

Primary Battery File

National Archives, Washington D.C.

Record Group 77

Correspondence of the Chief of Engineers

Entry 103

File, Fort, Battery:

98227

Ft. Ruckman

Btty Gardner

Address reply to
CHIEF OF ENGINEERS, U. S. ARMY,
Washington, D. C.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS.
WASHINGTON.

EEW-FF

Refer to File No. 98227

December 2, 1915.

From: The Chief of Engineers.

To: The District Engineer Officer, U. S. Engineer Office,
BOSTON, MASS.


Subject: Plans for 12-inch emplacements for high-angle fire.

1. With reference to E.D. letter of November 1, 1915, directing the submission of a report upon the locations to be selected for certain 12-inch guns on carriages adapted for high-angle fire, and to your indorsement thereon, dated November 15, 1915, you are advised that the authority of Congress will probably be asked for the application of funds to be appropriated next year to the emplacement of two of these guns on the Nahant reservation.

2. It is desired that the preparation of plans and estimates for these emplacements be immediately undertaken, this work being given precedence over all other work of your office, and that these plans and estimates be submitted at the earliest practicable date.

3. Reference is made to the study sketch accompanying E.D. circular letter of November 22, 1915 (38814).

By command of the Chief of Engineers:


Lieut. Col., Corps of Engineers.

U.S. Engr. Office, Boston, Mass., Dec. 20, 1915. - To the Chief of Engineers.

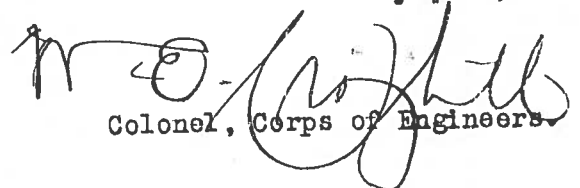
1. Two tracings are forwarded herewith, one showing a plan of the Nahant Reservation with the location of the battery, and the other a plan and cross sections of the battery. The axis is placed on a line east and west as this direction fits the ground well and covers the desired field of fire. Both flanks are protected from enfilade and the cover on the flanks is only made thick enough for protection against splinters.

2. The estimate has been carefully considered, but it has been made rather liberal on account of the inaccessibility of the site. Although Nahant is connected with the mainland, a wharf is necessary for economical delivery of sand, broken stone, and other materials, and also for ready access to the reservation by water. As a substantial wharf is planned, which will later be available for the troops, one-half the cost should be borne by the Quartermasters Department. Connection with the electric railroad is also provided for in the estimate.

Approximate estimate.

Earth excavation, 3,000 cu.yds. @ 50¢ per cu.yd.-----	\$1,500.00
Rock excavation, 1,100 " " " \$3.00 " " "-----	3,300.00
Sand fill, 86,000 " " " \$1.00 " " "-----	86,000.00
Concrete, 20,900 " " " \$9.00 " " "-----	188,100.00
Powder and shell rooms, 217 M brick @ \$20 per M-----	4,340.00
Concrete shell rooms, (ceiling), 250 cu.yds. @ \$20 per cu.yd.-----	5,000.00
Trolley system, -----	1,500.00
Shot tables, -----	460.00
Doors and windows, -----	1,570.00
Electric lighting system, -----	5,900.00
Drainage, sewer, and water, -----	1,250.00
Roadway and railroad, -----	1,200.00
Sodding, soiling, and seeding, -----	4,000.00
Stairways and railings, -----	600.00
Latrine and toilet fixtures, -----	550.00
Waterproofing, -----	700.00
Mechanical Indicators, -----	1,200.00
	<u>\$307,170.00</u>
Wharf, 500 ft. long, @ \$30 per ft., -----	15,000.00
Contingencies, including office charges and transportation, -----	50,000.00
	<u>\$372,170.00</u>

say \$375,000.00


Colonel, Corps of Engineers.

Inclos. 36 and 37 (tracings) accompg.

98227/13

2d Ind.

FVB-FF

Office C. of E., December 29, 1915 - To the District Engineer Officer,
BOSTON, MASS.

1. The plans received with 1st indorsement above are going forward for War Department approval, as preliminary designs, with estimate of \$300,000 for battery construction and \$15,000 for half cost of wharf.

2. As to the latter item, the above indorsement does not make it clear whether \$15,000 is intended to be the total cost, or half the cost, of wharf construction.

