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general management plan amendment
development concept plan and interpretive prospectus

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GENERAL MANAGEMENT PLAN AMENDMENT
Development Concept Plan and Interpretive Prospectus

SANDY HOOK UNIT
GATEWAY NATIONAL RECREATION AREA
New York/New Jersey

Draft
September 1988

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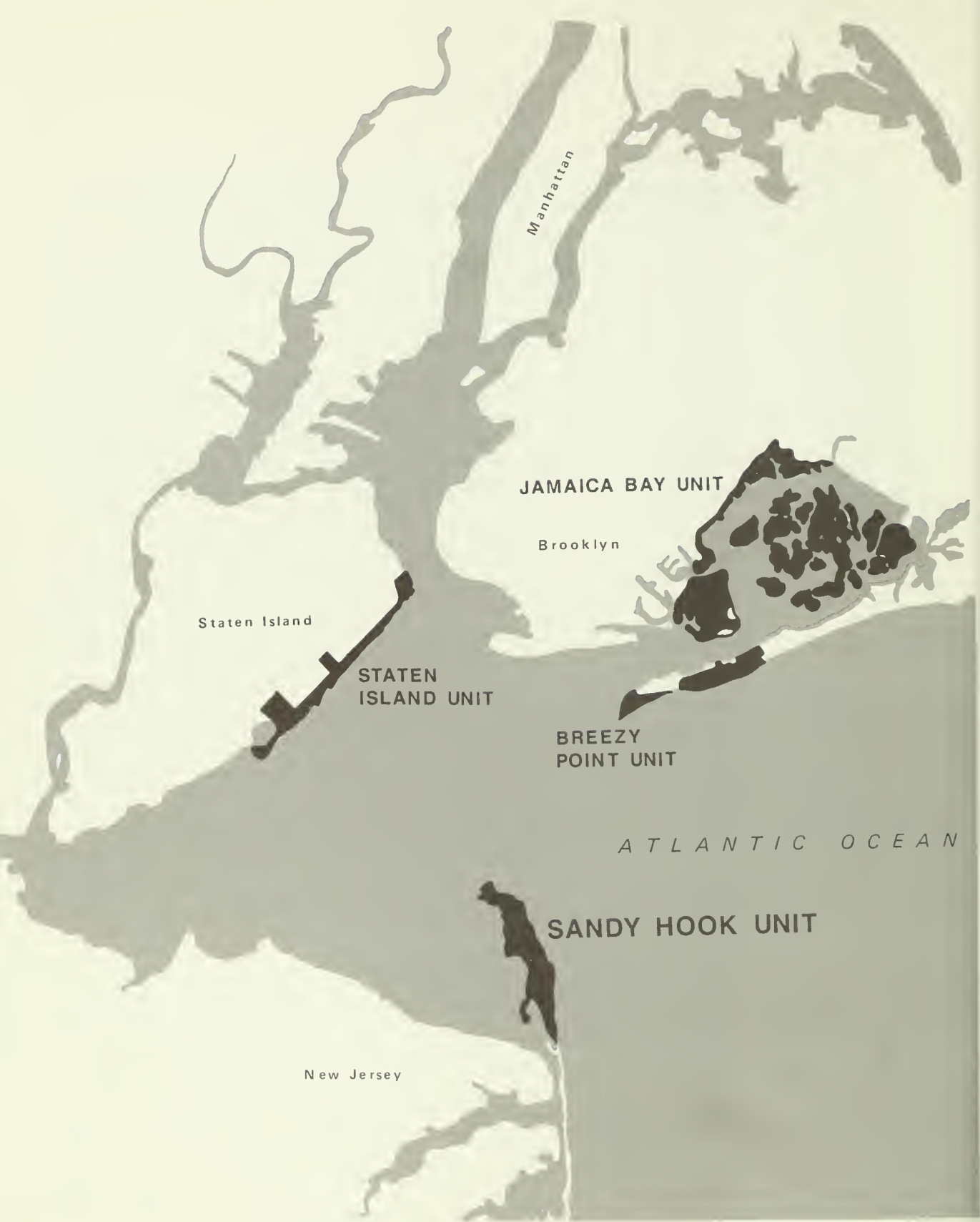
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PURPOSE

This development concept plan/interpretive prospectus is an amendment to the 1979 General Management Plan for Gateway National Recreation Area. It evaluates and updates planning, design, and management strategies for the Sandy Hook unit to ensure that its resource management and visitor use programs reflect current administrative policies and economic realities. The plan assesses park resources and visitor needs, determines the best locations for major park functions and activities (information/orientation, interpretation, recreation, administration, and maintenance), and recommends levels and types of development. It provides a realistic development program for the near future as well as a long-range visitor use and resource management concept. The concept supports overall recommendations in the approved GMP; however, some new proposals are included that modify the costs, implementation phasing, and levels and types of development and that recommend private sector involvement. Actions that were not assessed as part of the GMP are evaluated in this document.



LOCATION

GATEWAY NATIONAL RECREATION AREA / NEW YORK - NEW JERSEY
UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

DSC / AUG 1988 / 646-40242 B

THE RESOURCE

When Congress designated Gateway National Recreation Area in 1972, it was part of an effort to bring the national park system and its ethic of preserving and protecting outstanding resources closer to major cities. The lands and waters now included within Gateway are virtually priceless because of their open, natural character and their proximity to one of the world's largest population centers.

Sandy Hook, one of Gateway's four management units, encompasses 1,674 land and landlocked water acres. The area's ocean beaches, dunes, salt flats, marshes, and coves make it one of the most picturesque natural seascapes along the northeast coast.

Sandy Hook is a recurved spit, ranging in width from several hundred feet in the southern portion to approximately a mile in the north. It is continually changing because of the northward-moving littoral current on the ocean side and the tidal action in the bay. The central portion of the peninsula is the most stable, and the northern area is a zone of active beach accretion. The narrow southern strip is the site of the most severe wave erosion. Over the years Sandy Hook has been alternately attached to and separated from the mainland. Since about the turn of the century it has been connected to the barrier bar ending at Monmouth Beach, but there have been at least four ocean breaches of the this portion of the sand spit. The last major breach occurred in 1982. Over \$12 million were spent in beach nourishment and other corrective measures.

Although major storms can cause considerable and costly damage, they are not the primary source of shoreline erosion. Littoral drift and recurring coastal storms of a lesser magnitude are continually modifying the beaches in the critical zone, making the periodic replenishment of the beaches an ongoing requirement. In 1984 such a storm eroded a portion of the critical zone, which was rehabilitated at a cost of \$2.5 million. There has been no beach replenishment since 1984.

Several natural features of Sandy Hook aid in the perpetuation of this barrier beach system. The primary dune system protects the grasslands, shrublands, and woodlands from overwash and flooding during most storms. The park contains approximately 100 acres of saltwater and freshwater marshes. The highly productive salt marshes function as the basis of the food chain in the estuarine system. The fragile freshwater marshes are important in restoring and maintaining the groundwater aquifers. These marshes provide habitat for a variety of wildlife, especially waterfowl and shorebirds, and are critical to their continued presence. About 53 acres of heathland are located in the east-central portion of Sandy Hook. Beach heather dominates this community, which also includes grasses and thickets of bayberry, beach plum, sumac, and other shrub species. The 284-acre holly forest is rare along the northeast coast.

The installations at Fort Hancock, which cover the northern half of Sandy Hook, were part of the New York harbor defenses from the 1890s through World War II. In addition to defense, the fort and other parts of Sandy Hook were used for military training and as a proving ground, an ordnance depot, a summer camp for the National Guard, and a reserve encampment. From 1935 to 1943 Sandy Hook was used as a test area for newly developed radar equipment. Shortly before and during World War II, it was used as the site to train coastal defense units that would be stationed throughout the world. During World War II Fort Hancock became the headquarters for the protection of Long Island and New Jersey beaches. In 1943 the garrison was reduced in size but the fort continued to defend the New York area against air attack.

The entire Sandy Hook unit is listed on the National Register of Historic Places and is a national historic landmark. There are approximately 300 structures on Sandy Hook reflecting U.S. Lighthouse Board and Lifesaving Service and U.S. Army activities from 1764 through the 1970s. These structures exhibit varying levels of historic and architectural significance, and together they provide a tremendous resource for interpretation and adaptive use. At the same time the buildings pose a serious problem because they are deteriorating at an alarming rate due to the combined effects of age, weather, vandalism, and deferred maintenance.

