

Primary Battery File

National Archives, Washington D.C.

Record Group 77

Correspondence of the Chief of Engineers

Entry 103

File, Fort, Battery:

35 986

Ft. Andrews

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SUBJECT:

Office of the Chief of Engineers,

United States Army,

Washington, July 13, 1900.

Col. Chas. R. Suter,

Corps of Engineers,

Boston, Mass.

Colonel:

It is possible that provision can be made for the construction of the remaining half of the mortar battery at Peddocks Island with funds appropriated by the Act approved May 25, 1900.

To enable the Department to arrive at a decision, you are requested to report as soon as practicable an approximate estimate of the amount of funds that would be required for this purpose.

Very respectfully,

Your obedient servant,

A. H. S. Suter

Acting Chief of Engineers.

35986

UNITED STATES ENGINEER OFFICE.

P. O. BOX 5346, ROOM 917 WINTHROP BUILDING,

BOSTON, MASS.

July 17, 1900.

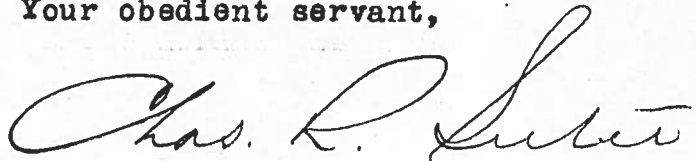
Brig. Gen. John M. Wilson,
Chief of Engineers, U. S. Army,
Washington, D. C.

General:

Replying to your letter of 13th inst. (#35986) in reference to the completion of the mortar battery at Peddocks Island, I have the honor to state that it will probably require an allotment of about \$75,000. This estimate is only approximate and may be somewhat modified by further study and detailed drawings, but I think that at least it would not be exceeded. This, it should be understood, includes some work connected with the other half of the battery which would need to be done in any case, as electric lighting and water supply, for instance.

Very respectfully,

Your obedient servant,

A handwritten signature in cursive script, reading "Chas. R. Smith". The signature is written in dark ink and is positioned above the typed name and title.

Col., Corps of Engrs., U. S. A.

JUL 18

35986

1900

WAR DEPARTMENT

Boston
July 17, 1900.

Dexter
Col. Chas. S.

Replying to E. D. letter
of July 13th in reference to
the completion of the Manton
Battery on Beddocks Island
states that it will probably
require an allotment of about
\$75,000. This estimate includes
some work connected with
the other half of the battery.
rc.

Wash, July 23, 1900.

K

UNITED STATES ENGINEER OFFICE.

P. O. BOX 5346, ROOM 917 WINTHROP BUILDING,

BOSTON, MASS.

August 29, 1900.

Brig. Gen. John M. Wilson,
Chief of Engineers, U. S. Army,
Washington, D. C.

General:

In accordance with your instructions of July 23, 1900, (35986), I have the honor to forward herewith plans and estimate ¹ for the construction of the second half of the Mortar Battery at Fort Andrews (Peddocks Island), this harbor.

In the plans for this work as originally presented to the Department, it was proposed to make the second half of the battery a duplicate of the first. This has not seemed to me to be either necessary or advisable, as the older work is cramped for room and its duplication would have involved heavy expense for excavation. I have therefore projected a half battery, parallel to the road, and as near the old work as was possible with due allowance for administration and other buildings not provided for in the original design. The floor of the battery is placed about 3-1/2 feet above that of the old work to save excavation.

In a general way the design submitted follows the latest type drawing issued: that is, the size of the mortar pits is increased and the ammunition service is so arranged as to have separate magazines and shell rooms for each pair of mortars; but I have preferred to put the magazines under the front parapet

instead of in the traverses, as in this case they are much better sheltered in that position by the hill in front of the work. This also enables the shell rooms to be made straight and facilitates the moving on trolleys of the heavy projectiles. The magazines have each a separate powder passage to the doors at rear of traverse and the powder will be handled on a special trolley in this passage. It is thought that no special delay in delivery need occur as the passage is left free for this service, and, moreover, some extra charges can be accumulated near the end for rapid firing, if desired. Extra size is given the magazines to allow a passage through them, - very essential as the cases hold different weight cartridges and must therefore be piled separately.

