Proposed Planning Study for the Preservation and Interpretation of Battery Blair

Renner | Woodworth

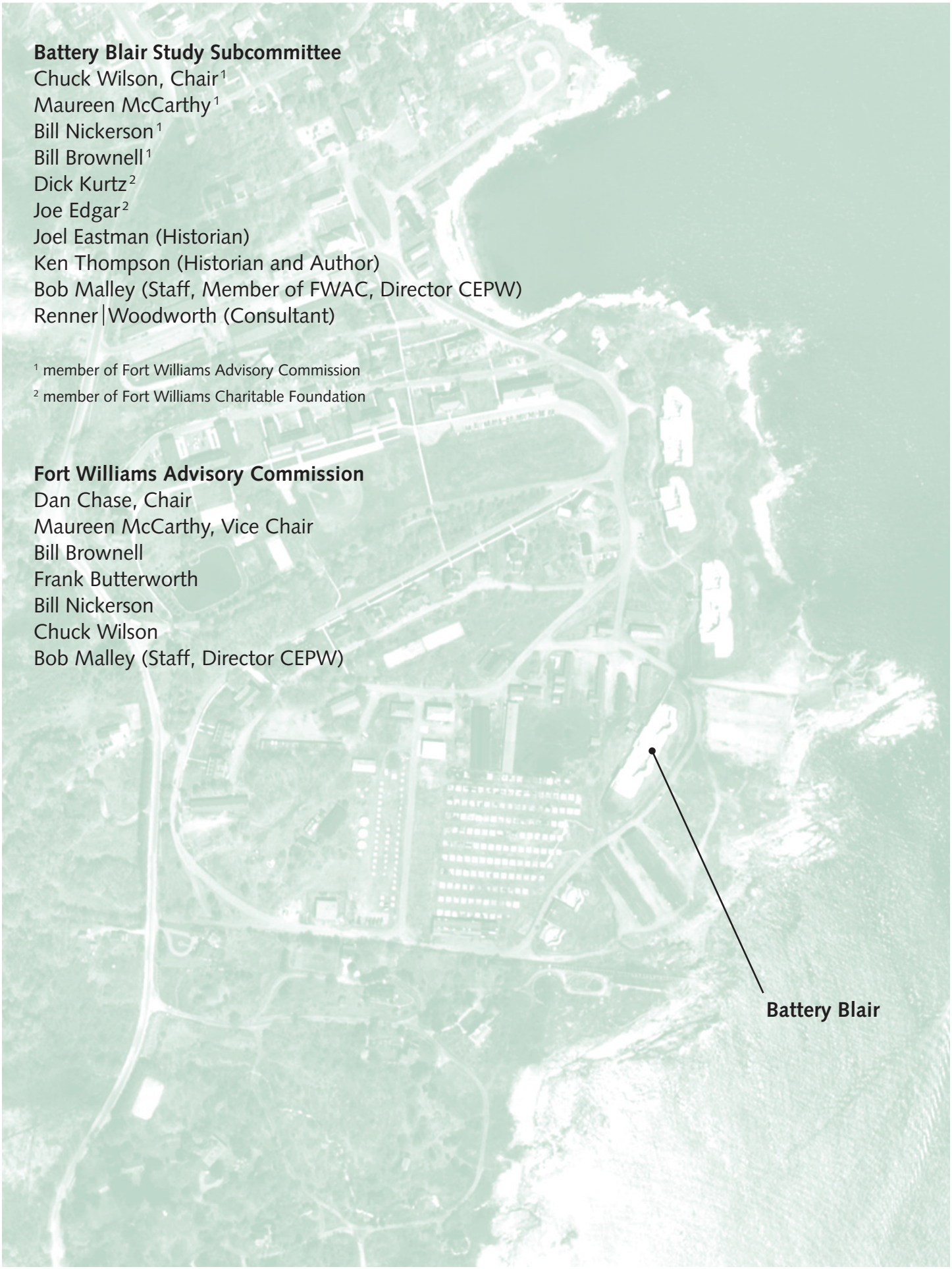
Fort Williams Advisory Commission
Battery Blair
Fort Williams Park
Cape Elizabeth, Maine
September 8, 2009

