Fort Hancock:
A Bastion of America's Eastern Seaboard

(National Park Service)

When Samuel J. Tilden surveyed America's most important harbor, he saw danger. "A million of soldiers," wrote New York's senior senator in 1885, "with the best equipments on the heights surrounding the harbor of New York in our present state of preparation, or rather in our total want of preparation, would be powerless to resist a small squadron of [foreign] war steamers." Nor was the threat confined to America's commercial capital: harbors from Portland, Maine, to San Francisco stood defenseless against any navy that chose to attack. Such an attack, Tilden argued, "...would inflict upon the property and business of the country an injury which can neither be foreseen nor measured."[1]

Many late 19th-century Americans, however, believed such dangers were remote. Europeans would never attack the U.S., they argued, and therefore money spent on stronger forts and new high-powered guns would be wasted. Existing defenses and the Atlantic Ocean provided more than adequate protection, and keeping expenditures low would both limit taxes and prevent the creation of the type of standing army Americans had traditionally feared.

This lesson uses Fort Hancock in New Jersey—one of the sites Senator Tilden hoped would defend New York—as a base for examining a debate that has run throughout American history. Today Fort Hancock stands silent, part of Gateway National Recreation Area, a unit of the National Park System. Although the fort is no longer part of the nation's military, its history illustrates many important issues involving American defense policy.

[1]*Quoted in the Congressional Record, volume 17, part 7, 49th Congress, 1st session (July 1886), 7101.*

Document Contents

Where this lesson fits into the curriculum

Time Period: Late 19th and early 20th centuries

Topics: This lesson could be used in U.S. history, social studies, and geography courses in units on American foreign policy around the turn of the 20th century or in courses on military history and technology.

Relevant United States History Standards for Grades 5-12

This lesson relates to the following National Standards for History from the UCLA National Center for History in the Schools:

US History Era 6

- **Standard 3C:** The student understands how Americans grappled with social, economic, and political issues.

US History Era 7

- **Standard 2A:** The student understands how the American role in the world changed in the early 20th century.

Relevant Curriculum Standards for Social Studies

This lesson relates to the following Curriculum Standards for Social Studies from the National Council for the Social Studies:

Theme III: People, Places, and Environment

- Standard A - The student elaborates mental maps of locales, regions, and the world that demonstrates understanding of relative location, directions, size, and shape.

Theme V: Individuals, Groups, and Institutions

- Standard E - The student identifies and describes examples of tensions between belief systems and government policies and laws.

Theme VI: Power, Authority, and Governance

- Standard F - The student explains conditions, actions, and motivations that contribute to conflict and cooperation within and among nations.
- Standard G - The student describes and analyzes the role of technology in communications, transportation, information-processing, weapons development, or other areas as it contributes to or helps resolve conflicts.

Theme VII: Production, Distribution, and Consumption

- Standard F - The student explains and illustrates how values and beliefs influence different economic decisions.

Theme VIII: Science, Technology, and Society

- Standard A - The student examines and describes the influence of culture on scientific and technological choices and advancement, such as in transportation, medicine, and warfare.

Theme IX: Global Connections

- Standard C - The student analyzes examples of conflict, cooperation, and interdependence among groups, societies, and actions.
- Standard E - The student describes and explains the relationships and tensions between national sovereignty and global interests in such matters as territory, natural resources, trade, use of technology, and welfare of people.

Theme X: Civic Ideals, and Practice

- Standard C - The student locates, accesses, analyzes, organizes, and applies information about selected public issues - recognizing and explaining multiple points of view.

Relevant Common Core Standards

This lesson relates to the following Common Core English and Language Arts Standards for History and Social Studies for middle and high school students:

Key Ideas and Details
- CCSS.ELA-Literacy.RH.6-12.1
- CCSS.ELA-Literacy.RH.6-12.2
- CCSS.ELA-Literacy.RH.6-12.3

Craft and Structure
- CCSS.ELA-Literacy.RH.6-12.4
- CCSS.ELA-Literacy.RH.6-12.6

Integration of Knowledge and Ideas
- CCSS.ELA-Literacy.RH.6-12.7

Range of Reading and Level of Text Complexity:
- CCSS.ELA-Literacy.RH.6-12.10

About This Lesson

This lesson is based on the National Register of Historic Places registration file "Fort Hancock and the Sandy Hook Proving Ground Historic District" [http://pdfhost.focus.nps.gov/docs/NHLS/Text/80002505.pdf] (with photographs http://pdfhost.focus.nps.gov/docs/NHLS/Photos/80002505.pdf) and other military and historical sources. It was written by George West, former Park Ranger and Interpreter at the Sandy Hook Unit of Gateway National Recreation Area. It was published in 2001. The lesson was edited by Fay Metcalf, education consultant, and the Teaching with Historic Places staff. TwHP is sponsored, in part, by the Cultural Resources Training Initiative and Parks as Classrooms programs of the National Park Service. This lesson is one in a series that brings the important stories of historic places into the classrooms across the country.

Objectives

1. To trace the development of the U.S. coastal defense system and its connection to the country's foreign policy;
2. To understand the arguments favoring and opposing a large program building up coastal defenses;
3. To learn how the evolution of military technology affected this system of defense;
4. To recognize how military expenditures have affected their own community.

Materials for students

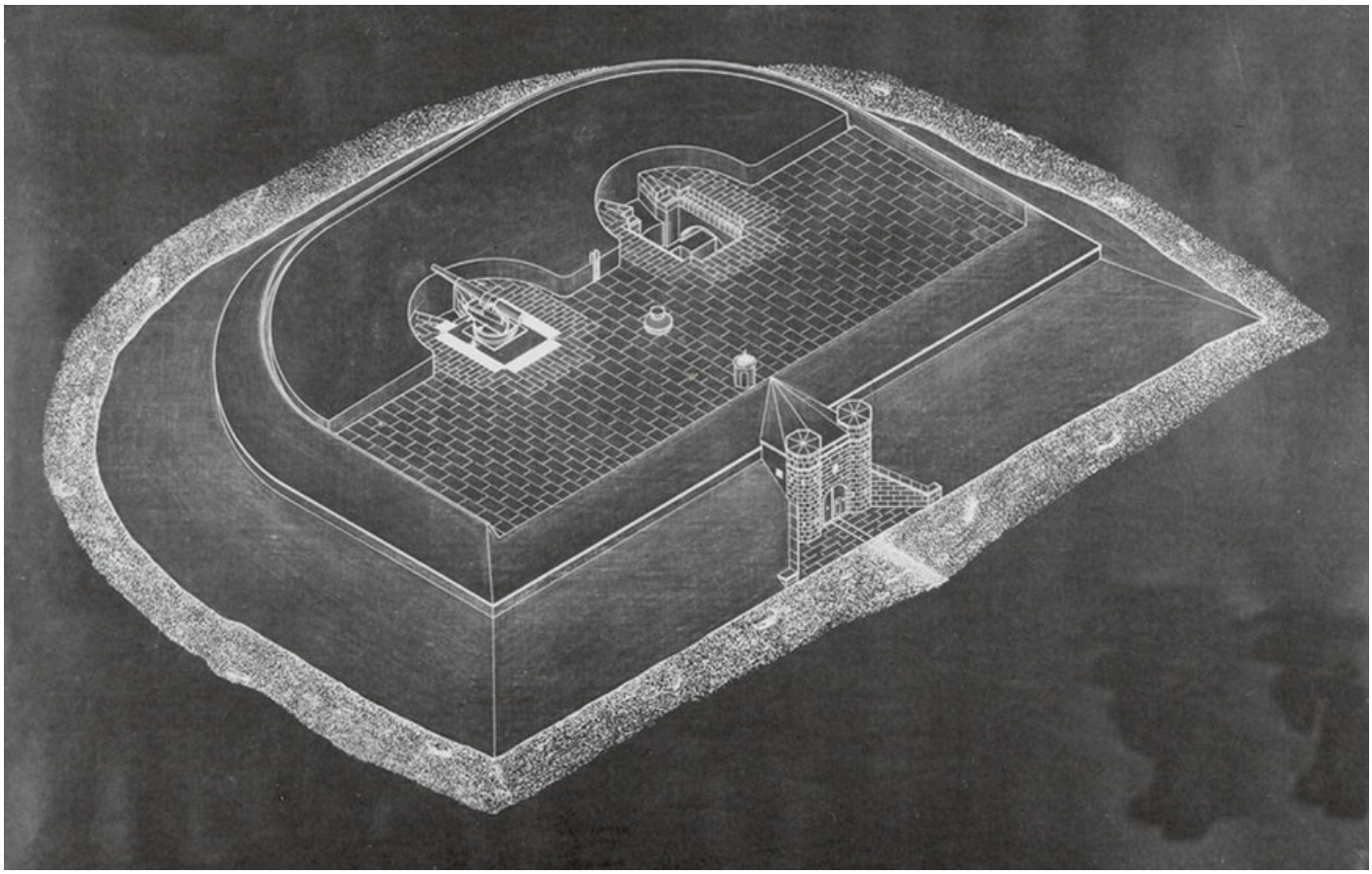
The materials listed below can either be used directly on the computer or can be printed out, photocopied, and distributed to students.