Each shell gallery has a trolley on each side running perfectly straight the whole length of the gallery and across the broad passage at rear of traverse, so that the trucks can be loaded under cover. Projectiles are piled three tiers high on both sides, except the torpedo shells of which there is but one row at the inner end of the gallery. The width of the rear passage and the size of doors leading thence to the mortar pits should obviate any difficulty in manoeuvring the trucks. The walls at rear end are left blank for implement racks and the passage itself affords storage room for the trucks so that everything can be kept under cover and locked up.

Guard rooms are provided at each end of the battery and the wide passages furnish additional bomb-proof cover if needed. Stairs give frequent access to the parapet. No look-out is shown as the hill in front cuts off the view.

Between the new and the old work a separate building is introduced, which contains the rooms needed for administration purposes and also the power plant, which is intended to furnish electricity for all the works contemplated on the Island. The storage battery, however, as estimated for, is only for the mortar battery. The rooms in the old work intended for power plant, etc., have been taken for guard and store rooms for that work as none had been originally provided.

Arrangements will be made so that the mortars can be fired singly or in groups of any desired size, either from the administration building or from the pits themselves as may be found most desirable, and voice pipes will be carried to all parts of the work.

Details of drainage, ventilation, electric lighting, etc. are too complicated to be shown on the plan presented, without confusion. They have therefore been left off, but are covered in the estimate.

The small scale map of the reservation shows the general arrangement of the new work and its position relative to other works built or contemplated by the approved project. Natural cover protects the work from any fire at shorter ranges than four miles. Beyond that distance the battery might be reached

from Broad Sound in front and from the open sea outside of Nantasket Beach on the right flank. Such fire, however, would be random or accidental, and hence of no great importance, but adequate cover is given the magazines and the rest of the battery is fairly well protected. The battery will be entirely invisible it is thought.

Details of construction, and, in a general way, the plan of the battery follow those of Mortar Battery No. 2, built by me at Fort Point, San Francisco, and which proved so entirely satisfactory that I have no hesitation in recommending them here.

The estimate which follows is larger than the approximate one sent you on July 17th. This is due to the fact that further study of the situation developed the necessity of more work than had been anticipated and as now presented it covers the needs of both the old and new work, and, also, to a certain extent, those of the gun batteries on top of the hill.

It would be very desirable, if possible, to make the excavation during the current season, and also to put in all drains and get the plant in position. We could then take up the concreting early in the Spring and finish it before Summer. Back filling and general finishing up would take the rest of the working season and the battery could be entirely completed and guns mounted before cold weather set in.

Estimate:

Excavation, 11523 cubic yards @ 35¢-----	\$ 4,033.
Fill, 5600 cubic yards @ 35¢ -----	1,960.
Trenching for drains and walls, -----	1,290.
Grading, sodding and seeding slopes, ----	1,900.
Drains and sumps, -----	1,580.
Blind drains, -----	600.
Concrete, 5694 cubic yards @ \$6.00-----	34,164.
Forms, -----	9,800.
Finishing, waterproofing and whitewashing,	4,380.
Ventilation, -----	200.
Steel beams, -----	2,970.
Anchor bolts, -----	1,030.
Ring Bolts, -----	84.
Trolleys, -----	1,500.
Doors, -----	2,000.
Speaking tubes, -----	153.
Fire places, -----	156.
Electrical plant, -----	6,750.
Conduits and lights, -----	2,000.
Water supply, -----	600.
Road, -----	3,250.
Taking down forms, -----	500.
Erecting and repairing plant, -----	4,000.

Carried forward, ---\$ 84,900.

Brought forward-----	\$ 84,900.
Removing and storing plant,-----	200.
Transportation (Steamer Tourist, etc.)---	4,000.
Superintendence,-----	2,900.
Office expenses and contingencies,-----	9,000.
TOTAL,-----	<u>\$101,000.</u>

Very respectfully,

Your obedient servant,

Chas. R. Hunter

Col., Corps of Eng'rs., U. S. A.