Battery Blair Study Subcommittee
Chuck Wilson, Chair[1]
Maureen McCarthy[1]
Bill Nickerson[1]
Bill Brownell[1]
Dick Kurtz[2]
Joe Edgar[2]
Joel Eastman (Historian)
Ken Thompson (Historian and Author)
Bob Malley (Staff, Member of FWAC, Director CEPW)
Renner | Woodworth (Consultant)

[1] member of Fort Williams Advisory Commission

[2] member of Fort Williams Charitable Foundation

Fort Williams Advisory Commission
Dan Chase, Chair
Maureen McCarthy, Vice Chair
Bill Brownell
Frank Butterworth
Bill Nickerson
Chuck Wilson
Bob Malley (Staff, Director CEPW)



Fort Williams, circa 1945 Courtesy Kenneth E. Thompson Jr.

Battery Blair Mission Statement

We propose to uncover, restore, and interpret Battery Blair, creating a "window" through which visitors can view and understand the long and rich history of the Battery and Fort Williams. The restored Battery and its new exhibits will complement the existing Portland Head Light Museum, which focuses on the lighthouse, the fort, and the maritime history of the region.

Battery Blair is one of a series of well-preserved historic coastal defense batteries located in Cape Elizabeth's Fort Williams Park. Completed in 1903, Battery Blair was equipped with two 12-inch guns on disappearing carriages; the guns fired 975-pound projectiles up to ten miles. Battery Blair was an integral part of a complex coastal defense network that protected the strategically important Casco Bay and Portland Harbor. Cape Elizabeth purchased the surplus fort from the General Services Administration in 1964, and in 1975, the large gun batteries were buried, creating the rolling shorefront topography that we see today. Part of the upper level of Battery Blair was left exposed, and in 1999, interpretive signage was installed.

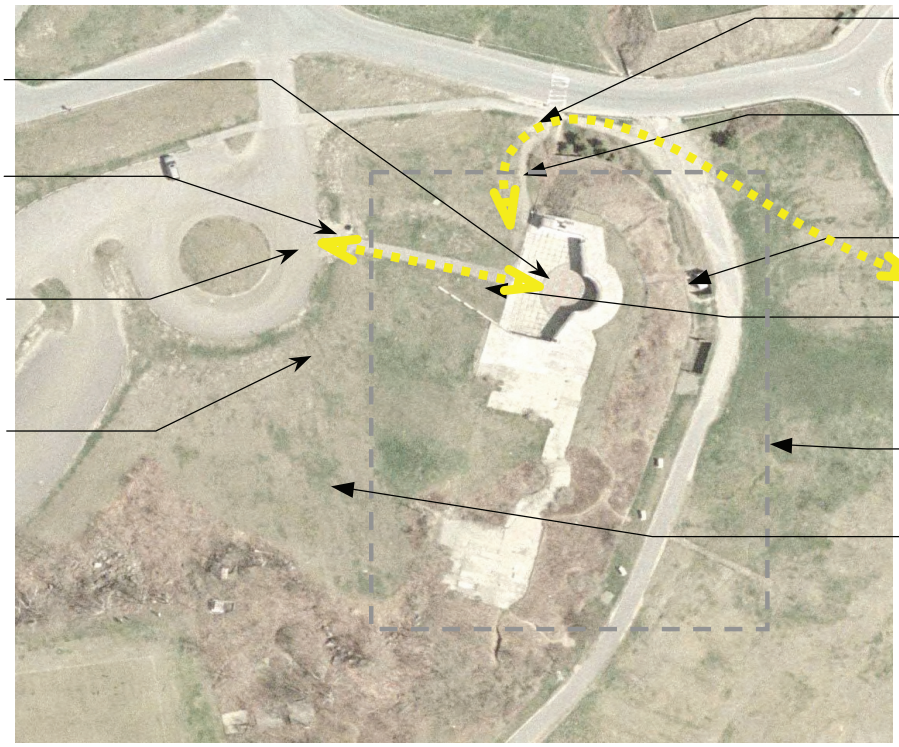
The current partial exposure of one gun emplacement at Battery Blair does not reveal the true scale, function, and majesty of the coastal defense installations at the fort. In fact, since few of the many original fort structures still exist, it is impossible to fully understand the historic scope of the fort and its important role in the military and political history of Maine, New England, and the United States.