1. One map of New York Harbor and surrounding region;
2. Three readings on the history of the U.S. coastal defense system and the arguments over its maintenance;
3. One drawing of a battery at Fort Hancock;
4. Four photos of some of the weapons emplaced at Fort Hancock.

Visiting the site

Located on the Sandy Hook Unit of Gateway National Recreation Area in New Jersey, Fort Hancock can be reached by taking the Garden State Parkway to Exit 117 (or US Route 9 and NJ Route 35 south). Follow Route 36 east for 12 miles to Sandy Hook. The Spermaceti Cove Visitor Center is open from 10 a.m. to 5 p.m. daily. For information, contact the Superintendent, Gateway National Recreation Area, Sandy Hook Unit, P.O. Box 530, Fort Hancock, NJ 07732, or visit the park's Web site.

Getting Started



What purpose do you think this structure was built to serve?

Photo Analysis Worksheet

Step 1:
Examine the photograph for 10 seconds. How would you describe the photograph?

Step 2:
Divide the photograph into quadrants and study each section individually. What details--such as people, objects, activities--do you notice?

Step 3:
What other information--such as time period, location, season, reason photo was taken--can you gather from the photo?

Step 4:
How would you revise your first description of the photo using the information noted in Steps 2 and 3?

Step 5:
What questions do you have about the photograph? How might you find answers to these questions?

Setting the Stage

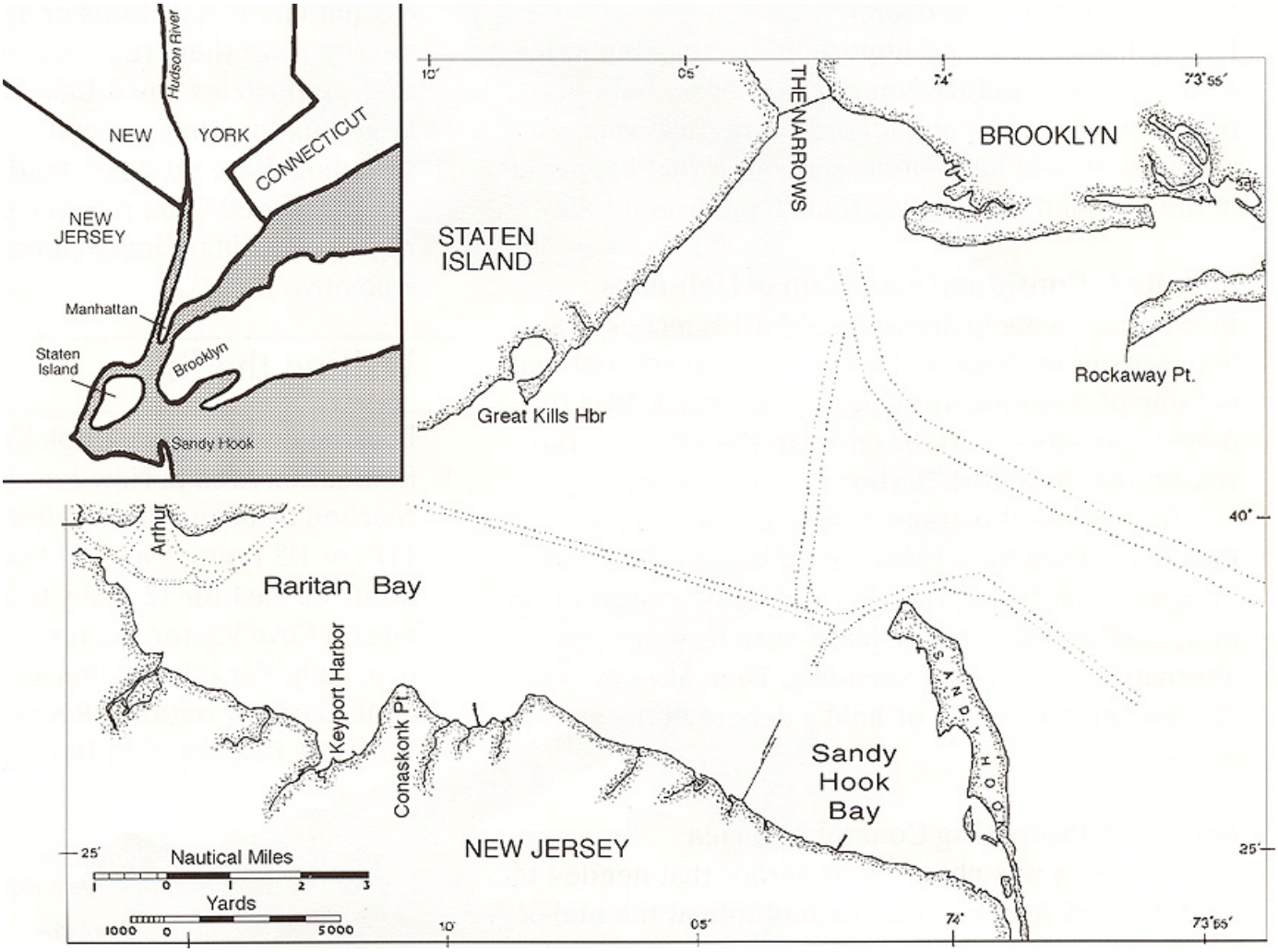
After the Civil War most Americans wanted to concentrate on domestic concerns. Economic issues dominated society, particularly those that involved the creation of an industrial juggernaut. During this period, the United States increasingly became a nation of industrial cities. Metropolitan areas exploded: between 1880 and 1900 Chicago's population tripled; over the same period New York's nearly doubled. In 1880 fewer than half of America's workers held jobs in agriculture. Perhaps the best way to illustrate the country's development is to point out that by 1890 the value of manufactured goods produced in the U.S. exceeded the combined total of those made in England, France, and Germany.

For the most part, the federal government devoted little time or money to defense and foreign policy issues. During the 1880s the State Department had only 60 employees; spending in 1879 on the Army and Navy Departments was half its level of 10 years earlier. A small group, however, did look outward. Some focused on the Caribbean and Latin America, arguing for a stronger navy to enforce the Monroe Doctrine and even supporting further acquisition of territory. Others concentrated on the European nations, noting their race for colonies in Africa and Asia and the rapid buildup of their navies.

National and international affairs did occasionally overlap. Some businessmen and politicians argued that a stronger military could help the country in at least two ways. A more powerful navy could protect vessels trading U.S. goods overseas, and a stronger system of coastal defenses could safeguard the economic resources in major American cities such as New York. These positions were by no means shared by all, however.

