEM	N/A
	7. Remove concrete sidewalks	7,200 SF	Parking Area (1300)	GOIS Parking Area 504 (70173)	Land Surface (359101)	FM / DEM	N/A
	8. Remove brick sidewalks and steps	860 SF	Parking Area (1300)	GOIS Parking Area 504 (70173)	Land Surface (359101)	FM / DEM	N/A
	9. Remove existing trees	12 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Library Elm (1041984); Library Plane Trees (1041985)	FM / DEM	N/A
	10. Remove existing shrubs	9 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Plant or Vegeta-tion, Shrub (1041986)	FM / DEM	N/A
	11. Remove lights standards	9 EA	N/A Non-NPS property	N/A	N/A	N/A	N/A
	12. Remove fire hydrants	1 EA	N/A Non-NPS property	N/A	N/A	N/A	N/A
	13. Relocate electric transformers	3 EA	N/A Non-NPS property	N/A	N/A	N/A	N/A
	14. Relocate catch basins	2 EA	N/A Non-NPS property	N/A	N/A	N/A	N/A

Table 3: Landscape Treatment Tasks and the Governors Island National Monument FMSS Hierarchy

CLR Treatment Task/FMSS Work Order	CLR Treatment Task Component/FMSS Task	Units of Material	FMSS Asset Type	FMSS Location	FMSS Asset	FMSS Work Type/ Sub-Type	Recurring Maintenance Needed
	15. Relocate light standards	1 EA	N/A Non-NPS property	N/A	N/A	N/A	N/A
	16. Adjust rim and cover on manholes	12 EA	N/A Non-NPS property	N/A	N/A	N/A	N/A
	17. Grading and finish surface, see task CR-1	N/A	N/A	N/A	N/A	N/A	N/A
FJG-TP-1: Rehabilitate Fort Jay's glacis slope	1. Regrade former golf course features	74,000 SF	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Turfgrass (1132870, 1132871)	FM / CM	Overseed lawn
	2. Fine grade, loam, and seed	74,000 SF					
FJG-TP-2: Preserve topographic feature associated with the New Barbette Battery	1. Install construction protection measures during adjacent projects	1 LS	Fortification (7300)	Location record needed	Asset record needed	FM / PM	N/A
FJG-CR-1: Rehabilitate historic covered defile	1. Complete archeological survey	1 LS	Maintained Landscapes (3100)	Fort Jay Landscape (230934)			Overseed lawn
	2. Install MSE retaining walls	480 LF					
	3. Install pedestrian surfacing	4,800 SF					
	4. Regrade defile area	118,100 SF					
	5. Fine grade, loam, and seed defile area	118,100 SF					
FJG-CR-2: Repair/ replace brick sidewalks along Andes Road	1. Remove cracked and defective bricks, precast concrete pavers, and asphalt infill	Selective, 8,700 SF	Site/Area (0000)	Governors Island Roads Area (70139)	Walkway, Red Brick (359227)	FM / CR or FM / DM	Replenish polymeric or stabilized sand
	2. Reset salvaged historic bricks and install new bricks to match	8,700 SF					
FJG-VG-1: Add street trees along eastern and northern edges of Comfort Road	1. Plant deciduous trees, mulch below	18 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Plant or Vegeta-tion (1132864)	CI / NC	Prune trees
FJG-VG-2: Rehabilitate street tree planting along Andes Road	1. Plant deciduous trees, mulch below	11 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Plant or Vegeta-tion (1132864)	FM / DM	Prune trees
FJG-VG-3: Replace failing trees at Nolan Park's western boundary	1. Remove failing trees	7 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Plant or Vegeta-tion (1132864)	FM / DM	Prune trees
	2. Plant disease-resistant American elm cultivars	16 EA					

Table 3: Landscape Treatment Tasks and the Governors Island National Monument FMSS Hierarchy