We are seeking $36,600 for a detailed feasibility study, which is the critical first step toward a project which will reveal, recreate, and interpret historic functional areas in Battery Blair; discuss Battery Blair as part of the regional coastal defense system; locate, recover, and display artifacts from the Battery; interpret the relationship between Fort Williams and Cape Elizabeth; develop walking tours of the Battery and the fort; and provide public access on and in Battery Blair. (Please see the attached *Fort Williams: Battery Blair Planning Study, Estimate of Fees (page 3)*, for a detailed estimate of costs.)

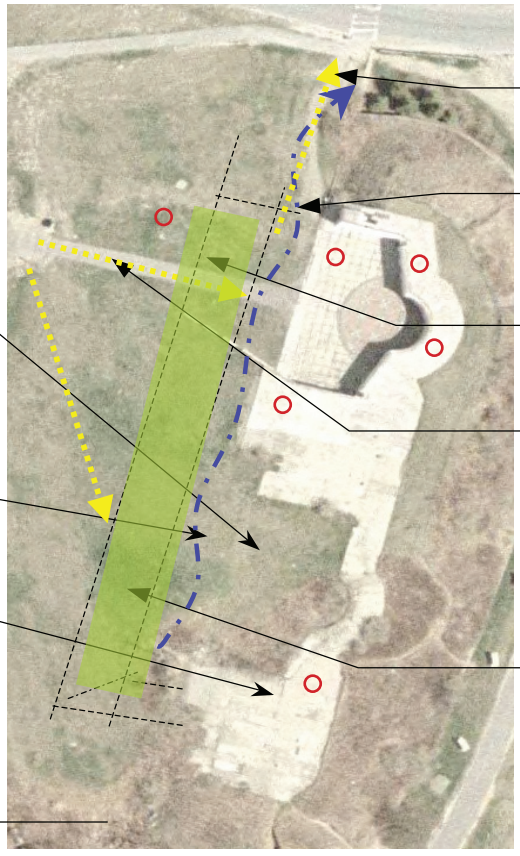
The feasibility study will accomplish the following:

1. Investigate and document the current condition of the Battery.
2. Research best preservation practices.
3. Determine the scope and cost of repairs and restoration.
4. Develop conceptual designs and determine the cost of related site improvements (drainage, access, utilities, etc.).
5. Develop and prioritize interpretive themes and stories and the range and cost of possible displays and exhibits.
6. Investigate the possibility of creating a replica of a disappearing gun.
7. Develop a phased, cost-effective budget and schedule for the project.
8. Explore possibilities for initial and long-term funding for both construction and operations.
9. Establish a process for documenting the project in conformance with the requirements of the *Historic American Engineering Record*.

Site Improvements Concept Plan



Battery Blair Environs



Battery Blair Detail

L 3.1	**Site Improvements Concept Plan** **Drawn by** **File Bleachers** **Scale NTS** **Project No 210800298** **Date 11.20.08** **Revised**	Fort Williams Battery Blair Shore Rd. Cape Elizabeth, Maine	**Consultants** Becker Engineering STANTEC	**Reiner Woodworth** **25 Pleasant Street** **Portland, Maine 04101** **207.773.9699** **207.773.9599 fax**