Locating the Site

Map 1: Lower New York Harbor and a portion of the eastern seaboard [inset]



(National Park Service)

The dotted lines on the map of New York Harbor represent the channels that large ships used to enter the harbor.

Questions for Map 1

1) Where might you place a military installation to protect New York City? Why?

Determining the Facts

Reading 1: Defending America's Coastline

Military men have long recognized the value of the Sandy Hook peninsula at the southern entrance to New York Harbor. Early in the Revolutionary War the British captured the peninsula and built defenses around its lighthouse. In the summer of 1778, after an inconclusive battle in New Jersey, the British army retired to Sandy Hook. From there, the Royal Navy shuttled troops across the bay to New York City, which the British also controlled.

During the War of 1812 it was the U.S. military that occupied the peninsula. In order to protect their navy, which lay in Sandy Hook and Raritan Bays, the American army built fortifications and emplaced cannon. Together these forces prevented the British from using the harbors in another attempt to occupy New York City. When the war ended, the troops left and the temporary defenses deteriorated.

In the 1840s the United States pushed westward, particularly toward Mexican territory. Although most people in the East supported these efforts, they feared that the military's emphasis on the West would leave their coast vulnerable to European attacks. As a result, the public pressured the federal government to ensure that the Atlantic ports were well protected. As part of this program, in the 1850s a large granite-wall structure known as the "Fort at Sandy Hook" was erected at the peninsula's northern end. Its thick walls and tiers of cannon illustrated key elements of modern design.

The Civil War, however, revealed the limitations of forts like Sandy Hook. More powerful cannon and exploding shells could breach walls that had recently been considered impenetrable. Maritime engineers found that iron armor added to the sides of warships such as the *Monitor* and the *Merrimack* provided them with significant protection from the shells most forts, including Sandy Hook, fired.

For the two decades following 1865, the U.S. concentrated on economic growth, not military preparedness. The government spent little on defense during this period, relying instead on many of the methods it had used before the war. Starting in 1817 the U.S. and Canada had agreed to sharply limit the number of warships each nation could have in the Great Lakes, and over time the border became demilitarized. Mexico continued to suffer from internal conflicts, limiting any threat from the south. Most importantly, the U.S. relied on the thousands of miles of the Atlantic Ocean to protect itself from European nations.

By the 1880s, however, some Americans had grown increasingly worried that the European attack they had long feared could happen at any time. The danger had increased, these men argued, for several reasons. European nations such as England and France had become increasingly expansionist, claiming colonies throughout the world. To carry out their policy they were building many technologically-advanced warships that featured steam power, improved armor that protected them from Civil War-era weapons, and new guns that could shatter the masonry walls of American forts. The American navy would provide little resistance in case of attack. Although the U.S. had developed some of the earliest ironclad ships during the Civil War, 20 years later the country's small navy was made entirely from wood. As a result, a Congressman from Michigan argued, "You might as well try to stop a mad rhinoceros by firing green peas out of an old-fashioned pop-gun as to try to stop a modern warship from sailing into any harbor in the United States."[1]

Economic changes in America provided reason for increased concern. Since the 1840s major cities had developed thousands of new factories and more elaborate port facilities to ship goods around the country and the world. According to New York Senator Samuel J. Tilden, "the property exposed to

destruction in the twelve seaports—Portland [Maine], Portsmouth, Boston, Newport, New York, Philadelphia, Baltimore, Charleston, Savannah, New Orleans, Galveston, and San Francisco—cannot be less in value than $5,000,000,000."[2] Whether or not Tilden's figures were accurate, the cities he named did contain an enormous amount of valuable property.

In 1885 President Grover Cleveland responded to these fears by appointing a committee to recommend new policies for coastal defense. Led by Secretary of War William C. Endicott, this nine-man board included seven military men and two politicians. Over the next six months they studied existing U.S. technology and that of European nations, concentrating particularly on the latest artillery weapons. New guns from England and Germany produced 20 times as much force as the cannon of the Civil War era, but no American factory could manufacture them.

In January 1886 the board issued their recommendations. Generally known as the "Endicott Report" after the chairman, it emphasized how the Europeans had leapt far ahead of the Americans in military technology and the commitment necessary for a strong defense. The U.S. needed, the report said, to build or strengthen forts in 27 locations. The need was most urgent in New York, but the first 11 on their list all required immediate attention.[3] The new system would include long-range guns and mortars mounted in concrete bunkers; floating gun batteries; torpedo boats; minefields; and rapid-fire guns to protect the minefields.

Such a program would not come cheaply. The Endicott report estimated the Army, which would man the forts, would have to spend over $126 million on this program. It suggested an initial appropriation of $21 million and annual supplements of $9 million until completion. This was an enormous amount for the time: in 1887 the entire federal budget was only $268 million, and the War Department as a whole that year received $38 million. For further perspective, around this time the average worker made about one dollar for a 10-hour day. The Endicott report then went to Congress, which would have to fund its recommendations. The subsequent debate over this spending revealed a great deal about American attitudes toward defense and the rest of the world.

Questions for Reading 1

1) Why did military leaders in the Revolutionary War and the War of 1812 want to control Sandy Hook?

2) Why did Americans want better coastal defenses before the Civil War? What were their reasons after 1865?

3) What did the Endicott Board recommend?

4) Why did the membership of the board make it likely they would favor large expenditures on defense? Did their backgrounds make the nine men better or worse choices to be on the committee? Why?

Determining the Facts

Reading 2: Reaction to the Endicott Board Recommendations

Alabama Congressman William H. Forney, chairman of the House Appropriations Committee, argued:

The [Endicott] board have recommended that an appropriation of twenty-one and a half million dollars should be made this year....The majority of the Committee on Appropriations did not deem it practicable to enter upon this great work at this time, and they have therefore presented the bill...which merely appropriates $670,000....I, for one, Mr. Chairman, do not think it is necessary at this time to enter upon the extensive works recommended by the board. We are at peace with all the world. Our relations with foreign governments are amicable, and at this time it does not seem likely that we shall get into difficulty at an early day....There are over two thousand guns of large caliber, ranging from 8 to 20 inches, and as we have those guns, as our country is at peace with the world, and as we have the fortification which the board testify were so efficient in former years, the majority of the committee think it is not necessary for us to enter at this time upon the immense work which the board recommend.

Ohio Congressman Benjamin Butterworth, one of the leading advocates of increased appropriations, countered:

I have said that the old fortifications, as shown by competent evidence, are not only absolutely worthless they are worse than useless. And why? Because...they seem to serve as an excuse for men pretending to be economists to say to the people of this country away inland and at other places that we already have our seacoast lined with fortifications now, and thus the otherwise suspicious and impatient public are lulled into a false sense of security....Suppose war should come tomorrow, and the experience of the world teaches that this supposition is not violent, are we prepared to offer as ramparts against the enemies' shot and shell the bodies of our children? Either we will gird our lines with ramparts of steel and iron or we must offer to the enemies' shot and shell the bodies of our citizen soldiers; one or the other must be furnished to resist the assault-iron and steel or flesh and blood.

Butterworth then quoted from the section of Senator Tilden's letter which followed the claim that $5 billion in property stood exposed in America's largest harbors.

They are the centers not only of foreign commerce but of most of the internal trade and exchanges of domestic productions....The interruption of the currents of traffic by the occupation of one or more of our principal seaports by a foreign enemy or the destruction of them by bombardment or the holding over them the menace of destruction for the purposes of exacting contribution or ransom would inflict upon the property and business of the country an injury which can neither be foreseen nor measured.

Questions for Reading 2

1) What reasons did Congressman Forney give for opposing the appropriation of $21 million?

2) What did Forney mean when he said this level of spending was not "practicable"?

3) What reasons did Congressman Butterworth give for supporting the appropriation of $21 million?

