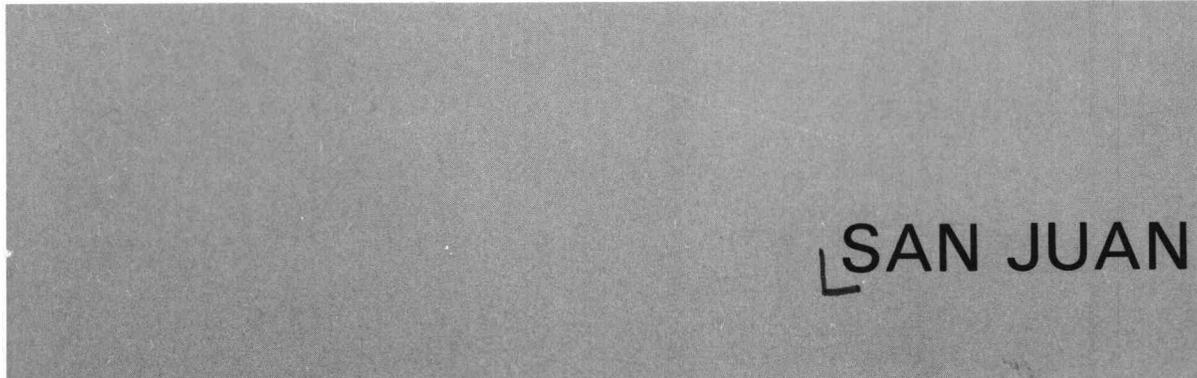


D-9A
#2

~~draft~~ Final general management plan
environmental assessment

w/ FONSI &
Statement of Findings
9/85

december 1984



SAN JUAN



NATIONAL HISTORIC SITE / PUERTO RICO



PLEASE RETURN TO:
TECHNICAL INFORMATION CENTER
DENVER SERVICE CENTER
NATIONAL PARK SERVICE

ON MICROFILM

RECOMMENDED:

Luis E. García-Curbelo,
Superintendent,

9/10/85

APPROVED:

Robert M. Baker,
Regional Director

9/10/85

**The proposed plan herein has been selected as the
General Management Plan. Please see the Plan
Approval/Finding of No Significant Impact.**

Initiate the necessary research to provide for the proper management, interpretation, and protection of cultural resources.

Improve the interpretive program, giving particular emphasis to providing visitors with an overview of almost 500 years of history represented.

Develop a previsit information system to enhance the visitors' understanding of the resources represented and to inform them of available opportunities.

Establish the detached El Canuelo unit as a primary visitor experience; institute a ferry shuttle from San Juan Harbor across the bay to El Canuelo; provide interpretation at El Canuelo; encourage the Bacardi Company to develop a land-based shuttle between El Canuelo and the Bacardi plant.

Remove all vehicles from the El Morro Esplanade and prohibit any new parking development within the historic site; develop through cooperative efforts a park-and-ride transit system that will connect the major parking lots, parking garages, and harbor area of Old San Juan with the San Cristobal outworks, San Cristobal, the Esplanade, and El Morro.

Improve the law enforcement program to ensure adequate visitor protection.

Retain the operating El Morro lighthouse in its present location; rehabilitate it to ensure preservation and visitor safety.

Encourage and work closely with the Civil Defense Agency to assist in relocating that operation outside the historic site boundary within the life of this plan.

Encourage the Commonwealth to assist where appropriate in the planning, implementation, and funding of this General Management Plan effort, according to the 1976 Cooperative Agreement.

The no-action alternative represents the situation that would occur if existing conditions were to continue. This alternative is undesirable because it would not correct inadequacies with regard to cultural resource management, visitor use and safety, and access and transportation. The alternative options represent other reasonable alternatives that were considered but were not proposed because of their associated development and operating costs and because of various implementation constraints.

The minimum services alternative would be the same as the proposal except El Canuelo would not become part of the primary visitor experience and a park-and-ride concept for San Cristobal and El Morro would not be implemented.

The implementation of the proposed plan, especially with regard to El Canuelo and a park-and-ride transit system, will depend to a large extent on the cooperation and resources of the Commonwealth of Puerto Rico, the municipality of San Juan, other governmental agencies, organizations, special interests, and individuals.

SUMMARY OF PUBLIC RESPONSE

In February and March 1984, 500 planning information and response forms were distributed to the public as part of the preliminary scoping process in preparing the GMP/EA. Thirty-three forms were returned, mostly from agencies and organizations in the San Juan metropolitan area. This information was used in the development of the proposal, alternatives and environmental consequences contained in the draft GMP/EA.

The draft GMP/EA was made available to the public on January 15, 1985. Copies of the draft plan (450) were sent to the mailing list, including those who had responded to the initial scoping information form. Notices were placed in newspapers informing the public that a GMP for San Juan National Historic Site was available on an official 30-day public review. The Commonwealth asked for and received an additional 15-day extension on the review period. The Superintendent was interviewed on television four times concerning the GMP/EA. Written comments were accepted until March 1, 1985. Thirty-seven responses were received.

The overall response of written comments received was favorable to the proposal, agreeing with the emphasis on protecting, preserving, and interpreting the historic site's cultural resources. There was considerable support for the proposed rehabilitation and interpretation of the El Canuelo site and the associated ferry interpretive tour from Old San Juan to El Canuelo. One respondent was concerned that the interpretive ferry from Old San Juan to El Canuelo would compete with the Catano Ferry transportation system. Opinions seemed to be equally split for proposing a park-and-ride system that would eliminate public parking on the Esplanade and at San Cristobal. One respondent stated that the impacts of this park-and-ride proposal were not adequately addressed. Opinions also seemed to be split for proposing that the Civil Defense function be removed from San Cristobal. Three respondents were concerned that the proposal to amend the 1976 Cooperative Agreement to allow compatible commercial use of buildings in Parcel C would detract from the purposes for which the historical site was established. One letter agreed with the proposal to allow compatible commercial use of buildings in Parcel C and suggested that the funds generated from this use be used to implement this plan. One respondent asked if the proposal for Santo Thomas

Bastion would eliminate the existing access to the La Perla community. Several respondents asked if the planning team had discussed the plan proposals with Commonwealth and city agencies and appropriate organizations. One letter recommended that the NPS proposal to allow wading at El Canuelo be revised to state that wading will be allowed only when water quality in San Juan Bay is improved to meet appropriate safety standards.

PROPOSAL CLARIFICATIONS

After reviewing the comments and reconsidering the proposed actions, the NPS recommends no major changes and only two minor revisions to the proposals described in the December 1984 GMP/EA for San Juan National Historic Site.

(1) The statement on page 59, paragraph 8, line 3 needs minor revision so that the proposal recommends wading at El Canuelo only at such time in the future when water quality is improved to an acceptable standard, allowing primary contact recreation.

(2) The proposal, described on page 66, paragraph 1, of the General Management Plan, to amend the 1976 Cooperative Agreement to provide for commercial use of the buildings in Parcel C will be dropped. The decision to drop the proposal was based upon a letter dated July 16, 1985, from the Puerto Rico State Historic Preservation Officer that stated both the Governor and Legislature of Puerto Rico have committed the Commonwealth of Puerto Rico to ensure the buildings in Parcel C are restored, conserved, and rehabilitated to house such prestigious institutions as the Institute of Puerto Rican Culture and the University of Puerto Rico in accordance with the original intent of the 1976 Cooperative Agreement.

The following clarifications are necessary:

The Catano Ferry serves primarily as a daily commuter line, providing continuous and direct service between Old San Juan and Catano. Since the proposed interpretive ferry shuttle would serve a totally different purpose by providing a slow tourist excursion from Old San Juan to El Canuelo by way of El Morro, it is doubtful that the two ferry systems would be in competition. Since the proposed interpretive shuttle is to be a self supporting concession operation, the Catano Ferry Service would have the opportunity to bid for the interpretive shuttle concession.

The NPS will not have the opportunity to fully assess the impacts and determine the feasibility of the park-and-ride system until the results of the pilot park-and-ride system have been analyzed (see page 43 of the GMP/EA).

The proposal to remove Civil Defense from San Cristobal will be retained without change or revision. While the NPS recognizes the important function provided by the Civil Defense, NPS believes

that this function could be relocated to a more appropriate location outside the historic site boundary. This proposal will provide climate controlled space necessary for establishing the proposed regional cultural resource preservation center and other administrative functions. Also the removal of Civil Defense will eliminate the present visual intrusion associated with the communication towers.

The statement on page 52, paragraph 3, line 4, "vehicle access will be prohibited" is misleading. The proposal should state that parking in Santo Thomas Bastion proper will be prohibited; however, the existing access road through the bastion will continue to provide access to the La Perla community.

The GMP/EA planning team discussed the planning issues with those Federal, Commonwealth, and municipal agencies, organizations, and special interests listed on page 124 and 125 of the plan.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

The potential environmental consequences of the proposal and the alternatives are described in detail on pages 69 through 84 of the GMP/EA.

The GMP/EA documents compliance with the Endangered Species Act (pages 57, and 114-116), Executive Orders 11888 and 11990 concerning floodplains and wetland management (page 50, 58, and 122, see attached Statement of Findings), and other environmental regulations. The GMP/EA relates the proposal and alternatives to the Puerto Rico coastal zone management program (page 121). On March 4, 1985, Puerto Rico concurred with the NPS determination that the proposed action is consistent with their coastal zone management plan.

Compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, was completed in accordance with the 1981 amendments to the Programmatic Memorandum of Agreement executed in December 1979 among the Advisory Council on Historic Preservation, the NPS and the National Conference of State Historic Preservation Officers on the NPS's planning process.

Pursuant to those 1981 amendments, on July 15, 1985, and August 23, 1985, respectively, the Advisory Council on Historic Preservation and Puerto Rico State Historic Preservation Officer (after some modification) indicated their concurrence in the selection of the preferred alternative for the San Juan National Historic Site.

CONCLUSION

After a review of the GMP/EA and the public response to it, the GMP proposals as described in the December 1984 GMP/EA are adopted with no major changes. One minor revision is made so that the proposal recommends wading at El Canuelo only at such time in the future when water quality is improved to an acceptable standard, allowing primary contact recreation. It is further concluded that the implementation of these proposals does not constitute a major Federal action significantly affecting the human environment and that an environmental impact statement will not be prepared. It is also important to reiterate that any successful plan for the historic site will depend not only on the commitment and resources of the National Park Service, but also on the commitment and resources of many agencies, organizations and individuals who comprise this historic city.

Approved:

C. W. Ogle
Acting Regional Director, Southeast Region9-10-85
Date

STATEMENT OF FINDINGS
SAN JUAN NATIONAL HISTORIC SITE
GENERAL MANAGEMENT PLAN

INTRODUCTION

San Juan National Historic Site is located in Puerto Rico, a self-governing Caribbean Island that is freely associated with the United States. The national historic site was established on February 25, 1949, for the protection of the massive masonry works of El Morro, San Cristobal, El Canuelo and their connecting walls, collectively, the ancient fortifications of San Juan, Puerto Rico.

The National Park Service (NPS) is in the process of adopting a new General Management Plan for the site and has recently published San Juan National Historic Site General Management Plan/Environmental Assessment (GMP/EA). Executive Orders 11988 ("Floodplain Management") and 11990 ("Protection of Wetlands") require the NPS and other Federal agencies to evaluate the likely impacts of actions in floodplains and wetlands. The objectives of the Executive Orders are to avoid to the extent possible the long-term and short-term adverse impacts associated with occupancy, modification or destruction of floodplains and wetlands and to avoid indirect support of development and new construction in such areas wherever there is a practicable alternative.

The purpose of this Statement of Findings is to present the rationale for locating proposed actions in the floodplain and to document the anticipated effects on floodplain and wetland values.

FLOODPLAINS AND WETLANDS IN THE REGION

The primary fortifications of San Juan National Historic Site are located on a rocky promontory more than 80 feet above mean sea level, with the Atlantic Ocean on one side and San Juan Bay on the other. The smaller El Canuelo fort was originally constructed on a tiny island that was later connected to Cabras Island by fill. Here, the 3.4-acre tract of NPS land is less than 5 feet above mean sea level.

The primary fortifications on the rocky promontory are located in an area of minimal flooding (zone C), as indicated on the flood insurance rate map published by the Federal Emergency Management Agency. In those areas where the national historic site boundary includes the shoreline, the immediate coast is in an area susceptible to 100-year floods (zone A), except for the northwest tip of El Morro, where the immediate coast is identified as being in an area susceptible to 100-year coastal floods with velocity (zone V). With the exception of shoreline and foundation stabilization, no action is proposed within the floodplain (zones A and V).

The 3.4-acre El Canuelo tract is located primarily in zone V, with a small section in zone A (see the El Canuelo Proposed Actions and

Interpretive Themes map). Proposed development, which includes a staging area, two administrative parking spaces, and a 700-square-foot visitor contact station with vault pump-out toilets is within an existing disturbed area and will have no adverse impact on natural floodplain values. Both the staging area and the contact station will be located in zone A.

THE PROPOSAL IN RELATION TO FLOODPLAINS AND WETLANDS

The proposal and alternative strategies are described in detail on page 50 in the GMP/EA. El Canuelo was part of the coastal defense system of San Juan; its location being paramount to an understanding of the fort's function; consequently, any effort to have an effective interpretive program with associated support facilities is dependent on interpretation occurring in close proximity to this coastal fort site. Thus, development within the 100-year floodplain is unavoidable. No options exist within the historic site for locating this facility outside the 100-year floodplain. Any potential sites on Cabras Island that are within a reasonable distance of the historic fort are also within the 100-year floodplain. Moving this facility outside the 100-year floodplain would necessitate moving the facility several miles from the fort and would defeat the purpose of both resource protection and interpretation, greatly diminishing the goal of bringing El Canuelo into the mainstream of the interpretive effort at San Juan National Historic Site.

The fort will be stabilized through a continuous maintenance program. The interior rooms and roof will be made accessible and presentable to the public, and barricades will be installed for safety. Vegetation growing on the structure will be removed and access from the ground level will be developed. Interpretive exhibits will also be provided.

A 700-square-foot manned visitor contact station, with pump-out comfort facilities, will replace the nearby toilet facility. This contact station will be on the east side of the Cabras Island access road, approximately the same distance from the east and west shores of the island to minimize potential damage from flooding (see El Canuelo Proposed Actions and Interpretive Themes Map). The site will be chosen so as to destroy as few trees as possible, if any, while taking advantage of shade from the trees; it will be located on NPS land.

Because the visitor contact station will be within the 100-year floodplain, the structure will be designed to minimize possible storm damage (design methods are contained in the national flood insurance program's "Flood Management Criteria for Flood-Prone Areas," Code of Federal Regulations, Title 4, Section 60.3).

In conformance with the standards and criteria of the national flood insurance program (44 CFR 60), the contact station will be elevated on open works such as pilings because of its location in a floodplain.

The lowest horizontal member of the structure will be no less than 5 feet above mean sea level, which is the base flood elevation as shown by the flood insurance rate map of the Federal Emergency Management Agency.

In case of a hurricane emergency and danger of flooding, the site will be closed to visitor use well in advance of a dangerous situation. This is in accordance with the early warning and evacuation procedures described in the existing hurricane plan for the national historic site.

No wetlands are located within the national historic site.

ALTERNATIVES CONSIDERED

Two alternatives plus an additional option are described on page 77 in the GMP/EA. The no-action alternative would result in El Canuelo continuing to remain closed to the public thereby denying visitors an appreciation and understanding of the full story of the San Juan fortifications.

Under this no-action alternative, the level of risk of property damage resulting from storm damage would be nonexistent as no new facilities would be built. The degree of risk would be the same under the minimum services alternative because, as in the no-action alternative, no new facilities would be constructed. The degree of risk under the referenced option on page 77 is unknown as it would result in transfer of United States interest in El Canuelo to the Commonwealth of Puerto Rico.

CONCLUSION

The National Park Service concludes that there is no practicable alternative to locating the interpretive and visitor support facilities at the El Canuelo unit of San Juan National Historic Site within the 100-year floodplain. However, the threat of flooding to life and property can be substantially mitigated through floodproof design of the proposed facilities and implementation of the existing hurricane evacuation plan. The GMP/EA relates the proposal and alternatives to the Puerto Rico coastal zone management program (page 121). On March 4, 1985, Puerto Rico concurred with the NPS determination that the proposed action is consistent with their coastal zone management plan. The NPS finds the proposal to be acceptable under Executive Orders 11988 and 11990.

Recommended: C. W. Ogles 9-10-85
Acting Regional Director, Southeast Region Date

Approved: [Signature] 10/10/85
Acting Director, National Park Service Date

~~DRAFT~~ ^{Final} GENERAL MANAGEMENT PLAN
ENVIRONMENTAL ASSESSMENT

SAN JUAN NATIONAL HISTORIC SITE
Puerto Rico

SUMMARY

The National Park Service proposes a general management plan for San Juan National Historic Site to provide for the preservation and maintenance of cultural resources and for the expansion of the interpretive program, while allowing passive recreational activities in appropriate areas. A concerted effort has been made to develop a realistic and achievable plan that meets the most critical needs of the historic site. The actions that are proposed take into account that the visitor experience must be commensurate with the experience at any park officially recognized for its international significance.

The plan proposes the following actions:

Preserve the historic structures and grounds in their existing form.

Prohibit any arbitrary alteration, restoration, or removal of historic fabric (historic fabric is defined as the materials dating from the historic period, 1539-1961, that make up the historic structures and grounds).

Develop comprehensive preservation/maintenance guides specific to the needs of the historic site.

Initiate the necessary research to provide for the proper management, interpretation, and protection of cultural resources.

Improve the interpretive program, giving particular emphasis to providing visitors with an overview of almost 500 years of history represented.

Develop a previsit information system to enhance the visitors' understanding of the resources represented and to inform them of available opportunities.

Establish the detached El Cañuelo unit as a primary visitor experience; institute a ferry shuttle from San Juan Harbor across the bay to El Cañuelo; provide interpretation at El Cañuelo; encourage the Bacardi Company to develop a regular land-based shuttle between El Cañuelo and the Bacardi plant.

Remove all vehicles from the El Morro Esplanade and prohibit any new parking development within the historic site; develop through cooperative efforts a park-and-ride transit system that will connect the major parking lots, parking garages, and harbor area of Old San Juan with the San Cristóbal outworks, San Cristóbal, the Esplanade, and El Morro.

Improve the law enforcement program to ensure adequate visitor protection.

Retain the operating El Morro lighthouse in its present location; rehabilitate it to ensure preservation and visitor safety.

Encourage and work closely with the Civil Defense Agency to assist in relocating that operation outside the historic site boundary within the life of this plan.

Encourage the commonwealth to assist where appropriate in the planning, implementation, and funding of this general management plan effort, according to the 1976 cooperative agreement.

The no-action alternative represents the situation that would occur if existing conditions were to continue. This alternative is undesirable because it would not correct inadequacies with regard to cultural resource management, visitor use and safety, and access and transportation. The alternative options represent other reasonable alternatives that were considered but were not proposed because of their associated development and operating costs and because of various implementation constraints. The minimum services alternative would be the same as the proposal except El Cañuelo would not become part of the primary visitor experience and a park-and-ride concept for San Cristóbal and El Morro would not be implemented.

The implementation of the proposed plan, especially with regard to El Cañuelo and a park-and-ride transit system, will depend to a large extent on the cooperation and resources of the commonwealth of Puerto Rico, the municipality of San Juan, other governmental agencies, organizations, special interests, and individuals.

Neither the proposal nor any of the alternatives is expected to have significant adverse impacts.

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INTRODUCTION

PURPOSE OF AND NEED FOR THE PLAN

This General Management Plan/Environmental Assessment combines two documents--the proposed plan and an environmental compliance document. The proposed plan sets forth the basic philosophy that will guide management, development, and use of San Juan National Historic Site. It describes the specific strategies that will be followed for the next five to 10 years to address current problems and achieve identified management objectives (see appendix A). The environmental assessment describes the alternatives to the proposal that were considered, the environmental consequences of the proposed plan and alternatives, and compliance considerations.

PURPOSE OF THE PLAN

The historic site's last approved plan was completed in 1961, and now a new plan is needed to address current problems. The proposed plan described in this document outlines management strategies to deal with these problems, and it complies with the requirements of the National Parks and Recreation Act of 1978, which calls for general management plans to be prepared for the preservation and use of each unit of the national park system. The plan has been prepared by an interdisciplinary team, and it has been developed to meet the needs of the site managers and visitors and to respond to the concerns of local residents.

In developing the proposed plan and alternatives, the views of local, commonwealth, and federal agencies were sought through informal meetings. Also information brochures were mailed to the general public so that they could comment about the issues and their concerns regarding this planning effort (see appendix B). The public and other governmental agencies will be invited to comment on the proposed plan and the assessment. The NPS regional director will then decide if the proposed plan should be revised to address any new concerns, and he will determine whether or not an environmental impact statement will be prepared. Once all environmental compliance actions have been completed, the general management plan will be finalized.

PLANNING ISSUES AND PROBLEMS

Several issues and problems have been identified as critical in the current planning effort:

Past rehabilitation, restoration, and removal of historic fabric has generated concern as to what is the proper and responsible resource management philosophy for the cultural resources of the historic site.

Past preservation and maintenance actions have generated concerns about the historical appropriateness, accuracy, and consistency of materials and preservation techniques used.

A comprehensive cultural resource information base is lacking, hindering effective management, preservation, and interpretation of the site's historic significance.

A limited NPS presence in all units of the historic site inhibits the effectiveness of the park's protection and interpretation/information programs.

The lack of visitor orientation to and information about the historic site results in visitors missing opportunities and limits their understanding of the site's overall historic significance.

High traffic volumes, along with the current parking situation both within and adjacent to the historic site, cause extreme congestion, which detracts from the historic scene and creates hazards for visitors.

Several divergent opinions exist as to what visitor uses are appropriate for the grounds and structures of the historic site.

Preservation efforts for El Canuelo (a detached unit of the historic site) are not commensurate with NPS standards.

Handicapped visitors currently have only limited access to both El Morro and San Cristóbal forts.

DESCRIPTION AND SIGNIFICANCE OF THE NATIONAL HISTORIC SITE

DESCRIPTION OF THE HISTORIC SITE

Regional Area

San Juan National Historic Site is located in Puerto Rico, a self-governing Caribbean island that is freely associated with the United States of America (see Region map). The historic site comprises the principal fortifications associated with the city of Old San Juan. All the fortifications are on San Juan Island except for one detached unit on Cabras Island on the west side of San Juan Bay (see Vicinity map). The city of Old San Juan is located on the 615-acre San Juan Island, which is connected by causeways to the greater metropolitan area. The city serves as both the capital of Puerto Rico and the headquarters for the municipal government. Old San Juan today is an extremely congested urban center, consisting predominantly of mixed commercial and high-density residential areas with little open space.

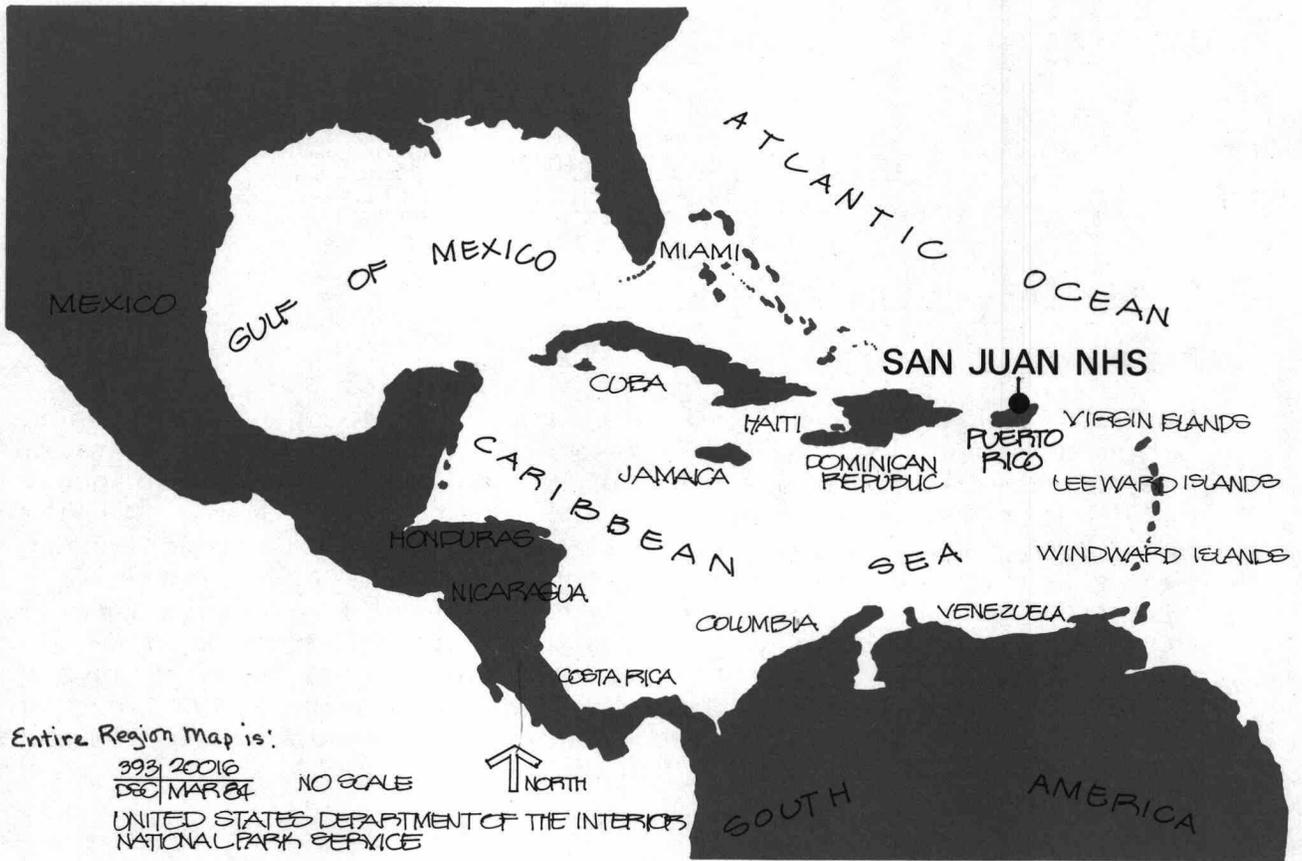
The Historic Site

As early as the 16th century, Spain recognized the importance of San Juan Bay as a shelter from tropical storms and as a secure base of naval operations from which all shipping entering the Caribbean could be controlled. Spain also knew that the bay had the same advantages for the enemy. Puerto Rico was regarded as the "gateway to the Antilles," and San Juan Bay was to serve as a primary port in Spain's plan to exploit the Americas (see Spanish Treasure Route map). Consequently, the Spanish slowly developed the city of Old San Juan into a fortified position that later acquired the title "Royal Presidio--Defense of the First Order."

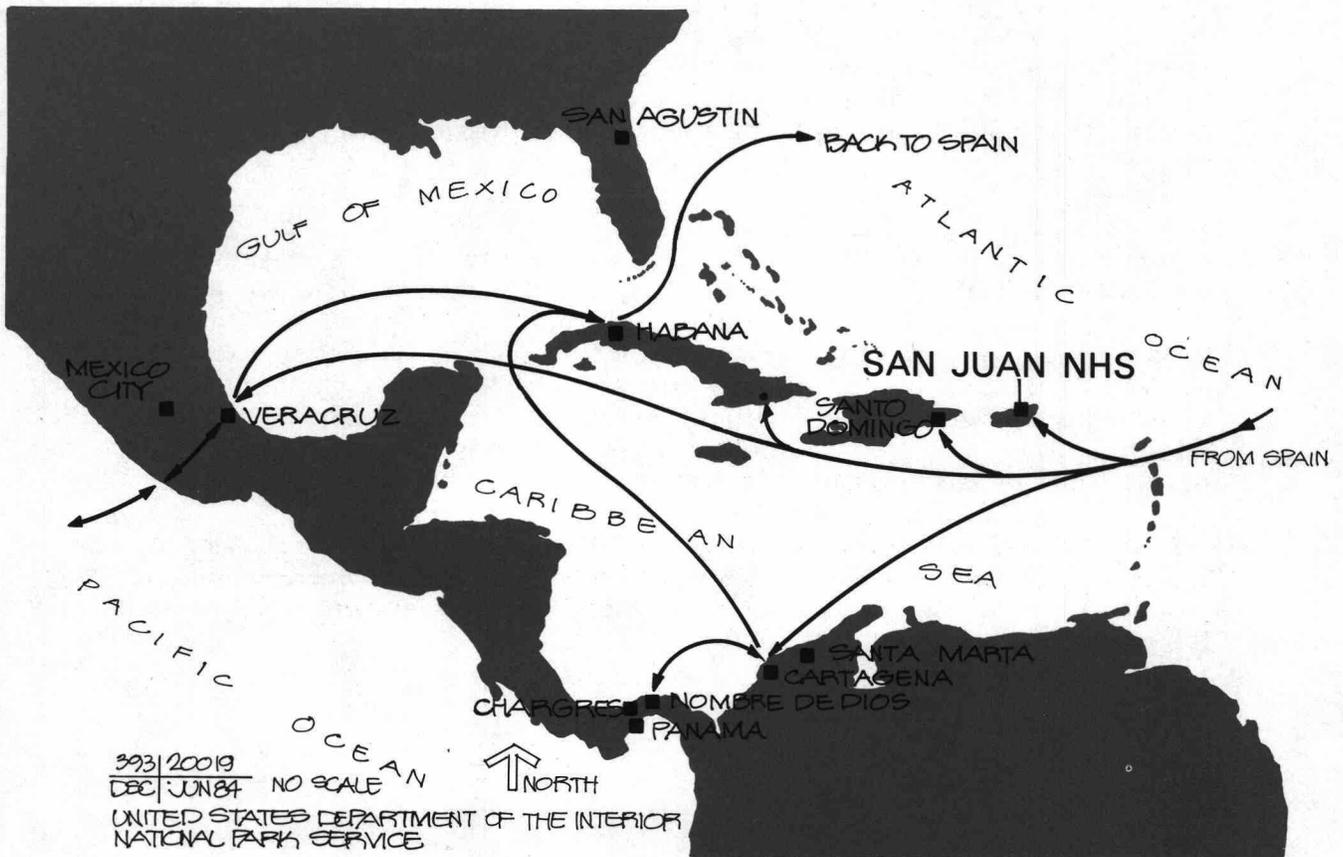
The vast fortifications of San Juan evolved over more than four centuries, and most of them now comprise the 75-acre national historic site. Approximately 2.5 miles of massive stone walls literally enclose the old city, along with two of the world's most impressive fortifications--El Morro, which guards the western approach (ocean defense) to the city, and San Cristóbal, which guards the eastern approach (land defense). A 3.4-acre detached unit of the historic site contains a small fort, El Cañuelo, that was constructed across the bay from Old San Juan to prevent hostile landings on the western side of the harbor.

The principal fortification units of the historic site--El Morro, San Cristóbal, El Cañuelo, and the walls and bastions--are described on the accompanying photo pages. Their locations are shown on the Existing Site map.