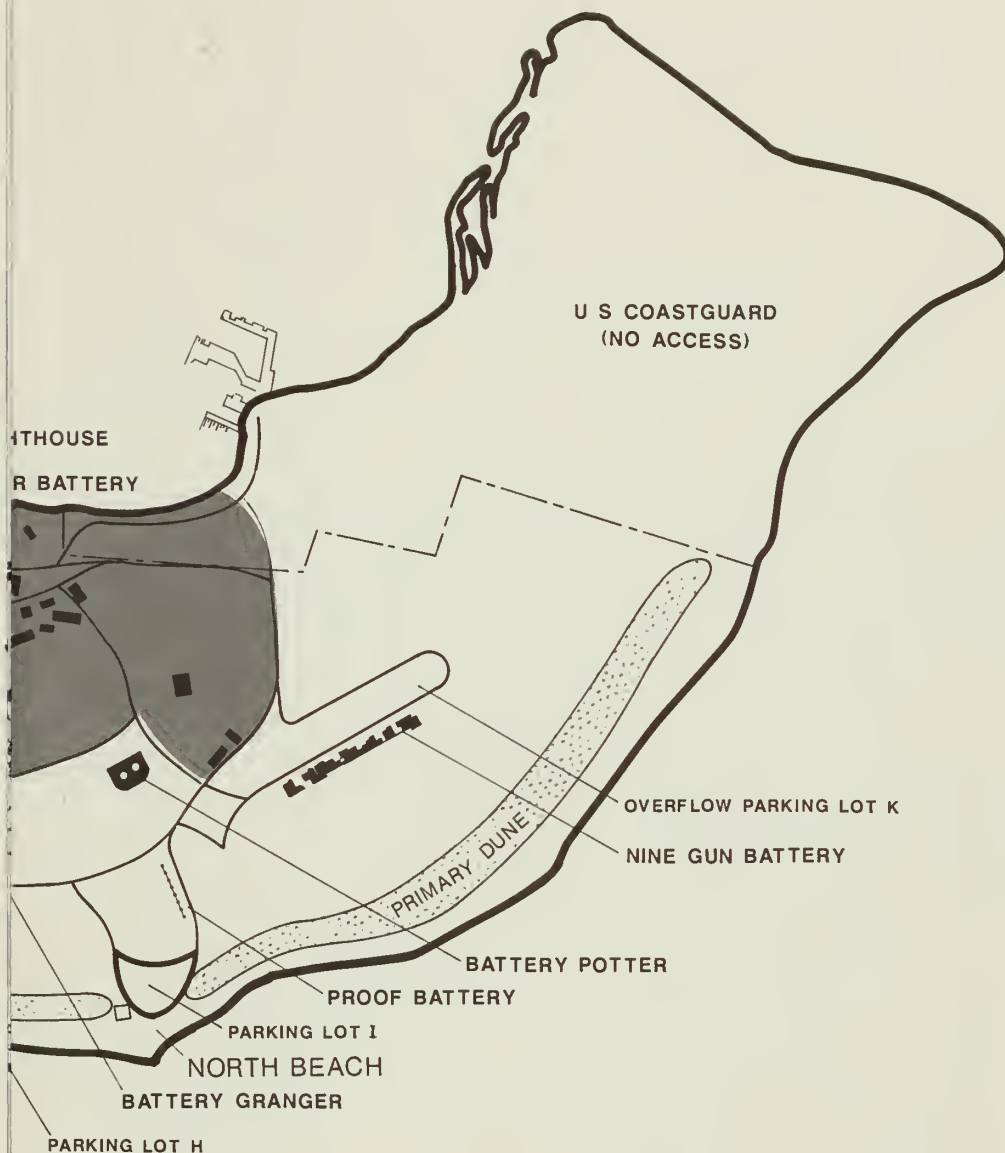
The Fort Hancock and Sandy Hook Proving Ground Historic District occupies approximately 477 acres. The National Park Service has jurisdiction over 380 of these acres; 97 acres are administered by the U.S. Coast Guard and U.S. Army. The 380 acres extend from the entrance of Fort Hancock to the U.S. Coast Guard/NPS boundary and contain 219 historic structures dating from the last quarter of the 19th through the first half of the 20th century. There are also nine cultural features (80+ acres) south of Fort Hancock, including four sites related to the Nike missile installation, three gun batteries, the water treatment and pumping station complex, and the lifesaving station. The national historic landmark designation form and the Historic Structure Report (volumes I-IV) list the following as being the fort's most significant cultural resources:

Proving Ground

- proof battery (174-A)
- brick house (officers' club) (114)
- powder magazine (150)
- chemistry lab (Coast Guard owned)
- generator building (350)

Harbor Defense

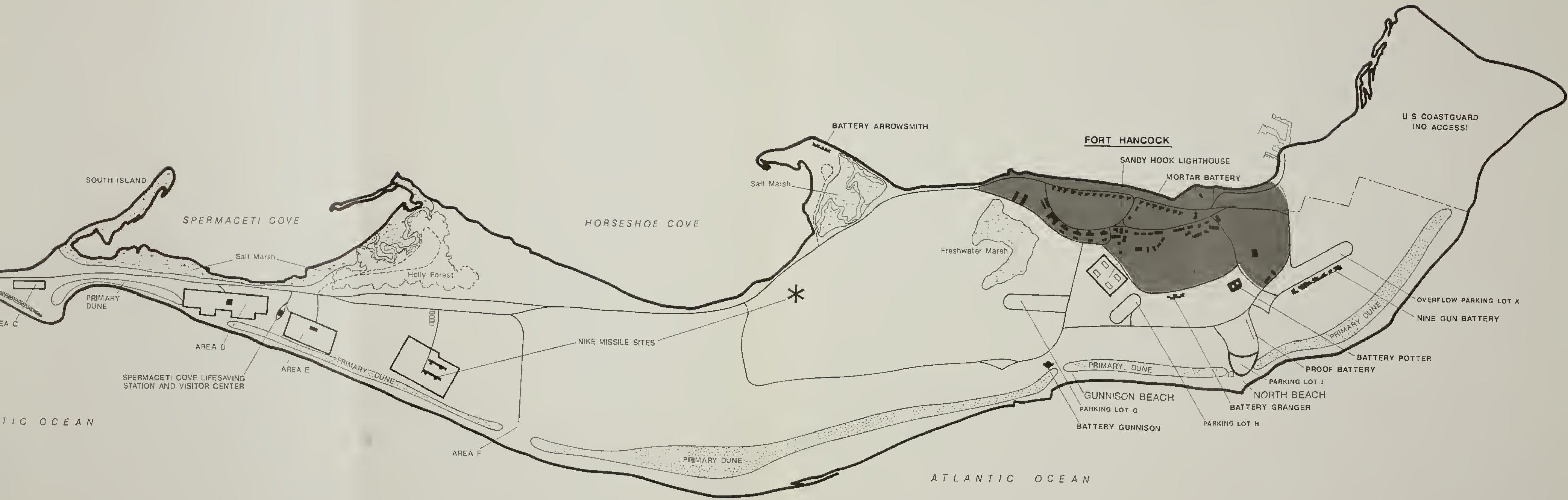
- Battery Potter (264 & 256-260)
- submarine mining (significant structures are Coast Guard owned)
- mortar battery (349) and Battery Gunnison (337)



EXISTING CONDITIONS

SANDY HOOK

GATEWAY NATIONAL RECREATION AREA
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE



EXISTING CONDITIONS

SANDY HOOK
GATEWAY NATIONAL RECREATION AREA
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NATIONAL PARK SERVICE

Fort Hancock Buildings

original buff-brick buildings surrounding both parade grounds

The two other resources with the most significance on Sandy Hook are the Spermaceti Cove lifesaving station and Sandy Hook lighthouse (owned by the U.S. Coast Guard).

The museum collections at the Sandy Hook unit are varied and include approximately 15,000 items dating from the 18th century to the present. Current collections include historical materials such as a variety of ordnance, military equipment, uniforms, and memorabilia, lifesaving equipment, books, photographs, and documentary materials. The collection also contains architectural elements, a range of archeological materials with associated records, and a small collection of plants and mounted animal specimens.

The major themes represented by the Sandy Hook collections are

- the aboriginal and colonial occupation of the Sandy Hook area

- the evolution of military fortifications from the 18th century through the era of the Nike missile system

- the history of the Sandy Hook proving ground from 1874 to 1919

- maritime history focused on the period from 1764 to the present, including the history of the United States Lifesaving Service

- the coastal environment, the flora and fauna of the ocean and estuarine waters, and the barrier beaches, marshes, and wooded uplands

The museum collections are constantly expanding. Items are donated by people who have had a personal association with Fort Hancock, artifacts are still being located on-site, and archeological investigations are being conducted. Based on the "Draft Collections Management Plan," Sandy Hook is to become the major repository for all Gateway collections. The plan currently proposes that building 47 (or a comparable space) be dedicated solely to museum collection storage and curatorial workspace.

The Sandy Hook proving ground Historic Resource Study (1978) and the Historic Structure Report made several management and use recommendations that were considered during the preparation of this plan. These reports will be used as references in any future management decisions.

