

**United States Department of the Interior**

National Park Service

**National Register of Historic Places Registration Form**

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

**1. Name of Property**Historic name: San Juan National Historic SiteOther names/site number: Real Presidio de San Juan; Plaza de San Juan de Puerto Rico; Post San Juan; San Juan Military Reservation; and Fort Brooke

Name of related multiple property listing:

N/A**2. Location**Street & number: 501 Norzagaray Street, Castillo San CristóbalCity or town: San Juan and Toa Baja State: Commonwealth of Puerto Rico County: N/ANot For Publication: Vicinity: **3. State/Federal Agency Certification**

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this X nomination \_\_\_ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property X meets \_\_\_ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

X national    X statewide    \_\_\_ local

Applicable National Register Criteria:

X A    \_\_\_ B    X C    X D*Stephanie Stephens*

1/13/2022

**Signature of certifying official/Title:****Date**Federal Preservation Officer, National Park Service**State or Federal agency/bureau or Tribal Government**

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

In my opinion, the property X meets    does not meet the National Register criteria.

*Carly A. Rubin*

*August 6, 2021*

Signature of commenting official:

Date

Puerto Rico State Historic Preservation Office

Title :

State or Federal agency/bureau  
or Tribal Government

**4. National Park Service Certification**

I hereby certify that this property is:

- entered in the National Register
- determined eligible for the National Register
- determined not eligible for the National Register
- removed from the National Register
- X other (explain:) Accept Additional Documentation

*James Gabbert*  
Signature of the Keeper

3/4/2022

Date of Action

**5. Classification**

**Ownership of Property**

(Check as many boxes as apply.)

Private:

Public – Local

Public – State

Public – Federal

**Category of Property**

(Check only one box.)

Building(s)

District

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

\_\_\_\_\_  
Name of Property

Site

Structure

Object

**Number of Resources within Property**

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
<u>18</u>	<u>0</u>	buildings
<u>8</u>	<u>0</u>	sites
<u>57</u>	<u>0</u>	structures
<u>1</u>	<u>0</u>	objects
<u>84</u>	<u>0</u>	Total

Number of contributing resources previously listed in the National Register 0

**6. Function or Use**

**Historic Functions**

(Enter categories from instructions.)

DEFENSE: Fortification, Military Facility, Battle Site,  
Arms Storage, Coast Guard Facility, Naval Facility  
TRANSPORTATION: Water-Related

**Current Functions**

(Enter categories from instructions.)

RECREATION AND CULTURE: Museum, Outdoor Recreation  
TRANSPORTATION: Water-Related, Pedestrian-Related

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

---

## 7. Description

### Architectural Classification

(Enter categories from instructions.)

Spanish Colonial

Mission/Spanish Colonial Revival

OTHER: U.S. Modern Harbor Fort

**Materials:** (enter categories from instructions.)

Principal exterior materials of the property:

STONE, BRICK, CONCRETE, EARTH, STUCCO, WOOD

## Narrative Description

---

### Summary Paragraph

San Juan National Historic Site is an historic district unit of the National Park System established on February 14, 1949.<sup>1</sup> With the passage of the National Historic Preservation Act in 1966, San Juan National Historic Site was administratively listed on the National Register of Historic Places on October 15, 1966. The boundaries of the site were redefined multiple times, and today comprise 79.9 acres in five distinct areas: Castillo San Felipe del Morro (including the 23-acre El Morro Esplanade), Castillo San Cristóbal; the 20-acre San Cristóbal Outworks, El Cañuelo, and the Old San Juan City Walls (North, West, and South) (Photos 1-6).<sup>2</sup>

San Juan National Historic Site is a well-preserved, complex of Spanish colonial masonry military fortifications, begun in 1539, and subject to continuous addition, reconstruction, and modernization efforts over the course of the seventeenth, eighteenth, nineteenth, and twentieth centuries. The last major construction campaign took place during the United States Army's use of the fortifications during World War II. The historic property occupies a large portion of San Juan Islet and spans the entrance to San Juan Bay to include the outpost, El Cañuelo, within its boundary. Castillo San Felipe del Morro comprises the fort of El Morro, the El Morro Esplanade, and San Antonio Guardhouse located to the east of the fort's dry moat. Castillo San Cristóbal

---

<sup>1</sup> Edwin C. Bearss, *Historic Structure Report, Historical Data Section: San Juan Fortifications, 1898-1958*. (Denver: Denver Service Center, National Park Service: 1984), 381; On February 14, 1949, Secretary of the Interior Julius A. Krug designated Castillo San Felipe del Morro (also, "El Morro"), Castillo San Cristóbal ("Fort San Cristóbal"), Casa Blanca, and El Cañuelo to be part of the San Juan National Historic Site. The Casa Blanca complex was transferred to the Government of Puerto Rico in 1967.

<sup>2</sup> In 1983, San Juan National Historic Site and La Fortaleza were inscribed as a World Heritage Site by the United Nations Educational, Scientific, and Cultural Organization. In 2013, the fortifications at San Juan National Historic Site were also documented as part of the Old San Juan Historic District/Distrito Histórico del Viejo San Juan for the National Register of Historic Places (6/15/2012) and the National Historic Landmarks Program (2/27/2013).



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

comprises the fort of San Cristóbal, the Quarters Buildings along Norzagaray Boulevard, and the San Cristóbal Outworks which stretch out for more than 1,000 feet (305 meters) east of the fort. The Old San Juan City Walls run approximately 2.5 miles along the northern, western, and southern edges of the city of Old San Juan and comprise a discontinuous network of bastions, walls, gates, and batteries. El Cañuelo comprises the fort of El Cañuelo (or Fortín San Juan de la Cruz), located on the Isla de Cabras, on the west side of San Juan Bay.

This nomination contains a total of 84 contributing resources, all of which retain physical integrity and contribute to the significance of the historic district. Contributing resources consist of eight sites, 18 buildings, 57 structures, and one object. There are no noncontributing resources within the district. A Glossary of Terms is included on page 187.

### Setting

San Juan National Historic Site (Park) is located on San Juan Islet and Cabras Island, spanning the mouth of the San Juan Bay, in the municipalities of San Juan and Toa Baja, Puerto Rico. The majority of the Park is located on San Juan Islet, a small and densely developed island which is sited between the Atlantic Ocean to the north, San Juan Bay to the west and south, and the San Antonio Channel and the Condado Lagoon at the eastern end of the islet. San Juan Islet measures approximately 2.6 miles long (east–west), between 0.15 and 0.6 miles wide (north–south), and forms the northernmost portion of the San Juan Municipality, the capital of Puerto Rico. Cabras Island is an islet on the west side of the entrance to San Juan Bay and is part of the municipality of Toa Baja. The portion of the Park located on Cabras Island is El Cañuelo (or Fortín San Juan de la Cruz). During the sixteenth century, Spanish explorer Ponce de León identified San Juan Islet and the San Juan Bay as a strategically important harbor for merchant and naval vessels traveling with the trade winds across the Atlantic Ocean from Europe to Spain’s colonial possessions in the Caribbean and America.

The topography at the northwestern end of San Juan Islet rises to approximately 90 feet (27.5 meters) above sea level at the rocky outcropping on which Castillo San Felipe del Morro sits. From this point, moving eastward, the ground slopes downward toward the south and east to the San Juan Harbor at the foot of the city of Old San Juan and toward the eastern end of the islet. Castillo San Cristóbal interrupts this downward slope, seated on a hill more than 100 feet (30 meters) above sea level on the northern coast of the islet. San Juan Islet is accessed from the mainland by four bridges: Dos Hermanos (Bridge #1750); Puente de San Antonio (Bridge #2793); San Antonio Railroad Bridge (Bridge #1571); and the Guillermo Esteves Bridge (Bridge #2702), all at the eastern end of San Juan Islet. On the western side of San Juan Bay, Cabras Island is accessed via a narrow man-made causeway which carries PR Route 870 from the mainland to the islet. San Juan Islet is intensely developed, with the neighborhood of Old San Juan built according the Spanish colonial conventions comprising narrow streets arranged in a grid and densely-packed residential buildings. Many of the buildings predate 1898 and are constructed of traditional *tapiería* (rammed earth) and *mampostería* (rubble masonry)

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

construction with stuccoed exteriors.<sup>3</sup> The Puerta de la Tierra neighborhood, directly east of Old San Juan, is less densely populated and is home to a mixture of historic and modern governmental, industrial, commercial, and residential buildings. While several plazas are located within the Old San Juan neighborhood, the El Morro Esplanade at San Juan National Historic Site represents that largest public open space on the islet.

The natural rocky headlands (*el morro*) at the entrance to San Juan Bay have dictated the location, form, and function of successive defensive building campaigns comprising the core complex of the Park. Construction began in 1539. The village of San Juan was established beginning in 1519 and was constructed according to an orthogonal (made up of perpendicular angles) grid, with several public plazas, the Catedral de San Juan Bautista (Cathedral of Saint John the Baptist), La Fortaleza, and Casa Blanca adjacent to the harbor.<sup>4</sup> Within Old San Juan are several significant historic sites which are closely related to the history of the fortifications. The Santa Elena Guardhouse and El Polvorín (Powder Magazine) are both managed by the Park, although they are outside the boundary, and historically acted in a support capacity for Castillo San Felipe del Morro and the Old San Juan City Walls. The cathedral, La Fortaleza, the Plaza de Armas of San Juan, and Casa Blanca are similarly related to the history of the historic district, but are located outside the Park boundaries.

## Inventory

The following section provides an inventory of the historic property types associated with San Juan National Historic Site. Contributing resources were built during the identified period of significance (1539–1971) and retain sufficient integrity to convey their historic associations.

The inventory is arranged by the five Park areas identified above. As many contributing resources represent smaller components of larger resources, the larger resources are introduced first, followed by each related contributing resource. Each resource name is listed with its corresponding National Park Service (NPS) resource ID, the unique number that identifies its record within the Cultural Resources Information System (CRIS). Those resources which have not yet been assigned a CRIS ID are indicated as “N/A.” CRIS resource types include Historic Structures (HS), Cultural Landscapes (CL), Archeology (AR), or Ethnographic Resources (ER) (no ethnographic resources are part of this nomination). A previous cataloging system internal to the Park, Park Structure Numbers (PSN), are also listed where available. Internal NPS systems use the acronym “SAJU” for San Juan National Historic Site. All resources are keyed to the sketch map (Key Map with Insets A, B, C, D, E, and F) included in the Additional Documentation section at the end of the nomination, unless otherwise noted in the Contributing Resources Table, below.

<sup>3</sup> Arleen Pabón-Charneco, *Distrito Histórico del Viejo San Juan / Old San Juan Historic District. Revised National Register of Historic Places Nomination*, June 15, 2012. (Washington D.C.: National Park Service, 2012), 7-43–7-44.

<sup>4</sup> Pabón-Charneco, *Old San Juan National Register Nomination*, 8-6, 8-67.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

**Contributing Resources Table**

**NR Criteria Abbreviations:** MH (Military History), MaH (Maritime History), EH (Ethnic Heritage), SH (Social History), AH (Architectural History), AR (Archaeology)

Type	Map #	CRIS Resource Name	CRIS ID	Major Construction Date(s)	Alternate Names	NR Criteria
<b>Castillo San Felipe Del Morro</b>						
Buildings =5; Sites = 2; Structures = 18; Object = 1						
Building	1	Castillo San Felipe del Morro	HS 001275	1539; 1600; 1765-1790; 1850s; 1876; 1896-1898; 1918; 1940s	El Morro; San Felipe del Morro Castle	A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	10	San Antonio Guardhouse	HS 91732	1897; 1920s; 1938; 1961		A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	31	World War II Radio Control Center	HS 091737	1942	Harbor Defense Command Post-Harbor Entrance Command Post	A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	34	Officer's Quarters (El Morro)	HS 091722	1773-1775; 1783; 1839; 1961	Pabellón del Gobernador	A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	35	Castillo San Felipe del Morro Chapel	HS 599577	1770-1790		A – State (EH, SH), National (MH, MaH); C – National (AH)
Site	7	El Morro Esplanade Historic Landscape	CL 550129; HS 91728	1539-1945; 1989	Esplanade; El Morro Glacis	A – State (EH, SH), National (MH, MaH); C – National (AH)
Site	81 (Not Mapped)	El Morro Archeological Site Complex	AR SAJU 00001.000	1539-1945		A – State (EH, SH), National (MH, MaH); C – National (AH); D – National (AR)
Object	9	Dutch Monument	HS 91729	circa 1861		A – State (EH, SH), National (MH, MaH)

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Type	Map #	CRIS Resource Name	CRIS ID	Major Construction Date(s)	Alternate Names	NR Criteria
Structure	8	El Morro Road	HS 91730	circa 1861; 1930; 1989		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	29	Castillo San Felipe del Morro Dry Moat	HS 091727	1765–1942		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	30	San Fernando Bastion at El Morro	HS 091740	1770s–2001		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	32	Castillo San Felipe del Morro Sally Port	HS 091736	1765		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	33	Plaza de Armas, Castillo San Felipe del Morro	HS N/A	1740s–1770s		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	36	Carmen Bastion	HS N/A	1765–1770s		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	37	Mercado Bastion	HS N/A	1740–1770s	Tejeda Bastion	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	38	Ochoa Bastion	HS N/A	1765–1770s		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	39	El Morro Lighthouse	HS 91731	1908		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	40	El Caballero Battery	HS 91720	1765–1770s	El Caballero	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	41	Austria Bastion	HS N/A	1765–1770s		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	42	El Morro Fire Control Station A	HS N/A	1942	Manhole A	A – State (EH, SH), National (MH, MaH); C – National (AH)

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Type	Map #	CRIS Resource Name	CRIS ID	Major Construction Date(s)	Alternate Names	NR Criteria
Structure	43	World War II Visual Signal Station	HS N/A	1941		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	44	Santa Bárbara Bastion	HS N/A	1539; 1770–1790; 1850s; 1918; 1938–1940		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	45	Gun Emplacement at Santa Bárbara Battery	HS N/A	1918		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	46	Great Wall	HS N/A	1776		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	47	Kitchen Courtyard	HS N/A	1776		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	48	Water Battery	HS N/A	1765–1770s	Floating Battery	A – State (EH, SH), National (MH, MaH); C – National (AH)
<b>Old San Juan City Walls</b>						
Sites = 2; Structures=17						
Site	79 (Not Map-ped)	Old San Juan City Walls Historic Landscape	CL N/A	1586–1945		A – State (EH, SH), National (MH, MaH); C – National (AH)
Site	82 (Not Map-ped)	Old San Juan City Walls Archeological Site Complex	Part of AR SAJU 00004.000, See also Castillo San Cristóbal List	1586–1945		A – State (EH, SH), National (MH, MaH); C – National (AH); D – National (AR)
Structure	3	Old San Juan City Wall (North Wall)	HS 006065	1776–1785	North Wall	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	11	San Antonio Bastion	HS N/A	1776–1783		A – State (EH, SH), National (MH, MaH); C – National (AH)

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Type	Map #	CRIS Resource Name	CRIS ID	Major Construction Date(s)	Alternate Names	NR Criteria
Structure	12	Santa Rosa Bastion	HS N/A	1776–1783		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	13	San José City Gate	HS N/A	1760–1783	Puerta de San José; La Puerta del Cementerio	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	14	Santo Domingo Bastion	HS N/A	1776–1783		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	17	Las Ánimas Bastion	HS N/A	1778–1783		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	18	La Puerta de la Perla	HS N/A	1772–1783	Gate at Santo Tomas Bastion; Santa Rosa City Gate; Puerta del Matadero	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	19	Santo Tomás Bastion	HS N/A	1772–1783		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	20	San Sebastián Bastion	HS N/A	1772–1783		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	5	Old San Juan City Wall (South Wall)	HS 006069	1630–1650; 1770–1790	Recinto del Sur, South Wall No. 2	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	27	La Concepción Bastion	HS N/A	1640–1650; 1770–1790		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	28	San José de las Palmas Bastion	HS N/A	1630–1650; 1770–1790	Las Palmas Bastion	A – State (EH, SH), National (MH, MaH); C – National (AH)

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Type	Map #	CRIS Resource Name	CRIS ID	Major Construction Date(s)	Alternate Names	NR Criteria
Structure	4	Old San Juan City Wall (West Wall)	HS 006068	1586; 1630–1650; 1770–1790; 1938–1940	Recinto del Oeste; South Wall No. 1	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	15	San Fernando Battery	HS N/A	1765; 1888; 1992–1995		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	16	Santa Elena Bastion	HS N/A	1586; 1630–1650; 1770–1790	El Baluarte de Santa Elena	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	25	San Agustín Bastion	HS N/A	1770s		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	26	San Juan City Gate	HS 091741	1635; 1749; 1809; 1956	Puerta de San Juan	A – State (EH, SH), National (MH, MaH); C – National (AH)
<b>Castillo San Cristóbal</b>						
Buildings = 11; Structures = 12						
Building	2	Castillo San Cristóbal	HS N/A	1634–1644; 1765–1790, 1940s	San Cristóbal	A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	21	Quarters Building No. 1	HS 006070	Circa 1861; 1880s; 1973	Quarters 208, also part of AR SAJU 00004.000	C – AH, State
Building	22	Quarters Building No. 2	HS 006072	circa 1857; 1880s; 1938	Quarters 209; Pabellones de Artillería; also part of AR SAJU 00004.000	A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	23	Quarters Building No. 3	HS 006073	circa 1859; 1880s; 1930–1940	Quarters 210; also part of AR SAJU 00004.000	A – State (EH, SH), National (MH, MaH); C – National (AH)

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Type	Map #	CRIS Resource Name	CRIS ID	Major Construction Date(s)	Alternate Names	NR Criteria
Building	24	Quarters Building No. 4	HS 006074	circa 1792; 1840; 1880s	Quarters 211; also part of AR SAJU 00004.000	A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	51	Guardhouse at San Cristóbal	HS 091719	1784–1839; 1861		A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	52	North Casements of San Cristóbal	HS 091718	1768–1771; 1774–1785; 1868; 1890s		A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	53	Troop's Quarters	HS 091724	1765–1771; 1938–1940; 1974	Cuarteles, Troop's Headquarters	A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	54	Officer's Quarters at Castillo San Cristóbal	HS N/A	1773–1775; 1835; 1839; 1850; 1938-1940; 1965		A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	56	The Chapel	HS 091721	circa 1839–1861	La Capilla de Santa Bárbara	A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	65	World War II Joint Command Center	HS 091726	1942	San Cristóbal Joint Operations Center; Building 213	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	49	Main Gate at San Cristóbal	HS 001271	1783; 1830; late 1930s	Entrada Principal	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	50	Plaza de Armas, Castillo San Cristóbal	HS N/A	circa 1765–1775		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	55	South Gate at San Cristóbal	HS 091723	1773–1783; 1861; 1898; 1960	Puerta del Socorro	A – State (EH, SH), National (MH, MaH); C – National (AH)



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Type	Map #	CRIS Resource Name	CRIS ID	Major Construction Date(s)	Alternate Names	NR Criteria
Structure	57	San Cristóbal Well Houses (Batch of 2)	HS N/A	1773, 1837–1861, 1899; 1971		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	58	Cisterns (Batch of 5)	HS N/A	1769–1774		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	59	El Caballero	HS N/A	1634–1644; 1770–1773; 1897; 1939–1942	El Macho; El Caballero de San Miguel	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	60	San Cristóbal Fire Control Station A	HS N/A	1942	Manhole A	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	61	San Cristóbal Fire Control Station B	HS N/A	1942	Manhole B	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	62	North Bastion, Curtain Wall, and South Bastion	HS 091725	1634–1644; 1765–1770; 1942; 1960s	Baluarto del Norte, Cortina, Baluarto del Sur	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	63	El Espigón	HS 91717	1634–1644; 1939; 1960s; 2004	La Garita del Diablo; Devil's Sentry Box	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	64	San Cristóbal Moat	HS 091712, HS 091733	1634–1644; 1769; 1942	Great Moat	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	74 (Not Map-ped)	Tunnels of San Cristóbal (Batch)	HS 091742	1634–1644; 1766; 1773; 1938; 1983	Tunnels 1, 2, 3, 4, 5	A – State (EH, SH), National (MH, MaH); C – National (AH)
<b>San Cristóbal Outworks</b>						
Buildings = 1; Sites=2; Structures=10						
Site	80 (Not Map-ped)	San Cristóbal Outworks Historic Landscape	CL 550130	1635–1940s		A – State (EH, SH), National (MH, MaH); C – National (AH)

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Type	Map #	CRIS Resource Name	CRIS ID	Major Construction Date(s)	Alternate Names	NR Criteria
Site	83 (Not Map-ped)	San Cristóbal Archeological Site Complex	AR SAJU 00002.000	1635–1945		A – State (EH, SH), National (MH, MaH); C – National (AH); D – National (AR)
Structure	66	La Trinidad Counterguard	HS 091711	1765–1783; 1894–1896	Contra-guardia de la Trinidad	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	67	San Carlos Ravelin	HS 006066	1776–1770; 1896; 1939–1942		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	68	Santa Teresa Battery	HS 006067	1783–1792; 1896–1897	El Baluarte de Santa Teresa	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	69	El Abanico	HS 001270	1779v1783; 1897; 1930; 1959	El Fuerte del Abanico; El Abanico	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	70	South Gate at El Abanico	HS 091716	1896–1898		A – State (EH, SH), National (MH, MaH); C – National (AH)
Building	71	El Abanico Guardhouse	HS 91714	1896; circa 1922; 1983	Edificio para Fuegos de Armas y Planton	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	72	Northeast Gate at El Abanico	HS 091715	1896–1898		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	73	La Princesa Battery	HS 091713	1779–1783; 1897; 1930; 1940–1941	Batería de la Princesa	A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	75	Gun Emplacement at La Princesa Battery	HS N/A	1940–1941		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	76	North Covered Way at San Cristóbal	HS 091734	1765–1772		A – State (EH, SH), National (MH, MaH); C – National (AH)
Structure	77	South Covered Way at San Cristóbal	HS 091735	1779–1783; 1897–1898		A – State (EH, SH), National (MH, MaH); C – National (AH)

San Juan National Historic Site

San Juan, Puerto Rico  
 Toa Baja, Puerto Rico  
 County and State

Name of Property

Type	Map #	CRIS Resource Name	CRIS ID	Major Construction Date(s)	Alternate Names	NR Criteria
<b>El Cañuelo</b>						
Buildings= 1; Sites=2						
Building	6	El Cañuelo	HS 6075	1609; 1664; 1841	Fortín San Juan de la Cruz	A – State (EH, SH), National (MH, MaH); C – National (AH)
Site	78 (Not Map-ped)	El Cañuelo Historic Landscape	CL 550131	1595–1945		A – State (EH, SH), National (MH, MaH); C – National (AH)
Site	84 (Not Map-ped)	El Cañuelo Archeological Site Complex	AR SAJU 00003.000	1609–1841		A – State (EH, SH), National (MH, MaH); C – National (AH); D – National (AR)

### Inventory Section 1: Castillo San Felipe del Morro

26 Contributing Resources // 0 Noncontributing Resources

See Map Insets A and D

Castillo San Felipe del Morro (HS 001275; PSN HS-200)

Contributing

El Morro Archeological Site Complex (AR SAJU 00001.00)

Contributing

Total: 1 Site, 1 Building.

The fort known as Castillo San Felipe del Morro (El Morro), stands as one of the largest Spanish colonial forts in the New World and occupies approximately 7 acres at the northwestern point of San Juan Islet (see Photos 1 and 8–19). Built to defend the entrance to San Juan Bay, El Morro is situated on the cliffs and rock outcrops at the edge of the island and is roughly triangular in plan. The batteries of Santa Bárbara Bastion form the triangle’s apex, facing the Atlantic Ocean and the San Juan Bay; Ochoa and Austria bastions form the triangle’s base, arranged in a wide hornwork on its landward front. To the west, El Cañuelo (Fortín San Juan de la Cruz) guards the westward reaches of the mouth of San Juan Bay. El Morro is built on a series of eight earthen levels (terrepleins) which are connected by ramps, gates, tunnels and stairways. The fort’s eight

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

levels include: the upper terreplein, the upper plaza, the dry moat, San Fernando Bastion at El Morro, Mercado Bastion, the Santa Bárbara terreplein, the lower plaza, and the Water Battery.<sup>5</sup>

The wide hornwork on Castillo San Felipe del Morro's eastern side defends the landward approach to the fort and monitor the broad, open El Morro Esplanade (Esplanade) that slopes eastward for nearly a quarter mile (see Photos 1, 8–10). Few structures stand within the Esplanade, with only San Antonio Guardhouse and the Dutch Monument interrupting the broad, open turf field. The hornwork is separated from the Esplanade by a dry moat (Castillo San Felipe del Morro Dry Moat) and is crossed by a centrally located arched masonry bridge. This bridge leads to the Castillo San Felipe del Morro Sally Port, which pierces the central masonry curtain wall of the hornwork and stands as the primary entrance point for the fort. Abutting the masonry bridge, the World War II Radio Control Center lies under a layer of turf between the bridge and Ochoa Bastion. At the bayside of the dry moat, a ramp leads down to the San Fernando Bastion at El Morro.<sup>6</sup>

Passing through the sally port, within the fort's walls, is the Plaza de Armas (upper plaza) (see Photo 11). This long and narrow plaza is 117.5 feet (35.75 meters) above sea level and lined with vaulted casemates, some of which are directed seaward to defend the fort while others are internal chambers once used as quarters, store-rooms, and a chapel. Excluding the Castillo San Felipe del Morro Chapel, the casemates surrounding the plaza are collectively known as the Officer's Quarters of El Morro. At the northern and southern ends of the plaza, under the twin bastions of the hornwork, are chambers which once held powder magazines. Today the casemates contain museum exhibits, a book store, restrooms, storage, and office space. A casemate archway opposite the El Morro Sally Port provides access to the fort's steeply inclined main ramp, leading down to Santa Bárbara Bastion and the lower levels of the fort (see Photos 12–16). At the north end of the plaza, and on the same level, an arched passageway leads to Carmen Bastion, which faces the Atlantic Ocean (see Photo 17). At the south end of the plaza, a ramp leads up to Austria Bastion, one of two bastions anchoring the fort's hornwork, the other being Ochoa Bastion.

Austria and Ochoa bastions, together with El Caballero Battery, comprise the upper terreplein and defended El Morro's eastern, landward flank at 140 feet (42.5 meters) above sea level (see Photos 18–19). Also, on the upper terreplein is the Castillo San Felipe del Morro Lighthouse, the World War II-era El Morro Fire Control Station A, and the Visual Signal Station. Access to the northern end of upper terreplein is had from a ramp in Carmen Bastion. Below Carmen Bastion,

<sup>5</sup> Joan Berkowitz et al., *The Fortifications of San Juan National Historic Site: Historic Structures Report, Volume III: Castillo de San Felipe del Morro, The City Walls, An Investigation of the Materials Used, Cultural Landscape Report*. (Atlanta: National Park Service Southeast Regional Office, 1991), 1; Richard Crisson, "Cultural Landscape Report for El Castillo de San Felipe del Morro." In *The Fortifications of San Juan National Historic Site: Historic Structures Report, Volume III: Castillo de San Felipe del Morro, The City Walls, An Investigation of the Materials Used*. (Atlanta: National Park Service Southeast Regional Office, 1991), 5–6.

<sup>6</sup> San Fernando Bastion at El Morro is located within the El Morro Dry Moat. The San Fernando Battery, a separate fortification, is located just outside and southeast of the El Morro Dry Moat.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

and reached by an interior stair ramp, is Mercado Bastion. A second stair, the triangular staircase, leads from Carmen Bastion down to the Santa Bárbara terreplein (also accessible via the fort's main ramp).

The Santa Bárbara terreplein, 75 feet (23 meters) above sea level, comprises a seaside battery and a bayside battery which meet to form a point at the toe of Santa Bárbara Bastion. At the point where the two batteries meet is a World War II-era gun emplacement (Gun Emplacement at Santa Bárbara Battery). A linear stair from the bayside battery, and a circular stair from the seaside battery, descend down to the lower plaza (Kitchen Courtyard), 56 feet (17 meters) above sea level.

The lower plaza (Kitchen Courtyard) is the sunken interior of Santa Bárbara Bastion, sitting at the foot of the Great Wall with rows of vaulted casemates along its north and southwest sides (see Photos 13–14). The north casemates face the Atlantic Ocean and support the seaside batteries of Santa Bárbara Bastion, above. The southwestern casemates are open and support the main ramp of the fort. The open casemates and the lower plaza were a service area for the fort, housing the kitchen, forge, and a latrine. Remnants of seventeenth-century walls are apparent in the dirt floor of the plaza. The north casemates were used to quarter soldiers and to mount defenses of the fort's northern flank.

At the northwestern end of the lower plaza, a vaulted tunnel leads to the interior of the original round tower, built circa 1539 (see Photo 15). Three of the four embrasures (gun ports) of the round tower have since been filled; one has been converted into a doorway. Through this doorway, stairs lead down to the lowest level of the fort, the Water Battery (see Photo 16). Sitting just 20 feet (6 meters) above sea level, the Water Battery could fire at the low reaches of ships passing through the channel.

Construction of Castillo San Felipe del Morro began in 1539, with the building of the rounded tower, now ensconced in the toe of Santa Bárbara Bastion. Over the years, the fortifications were improved and maintained intermittently as funding from Spain allowed. The largest building campaign took place between approximately 1770 and 1790, when El Morro underwent a modernization project and assumed much of its present appearance. The modernization project was intended to improve El Morro's defenses by increasing the number of casemate firing positions, facilitating the movement of people, artillery, and information throughout the fortification, and presenting an intimidating and formidable appearance to approaching ships. Smaller-scale changes occurred in the nineteenth and twentieth centuries by the Spanish and United States governments, until 1961 when preservation of the fort became paramount after it was transferred to the NPS.

El Morro's fortified masonry walls are composed primarily of limestone, mined from the quarry on the north coast of the San Juan Islet, where the Santa María Magdalena de Pazzi Cemetery is today. The limestone blocks which comprise most of the walls are arranged in an ashlar pattern

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

and act as retaining walls for the earthen and rubble fill on the interior of the bastions, walls, and terrepleins. The mortar binding the blocks together has a lime (calcareous) base, with sand and clay components, although portions of the fortification were repointed with Portland cement in the early twentieth century. Other materials used as part of the masonry walls include brick, wood (for doors, shutters, and window framing), and stucco to coat the exterior of the walls. Brick elements include the vaulting of casemates, piers, and the edges of walls, embrasures, and steps. Wood elements were originally constructed of local ausubo wood, but replacements are made with mahogany. Non-fortified walls, including interior walls and non-defensive surfaces, were of rubble construction (*mampostería*) until the 1890s.<sup>7</sup>

The stucco used to coat the walls is composed of a specialized lime and sand mixture. This coating acts to protect the masonry from the deleterious effects of salt water, while allowing for the infiltration and evaporation of water. During the early twentieth century, Portland cement was used in place of the stucco across many of El Morro's surfaces, creating a non-permeable layer which ultimately accelerated the deterioration of the limestone blocks beneath by trapping water inside. Today, the maintenance of the lime-based mortar and stucco at El Morro is a year-round project managed by the NPS's Historic Preservation Team.

The El Morro Archeological Site Complex (AR SAJU00001.000)<sup>8</sup> is an area of archeological sensitivity associated with Castillo San Felipe del Morro and the El Morro Esplanade, within the San Juan National Historic Site boundary. The Castillo San Felipe del Morro Archeological Site has been administratively identified by the NPS based on the archeological research potential represented by the presence of Spanish colonial architectural remains and as well as known archeologically-sensitive deposits excavated within El Morro and the El Morro Esplanade. The El Morro Archeological Site Complex has been issued a resource identification number of #SJ0100029 by the Oficina Estatal de Conservación Histórica de Puerto Rico (Puerto Rico State Historic Preservation Office, PRSHPO).<sup>9</sup> As discussed in more detail in Section 8, archeological investigations, including excavations in the Castillo San Felipe del Morro Dry Moat, the deposits on the cliffs outside the fort walls, the Kitchen Courtyard, and within the El Morro Esplanade have been undertaken intermittently since the 1960s. These investigations have yielded information about the military, maritime, and architectural history of the site and point to the archeological potential of this resource to yield important archeological information in the future.

---

<sup>7</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 1.

<sup>8</sup> Subsites within the El Morro Archeological Site Complex include: Castillo San Felipe del Morro (AR SAJU00001.001); El Morro Lighthouse (AR SAJU00001.002); Esplanade (AR SAJU00001.003); San Antonio Guardhouse Subsite (AR SAJU00001.004). Sites and subsites have been identified based on extant architectural remains which point to their potential to yield information in the future; known subsurface archeological data are not necessarily associated with these resource numbers. As such only archeological complexes are counted as "Sites" in the above Section 5 Resource Count.

<sup>9</sup> Puerto Rico State Historic Preservation Office, *Sitios Arqueológicos de San Juan: Resumen Arqueológico del Municipio de San Juan*. Oficina Estatal de Conservación Histórica Website, Accessed June 2021.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

---

Name of Property

### *Statement of Integrity*

Castillo San Felipe del Morro is situated on the high cliffs at the northwestern end of San Juan Islet with unimpeded views of the Atlantic Ocean, San Juan Bay, El Cañuelo, and Old San Juan. These views, along with continued association with nearby historic resources such as the National Register-listed Old San Juan Historic District, reinforce the fort's high degree of integrity of location, setting, feeling, and association as a defensive military fortification.

El Morro has been modified during multiple episodes of construction and reconstruction since the initial building campaign of 1539. These episodes have achieved significance in their own right, and retain integrity of design, materials, and workmanship to various eras within the period of significance (1539–1971). By and large, the fort retains a high degree of integrity of design, materials, and workmanship to the late eighteenth century. Those elements of the fort that were added or altered by the United States in the twentieth century retain varied degrees of integrity, as will be discussed below. As an example of a twentieth-century United States military reservation, El Morro on the whole retains a low degree of integrity of design, materials, workmanship, and feeling. El Morro retains a high degree of integrity of association with the history of Spanish military defensive systems from the sixteenth to the end of the nineteenth centuries and with the United States military use of the site from 1898 to 1945.

El Morro retains the ability to convey its significance with respect to Spanish and United States military and maritime history, the history of defensive architecture between the sixteenth and the twentieth centuries, ethnic heritage in Puerto Rico, and social history with respect to the preservation movement in Puerto Rico in the twentieth century.

Archeological excavations at the El Morro Archeological Site Complex, in the El Morro Dry Moat, the El Morro Esplanade, and along the cliffs at the exterior of Santa Bárbara Bastion, have yielded information related to the military, maritime, and architectural history of the fort. The stratigraphy within these excavations exhibits a high level of integrity and retains the potential to yield important archeological information.

A description of each contributing resource within Castillo San Felipe del Morro, known historical associations, previous investigations, and assessments of integrity, follows below. This discussion begins with those resources at the lowest elevation at the western tip of El Morro (p.20–23); followed by those resources at the administrative core of the fort (p. 23–25); the bastions and batteries which make up the hornwork (p. 25–28); the late nineteenth- and twentieth-century additions to the upper terreplein (p. 28–30); bastions abutting the Atlantic Ocean and the Great Wall (p. 31–34); and those resources which are located on the landward front of El Morro, east of the hornwork (p. 34–44).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Santa Bárbara Bastion (HS N/A)

Contributing

Water Battery (HS N/A)

Contributing

Kitchen Courtyard (HS N/A)

Contributing

Gun Emplacement at Santa Bárbara Battery (HS N/A)

Contributing

*Total: 4 Structures*

Santa Bárbara Bastion (Santa Bárbara) is the westernmost vanguard of Castillo San Felipe del Morro's defenses. Santa Bárbara includes seaside and bayside batteries which follow the irregular edges of the steep cliffs and come to a point at the toe of the bastion, where the Water Battery juts out into the channel (see Photos 12–16). Roughly triangular in shape, Santa Bárbara has three tiers: a wide terreplein atop which the batteries are arranged; a sunken lower plaza (Kitchen Courtyard) lined with casemates; and the Water Battery, an open-air platform built close to sea level. The interior remains of the circa-1539 tower are enclosed within its western toe. Santa Bárbara Bastion is accessed from the upper levels of El Morro via the triangular staircase (at Carmen Bastion) and the main ramp (at the Plaza de Armas). Santa Bárbara Bastion's masonry construction comprises limestone blocks, lime-based mortar, and brick; the latter used to edge masonry embrasures, firing steps, and the semi-circular gun emplacements. Once covered in a protective lime-based stucco coating, much of the stucco is missing and portions have been replaced with Portland cement.

Most of the visible elements of Santa Bárbara Bastion are associated with the late-eighteenth century (1770–1790) redesign of Castillo San Felipe del Morro, with the notable exceptions of the interior portion of the 1539 tower and the nineteenth- and twentieth-century gun emplacements. Additional changes include repairs which followed the damage wrought by the 1898 American bombardment during the Spanish-American War. The salient corner along the north wall of Santa Bárbara Bastion was subject to the most damage during the American bombardment, as portions of the corner and wall were missing after the encounter.<sup>10</sup> Afterwards, the void was filled with poured concrete. Local preservationists complained about the quality of repairs and, as a concession to calls for context-sensitive design, the United States Army started to make their repairs appear visually consistent with the existing limestone-block masonry thereafter. Repairs done in the 1938–1940 period include the installation of composite stone panel facing to Santa Bárbara Bastion, Carmen Bastion, and the interior surfaces of merlons and other surfaces repairs at the time.

The bayside battery of the Santa Bárbara terreplein jogs southeast from the toe of the bastion to meet the southern end of the Great Wall. The bastion's stone parapet is pierced by 22 embrasure openings and two narrow passageways leading to sentry boxes. Firing steps and ledges behind the parapets are edged with brick. A latrine chamber at the eastern end of the bayside battery

<sup>10</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 46–47.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

connects with a drainage ditch running along the base of the Great Wall. A set of two vaulted chambers, which supports the main ramp above, is located on the north side of the bayside battery. A hexagonal, limestone and stucco observation post (sometimes termed the “triangular guard post”) stands at the base of the main ramp and stair. The observation post has a rounded arch door on its east face, five vertical slits through which a guard could view the post’s surroundings, and decorative corbelled crenellation at its top.

Perched at Santa Bárbara Bastion’s salient angles, two small cylindrical sentry boxes (garitas) capped with concrete domes and finials provide views of the Atlantic Ocean and San Juan Bay through vertical slit windows. The bayside battery was constructed during the late-eighteenth-century modernization of El Morro, though it sits atop the circa-1702 Granados Bastion, which once defended El Morro’s bayside flank from a much lower elevation.<sup>11</sup>

The seaside battery of the Santa Bárbara terreplein jogs northeast from the toe of Santa Bárbara Bastion toward the northern end of the Great Wall. The stone parapet of the bastion is pierced by 10 embrasure openings and one observation window. Arranged behind the embrasures, atop the terreplein, are the overlapping arches of limestone tracks lined with brick, which are the remnants of 1890s gun emplacements in this area. Near the toe of the bastion are two 1850s gun emplacements and a small powder magazine. Constructed with basalt tracks that once housed iron rails, these emplacements were built for guns intended to fire *en barbette*, over the parapet wall.

The westernmost 1850s emplacement is obscured by the Gun Emplacement at Santa Bárbara Battery, a concrete twentieth-century gun platform. In preparation for World War I, the United States Army built the platform and installed a 4.72-inch Armstrong breech-loading rapid-fire rifle at the western end of Santa Bárbara Bastion in 1918.<sup>12</sup> This gun was removed in 1942 to improve the Army’s field of vision for searchlights and observation posts. The platform is roughly rectangular, with a semi-circular portion projecting southward. Niches built on the face of the four-foot tall platform were likely for radio and telegraph equipment. In 1955, a new gun was installed for target practice, and was later removed, likely by the NPS.<sup>13</sup>

The seaside battery tier is supported by vaulted casemates below, each of which has a narrow interior opening, widening toward the outer face of the walls, through which cannon could be aimed at enemy ships. The casemates connect with each other through interior segmented-arch doorways. Each casemate opens onto the sunken Kitchen Courtyard (lower plaza) via a segmented arch doorway with a central keystone.

The terreplein of the Kitchen Courtyard (lower plaza) was established in the late eighteenth century, when the bastion assumed its current form (see Photo 14). The Kitchen Courtyard sits

<sup>11</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 25.

<sup>12</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 46.

<sup>13</sup> WLA Studio, *Draft Additional Documentation, Fort Brooke, San Juan National Historic Site. National Register of Historic Places Nomination Form.* (Washington, D.C.: National Park Service, 2016), 7-3, 8-29.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

between the seaside casemates, the Great Wall, and the vaulted chambers which support the main ramp and staircase, above. The Kitchen Courtyard is reached by a staircase extending from the landing of the main ramp and a circular staircase located along the seaside battery. Seventeenth and early eighteenth-century buildings which once stood within the courtyard have been excavated by archeologists, the upper reaches of their walls and the alignment of late-eighteenth-century drains are evident in the dirt floor. The courtyard floor was once divided into a northern and southern section by a wall just south of the circular staircase. This wall was removed in the early twentieth century. The vaulted chambers under the main ramp and staircase were used as a latrine (east chamber) and a kitchen (chamber immediately west of the latrine).<sup>14</sup>

The first tower built on the rocky *el morro* headlands in 1539 is ensconced within the toe of Santa Bárbara Bastion (see Photo 15). Circular in plan, and with four embrasures pointed out toward the harbor entrance, the original elevation of the top of the tower was only 60 feet (18.5 meters) above sea level. In the early 1770s, a domed ceiling was added, three embrasures were infilled, and one was converted to a doorway leading down to the Water Battery.<sup>15</sup>

The Water Battery juts out into the mouth of San Juan Bay at 20 feet (6 meters) above sea level (see Photo 16). While a “Low Battery,” set below the tower at Santa Bárbara Bastion has existed in some form since the late sixteenth century, the present Water Battery or “Floating Battery” was not built until the late eighteenth century; sometime between 1765 and 1772.<sup>16</sup> The “Low Battery” was sited at a higher elevation, resting 15.5 feet (4.7 meters) higher than then floor of the extant Water Battery. In the early eighteenth century, the Low Battery was accessed via ramps from the Granados Bastion, which today sits underneath the seaside battery of Santa Bárbara Bastion. Today the Water Battery is accessed via an interior a stair from the 1539 portion of Santa Bárbara Bastion. The Water Battery terreplein has three arched gun emplacements, positioned to mount guns *en barbette*. A “hot shot” furnace is located in the west wall of the battery; this oven once heated munitions before they were fired at enemy ships.

### *Statement of Integrity*

As the oldest component of El Morro, Santa Bárbara Bastion’s architecture reflects the long history of military defensive systems implemented at San Juan National Historic Site since 1539. Even as the bastion today largely reflects the modernization project of the late eighteenth century, elements of earlier and later building campaigns and the preservation efforts of the twentieth century are evident. Santa Bárbara Bastion retains its historic views of the Atlantic Ocean and San Juan Bay which made it crucial to the military strategies of both the Spanish and United States forces.

<sup>14</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 9–10.

<sup>15</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 8.

<sup>16</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 18–19.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Santa Bárbara Bastion retains a high degree of integrity of location, setting, feeling, and association with the history of late-eighteenth-century Spanish coastal fortifications and moderate association with United States coastal fortifications. Extant features of Santa Bárbara Bastion retain varied degrees of integrity of design, materials, and workmanship to different eras of the period of significance (1539–1971).

As a whole, Santa Bárbara Bastion, the Water Battery, the Kitchen Courtyard, and the Gun Emplacement at Santa Bárbara Battery retain their ability to convey their significance as it relates to Spanish and United States military history, maritime history, the history defensive architecture, ethnic heritage, and social history.

<u>Plaza de Armas, Castillo San Felipe del Morro</u> (HS N/A)	Contributing
<u>Castillo San Felipe del Morro Chapel</u> (HS 599577)	Contributing
<u>Officer's Quarters (El Morro)</u> (HS 091722; PSN HS-224)	Contributing

*Total:* 1 Structure, 2 Buildings

The Plaza de Armas, also known as the upper plaza or main plaza, represents the administrative core of Castillo San Felipe del Morro. This long and somewhat narrow plaza is lined with casemates on both its east and west sides. The vaulted ceilings of the casemates support El Caballero Battery, above. Access to the Plaza de Armas can be had via the El Morro Sally Port, the main ramp and stair, and the arched passageways at its north and south ends. A wellhead is positioned at the center of the plaza, which connects to El Morro's three cisterns below. Collectively, the vaulted rooms of the casemates are known as the Officer's Quarters (El Morro), with the exception of the Castillo San Felipe del Morro Chapel.

The arches of the casemate vaults are exposed on their plaza façade, each arch accented by a central keystone and separated from its neighbors by squared pilasters. The arches and columns are capped by a projecting cornice, at the level of the upper terreplein, above which is a low parapet surrounding the plaza. The plaza façade of the casemates is covered in stucco and painted. On the west side of the plaza, casemate doorways are generally squared and unembellished while on the east side, segmented arch doorways are enframed by simple moldings and surmounted by large valence windows. Passage between many of the casemate chambers can be had via interior arch doorways.

The Castillo San Felipe del Morro Chapel (Chapel) represents the religious core of El Morro and is situated within a one-story vaulted casemate on the eastern side of the Plaza de Armas, adjacent to the El Morro Sally Port. The Chapel is a building composed of limestone block walls

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

to a height of approximately four feet (1.2 meters), with a brick vaulted ceiling.<sup>17</sup> The flooring in the chapel is black and white marble tile in a checkerboard pattern. Its neoclassical façade is one and one-half stories, surmounted by a bell-tower above the central entryway. Both the bell-tower and the entryway are capped by arched pediments. The entry surround includes flanking Tuscan-style pilasters and engaged columns supporting an embellished Doric entablature featuring an alternating pattern of rosettes, triglyphs, and cow skull decoration.

While the plaza was historically used for military drills, the rooms surrounding this open space were used for a variety of functions including as a kitchen, chapel, powder magazines, storage areas, and barracks. Most of the casemates along the west side of the plaza were built to serve as protected gun positions, as eight of these chambers feature embrasure openings through which munitions could be fired toward the Atlantic Ocean or San Juan Bay. The vaulted rooms had wood doors on their plaza façades, with iron-grilled windows. Today the casemates house the Park's museum, a bookstore, restrooms, storage space, and NPS administrative rooms.

Prior to the 1770s, the Plaza de Armas, did not have the serial-casemate appearance it has today and the terreplein was at a lower elevation. In the early eighteenth century, the Plaza de Armas had separate structures for troop's quarters, a Guardhouse, and a chapel.<sup>18</sup> The original chapel, constructed in 1636 and rebuilt in 1689, stood in the approximate location that the extant Chapel stands today, just south of the main entrance to the Plaza de Armas. Remnants of the original plaza elevation are evident in the differences in construction methods visible on the bayside walls of Austria Bastion.<sup>19</sup> The first iteration of the officer's quarters, built by 1742, was located along the southwestern side of the Plaza de Armas during the mid-eighteenth century. The extant Officer's Quarters (El Morro) were constructed in the 1780s, after the demolition of the previous structure.<sup>20</sup>

The Plaza de Armas, Officer's Quarters (El Morro), and the Chapel assumed their present appearance during the late-eighteenth-century building campaign, when the Great Wall was raised to its present height, three cisterns were built behind the wall, and the extant vaulted casemates the plaza were built atop the cisterns. The construction of the eastern bank of casemates resulted in the widening of the terreplein above (upper terreplein) along the curtain wall between Austria and Ochoa bastions.<sup>21</sup> This portion of the upper terreplein is today known as El Caballero Battery.

<sup>17</sup> Frederik C. Gjessing, *Sally Port and Chapel of San Felipe del Morro, San Juan, Puerto Rico, HABS No. PR-55*. Historic American Building Survey, San Juan National Historic Site. (Washington, D.C.: National Park Service, 1956).

<sup>18</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 23.

<sup>19</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 23.

<sup>20</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 23.

<sup>21</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 34–35.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

*Statement of Integrity*

The Plaza de Armas, Castillo San Felipe del Morro Chapel, and Officer's Quarters (El Morro) took on their current form during the modernization project of the late eighteenth century and retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. These contributing resources retain their ability to convey their significance with respect to Spanish military history, maritime history, defensive architecture, ethnic heritage, and social history.

Austria Bastion (HS N/A)

Contributing

Ochoa Bastion (HS N/A)

Contributing

*Total: 2 Structures*

The landward defenses of Castillo San Felipe del Morro are anchored by the seaside Ochoa Bastion and the bayside Austria Bastion. These bastions and the terreplein of El Caballero Battery between them, form the upper terreplein of El Morro. The upper terreplein was raised to its current height beginning in 1773 and can be reached via a ramp from Carmen Bastion and a ramp at the south side of the Plaza de Armas. Austria Bastion, Ochoa Bastion and El Caballero Battery are constructed of limestone blocks, lime-based mortar, with some elements composed of brick or rubble (*mampostería*) construction. The scarped walls of Austria and Ochoa bastions act as retaining walls, holding back the packed earth and rubble that makes up the interior of the bastions. These structures were historically covered with a layer of stucco, though some of this has worn away and some has been replaced with Portland cement. The original hornwork, two bastions and a connecting curtain wall at the landward approach to El Morro, was completed by Pedro de Salazar circa 1591 (see Figure 4). This hornwork was rebuilt after the 1598 attack of the Earl of Cumberland.<sup>22</sup> Archaeological remnants of the original hornwork (precursors to the extant Austria and Ochoa bastions and El Caballero Battery) were identified during excavations within the Castillo San Felipe del Morro Dry Moat and showed that the earlier structures shared a similar footprint with the extant works.<sup>23</sup> Archaeological data indicates that the circa 1600 bastion walls were constructed of rubble masonry built upon a brick footing, featured vertical rather than scarped walls, and included an orillión "notch" where the bastion met the curtain wall, which the current structures lack.<sup>24</sup>

<sup>22</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 13.

<sup>23</sup> Ken S. Wild, *Archaeological Investigations at the Flanking Battery Wall of El Morro, San Juan, Puerto Rico*. (Southeast Archeological Center, National Park Service: 1991); Smith, Hale, "Archaeological Excavation at El Morro, San Juan, Puerto Rico." *Notes in Anthropology*, Volume 6 (1962).

<sup>24</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 13–15.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Austria Bastion today is roughly star-shaped and features scarped walls which rise approximately 30 feet (9 meters) from the moat floor.<sup>25</sup> The elevation of its original terreplein was 11.5 feet (3.5 meters) lower than it is today, and can be seen in the southeast wall of the ramp leading up from the Plaza de Armas.<sup>26</sup> Raised to its current height starting in 1773, Austria Bastion's terreplein is built upon earthen fill and rubble.<sup>27</sup> Austria Bastion's parapet wall surrounds its north, east, and south sides and is pierced by 12 embrasures. These embrasures face San Juan Harbor, the landward approach to El Morro, and the El Morro Sally Port. One sentry box, accessed via a narrow alley through the parapet, is positioned at the southwestern-most salient angle of the bastion. The terreplein surface is a patchwork of poured concrete and limestone. Within Austria Bastion, and accessed from the east side of its ramp, is a powder magazine. The powder magazine chamber and a portion of the present-day museum beneath Ochoa Bastion, were open to the sky before the late-eighteenth-century building campaign. These positions were used for mounting a defense of the El Morro Sally Port, through an orillon "notch" in the exterior flanking walls of Austria and Ochoa bastions.<sup>28</sup>

Ochoa Bastion is roughly rectangular in plan, slanted eastward into El Morro's Dry Moat, where its scarped walls rise approximately 30 feet (9 meters) above the moat floor (see Photos 9, 18). Raised to its current height starting in 1773, Ochoa Bastion's terreplein is built upon earthen fill and rubble and is encircled by a parapet pierced by 10 embrasures.<sup>29</sup> Ochoa Bastion's embrasures point toward the landward approach to El Morro and the El Morro Sally Port. The limestone firing steps set adjacent to each embrasure are attached to the parapet wall via small arched brick vaults and a drainage ditch runs beneath. The parapet on the seaside (north) flanking wall of Ochoa Bastion is lower than the east and south parapets and lacks embrasures. This contrast is due to the nineteenth-century lowering of the parapet to accommodate the 1850s gun emplacements along the northern flank wall to defend against maritime attacks. The 1850s gun emplacements are marked by iron pintles and paved arches of slate blocks framing embedded iron rails for the rotating gun mounts (see Photo 18). In the 1890s, these emplacements were buried beneath an earthen embankment built to protect a new gun emplacements. While the earth layer was removed during the 1938-1940 restoration project at El Morro, the *mampostería* retaining wall that held it back is extant.<sup>30</sup>

Prior to the 1780s, Ochoa Bastion had two levels to accommodate the steep seaward-slope of the rocky headlands on the north side of El Morro. The southern (upper) portion of Ochoa Bastion had embrasures facing the El Morro Dry Moat, and the northeast (lower) portion had embrasures

<sup>25</sup> Excluding the parapets, which rise to approximately 40 feet (12 meters) above the moat floor.

<sup>26</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 23–24.

<sup>27</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 33.

<sup>28</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 24.

<sup>29</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 33.

<sup>30</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 48.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

facing the Atlantic Ocean. Ochoa's terreplein was raised to its current height during the modernization project of the late eighteenth century.<sup>31</sup>

In the mid-nineteenth century, a lighthouse was constructed on Austria Bastion, but was relocated to Ochoa Bastion by 1876. A portion of the distinct 1876 octagonal base exists today as part of the foundation of the extant lighthouse, built by the United States in 1908. A portion of the original lighthouse base on Austria Bastion was used in the late nineteenth century as a signal tower for communicating with Castillo San Cristóbal and nearby ships, but it is not extant today. In the 1890s, the Spanish installed a breech-loading gun emplacement in Austria Bastion to fire over the parapet wall; the emplacement was removed in the 1930s by the United States Army.<sup>32</sup>

### *Statement of Integrity*

Austria Bastion and Ochoa Bastion took on their current form during the modernization project of the late eighteenth century and retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some changes, such as the construction of the El Morro Lighthouse, have introduced additional elements into the terreplein of Ochoa Bastion, these changes occurred during the period of significance and are associated with United States military history. Both Ochoa and Austria bastions retain their ability to convey their significance as relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

El Caballero Battery (HS 91720)

Contributing

*Total:* 1 Structure

Connecting Ochoa Bastion and Austria Bastion is the central portion of the upper terreplein, El Caballero Battery. Raised to its current height starting in 1773, El Caballero Battery sits atop the casemates of the Plaza de Armas. As the highest battlement in El Morro, architects designed the space in order to mount both seaward and landward attacks.<sup>33</sup> El Caballero Battery's eastern parapet is pierced by four embrasures, pointed toward the landward approach to El Morro. Adjacent to the embrasures are limestone firing steps attached to the parapet by vaulted brick platforms. Brick drainage ventilation stacks pierce the eastern terreplein. The western terreplein of El Caballero Battery overlooks Santa Bárbara Bastion and the mouth of San Juan Bay. Its eighteenth-century appearance is obscured by three breech-loaded gun emplacements, similar to those extant today at Carmen and Ochoa Bastions, installed in the 1890s. Each emplacement comprises a concrete wall built into the parapet, arched tracks of limestone for rotating gun mounts on the terreplein floor, and a powder magazine adjacent to each gun position. The latter

<sup>31</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 27–33.

<sup>32</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 43.

<sup>33</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 33.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

are today covered with earth and grass. The 1890s magazines are constructed of rubble masonry reinforced by double courses of brick, coated with a lime-based stucco, and covered with a layer of earth. Much of the stucco has since been replaced by Portland cement. The central emplacement was built upon when the United States Army installed a poured concrete World War II Visual Signal Station.<sup>34</sup>

A portion of El Caballero Battery, situated above the El Morro Sally Port, was repurposed for a water storage tank in 1902. This structure received water from the cistern under the Plaza de Armas, as it was pumped out via a windmill.<sup>35</sup> The water tank and windmill were dismantled in the 1920s. When the Works Progress Administration (WPA)-era El Morro restoration projects took place (1938–1940), a new terrazzo floor was laid on the curtain wall terreplein.<sup>36</sup> At the northwest corner of El Caballero Battery, El Morro Fire Control Station A was constructed in 1942.

#### *Statement of Integrity*

El Caballero Battery took on its current form during the modernization project of the late eighteenth century and retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some additions have altered the Spanish-era design of the fortification, this resource retains its ability to convey its significance as it relates to Spanish military history, maritime history, the history of defensive architecture, ethnic heritage, and social history. El Caballero Battery also retains its ability to convey its significance as it relates to United States military history.

El Morro Lighthouse (HS 91731; PSN HS-233)

Contributing

*Total:* 1 Structure

The El Morro Lighthouse is sited on the upper terreplein of Castillo San Felipe del Morro, within Ochoa Bastion. The El Morro Lighthouse is a three-story square brick masonry tower, built in 1908 upon the octagonal brick base of an 1876 Spanish lighthouse. A portion of the old brickwork was retained on the first and second floors. A two-story rectangular entry bay projects from the southwest side. The third story, lantern level, is encircled by a corbelled brick cornice capped by a crenellated cement parapet wall with ornamental sentry boxes in the Spanish Mission Revival style. The wood window casements and doors on the first and second stories are set within segmental arched openings with projecting brick caps. The cylindrical lantern is constructed of cast iron, bronze, and glass sheets with wrought-iron plate-roofing. The ogee

<sup>34</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 43.

<sup>35</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 46.

<sup>36</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 48.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

profile of the lantern's onion-dome roof is reminiscent of the ogee roofs on sentry boxes throughout the site.

The El Morro Lighthouse is the oldest component of the lighthouse system on the island and was built to guide ships through the entrance to San Juan Bay and harbor. It was the central lighthouse in the San Juan area system.<sup>37</sup> The extant El Morro Lighthouse represents the third lighthouse known to be constructed at El Morro. The original lighthouse was constructed at Austria Bastion in 1846 and was an octagonal, cast-iron structure approximately 18 feet (5.5 meters) tall, sitting on a stone foundation approximately seven feet tall. The iron tower was moved in 1876 to a 13.7 foot (4.15 meter) octagonal brick base on Ochoa Bastion.<sup>38</sup> After being damaged during the 1898 bombardment, an octagonal brick tower was constructed in 1899 atop the 1876 brick base to replace it. Lasting only a few years, the lighthouse was again replaced in 1908. The new square lighthouse was built on the 1876 base and the light is likely the original 1875 Fresnel lens, apparently reused after the 1898 bombardment.<sup>39</sup>

#### *Statement of Integrity*

In its current state, the El Morro Lighthouse retains a poor integrity of design, materials, workmanship, feeling, and association with respect to its original 1876 form. The extant lighthouse retains much of the 1908 historical fabric and a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association with its twentieth-century form. This resource retains the ability to convey its significance with respect to United States military and maritime history, defensive architecture, ethnic heritage, and social history.

El Morro Fire Control Station A (HS N/A)

Contributing

*Total:* 1 Structure

El Morro Fire Control Station A (El Morro Manhole A), is a reinforced poured concrete "triple-deck observation and command post constructed in 1942"<sup>40</sup> (see Photos 13 & 17). Built into the northwest angle of the Great Wall, El Morro Manhole A is accessed via El Caballero Battery on the upper terreplein and via a ceiling hatch in a casemate adjacent to the Plaza de Armas. Once part of a World War II harbor defense system, El Morro Manhole A was constructed with a rounded exterior to blend with the curved wall on which it was constructed. The upper deck sits recessed from the two lower levels and is capped by a flat roof with a short parapet; this low wall

<sup>37</sup> United States Department of Transportation and United States Coast Guard, *The Lighthouse System of Puerto Rico, 1846-1979, National Register of Historic Places Nomination*, (Washington, D.C.: United States Department of the Interior, National Park Service, 1981), 13.

<sup>38</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 55–57.

<sup>39</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 60.

<sup>40</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-4.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

likely once held back a shallow cover of earthen fill. Three horizontal observation window slits in the curved exterior wall mark the three tiers of the structure and a heavy, sloping header and sill on each slit served to protect the soldiers who would have been posted inside. A more in-depth description of Manhole A and its development has been documented in the *Draft Additional Documentation of World War II Resources* document.<sup>41</sup>

#### *Statement of Integrity*

The El Morro Fire Control Station A retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. This building retains its ability to convey its significance with respect to military history, maritime history, the history of defensive architecture, ethnic heritage, and social history.

World War II Visual Signal Station (HS N/A)

Contributing

*Total:* 1 Structure

The World War II Visual Signal Station is a reinforced poured concrete one-story structure built upon the central portion of the Great Wall in October of 1941.<sup>42</sup> Constructed atop an 1890s gun emplacement, the square footprint of the structure partially obscures the tracks for the late-nineteenth-century gun mount. The World War II Visual Signal Station was constructed with a flat roof which rises only a few feet above the adjacent Great Wall/El Caballero Battery parapet wall. It contains one interior room. The structure has one door and three windows, one on the east and two on the west façade. Access to the World War II Visual Signal Station is had via the door on the west side of El Caballero Battery on the upper terreplein and via a hatch in the ceiling of the casemate that sits below the structure. Overlooking the entrance to San Juan Bay, the World War II Visual Signal Station served as a temporary Harbor Entrance Command Post (HECP), tasked with observing and communicating maritime activity with patrolling vessels before the combined Harbor Defense Command Post – Harbor Entrance Command Post was constructed. A more in-depth description of the World War II Visual Signal Station has been documented in the *Draft Additional Documentation of World War II Resources*.<sup>43</sup>

#### *Statement of Integrity*

The World War II Visual Signal Station retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. This structure retains the ability to convey its significance as it relates to military and maritime history, defensive architecture, ethnic heritage, and social history.

<sup>41</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*.

<sup>42</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-5.

<sup>43</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Carmen Bastion (HS N/A)

Contributing

*Total:* 1 Structure

Carmen Bastion is a roughly triangular masonry bastion facing the Atlantic Ocean which forms a key component of El Morro's maritime front. Carmen Bastion's eastern and northern walls are capped by a parapet wall pierced by ten embrasures (one infilled). At the bastion's northeastern corner, a narrow passageway through the parapet leads to a sentry box positioned at the bastion's salient angle. Carmen Bastion serves as an intermediary between multiple spaces within Castillo San Felipe del Morro: at its northwestern corner a triangular staircase leads down to the level of the Santa Bárbara terreplein; within its northern wall, a stair and ramp in the parapet lead down to Mercado Bastion; on its southeastern side, a ramp leads up to Ochoa Bastion; and on its southeastern side, an arched passageway leads to the Plaza de Armas. A powder magazine is nestled on the southern side of the broad ramp which emerges from the center of the bastion. At the top of the ramp, two columns with carved limestone ogee-shaped caps mark each side of the entrance to Ochoa Bastion.

Carmen Bastion was constructed in the late eighteenth century. Built upon earthen fill atop a pre-existing battery (Batería del Diablo) and an access ramp for Mercado Bastion, Carmen Bastion became an important point from which to improve the seaward defenses of the northern face of El Morro. During the 1890s, gun emplacements were installed there as part of preparations for the Spanish-American War. These gun emplacements were designed for modern, breech-loaded, weapons mounted on a carriage which pivoted along a single limestone arched track inlaid in the terreplein.<sup>44</sup> Similar guns were installed at the Great Wall, Austria Bastion, and Ochoa Bastion. During a survey of El Morro after the United States' bombardment of San Juan in 1898, two 15-centimeter Ordoñez rifles were found mounted behind the parapet at Carmen Bastion. Repairs by the United States Army, as part of the WPA program, included the installation of composite stone panel facing on Carmen Bastion and several other bastions throughout El Morro between 1938 and 1940.<sup>45</sup>

### *Statement of Integrity*

Taking on its current form during the modernization project of the late eighteenth century, Carmen Bastion retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. Carmen Bastion retains its ability to convey its significance as it relates to Spanish military history, maritime history, defensive architecture, ethnic heritage, and social history.

<sup>44</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 43.

<sup>45</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 45–47.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Mercado Bastion (HS N/A)

Contributing

*Total:* 1 Structure

Mercado Bastion is a small masonry bastion, roughly square in plan, sited below Carmen Bastion on Castillo San Felipe del Morro's northern face. Mercado Bastion's scarped walls are capped by a parapet which is pierced by one embrasure. Mercado Bastion represents one of the earliest extant components of El Morro, first built in the early seventeenth century. Access is had to Mercado Bastion from an interior stair and ramp path (known as "the gallery") which leads to a small door in the northwest wall of Carmen Bastion.

Mercado Bastion was constructed circa 1602 and was conceived of as a battery to defend the seaward faces of the main hornwork. This bastion holds the only remaining seventeenth-century embrasure at El Morro on its west wall. One architectural detail that suggests a possible seventeenth-century construction period is the cordon, or collar, of stone just below the embrasure line; this feature is also seen at El Cañuelo.<sup>46</sup>

During the mid-eighteenth century, Mercado Bastion was accessible via an open-air ramp from Batería del Diablo (now beneath Carmen Bastion) and by a path up from the upper terreplein to Santa Bárbara Bastion. In the late eighteenth century, when Carmen Bastion was constructed, the ramp access to Mercado Bastion was truncated, and a small, enclosed ramp and stair was installed to connect it to the terreplein of Carmen Bastion. This is also likely the time during which the northeast and southeast walls were reconstructed.<sup>47</sup>

#### *Statement of Integrity*

Built during the early seventeenth century and taking on its current configuration during the modernization project of the late eighteenth century, Mercado Bastion retains a high degree of integrity of location, setting, materials, workmanship, feeling, and association. The original ramps and the fabric of the east and south walls were altered in the late eighteenth century, though these changes occurred during the period of significance and are associated with Spanish military history. Mercado Bastion retains its ability to convey its significance as it relates to Spanish military history, maritime history, architecture, ethnic heritage, and social history.

Great Wall (HS N/A)

Contributing

*Total:* 1 Structure

Castillo San Felipe del Morro's Great Wall separates the upper and lower levels of the fort. It functions as a retaining wall for the upper plaza and upper terreplein, and as an imposing

<sup>46</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 25.

<sup>47</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 25.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

backdrop for the fort's lower levels. Standing approximately 82 feet (25 meters) above the Kitchen Courtyard (lower plaza) of Santa Bárbara Bastion, the Great Wall is composed of dressed limestone blocks bound together with lime-based mortars and is scarped gently eastward. Behind the wall's parapet, late-nineteenth-century gun emplacements are arranged along El Caballero Battery. Below the parapet, on the level of the Plaza de Armas (upper plaza), the Great Wall is pierced by the arched exterior openings of the nine vaulted casemates from which cannon could be shot toward marine targets (one has been infilled). The width of each opening at its interior is approximately 1.6 feet (0.5 meters) wide, but each yawns open to a width of 10 feet (3 meters) at the exterior face of the wall. The thickness of the Great Wall at the level of the casemates ranges between 6 and 13 feet (2–4 meters). One window and several drainage scuppers also pierce the exterior face of the Great Wall at the Plaza de Armas level. The egress for the triangular staircase, connecting Carmen Bastion with the Santa Bárbara Bastion's seaside battery, pierces the Great Wall at the northeast end of the Santa Bárbara Bastion terreplein.

El Morro's main ramp and stair bisects the Great Wall, connecting the Plaza de Armas with the Santa Bárbara Bastion terreplein (lower terreplein). Comprised of a central ramp, flanked by narrow slate and brick staircases on either side, the main ramp passes through the Great Wall via a vaulted tunnel and emerges at Santa Bárbara Bastion flanked by wide walls on either side. The ramp surface is an exposed aggregate concrete lined with brick. The flanking walls are of *mampostería* limestone rubble and brick construction. On its south side, the main ramp is built atop two vaulted casemates which open onto the Santa Bárbara Bastion bayside bastion and on its northern side by four casemates that open onto the Kitchen Courtyard (lower plaza).

Eighteenth-century depictions of El Morro show that a smaller retaining wall was present at the location of the Great Wall by 1742.<sup>48</sup> In his 1765 survey of El Morro's defenses, Alexander O'Reilly recommended that the existing retaining wall be heightened and thickened as part of the larger project to expand El Morro. In the 1770s, engineer Thomas O'Daly directed the construction of the Great Wall and the main ramp and stairs, completing the project by 1776.<sup>49</sup>

As part of the construction of the Great Wall, the Plaza de Armas (upper plaza) was built with three cisterns that were installed beneath and casemates at the plaza level. The terreplein above the casemates formed a cavalier, "El Caballero" battery.<sup>50</sup> The casemates were used for housing, kitchens, embrasures for cannon, and as latrines. As discussed above, El Caballero Battery was host to Spanish gun emplacements in the 1890s and to the World War II Visual Signal Station and El Morro Fire Control Station A (El Morro Manhole A) in the twentieth century.

<sup>48</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 25.

<sup>49</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 30.

<sup>50</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 34.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

*Statement of Integrity*

The Great Wall took on its current form during the modernization project of the late eighteenth century retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. Originally constructed in the early seventeenth century as a low retaining wall, but transformed into the Great Wall in the 1770s, this resource retains its ability to convey its significance as it relates to Spanish military history, maritime history, defensive architecture, ethnic heritage, and social history.

Castillo San Felipe del Morro Dry Moat (HS 091727; PSN HS-229)

Contributing

*Total:* 1 Structure

The Castillo San Felipe del Morro Dry Moat (El Morro Dry Moat) separates the hornwork of El Morro from the wide glacis of the El Morro Esplanade, sloping eastward from the fort. The El Morro Dry Moat also wraps around the north and south flanks of the fort, sloping dramatically downward toward the rocky cliffs at either side of the fort. The El Morro Dry Moat ranges from 14 to 17 feet (4–5.25 meters) wide. The west side of the moat comprises the scarped walls of Austria Bastion, the curtain wall, and Ochoa Bastion, while the east side of the moat is reinforced with a masonry counterscarp wall. The El Morro Dry Moat is bisected by the arched bridge of the El Morro Sally Port. The World War II Radio Control Center sits within the moat, wedged between the Sally Port bridge, the curtain wall, and Ochoa Bastion. San Fernando Bastion in El Morro Dry Moat (San Fernando Bastion) is situated down an earthen ramp at the south end of the moat.<sup>51</sup> Access to the El Morro Dry Moat can be had via several staircases and from the World War II Radio Control Center. The El Morro Dry Moat has seen a number of elevation changes over time. Prior to 1770, the moat was at least 1.7 feet (0.5 meters) lower at its south (harbor) end, and approximately 6.5 feet (2 meters) below the present floor of the moat at its northern (ocean) end.<sup>52</sup>

In the 1770s, the moat floor in the vicinity of the Ochoa Bastion's salient angle was raised approximately 10 feet (3 meters) and a short retaining wall was installed across the moat, separating the east side of the moat from the northern, seaward end of the moat.<sup>53</sup> The raised floor of the moat allowed for the increase in height of the moat counterscarp, to the east, and thereafter allowed for a steeper slope to be installed from the counterscarp down the glacis (El Morro Esplanade), moving eastward. These construction projects all date to the post-1770 period. Concurrent alterations include the building of both Austria and Ochoa bastions, Mercado

<sup>51</sup> San Fernando Battery, as separate structure than San Fernando Bastion at El Morro, is located just southeast of and outside of the El Morro Dry Moat.

<sup>52</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 27.

<sup>53</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 29.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Bastion, the El Morro Dry Moat and counterscarp walls, the Esplanade, and potentially the curtain wall and therefore a portion of El Caballero Battery.

El Morro Dry Moat does not appear to have seen major changes until the twentieth century. The moat was repurposed as part of the Army's recreation program, with several holes in a 9-hole golf course sited within the moat in the 1930s. In preparation for World War II, the combined Harbor Defense Command Post-Harbor Entrance Command Post Building was constructed in 1942 in the western portion of the moat and covered with a layer of earth.

### *Statement of Integrity*

The Castillo San Felipe del Morro Dry Moat took on its current width and depth in the late eighteenth century and retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. Although the El Morro Dry Moat has been subject to numerous changes, including the installation of a golf course and the construction of the World War II Radio Control Center, it retains its ability to convey its significance as it relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

San Fernando Bastion at El Morro (HS 091740)

Contributing

*Total:* 1 Structure

San Fernando Bastion at El Morro (San Fernando Bastion) is a small bastion built into the bayside slope of the El Morro Dry Moat (see Photo 8).<sup>54</sup> Roughly trapezoidal in plan, the bastion's walls are constructed of limestone with lime-based mortar and a stucco finish. Reachable only from a ramp and stair in the El Morro Dry Moat, the bastion consists of a small earthen terreplein surrounded by a low parapet wall which lacks embrasures or other openings.

San Fernando Bastion is depicted on the 1742 map of El Morro as a having a longer terreplein and a parapet wall with several embrasure openings. This bastion's walls were heightened by 3.25 feet (1 meter) and its terreplein was also raised as part of the late-eighteenth-century building campaign at El Morro.<sup>55</sup>

### *Statement of Integrity*

Taking on much of its current form during the modernization project of the late eighteenth century, San Fernando Bastion at El Morro retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. San Fernando Bastion retains its ability

<sup>54</sup> San Fernando Bastion at El Morro should not be confused with San Fernando Battery. The Bastion is located at the bayside end of the moat and is accessed from the Moat floor, the Battery is located outside and just southeast of the El Morro Dry Moat.

<sup>55</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 27.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

to convey its significance as it relates to Spanish military history, maritime history, defensive architecture, ethnic heritage, and social history.

Castillo San Felipe del Morro Sally Port (HS 091736; PSN HS-238)

Contributing

*Total:* 1 Structure

The Castillo San Felipe del Morro Sally Port (El Morro Sally Port) is cited at the center point of the landward defenses of El Morro and comprises a primary entryway and a vaulted internal passageway leading through the curtain wall to the Plaza de Armas. Reached by a six-arch masonry bridge, the El Morro Sally Port represents the formal ceremonial entrance to the fort and a key defensive position in the network of fortifications that make up San Juan National Historic Site.

The El Morro Sally Port is one of the historic property's few non-military architectural elements rendered in the academic tradition. The exterior elevation features a projecting pediment with denticulated cornice and Doric entablature with frieze of alternating discs and triglyphs resting on engaged Tuscan columns and plinths. The square portal opening surrounds a long barrel vault and features a flat arch with dressed limestone voussoirs and carved keystone supporting a carved stone cartouche in the Baroque style depicting a coat of arms. The columns and coat of arms are carved out of limestone and coated with a thin, smooth stucco layer. The bays of the El Morro Sally Port closest to the Plaza de Armas are constructed with walls of limestone blocks, with brick vaulted ceilings. The entire El Morro Sally Port interior has cast concrete flooring.<sup>56</sup>

The vaulted interior of the El Morro Sally Port is part of the system of casemates surrounding the Plaza de Armas which supports the terreplein of El Caballero Battery, above. The vault of the Sally Port dates to the late eighteenth century, while portions of the lower casemate space potentially date to the seventeenth century.<sup>57</sup> Today the interior space is used as a visitor greeting area.

The El Morro Sally Port as it exists today was constructed in 1786, when the monumental entrance gate was added with a variant of the coat-of-arms of the Spanish King, King Charles III.<sup>58</sup> The coat of arms features a crowned lion mounted atop a Baroque-styled shield blazoned with symbols of Carlos III's sixteen territorial claims. The crown at the top symbolizes the Bourbon dynasty and includes below the Cross of Saint Jenaro and the necklace of the Order of the Golden Fleece (an order of chivalry founded in 1429 by the Duke of Burgundy and Count of

<sup>56</sup> Gjessing, *Sally Port and Chapel HABS Documentation*.

<sup>57</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 35.

