

Primary Battery File

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Record Group 77

Correspondence of the Chief of Engineers

Entry 103

File, Fort, Battery:

28660

Ft. Taylor

Btty Dilworth

United States Engineer Office.

Key West, Fla., December 15, 1898.

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

General:-

Pursuant to directions contained in Department letter 28660, October 24, 1898, that plans and estimates be prepared for four emplacements for 15-pdr. R. F. guns, with maps showing proposed locations and fields of fire, I have the honor to report as follows:-

Rapid Fire guns of about the power in question are called for by the project for the defense of Key West in the following locations:-

1. Two 16-pdrs. near the "North" battery.
2. Three in Fort Taylor.
3. Three in the Western Martello Tower.
4. Three in the Eastern Martello Tower.

It may, I think, be taken for granted that the emplacements in the Martello Towers should be the last or among the last to be constructed.

I would recommend therefore that two of the four guns in question be mounted near the "North" battery, and two in Fort Taylor.

The fields of fire of the guns in these proposed locations and the fields of fire of batteries at present under construction, have been marked on

the Coast Survey Chart herewith.

There are also three tracings herewith, showing respectively, (1) the proposed location near the "North Battery", (2) the proposed location in Fort Taylor, with the character of emplacements proposed, (3) the character of the proposed emplacements near the "North Battery".

As these emplacements are copied from the typical drawings with hardly any change it was not thought necessary to have sections prepared at this time. They will be forwarded later.

I. In connection with the proposed location in Fort Taylor, attention is invited to the fact that the project of the Board of Engineers contemplates the construction in Fort Taylor of emplacements for nine R. F. guns, -- three 6 inch, three 16-pdrs., and three 6-pdrs -- and that the construction in Fort Taylor of emplacements for two 12-inch guns, now in progress, is not contemplated by that project. The location of the latter emplacements in Fort Taylor has of course greatly diminished the space available for R. F. guns, as well as limited possible fields of fire.

Considering the character of ^{the} R. F. armament proposed by the Board, the shape and size of the Fort, and the relative position of fort, mine fields and channels, it is probable that the three 6-inch guns were intended to be mounted behind the south west face of the Fort, and the 16-pdrs. and 6-pdrs. behind the west face. The six-inch guns would then command the southern channel of approach and would sweep the mine field; the 16-pdrs. would point across the main entrance channel and the mine field, the left gun firing down the main ship channel to the extent of its range, and the right gun covering the inner harbor and the mines across the north west entrance channels. Parapets for the 6-pdrs. could be so arranged that these guns would fire both over the main mine field

and over the inner harbor.

The position that would thus have been occupied by the 6-inch guns is now occupied by the 12-inch, and there is no other location in Fort Taylor whence the 6-inch guns could bring the same fire that they could have brought from behind the south west face. Under these circumstances it becomes a question whether they should be located in Fort Taylor at all. At the south end of the outwork of the Fort there is a site for these guns, from which the field of fire would be the same as that furnished by the location behind the south west face, except that the right gun of the battery would not be able to fire so far to the flank. The main objection to this site is the expense that must be incurred for foundations. Another site would be in the neighborhood of the 4.7-inch R. F. battery, and still another midway between these two, on what is now a flat submerged at all times except at extremely low water, but which judging from present indications will soon be a sand beach. It will be noted however that the proposed 15-pdr. battery is placed as far from the 12-inch battery as possible, except that about eleven feet more could be gained by making the parapet ~~on~~ the right flank of the right gun entirely of concrete. The space lying between the two batteries could be made to contain the three 6-inch guns called for by the project should it be judged expedient to locate them there.

The crest of the proposed 15-pdr. battery in Fort Taylor is at elevation 19' 10". This comes from taking the floor of the magazines at 7' 4", the parade of the Fort being at elevation 8' 6".

The typical drawings show the magazines protected by the equivalent of 36 feet of sand. In the location proposed, the distance from the inside of the magazine to the outside of the face wall of the Fort is 28 feet. Seven feet of this distance will be occupied by a concrete wall, five feet of it by the brick

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face-wall of the Fort, and it is proposed to fill the 14 feet between these walls with debris obtained in pulling down the old Fort, (viz: broken brick and concrete), the fragments to be carefully placed and the interstices filled with sand. Allowing this material to have a resistance to penetration one third greater than that of sand, the protection to the magazines will be the equivalent of more than 40 feet of sand.

II. The proposed location near the North Battery assumes that the two 8-inch guns proposed by the project will be located on one flank of the 15-pdrs., and the two 6-pdrs. on the other. All of the guns in this battery will have in close range the mines that are to bar the north west passage, and will also cover all but the most easterly group of mines that are to be placed in the main (southern) entrance channel.

Estimate of cost.

I. Battery of two 15-pdrs. near "North" battery.

305 cubic yards Portland concrete at \$8.00	\$2,440.00	
800 cubic yards Rosendale concrete at \$7.00	5,600.00	
Sand fill, 3800 cubic yards at 75¢	<u>2,850.00</u>	
	10,890.00	
Engineering and contingencies - - - - -	<u>1,089.00</u>	\$11,979.00

Amt. brought fwd. - - \$11,979.00

II. Battery of two 15-pdrs. in Fort Taylor.

Preparation of site, that is, tearing down northern half of west face of Fort Taylor (estimate based on similar work for 12-inch emplacements) - - - - - 200 cubic yards Portland concrete at \$7.00 540 cubic yards Rosendale concrete at \$6.00 Fill, 1250 cubic yards at 50¢

\$4,000.00
1,400.00
3,240.00
825.00
9,265.00

Engineering and contingencies

927.00

\$10,192.00

Total for both batteries - - - - - \$22,171.00

Very respectfully,

Your obedient servant,

C. McKinstry
Captain, Corps of Engineers, U. S. A.

4 Incls. tracings in sep. pkg.

Office of the Chief of Engineers
Washington, D. C.
December 28, 1899.
Dear Sir:
Reference is made to your letter of the 21st inst. regarding the proposed work for the battery of two 15-pdr. guns in Fort Taylor, and in reply to inform you that the same has been approved by the Chief of Engineers, and that the necessary orders will be issued to the Engineer in Charge of the work.

Very truly yours,
C. McKinstry
Captain, Corps of Engineers, U. S. A.

W. T. HUGHES, OFFICER,
2nd Department.

The report in the report of the Division of Engineer, dated the 15th inst., is hereby approved, and the necessary orders will be issued to the Engineer in Charge of the work.

Approved: _____
Date: _____