3. Rough estimates of quantities of concrete and of fill, made in this office for the typical battery, with generous allowances for excess due to the increased height of the Boston emplacements above natural surface of the ground, indicate that reductions of these items should be made, in the estimate of the preceding indorsement. It is, therefore, requested that the figures affecting these items be reexamined.

By command of the Chief of Engineers:


Lieut. Col., Corps of Engineers.

DEC 30 1915


448/27 Forts

3d Ind.

IAK

U.S. Engr. Office, Boston, Mass., Jan. 26, 1916. - To the Chief of Engineers.

1. By letter of December 31, 1915, it was reported that the estimate of \$15,000 for the wharf represented the total cost and that if the cost is to be divided so that the Engineer Department is to pay but one-half, the proper amount is \$7,500.

2. Careful re-examination of the quantities of concrete and fill has been made, with the result that the quantity of concrete is reduced to 18,765 cubic yards and the quantity of fill to 63,522 cubic yards. These quantities are believed to be a close estimate. Applying these quantities to the approximate estimate given in the first indorsement, we have --

Estimate.

Earth excavation, 3,000 cu.yds. @ 50¢ per cu.yd.-----	\$1,500.00
Rock excavation, 1,100 " " " \$3.00 " " "-----	3,300.00
Sand fill, 83,522 " " " \$1.00 " " "-----	83,522.00
Concrete, 18,765 " " " \$9.00 " " "-----	168,885.00
Powder and shell rooms, 217 M brick @ \$20 per M-----	4,340.00
Concrete shell rooms, (ceiling), 250 cu.yds. @ \$20 per cu.yd.---	5,000.00
Trolley system, -----	1,500.00
Shot tables, -----	460.00
Doors and windows, -----	1,570.00
Electric lighting system, -----	5,900.00
Drainage, sewer, and water, -----	1,250.00
Roadway and railroad, -----	1,200.00
Sodding, soiling, and seeding, -----	4,000.00
Stairways and railings, -----	600.00
Latrine and toilet fixtures, -----	550.00
Waterproofing, -----	700.00
Mechanical indicators, -----	1,200.00
	<u>\$285,477.00</u>
Wharf, 500 ft. long, @ \$30 per ft., -----	15,000.00
Contingencies, including office charges and transportation, -----	50,000.00
	<u>\$350,477.00</u>

say, - \$350,000.00

CHIEF OF ENGINEERS
JAN 20 1910

W. O. Croft
Colonel, Corps of Engineers.

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1. Two
D.S. EXP. C
18/27 Fort

OFFICE

448
27 1915
FOR

303

98227
13

11-17-16

REC'D. SAC, OFFICE CHIEF OF ARMS

11-28 1915

11-28 1915
DEC 30 1915

2. 11-28 1915

W

Proceedings of a Board of Officers convened by the following order:

HEADQUARTERS, COAST DEFENSES OF BOSTON,

Special Orders)
No. 60

Fort Warren, Mass.,
April 9, 1917

Extract.

1. A board of officers to consist of

Major T. Q. Ashburn, C.A.C.,
Captain J. P. Spurr, C.A.C.,
Captain C.G. Bunker, C.A.C.,

is appointed to meet at Fort Warren, Mass., at 10 o'clock A.M. on Tuesday, April 10, 1917, or as soon thereafter as practicable, to submit recommendation as to the location of the two proposed batteries on the reservation at Nahant, as follows:

- a. Two 12-inch B.L. Rifles,
- b. Four 12-inch Mortars.

2. Recommendation will also be submitted as to the installation of the fire control system for these batteries.

3. Before making recommendation regarding the location of the proposed batteries, the board will consult the District Engineer Officer and documents on file at these headquarters in regard thereto.

x

x

x

x

By order of COLONEL RIDGWAY:

EDMUND T. WEISEL,

Captain, C.A.C., Adjutant.

Fort Warren, Mass.,
April 11, 1917.

1. The Board met pursuant to the foregoing order.

Present: All members.

2. The Board, accompanied by the District Engineer Officer, Colonel Charles L. Potter, C.E., visited Nahant, Mass., carefully studied the ground with a view of possible locations for

- A Battery of four 12" B.L. Mortars, and
- A Battery of two 12" B.L. Rifles.