<sup>58</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 35. The Coat of Arms is a replica donated by the Spanish Ministry of National Education represented by Mr. Ernesto La Orden and the Spanish Consulate to Puerto Rico in the year 1961. It was received by the superintendent of the time, Mr. Kidtrigge Wing.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Flanders, Philip III of Burgundy). The gate was originally connected with the eastern side of the moat via a multi-component bridge composed of a bascule bridge and a five-arch masonry bridge. The bascule bridge was located closest to the Sally Port entrance and spanned a gap today occupied by a fixed masonry arch installed between 1861 and 1896. It was again replaced in 1930 by the extant masonry arch.<sup>59</sup> Today, the El Morro Sally Port represents the only point of entry for visitors to Castillo San Felipe del Morro. A reception desk, benches, and interpretive signage line the interior space of the vaulted sally port entryway.

### *Statement of Integrity*

Taking on much of its current form during the modernization project of the late eighteenth century, the Castillo San Felipe del Morro Sally Port retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. Although Castillo San Felipe del Morro Sally Port has been subject to late-nineteenth-century alterations and twentieth-century repairs and adaptations, this resource retains its ability to convey its significance as it relates to Spanish military history, maritime history, defensive architecture, ethnic heritage, and social history.

World War II Radio Control Center (HS 091737)

Contributing

*Total: 1 Building*

The World War II Radio Control Center (also known as the Harbor Defense Command Post – Harbor Entrance Command Post Building [HDCP-HECP]) is a one-story, reinforced, poured concrete building located within the Castillo San Felipe del Morro Dry Moat. It was built there in November of 1942. Today covered with a layer of earth and grass, the World War II Radio Control Center was designed to be camouflaged within the ground cover of El Morro's Dry Moat, sandwiched between the El Morro Sally Port bridge to the south, El Morro's curtain wall to the west, and Ochoa Bastion's flanking wall to the north. The building measures 140 feet in length (north-south) and 85 feet in width (east-west).<sup>60</sup> An interior north-south corridor provides access to rooms once used for communication switchboards, plotting map coordinates, and offices. Access to the World War II Radio Control Center can be had via a door under an arch of the El Morro Sally Port bridge, and via a tunnel and stairway which connects the World War II Radio Control Center with the former powder magazine beneath Ochoa Bastion, on the same level as the Plaza de Armas. The building was constructed as a bomb-proof structure, with 4-foot thick reinforced concrete walls and a layer of earth on exterior surfaces to shelter the structure. Interior walls are two to three feet (0.6-0.9 meters) thick. A more in-depth description of the

<sup>59</sup> Gjessing, *Sally Port and Chapel HABS Documentation*.

<sup>60</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-5-7-6.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

World War II Radio Control Center has been documented in the *Draft Additional Documentation of World War II Resources*.<sup>61</sup>

### *Statement of Integrity*

The World War II Radio Control Center retains integrity of location, setting, material, design, workmanship, feeling, and association. The World War II Radio Control Center retains high historic integrity and ability to convey its significance as it relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

### El Morro Esplanade Historic Landscape

Contributing

(*CL 550129; HS 91728; PSN HS-230*)

*Total: 1 Site*

The El Morro Esplanade Historic Landscape (El Morro Esplanade) is a 23-acre, broad, open plain atop the raised landform at the northwestern end of San Juan Islet which served a key defensive role as the landward defensive approach to Castillo San Felipe del Morro.<sup>62</sup> The El Morro Esplanade is bisected by El Morro Road and framed on its north and southwest perimeter by the north and west Old San Juan City Walls. To the west is the El Morro Dry Moat and to the east is the urban development of Old San Juan. The plain is treeless, covered with turf, and slopes down west to east from the El Morro Dry Moat, forming a defensive glacis and creating an open field of fire for the defenders of El Morro. A network of slopes and drainage structures convey water way from the esplanade through openings in the neighboring walls. El Morro Esplanade (also known today as Parcel A) is owned by the Commonwealth of Puerto Rico and administered by the National Park Service (Figure 19).<sup>63</sup> Areas of turf-covered plain bordering the El Morro Esplanade and surrounding landscapes further east and south of the San Juan National Historic Site boundary are owned and administered by the Commonwealth of Puerto Rico.

Historically the El Morro Esplanade was kept open and free of obstructions since Castillo San Felipe del Morro was constructed beginning in 1539. In the sixteenth century, however, the

<sup>61</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*.

<sup>62</sup> Panamerican et al., *Cultural Landscape Report for the El Morro Esplanade, 75% Draft- May 2019*. (Atlanta: Southeast Regional Office, National Park Service, 2019).

<sup>63</sup> The "El Morro Esplanade Historic Landscape" contributing resource includes only Parcel A, which is a 23-acre tract owned by the Commonwealth of Puerto Rico, and part of the San Juan National Historic Site in accordance with the 1976 Memorandum of Agreement. Portions of a second parcel, Parcel B, are also commonly understood as part of the esplanade, however, they lie outside the boundary of the Park. Parcel B includes Santa Elena Guardhouse, El Polvorín, and other sites along the Old San Juan City Wall – West Wall which are owned by the Commonwealth of Puerto Rico and not formally administered by the Park.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

topography of the esplanade was much more varied. A large ravine once cut into the northern cliff-face in the vicinity of San Antonio Bastion and Calvary Hill was once a high point near the eastern end of the open plain. Additionally, a number of buildings were present over the years, some of which survive. Of the buildings no longer extant were a chapel, barracks, stables, guardhouses, and a yellow fever hospital. The chapel, known as the “Chapel of Calvary” may have been constructed in the early sixteenth century at the eastern end of El Morro Road.<sup>64</sup> The chapel was demolished in the eighteenth century as part of the renovation of the San Juan fortifications by O’Reilly and O’Daly.

The modernization campaign of the late eighteenth century brought dramatic changes to the El Morro Esplanade between 1765 and 1792. O’Reilly’s 1765 plan described the aforementioned ravine as 605 feet (187 meters) long, 110–165 feet (34–50 meters) wide, 11–17 feet (3.4–4 meters) deep, and opening at the north beach.<sup>65</sup> The O’Reilly-O’Daly modernization plan called for leveling and grading the uneven elevations of the El Morro Esplanade to prevent enemy troops from obtaining landward access at the ravine location or having control of higher ground at Calvary Hill. O’Daly was also able to enhance the gradual slope of the glacis eastward, away from El Morro, by adding height to the dry moat’s counterscarp wall. The filling of the ravine was likely completed by 1792, when the city wall in that area was finished, though the leveling of Calvary Hill took many decades longer.<sup>66</sup> In 1792, two northern gates penetrated the Old San Juan City Wall – North Wall: at the east end San José City Gate gave access to the San José battery, the more westerly gate, La Puerta de la La Perla, gave access to the La Perla fort.<sup>67</sup> The El Morro Esplanade was intentionally kept treeless as a defensive measure to deny cover to potential attackers.

During the late eighteenth and nineteenth century “counter-mining galleries,” tunnels built to plant explosives, were constructed from the counterscarp wall of the El Morro Dry Moat eastward under the glacis.<sup>68</sup> The Dutch Monument, which commemorates the westernmost location of the Dutch trenches during the siege of El Morro in 1625, was present on historic maps along El Morro Road by 1861. The Santa María Magdalena de Pazzi Cemetery was established north of the Old San Juan City Wall – North Wall by 1814. Outside the Park authorized boundary, but nearby, the Santa Elena Guardhouse and San Agustín Guardhouse were

<sup>64</sup> Crisson, *CLR: El Morro*, 17.

<sup>65</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 29.

<sup>66</sup> Panamerican, *Draft El Morro Esplanade Cultural Landscape Report* 123; Crisson, *CLR: El Morro*, 18.

<sup>67</sup> “Plano que manifiesta la situación de la plaza de San Juan de Puerto Rico, 1792” Map and Description by Engineer Juan Francisco Mestre. Key and Description: Archivo del Museo Naval de Madrid, Accessed Jan 1 2020, <https://archivonacional.com/PL/1/1/11534>, Map: Archivo General Militar de Madrid (IHMC) SH. PRI-1517 as cited in Sepúlveda, *Puerto Rico Urbano: Vol. I*, 144.

<sup>68</sup> It remains unclear the distance these tunnels extended under the glacis as they were apparently blocked in 1896; Crisson, *CLR: El Morro*, 20–21.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

also completed by 1864. The San Antonio Guardhouse, located near the bastion of that name in the northwest portion of the Esplanade, was constructed by 1897.

The United States Army took control of the El Morro Esplanade beginning in 1898 and made extensive changes to the landscape, including the construction of 20 buildings, two roads, and three recreational structures within the first decades of the twentieth century.<sup>69</sup> Additionally, the Army constructed fences, installed utilities, paved El Morro Road, planted trees and grasses, and graded portions of the open plain. Beginning in 1901, three officer's quarters buildings were constructed near El Morro and in the 1920s and 1930s, military housing along Santa Elena and Casa Rosa roads, in the southwest part of the Esplanade, was built.<sup>70</sup> Trees were planted along El Morro Road between El Morro and Norzagaray Boulevard. In the 1930s and 1940s, recreational facilities were built on the Esplanade. The United States Army installed facilities such as a swimming pool, baseball field, and a tennis court. After the property was incorporated into San Juan National Historic Site in 1976, the twentieth-century buildings were demolished. In 1989, the trees that were planted along El Morro Road in 1930 were removed.

The defining characteristics of the historic landscape of the El Morro Esplanade include both natural and designed components of the landscape. The relationship between the natural landforms of the El Morro Esplanade — its open plain and its elevation above the surrounding seascape — and the military defense strategies that were enacted there remain clear and evident today.<sup>71</sup> The high promontory landform on which the El Morro Esplanade is sited rises steeply above the shoreline, limiting access to the space and providing a defensive perspective on the surrounding seascape and landward approach. Patterns of spatial organization within the El Morro Esplanade continue to reflect the relationship between the esplanade's design, and the Spanish military use of the space. The configuration of the broad, open plain framed by the city walls, El Morro, and the city of Old San Juan is consistent with the late eighteenth- and early nineteenth-century spatial organization. The substantial changes and additions made by the United States Army in the twentieth century, however, are no longer evident. Circulation patterns similarly reflect the historic landscape of the El Morro Esplanade as it was used from the sixteenth century through the mid-nineteenth century, with some variations. El Morro Road and the San José City Gate access tunnel are two important circulation features which survive.<sup>72</sup> While historically the primary access to El Morro came by way of a southern route from San Juan City Gate, today El Morro Road is the primary access road for El Morro. Other aspects of the historic landscape that continue to persist include vegetation patterns: the turf and treeless open space of the El Morro Esplanade is consistent with landscape that would have been maintained for military purposes during much of the Spanish-period use of the site.<sup>73</sup>

<sup>69</sup> Panamerican, *Draft El Morro Esplanade Cultural Landscape Report*, 142.

<sup>70</sup> Crisson, *CLR: El Morro*, 30.

<sup>71</sup> Panamerican, *Draft El Morro Esplanade Cultural Landscape Report*, 120.

<sup>72</sup> Panamerican, *Draft El Morro Esplanade Cultural Landscape Report*, 132–136.

<sup>73</sup> Panamerican, *Draft El Morro Esplanade Cultural Landscape Report*, 137–139.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Additionally, the defensive views created by the active manipulation of the ground surface, the vegetation patterns, and the construction of the glacis, are evident today and remain an important part of the Park's landscape.<sup>74</sup>

Even as the military defensive function of the El Morro Esplanade is clear today, present-day and historic land uses are very different. Historically, the El Morro Esplanade was used for military, residential, and recreational purposes. Today it is no longer used for military or residential purposes, and is instead used for interpretative, educational, commemorative, commercial, and conservation purposes in addition to recreational use.<sup>75</sup> Additionally, the Dutch Monument is the only small-scale feature which survives. Many historic buildings associated with the twentieth-century United States Military use of the space, and which helped to define the historic landscape, are no longer extant.<sup>76</sup> The San Antonio Guardhouse and the Old San Juan City Walls survive as defining structures and buildings, which further reinforces the landscape's continuity with the Spanish period of occupation.

#### *Statement of Integrity*

The El Morro Esplanade Historic Landscape was largely constructed during the late eighteenth century and retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association for the Spanish military occupation of the site. Once home to many military structures, roads, recreational facilities, and utilities, above ground physical traces of these resources are no longer evident and the Esplanade does not retain the ability to convey its historical significance with respect to United States military history. The El Morro Esplanade retains its ability to convey its significance as it relates to Spanish military history, maritime history, defensive architecture, ethnic heritage, and social history.

El Morro Road (HS 91730)

Contributing

*Total:* 1 Structure

El Morro Road, a one-lane asphalt paved road which crosses the El Morro Esplanade from southeast to northwest, has been present in some form since the late sixteenth century (see Figure 3).<sup>77</sup> Approximately 1,200 feet (365 meters) long and 25 feet (7.6 meters) wide, El Morro Road bisects the El Morro Esplanade and connects visitors approaching from Norzagaray Boulevard directly with the Castillo San Felipe del Morro Sally Port. The surface of the road is paved with

<sup>74</sup> Panamerican, *Draft El Morro Esplanade Cultural Landscape Report*, 147.

<sup>75</sup> Panamerican, *Draft El Morro Esplanade Cultural Landscape Report*, 126.

<sup>76</sup> Panamerican, *Draft El Morro Esplanade Cultural Landscape Report*, 140.

<sup>77</sup> "1575 Panoramic View of the City of San Juan, composed by Juan Escalante de Mendoza." Reproduced from Aníbal Sepúlveda Rivera, *Puerto Rico Urbano Atlas Histórico de la Ciudad Puertorriqueña: Volume 1 [of 4]: La Memoria Olvidada, 1509–1820s*. (San Juan: Carimar, 2004), 70.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

asphalt and slopes downward toward the open fields to its north and south to allow for drainage. Archaeological excavations undertaken in 1994 identified multiple layers of roadbed buried underneath the current road.<sup>78</sup> These included a brick paved road with stone lining and a mortared stone road with a plaster coating. The earliest portions of the archeologically-identified roads were found near the Castillo San Felipe del Morro Sally Port and likely dated to circa 1792.<sup>79</sup> While early maps indicate that historically several roads from Old San Juan to El Morro crossed the El Morro Esplanade El Morro Road assumed its current configuration by 1861.<sup>80</sup> During this period, the El Morro Esplanade was counter-mined and kept free of obstructions. Historic maps suggest that at least one building stood along El Morro Road before the twentieth century, a chapel, and multiple structures were built in close proximity to the road after the United States created the San Juan Military Reservation in 1903 (see Figures 3–11). In 1930, Australian pine, almond, and palm trees were planted along the length of the road. The trees were removed in 1989 in an effort to restore the historic viewshed from El Morro toward Old San Juan and recreate the open historic landscape of the El Morro Esplanade.

### *Statement of Integrity*

El Morro Road today retains a high degree of integrity of location, design, setting, feeling, and association with nineteenth-century Spanish military history and defensive architecture, particularly after 1861 when the road assumed its current alignment and general form. El Morro Road has been through multiple building episodes, and has poor integrity of materials and workmanship for earlier phases of its history. The post-1861 alignment of the road and the lack of physical obstructions, allows El Morro Road to continue to convey its significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

San Antonio Guardhouse (HS 91732; PSN HS-234)

Contributing

*Total:* 1 Building

San Antonio Guardhouse is a one-story, Spanish colonial-period building in a plain Classical-revival style situated just east of Castillo San Felipe del Morro, adjacent to San Antonio Bastion, and facing the Atlantic Ocean (see Photo 20). Rectangular in plan and academically

<sup>78</sup> Ken Wild, "Trip Report on Archaeological Investigations Conducted at San Fernando Bastion Prior to Proposed Construction by the Army Corp of Engineers. SEAC ACC. #1158, SAJU ACC. #128." SAJU Trip Reports 1994. From Chief, I&E; to Regional Archaeologist, SER, July 31, 1995. (On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-01158).

<sup>79</sup> Ken Wild, "Memorandum, El Morro Road; Summary of Archaeological Data in Regards to Design and Engineering Concerns. November 28, 1994, Revised March 1996." Ken Wild to Simon Trans-M-Trund, Engineer. Box Folder 25. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico; Mestre, "Plano...1792."

<sup>80</sup> Crisson, *CLR: El Morro*, 12.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

proportioned, the San Antonio Guardhouse measures approximately 42 feet (12.8 meters) long by 16 feet (4.8 meters) wide. Constructed primarily of brick and mortar and coated with stucco on the exterior, the building features symmetrically arranged facades, plain projecting water table, large chamfered corner quoins, molded cornice (broken at corners), roof scuppers, and a shallow, solid parapet wall set between projecting corner plinths. Exposed wood joists support the flat roof. The primary, north, façade is pierced by a central entry and two flanking windows, while the east and west façades include one arched window each, and the south façade features two arched windows. All door and window openings are segmental, with solid projecting caps, decorated key stones, and quoined architraves. The unglazed window openings are fitted with louvered interior wood shutters and the double-leaf front door is made of solid wood planking.

San Antonio Guardhouse was constructed circa 1897. Oriented north, this masonry building was “designed as pavilions for two chiefs” but was later used to store artillery.<sup>81</sup> The purpose of the building was to control access to San Antonio Bastion and the storehouse there. After the United States seized control of the San Juan fortifications, the purpose of the San Antonio Guardhouse again shifted. In the 1920s, repairs were made and the structure was used as a golf house. In 1938, the structure was being used as a bathhouse.<sup>82</sup> Historic photos show that a lean-to enclosure, attached to the north face of the building, enclosed a patio. At that time, an eight-foot high masonry wall ran northwest from the building, connecting it to San Antonio Bastion.<sup>83</sup> This wall was incorporated into the structure of an above-ground pool, once adjacent to the Guardhouse, which was constructed for the soldiers stationed at Fort Brooke. Following the NPS’s acquisition of the building in 1961, the pool and connecting masonry wall were removed and the building was repurposed as public restrooms.

### *Statement of Integrity*

Constructed in the late nineteenth century as an observation post for guards and to control access to San Antonio Bastion, San Antonio Guardhouse has been subject to multiple renovations and repairs over the years. The building retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. Despite changes to its interior, the San Antonio Guardhouse retains its ability to convey its significance as it relates to Spanish military history, maritime history, defensive architecture, ethnic heritage, and social history.

Dutch Monument (HS 91729)

Contributing

Total: 1 Object

<sup>81</sup> Bearss, *HSR: Historical Data: 1898–1958*, 290, 47.

<sup>82</sup> Bearss, *HSR: Historical Data, 1898–1958*, 308, 313.

<sup>83</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 32.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

The Dutch Monument is a limestone memorial monument sited halfway between El Morro and Norzagaray Boulevard, along El Morro Road. Constructed on a three-stepped platform, this monument is square in plan and appears designed to resemble a small mausoleum, with pediment roof details, engraved images of military helmets, and a truncated fluted column at the monument's apex. The broken column symbol is traditionally associated with memorials and is a popular gravestone design for individual's whose lives were cut short.

The Dutch Monument was erected to commemorate the 200<sup>th</sup> anniversary of Spanish victory over the Dutch in 1625, especially the efforts of Juan de Amézquita, Captain of the Puerto Rican forces during the conflict. The monument was installed at this location based on historical documentation of the westernmost Dutch trenches built during the siege of El Morro and commemorates those lives lost during the conflict.<sup>84</sup> The Dutch Monument has been present at its current location since at least 1861 based on historic maps. In the early twentieth century, the United States Army installed a new masonry base and a fence around the monument.<sup>85</sup> In 1925, the monument was rededicated on the 300<sup>th</sup> anniversary of the Dutch siege. The Dutch Monument was cleaned and underwent unspecified repairs in 1955.<sup>86</sup>

### *Statement of Integrity*

The Dutch Monument retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. Constructed sometime before 1861, the monument would have historically sat within the open plain of the El Morro Esplanade, as it does today. The Dutch Monument retains its ability to communicate its significance as it relates to military history, ethnic heritage, and social history.

## **Inventory Section 2: Old San Juan City Walls**

19 Contributing Resources // 0 Noncontributing Resources

See Map Insets A, B, and C

<u>Old San Juan City Walls Historic Landscape (CL N/A)</u>	Contributing
<u>Old San Juan City Walls Archaeological Site Complex (AR SAJU00004.000)</u>	Contributing

*Total: 2 Sites*

<sup>84</sup> Crisson, *CLR: El Morro*, 20.

<sup>85</sup> Panamerican, *Draft El Morro Esplanade Cultural Landscape Report*, 25.

<sup>86</sup> Bearss, *HSR: Historical Data, 1858–1958*, 419.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

The Old San Juan City Walls Historic Landscape comprises a 2.7-mile system of bastions connected by curtain walls and the associated landscapes located above and below the walls.<sup>87</sup> Constructed of limestone block and rubble masonry with a lime mortar, the Old San Juan City Walls rise between 15 and 60 feet (4.5–18.3 meters) above ground surface. The walls were originally built between the early seventeenth and late eighteenth centuries to surround the city of San Juan and provide military defense for that settlement. Today the walls are used for recreation, education, cultural interpretation, commemoration, and conservation.

The Old San Juan City Wall – North Wall (North Wall), runs between Castillo San Felipe del Morro and Castillo San Cristóbal and separates the El Morro Esplanade and Old San Juan on its south side from the Santa María Magdalena de Pazzi Cemetery, the La Perla neighborhood, and the Atlantic Ocean on its north side. The Old San Juan City Wall – West Wall (West Wall) runs along the cliffs on the southwestern edge of San Juan Islet between Castillo San Felipe de Morro and the San Juan City Gate. The West Wall separates the El Morro Esplanade and Old San Juan from the rocky shores on the harbor side of the islet, where the Paseo del Morro recreational walkway sits at the foot of the walls. The Old San Juan City Wall – South Wall (South Wall), runs along the south perimeter of Old San Juan between the San Juan City Gate and San Justo Bastion. The South Wall creates a dramatic vertical boundary between Old San Juan, to the north and the Paseo de la Princesa promenade to the south.<sup>88</sup> The East Wall (not extant) once ran between Castillo San Cristóbal and the South Wall; the East Wall, along with a portion of the South Wall, was dismantled circa 1897 as the city of San Juan expanded eastward.

The Old San Juan City Walls were initially constructed as a series of discrete polygonal bastions which were later connected via curtain walls. These fortifications act as retaining walls for earthen fill in some areas, though most are built into the steep terrain of the cliffs. The scarp walls are generally battered, sloping inward from the footings to the higher ground above.<sup>89</sup> The footings of the walls are closely fitted and consist of several courses of large stone blocks projecting out beyond the face of the wall.<sup>90</sup> The scarp walls are capped by sloping parapet walls. The parapet walls are between 12 and 16 feet thick (3.6–4.8 meters), rise approximately 3.5 feet (1 meter) above the terreplein, are pierced by embrasures, and are lined with stone and brick firing steps. Sentry boxes are positioned at the salient angles of each bastion to monitor the surrounding water. Drainage features such as drain pipes, culverts, swales, gutters and scuppers

<sup>87</sup> Panamerican et al., *Cultural Landscape Report for the San Juan Historic City Wall, 75% Draft- October 2019*. (Atlanta: Southeast Regional Office, National Park Service, 2019).

<sup>88</sup> Notably, portions of the South Wall, including San Justo Bastion, are located outside the boundary of the San Juan National Historic Site and are owned by the Commonwealth of Puerto Rico.

<sup>89</sup> Joan Berkowitz et al., *The Fortifications of San Juan National Historic Site: Historic Structures Report, Vol. III: Castillo de San Felipe del Morro, The City Walls, An Investigation of the Materials Used, Cultural Landscape Report*. (Atlanta: National Park Service Southeast Regional Office, 1991), 2.

<sup>90</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 2.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

— many of which are part of the original design of the walls — collect storm water and direct it away from the base of the walls via openings throughout the wall system.<sup>91</sup>

While individual batteries along the perimeter of Old San Juan were constructed beginning in the mid-sixteenth century, a connecting network of city walls was not pursued until the seventeenth century. In 1631, King Philip IV directed that San Juan be enclosed for defensive purposes.<sup>92</sup> This project began with sections of the South Wall, West Wall, and East Wall between 1634 and 1650, as landward and harbor-oriented approaches were considered to be the largest threats to the city in the wake of the Dutch attack of 1625. Plans for these structures describe battered walls, scarped using a 3 to 1 slope, and standing an average of 22.5 feet (7.5 meters) high. At the top of each wall or bastion, workers used earthen fill to create a terreplein. The walls were faced with limestone blocks bonded together with lime-based mortars and faced with stucco.

As with other areas of the San Juan defensive system, little additional construction took place on the Old San Juan City Walls between the mid-seventeenth century and the end of the Seven Years War in 1763. That year the King of Spain, Charles III, declared San Juan a “Defense of the First Order” in the campaign to safeguard Spain’s empire from threats posed by the English and other European powers. This declaration underscored San Juan’s central importance in the Spanish imperial goals and marked the beginning of the late-eighteenth-century modernization project throughout the fortifications. In 1765, Charles III appointed Field Marshall Alexander O’Reilly and engineer Thomas O’Daly to design and implement a comprehensive defensive plan for San Juan. The O’Reilly – O’Daly modernization project involved major improvements of El Morro and San Cristóbal, the improvement of the existing West, East, and South Walls, and the construction of the North Wall in its entirety.<sup>93</sup> The resulting network of walls followed the irregular edges of San Juan Islet cliffs, with bastions positioned to protect the neighboring curtain walls, creating interlocking fields of fire. Taking place over the course of two and one-half decades beginning in 1765, the implementation of the later stages of this building campaign were directed by Juan Francisco Mestre.

After the English attack mounted by Abercromby in 1797, the Spanish government invested in the maintenance of the fortifications and defensive lines in Puerta de Tierra, to the east of San Juan, and the San Juan City Walls themselves became less of a priority. Spanish control in the Caribbean was diminishing, leaving only Cuba and Puerto Rico under Spain’s control by 1830. During the nineteenth century, the Old San Juan City Walls were maintained, but no major building campaigns took place. As the city of San Juan grew and prospered in the nineteenth century, the city walls were increasingly seen as an economic encumbrance rather than as a

---

<sup>91</sup> Additional information on the landscape of the city walls, including the interconnected drainage features throughout the wall system, can be found in the 2019 Old San Juan City Walls Cultural Landscape Report; Panamerican, *Draft CLR: San Juan City Walls*.

<sup>92</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 13.

<sup>93</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 21.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

useful defensive feature of the landscape. The San Juan Municipal Authorities advocated for demolition of segments of the East Wall as early as 1865. In 1874, economic pressure resulted in the planned demolition of a portion of the East Wall. In 1895, local authorities began more extensive demolition of the East Wall and a portion of the South Wall, including Puerta de España and San Justo Gate. Both episodes enabled better access between the city and the wharfs along the waterfront of San Juan.<sup>94</sup>

After the Spanish-American War, the United States inspected, surveyed, and made plans for the preservation and repair the walls.<sup>95</sup> Already recognized as an architectural marvel, the United States Army advocated for projects which would improve and maintain the walls in the early decades of the twentieth century. The Army did not receive funding for most projects, however, and repairs were routinely postponed. Deferred maintenance of the walls resulted in structural failure of some sections. Additionally, improper architectural treatments, including the use of Portland cement for repairs, led to accelerated deterioration of some sections and seeded outrage among local preservationists. Major funding for wall repairs was first seen in 1938–1940, when the WPA undertook extensive repairs throughout the fortification complex.

The United States Army constructed several military-related buildings upon the terrepleins of the bastions along the North Wall and the West Wall during the first decades of the twentieth century. Since the 1980s, the Old San Juan City Walls have been maintained by the San Juan National Historic Site's maintenance department, utilizing traditional construction techniques and materials developed onsite with the aid of preservation specialists. These techniques include the production and application of specialized lime-based mortar and stucco which was colored to match the existing fabric of the fortifications.

The Old San Juan City Walls Historic Landscape includes a variety of defining natural and designed features which enhance the historic significance of the landscape. The walls themselves and their relationship to the natural topography are defining elements as they played a key role in Spanish military defensive strategy. The high cliffs that encircle much of the Old San Juan settlement on the islet were ideal locations to site defensive structures and this continues to be evident today.<sup>96</sup> The material make-up and appearance of the Old San Juan City Walls is very similar to the “bastioned trace” organized in 1792 when the last major building campaign was completed. Although sections of the East Wall and South Wall were dismantled in 1897 and United States-era military buildings were removed, the walls are consistent with the Spanish-period historic landscape. Patterns of spatial organization within the Old San Juan City Walls Historic Landscape — including the configuration of the bastions and curtain walls, surrounding open spaces, streets, drainage features, gates, and nearby communities — are also similar to the arrangement of the late-eighteenth-century landscape. The walls create vertical barriers between

<sup>94</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 29.

<sup>95</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 43–52.

<sup>96</sup> Panamerican, *Draft CLR: San Juan City Walls*, 192.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

spaces, tunnels and access stairs create controlled connections, and bastion terrepleins create open green spaces with viewing opportunities over the walls.<sup>97</sup> Other aspects of the historic landscape that continue to persist include vegetation patterns; the turf and treeless open space of the terreplein within the City Wall is consistent with landscape that would have been maintained for military purposes during much of the Spanish-period use of the site. Additionally, the expansive views of the Atlantic Ocean and San Juan Harbor from the parapet walls, embrasures, and sentry boxes would have been key to defending the city of San Juan and remain an important part of the Park's landscape.<sup>98</sup>

Even as the military defensive function of the walls and their effect on movement throughout the city is clear today, present-day and historic land uses are very different. Historically, the Old San Juan City Walls and the area immediately around them were used for military, residential, cemetery, and recreational purposes. Today they are no longer used for military purposes, and are instead used for museum, interpretation, educational, commemorative, and conservation purposes in addition to cemetery, recreation, and residential uses.<sup>99</sup> The landscape retains few of the historic circulation patterns that once organized the space. Roads which once connected the walls and gates to nearby landmarks, such as Castillo San Felipe del Morro or Castillo San Cristóbal, are no longer extant. Some features are still present, however, including select military roads and the "covered way" along the parapet walls. Most small-scale features and historic buildings have been demolished.<sup>100</sup>

The Old San Juan City Walls Archeological Site Complex (AR SAJU00004.000)<sup>101</sup> is an area of archeological sensitivity along the city walls, including the city walls themselves and those terrepleins and below-wall spaces that are within the San Juan National Historic Site boundary.<sup>102</sup> The Old San Juan City Walls Archeological Site Complex has been administratively identified by NPS based on the archeological potential represented by the presence of Spanish colonial architectural remains and the wall system's historical association

<sup>97</sup> Panamerican, *Draft CLR: San Juan City Walls*, 202.

<sup>98</sup> Panamerican, *Draft CLR: San Juan City Walls*, 208, 228.

<sup>99</sup> Panamerican, *Draft CLR: San Juan City Walls*, 198.

<sup>100</sup> Panamerican, *Draft CLR: San Juan City Walls*, 232.

<sup>101</sup> Subsites within the San Juan City Walls Archaeological Site Complex include: San Sebastián Bastion (AR SAJU00004.001); Santo Tomás Bastion (AR SAJU00004.002), Las Ánimas Bastion (AR SAJU00004.003), Santo Domingo Bastion (AR SAJU00004.004), Santa Rosa Bastion (AR SAJU00004.005), San Antonio Bastion (AR SAJU00004.006), Santa Elena Bastion (AR SAJU00004.007), San Agustín Bastion (AR SAJU00004.008); La Concepcion Bastion (AR SAJU00004.009); San José de las Palmas Bastion (AR SAJU00004.010); San Fernando Battery (AR SAJU00004.011); San Juan City Gate (AR SAJU00004.012); San José City Gate (AR SAJU00004.13); Santa Rosa City Gate (AR SAJU 00004.014); North Wall (AR SAJU 00004.015); South Wall No. 1 (AR SAJU00004.016); South Wall No. 2 (AR SAJU00004.017); Quarters Building No. 1 Calle de Norzagaray (AR SAJU00004.018); Quarters Building No. 2 Calle de Norzagaray (AR SAJU00004.019); Quarters Building No. 3 Calle de Norzagaray (AR SAJU00004.020); Quarters Building No. 4 Calle de Norzagaray (AR SAJU00004.021); La Puerta de la Perla (AR SAJU00004.022).

<sup>102</sup> The San Juan National Historic Site Park Boundary extends approximately 33 feet (10 meters) out from the base of the walls.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

with known archeologically sensitive sites within the San Juan National Historic Site. Several areas of the Old San Juan City Walls have been subject to archeological analyses, including the San Agustín Bastion terreplein and the area at the base of San Sebastián Bastion. Archeological deposits, discussed in detail in Section 8, adjacent to these bastion walls suggest that subsurface deposits with historical archeological potential remain intact. Modern looters have disturbed some of the near-surface soil in the area of San Antonio Bastion. Despite this, archeological stratigraphy associated with the period of significance remains largely intact and retains the potential to yield important information in the areas of military history, maritime history, and the history of defensive architecture.

### *Statement of Integrity*

Despite some changes to the Old San Juan City Walls Historic Landscape and limited disturbance of the Old San Juan City Walls Archeological Site Complex, these resources overall retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. The integrity of setting of the historic landscape is somewhat compromised by twentieth century buildings and parks atop the terreplein of the Old San Juan City Wall – South Wall, but this does not diminish the resource’s ability to convey its significance. The Old San Juan City Walls Archeological Site Complex has yielded and retains the potential to yield significant information related to Spanish military history, United States military history, maritime history, the history of defensive architecture, ethnic heritage, and social history. The Old San Juan City Walls Historic Landscape similarly retains its capacity to convey its significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

A description of each contributing resource within the Old San Juan City Walls, known historical associations, previous investigations, and assessments of integrity, follows. This discussion begins with the Old San Juan City Wall – North Wall (p. 49–58); followed by the Old San Juan City Wall – West Wall (p. 58–65); and the Old San Juan City Wall – South Wall (p. 65–68).

Old San Juan City Wall – North Wall (HS 006065; PSN HS-201)

Contributing

*Total:* 1 Structure

The Old San Juan City Wall – North Wall, known simply as the North Wall, runs along the northern edge of San Juan Islet for approximately one mile between Castillo San Felipe del Morro in the west and Castillo San Cristóbal in the east. Straight curtain walls connect the six bastions sited along the North Wall (west to east): San Antonio Bastion, Santa Rosa Bastion, Santo Domingo Bastion, Las Ánimas Bastion, Santo Tomás Bastion, and San Sebastián Bastion.

In the seventeenth century, the northern perimeter of Old San Juan was largely unfortified, as the west, south, and east sections of the city’s defensive walls were prioritized to defend the city

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

against a harborside attack. During this period, only the small masonry redoubt, el Fortín de la Perla (not extant) had been constructed and chapels on the Esplanade and along the north shore were also considered part of the defensive system on the islet.<sup>103</sup> Instead of manmade walls, the steep rocky coastline acted as a natural deterrent, in concert with the firepower which could be mounted from Castillo San Felipe del Morro and Castillo San Cristóbal.

The North Wall was constructed as part of the late-eighteenth-century modernization project recommended by Alexander O'Reilly, designed and built by Thomas O'Daly, and later Juan Francisco Mestre.<sup>104</sup> Constructed between 1766 and 1792 as part of the "maritime front" of the city, the North Wall created a continuous front along the north side of the islet, connecting Castillo San Cristóbal with Castillo San Felipe del Morro seamlessly.<sup>105</sup> Its high parapet wall acted as a "covered way" to protect troop movements between the two forts along the cliffside. Fortín de La Perla was located just outside the newly-constructed wall.

During the nineteenth century, the North Wall saw maintenance and repairs but no major construction projects. In the first decades of the nineteenth century, Ignacio Mascaró reported that a smooth stucco covering was applied to the entirety of the North Wall, from Castillo San Cristóbal to Santa Rosa Bastion.<sup>106</sup> As military technologies improved in the nineteenth century, however, the defensive utility of the North Wall waned as did the usefulness of the other Old San Juan City Walls. The reduced military character of this area, in concert with the increased population and density of the city of San Juan, resulted in the urbanization of the area below the wall adjacent to the Atlantic Ocean. The resulting neighborhood, La Perla, sprung up around a slaughterhouse established at this location in the mid-nineteenth century.<sup>107</sup> Additional development north of the wall included the Santa María Magdalena de Pazzi Cemetery, which was laid out beginning in 1814.

During the United States Army's use of the North Wall in the twentieth century, the pattern of deferred maintenance that began with the structure's defensive obsolescence in the nineteenth century, continued. In the early years of the twentieth century, the deterioration of the North Wall was also seen a health hazard; in 1912 the United States Army was pressured to "rat-proof" the walls during an outbreak of bubonic plague. The lack of maintenance devoted to the North Wall became a source of ire for local residents and the insular government of Puerto Rico and helped to motivate the passage of historic preservation laws.

### *Statement of Integrity*

The Old San Juan City Wall – North Wall retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. The North Wall retains its ability to

<sup>103</sup> Berkowitz, *Fortifications: Vol. III-City Walls*, 20.

<sup>104</sup> Berkowitz, *Fortifications: Vol. III-City Walls*, 21.

<sup>105</sup> Berkowitz, *Fortifications: Vol. III-City Walls*, 27.

<sup>106</sup> Berkowitz, *Fortifications: Vol. III-City Walls*, 36.

<sup>107</sup> Berkowitz, *Fortifications: Vol. III-City Walls*, 38.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

convey its significance in the areas of Spanish military history, United States military history, maritime history, the history of defensive architecture, ethnic heritage, and social history.

San Sebastián Bastion (HS N/A)

Contributing

*Total:* 1 Structure

San Sebastián Bastion is an irregularly-shaped, masonry bastion projecting northward from the Old San Juan City Wall – North Wall, immediately west of the Main Gate at Castillo San Cristóbal, and east of Santo Tomás Bastion. The bastion's angled and scarped walls rise above the cliffs abutting the Atlantic Ocean and the La Perla neighborhood and are capped by parapets pierced by 22 embrasures. The bastion is accessed via a ramp at its eastern flanking wall, where a partially-paved road slopes down from Norzagaray Boulevard. The bastion's walls are constructed primarily of coursed, face-dressed limestone rubble, while its corners are built of ashlar-laid limestone blocks and its embrasures are edged with brick. The entirety of the structure is coated in a layer of stucco, in varied states of preservation. The terreplein of the bastion is covered in turf, though firing steps and platforms along the perimeter are constructed of limestone rubble. A limestone-lined drainage culvert leads north into the western face wall, terminating in a stone scupper on the exterior of the wall.<sup>108</sup>

Two sentry boxes, with characteristic ogee-shaped caps, are positioned at San Sebastián Bastion's salient angles. The sentry boxes are accessed via narrow passageways through the parapet walls from the bastion's terreplein. The western sentry box is original, dating to the late eighteenth century, and is constructed of limestone and brick masonry, with a coating of stucco. The eastern sentry box is concrete and was constructed in 1939.

Built circa 1772–1783, San Sebastián Bastion was designed to protect Castillo San Cristóbal's Main Ramp and the surrounding sections of the San Juan City Wall. The bastion was manned with infantry soldiers in the 1830s despite the walls becoming increasingly obsolete as military technologies improved. A building which served as a magazine was located on the bastion's terreplein as of 1899. When the United States Army began to manage the fortifications after the Spanish-American War, the magazine was demolished and three residences for infantrymen were constructed atop San Sebastián Bastion's terreplein. After the bastion was acquired by the NPS in 1961, the buildings were demolished in 1964.<sup>109</sup> By 1929, a retaining wall to support Norzagaray Boulevard was raised several feet above the bastion's terreplein, though a precise

<sup>108</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 77.

<sup>109</sup> Pantel, del Cueto & Associates, *Stage 1A Archaeological Assessment, Paseo del Morro Amphitheater Project*. (San Juan: U.S. National Park Service, June 2017), 57.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

date for this construction is not known.<sup>110</sup> Also by 1929, the road which leads into the bastion had been constructed, although this access road may date to an earlier time and may be related to an earlier configuration of the Main Ramp at San Cristóbal.<sup>111</sup>

### *Statement of Integrity*

San Sebastián Bastion was constructed in the late eighteenth century and has been subject to only a few changes since that time—namely the construction and demolition of structures on its terreplein in the late nineteenth and early twentieth centuries and the raising of Norzagaray Boulevard. Despite these changes, San Sebastián Bastion retains integrity of location, design, setting, materials, workmanship, feeling, and association and its ability to communicate its significance with regard to military history, maritime history, defensive architecture, ethnic heritage and social history.

Santo Tomás Bastion (HS N/A)

Contributing

La Puerta de La Perla (HS N/A)

Contributing

*Total: 2 Structures*

Santo Tomás Bastion is an irregularly-shaped, masonry bastion projecting northward from the Old San Juan City Wall – North Wall, immediately west of San Sebastián Bastion and east of Las Ánimas Bastion. Santo Tomás Bastion’s angled and scarped walls rise above the La Perla neighborhood and are capped by parapet walls pierced by 13 embrasures. The bastion is accessed via Bajada Matadero Boulevard, which enters the bastion at its eastern flanking wall. This one-lane road slopes from the elevation of Norzagaray Boulevard down toward La Puerta de La Perla (also known as Santa Rosa Gate), which passes through the bastion’s west flanking wall. The bastion’s walls are constructed primarily of coursed, face-dressed limestone rubble, while its corners are built of ashlar-laid blocks and its embrasures are edged with brick. The entirety of the structure is coated in a layer of stucco, in varied states of preservation. The terreplein of the bastion is covered in turf, though firing steps and platforms along the perimeter are constructed of limestone rubble. To the east of the bastion, an access stair between the terreplein and La Perla is present within the curtain wall shared with San Sebastián Bastion.<sup>112</sup>

<sup>110</sup> United States War Department, *Plan of San Juan P.R. Showing Buildings Belonging to the Quartermaster’s Department U.S. Army on June 30*. August 1899. On file San Juan National Historic Site Archives, San Juan, Puerto Rico; United States War Department, *Fort Brooke and Vicinity, P.R. General Layout*. August 1946. On file San Juan National Historic Site Archives, San Juan, Puerto Rico; Berkowitz, *Fortifications: Vol. III - City Walls* 40, 46.

<sup>111</sup> Panamerican, *Draft CLR: San Juan City Walls*, 215–217; pers. Comm. Félix López, NPS Historian.

<sup>112</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 78; Jaqueline López Meléndez, *Documentación Arqueológica, Proyecto Muro de Retención, Calle Norzagaray, Viejo San Juan, Puerto Rico*. (San Juan: Department of Roads and Transportation, June 2006).



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

One sentry box is positioned at the junction of the west face and west flanking walls of Santo Tomás Bastion. The sentry box is accessed via a narrow passageway through the parapet wall from the bastion's terreplein. The sentry box is original, dating to the late eighteenth century, and is constructed of limestone and brick masonry, with a coating of stucco.

Built circa 1772–1783, Santo Tomás Bastion was constructed as part of a system of bastions built to defend the northern coast of the islet; La Puerta de La Perla was constructed to provide access to Fuerte de La Perla, once located below the North Wall. The bastion was manned with infantry soldiers and a piece of artillery in the 1830s despite the walls becoming increasingly obsolete as military technologies improved. Two buildings, a kitchen, and residence for non-commissioned officers, were constructed on the terreplein of the bastion in the late nineteenth century. After the United States Army began to manage the fortifications of San Juan after the Spanish-American War, an Officer's Quarters building was constructed atop the terreplein. This building was removed in the mid-twentieth century after the bastion was acquired by the NPS in 1961. By 1929, a retaining wall to support Norzagaray Boulevard was raised several feet above the bastion's terreplein, though a precise date for this construction is not known. In 2004, the partial collapse of the Norzagaray Boulevard retaining wall and subsequent repair, resulted in limited archaeological work proximate to the retaining wall and within a twentieth-century vaulted casemate beneath it (for more information, see Section 8).<sup>113</sup>

### *Statement of Integrity*

Santo Tomás Bastion and La Puerta de La Perla were constructed in the late eighteenth century and have undergone few changes since that time, with the exception of the construction and demolition of structures on the bastion terreplein in the late nineteenth and early twentieth centuries. Despite these changes, Santo Tomás Bastion and La Puerta de La Perla retain integrity of location, design, setting, materials, workmanship, feeling, and association as well as their ability to communicate their significance with regard to military history, maritime history, defensive architecture, ethnic heritage, and social history.

Las Ánimas Bastion (HS N/A)

Contributing

*Total:* 1 Structure

Las Ánimas Bastion is an irregularly-shaped, masonry bastion projecting northward from the Old San Juan City Wall – North Wall, immediately west of Santo Tomás Bastion and east of Santo Domingo Bastion. Las Ánimas Bastion's angled and scarped walls rise above the La Perla neighborhood and are capped by parapets, pierced by seven embrasures. The west flanking wall of the bastion rises several feet higher than the remainder of the parapet wall. Las Ánimas

<sup>113</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 40, 46; *Plan of San Juan, P.R.* August 1899; *Fort Brooke and Vicinity*, August 1946; Panamerican, *Draft CLR: San Juan City Walls*, 63-64.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Bastion is accessed via Norzagaray Boulevard and via a concrete staircase from the La Perla neighborhood, connected to an embrasure opening in the west facing wall. The bastion's walls are constructed primarily of coursed, face-dressed limestone rubble, while its corners are built of ashlar-laid limestone blocks and its embrasures are edged with brick. Portions of the bastion's scarp walls are faced with limestone rubble tiles. The entirety of the structure is coated in a layer of stucco, in varied states of preservation. The turf terreplein of the bastion has a drainage canal running along the east face and flanking walls, terminating at a drainbox leading to a scupper on the exterior of the east facing wall. At the salient angle of the bastion, the single sentry box sits on a corbelled base and has a cast-concrete ogee-shaped cap.<sup>114</sup>

Built between 1778 and 1783, Las Ánimas Bastion was constructed as part of a system of bastions built to defend the northern coast of the islet. The bastion was manned with infantry soldiers in the 1830s, but fell out of use as military technologies improved. During the United States Army's management of the North Wall in the early twentieth century, repairs were made at Santo Domingo and Las Ánimas bastions. In the late 1920s, repointing, grouting, vegetation removal, and some reconstruction of the parapet walls was undertaken at Las Ánimas Bastion, in addition to the installation of a concrete retaining wall where a section of the bastion had collapsed. Where repairs took place in the 1920s along the curtain wall west of Las Ánimas and on portions of the bastion's scarp walls, "coral blocks" (limestone rubble tiles) were used to face the walls in order to maintain visual continuity with the neighboring walls. These improvements coincide with a period of local historic preservation activism in San Juan.<sup>115</sup>

#### *Statement of Integrity*

Las Ánimas Bastion was constructed in the late eighteenth century and has undergone several episodes of repair and reconstruction, including the rebuilding and refacing of portions of its walls. These changes to the material composition and workmanship of Las Ánimas took place within the period of significance. The resource retains integrity of location, design, setting, feeling, and association and its ability to convey its significance with regard to Spanish military history, maritime history, defensive architecture, ethnic heritage, and social history.

Santo Domingo Bastion (HS N/A)

Contributing

*Total:* 1 Structure

Santo Domingo Bastion is an irregularly-shaped, masonry bastion projecting northward from the Old San Juan City Wall – North Wall, immediately west of Las Ánimas Bastion and east of Santa Rosa Bastion. Santo Domingo Bastion's angled and scarp walls rise above the La Perla neighborhood and the Santa María Magdalena de Pazzi Cemetery and are capped by parapets,

<sup>114</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 79.

<sup>115</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 28, 40, 79.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

pierced by 11 embrasures. The bastion's walls are constructed primarily of coursed, face-dressed limestone rubble, while its corners are built of ashlar-laid limestone blocks and its embrasures are edged with brick. Portions of the bastion's scarped walls are faced with limestone rubble tiles. The entirety of the structure is coated in a layer of stucco, in varied states of preservation. At the bastion's salient angle, a brick masonry sentry box on a limestone base is accessed via a narrow passageway through the parapet wall. While Santo Domingo Bastion sits at the same elevation as the neighboring Norzagaray Boulevard, access is limited as the terreplein is outside of federal jurisdiction today.<sup>116</sup>

Built between 1776 and 1783, Santo Domingo Bastion was designed with embrasures facing northeast toward the Atlantic Ocean and a sentry box at the salient angle. The bastion was manned with infantry soldiers and one piece of artillery in the 1830s, but fell out of use as military technologies improved. The Escuela Militar de Tiro (Military Shooting School) operated until 1897, and between January and June of that year two of the structures within the bastion were converted into a yellow fever hospital.

The terreplein was repurposed as the site of an ice plant for the nearby hospital as of 1899 until the 1920s.<sup>117</sup> In the late 1920s, repointing, grouting, vegetation removal, and some reconstruction of the parapet walls took place at Santo Domingo. As with Las Ánimas Bastion, these improvements coincide with a period of local historic preservation activism in San Juan in the early nineteenth century. Between 1921-1931 at least four structures were erected, most likely barracks or dormitories. During the 1930s those structures were demolished and replaced with a Bachelor Officer's Quarters. The latter was eventually expanded to serve, until 1967, as dormitories for the nurses that worked at the Rodriguez Hospital.<sup>118</sup> In preparation for World War II, the United States Army constructed four structures as part of Fort Brooke atop the terreplein and on the slope immediately adjacent: a theatre, a service club building, a residence for bachelor soldiers, and an annex to the bachelor's quarters.

When the NPS took over care of Santo Domingo Bastion in 1961, the terreplein was excluded from the acquisition and today the former bachelor's barracks are part of the University of Puerto Rico.<sup>119</sup>

### *Statement of Integrity*

Santo Domingo Bastion was constructed in the late eighteenth century and has undergone several episodes of repair and reconstruction, including the rebuilding of portions of the walls and re-

<sup>116</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 81.

<sup>117</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 28, 40; *Plan of San Juan, P.R.* August 1899.

<sup>118</sup> Pantel, del Cueto & Associates, *Trasfondo Histórico de la Parcela del Bastión de Santo Domingo*, Instituto de Neurobiología, Recinto de Ciencias Médicas, Universidad de Puerto Rico, Viejo San Juan de Puerto Rico (San Juan: Manuel de Lemos, AIA, Arquitectos-Planificadores, 2012).

<sup>119</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 49, 81; *Plan of San Juan, P.R.* August 1899; *Fort Brooke and Vicinity*, August 1946.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

facing of the walls with limestone rubble tiles. Despite these changes, Santo Domingo Bastion retains integrity of location, design, setting, feeling, and association as well as its ability to communicate its significance with regard to military history, maritime history, defensive architecture, ethnic heritage, and social history.

Santa Rosa Bastion (HS N/A)

Contributing

San José City Gate (HS N/A)

Contributing

*Total: 2 Structures*

Santa Rosa Bastion is a masonry bastion with a semi-regular shape projecting northward from the Old San Juan City Wall – North Wall, immediately west of Santo Domingo Bastion and east of San Antonio Bastion. Santa Rosa Bastion’s angled and scarped walls rise above the Santa María Magdalena de Pazzi Cemetery, and are capped by parapets pierced by 18 embrasures. Tombs have been set into the base of the bastion’s west flank wall. The bastion’s walls are constructed primarily of coursed, face-dressed limestone rubble, while its corners are built of ashlar-laid limestone blocks and its embrasures and firing steps are edged with brick. The entirety of the structure is coated in a layer of stucco, in varied states of preservation. The bastion is accessed via the El Morro Esplanade, which borders it to the south. The terreplein of the bastion is covered in turf, though firing steps and platforms along the perimeter are constructed of limestone rubble. A 14 foot- (4.27 meter) tall powder magazine, with three vaulted rooms accessed via wooden doors, curves eastward from the bastion’s west flank wall. Santa Rosa Bastion’s single sentry box is positioned at its salient angle and is accessed via a narrow passageway through the parapet wall. The sentry box is a replacement, constructed of concrete circa 1939, but mounted atop the original limestone base and coated in cement stucco.<sup>120</sup>

Just east of Santa Rosa Bastion, the one-lane Cemetery Boulevard slopes from the elevation of Norzagaray Boulevard down toward the San José City Gate (also known as the Puerta de San José and Puerta del Cementerio). This road passes beneath a portion of the El Morro Esplanade and through the curtain wall between Santa Rosa and Santo Domingo bastions, before opening onto the cemetery. The San José City Gate consists of a vaulted entryway at the level of the cemetery; the interior tunnel walls are constructed of limestone rubble, the vault is constructed of brick, and the entirety of the passageway is coated in stucco.<sup>121</sup>

Oriented toward the Atlantic Ocean, and designed with embrasures pointing northwest, northeast, and southeast, Santa Rosa Bastion was designed and built between 1776 and 1783. This bastion was built on the east side of what was once a ravine which descended from the El Morro Esplanade toward the Atlantic Ocean. The bastion saw no major building projects in the

<sup>120</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 81.

<sup>121</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 81.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

nineteenth century and was manned with infantry soldiers and five pieces of artillery in the 1830s. After the United States took control of the fortifications in 1898, no major building activities took place at Santa Rosa Bastion, although the bastion was used as the seventh hole of the golf course that zig-zagged across the El Morro Esplanade and Old San Juan City Walls beginning in the late 1920s.<sup>122</sup>

### *Statement of Integrity*

Santa Rosa Bastion and the San José City Gate were constructed in the late eighteenth century and have undergone few changes beyond repairs and maintenance since that time. Both resources retain integrity of location, design, setting, materials, workmanship, feeling, and association as well as their ability to communicate their significance with regard to military history, maritime history, defensive architecture, ethnic heritage, and social history. Santa Rosa Bastion retains poor integrity related to the early twentieth century golf course and does not retain the ability to convey its significance with respect to recreational history.

### San Antonio Bastion (HS N/A)

Contributing

*Total:* 1 Structure

San Antonio Bastion is an irregularly-shaped, masonry bastion projecting northward from the Old San Juan City Wall – North Wall, immediately west of the Santa Rosa Bastion and east of Castillo San Felipe del Morro. The bastion’s angled and scarped walls rise above the Santa Maria Magdalena de Pazzi Cemetery, and are capped by parapets pierced by seven embrasures. The bastion’s walls are constructed primarily of coursed, face-dressed limestone rubble, while its corners are built of ashlar-laid limestone blocks and its embrasures are edged with brick. The entirety of the structure is coated in a layer of stucco, in varied states of preservation. The bastion is accessed via the El Morro Esplanade, which borders it to the south. The terreplein of the bastion is covered in turf, though firing steps and platforms along the perimeter are constructed of limestone rubble. The arched limestone tracks of three nineteenth-century gun emplacements are positioned along the east and west face walls of the bastion. A one-story, rectangular powder magazine, sits on the bastion’s terreplein and projects southward from the west flanking parapet wall. A stone drainage scupper pierces the west face wall of the bastion.<sup>123</sup>

San Antonio Bastion’s single sentry box is positioned at its salient angle and is accessed via a narrow passageway through the parapet wall. The sentry box is a replacement, constructed of concrete circa 1939, but mounted atop the original limestone base.<sup>124</sup>

<sup>122</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 81 40; Historic Photograph, “El Morro and Adjoining Fortification Walls, SAJU (12-26-1929).” on file San Juan National Historic Site Archives, San Juan, Puerto Rico.

<sup>123</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 81.

<sup>124</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 81.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

San Antonio Bastion was constructed between 1776 and 1783 and was designed with embrasures which were oriented primarily to the east and northeast, rather than toward El Morro's curtain walls. In the nineteenth century, San Antonio Bastion was maintained and used as the most eastward extension of Castillo San Felipe del Morro's seaward defenses. In preparation for the Spanish-American War, the San Antonio Guardhouse was constructed to reinforce the defenses of this bastion. In the late nineteenth century, San Antonio Bastion was equipped with artillery and the bastion's parapet was reinforced with concrete. After the United States took control of the fortifications in 1898, San Antonio Bastion's walls were subject to little maintenance or repair, although the terreplein of the bastion was utilized as the location of the United States Army's swimming pool facilities beginning in the late 1920s, with the San Antonio Guardhouse serving as a pool house facility.<sup>125</sup> The swimming pool was demolished in the mid-twentieth century and the San Antonio Guardhouse now serves as a restroom facility.

#### *Statement of Integrity*

San Antonio Bastion was constructed in the late eighteenth century and has undergone few changes since that time, with the exception of the construction and demolition of an above-ground swimming pool in the twentieth century. San Antonio Bastion retains integrity of location, design, setting, materials, workmanship, feeling, and association as well as its ability to communicate its significance with regard to Spanish military history, maritime history, defensive architecture, ethnic heritage, and social history.

Old San Juan City Wall – West Wall (HS 006068; PSN HS-206)

Contributing

*Total:* 1 Structure

The Old San Juan City Wall – West Wall, known simply as the West Wall, runs along the southwest edge of San Juan Islet between Castillo San Felipe del Morro in the northwest and the San Juan City Gate in the southeast. Straight curtain walls and steep cliffs connect the battery, bastions, and gate sited within the West Wall (northwest to southeast): San Fernando Battery, Santa Elena Bastion, San Agustín Bastion, and the San Juan City Gate.

The West Wall was designed to enhance the natural defensive characteristics of the steep, rocky cliffs along the southwest edge of the island. Initially, in the sixteenth and early seventeenth centuries, the cliffs themselves were considered steep enough to discourage an attack on this front without any manmade walls.<sup>126</sup> The portion of the cliffside immediately southeast of El Morro in fact, was left bare permanently even as a network of manmade walls enveloped the city in the seventeenth and eighteenth centuries.

<sup>125</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 40.

<sup>126</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 10.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

A wall along the western cliffs was proposed as early as 1588 when Field Marshal Juan de Tejada and Italian engineer Bautista Antonelli designed a master plan for the defenses of the city after Sir Francis Drake's attack on other New World Spanish outposts in 1585.<sup>127</sup> Only Santa Elena Bastion and San Gabriel Bastion (precursor to San Agustín Bastion) were constructed by the turn of the seventeenth century. In reaction to the Dutch attack of 1625, improvements to the West Wall were undertaken, many of which were carried out by Governor Iñigo de la Mota Sarmiento.

With the late-eighteenth-century modernization project, the West Wall was reconstructed "to conform to the principles of bastioned fortifications."<sup>128</sup> This involved building long curtain walls to connect projecting bastions. Plans for the reconstruction to the West Wall were laid out in 1784 and 1787 and were likely completed by the early nineteenth century.

Maintenance of the West Wall presented problems as wave erosion began to undercut the curtain walls immediately, creating problems as early as 1808.<sup>129</sup> In the 1890s, the bastions along the West Wall were outfitted with breech-loaded firearms, in preparation for the Spanish-American War. Despite these preparations, the munitions along the West Wall were not used during the 1898 bombardment that followed.

During the United States Army's management of the West Wall in the early twentieth century, several repair, maintenance, and reconstruction projects were undertaken. For example, in 1932, three sentry boxes, including two sentry boxes within and adjacent to San Agustín Bastion, were repaired.<sup>130</sup> Additionally, in the late 1930s, a large portion of the curtain wall between Santa Elena Bastion and San Agustín Bastion was rebuilt as part of the WPA program in Puerto Rico. This preservation work was in part fueled by community agitation which pressed the United States Army, the stewards of the walls, and the federal government to be more active in the preservation of the fortifications.

### *Statement of Integrity*

The Old San Juan City Wall – West Wall retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While the wall has undergone some major changes since its construction, including the complete reconstruction of the curtain wall between Santa Elena Bastion and San Agustín Bastion, these changes fall within the period of significance and contribute to the significance of this structure. The West Wall retains its ability to convey its significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

<sup>127</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 10. In 1585 Drake raided Cartagena de Indias (Colombia), Saint Augustine (Florida) and Santo Domingo (Hispaniola).

<sup>128</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 23.

<sup>129</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 29.

<sup>130</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 49.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

San Fernando Battery (*HS N/A; PSN HS-241*)

Contributing

*Total:* 1 Structure

Located southeast of Castillo San Felipe del Morro, San Fernando Battery is an “L-shaped” outwork positioned to fire toward the mouth of San Juan Bay. San Fernando Battery is the northwesternmost component of the West Wall. The terreplein of the battery is divided into four gun emplacements and four low, earthen traverses. The low parapet wall lacks embrasures or a sentry box, though a passageway leading through the parapet wall to the former sentry box’s limestone base at the battery’s salient angle. Constructed of coursed, dressed limestone masonry with earthen fill and a stucco coating, portions of the parapet wall and traverses are edged with brick. Each late-nineteenth-century gun emplacement is marked by a central iron pintle and arched limestone tracks.

According to historic maps of the San Juan fortifications, the first iteration of San Fernando Battery was present before 1765 and had eight embrasures designed to defend the southwestern flank of Castillo San Felipe del Morro. The battery took on its current form after implementation of 1787 plans which called for thickening the low parapet to reinforce its strength and removing two embrasures, leaving six in the updated structure.<sup>131</sup>

When the importance of the West Wall waned in the early nineteenth century, San Fernando Battery continued to be manned, though not actively outfitted with artillery. In 1888, the battery was once again modernized with the installation of four breech-loading mortars designed to fire *en barbette*, over the parapet wall. It was at this time that the embrasures were removed, and the parapet wall was lowered. The United States Army proposed emplacements at San Fernando Battery in the early twentieth century, but these plans did not come to fruition.<sup>132</sup> By 1930, San Fernando Battery had been infilled with dirt when army housing was built nearby; the area was re-excavated by the NPS in the 1990s.<sup>133</sup>

### *Statement of Integrity*

San Fernando Battery took on much of its current form when it was redesigned circa 1787 and saw alterations in 1888. San Fernando Battery retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association and retains its ability to convey its significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

<sup>131</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 24.

<sup>132</sup> Bearss, *HSR: Historical Data, 1898–1958*, 66.

<sup>133</sup> Ken Wild, “Trip Report on Archaeological Investigations Conducted at San Fernando Bastion Prior to Proposed Construction by the Army Corp of Engineers.” SAJU Trip Reports 1994. (On file at the Southeast Archeological Center, Accession SEAC-01158), 1–2.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Santa Elena Bastion (HS N/A)

Contributing

*Total:* 1 Structure

Santa Elena Bastion is a masonry bastion within the West Wall which is situated south of San Fernando Battery. Santa Elena Bastion curves around a rocky outcropping and represents the only rounded bastion in the system of San Juan fortifications. The bastion has 13 embrasures pointing northwest, west, and southeast; the opening of each embrasure is blocked by an iron grille. The bastion is primarily constructed of coursed, dressed limestone rubble, coated in stucco, with brick edging on its embrasures, merlons, and firing steps. The terreplein of Santa Elena Bastion is outside the Park boundary.<sup>134</sup> To the southeast of Santa Elena Bastion is a curtain wall connecting it to San Agustín Bastion. This curtain wall is pierced by four embrasures and a stone scupper. Constructed of reinforced concrete, the curtain wall has a veneer of polygonal blocks of cast composite stone to create the appearance of coursed limestone.<sup>135</sup>

Santa Elena Bastion was first depicted on a 1575 panoramic view of San Juan, represented as a structure on the coastline below the cliffs (see Figure 3).<sup>136</sup> Construction of the bastion atop the cliffs was undertaken in the 1580s by Captain Diego Meléndez de Valdés.<sup>137</sup> Field Marshal Alexander O'Reilly's 1765 survey depicted the bastion as a triangular fort jutting out into the bay. Plans for the modernization of the bastion, drawn in 1787 by Juan Francisco Mestre, redesigned the bastion to curve around the rocky point, with embrasures facing northwest, across the unfortified cliffs, and southeast along the newly-straightened curtain wall between Santa Elena and San Agustín bastions. Construction was completed by 1792.<sup>138</sup>

In the early nineteenth century, Santa Elena Bastion was garrisoned by 20 soldiers and in 1838 two cannon were emplaced there. In preparation for the Spanish-American War in the 1890s, three breech-loaded rifles were installed.<sup>139</sup> In 1913, the curtain wall between Santa Elena Bastion and San Agustín Bastion had begun to slump toward the harbor and in 1918 a large section collapsed. Repairs were made to the wall in 1924 and 1925, utilizing Portland cement but also recycling many of the "coral blocks" (limestone) of the collapsed wall. Repair to the curtain wall west of San Agustín Bastion was undertaken in 1925.<sup>140</sup>

With the onset of World War I, the United States Army equipped Santa Elena Bastion with artillery to help defend San Juan Harbor; a position reused during the Second World War. In the

<sup>134</sup> A World War II gun emplacement and Santa Elena Guardhouse are situated outside the San Juan National Historic Site park boundary, upon Santa Elena's terreplein.

<sup>135</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 69.

<sup>136</sup> SARQGIS, *Archaeological Investigations at Santa Elena Gunpowder Magazine*. (San Juan: National Park Service, 2018), 24; "1575 Panoramic View of the City of San Juan, composed by Juan Escalante de Mendoza." Reproduced from Sepúlveda, *Puerto Rico Urbano: Vol. 1*, 70.

<sup>137</sup> SARQGIS, *Archaeological Investigations at Santa Elena Gunpowder Magazine*, 27–28.

<sup>138</sup> SARQGIS, *Archaeological Investigations at Santa Elena Gunpowder Magazine*, 38.

<sup>139</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 32.

<sup>140</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 48.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

late twentieth century, the NPS removed fill from the embrasures, repaired the firing steps, and undertook general maintenance of the bastion.

### *Statement of Integrity*

After multiple building episodes beginning in the late sixteenth century, Santa Elena Bastion took on its distinctive curved form in the 1790s. Santa Elena Bastion retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. Santa Elena Bastion retains its ability to convey its significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

San Agustín Bastion (HS N/A)

Contributing

*Total:* 1 Structure

San Agustín Bastion is a masonry bastion situated within the West Wall between Santa Elena Bastion, to the northwest, and the San Juan City Gate, to the southeast. San Agustín Bastion's walls jog around the rocky cliff and are pierced by 18 embrasures. Firing steps are positioned behind the merlons, adjacent to the embrasure openings. Two sentry boxes were reconstructed at the salient angles of the bastion in 1932. The sentry boxes are accessed via narrow passageways through the parapet wall from the terreplein. No structures are present on the bastion's earthen terreplein. The stone arch track of a gun emplacement is visible in the northwestern portion of the terreplein. Within the curtain wall which stretched southeasterly toward San Juan City Gate, 16 additional embrasures pierce the parapet wall and an additional sentry box overlooks the gate. After being subjected to weathering and deterioration throughout the twentieth century, the NPS undertook a reconstruction project in the 1980s; one of the sentry boxes (west) was rebuilt and six embrasures were reconstructed. San Agustín Bastion is constructed of coursed, dressed limestone rubble with brick used for coping on parapet walls and embrasures.

San Agustín Bastion was first constructed in the sixteenth century as part of the improvements made to the city of San Juan's west, south, and east defenses after the Dutch attack of 1625. Perched on a rocky outcropping along the jagged western edge of the island, this bastion needed reconstruction by the mid-eighteenth century. As part of the modernization project recommended by Alexander O'Reilly and executed by Thomas O'Daly, San Agustín Bastion was rebuilt to its present appearance between 1765 and 1790. Also during this period, the curtain wall between San Agustín and Santa Elena bastions was straightened and the San Gabriel Battery, which had once stood immediately north of San Agustín, was demolished.

As with other sections of the West Wall, San Agustín Bastion did not see any major building projects in the nineteenth century. During the early nineteenth century, San Agustín Bastion was

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

manned by 11 infantrymen and in 1838 two canon were positioned there.<sup>141</sup> During the mid-late nineteenth century, several structures were built on and around the bastion's terreplein.<sup>142</sup> In preparation for the Spanish-American War in the 1890s, two mortars were mounted at San Agustín to guard the harbor entrance and San Juan City Gate and in 1898 when the United States surveyed the walls, one structure was identified on the bastion's terreplein. In 1915, repair work was undertaken by the United States Army to the curtain wall northwest of the bastion. By 1937, three buildings and several trees were present atop the bastion's terreplein.<sup>143</sup> As part of the WPA preservation project at the fortifications in 1939, the curtain wall south of San Agustín was repaired, as was sea frontage of the bastion and its northern curtain wall.<sup>144</sup> The structures on the terreplein were demolished by 1951 and several trees from that period remain today.

### *Statement of Integrity*

San Agustín Bastion has undergone several building campaigns, culminating with the rebuilding of the bastion in the late eighteenth century. The presence of several trees on the terreplein planted in the early twentieth century detract somewhat from the original historical setting. Nonetheless, San Agustín Bastion retains a high degree of integrity of location, design, materials, workmanship, feeling, and association and retains its ability to convey its significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

San Juan City Gate (HS 091741; PSN HS-242)

Contributing

Total: 1 Structure

San Juan City Gate, also known as the Puerta de San Juan, is a monumental masonry gate which since the sixteenth century has connected the harbor with the spiritual center of the city, the Catedral de San Juan Bautista, by way of the Caleta de San Juan. Located within the Old San Juan City Wall – West Wall, San Juan City Gate pierces the curtain wall between San Agustín Bastion and Santa Catalina Bastion.<sup>145</sup> The curtain wall rises approximately 25 feet (7.6 meters) above ground surface in this area; the lower portion of scarp wall is constructed of limestone blocks and the upper portion of the scarp is constructed of *mampostería* (rubble masonry).

<sup>141</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 32.

<sup>142</sup> RGA, Inc., *Archaeological Assessment and Monitoring, San Agustín Bastion Drainage Project, San Juan National Historic Site, City of San Juan, Puerto Rico*. (San Juan: National Park Service, 2016), 3-23. A guardhouse just northeast of San Agustín Bastion was later converted in the nineteenth century for use as quarters for the Spanish Corps of Engineers.

<sup>143</sup> RGA, *Archaeological Assessment and Monitoring, San Agustín Bastion*, 3-32.

<sup>144</sup> Bearss, *HSR: Historical Data, 1898-1958*, 273-274.

<sup>145</sup> The portion of this curtain wall south of San Juan City Gate, including Santa Catalina Bastion, is outside the boundary of San Juan National Historic Site.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Masonry buttresses support the scarp walls on both the interior and exterior of the gate. San Juan City Gate is constructed of limestone masonry blocks coated in stucco.

Outside and just west of the San Juan City Gate, a low parapet wall blocks direct access from the water and a limestone sentry box is located at the north end of the wall. The west opening of the gate features a rectangular portal flanked by engaged square pilasters supporting a multi-part, ornamental cornice. The bronze-studded wood doors, 14 feet tall (4.3 meters) and 6 feet (1.8 meters) wide, are inscribed with the year 1749. Above the door, a marble plaque is inscribed with the message “*Benedictus qui venit in nomine Domini*” [Blessed is he that comes in the name of the Lord].

The east opening (interior) of the San Juan City Gate is roughly square, with a stone quoin surround, and a stone flat-arched lintel. The stone lintel is surmounted by a truncated, round arch framed by a cut-stone architrave, which was once part of a chapel that sat atop the gate.<sup>146</sup> The arch is infilled with *mampostería* and at its center is a commemorative tile mosaic of Saint John the Baptist. The east and west doorways of San Juan City Gate are connected via a long barrel vaulted passageway.

A city gate existed in some form by 1539, when La Fortaleza was completed on the bluffs above the gate.<sup>147</sup> The monumental structure today known as the San Juan City Gate was first built between 1634 and 1637 under Governor Enriquez de Sotomayor, during the same period that the city’s south and east walls were first constructed.<sup>148</sup> At that time, the gate represented the primary entry point for all visitors to the city. In the early eighteenth century, however, San Juan City Gate took on more of a ceremonial role. Because the harbor continued to be important, but the gate was not the most practical route into the city, passing through this threshold became an important part of religious and civil ceremonies which connected the wharf to the Catedral de San Juan Bautista, at the top of the steep Caleta de San Juan.<sup>149</sup> The more utilitarian traffic moved into the city via the San Justo Gate, which once pierced the walls on the south side of the city.

During the modernization project which took place throughout the fortifications in the late eighteenth century, San Juan City Gate took on its present appearance. Between 1787 and 1792, the original parapet atop the scarp was eliminated and an additional 9 feet (2.7 meters) were added to the height of the curtain wall, with a covered way (parapet) atop the wall.<sup>150</sup>

<sup>146</sup> Hector Santiago Cazull, *Historic Fortification Walls of Old San Juan. Historical Documentation, Existing Conditions, and Laboratory Technical Report*. 3 volumes. (San Juan: Puerto Rico DOT, 2003), 29.

<sup>147</sup> Panamerican, *Draft CLR: San Juan City Walls*, 14, 26.

<sup>148</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 15.

<sup>149</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 23.

<sup>150</sup> Santiago Cazull, *Historic Fortification Walls of Old San Juan*, 28; Berkowitz, *Fortifications: Vol. III - City Walls*, 25.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

In the nineteenth century, the Old San Juan City Wall – West Wall was subject to a number of repairs as portions of the curtain walls and bastions deteriorated or failed. Among the improvements made were rehabilitative repairs to San Juan City Gate completed in 1809. In the 1890s, in preparation for the Spanish-American War, the San Juan City Gate was garrisoned with 15 infantrymen and one piece of artillery.<sup>151</sup>

The United States Army undertook repairs to the scarp wall northwest of San Juan City Gate, the embrasures atop the parapet, and the seawall as part of the WPA 1938–1940 efforts to restore the historic fortifications in San Juan.<sup>152</sup> The seawall immediately west of the gate was also reconstructed and reinforced in 1956 as wave action had undercut the wall and threatened to destroy the sentry box.<sup>153</sup>

### *Statement of Integrity*

San Juan City Gate figures prominently in the history of the city as a portal through which the economic and religious nature of the Spanish settlement were connected. The earliest known construction at its present location took place in the early seventeenth century, and late eighteenth century alterations produced its present form. San Juan City Gate has a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. This resource retains its ability to convey its significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

Old San Juan City Wall – South Wall (HS 006069; PSN HS-207)

Contributing

*Total:* 1 Structure

The Old San Juan City Wall – South Wall, known simply as the South Wall, runs along the southern cliffs of San Juan Islet, adjacent to the city of Old San Juan. Two bastions within the South Wall are part of the San Juan National Historic Park, La Concepción Bastion and San José de las Palmas Bastion.<sup>154</sup> The South Wall is constructed of coursed, limestone masonry and earthen fill and rises between 40 and 60 feet (12–18 meters) above the Paseo de la Princesa, below.

The South Wall was constructed between 1634 and 1640, as part of Spain's defensive plans carried out principally by Governor Iñigo de la Mota Sarmiento after the Dutch attack of 1625.

<sup>151</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 29–33.

<sup>152</sup> Bearss, *HSR: Historical Data: 1898–1958*, 290.

<sup>153</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 59.

<sup>154</sup> The remaining two bastions of the city's south wall are Santa Catalina Bastion and San Justo Bastion, both of which are owned and managed by the Commonwealth of Puerto Rico. These are not within the authorized boundary of San Juan National Historic Site.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

The South Wall was designed to defend the inner harbor on its west end, the mangrove swamps of La Puntilla peninsula, and a portion of the eastern approach to the city at its east end.<sup>155</sup>

As with the other Old San Juan City Walls, the South Wall was also improved as part of the late-eighteenth-century modernization project. Plans drawn by engineer Juan Francisco Mestre in 1792 indicate that the level of the walls near the South Wall were likely raised between six and 10 feet during this period.<sup>156</sup> While the South Wall had sentry boxes, Mestre depicted the wall as thinner than other walls throughout the complex and without embrasures. In the nineteenth century, the South Wall was considered largely defensively obsolete.<sup>157</sup> The only gun installed along the South Wall in the nineteenth century was at the salient angle of La Concepcion Bastion, a project which required dismantling the sentry box at this location.

In the twentieth century, repair work was undertaken on the South Wall in association with the WPA historical preservation project throughout the San Juan fortifications. An assessment of the Old San Juan City Wall – South Wall in 1956 noted that the wall vegetation and weathering had deteriorated much of the stucco and mortar and had begun to erode the foundation base.<sup>158</sup> Today, twentieth century, non-Park structures and park spaces occupy much of the South Wall's terreplein while the Paseo de la Princesa and shops line the foot of the wall.