Planning Study Estimate

Fort Williams: Battery Blair Planning Study

Estimate of Fees

RennerlWoodworth

September 10, 2009

Hourly rate for principals: $ 135.00

Hourly rate for staff: $ 85.00

No.	Task	Remarks	RennerlWoodworth Principal Hrs	RennerlWoodworth Staff Hrs	Stantec Principal Hrs	Stantec Staff Hrs	Becker Structural Eng. Principal Hrs	Becker Structural Eng. Staff Hrs	Other Principal Hrs	Other Staff Hrs
	PART 1									
1	Assemble site information	Area near Battery-elevations, features, utilities, etc.	2.0		4.0	4.0				
2	Assemble/review fortification repair and restoration literature		3.0	2.0			2.0	1.0		
3	Assess access and safety issues	ADA, etc.	1.0		2.0					
4	Research other battery exhibits	Reprints, etc.; visits NIC	1.0	2.0						
5	Assemble overview of Battery history	Joel Eastman and Ken Thompson would do most of this; archive documents, sources, etc.; assemble a list of other locations with historic batteries.	1.5	0.5						
6	Develop list of possible interpretive themes and subjects	Joel Eastman, Ken Thompson, archives, Subcommittee, etc.	4.0		1.0					
		Estimated Fees	$ 1,688	$ 383	$ 945	$ 340	$ 270	$ 85	$ -	$ -
		Fee Subtotal	$ 3,710							
		Estimated Reimbursable Expenses (5% of fee)	$ 186							
		Part 1 Subtotal	$ 3,896							
	PART 2									
7	Additional investigation and analysis of structural condition	Core drill concrete, etc.					16.0	12.0		
8	Develop scope of Battery repair and restoration		2.0		4.0	4.0	12.0	12.0		
		Estimated Fees	$ 270	$ -	$ 540	$ 340	$ 3,780	$ 2,040	$ -	$ -
		Fee Subtotal	$ 6,970							
		Structural Testing Allowance	$ 5,000							
		Estimated Reimbursable Expenses (5% of fee)	$ 349							
		Part 2 Subtotal	$ 12,319							
	PART 3									
9	Develop list of possible interpretive themes and subjects	Joel Eastman, Ken Thompson, archives, Subcommittee, etc.	4.0		1.0					
10	Develop preliminary list of Battery Blair development options	Restoration, repair, architecture, interpretation, etc.; include possible phasing	4.0	3.0	4.0		2.0			
11	Review with Battery Blair Subcommittee	Review, expand, and refine list of options	4.0							
12	Revise Battery Blair options as required		2.0	1.0	1.0					
13	Develop scope of work for options		8.0		4.0					
14	Estimate cost of options		8.0	1.5	4.0	1.0	4.0	6.0		
15	Review with Battery Blair Subcommittee		4.0		3.0		3.0			
16	Revise as required		4.0	1.0	2.0	1.0				
17	Present to Commission		4.0							
18	Prepare final report		8.0	10.0	2.0	4.0				
19	Review with Battery Blair Subcommittee		4.0							
20	Project management		6.0		2.0					
		Estimated Fees	$ 8,100	$ 1,403	$ 3,105	$ 510	$ 1,215	$ 510	$ -	$ -
		Fee Subtotal	$ 14,843							
		Estimated Reimbursable Expenses (5% of fee)	$ 742							
		Part 3 Subtotal	$ 15,585							
		Parts 1, 2, and 3 Subtotal	$ 31,799							
		Fifteen percent fee contingency	$ 4,770							
		TOTAL	$ 36,568							

Historical Overview

Revised July 22, 2009 Overview of Fort Williams Park: Recreating Battery Blair by Robert Malley and Joel Eastman

In 1964, the small town of Cape Elizabeth purchased Fort Williams, which had been declared surplus by the army and turned over to the U.S. General Services Administration. Towns were the last on the list of government institutions qualified to bid on the fort, in which the federal, state and county governments expressed no interest. In fact, Cape Elizabeth had no additional funds to invest in the fort, so it lay dormant for 10 years, subject to vandalism.