3. Approximate location of the mortar battery is shown in "red" on the enclosed blue print.

4. In considering the location for a battery of two 12" B.L.R., the Board is strongly of the opinion that there is no place on the Government reservation at Nahant, Mass., suitable--for the reasons selected will require at least 3 degrees elevation

5. The Board visited Eastern Point, Nahant, and are of the opinion that there is an excellent site for a major caliber, direct-fire battery, protected from enfilading fire. It is shown on the enclosed section of C. & G.S. Chart. This site is located on the property of U.S. Senator Henry Cabot Lodge, and it is believed can be obtained for a reasonable price.

6. In event that it is finally decided that these 12" B.L.R. must be emplaced on the present Reservation, the Board is of the opinion that its location should be as shown on the enclosed blue print. This position will require not less than approximate 3 degrees elevation in order to fire over the high ground in front of the battery.

7. Paragraph 2 of the above quoted order requires a report upon the fire control system necessary for these batteries. This subject will require further study before any recommendations can be made, and will, therefore, be made at some date in the near future.

The Board adjourned to meet at the call of the President.

T. P. Asstine

Major, Coast Artillery Corps,
President.

J. T. Spurr
Captain, Coast Artillery Corps,
Member.

W. B. Bunn
Captain, Coast Artillery Corps,
Recorder.

Hq. C. S. Boston, Apr. 11, 1917.

Approved

Thos. R. Bingham
Col. C. & E. Co. 1st

HEADQUARTERS NORTHEASTERN DEPARTMENT

Office of Department Engineer,

25 Pemberton Sq.,

BOSTON, MASS.

May 12, 1917.

ADDITIONAL MEMORANDUM.

From: Department Engineer.

To: DEPARTMENT COMMANDER.

Subject: Location of Battery at Nahant.

1. The proposed location of the Battery at Nahant was to be made and the battery was to have been erected by October, 1917. It was at first the idea to supplement the present defenses by these long range 12-inch guns to be used at angles of fire from 10 to 30 degrees - practically long-range mortars. The site on the Nahant reservation was well adapted to such purposes, the low ground being selected. Then instructions were given to arrange for 0 degrees elevation. By moving to higher ground this could be done, but in a part of the field the fire was shut off below 3 degrees on account of intervening high ground.

2. Owing to the emergency nature of the proposed work it was decided to take advantage of the government ownership, rather than to go into the tedious operation of acquiring land and locating the battery where the guns would be more effective, accepting the small defects rather than delay their installation.

3. The location at East Point, as recommended by the Artillery board, will subject the battery to a smothering fire from small craft, since there is no provision for small guns to protect the battery from such fire. Funds available are understood to be limited and no provision is made for any flanking guns. As the estimate was made to Congress and the appropriations made for the establishment of certain guns for New York, New Bedford, and Boston, it is probable that, unless further funds be appropriated, the change to East Point will necessitate the delay of the work until another fortification act can be passed or result in its location at that point without the means of meeting the attack of small craft.

4. There is to my mind another reason for not placing this battery at East Point. I believe that the ultimate defense of Boston may call for a 16-inch battery at either East Point or on Phillips Point (See section of Coast Survey chart among inclosures) and that these 12-inch, long-range guns (practically mortars) had better not occupy ground that may be needed for larger guns.

5. If this battery could be outfitted with all auxiliary defense; if the battery could be built as promptly; and if it were certain that the ground might not be the proper location for a 16-inch battery later, there would be no question but that it should be located at East Point. But taking all object

Incl. 3

as against some sacrifice of effectiveness, it is believed that the guns should be located on the high site (shown on blue print) at Nahant reservation, where the simple platforms can be built and some action gotten out of the battery without parapets or magazines, the location being considerably screened from view by the high ground in front.

Chas. L. Potter

Colonel, Corps of Engineers.

RECD. HQ. N. E. DEPT. MAY 14 1917

ADDRESS REPLY TO
THE DISTRICT ENGINEER OFFICER
U. S. ENGINEER OFFICE
25 PEMBERTON SQUARE
BOSTON, MASS.

WAR DEPARTMENT
UNITED STATES ENGINEER OFFICE
ROOM 1017 BARRISTERS HALL, 25 PEMBERTON SQUARE
BOSTON, MASS.

REFER TO FILE NO. 511 Forts

BRIEFED *8-24-17*
BY *T. L. P.*

August 24, 1917

From: The District Engineer Officer, Boston, Mass.