#### *Statement of Integrity*

The Old San Juan City Wall – South Wall took on much of its present appearance in the late eighteenth century. The integrity of the historical setting of the South Wall is somewhat compromised by the presence of twentieth century buildings and modern parks on the Wall's terreplein. Despite this, the South Wall retains a high degree of integrity of location, design, materials, workmanship, feeling, and association. While portions of the wall and its bastions have undergone some alterations associated with changing military technologies, the wall retains its ability to convey its significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

La Concepción Bastion (HS N/A)

Contributing

San José de las Palmas Bastion (HS N/A)

Contributing

*Total: 2 Structures*

La Concepción Bastion and San José de las Palmas Bastion (Las Palmas Bastion) are masonry bastions connected by a masonry curtain wall and form part of the Old San Juan City Wall –

<sup>155</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 17; Sepúlveda, *Puerto Rico Urbano: Vol. I*, 87.

<sup>156</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 25.

<sup>157</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 35.

<sup>158</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 61.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

South Wall. Both bastions are constructed of coursed, dressed limestone rubble coated in stucco and the terreplein of each bastion sits at street-level in the southern section of Old San Juan. La Concepción Bastion is situated at the west end of the South Wall and could mount attacks toward the harbor or landward targets. The battered scarp wall of La Concepción Bastion rises approximately 40 feet (12 meters) above the Paseo de la Princesa, below. The bastion's parapet walls have no surviving embrasures, however, the limestone base of a sentry box that once sat at the salient angle is extant. Much of La Concepción Bastion's terreplein is occupied by the twentieth-century Convent of Las Siervas de María nursing home, convent, hospital, and chapel.

Las Palmas Bastion is located immediately east of La Concepción Bastion and is separated from it by tall curtain wall that rises as much as 65 feet (19.8 meters) above the park below. An eighteenth-century sentry box is located at the salient angle of the bastion, accessed via a narrow passageway through the parapet wall. The cylindrical walls of the sentry box are pierced by two vertical windows and capped by a round cornice. A simple dome roof and a bulbous masonry finial crown the structure. The bastion's eastern and western flank walls are each pierced by two embrasures, and each opening is spanned by an iron grille. The sealed doorways to vaulted tunnels are located at the base of the scarp wall and the curtain wall to the west. The western portion of Las Palmas Bastion's terreplein is paved with terracotta tile and is currently used as a public pedestrian park; the eastern portion is occupied by the Chamber of Commerce.<sup>159</sup>

Construction of the easternmost portion of the south wall began in 1630. Las Palmas Bastion was constructed in the early 1630s while La Concepción Bastion was constructed circa 1640, following the construction of the curtain wall that stretches between them, which was completed in 1638.<sup>160</sup>

In the late eighteenth century, La Concepción and Las Palmas bastions were depicted as part of Juan Francisco Mestre's 1792 plan for reconstruction of the city's defenses although it is not clear how much additional construction took place at these bastions during the modernization effort. Primarily oriented southward toward the "harbor-front" of the city, La Concepción Bastion and Las Palmas Bastion were not central to the "defense in depth" system which stretched eastward from the walled city.<sup>161</sup>

While secondary, the South Wall remained manned with infantry in the early nineteenth century. La Concepción Bastion's position at the western end of the south wall allowed it to mount a defense against potential bayside attacks and some landward attacks. Las Palmas was manned by infantry and canons in the early nineteenth century, but by mid-century it sat unmanned. Las Palmas' strategic importance diminished, and it was not an actively used part of the defensive network by the 1890s.<sup>162</sup> In contrast, during the 1890s the Spanish mounted a gun emplacement

<sup>159</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 73–75.

<sup>160</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 17.

<sup>161</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 26.

<sup>162</sup> Berkowitz, *Fortifications: Vol. III - City Walls*, 35.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

at La Concepción Bastion, a rotating 15-centimeter Ordoñez rifle on a center-pintle carriage, to take advantage of the strategic position in advance of the Spanish-American War.

After the United States Army seized control of the San Juan fortifications in 1898, minimal repair work was undertaken at either Las Palmas Bastion or La Concepción Bastion in the early twentieth century. In the 1920s, Las Palmas Bastion's parapet wall was deteriorating and was subject to repointing in 1927. Between 1938 and 1940, La Concepción Bastion was cleaned, repointed, patched, and faced with concrete as part of a WPA preservation project.<sup>163</sup> In preparation for World War II (circa 1940), 12 air raid tunnels were dug into the base of the scarp wall at Las Palmas Bastion; these tunnels were infilled in 1956.<sup>164</sup> The NPS undertook repairs and restoration at Las Palmas Bastion and La Concepción Bastion between 1999 and 2001.

### *Statement of Integrity*

La Concepción Bastion and San Jose José de las Palmas Bastion retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While both structures have undergone some alterations associated with changing military technologies and shifting uses of their terreplein, both structures also retain their ability to convey their significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

## **Inventory Section 3: Castillo San Cristóbal**

23 Contributing Resources // 0 Noncontributing Resources

Map Inset E

Castillo San Cristóbal (HS N/A)

Contributing

*Total:* 1 Building

Castillo San Cristóbal (San Cristóbal) and the San Cristóbal Outworks form the core of the landward defenses of the fortified city of Old San Juan. Located atop San Cristóbal Hill at the northeastern corner of the city, the defenses of Castillo San Cristóbal are reinforced by the outworks that stretch eastward from the fort's moat as part of the San Cristóbal Outworks Historic Landscape (see Photos 2 and 21–35). San Cristóbal and its outworks, collectively occupying 27 acres, were built to defend the northern coast of San Juan Islet and the entrance to

<sup>163</sup> Bearss, *HSR: Historical Data: 1898–1958*, 263; Berkowitz, *Fortifications: Vol. III - City Walls*, 49, 58.

<sup>164</sup> Bearss, *HSR: Historical Data: 1898–1958*, 402, 408; Berkowitz, *Fortifications: Vol. III - City Walls*, 61.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

the city of San Juan overland from the east. The San Cristóbal Outworks Historic Landscape is discussed separately, below.

San Cristóbal is a large limestone masonry fort which is roughly triangular in plan: the North Bastion, Curtain Wall, and South Bastion form the east front; the North Casemates and portions of El Caballero and the North Bastion make up the seaward north front, and the Officer's Quarters and Main Gate of San Cristóbal form the western front (see Photos 21-23). El Caballero forms the uppermost battery of the fort, with embrasures pointed east, and a single gun emplacement oriented north (see Photo 24). Attacks mounted from El Caballero's terreplein, at approximately 150 feet (46 meters) above sea level, would have projected eastward over the massive terreplein of the North Bastion, Curtain Wall, and South Bastion, below. World War II-era observation posts, San Cristóbal Fire Control Station A and San Cristóbal Fire Control Station B, are built upon the north parapet wall at the level of El Caballero and the North Bastion terrepleins, respectively. Just east of the San Cristóbal east scarp wall, the San Cristóbal Moat separates the fort from its outworks (see Photo 25). Today, within this moat, the World War II Joint Command Center, camouflaged by a layer of turf, occupies the portion of the moat between San Carlos Ravelin and the Curtain Wall. The seaward defenses of the fort were mounted from the North Bastion, El Caballero, the North Casemates, and El Espigón.

The administrative core of Castillo San Cristóbal is the Plaza de Armas. This triangular plaza is located west of, and protected by, the bastions on the east and north sides of the fort (see Photos 26-28). Encircling the Plaza de Armas are the open arcades of the North Casemates and the Officer's Quarters, the three-story Troop's Quarters, the Chapel, and the Guardhouse at San Cristóbal. The plaza also served as a central hub for a network of gates, tunnels, staircases, and ramps which enabled the movement of troops, supplies, and information throughout the fort. The Plaza de Armas is accessed via exterior ramps which lead to the Main Gate of San Cristóbal, at the northwest corner of the plaza, and the South Gate, at the southernmost corner. Just inside the Main Gate, a ramp leads to the rooftop gun platforms of the North Casemates; a second ramp adjacent to the Troop's Quarters, connects the plaza with El Caballero. Several of the tunnels of San Cristóbal connect the Plaza de Armas with other spaces; the North Bastion (Tunnel 3), the South Bastion (Tunnel 4), and the San Cristóbal Moat (Tunnels 1 & 2) can all be reached via narrow barrel-vaulted tunnels that begin at the plaza. Tunnel 5 is a counter-mining gallery built under the fort and moat, with the only egress located outside the fort near Norzagaray Boulevard. Tunnel 6 once connected the San Cristóbal Moat and the Troop's Quarters on Norzagaray Boulevard.

Like the Tunnels of San Cristóbal, the Cisterns and Well Houses were also integral features of the fort which are not always readily obvious. These features enabled San Cristóbal to function as a self-sufficient entity, both because of the water supply that they provided, but also because of the architectural support the cisterns provided. The Officer's Quarters and the Plaza de Armas are supported atop the five broad barrel-vaulted cisterns that underpin the eastern side of the fort.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

To the east of Castillo San Cristóbal, the San Cristóbal Outworks form an interdependent group of defensive structures forming the “defense in depth” system that characterizes the landward defenses of the San Juan fortifications (see Photos 29–33). These outworks include the glacis which stretch eastward from the San Cristóbal Moat, as well as the North Covered Way, San Carlos Ravelin, La Trinidad Counterguard, the South Covered Way, Fort El Abanico, the Northeast and South Gates at El Abanico, El Abanico Guardhouse, La Princesa Battery, the Gun Emplacement at Battery La Princesa, and Santa Teresa Battery. To the west of San Cristóbal, the Old San Juan City Wall – North Wall stretches toward Castillo San Felipe del Morro. To the southeast, San Cristóbal once connected with the Old San City Wall – East Wall but today the district of Puerta de la Tierra occupies the eastern part of San Juan Islet.

Construction of the main fort at Castillo San Cristóbal began in 1634 as part of the wider project to build a wall to close off the narrow strip of land between San Juan Harbor and the Atlantic Ocean after the Dutch attack of 1625.<sup>165</sup> This initial construction phase included: the first iteration of El Caballero, the North Bastion, Curtain Wall, and South Bastion; a small demi-bastion and ramp west of El Caballero; a cistern; a dry moat; and El Espigón, jutting out into the Atlantic Ocean. Most of these features exist today in modified form, with the demi-bastion being the only feature wholly demolished. Soon after Castillo San Cristóbal’s construction, it fell into disrepair and by 1749, the east scarp wall of the North Bastion needed to be stabilized with buttresses.<sup>166</sup>

Castillo San Cristóbal was substantially rebuilt between 1766 and 1785 as part of the modernization project proposed by Field Marshall Alexander O’Reilly and military engineer Thomas O’Daly. Changes to the fort proceeded in three phases. The first phase was 1766–1769 when the original features of the existing fort were improved, built up higher, demolished, or enlarged. The bastion walls were heightened, the moat was deepened, the counter-mining tunnel system below the fort was constructed (Tunnels 1, 2, and 5), and part of San Carlos Ravelin was begun. The second phase of the modernization project occurred between 1769 and 1773 after a collapse of the Curtain Wall required a large-scale rebuilding campaign of the eastern defensive front.<sup>167</sup> The walls were tested for their stability, reinforced, and built up at least six feet (1.8 meters). El Caballero was extended to the north and south, additional tunnels (Tunnels 3 and 4) were constructed, as were the powder magazine vaults (east end of North Casemates). The Troop’s Quarters, Plaza de Armas, and three of the Cisterns were also constructed at this time. The outworks San Carlos Ravelin and La Trinidad Counterguard were substantially completed by 1773.<sup>168</sup> The third phase of construction, spanning 1773–1785, saw construction of many features of the San Cristóbal Outworks on the land just east of Castillo San Cristóbal and the

<sup>165</sup> Joan Berkowitz et al., *The Fortifications of San Juan National Historic Site: Historic Structures Report, Volume II: San Cristóbal*. (Atlanta: Southeast Regional Office, National Park Service, 1991), 259.

<sup>166</sup> Joan Berkowitz et al., *The Fortifications of San Juan National Historic Site: Historic Structures Report, Volume I: Summaries, Conditions, Recommendations*. (Atlanta: Southeast Regional Office, National Park Service, 1991), 23.

<sup>167</sup> Berkowitz, *Fortifications: Vol. I - Summaries*, 24; Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 262.

<sup>168</sup> Berkowitz, *Fortifications: Vol. I - Summaries*, 24.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

structures within the fort were completed. Within San Cristóbal, the last of the five cisterns was completed and the water system was able to support soldiers at the fort for five months. The Officer's Quarters, Main Ramp, and North Casemates were completed. The broad, open glacis to the east of San Cristóbal was leveled by 1778 and shortly thereafter Santa Teresa Battery and Fort El Abanico were begun in 1779. La Princesa Battery was also constructed during this period and all three outworks were completed by 1783.<sup>169</sup> Additional features such as gates, moats, covered ways, and *líneas de retirada* (fortified lines of retreat) were also completed by 1783, when Juan Francesco Mestre, the military engineer taking over after Thomas O'Daly's death in 1781, documented the completed works for Spain.

While the majority of the extant fortifications and support structures at San Juan National Historic Site were built during the modernization project of the late eighteenth century, additions and alterations took place in the nineteenth century. Structures such as the Guardhouse, the Chapel, and alterations to the Well Houses were made in the early part of the nineteenth century. In the mid-nineteenth century, officer's quarters and other residences were constructed outside, but adjacent to the fort, on what is today Norzagaray Boulevard (Quarters No. 1, No. 2, No. 3, and No. 4). In the 1890s, a host of changes were made in order to prepare the fort for the Spanish-American War. The installation of La Princesa Battery gun emplacements, the construction of a Guardhouse for La Princesa (known as El Abanico Guardhouse), the construction of gates to ease the movement of traffic through the outworks are some of the changes made to refit the fortification system for a maritime attack with artillery capable of long-range fire.<sup>170</sup> The first shots of the Spanish-American War were fired from San Cristóbal and several months later the United States Army came to occupy the fort after the end of the war.

The United States Army made numerous changes to the fortifications in order to modernize them in preparation for World War II. These changes included the addition of modern plumbing and electrical lights, and construction of a large military housing development on the glacis east of Castillo San Cristóbal in 1930 that was named the La Princessa Housing Area [sic].<sup>171</sup> In the early 1940s, gun emplacements were built along the northern edge of the outworks, fire control stations were built at the North Bastion and on El Caballero, and the World War II Joint Command Center was constructed within the San Cristóbal Moat.<sup>172</sup>

Following World War II, San Juan National Historic Site was established by President Harry S. Truman in 1949. It was not until 1961, however, the United States Army ceded control of the fort to the NPS and large-scale restoration and repair efforts were undertaken throughout the Castillo San Cristóbal and the San Cristóbal Outworks.

<sup>169</sup> Berkowitz, *Fortifications: Vol. I - Summaries*, 25.

<sup>170</sup> Berkowitz, *Fortifications: Vol. I - Summaries*, 25.

<sup>171</sup> "La Princesa" was misspelled "La Princessa" in official documents related to the housing area. Hereafter, the misspelling is corrected.

<sup>172</sup> Berkowitz, *Fortifications: Vol. I - Summaries*, 26.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

San Cristóbal's fortified masonry walls are composed primarily of ashlar limestone blocks and limestone rubble. The mortar binding the blocks together has a limestone (calcareous) base, with sand and clay components, although portions of the fortification were repointed with Portland cement in the early twentieth century. Other materials used as part of the masonry walls include brick, local wood (for doors, shutters, and window framing), and stucco to coat the exterior of the walls. Brick elements include the vaulting of casemates, piers, and the edges of walls and steps. Wood elements were originally constructed of local ausubo wood, but replacements were made with mahogany. Non-fortified walls, including interior walls and non-defensive surfaces, were of *mampostería* construction or brick.

### *Statement of Integrity*

Castillo San Cristóbal is perched on San Cristóbal Hill, rising more than 150 feet (46 meters) above sea level. Its setting provides unimpeded views of the Atlantic Ocean, the San Cristóbal Outworks and the landward approach to the islet, Old San Juan, and San Juan Harbor. These strategic views, along with continued association with nearby historic resources such as the National Register listed Old San Juan Historic District, reinforce the fort's high degree of integrity of location, setting, feeling, and association as a late eighteenth-century Spanish coastal fortification. Castillo San Cristóbal retains a high degree of integrity of association with the history of Spanish and United States military history.

The defining features of San Cristóbal represent a palimpsest of 350 years of military defensive architecture and multiple building episodes, repairs, and expansions. The extant features of San Cristóbal retain integrity of design, materials, and workmanship to various eras within the period of significance. By and large, however, the fort retains a high degree of integrity of design, materials, and workmanship from the late eighteenth century. Those elements of the fort that were added or altered by the United States in the twentieth century retain varied degrees of integrity, as will be discussed below. San Cristóbal on a whole retains a moderate degree of integrity of design, materials, workmanship, and feeling as a twentieth-century United States military reservation. San Cristóbal retains the ability to convey its significance with respect to Spanish and United States military and maritime history, the history of defensive architecture between the sixteenth and the twentieth centuries, the ethnic heritage of Puerto Rico, and social history as it relates to Puerto Rico's preservation movement in the twentieth century.

A description of each contributing resource within Castillo San Cristóbal, a discussion of known historical associations, previous investigations, and assessments of integrity is provided below. This discussion begins with the Main Gate and buildings surrounding the Plaza de Armas (p.73–82); followed by the bastions, batteries, and moat that comprise the eastern and northern fronts of the fort (p. 82–89); and the internal network of tunnels and surrounding residential buildings (Quarters No. 1–4) which helped to make the fort function (p. 89–97).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Main Gate at San Cristóbal (HS 001271; PSN HS-202)

Contributing

*Total:* 1 Structure

The Main Gate at San Cristóbal is historically the principal entrance to Castillo San Cristóbal (see Photo 23). The gate is situated at the northwest corner of the fort and comprises a barrel-vaulted masonry ramp, a masonry gate structure, and a ground level plaza area abutting the San Juan City Wall–North Wall. The masonry ramp ascends up from a paved plaza area. The ramp is supported by two elliptical brick barrel vaults, the western vault being infilled on its north face and the east vault being closed off by an iron grille gate. At the top of the ramp, a segmented arch gate provides entrance into the Plaza de Armas. The gate is flanked by single pilasters, supporting an entablature with carved scallop shells, surmounted by a broken pediment and pedestalled finials. The east face of the gate is adorned with a flat arch which splays outward to accommodate swinging gates. The gate and ramp are constructed of ashlar-laid stone and brick.

The Main Gate at San Cristóbal was first constructed at this location in 1783 during the modernization project of the late eighteenth century. An earlier gate had approached the complex from the north. The ramp of the Main Gate was originally a straight east-west ramp and the ornamentation on the gate was somewhat less ornate, likely a simple wooden lintel atop masonry posts capped by stone ball finials.<sup>173</sup> Some changes were undertaken in the 1820s, when the broken pediment was added, and repairs were undertaken. In the 1830s, a telegraph framework was mounted atop the gate, and a secondary picket gate, exterior to the main gate, was added to the ramp. In the mid-nineteenth century, the ramp was stuccoed and the west arch was infilled and a gate was added to the east arch. The plaza area north of the ramp may have been used for sheep pasture at this time, and was later used for farming, as a garden, and for parking. The United States Army resurfaced the ramp, installed gutters along its edges, planted trees in the plaza area, and removed the sentry box that had formerly stood at the base of the ramp. In the late 1930s, the configuration of the ramp was changed with improvements to Norzagaray Boulevard and the present-day curve of the ramp was established.<sup>174</sup>

### *Statement of Integrity*

The Main Gate at San Cristóbal was constructed during the modernization project of the late eighteenth century, altered in the nineteenth century, and reconfigured in the twentieth century. This resource retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While twentieth-century changes have altered the Spanish-era design of the ramp, these changes fall within the period of significance and represent the evolution of the structure to suit twentieth-century needs of the United States Army. The Main Gate at San Cristóbal retains its ability to convey its significance as it relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

<sup>173</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 7–10.

<sup>174</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 11–16.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

<u>North Casemates at San Cristóbal</u> (HS 091718; PSN HS-220)	Contributing
<u>Guardhouse at San Cristóbal</u> (HS 091719; PSN HS-221)	Contributing

*Total: 2 Buildings*

The North Casemates at San Cristóbal (North Casemates) and the Guardhouse at San Cristóbal (Guardhouse) are one-story masonry buildings which form the northern side of the Plaza de Armas at Castillo San Cristóbal (see Photo 28). The North Casemate building is partitioned into a series of nine one-story vaulted casemates, a pair of two-story vaulted powder magazines, an open arcade/loggia, and a ramp to the paved rooftop battery, above. The North Casemates are one-room deep, 550 feet (168 meters) long, and stand behind the battered north wall of San Cristóbal, which rises between 49 and 79 feet (15–24 meters) above ground level.

The Guardhouse is a one-story, trapezoidal, cement-stuccoed brick building at the northwest corner of the Plaza de Armas. Largely unadorned, the Guardhouse's flat roof has no cornice but is capped by a small parapet which overhangs slightly. An octagonal cistern tower with a round dome is situated at the northwest corner of the building. A concrete bench projects from the south wall, where the primary entrance to the Guardhouse is located. Access to the guardhouse is also had via doors on the east and north elevations. Today the Guardhouse is used as the visitor's center for those entering the fort via the Main Gate at San Cristóbal.

The north wall of the North Casemates is pierced by 14 windows, eight of which taper outward like embrasures and are enclosed by wood shutters and iron bars. The interior spaces of most of the casemates are connected by interior doorways within the partition walls. The rooftop battery of the North Casemates is accessed by a paved ramp and staircase at the west side of the casemates, just inside the Main Gate.<sup>175</sup> Two sets of arched tracks are inset into the floor of the rooftop battery to guide the wheeled carriages of artillery. The south elevation of each vaulted casemate has paired door and window openings with flat, raised surrounds; several windows have interior wood shutters (see Photo 28). Fronting on the south elevation is the wide loggia, or galleria, with six and a half arched bays. This open-air colonnade is capped by a cornice supporting a flat frieze and crown molding, atop which a low parapet wall rises.

The North Casemates were constructed in three stages. The two-story vaulted powder magazines were constructed first, between 1768 and 1771, when El Caballero was extended northward. The nine one-story vaulted casemates were constructed between 1774 and 1785, and were designed as bombproof chambers housing a latrine (westernmost), kitchen, and quarters.<sup>176</sup> The casemates were constructed along the ridge of a high cliff, resulting in the exterior north wall's height varying with the topography of the cliff. Unlike the Troop's Quarters, each vault had a doorway onto the plaza. The last major addition was in 1868 when the loggia was constructed in front of the building. In the 1890s, the Spanish emplaced two guns on the rooftop battery, reinforced the

<sup>175</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 33–34.

<sup>176</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 35.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

north parapet wall, and built earthen traverses between the gun emplacements (the latter were removed in the twentieth century). The United States Army electrified, rehabilitated, and adapted the North Casemates to its needs in the early twentieth century. A temporary frame structure was built atop the rooftop in 1943 to provide more space during World War II; this structure was removed by 1960. Today, the North Casemates are adapted for use as a gift shop, exhibit space, offices, and storage space.<sup>177</sup>

The Guardhouse was built in two phases. The south section was constructed between 1784 and 1839, when the building is first documented. The north section was added circa 1861.<sup>178</sup> The domed tower with the cupola in the northwest corner of the building was likely a cistern built in the 1860s.<sup>179</sup> Notably, while interior spaces were reconfigured in the nineteenth and twentieth centuries, the exterior appearance of the building is consistent with its 1861 configuration.<sup>180</sup>

### *Statement of Integrity*

The North Casemates and the Guardhouse at San Cristóbal retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some additions have altered the original design of these buildings, the changes fall within the period of significance and represent the evolution of the buildings to suit late nineteenth-century warfare. The North Casemates and the Guardhouse at San Cristóbal retain their ability to convey their significance as it relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

<u>Plaza de Armas, Castillo San Cristóbal</u> (HS N/A)	Contributing
<u>San Cristóbal Well Houses (Batch of 2)</u> (HS N/A; PSN HS-235)	Contributing
<u>Cisterns (Batch of 5)</u> (HS N/A)	Contributing

*Total: 3 Structures*

The Plaza de Armas, Castillo San Cristóbal is a large, triangular, paved parade ground bounded on the north by the North Casemates of San Cristóbal, on the east by El Caballero, on the west by the Officer's Quarters at Castillo San Cristóbal and on the south by the South Gate at San Cristóbal (see Photo 26–28). The plaza serves as the primary assembly place, central node for movement throughout the fort, and as an important drainage feature connecting to the cisterns which sit below. Despite the modern, scored concrete paving throughout the plaza, it retains the contours which allow it to effectively drain water from the surrounding buildings. This water

<sup>177</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 38–43, 50, 56–57

<sup>178</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 68.

<sup>179</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 77.

<sup>180</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 82.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

passes down to the cisterns or out of the fort through gates, scuppers, or the latrine at the northwest corner of the plaza.<sup>181</sup>

Castillo San Cristóbal's Cisterns (Batch of 5) (Cisterns) are located beneath the Plaza de Armas and the Officer's Quarters, Castillo San Cristóbal. The five chambers are all rectangular in plan and oriented east to west, with their west elevation partially above grade, beneath the Officer's Quarters. The Cisterns are constructed of ashlar stone, with brick, barrel vaulted ceilings and interconnect passageways in their partition walls. Designed as two Cisterns with interconnecting vaults, the north cistern originally had two vaults and the south had three. Some connections are now sealed and all but the central vault is drained. Devotional paintings, known as *murales votivos*, adorn the east wall of several of the vaults and were meant to bless the fort's water supply. Access can be had to the Cisterns via five doorways within the blind arcade on the structure's west elevation. A network of drains leads from the surrounding buildings to the Plaza de Armas and into the Cisterns. Shafts in two of the Cistern's ceilings lead to the Well Houses, above.<sup>182</sup>

The San Cristóbal Well Houses (Batch of 2) (Well Houses) are circular, open roofed structures on the west side of the Plaza de Armas which enclose two well heads connected to the Cisterns, below. Constructed of brick and rubble masonry, the Well Houses are 12 feet (3.6 meters) in diameter, with six-foot (1.8-meter) high walls which encircle octagonal, masonry well heads that stand three feet (0.9 meters) tall. Access to the well houses is via a wood framed door on the west façades, directly in front of the loggia of the Officer's Quarters. The well heads and the entirety of the north well house are modern reproductions.<sup>183</sup>

The sloped Plaza de Armas, Cisterns, and San Cristóbal Well Houses were part of the 1765 plans for a modernized water system at San Cristóbal. An earlier cistern was present under El Caballero but this structure was insufficient. The Cisterns were constructed by 1774 and by 1783 the Plaza de Armas was fully enclosed by the buildings that surround it today. The Well Houses were first depicted in 1783.<sup>184</sup>

The Plaza de Armas remained largely unmodified in the early nineteenth century, though the loggia/arcade were added to the Officer's Quarters and the North Casemates during this period and the Well Houses were converted into bathhouses, with a parterre garden between the two structures. The Plaza de Armas had a windmill with a water pump over the north well head in the late nineteenth century. During the first half of the twentieth century, the United States Army modified the south Well House, removed the windmill, and added a basketball court to the

<sup>181</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 118–120.

<sup>182</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 123.

<sup>183</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 125.

<sup>184</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 127–130.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

northeast portion of the Plaza de Armas. The NPS restored both Well Houses in the 1970s, rebuilding the north structure, and restored the loggia in front of the Officer's Quarters.<sup>185</sup>

### *Statement of Integrity*

The Plaza de Armas, the Cisterns, and Well Houses retain a high degree of integrity of location, design, setting, feeling, and association. While some changes to materials, such as the replacement of the north Well House and the repaving of the plaza, point to a lessened retention of integrity of materials and workmanship, these resources nonetheless retain their ability to convey their significance as relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

The Chapel (HS 091721; PSN HS-223)

Contributing

Total: 1 Building

The Chapel is a roughly triangular, one-story building on the east side of Castillo San Cristóbal's Plaza De Armas, nestled at the foot of the El Caballero ramp (see Photo 26). Also known as *La Capilla de Santa Bárbara*, Saint Barbara being the patron saint of artillerymen, the Chapel was constructed in the mid-nineteenth century and is the only documented chapel to have been built at Castillo San Cristóbal. The Chapel is constructed of native hardwood with a coating of cement stucco.<sup>186</sup> The building's flat, ceramic tile roof sits behind a low parapet wall; a projecting molded cornice surmounts the western portion of the structure. Three doors pierce the building, though the two doorways into the sanctuary (west room) are spanned by fixed balustrades. The eastern door provides access to the vestry (east room), from which an interior arched doorway leads into the sanctuary. The sanctuary, which was built sometime between 1839 and 1861, features a masonry altar, with ornate molding and a semi-circular concave niche where a statue of the Chapel's namesake is positioned. The altar is likely a replacement built after 1898, but retains the original niche and altar arrangement.<sup>187</sup>

### *Statement of Integrity*

Built in the mid-nineteenth century and used for multiple purposes in the late nineteenth and early twentieth centuries, the Chapel retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some changes have been made, these changes restored the building to its 1861 appearance. The Chapel retains its ability to convey its significance as relates to military and maritime history, defensive architecture, ethnic heritage, and social history.

<sup>185</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 133–136, 155.

<sup>186</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 144.

<sup>187</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 148, 153.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Officer's Quarters at Castillo San Cristóbal (*HS N/A*)

Contributing

*Total:* 1 Building

The Officer's Quarters at Castillo San Cristóbal is a two-story masonry building which, forms the imposing western façade of Castillo San Cristóbal and the west side of the Plaza de Armas (see Photos 23 and 27). Built between 1773 and 1783, the Officer's Quarters was constructed atop the Cisterns in order to house military and sanitary officers.<sup>188</sup> The Officer's Quarters comprises three sections: the main block (built 1773–1775), the north addition (built by 1783), and the south addition (built in the 1800s). The main (central) block is constructed of rubble masonry and brick masonry, standing one story on its east elevation and two stories on its west elevation, including the above-ground portion of the Cisterns as the building's lower story (see Photo 23). The main block of the Officer's Quarters is five bays wide, each bay accessed via a segmented arch doorway with a simple banded surround. A five-bay loggia fronts on the Plaza de Armas. The semi-elliptical arches of the loggia are capped by an ornate stone cornice and surmounted by a parapet wall. The barrel-vaulted casemates of the Officer's Quarters are rectangular in plan with interior passageways piercing the partition walls and a mixture of flooring materials: decorative clay tiles, red clay tiles, and concrete.

The west elevation is pierced by five segmental arch windows, with heavy bolection architraves, and reproduction wood shutters. As with the Troop's Quarters, the heavy entablature includes a plain frieze, projecting cornice, and solid parapet wall with recessed panels and plinths.<sup>189</sup> Also similar to the Troop's Quarters, the window bays are separated by simple, stylized rectangular pilasters in the Giant Order (pilasters span two stories). The capitals extend into and are incorporated as part of the overall building entablature.

The north addition is a narrow, single-story, two-room, masonry structure which adjoins the Officer's Quarters and the Main Gate of San Cristóbal. This structure served principally to enhance security at the Main Gate. The building's roof is a flat, wood joist and rafter roof on the east side and barrel-vaulted shape on the west side. The building's low brick parapet surmounts a simple projecting cornice. The north wall is pierced by two segmental arch doorways and an infilled window, the east wall is pierced by a rectangular doorway. An interior doorway once connected the rooms into the main block, but today the east door is sealed.<sup>190</sup> The south annex is a single-story, triangular building attached to the south side of the main block of the Officer's Quarters and the South Gate of San Cristóbal. With approximately 10 interior rooms, the building serves as administrative space, restrooms, and storage. The east elevation is pierced by five rectangular doors with plain, banded masonry surrounds and modern wood doors. A low parapet wall and flat red tile roof caps the south annex. The west elevation is built atop San

<sup>188</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 162–163.

<sup>189</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 162–170.

<sup>190</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 172–174.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Cristóbal's battered west wall. Several rectangular windows and two drainage scuppers pierce the west elevation of the south annex.

The main block of the Officer's Quarters at San Cristóbal was constructed between 1773 and 1775. While not part of the original plans presented in 1765, the Officer's Quarters were added above the Cisterns to accommodate lodging space for guards, sanitary officers, and personnel associated with water distribution. Plans of Castillo San Cristóbal from 1783 show the two-room north addition for the first time.<sup>191</sup> By 1835, two rooms of the south addition, immediately abutting the main block, had been constructed and were in use as latrines. The remainder of the south annex was constructed circa 1850. The five open bays of the main block's loggia were infilled circa 1839, creating additional interior space attached to the quarters.<sup>192</sup> In the mid-nineteenth century, the adjacent Well Houses were connected to the enclosed loggia of the Officer's Quarters. This arrangement continued until the late nineteenth century when the north well house was demolished and replaced by a windmill water pump. In the late 1930s, the United States undertook several projects to restore the south annex and the north addition. It was not until 1965 that the arched bays of the main block's loggia were re-opened, restoring it to its late eighteenth-century appearance.<sup>193</sup>

#### *Statement of Integrity*

The Officer's Quarters at San Cristóbal appears much as it did when it was constructed during the modernization project of the late eighteenth century. This resource retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While portions of the building are replacements and the much of the interior space has been redesigned for modern uses, the Officer's Quarters retains its ability to convey its significance in the areas of military history, maritime history, defensive architecture, ethnic heritage, and social history.

South Gate at San Cristóbal (HS 091723; PSN HS-225)

Contributing

*Total:* 1 Structure

The South Gate at San Cristóbal (South Gate) is a masonry gate located at the southern end of the Plaza de Armas at Castillo San Cristóbal (see Photo 27). Once the gateway to the lower batteries of the South Bastion and the Old San Juan City Wall – East Wall, this gate is engaged on its west side with an ornamental parapet wall south of the Officer's Quarters and on its east side with the corner of the Troop's Quarters. The South Gate comprises two nine-foot (2.7-meter) stone and brick posts, supporting a brick and wood lintel with a molded cornice. A set of

<sup>191</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 176.

<sup>192</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 181–182.

<sup>193</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 191.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

reproduction wood slat doors are set within the gate, and the original stone threshold spans the opening. Atop the stone and brick posts are bell-shaped limestone caps that likely once had finials similar to those at the Main Gate of San Cristóbal. To the west of the gate, the west parapet wall has a small ornamental gable with a scroll design.<sup>194</sup>

The South Gate at San Cristóbal was constructed between 1773 and 1783. The ramp leading to the lower batteries of the South Bastion was in place by 1773, although the gate and west parapet wall were first depicted 10 years later. By 1861, the level of the west parapet was raised resulting in infilling between the ornamental gable and the west post of the gate. In 1898, the gate opening was partially infilled to accommodate a modern wood door. In the 1960s, the NPS removed the infilling of the gate and the west parapet, and added the replacement wood gate.<sup>195</sup>

### *Statement of Integrity*

Constructed during the modernization project of the late eighteenth century, the South Gate at San Cristóbal retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While portions of the structure are replacements and the original finials are missing, the South Gate retains its ability to convey its significance as it relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

Troop's Quarters (HS 091724; PSN HS-226)

Contributing

*Total:* 1 Building

This two-story, Spanish colonial-period, Classical Revival-style building is situated on the east side of Plaza de Armas at Castillo San Cristóbal, and is bordered by a steep ramp leading to El Caballero to the north, the South Bastion to the east, and the South Gate of San Cristóbal to the south (see Photo 26). Rectangular in plan, the limestone masonry walls are battered, sloping up toward El Caballero, above. The building's main elevation faces west and is symmetrically arranged, with segmental-arch window and doorway openings, belt coursing, entablature, cornice, and a small arched belfry centered atop the parapet wall. The interior casemate rooms are interconnected and have vaulted ceilings constructed of brick. Interior flooring is largely modern poured concrete. The building was constructed in 1771 as part of remodeling and expansion project of San Cristóbal by O'Daly.<sup>196</sup>

The west (main) façade fenestration measures five bays wide, each separated by simple, stylized rectangular pilasters with recessed panels in the Giant Order (pilasters span two stories). The capitals extend into and are incorporated as part of the overall building entablature. The central

<sup>194</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 195–198.

<sup>195</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 199–203.

<sup>196</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 208.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

bay features the main entranceway with a heavy bolection surround, a large second floor window with similar bolection architrave, keystone, and carved ornamental cap. The remaining bays include pairs of segmental arched window openings on the first and second floors, with plain architraves and projecting keystones. The outermost window openings on the first floor were converted into the present-day north and south doorways.<sup>197</sup> The heavy entablature includes a plain frieze, projecting cornice, and solid parapet wall with recessed panels and plinths.<sup>198</sup>

The north wall abuts the steep ramp to El Caballero and consists of a massive, cement stucco surface battered toward the higher levels. An arched doorway leads from the ramp into a tunnel (Tunnel 4) which connects the ramp with the South Bastion. The south and east walls are also battered and support the El Caballero terreplein, avoe; the south wall rises from the grade of the South Gate and the east wall rises from the terreplein of the South Bastion. The east wall is pierced by five rectangular windows and four ventilation ducts, connected to the interior rooms, and a doorway from an interior stair at the north end of the building.

The interior of the building consists of five vaults, each divided into two stories. Each story's interconnected vaulted casement rooms are linked by paired doors. The central casemates house the main stairway, which is supported in part by the east wall of the building.<sup>199</sup> Two additional stairways include a masonry staircase from the northernmost room on the first floor, leading to the South Bastion and a circular spiral stair from the southernmost room on the second story, leading to the El Caballero terreplein.

The Troop's Quarters building was first conceived of in 1765, and was completed in 1771. Constructed of limestone masonry, with some brick elements, the building became a central feature of Thomas O'Daly's modernization project at Castillo San Cristóbal. The Troop's Quarters was built with the dual purpose of creating space for quartering soldiers and extending the terreplein of El Caballero southward to increase its reach into the surrounding area. The current name was not assigned until the early twentieth century. The design of the Troop's Quarters has not changed dramatically since its initial construction. Notable alterations include the addition in the early to mid-nineteenth century of a signal pole and flagpole base, at the south and north sides of the roof parapet, respectively. The bell housing, at the center of the parapet wall, was also added in the nineteenth century.<sup>200</sup> During the period that the United States Army exercised jurisdiction over the fortifications, portions of the Troop's Quarters were used for a kitchen, dining facilities, and quarters.<sup>201</sup> In the 1930s, the WPA undertook a number of changes to help restore the building. These included the installation of a kitchen and the conversion of

<sup>197</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 212.

<sup>198</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 209.

<sup>199</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 213.

<sup>200</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 222–224.

<sup>201</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 227.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

two first-story windows into doorways within the west façade.<sup>202</sup> The NPS rehabilitated the building in 1974 and the space was converted into museum facilities.

### *Statement of Integrity*

Constructed in the late eighteenth century by the Spanish to house troops and to provide an extension to the El Caballero terreplein, the Troop's Quarters has seen a number of rehabilitation and renovation projects. Despite minor changes to the exterior of the building, including the installation of two doors where window openings were originally built on the west elevation, the Troop's Quarters retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. The Troop's Quarters retains its ability to convey its significance as relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

El Caballero (HS N/A; PSN HS-222)

Contributing

*Total:* 1 Structure

El Caballero is an elongated masonry bastion extending from the north side of Castillo San Cristóbal (Atlantic Ocean) to the south side of the fort (see Photos 2 and 24). El Caballero caps the Troop's Quarters and a portion of the North Casemates, and encloses the east side of the Plaza de Armas. Its concrete-paved terreplein rises 148 feet above sea level and is the tallest component of San Cristóbal. Fourteen embrasures pierce its east parapet wall, oriented toward potential attackers approaching overland.<sup>203</sup> At the north end of the terreplein, a late-nineteenth century gun emplacement, with basalt tracks, iron rails and a central iron pintle, is oriented toward the Atlantic Ocean. A signal flag house, a 75-foot (22.8-meter) flagstaff, and San Cristóbal Fire Control Station A, are also situated at the north end of the bastion. Two octagonal cistern heads project above the terreplein and are associated with the original cistern system at San Cristóbal.<sup>204</sup> Access to the structure can be had via a wide ramped tunnel from the Plaza de Armas and from the Troop's Quarters via a circular staircase. The stair tower's shell-motif limestone dome projects one story above the terreplein.

El Caballero's walls are constructed of limestone block and rubble, with brick used for small-scale elements, coping, edging of embrasures, and firing steps. The entire structure was once covered in stucco to protect the masonry from the elements.<sup>205</sup>

<sup>202</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 232.

<sup>203</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 87.

<sup>204</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 90.

<sup>205</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 97.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

El Caballero's curved, central, curtain wall was likely constructed atop bedrock, at the crest of San Cristóbal Hill, between 1634 and 1644.<sup>206</sup> A vaulted cistern was located beneath its terreplein to supply the fort with water and provide structural stability to the terreplein above. In the late eighteenth century, El Caballero was updated as part of the modernization project undertaken throughout the works. The structure's terreplein was raised and extended to the north and south in order to "better dominate the outer works" to the east and the ramp leading from Plaza de Armas was redesigned.<sup>207</sup> The extensions of El Caballero rest upon a combination of earthen fill and the architectural support of buildings below. The north addition was constructed by March of 1771 with a portion atop the two-story vaulted powder magazines of the North Casemates, and the south addition was completed by 1773, and sits atop the Troop's Quarters.<sup>208</sup>

In the first half of the nineteenth century, El Caballero was subject to repairs and saw the addition of signal poles, the signal flag house, and the extant gun emplacement. In 1897, a howitzer gun and small powder magazine were constructed within the east parapet; these structures were demolished in 1938 and the two embrasures at this location were rebuilt.<sup>209</sup> In 1942, the United States Army built the San Cristóbal Fire Control Station A, located at the northeast corner of El Caballero.

#### *Statement of Integrity*

First built in the seventeenth century, taking on its current form during the modernization project of the late eighteenth century, and updated in the nineteenth century, El Caballero reflects the long history of military defensive architecture at San Cristóbal. El Caballero retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some recent additions, such as the construction of a San Cristóbal Fire Control Station A, have altered the Spanish-era design of the fortification, these changes fall within the period of significance and represent the evolution of the structure to suit twentieth-century warfare. El Caballero retains its ability to convey its significance as it relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

San Cristóbal Fire Control Station A (HS N/A)

Contributing

*Total:* 1 Structure

San Cristóbal Fire Control Station A (San Cristóbal Manhole A) is a two-story, World War II-era observation post built atop the circa 1770 parapet wall at the northeast corner of El Caballero (see Photo 21). Constructed in 1942 of reinforced concrete, San Cristóbal Manhole A was

<sup>206</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 90, 93.

<sup>207</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 97.

<sup>208</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 97–99.

<sup>209</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 100–103, 108.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

intended to blend into the monolithic appearance of the north scarp wall of Castillo San Cristóbal. Below San Cristóbal Manhole A's flat roof, two horizontal observation slits face north toward the Atlantic Ocean and are protected by heavy concrete visors. Access to the structure is had from a doorway on the terreplein of El Caballero and an interior ladder allows movement between the two stories of the post. The upper story sits approximately 160 feet (49 meters) above sea level, while the lower story is approximately 155 feet (47 meters) above sea level.<sup>210</sup>

### *Statement of Integrity*

Constructed as an observation post at the highest point of Castillo San Cristóbal, San Cristóbal Fire Control Station A appears much as it did in 1942. San Cristóbal Manhole A retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association and retains its ability to convey its significance as it relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

North Bastion, Curtain Wall, South Bastion (HS 091725)

Contributing

*Total:* 1 Structure

The North Bastion, Curtain Wall, and South Bastion form the eastern defensive front of Castillo San Cristóbal (see Photos 2, 21, and 29). An irregularly-shaped bastion trace, this resource is oriented southwest to northeast, beginning at Luis Muñoz Rivera Avenue and terminating at the cliffs alongside the Atlantic Ocean. The North Bastion, Curtain Wall, and South Bastion are constructed primarily of rough-cut coursed ashlar limestone, with dressed stone for corners, bastion shoulders, sentry boxes, and embrasures.<sup>211</sup> The exterior walls are battered, with a projecting base. The embrasures of the North Bastion, Curtain Wall, and South Bastion vary in configuration, materials, and construction reflecting multiple building episodes but all are of rubble fill construction, trimmed with ashlar and brick and covered with a coat of stucco.

The North Bastion is attached to El Caballero along the bastion's north battery and to the Curtain Wall at the south flanking wall. The North Bastion's parapet walls are pierced by 18 embrasures of varying sizes and a passageway to an eighteenth-century sentry box is at its salient angle. The sentry box is constructed of brick, sitting on a limestone base. Along the north battery the remnants of the "barbette tier" is present, comprising a six-foot (1.8-meter) tall retaining wall, two gun emplacements, and a niche to accommodate a shaft to the magazine below. The earthen layer that the retaining wall held back, and which shielded the gun emplacements, is not extant. An embrasure in the bastion's south flank wall has been converted into a doorway, the terminus of Tunnel 1. San Cristóbal Fire Control Station B, a reinforced concrete observation post,

<sup>210</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-7.

<sup>211</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 247.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

surmounts the north battery wall and a poured concrete passageway leads southward from the manhole through what was once the earthen layer of the barbette tier. The North Bastion is accessed from the Plaza de Armas via Tunnel 3 and from the terreplein of the Curtain Wall.<sup>212</sup>

The Curtain Wall, situated between the North Bastion and the South Bastion, comprises a battered masonry wall which rises above the floor of the San Cristóbal Moat and a broad, paved, terreplein stretching between the moat and El Caballero. The Curtain Wall's parapet is pierced by eight embrasures and lined by stone and brick banquettes. Partially obscured from view by the World War II Joint Command Center, the Curtain Wall acts as a retaining wall for earthen fill. At its base, the Curtain Wall is pierced by the postern of Tunnel 3 and centrally located within the exterior wall, above the level of the World War II Joint Command Center, is the narrow, rectangular slit window of the gallery branch of Tunnel 1. The Curtain Wall is accessed via the neighboring terrepleins of the South and North Bastions. The slopes of these contiguous terrepleins are designed to facilitate drainage to the Cisterns, under the Plaza de Armas.<sup>213</sup>

The South Bastion, situated between the Curtain Wall and what was once the Old San Juan City Wall – East Wall, comprises a stepped, battered, masonry wall which rises above the level of the San Cristóbal Moat, and a narrow terreplein between the moat and El Caballero. The South Bastion's upper-level parapet wall is pierced by 10 embrasures, while the parapets of the lower batteries have an additional three. The two lower batteries are stepped downward, with the southernmost battery having been truncated in 1897 with the demolition of the Old San Juan City Wall – East Wall. Ramps connect the lower batteries to each other and to the South Gate of San Cristóbal.

Elements of the North Bastion, Curtain Wall, and South Bastion complex were constructed as early as 1634 when Castillo San Cristóbal was first constructed.<sup>214</sup> The bastion and wall complex took on much of its present appearance between 1765 and 1769 when the modernization project at San Cristóbal called for the thickening of walls, expanding the North Bastion eastward, and the raising the terreplein 8 to 9 feet (2.4–2.7 meters).<sup>215</sup> Inadequate design features of the original bastion trace led to a collapse of a portion of the Curtain Wall shortly thereafter, but the structure was soon reconstructed by 1770. Nineteenth-century changes include the infilling of some embrasures by mid-century and the 1896 construction of the barbette tier at the North Bastion and three earth traverses along the South Bastion's parapet wall. In the early twentieth century, some repair of damage sustained during the Spanish-American War was undertaken.<sup>216</sup> The use of the bastion complex shifted during World War II, resulting in the construction of the World War II Joint Command Center, the installation of the San Cristóbal Fire Control Station B, the

<sup>212</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 251–252.

<sup>213</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 252–255.

<sup>214</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 258–260.

<sup>215</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 262.

<sup>216</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 270.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

removal of the earthen traverses, and the use of the terreplein as a parking area.<sup>217</sup> During the 1960s, the NPS removed the earthen fill from embrasures and from behind the retaining wall of the barbette tier. A modern stair was constructed from a doorway at the east end of Tunnel 1, within the southern flank of the North Bastion, onto the turf room of the command center.

### *Statement of Integrity*

Taking on much of its current form in of the late eighteenth century, the North Bastion, Curtain Wall, and South Bastion complex retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some recent additions, such as installation of late-nineteenth-century barbette tier, the construction of San Cristóbal Fire Control Station B, and the construction of the World War II Joint Command Center, have altered the Spanish-era design of the fortification, these changes fall within the period of significance and represent the evolution of the structure to suit nineteenth- and twentieth-century warfare. The North Bastion, Curtain Wall, and South Bastion complex retains its ability to convey its significance in the areas of military history, maritime history, defensive architecture, ethnic heritage, and social history.

San Cristóbal Fire Control Station B (HS N/A)

Contributing

*Total:* 1 Structure

San Cristóbal Fire Control Station B (Manhole B) is a two-story, World War II-era observation post built atop the circa-1770 north parapet wall of the North Bastion (see Photo 22). Like Manhole A, Manhole B was constructed in 1942 of reinforced concrete and was intended to blend into the monolithic appearance of the north scarp wall of Castillo San Cristóbal. Below Manhole B's flat roof, two horizontal observation slits face north toward the Atlantic Ocean and are protected by heavy concrete visors. Access to Manhole B is had from the North Bastion terreplein via a 30-foot long (9-meter) concrete vaulted passageway. An interior ladder leads from the upper tier to the tower tier. The upper story sits approximately 132 feet (40 meters) above sea level, while the lower story is approximately 124 feet (38 meters) above sea level.<sup>218</sup>

### *Statement of Integrity*

Constructed as an observation post in 1942, San Cristóbal Fire Control Station B retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association and retains its ability to convey its significance as it relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

<sup>217</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 274.

<sup>218</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-8.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

San Cristóbal Moat (*HS 091712; HS 091733, PSN HS-214*)

Contributing

World War II Joint Command Center (*HS 091726*)

Contributing

*Total:* 1 Structure, 1 Building

The San Cristóbal Moat is a deep, wide, dry moat which separates the eastern scarp wall of Castillo San Cristóbal from the San Cristóbal Outworks which stretch eastward for more than 1,000 feet (305 meters) (see Photos 21, 25 and 30). The San Cristóbal Moat is 90–100 feet (27–30 meters) wide and runs between the Atlantic Ocean and Luis Muñoz Rivera Avenue. On the west side of the moat is San Cristóbal's battered scarp wall, rising moat between 30 and 75 feet (9–23 meters) above the floor of the moat. On the east side, the eighteenth-century outworks known as San Carlos Ravelin and La Trinidad Counterguard are situated within the moat. The west wall of the North Covered Way forms the counterscarp wall at the moat's northern end. The circa 1942 World War II Joint Command Center occupies the full width of the moat between the Curtain Wall and San Carlos Ravelin. The moat today also serves as a parking lot for San Juan National Historic Site.

The San Cristóbal Moat may have first been excavated in association with the construction of the North Bastion, Curtain Wall, and South Bastion in the 1630s. Seventeenth-century maps, such as the Osorio 1678 depiction of the fortifications of San Juan, show a dry moat with a counterscarp wall that was in place at that time (see Figure 6). In the late eighteenth century, the moat floor was redesigned to include an open-air "covered" passageway between San Cristóbal and its outworks, known as a caponier.<sup>219</sup> Completed by 1769, this passageway was I-shaped in plan (wider at either end) and was protected by earthen walls on either side (see Figure 9). At the caponier's east end was the postern gate of Tunnel 2 and at its west end were the stairs of San Carlos Ravelin. The caponier and ravelin stairs were demolished as part of the construction of the World War II Joint Command Center in 1942.

The World War II Joint Command Center is a bombproof, gas-proof, reinforced concrete bunker situated within the San Cristóbal Moat. This building served as the command center for both the Army and Navy San Juan Coastal Defense forces during World War II. The interior layout of the building centers on a long narrow hallway with offices branching off; similar to the layout of World War II Radio Control Center (HDCEP-HECP Building) at Castillo San Felipe del Morro. The main entrance is located on the building's south face, where concrete steps and ramps lead up from the moat floor to the modern entryway. The postern gate of Tunnel 2 provides access to the visitor's center and the east end of Tunnel 1 terminates with a ramp and stair onto the turf roof of the building. The turf roof of the World War II Joint Command Center was designed to conceal the bunker below. Today the building serves as a visitor's center, park offices, and park archives.<sup>220</sup>

<sup>219</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 343.

<sup>220</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-8 – 7-9.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

---

Name of Property

### *Statement of Integrity*

Despite some changes, San Cristóbal Moat and the World War II Joint Command Center retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While the addition of the World War II Joint Command Center altered the San Cristóbal Moat, these changes fall within the period of significance and represent the evolution of the structure to suit mid-twentieth-century warfare. San Cristóbal Moat and the World War II Joint Command Center retain their ability to convey their significance as relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

El Espigón (HS 91717; PSN HS-219)

Contributing

*Total:* 1 Structure

El Espigón (“the point”) is a triangular, masonry, demi-bastion and observation post which juts out toward the Atlantic Ocean, below El Caballero (see Photo 22). El Espigón is built on a rocky outcrop and represents the northernmost and lowest level of the San Cristóbal fortifications. A sentry box, nicknamed the “Devil’s Sentry Box” or the “Haunted Sentry Box,” is positioned at its salient angle and has three slit windows that look out on the ocean. The sentry box is supported by a carved limestone base with a corbelled design, has cylindrical walls constructed of brick, and is capped by a simple, semi-circular dome. This sentry box, along with the sentry box at El Cañuelo, represent the last surviving seventeenth-century sentry boxes in the Park. El Espigón’s east parapet wall extends from the salient angle southward to the north scarp wall of the North Bastion. A narrow concrete maintenance platform surrounds the post’s salient angle to prevent erosion from wave action. The terreplein of the outpost is soil, as is the interior flooring of the sentry box.<sup>221</sup>

Built during the first phase of construction at Castillo San Cristóbal, El Espigón was likely built sometime between 1634 and 1644. The long extension of the east parapet wall to the retaining wall below the North Bastion was made by 1773.<sup>222</sup> During the nineteenth century, El Espigón began to deteriorate until in 1880, the Spanish abandoned it formally. In the twentieth century, the United States Army and the NPS undertook various restoration projects, including foundation and window repairs in 1939 as part of the WPA historic preservation project. In the 1960s, the NPS installed the concrete maintenance platform.<sup>223</sup> In 2004, El Espigón was fully restored to its seventeenth-century appearance by the NPS conservation team.

---

<sup>221</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 280–283.

<sup>222</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 286.

<sup>223</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 286–294.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

### *Statement of Integrity*

While subject to extensive reconstruction in the twentieth century, El Espigón appears much as it did in the mid-seventeenth century and retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. El Espigón retains its ability to convey its significance in the areas of military history, maritime history, defensive architecture, ethnic heritage, and social history.

Tunnels of San Cristóbal (Batch) (HS 091742; PSN HS-243)

Contributing

*Total:* 1 Structure

The Tunnels of San Cristóbal comprise six discrete masonry tunnels which connect discrete areas of the fort and the San Cristóbal Outworks or which were designed as defensive counter-mining galleries. The Tunnels have vaulted ceilings and are tall and wide enough to allow at least a single file of soldiers to move through them readily. In the early twentieth century, most of the tunnels were altered with the addition of electrical wiring and were subject to repair made by the United States Army.

Tunnel 1 is the most northerly and longest tunnel, connecting the Plaza de Armas with the North Bastion and the San Cristóbal Moat. This tunnel slopes downward from its entrance at the northeast corner of the Plaza de Armas, toward its terminus at a rectangular barrel-vaulted casemate beneath the North Bastion. The casemate opens out onto the roof of the World War II Joint Command Center via a door through a former embrasure. A shorter spur, known as the “the gallery” or “the dungeon,” branches off the main tunnel at its midpoint and terminates at a small window overlooking the San Cristóbal Moat. Historical graffiti in the gallery includes images of eighteenth-century ships. Interior features of the main tunnel include mining slots, niches for soldiers, electrical lights, and ventilations shafts.<sup>224</sup>

The earliest components of Tunnel 1 include a portion of its south wall, which was constructed between 1634 and 1644 as the north wall of Castillo San Cristóbal, and the gallery spur, which also dates to the early to mid-seventeenth century.<sup>225</sup> The late-eighteenth-century modernization project involved the enclosure of Tunnel 1 and the construction of the vaulted casemate under the North Bastion with an embrasure facing southwest into the San Cristóbal Moat, protecting the Curtain Wall. No major changes to Tunnel 1 are known to have taken place in the nineteenth century. In the twentieth century, the United States Army restored the tunnel and refitted the casemate space for modern radio equipment.<sup>226</sup> In 1942, the embrasure opening was enlarged into a doorway to provide access to the roof of the World War II Joint Command Center.

<sup>224</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 492–510.

<sup>225</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 504–507.

<sup>226</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 529.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Tunnel 2 runs east to west under El Caballero and the Curtain Wall, connecting the Plaza de Armas with the lower level of the World War II Joint Command Center. Tunnel 2's segmented arch entryway, enframed by flat pilasters and a flat arch, is located beneath the El Caballero ramp on the east side of the Plaza de Armas (see Photo 26). The tunnel slopes downward from west to east and was carved out of the rock beneath the fort, reinforced with brick and stone vaulting, and has several soldier and powder niches. Built between 1765 and 1771 as the principal entrance to the San Cristóbal Outworks from the main fort, the postern of Tunnel 2 once let out into the San Cristóbal Moat.<sup>227</sup> Within the San Cristóbal Moat, a caponier connected the postern with San Carlos Ravelin. The tunnel could also be counter-mined if needed. Few changes were made to Tunnel 2 since its excavation, though electrical lighting was added in the twentieth century and the postern was significantly changed in 1942 with the construction of the World War II Joint Command Center. Solid steel doors were installed at that time and replaced by the NPS in the 1970s by iron grille doors.<sup>228</sup>

Tunnel 3 is a ramped underground passage which is sloped upward from west to east, connecting the Plaza de Armas with the terreplein of the North Bastion. Tunnel 3's west entryway is located immediately south of the entry to Tunnel 1, under El Caballero, at the northeast corner of the Plaza de Armas (see Photo 26). At 13 feet (4 meters) wide, Tunnel 3 is the widest tunnel at Castillo San Cristóbal and was used to move large artillery, as well as supplies and troops, between the Plaza de Armas and the North Bastion, Curtain Wall, and South Bastion complex. Tunnel 3 is constructed of rubble stone and cut limestone with brick vaulting. The tunnel's west (plaza) doorway is arched with a flat, banded architrave with a projecting keystone and banded course at the springline, similar to the west entrance to Tunnel 1. The east (bastion) doorway is enframed by cut limestone blocks, with interior stone jambs and wall pockets for inner doors. Where the tunnel opens onto the North Bastion terreplein, two short, stone retaining walls were once used to continue the slope of the ramp eastward. Like Tunnel 1, a portion of Tunnel 3's south wall was originally part of Castillo San Cristóbal's north exterior wall (built 1634–1644). The north wall and vaulting were constructed in 1769 when El Caballero was extended overhead and the North Bastion's terreplein was raised.<sup>229</sup> In the nineteenth and twentieth century, the tunnel's configuration remained unchanged though some repairs took place.<sup>230</sup>

Tunnel 4 is also a ramped underground passage, which runs west to east, connecting the Plaza de Armas with the North Bastion, Curtain Wall, and South Bastion complex. The entrance to this short tunnel is at the foot of El Caballero's ramp and slopes upward in an elongated "S" shape toward the South Bastion. Tunnel 4 was designed to provide quick access for troops between the Plaza de Armas and the South Bastion. The west entrance to the tunnel is an unadorned arch, stuccoed with Portland cement. The east entrance is squared and enframed by cut limestone

<sup>227</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 495, 506, 511.

<sup>228</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 533.

<sup>229</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 496, 498, 506.

<sup>230</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 533.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

blocks. Tunnel 4 is constructed of limestone rubble and blocks with a brick vaulted ceiling. Built between 1770 and 1771, it was likely constructed in coordination with the El Caballero Ramp and the Troop's Quarters. The tunnel's west end passes through the seventeenth-century portion of El Caballero. Few changes have been made to the tunnel since its late-eighteenth-century construction; in the nineteenth century a curvilinear wall was built on the South Bastion terreplein to shield the entrance to the tunnel, but this was removed after World War II.<sup>231</sup>

Tunnel 5 is a counter-mining tunnel constructed beneath the eastern portion of Castillo San Cristóbal, at an elevation lower than the San Cristóbal Moat. Tunnel 5 runs in a northeasterly direction from a doorway below in the low battery of the South Bastion; the main tunnel extends to a dead end at the north wall of the North Bastion, though a small branch slopes upwards to the east, ending in a set of stairs, with a listening well (to Tunnel 2) and a sealed window. As a counter-mining tunnel, it was not meant to move troops between two areas of the fort but was part of the defensive infrastructure of the fort. Tunnel 5's entrance is a flat stone portal with a brick lintel and steel plate doors opening onto the low battery of the South Bastion. Today the northernmost section of the main tunnel is inaccessible due to a collapse in the twentieth century.<sup>232</sup> Tunnel 5 was constructed between 1766 and 1769. While little change occurred during the nineteenth century, in the twentieth century the United States Army removed debris, installed electric lights, and relined portions of the tunnel with machine-made brick.<sup>233</sup>

Tunnel 6 is an underground passage which runs in a northwest to southeast direction from an ornate doorway in the shared courtyard between Quarters No. 3 and Quarters No. 4 to a postern on Norzagaray Boulevard. Tunnel 6 was constructed to move troops in and out of the San Cristóbal Moat covertly.<sup>234</sup> The tunnel is barrel vaulted, with stone walls and brick vaulting, all of which is covered in a cement stucco. The northerly entrance to the tunnel is an ornate, triple-finial doorway cut into the rear glacis on the west side of Castillo San Cristóbal. The southerly entrance is set in a reinforced concrete retaining wall, with a metal door. Tunnel 6 was constructed by 1773 and was described as a passageway created to avoid the frequent opening of Santiago Gate, the eastern entrance into the city of Old San Juan. Notably, when it was constructed, the extant Troop's Quarters and munitions buildings along Norzagaray Boulevard were not yet built. Quarters No. 1, No. 2, No. 3, and No. 4 were all constructed in the nineteenth century. Few additional changes were made in the nineteenth century apart from the demolition the original postern doorway, as part of the demolition of Santiago Gate in the late 1890s. After the demolition, Tunnel 6 no longer connected the San Cristóbal Moat with the interior of Old San Juan. In the twentieth century, some repairs were likely done during the 1938–1939 refurbishment of the San Juan fortifications.<sup>235</sup>

<sup>231</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 498–500, 517, 534.

<sup>232</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 500–501.

<sup>233</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 517–521, 534.

<sup>234</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 501,

<sup>235</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 521, 528, 535.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

### *Statement of Integrity*

Built during the modernization project of the late eighteenth century with some changes in the twentieth century, the Tunnels of San Cristóbal (Batch) retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some changes have taken place, including refurbishment with modern materials in some cases and the collapse of a portion of Tunnel 5, these changes do not affect the Tunnels' ability to convey their significance as relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

Quarters Building No. 1 (HS 006070; PSN HS-208)

Contributing

*Total:* 1 Building

Quarters Building No. 1 (also known as Quarters No. 208) is primarily a one-story, stuccoed masonry building situated on Norzagaray Boulevard between the main ramp to Castillo San Cristóbal to the north and the former artillery pavilions (Quarters Buildings No. 2, No. 3, and No. 4) to the south (see Photo 34).<sup>236</sup> Roughly rectangular in plan, the building measures three bays wide and five bays long. The westernmost two-room block constitutes the original footprint. The building has a flat roof and an ornately decorated primary (west) elevation utilizing Iberian revival architectural styles in “an eclectic mix of Moorish and Neoclassical decorative elements.”<sup>237</sup>

The primary (west) elevation is divided into three bays, with a central entry and full-length flanking windows, each featuring a Moorish arch fitted with elliptically divided transom lights, and double-leaf louvered and paneled wood doors and shutters. The northwest and southwest corners of the building are adorned with Classically-inspired corner pilasters capped with three corner quoins. A wide projecting cornice extends across the west elevation and wraps around the north and south elevations of the building. A crenelated parapet, with ziggurat-shaped crenels, sits atop the cornice. At the center of the parapet, an acroterion (sculpted ornament) in an ogee shape caps the structure. The window and door architraves include molded arch surrounds supported on square pilasters capped with Doric capitals. Balustrades with urn-shaped balusters span the width of the north and south openings.

The building was constructed in three phases, with the western portion constructed before 1861, the rear section constructed between 1880 and 1899, and a polygonal addition and second story added to the eastern end of the building by 1973. Notably, the eastern addition sits 40 feet (12

<sup>236</sup> Panamerican Consultants, Inc. and Wiss, Janney, Elstner Associates, Inc., *Historic Structure Report: Quarters 208, 100% Draft for Signature- December 2019*. (Atlanta: National Park Service Cultural Resources, Partnerships and Science Division, 2019), 33.

<sup>237</sup> Panamerican, *HSR: Quarters 208*, 33.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

meters) back from the main (west) façade of the building and is not visible from the street. The building likely functioned as a private residence for most of its history; its use as a military barracks by either the Spanish colonial government or the United States has not been confirmed to date. The building was sold to the NPS in 1968. Around 1997, a second-story steel and wood catwalk was attached to its east side, and a door was added to the east elevation at this level. The building is today used for Park offices.<sup>238</sup>

### *Statement of Integrity*

Quarters No. 1 was constructed in the mid-nineteenth century, likely as a private residence. The building's eastern end was altered with extensions and additions in the nineteenth and the twentieth century. Despite these additions, Quarters No. 1 includes an intact main façade and possesses integrity of location, design, setting, material, workmanship, feeling, and association. The building retains the ability to convey its significance as a good example of eclectic Spanish Colonial architecture from the nineteenth century. Further research may indicate that this structure was also associated with the history of Castillo San Cristóbal as military quarters.

Quarters Building No. 2 (HS 006072; PSN HS-209)

Contributing

*Total:* 1 Building

Quarters Building No. 2 (also known as Quarters No. 209) is a two-story, stuccoed masonry building designed in a Spanish Colonial Revival style and located on Norzagaray Boulevard, which slopes southward along the building's west elevation (see Photo 34). Roughly rectangular plan, the building is four bays wide along its west side and eight bays deep along its south side. The building shares alleys with Quarters Building No. 1 (north) and Quarters Building No. 3 (south) and stands on a level plateau cut out of the slope west of Castillo San Cristóbal. Quarters Building No. 2 has a flat concrete roof behind a low parapet wall.

The primary (west) elevation is symmetrical, with undecorated projecting corners, belt course, and four openings on each story. A balcony supported by ausubo wood beams projects from the second story and features turned wood posts, a wood balustrade, and a hipped roof clad in terracotta tile. The second floor full-length windows feature raised molded surrounds which rounded upper corners; one of the openings has louvered wood double doors. The rectangular first floor windows are full-length, and have raised flat band surrounds and louvered wood double doors. Wood balustrades span the width of the first floor window openings. Similar full-length window arrangements are open through the north and south sides of the building.

A stuccoed masonry and wood gate opening from the street onto the building's north side provides access to an alley which it shares with Quarters Building No. 1. A stuccoed masonry

<sup>238</sup> Panamerican, HSR: *Quarters 208*, 9, 26, 34.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

gate with masonry piers and pyramidal caps provides entry to the alley on the south side of the building, shared with Quarters Building No. 3.

Quarters Buildings No. 2 was constructed circa 1857 and was part of a series of three military barracks (Quarters Buildings No. 2, No. 3, and No. 4) along Norzagaray Boulevard known to be associated with Castillo San Cristóbal. The building was subject to a series of changes in the 1880s, including the addition of an entrance portico at the northeast corner of the building. During the nineteenth century, it served as a military barracks. In 1938, alterations were made to the building, including rehabilitation as part of the WPA-era improvements to the San Juan fortifications. During much of the twentieth century, the building was used as a single-family dwelling. To enable handicap access to the second floor of the building, a second floor entrance was added on the north elevation in 1997, accessed via a steel and wood ramp.<sup>239</sup> Today the building is used as park offices.

#### *Statement of Integrity*

Quarters Building No. 2 was constructed in the mid-nineteenth century as a military barracks. The building's northeastern portico was added in the late nineteenth century. These additions have obtained significance in their own right as part of the evolution of the building and do not detract from the overall significance or integrity of the resource. Quarters Building No. 2 retains its integrity of location, setting, design, material, workmanship, feeling, and association and continues to convey its significance as it relates to military history, maritime history, military architecture, ethnic heritage, and social history.

Quarters Building No. 3 (HS 006073)

Contributing

*Total:* 1 Building

Quarters Building No. 3 (also known as Quarters No. 210) is a one-story, stuccoed masonry building designed in a plain Classical-revival style during the Spanish Colonial period, situated on Norzagaray Boulevard which slopes southward along the building's west elevation (see Photo 35). The "L-shaped" plan of the building wraps around a rectangular terraced courtyard, enclosed by a high retaining wall and balustrade with wood entry gate and steps on the west side of the parcel. Both the building and courtyard stand on a level plateau cut out of the sloped glaxis west of Castillo San Cristóbal. The north wing abutting the street is two bays wide and 10 bays long, while the perpendicular east wing is one bay wide and four bays long. An arcaded concrete porch projects from the south and west façades of the building fronting the courtyard, and its roof is clad in terracotta tile. The building has a flat concrete slab roof, set behind a shallow parapet wall.

<sup>239</sup> Panamerican et al., 51.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Quarters Building No. 3 is coated in stucco and has architectural treatments on its west and south elevations, including a classically-inspired projecting cornice and a parapet set above the cornice. The west elevation, facing Norzagaray Boulevard, is pierced by two window openings, with flat surrounds, and wood louvered window shutters. Windows and doors line the north elevation, and the interior courtyard, and a portion of the east elevation, though part of the east wall of the building forms a retaining wall set against the slope of the glacis. The building features three exterior doors, including two within the courtyard, and a third within the alley north of the building.

The north wing of Quarters Building No. 3 (a.k.a. Quarters No. 210) was built circa 1859 as military quarters for Spanish soldiers stationed in San Juan and is located at the center of a series of three former military barracks (Quarters Buildings No. 2, No. 3, and No. 4).<sup>240</sup> An 1861 map of San Juan labels this structure, along with Quarters Building No. 2, as artillery barracks. In the 1880s, the building was tied together via a common parapet and cornice with the neighboring Quarters Building No. 2.<sup>241</sup> It is likely that the east wing of the building was added in the 1880s. The arcaded porches within the courtyard were added between 1930 and 1940.<sup>242</sup> Today the building is used as Park offices.

#### *Statement of Integrity*

Quarters Building No. 3 was constructed in the mid-nineteenth century as a military barracks. The building's eastern wing was added in the late nineteenth century and porches within the courtyard were built in the early twentieth century. These additions have obtained significance in their own right as part of the evolution of the building. Building No. 3 retains integrity of location, design, setting, material, workmanship, feeling, and association. The building continues to convey its significance as it relates to military history, maritime history, military architecture, ethnic heritage, and social history.

Quarters Building No. 4 (HS 006074)

Contributing

*Total:* 1 Building

Quarters Building No. 4 (also known as Quarters No. 211) is a one-story, stuccoed masonry building designed in a plain Classical-revival style during the Spanish Colonial period, situated on Norzagaray Boulevard which slopes southward along the building's west elevation (see Photo

<sup>240</sup> Frederik C. Gjessing, *Quarters No. 210, HABS No. PR-96, San Juan National Historic Site, Boulevard Norzagaray, San Juan, San Juan County, Puerto Rico*. Historic American Building Survey (Washington, D.C.: National Park Service, no date).

<sup>241</sup> Gjessing, *Quarters No. 210 HABS*.

<sup>242</sup> Gjessing, *Quarters No. 210 HABS*.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

35).<sup>243</sup> Roughly rectangular in plan, Quarters Building No. 4 faces south onto a rectangular terraced courtyard, enclosed by a balustrade set on a retaining wall on the parcel's west and south sides. Both the building and courtyard stand on a level plateau cut out of the steep slope west of Castillo San Cristóbal. Seven bays long by three bays wide, Quarters Building No. 4 has a flat concrete slab roof. The main entry opens through the south elevation via a three-bay-wide arcaded concrete porch with tile roof. Secondary entries open via two doors within the north courtyard.

The architectural treatment of the main (west) block includes a heavy cornice surmounted by a low parapet on the west elevation. Three full-length window openings feature capped entablatures and friezes decorated with raised panels flanking a central rosette, and plain surrounds.<sup>244</sup> The original window heights have been partly truncated to accommodate conventional window openings. The corners of the building are defined by simple raised panels. The courtyard is demarcated by a retaining wall to the south and west capped by an ornate balustrade. Access to the courtyard is had through wood door and stair that open onto Norzagaray Boulevard.

The adjacent concrete masonry servant's quarters, located within the small courtyard north of the building, has a pitched roof clad in terracotta tile. Between the main building and the servant's quarters is an entrance to Tunnel 6 of Castillo San Cristóbal, its entrance flanked by pilasters which support a frieze and triangular pediment and spires.

A building at the location of Quarters Building No. 4 first appears on maps in 1792, when a blacksmith was located on the site. This original building is believed to be represented by the western two bays of the extant building, fronting Norzagaray Boulevard. It is unlikely that a retaining wall existed in the late eighteenth century. By 1840, the building had expanded eastward and was converted into military barracks. By the 1860s, it is likely that the nearby slope was managed with a retaining wall or rip-rap. In 1880, the easternmost wing, connecting to a retaining wall, was constructed. After the United States Army took over the property in 1898, several changes were made, including the building up of some concrete walls to increase interior space on the north courtyard. Additionally, the concrete slab roof was installed along with the concrete south porch. Today the building functions as the residence of the Superintendent of San Juan National Historic Site.

---

<sup>243</sup> Frederik C. Gjessing, *Quarters No. 211, HABS No. PR-97, San Juan National Historic Site, Boulevard Norzagaray, San Juan, San Juan County, Puerto Rico*. Historic American Building Survey (Washington, D.C.: National Park Service, 1964); The Collaborative, Inc. and Atkinson-Noland & Associates, Inc., *Historic Structure Report: Quarters No. 211*. (Atlanta and Puerto Rico: Southeast Regional Office, National Park Service and San Juan National Historic Site, 2016).

<sup>244</sup> Collaborative, Inc. and Atkinson-Noland, *HSR: Quarters No. 211*, 33.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

### *Statement of Integrity*

Quarters Building No. 4 was constructed in the late eighteenth century originally as a blacksmith shop and was later remodeled and converted into military residences in the early nineteenth century. The building's original western portion was added to in the mid-nineteenth century, and was again altered in the early twentieth century. These additions have obtained significance in their own right as part of the evolution of the building. Quarters Building No. 4 retains integrity of location, design, setting, material, workmanship, feeling, and association. The building continues to convey its significance as it relates to military history, maritime history, military architecture, ethnic heritage, and social history.

