

EDITION OF JAN. 14, 1915.  
REVISIONS: JUNE 9, 1916.

SERIAL NUMBER

103

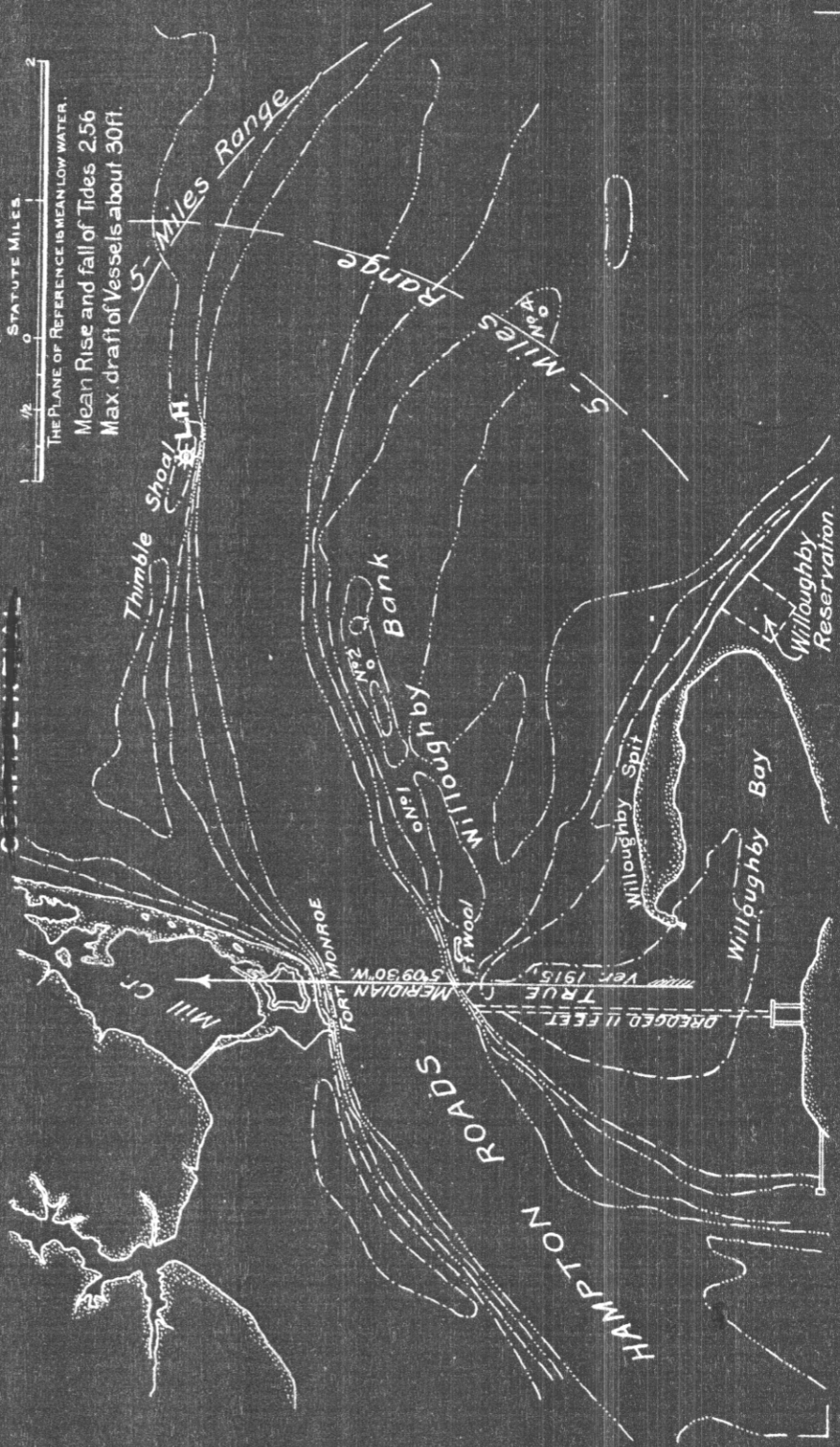
HAMPTON ROADS, VA.

1/2 0 1 2  
STATUTE MILES.

THE PLANE OF REFERENCE IS MEAN LOW WATER.

Mean Rise and Fall of Tides 2.56

Max. draft of Vessels about 30 ft.

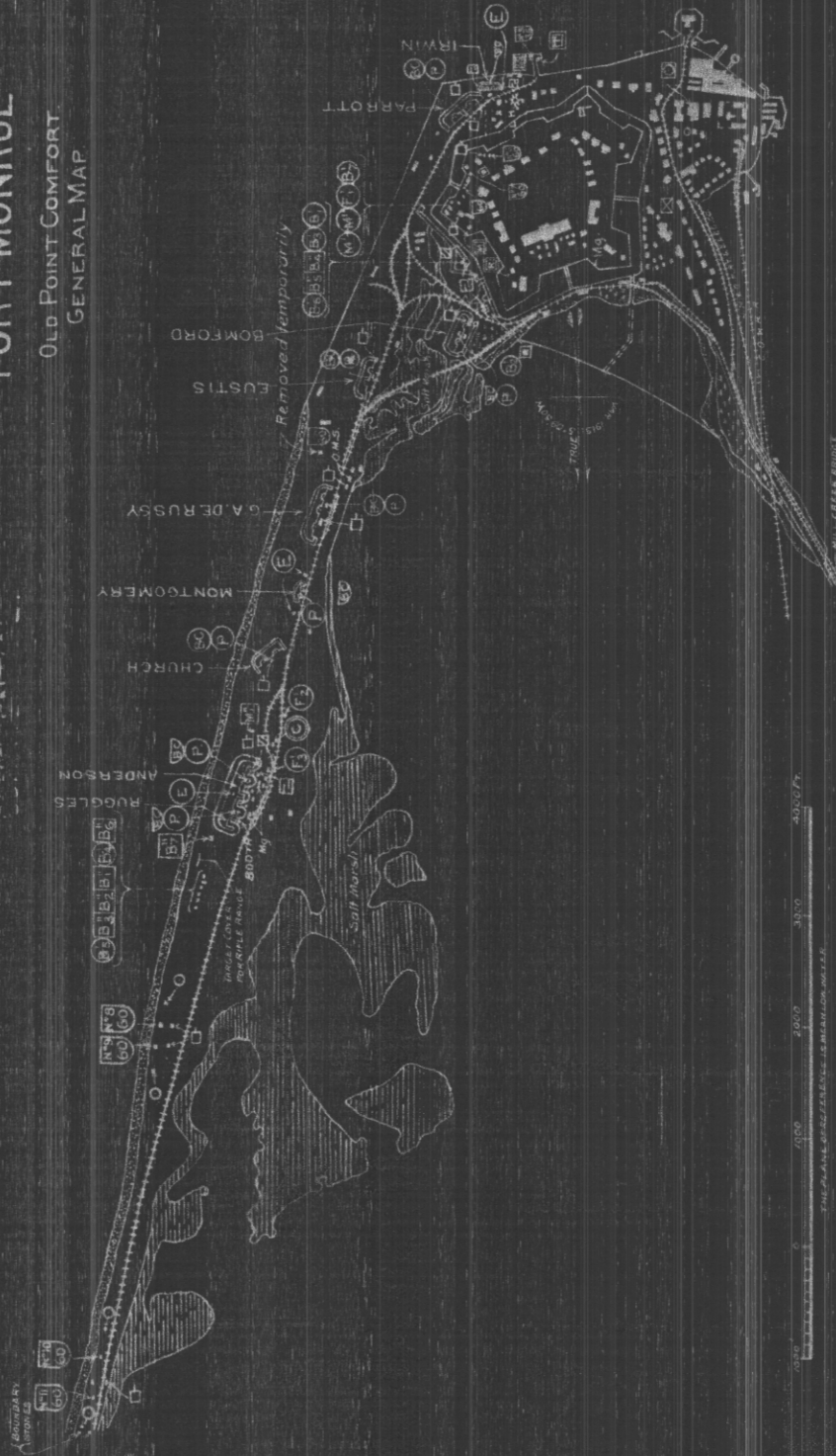


EDITION OF JUNE 9 1916  
REVISIONS: APR. 1 1921.

SERIAL NUMBER



HAMPTON ROADS, VA.  
**FORT MONROE**  
OLD POINT COMFORT  
GENERAL MAP





121 CAS. PHOTO. LAB'TY.  
122 FIRE ENGINE HO. & TEL. EXCH.  
123 NURSES QRS.  
124 OFFICER'S CLUB.  
20 Q.M. OFFICE.  
21 CONST. Q.M. & FIN. OFFICE.  
22 Q.M. SUPPLY OFFICE.  
23 Q.M. EMPLOYEE.  
24 OFFICE & TEAMSTERS QRS.  
25 Q.M. WAGON SHED.  
26 MCT. OFFICE, ST. ROOM,  
AND BLACKSMITH SHOP.  
27 Q.M. GARAGE.  
28 Q.M. STABLE.  
29 Q.M. STOREHOUSE &  
BOAT SUPPLIES.  
200 Q.M. SHOPS.  
201 Q.M. STOREHOUSE.  
30 ORDINANCE ST. HO.  
50 SIGNAL CORPS ST. HO.  
70 ENL. MENS LIBRARY.  
71 CHAPEL.  
72 YM. G. A. BUILDING.  
73 CATHOLIC CHURCH.  
74 PRIESTS HOUSE.  
75 CATHOLIC CLUB.  
76 LIBERTY THEATRE.  
77 HOSTESS HOUSE.  
78 HOSTESS HO. DORMITORY.  
80 POST OFFICE.  
90 AMERICAN RAILWAY  
EXPRESS.  
91 BAGGAGE ROOM.  
92 FREIGHT HOUSE.  
93 STEAMBOAT TICKET OFF.  
94 WAITING ROOM.  
95 BOOK STORE & CAFE.  
96 LANDING FOR SMALL BOATS.  
97 PAVILION.  
98 CHAMBERLIN GARAGE.  
901 C. & O. FREIGHT HOUSE.  
902 C. & O. DEPOT.  
903 N. N. & O. P. RY. WATCH HO.  
904 CAFE.  
905 CHAMBERLIN BOILER  
HOUSE & LAUNDRY.

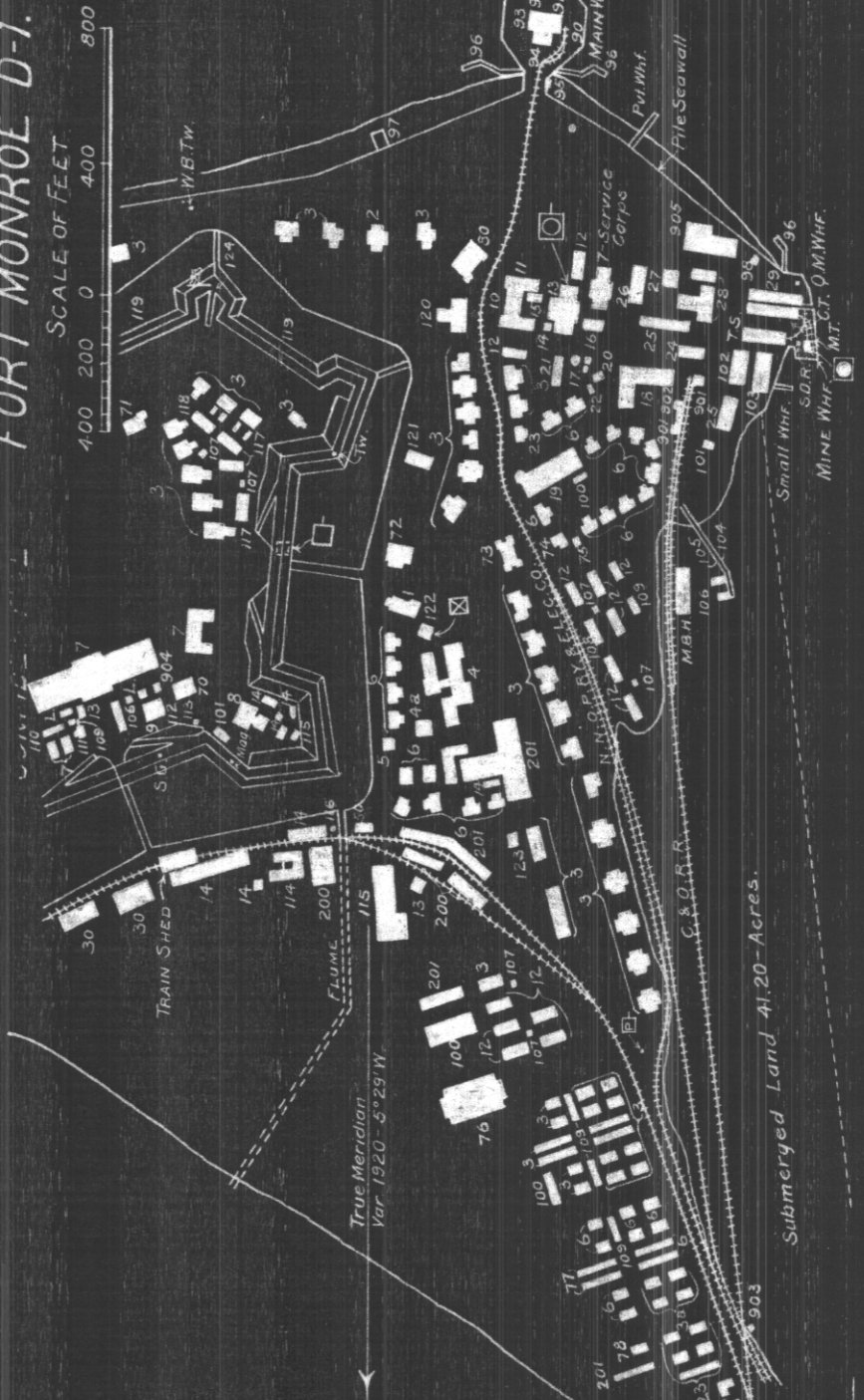
# CHESAPEAKE BAY FORT MONROE D-1.