4) Later in his speech, Congressman Butterworth asked not for $21 million, but only for $3 million. Considering how worried he was, why might he have lowered his request?

Determining the Facts

Reading 3: Sandy Hook after the Endicott Report

Little new construction occurred during the five years following the publication of the Endicott Report. In 1886, the year Forney and Butterworth debated, the House and Senate could not even agree on an appropriation, so no money was spent. Before 1890 the government annually allocated roughly $400,000, or one percent of the War Department's budget, for coastal defense. In addition, some special funds provided several million dollars to develop the technology necessary to make large caliber weapons in the United States.

Spending started to rise in the 1890s. Although funding never reached the levels the Endicott report recommended, it tripled from the previous decade. By 1905, for example, coastal forts had received nearly 700 new guns. This figure was only half the 1,300 originally proposed, but that target was not met, at least in part, because new methods required fewer weapons to achieve the same result.

Under this program Sandy Hook rapidly expanded. In 1891 the Army declared the granite fort from the 1850s obsolete and began building new concrete defenses. Construction of new gun batteries began soon after, and by 1899 a large section of the main post was completed. The new base at Sandy Hook—now called Fort Hancock, in honor of Civil War General Winfield Scott Hancock—gradually developed into the most important of the complexes guarding the approaches to New York Harbor.

The fort employed a range of weapons to defend itself and the city. An underwater minefield provided the initial protection for the channels going into New York Harbor. The original mines, laid out in groups adjacent to the two channels leading into the harbor, exploded upon contact with a ship. Later, the troops on Sandy Hook used electronics so they could detonate the mines remotely.

One of the first weapons the Army built at Fort Hancock was a battery, or set of guns. Several characteristics made Battery Potter—also named after a Civil War officer—different from previous U.S. weapons. First, for protection from enemy attack it was located in a bunker made from thick concrete rather than stone. Second, a large earthen mound hid the battery from the view of ships in the Atlantic. Third, its two 12-inch rifles fired 1,000-pound shells powerful enough to break through the thinly-armored decks of most warships of the time, the majority of which would sink if such a shell exploded inside them. Finally, Battery Potter's guns were the first weapons in the United States that rode a steam-powered hydraulic lift. These elevators raised each gun independently to the firing position, then lowered it again into the bunker so it could be reloaded. Because attackers could not see these weapons when they were being reloaded, they became known as "disappearing guns." These disappearing guns required large bunkers to house the boilers, coal storage, and other equipment for the steam-powered elevators.

Starting in 1896, two years after the construction of Battery Potter, the Army developed a better type of disappearing gun. These first appeared in Battery Granger, which was also designed to fire on enemy ships approaching New York Harbor. In this case, however, the guns had a counterweighted carriage which used the energy of the recoil to drop the weapon below a wall for reloading. Since batteries like Granger did not need a large steam engine and elevators to move the guns, they could be much smaller. They therefore were cheaper to build and easier to hide from approaching ships.

Fort Hancock also was fitted with smaller caliber, rapid-fire guns. These weapons were developed because of a change in naval tactics. By the late 19th century, most modern navies had destroyers, minesweepers, and torpedo boats—small fast gunboats with the ability to dodge most artillery fire. Because they did not extend very far below the waterline, these gunboats were not limited to using the

deep channels of a harbor; they could enter shallow areas during an attack. To counter that advantage, the U.S. Army set up a number of 3-, 5-, and 6-inch gun batteries that could be aimed and loaded rapidly and could fire up to 15 rounds per minute.

Together these systems defended New York Harbor. Those who had supported the modernization of places such as Fort Hancock argued that their importance extended past the reach of their weapons. In 1908 President Theodore Roosevelt proclaimed:

> Let the port [New York] be protected by the [Army's] fortifications; the fleet must be foot-loose to search out and destroy the enemy's fleets; that is the function of the fleet; that is the only function that can justify the fleet's existence....For the protection of our coasts we need fortifications; not merely to protect the salient points of our possessions, but we need them so that the Navy can be foot-loose.[1]

Not everyone shared Roosevelt's enthusiasm. The Army soon found that despite spending hundreds of thousands of dollars on buildings and hundreds of thousands more on weapons, parts of Fort Hancock had grown obsolete. By 1905 Battery Potter, for example, had been taken out of service because it was slow to reload and expensive to maintain. Some other new guns had been replaced even earlier, since builders quickly created heavier armor that protected ships from the originals' shells. By 1915 Army engineers decided the fort itself was out of date, and so began new construction.

This pattern continued for the next 50 years. Though gun batteries became more powerful, new methods of amphibious warfare made them ineffective and so the Army dismantled them. The introduction of missiles left many of Fort Hancock's weapons defenseless. During the 1950s Sandy Hook became one of many sites where the military installed NIKE surface-to-air missiles to protect the U.S. from planes the Soviet Union might send to attack. But the NIKE system, too, gradually became obsolete and was replaced. Finally, in 1974 the Army decommissioned the base entirely, and Fort Hancock became part of the National Park Service's Gateway National Recreation Area.

Questions for Reading 3

1) What were the weapons that helped defend New York Harbor?

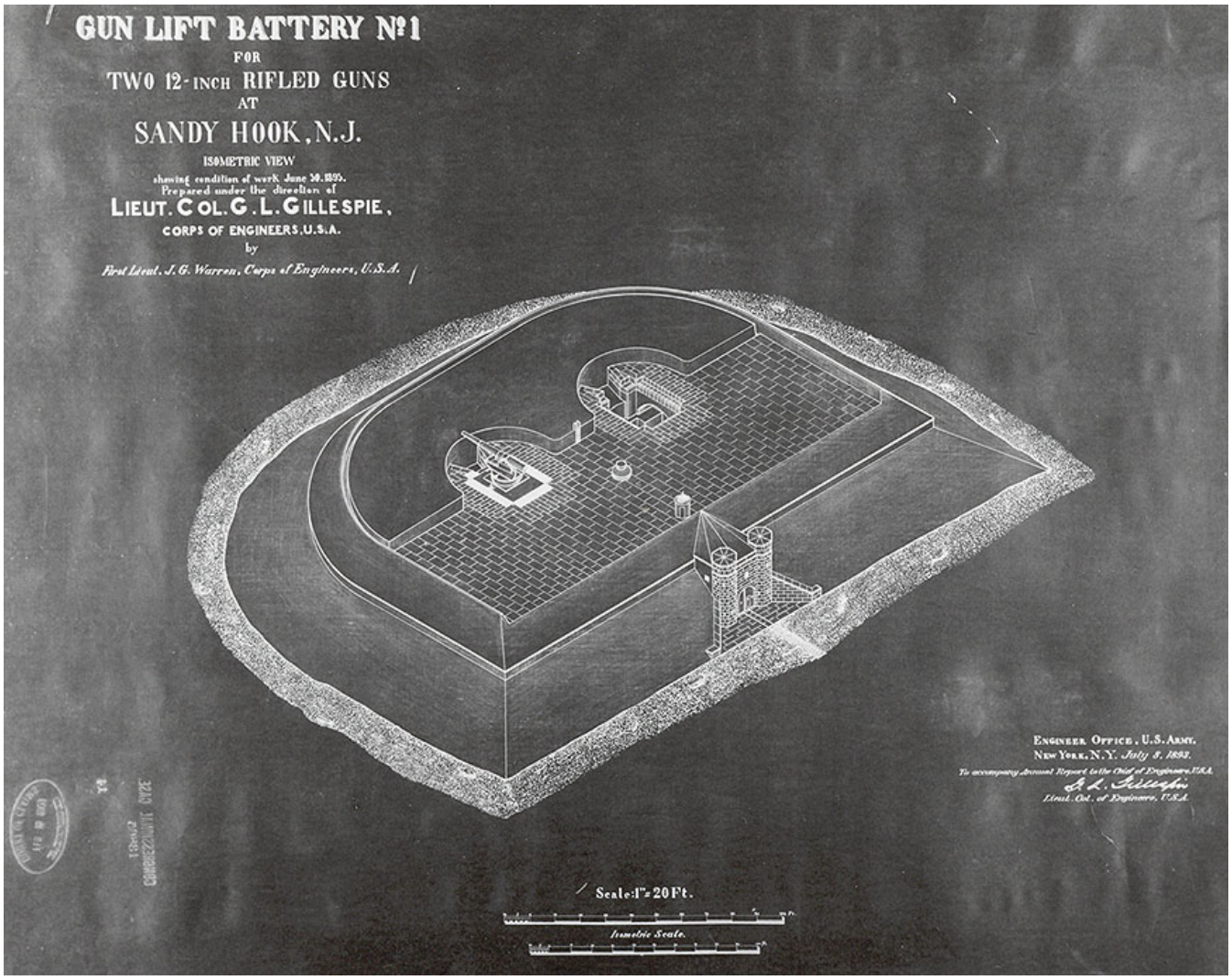
2) What are disappearing guns? Why were they considered an improvement?