CLR Treatment Task/FMSS Work Order	CLR Treatment Task Component/FMSS Task	Units of Material	FMSS Asset Type	FMSS Location	FMSS Asset	FMSS Work Type/ Sub-Type	Recurring Maintenance Needed
VG-4: Rehabilitate privet hedge along Andes Road	1. Rejuvenative prune existing hedge	Selective, 630 LF	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Plant or Vegeta-tion, Shrub (1041986)	FM / DM	Prune hedges
	2. Plant new hedge	600 LF					
FJG-SSF-1: Replace safety railing north of Fort Jay's ravelin	1. Remove existing railing	267 LF	Fortification (7300)	Location record needed	Asset record needed	FM / CR	Touch-up finish surface as needed
	2. Install new railing with color galvanized finish	278 LF					
FJG-SSF-2: Mark location of Fort Jay's external magazine	1. Complete archeological survey	1 LS	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Asset record needed	CI / NC	Replenish polymeric or stabilized stonedust for dry set installation; Repoint mortar joints for mortar set installation
	2. Install granite paving band	192 SF					
Fort Jay/Barbican Zone							
FJB-BL-1: Rehabilitate the Fort Jay barbican	1. Relocate cannonball sculpture to park's museum collections	1 LS	Outdoor Sculptures/ Monuments (7100)	Location record needed	Asset record needed	FM / DEM	N/A
	2. Remove elliptical island	105 LF brick wall	Site/Area (0000)	Fort Jay (70153)	Retaining wall, red brick (359116, 359118, 359121)	FM / DEM	N/A
	3. Remove asphalt	5,700 SF	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Traffic Surface, Bitumi-nous (1041972)	FM / DEM	N/A
	4. Remove existing trees	9 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Plant or Vegeta-tion (1132864)	FM / DEM	N/A
	5. Remove existing shrubs	5 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Shrubs, annuals, and perennials at Fort Jay Barbican (1041988)	FM / DEM	N/A
	6. Construct walls for central incline feature	320 LF	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Asset record needed	CI / NC	Repoint mortar joints
	7. Fill central incline feature	1,100 CY	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Asset record needed	CI / NC	Overseed lawn
	8. Fine grade, loam, and seed central incline feature	6,100 SF					

Table 3: Landscape Treatment Tasks and the Governors Island National Monument FMSS Hierarchy