SERIAL NUMBER

EDITION OF JAN. 1, 1921.  
REVISIONS: APR. 1, 1921.

## LEGEND

- 1 ADMINISTRATION BLDG.
- 2 COMMANDING OFF. QRS.
- 3 OFFICER'S QRS.
- 3a WARRANT OFF. QRS.
- 4 HOSPITAL.
- 5 HOSPITAL STWDS. QRS.
- 6 N. C. O. QUARTERS.
- 7 BARRACKS.
- 8 GUARD HOUSE.
- 9 POST EXCHANGE.
- 10 ARTILLERY SCHOOL.
- 11 TRAINING CENTER HO.
- 12 C. A. S. CLASSROOM.
- 13 BOILER HOUSE.
- 14 STOREHOUSE.
- 15 PRINTING HOUSE.
- 16 C. A. S. ASSEMBLY ROOM.
- 17 SEWAGE TANK & P. HO.
- 18 GARAGE LABORATORY.
- 19 SHERWOOD INN.
- 100 OFFICER'S QUARTERS.
- 101 GARAGE.
- 101 TOOL AND OIL ROOM.
- 102 MOTORCYCLE GARAGE.
- 103 S. L. LABORATORY.
- 104 PIER.
- 105 POST LAUNCH HOUSE.
- 106 ENL. MENS BATH HO.
- 107 HEATING PLANT.
- 108 C. A. S. PHOTO. LAB'TY.
- 109 LAVATORY.
- 110 MESS KITCHEN.
- 111 BAND MESS.
- 112 GYMNASIUM.
- 113 TESTING ROOM.
- 114 SALVAGE ST. HO.
- 115 LAUNDRY.
- 116 GALVANOMETER HO.
- 117 VOCATIONAL TRAINING CLASS ROOM.
- 118 POST SCHOOL.
- 119 CASEMATES.
- 20 OFFICER'S LIBRARY.



# LEGEND

- 3 OFFICER'S QRS.
- 6 N.C.O. QUARTERS.
- 6a ENLISTED MEN'S QRS.
- 7 BARRACKS.
- 13 BOILER HOUSE.
- 14 STOREHOUSE.
- 101 TOOL AND OIL HOUSE (A).
- 106 ENL. MEN'S BATH HO.
- 109 LAVATORY.
- 110 MESS KITCHEN.
- 111 BAND MESS.
- 125 ARTILLERY SCHOOL O.M.S.
- 126 BOARD WALK.
- 127 GUN SHED.
- 128 OFFICER'S BATH HO.
- 129 ARTILLERY ENGRS. ST. HO.
- 130 SUBSTATION.
- 131 QUARTERS METEORO.
- 132 LOGICAL SQUAD.
- 132 VOCATIONAL TRAINING OFFICE.
- 133
- 134 BAKERY.
- 201 O.M. STOREHOUSE.
- 202 COMMISSARY ST. HO.
- 300 ORDINANCE ST. HO.
- 40 ENGR. DEPT. OFFICE.
- 41 " " ST. HO.
- 42 " " QUARTERS.
- 43 " " SHOPS.
- 71 CHAPEL.
- 99 LIEUT. ELDRIDGE.
- 900 DOCTOR U.S.
- QUARANTINE SERVICE.

EDITION OF JAN. 1, 1921.  
REVISIONS: APR. 1, 1921.

SERIAL NUMBER

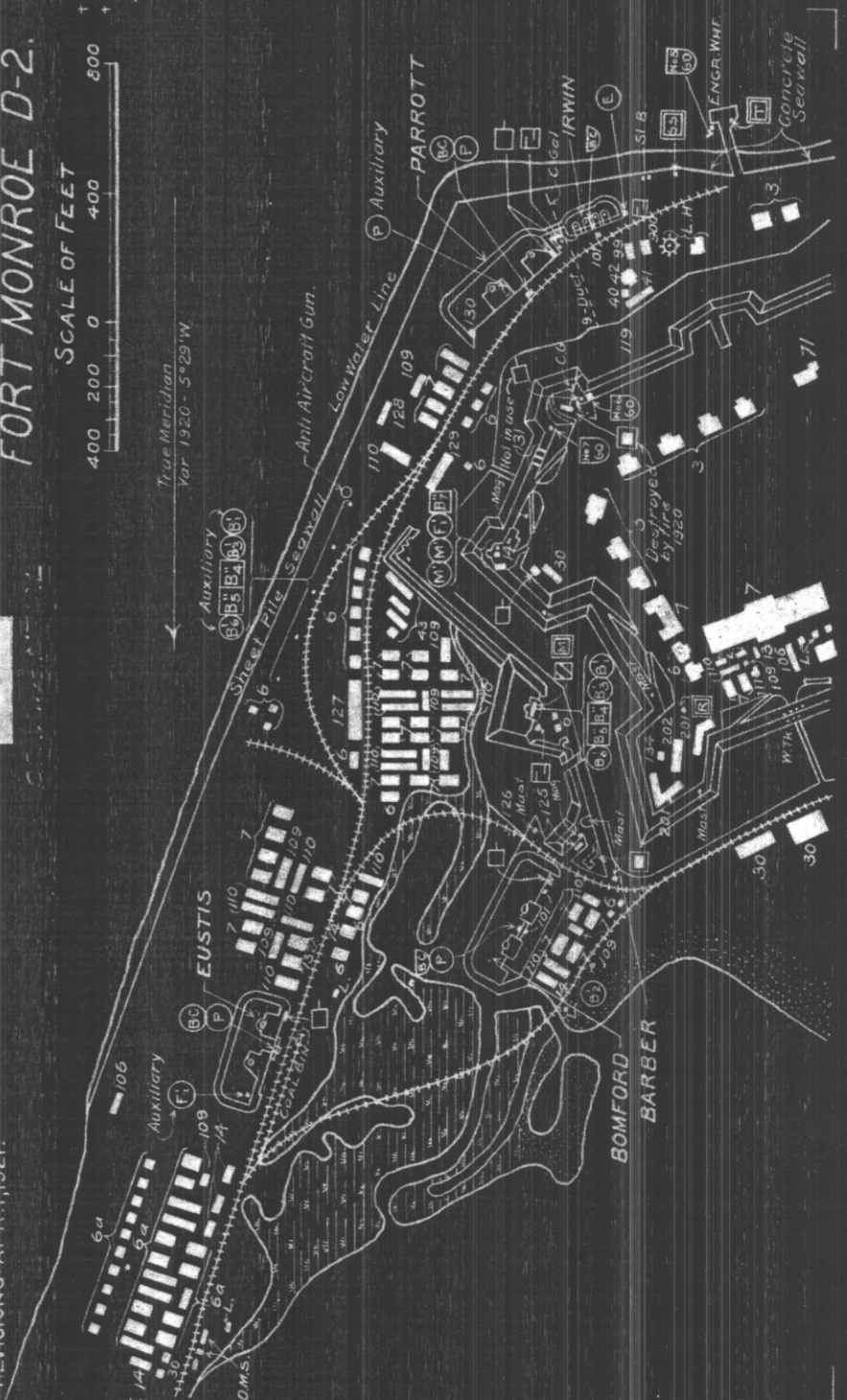
CHESAPEAKE BAY

## FORT MONROE D-2.

BATTERIES.  
PARROTT 2-12"D.  
BOMFORD 2-10"D.  
EUSTIS 2-10"D.  
BARBER 1-8"N.D.  
IRWIN 4-3"B.P.  
+ Out of Commission



True Meridian  
Var 1920 - 5° 29' W





- LEGEND**
- 6N.C.O. QUARTERS.
  - 7 BARRACKS.
  - 8 GUARD HOUSE.
  - 14 STOREHOUSE.
  - 30 ORDNANCE ST HD.
  - 30 GARAGE.
  - 09 LAVATORY.
  - 10MESS KITCHEN.
  - 135TRACTOR SHED.
  - 36CAMP KITCHEN.
  - 37 TARGET COVER AND RIFLE RANGE.

EDITION OF JAN. 1, 1921.

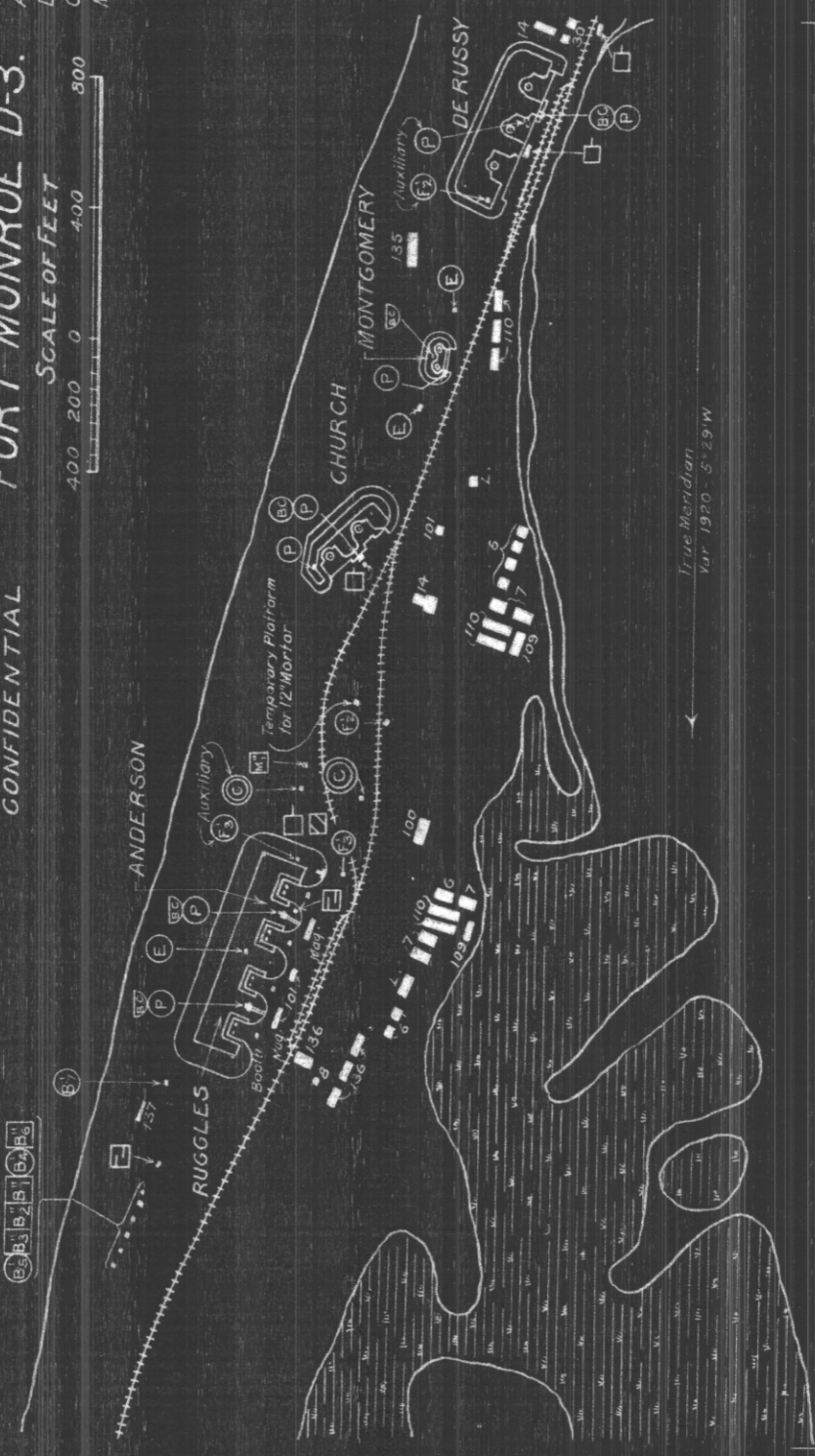
SERIAL NUMBER

**CONFIDENTIAL**

CHESAPEAKE BAY

# FORT MONROE D-3.

- BATTERIES.**
- RUGGLES 4-12"M.
  - ANDERSON 4-12"M.
  - DE RUSSY 3-12"D.
  - CHURCH 2-10"D.
  - MONTGOMERY 2-6"N.D.



True Meridian  
for 1920 5° 29' W

LEGEND  
 8 GUARD HOUSE  
 14 STOREHOUSE  
 38 BALLOON HANGAR

EDITION OF JAN. 1, 1921.

SERIAL NUMBER



# CHESAPEAKE BAY FORT MONROE D-4.

SCALE OF FEET  
 400 200 0 400 800





EDITION OF JUNE 9, 1916.  
REVISIONS: APR. 1, 1921.