To: The Chief of Engineers, U.S.A., Washington, D. C.

Subject: Plans and estimate for 12-inch long range gun emplacements, Nahant, Mass.

1. In compliance with instructions contained in par. 3 of E.D. indorsement July 19, 1917 (98227/128), tracing plans in 3 sheets for emplacements for two 12-inch long range guns at Nahant, Mass., are submitted herewith.

2. An estimate of the cost of the emplacements here follows: -

Rock Excavation,	10,200 cu. yds.	@	\$4.00	\$40,800.00
Sand Fill,	51,000 " "	@	1.25	63,750.00
Concrete, in place,	11,900 " "	@	10.50	124,950.00
Concrete, reinforced, in ceilings of shot & powder rooms,	300 " "	@	14.00	4,200.00
Brick, in Walls and Ceilings,	220 M	@	24.00	5,280.00
Trolley System, Trolleys, Rails, Blocks, etc.,				2,000.00
Shot and Powder Tables,	8	@	125.00	1,000.00
Doors, steel,	15	@	75.00	1,125.00
Windows, complete,	7	@	15.00	105.00
Electric Generator sets, in place,	2	@	5000.00	10,000.00
Electric Lighting System,	1	@	2000.00	2,000.00
Latrine and Toilet System,	1	@	500.00	500.00
Drainage, Sewer and Water System,	1	@	1500.00	1,500.00
Waterproofing,		@	800.00	800.00
Stairways and Railings,		@	800.00	800.00
Mechanical Indicators,	2	@	600.00	1,200.00
Soiling, Sodding and Seeding,		@	5000.00	5,000.00
Plant, in addition to plant on hand,			20000.00	20,000.00
Transportation,			2000.00	2,000.00
Overhead Charges,				32,990.00
Wharf, Trestle, and Railway,				15,000.00
TOTAL				\$335,000.00

3. This estimate of \$335,000. includes the cost of a temporary wharf, trestle and railway, that will be necessary for the construction of the battery; and is exclusive of the amount of \$17,700., which has already been allotted for plant.

4. The reduction of the quantities in this estimate as compared with one previously submitted is due to a more economical siting of the battery, which it is believed reduces the cost of construction to a minimum, consistent with the requirement of proper location.

Chas. L. Potter
Colonel, Corps of Engineers.

EEC

Inclos.1-3 accompg.
(reg.mail)

15144

*Inclos.1-3 accompg.
(Reg. mail)*

6 tracings accfy

98227/155

1st Ind.

EEW/FJS.

Office, C. of E., September 5, 1917. - To THE ADJUTANT GENERAL.

1. Subject to minor changes which may be found necessary in the course of construction, the accompanying plans are recommended for approval.

2. Funds for construction (\$335,000) are available for allotment.

3. The location was approved by the Secretary of War, July 10, 1917 (A.G.O.2613651)(O.C.C.A.3838/169-F)(O.C.E.98227/128).

N. M. Black

Brig. Gen., Chief of Engineers.

Incls. 156-158 accomp.

3 Incls

Received A.G.O. SEP 6 1917

662.2 Nahant, Mass. (Misc.) 2nd Ind.

War Dept., A. G. O., September 7, 1917, - To the Chief of Coast Artillery and the Chief of Ordnance, for remark.

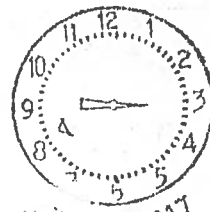
By order of the Secretary of War:

L. A. Dwyer

Adjutant General.

2 Incls.
Synopsis made.

OUT
MAIL & FILES DIV.



2/ RECEIVED SEP 9 - 1917 O.C.C.A.

3 Incls

3838/169-H

✓
3d Ind.

War Department, O.C.C.A., Sept. 25, 1917. - To the Chief of Engineers.

1. The Chief of Coast Artillery is of the opinion that, on account of the detached locality of this proposed battery, it would be wise as well as economical to construct quarters as a part of the emplacements.

2. It is believed that a room adjacent to these quarters should be constructed to provide a winter kitchen.

3. The provision of rooms along the rear of the rear gallery, as provided in plans for the emplacements for 12-inch guns mounted on bar-bette carriages near Mispillion River, Delaware, is referred to as a previously approved plan for the suggested construction. (See tracing, U.S. Engineer Office, Wilmington, Del., Incl. 110, O.C.E. 20156/96; Incl. 1, O.C.C.A. 1441/4-D.)