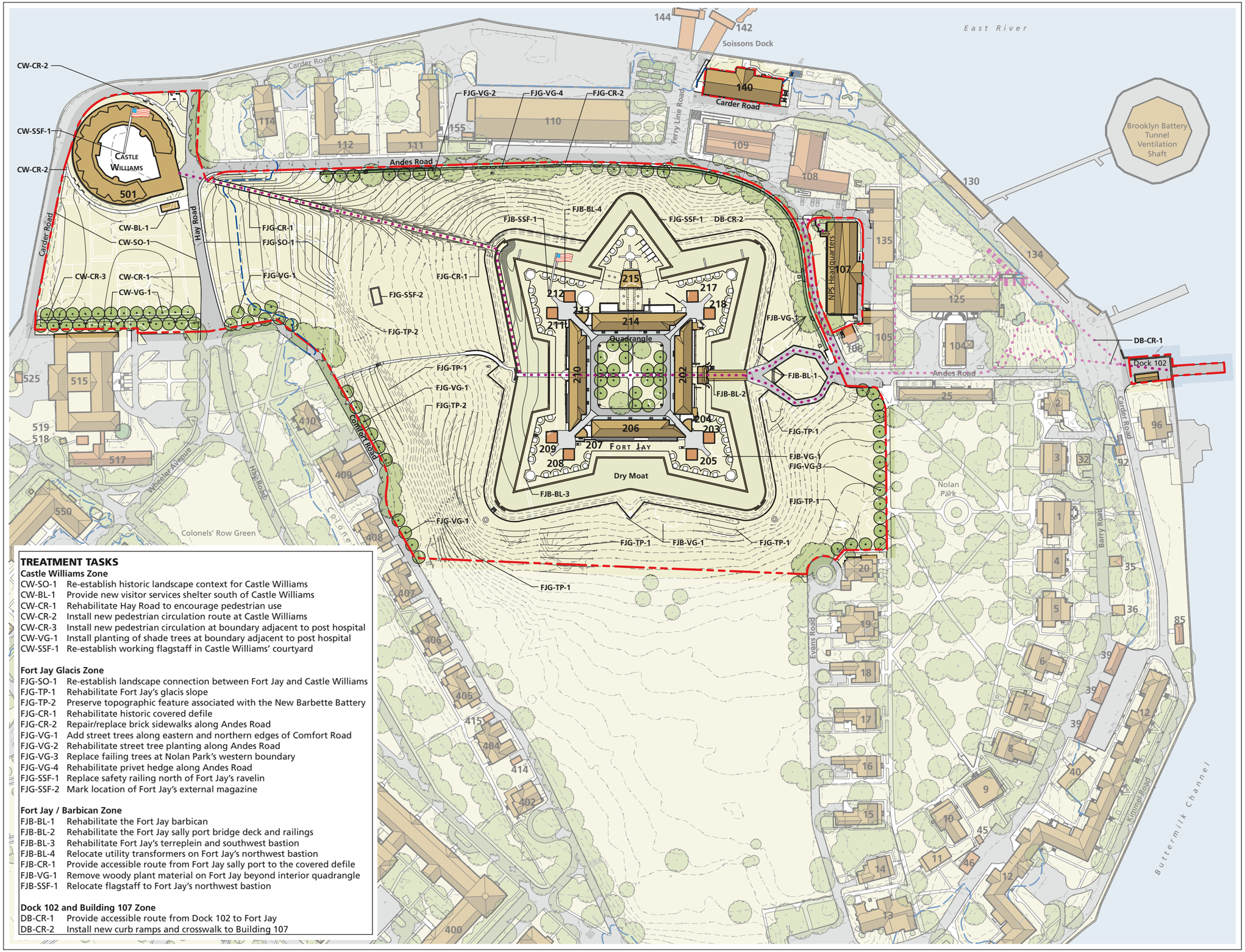
CLR Treatment Task/FMSS Work Order	CLR Treatment Task Component/FMSS Task	Units of Material	FMSS Asset Type	FMSS Location	FMSS Asset	FMSS Work Type/ Sub-Type	Recurring Maintenance Needed
FJB-BL-2: Rehabilitate the Fort Jay sally port bridge deck and railings	1. Remove concrete bridge deck and guardrails	LF	Road Bridge (1700)	Moat Bridge #219 (98273)	Various	FM / DEM and CI / NC	Repair or replace defective / failing surfaces
	2. Develop engineered bridge design with wood decking and guardrails, complete compliance and construction.	1 LS					
FJB-BL-3: Rehabilitate Fort Jay's southwest bastion	1. Remove non-historic brick wall	35 LF	Site/Area (0000)	Fort Jay (70153)	Retaining wall, red brick (359116, 359118, 359121)	FM / DEM	N/A
	2. Remove chain link fence	66 LF	Site/Area (0000)	Fort Jay Area (70132)	Fence, Chainlink (359219)		
FJB-BL-4: Relocate utility transformers from Fort Jay's northwest bastion	1. Complete archeological survey	1 LS	N/A Non-NPS property	N/A	N/A	N/A	N/A
	2. Relocate to underground vaults nearby existing transformers						
FJB-BL-5: Remove non-historic decks from Fort Jay barrack (Bldg 202)	1. Remove ledgers and other deck material	2 EA	Building (4100)	Building 202 (70147)	Deck Structure (1327382)	FM / DEM	N/A
	2. Remove footings and other below grade components						
FJB-CR-1: Provide accessible route from the Fort Jay sally port to the covered defile	1. Complete archeological survey	1 LS	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Asset record needed	FM / LM	Repair or replace defective / failing surfaces
	2. Develop design and construction documents, complete compliance and construction	1 LS					

Table 3: Landscape Treatment Tasks and the Governors Island National Monument FMSS Hierarchy