Since the Sandy Hook area became part of Gateway, the Fort Hancock structures and grounds have been used on a limited basis for interpretation, research, environmental education, and overnight use by organized groups (Brookdale Community College, Marine Academy of Science and Technology, National Marine Fisheries Service - Sandy Hook

Laboratory of the National Oceanic and Atmospheric Administration, American Littoral Society, New Jersey Marine Sciences Consortium, and New Jersey Department of Corrections). Although the fort is a significant resource, Sandy Hook has served primarily as a local and regional beach recreation destination. The entire ocean beach and bay currently provide opportunities for swimming, sunning, fishing, and environmental education. The southern portion remains the focal point for intensive beach use, but the northern portion is experiencing increasing use, placing new demands on both the cultural and natural resources.

MANAGEMENT, DEVELOPMENT, AND USE CONCEPTS

Proposals in this development concept plan/interpretive prospectus are based on the concept that Sandy Hook will continue to be a major regional recreation destination, primarily for people from adjacent Monmouth County and other nearby New Jersey counties. Recreational opportunities will be expanded to serve these visitors and to encourage use by a broader cross-section of people in keeping with the following management and use objectives:

Manage Sandy Hook primarily as a day use area, but expand evening and overnight activities where feasible.

Manage the Fort Hancock area as the focal point for interpretive, cultural, educational, and recreational activities by developing a "Gateway Village" there; preserve the historic character of the fort through a joint public/private venture involving adaptive use of as many structures as possible. The village concept incorporates the idea of year-round educational, recreational, and cultural programs focused on the interdependence of natural and urban systems and the relationship between man and the environment. The village will serve as the major activity center, providing orientation and other visitor services. Additional features will include cultural events, research facilities, and indoor and outdoor recreation.

Provide a variety of beach experiences ranging from casual use on remote, unguarded beaches with no visitor services to active use on guarded beaches with full visitor services.

Encourage use of Sandy Hook and its adjacent waters as a base for marine science research, particularly for research into the impact of the New York/New Jersey metropolitan area upon the marine life.

Develop mass public transportation by land and water if determined suitable and feasible.

Emphasize natural processes in resources management as well as habitat enhancement for significant floral species, shore nesting birds, and other fauna (the endangered piping plover, the osprey, the great horned owl, and the holly forest); continue dune stabilization, revegetation, and beach nourishment as needed to allow recreational, interpretive, and educational activities to continue. Beach nourishment is contingent on appropriated congressional funding.

Although this plan assumes continued land access to Sandy Hook and continued appropriations for beach nourishment, a commitment to provide access cannot be made. In the event that beach nourishment can no longer be provided and the existing road network cannot be maintained, the Park Service will cooperate with investors and other involved agencies to seek alternative sources of funding for land and water access to Sandy Hook.

Two management areas have been designated at Sandy Hook--the north and south areas--based on resource characteristics and visitor use. The north area is dominated by Fort Hancock. The south area is more natural and accommodates most of the recreational beach use. Following are the proposals and implementation strategies for each area.

NORTH AREA

The goal in the north area is to provide year-round use at Fort Hancock by converting it to a Gateway Village related to the fort's cultural resources and the adjacent beach and ocean. The challenge involves use of a large amount of building space, which will require significant funding for rehabilitation and adaptive use in accordance with the secretary of the interior's "Standards for Rehabilitation." Because this level of funding is uncertain, the plan incorporates the idea of long-term lease and occupancy by organizations, institutions, and corporations that will adapt building space and provide support facilities and amenities in keeping with the historic character of the area. The Park Service will preserve and interpret representative features in the complex and will cooperate with the lessees in maintaining the historic ambience. As conceived, the village will evolve into a year-round activity center offering a wide range of interpretive and recreational opportunities.

In support of the village concept, the plan has defined primary management and use zones based on resource characteristics, the existing layout of the fort, and the various buildings' interpretive and adaptive potential. Four zones have been identified and delineated: rehabilitation, coastal fortification, beach, and Coast Guard. The Coast Guard zone includes those lands administered by the U.S. Coast Guard, which are not open to the public and therefore are not addressed in the plan. The management and use proposals for the other three zones are described below.

Rehabilitation Zone

The goal within this zone is to retain the integrity of the historic scene and to provide for adaptive use through rehabilitation of historic structures. Because of their scale, arrangement, and location near the entrance to Fort Hancock, the two parade grounds (Pershing Field and the north parade ground) create a sense of arrival and provide a campuslike setting for the fort buildings. The impressive structures surrounding the grounds are architecturally significant and contain a large amount of usable space within a cohesive area, allowing large-scale adaptive use by one or more lessees. The other structures, more removed from the parade grounds, are less significant historically and architecturally, but they provide a large amount of usable space. Although many of these buildings were not included in the boundary of the Gateway Village as defined in the GMP, their value for adaptive use is apparent. Based on this value, the buildings are now included in the rehabilitation zone.





PROPOSAL
NORTH AREA-SANDY HOOK
GATEWAY NATIONAL RECREATION AREA
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
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The rehabilitation zone will be managed through a public/private arrangement that will involve one or more lessees. A request for proposals (RFP) format will be used in selecting private sector partners to rehabilitate, adaptively use, and maintain the Fort Hancock structures; it may be issued under the historic property leasing program. Following approval of this amendment, the Park Service will develop and issue the RFP, which will request that the prospective private partners propose how they will preserve and rehabilitate the structures, how the historic landscape will be managed, how the public will be accommodated, and what their financial commitment for operation will be. The Park Service will give preference to uses that are nonpolluting (have minimal effects on air and water quality), are compatible with the historic character, foster the concept of Fort Hancock as a Gateway Village, and further the NPS mission. A few of the possible uses are educational facilities (residential or nonresidential), hostels, research centers, conference/education centers, professional offices, a vacation resort, overnight accommodations, restaurants, health complexes, a geriatric center, a vocational rehabilitation center, movie sets, performing arts, courtesy docking facilities, excursion boat operations, and time-sharing residential units. Partners will be encouraged to incorporate NPS interpretive themes into their planning and to participate actively in a cooperative interpretive venture.

The RFP will require that the integrity of the facades and sides of officers' quarters 1-18, barracks 22-25, mess halls 55-58, and buildings 26, 27, and 74 be maintained. Changes to the other yellow brick buildings will be assessed on a case-by-case basis through the historic preservation compliance process. Additions to existing structures will be considered if they are compatible with maintaining the historic scene of Fort Hancock and if it can be demonstrated that the existing structures cannot accommodate all of the anticipated needs. No proposals will be considered that detract from the integrity of the site.

During the development of the RFP, discussions will be held with the National Oceanic and Atmospheric Administration Marine Science Laboratory, New Jersey Marine Science Consortium, Brookdale Community College, American Littoral Society, Marine Academy of Science and Technology, and New Jersey Department of Corrections, in an attempt to respect their interests at Sandy Hook. If it is determined that they may stay, new contractual or interagency agreements, with fees, will be established.

Over Fort Hancock's 100-year history many multi-unit and single-family dwellings were constructed to house officers and enlisted men based at the fort and proving ground. Since the establishment of Gateway, the Park Service has used some of these residences to house permanent and seasonal staff. The park will require the use of existing structures or new development for on-site housing as well as maintenance, operations, and visitor use functions because of security, emergency, and visitor and resource protection requirements. A major new visitor center is needed for information, interpretation, and museum and curatorial functions including offices, storage, exhibits, research, and cataloging. The

center could be located in the officers' club, one of the enlisted men's barracks, or a new structure in the vicinity of the former hospital building. Visitors should have access to one officers' row house and an enlisted men's barracks if a barracks is not developed as a visitor center. Visitor parking for 100 cars and five buses will also be required in conjunction with interpretive programs.

The Park Service has the following space requirements: visitor use and interpretation (31,500 sq ft), environmental education (44,300 sq ft), park operations (100,000 sq ft), maintenance and storage (200,000 sq ft), and housing (50,000 sq ft). Existing structures will be used for these functions unless a lessee's proposal indicates a compelling reason for other uses, and suitable alternatives for NPS functions can be provided. In addition, an NPS operations training center might be developed, which would require 15,000 square feet for residential and classroom functions. The Historic Structure Report describes the current use of each structure.

If the RFP fails to generate interest or the submitted proposals do not meet NPS requirements, management will continue its efforts to maintain the historic scene, to rehabilitate for adaptive reuse, to stabilize and document, and if necessary, to demolish and remove unsafe structures. If a private partner or partners are not found to assist in achieving cultural resource management, interpretive, and recreation goals at Fort Hancock, the Park Service will expand the practice of issuing permits to nonprofit organizations that will provide year-round programs, maintain the historic scene, and protect as many structures as possible. This practice will also be expanded to include private sector leasing of individual buildings or clusters of buildings. Permitting and leasing will be followed as an interim strategy until the RFP process is completed in order to achieve the primary objective of retaining as many structures as possible. Removal will only be considered as a last alternative and then only after the park has determined priority ranking to guide any removal actions.