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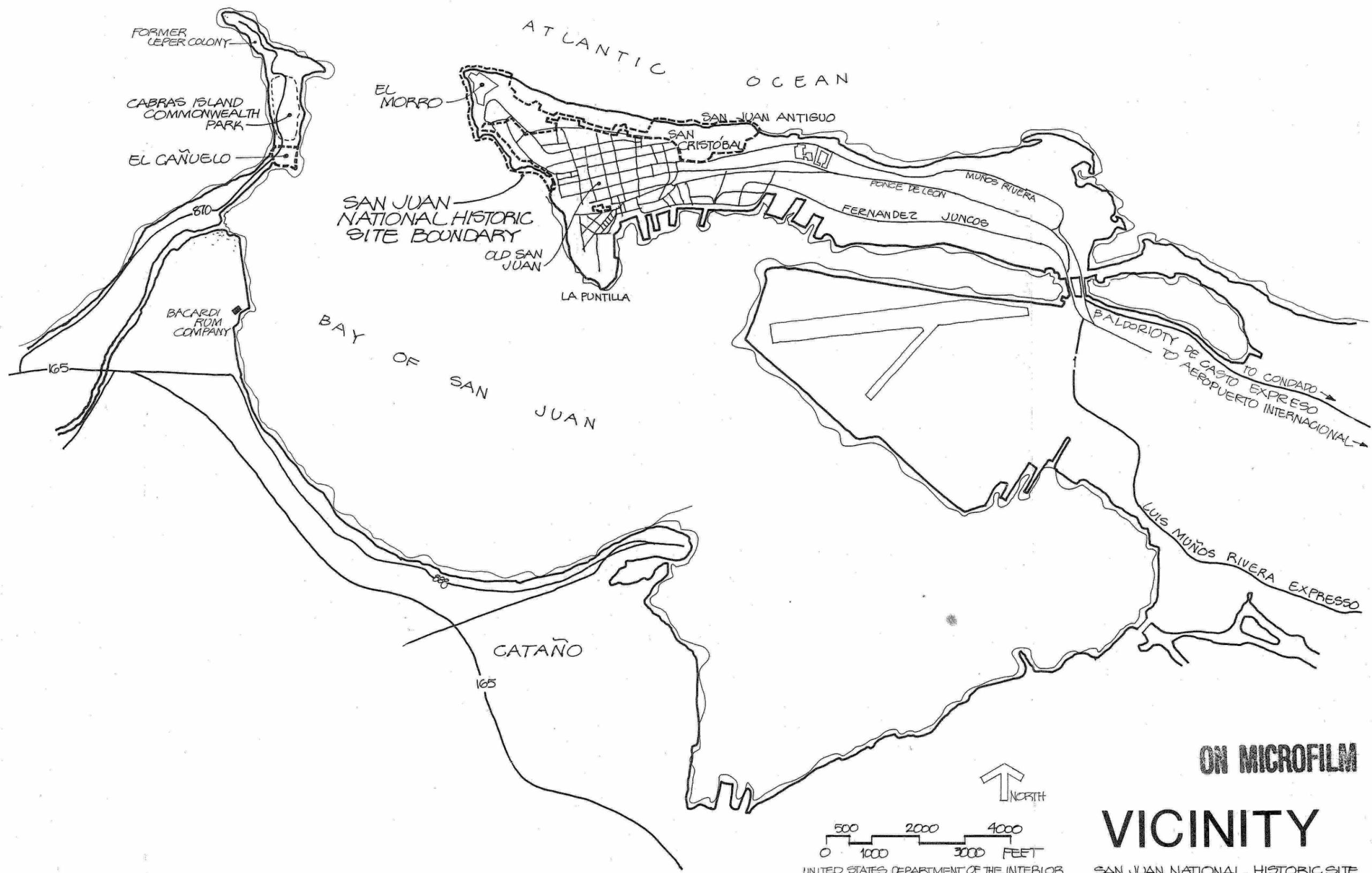


REGION



SPANISH TREASURE ROUTE AND DEFENSE PLAN

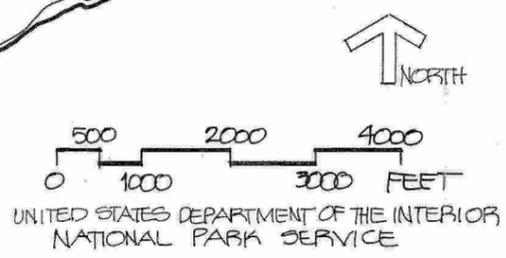
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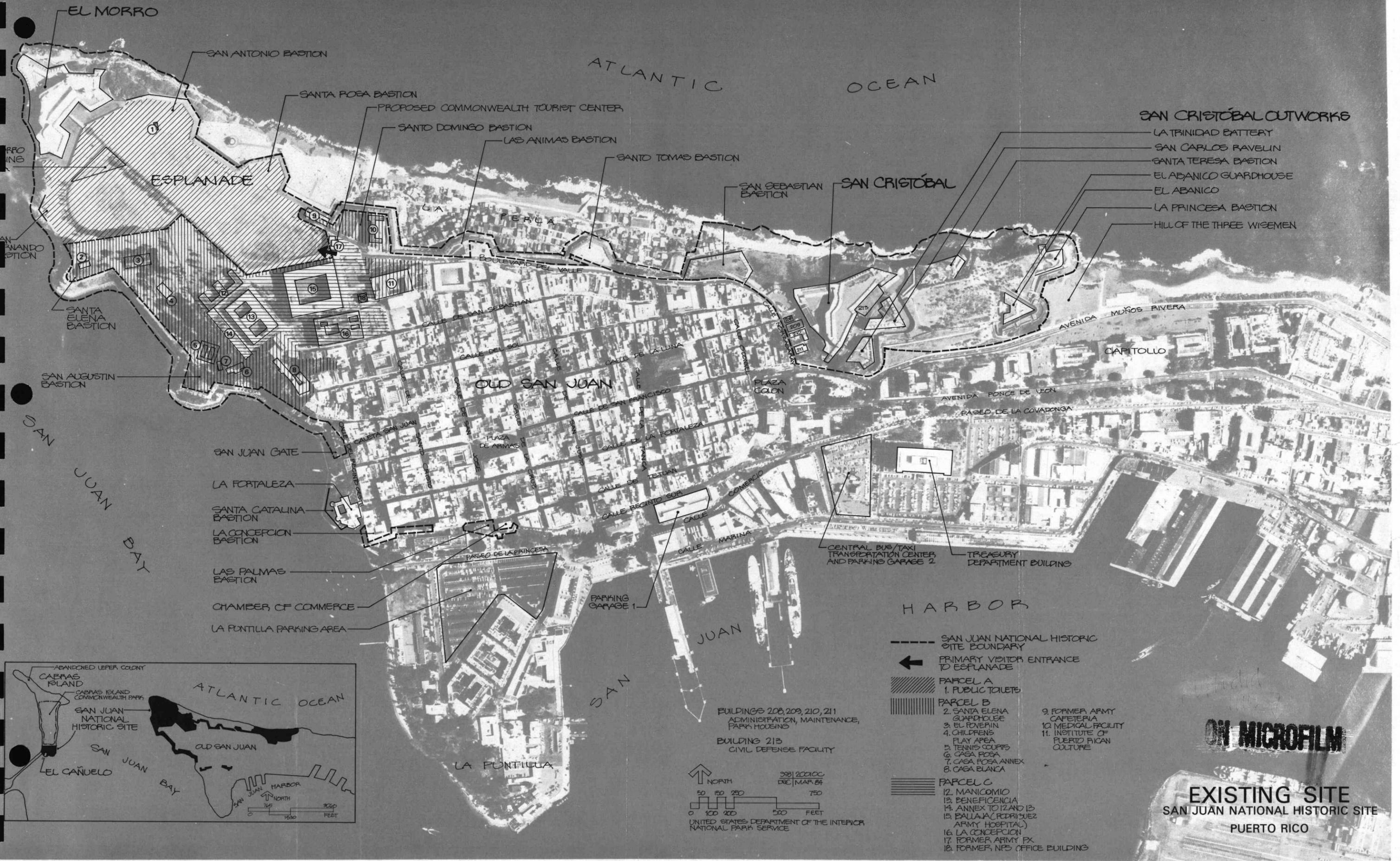
VICINITY

SAN JUAN NATIONAL HISTORIC SITE
PUERTO RICO



393/2001/17
DEC/JUN 84

Published as 393/2001/9



ATLANTIC OCEAN

SAN CRISTÓBAL OUTWORKS

- LA TRINIDAD BATTERY
- SAN CARLOS RAVELIN
- SANTA TERESA BASTION
- EL ABANICO GUARDHOUSE
- EL ABANICO
- LA PRINCESA BASTION
- HILL OF THE THREE WISEMEN

SAN CRISTÓBAL

- SAN SEBASTIAN BASTION

OLD SAN JUAN

HARBOR

--- SAN JUAN NATIONAL HISTORIC SITE BOUNDARY

← PRIMARY VISITOR ENTRANCE TO ESPLANADE

▨ PARCEL A
1. PUBLIC TOILETS

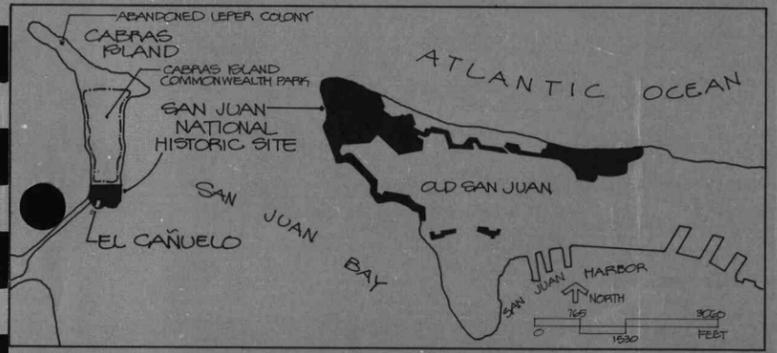
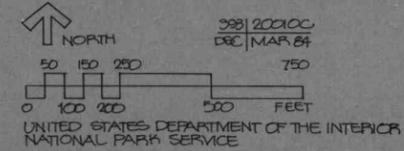
▤ PARCEL B
2. SANTA ELENA GUARDHOUSE
3. EL ROVERIN
4. CHILDREN'S PLAY AREA
5. TENNIS COURTS
6. CASA ROSA
7. CASA ROSA ANNEX
8. CASA BLANCA

▧ PARCEL C
12. MANICOMIO
13. BENEFICENCIA
14. ANNEX TO 12 AND 13
15. BALLAJA (RODRIGUEZ ARMY HOSPITAL)
16. LA CONCEPCION
17. FORMER ARMY PX
18. FORMER NPS OFFICE BUILDING

9. FORMER ARMY CAFETERIA
10. MEDICAL FACILITY
11. INSTITUTE OF PUERTO RICAN CULTURE

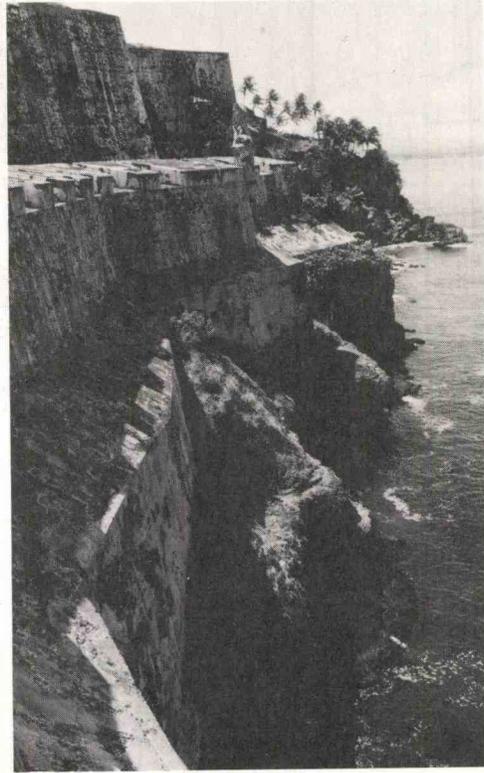
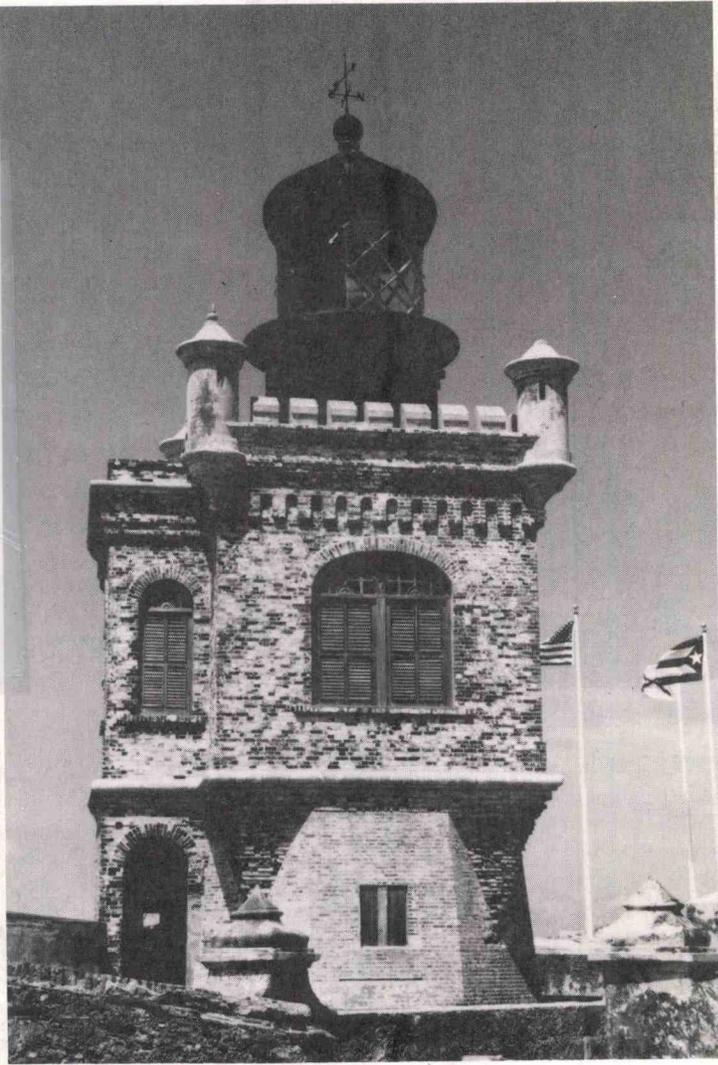
BUILDINGS 208, 209, 210, 211
ADMINISTRATION, MAINTENANCE, PARK HOUSING

BUILDING 213
CIVIL DEFENSE FACILITY

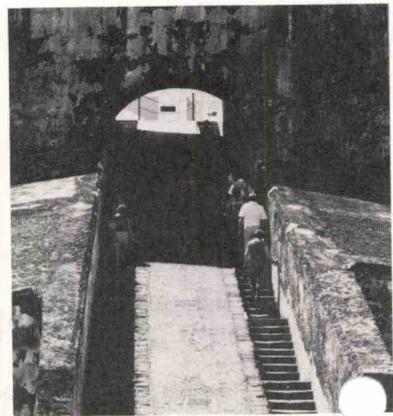
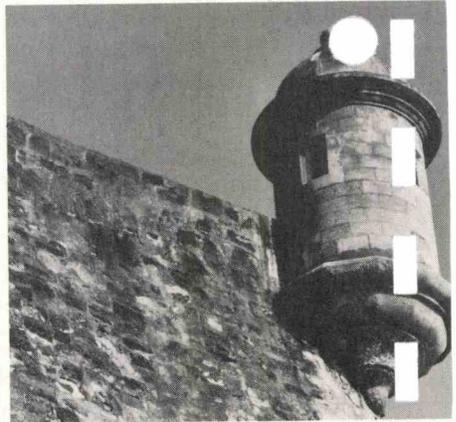


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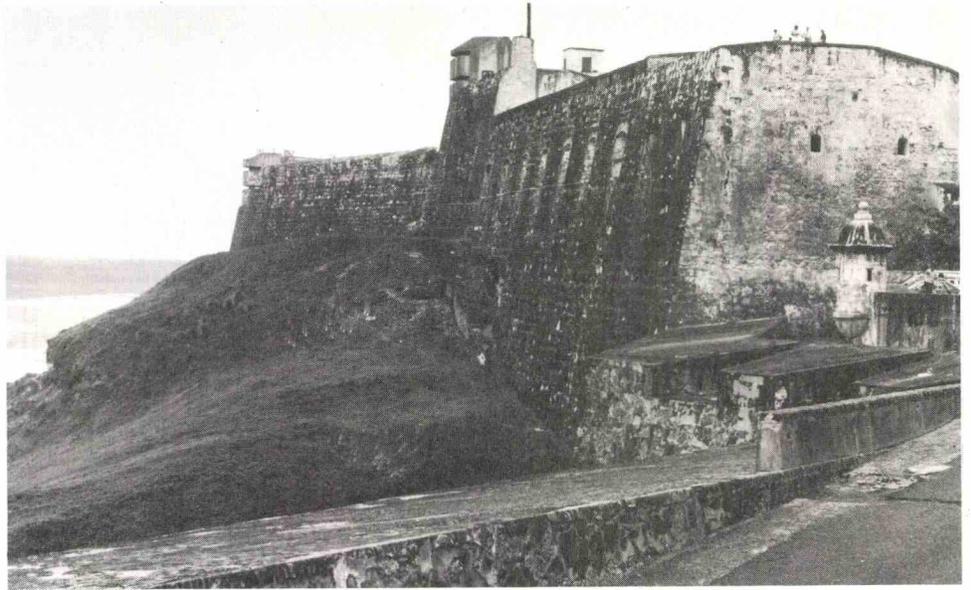
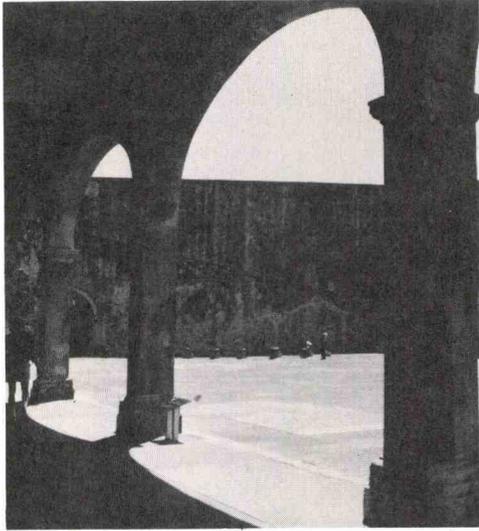
EXISTING SITE
SAN JUAN NATIONAL HISTORIC SITE
PUERTO RICO



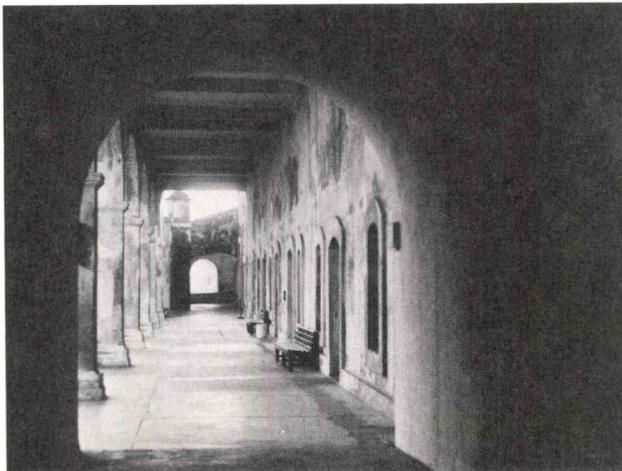
El Morro. Originally named *Castillo de San Felipe del Morro* in honor of King Philip II of Spain, El Morro is the most renowned fortification in the system. Its primary mission was to defend the harbor by preventing a seaborne penetration into San Juan Bay. The multilevel, amphitheater-like configuration of El Morro's sea batteries permitted the engagement of multiple targets at different distances and locations. The terrain behind the fort (Esplanade) was shaped into a slope that denied cover and concealment to advancing enemy infantry and gave the defenders an unobstructed field of fire.



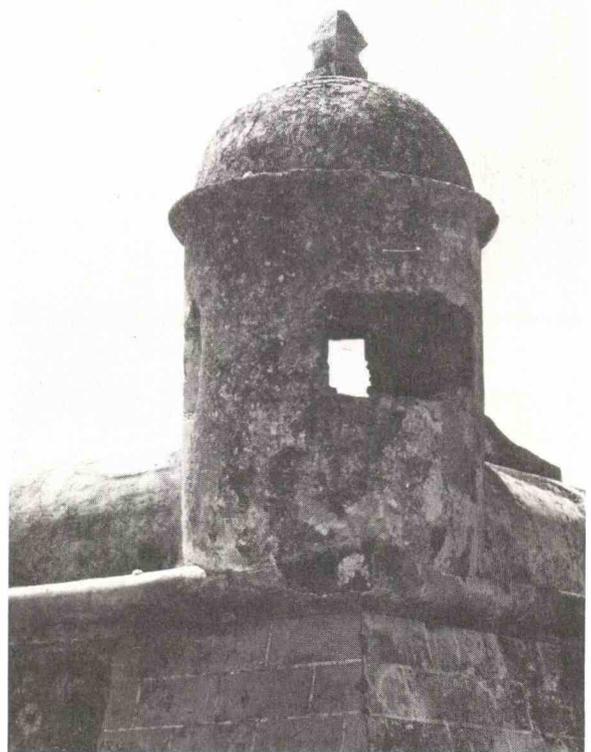
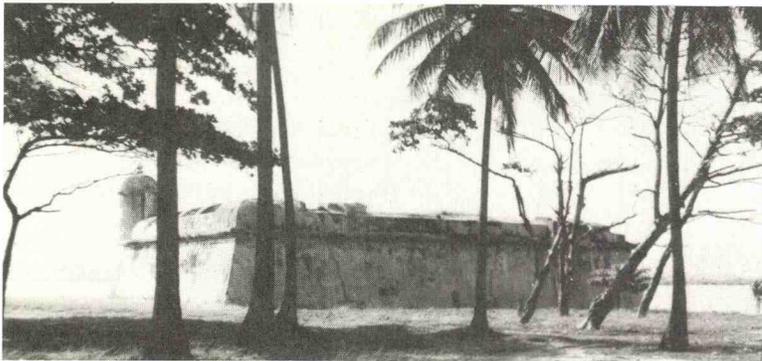
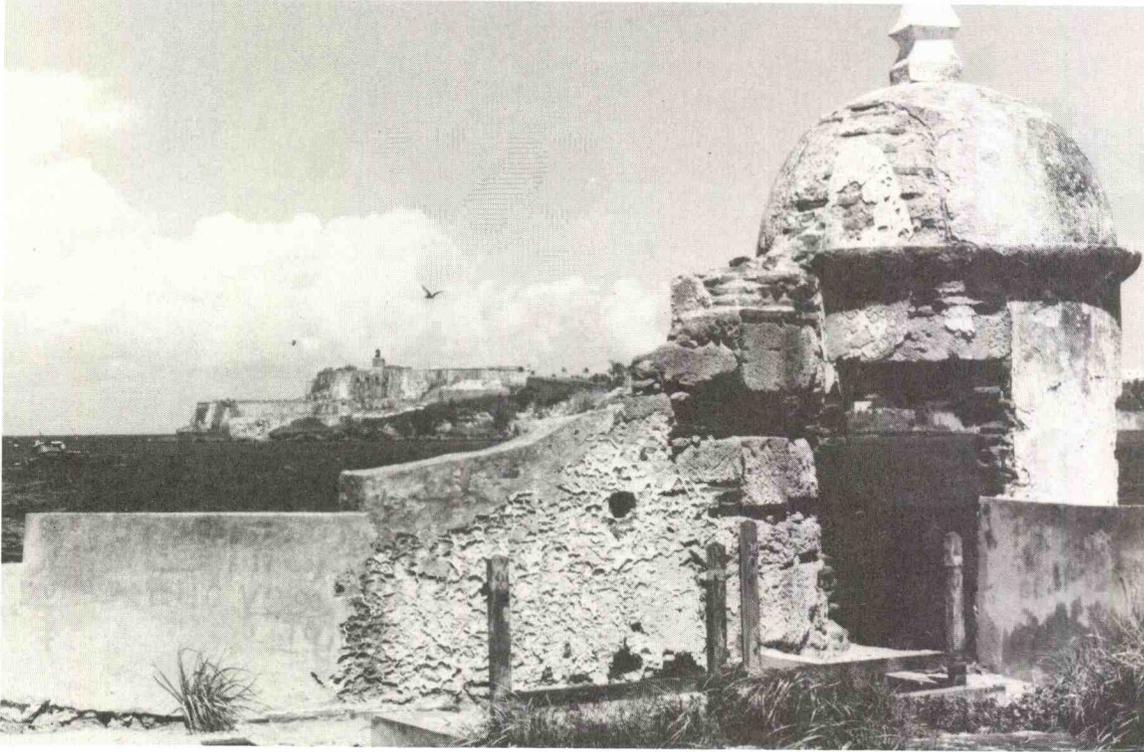
Viewed from the
Esplanade



San Cristóbal. The primary mission of the *Castillo de San Cristóbal* was to defend the land approaches into the city. Because its secondary mission was sea defense, some of its batteries are directed toward the north. The fort was designed using a horizontal defense system typical of land defense fortifications, in which a fort is preceded by smaller detached forts known as outworks. The outworks provided a “defense in depth,” keeping an attacking force away from the principal fort and protecting key terrain to prevent its use by the enemy. Five brick and rubble masonry quarters (buildings 208, 209, 210, 211, and 213) date from the 19th century. These structures supplemented the service facilities of the fort during the last years of that century and the first half of the 20th century.

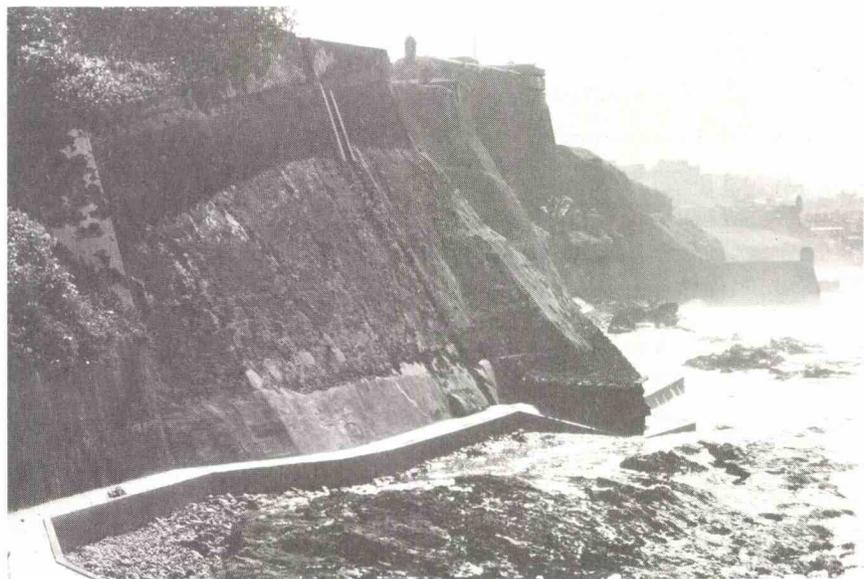
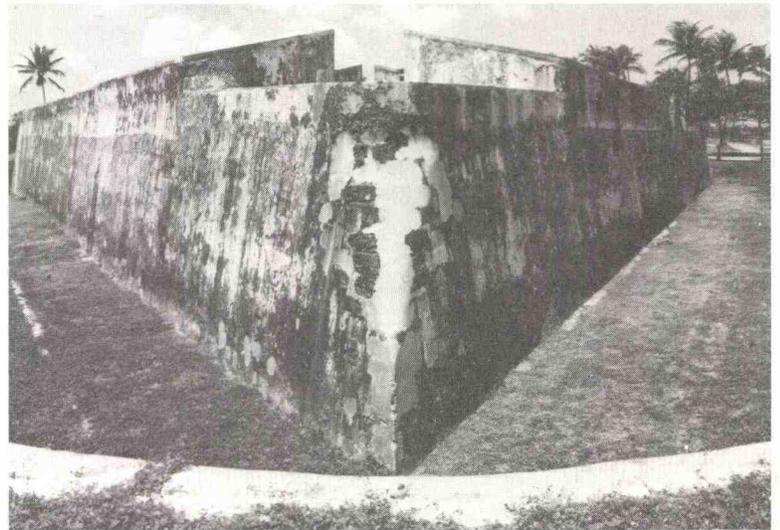


El Cañuelo. A small auxiliary fortification in the harbor defense system, El Cañuelo commanded the mouth of the Bayamón River, which became a main supply route when El Morro was besieged. El Cañuelo was also capable of cross-firing its cannons with El Morro, preventing enemy landings on the mainland area west of the harbor.





Walls and Bastions. City walls were first constructed along the south side of Old San Juan during the early 1600s and were completed within four years. The northern walls were not built until the 18th century. Various gates located along the walls provided access to the fortified city. San Juan Gate was for a long time the main entrance to the walled city from the harbor side.



Administrative History

Although San Juan National Historic Site was established by the secretary of the interior in 1949 (see appendix C), it remained under the control of the Department of the Army as part of the Fort Brooke Military Reservation until September 1961, when a major portion of it was transferred to the Department of the Interior. In 1966 the Department of Defense declared the remaining portion of the military reservation to be surplus. On March 31, 1967, the U.S. Department of the Interior and Puerto Rico entered into an agreement to dispose of the remaining Fort Brooke properties by transferring title of parcels A (the El Morro Esplanade) and B to Puerto Rico (see Existing Site map for the location of the parcels). Parcel A became part of the national historic site, under NPS management, although fee title was vested in Puerto Rico. Parcel B remained outside the historic site, under administration by Puerto Rico as a cultural center.

An amendment of the agreement on August 29, 1968, more clearly defined parcel B, and a second amendment on January 28, 1970, returned jurisdiction of the El Morro moat and counterscarp wall to the Department of the Interior. In August 1972, another tract of land outside parcels A and B, but within the former Fort Brooke Military Reservation (designated as parcel C), was conveyed by the United States to Puerto Rico. On March 20, 1984, the guardhouse in parcel A (only the structure) was conveyed by Puerto Rico to the United States.

A cooperative agreement was signed between the Department of the Interior and Puerto Rico on September 29, 1976. This new agreement supersedes all previous agreements and more clearly defines the areas of jurisdiction and responsibility between the National Park Service and Puerto Rico. This agreement establishes a good-neighbor policy whereby the Park Service and the commonwealth consult with each other as required to ensure the "smooth management" of the historic site (including parcel A) and parcels B and C.

Under this 1976 cooperative agreement, Puerto Rico retains title to parcels A, B, and C. Parcel A remains within the authorized boundary of the national historic site and is managed and administered by the Park Service. Parcels B and C are outside the historic site's authorized boundary and are managed and administered by Puerto Rico in a manner that will support the purpose for which the historic site was established. The 1976 cooperative agreement is reprinted as appendix D.

SIGNIFICANCE

San Juan National Historic Site was established for the following purposes:

to preserve for the public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States

to protect these ancient fortifications as outstanding monuments of the past, possessing exceptional historical and architectural interest for the nation

to recognize these ancient fortifications as possessing exceptional importance in commemorating the history of the United States

In the context of the History and Prehistory of the National Park System and the National Historic Landmarks Program, the national historic site represents the subtheme "Spanish Exploration and Settlement." Eleven park areas depict Spanish activity in the Southeast and Southwest; only San Juan National Historic Site, however, represents Spanish activity in the Caribbean.

All of the components of the national historic site are included on the National Register of Historic Places, which denotes sites of historical, architectural, archeological, or cultural significance to the history of the United States. Furthermore, the site comprises one element of the historic zone of San Juan, a National Register historic district that encompasses the northwestern triangle of the islet of San Juan. In 1981 the El Morro lighthouse, situated atop El Morro, was listed individually on the National Register as part of the register's thematic resource listing of the "Lighthouse System of Puerto Rico."

On January 23, 1984, the "San Juan Fortifications: La Fortaleza and San Juan National Historic Site" were officially accepted to the World Heritage List of the United Nations Educational, Scientific, and Cultural Organization. The World Heritage List identifies cultural and natural properties considered to be of outstanding universal value and by virtue of this quality especially worth safeguarding for future generations. The historic site qualified for this distinction because it is an outstanding example of a type of structure that illustrates a significant stage in history, and because it is directly and tangibly associated with events or with ideas or beliefs of outstanding universal significance. The nomination states in part:

The fortifications of San Juan and the other mighty redoubts built by Spain in the Americas are premier physical evidences of the epic imperial struggles that permanently fixed the destiny of the Americas. They are key monuments of the era when the Caribbean was the cockpit of international maritime rivalry and its islands played a part of almost undue importance in world strategy that was particularly international in its happenings. . . . In their engineering art, the Spanish forts girdling the Caribbean are manifestations of the architectural-engineering and historical heritage of the Old World and the New. . . . The defenses of San Juan are a well-preserved element in this grand system. . . . These fortifications are eminent physical reminders of Spain's past conquest and political dominion in the Caribbean and of the epic struggle she conducted to maintain her Empire in the Americas. . . . In this century, however, these fortifications have been transformed into potent symbols of the cultural ties that link the Hispanic World. . . . San Juan's forts remain as

the cultural patrimony of the Puerto Rican people, while possessing a meaning even for nations who have striven to control or influence the Hispanic peoples. . . . They form, individually and collectively, for all these reasons, part of the universal historical heritage of humanity.

PROPOSED PLAN

PLANNING PERSPECTIVE

The future of San Juan National Historic Site is inextricably tied with the future of the city that is contained within its walls. The many complex forces that drive the present-day city of Old San Juan also directly or indirectly control the future of the national historic site. Any successful plan for the historic site will depend not only on the commitment and resources of the National Park Service, but also on the commitment and resources of the many agencies, organizations, and individuals who comprise this historic city. The 1976 cooperative agreement between the National Park Service and Puerto Rico establishes a good-neighbor policy that provides a beginning for cooperation and commitment in the planning, development, and management of this internationally significant cultural resource.

San Juan National Historic Site serves local as well as regional and international visitors. Because the national historic site is located within a congested urban center, open space for the urban population is of critical importance, and recreational activities will be allowed on open space within the historic site boundary as long as they are compatible with the primary purpose of cultural resource preservation.