CLR Treatment Task/FMSS Work Order	CLR Treatment Task Component/FMSS Task	Units of Material	FMSS Asset Type	FMSS Location	FMSS Asset	FMSS Work Type/ Sub-Type	Recurring Maintenance Needed
FJB-CR-2: Rehabilitate Fort Jay quadrangle pedestrian and vehicular surfaces	1. Remove pavement	5,240 SF	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Fort Jay Sidewalks and Pathways (1041973)	FM / DEM	N/A
	2. Remove asphalt	11,840 SF					
	3. Remove curbing	248 LS					
	4. Remove bluestone curbing	600 LS					
	5. Remove light standards	4 EA	Site/Area (0000)	Fort Jay Building Area (70142)	Light pole, alum. (359341)	FM / DEM	N/A
	6. Install new concrete	2,030 SF	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Fort Jay Sidewalks and Pathways (1041973)	FM / DM	Repair or replace defective / failing materials
	7. Install new bluestone	5,810 SF					
	8. Install new asphalt	7,500 SF					
	9. Install new or reset curbing	956 LF					
	10. Install new bluestone curbing	600 LF					
	11. Install new lawn	14,600 SF	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Turfgrass (1132870, 1132871)	FM / DM	Overseed lawn
FJB-VG-1: Remove woody plant material on Fort Jay	1. Remove existing trees	12 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Fort Jay Trees (1041987)	FM / DEM	N/A
	2. Stump removal	12 EA					
FJB-VG-2: Rehabilitate Fort Jay quadrangle tree planting	1. Remove existing trees	3 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Fort Jay Trees (1041987)	FM / DEM	N/A
	2. Plant deciduous trees, mulch below	18 EA				CI / NC	Prune trees
FJB-SSF-1: Relocate flagstaff to Fort Jay's northwest bastion	1. Develop engineered footing and construction documents, complete compliance and construction	1 LS	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Exterior Furnish-ing, Flag Pole, Metal (1132861)	CI	Service mechanical parts according to manufacturer; Replace flag
FJB-SSF-2: Remove public address speakers and mounting poles from Fort Jay's bastions	1. Remove speakers and mounting poles	4 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Tower / Pole, Other Tower, Steel (1177587)	FM / DEM	N/A
FJB-SFF-3: Furnish Fort Jay quadrangle with representative period site fixtures	1. Install light standards	4 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Asset record needed (future)	CI / NC	Replace LED array
	2. Install benches	8 EA	Maintained Landscapes (3100)	Fort Jay Landscape (230934)	Asset record needed (future)	CI / NC	Touch-up finish surface as needed

Table 3: Landscape Treatment Tasks and the Governors Island National Monument FMSS Hierarchy

CLR Treatment Task/FMSS Work Order	CLR Treatment Task Component/FMSS Task	Units of Material	FMSS Asset Type	FMSS Location	FMSS Asset	FMSS Work Type/ Sub-Type	Recurring Maintenance Needed
Dock 102 and Building 107 Zone							
DB-CR-1: Provide accessible route from Dock 102 to Fort Jay	1. Coordinate with Trust and complete topographic ground survey between Dock 102 and Fort Jay's Barbican	1 LS	N/A Trust for Governors Island Property	N/A Trust for Governors Island Property	N/A Trust for Governors Island Property	N/A Trust for Governors Island Property	N/A Trust for Governors Island Property
	2. Coordinate with Trust and develop design and construction documents, complete compliance and construction	1 LS					
DB-CR-2: Install new curb ramps and crosswalk to Building 107	1. Complete topographic ground survey for Building 107 entry area and adjacent area on west side of Andes Road	1 LS	Maintained Landscapes (3100)	GOIS HQ Landscape (70140)	Sidewalks (1042111)	FM / DEM	N/A
	2. Remove existing curb	60 LF	Maintained Landscapes (3100)	GOIS HQ Landscape (70140)	Asset record needed	FM / DEM	N/A
	3. Install or reset curb	90 LF	Maintained Landscapes (3100)	GOIS HQ Landscape (70140)	Asset record needed (future)	FM / LM	Repair or replace defective / failing materials
	4. Install new concrete sidewalk	500 SF	Maintained Landscapes (3100)	GOIS HQ Landscape (70140)	Sidewalks (1042111)	FM / LM	
	5. Install new crosswalk line painting	135 LF	Maintained Landscapes (3100)	GOIS HQ Landscape (70140)	Asset record needed (future)	FM / LM	
	6. Install new lawn	415 SF	Maintained Landscapes (3100)	GOIS HQ Landscape (70140)	Turfgrass (1132854)	FM / LM	Overseed lawn