If the RFP, seasonal permitting, cooperative agreements, and private sector leasing fail, it will become necessary for the Park Service to maintain only those structures within the rehabilitation zone that are nationally significant or necessary for minimum visitor use, housing, and operations. All other structures will be documented and removed or allowed to deteriorate. Deteriorated buildings will be stripped of historically significant materials and glass, porches, etc., that could be vandalized or pose threats to visitor safety and security. Aboveground portions of the foundations of all the demolished structures will be left in place or removed and interpreted through historic photographs.

Documentation of structures contributing to the significance of Fort Hancock and the Sandy Hook proving ground according to HABS/HAER standards will be completed as part of the RFP process. If structures are to be removed, the Park Service will act in accordance with sections 106 and 110(f) of the National Historic Preservation Act of 1966, as amended, and only after all feasible preservation alternatives are assessed

and a decision to demolish is made. Appropriate mitigating measures will be taken.

Coastal Fortification Zone

The goal in this zone is to instill a sense of Sandy Hook's significance in harbor defense and as a proving ground for military arms development. The interpretive section of this document discusses interpretive themes and media as they relate to the resources in this and other management zones. Fort Hancock's role in coastal defense and arms development is best represented by the ring of gun batteries and support buildings on the periphery. These resources can effectively illustrate the evolution of late 19th and 20th century coastal fortifications. The Park Service will selectively stabilize portions at four fortifications and make them safe for public access by adding railings and lighting, patching holes, sealing unwanted doors, and improving walking surfaces. Interpretation will focus on their historic functions and the changes in coastal artillery during Fort Hancock's long history. These four batteries are

the proof battery ruins - the remnants are not impressive, but the battery played a major role in the development of weapons during the years when the United States emerged as a world power

Battery Potter and support structures - a massive concrete fortification visible from the beach and parade grounds; this fortification will be a focal point for interpreting coastal defenses, the proof battery, and navigation and commerce (lighthouse)

the mortar battery - another massive structure visible from most of Sandy Hook

Battery Gunnison and support structures - recently refitted with guns and easily accessible for interpretive programs

Battery Granger, the nine-gun battery (Batteries Alexander, Halleck, Bloomfield, and Richardson), and Batteries Peck, Engle, Morris, and Urmston will be fenced and interpreted at waysides, but no restoration or stabilization will be attempted because of their advanced state of decay. In addition, all but Battery Granger are behind the dune line north of North Beach, adjacent to the Coast Guard enclave and near the tern-nesting area. As stated in the GMP, this entire area is zoned for resource protection, which limits allowable uses.

Beach Zone

A variety of beach-related activities will be accommodated in the beach zone, which will be developed and managed by the Park Service.

Two beach centers with full visitor services will be constructed at Gunnison Beach and North Beach. In 1981 the Gruzen design plan was developed for the northern beach areas to implement the GMP; however, the design plan was never approved. The concepts in this amendment represent a 50 percent reduction in the development proposed in the Gruzen plan (four beach centers). In the Gunnison Beach and North Beach areas, facilities and services will be relocated behind the primary dune line, and the dune restored and revegetated wherever feasible; the beaches to the south and north of these two centers will remain undeveloped and will be managed to provide a feeling of seclusion and discovery. Both of the beach centers will be designed so that they will fill the basic needs of the environmental education program during the off-season, i.e., places for bus parking, restrooms, and space for indoor activities in inclement weather. This will require careful design. Site plans for the two beach access points will incorporate corridors for beach-cleaning equipment and emergency vehicles.

The north area will have two unpaved gravel parking areas for 1,100 cars (lot G 700 cars and lot J 400 cars) and unpaved overflow parking for 800 cars (200 cars adjacent to lot G and 600 cars in lot K). The total parking capacity of 1,900 cars is a decrease of 1,100 cars from the number approved in the GMP.

Gunnison Beach. A new beach center will be developed near the existing pedestrian route and will replace the existing concessioner transportation container on the beach. The new facility will include food service, changing areas and outdoor showers, comfort stations, seating, general storage, an NPS office, and space for lifeguards, first aid, information, and storage. Historic Battery Gunnison will be incorporated into the beach center design.

Gravel parking for beach users will continue to be provided at lot G (700 cars). A new overflow lot (200 cars) will be constructed next to lot G, and the existing lot H (200 cars) will be allowed to return to a natural state. The new overflow parking area will be in a previously disturbed area.

North Beach. A new beach center will be built in parking lot I, replacing the existing facility. The new facility will be constructed on raised decks, or the area will be raised with fill material to an elevation above the high water table. The facility will include food service, outdoor showers, comfort stations, changing rooms, a first-aid station, a lifeguard locker room, a rental area, and storage. The barrier dune seaward of parking area I will be restored and revegetated after the existing facilities are removed. A new boardwalk will be constructed to provide access over the dune from the beach center to the beach.

To accommodate visitors to North Beach, gravel parking lot J will be expanded from 200 to 400 cars, and lot K will be retained for overflow parking for 600 cars (unpaved). Lot I (150 cars) will be obliterated, and the area rehabilitated to make space for the beach center.

The proof battery, one of Sandy Hook's most significant resources, is just south of lot J, and caution will be taken in designing the parking and trails to assure that the battery and its support structures are not disturbed or destroyed. Another significant resource, Battery Potter, is just across the access road from the parking lot. Views from the top of this structure are extremely important to the interpretive program, and the beach parking must be screened from that view as much as possible. The entire area is relatively flat and open, making design considerations and integration of recreational and interpretive programs and facilities extremely important.

Access and Circulation

Access to the new beach centers and Fort Hancock will be along Hartshorne Drive, the main entrance road. A new road segment to the beach areas will be developed from the Fort Hancock entrance to the vicinity of parking lot G; this road will be aligned to avoid a nearby freshwater marsh. The new segment will connect to the northern portion of Atlantic Drive east of lot G. To accommodate this road segment, parking lot G will be slightly modified, and lot H eliminated. In addition, it is proposed that the Coast Guard trailer housing area (13 sites) be relocated to the northern end of Fort Hancock proper in an area within or adjacent to the main Coast Guard property. An exchange of lands will have to be agreed to by the Park Service and Coast Guard.

The portion of Atlantic Drive south of Gunnison Beach, which is currently the primary route for beach access, will be closed and converted to a bicycle trail. Bicycle access will be provided from the entrance to Sandy Hook to Fort Hancock and North Beach, linking the major recreational, interpretive and scenic resources.

SOUTH AREA

This area will continue to function as a major regional recreation destination. Most use will occur in the summer and will involve beach and water-related activities. Two management zones have been designated within this area--the beach and natural environment zones.

Beach Zone

Three types of uses occur in the beach zone, and they will continue to be supported by the Park Service. The southern beach section is used primarily for fishing and limited swimming. The central section is the intensely used beach area and includes a full complement of visitor services. The northern section has no visitor services, and beach experiences there are more casual and solitary. The general appearance of facilities, including shade structures, concessions stands, picnic areas, and comfort stations, will be improved at all beach areas. The concession and bathing complexes at areas D and E will be upgraded to accommodate visitor services and meet safety and health needs.

Parking for beach use will continue to be available in lots B, C, E, and F. Parking at lot D has been reduced because of piping plover (Charadrius melodus) nesting activities. This species is listed by the U.S. Fish and Wildlife Service as endangered throughout most of its range and as threatened in New Jersey. A total capacity of 2,900 cars will be provided in the southern area.

One of the park's significant interpretive features is in this zone--the Spermaceti Cove lifesaving station (interpretive center). Although parking for 22 automobiles and two buses will continue to be provided near the lifesaving station, it will be removed from the prime resource area and located closer to the entrance road. The Plum Island and South Island areas on the bay side offer opportunities for nature study. The Park Service will continue to provide for interpretive activities in these areas (see the interpretive section) while seeking ways to protect them from the effects of increasing visitor use. Protection may involve seasonal restrictions such as visitor capacity limits and use of a reservation system.

There is a small ranger station at the southern end of the beach zone near the park entrance. A special design analysis will be initiated to examine the capacity, utility, and safety of the ranger station and recommend alternative courses of action.

Natural Environment Zone

The natural environment zone includes the central portion of Sandy Hook, where the principal attractions are the holly forest and the salt marsh area. This zone will continue to be used primarily as an environmental study area, with no major development. To safely accommodate increased use of the bay opposite lot C by wind surfers, the Park Service will explore options including construction of a new, small parking area across Hartshorne Drive from lot C. Any new construction in this area will be accompanied by a comparable reduction in existing parking at lot C. Existing trails will be improved, and parking will continue to be provided at the Spermaceti Cove lifesaving station for visitors to the holly forest. The group campground will be improved, and existing parking (20 cars) for visitors to Horseshoe Cove will be centralized at one location.