However, in 1975, the Northern Cape Sewer Project provided an opportunity to begin work on Fort Williams, while saving money for the town. The sewer project would generate a huge amount of fill which would have to be disposed of at considerable expense. Someone in town government realized that the fill could be used at Fort Williams to build roads and playing fields, and to fill the major batteries on the shore and the foundations of demolished buildings on the property.

The Town Council adopted a statement of policy on the fort in 1976, specifying that "The portion of the fort which includes all of the shore front and parade ground shall be permanently dedicated to use as public open space and should not be developed or built upon." More specifically the council stated that "The Keyes and Garesche' Bunkers should be preserved and improved to emphasize the historical aspects of Fort Williams." At the same time the Town Council created a permanent Fort Williams Advisory Committee to make recommendations on the fort to the Council.

The decision to fill the large caliber batteries which dominated the shore front made perfect sense at the time. These structures included Battery Sullivan, which had been built for three 10-inch guns on disappearing carriages, Battery DeHart, which had mounted two 10-inch guns on disappearing carriages, and Battery Blair which had emplaced two 12-inch guns on disappearing carriages. The guns had been scrapped during World War II, and ammunition and other dangerous or valuable equipment removed.

The three batteries were two-story, concrete structures with internal and external stairways to the second level where the guns were mounted. The first levels consisted of magazines, shell and shot rooms, store rooms, generator rooms, tool rooms, oil rooms, storage battery rooms, and latrines. Overhead rails with trolleys carried shells from the shell rooms to electrically-powered ammunition hoists which lifted them to the loading platforms. Shielded electrical cable ran through the corridors on the ceilings, powering lighting and electrical devices on both levels. Underground fuel storage tanks behind the gun batteries provided gasoline for electrical generators. Magazines held wooden shelving where the powder bag containers were stored, and shot and shell rooms floors held wooded frame works with cut outs for the projectiles. Next to the storage battery room was an electrical switch board room equipped with switches and meters mounted on sheets of marble. The tool room held boards with the outlines of the many specialized tools used to maintain the guns, carriages, and ammunition hoists. Other store rooms held parts for the guns, carriages and ammunition hoists.

Batteries Sullivan and DeHart were dug into the hill behind the Portland Head Light, right in the middle of the most desirable spot on the shore line. From the top of the hill, the land sloped sharply down to an access road and the two-story high concrete gun batteries. From the water side, the land sloped upward to the parapet of the batteries, providing easy access to the batteries. Once on the parapet, it was a 10 foot drop to the loading platform. In the center and sides of the batteries where the height of the parapet extended to the rear of the battery, there was a 25 foot drop to the access road. Battery Blair was built on lower, level ground to the south of Batteries Sullivan and DeHart, but provided similar risks of persons falling. These were clear hazards, which when combined with the multitude of unlighted rooms and passageways on the first level of the batteries, made the burying of the structures with excavated earth and rock from the sewer project an obvious remedy.

In 1978, Cape Elizabeth was awarded multiple grants from the Maine Bureau of Parks and Recreation to begin a series of improvements at Fort Williams Park. New picnic, parking, and passive recreation areas were created. A picnic shelter was built, an exercise course created, and roadways improved. The grants also paid for the demolition of fourteen unused military buildings and for utility upgrades. Once Batteries Sullivan and DeHart were filled to the top of their parapets and the area leveled and seeded with grass, they became a prime location for visitors to picnic, fly kites, toss Frisbees, and hold weddings. While Battery Blair was being buried, a decision was made to leave the north gun emplacement uncovered, apparently because filling it would have created a high embankment along the road leading to the lighthouse.