TREATMENT TASKS

Castle Williams Zone

CW-SO-1	Re-establish historic landscape context for Castle Williams
CW-BL-1	Provide new visitor services shelter south of Castle Williams
CW-CR-1	Rehabilitate Hay Road to encourage pedestrian use
CW-CR-2	Install new pedestrian circulation route at Castle Williams
CW-CR-3	Install new pedestrian circulation at boundary adjacent to post hospital
CW-VG-1	Install planting of shade trees at boundary adjacent to post hospital
CW-SSF-1	Re-establish working flagstaff in Castle Williams' courtyard

Fort Jay Glacis Zone

FJG-SO-1	Re-establish landscape connection between Fort Jay and Castle Williams
FJG-TP-1	Rehabilitate Fort Jay's glacis slope
FJG-TP-2	Preserve topographic feature associated with the New Barbette Battery
FJG-CR-1	Rehabilitate historic covered defile
FJG-CR-2	Repair/replace brick sidewalks along Andes Road
FJG-VG-1	Add street trees along eastern and northern edges of Comfort Road
FJG-VG-2	Rehabilitate street tree planting along Andes Road
FJG-VG-3	Replace failing trees at Nolan Park's western boundary
FJG-VG-4	Rehabilitate privet hedge along Andes Road
FJG-SSF-1	Replace safety railing north of Fort Jay's ravelin
FJG-SSF-2	Mark location of Fort Jay's external magazine

Fort Jay / Barbican Zone

FJB-BL-1	Rehabilitate the Fort Jay barbican
FJB-BL-2	Rehabilitate the Fort Jay sally port bridge deck and railings
FJB-BL-3	Rehabilitate Fort Jay's terreplein and southwest bastion
FJB-BL-4	Relocate utility transformers on Fort Jay's northwest bastion
FJB-CR-1	Provide accessible route from Fort Jay sally port to the covered defile
FJB-VG-1	Remove woody plant material on Fort Jay beyond interior quadrangle
FJB-SSF-1	Relocate flagstaff to Fort Jay's northwest bastion

Dock 102 and Building 107 Zone

DB-CR-1	Provide accessible route from Dock 102 to Fort Jay
DB-CR-2	Install new curb ramps and crosswalk to Building 107

Cultural Landscape Report

Governors Island National Monument

Governors Island, New York

Treatment Plan Site Wide

National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Governors Island Topographic and Boundary Survey, Langan Engineering & Environmental Services, 2012
2. Title Survey of Governors Island, Montrose Surveying Company, LLP, 2003
3. Ortho Imagery, City of New York Department of Information Technology and Telecommunications, 2010
4. Governors Island Park and Public Space Project Site Plan, West 8 New York, 2013
5. Hurricane Sandy's Impact – Estimated Height of Flood Waters at Governors Island, produced by Natalya Apostolou, GATE, 2012