## **Inventory Section 4: San Cristóbal Outworks**

13 Contributing Resources / 0 Noncontributing Resources

See Map Inset E

<u>San Cristóbal Outworks Historic Landscape</u> (CL 550130)	Contributing
<u>San Cristóbal Archeological Site Complex</u> (AR SAJU00002.00)	Contributing

*Total: 2 Sites*

The San Cristóbal Outworks Historic Landscape (San Cristóbal Outworks) comprises the physical outworks, which stretch east from the San Cristóbal Moat, as well as intangible qualities which contribute to the appearance and experience of the landscape with respect to its period of significance (see Photos 2 and 25).<sup>245</sup> The San Cristóbal Outworks developed over a long period of occupation, beginning with the Spanish construction of a fort atop San Cristóbal Hill and the San Cristóbal Moat beginning in 1634. Eastward of the dry moat, the downward slope of the hill continued and provided a natural defense for the fort, as did the steep drop off of the cliffs to the north, bordering the Atlantic Ocean. The natural defensive qualities of the San Cristóbal Outworks landscape were enhanced beginning after O'Reilly's 1765 survey of San Juan's defenses. O'Reilly and engineer Thomas O'Daly then made plans for the modernization of those defenses, with special focus on the landward approach to the city and the San Cristóbal Outworks. This modernization of the outworks took place primarily between 1765 and 1785 and many components of this system are extant today, including (clockwise): The North Covered Way, Santa Teresa Battery, La Princesa Battery, Fort El Abanico, the South Covered Way, the

<sup>245</sup> Eliot Foulds and Alexandra von Bieberstein, *Cultural Landscape Report for the San Cristóbal Outworks*. (Boston: Olmsted Center for Landscape Preservation, National Park Service, 2015).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

San Cristóbal glacis, La Trinidad Counterguard, and San Carlos Ravelin. Several building and structures were also integral to the outworks system, but are not extant today, including: the first and second *líneas de retirada* (fortified lines of retreat, running the north-south width of the glacis), Santiago Ravelin (also known as Revellín del Príncipe), and portions of the South Covered Way. After this massive modernization project, the San Cristóbal Outworks were put to the test when English General Ralph Abercromby staged a two-pronged landward (east) and bayside (west) attack in 1797 and was successfully repulsed after a two-week conflict, April 17 to May 1.

Few changes were made to the San Cristóbal Outworks during the early nineteenth century and as military technology changed during that period, the defensive utility of many of the structures and buildings which were useful in the late eighteenth century could no longer afford protection to Castillo San Cristóbal and the city of Old San Juan. One of the results of this increasing obsolescence was the desire on the part of local residents to dismantle the city walls separating Old San Juan from the Puerta de la Tierra neighborhood. The Old San Juan City Wall – East Wall was dismantled in 1897, as was a portion of La Trinidad Counterguard, and Santiago Ravelin which once stood immediate south of the counterguard.<sup>246</sup>

Several changes were also made to the San Cristóbal Outworks in the 1890s in preparation for the Spanish-American War. These changes included reorienting the Outworks' firepower capacity toward the Atlantic Ocean and installing fixed artillery positions capable of longer-range fire. The first major change implemented by the Spanish was the installation of a line of four gun emplacements at La Princesa Battery, which extended from the battery westward. One of these gun emplacements, and its accompanying powder magazines, survives today. Two gun emplacements were also constructed at Santa Teresa Battery, both of which remain in place today.<sup>247</sup> Additional changes in the San Cristóbal Outworks during the 1890s included the construction of the El Abanico Guardhouse, the Northeast Gate at El Abanico, the South Gate at El Abanico, and an internal road which connected the two gates.

When the United States Army took possession of the San Juan fortification in October of 1898, a survey was undertaken of the San Cristóbal Outworks. Few changes were made immediately to the works, but they continued to be retained for military defensive purposes. In 1930, the Army built the La Princesa Housing Area atop what had been the San Cristóbal glacis in order to meet the high demand for modern officer's housing felt throughout the United States armed services in the 1920s.<sup>248</sup> This project required the demolition of the *líneas de retirada* and three of the 1890s gun emplacements that had been constructed adjacent to La Princesa Battery.

As part of defensive preparations for World War II, several changes were made to the San Cristóbal Outworks. These included the construction of four "Panama Mount" gun

<sup>246</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 5.

<sup>247</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 5.

<sup>248</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 36.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

emplacements in 1942 along the north wall of the outworks. Panama Mounts comprise a circle of concrete with a central pillar to carry the carriage of a coastal artillery gun, all of which would rotate along a circular steel track inset in the concrete. One of these emplacements survives today (Gun Emplacement at La Princesa). Additionally, the World War II Joint Command Center was constructed in 1942 immediately west of the outworks, within the San Cristóbal Moat.

The resources which contribute to the San Cristóbal Outworks Historic Landscape include a network of natural and designed landscape features, buildings, structures, vegetation patterns, and circulation routes which enhanced the military defensive qualities of the landscape in the late eighteenth, nineteenth, and early twentieth centuries. Intangible qualities, such as the spatial organization of these components and the views and vistas which surround the resource, also contribute to its significance. Natural topographic features and the manipulation of these features have defined the strategic military character of the San Cristóbal Outworks and today are generally consistent with the landscape of the Spanish occupation circa 1790–1890. Natural advantages remain evident today and include the natural rise the complex is sited on, the steep cliffs bordering the Atlantic Ocean, and San Cristóbal Hill which rises more than 100 feet (30 meters) above sea level to the west. The manipulation of these features can be seen in the form of the glacis east of Fort El Abanico, the stepped slope south of the South Covered Way, the slope of the glacis at the center of the outworks, and Castillo San Cristóbal to the west.

The buildings and structures which make up the San Cristóbal Outworks reflect the long military history of the site and changing military technology over time. This network of ravelins, batteries, traverses, covered ways, moats, counterguards, and tunnels were directed at defending Castillo San Cristóbal and the city of Old San Juan. The buildings and structures include (clockwise): the North Covered Way, Santa Teresa Battery, La Princesa Battery, the Gun Emplacement at La Princesa Battery, the Northeast Gate at El Abanico, the El Abanico Guardhouse, Fort El Abanico, the South Gate at El Abanico, the South Covered Way, La Trinidad Counterguard, and San Carlos Ravelin. Many of these date to the modernization project of the late eighteenth century and their configuration reflects their interdependence, with their iterative arrangement eastward and interconnected fields of fire. The spatial organization between the late-eighteenth-century buildings, structures, and topographic features remains evident today. With the addition of several buildings and structures in the late nineteenth and early twentieth centuries, the outworks came to reflect new military strategies in the 1890s and the 1940s. The interrelationships between the San Cristóbal Outwork's buildings, structures, and landscape features are generally consistent with the Spanish historic-period organization of the site (circa 1792–1898) with some additions during the United States Army's active use of the outworks (1898–1945).

The views and vistas created by the natural topography, designed landscape, buildings, and structures were central to the defensive character of the San Cristóbal Outworks. These features provided a clear field of vision eastward, toward the landward approach to Old San Juan, as well as northward and southward toward the Atlantic Ocean and the San Juan Bay, respectively.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

While contemporary development has changed these views, they remain relatively unobstructed and consistent with the historical conditions of the site. Additional character-defining features of the San Cristóbal Outworks Historic Landscape are the turf ground cover which is consistent with the Spanish historic period circa 1792–1898.

Historic landscape features which are somewhat diminished include the circulation patterns on the site, which would have followed covered ways, tunnels, *líneas de retirada*, and roads during the period of significance. Today circulation conforms to the interpretive and recreational use of the site with one main footpath loop around the grounds. While a portion of this path corresponds roughly with the outline of the 1930 road encircling the La Princesa Housing Area, earlier circulation patterns associated with the Spanish occupation of the site are not evident on the landscape. The alignment of the *líneas de retirada* is today represented by modern lines of stones, though these features do not reflect the design and workmanship of the original works.

Even as the military defensive function of the buildings, structures and topographic features is clear today, present-day and historic land uses are very different. Historically, the San Cristóbal Outworks were used for military and residential purposes. Today they are instead used for museum, interpretation, educational, commemorative, and conservation purposes.<sup>249</sup>

Additionally, only limited circulation patterns created by military roads and a portion of the South Covered Way remain evident. Internal circulation patterns associated with tunnels, *líneas de retirada* walls, and covered ways within the San Cristóbal Outworks Historic Landscape are no longer extant.<sup>250</sup>

The San Cristóbal Archeological Site Complex (AR SAJU00002.000) is an area of archaeological resources encompassing both Castillo San Cristóbal and the San Cristóbal Outworks Historic Landscape.<sup>251</sup> Archeological investigations in these areas are limited to construction-related archeology rather than projects driven by research questions (see Section 8). A remote sensing investigation of the grounds of the San Cristóbal Outworks, however, indicates that this area retains archeological potential.<sup>252</sup> The San Cristóbal Archeological Site Complex was administratively identified by NPS based on the archeological potential demonstrated by the presence of Spanish colonial architectural remains and the fortification's historical association with known archeologically sensitive sites within the San Juan National Historic Site, such as those identified at Castillo San Felipe del Morro. The San Cristóbal Archeological Site Complex has been issued a resource identification number of #SJ0200025 by the Oficina Estatal de Conservación Histórica de Puerto Rico.<sup>253</sup>

<sup>249</sup> Panamerican, *Draft San Juan City Walls Cultural Landscape Report*, 198.

<sup>250</sup> Panamerican, *Draft San Juan City Walls Cultural Landscape Report*, 232.

<sup>251</sup> The San Juan National Historic Site Park Boundary extends approximately 33 feet (10 meters) out from the base of the walls.

<sup>252</sup> Robert Nickel, *Archeological Ground-Penetrating Radar at San Juan National Historic Site: Overview and Executive Summary*. (Tallahassee: Southeast Archeological Center: 2001).

<sup>253</sup> Puerto Rico State Historic Preservation Office, *Sitios Arqueológicos de San Juan*, June 2021.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

### *Statement of Integrity*

Despite some changes to the San Cristóbal Outworks Historic Landscape since the end of the period of significance (1971), this resource retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. Comparative locations within San Juan National Historic Site and remote sensing data suggest that intact archeological stratigraphy associated with the period of significance remains within the San Cristóbal Archeological Site Complex remains intact and retains the potential to yield information important in the areas of military history, maritime history, defensive architecture, ethnic heritage, and social history. While several features of the San Cristóbal Outworks Historic Landscape from the period of significance are missing, including the *líneas de retirada*, portions of the South Covered Way, and twentieth-century resources such as the La Princesa Housing Area, this resource retains its ability to communicate its significance with respect to Spanish and United States military history, maritime history, defensive architecture, ethnic heritage, and social history.

A description of each contributing resource within San Cristóbal Outworks, known historical associations, previous investigations, and assessments of integrity, follows below. This discussion begins with the westernmost resources within the outworks (p. 101–104); followed by those resources along the Atlantic Ocean (p. 104–108); the outworks at the easternmost tip of the outworks (p. 108–112); and those outworks along the southern perimeter of the outworks (p. 112–113).

San Carlos Ravelin (HS 006066; PSN HS-203)

Contributing

*Total:* 1 Structure

San Carlos Ravelin (San Carlos) is a triangular masonry ravelin located within the San Cristóbal Moat. An important feature of the San Cristóbal Outworks, San Carlos Ravelin is situated with Santa Teresa Battery and the North Covered Way to the north, La Trinidad Counterguard and the South Covered Way to the south, and the outworks glacis to the east (see Photo 21, 25, and 29). San Carlos's parapet walls are pierced by 14 embrasures; the north parapet (200 feet [61 meters] long) and the south parapet wall (248 feet [76 meters] long) converge at the salient angle, where a sentry box with an ogee-shaped cap is positioned. Scarped rubble masonry walls underpin the parapets. Three embrasures in the north parapet are infilled and all the south embrasures and the sentry box alley are blocked by a wide breast-height, rubble masonry wall. Three semi-circular recesses within the concrete wall house concrete gun mounts.

The north exterior wall of the San Carlos Ravelin is solid, concealing the counter-mining galleries within it which were once reachable via an entrance within the San Cristóbal Moat. The south wing houses three vaulted casemates, accessible through two segmented arch doors on the structure's lower level. Five windows and two drainage pipes also pierce the south wing,

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

providing ventilation and drainage for the casemates. Surrounding the ravelin on the north and south is a counter moat, counterscarp wall, a covered way punctuated by two traverses, and a glacis that slopes away from the work, toward the seaside cliffs and the South Covered Way. Access to the terreplein of San Carlos is had via a paved ramp leading from the sod roof of the World War II Joint Command Center to the northern wing of the terreplein.

Built between 1766 and 1770, San Carlos Ravelin was constructed to protect Castillo San Cristóbal, in conjunction with the North Covered Way and La Trinidad Counterguard. The shape and placement of San Carlos Ravelin took advantage of the higher elevation of an existing ridge. The north and south parapet walls served specific functions; the north protected against shoreline attacks while the south parapet defended the landward approach to the east city gate.<sup>254</sup> Access to the structure was originally had via a caponier, a protected sunken passageway, between the San Cristóbal Curtain Wall (Tunnel 2 egress) and San Carlos's exterior stairs (not extant). Few changes were undertaken in the early nineteenth century, though two lightning rods were installed in 1818, one extant today at the western end of the south parapet.

In 1897, a portion of the Santiago Ravelin, which once stood south of La Trinidad, was demolished, creating increased vulnerability on the south side of Castillo San Cristóbal. As part of countering this, the south parapet wall of San Carlos Ravelin was reinforced with a 13 to 19-foot (4–5.7 meters) thick revetment wall and three gun emplacements armed with 15-centimeter Ordoñez rifles. The revetment wall was constructed of rubble masonry, with earthen fill, and was edged with brick and stone. The new wall infilled the embrasures along the south parapet, blocked direct access to the sentry box passageway, and partially filled three embrasures in the north parapet. As part of the WPA historic preservation project of the late 1930s, improvements were made to San Carlos in 1939, including the unearthing of embrasures and attendant repairs, as well as the replacement of the sentry box with a molded concrete sentry box mounted on the original base. In the 1940s, the World War II Joint Command Center was constructed just west of San Carlos, destroying the caponier between the ravelin and the fort, eliminating the stairs that once provided access to the lower level of the structure, and blocking the entry to the counter-mining gallery on the west side of the fort. Repairs in the 1960s included patching portions of the stucco coating with cement.<sup>255</sup>

### *Statement of Integrity*

Taking on much of its current form during the modernization project of the late eighteenth century with some changes in the nineteenth century, San Carlos Ravelin retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some recent additions, such as installation of late-nineteenth-century gun emplacements and the construction of the World War II Joint Command Center, have altered the Spanish-era design of

<sup>254</sup> T. Klugh, *Castillo de San Cristóbal, San Carlos Ravelin, San Juan Municipio, PR. Survey No. HABS PR-93*. (Washington D.C.: Historic American Building Survey, 1933).

<sup>255</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 343, 355–358.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

the fortification, these changes fall within the period of significance and represent the evolution of the structure to suit nineteenth- and twentieth-century warfare. San Carlos Ravelin retains its ability to convey its significance as it relates to Spanish and United States military history, maritime history, defensive architecture, ethnic heritage, and social history.

La Trinidad Counterguard (HS 091711; PSN HS-213)

Contributing

*Total:* 1 Structure

La Trinidad Counterguard is an irregularly-shaped, multi-level, masonry counterguard outwork, situated in the San Cristóbal Moat along the same defensive north-south line as San Carlos Ravelin and the North Covered Way (see Photo 30). La Trinidad Counterguard is bounded on its east side by a dry countermoat and counterscarp wall. Atop the counterscarp wall, a covered way and narrow moat separate the structure from the sloping glacis to the east.

Three independent batteries — the upper, the middle (two-levels), and the base (two-levels) — step downward from north to south, following the slope of the limestone ridge La Trinidad was built upon. The upper and middle batteries have sod esplanades, embrasures facing south and southeast, stone cannon tracks, banquettes, and brick drainage ditches. These batteries are accessed via separate limestone staircases from the San Cristóbal Moat. The base battery, partially demolished, has the remnants of banquettes and stone tracks, and is reached directly from the moat today. Barrel-vaulted casemates are carved out of the limestone; three casemates are accessed from the middle battery and three are accessed from the base battery. Both the middle and base batteries were built with two levels and within the middle battery, a ramp connects the levels. Nine embrasures pierce the east and southeast parapet wall of the counterguard; four within the upper battery and five within the middle battery. A doorway, at the northwest corner of the structure on the moat level, is edged with limestone blocks and opens into a truncated tunnel. La Trinidad Counterguard was constructed primarily of limestone rubble, with ashlar-laid limestone blocks used for corners and brick for elements such as coping and vaulting. A thick layer of protective lime-based stucco coats much of the structure.<sup>256</sup>

La Trinidad Counterguard was designed to defend the South Bastion (to the west) and the exposed flank of San Carlos Ravelin (to the north) in the mid-eighteenth century. Constructed between 1765 and 1783, the structure was primarily completed by 1776. Few changes took place in the nineteenth century before 1897 when a portion of the base battery of La Trinidad was demolished, along with Santiago Ravelin and Santiago Gate, to make way for vehicular traffic along Luis Muñoz Rivera Avenue and allow the city of San Juan to expand eastward. In the

<sup>256</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 362, 365, 368.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

1930s, La Trinidad Counterguard was planted with trees which were removed in the 1960s. Today some of the structure's casemates are used to house mechanical systems.<sup>257</sup>

### *Statement of Integrity*

La Trinidad Counterguard was constructed during the modernization of San Juan's fortifications in the late eighteenth century. The structure saw some significant changes at the end of the nineteenth century, with the demolition of a portion of the base battery. Despite this, La Trinidad Counterguard retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. La Trinidad Counterguard retains its ability to convey its significance in the areas of military history, maritime history, defensive architecture, ethnic heritage, and social history.

Santa Teresa Battery (HS 006067; PSN HS-204) Contributing

North Covered Way at San Cristóbal (HS 091734; PSN HS-236) Contributing

*Total: 2 Structures*

Santa Teresa Battery and the North Covered Way at San Cristóbal (North Covered Way) are components of the San Cristóbal Outworks which are situated immediately east of the San Cristóbal Moat and above the ocean cliffs at the north side of the complex (see Photos 2, 25, and 33).

The North Covered Way is a masonry redoubt, with rubble and earthen fill, situated on the cliffs above the Atlantic Ocean, between San Cristóbal Moat and Santa Teresa Battery. The North Covered Way's curved, rubble masonry wall forms the counterscarp of the San Cristóbal Moat and supports a terreplein which is reachable via two staircases at the south end of the structure. The north wall of the structure surmounts the seawall and is constructed of ashlar-laid limestone blocks. A parapet wall along the north and east edges of the terreplein features firing steps and a single embrasure, which pierces the north parapet. A narrow (8-foot [2.4-meter] wide) moat separates the North Covered Way from Santa Teresa Battery, to the east, though a small wood bridge spans the moat today. A tunnel system, a portion of which runs along the North Covered Way's moat, is accessed via a door at the center of the curved west wall. A second tunnel doorway at southwest corner of the structure, is enframed by ashlar-laid stone with a segmented arch and ashlar voussoir.<sup>258</sup>

Santa Teresa Battery comprises both a late-eighteenth-century masonry outwork, directed landward, and late-nineteenth-century masonry gun emplacements, positioned to fire north toward the Atlantic Ocean. Santa Teresa Battery's eighteenth-century east parapet wall is pierced

<sup>257</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 369, 374.

<sup>258</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 300–305.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

by four embrasures and is protected by a stepped moat, covered way, and a counter-mining gallery (tunnels) to the east. The covered way is lined with firing steps and a single masonry traverse provided additional protected firing positions toward the north, to protect against a potential approach from the sea cliffs. Two entryways pierce the east wall of the covered way and lead under the narrow moat, eastward to counter-mining galleries (tunnels). The structure is constructed of coursed rubble masonry with some brick elements and brick edging, all of which were once covered with stucco. As an important feature of the San Cristóbal Outworks, Santa Teresa Battery was designed in the late eighteenth century to work in conjunction with La Princesa Battery and Fort El Abanico to protect against landward military assaults. Access to Santa Teresa Battery from the North Covered Way is partially protected by low parapet wall (covered way) which runs roughly southwest-northeast between the two structures, but this wall is truncated by the late-nineteenth-century gun emplacements.<sup>259</sup>

Santa Teresa Battery's nineteenth-century seaward defenses include two gun mounts constructed along an east-west concrete parapet wall (covered way) and a concrete gun magazine. Built facing the cliff-side, the circular, concrete gun mounts are protected by earthen embankments capped by semi-circular concrete skirts. Adjacent to each gun mount is a vaulted, concrete ammunition bunker. South of the gun mounts and magazines, are the 1897 magazine structure and the remnants of a brick latrine, both built against an earthen embankment. The 1897 magazine was constructed as a single-barrel vault divided into three chambers; the structure's façade has a simple molded cornice and concrete molded quoins encircle the three segmented arch doorways. The magazine's limestone rubble and concrete mass is capped by a concrete roof covered in turf. The magazine is protected to the northeast by a low earthen embankment supported by a rubble retaining wall and a curved brick coping.<sup>260</sup>

Santa Teresa Battery and the North Covered Way were designed and constructed in the late eighteenth century under the direction of engineers Thomas O' Daly and Juan Francisco Mestre. In 1765, the North Covered Way was only a simple counterscarp wall with a sloping embankment to the east, which took advantage of an existing hill along the edge of the ocean cliffs.<sup>261</sup> Between 1769 and 1772, the North Covered Way was constructed in line with the San Carlos Ravelin, La Trinidad Counterguard, and Santiago Ravelin (not extant). The North Covered Way's counter-mining galleries provided access to spaces underneath the San Cristóbal's glacis should the Spanish need to explode portions of the outworks as enemies approached. Santa Teresa Battery was constructed between 1783 and 1792 and at the time included five embrasures within the eastern parapet wall. The covered way just east of the parapet was designed as the northernmost extension of the first line of retreat (1<sup>st</sup> *línea de retirada*).

<sup>259</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 300, 315.

<sup>260</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 309.

<sup>261</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 314.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Few changes were made to the North Covered Way and Santa Teresa Battery until the 1895 when plans to prepare for the Spanish-American War were set into motion. At that time, Santa Teresa Battery was partially demolished or covered with earthen fill, the two extant gun mounts were built, and the vaulted powder magazine and embankments were constructed. In the twentieth century, preservation efforts in the 1960s included the excavation of the embrasures within the east parapet wall and the removal of other elements unrelated to the eighteenth and nineteenth century use of the battery.<sup>262</sup> A modern lean-to structure is sited against the North Covered Way's east moat wall and is used by the park for maintenance and storage.

### *Statement of Integrity*

Santa Teresa Battery and the North Covered Way took on their present appearance during the modernization projects of the late eighteenth century and the late nineteenth century. These resources retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association with the history of Spanish military defensive strategy. While some additions have altered the original designs, the changes fall within the period of significance and represent the evolution of the structure to suit late-nineteenth-century warfare. Santa Teresa Battery and the North Covered Way at San Cristóbal retain their ability to convey their significance as relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

La Princesa Battery (HS091713; PSN HS-215)

Contributing

Gun Emplacement at Battery La Princesa (HS N/A)

Contributing

*Total: 2 Structures*

La Princesa Battery (La Princesa) is a multi-component masonry battery located at the northeast end of the San Cristóbal Outworks, north of Fort El Abanico (see Photos 29 and 32). The battery's curved outer walls follow the jog of the cliffs along the Atlantic Ocean and act as retaining walls for: the small north terreplein (rectangular area which projects northward from the battery); the north moat; the main terreplein; and the south moat. The wide parapet walls of the east and the south scarp walls (which once housed seven embrasures facing east and southeast), are constructed of rubble masonry atop cut stone foundations.<sup>263</sup> The scarped walls support the main terreplein, where a late-nineteenth-century gun emplacement and the twentieth-century Gun Emplacement at Battery La Princesa are oriented northward toward the Atlantic Ocean. Support structures such as bombproof magazine bunkers and connecting features such as ramps, staircases, and a covered passage complete this complex military resource. Access to La

<sup>262</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 318, 324, 327–330.

<sup>263</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 397.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Princesa Battery is had from a covered way connecting it with the Northeast Gate, or directly from the glacis, which is situated west of the structure.

La Princesa Battery's many components reflect the development of military technology over three centuries. The initial phase of construction was between 1779 and 1783 when La Princesa was built as a bastion to "improve irregular land features" north of Fort El Abanico and prevent landwards attacks from the east and enemy beach landings on the north.<sup>264</sup> La Princesa Battery's firepower was then directed primarily east and southeast. Surviving eighteenth-century components of La Princesa include: the east and south scarp walls, capped by wide parapet walls; the northwest portion of La Princesa's main terreplein, with its distinctive curved wall and chambers beneath; and the small north terreplein and north moat, which sit almost at sea level, northwest of the battery. Missing from La Princesa are seven embrasures which once pierced the east and south parapet walls, and an interior battery wall that was positioned upon the main terreplein with four embrasures pointed east.

Major changes to La Princesa Battery were introduced in 1897 during preparations for the Spanish-American War. At that time, the battery was redesigned such that its firepower was directed northward, toward the Atlantic Ocean, rather than landward. Four embrasures in the east parapet wall were demolished, two embrasures in the south wall were converted into other uses (a latrine and a stairway to the south moat). The installation of four new gun emplacements along an east-west axis (one extant) required the demolition or infilling of any eighteenth-century features on the main terreplein.<sup>265</sup>

Extant nineteenth-century components occupy much of the interior space of the main terreplein. An 1897 semi-circular, concrete gun emplacement is positioned behind an earthen embankment with bombproof magazines to the east and west. The west powder magazine's stucco-covered, domed roof conceals three vaulted rooms and an east-west subterranean passageway which facilitated troop movements between the gun emplacements that once stood further west.

Further changes were introduced by the United States Army in the twentieth century. In 1930, the construction of the La Princesa Housing Area required the demolition of much of the 1897 battery.<sup>266</sup> In 1942, La Princesa Battery was again changed, with the installation of four Panama Mount gun emplacements, the easternmost of which survives today (Gun Emplacement at Battery La Princesa).<sup>267</sup> Along two concentric concrete rings, iron tracks once guided the carriage for a large 155-mm caliber gun (not extant).

<sup>264</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 380.

<sup>265</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 390.

<sup>266</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 402.

<sup>267</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-9-7-10

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

### *Statement of Integrity*

La Princesa Battery and the Gun Emplacement at Battery La Princesa reflect the long history of military technology utilized at this outwork between the late eighteenth century and the mid-twentieth century. These resources retain a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some additions have altered the original design of these fortifications, the changes fall within the period of significance and represent the evolution of the structures to suit late-nineteenth-century and mid-twentieth-century warfare. La Princesa Battery and the Gun Emplacement at Battery La Princesa retain their ability to convey their significance in the areas of military history, maritime history, defensive architecture, ethnic heritage, and social history.

El Abanico Guardhouse (HS 91714; PSN HS-216)

Contributing

*Total:* 1 Building

El Abanico Guardhouse is a one-story, Spanish colonial period building constructed in a plain Classical Revival style, situated adjacent to the Northeast Gate at El Abanico, and facing north toward La Princesa Battery and the Atlantic Ocean (see Photos 29 and 31). Rectangular in plan, the El Abanico Guardhouse measures approximately 53.5 feet (16.3 meters) long and 19.5 feet (6 meters) wide. Constructed using brick shell walls infilled with limestone rubble and mortar, the entire building is coated with a layer of cement stucco.<sup>268</sup> The flat wood and masonry roof has a simple projecting cornice and shallow solid parapet with recessed panels. The wood frame of the roof is surmounted by brick pavers and a thin layer of concrete. The primary (north) and south façades are pierced by three rectangular doorways with double-leaf louvered wood doors. Windows pierce both the east and west sides of the building. All openings feature plain architraves with projecting molded caps; corners feature plain projecting panels.

Two masonry retaining walls are attached to the building, one from the northeast corner dates to 1896 and the second, projecting from the western façade, dates to 1783. The former wall is curved, slopes away from the building, and is coated in a layer of cement stucco. The latter wall is constructed of rubble stone, with a brick banquette (firing step) platform and is a portion of the 1783 parapet wall which once stood atop an earthen covered way.<sup>269</sup>

El Abanico Guardhouse was constructed circa 1896, atop the earthen covered way which protected the north façade of Fort El Abanico. Oriented toward the north, this masonry building was designed to store munitions and provide space for a sentry overlooking La Princesa Battery and the Atlantic Ocean.<sup>270</sup> The north façade was originally designed with three doorways, while

<sup>268</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 447.

<sup>269</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 450.

<sup>270</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 453.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

the south façade was designed to have three corresponding windows. After the United States seized control of the San Juan fortifications, the purpose of the El Abanico Guardhouse shifted. The United States Army electrified the building in 1902 and between 1922 and 1947, converted it into a garage.<sup>271</sup> As a result, the original three-bay north façade was redesigned as a four-bay garage. This configuration was maintained until the 1983 restoration project which rebuilt the original three doorways. This project replaced much of deteriorating building fabric, including the north façade, roof, interior partitions, and portions of exterior walls. Today the building is used as restrooms and for storage.<sup>272</sup>

### *Statement of Integrity*

Constructed in the late nineteenth century, El Abanico Guardhouse was subject to multiple renovations and repairs throughout the twentieth century to suit changing military needs. Major changes to its interior configuration and main façade made in the early twentieth century were reversed during a 1980s restoration project, which reestablished the original layout. The El Abanico Guardhouse today retains a high integrity of location, design, setting, feeling, and association. Much of the original fabric has been replaced and the building retains poor integrity of materials and workmanship with respect to Spanish-era construction. However, after being restored to its original appearance in the 1980s, El Abanico Guardhouse retains its ability to convey its significance as it relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

Northeast Gate at El Abanico (HS 091715; PSN HS-218)

Contributing

*Total:* 1 Structure

The Northeast Gate at El Abanico is a masonry gate, bridge, and sentry box complex which represents the easternmost entry point into the San Cristóbal Outworks. Situated between La Princesa Battery and Fort El Abanico, the gate comprises two limestone and brick masonry gateposts, two limestone and brick secondary gateposts, a modern wood plank bridge over the La Princesa Battery south moat, and a brick masonry sentry box. Masonry elements are stuccoed. The squared column gateposts are 16 feet (4.9 meters) tall, with a chamfered edge on their interior (west) face. They are constructed of ashlar-laid limestone, have a stepped cornice, and are capped by carved brick in a pyramidal design.<sup>273</sup> The secondary gateposts are located to the east across the modern wood plank bridge, stand 4 feet (1.2 meters) tall, and have pyramidal caps. The cylindrical sentry box is located to the north of the gate, set within La Princesa Battery's south parapet wall. Eleven feet (3.3 meters) tall, the sentry box is capped by a

<sup>271</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 456.

<sup>272</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 459–462.

<sup>273</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 467.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

crenelated parapet set behind a cornice with modillions. Three segmented arch windows and a doorway are enframed by molded cement quoins.

The Northeast Gate at El Abanico was constructed between 1896 and 1898.<sup>274</sup> In 1898, the bridge over the La Princesa south moat was constructed as part of a temporary roadway through the San Cristóbal Outworks, which ran in an arc from the Northeast Gate at El Abanico to the South Gate at El Abanico.<sup>275</sup> The Northeast Gate at El Abanico was designed “to allow materials for construction and heavy artillery to enter La Princesa Battery” during the 1890s, when that battery was being redesigned. The gate’s design is similar to that of the South Gate at El Abanico. The gates have not seen major changes, except for the replacement of the wood gate doors and hardware, the replacement of the bridge, and repair of stucco in the twentieth century.

### *Statement of Integrity*

Built in the 1890s in preparation for the Spanish-American War, the Northeast Gate at El Abanico facilitated the movement of military vehicles within the outer reaches of the San Cristóbal Outworks in the late nineteenth century. Twentieth-century changes have altered the Spanish-era design of the fortifications. The Northeast Gate at El Abanico today retains a high integrity of location, design, setting, feeling, and association, and a moderate degree of integrity of materials and workmanship due to replacement of some elements of the gate. The Northeast Gate of El Abanico retains its ability to convey its significance in the areas of military history, maritime history, defensive architecture, ethnic heritage, and social history.

Fort El Abanico (HS 001270; PSN HS-205)

Contributing

*Total:* 1 Structure

Fort El Abanico (El Abanico, “The Fan”) is a large masonry redoubt located on the eastern edge of the San Cristóbal Outworks glacis, south of La Princesa Battery and the El Abanico Guardhouse (see Photo 31). The redoubt’s “fan” design is derived from the three cross-fire embrasures positioned toward the salient angle of the structure. Surrounded by a system of dry moats and protected by a covered way to the northeast and southeast, Fort El Abanico formed the eastern vanguard of the San Cristóbal Outworks. The redoubt has two levels, the lower level consists of primarily vaulted interior casemates, while the upper terreplein comprises the structure’s battery. Constructed primarily of limestone block, El Abanico’s brick elements include the edging of parapets, firing steps and embrasures and the vaulting of interior casemates and counter-mining galleries. Stucco protects the interior and exterior surfaces of the masonry.

<sup>274</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 471–472.

<sup>275</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 472.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Access to Fort El Abanico can be had via a wood bridge on the western side of the structure, which crosses a narrow moat (8 feet [2.4 meters] wide) and connects the glacis with the lower level of El Abanico. Two masonry ramps curve upward toward the north and south wings of the battery terreplein. The battery terreplein is lined with firing steps and the redoubt's north parapet wall is pierced by two embrasures. Three centrally-located embrasures point east toward an opening at the structure's salient angle, beyond which a narrow moat leads to a demi-bastion at the structure's point. The south parapet wall lacks embrasures. Historic graffiti is etched into the structure in multiple locations, some of which dates to the mid-nineteenth century.

A 25-foot (7.6-meter) wide dry moat protects the 20-foot (6-meter) scarped walls of El Abanico. At the southwest corner of the moat, a set of stairs leads up toward the lower level of the El Abanico and a second set leads up to the covered way. The covered way is lined with firing steps and is punctuated by three rectangular, masonry traverses which provided additional coverage positions. A connection with La Princesa Battery's dry moat is sealed off.

Fort El Abanico was constructed between 1779 and 1783, first under the direction of Thomas O'Daly until 1781, then completed under the direction of Juan Francisco Mestre. Few significant changes to the structure were made in the nineteenth and twentieth centuries.<sup>276</sup> A portion of the covered way and one traverse were demolished to make way for the construction of the El Abanico Guardhouse in 1896. Adjacent to El Abanico, the Northeast Gate and the South Gate were also constructed in the 1890s. In the 1930s, the United States Army constructed a military housing project on San Cristóbal's glacis northwest of El Abanico. In 1959, the United States Army rehabilitated El Abanico, a process which included the removal of vegetation, repair of the masonry surfaces, and replacement of stucco. Additional rehabilitation work was undertaken in the 1960s, including raising the level of the moat floor to cover scarp wall foundations.<sup>277</sup>

#### *Statement of Integrity*

Fort El Abanico was constructed in the late eighteenth century and retains much of its original appearance today. El Abanico retains a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association. While some repairs and alterations have resulted in updates to the structure, Fort El Abanico retains its ability to convey its significance as relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

South Covered Way at San Cristóbal (HS 091735; PSN HS-237)

Contributing

Total: 1 Structure

<sup>276</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 427, 435.

<sup>277</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 440–441.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

The South Covered Way at San Cristóbal (South Covered Way) is a masonry parapet wall running along the south side of the San Cristóbal Outworks, connecting San Carlos Ravelin to Fort El Abanico (see Photos 25, 29, 30). The parapet wall has a two-stepped banquette on its north side and a sloping, earthen embankment to the south. Approximately 650 feet (200 meters) long, the rubble masonry covered way jogs south at three locations where defensive traverses (not extant) once helped to regulate movement along the covered way.

The South Covered Way was completed by 1783 and appears on Juan Francisco Mestre's *Plano de San Juan de Puerto Rico*.<sup>278</sup> Constructed as a means to move people, goods, and information safely to and from Fort El Abanico and other components of the San Cristóbal Outworks, it was originally designed with two parallel parapet walls. The parapet walls were lined with stepped banquettes and a wood palisade that rose over the level of the parapet.<sup>279</sup> In the original configuration, soldiers would have been flanked by protective walls as they moved along the way, and masonry traverses provided extra protection at San Carlos Ravelin, the 1<sup>st</sup> *línea de retirada* (entrenched line of defense), and the 2<sup>nd</sup> *línea de retirada*. The South Covered Way remained intact throughout much of the nineteenth century. In the 1890s, it was altered by the construction of the South Gate at El Abanico. Portions of the South Covered Way survived through World War I, however, the north parapet wall and traverses were destroyed in the 1930s with the construction of the La Princesa Housing Area.<sup>280</sup>

### *Statement of Integrity*

Built during the modernization project of the late eighteenth century, the South Covered Way underwent twentieth-century changes including its partial demolition as part of the redesign of the adjacent glacis. The South Covered Way retains a high degree of integrity of location, setting, and association; and a moderate degree of integrity of design, materials, workmanship, and feeling. Despite partial demolition of the South Covered Way, this resource retains its ability to convey its significance as relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

South Gate at El Abanico (HS 091716; PSN HS-236)

Contributing

*Total:* 1 Structure

The South Gate at El Abanico is a masonry gate and sentry box complex, situated at the eastern end of the South Covered Way, immediately southwest of Fort El Abanico (see middle distance, Photo 29). The gate comprises two limestone masonry gateposts and a brick masonry sentry box.

<sup>278</sup> Sepúlveda, *Puerto Rico Urbano: Vol. I*, 143.

<sup>279</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 427–431.

<sup>280</sup> Foulds and von Bierberstein, *CLR: San Cristóbal Outworks*, 38.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

The squared column gateposts are 17 feet (5 meters) tall with a chamfered edge on their interior (north) face. They are constructed of ashlar-laid limestone and are capped by an ornate ogee cornice, surmounted by a stepped pyramid, a cavetto cap, topped by a ball finial.”<sup>281</sup>

The cylindrical sentry box is located to the west of the gate, embedded within the South Covered Way’s banquette steps. The sentry box is 11 feet (3.3 meters) tall, constructed of brick masonry coated in cement stucco, and is capped by a crenelated parapet set behind a cornice with modillions. The window and door openings of the sentry box are segmented arches enframed by cement, molded quoins and the sidewalls flair out to a projecting round base.

The South Gate at El Abanico was constructed between 1896 and 1898. Its construction involved demolition of a portion of the South Covered Way, at the southwest corner of Fort El Abanico. The road that passed through the gate crossed a portion of the glacis and passed through the Northeast Gate at El Abanico.<sup>282</sup> The gates have not seen major changes, except for the replacement of the wood gates and hardware.

#### *Statement of Integrity*

Built in the 1890s in preparation for the Spanish-American War, the South Gate at El Abanico retains a high degree of integrity of location, design, setting, feeling, and association, and a moderate degree of integrity of materials and workmanship due to replacement of some elements of the gate. While some changes have been made to the South Gate of El Abanico, it retains its ability to convey its significance as relates to military history, maritime history, defensive architecture, ethnic heritage, and social history.

### **Inventory Section 5: El Cañuelo**

3 Contributing Resources / 0 Noncontributing Resources

See Map Inset F

<u>El Cañuelo</u> (HS 6075; PSN HS-212)	Contributing
<u>El Cañuelo Archeological Site Complex</u> (AR SAJU00003.000)	Contributing

*Total:* 1 Building, 1 Site

El Cañuelo, formally known as Fortín San Juan de la Cruz, is a square, masonry fort situated on Cabras Island, at the entrance to San Juan Bay (see Photo 6). Located across the bay from

<sup>281</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 480.

<sup>282</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 485–486.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Castillo San Felipe del Morro, El Cañuelo provided strategic crossfire in the defense of the bay and the entrance to the Bayamón River.<sup>283</sup> Originally surrounded by water, El Cañuelo is today connected to Cabras Island. Each corner of the 81-foot (24.7-meter) square fort is oriented to a cardinal direction, and a sentry box is positioned at the east corner. The fort's parapet walls are pierced by six embrasures, four along the primary (northeast) defensive front, one on the northwest wall, and another on the southeast wall. El Cañuelo's battered, limestone ashlar walls act as retaining walls for the fort's rubble fill and enclose a terreplein, as well as several lower-level interior rooms. The parapet walls are encircled by a rounded cordon at the level of the terreplein and are covered with a lime-based stucco. The sentry box's cylindrical walls are constructed of brick, pierced by two narrow windows with splayed jambs, and capped by a quarter-round cornice. Its domed roof is crowned by a four-sided masonry finial. The sentry box is distinct in that it is one of two extant seventeenth-century sentry boxes in the Park, the other being at El Espigón. The sentry box rests on a circular slab built into a corner (rather than resting on a corbelled foundation) and has a simple rounded dome roof.<sup>284</sup>

El Cañuelo is divided into two levels: the terreplein and the lower (interior) level. The lower level of the building consists of fill and several vaulted rooms, including narrow gun powder magazines, a storage room, a stairwell, a cistern (inaccessible), and a vaulted passageway.<sup>285</sup> Constructed of brick masonry with brick vaulted ceilings, the interior spaces are coated in stucco. The lower level is accessed via an exterior door in the southeast wall of the building and via a stairway from the terreplein.

El Cañuelo's terreplein measures roughly 62 feet (19 meters) square, is capped by a concrete pad, and is enclosed by a low parapet wall.<sup>286</sup> The terreplein's northeast parapet wall, and portions of the neighboring walls, rise higher than the remainder of the parapet and are pierced by embrasures. In the western corner of the terreplein, the brick masonry remnants of the nineteenth-century latrine and kitchen are built into the northwest and southwest walls, respectively. The latrine is constructed over the edge of the northwest parapet wall, such that waste would travel down the battered wall and into the bay. The kitchen includes the arched firebox of a cooking stove and a hearth. Two, low brick piers pierce the concrete floor of the terreplein, and are associated with nineteenth-century structures.

The island of El Cañuelo, on which the Fortín San Juan de la Cruz was built, was important to the defense of the Spanish city of San Juan beginning at least as early as 1595. The island is partially man made, built atop reefs and rocks known as El Anegado (or Anegada).<sup>287</sup> In 1595,

<sup>283</sup> WLA Studio, *Historic Structure Report: El Cañuelo, San Juan National Historic Site*. (Atlanta: Southeast Regional Office, National Park Service, 2018), 7.

<sup>284</sup> WLA Studio, *HSR: El Cañuelo*, 53.

<sup>285</sup> WLA Studio, *HSR: El Cañuelo*, 61.

<sup>286</sup> WLA Studio, *HSR: El Cañuelo*, 56–59.

<sup>287</sup> Walter Cardona Bonet, *Islotes de Borinquen: Amoná, Abey, Piñas, Sikey y otros. Notas para su Historia*. (San Juan: Comité Historia de los Pueblos, 1985), 19.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Sir Francis Drake attempted to approach San Juan from the west and the Spanish built a stockade and mounted an assault from the tiny island. In the early seventeenth century, a more formal structure was built: a round wood and rubble masonry tower. By 1609 the new fort was redesigned with a square footprint, embrasures on all sides, and a platform for infantry.<sup>288</sup> During the Dutch campaign to take over San Juan in 1625, El Cañuelo was captured as a means to control supply routes along the Bayamón River. The Spanish recaptured and burned the fortification.

The extant square masonry fort occupies the entire footprint of El Cañuelo Island and was constructed in 1664 of ashlar limestone walls with rubble fill. Named Fortín San Juan de la Cruz in the late seventeenth century, plans for the fort called for 21 embrasures along the four parapet walls, two sentry boxes, and a shelter structure atop the terreplein for soldiers. Additionally, two vaulted storage chambers, one for a gun powder magazine and the other for storage, and a cistern were planned for below the terreplein.<sup>289</sup> Whether the plans for the parapets and embrasures were fully implemented is not known as today the fort has only six embrasures and one sentry box.

The northeasterly orientation of the extant embrasures provided essential cross-fire across the mouth of San Juan Bay, when paired with fire from El Morro. In 1765, the fort was being actively used, with soldiers garrisoned there.<sup>290</sup> That year, Thomas Maisonet was appointed as the outpost's lieutenant and was charged with managing the outpost's maintenance, defense, conservation, and cleaning.

In the nineteenth century, El Cañuelo was updated. In 1841, plans were made to modify and refurbish El Cañuelo; a flat-roofed structure with brick masonry columns and wood partitions was planned for the terreplein, remnants of which were present in the early twentieth century.<sup>291</sup>

Historian Adolfo de Hostos indicates that in the mid- to late nineteenth century, El Cañuelo was garrisoned and was used as a maritime inspection station for vessels entering San Juan Bay.<sup>292</sup> Other temporary uses for the fort during the late nineteenth century included housing for prisoners while they labored nearby, storage for arriving cargo, and a mooring location for arriving vessels.<sup>293</sup>

---

<sup>288</sup> WLA Studio, *HSR: El Cañuelo*, 31.

<sup>289</sup> WLA Studio, *HSR: El Cañuelo*, 33, citing Juan Blanco, "A Study of the Morphological Structure of the System of Fortifications of San Juan de Puerto Rico, with a special emphasis on the development of the Frente de Tierra de San Cristóbal." (San Juan: Copyright Juan Blanco, 1988), 241.

<sup>290</sup> Adolfo de Hostos, *Ciudad murada: ensayo acerca del proceso de la civilización en la ciudad española de San Juan Bautista de Puerto Rico, 1521-1898* (San Juan: Instituto de Cultura Puertorriqueña, 1966), 198.

<sup>291</sup> Paola A. Schiappacasse, "Archaeology of Isolation: The 19<sup>th</sup> Century Lazareto de Isla de Cabras, Puerto Rico." Doctoral Dissertation (Syracuse University, 2011), 72-73; *Citing* General Archives of Puerto Rico, Fondo Obras Públicas, Series Edificio Públicos, Tema Lazareto, Box 666.

<sup>292</sup> De Hostos, *Ciudad Murada*, 198; Schiappacasse, "Archaeology of Isolation," 111.

<sup>293</sup> Schiappacasse, "Archaeology of Isolation," 123, 139.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

When the United States took control the military installations on San Juan Islet in 1898, it also seized control of El Cañuelo, but the fort was neglected during this period. In the 1940s, fill was deposited between Cabras Island and El Cañuelo Island and a causeway was constructed south to Palo Seco, connecting El Cañuelo to the mainland for the first time.<sup>294</sup> In 1966, the United States Army transferred 3.4 acres of land including El Cañuelo to the National Park Service.<sup>295</sup>

Minor repairs to the exterior walls and foundation of the building were made during the mid-twentieth century, and in the 1990s, riprap revetments and a breakwater were added around the building to protect the foundation. In the early 2000s, patching and cleaning took place and in 2012, the lower level entry was reopened and a staircase was added to the exterior.<sup>296</sup>

The El Cañuelo Archeological Site Complex<sup>297</sup> has been administratively identified by the NPS based on the archeological potential represented by the presence of Spanish colonial architectural remains and the building's historical association with other archeologically sensitive sites throughout the San Juan National Historic Site. The El Cañuelo Archeological Site Complex has not been subject to archeological investigations to date. Nonetheless, El Cañuelo has the potential to yield important information significant to Spanish military history, maritime history, and the history of defensive architecture. This potential is especially high within El Cañuelo's terreplein. Because the fort's military function diminished during the late eighteenth and early nineteenth centuries, archeological excavations and remote sensing within the terreplein have the potential to shed light on the seventeenth-century military construction and use of the building. Archeological excavations also have the potential to yield information on the period during which the site functioned as a maritime quarantine station.<sup>298</sup>

### *Statement of Integrity*

El Cañuelo took on much of its present appearance in the mid-seventeenth century and retains high integrity of location, design, setting, workmanship, and association. Although the building has been subject to alterations associated with its use in the mid-nineteenth century, these changes do not impede the building's ability to communicate its significance in the areas of Spanish military history, maritime history, and defensive architecture. Similarly, the El Cañuelo Archeological Site Complex likely retains high stratigraphic integrity and a high potential to yield important information in the areas of military history, maritime history, defensive architecture, ethnic heritage, and social history.

<sup>294</sup> Schiappacasse, "Archaeology of Isolation," 188–189.

<sup>295</sup> Schiappacasse, "Archaeology of Isolation," 194.

<sup>296</sup> WLA Studio, *HSR: El Cañuelo*, 37–38.

<sup>297</sup> Subsites within the El Cañuelo Archeological Site Complex Include: El Cañuelo (AR SAJU00003.001).

<sup>298</sup> WLA Studio, *HSR: El Cañuelo*, 105.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

El Cañuelo Historic Landscape (CL 550131)

Contributing

*Total:* 1 Site

El Cañuelo's Historic Landscape comprises a number of defining features which contribute to its significance to military and maritime history (see Photo 6). These include the site's topography, spatial relationship to Castillo San Felipe del Morro and the Bayamón River, its views of the San Juan Harbor, and its place within the waters of the San Juan Harbor. While today El Cañuelo is sited on a 3.4-acre parcel connected to the mainland, the building was originally surrounded by water, emplaced on the Island of El Cañuelo. El Cañuelo's location on a small island within San Juan Harbor was important to the fort's ability to deter maritime attacks on both San Juan and the Bayamón River in the seventeenth century. Being surrounded by water allowed for unimpeded views of approaching vessels and protected the fort against a landward assault. The fort was designed to mount attacks in all directions, thus defending against attacks from the south and west, via the shallows around Cabras Island or as ships entered the San Juan Harbor in the northeast. The fort's location, on the west side of San Juan Harbor opposite Castillo San Felipe del Morro, allowed it to function in concert with El Morro, providing cross-fire to protect the entrance to the harbor. Finally, El Cañuelo's low-lying topography, while ideal for damaging ships close to water level and at close range, ultimately limited its ability to adapt to changing military technology and strategy in the eighteenth and nineteenth centuries. The United States Army's 1939 construction of the causeway to Palo Seco and the landform which connects El Cañuelo with Cabras Island provided ready access to El Cañuelo from land, though the fort was not incorporated into twentieth-century harbor defense strategy.

#### *Statement of Integrity*

The El Cañuelo Historic Landscape retains many of the physical features and spatial relationships which defined it in the late seventeenth century. Though the fort is today connected to land, it continues to jut out into San Juan Harbor on its northeast and southeast elevations, providing views of Castillo San Felipe del Morro and San Juan Harbor which were historically crucial to its role as a support structure for El Morro. Views of the entrance to the Bayamón River are similarly possible, though the surrounding industrial landscape and the presence of the causeway between Cabras Island and Palo Seco disrupt this view. Despite these changes, the El Cañuelo Historic Landscape continues to have the ability to communicate its significance with respect to military history, maritime history, defensive architecture, ethnic heritage, and social history.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

## 8. Statement of Significance

### Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Property has yielded, or is likely to yield, information important in prehistory or history.

### Criteria Considerations

(Mark "x" in all the boxes that apply.)

- A. Owned by a religious institution or used for religious purposes
- B. Removed from its original location
- C. A birthplace or grave
- D. A cemetery
- E. A reconstructed building, object, or structure
- F. A commemorative property
- G. Less than 50 years old or achieving significance within the past 50 years

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

### Areas of Significance

Military History  
Maritime History  
Architecture  
Ethnic Heritage – Hispanic  
Social History  
Archeology – Historic, Non-Aboriginal

### Periods of Significance

1539–1945 – Criterion A (Maritime, Military History), Criterion C (Architecture), and Criterion D (Archeology – Historic, Non-Aboriginal)  
1539–1971 – Criterion A (Ethnic Heritage: Hispanic)  
1913–1971 – Criterion A (Social History)

### Significant Dates

1539: Construction begins at “*el morro*,” the future site of Castillo San Felipe del Morro.  
1586: Juan de Tejada and Bautista Antonelli survey Spain’s West Indies defenses.  
1591: Completion of El Morro hornwork and the cliff-top structure of Santa Elena Bastion.  
1625: Reconstruction of hornwork at El Morro; New tower at Santa Bárbara Bastion and Mercado Bastion; construction of first wood fortifications at El Cañuelo.  
1650: Completion of a two-decade campaign to complete a wall around the town of San Juan and a redoubt built at San Cristóbal Hill  
1792: Completion of a 27-year modernization campaign, as recommended by Alexander O’Reilly, implemented by Chief Engineer O’Daly, and completed by engineer Juan Francisco Mestre.  
1895: Spain begins to again modernize defenses at San Juan; new artillery is installed.  
1897: Demolition of eastern City Walls, including Santiago Ravelin and Santiago Gate.  
1898: Spanish-American War; United States bombards San Juan causing damage to forts.  
1918: Coast Artillery Command build rapid-fire gun batteries to fire over parapets.  
1940: Completion of a two-year WPA repair and reconstruction project.  
1945: Completion of the United States building campaign to prepare for World War II.

### Significant Person

\_\_\_\_\_  
\_\_\_\_\_

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

### Cultural Affiliation

Spanish

American

### Architect/Builder

Bautista Antonelli

Juan Bautista Antonelli (The Younger)

Thomas O'Daly

Alexander O'Reilly

Juan Francisco Mestre

### Statement of Significance Summary

San Juan National Historic Site is significant at the national level under Criterion A, for its contribution to Military History and Maritime History; under Criterion A on the state level for its contribution to Ethnic Heritage, and Social History; Criterion C, for its contribution to Architectural History; and Criterion D, in the area of Historic Non-Aboriginal Archeology, for information it has yielded and has the potential to yield that is important to Architectural History and Military History. The Historic District has multiple periods of significance: 1539–1945 (in the areas of Maritime History, Military History, Architecture, and Archeology - Historic, Non-Aboriginal), 1539–1971 (Ethnic Heritage - Hispanic), and 1913–1971 (Social History). The criterion, level(s) of significance, and area(s) of significance for each resource are noted in the list of contributing resources, above.

San Juan National Historic Site is significant at the national level under Criterion A in the areas of Military and Maritime History for its significance as a strategically important maritime and military base for two world powers, Spain and the United States of America. The Military and Maritime History period of significance (1539–1945) begins in 1539, when construction of the first Spanish redoubt at the *el morro* headlands was completed, and ends with the conclusion of World War II, after which the military use of the fortifications by the United States Army ended (though the army retained control of the fortifications until 1961). During the period of significance, the fortifications of San Juan National Historic Site played an important role in the military strategy of Spain, and later the United States, in the defense of each country's control of the island of Puerto Rico, maritime traffic, and commercial trade associated with the island and the Caribbean.<sup>299</sup>

<sup>299</sup> Spain and the United States were not in military conflict after 1898. The military role of the San Juan fortifications for the United States was with reference to the training of Puerto Rican infantry and preparation for potential conflicts associated with World War I and World War II.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

---

Name of Property

San Juan National Historic Site is significant at the national level under Criterion C as a well-preserved component of the system of colonial defensive architecture constructed by the Spanish Crown during the sixteenth through late nineteenth centuries and modified by the United States for its military defense system during the first half of the twentieth century. The period of Architectural significance (1539–1945) begins in 1539, when the first defensive structure within the Park was built on the *el morro* headlands, and ends in 1945 with the completion of architectural changes made by the United States associated with World War II.

San Juan National Historic Site is also significant at the state level under Criterion A in the area of Ethnic Heritage for its association with Hispanic cultural history in Puerto Rico and its role as an unparalleled symbol of Puerto Rican identity. Closely related to this is the Park's significance under Criterion A, on the state level, in the area of Social History for its association with the historic preservation movement in Puerto Rico, which sought to protect the cultural heritage of Puerto Rico through preservation of the San Juan fortifications and other resources. The period of significance for Ethnic Heritage (1539–1971) begins in 1539 with the earliest European construction projects within San Juan National Historic Site, which set in motion centuries of cultural interactions. The period of significance for Social History (1913–1971) begins in 1913, when a growing sense of Puerto Rican nationalist cultural identity and the increasing neglect of the fortifications on the part of the Army, led the territorial government of Puerto Rico to petition the United States Army for release the fortifications to the "People of Puerto Rico." The site thereafter was subject of numerous Puerto Rican cultural preservation laws and local activism for historic preservation throughout the twentieth century. The period of significance for both Social History and Ethnic Heritage continue through 1971, 50 years before this nomination. This end date is used as scholarly research is not yet available with respect to the contemporary importance of the fortifications in modern Puerto Rican ethnic heritage and social history.

San Juan National Historic Site is significant on the national level under Criterion D for Historic, Non-Aboriginal Archeology, in the areas of Military History, Maritime History, Ethnic Heritage, and Architecture. Archeological deposits at the Park have both yielded and have the potential to yield information important to our understanding of Spanish and American military and maritime history in Puerto Rico and information relevant to the architectural development of the San Juan fortifications. Additionally, archaeological research has the potential to shed light on the patterns of everyday life, cultural interaction, and social relationships experienced by the inhabitants of the fortifications. The period of significance (1539–1945) begins in 1539, with the earliest known historic occupation of the Park, when the Spanish began construction of Castillo San Felipe del Morro at the *el morro* headlands. The period of significance ends in 1945, with the end of the United States military building campaigns associated with World War II.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

---

Name of Property

## Narrative Statement of Significance

### Criterion A – Military History and Maritime History, 1539–1945

#### *Introduction*

San Juan National Historic Site is eligible for listing in the National Register of Historic Places (NRHP) on the national level under Criterion A in the areas of Military and Maritime History for its significance as a strategically important maritime and military base for two world powers, Spain and the United States of America, with a period of significance of 1539–1945. The island of Puerto Rico was the lynchpin in Spain’s New World mercantile empire from the sixteenth through the nineteenth centuries. Located at the natural maritime gateway to the land and resources of the Americas, Puerto Rico served as the vanguard of the Spanish Main. Construction at Castillo San Felipe del Morro began in 1539 and thereafter, the fortifications built at San Juan became one of the largest Spanish forts in the New World, among a suite of military outposts designed as a regional defensive network, and the scene of multiple international military conflicts as European powers vied for control of Caribbean maritime commerce and territory. When Spain’s network of fortified cities began to break down in the nineteenth century due to changes in new military technology and realignments in political allegiances, the strategic importance of the island of Puerto Rico remained, but the utility of its stone fortifications waned. After the Spanish-American War in 1897–1898, Puerto Rico became a territory of the United States of America. The United States also recognized the crucial military and maritime location of the fortifications at San Juan as the frontline in the defense of the region’s maritime commerce, as well as its political landscape. The significance of the San Juan fortifications in the military and maritime history of the region and Puerto Rico ends in 1945, with the completion of the United States’ preparation for World War II.<sup>300</sup>

#### *European Arrival and the First Spanish Settlement in Puerto Rico*

Before European colonization of Puerto Rico, the island was inhabited by the Taíno Indians, who called the island “Boriquén.” The first Europeans to visit the island were Christopher Columbus and Juan Ponce de León in 1493 when they briefly stopped for provisions and Columbus named it San Juan Bautista.<sup>301</sup> The island was quickly recognized for its beneficial location and configuration, as it was in the path of the northeast trade winds blown in from Africa to the West Indies and San Juan Bay offered a safe and readily defended harbor.<sup>302</sup>

---

<sup>300</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-1, 8-3, 8-23.

<sup>301</sup> Albert Manucy and Ricardo Torres-Reyes, *Puerto Rico and the Forts of Old San Juan*. (Riverside, CT: The Chatham Press, 1973), 23.

<sup>302</sup> National Park Service, *The Forts of Old San Juan*. (Washington, D.C.: National Park Service, 1996), 7.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

The Spanish Crown named Don Fray Nicolás de Ovando as the Royal Governor over the lands discovered by Columbus and sought out Ponce de León to colonize the island. Ponce de León, from a powerful family in the political and religious networks within Spain, began the colonization project in 1508 in what is today the municipality of Guaynabo. Colonization of Puerto Rico was undertaken initially as a defensive move; once in control of Puerto Rico, the Spanish could more effectively mount defenses of Hispaniola, to the west, from attacks by Carib Indians. In addition to providing a military stronghold, the promise of gold deposits helped motivate early settlement of the island.<sup>303</sup> Ponce de León named the harbor “puerto rico,” meaning rich or precious port, and settled at Caparra, about two miles south of present-day San Juan. This location was chosen for its access to San Juan Bay, pasture, wood, and areas for farming in addition to being in close proximity to the gold mines.<sup>304</sup>

Caparra was quickly recognized as an unhealthy settlement site. Located within a low-lying, marshy area, the mangrove swamps around the settlement were a breeding ground for mosquitoes.<sup>305</sup> The inhabitants voiced their concerns as early as 1515 and petitioned the Spanish Crown to remove the village to the Islet of San Juan.<sup>306</sup> Over the objections of Ponce de León, Rodrigo de Figueroa, the crown’s envoy, reported the poor conditions of the settlement in 1519 and recommended the move to present-day San Juan.<sup>307</sup> De Figueroa’s study of the region produced the first known map of the Islet of San Juan (Figure 1).

San Juan Islet offered a number of natural features which made it a more defensible and healthful location. With steep cliffs to the west, north, and south, the topography and elevation of the settlement offered good visibility of approaching ships as well as invaders approaching from the landward, easterly, side of the islet.<sup>308</sup> The location of the early settlement itself, along a slope on the south side of the islet, allowed for good drainage and more healthful conditions than those found at Caparra.

The village was moved to San Juan between 1519 and 1521, the same year Ponce de León died in Havana. The settlement grew slowly.<sup>309</sup> While no fortifications were built immediately, the Ponce de León family was granted land to build a house, and Casa Blanca was completed in 1523. Originally designed as a dwelling, the building was repurposed as a military stronghold in

<sup>303</sup> Manucy and Torres-Reyes, *Puerto Rico*, 23.

<sup>304</sup> Manucy and Torres-Reyes, *Puerto Rico*, 23; Pabón-Charneco, *Old San Juan National Register Nomination*, 8-4.

<sup>305</sup> Edward A. Hoyt, *A History of the Harbor Defenses of San Juan P.R. Under Spain: 1509-1898*. (San Juan: Antilles Coastal Artillery Command), 29.

<sup>306</sup> Rudolph D. Adams Van Middledyk, *The History of Puerto Rico: From the Spanish Discovery to the American Occupation*. (New York: Appleton and Company, 1903), 275.

<sup>307</sup> Pabón-Charneco, *Old San Juan National Register Nomination*, 8-4; Topographic map, “Plano de la mudanza de la ciudad de Puerto Rico a la isleta 1519.” by Rodrigo de Figueroa, Archivo General de Puerto Rico Mapoteca, Leg. Board 176, R. 3. San Juan, Guaynabo. Accessed 1 Jan 2020, Permalink: <https://archivonacional.com/PL/1/1/1779>.

<sup>308</sup> NPS, *The Forts of Old San Juan*, 7.

<sup>309</sup> Pabón-Charneco, *Old San Juan National Register Nomination*, 8-11.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

later years.<sup>310</sup> The initial lack of fortifications did not go unnoticed and the potential threats of nearby Native Taíno and foreign military incursions remained in the consciousness of the colonial government. In 1529, the colonial council advised the King of Spain, Charles I (who also held the title of Charles V, Emperor of the Holy Roman Empire) to “Let the port be fortified or the island be deserted.”<sup>311</sup>

Fortification of the settlement began with the construction of La Fortaleza, built between 1533 and 1539.<sup>312</sup> This stone fort was primarily oriented toward the landward approach to the city, even as it was also intended to defend the San Juan Bay. Its orientation reflects the driving motivation for its construction: protection against attacks from the Native Taíno and the Carib people who were increasingly coming to Puerto Rico from the Lesser Antilles to raid the Spanish settlement. La Fortaleza had a tower and embrasures (battlement openings for firing arms) oriented toward the bay, but these could not act as a deterrent to ships, as the fort could not be seen from the mouth of the bay. The strategic value of the building was therefore limited, and sixteenth-century historian Gonzalo Fernández de Oviedo commented after visiting San Juan that “blind men only could have chosen such a place for a fortress.”<sup>313</sup> The threat of foreign powers trying to take over the island would require a seaward-facing defense. Oviedo and others argued that the rocky headland (*el morro*), on the east side of the mouth of San Juan Bay, represented a more defensible position as it provided a commanding view of the only entrance to the bay.

#### *Construction Begins at El Morro --- Spanish I, 1539–1760 (Early Spanish)*

Following the construction of La Fortaleza, approval for a second fort was granted in 1539.<sup>314</sup> This fort, to be located at the western headlands of the San Juan Islet, promised to be in a more strategic position to defend the city, the port, and the maritime interests of the Spanish Crown.

First described in 1554, Castillo San Felipe del Morro (also, “El Morro”) included a stone masonry tower and a lower stone battery platform, at the harbor entrance. A portion of the tower structure survives today, enclosed within Santa Bárbara Bastion, its lower wall, and embrasures still visible from inside the bastion.<sup>315</sup> The following year, in 1555, the Spanish Crown delivered eight cannons to the island. These munitions were to be split between La Fortaleza and El Morro.

<sup>310</sup> Hoyt, *Harbor Defenses of San Juan*, 29.

<sup>311</sup> Hoyt, *Harbor Defenses of San Juan*, 30.

<sup>312</sup> Cecil N. McKitham, *La Fortaleza. National Register of Historic Places Nomination Form*, August 25, 1985. (United States Department of the Interior, Washington, D.C.: National Park Service, 1985).

<sup>313</sup> Hoyt, *Harbor Defenses of San Juan*, 34.

<sup>314</sup> Hoyt, *Harbor Defenses of San Juan*, 35; Berkowitz, *Fortifications: Vol. I – Summaries*, 29.

<sup>315</sup> Hoyt, *Harbor Defenses of San Juan*, 35; Berkowitz, *Fortifications: Vol. I – Summaries*, 29.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

This set of cannons represents the first instance of high-powered artillery available for use at the forts.<sup>316</sup>

By the last quarter of the sixteenth century, tensions between Spain and other European powers, most notably England, reached a fever pitch. England's Queen Elizabeth I disrupted the tenuous truce between the two countries and endorsed corsair raids of Spanish ships in the West Indies. These heightened tensions motivated Spain to make its first moves at designing a multi-site, coordinated defensive strategy by building a network of fortifications to defend its holdings in the New World (Figure 2).<sup>317</sup> Carried out in the 1580s and 1590s, the new installations were designed as an integrated system by Bautista Antonelli.<sup>318</sup> Military architects from this point forward were focused acutely on the desire of other European countries to disrupt Spain's hold on the Caribbean. Raids visited upon Spanish ships and settlements by the fleets of competing countries and pirates alike became a more pressing threat than that posed by attacks from Native peoples in the region.<sup>319</sup> Both divine protection and military force were incorporated into the defenses of the settlement at San Juan. A 1575 panoramic view of the Islet of San Juan from the north shows the tower of El Morro and La Fortaleza equipped with canons, and a series of chapel outposts at locations along the cliffs (Figure 3).

The increased danger to Spanish imperial power in the Caribbean was recognized by colonial officials such as Diego Meléndez de Valdés, who was named Captain-General of Puerto Rico in 1582. In 1585, the Spanish settlements of St. Augustine, Cartagena, and Santo Domingo were attacked by Sir Francis Drake.<sup>320</sup> In anticipation of a similar attack on Puerto Rico, Spain's government took a number of steps to fund and administer the protection of its defenses throughout the Caribbean and the New World. The year 1586 brought the establishment of the Junta de Puerto Rico (Board of Puerto Rico), and institution of the *situado mejicano*, which required that the treasury of the Viceroyalty of New Spain supply funds to Puerto Rico and other settlements to help finance their military and administrative roles.<sup>321</sup> It is within the context of foreign attacks throughout the Spanish Main that Captain Meléndez de Valdés ordered that construction begin on the early defenses at Santa Elena Bastion in 1586.<sup>322</sup> Additionally, the early stone walls were built to enhance the defensive qualities of the natural cliffs.<sup>323</sup>

<sup>316</sup> Hoyt, *Harbor Defenses of San Juan*, 36

<sup>317</sup> Bearss, *HSR: Historical Data: 1898-1958*, 12.

<sup>318</sup> Bearss, *HSR: Historical Data: 1898-1958*, 12; Ray F. Broussard, "Bautista Antonelli: Architect of Caribbean Defense," *The Historian* 50, no. 4 (1988): 507-520.

<sup>319</sup> United Nations Educational, Scientific, and Cultural Organization [UNESCO], *La Fortaleza and San Juan Historic Site in Puerto Rico. World Heritage Council Nomination Documentation*. Inscription on 12 September 1983. (World Heritage Council), 18.

<sup>320</sup> Hoyt, *Harbor Defenses of San Juan*, 37.

<sup>321</sup> Hoyt, *Harbor Defenses of San Juan*, 38.

<sup>322</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 24; UNESCO, *La Fortaleza and San Juan Historic Site*, 18.

<sup>323</sup> Hoyt, *Harbor Defenses of San Juan*, 36.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Also in 1586, Spain's government under King Philip II commissioned Maese Juan de Tejada, Cuba's Maestre de Campo (Master Field Marshal), and engineer-architect Bautista Antonelli to survey all of Spain's defenses in the West Indies.<sup>324</sup> Bautista Antonelli came from a prominent family of Italian military engineers and had assisted in fortification projects in several Mediterranean cities.<sup>325</sup>

By 1587, the team of engineers and military strategists had composed a comprehensive plan, with the aid of King Philip II's chief engineer Tiburcio Spanoqui. The defensive plan involved the coordination of a network of fortifications at San Juan, Santo Domingo (present-day Dominican Republic), Santa Marta and Cartagena de Indias (present-day Colombia); Nombre de Dios, Portobello, the Chagres River, and Panama (present-day Panama); and La Habana (present-day Cuba).<sup>326</sup> After surveying the headlands, Antonelli and Tejada proposed to build "a strong Fort" at El Morro, defensive walls around the city, and a defensive structure in the Boquerón area.<sup>327</sup> Antonelli and Tejada requested labor and materials for the hornwork, a type of fortification consisting of a pair of demi-bastions with a curtain wall connecting them, and other structures they planned for the site, making them the "original designers of the first complete fort which stood at El Morro."<sup>328</sup> Captain Diego Meléndez de Valdés began construction of the Antonelli and Tejada plans in the 1580s, Captain Pedro de Salaçar completing the hornwork by 1591.<sup>329</sup> A circa 1591 plan for the fortifications illustrates a dual bastion and ravelin arrangement comprising the western side of El Morro (Figure 4).

The newly-redesigned defenses of El Morro faced its first seaward assault when Queen Elizabeth I of England instructed Sir Francis Drake and Sir John Hawkins to seize Panamá and Puerto Rico in 1595. Drake made plans to attack Puerto Rico after learning that a Spanish galleon, the Santa María de Cabogena, was damaged and shored up there. In the months leading up to this assault, however, Spain actively prepared a defense; mustering 1,500 men at arms to greet Drake and dispatching Admiral Pedro Tello de Guzmán from Spain to retrieve the cargo from the damaged galleon.<sup>330</sup> After sending sounding parties to the area near the present-day location of El Cañuelo on November 22, Drake attacked on November 23, setting fire to a Spanish frigate. Following this, the Spanish, under the direction of Admiral Tello de Guzmán and with the assistance of the crew from the crippled galleon, bombarded the English with firepower launched from the

<sup>324</sup> Hoyt, *Harbor Defenses of San Juan*, 38.

<sup>325</sup> Anne W. Tennant, "Architect of a King's defense." *Americas* 55, no.5 (2003): 6-15.

<sup>326</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 18.

<sup>327</sup> Pabón-Charneco, *Old San Juan National Register Nomination*, 8-175.

<sup>328</sup> Hoyt, *Harbor Defenses of San Juan*, 39-40; 1591 "La planta y modelo como se a fortificado y puesto en defensa la çidadela y puerto de San Juan de Puerto Rico, por el capitán Pedro de Salaçar."

(Archivo General de las Indias, MP-Santo\_Domingo, 11, Seville, Spain). Accessed 1 January 2020:  
<http://pares.mcu.es/ParesBusquedas20/catalogo/description/22983>.

<sup>329</sup> SARQGIS, *Archaeological Investigations at Santa Elena Gunpowder Magazine*, 27-28.

<sup>330</sup> Hoyt, *Harbor Defenses of San Juan*, 42-45.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

remaining four frigates, El Morro, and Santa Elena Bastion. The English withdrew and after lingering several more days, left the area entirely by November 25, 1595.<sup>331</sup>

The next major assault on the Spanish defenses at Puerto Rico was made by Sir George Clifford, Earl of Cumberland in June of 1598. This attack differed markedly from Drake's earlier attempt. Unlike Drake, Cumberland's expedition was explicitly directed at the seizure of Puerto Rico, and he moved swiftly. The Puerto Rican garrison had fewer men, numbering between 300 and 400 soldiers.<sup>332</sup> Cumberland chose to approach the fortifications indirectly, from the eastern end of San Juan Islet, where he attacked the bridge crossing the San Antonio Channel at El Boquerón: Puente de San Antonio (San Antonio Bridge). Cumberland persisted and he succeeded in seizing the bridge on his third attempt. After this, his men marched to town and attempted to compel the surrender of the soldiers who had taken refuge in El Morro. The Spanish garrison surrendered at the end of June of 1598, beginning two months of English rule at San Juan.<sup>333</sup> English control ended on August 24, 1598, after an epidemic of dysentery ravaged Cumberland's troops, resulting on him abandoning the town, followed soon after by his second in command, Sir John Berkley.<sup>334</sup>

Following Cumberland's successful attack and temporary seizure of San Juan in 1598, immediate plans for improving island fortifications were put into action in 1599. Major changes included the reconstruction of the hornwork on the landward side of El Morro in the first decades of the seventeenth century. Austria Bastion and Ochoa Bastion were reconstructed as were a connecting curtain wall and an additional wall connecting these to the Mercado Bastion (a.k.a. Tejada Bastion).<sup>335</sup> This period also saw the construction of the first wooden fortifications at El Cañuelo. Importantly, the eastern end of the islet, which had been breached by Cumberland, was improved between 1608 and 1620 with the construction of San Antonio Bridge and San Antonio Fort, both built of stone.<sup>336</sup> At Castillo San Felipe del Morro, a new tower was constructed at Santa Bárbara Bastion and a wall was built to connect it to the recently-constructed Mercado Bastion.<sup>337</sup> A 1625 plan map shows the hornwork and the defenses as they were before the next attack on San Juan (Figure 5).

The building campaigns of the early seventeenth century were put to the test during the invasion of the Dutch in the autumn of 1625.<sup>338</sup> This attack exposed the weaknesses of the defensive

<sup>331</sup> Hoyt, *Harbor Defenses of San Juan*, 48–49.

<sup>332</sup> Hoyt, *Harbor Defenses of San Juan*, 51–53.

<sup>333</sup> Hoyt, *Harbor Defenses of San Juan*, 57; Regarding the date that El Morro was surrendered, Hoyt uses the date of June 29<sup>th</sup> 1598. Historian Adolfo de Hostos identifies the date as June 28<sup>th</sup> 1598, in his book *Ciudad Murada*.

<sup>334</sup> Hoyt, *Harbor Defenses of San Juan*, 56–57; Cayetano Coll y Toste, "La Toma de la Capital por Cumberland." *Boletín Histórico de Puerto Rico*, 5 (1918, Reprint 1968): 57.

<sup>335</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 29.

<sup>336</sup> Hoyt, *Harbor Defenses of San Juan*, 58–60; UNESCO, *La Fortaleza and San Juan Historic Site*, 19.

<sup>337</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 29.