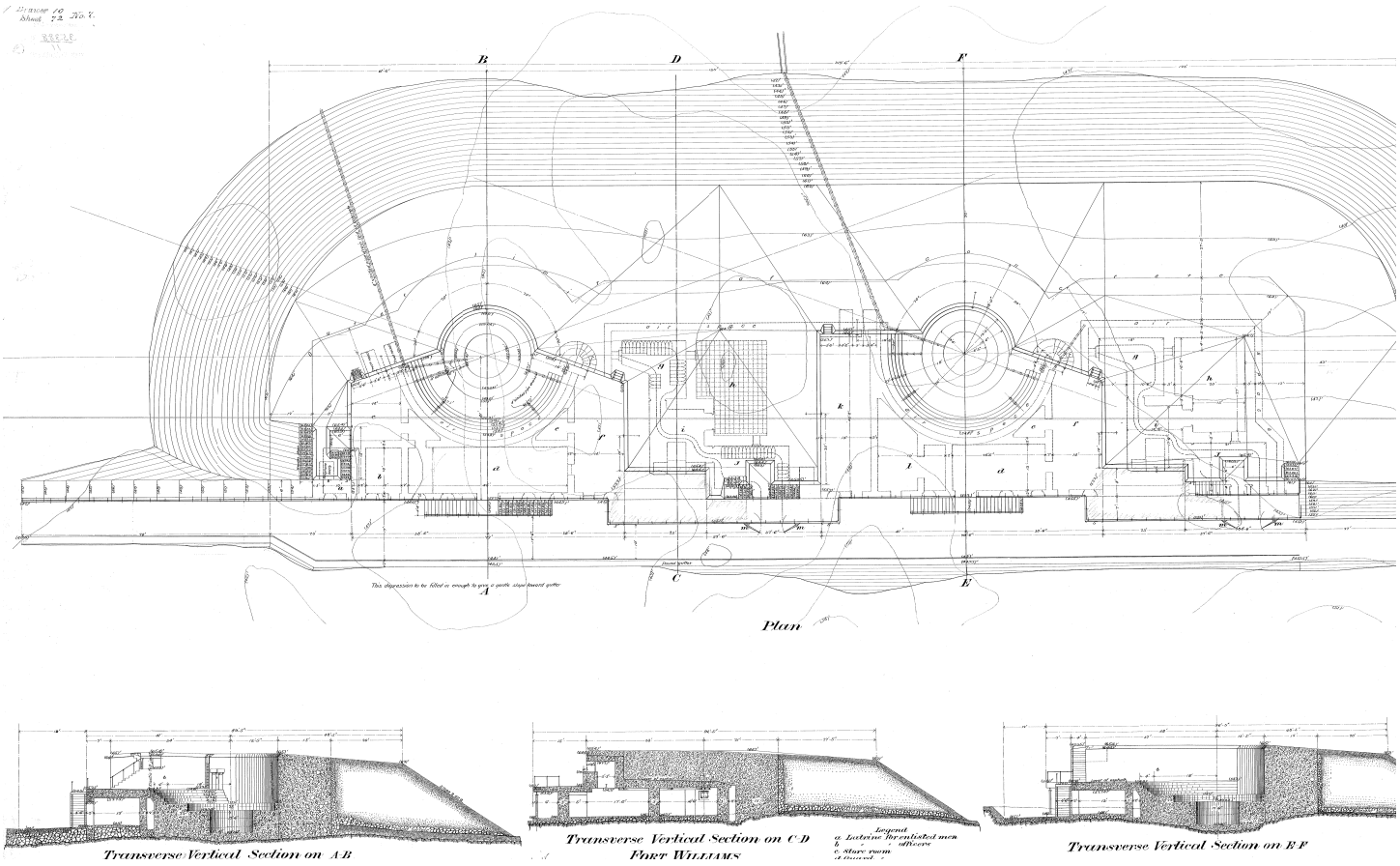
In 1985, Union Mutual Insurance Company of Portland, which used Portland Head Light as a logo, funded a project to create and place interpretive signs at most of the surviving batteries and buildings at the park, and a large map of the whole fort to be sited on the high ground behind Sullivan and DeHart.