3) How did army forts like the one on Sandy Hook help the U.S. Navy?

4) Why did weapons keep having to be replaced?

Visual Evidence

Drawing 1: Battery Potter, Fort Hancock



(Gateway National Recreation Area)

Drawing 1 depicts Battery Potter with one gun in the firing position and the other in the "disappeared" position.

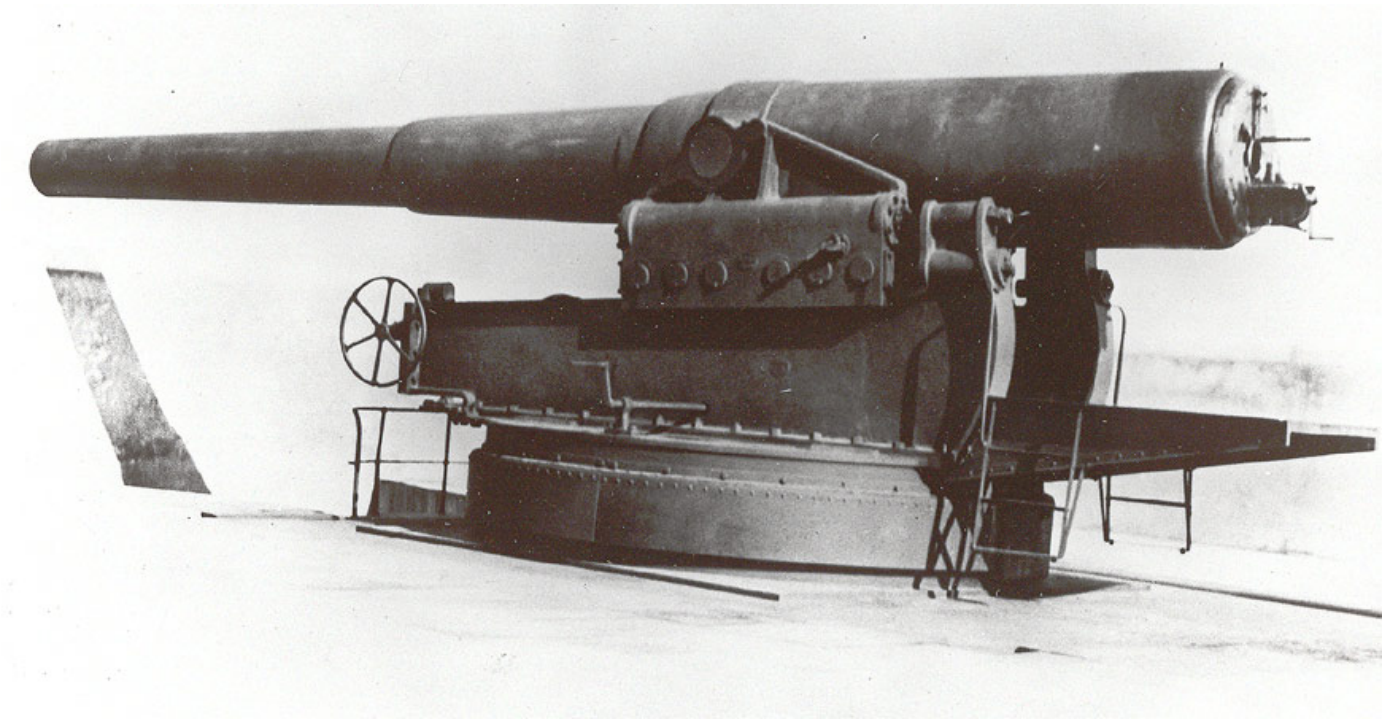
Questions for Drawing 1

1) What are your impressions of Battery Potter?

2) Why did the bunker have to be so large? (You may need to refer back to Reading 3).

Visual Evidence

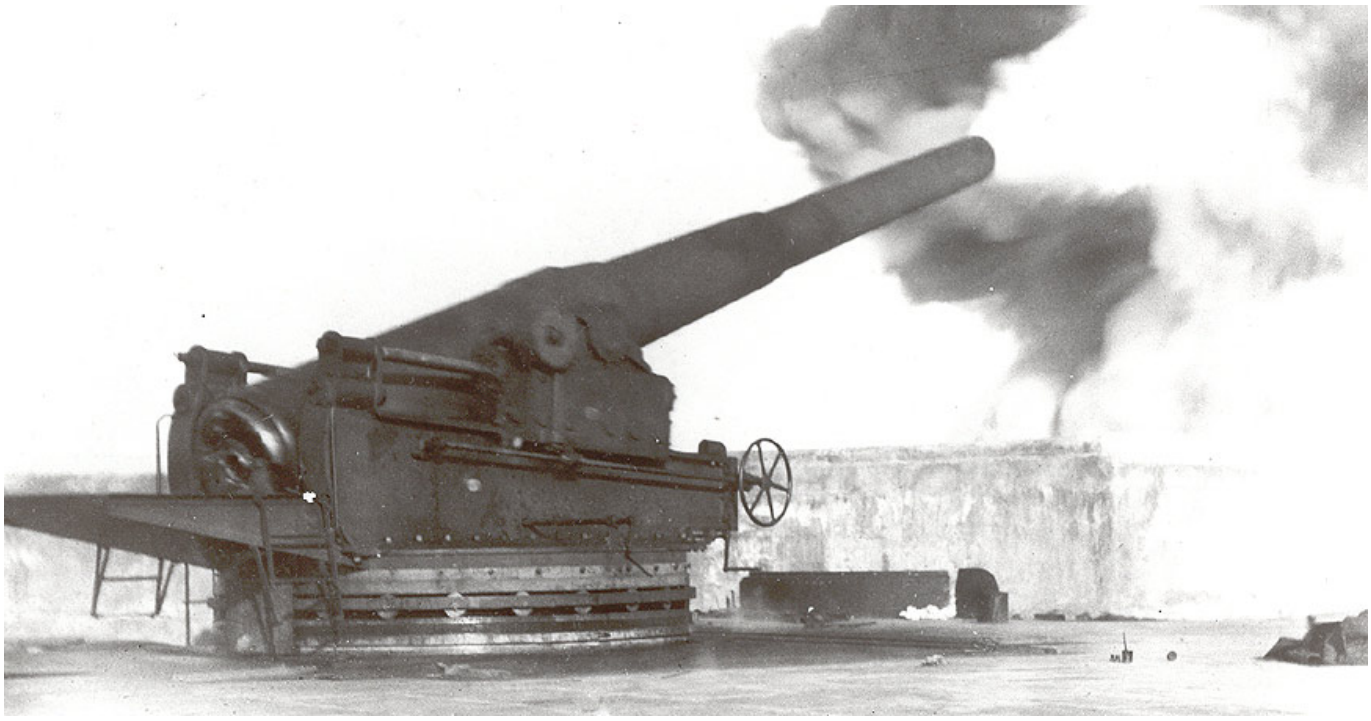
Photo 1: Gun at Battery Potter



(Gateway National Recreation Area)