<sup>338</sup> Hoyt, *Harbor Defenses of San Juan*, 60.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

network, which had been reinforced to face the types of offensive tactics used by Drake and Cumberland — a direct seaward attack or a land-based attack on the eastern front — but did not afford much protection for the bayside entrance to the city.<sup>339</sup> The Dutch siege began with hundreds of troops and 17 ships in September of 1625 when the fleet managed to enter San Juan Bay without losing a ship, despite artillery fire from El Morro. The Spaniards, led by Governor Juan de Haro, only had approximately 330 men in their garrison. The enemy, under the direction of General Bowdoin Hendricks, anchored and soon occupied the town of San Juan with 700 to 800 men while the Spanish military entered El Morro to prepare for a siege. Over the next three weeks, the Dutch and Spanish exchanged fire across the Esplanade as the Dutch attempted to take control of El Morro.<sup>340</sup> Hendricks also tried to take other portions of the island, but he was driven off by Captain Botello and native Puerto Rican militia during his expedition up the Bayamón River in mid-October. While the Dutch did take control of El Cañuelo early in the siege, Captain Botello and the Puerto Ricans retook the fort in mid-October.<sup>341</sup> Finally, on October 21<sup>st</sup> Hendricks threatened to burn the city if the garrison did not surrender. Upon refusal of the surrender, the Dutch set fire to the town, destroying 100 buildings.<sup>342</sup> The Spaniards pursued the Dutch and continued to fire upon them until they withdrew to their ships on November 1, 1625. The Dutch left Puerto Rico altogether on the following day under fire from the Spanish batteries.<sup>343</sup>

The Dutch invasion and burning of the city — something which had not occurred in previous attacks — awakened in the Spanish Crown a renewed recognition of Puerto Rico's role as the lynchpin in the Spanish New World Empire. This new urgency was further fueled by a changing political landscape throughout the Caribbean and South America. Countries such as England, France, the Netherlands, and Denmark had laid claim to islands and territories throughout the New World even as Spain held onto its network of fortifications. In 1645, King Philip IV emphasized the island's strategic significance when he asserted that Puerto Rico "is the front and vanguard of all my West Indies, and consequently the most important of them all — and the most coveted by my enemies."<sup>344</sup>

The Dutch invasion and the burning of the city spurred Spanish authorities to build the first defensive wall around the city. While individual bastions, small forts, chapels, and El Morro had formed the defensive system before, after the 1625 invasion, efforts were made to physically connect these components. Improvements to the defenses of San Juan following the Dutch attack were begun under the direction of Governor Enrique Enríquez de Sotomayor (1631–1635), were

<sup>339</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 20.

<sup>340</sup> Hoyt, *Harbor Defenses of San Juan*, 61–64.

<sup>341</sup> Hoyt, *Harbor Defenses of San Juan*, 65–66.

<sup>342</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 21.

<sup>343</sup> Hoyt, *Harbor Defenses of San Juan*, 65–67; Juan Manuel Zapatero, *La Guerra del Caribe en el Siglo XVIII*. (San Juan: Instituto de Cultura Puertorriqueña, 1964).

<sup>344</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 20.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

continued under Governor Iñigo de la Mota Sarmiento (1635–1641) and completed by Governor José Novoa y Moscoso (1656–1661). The circumvallation, termed the “Second Defensive System” by historian Edward Hoyt, involved the construction of walls, bastions, and gates in addition to the beginning of construction efforts at Castillo San Cristóbal.<sup>345</sup> Between 1630 and 1650, the town of San Juan was surrounded with a stone wall and bastion system. Construction began on Castillo San Cristóbal in 1634 in order to reinforce the eastern defenses of the town, heretofore protected by San Antonio Bridge and the Boquerón Battery defenses further east.<sup>346</sup> Construction began with a small redoubt at the site, and was directed by military architect Juan Bautista Antonelli (the Younger), son of the designer of Castillo San Felipe del Morro, Bautista Antonelli.<sup>347</sup> The earliest known drawing of Castillo San Cristóbal, authored by Venegas Osorio, dates to 1678 and depicts the building’s major features (Figure 6). The small fort suffered from poor construction, a harsh environment, and by 1731 was found to be in a state of decay.<sup>348</sup> While some of the early features remain visible today, such as the curve of the original El Caballero Battery wall, most were absorbed into the Castillo San Cristóbal complex that was constructed in the late eighteenth century.

### *Eighteenth-Century Fortification Modernization Project*

During the first half of the eighteenth century, political alliances within Europe were reconfigured as Spain and France aligned against England. Enemy European powers did not pursue Puerto Rico during this time and as a result, the garrison at San Juan was relatively small and the defense fell into disrepair.<sup>349</sup> By mid-century, however, it became apparent that unless Spain improved its defenses, Puerto Rico could be lost to the British, as was the case in Havana, Cuba in 1762.<sup>350</sup> In 1759, Puerto Rico’s Governor Esteban Bravo de Rivero appealed to the Spanish government that the defenses at San Juan were not adequate to withstand modern armies and naval fleets.<sup>351</sup> After the Seven Years War (1756–1763), the need for improved defenses in Puerto Rico was again recognized by the Spanish Crown when Charles III ascended to power. Crucially, this leader “accepted concepts of defense involving the strengthening of fortifications and the organization of armies in the colonies to assist in their defense.”<sup>352</sup>

<sup>345</sup> Hoyt, *Harbor Defenses of San Juan*, 69.

<sup>346</sup> Hoyt, *Harbor Defenses of San Juan*, 69.

<sup>347</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 21.

<sup>348</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 23.

<sup>349</sup> Hoyt, *Harbor Defenses of San Juan*, 75–76; María M. Alonso and Milagros Flores, *The Eighteenth Century Caribbean and the British attack on Puerto Rico in 1797*. (San Juan: National Park Service, Publicaciones Puertorriqueñas, 1997), 159.

<sup>350</sup> Alonso and Flores, *Eighteenth Century and British Attack*, 160.

<sup>351</sup> Hoyt, *Harbor Defenses of San Juan*, 77.

<sup>352</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 21.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

In 1765, Charles III appointed Irishman Alexander O'Reilly as Field Marshal to survey the defenses and reform the soldiers stationed at San Juan.<sup>353</sup> Engineer Thomas O'Daly was appointed to design and implement a comprehensive defensive plan for San Juan. The resulting report painted the San Juan harbor defenses in a poor light.<sup>354</sup> O'Reilly's report highlighted the strategic location of Puerto Rico, as the point at which the trade winds naturally brought ships to the area, making it "the best place from which to assist, or attack, the mainland of Spanish America."<sup>355</sup> O'Reilly's appraisal pointed out San Juan's reliance on "passive" defenses such as walls, in contrast to active defenses which better enable attack, made the fortifications vulnerable to foreign invaders. A 1766 plan of the port and city of Puerto Rico (today San Juan) illustrates the seaward focus of most of the fortifications at San Juan as well as some of its vulnerabilities, such as the inlet just east of El Morro (Figure 7). Charles III appointed Thomas O'Daly, Chief Royal Engineer, to direct the improvements and prepare plans.<sup>356</sup> Charles III approved the O'Reilly-O'Daly proposal in 1765, declaring San Juan a "defense of the first order."<sup>357</sup> In addition to O'Reilly and O'Daly, Juan Francisco Mestre was also a key figure in executing the transformation of the fortifications beginning in the 1780s after O'Daly's unexpected death.

The O'Reilly-O'Daly proposal, as executed by O'Daly and Mestre, laid out needed updates to the defenses at Castillo San Felipe del Morro, a vast construction project at Castillo San Cristóbal, and improvements to the wall system and El Cañuelo. At Castillo San Felipe del Morro, changes were wide-ranging and dramatic, expanding the fort's capacity for active assault on incoming ships and land-based attacks alike. The scale of the existing fort ballooned with the reinforcement and expansion of the walls and the raising of terrepleins throughout the fort, resulting in the creation of an eight-level complex which masked the rock outcropping it was built upon. At each level, embrasures pointed outward toward the sea or inward toward the El Morro Esplanade, to the southeast. Earlier batteries, such as the Santa Bárbara Battery, were enveloped within much larger and expansive structures. Additionally, it was during this period when features such as the Great Wall, the main staircase, and the Ochoa, Austria, and Carmen Bastions were increased in scale, taking on their current form. More detail on the specific changes undertaken at Castillo San Felipe del Morro during this period is presented in the Architecture Statement of Significance, below.

New regiments as well as prisoners were sent to help with the labor needed to complete this building campaign. O'Daly's program extended from 1776 to 1783, with some financing covered

<sup>353</sup> O'Reilly and O'Daly were of Irish descent but left Ireland to join the Spanish military. O'Daly in particular studied at the Academy of Mathematics in Barcelona before going on to serve as an engineer for the Spanish military. Nuria Hinajeros Martín, "El ingeniero Tomás O'Daly en Puerto Rico" In *América: Cultura visual y relaciones artísticas*. (eds.) Rafael López Guzmán, Yolanda Guasch Marí, y Guadalupe Romero Sánchez. (Spain: Universidad de Granada, 2015), 50.

<sup>354</sup> Hoyt, *Harbor Defenses of San Juan*, 77–80.

<sup>355</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 21.

<sup>356</sup> Hoyt, *Harbor Defenses of San Juan*, 77.

<sup>357</sup> Alonso and Flores, *Eighteenth Century and British Attack*, 161.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

by the *situado*. While most construction was completed by 1783, additional projects were taken on in the 1780s and 1790s, including the construction of the Castillo San Felipe del Morro Sally Port entrance and its masonry bridge over the dry moat and a new battery at the water level, lower than the previous structure at this location.<sup>358</sup>

Just as El Morro's capacity for countering a maritime assault on San Juan was widely expanded through the execution of the O'Reilly-O'Daly proposal, Castillo San Cristóbal (also, San Cristóbal) was also modernized between 1765 and 1785 in an attempt to better protect against landward attacks.<sup>359</sup> The vertical defenses of El Morro contrasted sharply with the horizontal depth of the outworks defenses at San Cristóbal, which sprawled eastward from Castillo San Cristóbal. As one moved eastward, "each component of the fortifications was protected by the slightly lower defense fronting it" extending all the way to Fort San Antonio and San Gerónimo at the eastern end of the islet.<sup>360</sup>

Engineers O'Daly and Mestre were eager to begin implementing the plan for Castillo San Cristóbal in 1766. When approval for the plan was received on March 10 that year, construction had already been underway for three months. The redesign of San Cristóbal included limited demolition and extensive construction as seen on the 1776 map created by O'Daly (Figure 8).<sup>361</sup> Chief among the changes was the deepening of the moat, reinforcement and heightening of the walls, repair of the curtain wall, and the construction of a tunnel system and a terreplein above. Beyond these, there was also the construction of embrasures and magazines, the creation of the glacis, building a new Cisterns below the fort's plaza, Officer's Quarters (Castillo San Cristóbal), North Casemates, ramps (including the Main Ramp), and new outworks, including San Carlos Ravelin, Fort El Abanico Ravelin, Santa Teresa and La Princesa batteries, La Trinidad Counterguard, and Santiago Ravelin. The transformation of San Cristóbal was largely complete by 1790 and San Juan had become "one of the premier fortified cities in the hemisphere" (Figure 9).<sup>362</sup>

Beginning in 1790, Europe was gripped by conflict in the wake of the French Revolution.<sup>363</sup> To stop the spread of revolution, Britain and Spain joined an anti-French coalition in 1793 but after French victories in 1794 at Fleurs (against the Austrians) and Black Mountain (against the Spanish), Spain joined forces with France. This alliance, on the eve of the Anglo-Spanish War (1796–1808) resulted in renewed threats for the garrison at San Juan from the British. By 1797,

<sup>358</sup> Hoyt, *Harbor Defenses of San Juan*, 78–83.

<sup>359</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 23; UNESCO, *La Fortaleza and San Juan Historic Site*, 22.

<sup>360</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 11.

<sup>361</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 23–24.

<sup>362</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 22.

<sup>363</sup> Hoyt, *Harbor Defenses of San Juan*, 81.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

virtually all French Islands in the Caribbean had been turned over to the British; only Puerto Rico and Cuba remained under Spanish control.<sup>364</sup>

The year 1797 marked a short-lived British siege of San Juan under the leadership of Sir Ralph Abercromby. The British fleet consisted of between 11 and 68 armed vessels; British accounts list 11 vessels while Spanish accounts, including that of Governor Ramón de Castro, describe between sixty and sixty-eight vessels.<sup>365</sup> The invaders brought with them approximately 600 cannons and 3,910 soldiers.<sup>366</sup> The Spaniards were also well-armed and substantial, comprised of 4,029 men and 415 pieces of artillery. Governor Don Ramón de Castro ordered extensive preparatory and defensive measures be taken as early as 1796 when word was received that war had broken out in England. This preparation included mustering hundreds of militia to add to the 1870 infantry and 300 horses already part of the Spanish forces.<sup>367</sup>

The English, under the command of General Ralph Abercromby, mounted a two-pronged attack on the Spanish in April of 1797. England's strategy was to attempt to isolate the Islet of San Juan from the rest of Puerto Rico by attacking from the east while also making attempts to cut off the Spanish from their naval defense ships by establishing a blockade at the mouth of San Juan Bay. On the eastern end of the islet, opposite the San Antonio Bridge, the English built a battery at the Condado called "Cerro del Condado" and one on the higher ground of Alto de Olimpo (also, Monte del Rodeo; today's Miramar), overlooking the bridge.<sup>368</sup> From these positions, they attempted to mount an attack by firing grenades and cannons beginning on April 18, 1797; however, they were quickly repulsed by counterfire from the fort at the San Antonio Bridge and San Gerónimo. The Spanish raided the enemy batteries on April 24, followed by an English bombardment of San Antonio Bridge and San Gerónimo which continued intermittently until the English withdrew on the night of April 30–May 1, 1797. After making little headway near San Antonio Bridge, the English mounted an additional battery at Miraflores Island (today's Isla Grande area) to the southwest on April 25, 1797. When the English opened fire from this location on April 28, they were greeted with a substantial bombardment which lasted several days. After widespread damage to their defenses, the English abandoned the post.<sup>369</sup> They were

<sup>364</sup> Juan Blanco, "A History of the Formative Influence on the Development of the System of Fortification of San Juan de Puerto Rico: 'Plaza Marítimo Militar' and 'Capitanía General,' Between 1493 and 1898." (Copyright Juan Blanco, no date [circa 1988]), 281–283.

<sup>365</sup> British sources, including Admiral Harvey's log, list only 11 vessels as being involved in the attack on Puerto Rico; however, Spanish sources attest to a much larger force --- between 60 and 68. It may be that the scale of the fleet was somewhere between these two counts; Alonso and Flores, *Eighteenth Century and British Attack*, 212; Hoyt, *Harbor Defenses of San Juan*, 83–94.

<sup>366</sup> Alonso and Flores, *Eighteenth Century and British Attack*, 157, 180–181, 217, 258.; Hoyt, *Harbor Defenses of San Juan*, 83–94.

<sup>367</sup> Zapatero, *La Guerra del Caribe en el Siglo XVIII*, 417; Alonso and Flores, *Eighteenth Century and British Attack*, 170–174.

<sup>368</sup> Alonso and Flores, *Eighteenth Century and British Attack*, 186–188.

<sup>369</sup> Hoyt, *Harbor Defenses of San Juan*, 91.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

again repulsed from their other positions by the fire power from both floating batteries and the Spanish forts. The English mounted multiple, smaller scale, assaults by sea beginning with the blockade of the San Juan Harbor on April 17. Shortly thereafter, the English scouted El Cañuelo on April 19, but were repulsed by fire power from El Morro. Other maritime attacks were attempted at San Gerónimo and Punta Salinas. The British withdrew during the night of April 30-May 1, 1797.<sup>370</sup> In the wake of the English attack, Governor Ramón de Castro prepared a report on the condition of the fortifications; San Gerónimo and San Antonio Bridge were rebuilt.

### *The Nineteenth Century: Peace and Obsolescence*

The century between the British attack of 1797 and the American attack of 1898 was relatively peaceful, and the town of San Juan, encircled on all sides by fortifications, continued to grow. Within the context of this relative peace, Spain made some improvements to the city's fortifications. The San Antonio Bridge and the fort at San Gerónimo were rebuilt and the Second Defense Line, east of San Cristóbal, was built between 1798 and 1800.<sup>371</sup> This was also a period of regular repair and maintenance at the fortifications, and of routine upgrading of the artillery and gun emplacements (Figure 10).<sup>372</sup> In 1810, the revolution in Mexico resulted in that country's independence from Spain and the end of the *situado mejicano* which had funded much of the construction and maintenance of defenses at San Juan and other Spanish forts before that time.<sup>373</sup> After 1810, Puerto Rico was primarily responsible for financing improvements to the defensive works.

While international peace prevailed, within Puerto Rico the Autonomist Movement, which advocated home rule, began to create discord on the island beginning in the mid-nineteenth century. Limited to the space within the city walls, the residents of San Juan became increasingly frustrated with overcrowding and continually called for the expansion of the city and the dismantling of the now-obsolete walls. In 1880, the bastions along the north wall, except San Antonio Bastion, were decommissioned as military posts.<sup>374</sup> Also during this period, there was an increasing recognition on the part of the United States of the need to secure territory in the Caribbean Sea in order to gain access to the Panama Canal.

Anticipating a potential attack, in 1895 Spain began to modernize defenses at San Juan, installing new longer-range artillery at many of the bastions as well as at Castillo San Cristóbal and Castillo San Felipe del Morro.<sup>375</sup> The guns installed at these locations incorporated late

<sup>370</sup> Hoyt, *Harbor Defenses of San Juan*, 92–94.

<sup>371</sup> NPS, *The Forts of Old San Juan*, 72.

<sup>372</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 29.

<sup>373</sup> Hoyt, *Harbor Defenses of San Juan*, 97.

<sup>374</sup> Hoyt, *Harbor Defenses of San Juan*, 98.

<sup>375</sup> Hoyt, *Harbor Defenses of San Juan*, 99–100.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

nineteenth-century military innovations such as the fixed barbette emplacement, improved explosives, and new gun technology as a result of improvements in metallurgy and machine tools.<sup>376</sup> This artillery was oriented northward toward the Atlantic Ocean, and at the mouth of San Juan Bay. The development of large ocean-going battleships with long-range guns mounted on their decks brought the prospect of foreign attacks from ever longer distances.

In April of 1898, the United States declared war on Spain, in support of the Cuban home rule movement.<sup>377</sup> At that time the military reserves in Puerto Rico numbered 18,000, including 8,000 well-disciplined veterans---5,000 infantry; 700 artillerymen; and 2,300 other corps.

Approximately 43 pieces of artillery were held by the Spanish, none of which were rapid fire.<sup>378</sup> Admiral William Sampson of the United States Navy approached San Juan Harbor on April 29, seeking to intercept the Spanish flotilla of Admiral Pascual Cervera. Reports had indicated that Cervera would stop at San Juan on his way to Cuba to break the United States blockade there. While no flotilla ended up stopping at San Juan, on May 12, Sampson ordered the bombardment of the city. The Spanish answered with artillery fire from batteries on land and the exchange lasted three hours (5am – 8 am), after which Sampson ordered his fleet to cease firing on the city.<sup>379</sup> No further military conflicts took place at San Juan during the Spanish-American War. On July 25, American troops landed at Guánica under the leadership of Nelson A. Miles and the American armies spread out over the island.<sup>380</sup> On August 12, an armistice was signed between the United States and Spain and on October 18, 1898, Spain turned over all its Puerto Rican territory, including San Juan, to the United States.<sup>381</sup>

The history of the United States' control of the fortifications on the Islet of San Juan after the Spanish-American War and through World War II (1898–1945) was documented in 2016 as part of “Additional Research on World War II Era Historic Resources,” which addressed resources not previously documented in the unsigned San Juan National Historic Site National Register Nomination of 1974.<sup>382</sup> The history presented below summarizes the 2016 documentation and secondary sources related to the era.

### *Early Twentieth-Century Changes*

<sup>376</sup> Jeremy Black, *War in the Nineteenth Century: 1900-1914*. (Malden, MA: Polity Press, 2009), 88–92.

<sup>377</sup> Fernando Picó, *History of Puerto Rico: A Panorama of Its People*. (Princeton: Markus Wiener Publishers, 2014), 233.

<sup>378</sup> Ángel Rivero Méndez, *Crónica de la guerra hispano-americana en Puerto Rico* (Madrid: Sucesores de Rivadeneira (s.a.) artes gráficas, 1922), 46-47, 57.

<sup>379</sup> Hoyt, *Harbor Defenses of San Juan*, 103.

<sup>380</sup> Picó, *History of Puerto Rico*, 235.

<sup>381</sup> Hoyt, *Harbor Defenses of San Juan*, 104; Picó, *History of Puerto Rico*, 236.

<sup>382</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

After the United States took possession of Puerto Rico in 1898, the fortifications at San Juan were quickly occupied by the United States Army. In September, the fortifications were surveyed by Colonel George Washington Goethals and Major Spencer Crosby with Major General Edward González of the Spanish army as their guide (Figure 13).<sup>383</sup> These inspections surveyed the conditions of the forts as well as the walls abutting the seacoast and the gun emplacements at the various bastions.<sup>384</sup> After the detailed survey, the San Juan Military Reservation (also known as Post San Juan) was established by President Theodore Roosevelt in 1903 and those areas not included in the reservation were granted to the territorial government of Puerto Rico.<sup>385</sup> As part of the Treaty of Paris (December 10, 1898), which formally ended the Spanish-American War, the United States Army returned the artillery from both forts to Spain.

The early days of Post-Spanish San Juan involved the stationing of the Fifty-Sixth and Fifty-Ninth Companies Coast Artillery at the fortifications. Once the Spanish guns were returned to Spain, however, and with no approved plans for a seacoast defense, the artillery companies were recalled to Boston in May 1904. From 1904 until the summer of 1917, the Puerto Rican Regiment, also known as the Sixty-Fifth United States Infantry, was garrisoned at Castillo San Felipe del Morro and Castillo San Cristóbal.<sup>386</sup> The grounds were primarily used for training the Puerto Rican Regiment. In addition to the United States Army, the United States Navy established a base at San Juan in the early twentieth century and from 1901–1914 the “Atlantic Fleet performed extensive training exercises in the waters around Puerto Rico.” In 1904, the first wireless station in the Caribbean was built at San Juan by the United States Army.<sup>387</sup>

World War I (1914–1918) brought changes to defenses at San Juan. In 1917, in order to prepare San Juan’s seacoast defense system for potential attack from the Germans, the War Department approved an arsenal for Puerto Rico and new gun emplacements.<sup>388</sup> At that time, the Puerto Rican Regiment was transferred to the Panama Canal to guard that important waterway. The Coast Artillery Command companies and recruits that came to occupy Post San Juan in 1917 and 1918 built rapid-fire poured-concrete batteries at Santa Bárbara Bastion, Santa Elena Bastion and La Princesa Battery. The detailed administrative history of the construction of these batteries is recounted in Bearss’ *Historic Structure Report*.<sup>389</sup>

The Puerto Rican Regiment, in the late winter of 1918–1919, “was alerted to be ready to return to the island from the Canal Zone.”<sup>390</sup> As a result of the Armistice of 1918, the Coast Artillery Command was moved to Delaware on the United States mainland. At Post San Juan, “care and

<sup>383</sup> United States War Department, *Plan of San Juan, P.R., Showing Buildings*.

<sup>384</sup> Bearss, *HSR: Historical Data: 1898-1958*, 27–39.

<sup>385</sup> Bearss, *HSR: Historical Data: 1898-1958*, 59.

<sup>386</sup> Bearss, *HSR: Historical Data: 1898-1958*, 73–74, 118.

<sup>387</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*.

<sup>388</sup> Bearss, *HSR: Historical Data: 1898-1958*, 143–150.

<sup>389</sup> Bearss, *HSR: Historical Data: 1898-1958*, 146–155.

<sup>390</sup> Bearss, *HSR: Historical Data: 1898-1958*, 155.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

maintenance of the three 4.72-inch Armstrong batteries would be turned over to the Puerto Rico Regiment of Infantry.”<sup>391</sup>

After Armistice Day in November of 1918, the fortifications at San Juan again became a secondary concern of the United States Army. Limited repairs were completed in the 1920s, and a host of construction projects in the Esplanade and adjacent to Castillo San Cristóbal were completed in the 1930s. In the mid-1930s, an effort began to transfer the San Juan Military Reservation from the Department of War to the Department of the Interior after a visit from First Lady Eleanor Roosevelt in March of 1934, during which she advocated for the site’s preservation. The uncertainty created by this potential shift made the Army reluctant to spend funds on the preservation and maintenance of the site, so the fortifications continued to deteriorate. It was not until late 1938 that funds were made available for a range of repair and restoration projects throughout the fortification complex.<sup>392</sup> As part of President Franklin D. Roosevelt’s New Deal, the Works Progress Administration took on a number of projects between 1938 and 1940 (Figure 14). Additional details on the New Deal are included in the Architectural Statement of Significance.

The improvements made by the United States Army at Post San Juan in the early twentieth century were in keeping with new innovations in military strategy, specifically with regard to seacoast defense. The early twentieth-century outfitting of the fortifications at San Juan reflect an embrace of the tenets of the Modern U.S. Harbor Defense Era (1886–1917).<sup>393</sup> The seacoast defense system prior to this had relied on the star-shaped bastioned traces of forts as defensive positions. With new developments in long-range gun artillery, strategies had to shift to an offensive approach. The Modern Era was characterized by a focus on the arming of strategic harbors and coastlines with heavy ordnance such as breech-loaded long-range cannons. In addition to this cannon design, the use of steel was also an important development as it produced “lighter, strong, and more powerful weapons.”<sup>394</sup> These are the types of weapons that were installed at the gun emplacements that were constructed prior to World War I at San Juan at La Princesa, Santa Bárbara Bastion, and Santa Elena Bastion.

In the 1930s, new military strategies were developed that focused on the potential of airborne attacks. The use of new fire control techniques, radar, airplanes, and boats to better target enemy forces became critical. Long-range weapons could reach 15–25 miles away and the United States Army depended upon a sophisticated “fire control and position finding” system to mount an effective defense.<sup>395</sup> This system utilized multiple sets of data from different locations to

<sup>391</sup> Bearss, *HSR: Historical Data: 1898-1958*, 155, citing National Archives, “Adjunct General to Commanding General, Eastern Department, July 14, 1919.” Record Group 77, General Correspondence 1898–1924.

<sup>392</sup> Bearss, *HSR: Historical Data: 1898-1958*, 295.

<sup>393</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-8; Mark H. Berhow, *American Seacoast Defenses: A Reference Guide*. (McLean, VA: The CDSG Press, 2004).

<sup>394</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-8.

<sup>395</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-9.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

triangulate the location of targets and improve accuracy. Fire control stations constructed of reinforced concrete were built according to standardized designs at strategic locations; two of which were built at the salient angles of the uppermost reaches of both Castillo San Felipe del Morro and Castillo San Cristóbal. These stations in essence represented a technologically advanced, twentieth-century incarnation of the centuries-old sentry boxes.

In the years leading up to World War II, the U.S. military continually reassessed its coastal defense strategy. In 1935, the Joint Board of the Army and Navy redefined the responsibilities of these two branches of the armed forces with respect to the protection of the nation's coastline. Puerto Rico was categorized as part of the coastal frontier, with the army responsible for defending the island and the navy responsible for "protecting shipping lanes and defending against enemy naval invasions."<sup>396</sup> The defense of Puerto Rico was crucial in preventing foreign powers from gaining a position from which they might be able to fire on the U.S. Mainland or the Panama Canal.

As United States involvement in World War II grew increasingly likely, the United States Army established the Army's Department of Puerto Rico in July of 1939 to improve harbor and coastal defenses. This department made a number of improvements both within the fortifications at San Juan and throughout the island and the region, which also included the Virgin Islands. These changes included the construction of an air base at Point Borinquen on the west coast of Puerto Rico; the Navy presence on Puerto Rico was limited to a regional station in San Juan. The Puerto Rico garrison grew rapidly during this period, with 21,000 officers and enlisted men, including the Sixty-fifth Infantry and the National Guard, as stationed in Puerto Rico.

Also in the early 1940s, military strategists viewed Puerto Rico's Harbor Defense Command Posts (HDCP) as increasingly outmoded. Previous coastal defenses, including HDCPs, represented military technology geared toward fending off close-range attacks by land and sea. To defend against airborne and long-range assaults, the U.S. would need to effectively coordinate the efforts of the Army and Navy and upgrade the artillery. The organization of the armed forces in the Caribbean was reconfigured in 1940, and the Puerto Rican Department was reorganized in 1941 to establish base commands in the Bahamas, Jamaica, and Antigua, in addition to Puerto Rico. This shift translated into material changes in the types of weaponry installed: long range and small caliber guns were adopted. A joint Army and Navy command center, the Harbor Entrance Control Post (HECP), was conceived as complimentary to the Army's HDCP.<sup>397</sup> In May of 1941, preparations began for what is known today as the World War II Radio Control Center (HECP-HDCP Building) at El Morro. Some changes involved the

<sup>396</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-10.

<sup>397</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-13.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

update of firepower capabilities. At the San Cristóbal outworks, La Princesa Battery became “Battery No. 3” and was equipped with heavy guns on Panama Mounts.<sup>398</sup>

In the years immediately preceding the United States’ entry into World War II, military efforts focused particularly on maintaining control of shipping within the “300-mile neutrality zone” in the area of the Panama Canal and the west Atlantic.<sup>399</sup> Puerto Rico’s location at the heart of the Caribbean made it an essential point of contact and outpost for aircraft carriers and long-range aircraft which were tasked with defending the Panama Canal and preventing enemy incursions into the Caribbean and Gulf of Mexico. Puerto Rico’s military role was as a communication hub with an air base. San Juan Military Reservation was to be the Pearl Harbor of the Caribbean.<sup>400</sup>

After the bombing of Pearl Harbor in December of 1941, plans for the World War II Radio Control Center (HECP-HDCP Building) at El Morro were accelerated. As a temporary measure, a Visual Signal Station was installed on the upper terreplein of El Morro. Five fire control stations (manholes) were planned: one at La Princesa, two at El Morro, and two at Castillo San Cristóbal. The design for these observation posts conformed to military specifications for “permanent, splinter-proof buildings...composed of formed, reinforced concrete, with heavy, concrete visors covering the observation slits.”<sup>401</sup> The design of the manholes was intended to blend in with the existing structure in order to camouflage their appearance. In 1942, funding was provided to build three of the five planned fire control stations, one at Castillo San Felipe del Morro and two at Castillo San Cristóbal.

Strategically, El Morro and San Cristóbal afforded commanding views of the Atlantic Ocean and San Juan Bay. At San Cristóbal, the two, two-story manholes were positioned, respectively, at the northeast corner of El Caballero (San Cristóbal Fire Control Station A/Manhole A) and at the north end of the North Bastion (San Cristóbal Fire Control Station B/Manhole B). At Castillo San Felipe del Morro, the three-story El Morro Fire Control Station A was constructed at the northeast angle of the Great Wall, at the level of the upper terreplein. Additional changes at this time included the removal of the gun emplacement, but not the concrete mount, installed at Santa Bárbara Bastion in 1918.<sup>402</sup>

The U.S. Army constructed the World War II Joint Command Center, located in the moat just east of Castillo San Cristóbal, in 1942. With walls four feet (1.2 meters) thick, and a “Burster” course five feet (1.5 meters) thick, the structure was considered gas proof, bombproof, and splinter proof, like the installation at El Morro.<sup>403</sup> This building incorporates the same command and communication capabilities and defensive features of the HECP-HDCP at El Morro, but it is

<sup>398</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-18.

<sup>399</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-15.

<sup>400</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-16.

<sup>401</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-19–8-20.

<sup>402</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-21.

<sup>403</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-19.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

larger and served a slightly different purpose. The Joint Command Center was designed to collect and disseminate important intelligence and contained offices for and connections with key headquarters and posts around Puerto Rico for the Army, Navy, and Marine Corps.<sup>404</sup> The building for the Joint Command Center filled the portion of the moat between Castillo San Cristóbal and San Carlos Ravelin and was occupied in 1943.

The Army renamed the San Juan Military Reservation/Post San Juan “Fort Brooke” on March 3, 1943, in honor of Major General John Brooke, who was installed by the military as Puerto Rico’s first American territorial governor in 1898. Fort Brooke functioned as a small city, boasting extensive amenities in addition to its technological and fire power capabilities. In addition to facilities for garrisoning soldiers, the complex offered a variety of sports and recreational opportunities (Figures 15 and 16).<sup>405</sup>

#### *Role of Post San Juan/Fort Brooke During World War II*

The role of Puerto Rico in military defense and maritime history in the region during World War II was especially important with respect to the German U-Boat campaign. U-Boat submarines terrorized hundreds of merchant and military vessels beginning in 1942.<sup>406</sup> Many of the targeted ships carried goods such as oil and bauxite, which were important to the war effort. To combat these attacks, the United States implemented new defensive strategies, including the deployment of convoys for merchant vessels and the investment in radar equipment on Puerto Rico and across the Caribbean to track the U-Boats. The convoys were made up of an array of vessels and aircraft, including navy destroyers, aircraft carriers, submarine chasers, patrol boats, catalane patrol bombers, and mariner seaplanes.<sup>407</sup> The effect of this new strategy was that few escorted ships were attacked and by the end of 1942, the Caribbean was no longer at the mercy of the U-Boat campaign. In total, 270 vessels had been lost though most were lost before the convoys were put in place.

The military presence in Puerto Rico also had a major impact on the economy and everyday life of the island and its people between 1939 and 1947.<sup>408</sup> The strategic location of Puerto Rico in the Caribbean had motivated the planning of a vast number of defensive support posts and new facilities. These plans required major updates to Puerto Rico’s infrastructure and drew significant federal funding from New Deal programs. The major programs active on Puerto Rico were the Puerto Rican Emergency Relief Administration (PRERA, Replaced by the Puerto Rico Reconstruction Administration [PRRA] in 1935), a branch of the Works Progress Administration

<sup>404</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-21.

<sup>405</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-22.

<sup>406</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-23.

<sup>407</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-25.

<sup>408</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-26.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

(WPA), and the Public Works Administration (PWA). The WPA and the PWA handled military and civilian construction projects, respectively. The projects associated with these programs employed thousands of Puerto Ricans, at times employing more than 50,000 workers, and spent \$82 million between 1935 and 1955.<sup>409</sup>

A large-scale preservation program was implemented at the San Juan Military Reserve between 1938 and 1940, wherein the WPA funded a wide variety of repairs; these repairs will be discussed below in the Ethnic Heritage, Social History, and Architecture sections. Many projects included the building of military defensive infrastructure (bases, docks, airfields) as supplied by the Cataño cement plant.<sup>410</sup> The United States dramatically reduced funding for WPA and PRRA programs in 1940 and many jobs disappeared. Economic distress increased, a problem compounded by wartime shortages and the virtual halt to military construction in 1943.<sup>411</sup> Shortages of gas and food were common, as were restrictions on movement and activities due to imposed security protocols.<sup>412</sup> Finally, the everyday lives of many Puerto Ricans were impacted by World War II through their direct involvement in the war effort as recruits to the Puerto Rican Sixty-Fifth Regiment, which served throughout the Caribbean and in Europe, or the Two-Hundred and Ninety-Sixth Infantry, which served in the Pacific Theater.

Additional military activities at Post San Juan included anti-aircraft artillery practice and training exercises at the fire control stations, such as measuring the accuracy of the artillery (Figure 17). But while Puerto Rico was the centerpiece of the Caribbean front, it was not subject to direct enemy attacks. In April of 1943 the defense ranking for Fort Brooke was reduced to Category B, which indicated that only minor attacks were anticipated. Soon after, the manpower at the fort was reallocated. Coast Artillery Troops were shifted to positions in Europe and the Pacific, and Puerto Rican soldiers were redeployed to the Panama Canal or other theatres.<sup>413</sup>

### *Transfer of San Juan Fortifications to the National Park Service*

After World War II, the Army sought ways of divesting itself of the maintenance-heavy masonry fortifications of Fort Brooke. This, in addition to increased agitation for the establishment of a National Park, led to a cooperative agreement between the Department of Defense and the Department of the Interior with respect to the management of Fort Brooke in September of 1948. According to this agreement, the National Park Service would lead the effort in establishing

<sup>409</sup> Geoff G. Burrows, "The New Deal in Puerto Rico: Public Works, Public Health, and the Puerto Rico Reconstruction Administration, 1935–1955." Doctoral Thesis. (City University of New York, 2014), 224, 268; Notably, the PRERA was replaced by the Puerto Rico Recovery Administration (PRRA) in 1937

<sup>410</sup> Burrows, *New Deal*, 224, 123–124.

<sup>411</sup> Jorge Rodríguez Beruff, "Rediscovering Puerto Rico and the Caribbean: US Strategic Debate and War Planning on the Eve of the Second World War," in *Island at War: Puerto Rico in the Crucible of the Second World War*, (Jackson: University of Mississippi Press, 2015), xiii.

<sup>412</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-27–8-28.

<sup>413</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-23.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

visitor facilities and creating interpretive programs and the Army would retain maintenance and security responsibilities as well as the right to re-take full control of the site in an emergency. In January of 1949, President Truman approved the agreement and Fort Brooke was designated San Juan National Historic Site. This marked the end of the facility's significance in the military and maritime history of the region and Puerto Rico.

The transfer of land to the National Park Service proceeded in 1961 after the Army had formally ascertained that most of the property at Fort Brooke was excess, though the El Morro Esplanade and the glacis at Castillo San Cristóbal, where the La Princesa Housing Area then stood, were excluded from the 36.33-acre transfer.<sup>414</sup> The National Park Service assumed full control of Castillo San Felipe del Morro, the Old San Juan City Wall – North Wall, the Old San Juan City Wall – West Wall, the Old San Juan City Wall – South Wall, and Castillo San Cristóbal and its Outworks (excluding the La Princesa Housing Area).

In 1962, the National Park Service received an allocation of \$400,000 for the preservation of San Juan National Historic Site, which went toward the repair and maintenance of the Old San Juan City Wall – North Wall, as well as Castillo San Cristóbal Outworks. This program, known as the Accelerated Public Works Program (APW) was the first major preservation project since the 1938–1940 WPA restoration project.<sup>415</sup> At Castillo San Cristóbal, the APW involved large-scale unearthing campaigns, to reveal the Spanish-Era structures of La Trinidad Counterguard, Santa Teresa Battery, La Princesa Battery, and the embrasures of the North Bastion.<sup>416</sup>

In 1966, after the removal of miscellaneous Army equipment, the Army initiated the transfer of the 4.95-acre La Princesa Housing Area to the Department of the Navy for continued use in association with recruitment and reserve housing. In conjunction with this, “the remaining 52.05 acres of Army administered lands at San Juan were reported as excess to the General Service Administration” and they were transferred to the National Park Service.<sup>417</sup> After the 1966 transfers, the sole administrator of San Juan National Historic Site was the National Park Service, except for the 4.95-acre La Princesa Housing Area.<sup>418</sup>

With the passage of the National Historic Preservation Act, San Juan National Historic Site was administratively listed in the National Register of Historic Places on October 15, 1966 without documentation, with a period of significance ending in 1799. In 1967, the United States Government conveyed to the Commonwealth of Puerto Rico two tracts, Parcel A and Parcel B

<sup>414</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 50–51.

<sup>415</sup> R.J. Auld, “Completion Report: Repair of Historical Fortification, Military Reservation, San Juan, Puerto Rico, April 1938 to May 28, 1940.” Prepared for the Construction Quartermaster, Post San Juan, San Juan, P.R., United States War Department. On file at the San Juan National Historic Site Archives, San Juan Puerto Rico (1940).

<sup>416</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 53.

<sup>417</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 54.

<sup>418</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 54.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

(El Morro Esplanade), by quitclaim deed.<sup>419</sup> The La Princesa Housing Area was officially transferred to the National Park Service in May 1973.<sup>420</sup> A National Register nomination was drafted in 1973 for San Juan National Historic Site, with a period of significance ranging from 1539–1945, but the nomination was never signed by the Keeper of the Register.<sup>421</sup> In 1976, a Memorandum of Agreement was signed between the United States Department of the Interior and the Commonwealth of Puerto Rico for the inclusion of “Parcel A” (much of the eastern portion of the El Morro Esplanade) within San Juan National Historic Site. Parcel B remains outside the boundary.<sup>422</sup> In 2016, Additional Documentation of resources that the United States War Department constructed and utilized between 1939 and 1945 was drafted to supplement the original 1973 NRHP Nomination Form.<sup>423</sup>

### Criterion C – Architecture, 1539–1945

San Juan National Historic Site is eligible for listing in the NRHP under Criterion C in the area of architecture, as a well-preserved component of the fortifications constructed by the Spanish Crown as part of its colonial defensive system and modified by the United States for its military defense system during the first half of the twentieth century. The period of significance (1539–1897 for Spain; 1898–1945 for The United States of America) extends from 1539, when construction began on the first fortifications at the *el morro* headlands, through to the mid-twentieth century when alterations and updates were undertaken by the United States in preparation for World War II. The extant fortifications represent a layering of four centuries of changing military engineering methods and architectural design; each construction phase reflects the technological capabilities, defensive needs, and design conventions of its time.<sup>424</sup> The fortifications represent one facet of a Spanish colonial coastal defensive system, with outposts distributed throughout the Caribbean, and which utilized European methods of military design

---

<sup>419</sup> United States Department of the Interior and Commonwealth of Puerto Rico. “United States of America, to Commonwealth of Puerto Rico, 31 March 1967.” Quitclaim Deed for Parcel A, San Juan National Historic Site. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico. The area known as Parcel A in 1967 included the present-day Parcel A and Parcel B.

<sup>420</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 56.

<sup>421</sup> Frederick C. Gjessing and Loretta Schmidt, “San Juan National Historic Site National Register Nomination.” unsigned, 1973. On file National Park Service and San Juan National Historic Site, San Juan, Puerto Rico.

<sup>422</sup> United States Department of the Interior and Commonwealth of Puerto Rico, Memorandum, “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 San Juan National Historic Site.” September 29, 1976. On file at the San Juan National Historic Site, San Juan, Puerto Rico.

<sup>423</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*.

<sup>424</sup> Pabón-Charneco, *Old San Juan National Register Nomination*, 8-13.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

and construction (see Figure 2). Most of the extant fortifications reflect the construction period of the late eighteenth century.

Multiple architectural themes informed the design of the fortifications over its 400-year history. This Architectural Statement of Significance for San Juan National Historic Site draws on the work of architectural historian Arleen Pabón-Charneco and her detailed review of the military architecture of San Juan as it relates to the early periods and the wider historical, architectural, and social development of Old San Juan.<sup>425</sup> The text also relies on the previous research of the late NPS Chief Historian Edwin C. Bearss, the 1990s Historic Structure Reports for the fortifications, and more current studies documenting recent changes to the site.<sup>426</sup>

### *Early Development at “el Morro,” 1539–1585*

The earliest fortifications within what is today San Juan National Historic Site were constructed according to the conventions of medieval military architecture, much like the defenses that had been constructed at La Fortaleza (outside San Juan National Historic Site).<sup>427</sup> The medieval towers and rounded corners of fortifications like La Fortaleza were designed to protect against direct, short-range, land and seaward attacks. Evidence suggests that the first iteration of the San Juan Gate, at the foot of Caleta de San Juan, also may date to as early as 1539.<sup>428</sup>

The earliest defensive buildings on the site of Castillo San Felipe del Morro were constructed at the western end of San Juan Islet at the rocky headlands known as *el morro* beginning in 1539.<sup>429</sup> That year, a bastion-like rounded tower was constructed to defend San Juan Bay and the nearby town of San Juan, utilizing four embrasures pointed toward the channel. On the interior of Santa Bárbara Bastion, the lower portion of this tower survives, and several of the embrasures remain visible. The medieval rounded tower design was vulnerable, however, to high powered artillery which could easily weaken the hollow structure as well as thin neighboring curtain walls. Military architects would later recognize the value of polygonal shapes, which allowed for broader bastions, shorter curtain walls, and fewer vulnerable spaces.

---

<sup>425</sup> Pabón-Charneco, *Old San Juan National Register Nomination*.

<sup>426</sup> Bearss, *HSR: Historical Data: 1898–1958*; Berkowitz, *Fortifications: Vol. I – Summaries*; Berkowitz, *Fortifications: Vol. II – San Cristóbal*; Berkowitz, *Fortifications: Vol. III – City Walls*; Berkowitz, *Fortifications: Vol. III – El Morro*; Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*; WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*.

<sup>427</sup> Pabón-Charneco, *Old San Juan National Register Nomination*, 8-170.

<sup>428</sup> Berkowitz, *Fortifications: Vol. III – City Walls*, 1.

<sup>429</sup> Pabón-Charneco, *Old San Juan National Register Nomination*, 8-170.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

*Puerto Rico and Building the Defensive Network of the Spanish Caribbean, 1586–1678*

During the late sixteenth and seventeenth centuries, specialized military engineers, many of whom came from the Italian Antonelli family, designed and oversaw the construction of San Juan's fortifications. No fewer than five Antonelli family members served the Spanish Crown in the sixteenth and seventeenth centuries; a pattern which points to the specialized knowledge and expertise required for the profession and the unique system of patronage practiced by Spain.<sup>430</sup>

Bautista Antonelli

The Antonelli engineers most involved with the architectural development of Puerto Rico were Bautista Antonelli and his son Juan Bautista Antonelli the Younger. Born around 1550, Bautista Antonelli had been hired by the Spanish Crown in the 1570s, working with his older brother Juan Bautista Antonelli the Elder. Together, Bautista Antonelli and Juan Bautista the Elder fortified several ports along the Mediterranean Coast of Spain and North Africa before Bautista Antonelli was commissioned to help fortify the Strait of Magellan for King Philip II.<sup>431</sup> Bautista Antonelli was also appointed to survey Spain's outpost at Cartagena in 1586, and was subsequently given the responsibility of constructing defenses at Puerto Rico, Cuba, Veracruz, Cartagena, and Panama in 1588.<sup>432</sup> His plans for Puerto Rico would be implemented during the late sixteenth and early seventeenth centuries.

Bautista Antonelli's Works in Puerto Rico

After the construction of the round tower at El Morro in the mid-sixteenth century, the next major building campaign took place after the survey of the island by military engineer Bautista Antonelli and Field Marshall Juan de Tejada in the 1580s. Bautista Antonelli's military defensive designs at Puerto Rico and other Spanish ports along the Spanish Main fulfilled the vision of naval strategist Pedro Menéndez de Avilés who had recommended fortification of all the major ports as early as the 1560s.<sup>433</sup>

Bautista Antonelli and Tejada designed a defensive strategy for San Juan, along with a suite of other fortifications throughout the Caribbean, in response to increasing tensions with competing European powers in the mid to late sixteenth century. By this time, medieval defensive models were eschewed in favor of Renaissance theories of defense. Renaissance defensive strategies relied upon bastions, earthen mounds supported by angled walls which improved visibility of the enemy, organized in a star-shaped "bastioned trace" which allowed for the elimination of blind spots and areas unreachable by artillery.<sup>434</sup> These concepts were incorporated into Bautista

<sup>430</sup> Blanco, *Formative Influence on the Development of the Fortifications*, 234–235.

<sup>431</sup> Broussard, "Bautista Antonelli," 508.

<sup>432</sup> Broussard, "Bautista Antonelli," 512.

<sup>433</sup> Broussard, "Bautista Antonelli," 507.

<sup>434</sup> Broussard, "Bautista Antonelli;" Tenant, "Architect."

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Antonelli's 1588 plan to update the defenses at Castillo San Felipe del Morro and the surrounding fortifications.<sup>435</sup>

In addition to its design innovations, the plan implemented by Bautista Antonelli and Tejada was one which firmly recognized San Juan as a link in a chain of forts which made up the Spanish Caribbean defensive network. Within this system, each fort guarded a key point in the interdependent chain of port cities along the Caribbean trade routes. Other cities within this network included La Habana (Havana), Castillo de San Marcos (St. Augustine), Cartagena de Indias, Portobello, and San Juan de Ulúa (at Veracruz). San Juan "served as the key base for the defense of the fleets that entered the Caribbean taking advantage of the strong and steady westward-blowing trade winds."<sup>436</sup>

As part of the execution of the Tejada and Bautista Antonelli plan, several new structures were built, including the first iteration of the hornwork of Castillo San Felipe del Morro on its southeast face (see Figure 4).<sup>437</sup> The circa 1591 plan for the hornwork shows Austria Bastion as the southern demi-bastion of the hornwork, which commanded views of both the bay and the landward approaches to the fort. A second demi-bastion, in the approximate location of Ochoa Bastion, was constructed along the northern side of the rock outcropping, bordering the Atlantic Ocean, with cannons pointed landward. Between these, a ravelin was planned in front of the curtain wall connecting the bastions. Santa Elena Bastion was constructed along the edge of the high cliffs above San Juan Bay, between Castillo San Felipe del Morro and La Fortaleza, circa 1586.<sup>438</sup> The El Morro Esplanade (Esplanade), the military *campo* (field), was mined and provided an unobstructed view of the landward side of the fort.<sup>439</sup> Additionally, the open field that sloped away from the fort provided higher ground as well as an open field of vision for the defenders. It is unclear if Tejada and Bautista Antonelli's plan was fully implemented by the time Sir Francis Drake attacked in 1595 and the Earl of Cumberland in 1598, though the bastion walls were likely a "weak construction of rubble masonry" at the time and may have been partially demolished by Cumberland.<sup>440</sup>

In the wake of Cumberland's attack, El Morro's hornwork was rebuilt starting in 1602 according to Bautista Antonelli's plans.<sup>441</sup> Additional defenses were constructed throughout the area in the early seventeenth century. On the west side of the mouth of the San Juan Bay, an early, wooden, iteration of El Cañuelo (Fortín San Juan de la Cruz) was constructed around 1608.<sup>442</sup> This

<sup>435</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 11.

<sup>436</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 38.

<sup>437</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 19.

<sup>438</sup> Berkowitz, *Fortifications: Vol. III – City Walls*, 10–11.

<sup>439</sup> Pabón-Charneco, *Old San Juan National Register Nomination*, 8-175.

<sup>440</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 13.

<sup>441</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 13.

<sup>442</sup> WLA Studio, *HSR: El Cañuelo*, 2.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

outpost, coupled with El Morro, enabled the Spanish to launch cross-fire at potential enemy ships that had entered San Juan Bay.

The Dutch siege and burning of the city of San Juan in 1625 exposed further weaknesses in the system. This and increasing colonization in the area by other hostile European powers, motivated the Spanish to enhance its defenses still further (see Military and Maritime Statement of Significance for more information on the Dutch attack). The Spanish Crown agreed to fortify and enclose the city.<sup>443</sup> Improvements to the hornwork and tower at El Morro and construction of individual small forts and bastions along the northern and western cliffs of the islet, established an integrated defensive system of continuous fortified walls around the perimeter of the city.<sup>444</sup> While a fully enclosed city was the vision, shortages of manpower and funding would delay full completion of the project for 150 years.

#### Juan Bautista Antonelli the Younger's Works in Puerto Rico

In order to move closer to an integrated defensive network on San Juan Islet, a second generation of Antonelli military engineers was brought to Puerto Rico to consult on the design and construction of San Juan fortifications in the 1630s. Bautista Antonelli's son, Juan Bautista Antonelli the Younger, came to the island in 1631 and lived there between 1633 and 1638 to oversee construction. His plans made specifications for rebuilding batteries, platforms, redoubts, and constructing bastioned walls along the bay (Old San City Wall – West Wall) and landward approaches to the city (Old San Juan City Wall – South Wall and East Wall).<sup>445</sup> Construction of much of the Old San Juan City Wall was carried out under the supervision of Governor Iñigo de la Mota Sarmiento in the 1630s. According to Governor Sarmiento, the city walls built under his mandate were constructed of cut stone and were approximately 15 feet (4.5 meters) high. Under his government, the South Wall and eastern wall (not extant) segments were built, the West Wall was reconstructed, Santa Elena Bastion was reinforced, and San Gabriel Bastion (not extant) was reconstructed.<sup>446</sup> Although Governor Sarmiento reported to Spain that the walls had already been completed by the end of 1636, reports from others of building projects related to curtain walls on the west and south sides of the fortified city continued into the 1650s.<sup>447</sup>

Also part of the 1630s building campaign designed by Juan Bautista the Younger were the first defensive structures at San Cristóbal Hill. At the eastern end of the San Juan Islet, the construction of a small redoubt, a temporary fortification without flanking walls, was undertaken at San Cristóbal Hill to supplement the Boquerón Battery and San Antonio Fort, where Cumberland's landward assault had breached their defenses.<sup>448</sup> The design of Juan Bautista

<sup>443</sup> Santiago Cazull, *Historic Fortification Walls of Old San Juan*, 64.

<sup>444</sup> Hoyt, *Harbor Defenses of San Juan*, 69.

<sup>445</sup> Blanco, *Formative Influence on the Development of the Fortifications*, 235.

<sup>446</sup> Aníbal Sepúlveda Rivera, *San Juan Historia Ilustrada de su Desarrollo Urbano, 1508–1898*. (San Juan: Carimar, 1989), 87; Berkowitz, *Fortifications: Vol. III – City Walls*, 13.

<sup>447</sup> Santiago Cazull, *Historic Fortification Walls of Old San Juan*, 65, 67.

<sup>448</sup> Hoyt, *Harbor Defenses of San Juan*, 69.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Antonelli the Younger incorporated bastions arranged in a star-shaped pattern to decrease blind spots, the conventions his father had advocated for in the late sixteenth century. Only the eastern portion of his seventeenth century star-shaped designs were constructed.

With the completion of many of the works designed by Bautista Antonelli and his son Juan Bautista the Younger, Puerto Rico was again recognized for its strategic importance in the Caribbean when King Philip IV of Spain described it as the “vanguard of all my West Indies” in 1645.<sup>449</sup>

In the 1670s, Luis Venegas Osorio was commissioned by the Spanish Crown to make a general inspection of the fortification systems in America.<sup>450</sup> Osorio produced a detailed map of the fortifications of San Juan in 1678 showing the condition of the 1630s improvements and subsequent additions (see Figure 6). The impressive walls enclosing the city were almost completed, apart from those along the northern bluff. In the western side of the city, the San Fernando Battery, Santa Elena Bastion, and San Agustín Bastions were also illustrated, though curtain walls between these had not yet been completed. The redoubt that would become Castillo San Cristóbal is also depicted, including its major features such as a semi-circular Caballero, a north and south bastion connected by a curtain wall, a dry moat to the east, and a small fort at the north point, facing the Atlantic Ocean (El Espigón/Devil’s Sentry Box). The western half of the “star” design of San Cristóbal depicted on the map was never constructed.

Also part of the mid-seventeenth-century building campaign was the construction of El Cañuelo. A stockade had been constructed in the late sixteenth century, a redoubt with a round tower of wood had been built at this location around 1608, and in 1609 the outpost was reconstructed in stone, using a square plan with embrasures.<sup>451</sup> Governor José Novoa y Moscoso recommended its reconstruction in 1658, though it is unclear when construction began.<sup>452</sup> By 1664, El Cañuelo was built of masonry construction and had taken on the general scale and layout it presents today.

The physical remains of the building campaigns prior to 1765 are few. At El Morro these include the remains of the interior wall of the low battery, the remains of the low battery wall along the bay-side of El Morro, a seventeenth-century retaining wall at the eastern end of Santa Bárbara Bastion, the interior of the 1539 tower, an interior wall along the ramp between the Plaza de Armas and Austria Bastion, a portion of Mercado Bastion with the only remaining seventeenth-century embrasure, and a portion of the Castillo San Felipe del Morro Dry Moat counterscarp, at its northern end.<sup>453</sup> Archeological excavations within the Castillo San Felipe del Morro Dry Moat

<sup>449</sup> UNESCO, *La Fortaleza and San Juan Historic Site*, 20.

<sup>450</sup> Sepúlveda, *San Juan Historia Ilustrada*, 93.

<sup>451</sup> Blanco, *Formative Influence on the Development of the Fortifications*, 126.

<sup>452</sup> WLA Studio, *HSR: El Cañuelo*, 12–13.

<sup>453</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 31.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

also identified evidence for *mampostería* foundations for the late sixteenth century hornwork, which were seated on brick footings (See Archeology Significance Statement, below).<sup>454</sup>

### *San Juan as a Defense of the First Order, 1765–1790*

The third major building campaign took place in the late 1760s, in the wake of the English capturing nearby Havana, Cuba and Manila, Philippines in 1762. In response, on September 25, 1765, Spain's King Charles III declared his interest in transforming the city of San Juan into a *Defensa de Primer Orden* (Defense of the First Order). The royal decree described the city as not only the first line of defense for the rest of the island, but also, the “bulwark of the Antilles; safeguard of the Gulf of Mexico; depository; point of acclimatization; port of call and naval station of the navigating fleets; favorable to foster and secure the commerce that will improve industry, agriculture, and art — the foundation of true wealth.”<sup>455</sup> To achieve these goals the fortifications underwent a transformation which resulted in the remaking of the entire system into a cohesive and self-contained defensive network within a fortified city.

The widespread building campaign, which came to involve both Castillo San Felipe del Morro, Castillo San Cristóbal, as well as the Old San Juan City Walls (North, South, East, and West) and El Cañuelo, subsumed most traces of the earlier stone and earth fortifications. Though repairs, additions, and changes were made in the nineteenth and early twentieth centuries, the San Juan fortifications as they appear today were largely in place by 1790. The construction materials for the fortifications were largely cut limestone, with a lime-based mortar (lime is derived from limestone), faced with plaster. Earth-filled bastions, terrepleins, and ramps were constructed to withstand firepower and allow easy movement around the complex.

To accomplish this modernization program, in 1765, Field Marshall Alexander O'Reilly was transferred to Puerto Rico from Havana, where he had been responsible for the reconstruction and modernization of its defenses, and of reorganizing the Spanish armed forces. Chief of the Royal Engineers Thomas O'Daly, under the direction of O'Reilly, prepared a detailed topographic map with the plans for the defenses at El Morro and its vicinity (see Figure 8).<sup>456</sup>

The O'Reilly-O'Daly plan for the fortification of San Juan (prepared by O'Daly), was submitted on May 20, 1765, and approved in September that same year. The design and execution of the O'Reilly-O'Daly plan was performed by Thomas O'Daly, together with engineer Juan Francisco Mestre. The master plan involved the renovation of each major component of the San Juan defensive system. O'Reilly and O'Daly envisioned a strong fortification on the east side of the city to defend against land invasion, which manifested itself in the transformation of Castillo San

<sup>454</sup> Wild, *Flanking Battery Wall*.

<sup>455</sup> Berkowitz, *Fortifications: Vol. III – City Walls*, 21, citing Zapatero, *La Guerra del Caribe en el Siglo XVIII*, 397.

<sup>456</sup> Berkowitz, *Fortifications: Vol. III – City Walls*, 21.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Cristóbal. The reworked defensive system at Castillo San Cristóbal employed the horizontally-focused “defense-in-depth” principle.<sup>457</sup> This strategy was implemented by creating a series of interdependent fortifications stretching eastward from Castillo San Cristóbal toward the San Antonio Bridge, each supported by one or more of the other elements of the system. This building campaign marks the first time both El Morro and San Cristóbal were outfitted with firepower directed seaward; at San Cristóbal, the North Casemates took on much of this responsibility.<sup>458</sup>

O’Reilly called for major construction to build up Castillo San Cristóbal beginning in the 1760s, creating the fort as it appears today, rising approximately 150 feet (45.7 meters) above sea level. Directly east, in the fort’s dry moat, San Carlos Ravelin, La Trinidad Counterguard, and Santiago Ravelin (known also as Revellín del Príncipe) were constructed. Following this, in the 1780s and 1790s, additional structures were built further east including the North Covered Way, Saint Teresa Battery, La Princesa Battery, Fort El Abanico, and the South Covered Way.

The O’Reilly-O’Daly plan also led to dramatic changes at Castillo San Felipe del Morro during the period between 1765 and 1783. The resulting fort protected both landward and seaward approaches while also incorporating features that facilitated internal movement and communication.<sup>459</sup> A major part of the new design for El Morro involved thickening its walls and raising of terrepleins. The northwestern-most tip of the fort, which once held the round tower with four embrasures, was enveloped within the construction of the large and expansive Santa Bárbara Bastion. Throughout the Santa Bárbara Bastion, the terreplein was raised to 75 feet (22.8 meters) above sea level. Casemates and embrasures were constructed along the northern side of the bastion, and the harbor-side flank was constructed, obscuring the Granados Battery, below. On the lower level of Santa Bárbara Bastion, the kitchen was constructed in what is today an open courtyard. The vaulted ceiling of the tower at the toe of Santa Bárbara Bastion was likely installed at this time. Above Santa Bárbara Bastion, a high scarp, known as the Great Wall, was constructed in 1776 atop an earlier retaining wall. The Great Wall was built in order to install cisterns and a higher terreplein for the Plaza de Armas and its seaward-facing casemates.<sup>460</sup>

El Morro’s hornwork was redesigned to make more space on the bastion terrepleins, thicken the walls, add embrasures, and expand the moat below. Archaeological evidence suggests that portions of the extant bastions were constructed on the foundations of the previous structures.<sup>461</sup> The parapets of Austria Bastion and Ochoa Bastion were thickened and the terreplein was raised to 140 feet (42.7 meters) above sea level and expanded above the vaulted casemates below (on

<sup>457</sup> Pabón-Charneco, *Old San Juan National Register Nomination*, 8-176; Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 4.

<sup>458</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 28.

<sup>459</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 28.

<sup>460</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 33–34.

<sup>461</sup> Wild, *Flanking Battery Wall*.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

the west side of the Plaza de Armas) to create El Caballero Battery. Throughout the complex, vaulted casements, quarters, and magazine storage rooms were constructed, their curved ceilings resistant to potential impacts.<sup>462</sup> Additional changes were made at Mercado Bastion and Carmen Bastion, including the construction of a ramp connecting the two. A chapel was constructed. Other new features included a large cistern, a new ramp to Austria Bastion, staircases, and tunnels. The sentry boxes which exist today replaced the older sentry boxes, which had a less ornate shape.<sup>463</sup> The original shape can be seen at El Cañuelo and at El Espigón in San Cristóbal.

Additional changes to the defenses at Castillo San Felipe del Morro continued at a slower pace after 1783. For example, in 1786, the Sally Port was constructed within the existing hornwork's curtain wall, including the addition of a carved stone coat-of-arms of the Spanish King, Charles III, above the entrance. The gate was connected to the El Morro Esplanade by an arched masonry bridge which originally included a section with a bascule (movable) design.<sup>464</sup> At the northwestern reach of the El Morro a new battery was constructed in 1796 at the water level, today known as the Water Battery.<sup>465</sup> By the end of the eighteenth century, Castillo San Felipe del Morro had assumed the general appearance it has today.

In addition to the transformation of El Morro and San Cristóbal, the implementation of O'Reilly's plans for the northern perimeter was also finished by 1783, thus completing the city's walls. Meanwhile, the western walls were redesigned and rebuilt, using the principles of bastioned fortifications: triangular-shaped bastions, with flanking walls, separated by a series of straight curtain walls.<sup>466</sup> The west city walls also functioned as retaining walls. In 1781, after O'Daly died, Juan Francisco Mestre completed the fortifications project. He produced a detailed map of San Juan in 1792 showing the finished work (see Figure 9).

Because of the O'Reilly-O'Daly defensive plan, the city of San Juan became a formidable fortified outpost. Castillo San Cristóbal and its outworks were especially crucial in this shift. The series of walls, forts, and covered ways stretching eastward from San Cristóbal created the desired "defense-by-depth system" and rendered San Juan one of the "strongest fortified cities in the Caribbean." This was demonstrated shortly after the work was completed, with the failed attack by Sir Ralph Abercromby in 1797. His navy of almost 4,000 sailors and fleet of as many as 68 warships could not defeat the newly redesigned fortification system.<sup>467</sup>

<sup>462</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 33; UNESCO, *La Fortaleza and San Juan Historic Site*, 22.

<sup>463</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 36.

<sup>464</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 35.

<sup>465</sup> Hoyt, *Harbor Defenses of San Juan*, 82.

<sup>466</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 23.

<sup>467</sup> Alonso and Flores, *Eighteenth Century and British Attack*, 258. Sepúlveda, *San Juan Historia Ilustrada*, 112–115.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

*Maintenance and Artillery Improvements, 1797–1898*

By 1830, the only islands in the Caribbean that remained under Spanish rule were Cuba and Puerto Rico. Despite this precarious political position, no major defensive building campaigns were taken up in San Juan by the Spanish Crown. With the defensive walls as a secondary concern, new construction was limited to military-related buildings such as a hospital and barracks for the troops nearby to the forts. Changes also included upgrades to the artillery installed at the fort as technology changed.<sup>468</sup>

As described above, the plan of Castillo San Felipe del Morro as it exists today was largely in place by 1790, with later additions associated with updating artillery emplacements. In the 1850s–1860s, “muzzle-loading cannon emplacements, situated *en barbette* (above the parapet), were installed in several locations.”<sup>469</sup> Forty years later, in 1890, breech-loaded rifles were installed at Carmen, Ochoa, and Austria terrepleins and on the west terreplein of El Caballero, atop the Great Wall (Figure 18). Also during this period, a lighthouse was built atop the terreplein of Austria Bastion (ca. 1845) though it was later moved to Ochoa Bastion.

Castillo San Cristóbal was also subject to very limited changes in the nineteenth century, though a few significant additions were made to improve living conditions for the soldiers residing and working at the forts. Nineteenth-century changes at Castillo San Cristóbal included the construction of new features, such as a signal house on El Caballero, the Chapel, Guardhouse, and additions to the Officer’s Quarters (Castillo San Cristóbal) and construction of a bathhouse. Other areas were further enclosed with loggia, the covered colonnades in front of the Officer’s Quarters and the North Casemates.<sup>470</sup>

As the city of San Juan expanded, the walls were increasingly seen as an impediment to economic growth and a health hazard.<sup>471</sup> In 1897, the Spanish government in Madrid authorized the demolition of Santiago Gate, part of the city’s eastern walls, as well as Santiago Ravelin (also known as Revellín del Príncipe), a portion of La Trinidad Counterguard, San Pedro Bastion, San Justo Bastion, and Muelle Bastion (see Figures 11 and 12). The area east of this, Puerta de Tierra, was opened for settlement.

Preparations for the Spanish American War also resulted in numerous changes. Changes to artillery included the emplacement of guns at Santa Teresa Battery, a project which represented the first use of Portland cement at the fortifications. Gun emplacements pointed seaward were also installed at La Princesa Battery and on the terreplein of the North Casements, at El Caballero, and the North Bastion. In addition to these gun installations, construction projects

<sup>468</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 16.

<sup>469</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 35.

<sup>470</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 26.

<sup>471</sup> Berkowitz, *Fortifications: Vol. III – City Walls*, 29.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

included a new cistern at El Abanico, and the construction of El Abanico Guardhouse, the South Gate, Northeast Gate, and the associated sentry boxes.<sup>472</sup>

The updates made to military artillery and gun emplacements in the mid to late nineteenth century could not keep pace with the rapidly changing military technology, in the form of new artillery and warships. The design and construction of the masonry fortifications were increasingly viewed as obsolete, even as advanced artillery was installed in the 1870s and plans to improve the batteries at Castillo San Felipe del Morro and Castillo San Cristóbal were made in the 1880s.<sup>473</sup>

At the close of the nineteenth century, the fortifications at San Juan were involved in their last major military conflict. It was during the Spanish-American War that the fortifications at San Juan would show their age. While they had been a successful deterrent and defense against invasion in the centuries leading up to 1898, they could no longer respond to technological advances in artillery and maritime navigation. Built to defend against a level of technology from the late eighteenth century which relied on cannons, ground troops and rifles, the fortifications were outmatched by late-nineteenth-century artillery technology. Despite the technological obsolescence of the fortifications, during the May 12, 1898 bombardment, the overall network of walls remained intact while severe damage was sustained within the site, especially at El Morro.<sup>474</sup>

#### *Maintenance and Retro-fitting for New Military Technology, 1898-1945*

Architectural changes made to the fortifications at San Juan during the first half of the twentieth century reflect attempts on the part of the United States Army to undertake repairs, to install occasional artillery upgrades, and to make limited additions to the structure of the defensive walls and bastions more generally. After the close of the Spanish-American War, the San Juan Military Reservation was established at the San Juan fortifications (also known as Post San Juan; after 1943 known as Fort Brooke). As an active military base, changes were made to the architecture at the reservation to prepare for future engagements (i.e. World War I and World War II) and the specific threats that these conflicts presented to economic and political stability in the region.

Within a few weeks after the United States took control of Puerto Rico in 1898, engineer Major Spencer Crosby began to survey the fortifications at San Juan.<sup>475</sup> He was followed by Major

<sup>472</sup> Berkowitz, *Fortifications: Vol. I – Summaries*, 26.

<sup>473</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 16, citing Blanco, *Formative Influence on the Development of the Fortifications*, 779.

<sup>474</sup> Bearss, *HSR: Historical Data: 1898–1958*, 28.

<sup>475</sup> Bearss, *HSR: Historical Data: 1898–1958*, 27.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Engineer Root of the Corps of Engineers who made drawings and a full account of the damages, indicating 40 areas damaged by shell fire, which would cost more than \$2,000 to repair. A coordinated effort, however, was not forthcoming, and repairs would happen “piecemeal during the next 40 years.”<sup>476</sup> In addition to assessing the damage done, the United States inventoried the artillery left behind, including rifles, some mounted *en barbette* and howitzer guns. These arms would later be returned to Spain in 1904.

After Root, the position of engineer officer was taken over by Captain Clement A.F. Flagler who requested staff for immediate repairs, and was allotted a small sum to hire “Civilian Assistants” in 1901.<sup>477</sup> Some of the features which received immediate repair included the Castillo San Cristóbal ramp in 1901 followed by repairs to floors, ditches, fences, stairs, and bridges.<sup>478</sup> At Castillo San Felipe del Morro in 1902, other projects included the repair to sentry boxes, reflooring several rooms with concrete, whitewashing, ventilation improvements, and the razing of dilapidated structures. Over the course of 1901–1902, several position finding stations were installed by civilian laborers.<sup>479</sup> At Castillo San Felipe del Morro, a masonry magazine was converted into a water tank in 1902 and electricity was installed at El Morro in 1901.<sup>480</sup>

Some architectural changes made to the fortifications between 1898 and 1904 were guided by the Corps of Engineer’s desire to improve defenses against “amphibious attack.”<sup>481</sup> These changes included the installations of high-power, rapid-fire guns along the seacoast and bay to replace the breech-loading rifles and howitzers.<sup>482</sup>

After 1904, many of the proposed improvement projects failed to receive funding, and maintenance of the fortifications languished, in part because the walls were not seen as necessary to the defensive strategies of the Army.<sup>483</sup> In the second decade of the century, the walls continued to be seen as a nuisance, constricting the city, and exasperating public health concerns. The deterioration of the walls created informal trash dumps which attracted rats, as in the case of the wall connecting San Agustín and Santa Elena bastions where wave action had washed away underlying sand and created a void.<sup>484</sup> These unsanitary conditions and an outbreak of the bubonic plague in 1912 put pressure on the United States Military to either rat-proof the walls or hand them over to the government of Puerto Rico. At a meeting in May of 1914, it was agreed

<sup>476</sup> Bearss, *HSR: Historical Data: 1898–1958*, 75.

<sup>477</sup> Bearss, *HSR: Historical Data: 1898–1958*, 80, citing National Archives, “Gillespie to Flagler, 20 May 1901.” Record Group 77, General Correspondence 1894-1924, Doc. 37102/9.

<sup>478</sup> Bearss, *HSR: Historical Data: 1898–1958*, 80–82.

<sup>479</sup> Bearss, *HSR: Historical Data: 1898–1958*, 85.

<sup>480</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 46.

<sup>481</sup> Bearss, *HSR: Historical Data: 1898-1958*, 74.

<sup>482</sup> Bearss, *HSR: Historical Data: 1898-1958*, 65.

<sup>483</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 46. One exception that did receive funding during this period was the rebuilding of the El Morro Lighthouse in 1908; this resource had been badly damaged in the 1898 bombardment.

<sup>484</sup> Bearss, *HSR: Historical Data: 1898–1958*, 156–158.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

that Puerto Rico would gain control of several sections of the walls, including San Justo Bastion, San José de Las Palmas Bastion, and the area between Santo Domingo Bastion and San Sebastián Bastion. The insular authorities, however, never took possession of these sections and no rat-proofing efforts were made, in part due to declining cases of the plague.<sup>485</sup>

The few repairs that were undertaken in the early twentieth century utilized Portland cement, including the improvement of casemates at Castillo San Felipe del Morro. Portland cement was used as an ingredient in plaster, as an additive to mortar, or as a building material for the construction of floors or walls. The incompatibility of this material with the limestone blocks and lime-based mortar was recognized as early as 1913 when Army Colonel William M. Black noted that stucco repairs and paint made with cement were doing more harm than good. Black's experience at other Spanish fortifications informed his opinion about repairs. He argued that any repair should be sympathetic to the appearance and material of the old work, and that "everything possible be done to maintain the integrity of the picturesque fortifications."<sup>486</sup>

District engineer Charles H. McKinstry, subscribed to repair philosophy of "*tratamiento simpático*," and made requests for preservation and restoration projects throughout the fortifications in 1916, though these were postponed.<sup>487</sup> Attention was again devoted to the city walls and forts as coastal defense preparations were started on the island in 1917 at the start of the United States involvement in World War I. Concrete platforms were constructed for the gun emplacements at La Princesa, at Santa Bárbara Bastion, and along the West Wall, at Santa Elena Bastion between 1917 and 1918.<sup>488</sup> The high elevation of these platforms raised the level of the artillery above the surrounding parapet walls.<sup>489</sup>

After World War I, the preservation and maintenance of the fortifications continued to be a concern of engineers stationed at Post San Juan but for which few funds were allocated. The 1920s represented a new opportunity to complete unfinished repairs from the 1898 bombardment, even if these repairs were simple Portland cement patches.<sup>490</sup> The state of deterioration became abundantly clear in 1919, when a large section of the curtain wall between Santa Elena and San Agustín bastions fell into the sea. Further east, portions of the wall on the east side of San Agustín Bastion, were heavily undermined from erosion and rats and were also poised to fall.<sup>491</sup> Despite the great need for repair and rebuilding, limited work was authorized in 1924 and 1925.<sup>492</sup> In 1927, local engineer Martín Paniagua, who employed on public works

<sup>485</sup> Bearss, *HSR: Historical Data: 1898–1958*, 173–175.

<sup>486</sup> Bearss, *HSR: Historical Data: 1898–1958*, 170, citing "Black to Chief Engineer, 13 December 1913." National Archives, Record Group 77, General Correspondence, 1894-1924, Doc 37102/30.

<sup>487</sup> Bearss, *HSR: Historical Data: 1898–1958*, 176–179.

<sup>488</sup> Bearss, *HSR: Historical Data: 1898–1958*, 151.

<sup>489</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-6.

<sup>490</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 46.

<sup>491</sup> Bearss, *HSR: Historical Data: 1898-1958*, 181–185.

<sup>492</sup> Bearss, *HSR: Historical Data: 1898-1958*, 194–199.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

projects, wrote an article in *El Mundo* denouncing the use of concrete in repairs and construction at the fortifications.<sup>493</sup> Paniagua protested that the repairs did not take into consideration “art, perspective, and tradition” of the fortifications, leading to the replacement of expert masonry with artless and monotonous concrete.<sup>494</sup> The complaints of Paniagua and his contemporaries are explored further below in the Social History and Ethnic Heritage Statement of Significance.

In the 1930s, the U.S. military launched a host of new construction projects. The El Morro Esplanade, in particular, was extensively developed to serve the housing and recreation needs of the soldiers stationed at Post San Juan. In addition to electrical and water infrastructure installed below grade in the Esplanade, a complex of officers’ quarters was constructed with a swimming pool, an officer’s club, and a golf course. Additionally, in 1931 Officers’ Quarters were constructed along Norzagaray Boulevard, just east of Castillo San Cristóbal in (among which were Quarters No. 1, No. 2, No. 3, & No. 4). At Castillo San Cristóbal, the United States constructed the La Princesa Housing Area on the glacis stretching eastward from the San Cristóbal Moat.<sup>495</sup> Organized around a central avenue with streets and utilities throughout, this housing area was completed in 1931 and involved the demolition of the “líneas de retirada,” a set of two successive north-south defensive walls crossing the glacis. These walls had been built to provide protection against gunfire in the event of troops retreating from La Princesa and El Abanico. The housing complex was torn down in the 1980s.