2 inclos.,
tracings in sep. roll.

OFFICE OF CHIEF OF ENGINEERS

AUG 31

35986

WAR DEPARTMENT	
U.S. Engineer Office, Boston, Mass.	
3288	Received SEP 4 1900

August 28, 1900.

Suter, Col. Chas. C.

Refers to E. D. instructions of July 25, 1900, and submits plans and est. for const'n of and half of mortar battery at Fort Andrews, Deddocks Is., Mass. In a general way the design submitted follows the latest type drawings issued. Sends small scale map of the res'n on Deddocks Id.

Submits detailed estimate amounting to \$101,000 which is larger than the approximate one sent July 17, 1900. The above est covers cost of drainage system, electric plant, road const'n, etc.

2 inclos. E.D. (tracings)

REC'D. MAJOR, OFFICE CHIEF OF ENGRS. SEP 10 1900
msd. 3 & 4 accy. Rm. 185, Bk. 3.

1st indorsement.

Office Chief of Engineers,

U. S. ARMY.

September 1, 1900.

Respectfully returned to Colonel Suter, approved.

The funds on hand do not at present admit of the full allotment to cover the within estimate. Acting on Colonel Suter's letter of July 12, 1900, \$75,000 has been reserved for this battery.

This sum is hereby allotted from the appropriation for "Gun and Mortar Batteries", for construction of "gun and mortar batteries, Act of May 25, 1898, to be applied to the construction of as much of the battery as the \$75,000 will permit.

In executing the work, it is the desire of the Chief of Engineers that Colonel Suter so arrange matters as to leave the partially constructed battery in a condition to receive no injury from suspension of work, in case further funds are not provided by Congress. It appears from the within estimate that all the concrete work and most of the earth work can be put in place with the present allotment. The electric plant, trolleys, grading, sodding, and part of the fill could perhaps be postponed.

To be returned.

By command of Brig. Gen. Wilson:

Thos. V. Child

Major, Corps of Engineers.

35986

2.

2nd indorsement,
U. S. Engineer Office,
Boston, Mass.

September 6, 1900.

Respectfully returned to the Chief of Engineers, U. S. Army, contents noted.

Chas. R. Suter

Col., Corps of Engrs., U.S.A.
Ports 3288.

2 inclos. accomp.
traces in sep. roll.

REC'D. OFFICE CHIEF OF ENGRS. SEP 10 1900

W:MY

409681

War Department,
Adjutant General's Office,
Washington,

December 13, 1901.

The Commanding General,
Department of the East,
Governor's Island N.Y.

Sir:-

The Chief of Engineers has reported to the Secretary of War that on account of the cold weather and the impracticability of doing economical work during the winter it is the intention to close down active work at Fort Andrews within a few days, leaving only enough watchmen there to care for the plant and the unfinished work. As the ordnance can be better taken care of by the troops than by the Engineer employes, he asks that authority be given to turn over the ordnance, both mounted and unmounted, to the troops stationed at that fort. He further reports that the eight emplacements for mortars have already been delivered and the mortars received and mounted; four of the mortars for the new emplacements have been received but not mounted and the four others have been ordered shipped.

The request of the Chief of Engineers having been approved by the Secretary of War, he directs that you issue the necessary instructions for the receipt of these emplacements and ordnance by the proper commanding officer and for ^{their} use and care by the troops.

Very respectfully,

Geo. Andrews.

Assistant Adjutant General.

For the
Chief of Engineers.

35986

DEC 39 1901

WAR DEPARTMENT

14	FORNIEL- U.S. ENGINEER OFFICE
44	CATIONS, BOSTON, MASS.
	BOSTON, DEC. 18 1901

Adjutant General's Office.

Furnishes official copy of letter of Assistant A.G., Dec. 13, 1901, to C.G., Dept. of the East, communicating instructions of the S. of W.; looking to the receipt of the within-mentioned mortar emplacements and ordnance at Ft. Andrews, Mass., by the proper C.O., for their use and care by the troops.