Visual Evidence

Photo 2: Gun at Battery Potter



(George Moss Collection, Gateway National Recreation Area)

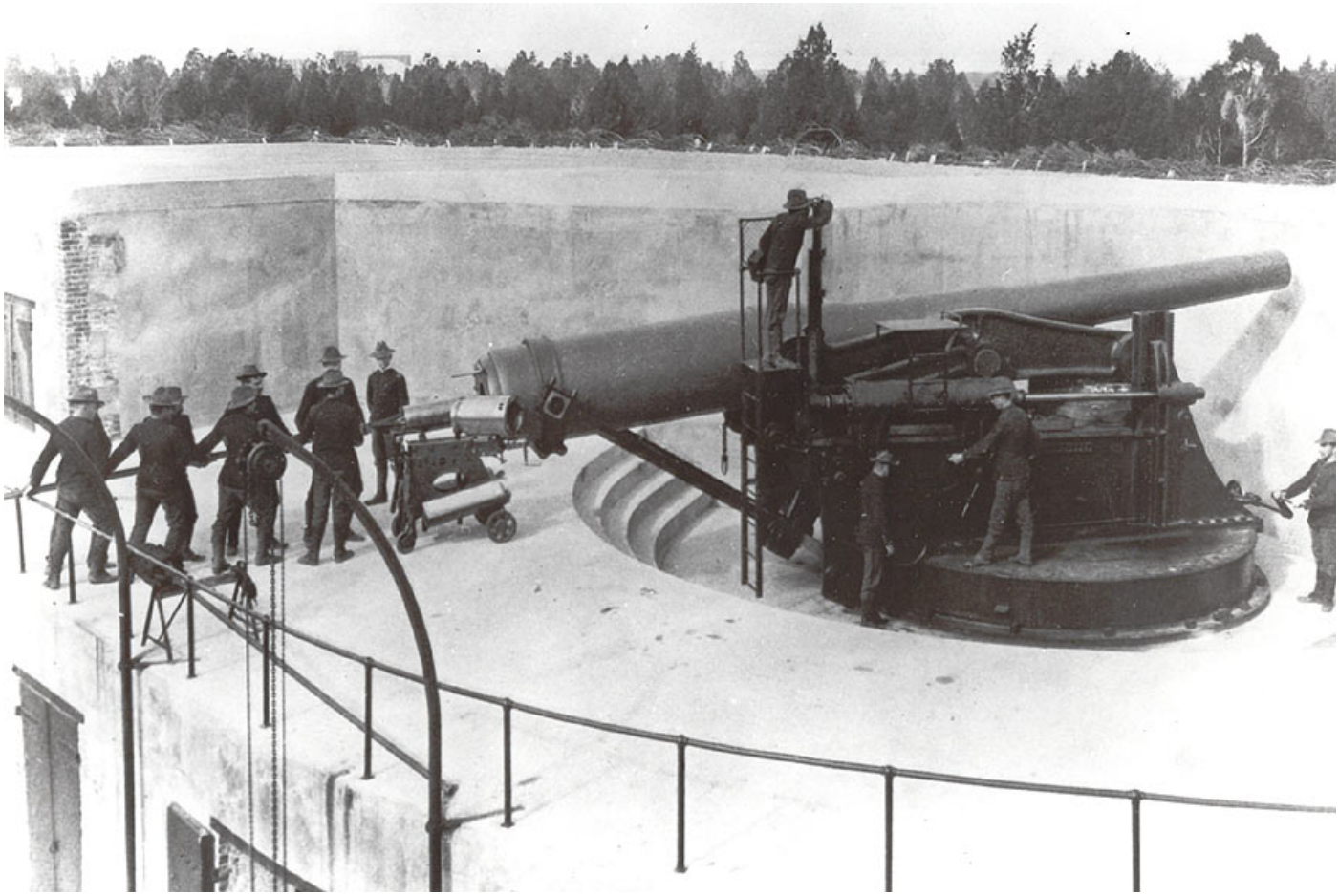
Questions for Photos 1 and 2

1) What are the differences between the positions of the guns in Photos 1 and 2?

2) The weapons at Fort Hancock were never fired in an attack. How do you explain what is happening in Photo 2?

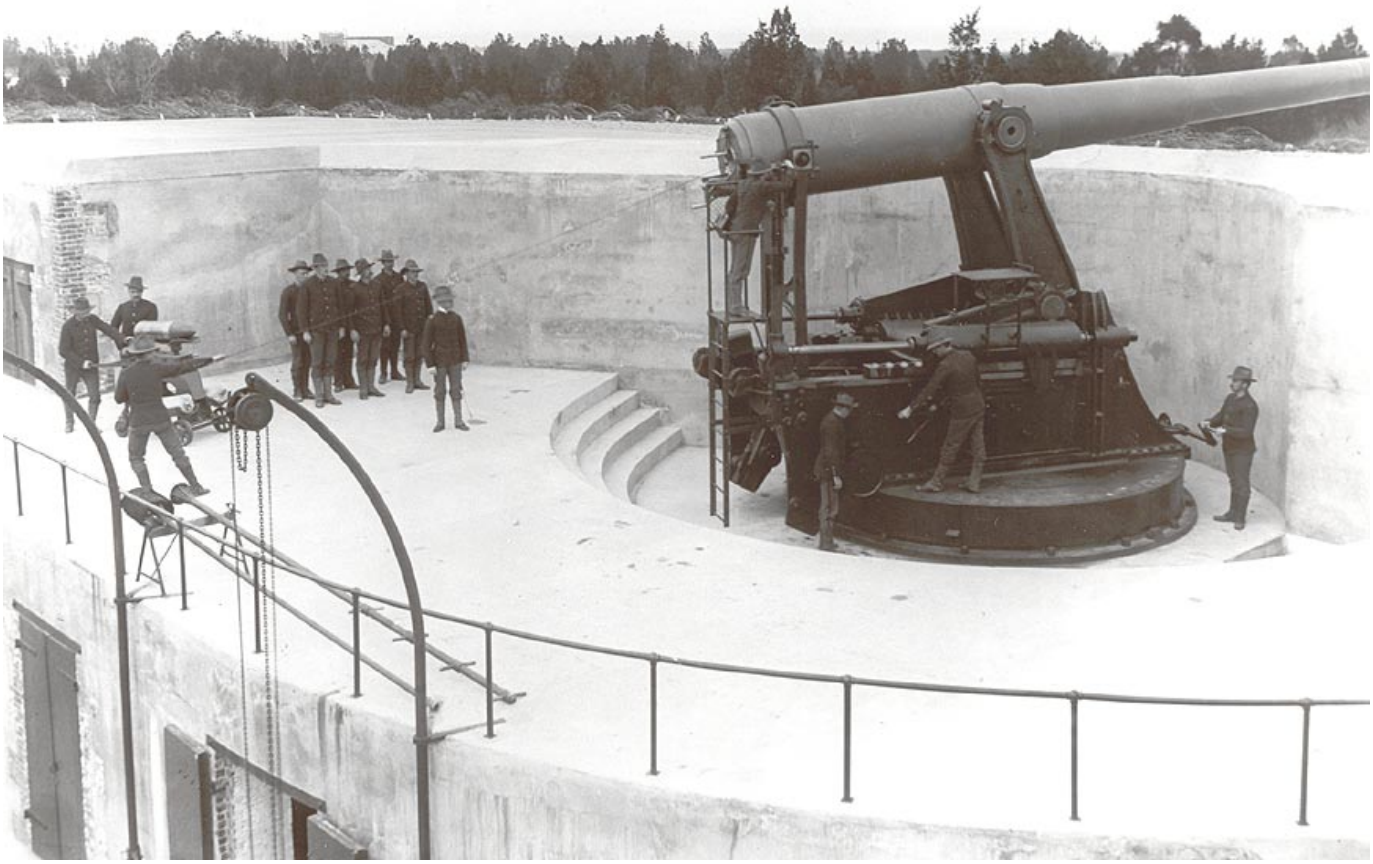
Visual Evidence

Photo 3: Gun at Battery Granger



(Gateway National Recreation Area)

Photo 4: Gun at Battery Granger



(Gateway National Recreation Area)

Questions for Photos 3 and 4

1) Compare the raised and lowered positions of the guns at Battery Granger with those at Battery Potter shown in Photos 1 and 2. How did the two systems differ?