The various units of the national historic site have played a significant role throughout the almost 500 years of history represented. The goal of the overall theme presentation will be to help visitors understand the span of history represented. Although visitors will have opportunities to pursue areas of specific interest, each visitor should leave the site with an awareness of the internationally important role these fortifications have played in world history. The following major theme concepts have served as guides in developing the interpretive recommendations for all units of the national historic site addressed in this plan:

- San Juan's strategic location--gateway to the Indies
- the Spanish empire--a master plan for the Caribbean
- Puerto Rico--the society and its people
- a walled city--an evolution of construction over five centuries
 - fortification development sequence
 - building design, technology, and materials
 - the architects, engineers, and builders
- the fortifications and their role in world history
 - conflict between the English and the Spanish
 - conflict between the Dutch and the Spanish
 - Spanish-American War
 - World War I
 - World War II

Each of the units played a role and in some way contributed to the evolution of events associated with the historic site. Therefore, it would be inappropriate in most instances to attempt to artificially identify each unit with one specific major theme or event. It would be more appropriate for visitors to have the opportunity to grasp the individual unit's contribution to all the major themes and events represented. Certain subthemes that relate directly to specific units are presented in

the following interpretive recommendations for the various units of the national historic site. (Specific media recommendations will be proposed in an interpretive plan for the national historic site, which is scheduled for completion in fall 1984.)

EL MORRO

El Morro has been and always will be the premier attraction of San Juan National Historic Site. The preservation of the fort's cultural resources in their existing form, representing a range of historic periods, is critical to providing visitors with the physical evidence that can stimulate a rewarding learning experience. A variety of interpretive media, in combination with guided and self-guiding tours, will provide both an effective means of conveying an overview of the fort's 500 years of history and a means of portraying the major themes and events represented. No new development will be required, and only those maintenance and administrative functions needed for the operation of El Morro will be housed in this park unit. Appropriate passive recreational activities will continue on the Esplanade; however, all vehicles will be eliminated from this unit to increase visitor safety and to enhance the historic scene. The following subthemes provide specific subject material particularly suitable for presentation at El Morro:

- vertical levels of defense
- defense against attack from the sea
- historical use of navigational aids
- life in the fort

SAN CRISTÓBAL

The fortifications of San Cristóbal, including both the fort and the outworks, represent a continuum of history, and they will all be preserved in their existing form. The interpretive program will be upgraded to provide a better overview of this unit's significance, especially for school groups and the many local residents who frequently visit San Cristóbal. Although no new development is required, the historic site's primary maintenance and administrative functions will be moved to less visible locations within the unit, allowing more of the main historic area to be opened to visitor use. The following range of interpretive subthemes provide subject material particularly suitable for presentation at San Cristóbal:

- defense in depth
- defense against attack from the land
- life in the fort

EL CAÑUELO

This fort, across the bay from El Morro, will be preserved, stabilized, and adapted for visitor use. El Cañuelo will be brought into the mainstream of the visitor experience by including it as a stop on an

interpretive ferryboat tour of San Juan Bay, which will provide a unique perspective of El Morro and the walled city of Old San Juan. A moderate level of development will be required at El Cañuelo to accommodate visitor use. The following subthemes provide subject material particularly suitable for presentation at El Cañuelo:

- protection of the harbor entrance--a cross fire with El Morro
- protection of El Morro's flank and supply route

WALLS AND BASTIONS

The walls and bastions of the historic site will be preserved in their existing form, maintained, and interpreted as the unifying element of the defense system. No development or onsite interpretation will be proposed. The various interpretive presentations at El Morro, San Cristóbal, and El Cañuelo, as well as on the interpretive ferryboat tour, will convey the important role that the walls and bastions played in the evolution of the fortifications. The following subthemes provide subject material particularly suitable for walls and bastions:

- unifying the fortifications of a city
- defense against attack from both the sea and the land

MANAGEMENT ZONING

All lands within the authorized boundary of San Juan National Historic Site (75 acres) will be managed as a historic zone, and two subzones will be designated--preservation/adaptive use and unstructured recreation. The purpose of management zoning is to indicate where park operations, management functions, visitor uses, and developments are appropriate. Zones are identified based on the authorizing legislation, NPS policies, the nature of the site's resources, the desired visitor experiences, and established uses. Subzones provide more specific guidance for management, development, and visitor use.

The preservation/adaptive use subzone (about 52 acres, 69 percent of the park) will be managed to preserve, protect, and interpret historic or archeological resources and their settings. Most of the structures within the historic site will be included within this subzone. Adaptation of historic structures and the historic scene will be allowed for visitor use (for example, interpretive exhibits and passive recreational pursuits) and for administrative/operational purposes (employee housing, maintenance shops and storage, and offices). Such adaptive use will not jeopardize significant historic structures or settings.

The unstructured recreation subzone (about 23 acres, 31 percent of the park) will include the Esplanade behind El Morro. Although the historic structures and settings will be preserved, casual outdoor recreational activities will be allowed. NPS managers will retain the authority to periodically close or rotate recreational use from one location to another to permit regrowth of vegetation. Most activities that require little supervision and no support development or facilities will be allowed in this zone. Acceptable visitor activities on the Esplanade will include picnicking, kite flying, unstructured softball games, and activities associated with "game days." No new developments or support facilities will be allowed in this subzone. The National Park Service will reserve the right to prohibit any activity that is not compatible with the purposes for which the historic site was established. Any NPS management actions on the Esplanade will be coordinated with Puerto Rico, as specified in the 1976 cooperative agreement (see appendix D).



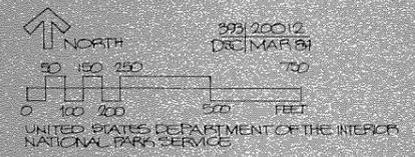
EL MORRO
 SAN ANTONIO BASTION
 SANTA ROSA BASTION
 SANTO DOMINGO BASTION
 LAS ANIMAS BASTION
 SANTO TOMAS BASTION
 SAN SEBASTIAN BASTION
 SAN CRISTÓBAL
 EL MORRO PARKING AREA
 ESPLANADE
 SAN FERNANDO BASTION
 SANTA ELENA BASTION
 SAN AUGUSTIN BASTION

ATLANTIC OCEAN
 LA PERGA
 BOULEVARD DEL VALLE
 CALLE DE SAN SEBASTIAN
 CALLE DEL SOL
 CALLE DE LA LUNA
 CALLE DE SAN FRANCISCO
 CALLE DE SAN JUAN
 CALLE DE LA FORTALEZA
 CALLE DE TETUAN
 CALLE RECINTO SUR
 CALLE COMERCIO
 CALLE MARINA

SAN CRISTÓBAL OUTWORKS
 LA TRINIDAD BATTERY
 SAN CARLOS PAVELIN
 SANTA TERESA BASTION
 EL ABIANCO GUARDHOUSE
 EL ABIANCO
 LA PRINCESA BASTION
 HILL OF THE THREE WISEMEN
 AVENIDA MUÑOS RIVERA
 CAPITOLLO
 AVENIDA PONCE DE LEON
 PASEO DE LA COYADONGA

OLD SAN JUAN
 PLAZA DE ARMAS
 PLAZA COLON
 SAN JUAN GATE
 LA FORTALEZA
 SANTA CATALINA BASTION
 LA CONCERNACION BASTION
 LAS PALMAS BASTION
 CHAMBER OF COMMERCE
 LA PUNTILOA PARKING AREA
 PASEO DE LA PRINCESA
 PARKING GARAGE 1
 SAN JUAN
 LA PUNTILOA

HARBOR
 CENTRAL BUS TAXI TRANSPORTATION CENTER AND PARKING GARAGE 2
 TREASURY DEPARTMENT BUILDING



- SAN JUAN NATIONAL HISTORIC SITE BOUNDARY
- PRESERVATION / ADAPTIVE USE SUBZONE (INCLUDES EL CAÑUELO)
- UNSTRUCTURED RECREATION SUBZONE

ON MICROFILM

MANAGEMENT ZONING
 SAN JUAN NATIONAL HISTORIC SITE
 PUERTO RICO

CULTURAL RESOURCE MANAGEMENT

A brief historical overview of the San Juan fortifications is found in the preceding "Description of the National Historic Site" section of this document. A more detailed discussion of the history and significance of the park's resources has been included as appendix E.

EXISTING CONDITIONS

The cultural resources of San Juan National Historic Site appear to be well managed. However, upon closer examination, many deficiencies are evident. These include the lack of a clear definition of what preservation philosophy is followed at the national historic site, inadequate preservation maintenance, real and potential structural problems, and real and potential threats to the integrity of the resources and the story they represent. For example, past restoration and removal of materials dating from the historic period (1539-1961), particularly at San Cristóbal, has created a configuration of the fortifications that never existed historically. In addition, the lack of a clearly defined cyclic maintenance program has raised questions as to the timeliness, historical appropriateness, accuracy, and consistency of materials and preservation maintenance techniques used. Currently, when the park staff identifies deteriorated areas, they are superficially treated, but real or potentially serious structural deficiencies such as the present condition of El Cañuelo and the El Morro lighthouse go largely unattended.

The present gaps in the cultural resource data base, specifically as it relates to the periods of Spanish construction and use of the fortifications (prior to 1898), significantly hinder effective management, preservation, and interpretation of the cultural resources that make up the national historic site. As a result, many interpretive stories go untold, and well-intentioned management actions have the potential to seriously affect the resources.

Finally, real and potential threats to the cultural resources, generated primarily by outside influences, are of major concern to the National Park Service. Among these threats are the damage to historic materials from the development of unauthorized vest-pocket parks and other facilities within the boundaries of the national historic site. Also the indiscriminate installation of commemorative plaques and monuments that are unrelated to the site's history and significance have caused damage to historic materials. To correct these problems, the following cultural resource management philosophy and actions are proposed.

PROPOSED ACTIONS

Preservation Philosophy

A preservation philosophy, as described below, will be established for San Juan National Historic Site to guide park management actions relating to the site's physical appearance and the appropriateness and historical accuracy of the time periods represented.

The fortifications of San Juan must be viewed as a historic district that has evolved over time, beginning with the earliest construction of La Fortaleza in 1533, following with the construction of El Morro in 1539, and extending up to the transference of a major portion of the site to the Department of the Interior in 1961. This evolution of all the major components (El Morro, San Cristóbal, El Cañuelo, the walls and bastions, and the San Cristóbal outworks), including the structural historic modifications that have been undertaken, contributes significantly to the overall story of the fortifications of Old San Juan. Over the centuries of construction and use, the fortifications have remained one of the finest examples of coastal and land defense systems in the world. As a new technology was developed or a need was identified, the fortifications were changed. Each of these changes was a product of its time, and each served a particular need in the overall defense mission. Therefore, the final result of these changes should be preserved so that the whole story can be told to the millions of visitors who come each year. The changes that have taken place are evidence of the history and development of the fortifications and their environment, and they are significant in their own right.

To restore all or portions of San Juan to a particular period or periods would be a costly and questionable undertaking. Restoration may impair or destroy the original fabric, and despite research, the replacement of missing fabric or elements must be based on conjecture. Past experience at San Juan and other historic sites has demonstrated that comprehensive or substantial modifications, extensive restoration treatments, or ill-advised large-scale reconstruction projects have harmed more resources than they have preserved. In addition, the expense of such actions has been considerable.

Therefore, the National Park Service will preserve the San Juan fortifications in their existing form, retaining as closely as possible their appearance between 1949 and 1961, the period during which the facilities were last used for military purposes. This preservation philosophy is consistent with sound cultural resource management standards, and it fully meets the NPS mandate to perpetuate in an unimpaired condition the cultural resources within the national park system. The adoption of this preservation philosophy has the following implications:

Missing historic fabric will not be reconstructed except when it is determined through the preservation maintenance program (described below) that reconstruction is necessary to ensure structural stability of the fortifications.

No physical alterations will be undertaken to provide for adaptive use of the casemates or other interior spaces, or to provide for handicapped visitor access or for visitor safety, if it is determined that such actions will impair the significant architectural features or structural system of the fortifications.

Interior spaces will generally not be restored unless it is absolutely necessary to help convey an interpretive theme.

Preservation Maintenance Program

To provide a consistent methodology for protection of the historic fabric, a preservation maintenance program will be established. Because more information is needed about the real and potential structural problems at San Juan National Historic Site, this program will be implemented in phases.

First, a preliminary analysis and evaluation of the present structural condition of the fortifications will be conducted by historical architects, engineers, and technical specialists, assisted as necessary by a research historian working on the historic resource study (see "Cultural Resource Data Base" section below). The purpose of this phase will be to ascertain the degree of internal and external wall erosion and whether the existing excessive vegetative covering of the fortifications is causing serious structural problems besides creating a poor physical appearance. Also the adequacy of present maintenance activities will be evaluated.

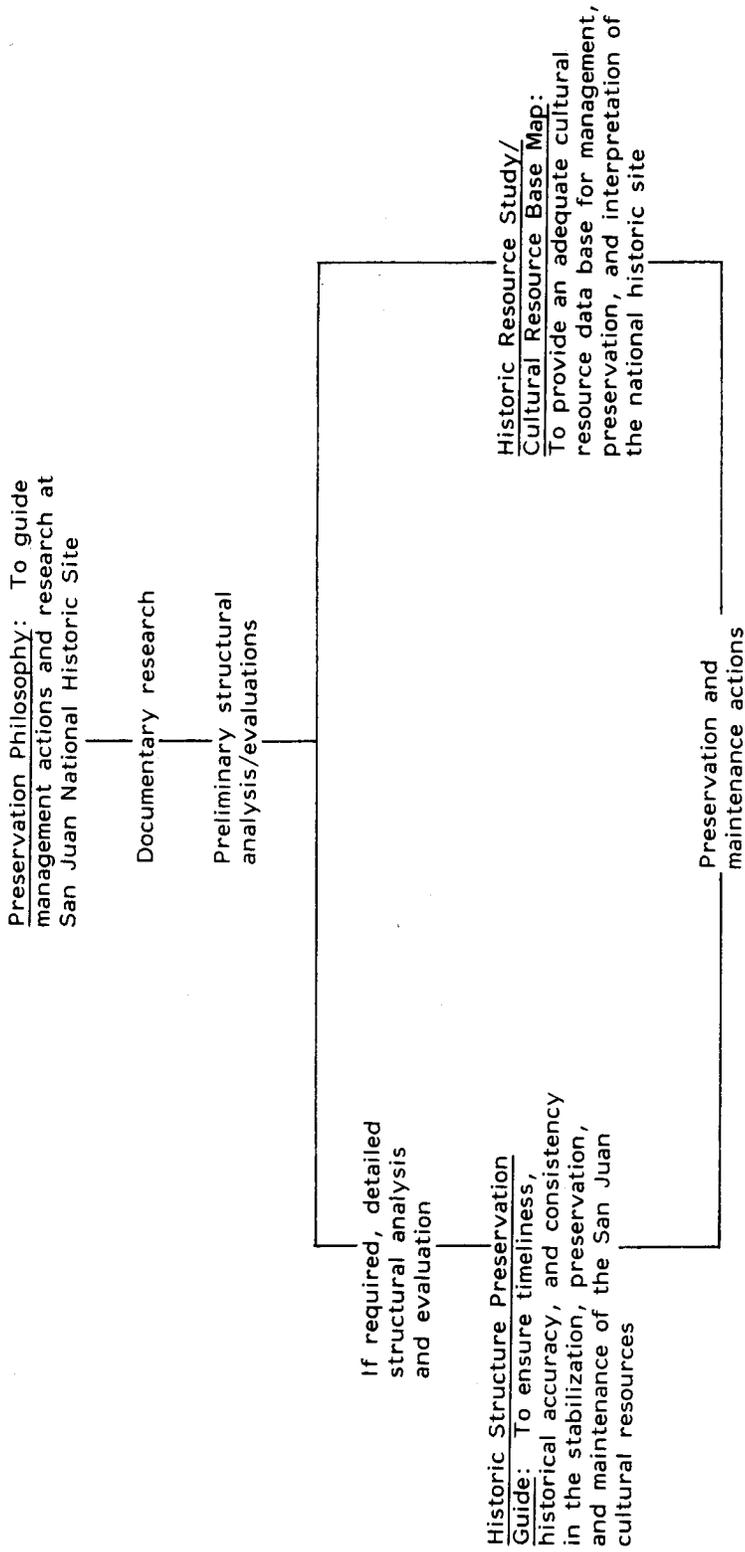
Second, individual historic structure preservation guides will be prepared for El Morro, San Cristóbal, the San Cristóbal outworks, El Cañuelo, and the walls and bastions. Each guide will provide a reference for park maintenance staff in planning and budgeting for routine cyclic maintenance activities, along with detailed guidelines for maintaining and preserving the fortifications in the course of day-to-day operations. The guides will help ensure that the historic structures are stabilized, preserved, and maintained in a timely, historically accurate, and consistent manner.

Because the preliminary analysis and evaluation may identify major unforeseen structural problems, a much more detailed investigation may be required before the comprehensive guides can be finalized. In that case, only interim emergency or routine preservation treatment measures will be undertaken, pending the completion of in-depth studies of the structures' architectural/engineering design, construction, and condition.

Cultural Resource Data Base

A historic resource study will be undertaken concurrently with the development of the historic structure preservation guides. The purpose of the study will be to fill in the existing gaps in the cultural resource information base for San Juan National Historic Site, specifically as it relates to the construction and occupation of the fortifications by the Spanish prior to 1898. The historic resource study, with its component cultural resource base map of both historic and archeological sites, will provide park managers with a comprehensive overview of the history of the fortifications, not only as individual structures but also as part of the overall story of the rise and fall of the Spanish empire in the Americas. It will also be available to assist in the management, preservation, and interpretation of the historic site. In addition to providing information for completion of the historic structure preservation guides, the resource study will identify any subsequent studies that should be undertaken to meet special needs. (For example, some little known event or activity that would require further research before a specific interpretive program could be developed.)

CULTURAL RESOURCE MANAGEMENT PLAN--SAN JUAN NATIONAL HISTORIC SITE



The cultural resource base map will document exact locations of surface and subsurface sites and structures to assist in the full understanding and interpretation of the fortifications. It will also be a reference to ensure that significant remains of elements of the fortifications, particularly those belowground, are not inadvertently destroyed during the course of any construction activity. Until the base map is completed, any ground disturbance within the boundaries of the national historic site will have to be preceded by archeological surveys to ascertain if there are unknown significant prehistoric or historic remains within the project area. If such resources are identified and if impacts cannot be avoided through project relocation or redesign, appropriate mitigating measures (such as recordation or systematic data recovery) will be programmed and completed before any construction activity. Similarly, a thorough archival record will be made of any significant architectural features that might be damaged or destroyed as a result of actions to implement the proposed plan.

The proposals for the historic resource study and the preservation guides overlap in areas of documentary research, and the final products are interdependent. Therefore, both actions will be initiated at the same time to allow for proper coordination between the two efforts, and the least possible cost in terms of personnel and time.

Specific Proposals

El Cañuelo. Currently, El Cañuelo is in a severely deteriorated physical condition, having been neglected in the park's maintenance program for several years. As a result, serious structural problems have been identified that must be corrected as soon as possible or else permanent loss of the structure is probable. In addition, shoreline erosion at Cabras Island is threatening the fort, further complicating preservation maintenance. Because El Cañuelo is a significant component of the national historic site (its 1625 predecessor predated San Cristóbal), it should be brought into the mainstream of the national historic site's preservation and interpretive programs. Therefore, appropriate historical, architectural, and structural studies and research will be undertaken, as described above. El Cañuelo will be stabilized, preserved, and made accessible for park visitors (see "Interpretation" and "Visitor Support Facilities" sections).

Civil Defense Facility. The Civil Defense Agency will be encouraged to find suitable space outside the national historic site as quickly as possible. The space it now occupies is needed by the National Park Service to consolidate certain administrative functions, such as staff offices, the park library, and storage for museum collections. Many of these functions are now housed within historic casemates at El Morro and San Cristóbal, necessitating the closure of these areas to visitors. The Civil Defense offices will also be used to provide adequate laboratory and research space for a regional cultural resource preservation center that will be established at the national historic site.

The preservation center will undertake the requisite testing and research efforts to develop and implement the proposed preservation maintenance

program for the national historic site. It also will be involved in the analysis, development, and application of preservation techniques for similar kinds of architecture throughout the Caribbean, as well as the Gulf of Mexico and the southern Atlantic coast. The center will also be available to advise other governmental agencies, such as the commonwealth of Puerto Rico, in the preservation of buildings, structures, sites, and other cultural resources under their jurisdiction.

After the Civil Defense Agency has vacated this space, the communication towers will be removed to eliminate the present visual intrusion.

El Morro Lighthouse. The El Morro lighthouse will be stabilized and preserved; it will continue to function as a navigational aid under the jurisdiction of the U.S. Coast Guard. This structure is significant to the historic site's purpose and is integral to the evolution of the San Juan fortifications.

Commemorative Plaques and Monuments. Future installation of commemorative plaques and monuments within the boundaries of the national historic site that honor persons and events unrelated to its history and significance will be prohibited. This action will avoid further damage to historic fabric or confusion to park visitors as to their significance or relationship to the history of the San Juan fortifications.

Unauthorized Development within the National Historic Site. The National Park Service, working with the municipality of San Juan and the commonwealth of Puerto Rico, will establish procedures to prevent further unauthorized development (such as vest-pocket parks, dwellings, and livestock pens) within the national historic site boundaries. This will avoid any future unnecessary damage or destruction of historic fabric or inconsistency with stated management objectives at the national historic site.

Collections. As previously mentioned, the national historic site's library and museum collections, which are valuable for study and interpretation, are now housed within historic casemates at San Cristóbal. The park staff is currently inventorying and cataloging these collections, but additional assistance is needed to ensure proper long-term curation and storage. To facilitate this effort, a collections preservation guide will be prepared by the park staff, in consultation with professional curators in the NPS Washington and regional offices. The guide will also serve as a reference for park staff in planning for and carrying out routine cyclic maintenance and preservation actions for library materials and museum artifacts.

Implementation. The preceding specific proposals will be implemented in phases because of financial constraints. A recommended phasing of the proposals and estimated costs are included in table 1, in the "Plan Implementation" section.

VISITOR USE

INTERPRETATION

Existing Conditions

Interpretive programs are provided at both El Morro and San Cristóbal by means of indoor and outdoor exhibits, guided tours, and a park folder. El Morro receives about three times the visitors that San Cristóbal does, and a 40-minute self-guiding audio tour about El Morro (on cassette tape) is available for sale or rental at the fort. The Esplanade, a large 23-acre open space in front of El Morro, is used daily by island residents for various passive recreational activities, and use is extremely high on weekends. No formal interpretive activities occur on the Esplanade.

The San Cristóbal outworks and the shoreline trail at El Morro are closed to the public. The trail and outworks have been closed because of numerous robberies and criminal assaults that have occurred in recent years. The number of crimes at the outworks declined after the area was fenced.

The site of El Cañuelo, across the bay from El Morro, can be visited by the public; however, visitors are not allowed to go into or on top of the fort, and no interpretation is provided.

Except for 15 recently installed outdoor wayside exhibits and one in-place cannon display, most of the interpretive program and hardware date from 1960 or earlier. Much of the program is piecemeal, focusing on scattered elements of the overall story of the fortifications. It is difficult for visitors to grasp even one or two of the major points associated with the international significance of this site. Some of the museum exhibits that highlight historical events and some of the outdoor exhibits that identify fortification features are adequate, but there is no interpretive means to unify the overall story for visitors. The present interpretive program also provides little variety for the large number of repeat visitors.

Tourists arriving by either plane or boat receive little if any information about or orientation to San Juan National Historic Site. No public transportation is available to El Morro, and numerous tourists charter transportation services, but they are encouraged to stop only briefly at El Morro before moving on to other tourist attractions. Consequently, visitors may leave with the misconception that El Morro is the only structure associated with the historic site.

Many first-time visitors to either El Morro or San Cristóbal spend valuable time trying to decide where to go. They are not oriented as to where they are within the forts, and there is nothing that helps them plan a tour according to their specific interests. For example, visitors to El Morro now attempt to use a general points-of-interest sign, which identifies 15 numbered locations. The sign is located within the dark, narrow, and congested sally port entranceway, and most visitors can remember the location of only one or possibly two points of interest. After leaving the sally port, visitors must locate a ranger for additional

assistance. Opportunities are limited for guided tours or assistance at either of the two forts because of personnel shortages.

The walls and bastions not directly associated with either El Morro or San Cristóbal are usually not part of the visitor experience. Besides the two major forts, the San Juan Gate is probably the only other major historic site associated with the walled city that receives a substantial number of visitors. Las Palmas Bastion serves as a small vest-pocket park for Old San Juan, but it is not formally interpreted nor is it identified onsite as part of the historic site. Although no formal onsite interpretation occurs at most of the walls and bastions, publications about the historic site do identify and explain their historic significance.

The main level of El Morro is the only part of the historic site that is partially accessible to handicapped visitors. The steep ramp in front of San Cristóbal restricts the handicapped unless they receive personal assistance. Once inside the main level of both forts, the restrooms and a limited selection of casemates are accessible. Also at these two locations, handicapped visitors can view a brief slide/sound presentation of the various levels of the fort that they cannot reach.

Proposed Actions

Visitor Experience. The overpowering physical presence of two massive forts protecting a walled city suggests even to casual observers that this is an important place. The scale and intensity of human effort represented by this immense stone fortress creates an immediate need to know: What happened here? Who built it? How? and Why? Before leaving San Juan National Historic Site, all visitors will have the opportunity to have these four basic questions answered. The answers, if creatively presented, will be only a beginning for interested visitors, encouraging them to ask more questions and to find more answers. Discovery will be the primary experience associated with San Juan National Historic Site.

For those who visit the historic site only once, El Morro will most likely remain the focus of attention because its dominant features and dramatic location overlooking the sea have an irresistible appeal. The challenge will be to bring El Morro into focus as an important element of the overall story. The story itself is much bigger than just El Morro, rather it requires an understanding of a country, a city, and a fortification, and an awareness of more than four centuries of architectural, engineering, military, and political history. For these one-time visitors, an overview will be critical to gaining an appreciation of the internationally significant role this historic site played in the development of the Americas. For visitors who allow more time for discovery or who frequently visit the site, they too will benefit from an overview; they will also have the opportunity to learn an infinite variety of facts about the life and events associated with the site's 500 years of history.

A secondary visitor experience associated with the historic site is passive recreation. The Esplanade in front of El Morro provides critically needed open space. Located in the midst of a congested urban environment, this

patch of green can provide opportunities for picnicking, kite flying, and other recreational pursuits that are appropriate and compatible with the historic site. For island residents, the fortifications and grounds are eminent physical reminders of their cultural history, symbols of pride and permanence that give a subtle but an important added dimension to otherwise common everyday leisure pursuits.

Information/Orientation. A special effort will be made to establish a previsit information system to reach those visitors arriving either by plane or cruise ship. Such a program will enhance the visitors' understanding of the resources that comprise the historic site, inform them of the opportunities available (including schedules and access), and stimulate their interest. A brief videotape program will accomplish this, and it can be shown to visitors in their hotel rooms, to visitors arriving at the international airport, and to the general public at home through public television broadcasting. This type of information program is now used effectively by the Forest Service in Puerto Rico. The video program and possibly the 16mm historic site film (currently in production) can also be shown to cruise ship passengers before they arrive in Old San Juan.

An exhibit information system will be used at appropriate locations in San Juan. Each exhibit will locate the historic site, highlight the major resource components, describe the available opportunities, and provide access information. These exhibits will be placed at the airport, primary harbor locations near the cruise ship terminals, the commonwealth tourist center (at the entrance gate to the Esplanade), the new central bus/taxi terminal, the La Puntilla parking area, and Las Palmas Bastion. Other locations may also be selected for exhibit sites (see the Proposed Actions and Interpretive Themes map). The information exhibits will be basically identical, and they will be designed to function effectively with or without personnel. At selected times, for example, when cruise ships arrive or during peak weekend use at El Morro, staff personnel or preferably volunteers will be stationed at the harbor exhibit, the Puerto Rico tourist center, and other appropriate locations. The people stationed at these exhibits will be able to provide more in-depth information and also increase the "visibility" of the historic site within the greater San Juan area.

The existing park folder provides a graphic depicting most of the historic sites in Old San Juan and an extensive narrative describing the fortifications. This existing graphic and narrative are out-of-date, and they duplicate much of the information now contained in the widely distributed and used Que Pasa magazine, published by the Tourism Company of Puerto Rico. A new park folder will be developed to convey more specific information about how the historic site and its various components contributed to the Caribbean defense system. This new folder will be professionally produced, and it will be distributed at appropriate locations to enhance the identity of the historic site and visitor understanding.

A new self-guiding publication, or several publications if needed, will be developed to orient visitors while on-site, help them plan their tours, provide a brief historical overview, and relate themes to structures at both El Morro and San Cristóbal. Available in both English and Spanish, the publication will complement rather than duplicate information presented

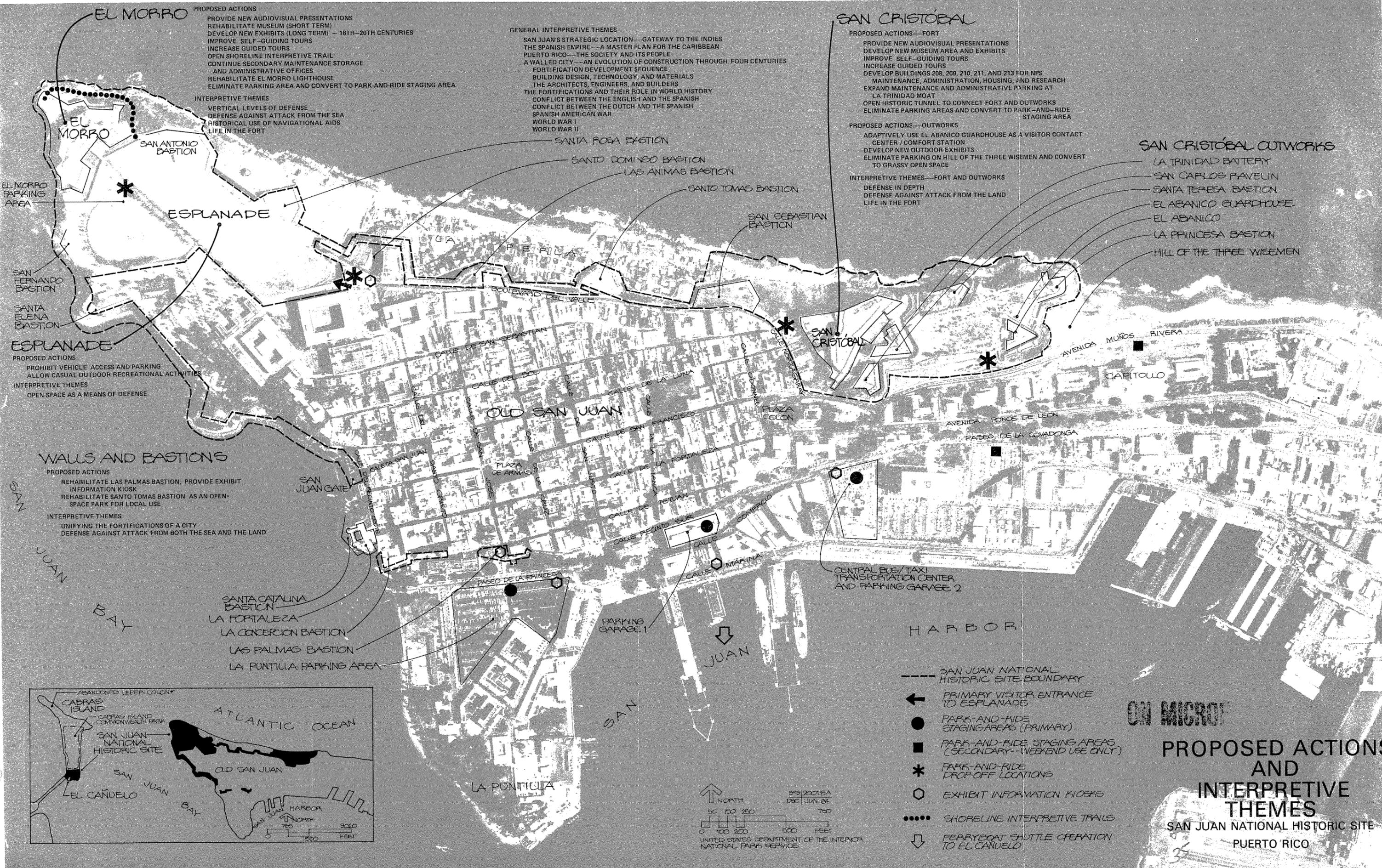
in the outdoor exhibits at both forts. At the entranceways to both forts, new bulletin board displays will be installed. Holders will be provided for the new self-guiding publication, and pertinent information will be posted--for example, closing times, times for guided tours, where they begin, how long they take, and any potential hazards. Visitors will also need to know that they can tour the forts for as long as they wish on their own. Both the bulletin board displays and the new publication will help visitors make the best use of their time, according to their individual interests.