Jan. 30, 1902. Letter to C.O. with inclos. 67468.

File 3

File

Send me copy.

1st indorsement.

Office Chief of Engineers,

U. S. ARMY.

December 16, 1901.

Respectfully referred to Capt. Henry Taylor, Corp. of Engineers, for his information.

Is returned

By command of Brig. Gen. Gillespie:

Wm. V. Allen

Major, Corps of Engineers.

35986 39

2nd indorsement.

U. S. Engineer Office, Boston, Mass.,

January 25, 1902.

Respectfully returned to the Chief of Engineers, with one copy each of invoices and receipts covering the transfer of the Engineer and Ordnance property pertaining to this battery, which was turned over on the 15th instant.

A copy of the invoice of Capt. E. S. Benton, Artillery Corps, in regard to the condition of the armament is inclosed herewith.

Henry Taylor
Captain, Corps of Engineers.

14
44
Forts.B.
4 inclos. and
Copy of Inclo. 71 accomp.

FROM OFFICE OF THE CHIEF OF ENGINEERS JAN 27 1902

WAR DEPARTMENT,
UNITED STATES ENGINEER OFFICE,

42 BOW STREET,
PORTSMOUTH, N. H.
P. O. BOX 5346, ROOM 917 WINTHROP BUILDING,
BOSTON, MASS.

February 3, 1902.

Brig. Gen. G. L. Gillespie,
Chief of Engineers, U. S. Army,
Washington, D. C.

General:

1. I have the honor to report that upon re-estimating the amount of work to be done to complete the mortar battery at Fort Andrews I have ascertained that the amount of funds on hand is not nearly sufficient to complete the battery.
2. The condition of the work is briefly as follows: The excavation has been completed except in the mortar pits and in part of the roadway in rear of the battery; the magazines, shell rooms and passages are finished, except the floors and placing the trolleys, and the concrete cover over them is in place. The work yet to be done is to make the excavation in the pits; the earth fill over the magazines, etc. (which is partly to be made from the earth excavated from the pits); to put in the gun platforms, floors throughout the battery, and electric lights; and to build a road in rear and clean up around the battery.
3. The available balance on hand from the allotment for this work is approximately \$5,000.00. The estimate of the amount required to complete this work is approximately \$39,000, made up in detail as follows:

Excavation, -----	\$ 2,400.00
Fill, -----	1,415.00
Grading and sodding, -----	3,715.00
Drainage, -----	920.00
Concrete, -----	7,825.00
Waterproofing, -----	600.00
Dry walls, -----	600.00
Placing trolleys, -----	140.00
Hand rails, -----	180.00
Speaking-tube mouth-pieces, -----	90.00
Steam pipes for heating, -----	315.00
Water supply, -----	840.00
Doors, -----	2,305.00
Setting base rings, -----	250.00
Road in rear, -----	1,360.00
Electric lighting, -----	7,300.00
Latrines, -----	1,700.00
Watching and repairs to plant, -----	1,000.00
Removing plant and cleaning up rubbish, -----	1,200.00
Transportation, -----	1,100.00
	<u>\$35,255.00</u>
Superintendence, contingencies, etc.,	
10%, -----	3,525.50
	<u>\$38,780.50</u>
	=====

4. The estimate given above does not include the cost of the generating plant for the electric lighting, which is estimated to be \$3,700.00. It does include, however, the storage battery, switchboard and all other accessories for the lighting except the generating plant itself, included in which are simply the boiler and generating set and the cost of setting up, piping, fittings, etc. The cost of the generating plant is not included for the reason that it provided only for the lighting of the mortar battery and the batteries for two 6-inch R.F. guns and two 5-inch R.F. guns. No provision was made for searchlights or for post lighting.

5. The generating plant was to be located in rooms in the mortar battery provided for this purpose. In view of the use of the generating plant for lighting not only the batteries, but also for running the searchlights and lighting the post, it would be better, in my opinion, to provide a power house separate from the mortar battery which could be located more centrally, when consideration is had of all the lighting that is to be done and which could be made of a suitable size to accommodate the largest plant which would ever be required at the post, which cannot be ^{accommodated} provided in the room now provided for it. The rooms provided are, however, ample to contain the plant for lighting the batteries alone.