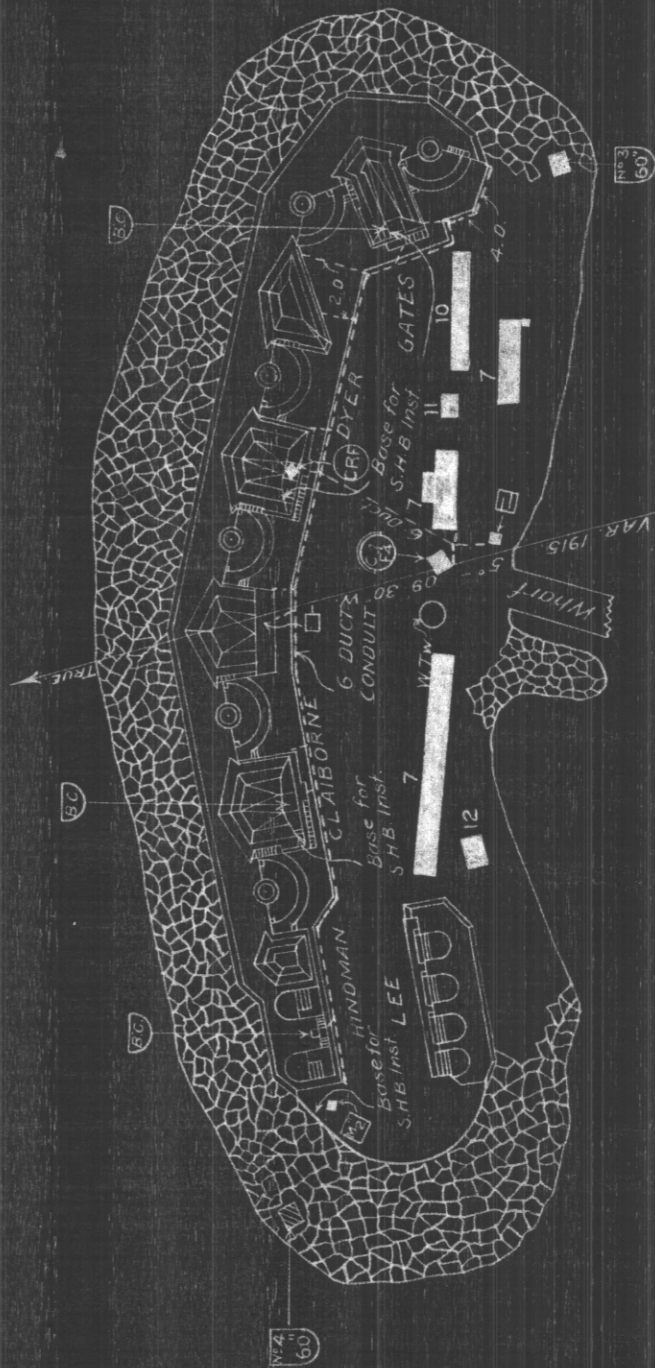
SERIAL NUMBER

HAMPTON ROADS, VA

## FORT WOOL

## BATTERIES:

\* CLAIBORNE... 2-6" D.  
\* DYER... 2-6" D.  
GATES... 2-6" D.  
LEE... 4-3" P.  
HINDMAN... 2-3" P.  
\* Guns Dismounted.



THE PLANE OF REFERENCE IS MEAN LOW WATER

500 ft.

400

300

200

100

0

Ledger  
Batteries  
CHESAPEAKE BAY.  
(Summary)

Forts.	MORTARS:		12-INCH		10-INCH	
			Dis.		Dis.	
	Mod:		Mod:Mod:		Mod:Mod:	
	'96:		'01:'97:		'96:'94:	
✓ Monroe,.....	16:		2:	3:	4:	2:
✓ Wool,.....						
Totals.	16:		2:	3:	4:	2:

	6-INCH		3-INCH	
	Dis:Ped:		B.P:Ped:	
	Mod:Mod:		Mod:Mod:	
	'03:'00:		'98:'02:	
Monroe,.....		2:		4:
Wool,.....	6:			6:
Totals.	6:	2:	4:	6:





Ledger  
Batteries  
CHESAPEAKE BAY.  
(Summary)

SUMMARY.

Guns to remain at the Coast Defenses of Hampton Roads, after those listed for withdrawal for use abroad, etc., have been removed:

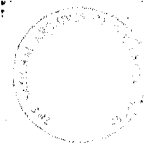
Fort	Battery	3"	4"	4.7"	5"	6"	8"	10"	12"	12"M	2.24"
Monroe	Irwin	4									
"	Parrott								2		
"	DeRussy								3		
"	Church							2			
"	Anderson									4	
"	Ruggles									4	
Wool	Claiborne				2+						
"	Hindman	2									
"	Lee	4									

✓ To be retained  
+ To be dismounted + emplaced in Battery Gates  
✓ Removed

LISTED FOR REMOVAL.

Fort	Battery	3"	4"	4.7"	5"	6"	8"	10"	12"	12"M	2.24"
Monroe	Anderson									4	
"	Bomford							2+			
"	Eustis							2+			
"	Ruggles									4	
Wool	Gates				2						
"	Dyer				2						
Monroe	Barber										
"	Montgomery				2						

✓ Indicates removal reported.  
+ To be retained  
x To be remounted  
\* The two 6-inch guns from Battery Claiborne to be mounted here.



Ledger - 1  
Batteries  
CHESAPEAKE BAY.  
(Monroe)  
(Gatewood)  
(Humphreys).

FORT MONROE:

BATTERY GATEWOOD: Out of commission. (j-1).

Guns:

Carriages:

Status: Transferred September 24, 1898. (j-1).

Hoists: None. (j-1).

Remarks: 1.7" Armstrong formerly here shipped out of district,  
3 to Augusta Arsenal and 1 to Sanday Hook Proving  
Ground. July 13, 1914. (j-1, 2).

BATTERY CHARLES HUMPHREYS: Out of commission. (j-1).

Guns:

Carriages:

Status: Transferred March 19, 1897. (j-1).

Hoists: Taylor Raymond hoist formerly here widened and  
shipped to Fort H. G. Wright. (j-1).

Remarks: 1 10" rifle 1888 on disappearing 1894 formerly here  
shipped to Watertown Arsenal in 1911. Battery out  
of commission. (j-1).





Ledger - 2  
Batteries  
CHESAPEAKE BAY.  
(Monroe)  
(Barber)  
(Bomford).

BATTERY THOMAS H. BARBER: Out of commissioned. (j-1).

Guns: 1 8-inch B. L. R., model of 1888. (j-1).  
Carriages: 1 non-disappearing, model of 1892. (j-1).  
Status: Transferred November 1, 1898. (j-1).  
Hoists: None. (j-1).  
Remarks: Battery out of commission October 17, 1913. (j-1).  
The 8-inch gun was dismounted in August, 1917, and  
has been shipped to Watervliet Arsenal (Report of  
Operations October 17.) Listed for use abroad. (j-7).  
Removed. (j-9).



BATTERY BOMFORD:

Guns: 2 10-inch B.L.R., model of 1888. (j-1).  
Carriages: Disappearing, model of 1894. (j-1).  
Status: Transferred March 18, 1897. (j-1).  
Hoists: Projectile: 2 Taylor Raymond back delivery. (j-1).  
Hoists have been widened. (j-1).  
Powder: None. (j-1).  
Remarks: Listed for removal for use abroad. (j-8).  
To be retained. (j-10).

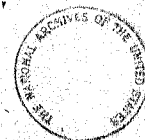
Ledger - 3  
Batteries  
CHESAPEAKE BAY  
(Monroe)  
(Irwin)  
(Parrott).

BATTERY IRWIN:

Guns: 4 3-inch r. f. guns, model of 1898MI. (j-1).  
Carriages: Balanced pillar mounts, model of 1898MI. (j-1 & 3).  
Status: Transferred May 28, 1903. (j-1).  
Hoists: None. (j-1).  
Remarks: Guns to be removed; carriages salvaged. (j-12).

BATTERY PARROTT:

Guns: 2 12-inch B.L.R., model of 1900. (j-1).  
Carriages: Disappearing, model of 1901. (j-1).  
Status: Transferred June 29, 1906. (j-1).  
Hoists: Projectile: 4 Taylor Raymond back delivery. (j-1).  
2 hoists have been widened and 2 are being  
widened. (j-1).  
Powder: None. (j-1).  
Remarks:



Ledger - 4  
Batteries  
CHESAPEAKE BAY  
(Monroe)  
(Eustis)  
(DeRussy).

BATTERY EUSTIS:

Guns: 2 10-inch B.L.R., model of 1888. (j-1).  
Carriages: Disappearing, model of 1896. (j-1).  
Status: Transferred January 3, 1901. (j-1).  
Hoists: Projectile: 2 Taylor Raymond front delivery. (j-1)  
Hoists have been widened. (j-1).  
Powder: Type A in Emplacement No. 1; Type C in  
Emplacement No. 2. (j-1).  
Remarks: Listed for service abroad. (j-9).  
To be retained. (j-10).



BATTERY DERUSSY:

Guns: 3 12-inch B.L.R., model of 1895. (j-1).  
Carriages: Disappearing, model of 1897. (j-1).  
Status: Transferred June 7, 1904. (j-1).  
Hoists: Projectile: 3 Taylor Raymond back delivery. (j-1).  
Hoists have been widened. (j-1).  
Powder: Three Type B. (j-1).  
Remarks:



Ledger - 5.  
Batteries  
CHESAPEAKE BAY.  
(Monroe)  
(Montgomery)  
(Church).

BATTERY MONTGOMERY:

Guns: 2 6-inch r.f. guns, model of 1900. (j-1).  
Carriages: Pedestal mounts, model of 1900. (j-1).  
Status: Transferred June 30, 1904. (j-1).  
Hoists: Projectile: 2 Hodges back delivery (hand power) (j-1).  
To be widened. (j-1).  
Powder: None. (j-1).  
Remarks: 2 6-inch guns temporarily transferred to Cape Henry.  
(j-5, 9).  
To be remounted. (j-10).

BATTERY CHURCH:

Guns: 2 10-inch B.L.R., model of 1895MI. (j-1).  
Carriages: Disappearing, model of 1896. (j-1).  
Status: Transferred January 3, 1901. (j-1).  
Hoists: Projectile: 2 Taylor Raymond back delivery. (j-1)  
Hoists have been widened. (j-1).  
Powder: 2 Type A (j-1).  
Remarks: To be retained. (j-10).

Ledger - 6  
Batteries  
CHESAPEAKE BAY.  
(Monroe)  
(Anderson)  
(Ruggles)

BATTERY ANDERSON:

Guns: 8 12-inch B.L. Mortars, 7 model of 1890MI and 1 (#4)  
model 1890.  
Carriages: Model of 1896. (j-1).  
Status: Transferred December 3, 1898. (j-1).  
Hoists: None. (j-1).  
Remarks: One mortar ordered dismounted and prepared for shipment  
(j-6). One mortar dismounted (j-6) 4 mortars removed  
for service abroad. (j-9).

BATTERY RUGGLES:

Guns: 8 12-inch B. L. Mortars, 7 model of 1890MI and 1 (#7)  
model 1890. (j-1).  
Carriages: Model of 1896. (j-1).  
Status: Transferred December 3, 1898. (j-1).  
Hoists: None. (j-1).  
Remarks: One mortar ordered dismounted and prepared for  
shipment (j-6). One mortar dismounted (j-6).  
4 Mortars removed for service abroad. (j-9).

Ledger - 7  
Batteries  
CHESAPEAKE BAY.  
(Monroe)  
(Main work)

MAIN WORK: *Temporary emplacement. Not part of project.*

Guns: 2 8-inch B.L.R., model of 1888. (j-1)

Carriages: Non-disappearing. (j-1)

Status: Transferred November 1, 1898. (j-1)

Hoists: (No magazines have been provided) (j-1).

Remarks:

Ledger - 7.1  
Batteries  
CHESAPEAKE BAY.  
(Monroe)

Guns: 2 - 3-inch anti-aircraft. Provided for in 1917 estimates. (j-1).

Carriages:

Status:

Remarks:



Ledger - 7.1  
Batteries  
CHESAPEAKE BAY.  
(Monroe).

Guns: 2 - 3-inch anti-aircraft. Provided for in 1917 estimates.  
(j-1).

Carriages:

Status:

Remarks:



FORT WOOL

Ledger - 8  
Batteries  
CHESAPEAKE BAY.  
(Wool)  
(Gates)  
(Dyer)

BATTERY HORATIO GATES:

Guns: 2 6-inch r.f.guns, model of 1903. (j-1)

Carriages: Disappearing, model of 1903. (j-1)

Status: Transferred August 18, 1908. (j-1)

Hoists: None. (j-1)

Remarks: Listed for use abroad (j-7). Removed (j-9).  
The 2 6-inch guns from Battery Claiborne to be mounted  
here (j-11).

BATTERY ALEXANDER DYER:

Guns: 2 6-inch r.f.guns, model of 1903. (j-1)

Carriages: Disappearing, model of 1903. (j-1)

Status: Transferred August 18, 1908. (j-1)

Hoists: None. (j-1)

Remarks: Listed for use abroad (j-7). Removed (j-9).

Ledger - 8.  
Batteries  
CHESAPEAKE BAY.  
(Wool)  
(Gates)  
(Dyer).

FORT WOOL

BATTERY HORATIO GATES:

Guns: 2 6-inch r. f. guns, model of 1903. (j-1).  
Carriages: Disappearing, model of 1903. (j-1).  
Status: Transferred August 18, 1908. (j-1).  
Hoists: None.  
Remarks: Listed for use abroad. (j-7) Removed. (j-9).  
The 2 6-inch guns from Battery Claiborne to be  
mounted here. (j-11).

BATTERY ALEXANDER DYER:

Guns: 2 6-inch r.f. guns, model of 1903. (j-1).  
Carriages: Disappearing, model of 1903. (j-1).  
Status: Transferred August 18, 1908. (j-1).  
Hoists: None. (j-1).  
Remarks: Listed for use abroad. (j-7). Removed. (j-9).



Ledger -- 9.  
Batteries  
(Wool).  
(Claiborne)  
(Lee).

BATTERY FERDINAND CLAIBORNE:

Guns: 2 6-inch r. f. guns, model of 1903. (j-1).  
Carriages: Disappearing, model of 1903. (j-1).  
Status: Transferred August 18, 1908. (j-1).  
Hoists: None. (j-1).  
Remarks: These guns to be removed and mounted in Battery  
Gates. (j-11).

BATTERY HENRY LEE:

Guns: 4 3-inch r. f. guns, model of 1902MI. (j-1).  
Carriages: Barbette, model of 1902. (j-1).  
Status: Transferred November 15, 1905. (j-1).  
Hoists: None. (j-1).  
Remarks:

Ledger - 9  
Batteries  
(Wool)  
(Claiborne)  
(Lee)

BATTERY FERDINAND CLAIBORNE:

Guns: 2 6-inch r.f.guns, model of 1903. (j-1)

Carriages: Disappearing, model of 1903. (j-1)

Status: Transferred August 18, 1908. (j-1)

Hoists: None. (j-1)

Remarks: These guns to be removed and mounted in Battery Gates.  
(j-11).