Audiovisual Programs. A film is now being produced that will provide the needed overview of the historic events that brought about the construction of this walled city and its fortifications. The film will dramatically establish the international significance of this historic site and answer four basic questions: What happened here? Who built it? How? Why? It will concentrate on the evolution of the fortifications since the 1500s. The film will be shown in the existing audiovisual rooms at both El Morro and San Cristóbal.

Video cassettes will also be used to expand the interpretive program. Eventually, an audiovisual library will be developed that will cover a variety of relevant theme topics and will be adapted to a wide range of publics, including the wheelchair handicapped, repeat visitors, school groups, and special interest groups. One casemate or one of the other many available locations on the main level of each fort will be adaptively used and designed for these brief video presentations. Because of recent technological advances in video electronics, local schools, universities, special interest groups, and individuals can all contribute to this video library. The volunteer efforts of the community in developing this video library will create a good working partnership to improve the visitor experience.

Interpretive Exhibits and Tours. There is abundant space within the historic site that will be used for changing exhibits and presentations associated with historic site themes. Volunteer groups will be encouraged to bring to the historic site a wide variety of appropriate exhibits, audiovisual presentations, dramas, and other special events. Schools, universities, public agencies, private groups, and individuals could be encouraged through contests or perhaps some type of controlled advertising incentive program to participate in these efforts. This public involvement in the NPS interpretive program will strengthen ties between the historic site and community while providing both a creative and cost-effective means of improving interpretation.

The use of the casemates on the entrance levels of El Morro and San Cristóbal will be changed to improve the quality of the interpretive experience by separating those used for interpretation from those used for maintenance and administration. The uses of the casemates are now mixed, combining administrative functions with visitor use areas. This arrangement confuses visitors and detracts from the flow of the interpretive presentation. The forthcoming interpretive plan will recommend specific uses for the various casemates.



EL MORRO

PROPOSED ACTIONS
 PROVIDE NEW AUDIOVISUAL PRESENTATIONS
 REHABILITATE MUSEUM (SHORT TERM)
 DEVELOP NEW EXHIBITS (LONG TERM) - 16TH-20TH CENTURIES
 IMPROVE SELF-GUIDING TOURS
 INCREASE GUIDED TOURS
 OPEN SHORELINE INTERPRETIVE TRAIL
 CONTINUE SECONDARY MAINTENANCE STORAGE AND ADMINISTRATIVE OFFICES
 REHABILITATE EL MORRO LIGHTHOUSE
 ELIMINATE PARKING AREA AND CONVERT TO PARK-AND-RIDE STAGING AREA

INTERPRETIVE THEMES
 VERTICAL LEVELS OF DEFENSE
 DEFENSE AGAINST ATTACK FROM THE SEA
 HISTORICAL USE OF NAVIGATIONAL AIDS
 LIFE IN THE FORT

GENERAL INTERPRETIVE THEMES
 SAN JUAN'S STRATEGIC LOCATION—GATEWAY TO THE INDIES
 THE SPANISH EMPIRE—A MASTER PLAN FOR THE CARIBBEAN PUERTO RICO—THE SOCIETY AND ITS PEOPLE
 A WALLED CITY—AN EVOLUTION OF CONSTRUCTION THROUGH FOUR CENTURIES
 FORTIFICATION DEVELOPMENT SEQUENCE
 BUILDING DESIGN, TECHNOLOGY, AND MATERIALS
 THE ARCHITECTS, ENGINEERS, AND BUILDERS
 THE FORTIFICATIONS AND THEIR ROLE IN WORLD HISTORY
 CONFLICT BETWEEN THE ENGLISH AND THE SPANISH
 CONFLICT BETWEEN THE DUTCH AND THE SPANISH
 SPANISH AMERICAN WAR
 WORLD WAR I
 WORLD WAR II

SAN CRISTOBAL

PROPOSED ACTIONS—FORT
 PROVIDE NEW AUDIOVISUAL PRESENTATIONS
 DEVELOP NEW MUSEUM AREA AND EXHIBITS
 IMPROVE SELF-GUIDING TOURS
 INCREASE GUIDED TOURS
 DEVELOP BUILDINGS 208, 209, 210, 211, AND 213 FOR NPS
 MAINTENANCE, ADMINISTRATION, HOUSING, AND RESEARCH
 EXPAND MAINTENANCE AND ADMINISTRATIVE PARKING AT LA TRINIDAD MOAT
 OPEN HISTORIC TUNNEL TO CONNECT FORT AND OUTWORKS
 ELIMINATE PARKING AREAS AND CONVERT TO PARK-AND-RIDE STAGING AREA

PROPOSED ACTIONS—OUTWORKS
 ADAPTIVELY USE EL ABANICO GUARDHOUSE AS A VISITOR CONTACT CENTER / COMFORT STATION
 DEVELOP NEW OUTDOOR EXHIBITS
 ELIMINATE PARKING ON HILL OF THE THREE WISEMEN AND CONVERT TO GRASSY OPEN SPACE

INTERPRETIVE THEMES—FORT AND OUTWORKS
 DEFENSE IN DEPTH
 DEFENSE AGAINST ATTACK FROM THE LAND
 LIFE IN THE FORT

SAN CRISTOBAL OUTWORKS

- LA TRINIDAD BATTERY
- SAN CARLOS PAVELIN
- SANTA TERESA BASTION
- EL ABANICO GUARDHOUSE
- EL ABANICO
- LA PRINCESA BASTION
- HILL OF THE THREE WISEMEN

ESPLANADE

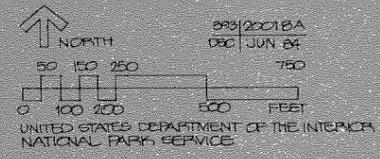
PROPOSED ACTIONS
 PROHIBIT VEHICLE ACCESS AND PARKING
 ALLOW CASUAL OUTDOOR RECREATIONAL ACTIVITIES

INTERPRETIVE THEMES
 OPEN SPACE AS A MEANS OF DEFENSE

WALLS AND BASTIONS

PROPOSED ACTIONS
 REHABILITATE LAS PALMAS BASTION; PROVIDE EXHIBIT INFORMATION KIOSK
 REHABILITATE SANTO TOMAS BASTION AS AN OPEN-SPACE PARK FOR LOCAL USE

INTERPRETIVE THEMES
 UNIFYING THE FORTIFICATIONS OF A CITY
 DEFENSE AGAINST ATTACK FROM BOTH THE SEA AND THE LAND



- SAN JUAN NATIONAL HISTORIC SITE BOUNDARY
- ← PRIMARY VISITOR ENTRANCE TO ESPLANADE
- PARK-AND-RIDE STAGING AREAS (PRIMARY)
- PARK-AND-RIDE STAGING AREAS (SECONDARY--WEEKEND USE ONLY)
- * PARK-AND-RIDE DROP-OFF LOCATIONS
- EXHIBIT INFORMATION KIOSKS
- SHORELINE INTERPRETIVE TRAILS
- ↓ FERRYBOAT SHUTTLE OPERATION TO EL CAÑUELO

PROPOSED ACTIONS AND INTERPRETIVE THEMES
 SAN JUAN NATIONAL HISTORIC SITE
 PUERTO RICO

The museum exhibits at El Morro are effective in presenting the themes of harbor defense, fort construction, and major events. Some minor improvements and rehabilitation work will be undertaken. An additional exhibit suggestion is to use different casemates to show the development and use of the fortifications over five centuries. Casemates could be used to highlight the construction, major events, and life in the fort for each century the fortification has been in place, thus reinforcing the film concept. Considering the broad range of possible theme topics, this concept would provide an ideal opportunity for changing exhibits. Specific exhibit designs and recommendations for new exhibits for both forts will be developed during the preparation of the interpretive plan.

The shoreline trail at El Morro (see Proposed Actions and Interpretive Themes map) will be reopened when visitor safety can be ensured. Guided interpretive tours will again provide visitors with a unique perspective of El Morro and its natural environs.

The ineffective museum exhibits at San Cristóbal will be replaced. The new exhibit room motif will convey an image of imperial Spain. Specific exhibit themes should place this fort in the context of the historical continuum, particularly the successive lines of fortification, known as the defense-in-depth concept. Secondary themes will portray the people who once worked and fought at San Cristóbal.

The San Cristóbal outworks will be opened to the public for the first time in 1984. This will provide additional interpretive opportunities for both residents and tourists to enjoy. Some passive leisure activities will be encouraged, but activities will be restricted to those that are compatible with the historic site's purpose.

A historic tunnel connecting the outworks and the fort proper will be opened to visitors when protection for resources and visitor safety can be ensured. This connection will provide a special interpretive experience for visitors, and it will allow them to see both areas of the fort without having to drive from one area to the other.

The adaptive restoration of the El Abanico guardhouse will continue. This building will be continuously staffed to provide information and orientation while the outworks are open to the public; comfort facilities will also be provided. The proposed bulletin board display will provide information and orientation, and a series of new outdoor exhibits will convey the interpretive message. Visitors will be able to easily grasp the idea of defense-in-depth and the purpose the fort served in protecting the city from land-based attacks as well as sea-based attacks. Other important themes relating to fortification features and major historic events will also broaden the appeal of the outworks.

Fortifications along the cliff escarpment (Santa Teresa and La Princesa bastions) will be viewed and interpreted from the central outworks to ensure visitor safety.

The significance and related themes associated with most of the walls and bastions will be presented in the interpretive film and publications for the historic site. With the exception of an information exhibit at Las Palmas Bastion, no formal onsite interpretive treatment is recommended.

Interpretive Ferryboat Shuttle (San Juan Bay and El Cañuelo). A new ferryboat shuttle operation will be proposed to take visitors on regularly scheduled tours from one of the piers in Old San Juan, along the southwest wall and in front of El Morro, and across the bay to El Cañuelo. For many visitors, including those in wheelchairs, this tour will be the only opportunity to see the walled city and the massive levels of El Morro from the unique perspective of the bay. Accompanied by a narrative explanation (in both English and Spanish), it will be an excellent opportunity for visitors to understand the fort's strategic location and the feeling of those men in ships who attempted to capture this fortress. The evolution of the other fortifications--La Fortaleza, San Juan Gate, and Casa Blanca--will also be related as part of the tour.

El Cañuelo will be stabilized and opened for visitors to explore. An exhibit will present the important role this small fortification played in supporting El Morro in the defense of San Juan Bay. The fort will be opened to the public only when personnel are available to staff a new visitor contact/comfort facility (approximately 700 sq ft) to be located adjacent to the site. While at El Cañuelo, visitors will be able to board a shuttle bus that will provide regularly scheduled trips for tours of the Bacardi plant (see "Access and Transportation" section). Visitors may also want to stay at El Cañuelo to enjoy picnicking, fishing, and other active and passive recreational activities provided at the adjacent Cabras Island commonwealth park.

Puerto Rico will be encouraged to open the site of the now abandoned leper colony located at the north end of Cabras Island. The ruins will undoubtedly stimulate the curiosity of a substantial number of visitors, easily justifying any associated costs for interpreting the site.

ACCESS AND TRANSPORTATION

Existing Conditions

Approximately 500,000 tourists arrive each year in Old San Juan by cruise ships, docking within 1 mile of El Morro. Approximately 2 million people arrive by air, and the international airport is 7 miles east of the historic site. Most of the hotels are located in Condado, between the airport and Old San Juan (see Vicinity map). Most of the tourists use taxis and tour vans to visit the old city and the historic site.

Old San Juan is served by various forms of public transportation, including the Metropolitan Bus Authority, "publico-cars" (privately operated automobiles), taxis, tourist vehicles, and a ferry system. All vehicular traffic enters Old San Juan from the east across three causeways along Avenida Muñoz Rivera. The bus lines now operate from the Plaza Colon terminal (about 2 blocks from San Cristóbal) and the Ochoa terminal (approximately 1 mile from El Morro). These terminals are to be replaced by one central bus/taxi terminal that is now under construction near the harbor (see Existing Access and Transportation map). Public buses provide access to these terminals, which are located along the periphery of the old city. The movement of public mass-transit vehicles within the city is restricted by narrow streets. School buses

and charter buses can reach both the entrance parking area at San Cristóbal and the El Morro parking area in parcel A by way of Calle Norzagaray.

Publico-cars provide sanctioned transit service within the entire San Juan metropolitan area. Some 12,000 such vehicles, using both fixed and random routes, constitute the major form of public transportation in Puerto Rico.

Because of the large concentration of tourists and commercial activity, taxis are found just about everywhere in Old San Juan. However, taxi stands are restricted to specific locations within the old city.

Although they are not legally considered as public transit vehicles, tour vans and minibuses provide charter services for sightseeing and passenger transfers between cruise ships, the airport, and hotels. These vehicles tend to congregate along the harbor front and at hotels.

The Cataño ferry system makes 50-60 trips daily from pier 2 in Old San Juan across the bay to Cataño. The ferry provides commuters with the most direct route between the old city and the western mainland portion of the metropolitan area. The low fare (25 cents) makes it an extremely reasonable transit option. The land approach by auto from Cataño to the old city is long and cumbersome, and if public transportation is used, one or more transfers must be made. The Cataño ferry also provides one bay tour (\$1.50 per person) every Sunday, allowing tourists and islanders to see El Morro from the bay.

Traffic in Old San Juan is heavily congested. The old city is Puerto Rico's political, commercial, and tourist center, and it is continuously packed with people and vehicles. Because automobiles are relied on almost exclusively for both public and private transportation, and because the streets are narrow and parking is limited, mobility within Old San Juan is a major problem for all who live in, work in, or visit the city. To help alleviate this problem, the Old San Juan Merchants' Association has recently developed a 1,200-capacity parking lot in the La Puntilla section of the city. In 1984 the association will begin operating a free shuttle between this parking lot and the main retail commercial center. If successful, the association will consider a southern extension of the shuttle to link the three major parking areas and the harbor area (see Existing Access and Transportation map).

Currently, there is no public transportation access to and from units of the historic site. Although the Plaza Colon bus terminal is only two blocks from San Cristóbal, visitors at San Cristóbal have no means of public transportation to El Morro or the other units. Likewise, no public transportation is available to El Morro, and visitors who reach El Morro have no means of public transportation to San Cristóbal. Tourists use taxis or charter vans almost exclusively for this 1½ mile trip between El Morro and San Cristóbal, and residents drive their private cars, adding to the existing congestion within the city and near the historic site. Taxis, charter vans, and private cars also provide the only means of access to El Cañuelo.

Island residents are accustomed to parking along the Esplanade roadways (approximately 110 parking spaces) and at the existing 40-car parking lot at the entrance to El Morro. These two areas now accommodate most weekday use. On weekends, especially Sundays, all parking spaces on the Esplanade may be filled from 10 a.m. through the afternoon. Even on weekends when parking on the Esplanade roadways is at capacity and parking at the El Morro lot flows over onto the lawn (up to 200 spaces), a continuous stream of traffic passes through the Esplanade and the El Morro parking area. The present parking situation on the Esplanade, along with the constant movement of taxis, publico-cars, vans, and school buses, creates a hazardous situation for children and adults trying to enjoy passive recreational activities on the Esplanade. This traffic and parking congestion also detracts from the historic scene.

The 17-space parking lot adjacent to the entrance ramp at San Cristóbal is the only designated public parking for the fort. All vehicles, including school buses, use this one small parking area. Although this parking area is adequate for most average weekday visitation (automobiles), any school bus parking disrupts and greatly limits parking opportunities for all other visitors. This parking lot reaches capacity on weekends by noon and remains at capacity most of the afternoon. When the parking lot is full, visitors must find parking along congested side streets near the fort.

Proposed Actions

Park-and-Ride Transit System. Only limited parking for handicapped visitors and administrative vehicles will be provided at El Morro and San Cristóbal. All other vehicle access to the Esplanade/El Morro complex (parcel A) and San Cristóbal will be eliminated (see "Visitor Support Facilities" section).

A proposed park-and-ride transit system will provide regularly scheduled service on weekdays and weekends at designated drop-offs at the San Cristóbal outworks, San Cristóbal fort, the Esplanade, and El Morro fort. This park-and-ride system will take advantage of the approximately 2,500 existing parking spaces already developed within Old San Juan. Designated pickup areas at selected parking locations within Old San Juan (possibly the La Puntilla parking area, garage 1, garage 2, the harbor terminals, the central bus/taxi center, and other appropriate centers) will provide tourists, residents, and school groups with a reliable means of access to the historic site (see Existing Access and Transportation map). On weekends the park-and-ride schedule and route may be expanded or adjusted to include the 1,000 additional existing and unused parking spaces associated with government facilities (the Capitol and Treasury Department buildings).

Promoting, developing, and implementing this park-and-ride system will require the cooperation, energy, and resources of the commonwealth and municipal governments, private enterprise, special interests, and individuals. When implemented, the park-and-ride system will eliminate traffic congestion within the Esplanade, and it should significantly reduce traffic congestion within all of Old San Juan, especially on streets

adjacent to the historic site. This proposal will also improve visitor safety, add to the quality of the historic scene, and eliminate the need to develop new parking areas within the historic site boundary.

To test the social, political, and economic feasibility of this park-and-ride concept, the following approach is recommended. A temporary, pilot park-and-ride system will be extensively promoted and implemented on a selected series of Sundays, using the existing resources of federal, commonwealth, and municipal agencies, private enterprises, and special interests. This pilot study will be designed to require a minimal expenditure of capital funds by using existing equipment. It is hoped that this study will provide the necessary information to determine whether the concept is economically feasible and acceptable to the public it would serve. If feasible and acceptable, the information would be used to develop future concession plans to establish the park-and-ride system on a permanent basis. If the system fails, then one of the other options described in the "Alternatives" section of this plan will have to be implemented.

San Juan Bay Ferryboat Tour. A new interpretive tour boat system operating from one of the piers along the harbor in Old San Juan will provide regularly scheduled trips across the bay to El Cañuelo. It is recommended that this tour boat system be operated by a concessioner. A 1983 NPS study estimates that to operate at an acceptable profit a tour boat would have to run six trips per day, 287 days per year, with an average of 25 passengers paying \$4.85 per round-trip. This estimate assumes that a new 52-passenger tour boat will cost \$250,000.

Although the study concludes that such a tour boat system is economically feasible and profitable, it also recognizes that a long-term successful operation may depend on a good marketing strategy and a tie-in with tours offered at the Bacardi rum plant. The Bacardi Corporation has shown an initial interest in subsidizing a land-based shuttle operation between El Cañuelo and the plant. A staging area for the proposed Bacardi shuttle, along with parking spaces for administrative vehicles, will be developed next to the proposed visitor information facility at El Cañuelo (see "Interpretation" section).

VISITOR PROTECTION

Existing Conditions

Crime has been a serious problem within the authorized boundary of San Juan National Historic Site. The number of reported incidents has steadily risen over the past several years: 16 in 1980, 44 in 1981, and 63 in 1982. These figures are considered to be conservative. A 1983 annual staff report estimated that the reported incidents represent only 25 percent of the actual incidents. Both the El Morro interpretive shoreline trail and the San Cristóbal outworks remain closed because the National Park Service cannot ensure visitor safety.

Visitor protection at the historic site now comes from three sources: park staff, municipal and commonwealth law enforcement officers (under

concurrent jurisdiction with NPS staff), and contract guards hired by the Park Service. These present efforts are ineffective and inadequate for the following reasons:

The present NPS staff is not large enough to effectively execute their assigned duties relating to interpretation and other visitor services as well as patrol park lands to provide visitor protection.

According to park staff reports, law enforcement assistance from the commonwealth and municipal police has not proved adequate in meeting visitor protection needs.

The present contract guards have no police powers, have limited training and experience in law enforcement, and are insufficient in numbers. They are principally charged with night watchmen duties and traffic control.

Present conditions within San Juan National Historic Site, especially at El Morro, the Esplanade, and San Cristóbal and its outworks, make it difficult to guarantee a safe and enjoyable experience for visitors, something they have come to expect in national parks.

Proposed Actions

The National Park Service will improve law enforcement capabilities, specifically at El Morro, the Esplanade, and San Cristóbal and its outworks. Personnel needs for protection will be evaluated and addressed through an NPS operations plan, which will be prepared after a general management plan has been approved. The operations plan, when approved, will be appended to the general management plan.

SPECIAL CONSIDERATIONS FOR HANDICAPPED VISITORS

Much of the main level of El Morro is accessible to handicapped visitors, giving them the opportunity to explore many of the casemates on this level. Improvements will be made on this level so that visitors will have easier access to the museum, several of the exhibit casemates, restrooms, and water fountains.

Because of its steep entrance ramp, San Cristóbal is inaccessible to handicapped visitors unless personal assistance is provided. The duties assigned to the contract guards will be expanded to include helping these visitors to and from the main level of the fort. Inside the fort, improvements will be made on the main level to provide easier access to the museum, restrooms, and water fountain.

At the San Cristóbal outworks, contract guards will also be required to help visitors negotiate the grade from the proposed park-and-ride staging/drop-off area at the south entrance to the main level. Once inside the outworks, a specially designed trail will be built to give handicapped visitors a chance to both enjoy the view and discover the purpose and events associated with this fortification.

El Cañuelo is not now accessible to the handicapped. Because of the fort's small size and remoteness, and because the necessary improvements may damage the historic fabric, this site will not be made accessible to the handicapped. The proposed visitor information center and associated restrooms adjacent to the fort, however, will be accessible to handicapped visitors.

Although wheelchair access to the upper and lower levels of El Morro and San Cristóbal is achievable and would be a worthwhile objective, it is impractical. Major modifications to both structures would be required, causing an unacceptable amount of damage or complete destruction of the original historic fabric. Visitors who are unable to reach the upper and lower levels of San Cristóbal now have the opportunity to view a brief slide/sound presentation of the levels they cannot reach. This type of audiovisual program will be expanded and presented at both forts, and it will be upgraded to a video cassette presentation. One casemate on the main level of each fort will be adapted for video presentations, providing all visitors with an alternative means of discovering the different levels of both forts and various theme topics.

VISITOR SUPPORT FACILITIES

Little new development is proposed for San Juan National Historic Site. Instead, preservation maintenance of existing structures will be emphasized, and existing structures will be adapted for necessary and compatible uses. (The current and proposed uses of all the structures within the site, and in parcels B and C, are listed in appendix F, along with the present administering agencies. The structures are also shown on the Existing Site map.) Maintenance work will primarily consist of repairing damage to exterior walls caused by weathering and vegetation that attaches itself to holes and cracks in the walls. (Maintenance proposals are further discussed in the "Cultural Resource Management" section.) Proposed new development is discussed below for each unit of the historic site.

EL MORRO

Existing Conditions

On the Esplanade an unlimited number of privately owned vehicles are allowed to park or drive through the grounds. On days with high visitation, such as on weekends, this results in slow-moving traffic, a continuous line of parked cars along the roadways, and hundreds of cars parked on the grass adjacent to the existing 40-space parking lot. Parking on the grass causes turf destruction and soil erosion, and it creates hazards for visitors. Furthermore, the overall situation impedes pedestrian movement, increases noise, contributes to air pollution, and intrudes on the historic scene.

Many visitors now park their cars along the entrance road, place blankets under trees along the roadway, and picnic. This has resulted in severe soil erosion and exposed tree roots immediately adjacent to the road. The problem is further compounded by sheet water flow from the road during rainstorms. Erosion around the sign for El Morro has resulted from heavy visitor use of the sign as a photographic subject.

Currently, there is no easy access to the lower east side of the Esplanade from the entrance gate and along most of the entrance road. Pedestrians must now walk down a steep slope to reach the flat area. In addition, erosional gullies occur at various spots on the Esplanade.

Proposed Actions

No new development is proposed for El Morro. However, new adaptive uses will be made of many of the interior rooms and casemates for visitor use and interpretation of the fort (see "Interpretation" section), and the parking area will be redesigned.

The existing parking area in front of El Morro will be reduced in size and redesigned to provide a park-and-ride staging/drop-off area and parking for 12 vehicles, eight for handicapped visitors and four for administrative

vehicles (see the Proposed Actions and Interpretive Themes map). The parking area will be designed for pedestrian convenience and safety and vehicle circulation. This new staging area will consist of pervious paving, which will be constructed of material such as Hastings Checker Blocks or Grasscrete to provide a hardened surface that will support vehicles while at the same time allowing grass to grow. This will provide an aesthetically pleasing appearance that will fit in well with the rest of the Esplanade.

Another park-and-ride staging/drop-off area will be developed adjacent to the Puerto Rico tourist center and will provide access to the southeastern portion of the Esplanade.

Puerto Rico will be responsible for the design and funding of these new staging areas, but in keeping with the 1976 cooperative agreement, the National Park Service will consult with Puerto Rico and provide any necessary technical assistance.

The straight entrance road leading to El Morro will be divided into two lanes--one for pedestrian use and the other for one-way vehicle use. Devices such as curbing and drainage culverts will be installed to control water run-off and erosion. The area beneath the trees on the north side of the entrance road will either be resodded or another surface material will be installed, allowing continued passive visitor uses, such as picnicking, while controlling surface erosion and protecting the existing trees.

The El Morro sign is well-located and will remain in place. However, its immediate area will be redesigned to make the site more suitable for picture taking and to control soil erosion. Erosional gullies on the Esplanade will be repaired, and pedestrian access will be provided near the entrance gate to the lower east portion of the Esplanade. These access improvements will be designed and funded by Puerto Rico, in consultation with the National Park Service. After these improvements have been completed, expenses for operation and maintenance will be borne by the Park Service, as stipulated in the 1976 cooperative agreement.

SAN CRISTÓBAL FORT AND OUTWORKS

Existing Conditions

Many of the casemates at San Cristóbal are currently used for NPS administrative functions, including the park's library and archives, interpretive exhibit storage, maintenance equipment storage, offices, and staff lounge. These casemates are now closed to public use.

The 15,992 square feet of office space under the earthworks in the moat between the fort proper and San Carlos Ravelin is now occupied by the Civil Defense Agency. Civil Defense staff use approximately 40 parking spaces in the moats next to the fort and the ravelin. Communication antennas belonging to the agency are currently on top of San Carlos Ravelin, causing a visual intrusion on the historic scene.

The 17-car parking lot at the entrance to San Cristóbal frequently fills, especially when buses are present, and many visitors are forced to find parking spaces outside the historic site.

The San Cristóbal outworks, including Santa Teresa Bastion, La Princesa Bastion, El Abanico, and the open space, are currently closed to the public. However, the bastions have recently been cleared of vegetation, selective cutting of existing coconut palm trees that intrude upon historic views has been completed, and the guardhouse adjacent to El Abanico is being reconditioned for use as a visitor contact station--all in preparation for being opened to public use. But no designated parking area now exists for future visitors.

The Hill of the Three Wisemen is currently administered by Puerto Rico. It is used for random parking, primarily by visitors to the Capitol building across the street (Avenida Muñoz Rivera). The unorganized parking has destroyed the lawn, resulting in severe soil erosion. The area is unsightly and is a visual intrusion on the historic scene.

Along the sidewalk on the east side of Calle Norzagaray overhead utility lines are strung on poles. They are within the boundary of the historic site and are a visual intrusion on the historic scene. Also, the poles impede pedestrian movement along the sidewalk.

Proposed Actions

No new development is proposed for the fort. However, many of the interior rooms and casemates will serve visitor use and interpretive functions (see "Interpretation" section). The Civil Defense Agency will be encouraged to move to a new location outside the national historic site as soon as possible. When this is accomplished, the communication antennas will be removed. The vacated office space will be used for the park library, collections storage, laboratories, and other NPS administrative functions. The new space is climate controlled and well suited for administrative needs. The vacated casemates will be opened for visitor use and interpretation. The parking spaces formerly used by Civil Defense staff will be used for NPS maintenance and administrative vehicles.

The existing parking area in front of San Cristóbal will be redesigned to provide a park-and-ride staging/drop-off area and parking for eight vehicles, six for handicapped visitors and two for administrative vehicles.

The San Cristóbal outworks will be opened to the public after the necessary archeological surveys and ongoing restoration work have been completed. The El Abanico guardhouse will be adaptively used as a visitor contact station, and toilet facilities will be provided. New underground power, water, and sewer lines will connect to commonwealth supplies. Existing paved roadways in the open green space will be replaced in some areas by grass, and in other areas by paved walkways that will be accessible to handicapped visitors and will also double as a service road. The existing paved turnout road and area south of El

Abanico entrance gate will be redesigned to provide a park-and-ride staging/drop-off area and seven parking spaces, five for handicapped visitors and two for administrative vehicles.

The National Park Service will encourage Puerto Rico to prohibit all vehicle parking on the Hill of the Three Wisemen and to maintain it as open space. The existing roadway to the top of the hill should be scarified, and the entire hill should be returned to a grassy condition to reestablish this site in its historical context as a glacis.

Selected utility poles along Calle Norzagaray will be removed in cooperation with and at the expense of the Electric Energy Authority and the Puerto Rico Telephone Company. The utility lines will be placed underground.

EL CAÑUELO

Existing Conditions

The ruins of El Cañuelo are less than 1 mile to the west of El Morro, across the inlet to the Bay of San Juan and on the southern tip of Cabras Island. The 80-foot-square stone fort is on 3.4 acres of land owned by the National Park Service and is within the boundary of the national historic site. The area is in the 100-year floodplain.

El Cañuelo is in a state of disrepair, and even recent efforts to stabilize the fort and site have fallen short of minimum preservation goals. It is now a safety hazard because people climb the walls and explore the interior. In doing so, they deface the walls by cutting footholds in the stone. Vegetation is growing on the fort's roof, and there is nothing to prevent people who climb onto the roof from falling into the rooms below. Unsupervised visitor use and the lack of security increase the chance of trespassers falling from the top of the fort and injuring themselves, and vandalism goes unchecked. The structure is further deteriorating through natural weathering. A toilet facility that is near the fort and within the historic site boundary does not meet NPS standards.

Adjacent to El Cañuelo is a 25-acre day-use park administered by the Puerto Rico Public Recreation and Park Administration. The park is used primarily for picnicking and other types of passive recreation, and it received more than 200,000 visitors in 1982. Public facilities at the park include picnic shelters and a basketball court.

Primary access to Cabras Island is by car over a causeway from the main island. A gate on the causeway is closed every night; however, private boats are allowed to land on the island. A boat dock in fairly good condition is located outside the historic site boundary, where the causeway meets the island.

Proposed Actions

The fort will be stabilized through a continuous maintenance program. The interior rooms and roof will be made accessible and presentable to the public, and barricades will be installed for safety. Vegetation growing on the structure will be removed, and access from the ground level will be developed. Interpretive exhibits will also be provided.