The missile age arrived at Sandy Hook in the 1950s with the construction and activation of the Nike missile site. The site was part of the system that defended the New York-Philadelphia corridor against intercontinental ballistic missile attack. It was upgraded in the 1960s with the addition of the Nike-Hercules and radar systems. In the same decade it became obsolete and was phased out. The site is now used for NPS beach maintenance operations. Current NPS plans are to compare the site with other similar facilities to determine its relative significance and, if it is not found to have any noteworthy significance, to fully document the site, clear it of all structures and facilities, and allow it to return to a natural state.

INFORMATION AND ORIENTATION

The majority of the 2.5 million visitors to Sandy Hook are repeat visitors who are familiar with the park and are headed for their favorite beach or bay destinations; only about 5 percent of the visitors experience some aspect of the park's interpretive program. Although these proportions will change with park development, the informational needs will remain simple. Essentially, visitors need to be informed about the park's natural and historic resources, the availability of interpretive and other special activities, and regulations and safety requirements.

A travelers information system--short-range broadcasts on car radio--will be established at Sandy Hook to alert visitors about backups at the entrance on busy days. In addition to information about beach access and scheduled events, safety and health messages will be included, with special attention given to swimming hazards, poison ivy, and ticks. Information about interpretive offerings will also be broadcast.

The Spmaceti Cove visitor center will serve as a local or satellite orientation center. Its park orientation function will be reduced in scale when increased interpretation of the U.S. Lifesaving Service is incorporated into the center's exhibits and programs and a visitor center is developed at Fort Hancock.

Beach centers and major parking areas will have simple exhibits or kiosks displaying information about interpretive programs, other park activities, and health and safety.

Visitors who are interested in interpretive programs will be directed to the new visitor center at Fort Hancock. The visitor center will be placed in a rehabilitated historic structure (officers' club or enlisted men's barracks), or a new building will be constructed on or near the site of the old post hospital. This decision will depend on the results of the RFP.

INTERPRETIVE THEMES AND MEDIA

Central Theme: Natural forces have created a landform that, because of its relationship to New York Harbor, is important to wildlife and people.

Sandy Hook contains natural, cultural, recreational, and scenic resources of great value. The objective of the central theme is to merge interpretation of these resources and to build a foundation from which all interpretive programs can grow. Sandy Hook, the southern arm embracing New York Harbor, has had certain functions determined by its form and location. Its importance can be understood only in relation to the whole of New York Harbor.

The marine and terrestrial ecosystems of Sandy Hook provide important habitat for a variety of wildlife. Many fish that spend much of their time





in the ocean spawn in estuarine environments and/or spend a portion of their lives there. Much of the wildlife at Sandy Hook--egrets, gulls, and even terrestrial species such as raccoons--depends on marine life for subsistence, and finfish and shellfish are important for commercial and recreational use. Humans have been and are a part of many of Sandy Hook's ecosystems, affecting and affected by other elements within the ecosystems as perceptions of the area's importance have changed. The following themes illustrate the changes in the peninsula's environment:

- barrier beach formation
- ecosystems, habitats, and communities
- alteration of environmental processes

Occupants and visitors have varied according to the perceived usefulness of Sandy Hook. Native Americans used Sandy Hook seasonally for harvesting local resources, and an early European settler found it to be a natural cattle pen. The peninsula's strategic location in relation to New York Harbor was first realized in the form of a lighthouse and later as part of an elaborate defense system. Currently, it is valued by those seeking respite from the urban scene. Visible evidence of these uses of Sandy Hook provides the basis for interpretation of a number of additional themes:

- navigation and commerce
- military presence and garrison life
- arms development
- coastal defense
- recreation

The central theme should be subtly introduced into all interpretation. It should also be the basis of an audiovisual program for visitor center use. The following sections elaborate on the specific interpretive themes for Sandy Hook.

Theme: Barrier Beach Formation--Sandy Hook's landforms and landscapes are continually changing because of environmental forces.

Noticeable physical changes in many landforms occur only after hundreds or even thousands of years. But at Sandy Hook noticeable physical changes can occur in a matter of hours. This landform provides the most visible evidence of the dynamics of an energy system. Both the shape (landform) and the characteristics of the landscape (dune system) are constantly being altered by the wind and water. This push-pull tug-of-war has changed the classification of the landscape from island to peninsula several times. The accretion and erosion processes have created a series of leapfrogging hook formations that are responsible for its growth pattern as well as its name.

The resource for interpretation of this theme is the entire hook and its changes over time. A brief audiovisual program, using satellite photographs and animation, will convey the large-scale aspect of the story. On-site interpretation through wayside exhibits, publications, and personal services will be provided on existing and future nature trails and at dune crossings.

Theme: Ecosystems, Habitats, and Communities--Sandy Hook illustrates the interrelationship between human and nonhuman communities and their environment.

Vegetation stabilizes the shifting sand of a barrier island, making succession toward more varied and complex communities possible. At the same time, habitats for wildlife are created. Thus, the landscape is slowly transformed by the interaction of ecosystems. Humans similarly adapt to environments and change them to suit their needs. Fort Hancock was an adaptation to the opportunities and limitations of the time. It was a planned, seemingly self-contained community with a distinct purpose. Fort Hancock derived its importance and support from without; consequently, the human community made relatively little demand on the immediate environment. The effect was preservation, in large measure, of natural environments that would otherwise have been altered more drastically. The holly forest is the most obvious manifestation of this survival, but the marine environment is the most important legacy, now and in the future.

Sandy Hook has recently become host to a human community whose concern is different from that of the army. Emphasis has shifted from maintenance of national sovereignty to survival of the oceans on which all nations depend. Scientific organizations conduct research on the impact of human activities on the marine environment, and environmental education programs stimulate an awareness in those who will inherit the problems.

Organizations that have conducted research and educational activities on Sandy Hook are

National Oceanic and Atmospheric Administration
New Jersey Marine Sciences Consortium
Brookdale Community College
American Littoral Society
U.S. Coast Guard
Marine Academy of Science and Technology

The National Oceanic and Atmospheric Administration, in conjunction with other organizations with facilities at Sandy Hook, has performed historically important research in pinpointing the sources and effects of pollution of the New York Bight.

Interpretation in the visitor center will refer briefly to these organizations and their work. Wherever feasible, additional interpretation

will take place at each organization's headquarters. This could range from a wayside exhibit outside the facility, to exhibits inside, to conducted tours. An aquarium would be a valuable interpretive tool and constitute a year-round attraction.

The environmental education center will be the focal point to convey the interrelationship of various elements of Sandy Hook. The center will be used for daily school group visits, educational workshops, a residential school program, and special educational events such as fairs and symposiums. Visitors of all ages will use the center to achieve a better understanding of the social and natural communities on the hook and how they relate to the home environment. The center will include overnight accommodations for 100 to 150 people (students, parents, and teachers), with separate rooms for men and women. Restrooms, showers, classrooms, a multi-purpose area, a laboratory, and cooking/eating facilities will also be provided.

Theme: Alteration of Environmental Processes--We have the power to alter the environment for good or ill.

Because humans are an integral part of the environment, we are all engaged in resource management whether by direct action or by influence on business and government. Economics created the dense population of New York, which gradually polluted the adjacent waters. Water pollution could close the park, as nearly happened in 1977. Some of the costs could be passed on to later generations, until it becomes clear that we face not only the loss of swimming beaches but perhaps the loss of productivity of the oceans.

One means of showing visitors that they are involved is through an interactive exhibit. By way of a computer-activated video display, visitors will be presented with a problem, such as erosion or wildlife habitat preservation, with some options, including cost factors. After an option is chosen, consequences will be displayed, perhaps with some unforeseen consequences.

Dune crossing exhibits will also deal with this theme, and dune restoration areas warrant wayside exhibits. On the bayside, at Horseshoe Cove, protection of wetlands and endangered species will be the main subthemes.

Theme: Navigation and Commerce--People living near and traveling on the sea must understand and respect its power.

The dynamics that created a safe harbor, New York Harbor, exacted a price--shipwrecks on sandbars in the narrow winding channel around Sandy Hook. Loss of revenue prompted a group of New York merchants to propose a lighthouse, completed in 1764. Concern for shipwreck victims led to creation of the U.S. Lifesaving Service in 1878. One of the first of eight boathouses funded by the federal government on the

New Jersey coast was built on Sandy Hook. In 1915 management of the Lifesaving Service was transferred to the U.S. Coast Guard, which operates the Sandy Hook Light to this day. The Coast Guard took over the navigational aids program in 1939. Of resources illustrating this theme, the Spermaceti Cove lifesaving station and the Sandy Hook lighthouse are essential to the story. The Ambrose Light and preceding lightships have provided reference to the Ambrose Channel, an engineering achievement important to the growth of New York Harbor. Similarly, the Sandy Hook Channel has played an important role in coastal defense and continues today to serve nearby defense facilities.