BATTERY HENRY LEE:

Guns: 4 3-inch r.f.guns, model of 1902.<sup>M</sup> (j-1)

Carriages: Barbette.<sup>Model 1902</sup> (j-1)

Status: Transferred November 15, 1905. (j-1)

Hoists: None.. (j-1)

Remarks:

FORT WOOL

(Wool)  
(Hindman)

BATTERY JACOB HINDMAN:

Guns: 2 3-inch r.f.guns, model of 1902. (j-1)

Carriages: Model of 1902. (j-1)

Status: Transferred November 15, 1905. (j-1)

Hoists: None. (j-1)

Remarks:



The following statement, unless otherwise indicated, is based on the report of completed batteries for the Norfolk district:

FORT MONROE

BATTERY GATEWOOD: Battery consisted of 4 4.7-inch Armstrong r.f.guns on Armstrong pedestal mounts. No hoists. Transferred September 24, 1898. Under date of April 7, 1914, (93476/1) the Secretary of War directed that Battery Gatewood be placed "out of commission", that guns and carriages be dismantled and stored pending disposition by Ordnance Department. The Ordnance Department requested that three of the guns and carriages be shipped to Augusta Arsenal for storage, *the 4th gun & carriage to be shipped to Sandy Hook Prov. ground.*

BATTERY CHARLES HUMPHREYS: Battery consists of emplacement for 1 10-inch gun on disappearing carriage. 1 10-inch rifle, model of 1888 on disappearing carriage, model of 1892, disappearing, shipped to Watertown Arsenal in 1911. A Taylor Raymond back delivery projectile hoist formerly at this battery has been widened and shipped to Fort H.G.Wright (See Report of Operations for June, 1914). The battery was transferred March 19, 1897. Battery is out of commission.

BATTERY THOMAS H. BARBER: Battery consists of 1 8-inch B.L.R., model of 1888, non-disappearing carriage, model of 1892. No hoists. Transferred November 1, 1898. Battery placed out of commission by direction of Secretary of War contained in ind. of C.A.Div., Oct. 17, 1913 (92088).

BATTERY BOMFORD: Battery consists of 2 10-inch B.L.R., model of 1888, on disappearing carriages, model of 1894. Two Taylor Raymond back delivery projectile hoists. Transferred March 19, 1897. No powder hoists.

98230/528 BATTERY IRWIN: Battery consists of 4 3-inch r.f.guns, model of 1898, on balanced pillar mounts, model of 1898. No hoists. Transferred May 28, 1903.

BATTERY PARROTT: Battery consists of 2 12-inch B.L.R., model of 1900, on disappearing carriages, model of 1901. 4 Taylor Raymond back delivery projectile hoists. No powder hoists. Transferred June 29, 1906.

BATTERY EUSTIS: Battery consists of 2 10-inch B.L.R., model of 1888, on disappearing carriages, model of 1896. 2 Taylor Raymond front delivery projectile hoists. Type A powder hoist in Emplacement No. 1; Type C in Emplacement No. 2. Transferred January 3, 1901.

BATTERY DERUSSY: Battery consists of 3 12-inch B.L.R., model of 1895, on disappearing carriages, model of 1897. 3 Taylor Raymond back delivery projectile hoists. 3 Type B powder hoists. Transferred June 7, 1904.

BATTERY MONTGOMERY: Battery consists of 2 6-inch r.f.guns, model of 1900 on pedestal mounts, model of 1900. 2 ~~Hodges~~ back delivery (hand power) projectile hoists. No powder hoists. Transferred June 30, 1904. The widening of the Hodges hoists at this battery is included in the hoist widening work program for 1914. (71562/460).

BATTERY CHURCH: Battery consists of 2 10-inch B.L.R., model of 1888, *1895 M/1-98230 528* on disappearing carriages, model of 1896. 2 Taylor Raymond back delivery projectile hoists. 2 Type A powder hoists. Transferred January 3, 1901. The Chief of Ordnance, in letter of January 17, 1914, (13117/71) stated it is the intention of the Ordnance Department to replace the existing armament at this battery with two 10" guns, model of 1885.

BATTERY ANDERSON: Battery consists of 8 12-inch B.L. Mortars, model of 1890, on carriages, model of 1896.<sup>M</sup> No hoists. Transferred December 3, 1898. *(7 model 1890 M1, and 1 (No. 7) 98230 528)*

BATTERY RUGGLES: Battery consists of 8 12-inch B.L. Mortars, model of 1890, on carriages, model of 1896.<sup>M</sup> No hoists. Transferred December 3, 1898. *(7 model 1890 M1, and 1 (#4) 98230 528)*

MAIN WORK: 2 8-inch B.L.R., model of 1888, on non-dis. carriages, No magazines have been provided. Transferred November, 1, 1898.

#### FORT WOOL

BATTERY HORATIO GATES: Battery consists of 2 6-inch r.f. guns, model of 1903, on disappearing carriages, model of 1903. No hoists. Transferred August 18, 1908.

BATTERY ALEXANDER DYER: Battery consists of 2 6-inch r.f. guns, model of 1903, on disappearing carriages, model of 1903. No hoists. Transferred August 18, 1908.

BATTERY FERDINAND CLAIBORNE: Battery consists of 2 6-inch r.f. guns, model of 1903, on disappearing carriages, model of 1903. No hoists. Transferred August 18, 1908.

BATTERY HENRY LEE: Battery consists of 4 3-inch r.f. guns, model of 1902,<sup>M</sup> on barbette carriages. No hoists. Transferred November 15, 1905.

BATTERY JACOB HINDMAN: Battery consists of 2 3-inch r.f. guns, model of 1902.<sup>M</sup> No hoists. Transferred November 15, 1905.

#### HOISTS

12-inch: 3 at Battery DeRussy widened; 2 at Battery Parrot widened and 2 being widened.

10-inch: 2 at Battery Bomford widened; 2 at Battery Eustis widened; 2 at Battery Church widened

(See report of operations for June, 1914)

*July 13, 1914, T.O., <sup>2</sup>Ed of Chesapeake Bay reports armament of Battery Gatewood has been shipped as directed. (See 93476/8 f-1)*

3  
D.E.O., Norfolk, reports carriages at Battery Irwin, Fort Monroe, remodeled to model 1891 M1. (R. of O., March, 1915).

4  
The Secretary of War has approved recommendation of Board of Review that 2 3-inch anti-aircraft guns be emplaced at Fort Monroe. The guns are provided for in the 1917 Ordnance Department estimates. (99735/3)

5

February 6, 1917 the Secretary of War authorized the transfer of 2 6-inch guns and 2 Barbette carriages, model 1900, from Battery Montgomery, Fort Monroe, to Cape Henry for installation in emergency battery (104847/2.).

6

May 3, 1918, the Commanding Officer, Middle Atlantic Coast Artillery District, New York, was directed to have dismounted and prepared for shipment 12-inch mortars, Model of 1890, as follows (662A-F1):

Fort Monroe:

Battery Anderson-----1  
Battery Ruggles-----1

May 24, 1918, the D.E., Norfolk, Va. reported that in accordance with above instructions the following armament had been dismounted and made ready to load on car (662A(Ches)F6):

Fort Monroe, Battery Anderson:

Mortar No. 26 from pit A  
Mortar No. 6 from pit B



7

OC.C.A., Aug. 24, 1917, states that the following guns have been ordered dismounted for use abroad. (95991/80):

Ft. Monroe,	Battery Barber ✓	1 8-inch gun
" Wool,	" Gates ✓	2 6-inch guns
"	" Dyer ✓	2 6-inch guns.

8

Letter to District Engineer, Norfolk, Va., May 29, 1918 (662A(Ches)F5) transmitting copy of letter of the Adjutant General dated May 25, 1918 and the Coast Artillery District Commander directing the removal of 2 10-inch guns from Battery Bomford, Ft. Monroe for service abroad.

9

July 18, 1918, the C.C.A. advises that the following armament is listed for removal for service elsewhere (662A-F9 and F9/1):

Ft. Monroe, Battery Barber, ✓	1 8-inch gun has been transferred to service abroad.
Ft. Monroe, Battery Bastis, ✓	2 10-inch guns have been listed for transfer to service abroad.
Ft. Monroe, Battery Montgomery ✓	2 6-inch guns have been transferred to Cape Henry.
Ft. Monroe, Battery Anderson ✓	4 12-inch M have been transferred to service abroad.
Ft. Monroe, Battery Ruggles ✓	4 12-inch M have been transferred to service abroad.
Ft. Wool, Battery Gates ✓	2 6-inch guns have been transferred to service abroad.
Ft. Wool, Battery Dyer ✓	2 6-inch guns have been transferred to service abroad.

10

The following armament removed or listed for removal is now to be remounted and retained:

Fort Monroe, Battery Church	2-10" guns
" " " Bomford,	2-10" "
" " " Eustis,	2-10" "
" " " Montgomery,	2-6" "

(662A(Ches)F9 and 662A-F10/3).

11

The dismounting of the 2-6" guns from Battery Claiborne, Fort Wool, and for remounting them on the two disappearing carriages in the emplacements of Battery Gates has been ordered. The two disappearing carriages of Battery Claiborne will be scrapped.  
(662A(Ches)F11).

12

March 27, 1920, the A. G. O. approved removal of the following 3" guns:

Battery Irwin, Fort Monroe, 4.  
Guns to be removed; carriages salvaged.  
(662A-F11/1 & 2).

Memoranda - 1  
Batteries

1.  
Letter to District Engineer, Norfolk, Va., Feb. 21, 1918 (662A (Ches)F1) as follows:

1. After the removal of armament now contemplated for shipment abroad and for use on transports, there will remain in service at the defenses of Chesapeake Bay the following batteries:

Fort Monroe:

Battery Irwin	4 3-inch guns
" Parrott	2 12-inch guns
" DeRussy	3 12-inch guns
" Church	2 10-inch guns
" Anderson	4 12-inch mortars
" Ruggles	4 12-inch mortars

Fort Wool:

Battery Claiborn	2 6-inch guns
" Hindman	2 3-inch guns
" Lee	4 3-inch guns

2. The above information is furnished for the confidential files of your office. The batteries and armament not mentioned are listed for removal. After checking this information with the records of your office a statement should be furnished this office, showing the batteries and armament now at the defenses of Chesapeake Bay and not included in the above list.

2  
Letter from District Engineer, Norfolk, Va., March 14, 1918 (662A(Ches)F2) as follows:

1. In reply to your confidential letter of February 21, 1918, (File No. 662A, Ches.F), in regard to armament in service at the defenses of Chesapeake Bay, I have to report as follows:

3. Following is a statement showing the armament now at the defenses of Chesapeake Bay, not included in the list that will remain in service at this point, as above:

Fort Monroe:

Pit "B", Battery Anderson	2 12-inch mortars, to be removed and shipped,
Battery Bomford	4 10-inch guns, 2 mounted, 2 dismounted.-It is not known whether all four of these guns are to be removed and shipped, or only those that are dismounted.
Battery Eustis,	2 10-inch guns, to be removed and shipped.
Battery Parrott,	1 extra 12" gun, No.1, dismounted.
On the beach at Fort Monroe	1 3-inch anti-aircraft gun, recently placed.

COAST DEFENSES OF CHESAPEAKE BAY.

C: Forts Monroe and Wool.

F-1: Batteries Parrott, 2 12-inch; Bemford, 2 10-inch, and Eustis, 2 10-inch, Fort Monroe.

B-1: Battery Parrott, 2 12-inch, Fort Monroe.

B-2: Battery Bemford, 2 10-inch, Fort Monroe.

B-3: Battery Eustis, 2 10-inch, Fort Monroe.

F-2: Batteries DeRussy, 3 12-inch; and Church, 2 10-inch, Fort Monroe.

B-4: Battery DeRussy, 3 12-inch, Fort Monroe.

B-5: Battery Church, 2 10-inch, Fort Monroe.

F-3: Batteries Anderson, 8 mortars, and Ruggles, 8 mortars, Fort Monroe.

B-6: Battery Anderson, 8 mortars, Fort Monroe.

B-7: Battery Ruggles, 8 mortars, Fort Monroe.

M: Batteries Montgomery, 2 6-inch; and Irwin, 4 3-inch, Fort Monroe.

B-8: Battery Montgomery, 2 6-inch, Fort Monroe.

B-9: Battery Irwin, 4 3-inch, Fort Monroe.

F-4: Batteries Gates, 2 6-inch; Dyer, 2 6-inch; Claiborn, 2 6-inch; Hindman, 2 3-inch; and Lee, 4 3-inch, Fort Wool.

B-10: Battery Gates, 2 6-inch, Fort Wool.

B-11: Battery Dyer, 2 6-inch, Fort Wool.

B-12: Battery Claiborn, 2 6-inch, Fort Wool.

B-13: Battery Hindman, 2 3-inch, Fort Wool.

Radio: Fort Monroe.

Post Signal Station: Fort Monroe.



Ledger - 1  
Fire Control  
(Monroe)

Battle Command.

C: Location: About 200 feet south of Battery Anderson, Ft. Monroe (j-1)  
Construction: 2 room steel tower. (j-1)  
References: Site: 7. (j-1)  
Instrument: 60. (j-1)  
Status: Transferred July 2, 1914. (j-1)

Ledger - 2  
Fire Control  
(Monroe)

First Fire Command.

F'1: Location: Loading platform of abandoned 10-inch gun emplacement in  
bastion 5, main work. (j-1)  
Construction: 2-room wood structure. (j-1)  
References: Site: 26.6. (j-1)  
Instrument: 36. (j-1)  
Status: Transferred July 2, 1914. (j-1)



First Fire Command.

BATTERY PARROTT (2 12-inch):

B'1: Location: Loading platform of abandoned Battery Humphreys. (j-1)

Construction: 8-room frame structure with corrugated iron roof  
(j-1)

References: Site: 24.7 (j-1)

Instrument: 35.5. (j-1)

Status: Transferred May 2, 1914. (j-1)

B"1: Location: In woods north of Battery Ruggles. (j-1)

Construction: 3-room frame structure with corrugated iron roof  
(j-1)

References: Site: 7. (j-1)

Instrument: 35. (j-1)

Status: Transferred May 2, 1914. (j-1)

B.C. & PLOTTING ROOM:

Location: Rear of center traverse of battery. (j-1)

Construction: 3-room concrete structure with steel roof. (j-1)

References: Site: 9. (j-1)

Instrument: 34'10". (j-1)

Status: Transferred November 7, 1910. (j-1)

First Fire Command.