DRAWN BY

Tim Layton and Sasha Bachier
AutoCAD and Illustrator CS6, 2014

LEGEND

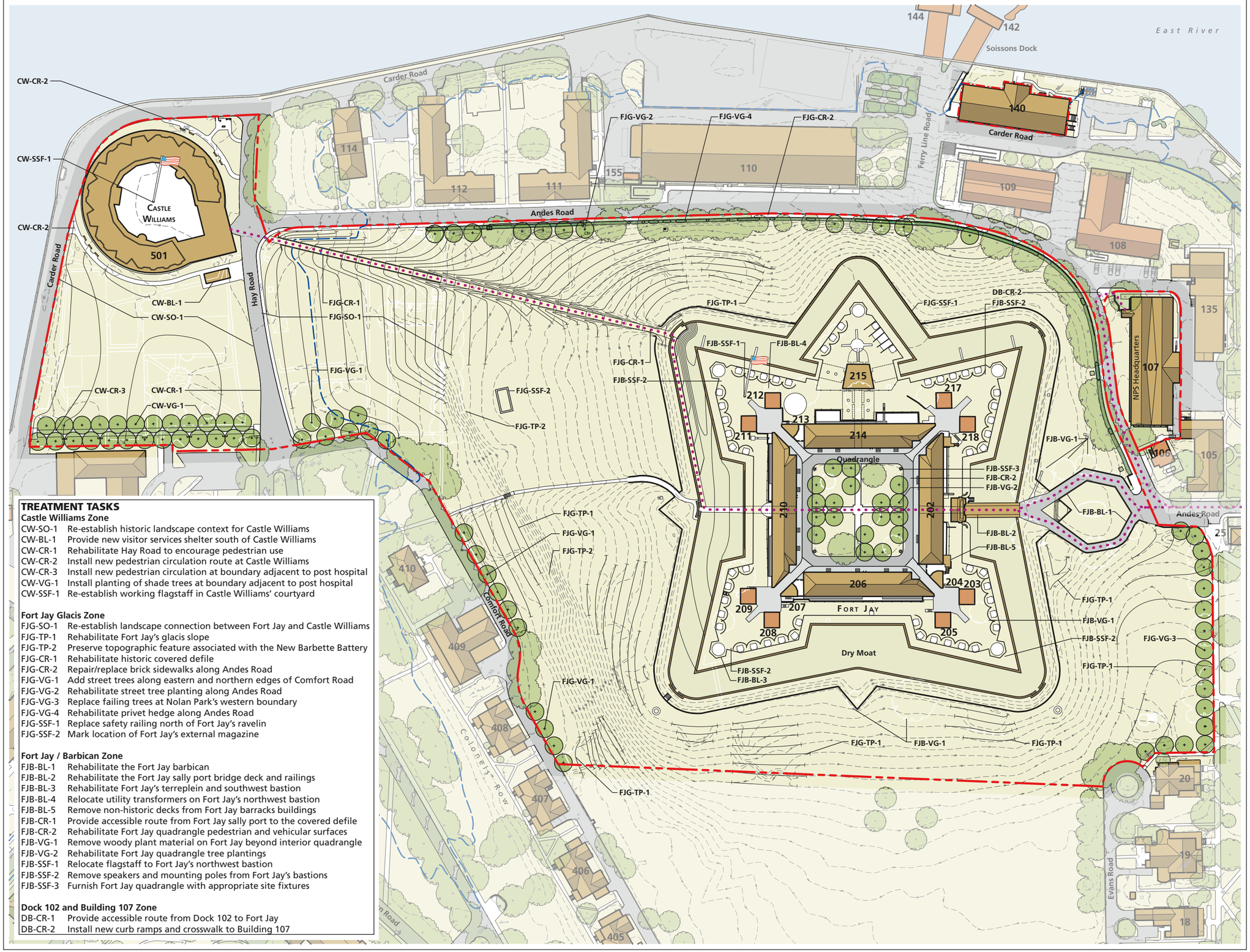
- National Monument Boundary
- Easement on Building 140
- Estimated Limit of Hurricane Sandy Flood Water
- Proposed Accessible Route
- Building / Structure
- Building / Structure Non-contributing per NHL
- Paved Vehicular Circulation
- Paved Pedestrian Circulation
- Deciduous Tree
- Evergreen Tree
- Proposed Deciduous Tree

NOTES

1. Projection: New York State Plane, Long Island Zone, NAD 83, Feet
2. All features shown in approximate scale and location

0′ 45′ 90′ 180′

Drawing 3



TREATMENT TASKS

Castle Williams Zone

CW-SO-1	Re-establish historic landscape context for Castle Williams
CW-BL-1	Provide new visitor services shelter south of Castle Williams
CW-CR-1	Rehabilitate Hay Road to encourage pedestrian use
CW-CR-2	Install new pedestrian circulation route at Castle Williams
CW-CR-3	Install new pedestrian circulation at boundary adjacent to post hospital
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Fort Jay Glacis Zone

FJG-SO-1	Re-establish landscape connection between Fort Jay and Castle Williams
FJG-TP-1	Rehabilitate Fort Jay's glacis slope
FJG-TP-2	Preserve topographic feature associated with the New Barbette Battery
FJG-CR-1	Rehabilitate historic covered defile
FJG-CR-2	Repair/replace brick sidewalks along Andes Road
FJG-VG-1	Add street trees along eastern and northern edges of Comfort Road
FJG-VG-2	Rehabilitate street tree planting along Andes Road
FJG-VG-3	Replace failing trees at Nolan Park's western boundary
FJG-VG-4	Rehabilitate privet hedge along Andes Road
FJG-SSF-1	Replace safety railing north of Fort Jay's ravelin
FJG-SSF-2	Mark location of Fort Jay's external magazine