The story is currently interpreted at the lifesaving station, which also provides orientation and general interpretive functions. Although the facility will continue in the latter role as other facilities are developed, the lifesaving story will be augmented beyond the existing beach apparatus equipment and drill program. Photomurals in the boatroom, a life-car in the park collection, and an audiovisual program about the Lifesaving Service are appropriate additions. The exterior of the building and a representative portion of the interior will be restored to its ca. 1900 appearance.

Theme: Military Presence and Garrison Life--Military and garrison activities have evolved from the 18th century to the present.

Sandy Hook has been the site of military activity since the 18th century. Beginning in 1776 British warships used it as a rendezvous point. During the War of 1812 American troops occupied the island to prevent the British from doing so.

With the advent of steam-driven ships and long-range shell guns, defense of New York's outer harbor became imperative. In 1857 the Corps of Engineers prepared a site on Sandy Hook, and two years later it broke ground for a fort. Work accelerated during the Civil War years, and in 1863 troops were sent to the island to man the armament and guard public property.

The next important development was the 1886 Endicott Board report, which called for a comprehensive defense system to protect the most important ports and harbors from naval attack. Under this and other ensuing programs, Sandy Hook became the important complex guarding the approaches to New York Harbor.

A submarine defense system was activated in 1898, only days before the United States declared war on Spain.

Between 1890 and 1908 hundreds of thousands of dollars were spent on the construction and armament of seacoast and mortar batteries. During World Wars I and II, batteries were added to reflect changing technology.

During the period of 1943-48 the Sandy Hook batteries were phased out and disarmed because of the development of the atomic bomb and missiles and the successful application of new principles of amphibious warfare.

The 1950s ushered in the missile age for the island with the activation of a Nike missile site, which was improved in the 1960s by the introduction of the Nike-Hercules system and tracking radar. By the late 1960s the system became obsolete and was phased out. Sandy Hook's days as a key element in the defense of the nation were over.

Today, the U.S. Coast Guard and U.S. Army Corps of Engineers constitute the only military presence remaining at Sandy Hook. They maintain 180 acres at the northern tip of the island, and the Coast Guard also holds two small properties within Fort Hancock, one of which contains the historic Sandy Hook lighthouse.

Between the earliest years of the coast artillery and the closing days of the missile era, the nature of life in the garrison changed little. The fort's function as a deterrent dictated a certain drill routine to maintain readiness. At the same time, it was recognized that there was little likelihood of shots being fired in anger. The garrison was virtually a self-contained community structured on the caste system of military organization. Quarters were assigned according to rank; social life and recreation were similarly ordered.

The evolution of military and garrison activities will be fully explained through audiovisual and exhibit presentations in the new visitor center. Activities that relate to on-site resources (buildings, parade grounds) will also be interpreted in the Fort Hancock area. Because military matters were an important part of garrison life, activities such as parades, inspections, reports, instructions, and firing practices will be illustrated. In addition, because there were long periods of routine and boredom, and much time was spent in pursuits not greatly different from those of civilians, the efforts made to civilize the post--parties, dances, athletics, movies, etc.--will also be described. Information exists in the form of documentary evidence and oral history to support this aspect of the story. On-site interpretation will be predominantly at the quarters, barracks, officers' club, theater, gymnasium, and other structures that reflect daily life; the fortifications will be interpreted to a lesser extent. Structures may be interpreted through a variety of means depending upon their ultimate uses. Wayside exhibits and self-guiding publications will be adequate for exteriors. Reserving a portion of a barracks and an officer's quarters would be desirable. Alternatively, interiors could be re-created in the visitor center. In either case, a partial furnishings/exhibit treatment would be most effective.

Theme: Arms Development--Each stage of the arms race requires testing, and together they chronicle America's development as a world power.

What we call the arms race, while greatly accelerated in the 20th century, is as old as warfare. Each advance in weapons or other defense mechanisms calls for a countermeasure designed to supplement political alliances in maintaining that teetering equilibrium between nations, often called the balance of power.

Sandy Hook had a key role in the development of weapons during the vital years when the United States was emerging as a world power. In the latter part of the 19th century a technological revolution in weaponry was under way on both sides of the Atlantic. Powerful modern navies were being built in a number of European countries. In 1874 the U.S. Army Ordnance Department established the proving ground at Sandy Hook for testing powerful and sophisticated rifled guns and mortars for emplacement in the nation's coastal fortifications. All experimental guns for seacoast defense were tested at Sandy Hook, and all production guns proof-tested here. Field artillery, Gatling guns, small arms, explosives, and fuses were also tested. Proof-testing was transferred to the Aberdeen proving ground in Maryland in 1918-19 because technology had begun to develop longer range weapons capable of firing projectiles beyond the bounds of the test area.

The principal resource supporting this theme is the 1901 proof battery, considered to be one of Sandy Hook's most significant resources. The artifact collection and photo collection are support elements. Although significant, the proof battery remnant is not impressive and requires considerable interpretive effort to suggest its importance. Restoration of its appearance to ca. 1917, with traverses, railroad, gantry crane, roadbeds, and associated structures, would be extremely costly and would probably not be justified when weighed against possible interpretive returns. Consequently, selective stabilization along with waysides and photo markers is the most effective proposal. Some improvement of the overall impression will also be achieved with selective removal of vegetation cover and removal or screening of nonhistoric intrusions. If possible, a row of reproduction gun tubes will be added to the scene to emphasize that large quantities of guns were proofed here, in addition to the testing of prototypes. Demonstrations, on a reduced scale, of the timing frames used to measure the velocity of projectiles may be provided to illustrate the function of the battery.

Additional wayside exhibits are called for adjacent to the battery. From the top of Battery Potter visitors can get a good overall view of the testing area as well as the coastal batteries that are a closely related part of the story. The obsolescence of gun batteries, including Potter, was accelerated partly by developments tested at the proof battery.

The proving ground will also be the subject of interpretive media in the visitor center.

Theme: Coastal Defense--The commercial importance of New York Harbor demands an elaborate defense system.

Throughout most of America's history the oceans lent a comfortable sense of remoteness from hostility. Before the advent of long-range bombers and missiles, guns amassed at principal ports provided security. They were also an alternative to standing armies.

When once constructed they require but little expenditure for their support. In time of peace they withdraw no valuable citizens from the useful occupations of life. Of themselves they can never exert an influence dangerous to public liberty; but as a means of preserving peace, and as obstacles to an invader, their influence and power are immense.

Lieutenant Henry W. Halleck (1843)

The proximity of the proving ground to several generations of coastal defense installations on Sandy Hook is instructive. An improvement in arms requires improvement in defenses, and vice versa. Battery Potter, a viewing platform for the entire complex, housed a steam-powered gun carriage which became obsolete shortly after it was installed. Battery Potter then became the central fire control tower for almost all the massive concrete gun batteries at Fort Hancock from 1907 through World War II. Between World War I and World War II mobile harbor defense weapons became an important strategy. This concept is represented by tractor-drawn and railroad artillery. War plane development necessitated the conversion of some batteries to anti-aircraft, and new anti-aircraft batteries were built.

The importance of Sandy Hook was recognized early, and even after the Ambrose Channel was dug, Fort Hancock offered the best first shot at an approaching enemy. At Fort Tilden on Long Island's Rockaway Peninsula in New York, two 16-inch rifles were emplaced at Battery Harris in 1922, but Fort Hancock's position for a first shot remained important. Sandy Hook worked in coordination with Fort Tilden, Fort Wadsworth, and Fort Hamilton, as well as other forts in the area, in the protection of the harbor. During World War II the interlocking fields of fire, the electric underwater mine systems, and the flow of ship traffic in and out of the harbor were centrally coordinated from the New York Harbor Command located in the underground passageways of Batteries McCook and Reynolds in Sandy Hook's mortar battery complex.

Resources that support this theme are, in priority order,

Battery Potter
two six-inch guns and Battery Gunnison
mortar battery (McCook and Reynolds)
Battery Granger
Batteries Kingman and Mills
nine-gun battery

Nike sites

anti-aircraft, railroad gun, and searchlight sites

Of these, Battery Potter and Battery Gunnison are essential elements. Battery Gunnison derives a significance beyond its basic function because it was also a mine-defense point. The mine casemate in the U.S. Coast Guard area was the control point.

Additional wayside exhibits and publications will improve site-specific interpretation, but more is needed to convey the rather complex story of coastal defense. Here again, the view from the top of Battery Potter is valuable. The fire-control rooms, which were added to Battery Potter in 1907 and also served as the harbor entrance command post during World War II, can house exhibits detailing the system, the technological relationship to the proving ground, and even some historic furnishings.