BATTERY BOMFORD (2 10-inch):

B'2: Location: On beach of Mill Creek, rear of battery  
Bomford (j-7)  
Construction: Steel frame (j-7)  
References: Site: 5.25 (j-7)  
Instrument: 60.0 (j-7)  
Status: Completed (j-1)  
Transferred June 16, 1903. (j-7)

B'2: Location: In woods north of Battery Ruggles. (j-1)  
Construction: 3-room frame structure with corrugated iron roof.  
(j-1)  
References: Site: 7 (j-1)  
Instrument: 35. (j-1)  
Status: Transferred May 2, 1914. (j-1)

B.C. & PLOTTING ROOM:

Location: Rear of traverse between Emp. Nos. 1 & 2,  
Battery Bomford (j-7)  
Construction: Concrete (j-7)  
References: Site: 21.97 (j-7)  
Instrument: 35.47 (j-7)  
Status: Completed (j-1)

First Fire Command.

BATTERY EUSTIS (2 10-inch):

**B'3: Location:** Loading platform abandoned Battery Humphreys. (j-1)

Construction: Combined 8-room frame structure with corrugated iron roof. (j-1)

References: Site: 24.7. (j-1)

Instrument: 35.5. (j-1)

Status: Transferred May 2, 1914. (j-1)

**B#3: Location:** In woods north of Battery Ruggles. (j-1)

Construction: 3-room frame structure with corrugated iron roof. (j-1)

References: Site: 7. (j-1)

Instrument: 35. (j-1)

Status: Transferred Mayn2, 1914. (j-1)

B.C. & PLOTTING ROOM:

Location: Inrear of traverse between emplacements Nos.1 and 2,  
Battery Eustds. (j-1)

Construction: 2-room reinforced concrete structure. (j-1)

References: Site: 10. (j-1)

Instrument: 30.10. (j-1)

Status: Transferred September 30, 1908. (j-1)

Second Fire Command.

F-2: Location: To left and rear of Battery Church. (j-1)

Construction: 2-room steel tower. (j-1)

References: Site: 7. (j-1)

Instrument: 60. (j-1)

Status: Transferred July 2, 1914. (j-1)



Second Fire Command.

BATTERY DERUSSY ( 3 12-inch):

B'4: Location: Woods north of Battery Ruggles. (j-1)

Construction: 3-room wood structure. (j-1)

References: Site: 7.06 (j-1)

Instrument: 35. (j-1)

Status: Transferred April 29, 1905. (j-1)

B"4: Location: Loading platform abandoned Battery Humphreys. (j-1)

Construction: Combined 8-room frame structure with corrugated iron roof. (j-1)

References: Site: 24.7 (j-1)

Instrument: 35.5. (j-1)

Status: Transferred May 2, 1914. (j-1)

B.C.& PLOTTING ROOM:

Location: Rear of traverse between emplacements Nos.1 and 2, Battery DeRussy. (j-1)

Construction: 2-room reinforced concrete structure. (j-1)

References: Site: 10. (j-1)

Instrument: 33. (j-1)

Status: Transferred July 1, 1908. (j-1)



Second Fire Command.

BATTERY CHURCH (2 10-inch):

**B'5:** Location: In woods north of Battery Ruggles. (j-1)

Construction: 3-room frame structure with corrugated iron roof. (j-1)

References: Site: 7. (j-1)

Instrument: 35. (j-1)

Status: Transferred May 2, 1914. (j-1)

**B#5:** Location: Loading platform abandoned Battery Humphreys. (j-1)

Construction: Combined 8-room frame structure with corrugated iron roof. (j-1)

References: Site: 24.7. (j-1)

Instrument: 35.5. (j-1)

Status: Transferred May 2, 1914. (j-1)

B.C.& PLOTTING ROOM:

Location: In rear of traverse between emplacements Nos.1 and 2, Battery Church. (j-1)

Construction: 3-room reinforced concrete structure. (j-1)

References: Site: 10. (j-1)

Instrument: 31. (j-1)

Status: Transferred August 6, 1909. (j-1)

Ledger - 9  
Fire Control  
(Monroe)

Third Fire Command.

F'3: Location: About thirty feet in rear of traverse No.1, Battery  
Anderson. (j-1)

Construction: 1-room steel tower. (j-1)

References: Site: 7. (j-1)

Instrument: 60. (j-1)

Status: Transferred July 2, 1914. (j-1)



Ledger - 10  
Fire Control  
H. C. STONE  
(Monroe)

Third Fire Command.

BATTERY ANDERSON (8 mortars):

B'6: Location: Loading platform abandoned Battery Humphreys. (j-1)

Construction: Combined 8-room frame structure with corrugated iron roof. (j-1)

References: Site: 24.7. (j-1)

Instrument: 35.5. (j-1)

Status: Transferred May 2, 1914. (j-1)

B'6: Location: In woods about 500 ft. north of B. Ruggles. (j-1)

Construction: 2-room wood structure. (j-1)

References: Site: 7.6. (j-1)

Instrument: 35. (j-1)

Status: Transferred April 29, 1905. (j-1)

B.C. & PLOTTING ROOM:

Location: On slope of traverse between Pits A and B, Battery Anderson. (j-1)

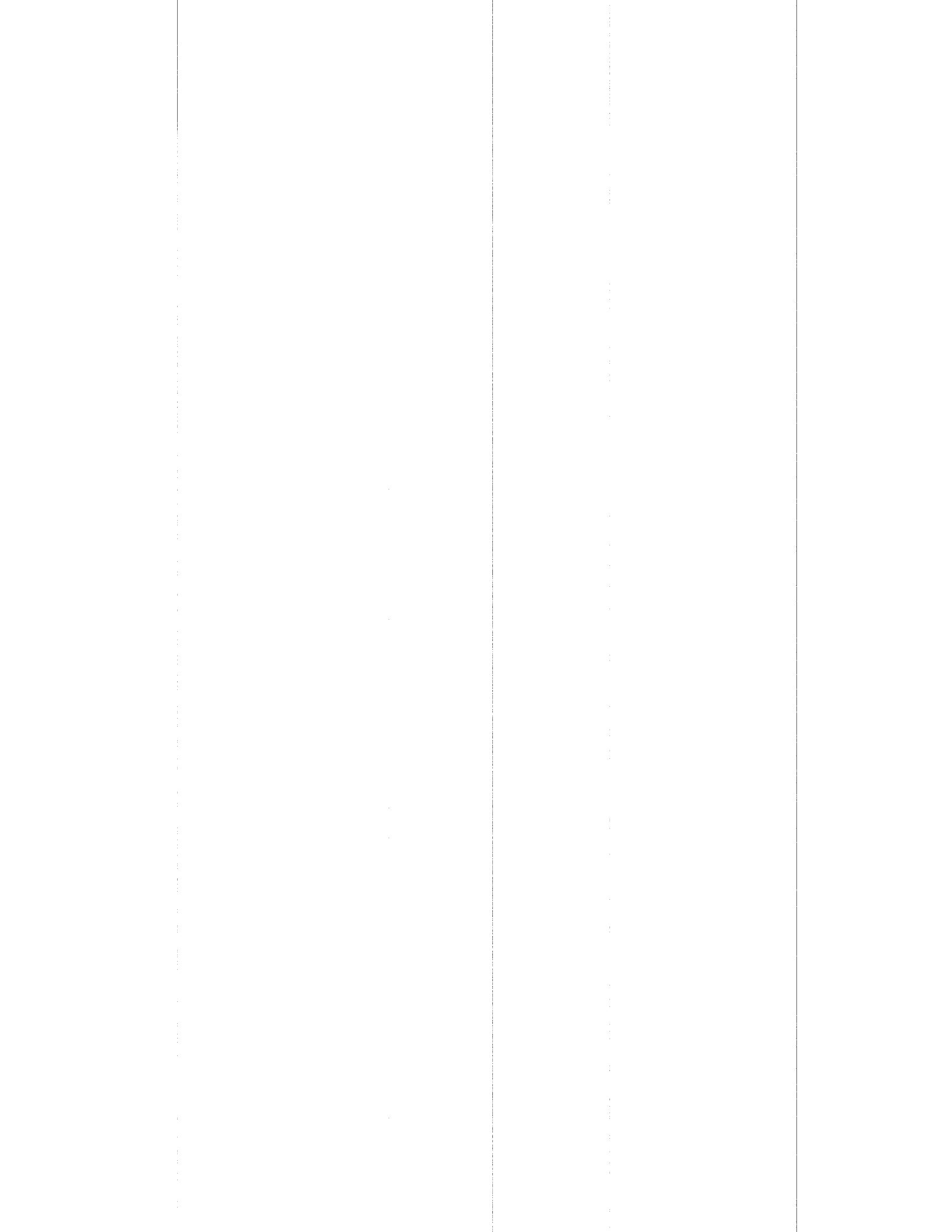
Construction: B.C. station of concrete with canvas cover. Plotting room of concrete with flat roof. (j-1)

References: Site: 23.25 (j-1)

Instrument: 44.75. (j-1)

Status: Transferred September 18, 1914. (j-1)





BATTERY RUGGLES (8 mortars):

B'7: Location: On beach, north of Battery Ruggles. (j-1)

Construction: 1-room frame structure with corrugated iron roof. (j-1)

References: Site: 27. (j-1)

Instrument: 35. (j-1)

Status: Transferred May 2, 1914. (j-1)

B"7: Location: Loading platform of abandoned emplacement in bastion 5 of main ~~work~~. (j-1)

Construction: 1-room frame structure with corrugated iron roof. (j-1)

References: Site: 26. (j-1)

Instrument: 36.9. (j-1)

Status: Transferred May 2, 1914. (j-1)

B.C. & PLOTTING ROOM:

Location: On slope of traverse between Pits A and B Battery Ruggles. (j-1)

Construction: B.C. station of concrete, over plotting room, with canvas cover; plotting room of concrete with flat roof. (j-1)

References: Site: 28.416. (j-1)

Instrument: 43.166. (j-1)

Status: Transferred September 18, 1914. (j-1)



Mine Command.

M'M': Location: Bastion 5, main work, to left of old 10-inch emplacement. (j-1)

Construction: 4-room frame structure. (j-1)

References: Site: 31. (j-1)

Instrument: 36. (j-1)

Status: Transferred July 2, 1914. (j-1)

M'': Location: Terreplein at front 4, main work. (j-1)

Construction: 2-room wood structure (j-1)

References: Site: 28.8 (j-1)

Instrument: 40. (j-1)

Status: Transferred April 29, 1905. (j-1)

M''': Location: On top of old work at western end of Ft. Wool. (j-1)

Construction: 1-room frame structure. (j-1)

References: Site: 21.6 (j-1)

Instrument: Not stated. (j-1)

Status: Transferred August 18, 1908. (j-1)

Mine Command.

BATTERY MONTGOMERY (2 6-inch):

B's-B's: Location: 2 s.h. instruments on/each flank of B.Montgomery. (j-1)  
and B.Cs. Construction:

References: Site:

Instrument: base: 22'6". (j-4)

Status: Transferred May 18, 1916. (j-4)

B.C. Location: Center of battery at gun platform level. (j-1)

Construction:

References: Site:

Instrument:

Status:

PLOTTING ROOM:

Location: At left end of battery. (j-1)

Construction:

References: Site:

Instrument:

Status:

Mine Command.

BATTERY IRWIN (4 3-inch):

B'9: Location: On slope, right flank Battery Irwin. (j-4)

AND B.C. Construction:

References: Site:

Instrument: base: 20'6". (j-4)

Status: Transferred May 18, 1916. (j-4)

B.C.: Location:

Construction:

References: Site:

Instrument:

Status: Completed (j-1)

Switchboard Room No. 1:

Location: Loading platform abandoned Battery Humphreys. (j-1)

Construction:

Reference of site:

Status: Transferred May 2, 1914. (j-1)

Switchboard Room No. 2:

Location: At power plant, Battery Anderson. (j-1)

Construction:

Reference of site:

Status: Completed (j-1)

Meteorological Station:

Location: On terrace of old work Bastion 5, near  
Front 5. (j-7)

Construction: Steel frame (j-7)

Reference of site: 27.8 (j-7)

Status: Instrument: 60.0 (j-7)  
Completed (j-7)

Transferred July 10, 1903. (j-7)

Tide Station:

Location: Engineer wharf. (j-1)

Construction:

Reference of site:

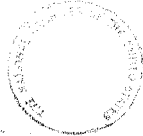
Status: Completed (j-1)

Radio Station:

Location: Inside of old works, near Post Commissary. (j-7)  
Construction: Brick. (j-7)  
Reference of site: 6.75 (j-7)  
Status: Transferred March 11, 1909. (j-1)

Post Signal Station:

Location: Near beach, between lighthouse wharf and B.Irwin. (j-1)  
Construction: 3-room frame structure. (j-1)  
Reference of site: 7. (j-1)  
Status: Transferred May 2, 1914. (j-1)



Station for azimuth instrument . - Battery Ruggles

Location: Near north end of the reservation. (j - 5).

Construction:

References: Site:

Instrument:

Status:

Remarks:

Station for azimuth instrument - Battery Anderson.

Location: Near north end of the reservation. (j - 5).

Construction:

References: Site:

Instrument:

Status:

Remarks:



Station for azimuth instrument. - Battery Church.

Location: Near north end of the reservation. (j - 5).

Construction:

References: Site:

Instrument:

Status:

Remarks:

Station for azimuth instrument. - Battery DeRussy.

Location: Near north end of reservation. (j - 5).

Construction:

References: Site:

Instrument:

Status:

Remarks:



Station for azimuth instrument. - Battery Parrott.

Location: Near north end of the reservation. (j - 5).

Construction:

References: Site:

Instrument:

Status:

Remarks:

Auxiliary station. - Battery Ruggles.