While construction on the El Morro Esplanade and housing projects progressed, attempts to acquire appropriations for major repairs in the early 1930s were unsuccessful.<sup>496</sup> The repair projects that were planned were repeatedly put on hold as the United States Government considered making the site a national monument. The potential transfer of the land from the Department of the Army to the Department of the Interior served as a disincentive for the Army to invest in property that they would soon not control.

Finally, in 1938, funds were made available through the Works Progress Administration to undertake major restoration projects on the San Juan fortifications within the military reserve. The work was directed by David McCoach, the District Engineer for the Puerto Rico District.<sup>497</sup> Projects undertaken by the WPA included repairs to Castillo San Felipe del Morro, Castillo San Cristóbal, and the curtain walls and bastions connecting the two forts.<sup>498</sup> The significance of this large-scale restoration project for the long-term preservation of the fortifications and the

---

<sup>493</sup> Martín Paniagua, “Don Martín Paniagua aboga porque no se reste el sello primitivo a las murallas de San Juan.” *El Mundo*, 19 Jan 1927: 6, 10; United States Census Bureau (USCB), Census Population Schedule, Municipality of San Juan, Puerto Rico (1920).

<sup>494</sup> Paniagua, “La Murallas.”

<sup>495</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 39.

<sup>496</sup> Bearss, *HSR: Historical Data: 1898–1958*, 253–355.

<sup>497</sup> Auld, “Completion Report,” 1; Bearss, *HSR: Historical Data: 1898–1958*, 265.

<sup>498</sup> Auld, “Completion Report.”

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

preservation movement on Puerto Rico is described in more detail in the Statement of Significance for Ethnic Heritage and Social History, below.

Important architectural innovations related to the construction history at the fortifications in the early decades of the twentieth century included the development of reinforced concrete, which enabled the low-cost and fast construction of durable buildings and features such as gun emplacements. This building material along with construction techniques which included “forms made from plywood and planks, use of chamfers on edges, and use of expansion and control joists cast into structure” were implemented in the construction of multiple buildings throughout San Juan National Historic Site grounds.<sup>499</sup> Reinforced concrete structures included a number of buildings erected in the early 1940s, in anticipation of World War II: the Harbor Defense Command Post at Castillo San Felipe del Morro; the fire control stations such as Fire Control Station A at Castillo San Felipe del Morro and Fire Control Stations A and B at Castillo San Cristóbal; the World War II Joint Operations Center built within the moat at Castillo San Cristóbal, and other features.

The architectural changes made to the fortifications at San Juan fortifications in the lead up to, and during, World War II, are architecturally significant as examples of the implementation of modern military strategies and materials as incorporated into an existing set of structures. As discussed in the Military – Maritime History Statement of Significance, Puerto Rico was increasingly seen as an important military location within the Caribbean as tensions between Germany and the allies mounted in the late 1930s.

New military strategies, which focused on the potential for airborne attack rather than close-range assaults, required a network of information-gathering stations, new artillery equipment, and communication infrastructure to allow close contact with other military branches and locations throughout the region.

Within San Juan Reservation/Post San Juan, three observation posts, termed “fire control stations” or “manholes,” were constructed to gather information on potential enemy combatants in the water or air around San Juan. El Morro Fire Control Station A was installed at the northern end of the Great Wall at Castillo San Felipe del Morro, facing the Atlantic Ocean. Constructed of formed reinforced concrete with concrete visors over horizontal observation slits, this station was built to blend in with the monolithic appearance of existing fort. El Morro Fire Control Station A stands three stories tall, with its face curving around the north end of the Great Wall. At Castillo San Cristóbal, Fire Control Stations A and B (Manholes A and B) were constructed based on similar architectural conventions. Castillo San Cristóbal Fire Control Station A (Manhole A) was positioned at the northeast corner of El Caballero at the highest point in the fort. Castillo San Cristóbal Fire Control Station B (Manhole B) was positioned at the north end of the North

---

<sup>499</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-8.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Bastion, just east of Manhole A. Both were located strategically to gain the widest view of the surrounding seascape, designed to conform to the monolithic appearance of the limestone walls.

The World War II Radio Control Center, also known as the Harbor Defense Command Post-Harbor Entrance Control Post (HDCP-HECP) Building, was constructed in 1942. Sitting in the Castillo San Felipe del Morro Dry Moat under a layer of turf, this reinforced concrete structure was built to be bombproof, splinter-proof, and gas-proof. The facilities were constructed to accommodate a command post, fire control station, radar towers, anti-aircraft batteries, search lights, and communication equipment such as phone, wire, and radio.<sup>500</sup> The interior office spaces, plotting room, and switchboard room served the functions of both the HCDP and HECP.

The Visual Signal Station at El Morro acted in a support capacity for the World War II Radio Control Center. Constructed in 1941, this structure was built into the superior slope of the Great Wall at El Morro overlooking the entrance to San Juan Bay. This one-story, one-room reinforced concrete building was originally built to serve as the temporary HECP.<sup>501</sup>

At Castillo San Cristóbal, the World War II Joint Command Center (also, Joint Operations Center/Building 213) followed a similar architectural plan as the World War II Radio Control Center and conformed to the same design safety measures to ensure the building was bombproof, splinter-proof, and gas-proof. This building was constructed out of reinforced concrete within the San Cristóbal Moat, between the eastern flanking wall of Castillo San Cristóbal and San Carlos Ravelin. Atop the building, a layer of turf on the roof to obscured its visibility from the air. The Joint Operations Center served as a command post for the Army, Navy and Marine Corps and contained a host of spaces designed for communication equipment and offices for the various military branches.

Additional structural changes associated with the World War II building campaign include the construction of a Gun Emplacement at Battery La Princesa, built in 1940–1941, and the removal of a gun installed at Santa Bárbara Bastion in 1942. The La Princesa gun emplacement included four concrete Panama Mounts along the edge of the cliff overlooking the Atlantic Ocean. The gun mounted at Santa Bárbara Bastion dated from 1918 and was removed in 1942 to improve visibility for searchlights and observation posts.

After World War II ended in 1945, improvement and retrofitting of the San Juan fortifications to the needs of the United States Military came to an end. While the Army, and to some degree the Navy, maintained a presence at the fortifications until the 1960s, architectural projects were limited and geared primarily toward maintenance, repair, and selective demolition, rather than toward construction.

In its strategic siting and its physical fabric, San Juan National Historic Site's system of forts, walls, bastions, and open spaces reflect applied military engineering and design theory as it was

<sup>500</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 8-14.

<sup>501</sup> WLA Studio, *Draft: Fort Brooke Resources at San Juan National Historic Site*, 7-5.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

practiced in the early sixteenth century through the late nineteenth century, with some changes in the first half of the twentieth century. As identified in the 1983 UNESCO World Heritage Site Nomination form, the forts “reflect Italian Renaissance, Baroque, and French Enlightenment designs for military emplacements” as evidenced by the form and construction methods of the existing fabric.<sup>502</sup> Spain built successive iterations of the fortifications as technology, resources, and geo-political interests shifted from the mid-sixteenth century (1539) through the late nineteenth century (1898). The United States also made changes to the fortifications to reflect the technological changes, military needs, and maritime strategies of the early twentieth century; the last American military building campaign was completed by 1945. As such, the fortifications are eligible for listing on the NRHP in the area of Architecture as an unparalleled example of applied military engineering during successive periods of occupation from 1539 through 1945.

### **Criterion A — Ethnic Heritage (1539–1971) and Social History (1913–1971)**

San Juan National Historic Site is eligible for the NRHP under Criterion A, in the area of Ethnic Heritage, on the state level for its association with Hispanic cultural history in Puerto Rico and its role as an unparalleled symbol of Puerto Rican identity. The period of significance for Ethnic Heritage begins in 1539, with the earliest European construction projects within San Juan National Historic Site and the multi-cultural colonial interactions which these projects set in motion. The fortifications continued to develop as a locus of complex cultural interactions over the course of the ensuing centuries. Beginning in the early twentieth century, the San Juan fortifications became identified as a symbol of Hispanic cultural patrimony, and remain an important part of Puerto Rican national identity. The fortifications at San Juan National Historic Site continued to be an active part of the development and articulation of Puerto Rican ethnic heritage in the twentieth century. The period of significance for Ethnic Heritage ends in 1971, marking the typical 50-year cut-off date for eligibility for listing in the NRHP. This rule is used to ensure that enough time has passed to allow for historical perspective on the importance of past events. In the future, this period of significance may be revised in light of the continued resonance of San Juan National Historic Site as a locus of cultural identity and ethnic heritage in the later twentieth century.

Puerto Rico has a complicated history of cultural interaction and change, dating back to early Spanish colonial encounters of the sixteenth century through to the present. People from many different cultures — Native Taino, African, Spanish, Italian, Irish, English, and others — have contributed to the development of Puerto Rico, the institutions that are central to the island’s culture, and to the design and construction of the fortifications themselves. Many of these contributions are outlined in descriptions of the architecture, military history, maritime history,

<sup>502</sup> UNESCO, *La Fortaleza and San Juan Historic Site*.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

and archeology discussed throughout this nomination. While the multi-cultural nature of Puerto Rican heritage is increasingly recognized today, the history of a shared sense of Puerto Rican ethnic heritage has historically taken Spanish colonial culture as a touchstone.<sup>503</sup> The history of this shared sense of Puerto Rican ethnic heritage in the early twentieth century was closely tied to social movements on the island, including the early historic preservation movement.

San Juan National Historic Site is eligible for the NRHP under Criterion A, in the area of Social History, on the state level for its association with the historic preservation movement in San Juan, which sought to protect the cultural heritage of Puerto Rico through preservation of the San Juan fortifications and other resources. The period of significance for Social History is 1913–1971. The period of significance begins in 1913, when the territorial government of Puerto Rico petitioned the United States Army to release the fortifications to the “People of Puerto Rico” during a period when the Army was neglecting the structures.<sup>504</sup> This gesture marked the beginning of the fortifications playing an active role in discourse around Puerto Rican national identity and independence. The San Juan fortifications continue to play an important role in the Social History of the island, as a flashpoint for discourse on Puerto Rican cultural patrimony. The period of significance for Social History ends in 1971, marking the typical 50-year cut-off date for eligibility for listing in the NRHP. In the future the period of significance can be revised as the continued importance of the San Juan fortifications for the Social History of Puerto Rico in the recent past is more clearly understood.

The remainder of this section will focus on the twentieth-century significance of San Juan National Historic Site for social history and ethnic heritage in Puerto Rico, as exemplified both by the efforts of preservationists to maintain and protect the fortifications and in the ways that the site became a broader symbol of national Puerto Rican identity during this period. San Juan National Historic Site as a whole holds this significance, rather than individual contributing resources.<sup>505</sup>

### *San Juan Fortifications and Puerto Rican Heritage*

The significance of San Juan National Historic Site to the social history and cultural heritage of Puerto Rico is far reaching. As a symbol of Puerto Rican national identity, Spanish military

---

<sup>503</sup> The cultural complexity of the culture history of Puerto Rican has been explored by scholars such as Lisa Pierce Flores in *The History of Puerto Rico*. (Santa Barbara: ABC-CLIO, 2010) and Arturo Morales Carrion in *Puerto Rico: A Political and Cultural History*. (New York: W.W. Norton and Co. and the American Association for State and Local History, 1983).

<sup>504</sup> Santiago Cazull, *Historic Fortification Walls of Old San Juan*, 67.

<sup>505</sup> While the National Register identifies “ethnic heritage” as one of its recognized Areas of Significance, the remainder of this Statement of Significance will use the term “cultural heritage.” The term ethnic heritage can be interpreted as focused on difference and “othering;” this Statement will focus on the ways that cultural practices, objects, and structures create a sense of belonging and shared identity.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

architecture was central to the nascent historic preservation movement on the island in the years after the colony's transfer from Spain to the United States. Early twentieth-century political movements, such as the movement for Puerto Rican independence, were bound up in the ongoing process of defining a distinctive Puerto Rican shared identity, free from all foreign control.

In the late nineteenth century, Puerto Rican activists had expressed dissatisfaction with the ways Spanish colonial institutions, laws, and architecture placed restrictions on many native Puerto Ricans.<sup>506</sup> This agitation led to the demolition of the east section of the Old San Juan City Wall and a series of other reforms. In contrast, Spanish architecture and Spanish cultural heritage in general, came to take on a new meaning under American rule. Changes made to the island in the wake of American colonial policy had disenfranchised many wealthy landowning elites and this group "turned to the island's Hispanic legacy in response to U.S. colonialism."<sup>507</sup> These actors saw Spanish civilization, underwritten by a sense of shared family traditions and religion, as a counterpoint to the alien and sometimes cruel barbarisms associated with Anglo-American imperial rule.<sup>508</sup> The movement for Puerto Rican independence increasingly turned to the island's Spanish past for a sense of self.<sup>509</sup>

The preservation movement gained momentum in the Spanish Antilles in the 1910s when activists in Cuba, the Dominican Republic, and Puerto Rico called for government mechanisms to aid in the protection of cultural resources and the establishment of museums and archives.<sup>510</sup> In 1913, the Puerto Rican government established the position of Historian of Puerto Rico and in 1919, the Historical Archives of Puerto Rico were founded.<sup>511</sup> Both of these actions accelerated the development of the preservation movement on the island. The Historical Archives of Puerto Rico was tasked with the "supervision, organization, classification, and cataloguing of documents from the former Spanish government and the institutions that were eliminated or reformed after 1898."<sup>512</sup> It was not until 1930, however, that a government body was formed to oversee the preservation of cultural resources.

In the interim between 1919 and 1930, it was the voices and actions of private citizens which came to fuel the island's preservation movement. In 1923, for example, The Ladies' Civic Club

---

<sup>506</sup> Picó, *History of Puerto Rico*, 221–227.

<sup>507</sup> Dávila, *Sponsored Identities*, 26.

<sup>508</sup> Dávila, *Sponsored Identities*, 26.

<sup>509</sup> Arlene M. Dávila, *Sponsored Identities: Cultural Politics in Puerto Rico*. (Philadelphia: Temple University Press, 1997).

<sup>510</sup> Rosina C. Negrón Menicucci, "The Origins of the Preservation Movement in the Spanish Antilles." Unpublished M.S. Thesis (University of Pennsylvania, 2000).

<sup>511</sup> Negrón Menicucci, "Origins of the Preservation Movement," 18–19; Erwin R. Harvey, *Legislación Cultural: Legislación cultural comparada, Legislación cultural puertorriqueña*. (San Juan, Instituto de Cultural Puertorriqueña, 1993).

<sup>512</sup> Negrón Menicucci, "Origins of the Preservation Movement," 19.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

of Puerto Rico protested the proposed demolition of an eighteenth-century Old San Juan landmark, the Capilla del Santo Cristo de la Salud. This public protest is considered “the first local heritage rescues act” in Puerto Rico and motivated other nearby property owners to improve their structures.<sup>513</sup>

During the 1920s in Puerto Rico, the political significance of this protest was underwritten by the popularity of the Union Party, an organization born out of the labor movements of the late 1910s which favored independence from the United States.<sup>514</sup> Also significant was the founding of the Nationalist Party in 1922 from a group of dissenters from the Union Party. The Nationalist Party “placed much emphasis on the symbols of national identity and advocated the study and contemplation of Puerto Rico’s historical reality.”<sup>515</sup> The Nationalist Party gained popularity based not only on its demand for independence, but also on its platform of anti-colonialism and anti-imperialism.<sup>516</sup> This campaign highlighted the illegality of colonial rule and “promot[ed] Puerto Rican national symbols such as the flag and the national anthem.”<sup>517</sup>

The most monumental symbols of Spanish cultural heritage were the San Juan fortifications. The preservation of these monuments was identified early on as a central goal around which early local preservationists gathered. Throughout the first two decades of the twentieth century, the United States Army made several inspections of the fortifications and a number of requests for appropriations from the federal government for repairs, often citing the historical importance of the walls.<sup>518</sup> Repair and maintenance projects largely went unfunded and the continued deterioration and neglect of the walls, forts, and open spaces occupied by the United States Army was seen through the lens of the deteriorating political relationships between the Insular Government and the Federal Government.

### *The 1926-1927 Wall Repair Controversy*

Control of the San Juan fortifications was a subject of frequent negotiation between the United States Army and the Puerto Rican Insular Government in the early decades of the twentieth century. As a symbol of Puerto Rican heritage which predated the United States, the Puerto Rican Insular Government sought to control the fortifications. As part of San Juan’s military defense complex, the United States Army sought to maintain control of the walls, but invested little in their maintenance. During the first quarter of the twentieth century, the fortifications

<sup>513</sup> Beatriz del Cueto, and Agamemnon G. Pantel, “La conservación urbana en Puerto Rico/Urban conservation in Puerto Rico.” *Loggia* 29 (2016): 45.

<sup>514</sup> Picó, *History of Puerto Rico*, 225–227.

<sup>515</sup> Picó, *History of Puerto Rico*, 256.

<sup>516</sup> Dávila, *Sponsored Identities*, 26.

<sup>517</sup> Dávila, *Sponsored Identities*, 27.

<sup>518</sup> Bearss, *HSR: Historical Data: 1898–1958*.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

figured into political discussions about public health, changes in military technology, historic preservation, and government fiscal responsibility.

Multiple United States Army officers recognized the historic value of the fortifications in the first decades of the twentieth century. Despite this recognition, the Department of Defense did not invest in their maintenance and the walls were routinely neglected. This pattern of neglect came to a head in 1912 when the rat-infested walls became a popular scapegoat for an outbreak of bubonic plague. Despite the outbreak, the Army again decided against repairs to the walls and admitted that the Army did not consider the walls to have a military function. In response, Puerto Rico's Governor, George R. Colton, reiterated that the walls had cultural value for Puerto Ricans and those walls not needed for military purposes should be transferred to the "People of Puerto Rico."<sup>519</sup>

In the decades that followed, the financial burden of maintaining the walls became the subject of a number of agreements between the United States and Puerto Rican Insular governments. Cost sharing agreements ultimately ended when the United States failed to allocate funds for their portion of the needed projects.<sup>520</sup> Limited repairs that did proceed were acutely focused on short-term economical solutions which utilized inexpensive materials such as Portland cement.

In the late 1920s, the quality of those repairs undertaken by Army Corps of Engineers was pointedly criticized *El Mundo*, a popular San Juan newspaper. Local engineers and preservationists considered the Corps' methods and materials as inappropriate for the historic fortifications. The use of Portland cement on the limestone walls was considered especially problematic. Recommendations had been made to the Corps in years past as to the best methods of restoring the walls, utilizing traditional materials, and replacing materials in kind. Among these were the recommendations of Governors Reilly and Horace Mann Towner who spoke out in support of historic preservation of the fortifications.<sup>521</sup>

Despite these recommendations and guidelines, the past work undertaken by the Corps was seen as incompatible with the materials and appearance of the historic fabric.

Dissatisfaction with the Corps' past work pivoted on the fact that the fortifications held cultural value for the people of Puerto Rico that was tied to the skilled craftsmanship used to construct and maintain them. In a January 1927 opinion piece, local civil engineer Martín Paniagua lamented that the historical character of the walls was not incorporated in the design plans and that "if [Army Engineer Boggs] knew something about art, perspective, tradition, and if he had read a little bit about our history, he would not have allowed such nonsense to occur."<sup>522</sup> The Army Corps had allowed problems such as drainage, erosion, and vegetation to escalate and did

<sup>519</sup> Bearss, *HSR: Historical Data: 1898–1958*, 160–161.

<sup>520</sup> Bearss, *HSR: Historical Data: 1898–1958*, 171–174, 193; 209; 213–215

<sup>521</sup> Santiago Cazull, *Historic Fortification Walls of Old San Juan*, 70.

<sup>522</sup> Paniagua, "La Murallas," 6. Translated from Spanish.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

not recognize that modern materials and techniques exasperated these problems while also diminishing the aesthetic appeal of the fortifications.<sup>523</sup>

Paniagua's remarks set off a series of featured editorials in *El Mundo* over the following weeks wherein the newspaper's editors criticized the Army Corps of Engineers and called for action on the part of Puerto Rican-elected officials to do something to ensure that the walls were restored properly.

Commissioner Guillermo Esteves, head of the Puerto Rican Department of the Interior (Puerto Rican DOI) which had approved the project, defended the work on the walls. Despite this, several other key officials remained silent, including the Mayor of San Juan, Roberto H. Todd, the Governor of Puerto Rico, Horace Mann Towner, and the engineer overseeing the work itself, District Engineer F.C. Boggs.

It wasn't until weeks later that Army Corps District Engineer F.C. Boggs, responded to the criticism in an article in *El Mundo*, where he announced the Corps agreed that the work would ideally be completed in a more aesthetically-pleasing manner.<sup>524</sup> To do this, Boggs convinced the contractors to "reface areas where concrete was used with coral blocks, at no extra cost to the United States."<sup>525</sup> The newspaper praised Boggs, Esteves, and especially the contractors, who shouldered the economic burden of changes to the repair plans. Indeed, Boggs agreed that it was desirable to "make these repairs harmonize with the old structure," but maintained that the most important goal was in protecting United States, regardless of the technique employed.<sup>526</sup>

After the harsh critiques of 1926 and 1927, the Corps took into consideration the historical importance of the walls and the public interest in their preservation when planning repairs. Cost estimates for future projects had to include specifications that were focused on the restoration, not simply the repair of the fortifications.<sup>527</sup> The 1926–1927 conflict over repairs proposed by the Army Corps of Engineers sowed the seeds for a preservation movement that continued to grow on the island. As one scholar has noted, the controversy surrounding the repairs made in 1920s had as one result the formation of a "public consensus...regarding the historical and aesthetic value of the walls."<sup>528</sup>

---

<sup>523</sup> Paniagua, "La Murallas," 6.

<sup>524</sup> "Editorial Notes: Las Murallas de San Juan. Al fin de harán las obras como hemos pedido," *El Mundo*, 7 February 1927.

<sup>525</sup> Bearss, *HSR: Historical Data: 1898–1958*, 224.

<sup>526</sup> Bearss, *HSR: Historical Data: 1898–1958*, 222, citing "Boggs to Estes, Feb. 18, 1927." Washington National Record Center, Record Group 77, Entry 50-23, Box 115

<sup>527</sup> Bearss, *HSR: Historical Data: 1898–1958*, 223, citing "Jadwin to Secretary of War, Mar. 15, 1927." Washington National Record Center, Record Group 77, Entry 50-23, Box 115.

<sup>528</sup> Santiago Cazull, *Historic Fortification Walls of Old San Juan*, 73.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

*Movement toward the Institutionalization of Cultural Heritage Protections*

The public recognition of the fortifications as vital components of Puerto Rican heritage helped to push the Insular Government to established institutions and to pass legislation for the protection of cultural heritage. The Puerto Rican Legislature passed a law in 1930 establishing the Board for the Preservation of Historical Values (Junta de Conservación de Valores Históricos), a state-level advisory board for the conservation of Puerto Rican heritage. Adopted April 23, 1930 and effective in July of 1930, the measure was intended to “conserve and repair buildings and other structures that included fortification and castles, and other monuments, federal, local or private.”<sup>529</sup> Section 6 of the law echoed the concerns which were brought to the surface during the 1920s: “Buildings, structures, including castles and fortifications, and island monuments that are declared of historical value by this Board, may not be altered in a way that affects their original appearance, without prior consultation and approval from the Conservation Board of Historical Values.” The importance of San Juan’s fortifications in particular is suggested by the make-up of the Board which included both the Mayor of San Juan and the Colonel of the Puerto Rican Regiment as originating members, in addition to the Commissioner of the Puerto Rican DOI and a group of members to be appointed by the Governor.<sup>530</sup>

The historical importance of the fortifications was increasing recognized by the United States War Department during the 1930s, though this recognition did not translate into funding for repairs. In 1930, Assistant Engineer Truss noted a variety of damage to the Great Wall at El Morro and argued in his report that “El Morro is the most important and most interesting, historically, of the San Juan fortifications” and would require attention to ensure its preservation.<sup>531</sup>

Pressure to better maintain the fortifications increased after a 1934 visit from First Lady Eleanor Roosevelt. During her visit, she expressed interest in the preservation of the fortifications and the potential for establishing a national park on the island. Shortly thereafter, the War Department explored the option of transferring San Juan Military Reservation to the Department of the Interior and establishing a national monument. This transfer would have embraced the shift toward cultural heritage tourism that had already begun at the site. By the mid-1930s, the forts were open to the public, the Sixty-Fifth U.S. Infantry were detailed as guides, and there were multiple repurposed spaces for services such as a fire station, a barber shop, and a dance hall.<sup>532</sup> A 1934 planning study proposed that a national monument could encompass “all historic walls,

<sup>529</sup> Negrón Menicucci, “Origins of the Preservation Movement,” 19.

<sup>530</sup> Harvey, *Legislación Cultural*.

<sup>531</sup> Bearss, *HSR: Historical Data: 1898–1958*, 240; citing “Truss to District Engineers, Nov. 5, 1930.” Washington National Record Center, Record Group 77, Entry 50-23, Box 115

<sup>532</sup> Bearss, *HSR: Historical Data: 1898–1958*, 256, citing “Bryant and Wright, Report of Puerto Rico Field Study, June 27, 1934.” National Archives, Record Group 79, NPS Central Classified File, 1933–49.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

fortifications, etc., situated on the area now comprising the Military Reservation.”<sup>533</sup> A bill to establish San Juan National Monument (Bill S. 2864), was introduced to Congress in 1935, but stalled after passing in the Senate.<sup>534</sup> The United States Army continued to control the site, and maintenance continued to be postponed.

### *WPA and Preservation at the Walls 1938–1940*

While the push for the establishment of a national monument at the site was unsuccessful, the importance of the site to the cultural heritage of Puerto Rico was reaffirmed when extensive repair projects were funded as part of The New Deal. President Franklin D. Roosevelt signed the Puerto Rican Emergency Relief Act in 1933, making funds available for a variety of projects and promising a host of jobs for unemployed Puerto Ricans through the Puerto Rico Emergency Relief Administration (1933–1935), followed by the Puerto Rican Reconstruction Administration (PRRA, 1935–1953). Funds directly from the Works Progress Administration were also used for a variety of projects in Puerto Rico, including a host of repairs to the San Juan fortifications.

The work at the San Juan Fortifications included repairs to Castillo San Felipe del Morro, Castillo San Cristóbal, as well as those portions of the curtain walls and bastions connecting the two forts which were located within the San Juan Military Reservation. Only work on fortifications within the San Juan Military Reservation was undertaken and ranged in scale from small-scale patching and painting to the construction of revetments to prevent wave damage.<sup>535</sup>

Initially, only \$100,000 was made available for the repair work, including repairs to the San Agustín Wall, sentry boxes, and the wall at Santo Domingo.<sup>536</sup> For the first half of 1938, five to seven thousand Puerto Rican relief workers were involved in rehabilitation and repair of various “historic structures in and around San Juan.”<sup>537</sup> The completion of this work cost \$500,000. Other projects included in the WPA projects were the repair of sentry boxes, stairs, ramps, and walls, and the opening of sealed embrasures.<sup>538</sup> In 1939, WPA workers reconstructed the curtain wall between San Agustín and Santa Elena bastions, repaired or reconstructed nine sentry boxes, and repaired stairs, ramps, walls, and embrasures.<sup>539</sup> Approved in October 1939, work continued

---

<sup>533</sup> John L. Nagle, “Report on Park Development and Tourist Trade Possibilities: Island of Puerto Rico.” December 10–18, 1934. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

<sup>534</sup> Bearss, *HSR: Historical Data: 1898–1958*, 257.

<sup>535</sup> Auld, “Completion Report,” 4.

<sup>536</sup> Bearss, *HSR: Historical Data: 1898–1958*, 259; citing “Monthly Report of Preservation and Repair of Historical Fortifications for April–June 1938.” Washington National Records Center, Record Group 77, Entry 50-23, Box 11.

<sup>537</sup> Bearss, *HSR: Historical Data: 1898–1958*, 271.

<sup>538</sup> Auld, “Completion Report.”

<sup>539</sup> Auld, “Completion Report.”

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

on several specifications already identified and a new project was established to cover the cleaning, patching, pointing, and re-facing of eroded masonry.<sup>540</sup>

The WPA restoration project is significant because it represents the first large-scale effort to mitigated years of neglect and deterioration which had compromised the material integrity and stability of the fortifications. All or most of the work was accomplished by hand and the craftsmen recruited for the work were from San Juan and surrounding communities. Census records, taken in mid-1940, indicate a large variety of laborers and masonry specialists resided in San Juan who had, five years earlier lived in other areas of the island.<sup>541</sup> Many workers reported employment with the Puerto Rico Reconstruction Administration and the WPA. At the height of the project, nearly 2,000 men were working both day and night shifts. The man-hours expended were 3,614,955.<sup>542</sup>

The 1938–1940 restoration campaign was also significant because of the shortfalls it exposed in the United States Army’s approach to historic preservation. Despite the good intentions of the project, the work was quickly critiqued as not sufficiently sensitive to the historic character of the fortifications. When National Park Service Architect, Stuart M. Barnette, traveled to San Juan to consult on the restoration of La Fortaleza in early 1940, he complained that the plans “showed almost complete disregard for the importance of historic structures.”<sup>543</sup> In the years between 1940 and 1945, the United States Army actively used the San Juan fortification in preparation for World War II (as discussed above). It was not until after 1945 that the fortifications began to be viewed as primarily related to the cultural heritage of Puerto Rico, rather than as a military installation. With this new role, a new approach to historic preservation at the fortifications began to be imagined.

### *Establishment of San Juan National Historic Site*

During the Post-World War II years, the political climate in Puerto Rico reflected an increased dissatisfaction with U.S.-appointed governors. Demands for self-governance were answered in a 1947 law that would allow for democratic election of the governor and which many expected would be a step toward a Puerto Rican territorial constitution, which would enable self-governance.<sup>544</sup> Luis Muñoz-Marín, the leader of the Popular Democratic Party, became Puerto Rico’s first democratically elected governor in late 1948, and took office in January of 1949.

<sup>540</sup> Bearss, *HSR: Historical Data: 1898–1958*, 285–288.

<sup>541</sup> USCB, Census Population Schedule, Municipality of San Juan, Puerto Rico (1940). These data have not to date been systematically quantified. The 1940 census has a great deal of information on residence, past residence, profession, and employer. Often, the “PRRA” or “Government” is cited as employer for carpenters and masons.

<sup>542</sup> Auld, “Completion Report,” 17.

<sup>543</sup> Bearss, *HSR: Historical Data: 1898-1958*, 304–305, citing “Barnette to the Director, Feb. 5, 1940.” National Archives, Record Group 79, NPS Central Classified File, 1933–49.

<sup>544</sup> Picó, *History of Puerto Rico*, 278.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Muñoz Marin supported the island's preservation movement, which had recently pushed for legislation to protect Puerto Rico's cultural heritage. In 1947, the Puerto Rican Monuments and Historic Places Act was passed which declared the monuments and historic places of Puerto Rico were to be public property, for the benefit of the community.<sup>545</sup> It was within this context that "historians, preservationists, and groups interested in tourism" worked together to push for the establishment of San Juan National Historic Site.<sup>546</sup>

In September of 1948, an agreement was reached between the Department of the Army and the Department of the Interior (which includes the National Park Service) distributing management duties between the two departments. San Juan National Historic Site at that time was composed of Castillo San Felipe del Morro, Castillo San Cristóbal, Casa Blanca, and El Cañuelo.<sup>547</sup> According to the agreement, the Department of the Army continued to have ultimate control over the fortifications, but the National Park Service would facilitate the establishment of facilities for visitors, interpretive programming and signage, and planning for future public use of the site.<sup>548</sup> The National Park Service was also tasked with the review of "maintenance and repair programs or proposed alterations and structural changes in historically important sections of the fortifications, including open spaces."<sup>549</sup> On January 4, 1949, President Harry S. Truman approved of the cooperative agreement between the departments. Following this, on February 14, 1949, the Secretary of the Interior designated San Juan National Historic Site, under the provisions of the 1935 Historic Sites Act.<sup>550</sup>

Even as San Juan National Historic Site had been established, protection and promotion of cultural patrimony remained at the center of much of the nationalist politics that Governor Muñoz-Marín espoused. After he took office in 1949, Muñoz-Marín took several steps to protect cultural heritage, with specific interest in Hispanic cultural heritage. The duties of the Conservation Board of Historical Values were taken over by the Historic Site Advisory Committee under the Planning Board (Junta de Planificación) in 1949 (Law No. 374, May 14, 1949). The Planning Board was granted the ability to designate zones of historic value for tourism, and it favored the use of architectural styles with roots in Spanish colonial traditions.

<sup>545</sup>This act is entitled "Ley de Monumentos y Lugares Históricos de Puerto Rico." and was passed on July 1, 1947; Harvey, *Legislación Cultural*; Negrón Menicucci, "Origins of the Preservation Movement," 20.

<sup>546</sup> Bearss, *HSR: Historical Data: 1898-1958*, 379.

<sup>547</sup> Cooperative Agreement of Sept. 4, 1948, National Archives, Record Group 79, NPS Central Classified File, 1933-49. On file San Juan National Historic Site Archives, San Juan, Puerto Rico; At the time of the 1948 cooperative agreement, Casa Blanca was used by the Department of the Army as District Headquarters. Casa Blanca is no longer part of San Juan National Historic Site.

<sup>548</sup> Bearss, *HSR: Historical Data: 1898-1958*, 380, citing "Cooperative Agreements of Sept. 4, 1948." National Archives, Record Group 79, National Park Service, Central Classified File, 1933-49, San Juan

<sup>549</sup> Bearss, *HSR: Historical Data: 1898-1958*, 380.

<sup>550</sup> Bearss, *HSR: Historical Data: 1898-1958*, 381; M. Gothlin, "Las Fortificaciones de San Juan estarán Abiertas al Público." *El Mundo*, 18 February 1949: 7; Chapel J. Martínez, "Truman Declara Monumentos Históricos las Fortificaciones." *El Mundo*, 3 February 1949: 4.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Muñoz-Marín established the Institute of Puerto Rican Culture (ICP) in 1955 and Dr. Ricardo Alegría, an anthropologist, served as the first Executive Director of the Institute.<sup>551</sup> The Institute's purpose was "to conserve, promote, enrich, and divulge the Puerto Rican cultural values and to accomplish a broad knowledge and appreciation of these values."<sup>552</sup> The ICP worked as an instrument of the State to outline the bounds of Puerto Rican culture and heritage, under the umbrella of cultural nationalism.<sup>553</sup>

The efforts of Muñoz-Marín aligned with the preservation efforts of San Juan National Historic Site. In 1955, Park Historian and Acting Superintendent, Julio Marrero-Núñez, wrote an article for the publication *History News* outlining the historical activities at San Juan, including the explosion of interest in the Park, which by 1954 had seen 45,000 visitors.<sup>554</sup> Marrero-Núñez also described the recent establishment of "The Society for the Development and Preservation of San Juan," the publication of *Historia* by the University of Puerto Rico Department of History, and the approval of a bill by the Legislature of Puerto Rico creating ICP.<sup>555</sup> The Chamber of Commerce of Puerto Rico and the Puerto Rico Visitors Bureau also promoted preservation as part of an economic strategy that would promote tourism on the island.

After being designated a National Historic Site in 1949, maintenance at San Juan National Historic Site continued in much the same pattern as before, with the Army overseeing maintenance and repair. In 1951, for example, a section of wall fronting San Agustín Bastion collapsed, and the entire bastion was under threat of falling into San Juan Bay.<sup>556</sup> After a number of studies and calls for funding, it was decided that the repairs would be made "as expeditiously as possible, not only to protect the presently damaged area but also the currently undamaged section."<sup>557</sup> The project was completed in 1953. Another collapse, this time at Las Ánimas Bastion, resulted in emergency repairs in 1955, apparently without comment on the materials and methods used. In 1955, the National Park Service (NPS) began restorations on the Chapel at Castillo San Felipe del Morro, as well as repairs to the triangular stairway, vegetation removal, and repair to the Dutch Monument. Additionally, a casemate was designated as a waiting room for visitors.<sup>558</sup>

While the Army and NPS managed these repairs independently, collaborations with civilian groups also took place. In 1955, the Women's Civic Club (Club Civico de Damas) donated \$5,622 for the restoration of San Juan Gate, which lies along the west wall of San Juan National

<sup>551</sup> Beatriz del Cueto and Agamemnon G. Pantel, "La conservación urbana,"; Negrón Menicucci, "Origins of the Preservation Movement," 49-50.

<sup>552</sup> Negrón Menicucci, "Origins of the Preservation Movement," 49.

<sup>553</sup> Picó, *History of Puerto Rico*.

<sup>554</sup> Julio Marrero-Núñez, "Puerto Rican Interest in Local History." *History News* 10 no. 11 (1955): 44.

<sup>555</sup> Marrero-Núñez, "Puerto Rican Interest in Local History," 41.

<sup>556</sup> Bearss, *HSR: Historical Data: 1898-1958*, 388.

<sup>557</sup> Bearss, *HSR: Historical Data: 1898-1958*, 398.

<sup>558</sup> Bearss, *HSR: Historical Data: 1898-1958*, 419.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Historic Site.<sup>559</sup> The donation of these funds demonstrates the continued interest and investment of civilians in the preservation of Hispanic architectural heritage, as embodied in the San Juan fortifications.<sup>560</sup> National Park Service Architect, F.C. Gjessing, prepared plans for the restoration at the request of local preservationists and the women's club.<sup>561</sup> In an effort to maintain the historical integrity of the restoration, the reviewing officer at the Eastern Office of Design and Construction "raised questions regarding the absence of any documentation to support the proposed work."<sup>562</sup> Reassured by Superintendent Hubler that the project was one of preservation and repair, rather than extensive restoration, the plans and specifications were approved. A local contractor, F.W. Loesche, was awarded the contract in February of 1956, at a cost of \$5,980, the \$358 difference raised by the Comité de Historia. The restoration project was completed in the spring in 1956.<sup>563</sup> Additional civilian service organizations involved in raising money for the restoration of San Juan landmarks included the Lion's Club.<sup>564</sup>

In 1960, the NPS created a listing of sites throughout the United States associated with Spanish Exploration, including San Juan National Historic Site.<sup>565</sup> Shortly thereafter, in 1961, the Department of the Army transferred ownership of San Juan National Historic Site to the National Park Service. The NPS quickly made plans to restore features of the fortifications, including multiple projects at Castillo San Cristóbal, such as the restoration of the Well House, east loggia of the Officer's Quarter's, Troop's Quarters, El Abanico, and the South and Northeast gates of El Abanico.<sup>566</sup> On October 15, 1966, San Juan National Historic Site was "administratively listed" in the NRHP. This designation indicates that a supporting nomination had not been accepted. During this period, Puerto Rico experienced a resurgence of national pride with the 450<sup>th</sup> anniversary of the founding of San Juan, a celebration which resulted in renewed attention for the architecture of Old San Juan.<sup>567</sup>

While the park had been designated an historic site in 1949, it was only in 1973 that a preliminary NRHP nomination form for San Juan National Historic Site was prepared, following the nomination and listing of Old San Juan (Viejo San Juan) Historic District in the National

<sup>559</sup> Bearss, *HSR: Historical Data: 1898-1958*, 201; H. V. Tooker, "Procederán a Restaurar la Puerta de San Juan." *El Mundo*, 21 March 1955: 12.

<sup>560</sup> Tooker, "Procederán Restaurar la Puerta de San Juan," 12.

<sup>561</sup> Bearss, *HSR: Historical Data: 1898-1958*, 401.

<sup>562</sup> Bearss, *HSR: Historical Data: 1898-1958*, 401, citing "Cornell to Superintendent, SAJU, Aug 30, 1955." Washington National Record Center, Record Group 79, NPS, Washington Office Files, 1953-60.

<sup>563</sup> Bearss, *HSR: Historical Data: 1898-1958*, 403.

<sup>564</sup> Marrero-Núñez, "Puerto Rican Interest in Local History." 44.

<sup>565</sup> American Association for State and Local History, "National Park Service Historic Landmarks Registry Lists 26 Sites Under Spanish Exploration Theme." *History News* 16 no. 1 (1960): 3, 12.

<sup>566</sup> Berkowitz, *Fortifications: Vol. I - Summaries*, 27.

<sup>567</sup> Gregory Nokes, "As City Celebrates its 450<sup>th</sup> Anniversary, Old San Juan is Undergoing Restoration." *The Danville Register*, 24 Mar 1971, 8.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Register in 1972.<sup>568</sup> The 1973 nomination was never signed, but it stands as the first official documentation of the significance of San Juan National Historic Site in the areas of military history and architecture.<sup>569</sup> Following this nomination, in 1983, San Juan National Historic Site and La Fortaleza were inscribed as a World Heritage Site by the United Nations Educational, Scientific, and Cultural Organization (UNESCO).<sup>570</sup>

Over the course of the period between 1913 and the present day, the preservation of the fortifications at San Juan have played an important role in the articulation of Puerto Rican cultural heritage and in the social and political movements surrounding the formation of a uniquely Puerto Rican identity. As such, San Juan National Historic Site is eligible for the NRHP under Criterion A, in the areas of Ethnic Heritage and Social History, for its role in the fostering of cultural identity, the promotion of Hispanic cultural history, and as a central focal point for the early twentieth-century historic preservation movement in Puerto Rico.

### **Criterion D — Archeology, Historic Non-Aboriginal; 1539–1945**

San Juan National Historic Site is nationally significant under Criterion D for the important information that archeological investigations have yielded and have the potential to yield with respect to the architectural history of the fortifications, the role of these fortifications in military history, military life, and social, economic, and cultural relationships between the military and the civilian community. The period of significance ranges from 1539, when the construction at the *el morro* headlands was first authorized by Spain and construction began in the area of Santa Bárbara Bastion, through 1945, when architectural changes associated with World War II were completed.<sup>571</sup> Many archeological investigations have taken place within San Juan National Historic Site. Where the location and extent of these studies are known, they are indicated on the Archeological Studies Map, locations of contributing resources are indicated on the Key Map, with Insets A, B, C, D, E, and F

---

<sup>568</sup> Luis M. Rodríguez Morales, *Zona Histórica de San Juan (San Juan Historic Zone)*, National Register of Historic Places Nomination, October 10, 1972. On file National Park Service and San Juan National Historic Site, San Juan, Puerto Rico.

<sup>569</sup> Gjessing and Schmidt, *San Juan National Historic Site NR Nomination*, unsigned.

<sup>570</sup> UNESCO, *La Fortaleza and San Juan Historic Site*.

<sup>571</sup> While no pre-Columbian archeological sites have been documented within San Juan National Historic Site to date, the Los Dominicos Site (SJ-1; SJ0100001) is located within 500 feet of the Santo Domingo Bastion. Excavations at Los Dominicos have yielded pre-Columbian ceramics (Puerto Rico State Historic Preservation Office, *Sitios Arqueológicos de San Juan*, June 2021).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

*Castillo San Felipe del Morro (also, El Morro)*

Much of the archeological excavation and analysis which has taken place at San Juan National Historic Site has been undertaken within and around Castillo San Felipe del Morro. This work has yielded information on the construction history of a number of contributing resources including: Castillo San Felipe del Morro, Santa Bárbara Bastion, Austria Bastion, Carmen Bastion, Ochoa Bastion, Mercado Bastion, Water Battery, Kitchen Courtyard, Castillo San Felipe del Morro Dry Moat (El Morro Dry Moat), the Castillo San Felipe del Morro Sally Port (El Morro Sally Port), El Morro Road, and the El Morro Esplanade.

The earliest documented archaeological project at El Morro was undertaken in 1961 by Hale G. Smith, first chair of the Anthropology Department at Florida State University.<sup>572</sup> Smith was tasked with identifying material evidence related to the “repair, restoration, and interpretation” of Castillo de San Felipe del Morro.<sup>573</sup> To accomplish these goals, he targeted four areas: the El Morro Dry Moat at Austria Bastion, the Kitchen Courtyard, the Water Battery, and portions of the planned Shoreline Trail (Paseo del Morro today).

Within El Morro’s Dry Moat, Smith identified the *mampostería* (rubble masonry) walls associated with earlier building campaigns and their spatial relationship with the extant walls, which were constructed in the late eighteenth century. Limited excavation in the Water Battery identified four floor levels, in addition to other features pointing to the complicated construction history at this location. The open excavations within the Kitchen Courtyard of the Santa Bárbara Bastion identified a number of earlier structures, including the entire first story of a building that had been filled in when the extant terreplein for the Santa Bárbara Bastion was constructed. The lack of domestic debris on the interior of the fort, motivated Smith to undertake excavations along the shoreline in order to test his hypothesis that refuse was disposed of outside the walls of the fort. Excavations along the north shoreline of El Morro identified domestic refuse and supported Smith’s hypothesis. Importantly, Smith’s research also identified several previously undocumented thought to be locally-made historic ceramic types including El Morro Ware, Rey Ware, and Moat Plain.<sup>574</sup> Smith’s excavations provided insight into the construction sequence at Castillo San Felipe del Morro, methods of construction, previous site layout, and disposal practices, all of which contribute to our knowledge of the development of the fortifications at San Juan National Historic Site.

After Smith’s academically-focused archaeological research project, research at Castillo San Felipe del Morro continued intermittently; at times, this work was associated with construction disturbance (discussed below), planned regulatory surveys, and academic research programs.

<sup>572</sup> Kittridge A. Wing, “Memorandum (H30) Regarding Archaeological Investigation at El Morro, San Juan National Historic Site, with Attachments. July 28, 1962.” National Archives, Philadelphia, Record Group 79, NPS 1785–2006, General Subject Files, 1936–1965; Smith, “Archaeological Excavation at El Morro.”

<sup>573</sup> Smith, “Archaeological Excavation at El Morro.” vi.

<sup>574</sup> Smith, “Archaeological Excavation at El Morro.”

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Most of these projects yielded information on the architectural history of El Morro or the nature of everyday military life, enhancing an understanding of military history at the site. During a construction project in 1976, Southeast Archeological Center (SEAC) archaeologist Judith Kenyon, inspected construction disturbance within the El Morro Dry Moat and under the El Morro Sally Port. Kenyon reported a “sizable number of potsherds,” suggesting the archaeological potential of deposits associated with this resource, but did not offer interpretations.<sup>575</sup> In 1979, construction-related excavations were undertaken by Dr. A. Gus Pantel within the El Morro Dry Moat and along the seaside slopes outside Ochoa Bastion, Carmen Bastion, and Mercado Bastion.<sup>576</sup> Well-preserved deposits from the 1700s and 1800s, as well as evidence for earth-moving and fill episodes were identified.<sup>577</sup> While no reliable stratigraphic sequence was present, several periods of development could be identified and the dates associated with the ceramics recovered suggested that the fill may be demolition debris from homes in Old San Juan, before the construction of the Ballaja Barracks.<sup>578</sup> Further, the investigators pointed to the potential of the archaeological data to yield information about the relationship between El Morro and the town of San Juan.<sup>579</sup>

In 1989, SEAC archeologist Ken Wild undertook excavations at El Morro to assess impacts on cultural resources of recent construction. Stratified midden deposits along the bluff along the bayside of Santa Bárbara Bastion, outside the walls of the fortification, provided evidence for recent (post-1700) dumping of debris, in situ historic deposits associated with earlier construction of the fort walls, and rock cuts that could represent the initial prepping of the site for construction.<sup>580</sup> The following year, Wild led archeological excavations at El Morro directed at identifying construction phases in support of an Historic Structures Report (HSR).<sup>581</sup> Wild’s early 1990s excavations took place adjacent to the Hale 1960s excavations, in the El Morro Dry

<sup>575</sup> Judith Kenyon, “Inspection of La Princesa, San Juan National Historic Site.” United States Government Memorandum from Park Technician (Archeologist) to Chief, Southeast Archeological Center, April 30, 1976. (Atlanta: Southeast Archeological Center, National Park Service, 1976).

<sup>576</sup> Agamemnon Gus Pantel, *Report of Archaeological Salvage and Analysis of Recovered Archaeological Materials, Castillo San Felipe Del Morro, San Juan, Puerto Rico*. (San Juan: The Foundation of Archaeology, Anthropology, and History of Puerto Rico, 1992).

<sup>577</sup> Pantel, *Salvage and Analysis... Castillo San Felipe del Morro*, 104-105.

<sup>578</sup> J.W Joseph and Stephen C. Bryne, “Socio-economics and Trade in Viejo San Juan, Puerto Rico: Observations from the Ballaja Archaeological Project.” *Historical Archaeology* 26 (1997): 45-58; Pantel, Gus A., Jilil Sued Badillo, Anibal Sepúlveda, and Beatriz del Cueto de Pantel, *Archaeological Investigations into the History, Urbanism, and Architecture of Barrio Ballaja from Precolumbian Times Through to the Twentieth Century*. (San Juan: The Foundation of Archaeological, Anthropology, and History of Puerto Rico, 1986).

<sup>579</sup> Pantel, *Salvage and Analysis... Castillo San Felipe Del Morro*.

<sup>580</sup> Ken S. Wild, “Trip Report, SAJU, 6/14 – 6/17.” SAJU Trip Reports 1989. National Park Service, 1989. (Accession SEAC-00832) On file at the Southeast Archeological Center, Tallahassee, FL.

<sup>581</sup> Berkowitz, *Fortifications: Vol. I – Summaries*; Berkowitz, *Fortifications: Vol. II – San Cristóbal*; Berkowitz, *Fortifications: Vol. III – El Morro*; Berkowitz, *Fortifications: Vol. III – City Walls*, 29; Wild, *Flanking Battery Wall*; The HSR represented a collaboration between the Park and conservator Frank Matero of Columbia University, later of the University of Pennsylvania, and a team of local San Juan masons and laborers in preparation for the quincentenary of the founding of San Juan.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Moat, against the north flanking battery wall of Austria Bastion. Wild's excavations found evidence for the construction sequence of the previous hornwork and moat, which had sat at a lower elevation than the extant walls, and evidence for an orillión, a recess in the flanking wall, which had been filled in the late eighteenth century.<sup>582</sup> The foundation of the earlier hornwork was found to be built of rubble/*mampostería* with several courses of brick footing, the latter of which had previously been interpreted by Smith as part of a floor surface.<sup>583</sup> This research served to underscore the information potential of intact, subsurface deposits within El Morro for the reconstruction of architectural history at the site.

In 1997, archeology was undertaken to mitigate the effects of construction activities at San Fernando Battery<sup>584</sup> and the midden along the bayside exterior wall of Santa Bárbara Bastion.<sup>585</sup> These excavations addressed research questions associated with the depositional history of middens, the nature of military life in terms of socioeconomic status, and subsistence patterns within the Castillo San Felipe del Morro. Excavation of a midden just north of San Fernando Battery yielded artifact assemblages that resembled domestic contexts seen in Old San Juan archaeological sites rather than what might be expected in a garrison. In contrast, the midden on the bluff on the bayside of Santa Bárbara Bastion revealed patterns more consistent with a garrison. The midden in this area from the disposal of refuse from the 1790s through the 1850s and the assemblage had higher numbers of military artifacts, suggesting more clearly a garrison population. Local animal bones and the lack of exotic ceramic artifacts in the deposits suggested that the assemblage was associated with the everyday lives of the common soldier, rather than the refuse of higher-ranking officers.<sup>586</sup>

In 2001, a ground-penetrating radar (GPR) survey was undertaken on the southeast end of Santa Bárbara Bastion, near San Juan Bay and the latrine structure. Though the area was paved with stone and concrete, the survey was able to detect a latrine drain and a gun embrasure.<sup>587</sup> This geophysical survey suggests that the terrepleins within Castillo San Felipe del Morro retain archeological integrity and the potential to yield new information on the architectural and military history of the site.

Most recently, the lives of the soldiers at Castillo San Felipe del Morro were the focus of architectural analysis. An analysis of previous research and field observation of interior spaces of

---

<sup>582</sup> Wild, *Flanking Battery Wall*, 1.

<sup>583</sup> Berkowitz, *Fortifications: Vol. III – El Morro*, 13–14; Wild, *Flanking Battery Wall*.

<sup>584</sup> Archeological Reports for San Fernando Battery use the term “San Fernando Bastion.” San Fernando Bastion at El Morro is located within Castillo San Felipe del Morro Dry Moat. As such, the updated name for the structure immediately southeast of El Morro (outside the El Morro Dry Moat) is San Fernando Battery.

<sup>585</sup> Michele Helene Hayward Merkling, and Michael A. Cinguino Argana. *Archaeological Investigations at Castillo de San Felipe del Morro, Old San Juan, Puerto Rico. Final Report Volume I*. Prepared by Panamerican Consultants, (Jacksonville: United States Army Corps of Engineers, Jacksonville District, 1997).

<sup>586</sup> Merkling and Cinguino Argana, *Archaeological Investigations at Castillo San Felipe del Morro*.

<sup>587</sup> Nickel, *Archaeological GPR at San Juan National Historic Site*, 8.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

the latrine and kitchen on the Santa Bárbara Bastion's Kitchen Courtyard enabled researcher to reconstruct the architectural history of these spaces and date construction episodes.<sup>588</sup> Ongoing research seeks to identify the types of foods being consumed at El Morro during the late eighteenth and nineteenth centuries via laboratory analysis of soil samples.<sup>589</sup>

In what is today the open expanse of the El Morro Esplanade, just southeast of El Morro, multiple archeological investigations have taken place which help to reconstruct the history of the landscape, thus far yielding information on the architectural and military history of two contributing resources: El Morro Esplanade Historic Landscape and El Morro Road. In 1987, construction-related trenching triggered archaeological research on El Morro's Esplanade (Reaves 1987).<sup>590</sup> The excavations recovered ceramics spanning 300 years of manufacture and deposits extending to depths of more than two feet (0.6 meters) below ground surface. While no further interpretations were made, these findings point to the presence of archeological potential throughout the Esplanade.

In 1989, archaeologist Antonio Daubón Vidal analyzed the use-history of the El Morro Esplanade, documenting the changes in use over time via historical documentation.<sup>591</sup> In addition to siegeworks constructed by the English and Dutch in the sixteenth and seventeenth centuries, several areas were used as quarries and/or refuse dump sites, and multiple buildings constructed by the Spanish and Americans once stood on the grounds, which are today a treeless field with few buildings. In 1994, SEAC archeologists identified three layers of historic roads along the alignment of El Morro Road.<sup>592</sup> From samples taken along the length of the present road, the depths and material make-up of previous avenues at this location were identified. The earliest and deepest (almost 3.3 feet [one meter] deep) correlated with a road present on a 1792 map of Old San Juan.<sup>593</sup> Earlier road surfaces found include brick bat paving with stones lining the road, and mortared stone paving with a plastered surface. This information was used to design a new El Morro Road that would protect the historic surfaces below and would also simulate the historic setting of the road as it bisected the Esplanade.<sup>594</sup> Additionally, the historical

---

<sup>588</sup> Fernández-Pérez, "Beyond subsistence."

<sup>589</sup> Natasha A. Fernández-Pérez, "Beyond subsistence: Food and social order in the Spanish colonial context of Puerto Rico. El Morro Kitchen Archaeological Project 2016." Mellon Mays Undergraduate Fellowship Research Report. University of Puerto Rico, Río Piedras (2016), 49.

<sup>590</sup> Roy W. Reaves, "Trip Report, SAJU and VIIS, 8/30/87-9/12/87." United States Government Memorandum from Research Archeologist, Reaves, to Chief Southeast Archeological Center, September 29, 1987. Project No. H2215 (SER-OSE). On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-00758).

<sup>591</sup> Antonio Daubón Vidal, *Archaeological Assessment for the Proposed San Felipe del Morro Landfill Area, San Juan, Puerto Rico*. (San Juan: Commonwealth of Puerto Rico Public Building Authority, 1989).

Hayward Merklng and Cinquino Argana, *Archaeological Investigations at Castillo de San Felipe del Morro*, 101.

<sup>592</sup> Wild, "Trip Report on Archaeological Investigations Conducted at San Fernando Bastion." 1-7; Wild "Memorandum, El Morro Road."

<sup>593</sup> Wild, "Memorandum, El Morro Road."

<sup>594</sup> Wild, "Trip Report on Archaeological Investigations Conducted at San Fernando Bastion." 1-7.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

documentation suggested that structures once stood at the edges of the 25-foot wide road, pointing to continued archaeological potential along the alignment.<sup>595</sup>

In 1997, archeological investigations of a portion of the El Morro Esplanade adjacent to, but directly outside, the boundary of San Juan National Historic Site, found the foundation of the yellow fever hospital built in 1897 by the Spanish, a brick pillar feature dated to the Spanish Colonial Period, a terraced wall, and a burn feature potentially associated with an industrial site.<sup>596</sup>

The continued archeological potential of the El Morro Esplanade is underscored by the findings of a GPR survey undertaken in 2001. On the south side of El Morro Road, the GPR survey revealed evidence for United States-Era roads, utilities, and buildings, and also detected Spanish-era features. On the north side of El Morro Road, several building sites not associated with the U.S. Army were detected, one of which appeared to be oriented with the street grid of Old San Juan.<sup>597</sup>

#### *Old San Juan City Wall – West Wall*

Stretching out to the southeast of Castillo San Felipe del Morro is the Old San Juan City Wall – West Wall, a contributing resource which has yielded and is likely to yield important information on the architectural and military history of San Juan National Historic Site. Contributing resources which have yielded information include: Old San Juan City Wall – West Wall, San Fernando Battery, Santa Elena Bastion, and San Agustín Bastion. Archeological research on the city walls and bastions began in the 1980s with a United States Army Corps of Engineers (USACE) project to rehabilitate the Casa Rosa Scarp Wall, the portion of the Old San Juan City Wall – West Wall which runs just east of San Agustín Bastion.<sup>598</sup>

In the area of the curtain wall known as the Casa Rosa Scarp Wall (between San Agustín Bastion and San Juan City Gate), 1984 Stage I excavations identified significant, systematic refuse deposits laid since the building of the city wall. During data recovery in 1987, archeologists excavated stratified fill on the interior side of the city wall which stretched to a depth of 19.7 feet (6 meters) below ground surface.<sup>599</sup> Findings from the documentation of the fill sequence revealed new information about the construction sequence of the city wall (during the late 1700s) and the history of municipal refuse disposal (1800s and 1900s). The lower levels of fill showed

<sup>595</sup> Wild, "Memorandum, El Morro Road."

<sup>596</sup> Ken Wild, *Report on Archeological Investigations Conducted at Parcel B, San Juan, Puerto Rico*. (San Juan and Tallahassee: San Juan National Historic Site and the Southeast Archeological Center, 1997).

<sup>597</sup> Nickel, *Archaeological GPR at San Juan National Historic Site*, 6-8.

<sup>598</sup> Carlos Solís Magaña, *Archaeological Testing of Casa Rosa Scarp Wall Project Area, San Juan Historic District, San Juan, Puerto Rico*. (Jacksonville: The United States Army Corps of Engineers, Jacksonville District, 1984).

<sup>599</sup> Carlos Solís Magaña, *Colonial Archaeology of San Juan de Puerto Rico: Excavations at the Casa Rosa Scarp Wall, San Juan National Historic Site, Puerto Rico*. Office of Archaeological Research Alabama State Museum of Natural History. The University of Alabama, Report of Investigations 52 (1988).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

possible evidence of harbor dredging at the time of wall construction, with a layer atop this containing bedrock particles potentially redeposited from other areas of construction.<sup>600</sup>

Archeological assemblages were identified in association with household refuse, military refuse, architectural refuse, and municipal refuse. Solís Magaña argued that sites of municipal waste disposal offer important comparative contexts for domestic sites.<sup>601</sup> Artifacts found in the deposits at the Casa Rosa Scarp Wall, especially ceramics and faunal material, shed light on commerce relationships and subsistence practices in the late eighteenth century. Commerce relationships, legal and illicit, are represented in the ceramic assemblage, which includes vessels manufactured in a variety of countries. Faunal remains revealed a dependence on animal husbandry and marine resources while documentary sources pointed to the cultivation of a variety of tubers and the importation of goods to supplement the island diet. One of the central conclusions proposed by Solís Magaña is that each of the bastions, walls, and forts, and other defensive structures have information potential as specific construction events can be linked to episodes of municipal refuse disposal.<sup>602</sup>

San Fernando Battery was subject to subsurface investigations between 1992 and 1995 by the USACE and SEAC as part of stabilization efforts and in an effort to expose the historic grade and architectural form of this bastion.<sup>603</sup> In 1992, SEAC archaeologist David McCullough excavated a series of trenches along the cliff's edge where a stabilization wall was proposed.<sup>604</sup> Within these trenches, a midden was identified at the northeastern end of San Fernando Battery which extended to a depth of 3.3 feet (1 meter) below ground surface and yielded a variety of materials from the nineteenth and twentieth centuries.<sup>605</sup> Archeological excavations in 1995 at San Fernando Battery unearthed the historic layout of the bastion. These excavations identified four gun emplacements, a drainage feature, and a 1790s road surface.<sup>606</sup> Throughout the excavation units, researchers identified evidence for the construction and modification of the bastion between 1750 and 1898. As mentioned above, the midden adjacent to San Fernando Battery was revisited in 1997, when excavations revealed patterns of refuse disposal more consistent with domestic refuse than military activities.<sup>607</sup>

Excavations in 1997 along the Santa Elena Bastion wall identified information important to the architectural and military history of San Juan National Historic Site. Archeologists removed modern debris to depths of up to 15 feet (4.6 meters) along the interior north wall at Santa Elena

<sup>600</sup> Solís Magaña, *Colonial Archaeology of San Juan*, 126.

<sup>601</sup> Solís Magaña, *Colonial Archaeology of San Juan*, 129–130.

<sup>602</sup> Solís Magaña, *Colonial Archaeology of San Juan*, 133–135.

<sup>603</sup> Wild, "Trip Report on Archaeological Investigations Conducted at San Fernando Bastion." 1–7.

<sup>604</sup> Hayward Merkling and Cinquino Argana, *Archaeological Investigations at Castillo de San Felipe del Morro*, 107; Wild, "Trip Report on Archaeological Investigations Conducted at San Fernando Bastion." 1–7.

<sup>605</sup> Hayward Merkling and Cinquino Argana, *Archaeological Investigations at Castillo de San Felipe del Morro*, 98, 107.

<sup>606</sup> Wild, "Trip Report on Archaeological Investigations Conducted at San Fernando Bastion." 1–7.

<sup>607</sup> Hayward Merkling and Cinquino Argana, *Archaeological Investigations at Castillo de San Felipe del Morro*."

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Bastion. This wall, built in the 1700s, was finished with a plaster face and also had walkway, now buried, on its interior face.<sup>608</sup>

In anticipation of a drainage project at San Agustín Bastion in 2016, an archeological assessment was conducted, including documentation of existing conditions, excavation of a series of 14 shovel test pits, and monitoring of construction efforts. Multiple nineteenth- and twentieth-century architecture-related features were encountered and further research was recommended.<sup>609</sup> Archeological excavation at San Agustín Bastion completed in 2017 found the archaeological remains of two previously-undocumented structures built between 1861 and 1867.<sup>610</sup> These pabellones (pavilions) are illustrated on an 1887 map of the city. The archeological material pointed to residential use of the buildings, and also to the high purchasing power of the soldiers or officers living there. Importantly, the lower deposits of the excavation were undisturbed, suggesting that even earlier deposits likely retain information on the eighteenth-century form and use of San Agustín Bastion.<sup>611</sup>

Adjacent, but outside of San Juan National Historic Site, archeological research was undertaken in 2014 in coordination with a project to upgrade the electrical infrastructure of the Santa Elena Powder Magazine, located just east of the Santa Elena Bastion.<sup>612</sup> The paucity of cultural material that was recovered was noted as consistent with the “rigorous control mechanisms” that would have had to have been adhered to in order to create a safe environment for the storage of ammunition.<sup>613</sup> Additional archeological work took place adjacent to the Santa Elena Powder Magazine in 2018 in the form of a Phase IA/IB investigation in the area south of the structure. This research revealed well-stratified archaeological deposits which correspond with construction events between 1897 and 1990. The high level of stratigraphic preservation suggests that good archaeological integrity is likely present in other nearby areas.<sup>614</sup>

### *Old San Juan City Wall – South Wall*

The Old San Juan City Wall – South Wall has been subject to archeological investigations that have yielded information about the architectural history and military history of San Juan

<sup>608</sup> Wild, *Report on Archeological Investigations Conducted at Parcel B*, 16.

<sup>609</sup> RGA, *Archeological Assessment and Monitoring, San Agustín Bastion Drainage Project*.

<sup>610</sup> SARQGIS, *Archeological Assessment and Monitoring San Agustín Bastion Drainage Project San Juan National Historic Site, San Juan, Puerto Rico*. (San Juan: National Park Service, 2018), 58.

<sup>611</sup> SARQGIS, *Assessment and Monitoring San Agustín Bastion*, 58.

<sup>612</sup> Pantel, del Cueto & Associates, *Archeological Assessment, Santa Elena Magazine, Upgrade of Electrical Infrastructure at Masonry Workshop, Visitor and Training Area, San Juan National Historic Site, San Juan, Puerto Rico*. March 2014. (San Juan: Division 16 Engineering Corp. Electrical Contractors and San Juan National Historic Site, 2014).

<sup>613</sup> Pantel, del Cueto & Associates, *Archeological Assessment, Santa Elena Magazine*, 78.

<sup>614</sup> SARQGIS, *Archeological Investigations at Santa Elena Gunpowder Magazine*.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

National Historic Site as related to the contributing resources of Old San Juan City Wall – South Wall and the San José de las Palmas Bastion (Las Palmas Bastion). Construction-related archeological work undertaken in 1998 within the terreplein of Las Palmas Bastion generated new information about the architectural history of the bastion.<sup>615</sup> A brick foundation, pre-dating the twentieth century, was uncovered during demolition activities within the bastion's terreplein.<sup>616</sup> Following this, archeologists excavated three trenches within the 59 × 23 feet (18 × 7 meters) area, between the Chamber of Commerce building and the parapet of Las Palmas Bastion, to determine the nature of the structure and the associated archeological deposits. Investigators found a heterogeneous mixture of domestic refuse and evidence of previous disturbance. The researchers interpreted the structure which once stood at the site as a support structure for the South Enclosure of the city which was intentionally dismantled to make way for more modern structures at the site sometime in the late nineteenth century.<sup>617</sup> Notably, immediately east of Las Palmas Bastion, though outside the boundary of San Juan National Historic Site, archeological investigations at San Justo Bastion found undisturbed seventeenth-century deposits below layers of fill.<sup>618</sup> These deposits date to the original construction of the bastion during the period 1630–1635, underscoring the archeological potential of the city wall terreplein as a potentially informative focus of inquiry.

#### *Old San Juan City Wall – North Wall*

The Old San Juan City Wall – North Wall has also been subject to archeological investigations that have yielded and have potential to yield information about the architectural history and military history of San Juan National Historic Site. The contributing resources which have been subject to archeological studies in the past include: Old San Juan City Wall – North Wall, San Antonio Bastion, Santa Rosa Bastion, Santo Domingo Bastion, Santo Tomás Bastion, San Sebastián Bastion, El Espigón, and Castillo San Cristóbal. A remote sensing GPR survey undertaken in 2001 showed evidence for intact stratigraphy and archeological potential within the bastion terrepleins along the North Wall. Archeologists found that in parts of Santa Rosa Bastion, Santo Domingo Bastion, and San Antonio Bastion evidence for buried gun embrasures and adjacent surfaces and an additional unidentified structure within Santa Rosa Bastion, remained below the surface.<sup>619</sup>

---

<sup>615</sup> Pantel, del Cueto & Associates, *Documentación Arqueológica Anexo de la Cámara de Comercio de Puerto Rico, Baluarte de San José de Las Palmas*, 1998. (San Juan: Instituto de Cultura Puertorriqueña, 1998).

<sup>616</sup> Pantel, del Cueto & Associates, *Baluarte de San José de Las Palmas*.

<sup>617</sup> Pantel, del Cueto & Associates, *Baluarte de San José de Las Palmas*.

<sup>618</sup> Marisol Meléndez Maiz, *Supervisión Arqueológica de la Demolición de la Verja, Acera y Piso de Cemento y Evaluación Arqueológica Fase II, Bastión de San Justo*. (San Juan: Puerto Rico Department of Planning, Development, and Tourism, 1994).

<sup>619</sup> Nickel, *Archaeological GPR at San Juan National Historic Site*.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

During excavations in 1995 and 2017 at San Sebastián Bastion, archeologists identified the presence of cultural deposits outside the city walls, adjacent to Castillo San Cristóbal.<sup>620</sup> In 1995, archeological excavations were required in anticipation of a proposed road connecting San Sebastián Bastion and El Espigón (Devil's Sentry Box).<sup>621</sup> A limited shovel test pit survey identified modern fill to 2.3 feet (0.7 meters) below ground surface, underlain by a rich historic midden deposit that could extend to a depth of up to 32.8 feet (10 meters) below ground surface, based on field observations.<sup>622</sup> An archeological survey along the hillside between San Sebastián Bastion and the El Espigón was undertaken in 2017 in advance of plans to construct a small amphitheater for interpretive programs in the area.<sup>623</sup> Testing within a 114.8 × 164 foot (35 × 50 meter) grid identified deep cultural deposits along the northernmost transects, to depths of 3.28 feet (one meter) or more.<sup>624</sup> As the artifact data was highly fragmented, the refuse represents a secondary depositional context, but nonetheless represents important information about activities within Castillo San Cristóbal and the city of San Juan.<sup>625</sup>

In 2004, a portion of the North Wall of Old San Juan, located on the interior of Santo Tomás Bastion, suffered a collapse. Construction-related archeology undertaken by the Instituto de Cultura Puertorriqueña (ICP), in collaboration with the National Park Service, documented the wall structure and undertook limited archeological testing within a vaulted chamber adjacent to the collapse. These excavations produced mixed deposits which lacked cultural material from the late twentieth century, suggesting the chamber had been walled up in the 1940s. A test pit on the terreplein and subsequent archeological monitoring of construction activity similarly revealed mixed stratigraphy.<sup>626</sup> While the artifacts recovered were of limited archeological potential due to the disturbed nature of the deposits, the investigation contributed to our knowledge of the design of the wall system, built in the 1760s, and its modification in the twentieth century.

---

<sup>620</sup> Ken S. Wild, "Trip Report on Archaeological Testing Conducted Near the Devil's Sentry Box Prior to Proposed Construction by the Army Corp of Engineers." SEAC ACC. #1186, SAJU ACC. #127." SAJU Trip Reports 1994. From Chief, I&E; to Regional Archaeologist, SER, July 31, 1995.; Ken S. Wild and Debbie Leslie, *Research Design for an Archaeological Investigation of the Structure Stabilization Project at the Devil's Sentry Box and the Historic Grade Restoration at San Fernando Bastion, San Juan, Puerto Rico*. (San Juan: San Juan National Historic Site, 1995); Pantel, del Cueto & Associates, *Stage 1A Archaeological Assessment, Paseo del Morro Amphitheater Project*. (San Juan: U.S. National Park Service, June 2017); Pantel, del Cueto & Associates, *Stage 1B Archaeological Survey, Paseo del Morro Amphitheater Project*. (San Juan: U.S. National Park Service, August 2017).

<sup>621</sup> Wild and Leslie, "Research Design ... the Devil's Sentry."

<sup>622</sup> Wild, "Trip Report on Archaeological Testing Conducted Near the Devil's Sentry Box."

<sup>623</sup> The amphitheater was never constructed; Pantel, del Cueto & Associates. *Stage 1A Archaeological Assessment, Paseo del Morro Amphitheater Project*.; Pantel, del Cueto & Associates, *Stage 1B Archaeological Survey, Paseo del Morro Amphitheater Project*.

<sup>624</sup> Pantel, del Cueto & Associates, *Stage 1B Archaeological Survey, Paseo del Morro Amphitheater Project*.

<sup>625</sup> Pantel, del Cueto & Associates, *Stage 1B Archaeological Survey, Paseo del Morro Amphitheater Project*, 107.

<sup>626</sup> López Meléndez, *Documentación Arqueológica, Proyecto Muro de Retención, Calle Norzagaray*.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

*Castillo San Cristóbal*

While previous archeological excavations address the seaward slope just west of Castillo San Cristóbal, no formal archeological excavations have been undertaken within Castillo San Cristóbal or its outworks.<sup>627</sup> Nonetheless, non-invasive geophysical study at Castillo San Cristóbal and the comparative context of Castillo San Felipe del Morro point to San Cristóbal's high potential to yield information important to architectural history and military history in San Juan.

At the Castillo San Cristóbal Outworks, a geophysical survey of the glacis east of the main fortifications revealed an abandoned moat and tunnel complex as well as more recent United States-era roads and utilities associated with the La Princesa Housing Area.<sup>628</sup> A GPR survey of the North Bastion terreplein of Castillo San Cristóbal was less successful. On the hornwork terreplein, much of the original Spanish construction materials had been replaced by reinforced concrete and several gun embrasures had been modified.<sup>629</sup> The glacis survey revealed the circa-1945 U.S. Army residential area grid with paved roads, pipes, and electrical lines. Spanish-era features included a dry moat, now covered with soil, which once cut through the grid, as well as east-west and north-south running tunnels which once connected to the moat.<sup>630</sup> The researchers recommended further remote sensing, including magnetometer and soil resistivity, for the identification of additional information related to architecture which could help to guide potential future excavations at the sites. While complex sites such as San Juan National Historic Site present many overlapping layers of information which is at times difficult to interpret, geophysical surveys suggest that the below-ground potential of these sites remains high.

Additional non-invasive archeological investigations underscore the information potential of Castillo San Cristóbal. Between 2004 and 2006, extensive documentation of the historic graffiti present throughout the defensive fortifications at San Juan National Historic Site was undertaken to analyze the interpretive potential of these works.<sup>631</sup> At Castillo San Cristóbal, Rivera-Collazo was able to make a variety of inferences about the construction history of the spaces where the graffiti was located, finding that by dating the graffiti via the stylistic characteristics of the subject matter, such as ships, use periods of interior spaces such as tunnels could be estimated.<sup>632</sup>

---

<sup>627</sup> Pantel, del Cueto & Associates, *Stage 1B Archaeological Survey, Paseo del Morro Amphitheater Project*; Wild, "Trip Report on Archaeological Testing Conducted Near the Devil's Sentry Box."

<sup>628</sup> In Nickel's 2001 investigation, he referred to the glacis erroneously as the "Plaza de Armas." Nickel, *Archaeological GPR at San Juan National Historic Site*, 9-11.

<sup>629</sup> Nickel, *Archaeological GPR at San Juan National Historic Site*, 9.

<sup>630</sup> Nickel, *Archaeological GPR at San Juan National Historic Site*, 11-12.

<sup>631</sup> Isabel C. Rivera-Collazo, "Historical Ship Graffiti on the Walls of San Juan's Spanish Defense System: An Interim Report." *The International Journal of Nautical Archaeology* 35, no.1 (2006): 41-52; Isabel C. Rivera-Collazo, "Graffiti as a Resource for Historical and Archaeological Research: The Figurative Graffiti on the Walls of San Juan's Spanish Defense System, Puerto Rico." In *Proceedings of the Twenty-First Congress of The International Association for Caribbean Archaeology*. Vol. I (2007).

<sup>632</sup> Isabel C. Rivera-Collazo, "Historical Ship Graffiti."