2) What do you think the men in Photo 3 are doing? What do you think the men in Photo 4 are doing?

3) When might these photos have been taken? On what do you base your answer?

Putting It All Together

Fort Hancock reflected important developments in 19th- and 20th-century American defense. The following activities should help emphasize both what happened in the past and what topics remain important today.

Activity 1: Continued Evolution of Defenses

In total the weapons installed at Fort Hancock cost hundreds of millions of dollars. Yet in nearly 100 years not one of them was fired against an attack. Was the money therefore wasted or were the weapons possibly the reason that New York Harbor remained safe?

To examine this issue, have students review Reading 2. Then have them decide which of the two Congressmen they agree with and write a short essay in which they explain why. Make sure they discuss alternatives to defense spending. Then have the class discuss their answers, or hold a debate between the two sides.

Activity 2: Protecting Coastal America

New York City was not the only harbor that needed to be defended. As the list in the footnote at the end of Reading 1 points out, the Endicott Report believed 26 other ports needed better defenses. (If students don't recognize some of the places, point out that modern ships were heavier and needed deeper channels. Some 19th-century ports declined in importance because their harbors were too shallow.) Divide the class into teams of four or five, and have each group choose one of the 26 cities to defend. Each group should research the history of the port and draw up a plan, using the Endicott System of defense, which shows how they would have defended their city in 1900. Then ask each group to consider how they would have changed their plans for defense if they had been in charge in the 1950s. Have them keep in mind the use of surface-to-air missiles to protect cities from intercontinental bombers and, later, Intercontinental Ballistic Missiles, or ICBMs. Conclude the activity by holding a classroom discussion on the need to continually update the nation's defense systems.

Activity 3: Your Community – Defense and the Economy

Often a community or region finds its economy tied to a specific industry. In many areas the military significantly affects an area's economic health, either because of a base or because of weapons manufacture. Have the students research their own community (or region if necessary) to determine if there are any military installations or arms manufacturers nearby. Have them research what has happened to these industries since 1980, when there was first a large buildup, then a significant decrease, in military spending. Have students hold a debate on the following statement: "The reliance of a community or a region on military installations or defense factories is a positive thing."

References and Endnotes

Reading 1

Reading 1 was compiled from *Edwin C. Bearss, Historic Resource Study—The Sandy Hook Defenses, 1857-1948*, Gateway National Recreation Area, National Park Service, September 1983; Harry Butowsky, "Fort Hancock and the Sandy Hook Proving Ground Historic District" (Monmouth County, New Jersey) National Register of Historic Places Registration Form, Washington D.C.: U.S. Department of the Interior, National Park Service, 1982; U.S. Congress, House, Board on Fortifications or Other Defenses, 49th Cong, 1st sess., 1886; Edward Ranson, "The Endicott Board of 1885-86 and Coastal Defense," Military Affairs, vol. 31, no. 2 (Summer 1967), 74-84.

[1]Quoted in Robert S. Browning III, *Two If By Sea: The Development of American Coastal Defense Policy* (Westport, Conn.: Greenwood Press, 1983), 150-51.
[2]Quoted in the *Congressional Record*, volume 17, part 7, 49th Congress, 1st session (July 1886), 7100.
[3]According to the Endicott Report (page 8), these were the "Ports Arranged in Order of Urgency": 1) New York; 2) San Francisco; 3) Boston; 4) the Great Lake Ports; 5) Hampton Roads; 6) New Orleans; 7) Philadelphia; 8) Washington; 9) Baltimore; 10) Portland, Me.; 11) Narragansett Bay, R.I.; 12) Key West; 13) Charleston; 14) Mobile; 15) New London; 16) Savannah; 17) Galveston; 18) Portland, Ore.; 19) Pensacola; 20) Wilmington, N.C.; 21) San Diego; 22) Portsmouth; 23) Jacksonville; 24) mouth of the Kennebec River; 25) New Bedford; 26) mouth of Penobscot River; 27) New Haven.

Reading 2

Reading 2 was compiled from Congressional Record volume 17, part 7, 49th Congress, 1st session (July 1886), 7097-7100.

Reading 3

Reading 3 was compiled from Edwin C. Bearss, Historic Resource Study—The Sandy Hook Defenses, 1857-1948, Gateway National Recreation Area, National Park Service, September 1983; Harry Butowsky, "Fort Hancock and the Sandy Hook Proving Ground Historic District" (Monmouth County, New Jersey) National Register of Historic Places Registration Form, Washington, D.C.: U.S. Department of the Interior, National Park Service, 1982; Russell S. Gilmore, Guarding America's Front Door (Fort Hamilton Historical Society, 1983); Emanual Raymond Lewis, Seacoast Fortifications of the United States, an Introductory History (Annapolis, Md.: Naval Institute Press, 1993); and Russell Weigley, The American Way of War (Bloomington, Ind.: Indiana University Press, 1973).

[1] As quoted in Emanual Raymond Lewis, Seacoast Fortifications of the United States, An Introductory History (Annapolis, Md.: Naval Institute Press, 1993), 99.

Additional Resources

By looking at *Fort Hancock: A Bastion of America's Eastern Seaboard,* students explore the development of this coastal defense system. Those interested in learning more will find that the Internet offers a variety of interesting materials.

Gateway National Recreation Area

Visit Gateway National Recreation Area's Web pages for general information on visiting the park.

Maritime Heritage Program

The National Park Service's Maritime Heritage Program works to advance awareness and understanding of the role of maritime affairs in the history of the United States by helping to interpret and preserve our maritime heritage. The program's web pages include information on National Park Service maritime parks, historic ships, lighthouses, and life saving stations. Of particular interest is information on the Sandy Hook Light, the oldest standing light tower in the United States.

National Archives and Records Administration (NARA)

Search the NARA website for a variety of primary sources, including photos of bunkers, guns, and officer's quarters, using keywords such as "Fort Hancock" and "Sandy Hook."

Library of Congress

Search the digital collections using keywords "Sandy Hook" and "Fort Hancock." Primary resources available on-line include photographs, HABS/HAER documentation, periodicals, and Congressional records.

GUN LIFT BATTERY Nº 1

FOR

TWO 12-INCH RIFLED GUNS

AT

SANDY HOOK, N.J.

ISOMETRIC VIEW

showing condition of work June 30. 1895.