The visitor center will contain the more elaborate and sophisticated media to interpret coastal defense. If feasible, one of the six-inch guns will be brought in to serve as a centerpiece for the exhibit; this will also ensure preservation of an extremely rare artifact. Interpretation could begin with an introductory audiovisual program featuring a veteran of Fort Hancock explaining the workings of a battery.

Theme: Recreation--Recreation has a long history in the New York Harbor area, including the New Jersey shore and Sandy Hook.

The original Jersey shore "vacationers," the Lenni Lenape Indians, began summering at the Jersey shore centuries ago. They left their inland villages in June to fish, hunt, collect oysters, clams, berries, and beach plums. In the mid-1600s wealthy colonists from the Philadelphia area began to be drawn to the shore to enjoy the soothing qualities of the salt air and the cooler temperatures. The New Jersey coast was one of the young nation's first and most popular summer resorts. The tradition continues. Thanks to the shore, tourism is now New Jersey's second largest industry.

The towns of Long Branch, approximately 6 miles from the entrance of Sandy Hook, and Cape May, at the end of the Jersey shore, were the first resort communities and share the unofficial title of the "Nation's First Seashore Resort." In the 1830s and 1840s, the ocean beaches, gambling parlors, billard halls, and horse racing were all major attractions in Long Branch. The town also boasts of being the summer home to seven presidents, most notably Presidents Ulysses S. Grant, James Garfield, and Woodrow Wilson.

In Highlands, the community closest to Sandy Hook, tourism peaked in the early 1900s. Hotels, inns, and restaurants were overflowing with patrons. The ocean and river beaches were crowded in the summer months. The area was perfect for day trips or weekend outings for New Yorkers. Steamships from Manhattan docked in nearby Atlantic Highlands, and railroads brought visitors directly to Highlands. At the

current entrance to the park was Sandless Beach. The family of Henry Sandless operated this public beach, closest to Sandy Hook and Fort Hancock, until the 1930s. The beaches at Sandy Hook, a part of the Fort Hancock Military Reservation, were used primarily by military personnel and their dependents.

After World War II the popularity of the immediate shore area decreased as more people began to travel by automobile rather than train or boat and the economy of the area declined. However, in 1957 the Garden State Parkway opened, providing a more direct and quicker route to the New Jersey shore. In 1962 the state of New Jersey leased the southern two miles of Sandy Hook and opened Sandy Hook State Park. It was a popular spot for ocean bathing and sport fishing. The remainder of Sandy Hook was a part of the air defense system of greater New York and northern New Jersey and base for Nike missiles. In the mid 1960s Sandy Hook was studied as a possible unit of a New York Harbor urban park. The final outcome was the creation of Gateway National Recreation Area in 1972. In 1975 the U.S. Army officially turned Fort Hancock and all of Sandy Hook over to the National Park Service.

The tradition of vacationing and tourism continues to grow on the New Jersey shore. The history of recreation in the area will be explained at the visitor center and at major beach centers (area D, Gunnison Beach, and North Beach).

COMPLIANCE REQUIREMENTS

Actions in this General Management Plan Amendment do not require additional compliance with the National Environmental Policy Act of 1969. NEPA compliance was completed in the 1979 Environmental Statement, General Management Plan, Gateway National Recreation Area, and the actions proposed here qualify for categorical exclusion from the NEPA process, based on 516 DM 6, appendix 7.4.A(1): "changes or amendments to an approved plan, when such changes would cause no or only minimal environmental impact." The proposed modifications in the design of the north area's beach zone, including facilities and access roads, are within the scope of the concepts in the General Management Plan. The beach access road alignment will avoid a freshwater marsh and will not affect any area that has not been disturbed by previous development. The amount of automobile parking proposed for North Beach will be less than the amount indicated in the GMP and the 1981 Gruzen design plan; the amount of parking proposed for South Beach is approximately the same as existing parking.

The coastal floodplain on Sandy Hook is 10.8 feet mean sea level (MSL). The Federal Insurance Administration recommends a base elevation for developments in floodprone areas of 12 feet mean sea level to allow for possible storm surge flooding. However, because there is no practical alternative location for beach developments at Sandy Hook, the facilities and access roads proposed in this plan are excepted actions in the coastal floodplain under the NPS guidelines for implementing EO 11988, "Floodplain Management."

The Coastal Barrier Resources Act protects landforms such as Sandy Hook through limitations on construction and other modifications of natural systems; however, the act excludes coastal areas administered by federal agencies for wildlife refuge, sanctuary, recreational, or natural resource conservation purposes.

Consultation with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the New Jersey Department of Environmental Protection, Division of Coastal Resources, will continue in order to determine any effects on animal and plant species protected under the Endangered Species Act of 1973 and species of special concern that are protected by state legislation.

The New Jersey Department of Environmental Protection will be consulted to determine if the actions in this plan are consistent with the state Coastal Zone Management Plan.

Table 1: Development Requirements
(a portion of the following costs will be borne by the concessioner)

NORTH AREA DEVELOPMENT REQUIREMENTS (Phase I and III Priorities)

	Advance and Gross Construction Costs	Product Planning Costs	Total Project Costs
<u>General (Phase I)</u>			
Relocate trailer park - Replace utilities (\$125,000), demolish 16 pads, and restore site (\$8,000), construct 16 new pads (\$48,000), improve and landscape site (\$20,000), construct paved roadway (600 lf - \$45,000), and move existing trailers (\$32,000)	\$ 364,000	\$ 70,000	\$ 434,000
Construct north area paved entrance road and parking accesses (6,000 lf)	578,000	114,000	692,000
Provide water, sewer, and electricity for two beach centers and Battery Potter (lump sum [LS])	<u>1,310,000</u>	<u>250,000</u>	<u>1,560,000</u>
General - Subtotal	\$ 2,252,000	\$ 434,000	\$ 2,686,000
<u>Battery Gunnison Beach Center: Area with complete food, beverage, and rental services and interpretive functions (Phase I)</u>			
Replace existing concrete-block concession and interpretive facilities with new building behind primary dune (LS)	\$ 983,000	\$ 188,000	\$ 1,171,000
Upgrade lot G gravel parking for 700 vehicles	459,000	88,000	547,000
Upgrade and maintain lot H for overflow parking for 200 vehicles (unpaved)	131,000	25,000	156,000
Establish boardwalks (400 lf) and wood chip trail (600 lf)	92,000	18,000	110,000
Stabilize Battery Gunnison	<u>262,000</u>	<u>50,000</u>	<u>312,000</u>
Battery Gunnison Beach Center - Subtotal	\$ 1,927,000	\$ 369,000	\$ 2,296,000
<u>North Beach Center: Area with complete fast-food, beverage, and rental services and interpretive functions (Phase I)</u>			
Replace existing concrete-block concession and interpretive facilities with new building behind primary dune (LS)	786,000	150,000	936,000
Upgrade lot J gravel parking to 400 vehicles and obliterate lot I (150 vehicles)	765,000	146,000	911,000
Maintain lot K unpaved overflow parking for 600 vehicles	--	--	--
Install proof battery wayside exhibits and historic furnishings	75,000	14,000	89,000
Stabilize proof battery	328,000	63,000	391,000
Construct boardwalks (400 lf) and wood chip trail (600 lf)	<u>92,000</u>	<u>18,000</u>	<u>110,000</u>
North Beach Center - Subtotal	\$ 2,046,000	\$ 391,000	\$ 2,437,000

	Advance and Gross Construction Costs	Product Planning Costs	Total Project Costs
<u>Battery Potter and Mortar Battery: Major interpretive area (Phase I)</u>			
Stabilize Battery Potter interior/exterior (LS)	950,000	181,000	1,131,000
Develop 25-vehicle paved parking	66,000	13,000	79,000
Install exhibits and waysides (LS)	131,000	25,000	156,000
Construct interpretive trails (wood chips) and and boardwalks (LS)	197,000	38,000	235,000
Construct stairway and viewing platform (Battery Potter)	328,000	63,000	391,000
Stabilize mortar battery	524,000	100,000	624,000
Battery Potter/Mortar Battery - Subtotal	\$ 2,196,000	\$ 420,000	\$ 2,616,000
<u>Fort Hancock Visitor Center: Sandy Hook's major interpretive, information, and orientation center (Phase III)</u>			
Visitor Center - Rehabilitate an enlisted men's barracks \$(1.4 million), or rehabilitate officers' club (\$1.6 million) including curatorial facilities, or construct new building (\$1.6 million)	\$ 2,096,000	\$ 400,000	\$ 2,496,000
Provide new paved parking area for 100 vehicles and sidewalk (200 lf)	262,000	50,000	312,000
Install visitor center theme AV, geomorphology AV, interactive video, and exhibits	577,000	110,000	687,000
Install military life furnishings and exhibits	157,000	30,000	187,000
Fort Hancock Visitor Center - Subtotal	\$ 3,092,000	\$ 590,000	\$ 3,682,000
<u>Fort Hancock Miscellaneous Development (Phase III)</u>			
Install wayside exhibits and historic furnishings for various batteries	118,000	23,000	141,000
Construct interpretive trails (1.5 miles), overlooks (3), exhibits, and waysides	125,000	24,000	149,000
Install fencing and signs for battery and visitor protection (2 miles)	524,000	100,000	624,000
Rehabilitate 425,800 sq ft for NPS needs (visitor use and interpretation 31,500, environmental education 44,300, park operations 100,000, maintenance 200,000, and housing 50,000; estimate is based on 50% costs of new construction)	27,510,000	5,250,000	32,760,000
Fort Hancock Miscellaneous Development - Subtotal	\$28,277,000	\$ 5,397,000	\$ 33,674,000