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Additionally, the ship graffiti in particular represents evidence of a Spanish maritime culture that not only existed at Puerto Rico, but at other Spanish ports in the sixteenth through nineteenth centuries.<sup>633</sup>

### *Episodes of Non-Archaeological Ground Disturbance*

Some episodes of ground disturbance have not been undertaken using modern archaeological methods. Over the course of the twentieth century, a number of excavations removed overburden had been installed in the late nineteenth century to cover and reinforce some of the original stone fortifications. In 1939, infilled embrasures at San Carlos Ravelin were unearthed as part of the WPA program at the fortifications.<sup>634</sup> Focused on the embrasures, this project is unlikely to have had an impact on archaeological resources. The work in the early 1960s of the Accelerated Public Works Program unearthed La Trinidad Counterguard, Santa Teresa Battery, La Princesa Battery, and the embrasures of the North Bastion.<sup>635</sup> The removal of the overburden effectively removed archaeological deposits associated with circa 1890–1962 activities. Deeper, pre-1890s paths and ground surfaces may have also been affected. As the goal of these projects was the exposure of the stonework of the fortifications, there may have been limited impacts on the deposits within the terrepleins of these bastions and batteries.

Non-archaeological ground disturbance also includes criminal looting activities. These illegal excavations have had an impact on archeological resources and the loss of context limits the potential interpretive value of any materials recovered after the vandalism. In 2000, two such cases were investigated. The incidents took place within the latrine structure in Santa Bárbara Bastion at Castillo San Felipe del Morro and within Santa Rosa Bastion and San Antonio Bastion, where the ground was disturbed by 31 pot-hunting holes to a maximum depth of 6 inches each.<sup>636</sup> No new archeological insights were obtained as a result of these disturbances, although the presence of artifacts within the disturbed area points to the continued archeological potential of deposits within San Juan National Historic Site.

<sup>633</sup> Isabel C. Rivera-Collazo, "Graffiti as a Resource." 3.

<sup>634</sup> Berkowitz, *Fortifications: Vol. II – San Cristóbal*, 343, 355–358.

<sup>635</sup> Foulds and von Bieberstein, *CLR: San Cristóbal Outworks*, 53.

<sup>636</sup> Bennie C. Keel, "Assessment of Damage to Archaeological Resources at San Juan National Historic Site, Puerto Rico." Criminal Incident Record SAJU 200000057. (San Juan: San Juan National Historic Site, 2000); Margo Schwadron, "Assessment of Damage to Archaeological Resources at Castillo de San Felipe Del Morro (El Morro) (00PR15), San Juan National Historic Site, San Juan, Puerto Rico." NPS Criminal Case 00H010. (San Juan: San Juan National Historic Site, 2000).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Construction-related disturbance has also been caused by Park staff, such as in the case of construction excavations in the La Princesa Housing Area in 1976 and near El Morro in 1989.<sup>637</sup> The former disturbances produced no cultural material, however, the latter did yield historic artifacts and resulted in an archeological investigation in an attempt to mitigate the potential loss of information caused by the disturbance (as discussed above in the El Morro section).<sup>638</sup> Additional damage was caused by an oil spill from the Barge *Morris J. Berman*, which leaked oil into the Atlantic Ocean north of San Juan Islet in early 1994. NPS archeologists assessed damage to the forts and nearby beaches, coordinated with the Puerto Rican state historic preservation office and the Institute of Puerto Rican Culture, and decided that the “least destructive measure was to allow natural forces to remove the oil over time” via wave action and rain.<sup>639</sup>

### *Future Archeological Research Potential*

The San Juan National Historic Site fortifications as they exist today overlay a complicated series of construction episodes that took place over multiple centuries. The archaeological research potential of the forts, bastions, and open glacis spaces is vast. Some archaeological topics which may yield important information about the past include: the history of architecture and construction techniques; the patterns of everyday life for soldiers at the fortifications; and social relationships between inhabitants of the forts and with the surrounding community.

The history of the architecture at San Juan National Historic Site remains one of the essential areas of information potential for archeology-related contributing resources. Historical texts and plans drawn up by the engineers of the fortifications represent proposals and workplans for construction campaigns, though not necessarily what was built. One of the most fruitful archeological topics explored to date has been the identification of past construction episodes and the establishment of a construction sequence of the fortifications. Continued exploration of the archeological traces of past structures, buildings, and features has the potential to reveal additional information on construction techniques, materials, and changing military defensive strategies over time. Additionally, information gained through these analyses can improve preservation techniques used on the fortifications today. Research questions related to the architecture at the Park include:

---

<sup>637</sup> Judith Kenyon, “Inspection of La Princesa, San Juan National Historic Site.” United States Government Memorandum from Park Technician (Archeologist) to Chief, Southeast Archeological Center, April 30, 1976. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-00502).

<sup>638</sup> Wild, “Trip Report, SAJU, 6/14 – 6/17.” 1–16.

<sup>639</sup> Ken Wild, “Trip Report San Juan, Puerto Rico Oil Spill.” SEAC ACC. #1120. 1/15/94 – 1/20/94.” SAJU Trip Reports 1994. From Chief, I&E; to Chief SEAC, January 28, 1994. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-01120).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

- *Historical Plans.* What might differences between historical plans for construction and the realization of these proposals tell us about the economic and labor capacity, practical needs, environmental constraints, or military strategy of the authorities carrying out the plans?
- *Material Composition.* What can that material make-up of past structures, buildings, and features tell us about the history of construction techniques and materials? How do these construction practices compare with those found at other fortifications built by Spain and other world powers?
- *Alternations over time by the Spanish.* What can changes to the form, scale, and maintenance of the fortifications over the long term tell us about the roles these structures played in Spain's seacoast defenses throughout Puerto Rico? How do these compare with other fortified ports within the Caribbean and other Spanish colonies?
- *Alterations by the United States.* When the United States adapted the San Juan fortifications to meet their military needs, in what ways were historic components of the structures incorporated, repurposed, and altered as part of their new use-patterns? Where demolition was undertaken, how was debris disposed of and are the traces of previous structures still preserved archaeologically?
- *Alterations by the National Park Service.* With the conversion of sections of the military reservation into a national park, how were the historic components of the landscape, buildings, and structures altered to conform to a vision for the Park's interpretative programs?

The practical details of everyday life at the fortifications remains largely unknown despite previous research which has identified refuse pits and middens. Archaeological research has the potential to provide information about how soldiers dealt with basic issues such as clean water, sanitation, food supply, and lighting. Further documentary research to identify the number of soldiers living at the fortifications during specific time periods is needed. With information on the number of inhabitants, analysis of the archaeological record has the potential to show what everyday life was like for these soldiers. Research questions related to the patterns of everyday life include:

- *Space.* The documentary record provides information about the intended uses of space within the forts and bastions. What can the archaeological record, and architectural traces such as historical graffiti, tell us about how the interior and exterior spaces of the fortifications were organized for activities such as food storage and processing, sleep, work, medical care, and leisure throughout the centuries? What temporary uses might have been given to some of these spaces in response and support to ongoing problems faced by the population of San Juan? (i.e. use of some areas to house hospitals).
- *Health.* While the locations of cisterns and latrines are known at both Castillo San Felipe del Morro and Castillo San Cristóbal, questions about sanitation and health remain. How

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

were interior and exterior spaces, engineering features, and objects used to help create a sanitary living environment?

- *Leisure*. The official roles and duties of soldiers are known from documentary records. What can the archaeological record tell us about how soldiers executed their duties as well as their everyday activities beyond official responsibilities?
  - Leisure activities, such as games or artistic expression, or small-scale production activities, such as button-making and mending, may have left archaeological traces, as supported by the existing material culture. What other material evidence points to these types of activities?
- *Community Connections*. When not under siege, El Morro and San Cristóbal likely maintained a variety of economic and social ties with their immediate surroundings and the city of San Juan to function. Can excavations outside the forts, in areas like the El Morro Esplanade, shed light on how the activities and systems in place within the fort related to those residential areas, businesses, and markets beyond their walls? What can we learn about ethnic groups and their participation in these activities?
  - How might coordination between the forts and their surroundings have helped to solve the practical problems of everyday life (housing, food, sanitation, movement of supplies, entertainment, etc.)?
  - How much access did soldiers have to public markets and what merchandise was available?
  - How did different ethnic groups participate in the construction, maintenance, and quotidian services in support of the military at the forts?
    - In what ways did enslaved Africans and their descendants contribute to the life within and around the forts?

Social relationships between the ranks of Spaniards living at the fortifications remains an important and little studied area of potential investigation.<sup>640</sup> Archeologists Joseph and Bryne, in their analysis of ceramics from residential deposits just east of San Juan National Historic Site boundary, identified trade patterns that corresponded with differences in social and economic classes.<sup>641</sup> Future research inside the fortifications could investigate similar questions about access to markets and trade good and the ways these patterns related to social identities. Other classes of artifacts, such as food remains and historical graffiti, may also shed light on how the material world was used to create and maintain the social and cultural relationships between inhabitants of the forts.<sup>642</sup> Research questions related to the material traces of social relationships include:

---

<sup>640</sup> Fernández-Pérez, “Beyond subsistence”; Hayward Merklings and Cinquino Argana, *Archaeological Investigations at Castillo de San Felipe del Morro*.”

<sup>641</sup> Joseph and Bryne, “Socio-economics and Trade in Viejo San Juan.”

<sup>642</sup> University of Pennsylvania Architectural Conservation Laboratory, *Historic Graffiti Conservation Project, San Juan Fortifications National Historical Site*, (San Juan: San Juan Fortifications National Historic Site, 2006).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

- *Trade networks.* Were trade networks equally accessible to soldiers and officers? What might contrasting materials within these assemblages tell us about differences in class, social status, or ethnic groups?
- *Foodways.* Archeological evidence for foodways could shed light on social relationships and the complexities of culture change. What do artifact patterns associated with food remains tell us about the variety, quality, and type of foods available to the soldiers garrisoned at the fortifications? What evidence for ethnic cuisine is present? How do we see these food traditions blending, being maintained, or being supplanted by new traditions?
- *Personal Expression.* Historical graffiti dating from the nineteenth and twentieth centuries represents an opportunity to explore the intimate, individual, and personal aspects of everyday life.
  - What function did historical graffiti have for soldiers? Are there artifact patterns which suggest that graffiti was an idle leisure activity, venue for self-expression, a means of insubordination, or a combination of these? Can the names and titles etched on the fortifications be correlated with documentation of known soldiers? What role may graffiti have played in creating and cementing social relationships between soldiers? Is there evidence for games, messages between soldiers, or shared artistic expression?

Military sports programs implemented between 1898 and 1945 served to popularize team sports in Puerto Rico and these sports came to play a central role in Puerto Rican recreational life. San Juan Military Reservation hosted a wide variety of sports throughout its campus and effectively became the commonwealth's first sports complex.<sup>643</sup> Team sports had been popularized in Puerto Rico with the arrival of American soldiers and were actively promoted by the military and other colonial institutions. With the conclusion of World War II, the use of Fort Brooke as a military installation quickly waned, as did its function as a center for military sports.<sup>644</sup> Baseball, golf, swimming, and tennis facilities were all constructed as part of the military sports program, but none of the buildings and structures associated with these facilities are extant today within San Juan National Historical Site.

- *Types of Team Sports.* Can archaeological excavations at the El Morro Esplanade, Castillo San Felipe del Morro Dry Moat, or the glacis at Castillo de San Cristóbal yield

<sup>643</sup> Eric J. López-Jorge, *De bastión español a reservación militar estadounidense: Estrategias y transformaciones de los paisajes militarizados de San Juan, Puerto Rico*, Doctoral Dissertation (Universidad de Puerto Rico, Rio Piedras, 2019).

<sup>644</sup> Baseball came to Puerto Rico circa 1897. The systematic promotion of team sports, however, was introduced with the arrival of the American military to San Juan Military Reservation; Walter Bonilla, "Hacia otro de los temas del 98: Los estadounidenses no trajeron el hipismo, béisbol ni el atletismo a Puerto Rico." *Revista Universidad de América* 10, no. 1 (1998): 88–95.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

information about the development of the sports programs and how space was used in multiple ways to accommodate the variety of sports in play? Is there archaeological evidence for unrecorded team sports or other military-sanctioned recreational activities from the early twentieth century in these spaces?

- *Traditional Sports.* Traditional Puerto Rican sports and recreational activities, such as cock fighting, boliche, kite-flying, billiards, and dominoes, were considered counter to the cultural of camaraderie and cooperation that the United States military hoped to foster.<sup>645</sup> Despite the promotion of team sports, were traditional recreational activities and sports embraced at San Juan Military Reservation? Where were these activities taking place and what changes were made to these games and sports within the context of American military culture?

### ***San Juan National Historic Site Collections Statement***

San Juan National Historic Site has large archeological and museum collections which date back to 1950. The first objects accessioned into the collection were cannons and various types of artillery shells found in the San Juan area and at the Park. Beginning with the Hale Smith archeological excavations of the 1960s, the archeological collection has grown to many thousands of artifacts. The archives and museum collections hold the Park's diverse collection that documents early Taino presence on Puerto Rico, 400 years of history of the fortifications, the soldiers that lived in them, the people that were protected, as well as documentation of Park management.<sup>646</sup> Collections-based research has the potential to begin answering many of the research questions outlined above related to trade and market access for soldiers, the analysis of activities within various interior spaces, and the means of maintaining a healthy living environment within the fort. Additionally, an in-depth review of the classificatory system of early collections will help to further refine our understanding of the chronology of deposits.<sup>647</sup> A re-analysis of the important ceramic types identified by Smith --- El Morroware, Reyware, and Moat Plain --- will help to determine whether these artifacts were locally produced or imported.<sup>648</sup> Analysis of the Park's archaeological and museum collections has the potential to better illuminate the history of the Park and establish a knowledge base to build upon with future archaeological investigations.

---

<sup>645</sup> Eric J. López-Jorge, "El deporte y la Segunda Mundial en Puerto Rico." In *Puerto Rico en la Segunda Guerra Mundial: El Escenario Regional*, Segunda Parte. (San Juan: Ediciones Callejón, 2015), 515; Elizabeth Wakefield, *Playing to Win: Sports and the American Military, 1898-1945*. (Albany: State University of New York Press, 1997); Juan Llanes Santos, "Beaks and Spurs: Cock-fighting in Puerto Rico." National Register of Historic Places Multiple Properties Documentation Form. 21 May 2014. (Washington: National Park Service, 2014).

<sup>646</sup> Part of the archeological collection, including project associated records, is located at the Southeast Archeological Center (SEAC) in Tallahassee, Florida.

<sup>647</sup> Paola A. Schiappacasse, "Excavating repositories: academic research using archaeological collections." *Advances in Archaeological Practice* 7, No. 3 (2019): 247-257.

<sup>648</sup> Schiappacasse, "Excavating repositories," 250-252.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

## GLOSSARY

**Banquette:** also, firing steps. An elevated foot stand platform for infantry behind a parapet.

**En Barbette:** The emplacement of guns on a fixed, raised platform so they can fire over a parapet.

**Bastion:** also, baluarte, bulwark. An earthen structure projecting outward at an angle from a curtain wall of a fortification; faced with sod, brick, or stone. Typically consists of two faces and two flanking walls, which connect the faces to the curtain wall. Fire from the flanks protects the curtain wall with the two faces providing coverage. The angles illuminate dead ground in front of the bastions.

**Bastioned Trace:** A series of bastions and curtain walls.

**Bombproof:** Building or other defenses built to withstand cannon balls or shells.

**Casemates:** Batteries for seacoast defense which are in enclosed chambers within scarp walls, as opposed to being positioned atop a bastion. The casemate does not need an earthen "mask" to absorb additional energy from firepower as the scarp walls area constructed thick enough to withstand the type of fire coming from ship-mounted artillery, allow.

**Caballero:** also, Cavalier. A high work, usually the tallest gun platform in a fort, often higher than the main parapet so as to fire over it.

**Caponier:** a fortification within a dry moat which allows firing into the moat and provides protection from direct fire; often a sunken passageway within a dry moat, between a fortification and its outworks, which is covered from direct fire.

**Counterscarp:** A masonry wall which is spatially opposite to a scarp wall. Serves to screen defenders moving through dry moat.

**Covered Way:** A broad, level area located beyond the dry moat and protected from direct fire by an earthen bank formed in the glacis or a parapet. This element allows defenders to move out and around the fort, and to fire from positions forward of the bastions.

**Curtain Wall:** Main wall of a defensive work; often located between two bastions. It is reinforced by bastions or towers placed at a distance which defend the approaches to the fortification.

**Embrasure:** also, battlement. Opening cut in a parapet for artillery to fire through; usually wider at the rear and narrows through to the front.

**Glacis:** Angled away from the fort, it is an open field which masks the scarp of the fort from direct cannon fire and provides a clear field of fire for defenders.

**Líneas de Retirada:** Masonry walls, often countermined, constructed across open field of a glacis, which provides protection as troops retreat from outworks toward the main fort.

**Loggia:** a gallery or room with one or more open sides.

**Mampostería:** roughly coursed stone and rubble masonry using lime mortar

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

\_\_\_\_\_  
Name of Property

**Merlons:** the solid part of a parapet wall, between two embrasures.

**Parapet:** an earthen or masonry construction atop the wall of a bastion or curtain wall, which rises above the terreplein and provides coverage from direct fire.

**Redoubt:** A temporary or supplementary fortification, square or polygonal, without flanking walls.

**Retrenchments:** Secondary works behind the first line of defense, used to bar further progress by enemy forces.

**Ravelin:** A detached triangular/V-shaped outwork constructed beyond the main ditch or curtain wall of a fortification, with two faces forming a salient angle. These protect the bastions and curtain wall behind them from direct enemy artillery fire.

**Salient Angle:** Outward point of a bastion or other projecting work.

**Sally Port:** Access point for troops into and out of a fort.

**Scarp:** A masonry wall which acts to retain the earth/rubble of a bastion. On the interior wall of a ditch or moat; may be built at an angle to make scaling the wall difficult.

**Terreplein:** A ground surface of a fortified work, from which guns and troops operated, protected by an artificial parapet. Originally refers to the gently sloping ground behind a parapet.

**Traverse:** a rampart or platform perpendicular to a wall that provides protection from flanking fire.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

---

## 9. Major Bibliographical References

Alonso, María M. and Milagros Flores

1997 *The Eighteenth Century Caribbean and the British attack on Puerto Rico in 1797*. English Edition. National Park Service, Publicaciones Puertorriqueñas, San Juan, Puerto Rico.

American Association for State and Local History

1960 "National Park Service Historic Landmarks Registry Lists 26 Sites Under Spanish Exploration Theme." *History News* 16 (1): 3, 12.

Archivo General de las Indias

1591 "La planta y modelo como se a fortificado y puesto en defensa la çidadela y puerto de San Juan de Puerto Rico, por el capitán Pedro de Salaçar". Archivo General de las Indias, MP-Santo\_Domingo, 11, Seville, Spain. Accessed 1 January 2020:  
<http://pares.mcu.es/ParesBusquedas20/catalogo/description/22983>

Auld, R.J.

1940 "Completion Report: Repair of Historical Fortification, Military Reservation, San Juan, Puerto Rico, April 1938 to May 28, 1940." Prepared for the Construction Quartermaster, Post San Juan, San Juan, P.R., United States War Department. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

Bearss, Edwin C.

1984 *Historic Structure Report, Historical Data Section: San Juan Fortifications, 1898-1958*. Denver Service Center, National Park Service. On file at the SAJU NHS Archives, Fort San Cristóbal, San Juan, PR.

Berkowitz, Joan, E. Blaine Cliver, Richard Crisson, Robert Holzheimer, Judy Jacob, Frank Matero, Marjorie Smith, and Barbara Yocum

1991a *The Fortifications of San Juan National Historic Site: Historic Structures Report, Volume I: Summaries, Conditions Survey, Recommendations, Glossary, Bibliography, Selected Historic Drawings, Appendices*. Southeast Regional Office, National Park Service, Atlanta, GA.

1991b *The Fortifications of San Juan National Historic Site: Historic Structures Report, Volume II: San Cristóbal*. Southeast Regional Office, National Park Service, Atlanta, GA.

1991c *The Fortifications of San Juan National Historic Site: Historic Structures Report, Volume III: Castillo de San Felipe del Morro, The City Walls, An Investigation of the Materials Used*. Southeast Regional Office, National Park Service, Atlanta, GA.

Berhow, Mark H.

2004 *American Seacoast Defenses: A Reference Guide*. The CDSG Press. McLean, VA.

Black, Jeremy

2009 *War in the Nineteenth Century: 1900-1914*. Polity Press, Malden, MA.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Blanco, Juan

n.d. "A History of the Formative Influence on the Development of the System of Fortification of San Juan de Puerto Rico. 'Plaza Marítimo Militar' and 'Capitanía General,' Between 1493 and 1898." Volumes I and II. Copyright Juan Blanco. On file, San Juan National Historic Site Archives, San Juan, Puerto Rico.

1988 "A Study of the Morphological Structure of the System of Fortifications of San Juan de Puerto Rico, with a special emphasis on the development of the Frente de Tierra de San Cristóbal." Prepared for the National Park Service, Copyright Juan Blanco. On file, San Juan National Historic Site Archives, San Juan, Puerto Rico.

Bonilla, Walter

1998 "Hacia otro de los temas del 98: Los estadounidenses no trajeron el hipismo, béisbol ni el atletismo a Puerto Rico." *Revista Universidad de América* 10 (1): 88–95.

Burrows, Geoff G.

2014 "The New Deal in Puerto Rico: Public Works, Public Health, and the Puerto Rico Reconstruction Administration, 1935-1955." Doctoral Thesis, History, City University of New York.

Broussard, Ray F.

1988 "Bautista Antonelli: Architect of Caribbean Defense." *The Historian* 50 (4): 507–520.

Cardona Bonet, Walter A.

1985 *Islotes de Borinquén: Amoná, Abey, Piñas, Sikey y otros. Notas para su Historia.* Comité Historia de los Pueblos, San Juan.

Coll y Toste, Cayetano

1968 "La Toma de la Capital por Cumberland." *Boletín Histórico de Puerto Rico*, Vol. 5: 40–57. First published 1918, Tipografía Cantero Fernández & Cia, San Juan. Reprinted 1968. Kraus Reprint Co., New York and San Juan, Puerto Rico.

Collaborative, Inc. (The) and Atkinson-Noland & Associates, Inc.,

2016 *Historic Structure Report: Quarters No. 211.* Southeast Regional Office, National Park Service and the San Juan National Historic Site, Atlanta, Georgia and San Juan, Puerto Rico.

Cooperative Agreement

1948 "Cooperative Agreements of Sept. 4, 1948." National Archives, Record Group 79, NPS Central Classified File, 1933-49, San Juan National Historic Site Archives, San Juan, Puerto Rico.

Crisson, Richard

1991 "Cultural Landscape Report for El Castillo de San Felipe del Morro." In *The Fortifications of San Juan National Historic Site: Historic Structures Report, Volume III: Castillo de San Felipe del Morro, The City Walls, An Investigation of the Materials Used.* Southeast Regional Office, National Park Service, Atlanta, GA.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Daubón Vidal, Antonio

1989 *Archaeological Assessment for the Proposed San Felipe del Morro Landfill Area, San Juan, Puerto Rico*. Prepared for the Commonwealth of Puerto Rico Public Building Authority. Report on file, State Historic Preservation Office, San Juan, Puerto Rico.

Dávila, Arlene M.

1997 *Sponsored Identities: Cultural Politics in Puerto Rico*. Temple University Press, Philadelphia, PA.

De Figueroa, Rodrigo

1519 “Plano de la mudanza de la ciudad de Puerto Rico a la isleta 1519.” Archivo General de Puerto Rico Mapoteca, Leg. Board 176, R. 3. San Juan, Guaynabo. Topographic map. Accessed 1 Jan 2020, Permalink: <https://archivonacional.com/PL/1/1/1779>.

De Hostos, Adolfo

1966 *Ciudad murada: ensayo acerca del proceso de la civilización en la ciudad española de San Juan Bautista de Puerto Rico, 1521–1898*. Instituto de Cultura Puertorriqueña, San Juan.

Del Cueto, Beatriz, and Agamemnon G. Pantel

2016 “La conservación urbana en Puerto Rico/Urban conservation in Puerto Rico.” *Loggia* (29): 44-57.

El Mundo [San Juan, Puerto Rico]

1927 “Editorial Notes: Las Murallas de San Juan. Al fin de harán las obras como hemos pedido.” 7 Feb.

Fernández-Pérez, Natasha A.

2016 “Beyond subsistence: Food and social order in the Spanish colonial context of Puerto Rico. El Morro Kitchen Archaeological Project 2016.” Mellon Mays Undergraduate Fellowship Research Report. University of Puerto Rico, Río Piedras.

Foulds, Eliot and Alexandra von Bieberstein

2015 *Cultural Landscape Report for the San Cristóbal Outworks*. Olmsted Center for Landscape Preservation, National Park Service. Boston, MA.

Gjessing, Frederik C.

n.d. *Quarters No. 210, HABS No. PR-96, San Juan National Historic Site, Boulevard Norzagaray, San Juan, San Juan County, Puerto Rico*. Historic American Building Survey, National Park Service, U.S. Department of the Interior, Washington, D.C.

1956 *Sally Port and Chapel of San Felipe del Morro, San Juan, Puerto Rico, HABS No. PR-55*. Historic American Building Survey, San Juan National Historic Site. National Park Service, Washington, D.C.

1964 *Quarters No. 211, HABS No. PR-97, San Juan National Historic Site, Boulevard Norzagaray, San Juan, San Juan County, Puerto Rico*. Historic American Building Survey, National Park Service, U.S. Department of the Interior, Washington, D.C.

Gjessing, Frederick C. and Loretta Schmidt

1973 “San Juan National Historic Site National Register of Historic Places Nomination.” unsigned. On file National Park Service and San Juan National Historic Site, San Juan, Puerto Rico.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Gothlin, M.

1949 "Las Fortificaciones de San Juan estarán Abiertas al Público." *El Mundo*, 18 Feb:7.

Harvey, Erwin R.

1993 *Legislación Cultural: Legislación cultural comparada, Legislación cultural puertorriqueña*. Instituto de Cultural Puertorriqueña, San Juan, Puerto Rico.

Hayward Merckling, Michele Helene and Michael A. Cinquino Argana

1997 *Archaeological Investigations at Castillo de San Felipe del Morro, Old San Juan, Puerto Rico*. Final Report Volume I. Prepared by Panamerican Consultants, Inc. for the United States Army Corps of Engineers, Jacksonville District, Jacksonville, FL. On file at the Southeast Archeological Center (Accession SEAC-01093).

Hinajeros Martín, Nuria

2015 "El ingeniero Tomás O'Daly en Puerto Rico" In *América: Cultura visual y relaciones artísticas*. (eds.) Rafael López Guzmán, Yolanda Guasch Marí, y Guadalupe Romero Sánchez. Universidad de Granada, Spain.

Hosmer, Jr, Charles B.

1965 *Presence of the Past: A History of the Preservation Movement in the United States Before Williamsburg*. G. P. Putnam's Sons, New York, New York.

Hoyt, Edward A.

1944 *A History of the Harbor Defenses of San Juan, P.R. Under Spain: 1509-1898*. Antilles Coastal Artillery Command, San Juan.

J & F Stodges

1899 [Map] "San Juan, Porto Rico. Defenses on North Front, from Morro to La Princesa." United States Corps of Engineers, Washington, D.C., April 13, 1899. Accession # 077-FMF-San\_Juan-107-04. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

Joseph, J.W. and Stephen C. Bryne

1997 "Socio-economics and Trade in Viejo San Juan, Puerto Rico: Observations from the Ballaja Archaeological Project." *Historical Archaeology* 26 (1): 45-58.

Keel, Bennie C.

2000 "Assessment of Damage to Archaeological Resources at San Juan National Historic Site, Puerto Rico." Southeast Archeological Center, National Park Service. Submitted to San Juan National Historic Site, Puerto Rico to become part of Criminal Incident Record SAJU 200000057. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-01489).

Kenyon, Judith

1976 "Inspection of La Princesa, San Juan National Historic Site," United States Government Memorandum from Park Technician (Archeologist) to Chief, Southeast Archeological Center, April 30, 1976. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-00502).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Klugh, T.

1933 *Castillo de San Cristóbal, San Carlos Ravelin, San Juan Municipio, PR.* Survey No. HABS PR-93, Historic American Building Survey, Washington, D.C.

Llanes Santos, Juan

2014 *"Beaks and Spurs: Cock-fighting in Puerto Rico."* National Register of Historic Places Multiple Properties Documentation Form, 21 May 2014. National Park Service, Washington, D.C. On file at the State Historic Preservation Office, San Juan, Puerto Rico.

López-Jorge, Eric J.

2019 *De bastión español a reservación militar estadounidense: Estrategias y transformaciones de los paisajes militarizados de San Juan, Puerto Rico*, Doctoral Dissertation. University of Puerto Rico, Rio Piedras.

2015 "El deporte y la Segunda Mundial en Puerto Rico." In *Puerto Rico en la Segunda Guerra Mundial: El Escenario Regional*, Segunda Parte. pp. 515-537. (eds) Jorge Rodríguez Beruff y José L. Bolívar Fresneda. Ediciones Callejón, San Juan, PR.

López Meléndez, Jaqueline

2006 *Documentación Arqueológica Proyecto Muro de Retención Calle Norzagaray, Viejo San Juan, Puerto Rico.* Etapas I-II Documentación de Cámaras Abovedadas, Monitoría Arqueológica. Contrato #AC-800194 L009999234. Submitted to the Department of Transportation and Public Works, San Juan, Puerto Rico. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

Manucy, Albert and Ricardo Torres-Reyes [M&TR]

1973 *Puerto Rico and the Forts of Old San Juan.* The Chatham Press, Riverside, CT.

Marrero-Núñez, Julio

1955 "Puerto Rican Interest in Local History." Published by the American Association for State and Local History. *History News* 10 (11): 41, 44.

Martínez Chapel, J.

1949 "Truman Declara Monumentos Históricos las Fortificaciones." *El Mundo*, 3 Feb.:4.

McKitham, Cecil N.

1985 *La Fortaleza.* National Register of Historic Places Nomination Form, August 26, 1985. United States Department of the Interior, National Park Service, Washington, D.C.

Meléndez Maíz, Marisol

1994 *Supervisión Arqueológica de la Demolición de la Verja, Acera y Piso de Cemento y Evaluación Arqueológica Fase II, Bastión de San Justo.* Prepared for the Puerto Rico Department of Planning, Development, and Tourism, San Juan. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico (Folder 174, Folder 27).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Mestre, Juan Francisco

1792 “Plano que manifiesta la situación de la plaza de San Juan de Puerto Rico, 1792.” Key and Description: Archivo de Museo Naval de Madrid, Accessed Jan 1 2020, Permalink: <https://archivonacional.com/PL/1/1/11534>. Map: Archivo General Militar de Madrid (IHMC) SH. PRI-1517 as cited in Sepúlveda, *Puerto Rico Urbano: Vol. 1*, 144.

Morales Carrion, Arturo

1983 *Puerto Rico: A Political and Cultural History*. W.W. Norton and Co. and the American Association for State and Local History, New York.

Muratti, Jose A.

1946 *History of the 65<sup>th</sup> Infantry, 1899–1946*. United States Army Military History Institute. On file at the United State Army Military History Library, Carlisle, PA.

Murtagh, William J.

2006 *Keeping Time: The History and Theory of Preservation in America*. Wiley and Sons, Hoboken.

Nagle, John L.

1934 “Report on Park Development and Tourist Trade Possibilities: Island of Puerto Rico.” December 10–18, 1934. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

National Archives [NA], Washington, D.C.

1901 “Gillespie to Flagler, 20 May 1901.” Record Group 77, General Correspondence 1894-1924, Doc. 37102/9.

1913 “Black to Chief Engineer, 13 December 1913.” Record Group 77, General Correspondence, 1894-1924, Doc 37102/30.

1919 “Adjunct General to Commanding General, Eastern Department, 14 July 1919.” Record Group 77, General Correspondence 1898–1924.

1934 “Bryant and Wright, Report of Puerto Rico Field Study, June 27, 1934.” Record Group 79, NPS Central Classified File, 1933–49.

1940 “Barnette to the Director, Feb. 5. 1940.” Record Group 79, NPS Central Classified File, 1933–49.

National Park Service [NPS]

1996 *The Forts of Old San Juan*. Division of Publications, National Park Service, Washington, D.C.

Negrón Menicucci, Rosina C.

2000 “The Origins of the Preservation Movement in the Spanish Antilles.” Unpublished M.S. Thesis, University of Pennsylvania.

Nickel, Robert

2001 *Archeological Ground-Penetrating Radar at San Juan National Historic Site: Overview and Executive Summary*. Prepared for the Southeast Archeological Center. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-01503).

Nokes, Gregory

1971 “As City Celebrates its 450<sup>th</sup> Anniversary, Old San Juan is Undergoing Restoration.” *The Danville Register*, 24 Mar 1971: 8. Danville, VA.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Pabón-Charneco, Arleen

2012 *Distrito Histórico del Viejo San Juan / Old San Juan Historic District. Revised National Register of Historic Places Nomination*, June 15, 2012. United States Department of the Interior, National Park Service, Washington, D.C.

Panamerican Consultants, Inc., Wiss, Janney, Elstner Associates, Inc., and Liz Sargent, HLA

2019a *Cultural Landscape Report for the El Morro Esplanade, 75% Draft- May 2019*. Prepared for Cultural Resources, Partnerships and Science Division, Southeast Regional Office, National Park Service, Atlanta, GA.

2019b *Cultural Landscape Report for the San Juan Historic City Wall, 75% Draft- October 2019*. Prepared for Cultural Resources, Partnerships and Science Division, Southeast Regional Office, National Park Service, Atlanta, GA.

2019c *Historic Structure Report: Quarters 208, 100% Draft for Signature- December 2019*. Prepared for Cultural Resources, Partnerships and Science Division, Southeast Regional Office, National Park Service, Atlanta, GA.

Paniagua, Martín

1927 "Don Martín Paniagua aboga porque no se reste el sello primitivo a las murallas de San Juan." *El Mundo*, 19 Jan 1927: 6, 10.

Pantel, Agamemnon Gus

1992 *Report of Archaeological Salvage and Analysis of Recovered Archaeological Materials, Castillo San Felipe Del Morro, San Juan, Puerto Rico*. Prepared for the U.S. Department of the Interior by The Foundation of Archaeology, Anthropology, and History of Puerto Rico. On file at the Southeast Archeological Center, Tallahassee, FL. (Accession SEAC-00503).

Pantel, del Cueto & Associates

1998 *Documentación Arqueológica Anexo de la Cámara de Comercio de Puerto Rico, Baluarte de San José de Las Palmas*. Instituto de Cultura Puertorriqueña, San Juan, Puerto Rico. On file San Juan National Historic Site Archives, San Juan, Puerto Rico (Box 173, Folder 18).

2012 *Trasfondo Histórico de la Parcela del Bastión de Santo Domingo*, Instituto de Neurobiología, Recinto de Ciencias Médicas, Universidad de Puerto Rico, Viejo San Juan de Puerto Rico. On file at the Puerto Rico Historic Preservation Office, San Juan, Puerto Rico.

2014 *Archaeological Assessment, Santa Elena Magazine, Upgrade of Electrical Infrastructure at Masonry Workshop, Visitor and Training Area, San Juan National Historic Site, San Juan, Puerto Rico*. March 2014. Prepared for Division 16 Engineering Corp. Electrical Contractors and San Juan National Historic Site. On file, San Juan National Historic Site Archives, San Juan, Puerto Rico.

2017a *Stage 1A Archaeological Assessment, Paseo del Morro Amphitheater Project*. Submitted to San Juan National Historic Site, U.S. National Park Service, San Juan Puerto Rico, June 2017.

2017b *Stage 1B Archaeological Survey, Paseo del Morro Amphitheater Project*. Submitted to San Juan National Historic Site, U.S. National Park Service, San Juan Puerto Rico, August 2017.

Pantel, Gus A., Jalil Sued Badillo, Aníbal Sepúlveda, and Beatriz del Cueto de Pantel.

1986 *Archaeological Investigations into the History, Urbanism, and Architecture of Barrio Ballaja from Precolumbian Times Through to the Twentieth Century*. The Foundation of Archaeological, Anthropology, and History of Puerto Rice, San Juan, Puerto Rico.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Picó, Fernando

2014 *History of Puerto Rico: A Panorama of Its People*. Markus Wiener Publishers, Princeton, NJ.

Pierce Flores, Lisa

2010 *The History of Puerto Rico*. The Greenwood Histories of Modern Nations. ABC-CLIO, Inc. Santa Barbara.

Puerto Rico State Historic Preservation Office

n.d. *Sitios Arqueológicos de San Juan: Resumen Arqueológico del Municipio de San Juan*. Oficina Estatal de Conservación Histórica Website, Accessed June 2021. <http://www.oech.pr.gov/ProgramaConservacionHistorica/Educacion/Municipios/Informaci%C3%B3n%20Arqueol%C3%B3gica%20del%20Municipio%20de%20San%20Juan.pdf#search=arqueologica>

Reaves, Roy W. III

1987 "Trip Report, SAJU and VIIS, 8/30/87–9/12/87." United States Government Memorandum from Research Archeologist, Reaves, to Chief Southeast Archeological Center, September 29, 1987. Project No. H2215 (SER-OSE). On file at the Southeast Archeological Center, Tallahassee, FL. (Accession SEAC-00758).

RGA, Inc.

2016 *Archaeological Assessment and Monitoring, San Agustín Bastion Drainage Project, San Juan National Historic Site, City of San Juan, Puerto Rico*. Prepared for the NPS, San Juan National Historic Site. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

Rivera-Collazo, Isabel C.

2006 "Historical Ship Graffiti on the Walls of San Juan's Spanish Defense System: An Interim Report." *The International Journal of Nautical Archaeology* 35(1): 41–52.

2007 "Graffiti as a Resource for Historical and Archaeological Research: The Figurative Graffiti on the Walls of San Juan's Spanish Defense System, Puerto Rico." In *Proceedings of the Twenty-First Congress of The International Association for Caribbean Archaeology*. Vol. I, Published by the University of the West Indies, School of Continuing Studies, St. Augustine, July 2007.

Rivero Méndez, Ángel

1922 *Crónica de la guerra hispano-americana en Puerto Rico*. Sucesores de Rivadeneyra (s.a.) artes gráficas, Madrid.

Rodríguez Beruff, Jorge

2015 "Rediscovering Puerto Rico and the Caribbean: US Strategic Debate and War Planning on the Eve of the Second World War," in *Island at War: Puerto Rico in the Crucible of the Second World War*, ed. Jorge Rodríguez Beruff and José L. Bolívar Fresnada. University of Mississippi Press, Jackson.

Rodríguez Morales, Luis M.

1972 *Zona Histórica de San Juan (San Juan Historic Zone)*, National Register of Historic Places Nomination, October 10, 1972. On file National Park Service and San Juan National Historic Site, San Juan, Puerto Rico.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Sambolín Alsina, Luis

1979 *Historia de la educación física y deportes*. Imprenta Universidad Interamericana. San Germán, Puerto Rico.

San Juan National Historic Site Archives

1929 “El Morro and Adjoining Fortification Walls, SAJU (12-26-1929).” Historic Photograph, on file San Juan National Historic Site Archives, San Juan, Puerto Rico.

Santiago Cazull, Héctor

2003 *Historic Fortification Walls of Old San Juan. Historical Documentation, Existing Conditions, and Laboratory Technical Report*. 3 volumes. Puerto Rico Department of Transportation and Public Works Highway and Transportation Authority, San Juan.

SARQGIS

2017 *Archaeological Assessment and Monitoring San Agustín Bastian Drainage Project San Juan National Historic Site, San Juan, Puerto Rico*. Prepared for NPS, San Juan National Historic Site. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

2018 *Archaeological Investigations at Santa Elena Gunpowder Magazine*. Prepared for the National Park Service, San Juan National Historic Site.

Schiappacasse, Paola A.

2011 “Archaeology of Isolation: The 19<sup>th</sup> Century Lazareto de Isla de Cabras, Puerto Rico.” Doctoral Dissertation, Syracuse University, 2011.

2019 “Excavating repositories: academic research using archaeological collections.” *Advances in Archaeological Practice* 7 (3): 247-257.

Schwadron, Margo

2000 “Assessment of Damage to Archaeological Resources at Castillo de San Felipe del Morro (El Morro) (00PR15), San Juan National Historic Site, San Juan, Puerto Rico.” Submitted to San Juan National Historic Site, San Juan, PR as part of NPS Criminal Case 00H010. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-01502).

Sepúlveda Rivera, Aníbal

1989 *San Juan Historia Ilustrada de su Desarrollo Urbano, 1508–1898*. San Juan de Puerto Rico: Carimar.

2004 *Puerto Rico Urbano Atlas Histórico de la Ciudad Puertorriqueña, Volume 1 [of 4]: La Memoria Olvidada, 1509–1820s*. Carimar Publishers, San Juan, Puerto Rico.

Smith, Hale

1962 “Archaeological Excavation at El Morro, San Juan, Puerto Rico. With Historical background Sections by Ricardo Torres Reyes.” Work Done Under National Park Service Contract # 14-10-0131-745, 1961. *Notes in Anthropology*, Volume 6. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico and Southeast Archeological Center (Accession SEAC-00501).

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

Solís Magaña, Carlos

- 1984 *Archaeological Testing of Casa Rosa Scarp Wall Project Area, San Juan Historic District, San Juan, Puerto Rico.* Prepared by OSM Archaeological Consultants, Inc., Moundville, Alabama; for The United States Army Corps of Engineers, Jacksonville District. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SAJU-00289).
- 1988 *Colonial Archaeology of San Juan de Puerto Rico: Excavations at the Casa Rosa Scarp Wall, San Juan National Historic Site, Puerto Rico.* Office of Archaeological Research Alabama State Museum of Natural History. The University of Alabama, Report of Investigations 52.

Tennant, Anne W.

- 2003 "Architect of a King's defense." *Americas* 55 (5): 6–15.

Tooker, H. V.

- 1955 "Procederán a Restaurar la Puerta de San Juan." *El Mundo*, 21 March: 12.

United Nations Educational, Scientific, and Cultural Organization [UNESCO]

- 1983 *La Fortaleza and San Juan Historic Site in Puerto Rico. World Heritage Council Nomination Documentation.* Inscription on 12 September 1983. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

United States Census Bureau [USCB]

- 1920 Census Population Schedule, Municipality of San Juan, Puerto Rico.  
1940 Census Population Schedule, Municipality of San Juan, Puerto Rico.

United States Department of the Interior and Commonwealth of Puerto Rico

- 1967 "United State of America, to Commonwealth of Puerto Rico, 31 March 1967." Quitclaim Deed for Parcel A, San Juan National Historic Site. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.
- 1976 Memorandum: "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 San Juan National Historic Site." September 29, 1976. On file at the San Juan National Historic Site, San Juan, Puerto Rico.

United States Department of Transportation and United States Coast Guard

- 1981 *The Lighthouse System of Puerto Rico, 1846–1979, National Register of Historic Places Nomination.* October 22, 1981. United States Department of the Interior, National Park Service, Washington, D.C.

United States War Department

- 1899 *Plan of San Juan P.R. Showing Buildings Belonging to the Quartermaster's Department U.S. Army on June 30.* August 1899. On file San Juan National Historic Site Archives, San Juan, Puerto Rico.
- 1946 *Fort Brooke and Vicinity, P.R. General Layout.* August 1946. On file San Juan National Historic Site Archives, San Juan, Puerto Rico.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

University of Pennsylvania Architectural Conservation Laboratory

2006 *Historic Graffiti Conservation Project, San Juan Fortifications National Historical Site*, San Juan Fortifications National Historic Site, San Juan. On file at the San Juan National Historical Site Archives, San Juan.

Van Middledyk, Rudolph Adams

1903 *The History of Puerto Rico: From the Spanish Discovery to the American Occupation*. D. Appleton and Company, New York.

Wakefield, Elizabeth

1997 *Playing to Win: Sports and the American Military, 1898–1945*. State University of New York Press, Albany.

Washington National Records Center [WNRC], Washington D.C.

1927 “Boggs to Estes, Feb. 18, 1927.” WNRC, Record Group 77, Entry 50-23, Box 115.

1927 “Jadwin to Secretary of War, Mar. 15, 1927.” WNRC, Record Group 77, Entry 50-23, Box 115.

1930 “Truss to District Engineers, Nov. 5, 1930.” WNRC, Record Group 77, Entry 50-23, Box 115.

1938 “Monthly Report of Preservation and Repair of Historical Fortifications for April– June 1938.” WNRC, RG 77, Entry 50-23, Box 115.

1955 “Cornell to Superintendent, SAJU, Aug 30, 1955.” WNRC, Record Group 79, NPS, Washington Office Files, 1953-60

Wild, Ken S.

1989 “Trip Report, SAJU, 6/14 – 6/17.” SAJU Trip Reports 1989, From Archeologist, Wild, SEAC; to Chief, Southeast Archeological Center, June 27, 1989. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-00832).

1991 *Archaeological Investigations at the Flanking Battery Wall of El Morro, San Juan, Puerto Rico*. Southeast Archeological Center, June 1991. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-00867).

1994 “Trip Report San Juan, Puerto Rico Oil Spill. SEAC ACC. #1120. 1/15/94 – 1/20/94.” SAJU Trip Reports 1994. From Chief, I&E; to Chief SEAC, January 28, 1994. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-01120).

1995a “Trip Report on Archaeological Investigations Conducted at San Fernando Bastion Prior to Proposed Construction by the Army Corp of Engineers. SEAC ACC. #1158, SAJU ACC. #128.” SAJU Trip Reports 1994. From Chief, I&E; to Regional Archaeologist, SER, July 31, 1995. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-01158).

1995b “Trip Report on Archaeological Testing Conducted Near the Devil’s Sentry Box Prior to Proposed Construction by the Army Corp of Engineers. SEAC ACC. #1186, SAJU ACC. #127.” SAJU Trip Reports 1994. From Chief, I&E; to Regional Archaeologist, SER, July 31, 1995. On file at the Southeast Archeological Center, Tallahassee, FL (Accession SEAC-01186).

1996 “Memorandum, El Morro Road; Summary of Archaeological Data in Regards to Design and Engineering Concerns.” November 28, 1994; Revised March 1996. Ken Wild to Simon Trans-M-Trund, Engineer. Box Folder 25. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

1997 *Report on Archeological Investigations Conducted at Parcel B, San Juan, Puerto Rico.* Project and Report Funded by National Park Service, San Juan National Historic Site and the Southeast Archeological Center, Tallahassee Florida. On file at the Southeast Archeological Center, Tallahassee, FL. (Accession SEAC-01043 and 01135).

Wild, Ken S. and Debbie Leslie

1995 *Research Design for an Archaeological Investigation of the Structure Stabilization Project at the Devil's Sentry Box and the Historic Grade Restoration at San Fernando Bastion, San Juan, Puerto Rico.* SEAC Accession 1158 and 1186. On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico.

WLA Studio

2018 *Historic Structure Report: El Cañuelo, San Juan National Historic Site.* National Park Service, Southeast Regional Office, Cultural Resources, Partnerships, and Science Division.

WLA Studio

2016 *Draft Additional Documentation, Fort Brooke, San Juan National Historic Site. National Register of Historic Places Nomination Form.* United States Department of the Interior, National Park Service.

Wing, Kittridge A.

1962 "Memorandum (H30) Regarding Archaeological Investigation at El Morro, San Juan National Historic Site, with Attachments. July 28, 1962." National Archives, Philadelphia, Record Group 79, Records of the National Park Service, 1785–2006. Series: General Subject Files, 1936–1965, File Unit: San Juan- Historical Buildings-Preservation. Item # 1308690\_2016-162. Accessed November 21, 2018, <https://catalog.archives.gov/id/40304916>

Zapatero, Juan M.

1964 *La Guerra del Caribe en el Siglo XVIII.* Instituto de Cultura Puertorriqueña, San Juan, Puerto Rico.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

**Previous documentation on file (NPS):**

preliminary determination of individual listing (36 CFR 67) has been requested

previously listed in the National Register

previously determined eligible by the National Register

designated a National Historic Landmark

recorded by Historic American Buildings Survey #

PR-43 (San Juan Gate);

PR-47 (Castillo San Cristóbal);

PR-48 (Castillo de San Felipe del Morro);

PR-52 (Fortin de San Juan de la Cruz, El Cañuelo);

PR-55 (Castillo de San Felipe del Morro Sally Port & Chapel);

PR-56 (Entrance Gate, Boulevard Norzagaray);

PR-57 (South Gate, Boulevard Norzagaray);

PR-60 (Quarters No. 209);

PR-91 (Castillo de San Cristóbal, Santa Teresa Battery);

PR-93 (Castillo de San Cristóbal, San Carlos Ravelin);

PR-94 (Fuerte El Abanico);

PR-95 (Fuerte La Princesa); PR-96 (Quarters No. 210);

PR-97 (Quarters No.211);

PR-98 (Officers Quarters, Boulevard Norzagaray);

PR-100 (Troop's Quarters);

PR-101 (North Casemates, Boulevard Norzagaray);

PR-102 (Cistern Heads, Boulevard Norzagaray);

PR-103 (106 Calle de la Cruz [House]);

PR-121 (La Trinidad Counterguard);

PR-135, Sheets A-I (Murallas del Viejo San Juan);

PR-136 (Casa de la Guardia, Baluarte de San Antonio)

recorded by Historic American Engineering Record #

PR-23 (Castillo de San Felipe del Morro Lighthouse)

recorded by Historic American Landscape Survey # \_\_\_\_\_

**Primary location of additional data:**

State Historic Preservation Office

Other State agency

Federal agency

Local government

University

Other

Name of repository: \_\_\_\_\_

**Historic Resources Survey Number (if assigned):** \_\_\_\_\_

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

## 10. Geographical Data

**Acreeage of Property** 79.9 acres

### UTM References

Datum (indicated on USGS map):

D 1927 or  NAD 1983

1. Zone: 19Q	Easting: 802443	Northing: 2044177
2. Zone: 19Q	Easting: 803617	Northing: 2044856
3. Zone: 19Q	Easting: 805580	Northing: 2044494
4. Zone: 19Q	Easting : 895564	Northing: 2044279
5. Zone: 19Q	Easting: 805194	Northing: 2044208
6. Zone: 19Q	Easting : 804074	Northing: 2044383
7. Zone: 19Q	Easting : 804597	Northing: 2043918
8. Zone: 19Q	Easting: 804267	Northing: 2043894
9. Zone: 19Q	Easting : 803631	Northing: 2044401

### Verbal Boundary Description (Describe the boundaries of the property.)

The boundary of the San Juan National Historic Site Historic District is shown as a black dashed line on the attached Key Map, with Insets A, B, C, D, E, and F.

### Boundary Justification (Explain why the boundaries were selected.)

The boundary of the area listed in this nomination represents the bounds of the property owned or administrated by the National Park Service as the San Juan National Historic Site.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

---

### 11. Form Prepared By

name/title: Teresa Dujnic Bulger and Paola Schiappacasse  
organization: Richard Grubb & Associates, Inc.  
street & number: 259 Prospect Plains Road, Building D.  
city or town: Cranbury state: New Jersey zip code: 08512  
e-mail: tbulger@rgaincorporated.com  
telephone: (609) 655-0692  
date: June 22, 2021

---

### Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

## Photographs

### For all photographs:

Name of Property: San Juan National Historic Site

County and State: San Juan, Puerto Rico

Photographer: Kelly Wiles

Date: March 19–21, 2018

Location of negatives: Richard Grubb & Associates, 259 Prospect Plains Road, Building D, Cranbury, NJ

1. Castillo San Felipe del Morro, East Front, looking northwest. El Morro Road and El Morro Esplanade in foreground.
2. Castillo San Cristóbal, East Front, looking west. San Cristóbal Outworks in the foreground, including San Carlos Ravelin and Santa Teresa Battery.
3. San Juan City Walls - North Wall, looking west. San Sebastián Bastion in the foreground, La Perla neighborhood in the middle ground, and Castillo San Felipe del Morro is sited on the rocky headlands in the distance.
4. San Juan City Walls - West Wall, San Agustín Bastion, looking west.
5. San Juan City Walls - South Wall, La Concepción Bastion, looking north.
6. El Cañuelo, Northeast Front, looking south.
7. El Cañuelo, terreplein, looking northeast. Castillo San Felipe del Morro is in the distance.
8. Castillo San Felipe del Morro, looking northwest. Resources shown: Austria Bastion; Castillo San Felipe del Morro Dry Moat; ramp to San Fernando Bastion; and El Morro Lighthouse.
9. Castillo San Felipe del Morro, looking north. Resources shown: World War II Radio Control Center; Castillo San Felipe del Morro Dry Moat; Ochoa Bastion; and El Morro Lighthouse.
10. Castillo San Felipe del Morro, Sally Port, looking northwest.
11. Castillo San Felipe del Morro, Plaza de Armas, looking southeast. View from El Caballero Battery terreplein.
12. Castillo San Felipe del Morro, main ramp and Santa Bárbara Bastion, looking northwest.
13. Castillo San Felipe del Morro, looking southeast. Resources shown: Santa Bárbara Bastion, Great Wall, and El Morro Fire Control Station A.
14. Castillo San Felipe del Morro, looking south. View of Kitchen Courtyard, Great Wall, and main ramp.
15. Castillo San Felipe del Morro, Santa Bárbara Bastion interior, looking west.



San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

16. Castillo San Felipe del Morro, Water Battery, looking northeast.
17. Castillo San Felipe del Morro, Carmen Bastion and El Morro Fire Control Station A, looking west.
18. Castillo San Felipe del Morro, Ochoa Bastion terreplein and El Morro Lighthouse, looking northwest.
19. Castillo San Felipe del Morro, Austria Bastion terreplein, looking south.
20. Castillo San Felipe del Morro, El Morro Esplanade and San Antonio Guardhouse, looking west.
21. Castillo San Cristóbal, East Front, looking west. View from San Carlos Ravelin terreplein. Resources shown: San Carlos Ravelin; World War II Joint Command Center; Curtain Wall and South Bastion, El Caballero, San Cristóbal Fire Control Station A.
22. Castillo San Cristóbal, North Front, looking east. View from the foot of San Sebastián Bastion.
23. Castillo San Cristóbal, West Front, looking southeast. Resources shown: Main Gate at San Cristóbal; Officer's Quarters at San Cristóbal.
24. Castillo San Cristóbal, El Caballero terreplein, looking south.
25. Castillo San Cristóbal Outworks, view south. Resources shown: portion of North Covered Way (at left); San Carlos Ravelin; San Cristóbal Moat; South Covered Way.
26. Castillo San Cristóbal, Plaza de Armas, looking southeast. Resources shown: Plaza de Armas, Castillo San Cristóbal; Troop's Quarters; The Chapel; (left to right), Tunnel 1 (partially obscured), Tunnel 3, and Tunnel 2.
27. Castillo San Cristóbal, Plaza de Armas, looking southwest. Resources shown: Plaza de Armas, Castillo San Cristóbal; Officer's Quarters at San Cristóbal; San Cristóbal Well House (Batch of 2); South Gate at San Cristóbal.
28. Castillo San Cristóbal, Plaza de Armas, looking north. Resources shown: Plaza de Armas, Castillo San Cristóbal; North Casemates of San Cristóbal; Guardhouse at San Cristóbal.
29. Castillo San Cristóbal Outworks, looking east. Resources shown: (foreground) North Bastion; (middle ground) portion of San Carlos Ravelin; (distance) La Princesa Battery, Guardhouse at El Abanico, Fort El Abanico, South Gate at El Abanico, South Covered Way.
30. Castillo San Cristóbal Outworks, looking southeast, Resources shown: La Trinidad Counterguard; San Cristóbal Moat, South Covered Way.
31. Castillo San Cristóbal Outworks, salient angle of Fort El Abanico, looking west. Guardhouse at El Abanico at right.
32. Castillo San Cristóbal Outwork, La Princesa Battery, looking southwest. Castillo San Cristóbal in the distance.

San Juan National Historic Site

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Name of Property

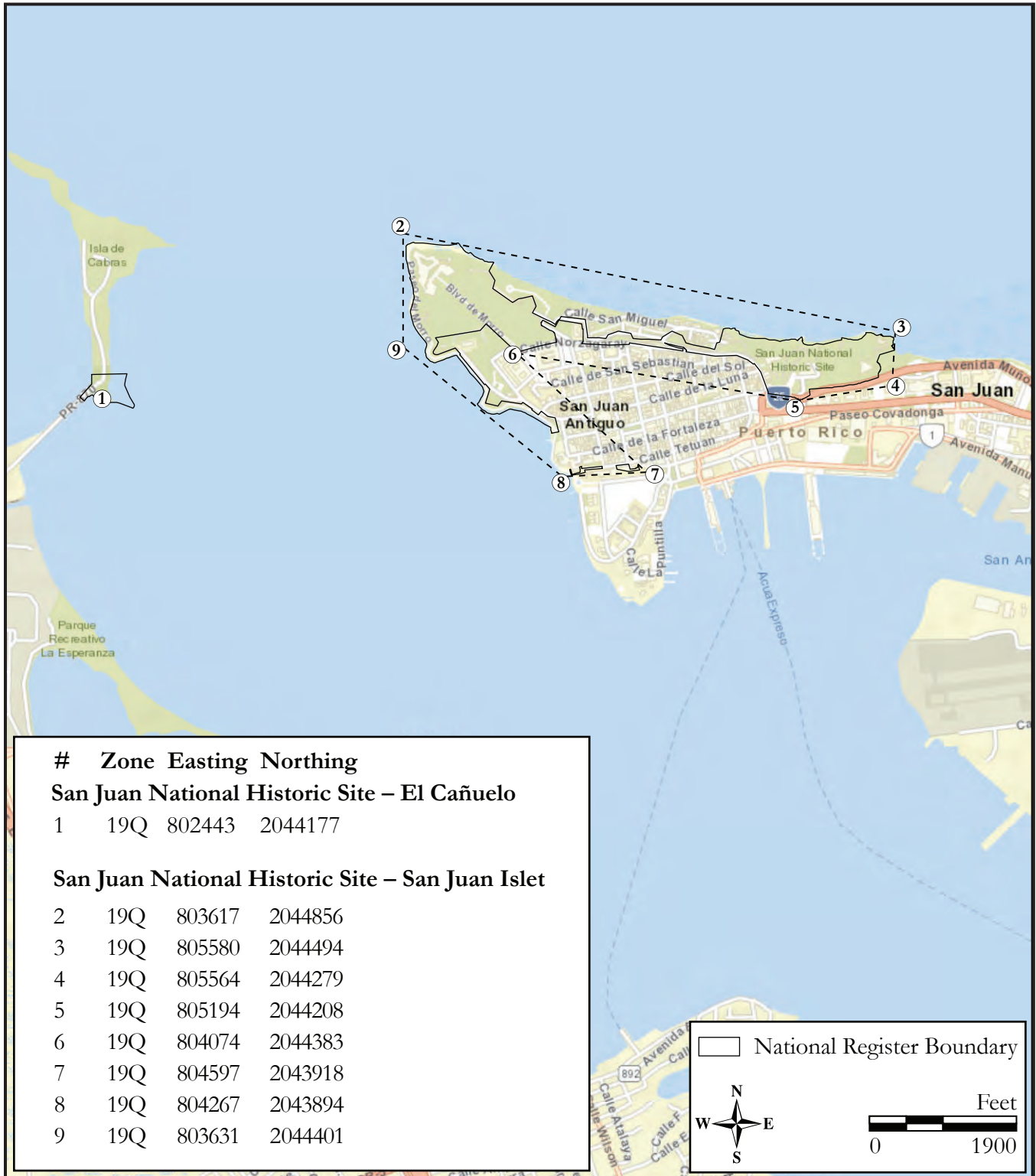
33. Castillo San Cristóbal Outworks, Santa Teresa Battery, looking northwest.
34. Castillo San Cristóbal, Quarters Building No. 1 and Quarters Building No. 2, looking southeast. Norzagaray Street in foreground.
35. Castillo San Cristóbal, Quarters Building No. 3 and Quarters Building No. 4, looking southeast. Norzagaray Street in foreground.
36. San Juan City Walls - North Wall, looking northwest. Resources shown: Santa Rosa Bastion, San Jose City Gate; El Morro Esplanade, Castillo San Felipe Del Morro. Santa María Magdalena de Pazzi Cemetery at right.
37. San Juan City Walls - North Wall, San Antonio Bastion, looking east.
38. San Juan City Walls - North Wall, Santo Tomás Bastion, looking northeast. Bajada Matadero Street bisects the bastion leading to La Puerta de La Perla (at left).
39. San Juan City Walls - West Wall, Santa Elena Bastion, looking north. Curtain wall between Santa Elena and San Agustín bastions at right.
40. San Juan City Walls - West Wall, San Agustín Bastion, looking south.
41. San Juan City Walls - West Wall, San Juan City Gate, looking east from San Agustín Bastion.

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

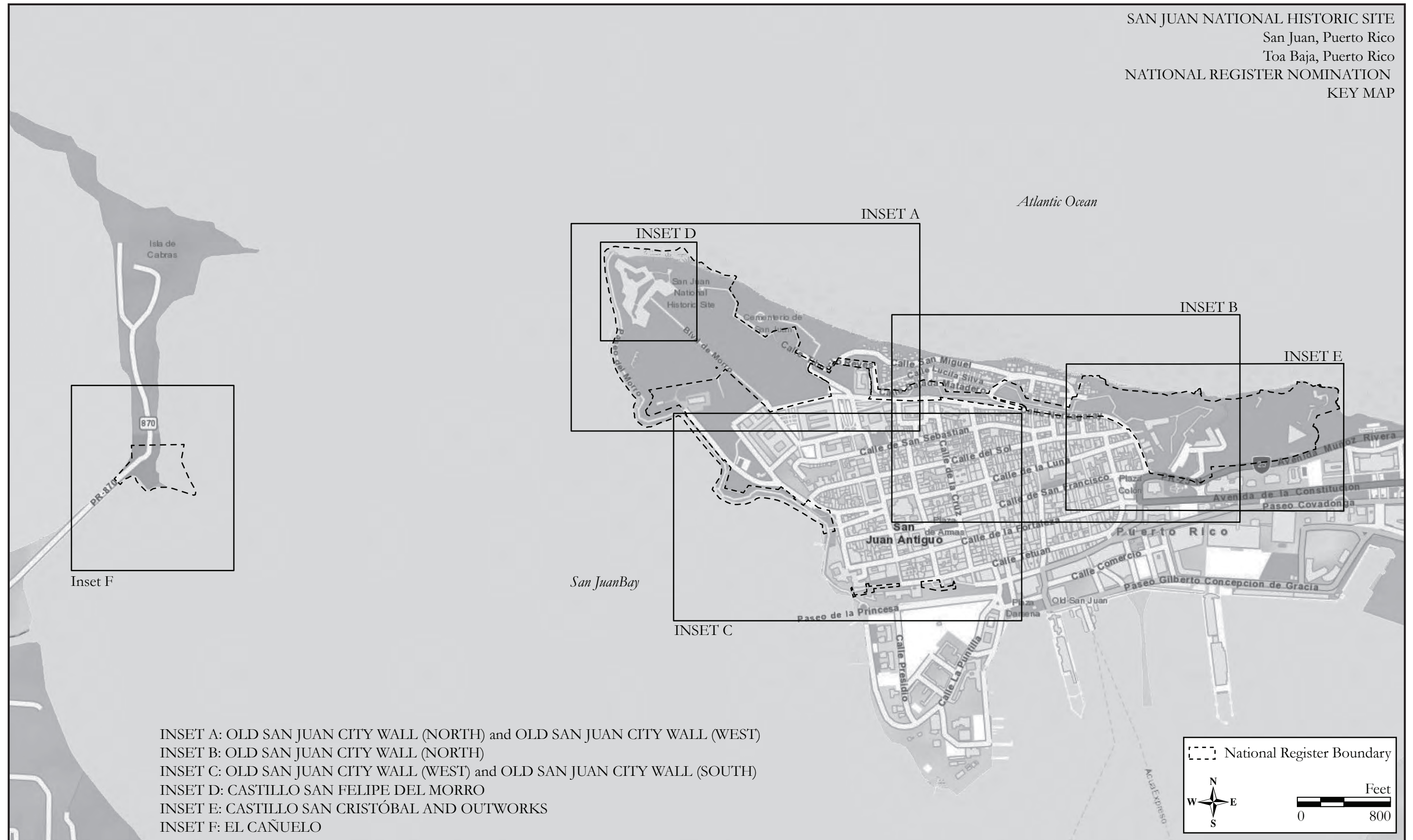
San Juan National Historic Site

Name of Property



Location Map

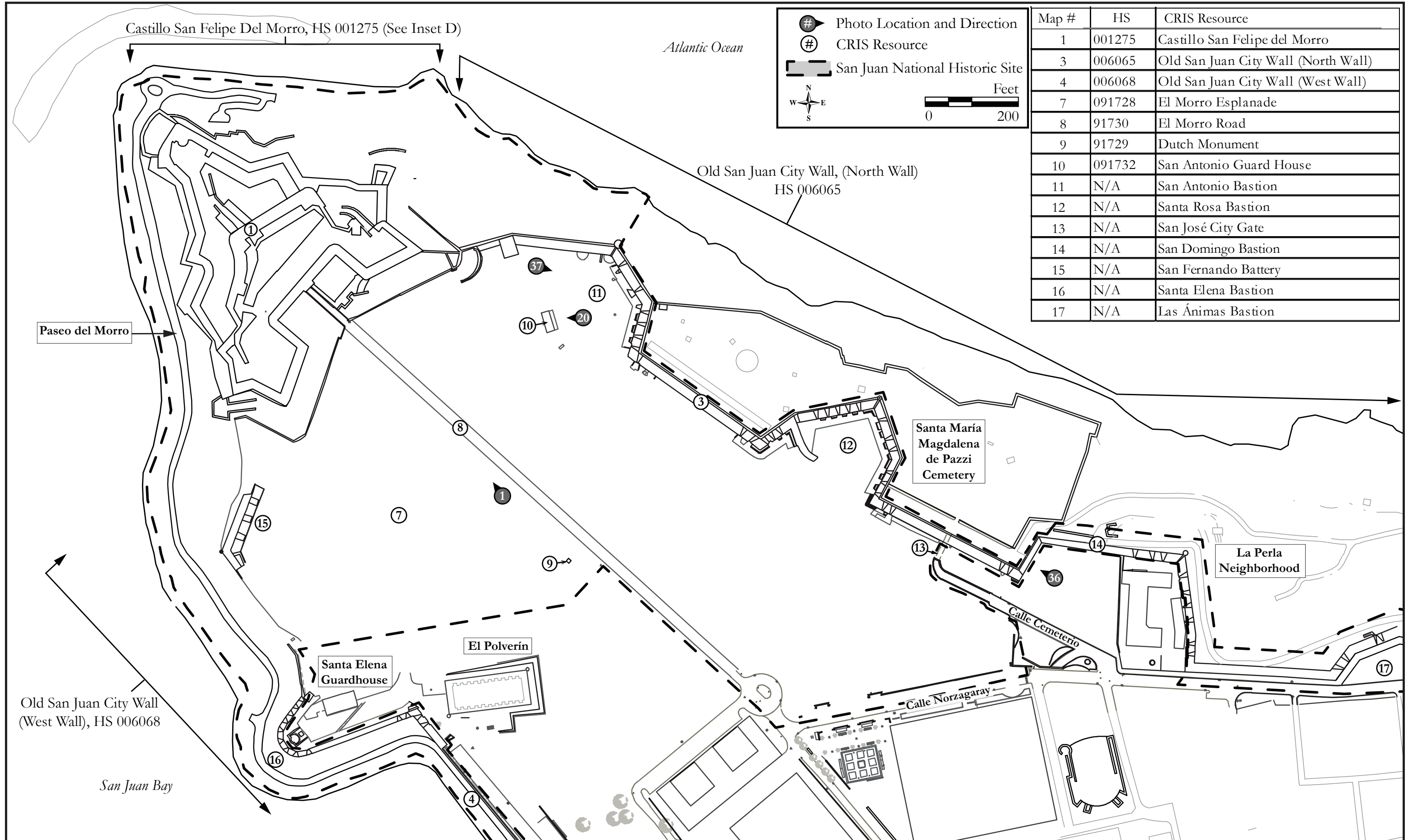
SAN JUAN NATIONAL HISTORIC SITE  
 San Juan, Puerto Rico  
 Toa Baja, Puerto Rico  
 NATIONAL REGISTER NOMINATION  
 KEY MAP



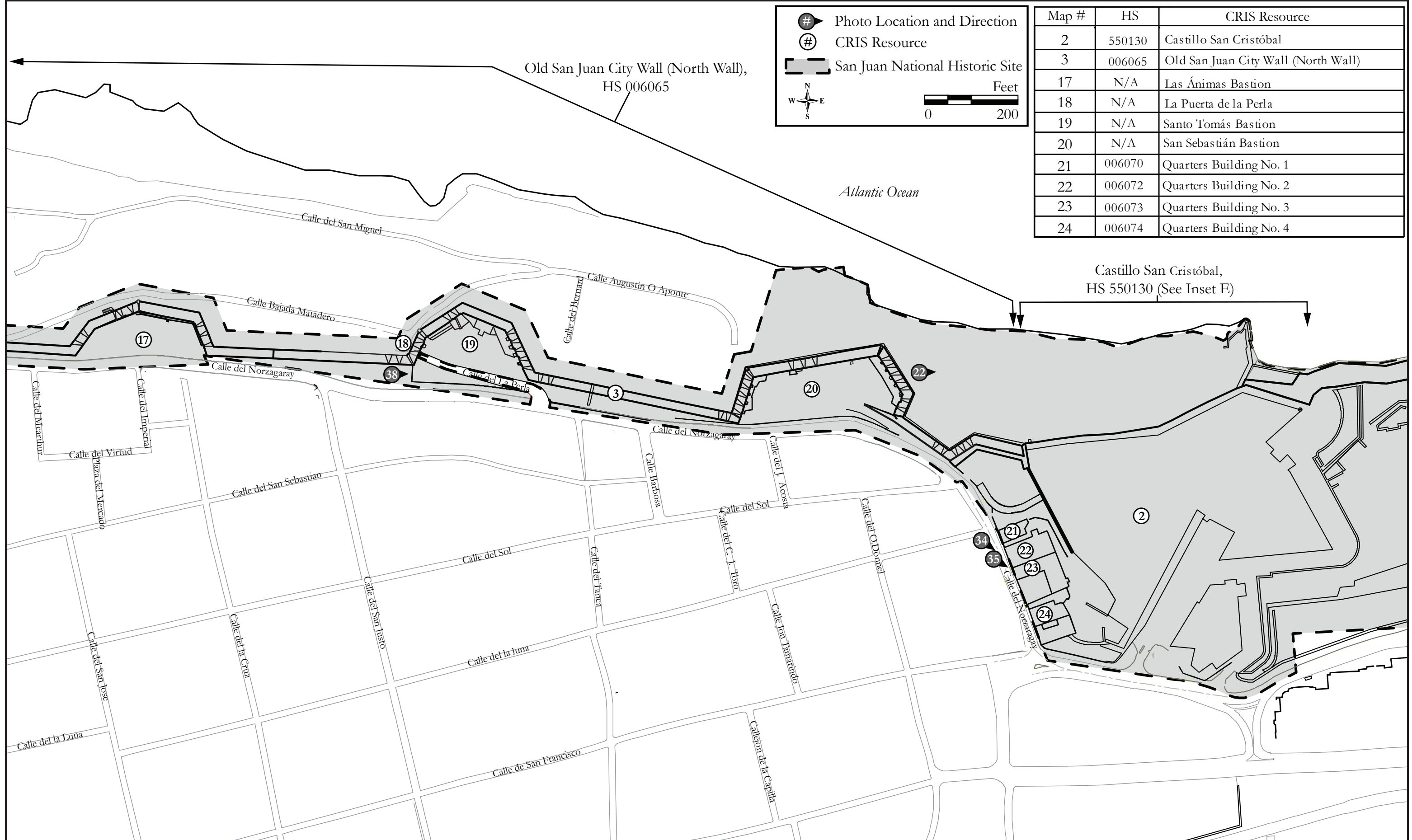
- INSET A: OLD SAN JUAN CITY WALL (NORTH) and OLD SAN JUAN CITY WALL (WEST)
- INSET B: OLD SAN JUAN CITY WALL (NORTH)
- INSET C: OLD SAN JUAN CITY WALL (WEST) and OLD SAN JUAN CITY WALL (SOUTH)
- INSET D: CASTILLO SAN FELIPE DEL MORRO
- INSET E: CASTILLO SAN CRISTÓBAL AND OUTWORKS
- INSET F: EL CAÑUELO

Key Map



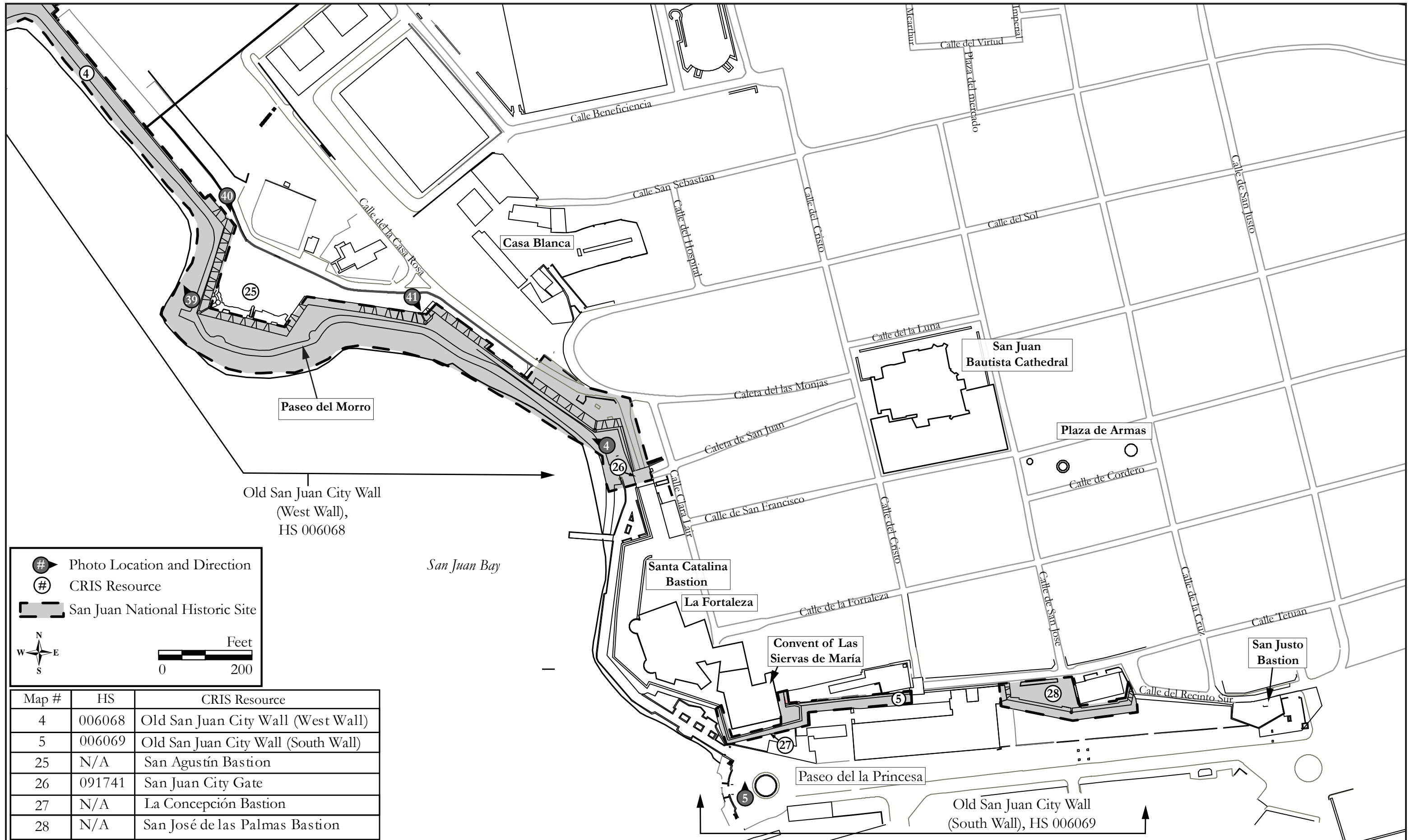


INSET A: OLD SAN JUAN CITY WALL (NORTH) and OLD SAN JUAN CITY WALL (WEST)