Fort Jay / Barbican Zone

FJB-BL-1	Rehabilitate the Fort Jay barbican
FJB-BL-2	Rehabilitate the Fort Jay sally port bridge deck and railings
FJB-BL-3	Rehabilitate Fort Jay's terreplein and southwest bastion
FJB-BL-4	Relocate utility transformers on Fort Jay's northwest bastion
FJB-BL-5	Remove non-historic decks from Fort Jay barracks buildings
FJB-CR-1	Provide accessible route from Fort Jay sally port to the covered defile
FJB-CR-2	Rehabilitate Fort Jay quadrangle pedestrian and vehicular surfaces
FJB-VG-1	Remove woody plant material on Fort Jay beyond interior quadrangle
FJB-VG-2	Rehabilitate Fort Jay quadrangle tree plantings
FJB-SSF-1	Relocate flagstaff to Fort Jay's northwest bastion
FJB-SSF-2	Remove speakers and mounting poles from Fort Jay's bastions
FJB-SSF-3	Furnish Fort Jay quadrangle with appropriate site fixtures

Dock 102 and Building 107 Zone

DB-CR-1	Provide accessible route from Dock 102 to Fort Jay
DB-CR-2	Install new curb ramps and crosswalk to Building 107

Cultural Landscape Report

Governors Island National Monument

Governors Island, New York

Treatment Plan
National Monument Detail

National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Governors Island Topographic and Boundary Survey, Langan Engineering & Environmental Services, 2012
2. Title Survey of Governors Island, Montrose Surveying Company, LLP, 2003
3. Ortho Imagery, City of New York Department of Information Technology and Telecommunications, 2010
4. Governors Island Park and Public Space Project Site Plan, West 8 New York, 2013
5. Hurricane Sandy's Impact – Estimated Height of Flood Waters at Governors Island, produced by Natalya Apostolou, GATE, 2012

DRAWN BY

Tim Layton and Sasha Bachier
AutoCAD and Illustrator CS6, 2014

LEGEND

- National Monument Boundary
- Easement on Building 140
- Estimated Limit of Hurricane Sandy Flood Water
- Proposed Accessible Route
- Building / Structure
- Building / Structure Non-contributing per NHL
- Paved Vehicular Circulation
- Paved Pedestrian Circulation
- Deciduous Tree
- Evergreen Tree
- Proposed Deciduous Tree

NOTES

1. Projection: New York State Plane, Long Island Zone, NAD 83, Feet
2. All features shown in approximate scale and location

0′ 32.5′ 65′ 130′

Drawing 4

Cultural Landscape Report

Governors Island National Monument

Governors Island, New York

Tree Planting and Removal National Monument Detail

National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Governors Island Topographic and Boundary Survey, Langan Engineering & Environmental Services, 2012
2. Title Survey of Governors Island, Montrose Surveying Company, LLP, 2003
3. Ortho Imagery, City of New York Department of Information Technology and Telecommunications, 2010
4. Hurricane Sandy's Impact – Estimated Height of Flood Waters at Governors Island, produced by Natalya Apostolou, GATE, 2012