	Advance and Gross Construction Costs	Product Planning Costs	Total Project Costs
<u>Other Miscellaneous Development (Phase III)</u>			
Dune stabilization (LS)	372,000	71,000	443,000
Develop site (plantings, furniture, signs, etc.)	\$ 958,000	\$ 183,000	\$ 1,141,000
Install information/orientation kiosks at major interpretive and recreation areas (10)	197,000	38,000	235,000
Establish group campground (4 miles)			
Install travelers information system (LS)	33,000	6,000	39,000
Allow Nike missile site to deteriorate			
Establish bicycle trail from entrance station to Gunnison Beach center, North Beach center, and Fort Hancock (10 miles)	1,601,000	306,000	1,907,000
Establish urban park operations training center (for 50 people, overnight)	1,277,000	244,000	1,521,000
Construct Sandy Hook well	<u>524,000</u>	<u>100,000</u>	<u>624,000</u>
Other Miscellaneous Development - Subtotal	\$ 4,962,000	\$ 948,000	\$ 5,910,000
NORTH AREA DEVELOPMENT - SUBTOTAL	\$44,756,000	\$ 8,549,000	\$53,301,000

SOUTH AREA DEVELOPMENT REQUIREMENTS (Phase II Development Priority)

	Advance and Gross Construction Costs	Product Planning Costs	Total Project Costs
<u>Area B: Beach recreation with limited fast-food, beverage, and rental services</u>			
Upgrade two existing concession transportation containers with siding and pitched roofs; install water connections	\$ 19,000	\$ 4,000	\$ 23,000
Retain paved parking for 500 vehicles	--	--	--
Establish boardwalks (300 lf) and paved trails (300 lf)	189,000	36,000	225,000
Hook up comfort station (LS)	16,000	3,000	19,000
Install cold showers/drainage on beach side of the parking lot	7,000	1,000	8,000
Area B - Subtotal	\$ 231,000	\$ 44,000	\$ 275,000
<u>Area C: Beach recreation with limited fast-food, beverage, and rental services</u>			
Upgrade existing concession transportation container with siding and a pitched roof; install water connections	11,000	2,000	13,000
Retain paved parking for 225 vehicles	--	--	--
Establish boardwalks (300 lf) and paved trails (300 lf)	189,000	36,000	225,000
Hook up comfort station and install cold shower/drainage	20,000	4,000	24,000
Area C - Subtotal	\$ 220,000	\$ 42,000	\$ 262,000
<u>Area D: Beach center with complete food, beverage, and rental services</u>			
Improve architectural appearance of concession facilities, offices, storage, and trash/garbage storage area; complete water connections	33,000	6,000	39,000
Increase paved parking from 850-car capacity to 1,150-car capacity	786,000	150,000	936,000
Upgrade and integrate comfort station, changing area, cold showers, first aid station, and rental space with other nearby facilities (i.e., historic Spermaceti Cove lifesaving station); improve pedestrian access to beach	511,000	98,000	609,000
Area D - Subtotal	\$ 1,330,000	\$ 254,000	\$ 1,584,000

	Advance and Gross Construction Costs	Product Planning Costs	Total Project Costs
<u>Lifesaving station:</u> Interpretive and information/orientation center, trails, and service road.			
Construct paved parking for 15 vehicles, paved trail/access road (200 lf), and boardwalk (400 lf)	\$ 59,000	\$ 11,000	\$ 70,000
Install interpretive exhibits, wayside exhibits, and information kiosk	98,000	19,000	117,000
Rehabilitate lifesaving station	197,000	38,000	235,000
Install information/orientation exhibits	33,000	6,000	39,000
Provide audiovisual equipment	53,000	10,000	63,000
Provide handicap access and site improvements	<u>53,000</u>	<u>10,000</u>	<u>63,000</u>
Lifesaving Station - Subtotal	\$ 493,000	\$ 94,000	\$ 487,000
<u>Area E:</u> Beach center with food, beverage, and rental services			
Upgrade existing concession transportation containers with siding and pitched roofs; install water connections	33,000	6,000	39,000
Repair and resurface paved parking - 725 vehicles	210,000	40,000	250,000
Replace comfort station and cold showers	197,000	38,000	235,000
Upgrade existing lifeguard headquarters functions	<u>46,000</u>	<u>9,000</u>	<u>55,000</u>
Area E - Subtotal	\$ 486,000	\$ 93,000	\$ 579,000
<u>Area F:</u> Fishing access - no services			
Screen maintenance area from park entrance road	<u>20,000</u>	<u>4,000</u>	<u>24,000</u>
SOUTH AREA DEVELOPMENT - SUBTOTAL	\$ 2,760,000	\$ 527,000	\$ 3,287,000
South Area Development - Subtotal	\$ 2,760,000	\$ 527,000	\$ 3,287,000
North Area Development - Subtotal	\$44,752,000	\$ 8,549,000	\$53,201,000
TOTAL GROSS CONSTRUCTION (FY 87)	\$47,512,000	\$ 9,076,000	\$56,588,000

For estimating purposes, it can be assumed that the previously mentioned development costs will increase 5 percent per year for the next five years. There will be costs added at a later date for beach nourishment, shoreline protection, HABS/HAER documentation, stabilization, and cyclic maintenance for the four batteries. The preservation costs of the facades and sides of the 28 significant yellow brick buildings fronting the parade ground are not included because they will be the responsibility of the private sector partners (RFP).

Table 2: Operational Requirements

Existing personnel levels and budgets will be relied on first for administrative and operational functions. However, operational requirements will change as this plan is implemented. If Sandy Hook development occurs as described in this plan, staffing could require increases above the FY 88 level as follows:

<u>Management and Administration</u>	
Management Assistant, GS-301/025-09 (concessions and special park use)	\$ 25,200
<u>GS-025-09 Interpretation and Cultural Resources Management</u>	
Park Rangers (2) GS-025-5	33,300
Park Rangers (12; seasonal positions for four months) GS-205-4	57,200
Cultural Resources Management Specialist (curator) GS-10150-09	25,200
<u>Maintenance</u>	
Maintenance Mechanic (carpenter) WG-4749-09	25,400
Maintenance Mechanic (plumber) WG-4749-09	25,400
Maintenance Mechanic (helper) (2) WG-4729-05	43,000
Laborers (14 seasonals for four months) WG-3502-02	83,300
Custodians (3) WG-3502-02	55,700
<u>Resource Management and Visitor Protection</u>	
Visitor Protection Park Ranger (Patrol) GS-025-5	16,700
Visitor Protection Park Ranger (Patrol/Dispatch) GS-025-5 (3 seasonals for four months)	16,000
Traffic Control Park Rangers GS-025-4 (2 seasonals four months)	9,500
Resources Management Specialist GS-205/401-5	16,700
First Aid Assistants GS-025-04 (7 seasonal positions for four months)	33,400
In addition, operations cost increases will include costs of training (\$22,000), supplies and materials (\$150,000), miscellaneous radios, and other equipment and technical assistance (\$70,000)	242,000
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Operational Requirements - Total	\$708,000

CONSULTATION AND COORDINATION

Federal

Advisory Council on Historic Preservation
Environmental Protection Agency
National Marine Fisheries Service
U. S. Department of the Army
 Corps of Engineers
U.S. Fish and Wildlife Service
Department of Transportation
 U.S. Coast Guard

New Jersey State

Department of Environmental Protection
 Division of Coastal Resources
 Office of New Jersey Heritage
State Historic Preservation Officer

PLANNING TEAM

Denver Service Center

Fred Babb, Team Captain

Nan Rickey, Historian

Terry Urbanowski, Landscape Architect

Robert Rothweiller, National Resource Specialist

Park

Robert McIntosh, Superintendent

Steven Whitesell, Site Manager

Bob Hartman, Chief of Maintenance

Regional Consultant

Jim Skelton - Regional Historic Architect

Harpers Ferry Center

Cliff Soubier, Interpretive Planner

As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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