Map #	HS	CRIS Resource
2	550130	Castillo San Cristóbal
3	006065	Old San Juan City Wall (North Wall)
17	N/A	Las Ánimas Bastion
18	N/A	La Puerta de la Perla
19	N/A	Santo Tomás Bastion
20	N/A	San Sebastián Bastion
21	006070	Quarters Building No. 1
22	006072	Quarters Building No. 2
23	006073	Quarters Building No. 3
24	006074	Quarters Building No. 4

INSET B: OLD SAN JUAN CITY WALL (NORTH)



# Photo Location and Direction  
# CRIS Resource  
 San Juan National Historic Site





N  
 W — E  
 S

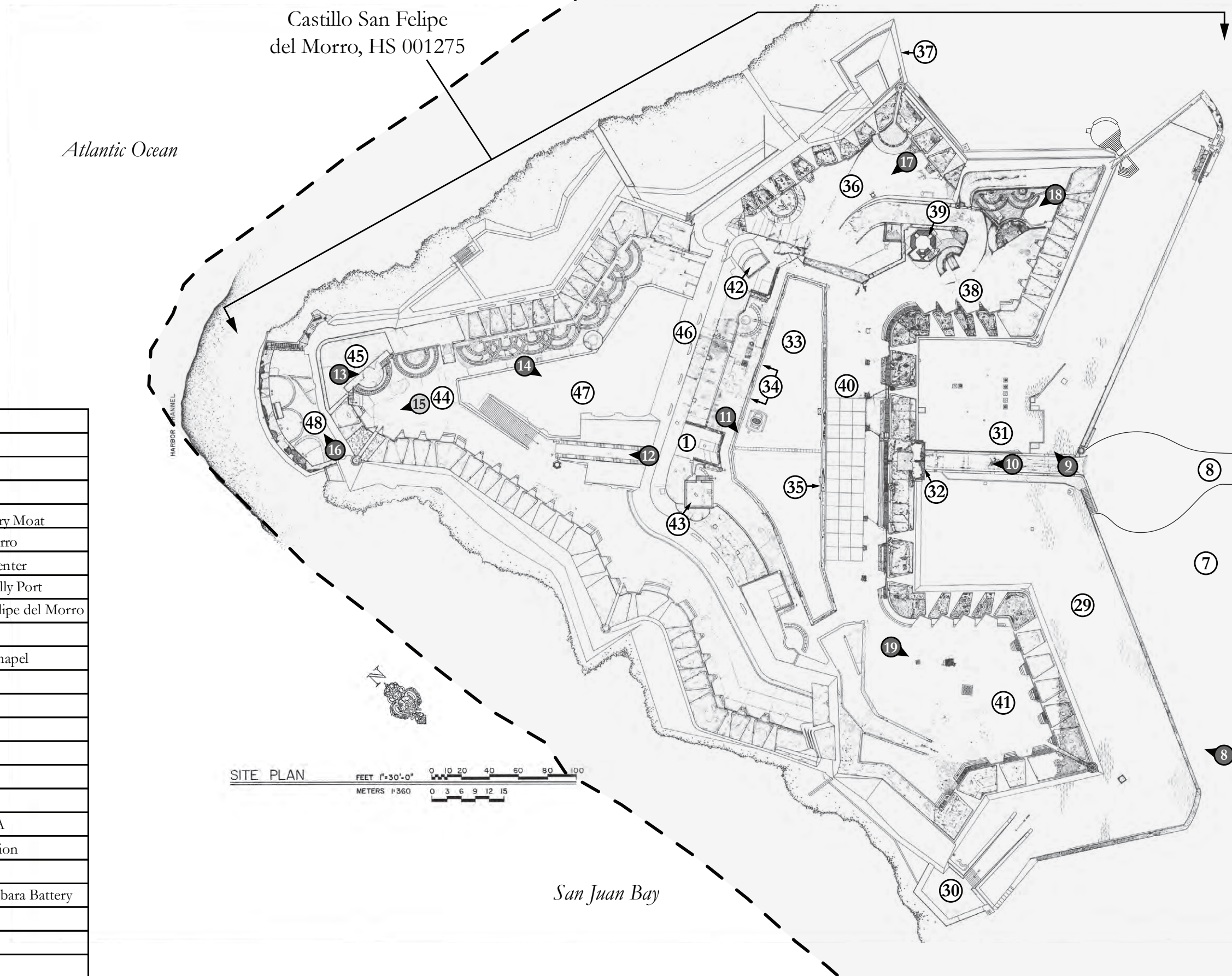
Feet  
 0 — 200

Map #	HS	CRIS Resource
4	006068	Old San Juan City Wall (West Wall)
5	006069	Old San Juan City Wall (South Wall)
25	N/A	San Agustín Bastion
26	091741	San Juan City Gate
27	N/A	La Concepción Bastion
28	N/A	San José de las Palmas Bastion

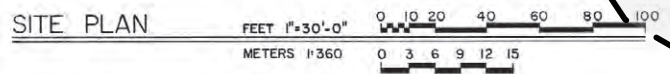
INSET C: OLD SAN JUAN CITY WALL (WEST) and OLD SAN JUAN CITY WALL (SOUTH)



-  Photo Location and Direction
-  Interior Photo
-  CRIS Resource
-  San Juan National Historic Site

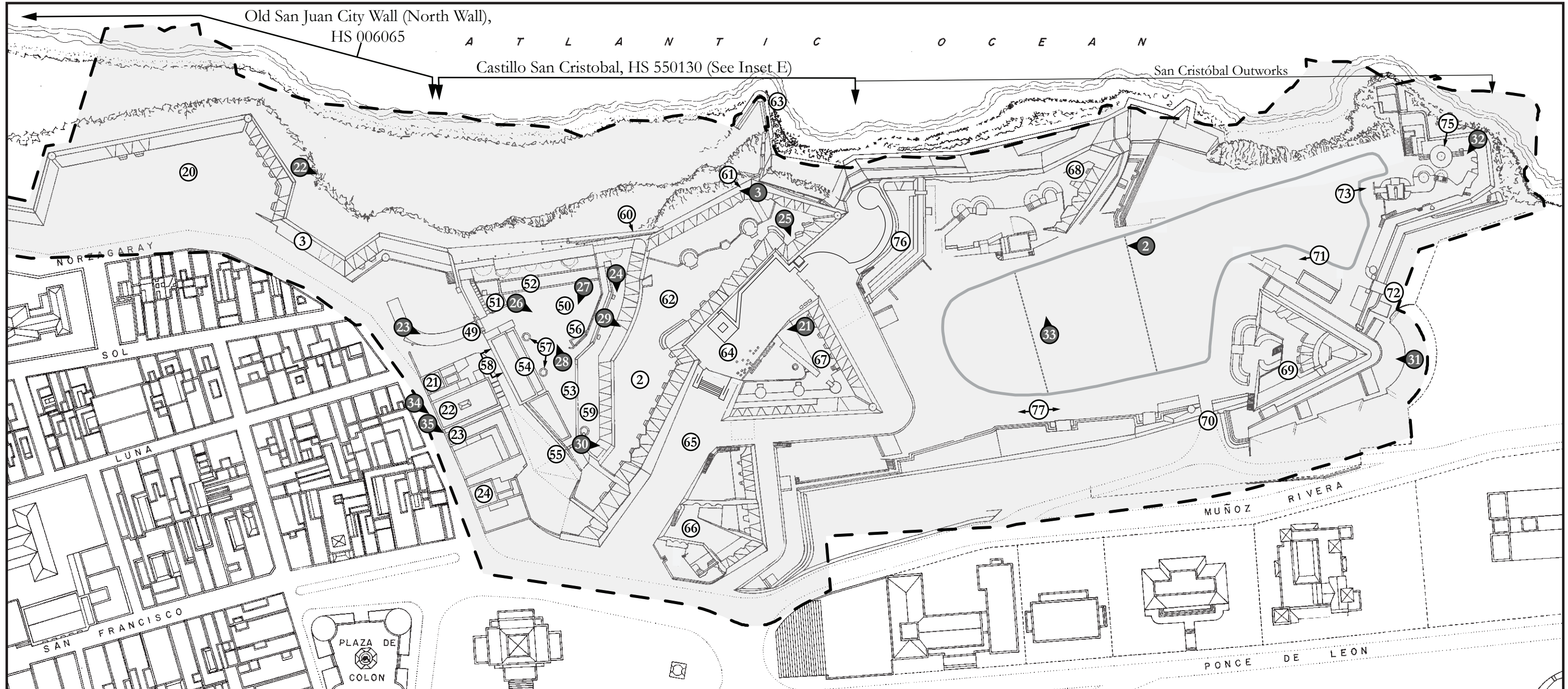


Map #	HS	CRIS Resource
1	001275	Castillo San Felipe del Morro
7	091728	El Morro Esplanade
8	91730	El Morro Road
29	091727	Castillo San Felipe del Morro Dry Moat
30	091740	San Fernando Bastion at El Morro
31	091737	World War II Radio Control Center
32	091736	Castillo San Felipe del Morro Sally Port
33	N/A	Plaza de Armas, Castillo San Felipe del Morro
34	091722	Officer's Quarters (El Morro)
35	599577	Castillo San Felipe del Morro Chapel
36	N/A	Carmen Bastion
37	N/A	Mercado Bastion
38	N/A	Ochoa Bastion
39	091731	El Morro Lighthouse
40	91720	El Caballero Battery
41	N/A	Austria Bastion
42	N/A	El Morro Fire Control Station A
43	N/A	World War II Visual Signal Station
44	N/A	Santa Bárbara Bastion
45	N/A	Gun Emplacement at Santa Barbara Battery
46	N/A	Great Wall
47	N/A	Kitchen Courtyard
48	N/A	Water Battery



INSET D: CASTILLO SAN FELIPE DEL MORRO

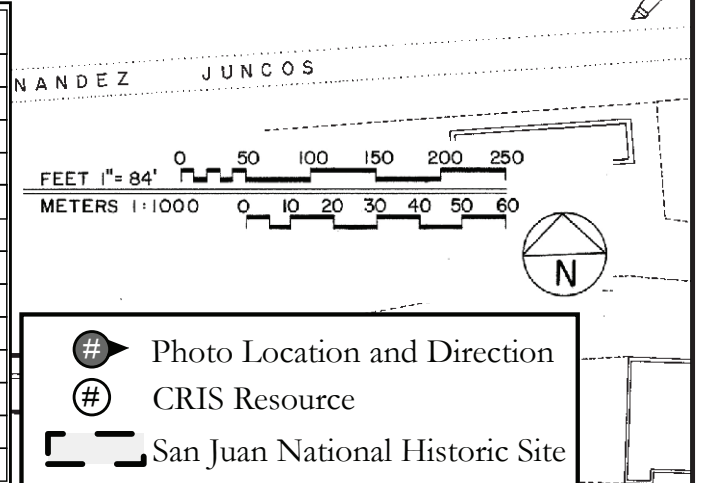




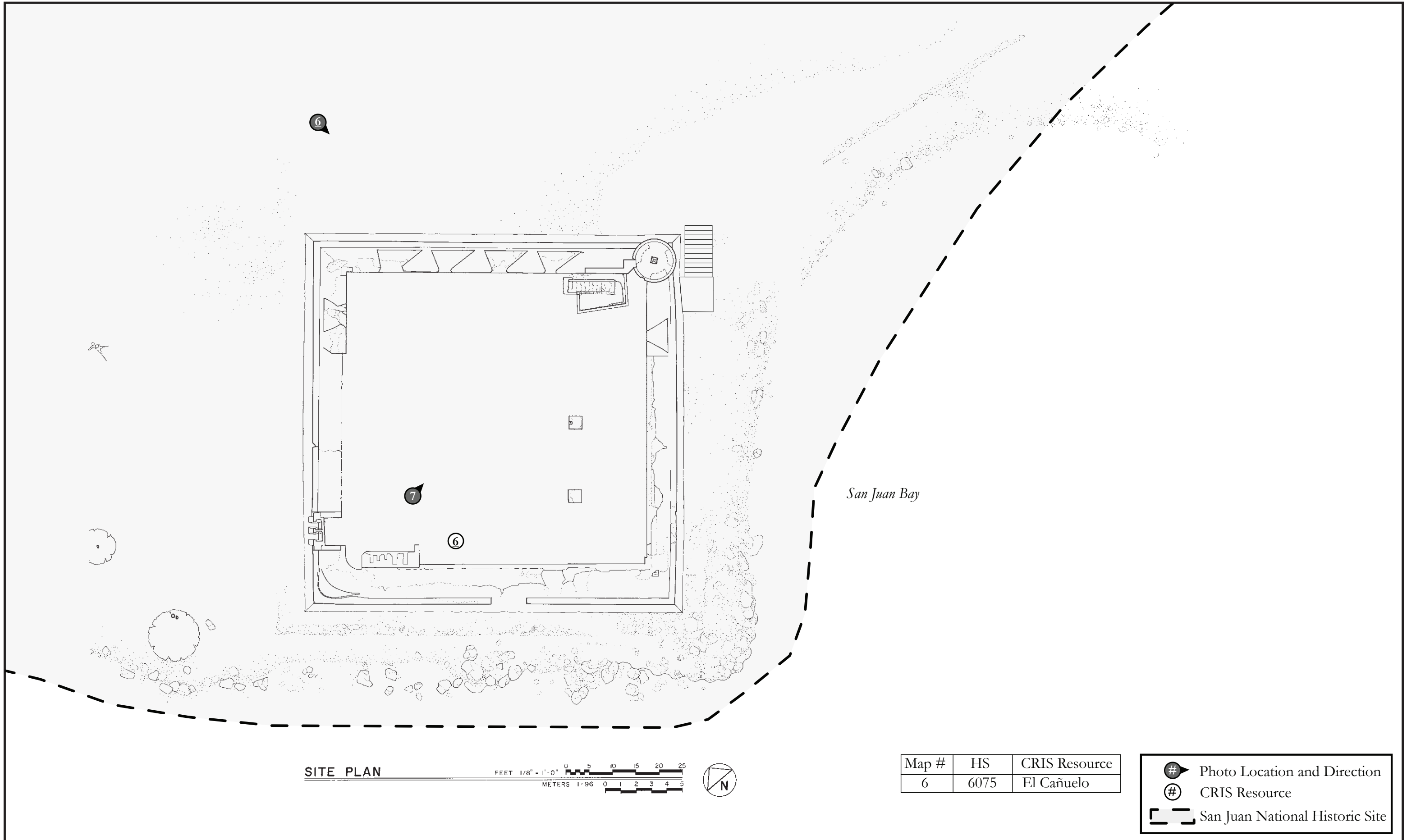
Map #	HS	CRIS Resource
2	550130	Castillo San Cristóbal
3	006065	Old San Juan City Wall (North Wall)
20	N/A	San Sebastián Bastion
21	006070	Quarters Building No. 1
22	006072	Quarters Building No. 2
23	006073	Quarters Building No. 3
24	006074	Quarters Building No. 4
49	001271	Main Gate at San Cristóbal
50	N/A	Plaza de Armas, Castillo San Cristóbal
51	091719	Guardhouse at San Cristóbal
52	091718	North Casements of San Cristóbal
53	091724	Troop's Quarters
54	N/A	Officer's Quarters at Castillo San Cristóbal

Map #	HS	CRIS Resource
55	091723	South Gate at San Cristóbal
56	091721	The Chapel
57	N/A	San Cristóbal Well Houses (Batch of 2)
58	N/A	Cisterns (Batch of 5)
59	N/A	El Caballero
60	N/A	San Cristóbal Fire Control Station A
61	N/A	San Cristóbal Fire Control Station B
62	091725	North Bastion, Curtain Wall, and South Bastion
63	091717	El Espigón
64	091726	World War II Joint Command Center
65	091712, 091733	San Cristóbal Moat
66	091711	La Trinidad Counterguard

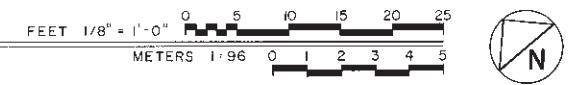
Map #	HS	CRIS Resource
67	006066	San Carlos Ravelin
68	06067	Santa Teresa Battery
69	001270	Fort El Abanico
70	091716	South Gate at El Abanico
71	91714	El Abanico Guardhouse
72	091715	Northeast Gate at El Abanico
73	091713	La Princesa Battery
74	091742	Tunnels of San Cristóbal (Batch)(not depicted)
75	N/A	Gun Emplacement at Battery La Princesa
76	091734	North Covered Way at San Cristóbal
77	091735	South Covered Way at San Cristóbal






INSET E: CASTILLO SAN CRISTÓBAL AND OUTWORKS



SITE PLAN



Map #	HS	CRIS Resource
6	6075	El Cañuelo

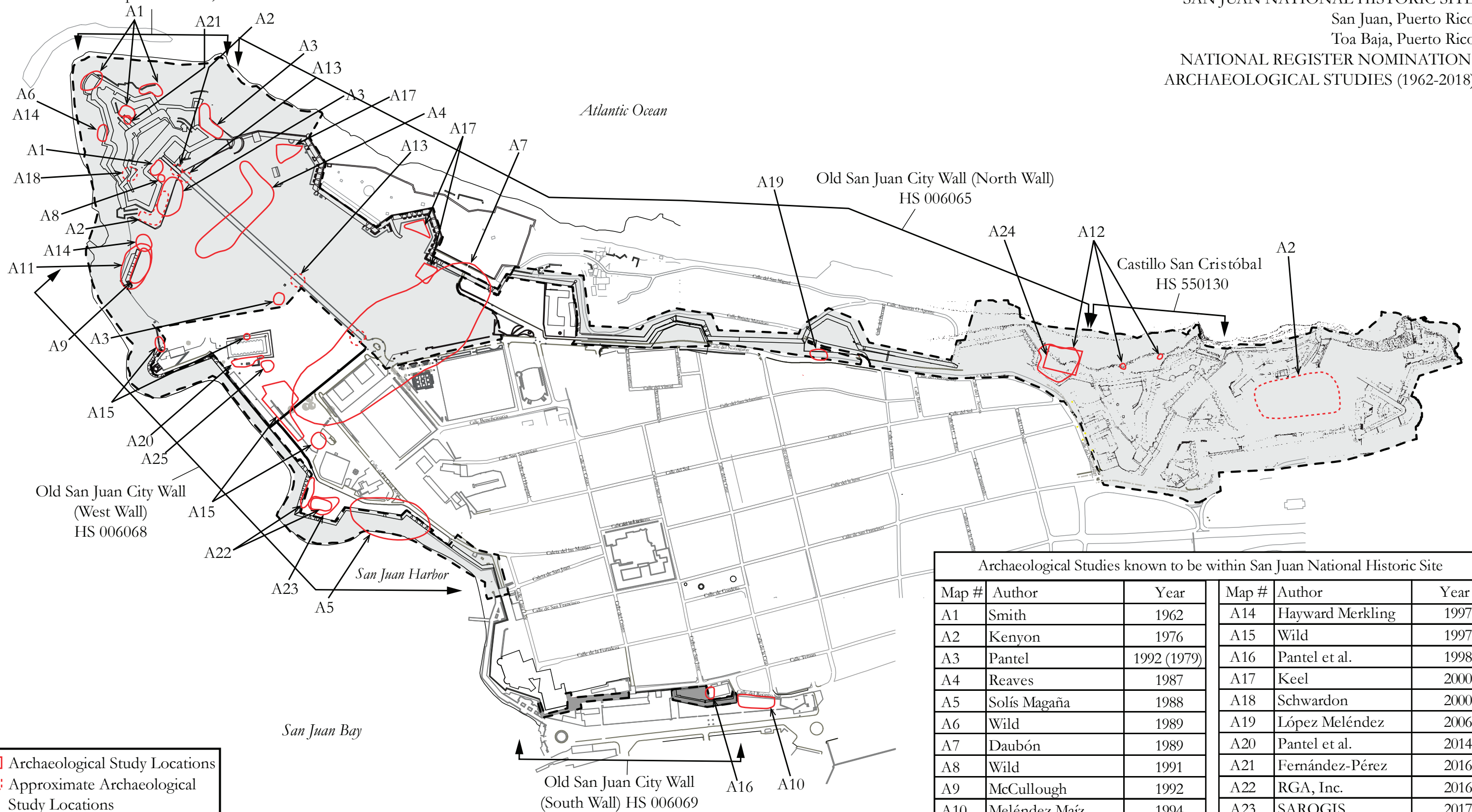
-  Photo Location and Direction
-  CRIS Resource
-  San Juan National Historic Site

INSET F: EL CAÑUELO



Castillo San Felipe del Morro, HS# 001275

**SAN JUAN NATIONAL HISTORIC SITE**  
 San Juan, Puerto Rico  
 Toa Baja, Puerto Rico  
**NATIONAL REGISTER NOMINATION**  
**ARCHAEOLOGICAL STUDIES (1962-2018)**



Archaeological Studies known to be within San Juan National Historic Site					
Map #	Author	Year	Map #	Author	Year
A1	Smith	1962	A14	Hayward Merklings	1997
A2	Kenyon	1976	A15	Wild	1997
A3	Pantel	1992 (1979)	A16	Pantel et al.	1998
A4	Reaves	1987	A17	Keel	2000
A5	Solís Magaña	1988	A18	Schwardon	2000
A6	Wild	1989	A19	López Meléndez	2006
A7	Daubón	1989	A20	Pantel et al.	2014
A8	Wild	1991	A21	Fernández-Pérez	2016
A9	McCullough	1992	A22	RGA, Inc.	2016
A10	Meléndez Maíz	1994	A23	SARQGIS	2017
A11	Wild	1995a	A24	Pantel et al.	2017
A12	Wild	1995b	A25	SARQGIS	2018
A13	Wild	1996			



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

Toa Baja, Puerto Rico

County and State



Figure 1: First map of San Juan Islet, part of the 1519 study of the region prepared by Rodrigo de Figueroa before the move of the settlement from Caparra to San Juan Islet. (Archivo General de las Indias, Seville, Spain; reproduced from Sepúlveda 2004, V.1: 132).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

County and State



Figure 2: Illustration of the “Spanish Empire in the West Indies: Major Fortifications and Convoy Routes, 1550-1750.”  
(reproduced from Hoyt 1943).

San Juan National Historic Site

Name of Property



Figure 3: 1575 panoramic view of the City of San Juan, composed by Juan Escalante de Mendoza. (Reproduced from Sepúlveda 1989: 70).



San Juan National Historic Site

Name of Property

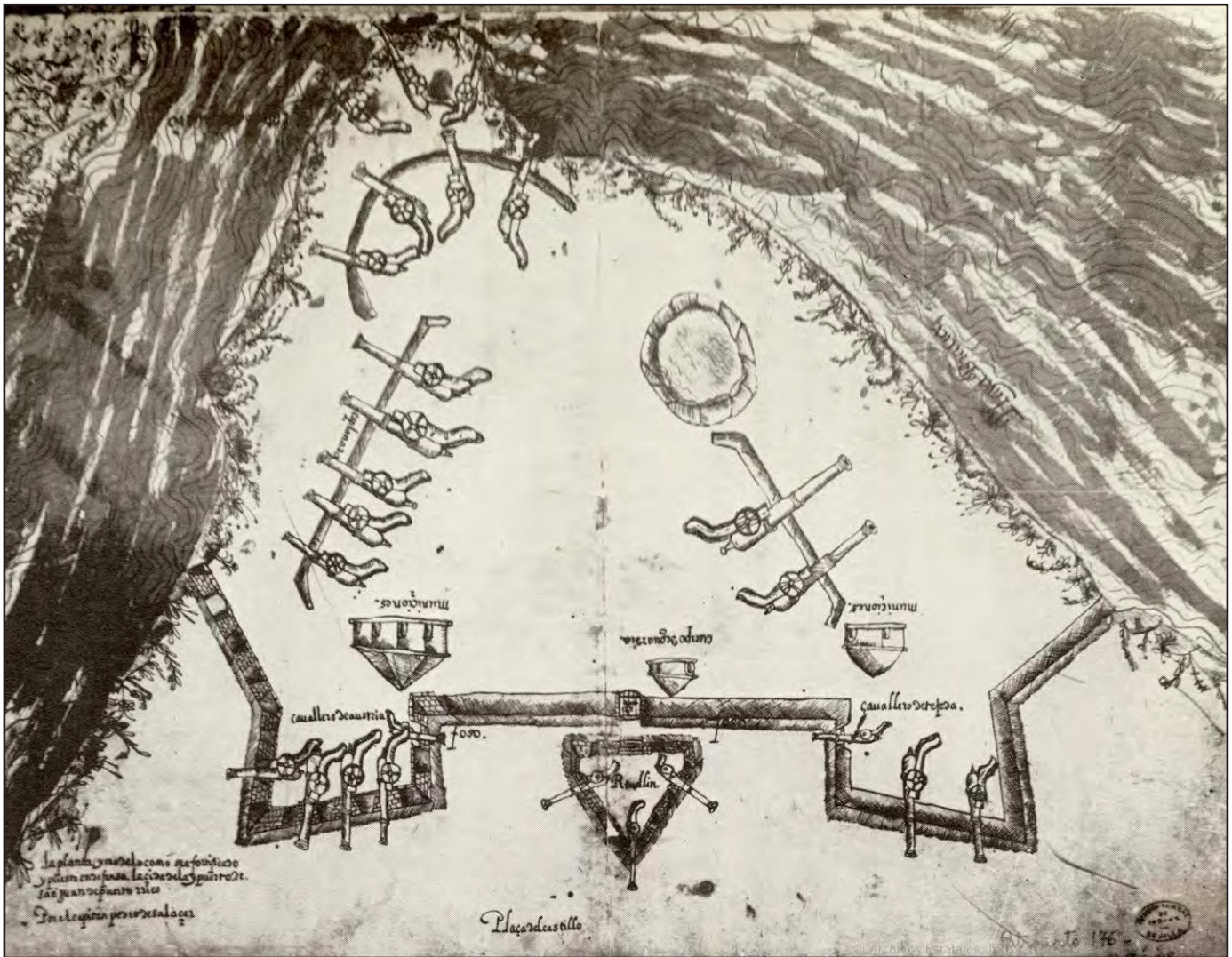


Figure 4: 1591 Plan Map of the defenses of the city and port of San Juan, (“La planta y modelo como se a fortificado y puesto en defensa la çidadel y puerto de San Juan de Puerto Rico, por el capitán Pedro de Salazar.” Archivo General de las Indias, MP-Santo Domingo, 11, Seville, Spain).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

County and State

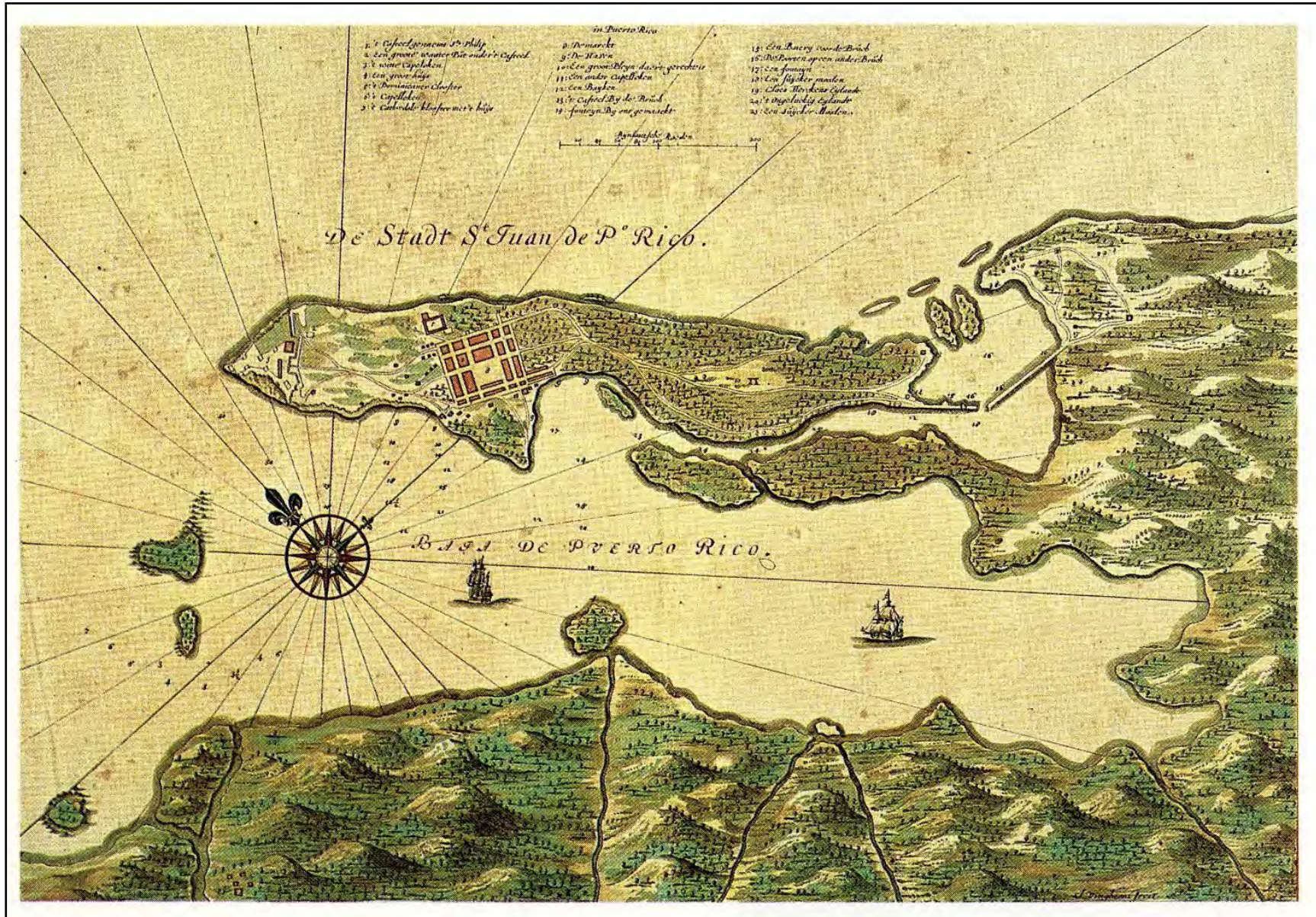


Figure 5: Circa 1625 Plan Map of San Juan.



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

County and State



Figure 6: 1678 Plan of the fortifications at San Juan, composed by Engineer Luis Venegas Ossorio.  
 (Archivo General de las Indias, MP-Santo Domingo, Número 074).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

County and State

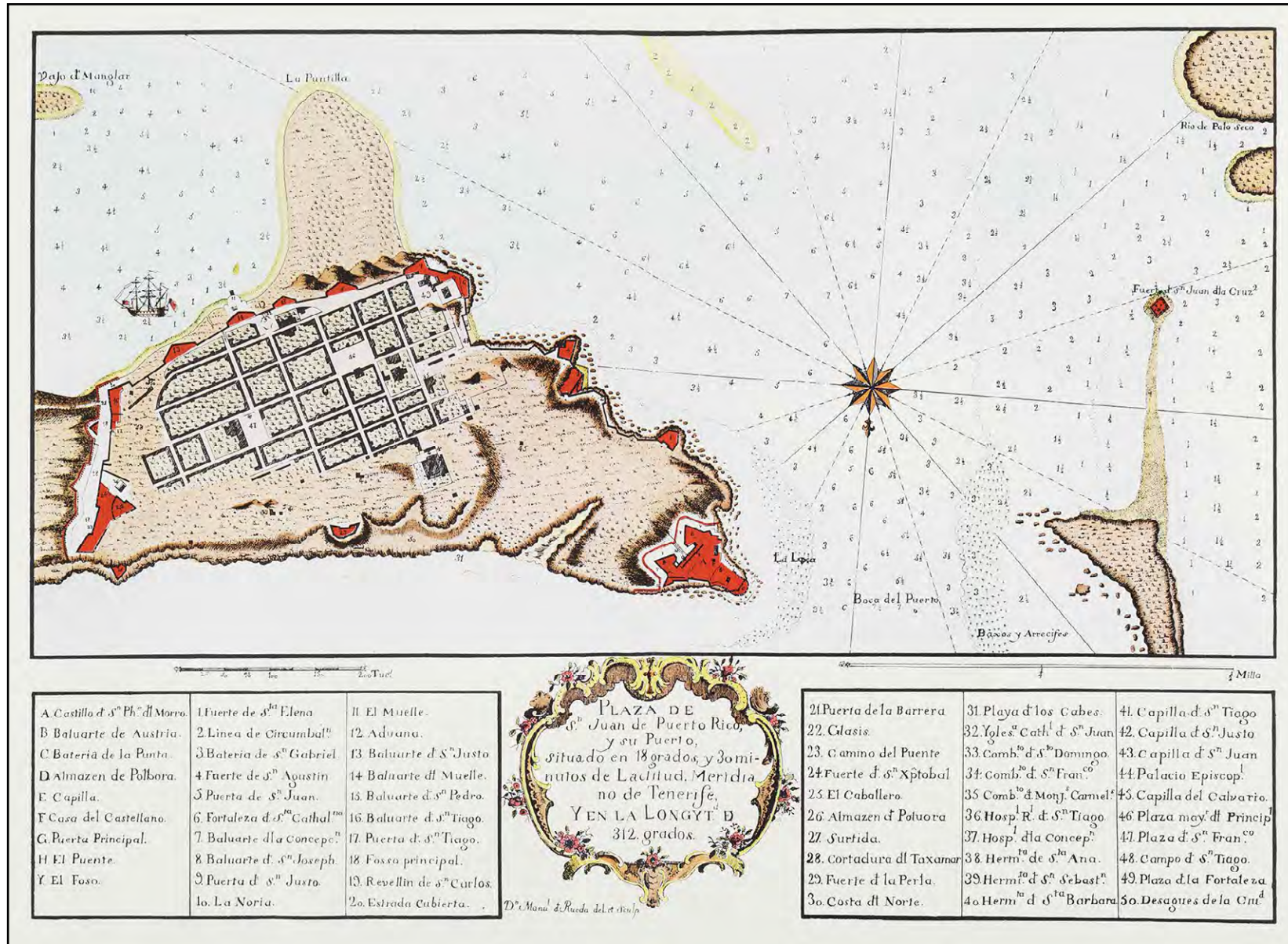


Figure 7: 1766 Map of the Port and City of San Juan, from Manuel de Rueda's American Atlas. (Puerto Rico Digital Library).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

County and State



Figure 8: 1776 Map of San Juan, Puerto Rico and its surroundings, composed by Thomas O'Daly.  
(Archive del Museo Naval de Madrid, Spain).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

County and State



Figure 9: 1792 Map of San Juan by Engineer Juan Francisco Mestre (Archivo General Militar de Madrid (IHMC) SH. PRI-1517).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

County and State



Figure 10: 1868 Map of San Juan, “Plano del puerto de la capital de la isla de Puerto Rico” (Archivo Digital Nacional De Puerto Rico, from the Archivo del Museo Naval de Madrid).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

County and State



Figure 11: 1897 Plan of San Juan before the demolition of a portion of the city walls in 1897.  
("Plano del Recinto Amurallado del Ciudad de San Juan, Puerto Rico; Departamento de Interior, Division de Terrenos Publicos y Archivos).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State



Figure 12: 1897 photograph of the demolition of a portion of the east city wall. The view is southwest from near present-day Plaza de Colón. (San Juan National Historic Site Archives, San Juan, Puerto Rico).

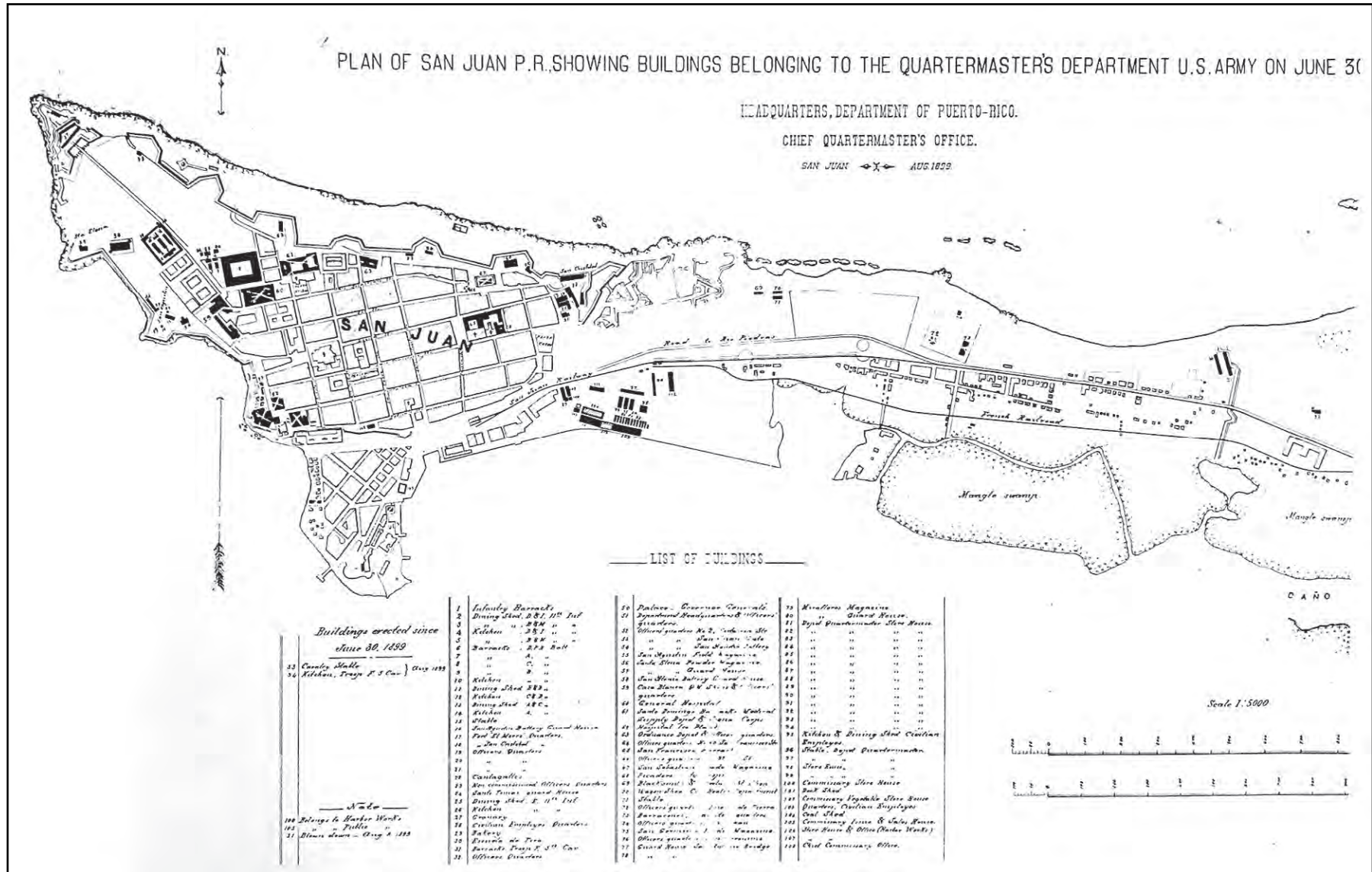


Figure 13: 1899 Plan of the Grounds and Buildings of the United States War Department (On file at the San Juan National Historic Site Archives, San Juan, Puerto Rico).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

Toa Baja, Puerto Rico

County and State

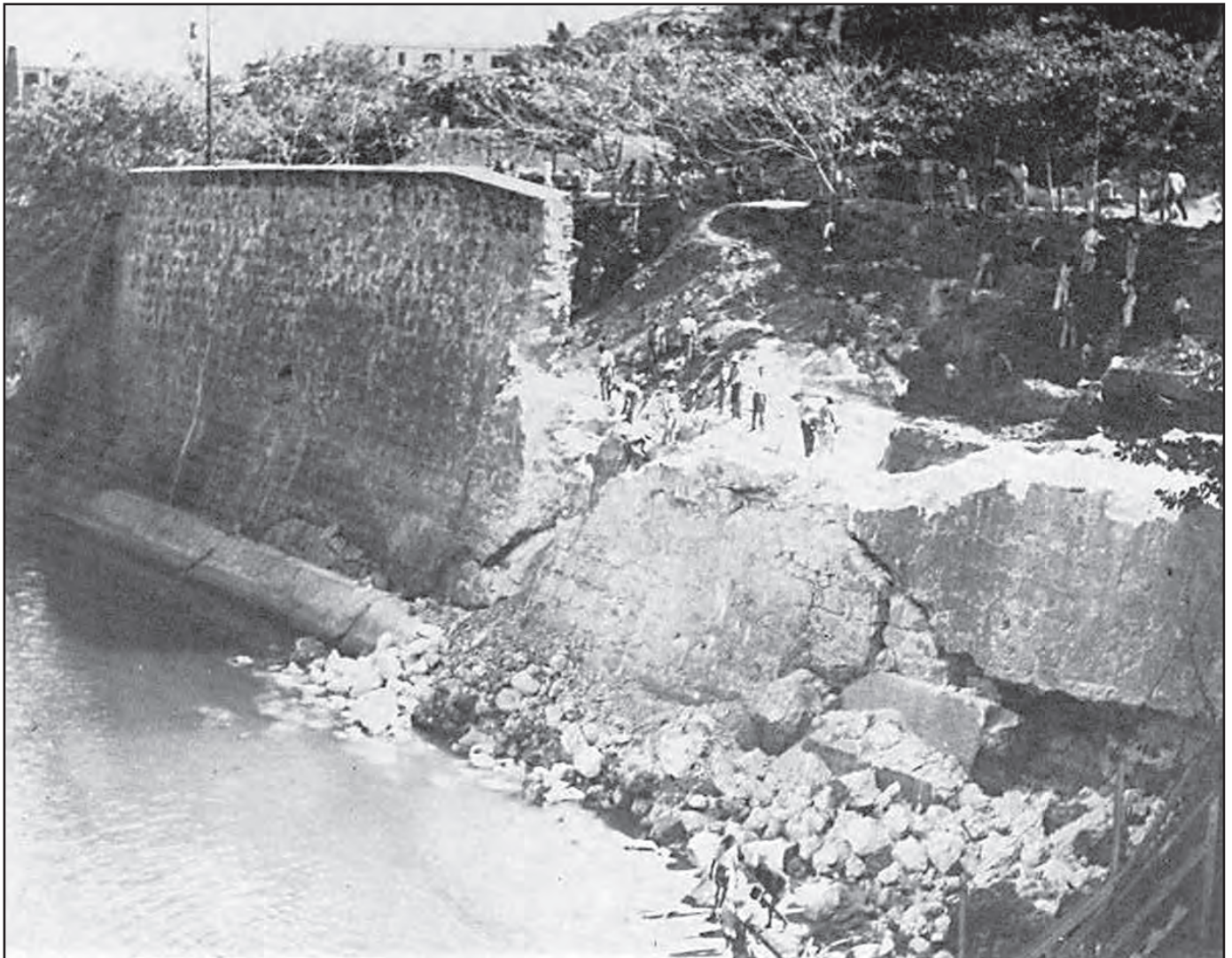


Figure 14: Photograph of the collapsed curtain wall May 3, 1938. This collapsed portion is located between Santa Elena Bastion and San Agustín Bastion. (On file San Juan National Historic Site Archives, San Juan, Puerto Rico).



San Juan National Historic Site  
 Name of Property

San Juan, Puerto Rico  
 County and State

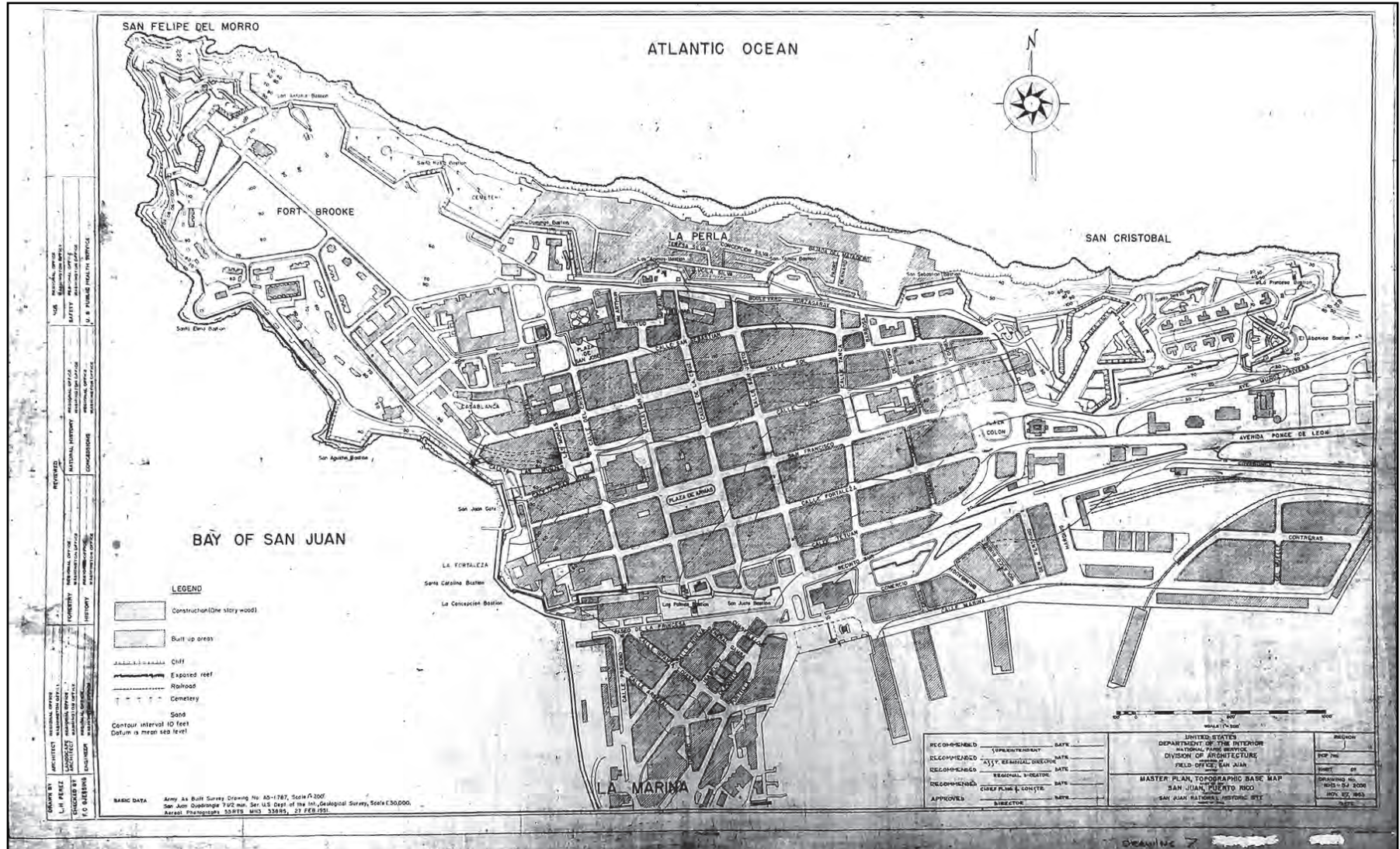


Figure 15: 1953 Fort Brooke Master Topographic Map.  
 (On file San Juan National Historic Site Archives, San Juan, Puerto Rico).



San Juan National Historic Site

Name of Property



Figure 16: Aerial photograph of Castillo San Felipe del Morro and adjoining wall, December 26, 1929.  
(On file San Juan National historic Site Archives, San Juan, Puerto Rico).

San Juan National Historic Site

Name of Property

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

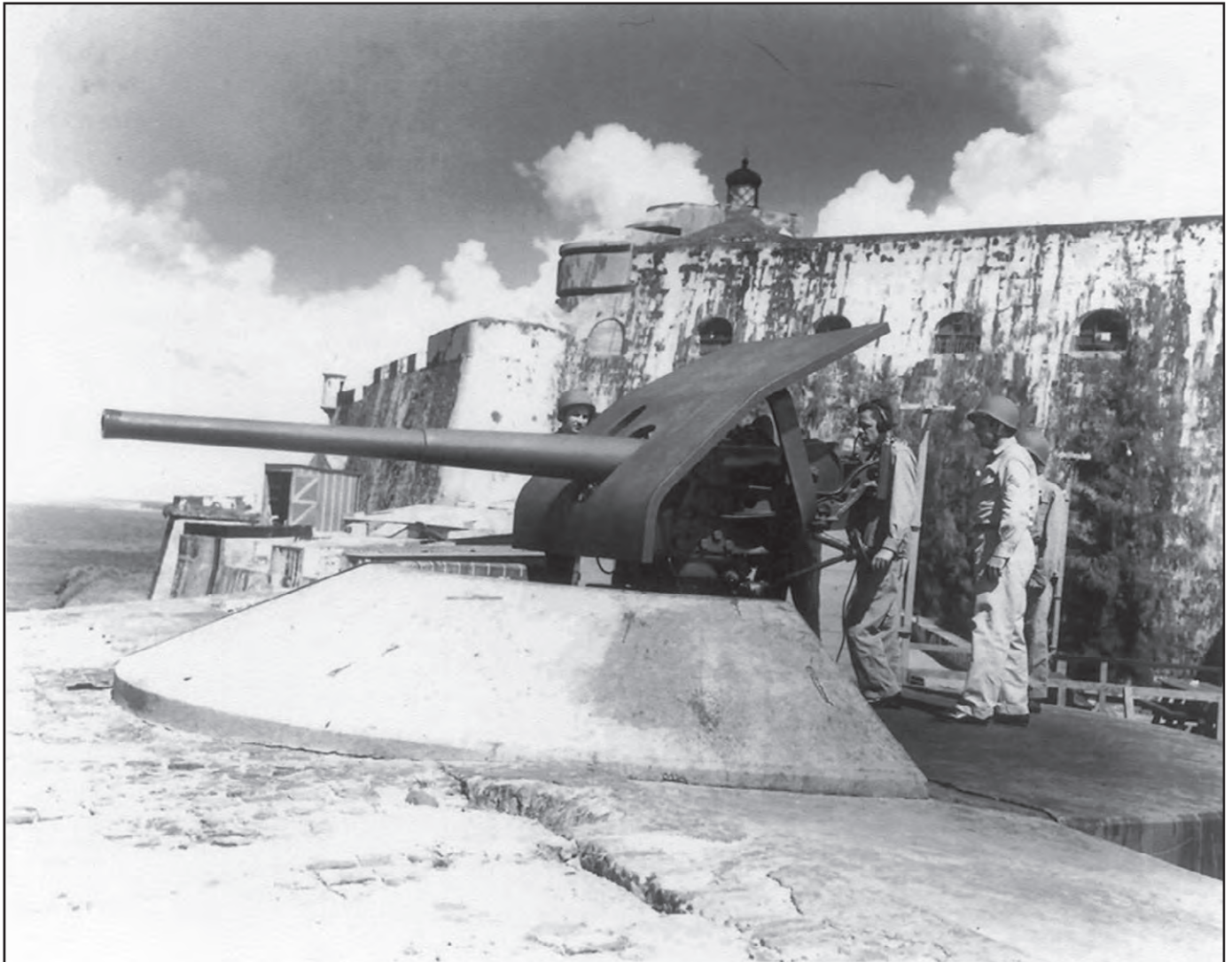


Figure 17: 1945 photograph of soldiers at the gun emplacement at Santa Barbara Bastion, Castillo San Felipe del Morro. The gun emplacement would soon be removed, leaving the concrete platform below. Note El Morro Fire Station A (Manhole A) in the background. (San Juan National Historic Site Archives, San Juan, PR).



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

Toa Baja, Puerto Rico

County and State

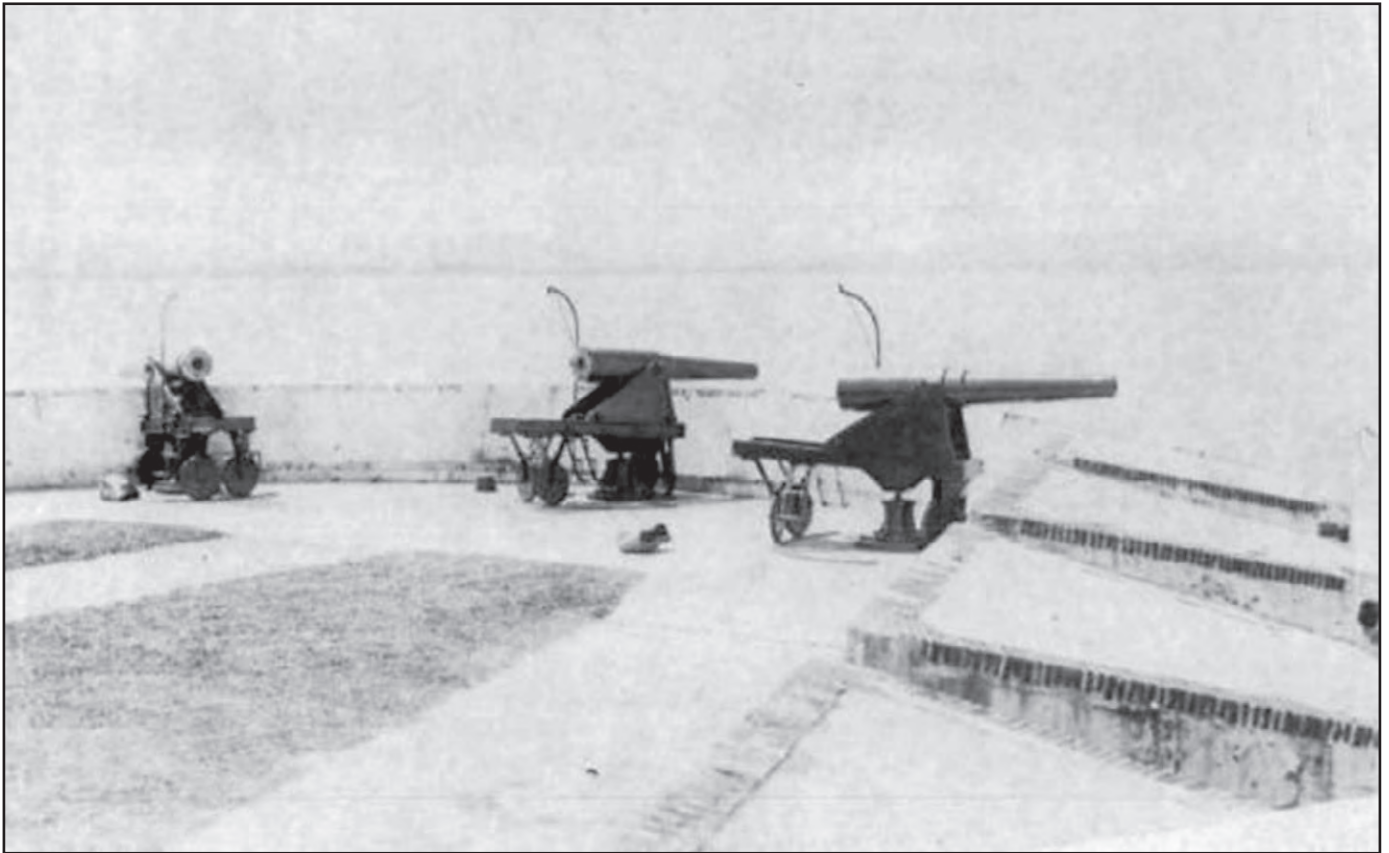


Figure 18: Circa 1898 photograph of three 15-cm Breech-loading Rifle Gun and their Front-Pintle Carriages Emplaced in Santa Elena Bastion. (National Archives 77-F-107-3-27; reproduced from Bearss 1984: 443).

San Juan National Historic Site

Name of Property

San Juan, Puerto Rico

County and State

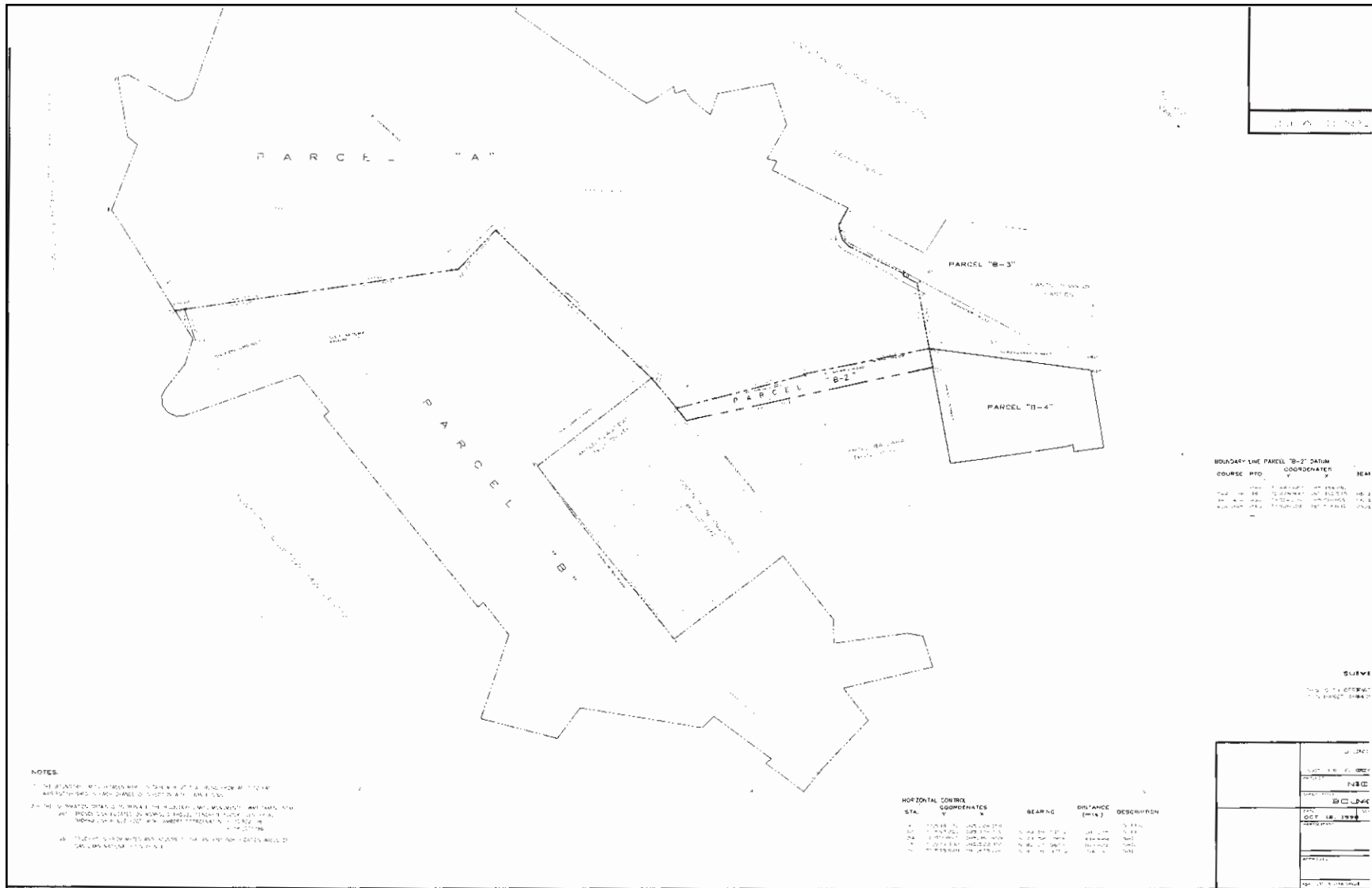


Figure 19: 1998 Survey of Boundaries of Parcel A and Parcel B; only Parcel A is within the boundary of San Juan National Historic Site. (San Juan National Historic Site Archives, San Juan, PR).

San Juan National Historic Site

Name of Property

Photographs 1-41



1 Castillo San Felipe del Morro, East Front, looking northwest. El Morro Road and El Morro Esplanade in foreground.



2 Castillo San Cristóbal, East Front, looking west. San Cristóbal Outworks in the foreground, including San Carlos Ravelin and Santa Teresa Battery.



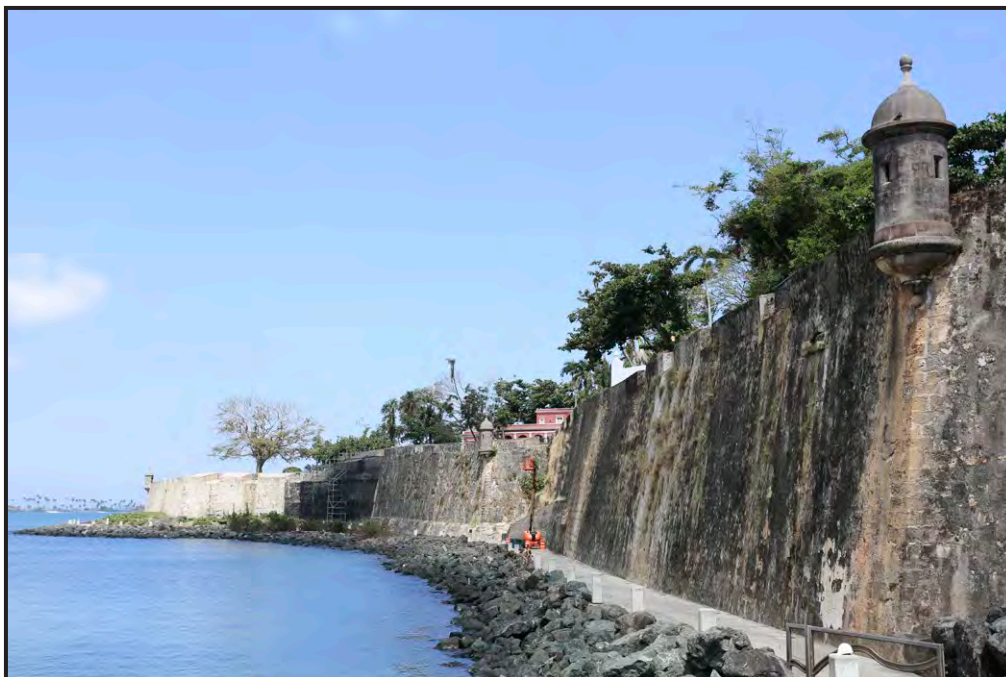
San Juan National Historic Site

Name of Property

Photographs 1-41



- 3 San Juan City Walls - North Wall, looking west. San Sebastián Bastion in the foreground, La Perla neighborhood in the middle ground, and Castillo San Felipe del Morro is sited on the rocky headlands in the distance.



- 4 San Juan City Walls - West Wall, San Agustín Bastion, looking west.



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Photographs 1-41



5 San Juan City Walls - South Wall, La Concepción Bastion, looking north.



6 Fortín San Juan de la Cruz, Northeast Front, looking south.

San Juan National Historic Site

Name of Property

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Photographs 1-41



7 Fortín San Juan de la Cruz, terreplein, looking northeast. Castillo San Felipe del Morro is in the distance.



8 Castillo San Felipe del Morro, looking northwest. Resources shown: Austria Bastion; Castillo San Felipe del Morro Dry Moat; ramp to San Fernando Bastion; and El Morro Lighthouse.



San Juan National Historic Site

Name of Property

Photographs 1-41



9 Castillo San Felipe del Morro, looking north. Resources shown: World War II Radio Control Center; Castillo San Felipe del Morro Dry Moat; Ochoa Bastion; and El Morro Lighthouse.



10 Castillo San Felipe del Morro, Sally Port, looking northwest.

San Juan National Historic Site

Name of Property

Photographs 1-41



11 Castillo San Felipe del Morro, Plaza de Armas, looking southeast. View from El Caballero Battery terreplein.



12 Castillo San Felipe del Morro, main ramp and Santa Bárbara Bastion, looking northwest.



San Juan National Historic Site

Name of Property

Photographs 1-41



13 Castillo San Felipe del Morro, looking southeast. Resources shown: Santa Bárbara Bastion, Great Wall, and El Morro Fire Control Station A.



14 Castillo San Felipe del Morro, looking south. View of Kitchen Courtyard, Great Wall, and main ramp.

San Juan National Historic Site

Name of Property

Photographs 1-41



15 Castillo San Felipe del Morro, Santa Bárbara Bastion interior, looking west.



16 Castillo San Felipe del Morro, Water Battery, looking northeast.



San Juan National Historic Site

Name of Property

Photographs 1-41



17 Castillo San Felipe del Morro, Carmen Bastion and El Morro Fire Control Station A, looking west.



18 Castillo San Felipe del Morro, Ochoa Bastion terreplein and El Morro Lighthouse, looking northwest.

San Juan National Historic Site

Name of Property

Photographs 1-41



19 Castillo San Felipe del Morro, Austria Bastion terreplein, looking south.



20 Castillo San Felipe del Morro, El Morro Esplanade and San Antonio Guardhouse, looking west.



San Juan National Historic Site

Name of Property

Photographs 1-41



21 Castillo San Cristóbal, East Front, looking west. View from San Carlos Ravelin terreplein. Resources shown: San Carlos Ravelin; World War II Joint Command Center; Curtain Wall and South Bastion, El Caballero, San Cristóbal Fire Control Station A.



22 Castillo San Cristóbal, North Front, looking east. View from the foot of San Sebastián Bastion.

San Juan National Historic Site

Name of Property

Photographs 1-41



23 Castillo San Cristóbal, West Front, looking southeast. Resources shown: Main Gate at San Cristóbal; Officer's Quarters at San Cristóbal.



24 Castillo San Cristóbal, El Caballero terreplein, looking south.



San Juan National Historic Site

Name of Property

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Photographs 1-41



25 Castillo San Cristóbal Outworks, view south. Resources shown: portion of North Covered Way (at left); San Carlos Ravelin; San Cristóbal Moat; South Covered Way.



26 Castillo San Cristóbal, Plaza de Armas, looking southeast. Resources shown: Plaza de Armas, Castillo San Cristóbal; Troop's Quarters; The Chapel; (left to right), Tunnel 1 (partially obscured), Tunnel 3, and Tunnel 2.

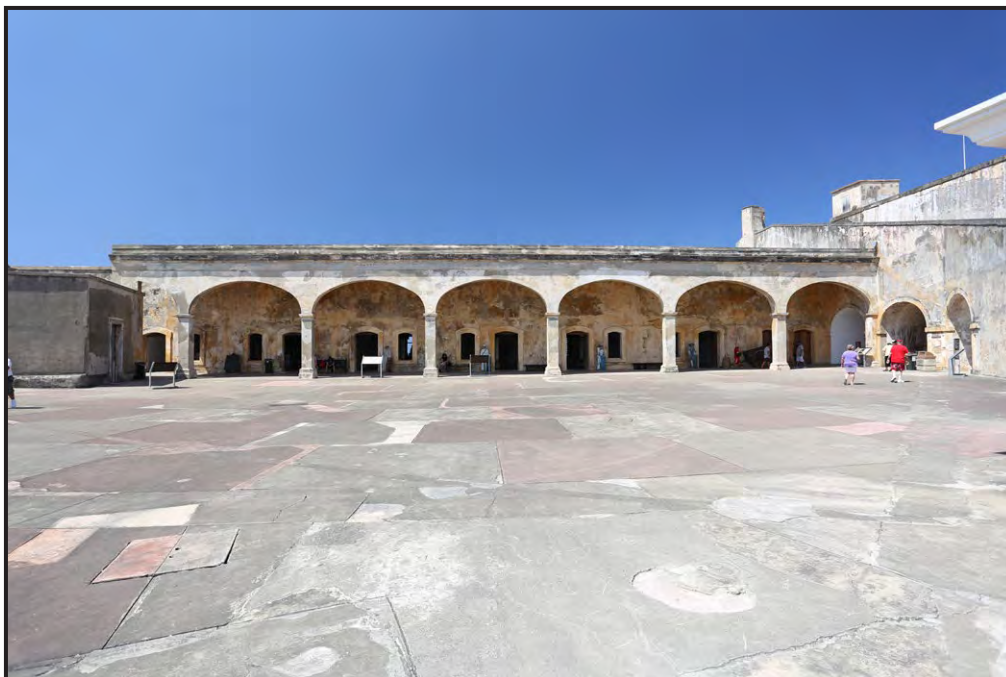
San Juan National Historic Site

Name of Property

Photographs 1-41



27 Castillo San Cristóbal, Plaza de Armas, looking southwest. Resources shown: Plaza de Armas, Castillo San Cristóbal; Officer's Quarters at San Cristóbal; San Cristóbal Well House (Batch of 2); South Gate at San Cristóbal.



28 Castillo San Cristóbal, Plaza de Armas, looking north. Resources shown: Plaza de Armas, Castillo San Cristóbal; North Casemates of San Cristóbal; Guardhouse at San Cristóbal.

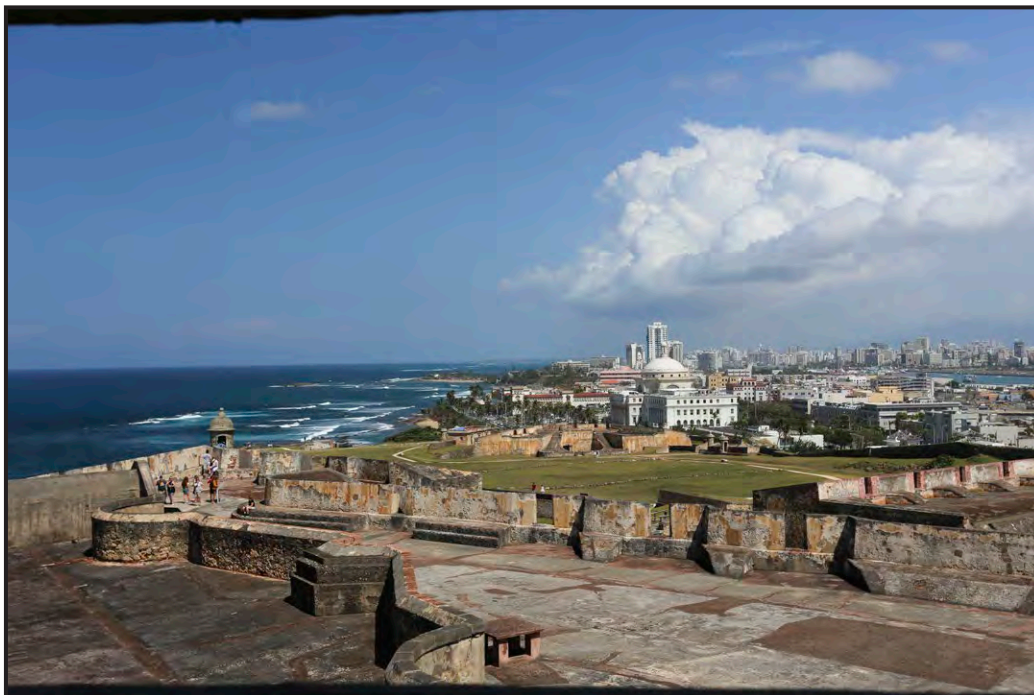


San Juan National Historic Site

Name of Property

San Juan, Puerto Rico  
Toa Baja, Puerto Rico  
County and State

Photographs 1-41



29 Castillo San Cristóbal Outworks, looking east. Resources shown: (foreground) North Bastion; (middle ground) portion of San Carlos Ravelin; (distance) La Princesa Battery, Guardhouse at El Abanico, Fort El Abanico, South Gate at El Abanico, South Covered Way.



30 Castillo San Cristóbal Outworks, looking southeast, Resources shown: La Trinidad Counterguard; San Cristóbal Moat, South Covered Way.

San Juan National Historic Site

Name of Property

Photographs 1-41



31 Castillo San Cristóbal Outworks, salient angle of Fort El Abanico, looking west. Guardhouse at El Abanico at right.



32 Castillo San Cristóbal Outwork, La Princesa Battery, looking southwest. Castillo San Cristóbal in the distance.



San Juan National Historic Site

Name of Property

Photographs 1-41



33 Castillo San Cristóbal Outworks, Santa Teresa Battery, looking northwest.



34 Castillo San Cristóbal, Quarters Building No. 1 and Quarters Building No. 2, looking southeast. Norzagaray Street in foreground.



San Juan National Historic Site

Name of Property

Photographs 1-41



35 Castillo San Cristóbal, Quarters Building No. 3 and Quarters Building No. 4, looking southeast. Norzagaray Street in foreground.



36 San Juan City Walls - North Wall, looking northwest. Resources shown: Santa Rosa Bastion, San Jose City Gate; El Morro Esplanade, Castillo San Felipe Del Morro. Santa María Magdalena de Pazzi Cemetery at right.

San Juan National Historic Site

Name of Property

Photographs 1-41



37 San Juan City Walls - North Wall, San Antonio Bastion, looking east.



38 San Juan City Walls - North Wall, Santo Tomás Bastion, looking northeast.  
Bajada Matadero Street bisects the bastion leading to La Puerta de La Perla (at left).



San Juan National Historic Site

Name of Property

Photographs 1-41



39 San Juan City Walls - West Wall, Santa Elena Bastion, looking north. Curtain wall between Santa Elena and San Agustín bastions at right.



40 San Juan City Walls - West Wall, San Agustín Bastion, looking south.

San Juan National Historic Site

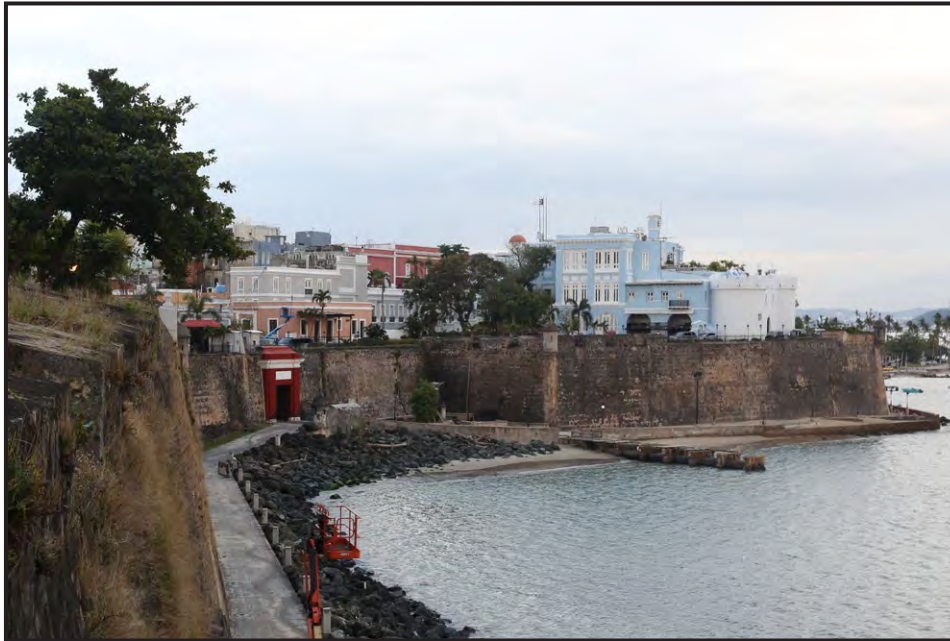
Name of Property

San Juan, Puerto Rico

Toa Baja, Puerto Rico

County and State

Photographs 1-41



41 San Juan City Walls - West Wall, San Juan City Gate, looking east from San Agustín Bastion.