DRAWN BY

Tim Layton, AutoCAD and Illustrator CS6, 2014

LEGEND

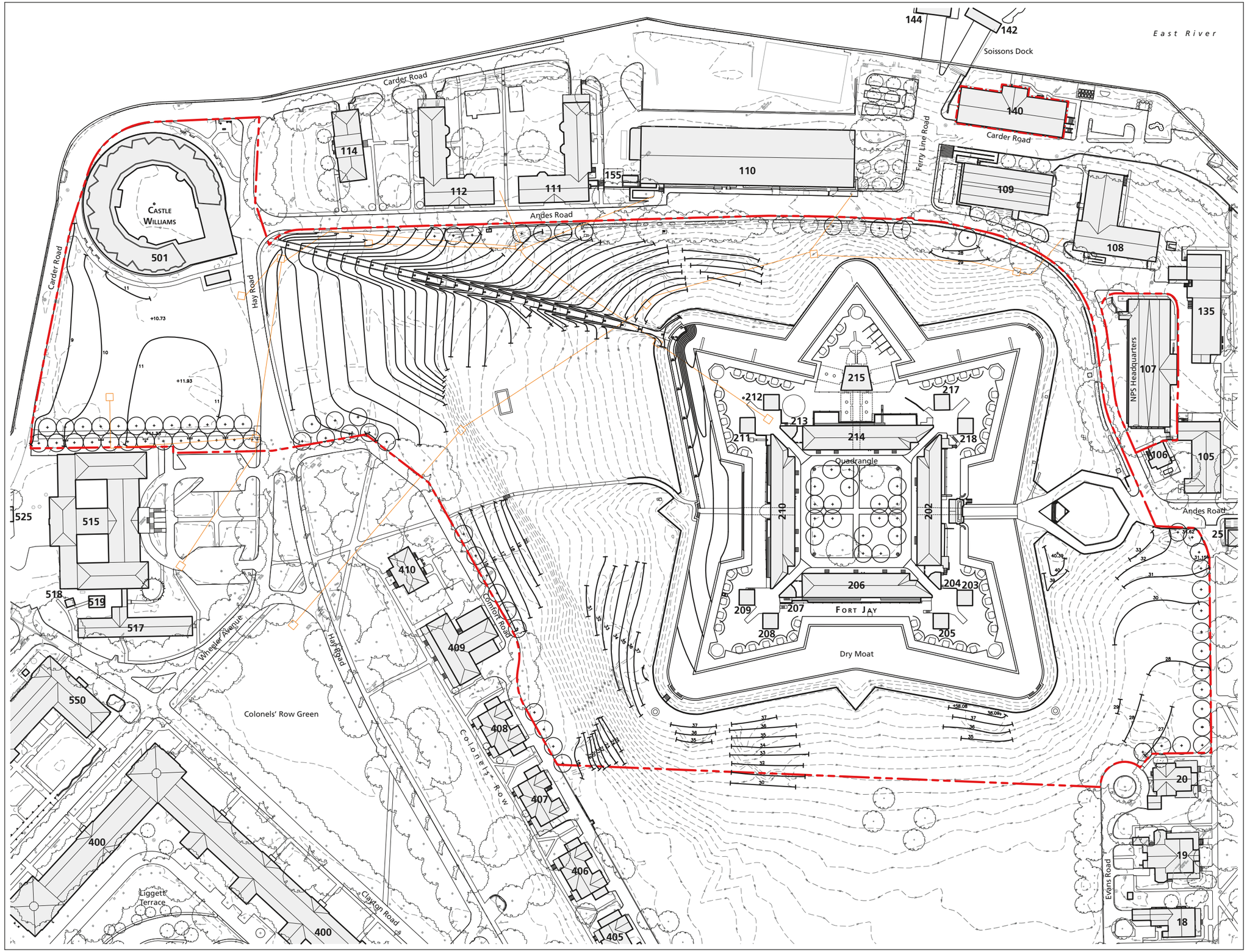
- Deciduous Tree to Plant (Total = 88)
- Deciduous Tree to Remove (Total = 43)
- Evergreen Tree to Remove (Total = 11)

NOTES

1. Projection: New York State Plane, Long Island Zone, NAD 83, Feet
2. All features shown in approximate scale and location

0′ 32.5′ 65′ 130′

Drawing 5



Cultural Landscape Report

Governors Island National Monument

Governors Island, New York

Schematic Grading National Monument Detail

National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Governors Island Topographic and Boundary Survey, Langan Engineering & Environmental Services, 2012
2. Title Survey of Governors Island, Montrose Surveying Company, LLP, 2003
3. Ortho Imagery, City of New York Department of Information Technology and Telecommunications, 2010
4. High Voltage Distribution System, Coast Guard Support Center, New York, 1980

DRAWN BY

Tim Layton, AutoCAD and Illustrator CS6, 2014

LEGEND

- National Monument Boundary
- Easement on Building 140
- Building / Structure
- Existing Contour
- Proposed Contour
- +38.08 Proposed Spot Elevation
- Conjectured High Voltage Distribution Line

NOTES

1. Projection: New York State Plane, Long Island Zone, NAD 83, Feet
2. All features shown in approximate scale and location
3. Conjectured high voltage distribution lines have been traced from source drawings and shall be deemed approximate only. All utility locations and elevations must be verified by qualified, licensed professionals.

0′ 32.5′ 65′ 130′

Drawing 6

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