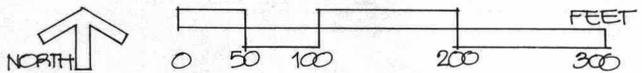
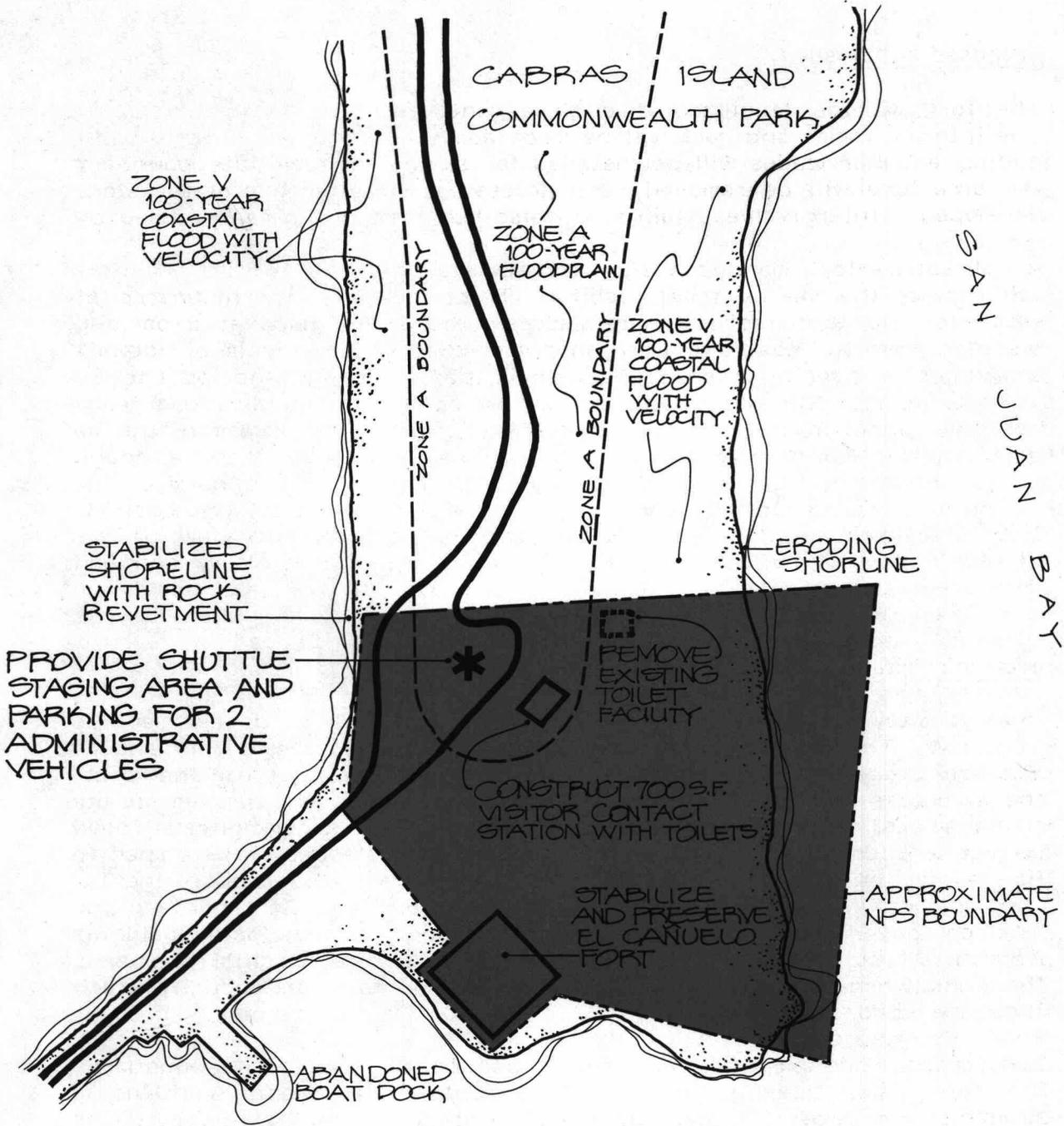
A 700-square-foot manned visitor contact station, with comfort facilities, will replace the nearby toilet facility. This contact station will be on the east side of the Cabras Island access road, approximately the same distance from the east and west shores of the island to minimize potential damage from flooding (see El Cañuelo Proposed Actions and Interpretive Themes map). The site will be chosen so as to destroy as few trees as possible, if any, while taking advantage of shade from the trees; it will be located on NPS land.

No options exist within the park for locating this facility outside the 100-year floodplain; options within 1 mile of the boundary are either extremely limited or unavailable. Any potential sites on Cabras Island that are within a reasonable distance of the historic fort are also within the 100-year floodplain. Moving this facility outside the 100-year floodplain would be impractical, would defeat the purpose of resource protection, and would greatly diminish the goal of bringing El Cañuelo into the mainstream of the interpretive effort at San Juan National Historic Site.

Because the visitor contact station will be within the 100-year floodplain, the structure will be designed to minimize possible storm damage (design methods are contained in the national flood insurance program's "Flood Management Criteria for Flood-Prone Areas," Code of Federal Regulations, title 44, sec. 60.3).

The contact station will be elevated on open works such as pilings because of its location in a floodplain. The lowest horizontal member of the structure will be no less than 5 feet above mean sea level, which is the base flood elevation as shown by the flood insurance rate map of the Federal Emergency Management Agency. It will be accessible to handicapped visitors, and entrances to the toilets will be from the outside. The structure will be designed to take advantage of cooling breezes, and it will be securable when not attended by NPS personnel. Power will come from existing municipal power lines less than 100 feet away. A commonwealth water line to the site already exists, but the pump-out septic tank at the existing toilet facility will need to be replaced.

A staging area for the proposed Bacardi Company shuttle and parking for two administrative vehicles will be constructed in an area adjacent to the visitor contact station. A turnaround for the shuttle will be incorporated into the design. The construction of the new facility and the shuttle staging area should be considered as a preliminary step toward a more comprehensive recreation planning effort sponsored by Puerto Rico for other sections of Cabras Island. Future plans should also include designs for interpreting the former leper colony on the north end of the island.



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UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

THEMES
 PROTECTION OF THE HARBOR
 ENTRANCE—A CROSS FIRE
 WITH EL MORRO
 PROTECTION OF EL MORRO'S
 FLANK POSITION AND
 SUPPLY ROUTES

ON MICROFILM

**EL CANUELO
 PROPOSED ACTIONS
 AND INTERPRETIVE THEMES
 SAN JUAN NATIONAL HISTORIC SITE
 PUERTO RICO**

WALLS AND BASTIONS

Existing Conditions

The walls and bastions located within the national historic site boundary are shown on the Existing Site map. Continuous maintenance of the stone walls by the National Park Service is required to repair damage caused by weathering and vegetation.

Santo Tomas Bastion is entirely within the boundary of the historic site, but it is in a state of disrepair and is now illegally used as a parking lot. To the east of the bastion and within the boundary is a sidewalk pedestrian park. It is shaded by trees and receives constant use by local residents. On the south side of the bastion a public road leads down from Boulevard del Valle, providing the primary access to the La Perla community. The road goes through the old city wall, and although the top of the wall forms a bridge over the road, the boundary of the historic site is not interrupted at this point. Like all of the bastions along the north wall, Santo Tomas affords an excellent view of the Atlantic Ocean, the north coast of Old San Juan, and El Morro and San Cristóbal in the distance.

Proposed Actions

Santo Tomas Bastion is the only location where new development is proposed. This bastion will be designed for pedestrian use only and to take advantage of the excellent views to the west, north, and east. Vehicle access will be prohibited. Use of Santo Tomas will complement the use of the adjacent sidewalk park, helping to fulfill a demonstrated need for public open space in the area. Although the bastion will be open to the general public, use is expected to be primarily by local residents. The bastion will be developed through a cooperative effort between the municipal government and the National Park Service. The municipality is preparing design drawings and specifications, subject to NPS approval. The Park Service has already programmed funds for construction, which is scheduled for 1984.

Half of Las Animas Bastion is within the national historic site boundary. The other half belongs to the U.S. Coast Guard and contains a communication tower and associated utility building. In the future, if the communication facilities are no longer needed, the National Park Service will acquire the land and convert the entire bastion into a pedestrian space.

San Sebastian Bastion is entirely within the national historic site and affords a spectacular view of the north wall of San Cristóbal and the rampart leading up to it. This view will remain intact, and nothing will be developed or allowed to occur on the bastion or the fort's embankment to adversely affect it. Because of its proximity to San Cristóbal, the bastion is a popular stop for many visitors. The bastion is covered by grass and is popular with local residents for passive recreation, especially in the evening. This use will continue.

Three bastions in parcel A--Santa Rosa, San Antonio, and San Fernando--are within the national historic site. They have no structures on them, are grassed over, and are extensions of the Esplanade. They will remain as open space for passive recreational use by visitors to the national historic site.

Las Palmas Bastion, also within the national historic site, has been converted to a pedestrian park with pavement, benches, trees, and waste receptacles. An exhibit information display will be located here (see "Interpretation" section). Maintenance will continue to be the responsibility of the National Park Service.

PARK OPERATIONS

ADMINISTRATION

Present administrative offices for the national historic site are located in casemates at San Cristóbal. Some of the administrative functions, such as the superintendent's and staff offices, will be moved to buildings 208 and 209, which are being restored for this purpose. Maintenance, carpentry, and paint shops, as well as storage space, will also be located in these buildings. Other functions, such as the library, archives, and laboratories, will be relocated to building 213 as soon as it is vacated by the Civil Defense Agency. Additional maintenance shops and storage space will continue to be located at El Morro. One of the casemates at El Morro will also continue to be used as a staff office.

STAFFING

Existing staffing levels for the national historic site are shown in appendix G. Specific staffing requirements necessary to implement this plan will be evaluated and addressed through the NPS operations plan, which will be prepared after the general management plan has been approved. The approved operations plan will be appended to the general management plan. Operating costs are presented in the "Plan Implementation" section.

STAFF HOUSING

Staff housing will continue to be located in buildings 210 and 211. This will be considered as required occupancy for the superintendent, assistant superintendent, chief of visitor services, and the facility manager to minimize response times for onsite emergencies. Occupancy will also help ensure that the structures are regularly maintained.

ENTRANCE FEES

The establishment of visitor entrance fees was considered to help defray operating costs. However, it was decided not to institute entrance fees at this time.

The majority of site visitors are local Puerto Ricans, many of whom are repeat visitors. For local residents, the visit is viewed as an inexpensive opportunity for a recreational and educational family outing in a place that inspires much national pride. The improved interpretive program proposed in this plan will provide better opportunities than now to learn about the history of the fortifications. The National Park Service wants to keep the site as a museum and a monument to the Spanish explorers of the New World, and to keep it free and open to all people. To impose an entrance fee would create a hardship for many visitors, and it would certainly reduce the number of visits, especially repeat visits by local residents.

NATURAL RESOURCE MANAGEMENT

San Juan National Historic Site was established "to preserve for the public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States." Thus, the two primary reasons for establishing the site were preservation of historic resources and visitor use. The site's natural resources, therefore, will be managed so as to enhance the historic resources and the visitor experience.

Because of the relatively small size of the national historic site and its urban setting, no action plans, such as fire management or feral animal control, are needed. Natural resource management will be primarily to maintain the grounds and the natural foundations on which the fortifications rest, and to remove vegetation from masonry surfaces.

GEOLOGY

The islet of San Juan, on which the national historic site is located, is composed of a series of cemented sand dunes rising more than 80 feet above sea level on a limestone reef formation. The cemented dunes, eolianite, were formed more than 25,000 years ago of beach sand blown by the wind into high dunes and then cemented by calcium carbonate derived in part from seawater solution, and in part from the reprecipitation of the calcium carbonate originally in the sand. El Morro, San Cristóbal, and the walls and bastions were all integral extensions of the naturally existing cliffs, and the man-made fortifications are superstructures on an eolianite foundation. However, over the years the shoreline has receded, and the foundation has eroded because of weathering and wave action to the point that caves have formed, which threaten the collapse of the fortifications. This threat presents the greatest danger to the national historic site.

To protect and preserve the fortifications, the National Park Service has undertaken about \$12 million worth of foundation stabilization work through a series of contracts administered by the Corps of Engineers. An estimated \$18 million of additional work will be needed to complete all necessary stabilization. Work that is being completed includes protection of the wall foundation from San Juan Gate to Santa Elena Bastion, Santa Elena Bastion, El Morro's north slope and wall, San Cristóbal, Devil's Sentry Box, Santa Teresa Bastion, and La Princesa Bastion. Work that is underway includes protection of the eroding shore between the Santa Elena Bastion and El Morro's west wall (highest priority), the Casa Rosa scarp, San Fernando Bastion, El Morro's west wall, San Sebastian Bastion, and El Morro's point, north shore, and west shore. Additional work will be done on the Devil's Sentry Box and El Morro's north wall.

At El Cañuelo, the 3.4 acres of NPS land is less than 5 feet above sea level. The eastern shore of the southern end of Cabras Island has eroded more than 100 feet in the last decade. If this erosion continues, the fort will be threatened, and the commonwealth public park adjacent to the site will lose valuable recreation land. The Corps of Engineers is

studying the erosional problem and will recommend alternatives for protecting the site. Because the threatened area is under the jurisdiction of both the National Park Service and Puerto Rico, it is suggested that erosion control plans be given cooperative support by both parties.

PLANT LIFE

To the uneducated eye, there appears to be little variety of plant life at the national historic site. Readily apparent are the coconut palms on the Esplanade, at the San Cristóbal outworks, and at El Cañuelo; Australian pines line the road on the Esplanade; sea grapes grow near the edges of the cliffs; and the open grounds are covered with grass. According to a study done in 1983 by the Puerto Rico Department of Natural Resources, however, 120 plant species are found in the vicinity of the two major forts. Of these, 110 are found at El Morro, 93 at San Cristóbal, and 83 are common to both forts.

The Esplanade--the open area forming the land approach to El Morro--is a highly significant part of the historic scene. The expanse was purposely kept clear of vegetation so that any enemy approach could be readily detected and dealt with. As a consequence, the open character of the land is just as much a part of the defense concept as are the walls of El Morro themselves. In more modern times, changes have occurred on the Esplanade: The terrain has been leveled; various buildings, a swimming pool, and a golf course were constructed and then removed; roads were built; and exotic trees were planted.

The Esplanade will be managed as an open space. Nothing will be planted that would tend to intrude on the views from El Morro. The grassy lawn will be maintained. The existing trees will also be maintained, even though they are out of place with the original historic context of the scene, because they provide welcome shade for visitors. However, they will not be replaced when they die.

The open area in the San Cristóbal outworks and the Hill of the Three Wisemen were also historically kept as open space for military reasons, just as the Esplanade was. Recently, selected coconut palm trees were removed to open up the view from San Cristóbal to the east and to open up the view of the fort from Avenida Muñoz Rivera, the major approach road to Old San Juan. This view will remain open, and no trees will be allowed to obscure it. The few remaining palms were left to provide shade for people who will visit this historic area when it is opened to the public. The lawn will be maintained. Similarly, on the Hill of the Three Wisemen, vegetation should not be allowed to obscure the eastward view from El Abanico or San Cristóbal.

On the cliff side between Santa Teresa and La Princesa bastions, and in other areas of the national historic site, exotics such as sword plant are firmly established and will be retained. The plants are effective in controlling erosion because of their root systems; they inhibit unauthorized visitor access because of their densities; and they are not damaging historic resources or intruding on the historic scene. However, if vegetation such as the sea grape grows tall enough to intrude on the historic scene, it will be pruned.

At El Cañuelo, the existing trees do not interfere with any of the historic views of the water approaches to San Juan Bay. Because the trees provide valuable shade for visitors, which is especially important adjacent to a recreational park, the trees will be retained and replaced when they die.

A continuing problem, and the most expensive in terms of annual maintenance costs, is the growth of vegetation on the fortification walls. Plants invade the cracks and crevices caused by natural weathering. Root expansion in turn causes greater degradation of the masonry. The plants are not necessarily exotics; however, they are damaging the historic resources and will continue to be removed. Future methods of removal may include mechanical means and the use of herbicides approved by the National Park Service and the Environmental Protection Agency. If herbicides are used, they will be applied by specially trained personnel to ensure their safe and proper use.

Detailed methods of vegetation control will be contained in the historic structure preservation guides (see "Cultural Resource Management" section).

BIRD LIFE

Bird species represent the greatest variety of fauna at the national historic site, as well as on the rest of Puerto Rico. Birds are plentiful and include both resident and migratory species, along with many colorful land birds and a number of sea and shore birds. Birds found in the vicinity of the national historic site include doves, parakeets, sparrows, swallows, and mockingbirds. Numerous birds nest at El Morro and San Cristóbal. Migratory birds are observed primarily between November and April.

During a recent three-year period, the Puerto Rico Department of Natural Resources observed 27 species of birds at El Morro. The department thinks a similar number of birds are found at San Cristóbal because the two forts are physically so similar and so close. No specific management proposals are being made for birds or other fauna at the national historic site, other than to allow them to live naturally in their habitats as they are now doing.

ENDANGERED SPECIES

The arctic peregrine falcon (Falco peregrinus tundrius) and the brown pelican (Pelicanus occidentalis) are the only endangered species seen at San Juan National Historic Site. Peregrine falcons seasonally migrate through the area and brown pelicans are often sighted in the air or roosting along the shoreline. The actions proposed in this plan pose no threat to either species. No locally or nationally listed threatened or endangered species of plants or animals are known to inhabit the national historic site. Therefore, no related management actions are proposed. (See appendix H for compliance letters relating to endangered or threatened species in Puerto Rico.)

FLOODPLAINS AND WETLANDS

As previously mentioned, the primary fortifications of San Juan National Historic Site are located on a rocky promontory more than 80 feet above mean sea level, with the Atlantic Ocean on one side and San Juan Bay on the other. The smaller El Cañuelo fort was originally constructed on a tiny island that was later connected to Cabras Island by fill. Here, the 3.4-acre tract of NPS land is less than 5 feet above mean sea level.

The primary fortifications on the rocky promontory are located in an area of minimal flooding (zone C), as indicated on the flood insurance rate map published by the Federal Emergency Management Agency. In those areas where the national historic site boundary includes the shoreline, the immediate coast is in an area susceptible to 100-year floods (zone A), except for the northwest tip of El Morro, where the immediate coast is identified as being in an area susceptible to 100-year coastal floods with velocity (zone V). No action is proposed in the floodplain (zone A or V), other than shoreline and foundation stabilization.

The 3.4-acre El Cañuelo tract is located primarily in zone V, with a small section in zone A (see the El Cañuelo Proposed Actions and Interpretive Themes map). Proposed development, which includes a staging area, two administrative parking spaces, and a 700-square-foot visitor contact station with toilets will have no adverse impact on the floodplain. Both the staging area and the contact station will be located in zone A. In conformance with the standards and criteria of the national flood insurance program (44 CFR 60), the contact station will be elevated on open works, and the lowest horizontal member of the structure will be no lower than the base flood elevation, which is 5 feet above mean sea level.

In case of a hurricane emergency and danger of flooding, the site will be closed to visitor use well in advance of a dangerous situation. This is in accordance with the early warning and evacuation procedures described in the existing hurricane plan for the national historic site.

The visitor contact station will meet the minimum needs for visitor use and park management at El Cañuelo. It will be in a location least likely to be affected by the actions of coastal storms and flooding. A statement of findings documenting the rationale for new construction and continued occupation in a floodplain will accompany the decision document for the general management plan, as required by the NPS guidelines for compliance with Executive Order 11988.

No wetlands are located within the national historic site.

CLIMATE AND STORMS

The climate of San Juan is relatively mild and pleasant year around. Average temperatures vary from 80° F. in January and February to 85° or 87° from June through October. However, high humidity often necessitates the need for air conditioning. Annual rainfall averages 60 inches. March is the driest month (2.1 inches), and May is the wettest (7.2 inches).

Prevailing winds are from the east. Land and sea breezes modify the easterly trade winds so that winds at San Juan generally shift from southeasterly in the early mornings to northeasterly in the afternoons and evenings.

Tropical storms, or hurricanes, are the principal destructive weather threat to San Juan National Historic Site. Storms can vary from severe thunderstorms to major hurricanes. The recognized hurricane season is from June 1 to November 30, with most storms occurring from mid August to mid October. Wind velocities of hurricanes vary from 75 to 150 miles per hour, with gusts up to 200 miles per hour. Hurricanes are accompanied by destructive waves and torrential rains, which cause flooding.

Because the primary fortifications are well above sea level, flooding and damage caused by wave action are not problems. However, the low topography at El Cañuelo results in damage from flooding and wave action, as well as from high winds.

The NPS hurricane plan will be followed in case of a major storm. The plan assigns responsibilities to NPS staff members for preparing structures and equipment for the onslaught of a hurricane, and it assigns responsibility for the notification and evacuation of visitors.

AIR AND WATER QUALITY

San Juan National Historic Site is designated as a class II area for the prevention of significant deterioration, under the 1977 amendments to the Clean Air Act. Industrial pollution is severe in the town of Cataño, across the bay to the south of Old San Juan. The Cataño air basin is currently classified as a nonattainment area for particulate matter, which means that measured concentrations exceed the amount allowed by the federal national ambient air quality standards. Because of the prevailing easterly winds, however, the historic site is not significantly affected by the Cataño air basin and is considered an attainment area for particulate matter.

Heavy automobile traffic on the Esplanade and at San Cristóbal on weekends and holidays contributes to air pollution. This source of pollution will be alleviated by eliminating traffic.

The prevailing easterly winds are heavily salt-laden because of the ocean. This causes severe corrosion to metalwork at the historic site, a factor that must be considered in the design of new structures and in the maintenance of existing ones.

The waters of San Juan Bay are polluted and unsuitable for water contact sports. However, fishing is allowed from the walkway that runs along the base of the wall to the northwest of San Juan Gate. Although it will not be encouraged, and no lifeguard will be provided by the Park Service, wading will be allowed at El Cañuelo.

PLAN IMPLEMENTATION

Estimated costs and priorities for the proposed plan are shown in table 1. The subject headings are arranged according to the plan outline and do not reflect a priority sequence; that will be decided by NPS management through the programming process. Priorities are referenced within each category; however, it is assumed that priority proposals in various categories can be programmed concurrently to provide a logical implementation sequence. The total annual operating cost is shown in table 2.

Specific segments of the interpretive proposal will be implemented by the Harpers Ferry Center of the National Park Service. The approximate cost of implementing these interpretive segments is estimated to be \$160,000. Interpretive facilities and media costs will be described in more detail in the forthcoming interpretive plan.

Table 1: Costs and Priorities for Proposed Actions
(1984 gross dollars)

Priority	Proposal	Costs
<u>Cultural Resource Management</u>		
1	Historic resource study and historic structure preservation guides*	
	Historic resource study	\$ 100,000 - 125,000**
	Individual historic structure preservation guides	
	A. El Morro	300,000 - 375,000
	B. San Cristóbal	60,000 - 135,000
	C. San Cristóbal outworks	40,000 - 65,000
	D. Walls/bastions	100,000 - 130,000
2	Stabilization/preservation of El Cañuelo	1,000,000***
3	Stabilization/preservation of El Morro lighthouse	45,000
4	Collections preservation guide	25,000
	Total	\$1,670,000 - 1,900,000

*Ideally, analysis and evaluation should be conducted for all the major components at the same time; however, if this is precluded by budgetary constraints, the work should proceed in the order designated above.

**The higher estimate is provided in case any in-depth research investigation is required.

***Because El Cañuelo is a detached unit, the costs include not only costs for stabilization/preservation work but also for development of the historic structure preservation guide and approximately \$300,000 for shoreline stabilization around the site.

<u>Priority</u>	<u>Proposal</u>	<u>Costs</u>
<u>Visitor Use--Interpretation</u>		
1	Interpretive plan	To be prepared by Southeast Regional Office
2	Outreach/previsit information system: videotape program exhibit information system	\$ 50,000 50,000
3	Park folder	Harpers Ferry Center folder funding
4	Self-guiding brochure(s) for El Morro and San Cristóbal	*
5	Bulletin board displays for El Morro and San Cristóbal	5,000
6	New San Cristóbal museum exhibit	**
7	Rehabilitation of El Morro museum exhibits	**
8	El Morro casemate exhibits (exhibits specific to each of the five centuries represented)	**
9	San Cristóbal outworks wayside exhibits	35,000
10	El Cañuelo exhibit treatment	<u>20,000</u>
	Total	\$160,000

Visitor Use--Access and Transportation

1	Pilot park-and-ride system (a temporary mass transit system connecting existing parking garages and lots in Old San Juan with El Morro and San Cristóbal on a series of selected Sundays to determine feasibility)	a
2	Permanent daily park-and-ride system	b
3	Interpretive ferryboat shuttle system from Old San Juan to El Cañuelo, plus associated ground shuttle transportation between El Cañuelo and the Bacardi plant (concession operations would be feasible and profitable--NPS "Concessions Report," November 1983)	b

*Annual park operating budget.

**Proposals and costs to be developed in the interpretive plan.

<u>Priority</u>	<u>Proposal</u>	<u>Costs</u>
<u>Visitor Support Facilities</u>		
<u>Esplanade (Parcel A)</u>		
1	Reduction of El Morro parking area and redesign as a park-and-ride staging/drop-off area and a 12-space parking area (8 for handicapped visitors and 4 for administrative vehicles)	(\$ 15,000) ^c
2	Creation of pedestrian lane on entrance road to El Morro; surface drainage control on entrance road; surface treatment of area beneath trees along entrance road; aesthetic treatment of area surrounding El Morro sign; repair of erosional gullies on Esplanade	(100,000) ^c
3	Pedestrian access to lower east portion of Esplanade	(27,000) ^c
	Total	(\$139,000) ^c
<u>San Cristóbal Fort and Outworks</u>		
1	Redesign of San Cristóbal parking area (entrance ramp) as a park-and-ride staging/drop-off area and a 7-space parking area (5 for handicapped visitors and 2 for administrative vehicles)	\$ 3,000
2	Redesign of the existing asphalt parking area and entrance road at the south gate entrance to the outworks (now closed to the public) for a park-and-ride staging/drop-off area and 7-space parking area (5 for handicapped visitors and 2 for administrative vehicles)	10,000
3	Restoration of the outworks and grounds; relocation of security fence; scarification of existing driveway	d
4	Removal of selected utility poles on Calle Norzagaray	e
	Total	\$13,000

<u>Priority</u>	<u>Proposal</u>	<u>Costs</u>
	<u>El Cañuelo</u>	
1	Visitor contact station (700-sq-ft elevated building with access for handicapped visitors)	\$187,000
	Demolition of existing 200-sq-ft toilet facility and site restoration	3,000
	Underground electric and telephone lines	2,000
	Water connection	3,000
	Septic tank	10,000
2	Asphalt staging area for land-based shuttle to Bacardi plant and parking for two administrative vehicles	<u>15,000</u>
	Total	\$220,000

Summary

Cultural Resource Management	\$1,670,000 - 1,900,000
Visitor Use--Interpretation	160,000
Visitor Use--Access and Transportation	a,b
Visitor Support Facilities	
Esplanade (Parcel A)	(139,000) ^c
San Cristóbal Fort and Outworks	13,000
El Cañuelo	<u>220,000</u>
Grand Total	\$2,063,000 - 2,293,000

-
- a. The cost to be shared by Puerto Rico and the National Park Service (cost to be determined).
 - b. Self-supporting concession operation.
 - c. In accordance with the 1976 cooperative agreement regarding capital improvements on the Esplanade (parcel A), these costs will be paid by Puerto Rico. They are not included in the total development cost.
 - d. These are items that will be funded through the annual park operating budget and the annual cyclic maintenance budget for rehabilitation, restoration, or replacement.
 - e. The cost for this item will be shared by the Electric Energy Authority and the National Park Service through its annual operating funds.

Table 2: Annual Operating Costs to Implement Plan
(1984 dollars)

<u>Nonstaffing Requirements (equipment, vehicle rentals, supplies, utilities, studies, contracts, etc.)</u>	
Management and administration	\$ 12,000
Interpretation	12,000
Visitor protection	100,400
Maintenance	<u>86,600</u>
Subtotal	\$211,000
 <u>Capital Equipment Costs</u>	
Maintenance	\$ 15,000
 <u>Other</u>	
Quarters	<u>\$ 10,500</u>
Total	\$236,500*

*Excludes staffing costs.

COOPERATIVE AGREEMENTS

1976 COOPERATIVE AGREEMENT (SEE APPENDIX D)

Both the National Park Service and Puerto Rico will continue relations on a good-neighbor basis, with consultations on matters pertaining to the historic site and parcels A, B, and C. Both parties have an immediate concern to allow adaptive use of structures in parcel C that will result in preservation maintenance and the halting of deterioration (primarily of the Ballajá and Beneficencia buildings). To accomplish this, the National Park Service proposes that the 1976 cooperative agreement be amended to allow for compatible commercial development of structures in parcel C where appropriate. Such an amendment, coupled with lease restrictions to prevent undesirable treatment to the exteriors and grounds, will help ensure the preservation of these historic structures. Appropriate tax incentives will be necessary to make commercial development economically feasible.

This plan also recommends that article III.e. of the 1976 agreement (to establish a joint Puerto Rican/NPS visitor center) be deleted. The Park Service will provide adequate interpretation of the historic site in consultation with Puerto Rico. A combined interpretive center would be too costly and the benefits few.

COOPERATIVE AGREEMENTS OR CONSULTATION NECESSARY FOR PLAN PROPOSALS

Implementation of the following proposals will require future cooperation and consultation with Puerto Rico and other selected interests:

- establishment of a pilot park-and-ride transit system to determine long-range feasibility

- establishment of a permanent park-and-ride system through a concession operation

- elimination of the El Morro parking area and its redesign as a park-and-ride staging/drop-off area

- inclusion of existing parking garages and lots (both public and governmental parking areas) as part of the park-and-ride system

- elimination of access and parking along the Esplanade roadways

- establishment of an interpretive ferryboat shuttle from Old San Juan to El Cañuelo and a land shuttle from El Cañuelo to the Bacardi plant

ALTERNATIVES AND ENVIRONMENTAL CONSEQUENCES

ALTERNATIVES

In addition to the proposed plan, a no-action alternative and a minimum services alternative were considered. These alternatives are summarized in table 3. Various options for certain elements of the proposed plan were also considered, and these too are described in the table.

The no-action alternative would continue existing policies for the preservation of historic structures. Procedures and methods for preservation maintenance would not be standardized, and no systematic historical research would be conducted. El Cañuelo would remain closed to the public. Existing means of access to the various parts of the historic site would continue.

The minimum service alternative would consist of the basic actions needed to ensure the preservation of the site's historic significance. Cultural resources would be preserved as described under the proposed plan; however, El Cañuelo would not be opened to the public. Visitor access would be the same as the proposed plan.

Options for cultural resource management that were considered include restoring various historic structures to specific time periods, based on an extensive research effort, and transferring ownership of El Cañuelo to Puerto Rico. Visitor access options for El Morro included (1) redesigning the El Morro parking area to accommodate 300 vehicles; (2) redesigning the area to improve circulation, maintaining the size of the parking area, and providing an interpretive shuttle from La Puntilla to El Morro; and (3) encouraging Puerto Rico to build a 400-600 vehicle parking garage east of the Rodriguez Army Hospital, with a visitor shuttle to El Morro. Visitor access options for San Cristóbal included (1) retaining the existing parking area near the entrance ramp and opening the existing outworks parking area; and through cooperative agreements with Puerto Rico, allowing visitors to use 250 existing parking spaces near the Capitol; and (2) developing a 20-space parking area at San Sebastian Bastion and a 50-space parking area at the Hill of the Three Wisemen.

Table 3: Summary of the Proposed Plan and Alternatives

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>
Preservation Philosophy (El Morro, San Cristóbal, San Cristóbal outworks, and walls and bastions)	<p>Establish a long-range preservation philosophy to direct management and protection of cultural resources by</p> <ul style="list-style-type: none"> prohibiting any arbitrary alteration, restoration, or removal of historic fabric preserving all historic structures in place developing comprehensive historic structure preservation guides allowing reconstruction only as authorized by the preservation guides initiating research to support the preparation of the preservation guides and other critical management and interpretive needs 	<p>Continue to allow arbitrary alteration, restoration, and removal of historic fabric.</p> <p>Continue existing maintenance program without benefit of standardized procedures and methods.</p> <p>Conduct no systematic historic research.</p>	Same as proposed plan.	<p>Establish a long-range preservation philosophy by</p> <ul style="list-style-type: none"> altering the historic fabric as necessary to restore various historic structures to a designated period or periods developing a comprehensive preservation guide implementing an extensive research effort to support restoration
El Morro Lighthouse	Retain operating lighthouse at its present location; rehabilitate as necessary to ensure preservation and visitor safety.	Retain operating lighthouse in present location; provide no maintenance or rehabilitation.	Same as proposed plan.	Restore operating lighthouse to reflect a specific historic period (restoration and reconstruction); conduct research necessary to support action.
El Cañuelo	Stabilize and rehabilitate the fort for visitor use; institute ferry service from Old San Juan to the fort. Develop a small visitor contact and restroom facility, plus a small parking area, near the fort; provide staff when the fort is open to the public. Encourage Bacardi Company to develop a regular shuttle between El Cañuelo and the Bacardi plant.	Continue to keep fort closed to public use and provide no preservation or maintenance.	Establish an adequate stabilization and maintenance program, but keep this fort closed to public use.	Transfer El Cañuelo fee title to Puerto Rico.
Civil Defense Agency	Encourage Civil Defense Agency to move outside the historic site as soon as possible and remove communication antennas. Use climate-controlled building space for NPS library, archives and collection storage, maintenance storage, staff offices, and research space.	Allow Civil Defense Agency and communication towers to remain.	Same as proposed plan.	