6. The reason that the amount required to complete this work so largely over-runs the amount available is due principally to the discovery of quicksand under the site of the mortar battery. When the original estimate was made there was nothing to indicate that quicksand would be discovered, but it appeared that the foundations would be good and secure. Work was accordingly laid out and started under a definite plan. This plan contemplated beginning the laying of concrete at the eastern end of the battery. Just before the excavation was completed at this end of the battery, quicksand was discovered. It not only cost a large amount of money to drain this quicksand so as to make the foundations stable, but it required an entire change of the manner in carrying on the work, and on this account the work throughout the entire summer wa

carried on at a great disadvantage, and the delay prevented the work being finished before cold weather came on.

7. A brief description of the method proposed for draining the quicksand was given in the Annual Report. This work has been entirely successful. The water can be heard running a steady stream through the outlets provided for it but there has not been the slightest indication of its coming through the walls or floors, and there is no indication of any settlement of the foundations.

8. In the above estimate are also included a number of items which were not included in the original estimate. Part of these are made necessary on account of the delay in finishing the work caused by the quicksand. It was attempted to finish the concrete last fall, to waterproof it, and to cover it with earth sufficiently to protect it from the weather. This could easily have been done had it not been for the delay caused by the discovery of the quicksand. A cold wave of unusual severity came early in the season and caught this work at a critical time. From recent examinations I believe that the exposed surfaces of the concrete, where the waterproofing was applied just before the cold weather, have been seriously damaged by the frost and that these surfaces will have to be entirely renewed. This item is partly covered in the cost of the concrete and partly in the item of waterproofing in the above estimate. The damage to these surfaces is referred to in Colonel Suter's report of inspection published in Mimeograph No. 45

I believe that the damage was caused entirely by the frost.

9. The emplacements which are being constructed at Fort Standish for two 6-inch R. F. guns were treated in the same manner as the mortar battery at Fort Andrews. All but a small portion of the 6-inch battery was waterproofed before cold weather came on, but small portions of the retaining walls were finished just before the cold weather. The portions treated in warm weather show no signs of scaling while the part treated just before the cold weather has acted in the same manner as the surface of the mortar battery at Fort Andrews noticed by Colonel Suter. A special report of this will be made later.

10. Between the walls of the battery and the earth, dry walls were carefully laid in order to carry off the water from the springs in the ground, of which it is full. On account of the walls not being completely finished and covered last fall the alternate freezing and thawing have caused more or less slides, and in order to make certain that ample facility for the water to escape is given, it will probably be necessary to take out a large part of these walls and relay them. This item is also included above.

11. Other items which would not have been necessary could the work have been completed last fall are those for watching and repairs to plant and transportation.

12. The item of latrines and removing the plant and cleaning up the rubbish around the battery were not included in previous est

16. If these transfers are authorized the funds then available will be used for completing the most essential parts of the mortar battery. It is estimated that with these funds the excavation can be completed, the gun platforms put in, the floors laid, the trolleys placed, and the electric light tubes, wires and switchboards placed; in other words, the battery will be put in such shape that it will be serviceable.

17. In detail the estimated use of the funds would be as follows:

Excavation, -----	\$ 2,400.00
Fill, -----	1,415.00
Grading and sodding, -----	500.00
Drainage, -----	920.00
Concrete, -----	6,825.00
Waterproofing, -----	600.00
Dry walls, -----	600.00
Placing trolleys, -----	140.00
Hand rails, -----	180.00
Speaking-tube mouth-pieces, -----	90.00
Setting base rings, -----	250.00
Electric wiring, etc., -----	2,600.00
Watching and repairs to plant, -----	1,000.00
Transportation, -----	700.00
	<u>\$18,220.00</u>
	<u>1,822.00</u>
Contingencies, etc., -----	<u>\$20,042.00</u>
	<u>=====</u>

18. The funds remaining available on each of the allotments from which transfers are made it is estimated will be sufficient to complete the works for which the allotments were made, and it is not anticipated that any further allotments will be required

C. of E.- 8

for completing those works.