In 1993, the Town of Cape Elizabeth acquired title to the double light-keepers residence at Portland Head Light, and plans were developed to turn it into a museum focused on the history of the lighthouse and the region, with one room to be devoted to the history of the fort. When finished, the Fort Williams room included a scale model of the fort as it appeared in 1941, huge photographs of the fort on the walls, and smaller images of army activities.

As the 100th anniversary of the 1899 naming of Fort Williams approached, the Fort Williams Advisory Committee determined to not only hold a celebration, but to also turn the one exposed gun platform of Battery Blair into an interpretive center detailing the history of Fort Williams and battery. The interpretive center became one of the highlights of the centennial celebration, and one of the areas most frequented by visitors thereafter.

In 2009, the Fort Williams Advisory Committee created a Battery Blair Committee to study the feasibility of removing some portion of the earth cover from the battery and using it as a location to present the history of the battery. The decision of the Advisory Committee reflected the changes in attitude which had taken place in the town and the nation in the 30 years since the major batteries at the fort were buried. Most significant was the growing belief that history was important, and that an effort must be made to make the public aware of the past, and to preserve and interpret historical areas and structures.

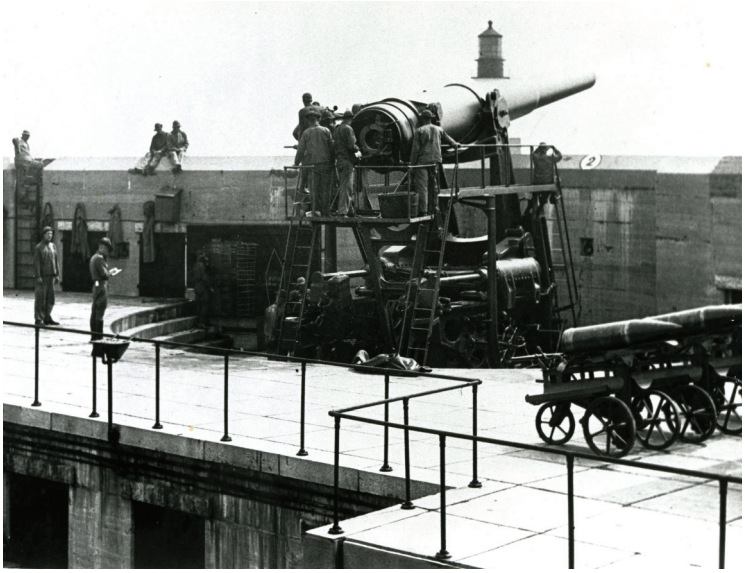
In Cape Elizabeth the belief was applied to Fort Williams, its batteries and buildings. Second, Fort Williams Park had developed to a point where a new major project could at least be considered.



Third, archaeologists had determined that burying an artifact or structure was an acceptable method to preserve it. In the case of concrete gun batteries, the earth cover protected against the freeze-thaw cycle which caused the most damage to concrete structures, as well as harm from rain, sun and vandalism. Thus, the decision to bury the major batteries could now be seen as a positive move to preserve them to a future time when it might be feasible to restore them.

Battery Blair was the best choice for uncovering for a variety of reasons. First, it is on a lower level than Sullivan and DeHart, in an area less used by the public, so that removing its earth cover would not make a drastic change in the topography nor disrupt public activities, but instead, open up an new area to view. Second, it is the most modern of the large batteries, completed in 1903 to the latest designs, and using the latest concrete construction techniques. Sullivan and DeHart were built to early plans and completed in 1898 using earlier methods of concrete construction which did not stand up as well. Third, Battery Blair had the largest guns, 12-inch, and fired the heaviest projectiles, 975 pounds, to the longest range, 10 miles. Batteries Sullivan and Dehart with their 10-inch guns fired a 617 pound projectile to a maximum range of 8 miles and were considered obsolete after World War I. Fourth, Battery Blair has the distinction of having fired target practice on December 8, 1941, the day after the Pearl Harbor attack. Finally, Blair is in an ideal location for visitation and security in its location next to the road leading to Portland Head Light.