4. A sunken walk should connect the two B.C. stations.

3 Incls.

[Signature]
Major General,
Chief of Coast Artillery.

RECD. BACK OFFICE RECD. OFFICERS.

incls 138-138 accpg
138-138

98227/155

4th Ind.

EEW/FJS.

Office, C. of E., Sept. 29, 1917. - To THE DISTRICT ENGINEER OFFICER,
BOSTON, MASS.

1. Attention is directed to comments of the 3rd indorsement above, which necessitates further revision of design. A blueprint of the plan for batteries near Mispillion River is herewith for retention. The concrete wall along "firing trench", shown on that plan is to be omitted.

2. The original plan for the battery at Nahant (inclosure 15) is sent for withdrawal at Boston.

By command of the Chief of Engineers:

M. Robinson

Incls 15, 156-158; and
blueprint of 20156/110
by regd. mail

[Signature]
Colonel, Corps of Engineers.

U.S. Engr. Office, Boston, Mass., Nov. 7, 1917. - To the Chief of Engineers, U.S. Army, Washington, D. C.

1. Revised drawings for the 12" long range gun emplacements at Nahant, Mass., embodying the changes suggested in the 3rd indorsement, are herewith.

2. The revised estimate is as follows:

Rock Excavation	12,750 cu.yds.	@	\$4.00		\$51,000.
Sand Fill	52,700 " "	@	1.25		65,875.
Concrete in place	13,200 " "	@	10.50		138,600.
Concrete, reinforced, in ceilings of shot & powder rooms	400 " "	@	14.00		5,600.
Brick, in Walls and ceilings, 289 M		@	24.00		6,936.
Trolley system, Trolleys, Rails, Blocks, etc.					2,000.
Shot and Powder Tables	8	@	125.00		1,000.
Doors, steel,	22	@	68.18	say	1,500.
Windows, complete,	16	@	15.00		240.
Electric Generator sets, in place,	2	@	5000.00		10,000.
Electric Lighting system					2,000.
Latrine and Toilet system					500.
Drainage, Sewer and Water system					1,500.
Waterproofing					950.
Stairways and Railings					800.
Mechanical Indicators					1,200.
Soil, Sodding and Grading					5,000.
Plant, in addition to plant on hand,					20,000.
Transportation					2,000.
Overhead charges					33,299.
Wharf, Trestle and Railway					<u>15,000.</u>
					\$365,000.

3. This revised estimate of \$365,000. includes, as in the previous estimate, the cost of a temporary wharf, trestle and railway, which will be necessary for the construction of the battery; and is exclusive of the amount of \$17,700. which has already been allotted for plant.

Francis R. Monte

Colonel, Corps of Engineers.

Inclos. 1-3 & 6-8 accpg.
(by reg. mail)

REC'D. BACH. OFFICE OFFICE OF THE

NOV 20 1917

Inc. 156-157¹⁵⁸ accpg.
Inc. 165-167 accpg.

98227/155

6th Ind.

EEW/KTC

Office, Chief of Engineers, November 16, 1917 - THROUGH THE CHIEF OF COAST ARTILLERY AND THE CHIEF OF ORDNANCE TO THE ADJUTANT GENERAL.

1. Suggestions of the 3rd indorsement above have been incorporated in new plans (inclosures 165-167) which are recommended for approval.

2. The estimated cost of construction is \$365,000. Funds are available for allotment.

N. H. Black

Major General, Chief of Engineers.

Incls. 156-158, 165-167 accomp.

✓ BACK NOV 17 1917 O. C. A.

6 Incls

662, 2

3838/169-H

M. L. G.

7th Ind.

War Department, O.C.C.A., February 27, 1918. Through the Chief of Ordnance, to The Adjutant General.

Approval recommended.

J. H. Barton

Brigadier General, N.A.,
Acting Chief of Coast Artillery.

6 incls.

trans

RECEIVED MISCEL. DIV.

MAR 5 1918

662.2 Nahant, Mass.
(Misc. Div.)

8th Ind.

REP/EGS

War Department, A. G. O., March 6, 1918. - To the District Engineer Officer, Boston, Mass. approved as recommended in the 6th indorsement hercon.

By order of the Secretary of War:

Paul Giddings

Adjutant General.

6 incs.
Synopsis made.