Location: Between Batteries Parrott and Eustis. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:



Auxiliary station - Battery Anderson.

Location: Between Batteries Parrott and Eustis. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:

Auxiliary station. - Battery Church.

Location: Between Batteries Parrott and Eustis. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:



Ledger - 16.5  
Fire Control  
Monroe

Auxiliary Station. - Battery DeRussy.

Location: Between Batteries Parrott and Eustis. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:

Auxiliary Station. - Battery Parrott.

Location: Between Batteries Parrott and Eustis. (j - 5)

Construction: Monument only (j - 5).

References: Site:

Instrument:

Status:

Remarks:

Auxiliary Station for C.

Location: On mound near M<sup>n</sup> Station. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:

Auxiliary Station for Fl.

Location: At Battery Eustis. (j - 5)

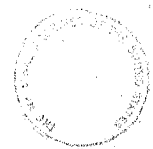
Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:



Ledger -- 16.7

Fire Control

(Monroe)

Auxiliary Station for F2.

Location: At Battery DeRussy. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:

Auxiliary Station for F3.

Location: At Battery Anderson. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:



Supplementary Station.

Location: At North End Point. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:

Supplementary Station:

Location: Near Back River Light. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:



Supplementary Station.

Location: At Quartermaster Wharf. (j - 5).

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:

Supplementary Station.

Location: At Old Soldier's Home. (j - 5)

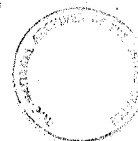
Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:





Supplementary Station.

Location: At Willoughby Spit reservation. (j - 5)

Construction: Monument only. (j - 5)

References: Site:

Instrument:

Status:

Remarks:

Plotting Room, Battery Parrott.

Location:

Construction: Bombproof. (j - 5)

References: Site:

Instrument

Status:

Remarks:

Plotting Room, Battery Church.

Location:

Construction: Bombproof. (j - 5)

References: Site:

Instrument:

Status:

Remarks:

Plotting Room, Battery DeRussy.

Location:

Construction: Bombproof. (j - 5)

References: Site:

Instrument:

Status:

Remarks:



Ledger - 17  
Fire Control  
BATTERY PLACES  
(Wool)

Fourth Fire Command.

F'4: Location: Rear of gun No.2, Battery Dyer, Ft.Wool. (j-1) 125 feet  
in rear of Battery Dyer (j-4)  
Construction: 3 story frame structure. (j-4)  
Pedestal for s.h.b. (j-4)  
References: Site:  
Pedestal for s.h.b.: 34'9". (j-4)  
Instrument:  
Status: Transferred May 18, 1916. (j-4)

Ledger - 18  
Fire Control  
BATTERY PLACES  
(Wool)

Fourth Fire Command.

BATTERY GATES (2 6-inch):

B'10:Location: At corner of center traverse. (j-4)  
J.A.B.  
Construction:  
References: Site:  
Top of pedestal: 26'6". (j-4)  
Instrument:  
Status: Transferred May 18, 1916. (j-4)

B.C. & PLOTTING ROOM:

Location:  
Construction:  
References: Site:  
Instrument:  
Status: Completed (j-3)



Ledger - 19  
Fire Control  
BATTERY DYE  
(Wool)

Fourth Fire Command.

BATTERY DYER (2 6-inch):

B'11: Location: Corner of center traverse. (j-4)  
S.H.B.

Construction:

References: Site:  
Top of pedestal: 26'6". (j-4)  
Instrument:

Status: Transferred May 18, 1916. (j-4)

B.C. & PLOTTING ROOM:

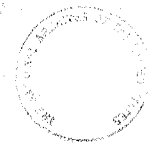
Location:

Construction:

References: Site:

Instrument:

Status: Completed (j-3)



Fourth Fire Command.

BATTERY CLAIBORN (2 6-inch):

*SAB.* B'12: Location: Corner of center traverse. (j-4)

Construction:

References: Site:

Top of pedestal: 26'6". (j-4)

Instrument:

Status: Transferred May 18, 1916. (j-4)

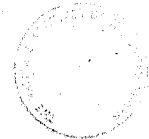
*+ plotting room.*  
B.C.: Location:

Construction:

References: Site:

Instrument:

Status: Completed (j-3)



Fourth Fire Command.

BATTERY HINDMAN (2 3-inch ):

B'13: Location: ~~San~~ Corner of center traverse. (j-4)

Construction:

References: Site:

Top of pedestal: 24'4". (j-4)

Instrument:

Status: Transferred May 18, 1916. (j-4)

B.C.: Location:

Construction:

References: Site:

Instrument:

Status: *Work in progress (j-4)*

Ledger - 22  
Fire Control  
(Wool)

Fourth Fire Command.

BATTERY LEE (4 3-inch):

B.C.: Location:

Construction:

References: Site:

Instrument:

Status: *Work in progress (f-2)*

Ledger - 23  
Fire Control  
(Wool)

Switchboard Room No.3:

Location: Ft.Wool. (j-1)

Construction:

Reference of site:

Status: *Completed (f-3)*

1

The following is a statement of the fire control project for the Coast Defenses of Chesapeake Bay, based on report of the Harris Board, approved August 29, 1904 (35200/150) as modified by report of board of officers convened by S.O.34, W.D., 1910, (35200/403), memorandum of the Chief of Coast Artillery, June 8, 1911, (35200/418), and letter of the Commanding Officer, Coast Defenses of Chesapeake Bay, with proceedings of board of officers convened by G.O.76, W.D., 1914, (35200/598-599); together with a statement of the status of work based on the report of completed batteries for the Norfolk District, unless otherwise indicated:

Battle Command.

(Forts Monroe and Wool.)

C: Located on tower about 200 feet south of Battery Anderson. 2-room steel tower. Ref. of site 7. Ref. of instrument 60. Transferred July 2, 1914.

First Fire Command.

(Batteries Parrott, 2 12-inch; Bomford, 2 10-inch; Eustis, 2 10-inch).

F'1: Located on loading platform of abandoned 10-inch gun emplacement in bastion 5, main work. 2-room wood structure. Ref. of site 26.6. Ref. of instrument 36. Transferred July 2, 1914.

B'1 (Parrott): Located on loading platform of abandoned Battery Humphreys. Combined 8-room frame structure with corrugated iron roof. Ref. of site 24.7. Ref. of instrument 35.5. Transferred May 2, 1914.

B'1 (Parrott): Located in woods north of Battery Ruggles. 3-room frame structure with corrugated iron roof. Ref. of site 7. Ref. of instrument 35. Transferred May 2, 1914.

B.C. (Parrott): Located in rear of center traverse of battery. 3-room concrete structure with steel roof. Ref. of site 9. Ref. of instrument 34'10". INCLUDES PLOTTING ROOM. Transferred November 7, 1910.

B'2 (Bomford): By indorsement of June 19, 1913, (35200/522) the C. of C.A. stated that the S. of W. directed the construction of B'2 Bomford in an existing structure. By indorsement of March 7, 1914 (35200/551) the D.E.O., Norfolk, reported the completion of the work.

B'2 (Bomford): Located in woods north of Battery Ruggles. 3-room frame structure with corrugated iron roof. Ref. of site 7. Ref. of instrument 35. Transferred May 2, 1914.

B.C. & Plotting Room (Bomford): Construction of B.C. station and plotting room, Battery Bomford, authorized by ind. of C. of C.A., June 19, 1913, (35200/522). D.E.O., Norfolk, by indorsement of March 7, 1914, (35200/551) reported the completion of the work.

B'3 (Eustis): Located on loading platform of abandoned Battery Humphreys. Combined 8-room frame structure with corrugated iron roof. Ref. of site 24.7. Ref. of instrument 35.5. Transferred May 2, 1914.

B'3 (Eustis): Located in woods north of Battery Ruggles. 3-room frame structure with corrugated iron roof. Ref. of site 7. Ref. of instrument 35. Transferred May 2, 1914.

B.C. & Plotting Room (Eustis): Located in rear of traverse between emplacements Nos. 1 and 2, Battery Eustis. 2-room reinforced concrete structure. Ref. of site 10. Ref. of instrument 30.10. Transferred September 30, 1908.



Second Fire Command.  
(Batteries DeRussy, 3 12-inch; and  
Church, 2 10-inch.)

F'2: Located to left and rear of Battery Church. 2-room steel tower. Ref. of site 7. Ref. of instrument 60. Transferred July 2, 1914.

B'4 (DeRussy): Located in woods north of Battery Ruggles. 3-room wood structure. Ref. of site 7.06. Ref. of instrument 35. Transferred April 29, 1905.

B"4 (DeRussy): Located on loading platform of abandoned Battery Humphreys. Combined 8-room frame structure with corrugated iron roof. Ref. of site 24.7. Ref. of instrument 35.5. Transferred May 2, 1914.

B.C. and Plotting Room (DeRussy): Located in rear of traverse between emplacements Nos. 1 and 2, Battery DeRussy. 2-room reinforced concrete structure. Ref. of site 10. Ref. of instrument 33. Transferred July 1, 1908.

B'5 (Church): Located in woods north of Battery Ruggles. 3-room frame structure with corrugated iron roof. Ref. of site 7. Ref. of instrument 35. Transferred May 2, 1914.

B"5 (Church): Located on loading platform of abandoned Battery Humphreys. Combined 8-room frame structure with corrugated iron roof. Ref. of site 24.7. Ref. of instrument 35.5. Transferred May 2, 1914.

B.C. and Plotting Room (Church): Located in rear of traverse between emplacements Nos. 1 and 2, Battery Church. 3-room reinforced concrete structure. Ref. of site 10. Ref. of instrument 31. Transferred August 6, 1909.

Third Fire Command.  
(Batteries Anderson, 8 mortars; and  
Ruggles, 8 mortars).

F'3: Located about thirty feet in rear of traverse No. 1, Battery Anderson. 1-room steel tower. Ref. of site 7. Ref. of instrument 60. Transferred July 2, 1914.

B'6 (Anderson): Located on loading platform of abandoned Battery Humphreys. Combined 8-room frame structure with corrugated iron roof. Ref. of site 24.7. Ref. of instrument 35.5. Transferred May 2, 1914.

B"6 (Anderson): Located in woods about 500 feet north of Battery Ruggles. 2-room wood structure. Ref. of site 7.6. Ref. of instrument 35. Transferred April 29, 1905.

B.C. and Plotting Room (Anderson): Located on slope of traverse between Pits A and B, Battery Anderson. B.C. station of concrete, over plotting room, with canvas cover. Plotting room of concrete with flat roof. Ref. of site 23.25. Ref. of instrument 44.75. Transferred September 18, 1914.

B'7 (Ruggles): Located on beach, north of Battery Ruggles. 1-room frame structure with corrugated iron roof. Ref. of site 27. Ref. of instrument 35. Transferred May 2, 1914.

B"7 (Ruggles): Located on loading platform of abandoned emplacement in bastion 5 of main work. 1-room frame structure with corrugated iron roof. Ref. of site 26. Ref. of instrument 36.9. Transferred May 2, 1914.

B.C. and Plotting Room (Ruggles): Located on slope of traverse between Pits A and B, Battery Ruggles. B.C. station of concrete, over plotting room, with canvas cover; plotting room of concrete with flat roof. Ref. of site 28.416. Ref. of instrument 43.166. Transferred September 18, 1914.

Mine Command

(Batteries Montgomery, 2 6-inch;  
and Irwin, 4 3-inch.)

M'M: Located in bastion 5, main work, to left of old 10-inch emplacement. 4-room frame structure. Ref. of site 31. Ref. of instrument 36. Transferred July 2, 1914.

M": Located on terreplein of front 4, main work. 2-room wood structure. Ref. of site 28.8. Ref. of instrument 40. Transferred April 29, 1905.

M": Located on top of old work at western end of Fort Wool. 1-room frame structure. Ref. of site 21.6 Ref. of instrument not stated. Transferred August 18, 1908.

B'8-B'8.(Montgomery): Two s.h.b.instrument stations are located on the flanks of Battery Montgomery. (Letter of D.E.O., Norfolk, March 2, 1915, 35200/643). No information rel. date of completion and transfer.

B.C.(Montgomery): Located in the center of the battery, at the gun platform level. (Letter of D.E.O., Norfolk, March 2, 1915, 35200/643).

Plotting Room (Montgomery): Located in the left end of the battery. (Letter of D.E.O., Norfolk, March 2, 1915, 35200/643). No information as to date of completion and transfer.

B'9 (Irwin): Station for s.h.b.instrument. Completed. (35200/644).

B.C.(Irwin): Completed. (35200/644).

Switchboard Room No.1: Located on loading platform of abandoned Battery Humphreys. Transferred May 2, 1914.

Switchboard Room No.2: Located at power plant, Battery Anderson. Completed. (35200/644).

Meteorological Station: Completed. (35200/644).

Tide Station: Located on Engineer wharf. Completed.

Radio Station: Transferred March 11, 1909.

Post Signal Station: Located near beach, between lighthouse wharf and Battery Irwin. 3-room frame structure. Ref. of site 7. Transferred May 2, 1914.

Fourth Fire Command.

(Batteries Gates, 2 6-inch; Dyer, 2 6-inch;  
Claiborn, 2 6-inch; Hindman, 2 3-inch; and  
Lee, 4 3-inch, Fort Wool.)

F'4: Located in rear of Gun No.2, Battery Dyer, Fort Wool. About 50% completed. (35200/644).

B'10:(Gates): Work in progress. Station for s.h.b.instrument.

B.C.& Plotting Room (Gates): About 95% complete. (35200/645).

B'11 (Dyer): Station for s.h.b.instrument. Work in progress.

B.C.& Plotting Room (Dyer): About 95% complete. (352--/645).

B'12 (Claiborn): Work in progress. Station for s.h.b.instrument.

B.D. & Plotting Room (Claiborn): About 95% complete. (35200/645).

B'13 (Hindman): Station for s.h.b.instrument. Work in progress.

B.C.(Hindman): Work in progress.

B'14 (Lee): C.C.A., by indorsement of May 3, 1915, (35200/647) states no provision for s.h.b.instrument should be made at Battery Lee, Fort Wool at this time.