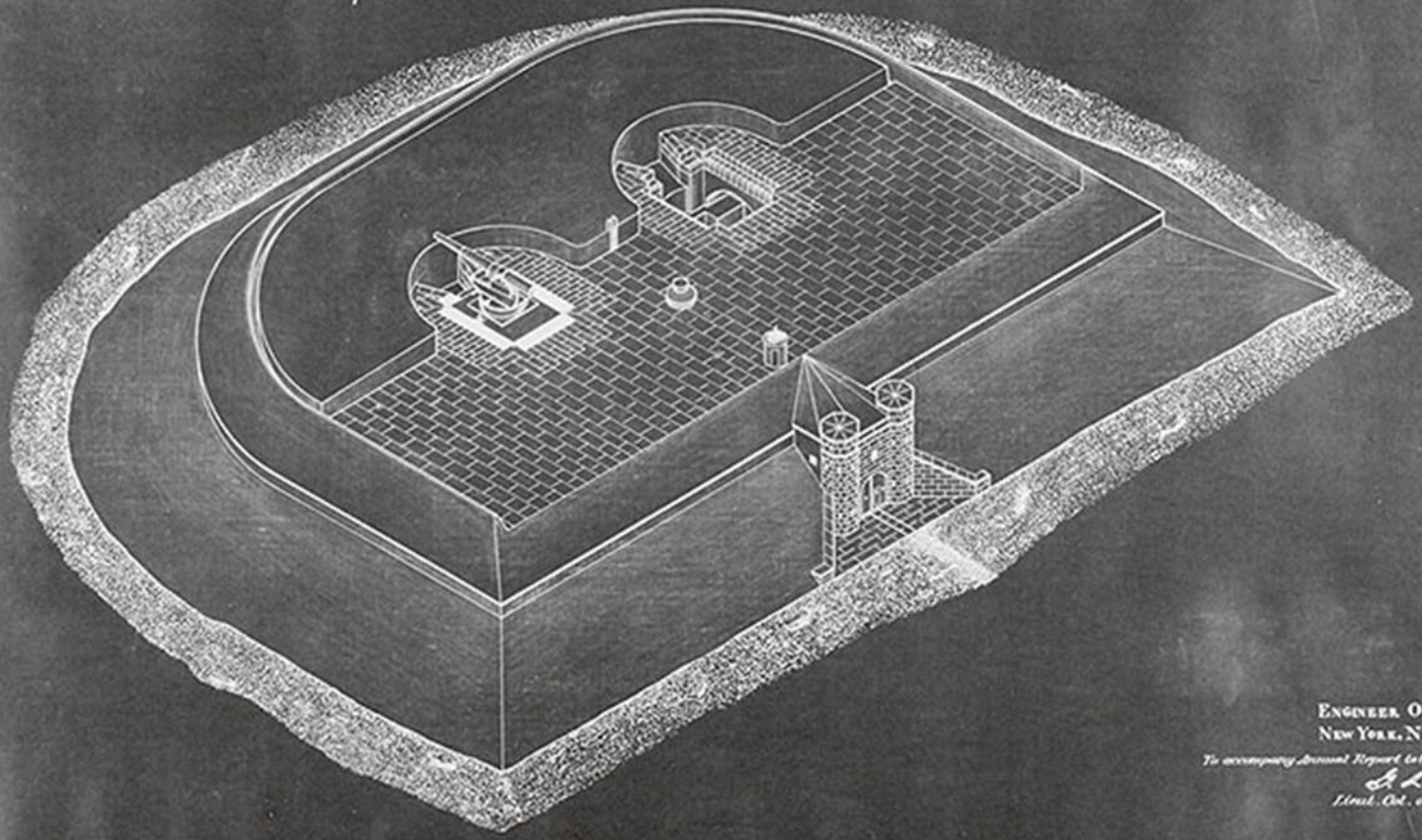
Prepared under the direction of

LIEUT. COL. G. L. GILLESPIE,

CORPS OF ENGINEERS, U.S.A.

by

First Lieut. J. G. Warren, Corps of Engineers, U.S.A.



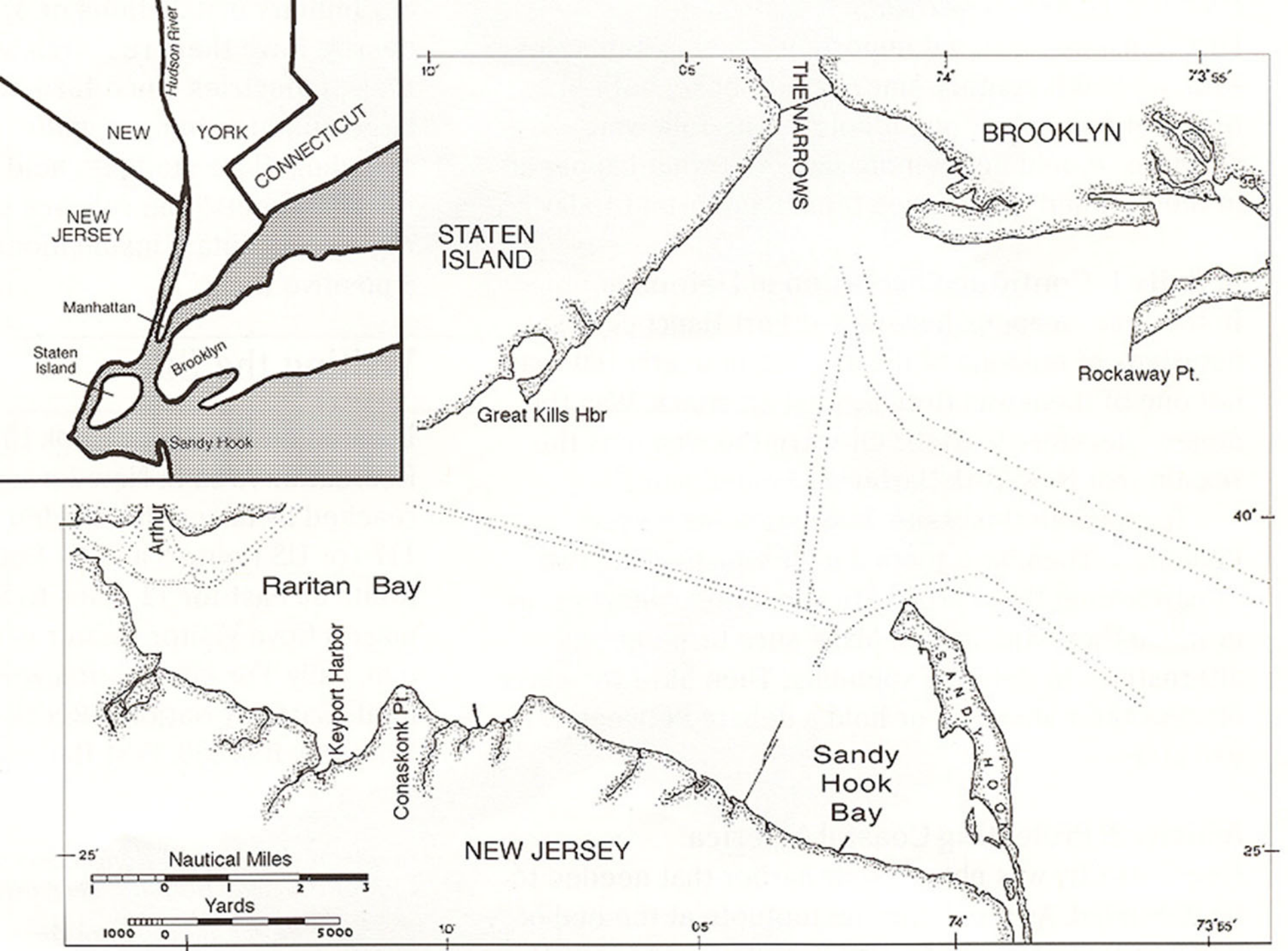
ENGINEER OFFICE, U.S. ARMY.
NEW YORK, N.Y. *July 8, 1895.*

To accompany Annual Report to the Chief of Engineers, U.S.A.

G. L. Gillespie
Lieut. Col. of Engineers, U.S.A.

Scale: 1" = 20 Ft.

Isometric Scale.


Hudson River
NEW
YORK
CONNECTICUT
NEW
JERSEY
Manhattan
Staten
Island
Brooklyn
Sandy Hook
10'
05'
74'
73°55'
THE NARROWS
BROOKLYN
STATEN
ISLAND
Rockaway Pt.
Great Kills Hbr
40°
Arthur
Raritan Bay
Keyport Harbor
Conaskonk Pt.
SANDY HOOK
Sandy
Hook
Bay
NEW JERSEY
25'
Nautical Miles
1 0 1 2 3
Yards
1000 0 5000