Recd. Back U. S. Engr. Office, Boston.

MAR -9 1918

511/4 Forts

9th Ind.

IAK

U.S. Engr. Office, Boston, Mass., Mar. 9, 1918. - To the Chief of Engineers.

The plans having been approved, allotment of the necessary funds is requested.

Francis R. Monte

Colonel, Corps of Engineers.

Inclos. 1-3 and 6-8 accomp.
(By regd. mail)

Incls. 156-158, 165-167 accomp.



98227/155

10th Ind.

FVB/KTC

Office, Chief of Engineers, March 16, 1918. - TO THE DISTRICT ENGINEER,
BOSTON, MASS.

1. For construction of two-gun 12-inch long-range battery at Nahant, the sum of \$365,000 is hereby allotted from the appropriation for "Gun and Mortar Batteries, Act June 15, 1917" (Battery Construction).

2. It is understood that the original tracings of the approved plan (inclosures 165-167) are on file in the Boston office.

By command of the Chief of Engineers:



Brig. Gen., Engineers.

Recd. ~~Back~~ U. S. Engr. Office, Boston: MAR 18 1918

q *Ext*

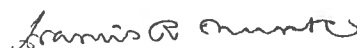
511/4 Forts

11th Ind.

EEC

U.S.Engr.Office,Boston,Mass.,March 18,1918. - To the Chief of Engineers.

Noted.



Colonel, Corps of Engineers.



Copy of Civil Engineer's

3838

169-H

1917

WAR DEPARTMENT

U.S. ENGINEER OFFICE
511 OCT 2 1917
4
BOSTON, MASS.

O. O. WAR DEPT.
GENERAL CONTROL O. O.
O. O.

MAR 4 1918

Concrete, in
Sand Fill,
ck Excavat
Concrete, re
ceilings

Recd. Back U. S. Engr. Office, Boston. MAR 18 1918
Recd. Back U. S. Engr. Office, Boston. MAR -9 1918

FIRE CONTROL INSTALLATION

Recommendations for new installation of; Nahant, Mass.

Report of a Board of Officers:

Convened at Ft. Banks, Massachusetts, pursuant to verbal orders from the Commanding Officer, Coast Defenses of Boston, for the purpose of locating a B.C. station, primary and secondary stations for the proposed long range mortar battery at Nahant, Mass. The Board will also report on the submitted engineer drawings of the proposed emplacements.

Members:

Colonel Geo. F. Quimby, C.A.N.G.
 Captain B. S. DuBois, C.A.C.
 Captain Albert S. Bullens, C.A.N.G.

Colonel Geo. F. Quimby, C.A.N.G., was relieved from duty by verbal orders of the Coast Defense Commander, and his duties as a member of this Board were assumed by Major Frank S. Nolan, C.A.N.G., who was detailed by the same order.

The recommendations of the board, in the order of importance stated, are as follows:

First:

It is recommended that the combined B.C. and B' stations be located on the westerly edge of the Lodge Estate, approximate azimuth to the Graves Light $330^{\circ}45'$; approximate azimuth to Great Faun Beacon $24^{\circ}5'$. This station to be only slightly elevated above the surface of the surrounding terrain.

Second:

It is recommended that the B" station be located on private property at Little's Point, Swampscott, directly in front of the present residence thereon. Approximate azimuth to the Graves Light $352^{\circ}55'$; approximate azimuth to the Standpipe, Nahant, $37^{\circ}56'$. This will give a base line of approximately 6,000 yds. *Little's Point in local name of part of Philip's Point*

Third:

It is recommended that an auxiliary B" station be installed at Grovers Cliff, Ft. Heath, Winthrop, adjacent and to the left of the present range stations. Approximate azimuth to the Graves Light $288^{\circ}17'$. Approximate azimuth to this station from the B.C. station at East Point, Nahant, is $59^{\circ}25'$. This will give a base line of approximately 6750 yds.

98227/165

510 AUG 3 1918 Fort

ENGINEER OFFICE

"2"

Fourth:

It is recommended that an auxiliary emergency base end station be located at Deer Island, adjacent and to the left and forward of B² Tirrell.

Fifth:

As this battery is so situated as to have all round fire, the locations given in the Third and Fourth recommendations will be very valuable for landward defense.

Sixth:

It is recommended that the proposed construction of the magazine for this battery be altered as follows:

Close the entrance as shown on drawing; divide the magazine in two.