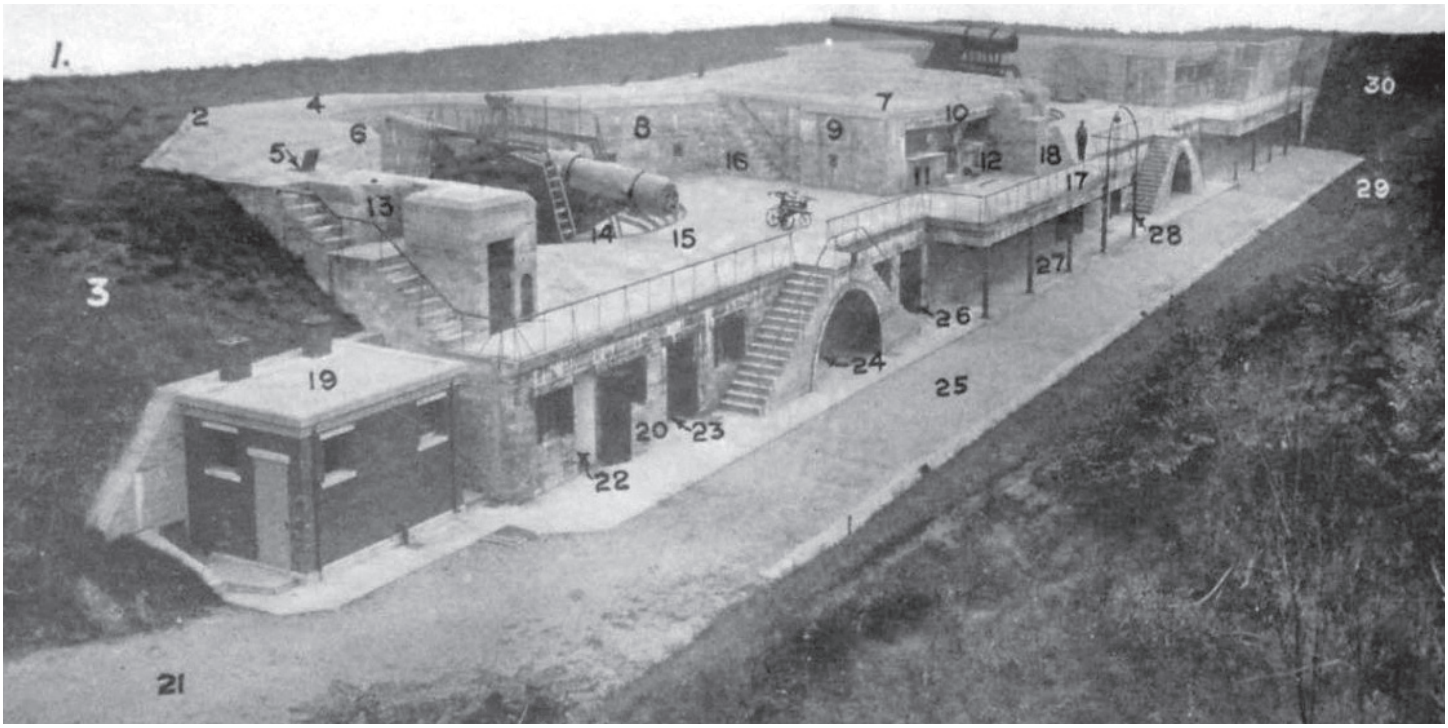
Photographs



Battery Blair 12-inch gun no. 2 in firing position with Portland Head Light beyond, circa 1926

Parade wall of Battery Blair with battery commander's station to the right and plotting room below.

Battery Blair interpretive exhibit, 1999



An example of a seacoast gun battery, circa 1910

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Cover Photograph:
Recoil position being swabbed out:
12-inch gun in Battery Blair emplacement no. 1, circa 1910
Courtesy Kenneth E. Thompson Jr.
from *Portland Head Light & Fort Williams*