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>
Visitor Protection	Increase number of law enforcement rangers to ensure adequate visitor protection.	Continue existing protection services.	Same as proposed plan.	Establish a unit of U.S. Park Police.		
Visitor Access to El Morro	Develop a reliable park-and-ride system to provide mass-transit service to El Morro, Esplanade, and San Cristóbal and its outworks from existing designated parking lots, garages, and other major collection points in Old San Juan. Prohibit access by private cars, chartered vehicles, and school buses to the Esplanade and El Morro complex on both weekdays and weekends. Convert the existing El Morro parking area into open space except for a park-and-ride staging area and limited parking for handicapped visitors and administrative vehicles.	Allow parking to continue along all roadways on the Esplanade. Maintain existing 40-car El Morro parking area. Allow unlimited vehicular access to Esplanade.	Same as proposed plan.	Prohibit all parking along roads within the Esplanade. Redesign and expand the El Morro parking area to accommodate approximately 300 parking spaces and a drop-off zone. Allow parking for chartered vehicles, handicapped visitors, private autos, and administrative vehicles at El Morro on both weekdays and weekends. When the parking area at El Morro is at capacity, institute a controlled vehicle access system.	Prohibit all parking along roads within the Esplanade. Redesign existing El Morro parking area to improve circulation but maintain existing size. Allow parking only for chartered vehicles, handicapped visitors, and administrative vehicles at El Morro parking area. Encourage all private automobiles and school buses to park at La Puntilla parking lot, and develop an interpretive shuttle (separate from the Old San Juan merchants' shuttle but in cooperation with the merchants' association) from La Puntilla parking lot to the El Morro parking area.	Prohibit all parking along roads within the Esplanade. Redesign the existing El Morro parking area to improve circulation but maintain existing size. Allow parking only for school buses, handicapped visitors, and administrative vehicles at El Morro parking area. Encourage Puerto Rico to implement their plan for a 400-600 car parking garage and staging area in parcel C (east of the Rodriguez Army Hospital). Develop a shuttle system from the parking garage to the El Morro parking area. Encourage expansion of Old San Juan merchants' shuttle to include El Morro.
Visitor Access to San Cristóbal and the Outworks	Develop a reliable park-and-ride system to provide mass-transit service to San Cristóbal and its outworks, the Esplanade, and El Morro from existing designated parking lots, garages, and other major collection points in Old San Juan. Prohibit access by private cars, chartered vehicles, and school buses at the San Cristóbal complex on weekdays and weekends. Convert the parking area at the San Cristóbal ramp to a park-and-ride staging area with limited parking for handicapped visitors and administrative vehicles. Also open and develop the south gate parking area as a staging area. Encourage Puerto Rico to prohibit all parking on the Hill of the Three Wisemen and to convert to grassy open space.	Provide only the existing 17 parking spaces at the entrance to San Cristóbal along Calle Norzagaray.	Retain existing 17-space parking area at entrance to San Cristóbal along Calle Norzagaray. Develop a 20-space parking area directly adjacent to the south entrance of San Cristóbal outworks.	Retain existing 17-space parking area at entrance to San Cristóbal along Calle Norzagaray, with overflow parking at San Sebastian Bastion. Transfer the Hill of the Three Wisemen to the National Park Service through exchange; develop as a parking area for the outworks, providing 50 spaces.		Encourage expansion of Old San Juan merchants' shuttle to include San Cristóbal.

ENVIRONMENTAL CONSEQUENCES

The most significant impacts of the proposed plan would be on cultural resources and the visitor experience. Implementation of the proposed plan would ensure the long-term preservation of the cultural resources of San Juan National Historic Site. Preservation and maintenance actions would be undertaken in a systematic and comprehensive fashion. The physical appearance of the historic structures would not be changed, and there would be little or no alteration of the historic fabric. Detailed research efforts that would be undertaken to develop historic structure preservation guides would provide the information needed for the most effective maintenance, and the guides would help ensure continuity and consistency in the overall maintenance program.

The biggest impact on the visitor experience under the proposed plan would be the change in traditional use patterns of the Esplanade. Prohibiting access to the Esplanade and El Morro complex by private cars, chartered vehicles, and school buses, in conjunction with the development of a park-and-ride system to facilitate visitor access, would reduce traffic congestion on the Esplanade, improve visitor safety, and enhance the historic scene.

The interpretive experience for first-time visitors as well as repeat visitors would be improved by focusing on themes relating the development of the fortifications over 500 years and the role that they played in world history. This would give visitors a better understanding of why these structures were built and what purpose they served.

Opening El Cañuelo to visitation and making it part of the primary visitor experience would further explain the interrelated defensive role of El Morro, San Cristóbal, and El Cañuelo.

The proposed plan would have a major impact on local governmental agencies, private enterprises, organizations, and private interests because they would be expected to fully cooperate in the implementation of the plan. This would require a commitment of material and financial resources by public and private local interests, along with contributions to the day-to-day management needs of the historic site.

The no-action alternative, which would continue the existing maintenance program without benefits of standardized procedures and methods, could result in the eventual loss of portions of the fortifications through the failure to address major structural problems in a comprehensive fashion. Future stabilization and preservation costs could, therefore, be many times more than if such actions were undertaken now. Under no action, the visitor experience would remain the same as it is now, and El Cañuelo would not be opened to visitor use and interpretation.

Under the minimum services alternative, El Cañuelo would not be open to visitor use, thus visitors would be deprived of learning about a major portion of the San Juan defense network. Most of the other impacts would be similar to those of the proposed plan.

The other consequences of the proposed plan and alternatives are presented in table 4. Impacts on cultural resources, natural resources, the socioeconomic environment, visitor use and experience, and park management are discussed. Approximate costs are also indicated.

Table 4: Environmental Consequences of the Proposed Plan and Alternatives
Preservation Philosophy--El Morro, San Cristóbal and Outworks, Walls and Bastions

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>
<u>Description of Actions</u>	<p>Establish a long-range preservation philosophy to direct management and protection of cultural resources by</p> <p>prohibiting any arbitrary alteration, restoration, or removal of historic fabric</p> <p>preserving all historic structures in place</p> <p>developing comprehensive historic structure preservation guides</p> <p>allowing reconstruction only as authorized by the preservation guides</p> <p>initiating research to support the preparation of the preservation guides and other critical management and interpretive needs</p>	<p>Continue to allow arbitrary alteration, restoration, and removal of historic fabric</p> <p>Continue existing maintenance program without benefits of standardized procedures and methods</p> <p>Conduct no systematic historical research</p>	Same as proposed plan.	<p>Establish a long-range preservation philosophy by</p> <p>altering the historic fabric as necessary to restore various historic structures to a designated period or periods</p> <p>developing a comprehensive preservation guide</p> <p>implementing an extensive research effort to support restoration</p>
<u>Impacts</u>				
<u>Cultural Resources</u>	<p>Physical appearance of historic structures would remain as is, with little or no alteration of historic fabric, but their physical condition would be improved.</p> <p>A systematic approach to preserving all the cultural resources would be ensured, and arbitrary, indiscriminate, and historically inaccurate actions regarding preservation and maintenance of cultural resources would be minimized. This would help ensure the long-term preservation of the San Juan fortifications.</p> <p>More knowledge about and a better understanding of the cultural resources would be provided, thus preventing the accidental loss of significant historic materials.</p>	<p>Physical appearance of historic structures could change over time, and their physical condition could deteriorate.</p> <p>Lack of a systematic approach to preserving cultural resources, and arbitrary decisions regarding preservation and maintenance, would continue. This would result in a superficial maintenance program that could lead to long-term deterioration of major portions of the fortifications and their eventual loss.</p> <p>The absence of a comprehensive resource data base would make it difficult to prevent the inadvertent destruction of currently unknown archeological resources.</p>	Same as proposed plan.	<p>The existing physical appearance of historic structures could be significantly altered by recreating the appearance of the fortifications during a specific historic period; however, their physical condition would improve. Other impacts would be the same as the proposed plan.</p>
<u>Natural Resources</u>	No additional impact.	No additional impact.	No additional impact.	No additional impact.
<u>Socioeconomic Environment</u>	No additional impact.	No additional impact.	No additional impact.	No additional impact.

<u>Impacts</u>	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>
Visitor Use and Experience	<p>Authenticity and preservation of cultural resources would be ensured for future generations to appreciate.</p> <p>The preservation and maintenance of structures from many historic periods would provide a basis for interpreting the entire 400-year history of the fortifications.</p> <p>Research data would enhance the development and presentation of interpretive programs.</p>	<p>Continuation of existing arbitrary alteration, restoration, and removal of historic fabric would hinder effective interpretive programs.</p> <p>Interpretive programs would suffer from inadequate data.</p>	Same as proposed plan.	<p>Many historic structures representing periods in the 500-year history of the site would be removed or altered, and structures would be reconstructed to reflect a certain time period or periods. This action would restrict the focus of interpretation and diminish the international significance of the fortifications.</p>
Park Management	<p>Research and historic structure preservation guides would improve decision making, direct preservation and maintenance, improve management efficiency, and ensure long-term continuity and consistency in the maintenance program.</p>	<p>Preservation and maintenance decisions would continue to be made on the basis of inadequate data.</p> <p>Management efficiency would continue to be impaired.</p> <p>Lack of consistency in preservation and maintenance methods would continue.</p>	Same as proposed plan.	Same as proposed plan.
Costs	<p>Initial cost for all studies would range from \$600,000 to \$850,000</p> <p>Long-term annual maintenance costs would be reduced.</p>	<p>There would be no initial cost for studies.</p> <p>Future stabilization and preservation costs could require tens of millions of dollars due to continuing improper and inadequate preservation and maintenance.</p>	Same as proposed plan.	<p>Initial study costs could be two to three times those of the proposal, owing to the in-depth research required prior to reconstruction.</p> <p>Demolition and reconstruction costs could be in the tens of millions of dollars, depending upon the historic period selected for reconstruction.</p>

El Morro Lighthouse

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>
<u>Description of Actions</u>	Retain operating lighthouse at its present location; rehabilitate as necessary to ensure preservation and visitor safety.	Retain operating lighthouse in present location, provide no maintenance or rehabilitation.	Same as proposed plan.	Restore operating lighthouse to reflect a specific historic period (restoration and reconstruction); conduct research necessary to support action.
<u>Impacts</u>				
Cultural Resources	Preservation and maintenance of historic functioning lighthouse would be ensured. The different periods of rehabilitation reflected on the existing facade would continue to be evident.	Lighthouse would continue to deteriorate and be in danger of collapse.	Same as proposed plan.	Existing facade of lighthouse would be altered to represent a specific historic period of construction, resulting in a loss of some historic material.
Natural Resources	No additional impact.	No additional impact.	No additional impact.	No additional impact.
Socioeconomic Environment	No additional impact.	No additional impact.	No additional impact.	No additional impact.
Visitor Use	Physical presence of lighthouse would provide an opportunity to interpret its role in sea navigation. Threat to visitor safety due to falling masonry and possible collapse would be alleviated.	The lighthouse could collapse because of neglect, in which case the U.S. Coast Guard would replace it with a modern navigational aid. The opportunity to interpret the lighthouse's role in navigation would be severely hindered. Threats to visitor safety would continue.	Same as proposed plan.	Same as proposed plan.
Park Management	National Park Service would continue to accommodate U.S. Coast Guard needs.	Increasing maintenance would be required on the deteriorating structure. Possible collapse of the lighthouse and replacement would reduce future maintenance requirements.	Same as proposed plan.	Same as proposed plan.
Costs	Rehabilitation would cost \$45,000.	No initial costs. Annual maintenance costs could become much greater over time because of continuing deterioration.	Same as proposed plan.	Research and restoration would exceed cost of rehabilitation in the proposed plan by 10 times.

El Cañuelo

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>
<u>Description of Actions</u>	Stabilize and rehabilitate the fort for visitor use; institute ferryboat service from Old San Juan to the fort. Develop a small visitor contact station and restroom, plus a small shuttle staging area near the visitor contact facility. Provide staff when the fort is open to the public. Encourage Bacardi Company to develop a regular land shuttle between El Cañuelo and the Bacardi plant.	Continue to keep fort closed to public use and provide no preservation or maintenance.	Establish an adequate stabilization and maintenance program, but keep El Cañuelo closed to public use.	Transfer El Cañuelo fee title to Puerto Rico.
<u>Impacts</u>				
<u>Cultural Resources</u>	Preservation maintenance of El Cañuelo would be ensured. Vandalism would be reduced.	El Cañuelo would continue to deteriorate and be in danger of collapsing. Vandalism would continue.	Same as proposed plan.	A major component of the cultural resource would be removed from designation as part of the historic site, depending upon the transfer agreement.
<u>Natural Resources</u>	The parking area and visitor contact station would be located in the 100-year floodplain but outside the coastal high hazard area; there would be no adverse impact on the floodplain. The parking area would occupy 0.75 acre of previously disturbed land. One or two palm trees could be removed, depending on specific siting of visitor contact station and the staging area.	Existing toilet facility would remain within the coastal high hazard area of the 100-year floodplain. No palm trees would be removed.	Same as no-action alternative.	Unknown.
<u>Socioeconomic Environment</u>	Ferryboat service and shuttle could provide economic opportunities for private enterprise. Opportunity for visitors to reach Bacardi plant by means of boat/land shuttle could affect existing chartered vehicle transportation services.	No additional economic opportunities would be provided for private enterprise. There would be no competition from a ferryboat/land shuttle service with existing chartered vehicle transportation services to El Cañuelo and the Bacardi plant.	Same as no-action alternative.	Unknown.

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>
Visitor Use and Experience	<p>El Cañuelo would be more accessible because of the ferryboat service, and it would become one of the primary visitor experiences at the national historic site. Visitor safety would be enhanced.</p> <p>Ferryboat service would provide many visitors to the national historic site their only opportunity to view El Morro from San Juan Bay.</p>	<p>El Cañuelo would continue to be closed to visitor use. Unauthorized access to El Cañuelo would continue, along with present safety hazards.</p> <p>Many visitors would have no opportunity to view El Morro from San Juan Bay.</p>	<p>Same as no-action alternative, except that visitors would be protected because unauthorized access and hazards would be reduced.</p>	<p>Visitor use would be governed by Puerto Rico.</p>
Park Management	<p>Increased park staffing would be required for protection and visitor services.</p> <p>Additional maintenance and patrol burdens would occur because of El Cañuelo's remoteness from the rest of the national historic site.</p>	<p>Infrequent maintenance and protection patrols would continue.</p>	<p>Same as proposed plan except no visitor service staff would be required.</p>	<p>Preservation and maintenance would be the responsibility of Puerto Rico rather than of the National Park Service.</p>
Costs	<p>Structural stabilization would cost \$650,000, shoreline stabilization \$300,000, visitor support facilities \$225,000, and historic structure preservation guide \$50,000.</p> <p>Establishing ferryboat service from Old San Juan to El Cañuelo would cost an estimated \$400,000, and a land-based shuttle between El Cañuelo and the Bacardi plant \$100,000. A concessioner prospectus would be released to determine private sector interest in operating these services.</p>	<p>No initial costs. Annual maintenance costs would be much greater than under the proposed plan because of continuing deterioration and emergency repairs.</p>	<p>Initial cost for fort and shoreline stabilization would be \$1 million.</p> <p>Annual maintenance costs would be the same as the proposed plan, but there would be no maintenance or development cost for a visitor contact station/staging area.</p>	<p>No initial cost to the National Park Service. Annual NPS operation costs for national historic site would be reduced.</p>

Civil Defense Agency

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>
<u>Description of Actions</u>	Encourage Civil Defense Agency to move outside the historic site as soon as possible. Use climate-controlled building space for NPS library, archives and collection storage, maintenance storage, staff offices, and laboratory research space. Remove communication antennas.	Allow Civil Defense operation and communication towers to remain.	Same as proposed plan.
<u>Impacts</u>			
Cultural Resources	Visual intrusion of communication towers on the historic scene would be removed.	Visual intrusion of communication towers on the historic scene would remain.	Same as proposed plan.
Natural Resources	No additional impact.	No additional impact.	No additional impact
Socioeconomic Environment	Relocation of Civil Defense facilities could provide additional income to the private sector, depending on the new location of the agency. The Civil Defense Agency would incur significant relocation costs.	No additional income would be provided to private sector. The Civil Defense Agency would incur no relocation costs.	Same as proposed plan.
Visitor Use and Experience	Visitors would be able to visit additional casemates in San Cristóbal, which would be vacated when administrative functions were relocated to building 213. Interpretive program could be improved. Historic scene would be enhanced by removal of communication towers. Additional 40-space parking for administration and maintenance would be available within site boundary adjacent to San Cristóbal.	Communication towers would intrude on the historic scene. Visitors would not have the opportunity to explore casemates that would continue to be used for administrative activities. Parking for maintenance and administration would continue to be inadequate.	Same as proposed plan.
Park Management	Many of the administrative activities now scattered throughout San Cristóbal would be centralized, thus contributing to management efficiency.	Administrative activities would continue to be scattered throughout San Cristóbal, thus hindering management efficiency.	Same as proposed plan.
Costs	Minimal initial NPS costs would be required to relocate administrative activities from casemates to building 213.	Existing level of spending would continue.	Same as proposed plan.

Visitor Protection

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>
<u>Description of Actions</u>	Increase number of law enforcement rangers to ensure adequate protection for visitors and resources.	Continue existing protection services.	Same as proposed plan.	Establish a unit of the U.S. Park Police.
<u>Impacts</u>				
Cultural Resources	Cultural resources would suffer less damage due to vandalism.	Vandalism to cultural resources would continue to occur at unacceptably high levels.	Same as proposed plan.	Same as proposed plan.
Natural Resources	No additional impact.	No additional impact.	No additional impact.	No additional impact.
Socioeconomic Environment	No additional impact.	No additional impact.	No additional impact.	No additional impact.
Visitor Use and Experience	Public areas such as the El Morro shoreline trail and the tunnel connection between the San Cristóbal fort and outworks, which are now closed because of insufficient patrolling, could be opened to public use. Crime incidents would be reduced. Many visitors would feel more secure in exploring the entire national historic site, knowing that adequate law enforcement was being provided, thus enhancing the visitor experience.	Areas now closed to public use because of insufficient patrolling would remain closed. Crime incidents would continue at unacceptably high levels and could increase. Many visitors would continue to feel insecure about exploring otherwise interesting areas of the national historic site, even though the areas would remain open to the public.	Same as proposed plan.	Same as proposed plan.
Park Management	The National Park Service would be less dependent on commonwealth, municipal, and contract law enforcement services; law enforcement would improve. Additional NPS staffing would be required.	The National Park Service would continue to depend upon commonwealth, municipal, and contract law enforcement services, which have proven to be inadequate. No additional NPS staffing would be required.	Same as proposed plan.	Same as proposed plan.
Costs	Annual staffing costs would increase.	Existing level of spending would continue.	Same as proposed plan.	Annual staffing costs would increase.

Visitor Access to El Morro and the Esplanade

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>
<u>Description of Actions</u>	<p>Develop a reliable park-and-ride system to provide mass-transit service to El Morro, Esplanade, San Cristóbal, and San Cristóbal outworks from existing designated parking lots, garages, and other major collection points within Old San Juan.</p> <p>Prohibit access by private cars, chartered vehicles, and school buses to the Esplanade and El Morro complex on both weekdays and weekends.</p> <p>Convert the existing El Morro parking area into open space except for a park-and-ride staging area and limited parking for handicapped visitors and administrative vehicles.</p>	<p>Allow parking to continue along all roadways on the Esplanade. Maintain existing 40-car El Morro parking area. Allow unlimited vehicle access to Esplanade on both weekdays and weekends.</p>	<p>Same as proposed plan.</p>	<p>Prohibit all parking along roads within the Esplanade at all times.</p> <p>Redesign and expand the El Morro parking area to accommodate approximately 300 parking spaces and a drop-off zone. Allow parking for chartered vehicles, school buses, handicapped visitors, private autos, and administrative vehicles at El Morro on both weekdays and weekends. When the parking area at El Morro is at capacity, institute a controlled vehicle access system (allow vehicles to enter the Esplanade only as others leave).</p>	<p>Prohibit all parking along roads within the Esplanade at all times.</p> <p>Redesign existing El Morro parking area to improve circulation but maintain existing size. Allow parking only for chartered vehicles, handicapped visitors, and administrative vehicles at El Morro parking area.</p> <p>Encourage all private automobiles and school buses to park at La Puntilla parking lot, and develop an interpretive shuttle to operate on both weekdays and weekends (separate from the Old San Juan merchants' shuttle but in cooperation with the merchants' association) from La Puntilla parking lot to the El Morro parking area.</p>	<p>Prohibit all parking along roads within the Esplanade at all times.</p> <p>Redesign the existing El Morro parking area to improve circulation but maintain existing size. Allow parking only for school buses, handicapped visitors, and administrative vehicles at El Morro parking area.</p> <p>Encourage Puerto Rico to implement their plan for a 400-600 car garage and staging area in parcel C (east of the Rodriguez Army Hospital). Develop a shuttle system from the parking garage/staging area to the El Morro parking area.</p>
<u>Impacts</u>						
<u>Cultural Resources</u>	<p>The historic integrity of the site would be greatly enhanced because traffic congestion would be reduced.</p> <p>The visual intrusion of the existing parking area on the historic scene would be greatly reduced.</p>	<p>The site would continue to be severely and adversely impacted by vehicle congestion, parking along Esplanade roadways and in front of El Morro, and a continuous line of moving traffic, especially on weekends, when as many as 8,000 visitors and 3,000 vehicles can be expected.</p>	<p>Same as proposed plan.</p>	<p>Expanded 300-car parking area would create the greatest visual impact on the historic scene when compared to all other options considered, except for the no-action alternative.</p>	<p>The 40-car parking area at El Morro would have more impact on the historic scene than the proposed plan, but less than options 1 and 3.</p>	<p>The 100-car parking area at El Morro would have more impact on the historic scene than the proposed plan or option 2, but less than option 1.</p>
<u>Natural Resources</u>	<p>Existing paved parking area (½ acre) would be returned to grassy open space except for pervious paving and grass for the park-and-ride staging area and 12 parking spaces. Road improvements and redesign of parking area would reduce soil erosion. Air pollution from vehicles would be less than all the options, with the possible exception of option 3.</p>	<p>Existing parking area would continue to occupy ½ acre of space and would remain with an asphalt surface, thus allowing no natural percolation.</p> <p>Soil erosion would continue to occur unabated along edges of roadway and parking area.</p> <p>Existing air pollution due to traffic congestion would continue.</p>	<p>Same as proposed plan.</p>	<p>Expanded 300-car parking area of pervious paving would cover an additional 3 acres of grassed area, but would allow for natural percolation.</p> <p>Air pollution from vehicles would be greater than the proposed plan and options 2 and 3.</p>	<p>Redesigned parking area would be slightly larger than existing one, but would allow for natural percolation.</p> <p>Soil erosion would be reduced.</p> <p>Air pollution from vehicles would be greater than the proposed plan, but less than option 1.</p>	<p>Expansion of existing parking area would cover 1 additional acre, but the entire parking area would be constructed of pervious paving to allow percolation.</p> <p>Air pollution due to vehicles would possibly be the least of all alternatives, including the proposed plan.</p>

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>
Socioeconomic Environment	<p>The park-and-ride system would reduce daily traffic volumes within Old San Juan.</p> <p>Park-and-ride system could adversely affect the chartered vehicle business, but it would provide additional economic opportunities for private enterprise.</p>	<p>Historic site would continue to generate large volumes of traffic, aggravating the already congested streets of Old San Juan.</p>	<p>Same as proposed plan.</p>	<p>Roads adjacent to the historic site could become more congested on weekends with controlled vehicle access system because of standing and parked vehicles waiting to enter the Esplanade after the 300-space parking area was filled.</p> <p>Historic site would continue to generate large volumes of traffic, aggravating the already congested streets of Old San Juan.</p>	<p>La Puntilla shuttle could provide economic opportunities for private enterprise.</p> <p>La Puntilla shuttle would help reduce traffic congestion in Old San Juan.</p>	<p>New parking garage and shuttle to El Morro could provide economic opportunities for private enterprise.</p> <p>Parking garage would alleviate traffic congestion in the area adjacent to the entrance to the Esplanade.</p>
Visitor Use and Experience	<p>Reduced traffic congestion would improve visitor safety and the quality of the visitor experience.</p> <p>Redesigning El Morro parking area to provide a staging area and a small parking area would improve pedestrian access and vehicle circulation and would enhance visitor safety.</p> <p>Traditional use patterns would change when parking was eliminated. Visitation could decrease over the short term because of resistance to changes in traditional use patterns.</p> <p>Connecting El Morro and San Cristóbal with a reliable transit system would encourage visitors to see both forts, increasing their understanding of the site's significance.</p>	<p>Threats to visitor safety due to traffic congestion, especially on weekends, would continue.</p> <p>Traditional visitor use patterns would continue, and parking directly adjacent to play and picnic areas along the Esplanade roadway would continue.</p>	<p>Same as proposed plan.</p>	<p>Traffic congestion would probably not be reduced to any significant extent.</p> <p>Visitor safety would be increased because parking would be eliminated along the Esplanade roadway. Enlarged 300-car parking area would better meet weekend demand for parking on the Esplanade than the existing parking area, but still might not be adequate for weekend demand during peak periods of use.</p> <p>The amount of open grassy space for visitors would be reduced by approximately 3 acres due to increased size of parking area.</p> <p>Visitor frustration would increase during periods when controlled vehicle access system was in operation.</p>	<p>Fees would be required for most visitors to ride shuttles from La Puntilla or to charter vehicles to visit the Esplanade/El Morro complex.</p> <p>Interpretive shuttle from La Puntilla would provide an added dimension for the visitor experience.</p> <p>Traditional use patterns would be altered.</p> <p>Visitation might decrease over the short term.</p>	<p>Visitor safety and quality of visitor experience would be enhanced more than any other alternative, including the proposal, because of removal of all vehicle parking (except 2 administrative vehicles) and traffic from one of the national historic site's primary resources.</p> <p>Traditional use patterns would change.</p> <p>Visitation could be expected to decrease in the short term.</p> <p>Fees would be required to park at the new garage and to ride the shuttle to El Morro.</p>
Park Management	<p>The need for additional parking within the historic site would be eliminated. Short-term traffic law enforcement problems could increase while visitors adjusted to a new system.</p>	<p>Existing traffic management problems due to vehicle congestion would continue.</p>	<p>Same as proposed plan.</p>	<p>Additional staff would be required to control vehicle access.</p> <p>In the short term, traffic law enforcement problems would increase.</p>	<p>Coordination with the municipality of San Juan, Puerto Rico, and private interests would be required to implement the La Puntilla shuttle. Other impacts would be similar to those of the proposed plan.</p>	<p>Coordination with the municipality of San Juan and Puerto Rico would be required in the design and construction of the new parking garage and staging area in parcel C immediately outside the Esplanade entrance gate.</p>
Costs	<p>Approximately \$750,000 would be required for the park-and-ride transit system (new equipment estimate). Operation would have to be subsidized to provide free transportation to visitors.</p>	<p>Existing level of spending would continue.</p>	<p>Same as proposal.</p>	<p>Initial cost to Puerto Rico for design and construction of 300-car/10-bus El Morro parking area would be \$900,000.</p>	<p>Initial cost to Puerto Rico for redesign and reconstruction of existing parking area for approximately 40 vehicles would be \$100,000.</p> <p>La Puntilla shuttle would cost approximately \$400,000 and would be submitted for concessioner prospectus to determine private interest in the operation.</p>	<p>Cost of 400-600 car parking garage would exceed \$5 million; plan would be submitted as a concessioner prospectus to determine private interest in the operation.</p> <p>Shuttle from garage to El Morro would cost approximately \$100,000 and would be submitted as a concessioner prospectus to determine private interest.</p>

Visitor Access to San Cristóbal and the Outworks

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>
<u>Description of Actions</u>	<p>Develop a reliable park-and-ride system to provide mass-transit service to San Cristóbal fort and outworks, the Esplanade, and El Morro from existing designated parking lots, garages, and other major collection points in Old San Juan. Prohibit access by private cars, chartered vehicles, and school buses at the San Cristóbal complex on weekdays and weekends.</p> <p>Convert the parking area at the San Cristóbal ramp to a park-and-ride staging area with limited parking for handicapped visitors and administrative vehicles. Also open and develop the south gate parking area as a staging area.</p> <p>Encourage Puerto Rico to prohibit all parking on the Hill of the Three Wisemen and to convert to grassy open space.</p>	<p>Provide only the existing 17 parking spaces at the entrance to San Cristóbal along Calle Norzagaray.</p>	<p>Retain the existing 17-space parking area at entrance to San Cristóbal along Calle Norzagaray.</p> <p>Open existing driveway at the south gate to the outworks for parallel parking for 10 cars (no development required).</p> <p>Provide overflow parking on weekends through a cooperative agreement with Puerto Rico to use 250 parking spaces near the Capitol.</p> <p>Convert the Hill of the Three Wisemen to grassy open space.</p>	<p>Retain the existing 17-space parking area at the entrance to San Cristóbal along Calle Norzagaray, with overflow parking (20 spaces) at San Sebastian Bastion.</p> <p>Transfer the Hill of the Three Wisemen to the National Park Service through exchange; develop as a 50-space parking area for the outworks.</p>
<u>Impacts</u>				
<u>Cultural Resources</u>	<p>Converting the existing outworks parking area to a park-and-ride staging area and limited parking area could affect unknown underground cultural resources.</p> <p>Converting the Hill of the Three Wisemen to a grassy open space would greatly enhance the historic scene.</p>	<p>Continued deterioration of the Hill of the Three Wisemen could impact currently unknown cultural resources.</p>	<p>No additional impact.</p>	<p>Parking areas on the Hill of the Three Wisemen and at San Sebastian Bastion could affect currently unknown underground cultural features.</p> <p>Parking would be a visual intrusion on the historic scene at both sites.</p>
<u>Natural Resources</u>	<p>Converting the existing outworks parking area to a staging area would disturb 1/8 acre of grassland and require the removal of four to five palm trees. Converting the Hill of the Three Wisemen to open space would add 1/2 acre of grassland to the historic site.</p>	<p>Soil would continue to be lost because of erosion gullies on the Hill of the Three Wisemen as a result of unauthorized parking on steep unsurfaced slopes.</p>	<p>Converting the Hill of the Three Wisemen to open space would add 1/2 acre of grassland to the historic site.</p>	<p>The parking area on the Hill of the Three Wisemen would occupy 1/2 acre of land already denuded of grass by unauthorized vehicle parking. The parking area at San Sebastian Bastion would disturb 1/4 acre of grassland. Both parking areas would be constructed of pervious paving, allowing for natural percolation.</p>
<u>Socioeconomic Environment</u>	<p>Same as the socioeconomic impacts for El Morro proposed plan.</p>	<p>No additional impacts.</p>	<p>No additional impacts.</p>	<p>Minor economic gains because of parking area construction.</p>

	<u>Proposed Plan</u>	<u>No-Action Alternative</u>	<u>Minimum Services Alternative</u>	<u>Option 1</u>
Visitor Use and Experience	Same as visitor use impacts for El Morro proposed plan, with the addition that the Hill of the Three Wisemen would provide ½ acre of additional open space for visitors to enjoy.	Visitors would continue to experience extreme difficulty in finding parking space at or adjacent to San Cristóbal fort ramp and would find it especially difficult to reach the outworks.	Visitors would continue to experience difficulty in finding parking spaces at or near the San Cristóbal fort ramp during heavy use periods. Accessibility to the outworks would improve over existing conditions because a 10-space parking area would be provided near south gate, and overflow parking for 250 vehicles would be provided at the Capitol.	Vehicle parking would be more convenient during low use periods for people wanting to visit either San Cristóbal or the outworks.
Park Management	Same as park management impacts for El Morro proposed plan.	Existing staffing levels would continue.	Additional NPS staff would be required to monitor parking in the area from the south gate to the outworks. Traffic along Avenida Muñoz Rivera would be impeded because of pedestrian crosswalks or traffic caution lights for visitor access from Capitol parking lot. A separate traffic lane on Avenida Muñoz Rivera could be required for vehicles entering or leaving the south gate area. The use of 250 parking spaces near the Capitol on weekends would require coordination with Puerto Rico.	Additional NPS staff would be required to monitor parking at the Hill of the Three Wisemen.
Costs	Costs of a park-and-ride staging area are included in costs for El Morro proposal, with additional \$40,000 for the staging/parking area at the outworks. Annual operating costs would increase for additional staff.	Existing spending requirements would continue.	Annual operating costs would increase for additional staff.	Initial NPS cost for parking area at the Hill of the Three Wisemen would be \$150,000. Initial NPS cost for parking at San Sebastian Bastion would be \$50,000. Annual operating costs would increase for additional staff.

APPENDIXES/PREPARERS AND CONSULTANTS

APPENDIX A: MANAGEMENT OBJECTIVES

CULTURAL RESOURCES PRESERVATION

Institute a long-term preservation management philosophy that will prevent the arbitrary removal, alteration, or destruction of the historic fabric associated with this internationally significant historic site.

Preserve the historic site in its existing form because all its components are significant and contribute to the continuum of 500 years of history represented.

Develop a consistent methodology for preservation and maintenance of the historic site's cultural resources.

Provide an adequate cultural resource information base to assist in the management, preservation, and interpretation of the historic site.

Identify, evaluate, protect, and preserve the site's archeological and historic resources in accordance with legislative and executive requirements and NPS historic preservation policies.

Eliminate the adverse effects of erosion and natural weathering related to structures and grounds associated with El Morro, San Cristóbal, El Cañuelo, and the walls and bastions.

INTERPRETATION

Develop an interpretive program that gives visitors an opportunity to grasp an overview of the site's international significance within the context of the 500 years of history it represents.

Promote visitor awareness of the opportunities afforded by the national historic site.

Provide an integrated interpretive program that allows visitors to easily grasp the contribution of individual units to the major themes and events represented.