19. A further allotment of \$19,000 will however be required
* for completing the mortar battery at Fort Andrews.

Very respectfully,

Your obedient servant,

Harry C. Suter

Captain, Corps of Engineers.

14
Forts.B.

Through Col. Chas. R. Suter,

Corps of Engineers,

Division Engineer of the Northeast Division.

NORTHEAST DIVISION
ENGINEER CHIEF
February 4, 1902

ENGINEER CHIEF OF ENGINEERS

35986

70 Boston, Mass., February 3, 1902.

WAR DEPARTMENT
Taylor,
Captain Harry

Repts. condu. of the work, etc., & insufficiency of funds to compl. the Mor. Batty. at Ft. Andrews, Mass. To compl., presents est. in detail, amtg. to \$39,000, approx., (which does not incl. cost of Gen-rlg. plant for the elec. lghing., estd. at \$3,700). Avail. bal. on hand from allot. for this work is, approx. \$5,000. Repts. fur. allot of... \$39,000 for compln., or, in lieu of this allot., auth. to make certain transfers of funds, stated, from apprn. for "Gun and Mor. Batteries", to complete the most essential parts of the batty., i.e., place it in such shape that it will be serviceable. The estd. amt. of these transfers of funds to be used is, approximately, \$20,000, requiring a further allot. of \$19,000 to compl. the Batteries, of \$19,000.

14 FORTH- U.S. ENGINEER OFFICE
78 CATIONS, BOSTON, MASS.
FEB 14 1902

NEED BACK, OFFICE CHIEF OF ENGRS. FEB 18 1902

1st indorsement.
NORTHEAST DIVISION
(ENGINEER OFFICE)

New York, February 4, 1902.

Respectfully forwarded to the Chief of Engineers, U. S. Army.

The increased estimate has been rendered necessary by unforeseen contingencies and extension of work as described by Captain Taylor, and is recommended for approval. In the interest of economy it is very desirable that the battery be promptly completed, and such transfers of funds suggested by Captain Taylor as may be possible are also recommended.

Chas. R. Suter

Colonel, Corps of Engineers,
Division Engineer.

16-1902.

2d indorsement.

Office Chief of Engineers,
U. S. Army.

February 10, 1902.
Respectfully returned to Captain Taylor, approving the transfers of funds within recommended.

For the completion of this battery as within recommended, the further sum of \$21,720.41 is hereby allotted from the appropriation for "Gun and Mortar Batteries" (by contract), Act of March 3, 1897,

making a total of \$36,720.41 made available for this battery. This new allotment must be expended by contract, and not otherwise.

This is all the money that can be gotten for mortar-battery work, and this has been obtained by withdrawal from allotments for other works.

In the Act of March 1, 1901, the construction funds therein appropriated were restricted by Congress to gun batteries, and it is probable that the same course will be followed in the next fortification appropriation Act. In short, no further allotments for mortar-battery construction can be hoped for. Captain Taylor must, therefore, use every effort to complete this mortar battery with the funds now made available.

This paper to be returned.

By command of Brig. Gen. Gillespie

Major, Corps of Engineers.

35986

70

Through Col. CHAS. R. SUTER,

Corps of Engineers,

Division Engineer, Northeast Division.

Recd by Feb. 12, 1902.

3rd indorsement.
NORTHEAST DIVISION
ENGINEER OFFICE

New York, February 13, 1902

Respectfully forwarded to Captain Taylor, inviting attention to the preceding indorsement.

Chas. R. Suter

Colonel, Corps of Engineers
Division Engineer.

16-1902.

4th indorsement.

U. S. Engineer Office,
Boston, Mass.

February 13, 1902

Respectfully returned to the Chief of Engineers.

Forney
Captain, Corps of Engineer

14
78

Fort S. B.
NEED BACK, OFFICE CHIEF OF ENGRS. FEB 18 1902