B.C.(Lee): Work in progress.

Switchboard Room No.3: Located at Fort Wool. About 95% completed. (35200/645).

2

The following statement of status of f.c.work, Fort Wool, Va. is based upon progress report on f.c.work, dated May 1, 1915, (35200/650):

F'4: About 90% complete.

B.C.s and Plotting Rooms, Batteries Claiborne, Dyer and Gates: Completed.

Switchboard Room No.3: Completed.

3

The following statement of status of fire control work, Fort Wool, Va., is based upon progress report (35200/653):

F'4: Completed.

Switchboard Room No.3: Completed.

B.C.s and Plotting Rooms, Batteries Claiborne, Dyer & Gates: Completed

4

B.C.stations for S.H.B.instruments:

One on slope, right flank of Battery Irwin. Ref. of instrument base 20'6".

Station on slope, each flank of Battery Montgomery. Reference of instrument base 22'6".

One at corner of center traverse of each of 6-inch batteries of Fort Wall. Reference top. pedestal 26'6".

One on old wall on left flank of Battery Hindman. Ref. top of pedestal 24'4".

Above stations transferred May 18, 1916.

F'4: Located 125 feet in rear of Battery Dyer, Fort Wool. 3 story frame structure 15' by 15' inside. Pedestal for s.h.b.instrument, reference 34'9". Transferred May 18, 1916.

Above statement based on supp.sheets for r.c.b.rec'd.with 35200/657).

5

Auxiliary fire control project for Fort Monroe, Va., approved April 12, 1918, provides for the following:

✓ 5 permanent stations, for azimuth instrument, to be built near north end of the reservation, separated by intervals of not less than 50 yards, to serve Batteries Ruggles, Anderson, Church, DeRussy, and Parrott.

✓ 5 auxiliary stations (monuments only) to be located between Batteries Parrott and Eustis, to serve Batteries Ruggles, Anderson, Church, DeRussy, and Parrott.

Auxiliary stations (monuments only) for Fort and Fire Commanders to be located as follows:

✓ 0 - on mound near M" station.

✓ F1 - at Battery Eustis.

✓ F2 - at Battery DeRussy.

✓ F3 - at Battery Anderson.

Supplementary stations (monuments only) to be located as follows:

✓ One at North End Point

✓ One near Back River Light.

✓ One at Quartermaster wharf.

5 Cont'd.

✓ One at Old Soldiers' Home.

✓ One at Willoughby Spit reservation.

Bombproof plotting rooms to be provided for Batteries Parrott, Church, and DeRussy. (665(Ches)F1, F4).

6

July 16, 1919, funds allotted to accomplish the work outlined in entry 5 above. (665(Ches)F5).

7

The following information obtained from Report of Completed Works:

✓ June 16, 1903, primary station, Battery Bomford (B'2), Fort Monroe, located on beach of Mill Creek rear of Battery Bomford, was transferred to the Artillery. Steel frame construction. Reference of site, 5.25; reference of instrument, 60.0.

✓ B. G. Station & P. R. Bomford, Fort Monroe, located rear of traverse between emplacements Nos. 1 & 2, Battery Bomford; date of transfer not known. Concrete construction. Reference of site, 21.97; reference of instrument, 35.47.

✓ Meteorological Station, Fort Monroe, located on terreplein of old work Bastion 5, near Front 5, transferred to Artillery July 10, 1903. Steel frame construction. Reference of site, 27.8; reference of instrument, 60.0.

✓ Radio Station, Fort Monroe, located inside of old works, near Post Commissary, transfer to the Artillery March 11, 1909. Brick construction. Reference of site, 6.75.

June 19, 1906, Cable Hut, located between Batteries Irwin and Parrott, was transferred to the Artillery. Brick construction. Reference of site, 10.0.

June 12, 1909, Cable Hut, on Right flank of Battery Irwin in slope, was transferred to the Artillery. Concrete construction. Reference of site, 8.0.

May 2, 1914, Cable Terminal Hut, Humphreys, located on parade level, to left of Humphreys, behind left wing wall, was transferred to the Artillery. Brick construction. Reference of site, 12.97.

July 13, 1900, Tide Gauge, Fort Monroe, located on Engineer Wharf, Southwest of Battery Irwin, was transferred to the Artillery. Frame construction. Reference of site, 9.25.

June 4, 1914, Cable Terminal Hut, Anderson, Fort Monroe, located in edge of traverse between Pits "A" and "B", Battery Anderson, was transferred to the Artillery. Concrete construction. Reference of site, 10.0.

May 18, 1916, Cable Terminal Hut, Fort Wool, located about 40' southwest of the Fourth Fire Command Station (F'4), was transferred to the Artillery. Concrete construction. Reference of site, 7.5. (660B(Ches)F1).

Ledger - 1  
Electrical Installations  
(Monroe)  
(Battery plants).

FORT MONROE

Structures served: All fortification works, excepting searchlights. (j-1)

Units: 1 100 kw. motor generator set taking current from Q.M. plant and distributing through motor-generators at batteries. (j-1)

Voltage: 2300-volt. (j-1)

Connections: Conduit. (j-1)

Location: Artillery School building. (j-1)

Status:

Remarks: A duplicate 100 kw m.g. set has been ordered and is practically installed at above plant (j-1)



Structures served: Batteries Parrott and Irwin, and 36-inch searchlight No. 5. (j-1)

Units: Westinghouse motor-generator set No. 290820; motor 75 h.p.; generator No. 329568, 50 kw., d.c.; 3 25 kw. transformers. (j-1)

Voltage: Generator 125 volt, d.c; transformers 2300-230 volt. (j-1)

Connections: Conduit. (j-1)

Location: Concrete power house in southwest end of Battery Parrott. (j-1)

Status: Transferred May 25, 1905. (j-1)

Remarks: It is proposed to provide a reserve consisting of 2 - 25 kw sets for the Battery Parrott plant. (see j-1 & L-9)

Ledger - 2  
Electrical Installations  
(Monroe)  
(Battery plants)

Structures served: Batteries DeRussy, and occasionally Battery Montgomery (j-1)

Units: Westinghouse motor-generator set No.324978; motor 75 h.p.; generator No.329569, 50 kw.d.c.; 3 25 kw. transformers. (j-1)

Voltage: Generator 125 volt., d.c.; transformers 2300-230 volt. (j-1)

Connections: Conduit. (j-1)

Location: Concrete power house in rear of 2nd traverse, Battery DeRussy. (j-1)

Status: Transferred July 2, 1914. (j-1)

Remarks: *Proposed to provide a reserve of 2-25 kw. sets for this plant. (see j-1 and L-9)*

Structures served: Batteries Anderson and Ruggles and fire control stations (j-1)

Units: Westinghouse motor-generator No.329564; motor 37 h.p.; generator No.329566, 25 kw.d.c.; 3 10 kw. transformers. There is also one 60-cell Electric Storage Battery Co. storage battery which is used for lighting vicinity of batteries and interior of Battery Anderson when it is not desirable to operate motor-generator. (j-1)

Voltage: Generator 125 volt., d.c.; Generator 2300-230 volt. (j-1)

Connections: Conduit. (j-1)

Location: Concrete power house in traverse 1, Battery Anderson. (j-1)

Status: Transferred July 2, 1914. (j-1)

Remarks: *Proposed to install 1-2 sets at here for reserve (see j-1 & L-10)*

Ledger - 3  
Electrical Installations  
(Monroe)  
(Battery plants)

Structures served: Batteries Church and Montgomery. (j-1)

Units: Westinghouse motor-generator set No. 329506; motor 23 h.p.;  
generator No. 329553, 15 kw., d.c.; 3 7-1/2 kw. transformers. (j-1)

Voltage: Generator 125 volt., d.c.; transformers 2300-115 volt. (j-1)

Connections: Conduit. (j-1)

Location: Power room under B.C. station at Battery Church. (j-1)

Status: Transferred May 25, 1905. (j-1)

Remarks: It is proposed to install here the 30 Kw m.g. now at searchlights  
#8; The 15 kw set now here to be installed at old fort for  
for purposes independent of searchlights plants. (See j-1 and L-4)

Structures served: Battery Bomford. (j-1)

Units: Westinghouse motor-generator set No. 329505; motor 23 h.p.;  
generator 15 kw. d.c. No. 329552. (j-1)

Voltage: 125 volt. d.c. (j-1)

Connections: Conduit. (j-1)

Location: Storage battery room in rear of and to right of Emplacement  
No. 1, Battery Bomford. (j-1)

Status: Transferred May 28, 1907. (j-1)

Remarks: Proposed to install here a 25 kw set for reserve. (See j-1 & L-10)

Ledger - 3/1  
Electrical Installations  
(Monroe)  
(Battery plants)

Structures served: Battery Eustis. (j-1)

Units: Westinghouse motor generator No. 329507; motor 23 h.p.; generator No. 329554, 15 kw.; 3 7-1/2 kw. transformers. (j-1)

Voltage:

Connections:

Locations:

Status:

Remarks: Authority for removal of above plant from Battery Parrott to Eustis under date of Jan. 2, 1914, and work is in progress (j-1) (see also I-6)

Structures served: Set used for instruction purposes, C.A. School; also as reserve for Battery Parrott and searchlights Nos. 6 and 7. (j-2)

Units: 1 25-kw. set: G.E. gas. engine No. 10888; generator No. 435420 (j-6)

Voltage: *Transferred to Cape Henry (j-7)*

Connections:

Location: Right flank of Battery Parrott. (j-3)

Status: Transferred May 18, 1916. (j-6)

Remarks: Concrete power house. (j-6)



Ledger - 4  
Electrical Installations  
(Monroe)

Structures served: 60-inch searchlights Nos. 6 and 7 (j-1,4)

Units: Westinghouse motor-generator set No.329499; motor 45-h.p.; 30-kw.,  
d.c.generator No.329558; 3 15-kw., 2300-230 volt. transformers (j-1)  
Westinghouse motor-generator set No.329,502; motor 45-h.p.; generator  
30-kw., d.c. (j-1)

Voltage: 125-volt. (j-1)

Connections:

Location: Site of old Schuckert plant. (j-4)

Status:

Remarks:

*Funds allotted for install 8/24/15 (j-4)*

Structures served: 60-inch searchlight No. 8. (j-1)

Units: Westinghouse motor generator set No.329500, motor 45-h.p.; generator  
No.329560, 30-kw., d.c.; 3 15-kw transformers. (j-1)

Voltage: 125-volt.d.c. (j-1)

Connections: Aerial line. (j-1)

Location: On beach about 600 yards north of Battery Ruggles. (j-1)

Status: Transferred May 25, 1905. (j-1)

Remarks:

*Proposed to remove above plant which install  
at Batt. Church*

*{ Plant received supplies by install  
of 25 kw. set for searchlight # 5. See p. 6.*

Ledger - 4.1  
Electrical Installations  
H. H. H. H. H.  
(Monroe)  
(Searchlight Plants)

Structure served: No. 8, 60-inch searchlight. (M-1).

Units: 1 25 kw. generating set. G.E. gas engine No. 5496; generator No. 189211. (j-6)

Voltage:

Connections:

Location: About 600 yards north of Battery Ruggles. (j-6)

Status: Transferred May 18, 1916. (j-6)

Remarks: Power house frame building with tin roof. (j-6)

Ledger - 5  
Electrical Installations  
(Monroe)  
(Searchlight plants)

Structures served: 60-inch searchlight No. 9. (j-1)

Units: 1 Dock engine, No. 9, and one Sprague 25 kw. generator. (j-1)

Voltage: 115 volt. (j-1)

Connections:

Location: In same power house with No. 8 plant, on beach, 600 yards north of Battery Ruggles. (j-1)

Status: Transferred (date not known).

Remarks:

Structures served: 60-inch searchlights Nos. 10 and 11. (j-1)

Units: 2 Atlas 60 h.p. locomotive boilers; two 55 h.p. Delaval steam turbines Nos. 1547 and 1548; and 2 35 kw. Delaval generators. (j-1)

Voltage: 125 volt. (j-1)

Connections:

Location: In frame power house on beach near Buckroe. (j-1)

Status: Transferred June 19, 1914. (j-1)

Remarks:

Ledger - 6  
Electrical Installations  
(Monroe)  
(Spare plants)

Structures served: Not in use. (j-1)

Units: Westinghouse motor-generator No. 329507. (j-1) Motor 23 h.p.; generator No. 329554, 15 kw.; 3 7-1/2 kw. transformers. (j-1)

Voltage: Generator 125 volt., d.c.; (j-1)

Connections:

Location: Left flank of Battery Parrott. (j-1)

Status: Transferred May 25, 1905. (j-1)

Remarks: This plant is being removed for install at Battery Eustis. (j-1 & L-3.1)

Structures served: Not in use. (j-1)

Units: Westinghouse motor-generator set No. 329501; motor 45 h.p.; generator 30 kw.; 3 15 kw. transformers. (j-1)

Voltage: Generator 125 volt., d.c.; transformers 2300-230 volt. (j-1)

Connections:

Location: At foot of old battle light tower between Batteries DeRussy and Eustis. (j-1)

Status: Transferred May 25, 1905. (j-1)

Remarks: Proposed to install this set at sunlight #7 (see j-1 & L-11)

Being installed at old Bold Schuckert plant - (see L-4)

Ledger - 7  
Electrical Installations  
(Monroe)  
(Spare plants)

Structures served: Not in use. (j-1)

Units: 1 Lidgerwood portable 15 h.p. boiler; 1 15 h.p. General Electric engine; 1 General Electric 10 kw. d.c. generator. (j-1)

Voltage: 110 volt. (j-1)

Connections:

Location: Formerly located at Buckroe. Present location not known. (j-1)

Status: Transferred May 25, 1905. (j-1)

Remarks: Generating set for D.M. J. Monroe. Boiler to be placed before inspector (j-1)

Structures served: Not in use. (j-1)

Units: 1 New York Safety 30 h.p. water tube boiler; 1 New York Safety 25 h.p. engine; 1 15 kw. Crocker-Wheeler generator. (j-1)

Voltage: 125 volt. (j-1)

Connections:

Location: In storage at Battery Bomford. (j-1)

Status: Transferred November 12, 1903. (j-1)

Remarks: Above plant transferred to Great Bridge Canal Lock. (j-2)

Ledger - 8  
Electrical Installations  
(Monroe)  
(Spare plants)

Structures served: Not in use. (j-1)

Units: 2 125 kw. Westinghouse 1850-2300 volt. transformers. (j-1)

Voltage: 1850-2300 volt. (j-1)

Connections:

Location: Small brick building in rear of Battery Bomford. (j-1)

Status: Transferred March 15, 1905. (j-1)

Remarks:

Ledger - 9  
Electrical Installations  
(Monroe)  
(Additional work re-  
quired.)  
(Battery plants)

ADDITIONAL WORK REQUIRED

Structures to be served: Reserve at Battery Parrott Plant. (j-1)

Units: 2 25 kw. generating sets. (j-1)

Voltage:

Connections:

Location: In new power house to be built immediately to right of battery.  
(j-1)

Status: Proposed (j-1)

Remarks: (See present plant L-1)

Structures to be served: Reserve at Battery DeRussy plant. (j-1)

Units: 2 25 kw. sets. (j-1)

Voltage:

Connections:

Location: Power house at Battery <sup>DeRussy</sup> ~~Anderson~~. (j-1)

Status: Proposed (j-1)

Remarks: See primary plant (L-2)

Ledger - 10  
Electrical Installations  
(Monroe)  
(Additional Work Re-  
quired.)