Develop appropriate onsite planning aids to help people organize their visits to meet their individual interests and time limitations.

Ensure a meaningful experience for both handicapped and repeat visitors.

Bring El Cañuelo into the mainstream of the historic site's interpretive program.

ACCESS AND CIRCULATION

Improve access to and circulation within San Juan National Historic Site.

Provide reliable and efficient mass-transit services between existing and proposed parking areas in Old San Juan and the various units of the historic site on a continuous basis.

Ensure that the integrity of the historic grounds is not compromised by vehicle access and parking.

DEVELOPMENT

Ensure that nonhistoric park developments are the minimum necessary to provide for efficient administration and essential public services, and that such facilities are visually compatible with each other, with the historic structures themselves, and with the historic setting.

Allow only the placement of objects or structures within the historic site that are compatible with the purposes for which the historic site was established.

PARK OPERATIONS

Ensure effective and efficient park management that applies high standards for resource preservation and use.

Provide for appropriate staffing levels and ensure that all personnel are provided with the necessary tools and facilities to adequately manage, preserve, and interpret the historic site's resources on a continuous basis.

VISITOR PROTECTION

Ensure visitor safety in all areas of the historic site by providing a well-trained, responsive, and effective law enforcement capability.

COOPERATION

Cooperate with federal agencies, the commonwealth of Puerto Rico, the city of San Juan, private organizations and interests, and members of the public in (1) planning for the coordinated development and public use of the historic resources of Old San Juan, (2) ensuring that commercial, residential, and other land uses in the park's vicinity have the least possible adverse effect on the park's historic resources and their settings, and (3) providing information to the public on recreational and interpretive opportunities in the San Juan area.

Cooperate with the commonwealth of Puerto Rico in developing coordinated plans for efficient management of the El Morro Esplanade and parcels B and C.

Cooperate with the commonwealth of Puerto Rico and all other interests to ensure that the use of the historic site for nonpark purposes does not adversely affect park resources or the experience of park visitors.

Encourage local private enterprise, special interests, organizations, and individuals to provide where appropriate the resources (material and financial) to assist in implementing the proposals of the General Management Plan as well as making contributions to the day-to-day management needs of the historic site.

APPENDIX B: SUMMARY OF PUBLIC RESPONSES
ABOUT PLANNING ISSUES

In February and March 1984, a planning information and response form was made available to solicit public comment on the issues for managing, developing, and using San Juan National Historic Site. Four hundred forms were distributed, and 33 forms were returned and analyzed. The following summarizes the public comments:

All but three responses stressed the need for improved visitor safety within the historic site.

Of the 20 comments specifically referencing El Cañuelo, all wanted to see El Cañuelo preserved and opened to public use. Approximately half of those responding recommended ferryboat access to El Cañuelo.

Of the 15 comments referring to the Hill of the Three Wisemen, all wanted the hill restored to a passive park area.

Of the 15 comments about the use of the Esplanade, all wanted use restricted to passive recreation (status quo).

Of the 16 comments referencing the historic site's interpretive program, 14 recommended that the interpretive program be expanded and improved. Two respondents felt that the present program was adequate. The use of living history demonstrations, plays, and dramas were all mentioned as ways to improve interpretation.

Nine comments recommended that the historic site's interpretive program should focus on the entire 400 years of history represented, while five comments recommended that specific periods should be related to specific structures.

Of the 15 comments mentioning the need for food services within or adjacent to the historic site, 12 favored some type of food services, but three thought that service should not be provided. Of the 12 favoring food services, all felt it should be done in a way so as not to detract from the historic site.

Eleven comments referenced the need for some type of mass-transit system to connect various parts of Old San Juan to the historic site.

Eight comments specifically said that the Esplanade should be closed to vehicle traffic, but two said the Esplanade should not be closed to vehicle traffic.

The following comments were taken directly from the public response forms:

La Perla should not be allowed to grow larger . . . or it would tend to destroy the beauty of SJNHS.

Close El Morro grounds at night.

Study possibility of transportation between San Cristóbal and El Morro.

Visitor safety should be increased by hiring security guards for the isolated areas.

Interpretive tours could be provided through the Puerto Rico Tourism Company.

La Perla should be preserved without performing any changes.

Conduct a massive promotion of the historic site not only at a national but also at an international level.

Visitor safety is OK now.

More exhibits of military equipment, tours, guides wearing typical uniforms.

Increase park guards.

More police vigilance.

At San Cristóbal give conferences, craftsmen classes, and Puerto Rican music.

At La Perla, eliminate it and make it a part of the NPS and connect San Cristóbal and El Morro with a fantastic park.

At El Cañuelo nothing should be done to it until it is restored.

[For interpretation, the site] should be visualized as a whole.

More security barriers for small children.

All the fort should be totally opened to the public.

All San Cristóbal should be a historic area accessible to the public.

Relocate Civil Defense.

Orient the plan towards the 500-year anniversary of the discovery of Puerto Rico, which will be within the next nine years, so that the monuments will be then in their greatest splendor.

Any plan should consider and take the necessary measures to expedite the participation of audiovisual projects.

Provide safety barriers and facilities for the handicapped.

It is very important that the government TV station provide documentaries and programs that cover San Juan history.

Establish a walkway on the exterior side [of the walls] so that the visitors may walk from San Cristóbal up to El Morro and the old cemetery.

Establish a walkway [with reference to city walls] so the public can observe them.

Let's have horsedrawn carriages.

Eliminate street vendors.

What was the life of El Morro or San Cristóbal like, where did people eat, sleep, work.

Self-guided tours could be done easily by writing a small pamphlet to be sold cheaply and numbering points of interest.

La Perla has probably changed less than much of Old San Juan, and it is probably as old as the rest of the city. Since it has always been part of the view, changing or destroying it would alter the integrity of the historic site. Consult La Perla residents.

San Juan is unique in that it has extensive walls. A project for its illumination, especially of the north and west walls should be developed.

[Because of illegal parking near the city walls], higher violation fees and vehicle removal are much needed.

Future uses should maintain a perspective that the SJNHS is an integral part of Old San Juan and as such should be responsive to the social and economic needs of the community.

There are facilities which probably require identification and opening to the public such as the underground interconnection of the fortifications.

La Perla has become a landmark of historic San Juan just as the rest of the developments. Although it may seem difficult to manage, the commonwealth government should attempt to restore the area.

In my opinion the NPS should approach the governor of Puerto Rico to create by executive order an administrative commission empowered to obligate responsible parties to carry out whatever projects are needed.

Provide camping at San Cristóbal outworks.

APPENDIX C: ESTABLISHMENT ORDER

FEDERAL REGISTER

February 25, 1949

Office of the Secretary
San Juan National Historic Site,
Puerto Rico

Whereas, the Congress of the United States has declared it to be a national policy to preserve for the public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States;

Whereas, the ancient fortifications of San Juan, Puerto Rico, particularly the massive masonry works of El Morro and San Cristóbal and their connecting walls, are outstanding monuments of the past, possessing exceptional historical and architectural interest for the Nation, and have been declared by the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments to possess exceptional importance as commemorating the history of the United States; and

Whereas, with the approval of the President, a cooperative agreement has been made between the Secretary of the Interior and the Secretary of the Army providing for the preservation of the ancient fortifications of San Juan and their designation as a national historic site:

Now, therefore, I, J.A. Krug, Secretary of the Interior, under and by virtue of the authority conferred by section 2 of the act of August 21, 1935 (49 Stat. 666; 16 U.S.C. 462), do hereby designate the fortresses of El Morro and San Cristóbal, Casa Blanca, and El Cañuelo on Cabras Island, including the areas shown on the diagram, marked "Exhibit A," annexed hereto and made a part hereof, to be a national historic site, having the name "San Juan National Historic Site."

The administration, protection, and development of this national historic site shall be exercised in accordance with the provisions of the above-mentioned cooperative agreement and the act of August 21, 1935, supra.

Warning is expressly given to all unauthorized persons not to appropriate, injure, destroy, deface, or remove any feature of this historic site.

In witness whereof, I have hereunto set my hand and caused the official seal of the Department of the Interior to be affixed, at the City of Washington, this 14th day of February 1949.

[Seal]

J.A. Krug,
Secretary of the Interior

[F. R. Doc. 49-1402; Filed, Feb. 24, 1949; 8:50 a.m.]

APPENDIX D: 1976 COOPERATIVE AGREEMENT

COOPERATIVE AGREEMENT BETWEEN
THE UNITED STATES DEPARTMENT OF THE INTERIOR
AND THE COMMONWEALTH OF PUERTO RICO
CONCERNING THE PRESERVATION, DEVELOPMENT,
MAINTENANCE AND UTILIZATION OF CERTAIN LANDS
IN CONNECTION WITH THE SAN JUAN NATIONAL HISTORIC SITE

THIS AGREEMENT in duplicate originals, made and entered into this 29th day of September 1976, by and between the United States of America, acting in this behalf by the Director of the National Park Service, Department of the Interior, and the Commonwealth of Puerto Rico,

WITNESSETH:

WHEREAS, under date of March 31, 1967, an AGREEMENT was made and entered into by and between the United States of America, acting in this behalf by Stewart L. Udall, Secretary of the Interior, and the Commonwealth of Puerto Rico concerning the preservation, development, maintenance and utilization of certain lands in connection with the San Juan National Historic Site; and

WHEREAS, an AMENDMENT to said AGREEMENT was executed on August 29, 1968 by the United States of America, acting in this behalf by Stewart L. Udall, Secretary of the Interior, and on October 16, 1968 by the Commonwealth of Puerto Rico; and

WHEREAS, a second AMENDMENT to said AGREEMENT was executed on January 28, 1970 by the United States of America, acting in this behalf by Walter Hickel, Secretary of the Interior, and on July 15, 1969 by the Commonwealth of Puerto Rico; and WHEREAS, pursuant to said AGREEMENT a certain tract of land that was to become a part of the San Juan National Historic Site designated as Parcel A and a certain tract of land without the San Juan National Historic Site designated as Parcel B were conveyed by the United States to the Commonwealth by quitclaim deeds each dated March 31, 1967; and WHEREAS, it is in the best interests of both the Commonwealth of Puerto Rico and the United States that title to said property remain in the Commonwealth of Puerto Rico; and

WHEREAS, it has been determined that further coordinated development of the former Fort Brooke Military Reservation, situated in San Juan, Puerto Rico, requires that said AGREEMENT and AMENDMENTS be substantially modified; and WHEREAS, said determination necessitates a new agreement which will supersede and void said prior AGREEMENT and AMENDMENTS to clarify the purpose and intent on the part of both the Department of the Interior and the Commonwealth as to the future utilization of the lands indicated herein; and

WHEREAS, a portion of said property is within the San Juan National Historic Site, which site will be redefined to include such property as indicated herein; and

WHEREAS, a certain tract of land outside said Parcels A and B but within the former Fort Brooke Military Reservation, designated as Parcel C, was conveyed in part by the United States to the Commonwealth by quitclaim deed dated August 16, 1972, and it is anticipated will be conveyed in remaining part in the near future; and

WHEREAS, the Commonwealth of Puerto Rico and the Department of the Interior are extremely interested in assuring the continued preservation, development, maintenance and utilization of all of said property for National Historic Site and other historical and cultural purposes or for public purposes not inconsistent with the historical and cultural character of the area; and

WHEREAS, said purposes can be accomplished through a cooperative agreement executed pursuant to the Historic Sites Act, 49 Stat. 666, 16 U.S.C §§ 461-467 (1964);

NOW THEREFORE, in consideration of the foregoing, and pursuant to the authority contained in the aforementioned Historic Sites Act, and pursuant to the laws of the Commonwealth of Puerto Rico and its general policy of maintaining its great historical and cultural heritage, the parties hereto have covenanted and agreed, and by these presents do covenant and agree to and with each other and in consideration of the mutual promises herein expressed, as follows:

ARTICLE I

It is mutually understood and agreed by the United States and the Commonwealth:

(a) That the following terms shall be defined for the purpose of this agreement as follows:

1. "Parcel A" shall mean that portion of the property, title to which is held by the Commonwealth by quitclaim deed dated March 31, 1967, as corrected and amended, conveyed under the Secretary's authority under Executive Order No. 10250 of June 5, 1951 (3 CFR, 1954-1958 Comp., p. 755, 16 F.R. 5385), which will be within the San Juan National Historic Site after said site has been redefined by the Secretary. Said Parcel A is indicated on the map attached hereto, marked "Appendix 1," and is fully described by metes and bounds in the attachment hereto marked "Appendix 2." Both appendices are incorporated as a part of this agreement as if fully set forth herein.*

2. "Parcel B" shall mean that portion of the property title to which is held by the Commonwealth by quitclaim deed dated March 31, 1967, as corrected and amended, conveyed under the Secretary's authority under Executive Order 10250 of June 5, 1951 (3 CFR, 1954-1958 Comp., p. 755, 16 F.R. 5385), which will not be within the San Juan National Historic Site and which is indicated as Parcel B in "Appendix 1," and which is described by metes and bounds in "Appendix 2."

* Appendixes 1 and 2 have not been reprinted. See the Existing Site map in the text for this information. Ed.

3. "Parcel C" shall mean that property, title to which is held by the Commonwealth by quitclaim deed dated August 16, 1972, conveyed under the Federal Property and Administrative Services Act of 1949 (63 Stat. 377), as amended, and, in addition, those properties totalling 6.48 acres including the buildings known as the Bajalla, Beneficencia, and Concepcion and annex, which it is anticipated will be conveyed to the Commonwealth by the United States. Said Parcel C is indicated in "Appendix 1" and is described by metes and bounds in "Appendix 2."
4. "Campo del Morro Area" shall mean that area encompassed by Parcels A, B and C as herein described.
5. "Secretary" shall mean the Secretary of the United States Department of the Interior, or his duly authorized representative.
6. "Governor" shall mean the Governor of Puerto Rico or his duly authorized representative.
7. "Commonwealth" shall mean the Commonwealth of Puerto Rico.
8. "National Park Service" shall mean the bureau within the United States Department of the Interior established by Congress by Act of August 25, 1916, and subsequent amendments.
9. "Good neighbor basis" shall mean consultation and notification regarding ongoing developments but shall not connote any mandatory obligation to act pursuant to advice which is given or sought.
10. "Manage, operate, and maintain" shall mean the exercise of full and complete rights and responsibilities

pertaining to planning and utilization, subject to the obligations enumerated in Articles II and III herein.

11. "Capital expenditures" shall mean, and be limited to, funds for the construction (or demolition) and major repair of structures, roads, or other facilities as contemplated in the plan to be formulated for Parcel A. Funds for maintenance and upkeep shall not be considered capital expenditures.

(b) That no member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom, but this restriction shall not be construed to extend to this contract if made with a corporation or company for its general benefit.

(c) That, insofar as title is concerned, this agreement shall in no wise affect or condition the terms of the deeds transferring said parcels from the United States to the Commonwealth.

(d) That this agreement hereby supersedes and voids all prior agreements and amendments thereto.

(e) That the term of this agreement is perpetual, but it may be amended or voided by mutual agreement between the Department of the Interior represented by the Secretary and the Commonwealth represented by the Governor.

(f) That this agreement shall be terminated upon the reversion to the United States of Parcel A or Parcel B.

(g) That the Commonwealth and the National Park Service shall seek approval to execute appropriate documents to provide that

the parties shall concurrently exercise enforcement responsibilities in Parcel A for all violations of appropriate laws and regulations.

ARTICLE II

The Commonwealth agrees, for itself, its successors and assigns:

(a) To make every effort to create and maintain around Parcels A, B and C a safe and attractive environment conducive to the enjoyment by the public of the historical, cultural and aesthetic qualities of the area.

(b) To comply with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, as amended) and all requirements imposed by or pursuant to the regulations of the Department of the Interior (43 CFR 17) issued pursuant to that title and as in effect on the date of this agreement, to that end that, in accordance with Title VI of that Act and said regulations, no person shall, on the ground of race, color, sex, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use by the Commonwealth of the Campo del Morro area.

(c) Not to convey any of the lands of Parcels A and B, interests therein, or rights for the commercial use thereof unless the Secretary so authorizes in writing.

(d) To be responsible, subject to the availability of funds, for all capital expenditures, not to include funds for maintenance and upkeep, on property in Parcel A at the direction of the National Park Service.

(e) Not to erect new structures or to modify existing structures within Parcel A except as contemplated in the plan to be formulated pursuant to Article III (b) hereof.

(f) To give employees of the Department of the Interior, together with proper equipment, the necessary rights of way for purposes of access to Parcel A and the fortress walls surrounding the Campo del Morro area.

(g) To use Parcel B continuously for historical or cultural purposes or for public purposes not inconsistent with the historical and cultural character of the area.

(h) To exercise sole planning responsibility for Parcel B in accordance with Article II(g) hereof, consulting the National Park Service on a good neighbor basis during the formulation of such plans, in view of the mutual interest of the Commonwealth and the National Park Service in the area and the cordial relationship between the parties.

(i) To manage, operate, and maintain Parcel B at its expense, while recognizing the need for continuing operational consultation on a good neighbor basis with the National Park Service regarding Parcel A to assure the smooth management of the entire Campo del Morro area.

(j) Not to construct or install any permanent structures or facilities above the surface of the ground on the triangular portion of Parcel B lying to the northwest of Manicomio bounded by El Morro Road, El Manicomio Road, Casa Rosa Road, and Santa Elena Road.

(k) To use Parcel C in such a manner that the development or use thereof will not alter or affect the aesthetic or architectural qualities of the buildings thereon or in any way subvert the historic and cultural connotation of the entire Campo del Morro area.

(l) To recognize the need, with respect to Parcel C, for continuing consultation on a good neighbor basis with the

National Park Service regarding Parcel A to assure the smooth management of the entire Campo del Morro area.

(m) To provide space in Parcel B or Parcel C for the storage and repair of equipment necessary for maintenance of Parcel A by the National Park Service.

(n) To study possible alternatives for the relocation within Parcel B or Parcel C of the National Park Service administrative offices for the San Juan National Historic Site.

(o) To seek a mutually satisfactory location within Parcel B or Parcel C for a joint Commonwealth-National Park Service Visitor Center to serve the entire Campo del Morro area.

(p) To use its best efforts to obtain the necessary legal authority, including, but not limited to, appropriations required for capital expenditures in Parcel A, that may be required to enable it to fully comply with this agreement.

ARTICLE III

The United States agrees, subject to the availability of funds:

(a) To redefine, simultaneously with the signing of this agreement, the San Juan National Historic Site to include that property referred to herein as Parcel A, but not to include Parcel B or Parcel C as defined herein or any part thereof.

(b) To formulate and adopt, after consultation on a good neighbor basis with the Commonwealth, a plan for the development, utilization maintenance of Parcel A.

(c) To manage, operate and maintain Parcel A at its expense, while recognizing the need for continuing operational consultation with the Commonwealth to assure the smooth management of the entire Campa del Morro area.

(d) To pay its share of utility costs and maintenance expenses incurred in facilities provided by the Commonwealth pursuant to Article II(m) hereof, utilized for the storage and repair of equipment necessary for the maintenance of Parcel A.

(e) To assist the Commonwealth in selecting a mutually satisfactory location within Parcel B or Parcel C for a joint Commonwealth-National Park Service Visitor Center to serve the entire Campo del Morro area.

(f) To cooperate with and provide technical assistance to the Commonwealth in the fulfillment of its responsibilities under this agreement.

(g) To cooperate and execute such further agreements with the Commonwealth as may be necessary for the protection of persons and property on Parcel A.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed as of the day and year first above written.

UNITED STATES OF AMERICA
Acting by and through the Director
of the National Park Service,
Department of the Interior

151 GARY EVERHARDT

COMMONWEALTH OF PUERTO RICO
Acting through its Governor

151 RAFAEL NERNANDEZ CENON

APPENDIX E: A HISTORICAL OVERVIEW OF THE SAN JUAN FORTIFICATIONS

The vast fortifications of San Juan evolved over almost five centuries as the result of lessons learned through repeated assaults on the city and in response to clearly perceived threats from hostile international forces.

Puerto Rico's strategic location made her a desirable object in diplomacy and war. Complex and changeable geopolitical considerations affecting the nations interested in controlling Puerto Rico or influencing her destiny played an intimate part in these events. The natural defenses of San Juan's harbor were enhanced by the skill of highly capable military engineers. The system of defenses evolved largely because of these factors.

EARLY FORTIFICATIONS

The earliest Spanish defensive structures in Puerto Rico were the fortified houses of local settlers, including that of Ponce de Leon at Caparra, and the Casa Blanca in San Juan, built soon after the capital was moved to that settlement in 1519. The principal purpose of these earliest fortifications was to provide protection against the Indians of the newly settled island and the Carib Indians, who were at that time moving into Puerto Rico from the Lesser Antilles.

Only in 1537-40 was La Fortaleza, the first permanent fortification, as defined by military historians, constructed. Elements of this first defense, built overlooking the anchorage of San Juan Bay, form part of the graceful building today bearing that name, which has been the residence of the executive authorities of Puerto Rico since about 1570.

La Fortaleza's walls were about 2 meters thick. Its main gate (sally port), facing inland toward the town, was protected by a small demilune. On the shore side stood a circular tower (the present north one) that provided vantage points for defense. The south tower was added toward the end of the 16th century. The area between La Fortaleza and the shore was enclosed by a high wall prepared to emplace cannon.

Early Spanish visitors to San Juan, notably Gonzalo Fernández de Oviedo, who was later a noted historian, criticized the location of La Fortaleza. They recommended fortifying the strategically located rocky headland (el morro) at the east side of the mouth of San Juan Bay that commanded the only navigable channel into the bay. When works had been constructed at this location, La Fortaleza took a secondary place in the city's defenses. Nevertheless, as the nerve center of Puerto Rico's government, La Fortaleza has continued to play a major role, not only in the development and management of the island's defenses, but also in most major aspects of its other public affairs and cultural life.

In 1539 construction began on the first works at El Morro, the site recommended by Oviedo. Although the works' early history is unclear, by 1554, a water battery, constructed on a semicircular platform at the

narrowest part of the harbor entrance, and a large vaulted masonry tower, built against the steep cliff, had been completed. Neither La Fortaleza nor El Morro was armed with long-range weaponry until about 1555.

A CARIBBEAN DEFENSE SYSTEM

As the 16th century waned, the principal reason for fortifying the West Indian posts changed. By one of the formidable ironies of history, Sir Francis Drake and other English and French adventurers, while demonstrating the rising sea power of their nations, became instrumental in strengthening Spain's strategic hold on her American possessions.

Landings and raids, as well as seizures of Spanish vessels and fleets in the Caribbean, including a number of episodes in Puerto Rico and waters in its vicinity, demonstrated Spanish vulnerability. These aggravations had begun as early as the 1520s in Puerto Rico, but they became almost epidemic toward the end of the century. Notable, or perhaps notorious, in this regard, was Sir Francis Drake's voyage of 1585, in which he plundered and burned major parts of the cities of Santo Domingo, Cartagena de Indias, and Saint Augustine, and harassed Havana. He had also terrorized the Spanish homeland. Almost simultaneously, the English were making their first attempts to colonize North America, including present North Carolina, dangerously near, or so it seemed, to Spanish Florida.

Although Spain's imperial power was still formidable, these raids by national fleets and unauthorized "pirates" assumed dimensions that required a vigorous counter effort, or at least adequate defenses for settled communities. Not only were the spoils taken from Spain, sapping her treasury and endangering the stability of her colonies, but the risk existed that if she did not fortify her Indies, she would lose them altogether to the other European powers.

The rising dangers to Spain's control of the Caribbean were seen clearly by local colonial officials, such as Diego Menéndez de Valdes, who became captain-general of Puerto Rico in 1582. Early in his service, he strengthened defensive positions on San Juan Island, notably by building the first fortifications at Santa Elena. He also petitioned the crown to strengthen the defenses of San Juan. Philip II's sympathetic response was to establish the Board of Puerto Rico (later the War Council), which became the permanent agency handling West Indian defenses. Arrangements were made to finance defense expenditures in the region through subsidies deriving from the wealth of Spanish Mexico and Peru.

Defensive arrangements took on a more systematic character in the wake of Drake's 1585 expedition to the Caribbean. The next year, Philip II sent Juan de Tejeda, assisted by the skilled Italian engineer Bautista Antonelli, to survey the defense needs. By late 1587, with the collaboration of Tiburcio Spanoqui, another Italian who was the king's chief engineer, they had worked out a comprehensive plan for a system of Caribbean defense, including new or improved fortifications at key coastal locations: San Juan, Santo Domingo (present Dominican Republic), Santa

Marta and Cartagena de Indias (in present Colombia); Nombre de Dios, Portobello, the Chagres River, and Panama (in present Panama); and Havana, Cuba. Late in 1588, the king directed Tejada and Antonelli to begin the construction of this great network of defenses. Urgency was lent to this enterprise when Spain suffered a great naval defeat in the loss of her "Invincible Armada" in that same year.

Antonelli soon returned to America to assist in carrying out the plan. In San Juan, the initial element in the defensive scheme was the improvement of El Morro by building, across the base of the headland, a hornwork to protect the land side of the earlier tower and batteries. The Austria Bastion, a half-bastion in the hornwork, commanded both the harbor and the land approaches; a second half-bastion, named for Tejada, was on the Atlantic side. (These features now rest beneath the massive walls that bear the same names, but are of later construction.) A small ravelin in the center of the hornwork protected its single gate (sally port). A new water battery was also added in 1593, replacing the older one, which had deteriorated.

The power of the newly completed defenses was proved in 1595, when Queen Elizabeth I of England gave Sir Francis Drake and Sir John Hawkins joint command of an expedition against Puerto Rico and Panama. Although Panama was the major target because of the precious metals that were shipped through it, Puerto Rico, where a considerable quantity of treasure was incidentally stored, was intended for seizure as a permanent English base. When Drake attacked the fortifications frontally, he was repulsed by forces under Pedro Suárez.

Another English assault three years later had a similar goal, but met with quite a different outcome, at least initially. When Sir George Clifford, third earl of Cumberland, assailed his objective, he did not repeat Drake's mistake of attacking the harbor defenses directly. Instead, he chose the indirect approach and located a weakness in the fortifications at the eastern end of San Juan Island. Cumberland landed east of the island, overcame the weak defenses at this point, and laid siege to El Morro. Disabling the undermanned fort's landward side with cannon placed at well-chosen points, he compelled its surrender.

Disease, rather than Spanish military might, put an early end to this brief English occupation, their second but not their last attempt to make Puerto Rico a permanent base for their West Indian operations. The English forces were withdrawn entirely within a few months, and the Spanish reoccupied the island. The English, however, had left the fort and much of the city in ruins.

REBUILDING OF THE SAN JUAN FORTIFICATIONS

Between 1599 and 1619, the San Juan fortification system was rebuilt and improved. The walls of El Morro's hornwork were made higher and more massive. Antonelli's parapet, badly damaged by the English, became part of the subfoundation of the new wall, and the ground level outside it was raised to protect its base. The commanding ground from which Cumberland's guns had mauled the hornwork was leveled. The eastern

defenses of the island were expanded and repaired. Also a small wooden fort was built on El Cañuelo Island, opposite El Morro, on the west side of the harbor entrance.

Even with these improvements, another basic defect in the city's fortification system remained. A third major attack on San Juan illuminated the problem and led to its remedy. Because of winds and currents, hostile forces were most likely to approach San Juan, as did normal trade, from the east. They might choose to land east of El Morro and seek to overrun the island overland from the eastern end, as had Cumberland, or attack the forts directly, as Drake did. There was an alternative, however. In 1625 a Dutch fleet, under Bowdoin Hendrick, took this latter option.

The Dutch ran the harbor entrance gauntlet of El Morro and El Cañuelo and landed beyond the reach of the principal Spanish artillery. They seized the town and laid siege to El Morro. Although they managed to damage the hornwork, they were unsuccessful in reducing the fort. Frustrated by their inability to take El Morro, they resorted to burning the city. Of La Fortaleza, for example, only the main walls were left. The Puerto Rican and Spanish troops, under Juan de Haro, soon afterward expelled the Dutch.

Further major improvements were dictated in the defenses with the reconstruction of the city from the 1630s to the 1660s, including the rebuilding of La Fortaleza. These consisted of the rebuilding and further strengthening of El Morro and the construction of a wall to protect the city on the west, south, and east. This wall incorporated the first, rather unsophisticated, Castillo de San Cristóbal, on the hill at the northeast edge of the old town. No wall was built on the north at this time because the high cliffs there provided a measure of natural defense, although a small fort, La Perla, was built on the shore below the cliffs. Lesser works toward the eastern end of the island, outside the walls, were improved; and El Cañuelo was rebuilt as a square masonry redoubt. Bautista Antonelli's son, also a military engineer, assisted for several years in the execution of these projects.

The Spanish crown agreed to the great expenses incurred in this project because Spain recognized the strategic significance of Puerto Rico as clearly as her assailants did. One of Philip IV's remarks on this subject, in 1645, bears quotation: "It is the front and vanguard of all my West Indies, and consequently the most important of them--and the most coveted by my enemies."

Through the 1600s and into the 1700s, Spain's anxiety about a repetition of the earlier attempts to seize Puerto Rico was fed by the continuing activity of her many antagonists. These attacks included further raids and numerous seizures of Spanish-claimed territory in the Caribbean, as well as the capture of treasure fleets. Additional naval defeats, especially in 1639-40, severely reduced Spain's ability to protect her American possessions. The Caribbean was no longer a Spanish sea, as other nations moved rapidly to establish their own colonies.

The Dutch, for example, although rebuffed at San Juan in 1625, occupied St. Eustatius in 1634; Curaçao, Bonaire, and Aruba in 1634-35; Saba in 1640; St. Martin in 1648; and Surinam by 1667. The French had settlements in Martinique and Guadeloupe after 1635; controlled Tortuga after 1640; and effectively occupied present Haiti in the 1660s. The English, besides making formidable settlements on the North American mainland, planted colonies in Antigua and Barbados in 1627; in St. Christopher (along with the French) about the same time in the mid-1620s; and seized Jamaica in 1655. Even Denmark took part, arriving in the Virgin Islands in 1671. Less successful ventures were attempted by these powers in many other locations.

A DEFENSE OF THE FIRST ORDER

The accession in 1701 of a branch of the French Bourbons to the throne of Spain led to major political realignments among the European powers, notably the alliance of Spain with France in a series of wars against Great Britain. Puerto Rico was spared major assaults, although other important Spanish Caribbean ports, such as Cartagena de Indias, were not. During the first half of the 1700s, no major works were undertaken in Puerto Rico. This situation changed after the Seven Years' War (1756-63), as part of the reforms inaugurated by Charles III, who ascended the Spanish throne in 1759.

Charles III accepted concepts of defense involving the strengthening of fortifications and the organization of armies in the colonies to assist in their defense. His concerns on this account were certainly sharpened by the British seizures of Manila and Havana in 1762. Spain soon regained these cities and acquired Louisiana from France, but was obliged to cede Florida to the British. The virtual elimination of France from the Americas laid the basis for further conflict between Spain and Great Britain, the two nations that possessed most of the Western Hemisphere's territory.

Charles III's resolution to make San Juan a "Defense of the First Order" arose after an inspection trip to Cuba and Puerto Rico by Major-General Alexander O'Reilly, an Irishman who held other important Spanish posts. O'Reilly; engineer Thomas O'Daly, another Irishman; and O'Daly's principal collaborator, Juan Francisco Mestre, were the key figures in the ensuing transformation of the San Juan works. O'Reilly's report stressed the strategic windward location of Puerto Rico, "the crossroads of America," that made it the best place from which to assist or attack the mainland of Spanish America. Following Charles III's approval in 1765 of the elaborate O'Reilly-O'Daly proposal for San Juan's defenses, O'Daly and then Mestre oversaw the completion of the plan from about 1766 to 1790.

Not until the early 1790s was their triumph of military engineering completed, essentially as it remains. Their work vastly changed and improved El Morro and San Cristóbal, reinforced the city wall and extended it from El Morro to San Cristóbal so that it completely enclosed the city, and rebuilt and greatly strengthened all the outlying fortifications.

El Morro was transformed. The tower, which had been enclosed in the 17th century in a U-shaped battery, was further enlarged into the Santa Bárbara Bastion. Above Santa Bárbara, a high scarp was installed that rose almost from bedrock to the top of the hornwork. This scarp not only shielded the hornwork and utility structures of the fort, but contained another level of casemates. The flanks of the hornwork were redesigned to make more room in the bastions. The parapets were thickened and embrasures installed for almost twice as many cannon as before. The roofs of bombproof vaults built against the hornwork provided a wide terreplein.