Extend the ends of magazine sufficiently to allow of having an entrance at each end.

This will prevent possible fire in the magazine and allow of separate service entrances for each pit.

If the locations are approved, more detailed surveys will be necessary to definitely locate the center points of mounts for range finding instruments.

P. Frank Nolan
Major, C.A.N.G.

W. H. B. B.
Captain, C.A.C.

W. H. B. B.
Captain, C.A.N.G.

Headquarters Coast Defenses, of Boston. Ma

April 29, 1918.

1. There is deep water in rear of the base lines in Nahant and Broad Bays. These areas should be covered by D.P.F's at one extremity or other of the selected base lines. It will be possible to do this at or in the immediate vicinity of the selected sites. The exact location and height of stations should be determined by the engineers to secure this result.

3. Emplacement should provide for replacement of 12 inch mortars by 16 inch mortars without future alterations. This should include provision for 16 inch powder charge, projectile rooms and trolleys. Data giving exact dimensions are not available.

4. The plotting room is not protected. It is located where noise of trolleys in projectile room and noise in pits will be a maximum. If located at the battery, the most suitable location is believed to be in the present proposed entrance. This can be done if the recommendation of the board is approved to have an entrance at either end of the magazine. The entrance to the plotting room would have to be from the side by a passage-way extending along the length of the magazine. Artificial lighting will have to be resorted to as the blast will not allow doors or windows opening into the pit.

5. The projectile house is so near the guns that there is some question whether the corrugated iron will not be torn off by the blast. As little wood as is practicable should enter its construction and it is recommended that the wood sheeting be omitted from the roof.

6. In removing the projectile room from earth or other protection, it must be born in mind that hostile fire may wreck the overhead trolleys. If the trolleys are retained they should be supplemented by small cranes mounted on trucks, designed to handle projectiles in case of emergency. Such cranes would be useful also in case of heavy mobile artillery when the projectiles would be piled in the open.

7. Delivery tables should be at either end of the projectile room. If overhead trolleys are used, the two tracks should be connected at ends by curves to allow return after delivery. They should be provided with a switch at centre.

8. A raised platform is recommended in front of the centre of the projectile room as a battery officer's station.

Wm. H. Banell
Colonel, C.A.C. Commanding.

REGD. HQ. NACAA. APR 30 1918

3838/169-G

10th Ind.

War Dept., O.C.C.A., July 19, 1918. - To The Adjutant General.

1. It is recommended that the project for moving four 12-inch mortars from Fort Banks to Nahant be abandoned. The cost of construction for emplacing these mortars is now estimated at \$26,000. It is evident from the 12th Ind., (A. G. O. 2267187-A-9;98227-36 O.C.E.) dated March 19, 1917, that when the Board of Review approved this project, it was believed that the construction work could be utilized at a later date for emplacements of 16" mortars. I am informed that the Engineer Department does not think that any such utilization can be made of the construction now contemplated.

2. I believe it is very desirable to reenforce the long range 12-inch rifles which are to be located at Hog Island and Nahant, as well as the 16-inch rifles which are to be located at Calf Island, by the fire of long range mortars located at Nahant. However, the field of fire of the mortars which it is proposed to transfer from Fort Banks to Nahant, and which have a range of only 15,000 yards, will not add significantly to the defensive strength of these coast defenses.

3. Of the 16 mortars at Fort Banks, four have already been designated for use in France, and it is quite possible that additional withdrawals may be necessary. Should the number of mortars at Banks be reduced to eight, I believe that they would fulfill their functions of defense better if grouped at that point than if divided between that point and Nahant.

F. W. COE
F. W. COE

Major General
Chief of Coast Artillery.

Inc. 1 & 3-6
Total 5 Incls.

Received A.G.O.
JUL 19 1918

RECEIVED MISCEL. DIV.
JUL 19 1918

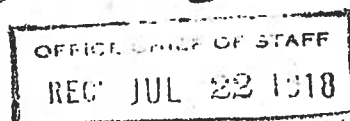
472.4 Ft. Banks, Mass. (Misc.Div.)

11th Ind.

A.G.O., July 20, 1918.-To the Chief of Staff.

(Synopsis made)

5 Incls.
jew/nay



REC'D W.F.D.C.C. JUL 22 1918

-8- REC'D BACK A.G.O JUL 31 1918