Castillo de San Cristóbal, perhaps even more than El Morro, dramatized the technical skill of its builders. In contrast to the vertical defense at El Morro, which took advantage of its terrain, the topography of San Cristóbal and its environs had to be altered greatly to achieve a defense in depth. Especially on the island east of San Cristóbal great modifications were made. Clearing and leveling were accomplished to permit free range to the fort's guns; on the bay side some swamps were drained while others were left as natural barriers.

From San Cristóbal to the eastern end of the island was about 2.5 kilometers. The master plan for San Cristóbal's defense placed two subsidiary lines of fortifications across the narrow island east of San Cristóbal. The inlet to the mainland and its bridge were guarded by Fort San Antonio. Another small fort, San Gerónimo, or Boquerón Battery, was placed at the mouth of the inlet. Between San Antonio and San Gerónimo, earthworks were built. Behind this first line of defense, midway between the inlet and San Cristóbal, a hornwork with a large moat formed the second line; extending along the shore from this hornwork was a masonry parapet running along the Atlantic shore toward San Cristóbal. Behind the hornwork was yet another, smaller breastwork.

With the completion of the O'Reilly-O'Daly scheme, San Juan became one of the premier fortified cities of the hemisphere. It was so heavily protected, in fact, that most of the land area of the old city was taken up by the forts and other military facilities.

In 1797, shortly after its completion, the fortification system was put to its most significant test by the British. This episode occurred not long after Spain had realigned herself with France, following a lapse in their relationship during the early French revolutionary wars. The British had already occupied Santo Domingo, Guadeloupe, Port-au-Prince, and other West Indian ports. The same fleet and army that had just successfully relieved Spain of Trinidad launched an assault on Puerto Rico. The British army, under Sir Ralph Abercromby, was unable to penetrate the defenses of San Cristóbal. The attacking navy, under Admiral Sir Henry Harvey, could not effectively damage the major forts from the sea.

The defenders of the forts, led by Ramón de Castro, had heroically met a powerful challenge. San Juan would not endure another major assault for a full century. Nevertheless, the great empire, in whose defense the fortifications had been built, would soon escape from Spain's grasp. It did not fall into the hands of her traditional enemies, with whom she had

so long contended for the control of the Americas, but to independent national governments.

THE FORTIFICATIONS IN THE 19TH CENTURY

By 1830 only Puerto Rico and Cuba remained of Spain's vast American dominions. Because trade with the newly independent Spanish-American states was freely available to many nations, Puerto Rico and Cuba were no longer of great potential use as bases. Thus, until 1898, San Juan was not the object of any major military assault. The forts, nevertheless, were maintained and improved in various ways. The outlying San Gerónimo and San Antonio, which Abercromby had damaged, were rebuilt. The second defense line of San Cristóbal was replaced in masonry. Armament was updated throughout the system.

Although the physical state of the fortifications was largely unchanged in the 19th century, many events vital to Puerto Rican culture and identity were taking place. This period showed striking vitality, especially in intellectual pursuits and the arts, that cannot be briefly or justly summarized in this discussion. Just one allusion, as it relates to the fortifications, will suffice to demonstrate this point. Castillo de San Felipe del Morro, the most hallowed symbol of the island's heroic martial spirit and resistance to external threats, became an ambiguous symbol, because on several occasions advocates of Puerto Rican autonomy were imprisoned there by Spanish colonial officials.

In the 19th century, Puerto Rico also flourished in other ways. The city of San Juan, long protected by its city walls and great forts, became constrained by them. Population pressures stimulated the desire to develop the land adjacent to the old city, and finally led to the demolition, beginning in 1897, of the portion of the city wall that ran from San Cristóbal to the waterfront on the bay. The newly opened area to the east urbanized rapidly and obscured much of the outer defense lines of San Cristóbal. (San Gerónimo, as well as a sentry box and a section of San Antonio's wall, however, do survive; San Gerónimo is now a historical monument administered by Puerto Rico.) La Trinidad counterguard, as well, was partially destroyed in this process.

The year 1897 was also when the Spanish made their last significant modifications in the works of San Cristóbal. They built La Princesa Bastion, incorporating an earlier work of the same name. The modern bastion, concrete-hardened, with four emplacements for powerful rifled guns, was aligned parallel to the coast. The Spanish also made major changes in the terreplein and parapets of Santa Teresa; and they strengthened San Carlos Ravelin with masonry, concrete, and earth, and installed three modern guns.

The most important of San Juan's venerable fortifications, however, were still unchanged in 1898, when the United States declared war on Spain. The fort's defenders were mustered for the first assault on San Juan in just over a century.

While the value of the fortifications against the weaponry of the U.S. Navy was probably not very great, some evidence indicates that the casualties that might have been incurred in a direct assault on the forts was one motive for the manner in which the United States attacked the island. Although Admiral Sampson, leader of the U.S. fleet that bombarded San Juan in May 1898, expressed the belief that he could reduce the forts and easily seize San Juan, his opinion is belied by the relatively mild damage done to the forts by his bombardment and by the plan followed in the U.S. Army's assault on the island. This latter plan was especially striking evidence that the forts still evoked a measure of respect in their attackers. The invasion forces struck on the west and south of the island. They were to converge near San Juan, and with the aid of a blockading fleet, besiege the city. Negotiations between the United States and Spain, however, brought a ceasefire before this plan was carried into effect.

THE FORTIFICATIONS UNDER THE U.S. ARMY

To discuss the strategic significance of the Spanish fortifications of San Juan in the 20th century would verge upon a discussion of current events in terms of world history. It should be noted, however, that the fortifications remained integral parts of military facilities until after World War II.

For most of this active military period, El Morro and San Cristóbal were garrisoned by soldiers of the 65th U.S. Infantry (formerly the Puerto Rico Regiment), a locally recruited unit with a proud combat and service record. This resulted in a continuation of the post's Hispanic military and cultural heritage through the mid-20th century.

During the American military occupation, the forts, despite their service as parts of military facilities until the mid 1940s, and in some cases into the 1950s, retained their basic configuration. Generally speaking, those changes that were made were reversible or took place in ways that exhibited a degree of sensitivity to the historic construction.

The major forts continued to be overtly identified as important to the defense of the Caribbean up through World War II, when certain new facilities were installed in and near them. It was on grounds of national defense, in fact, that promising negotiations between the Department of the Interior and the Department of War in the late 1930s and early 1940s to convert the fortifications into a cooperatively managed unit of the national park system were broken off.

Considerable notice had begun to focus on the historic character of San Juan's fortifications in the early 1930s, shortly after the first major additions of historic units to the U.S. national park system. President Franklin D. Roosevelt, for example, seems to have been concerned about their historic significance as early as 1934, and legislation to add them to the national park system was first introduced in the U.S. Congress in 1935.

The negotiations between the War Department and the Interior Department resumed in 1946 and culminated in 1949. Early in that year, President Harry S. Truman established San Juan National Historic Site, initially under cooperative management by the Department of the Army and the National Park Service.

APPENDIX F: BUILDING INVENTORY

<u>Structure*</u>	<u>Administering Agency</u>	<u>Existing Use</u>	<u>Proposed Use</u>
El Morro	National Park Service (NPS)	Historic site--open to public	Same
Guardhouse on Esplanade (A)		Public toilet facility	Same
Santa Elena guardhouse (B)	Puerto Rico Department of Transportation and Public Works	Vacant--well boarded up	Workshops for Institute of Serigraphy--open to public
El Polverin (Santa Elena gunpowder storehouse) (B)	Institute of Puerto Rican Culture	Vacant--well boarded up	Possible workshop for arts; interpretation of maintenance and repair of art objects
Casa Rosa (B)	La Fortaleza	College of Architects	Same
Annex to Casa Rosa (B)	La Fortaleza	Repair shop for air conditioners	Same
Casa Blanca (B)	Institute of Puerto Rican Culture	Public visitation and interpretation	Same
Former army cafeteria (B)	City of San Juan	Social services for La Perla	Same
Medical facility (B)	University of Puerto Rico	Medical facility	Same
Institute of Puerto Rican Culture (B)	Institute of Puerto Rican Culture	Offices	Same
Manicomio (C)	Institute of Puerto Rican Culture	School of Plastic Arts	Same
Beneficencia (C)	Puerto Rico Land Administration	Primarily vacant--some rooms for storage by Puerto Rico Sports and Recreation Department	World trade center
Annex to Beneficencia and Manicomio (C)	La Fortaleza	Carpentry shop for La Fortaleza	Same
Ballajá (Rodriguez Army Hospital) (C)	Puerto Rico Department of Education	Vacant--health and safety hazard	School of Architecture and Planning
La Concepción (C)	Puerto Rico Department of Education	Vocational school	Same
Former army post exchange (C)	Puerto Rico Sports and Recreation Department	Institute of Lexicografía Hispanoamericana Library	Cafeteria, game rooms, library, shops, office for Indoor Sports Federation, visitor information
Former NPS office building (C)	Puerto Rico Sports and Recreation Department	Vacant--well boarded up	Replace with pedestrian space
San Cristóbal	NPS	Historic site--open to public	Same
Building 208	NPS	Being restored	NPS maintenance/carpentry/storage
Building 209	NPS	Being restored	NPS administration/storage/paint shop/maintenance
Building 210	NPS	NPS employee duplex housing	Same
Building 211	NPS	NPS superintendent's housing	Same
Building 213	NPS	Civil Defense offices	NPS administrative/research maintenance/storage space
La Trinidad Battery	NPS	None--closed to public	Open to visitor use and interpretation
San Carlos Ravelin	NPS	None--closed to public	Open to visitor use and interpretation
El Abanico	NPS	Being restored	Open to visitor use and interpretation
El Abanico guardhouse	NPS	Being restored	Visitor contact station
El Cañuelo	NPS	None--closed to public	Open to visitor use and interpretation
Toilet near El Cañuelo	Puerto Rico Sports and Recreation Department (on NPS land)	Public toilet	Replace with new visitor contact station and comfort station

* (A) - Parcel A
 (B) - Parcel B
 (C) - Parcel C

APPENDIX G: EXISTING STAFFING
(as of January 1984)

<u>Position No.</u>	<u>Title</u>	<u>Grade</u>	<u>Work-Year Authorized</u>
5331-01	Park Manager	GM-13	1.0
5331-02	Park Manager	GS-12	1.0
5331-10	Administrative Officer	GS-09	1.0
5331-15	Secretary/Stenographer	GS-05	1.0
5331-17	Clerk Typist	GS-03	1.0
5331-18	Purchasing Agent	GS-04	1.0
5333-01	Facility Manager	GS-11	1.0
5333-14	Assistant Facility Manager	GS-07	1.0
5333-05	Maintenance Mechanic Foreman	WS-08	1.0
5333-10	Maintenance Worker Foreman	WS-04	1.0
5333-12	Carpenter	WG-09	1.0
5333-15	Painting Worker	WG-07	1.0
5333-08	Mason	WG-10	1.0
5333-09	Mason	WG-10	1.0
5333-11	Mason	WG-10	1.0
5333-13	Mason	WG-10	1.0
5333-21	Mason Helper	WG-05	1.0
5333-23	Mason Helper	WG-05	1.0
5333-32	Mason Helper	WG-05	1.0
5333-33	Mason Helper	WG-05	1.0
5333-22	Motor Vehicle Operator	WG-05	1.0
5333-26	Maintenance Worker	WG-05	1.0
5333-35	Laborer	WG-03	1.0
5333-36	Laborer	WG-03	1.0
5333-37	Laborer	WG-03	1.0
5333-100	Laborer	WG-03	0.9
5333-104	Maintenance Worker	WG-05	0.9
5333-200	Custodial Worker	WG-02	0.8
5334-05	Supervisory Park Ranger	GS-09	1.0
5334-06	Supervisory Park Technician	GS-06	1.0
5334-08	Supervisory Park Technician	GS-07	1.0
5334-24	Park Technician	GS-05	1.0
5334-28	Park Technician	GS-05	1.0
5333-100	Park Technician	GS-05	0.9
5334-101	Park Technician	GS-05	0.9
5334-102	Park Technician	GS-05	0.9
5334-103	Park Technician	GS-05	0.9
5334-104	Park Technician	GS-05	0.9
5334-105	Park Technician	GS-05	0.9
5334-106	Park Technician	GS-05	0.9
5334-107	Park Technician	GS-05	0.9
5333-T	Laborer	WG-03	0.8
5333-T	Laborer	WG-03	0.8
5333-T	Laborer	WG-03	0.8
5333-T	Laborer	WG-03	0.8
5333-T	Custodial Worker	WG-02	0.7
5333-T	Custodial Worker	WG-02	0.7
	Total		44.4

APPENDIX H: COMPLIANCE LETTERS FOR
ENDANGERED OR THREATENED SPECIES
AND CULTURAL RESOURCES



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Region
9450 Koger Boulevard
St. Petersburg, FL 33702

August 2, 1983

Mr. Jeffrey E. Heywood
Landscape Architect/Planner
National Park Service,
Denver Service Center
755 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

Dear Mr. Heywood:

This responds to your July 28, 1983, letter regarding the general management plan for San Juan National Historic Site, San Juan, Puerto Rico. A list of endangered/threatened species under our purview that may occur in the project area was requested pursuant to Section 7 of the Endangered Species Act of 1973 (ESA).

We have reviewed the proposed project and have determined that no species of listed sea turtles or whales under our purview are likely to occur in the proposed project area. This concludes consultation responsibilities under Section 7 of the ESA. However, consultation should be reinitiated if new information reveals impacts of the identified activity that may affect listed species or their critical habitat, a new species is listed, the identified activity is subsequently modified or critical habitat determined that may be affected by the proposed activity.

Sincerely yours,

Charles A. Oravetz

Charles A. Oravetz, Chief
Protected Species Management Branch





United States Department of the Interior
FISH AND WILDLIFE SERVICE

Ecological Services and
Endangered Species Field Office
P.O. Box 3005, Marina Station
Mayaguez, Puerto Rico 00709

August 5, 1983

Mr. Jeffrey E. Heywood
National Park Service
Denver Service Center
P.O. Box 25287
Denver, Colorado 80225

Dear Mr. Heywood:

This is in response to your July 28, 1983 letter concerning the general management plan for the San Juan National historic Site, San Juan, Puerto Rico (Log No. 4-4-83-034) and its potential impacts on the brown pelican (Pelecanus occidentalis) and the peregrine falcon (Falco peregrinus).

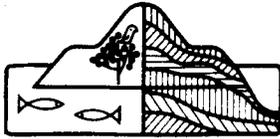
Based on the information provided we concur with your assessment that the project will have no adverse effect on endangered or threatened species. Therefore, we find that your proposed action does not affect these species.

This does not constitute a Biological Opinion described under Section 7 of the Endangered Species Act, however, it does fulfill the requirements of the Act and no further action is required. If modifications are made in the project or if additional information including potential impacts on listed species occurs, consultation should be reinitiated.

Sincerely,

Agustin P. Valido
Agustin P. Valido
Field Supervisor

cc:
AFA(SE), FWS, Atlanta, GA
NMFS, Panama City
DNR, San Juan



**DEPARTMENT
OF NATURAL
RESOURCES**

SEP 07 1992

Mr. Jeffrey E. Heywood
Landscape Architect/Planner
U.S. National Park Service
Denver Service Center
PO Box 25287
Denver, Colorado 80225

Dear Mr. Heywood:

The Department of Natural Resources concurs with the opinion of the National Park Service and the Fish and Wildlife Service, namely, that we know of no locally or nationally threatened or endangered species of plants or animals that would be adversely impacted by the proposed activities of the Park Service in the San Juan National Historic Site. The urban location of the site and its terrestrial character largely preclude conflicts with endangered species.

Please keep us informed of your plans for development of the site.

Sincerely yours,

Hilda Díaz Soltero
Secretary

cc: Mr. Agustín Valido, FWS Mayaguez, P.R.



OFFICE OF THE GOVERNOR
STATE HISTORIC PRESERVATION OFFICE
LA FORTALEZA
SAN JUAN, PUERTO RICO 00901

May 10, 1984

Mr. Bob Baker
Regional Director
National Park Service
75 Spring St., S.W.
Suite 1176
U.S. Department of the Interior
Atlanta, Georgia 30303

Dear Mr. Baker:

Mr. John Bright of the Denver Service Center submitted to our Office for our review the draft document of the San Juan General Management Plan. We wish to thank all those involved for the opportunity given to the State Historic Preservation Office to comment on this important issue.

We concur with all of the findings in particular, as stated on page 38, we are seriously concerned with loss of integrity and character of the original fabric. We are also concerned about some of the preservation techniques used in the preservation process. For example, there seems to be not one person in the existing staff (and no provision made for in the proposed additional staffing) professionally-educated in the field of preservation (whether a preservationist, architect, architectural historian or other). In our opinion, the Preservation Maintenance Program proposed in the General Plan needs to be structured by qualified, up-to-date professionals in the field of preservation. We feel that this might provide a unique opportunity to create an active, professional and vital center of studies and applied techniques not only for the use of the San Juan Historic Site but also of other similar resources.

We also endorse any professional action that will better the present situation of the El Cañuelo Fort. We concur wholeheartedly with the review team that this is an important building within the Site and should be treated as such.

Although we agree with the idea that traffic near the esplanade creates a serious safety problem and somewhat detracts from the visual integrity of the complex, we believe that cars should be allowed to enter the park until a solution is formalized for this problem. We want to avoid prohibiting vehicle entrance to the Park before an alternate solution exists.

There exists the probability that the Ballajá Quarters Building will become

Mr. Bob Baker
Page 2
May 10, 1984

part of the University of Puerto Rico. We are aware that the University is interested in developing the parcel in front (please see site plan included) of the Ballajá Building as additional parking place for their clientele. La Concepción Building is also using the nearby space as a much-needed parking lot. Entrance to both lots is gained by means of the main entrance to the fort. Another entrance could be created between these two buildings. In any case, we feel that a solution to this need should be explored.

We would like to take this opportunity to congratulate the Review Team for the excellent and professional assessment of the needs of the San Juan Historic Site presented in this General Management Plan.

We are at your service for any other matter you may deem important.

Sincerely yours,



Arleen Pabón de Rocafort, PhD.
State Historic Preservation Officer

APR/lca

cc: Mike Bureman
Denver Service Center

APPENDIX I: VISITOR DATA

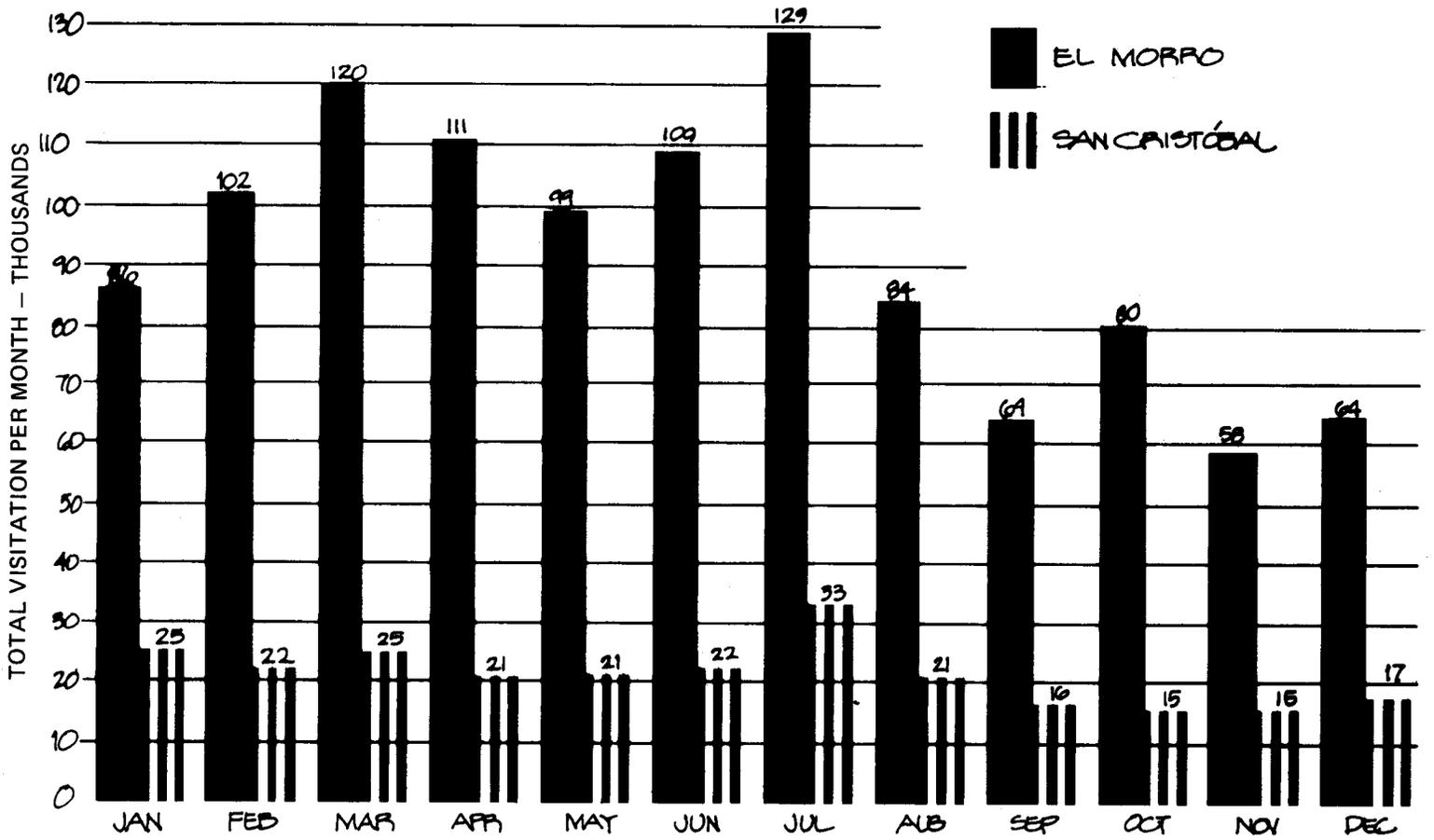
The average annual visitation at San Juan National Historic Site for the last 10 years has been approximately 1.3 million visitors (see graph of annual visitation). This figure includes only those visitors who enter El Morro and San Cristóbal forts. People who now visit the Esplanade are counted only if they enter El Morro proper. The park staff estimates that approximately 500,000 visitors a year visit the Esplanade. A new estimating procedure is currently being developed to include the Esplanade visitation as part of the overall visitor count. No overnight facilities are available within the historic site.

El Morro, the primary attraction, receives approximately four times the number of visitors that San Cristóbal does. All existing parking spaces (legal and illegal) for both forts reach capacity by noon on almost every weekend of the year. El Morro on a peak Sunday may have 6,000 to 8,000 visitors and San Cristóbal 3,000-6,000 visitors; however, there may be only two NPS employees at each area to manage this visitation. Weekday use at El Morro ranges between 2,000 and 3,000 visitors, while weekday use at San Cristóbal is between 1,000 and 1,500.

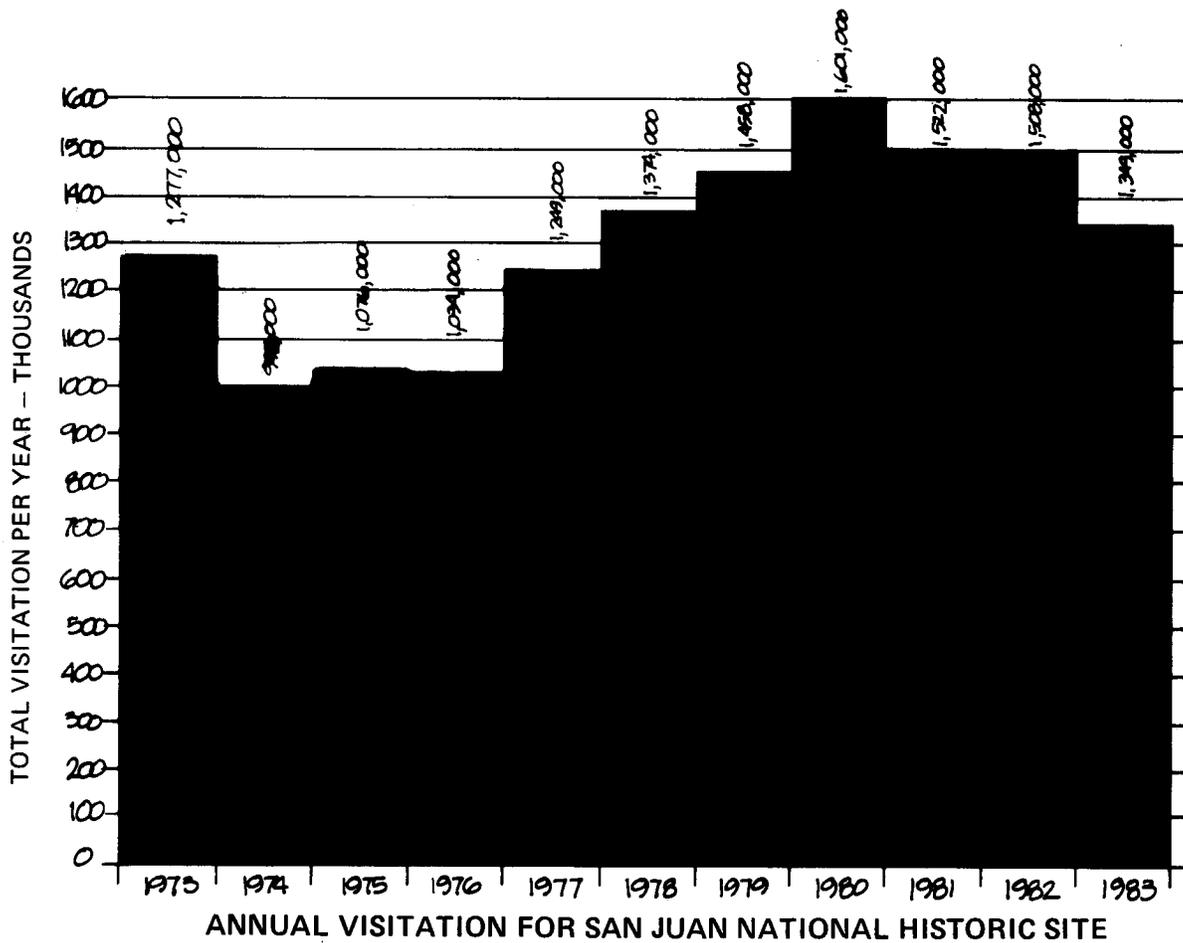
Repeat visitation to the historic site is high, indicating the significant role that these historic structures and associated open spaces play in the greater San Juan community. School groups frequent both forts (approximately 100,000 students per year) and actively participate in NPS programs. Fridays are traditionally heavy use days for school groups.

The August through October hurricane season shows the lowest visitation, with a monthly average of approximately 92,000. The monthly highs come usually in March and April when an average of 138,000 visits is recorded (see graph of monthly visitation).

International visitors arrive by both airlines and cruise ships. From 1979 to 1981, the number of international visitors declined by approximately 7.6 percent (Tourism Company of Puerto Rico). Since 1980, the park's visitation figures have correspondingly declined by approximately 6 percent. The worldwide recession is believed to be one major reasons for this downward trend in tourism.



1983 VISITATION – SAN JUAN NATIONAL HISTORIC SITE



APPENDIX J: COMPLIANCE CONSIDERATIONS

NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED

Because San Juan National Historic Site is listed on the National Register of Historic Places, actions that affect it, such as approval and implementation of the proposed general management plan, are subject to review and comment by the Advisory Council on Historic Preservation and the appropriate state historic preservation officer in accordance with the "Regulations for the Protection of Historic and Cultural Properties" (36 CFR 800).

Pursuant to those regulations, the council, the National Park Service, and the National Conference of State Historic Preservation Officers have executed a programmatic memorandum of agreement on the NPS planning process. In accordance with that memorandum of agreement, the council and the Puerto Rico historic preservation officer have participated in the development of this plan through informal consultations and reviews.

Those consultations and reviews will continue throughout the planning process, and both parties will be given an opportunity to formally review and comment on the proposed plan before it is approved by the regional director. Evidence of compliance with section 106, as applicable to this plan, will be included in its final NEPA document.

PUERTO RICO'S COASTAL MANAGEMENT PROGRAM

The National Park Service has reviewed Puerto Rico's coastal management program and has informally consulted with Jose Gonzalez-Liboy of the Puerto Rico Department of Natural Resources. Based on the information so gathered and in accordance with section 307(c) of the Coastal Zone Management Act of 1972, the National Park Service believes that the actions contained in the proposed plan are consistent with Puerto Rico's coastal management program. This determination is based on a finding that no areas identified in the coastal management program as being of particular concern, or areas for preservation and restoration, are located within or near the national historic site.

ENDANGERED SPECIES ACT

In accordance with the Endangered Species Act of 1973, the National Park Service has informally consulted with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Puerto Rico Department of Natural Resources (see appendix H). The agencies know of no threatened or endangered species of plants or animals that are of local or national concern that would be adversely affected by the proposed activities at the national historic site.

Consultation responsibilities under section 7 of the Endangered Species Act are now concluded. However, consultation will be reinitiated if new information reveals potential impacts of the proposals on listed species or

their critical habitats, or if a new species or critical habitat is listed for the national historic site.

PROTECTION OF FLOODPLAINS AND WETLANDS

A new staging area, two-car administrative parking area, and a 700-square-foot visitor contact station are proposed for El Cañuelo on Cabras Island. This development will be in the 100-year floodplain (zone A) because the entire 3.4 acres of NPS land and the adjacent land is in the 100-year floodplain. Currently, the National Park Service does not maintain a presence at the site, and the fort is closed to the public. The proposed visitor contact station is necessary to meet the minimum needs for visitor use and park management at El Cañuelo. There is no practicable alternative to locating it in the floodplain. It will be sited in a location least likely to be affected by coastal storms and flooding. There will be no adverse impact on the floodplain.

In conformance with the standards and criteria of the national flood insurance program (44 CFR 60), the visitor contact station will be elevated on open works, and the lowest horizontal member of the structure will be no lower than the base flood elevation, which is 5 feet above mean sea level. In case of a hurricane emergency and danger of flooding, the site will be closed to visitor use well before the dangerous situation, in accordance with early warning and evacuation procedures described in the existing hurricane plan for the national historic site. A statement of findings documenting the rationale for new construction in and continued occupation of floodplains will accompany the decision document for the proposed plan, as required by NPS guidelines for compliance with Executive Order 11988.

There are no wetlands within the national historic site. Therefore, proposed actions will have no effect on wetlands.

ACCESSIBILITY FOR SPECIAL POPULATIONS

In accordance with NPS management policies, the Rehabilitation Act of 1973 (PL 93-112), and other relevant statutes, new development at the national historic site, such as the visitor contact station at El Abanico and El Cañuelo will be accessible to handicapped visitors. Parking spaces for handicapped visitors will be provided in each of the parking areas for El Morro, San Cristóbal, and near El Abanico.

It would be very costly, both in terms of money and destruction of historic fabric, to make the entire national historic site accessible to all visitors. Therefore, only a representative sample of the historic structures will be made fully accessible to handicapped visitors. The primary areas of accessibility will be the main plazas of El Morro and San Cristóbal, and all visitor use areas on those levels. This will include the chapels, audiovisual rooms, interpretive museums, casemates, concession stores, and toilets.

PROTECTION OF PRIME AND UNIQUE FARMLAND

The proposed plan will have no effect on prime or unique farmlands because none exist in the park.

PREPARERS AND CONSULTANTS

PLANNING TEAM

Denver Service Center

Bart Young, Team Captain, Outdoor Recreation Planner
Jeff Heywood, Landscape Architect/Planner
Mike Bureman, Cultural Resource Specialist

San Juan National Historic Site

Luis E. Garcia-Curbelo, Superintendent
Gerardo Parrilla, Chief, Maintenance
Gregory Batista, Chief, Visitor Services

Southeast Regional Office

Paul Swartz, Chief of Planning
Benjamin Nistal-Moret, Cultural Resource Specialist

CONSULTANTS

National Park Service

Denver Service Center

Ray Borrás, Chief, Branch of Estimates
Russ Pishnery, Concessions Management Specialist
Fred Moore, Concessions Management Specialist

Southeast Regional Office

Paul Hartwig, Chief, National Register Programs Division
William Smith, Chief, Maintenance Division
William O'Neal, Chief, Recreation Services Division

Washington Office

Edwin Bearss, Chief Historian

Federal Agencies

Advisory Council on Historic Preservation

Department of the Army

Corps of Engineers

Department of the Interior

Fish and Wildlife Service

Department of Transportation

Coast Guard

Commonwealth of Puerto Rico

Department of Commerce

Department of Sports and Recreation

Department of Transportation and Public Works

Historic Preservation Officer

Tourism Development Company

Municipality of San Juan
Planning and Budget

Organizations and Special Interests

Asociación de Comerciantes del Viejo San Juan

Bacardi Corporation

Chamber of Commerce

Comite pro Conservación Zona Historica de San Juan, Inc.

Fondo de Mejoramiento

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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