Structures to be served: Reserve at Battery Anderson plant. (j-1)

Units: 1 25 kw. generating set. (j-1)

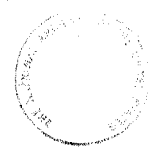
Voltage:

Connections:

Location: Power house at Battery Anderson. (j-1)

Status: *proposed (j-1)*

Remarks: *See primary plant (L-2)*



Structures to be served: Reserve at Battery Bomford plant. (j-1)

Units: 1 25 kw. generating set. (j-1)

Voltage:

Connections:

Location: At Battery Bomford. (j-1)

Status: *proposed (j-1)*

Remarks: *See primary plant (L-3)*



Ledger - 11  
Electrical Installations  
(Monroe)  
(Additional work required.)

Structures to be served: Primary service for searchlight No. 7. (j-1)

Units: 30 kw. motor-generator now located near Battery Eustis formerly used with battle light. (j-1)

Voltage: 125 dc. (j-1) (L-6)

Connections:

Location:

Status: Proposed. (j-1)

Remarks: Above plant not in use at present (see j-1 & L-6)

(See L-4)

Structures to be served: Reserve for searchlights Nos. 6 and 7. (j-1)

Units: 2 25 kw. sets. (j-1)

Voltage:

Connections:

Location:

Status: Proposed. (j-1)

Remarks:

Ledger - 12  
Electrical Installations  
(Monroe)  
(Additional work re-  
quired.)

Structures to be served: 60-inch searchlight No. 8. (j-1) Primary ser-  
vice. (j-1)

Units: one 25 kw. generating set. (j-1)

Voltage:

Connections:

Location:

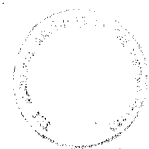
Status:

Remarks:

*Proposed (j-1)*

*See present primary plans (L-4)*

*See L-4 & L-4.1*



Structures served: Plant lights emplacements, f.c. stations, and 2  
36-inch searchlights. (j-5)

Units: 2 25-kw. General Electric generating sets as follows:  
Set No. 1: 1 43/54-h.p. gas engine and No. 6851, and 1 25-kw.  
d.c. generator No. 324506.  
Set No. 2: 1 43/54-h.p. gas engine No. 10890 and 1 25-kw.  
d.c. generator No. 435415. (j-5)

Voltage: 115-volt. (j-5)

Connections:

Location: Central power house, Fort Wool. (j-1)

Status: Set No. 1 transferred June 17, 1912. Set No. 2 transferred  
September 24, 1915 (j-5)

Remarks:

Structures served: Not in use. (j-1)

Units: 2 Schenectady 38-h.p. gas engines and 2 G.E. 25-kw. generators. (j-1)

Voltage: 115-volt. (j-1)

Connections:

Location: Central power house, Ft. Wool. (j-1)

Status: Transferred May 25, 1905. (j-1)

Remarks:

The following statement, unless otherwise indicated, is based on the report of completed batteries for Norfolk, Va.

FORT MONROE

The primary source of power for post and fortification purposes is a central plant consisting of three steam-driven generators (one of which is out of service but is to be replaced) installed by the Quartermaster Department in the Artillery School Building. This plant furnishes direct current which is transformed into 3-phase alternating current at 2300 volts for fortification purposes by a motor generator plant consisting of one 100 kw. motor-generator located in the same building. A duplicate 100 kw. set has been ordered for installation with the above named motor generator plant (89571/30). The installation of this second motor-generator is now about completed (See June, 1914, report of operations for Norfolk district). The power distributed by the above motor-generator plant is taken by motor-generators as follows:

BATTERY PARROTT PLANT: Located in power room in southwest end of Battery Parrott. Plant consists of one motor-generator set, as follows: Motor 75 h.p. Westinghouse; Generator No. 329568, Westinghouse 50 kw., 125 volt. d.c., and 3 25 kw., 2300-230 volt. transformers. Plant furnishes current for Batteries Parrott and Irwin and 36-inch searchlight on mine wharf, Fort Monroe. Transferred May 25, 1905. Power house concrete.

BATTERY DERUSSY PLANT: Located in new concrete power house in rear of 2nd traverse, Battery DeRussy. Plant consists of one Westinghouse motor generator set No. 324978, a 75 h.p. motor and a 50 kw. 125 volt. d.c. generator No. 329569; and 3 25 kw., 2300-230 volt. transformers. Plant furnishes current for Battery DeRussy and occasionally for lighting Battery Montgomery. Transferred in new location July 2, 1914.

BATTERY ANDERSON PLANT: Located in concrete power house in traverse No. 1, Battery Anderson. Plant consists of one Westinghouse motor-generator set No. 329564; motor 37 h.p.; generator 25 kw., 125 volt., No. 329566, d.c. Plant furnishes current for Battery Anderson and Battery Ruggles, fire control stations to north of batteries and those nearer. There are also at Battery Anderson 3 10 kw., 2300-230 volt. transformers. Transferred July 2, 1914.

BATTERY CHURCH PLANT: Located in power room under B.C. station at Battery Church. Plant consists of one motor generator set (Westinghouse) No. 329506; 1 23 h.p. motor and one 15 kw., 125 volt., d.c. generator No. 329553; 3 7-1/2 kw. 2300-115 volt. transformers. Transferred May 25, 1905. Plant furnishes current for Batteries Church and Montgomery.

BATTERY BOMFORD PLANT: Located in storage battery room in rear of and to right of Emplacement No. 1, Battery Bomford. Plant consists of one motor-generator (Westinghouse) set No. 329505; motor is 23 h.p.; generator 15 kw., 125 volt., d.c., No. 329552. Plant furnishes current for Battery Bomford. Transferred May 28, 1907.

NO. 6 SEARCHLIGHT (60-inch) PLANT: Located in frame power house at foot of tower, left end, 3rd curtain, old work. Plant consists of one motor-generator set No. 329499 (Westinghouse); motor 45 h.p.; generator No. 329558 30 kw., 125 volt. d.c. Plant furnishes current for 60-inch searchlight in position No. 6. Transferred May 25, 1905. There are also 3 15 kw., 2300-230 volt. transformers.

SEARCHLIGHT NO.8 (60-inch) PLANT: Plant is located in frame building at site of No.8 searchlight, on beach 600 yards north of Battery Ruggles. Consists of one Westinghouse 30 kw. motor-generator set No.329500, as follows: motor 45 h.p.; generator No.329560, 30 kw.,125 volt.,d.c.; and 3 15 kw.,2300-230 volt.transformers. Plant furnishes current for 60-inch searchlight No. 8. Transferred May 25, 1905.

SEARCHLIGHT NO.9 (60-inch) PLANT: Plant is located in power house with above described motor-generator set north of Battery Ruggles. Consists of 1 25 kw. gasoline generating set as follows: Dock engine No. 8, and one Sprague 25 kw.,115 volt.generator. Furnishes current for 60-inch searchlight No. 9. Date of transfer not known.

SEARCHLIGHTS NOS.10 and 11 (60-inch) PLANT: Located in frame power house on beach near Buckroe. Plant consists of two Atlas 60 h.p.locomotive boilers, two 55 h.p. Delaval steam turbines Nos.1547 and 1548, and two 35 kw.,125 volt.,Delaval generators. Plant furnishes current for 2 60-inch searchlights at Positions Nos. 10 and 11. Transferred June 19, 1914.

15 KW.MOTOR-GENERATOR SET: Located in room of wing-wall, left flank of Battery Parrott. Plant consists of one 15 kw.motor-generator set No. 329507 (Westinghouse), as follows; motor 23 h.p.; generator No.329554, 15 kw.,125 volt,d.c.; and 3 7-1/2 kw.transformers. Plant formerly furnished current for 36-inch searchlight at Fort Monroe before its removal to its present position on the mine wharf, and is not now in use. Transferred May 25, 1905.

30 KW.MOTOR-GENERATOR SET: Located in power house (frame) at foot of old battle light tower between Batteries DeRussy and Eustis, on beach. Plant consists of one 30 kw.Westinghouse motor-generator set No.329501, as follows: motor 45 h.p.; generator 30 kw.,125 volt.,d.c.; and 3 15-kw. 2300-230 volt.transformers. Plant not now in use. Transferred May 25, 1905.

10 KW. STEAM SET: Formerly located at Buckroe. Plant consists of 1 Lidgerwood portable 15 h.p.boiler; 1 15 h.p.General Electric engine; and 1 General Electric 10 kw.,110 volt.,d.c.generator. Transferred May 25,1905

15 KW.STEAM SET: Formerly located at Battery Bomford. Plant consists of 1 New York Safety 30 h.p.water tube boiler; 1 New York Safety 25 h.p. engine; and 1 15 kw.,125 volt.,Crocker-Wheeler generator. Plant now in storage. Transferred November 12, 1903.

TRANSFORMER PLANT: Located in small brick building in rear of Battery Bomford. Installed to receive from the mains of the Newport News and Old Point Ry.& Electric Co.,power in the "monocyclic" system and alter it into the "three phase". Consists of two 125 kw.Westinghouse 1850-2300 volt. transformers. Transferred March 15, 1905.

ADDITIONAL WORK REQUIRED AT FORT MONROE: (See letter of D.E.O.,Oct.1, 1913).

The following work at Fort Monroe was recommended by the District Officer in his report of October 1, 1913, (89571/30) in regard to electrical installations, existing and required at Hampton Roads:

BATTERY PARROTT:PLANT: The installation of a reserve, to consist of 2 25 kw. generating sets, in a new power house to be built immediately to the right of the existing battery.

BATTERY DERUSSY:PLANT: The installation of a reserve, to consist of 2 25 kw. gasoline generating sets, in power house recently constructed at Battery DeRussy.

BATTERY ANDERSON PLANT: The installation of a reserve, to consist of 1 25 kw. gasoline generating set, in existing power house.

BATTERY CHURCH PLANT: It is proposed to install at this battery the 30 kw.motor-generator now in use with searchlight No.8 when gasoline set proposed for that light is received. The 15 kw. set now at Battery Church to be removed to old fort for lighting stations, casemates, etc., independent of searchlight plantw.

BATTERY EUSTIS: It is proposed to install here the 15 kw.motor-generator at Battery Parrot which is no longer in use there. NOTE: The removal of this motor generator to Battery Eustis was approved under date of January 2, 1914 (38959/197) and is now in progress. (See Bomford)

BATTERY BOMFORD PLANT: It is proposed to install a reserve, consisting of 1 25 kw. gasoline generating set, which will also serve reserve purposes for Battery Eustis.

SEARCHLIGHTS NOS.6 AND 7: It is proposed to provide primary service for searchlight No. 7 by installing at the searchlight site the 30 kw. motor generator set located near Battery Eustis formerly used with "battle light", this set not being in use at present.

The installation of a reserve for Searchlights Nos. 6 and 7 to consist of 1 25 kw. gasoline generating sets.

SEARCHLIGHT NO.8: It is proposed to replace the 30 kw.motor generator set with a 25 kw.gasoline generating set, thus terminating the A.C.line at Battery Anderson, all the cables being in conduit.

NOTE: There is at present installed at Battery Anderson, Fort Monroe, a 60-cell Electric Storage Battery Co. storage battery. It is used for lighting the vicinity of Batteries Anderson, Ruggles, Church and Montgomery fire control stations, and interior of Battery Anderson, when it is not desirable to run motor-generator.

#### FORT WOOL

GASOLINE PLANT: Located in central power house at Fort Wool. Plant consists of one 50 h.p.General Electric gasoline engine No.6851, and one General Electric 25 kw., 115 volt.generator No.324506. Plant furnishes current for lighting ~~emplacements~~ and fire control stations and operates one 36-inch searchlight. Transferred June 17, 1912. An additional 25 kw set for installation at Fort Wool has been ordered and allotment made for its procurement under date of Oct.7, 1913 (81674). ~~81491.~~

OLD PLANT: Located in central plant. Consists of two Schenectady 38 h.p.gasoline engines and two General Electric 25 kw., 120 volt., generators. Out of commission. Transferred May 25, 1905.

NO ADDITIONAL plant recommended by the District Officer (89571/30)

2

Sept.10, 1914, D.E.O. reports steam plans (15 kw.) formerly at Battery Bomford, but lately in storage, has been transferred to Great Bridge Canal Lock and cost of plant has been transferred on books of that office.

3

D.E.O., Norfolk, Aug. 31, 1914, (38959/225) requests authority to apply funds in hand to the construction on right flank of Battery Parrott, Fort Monroe, of a power house to accommodate a 25-kw. generating set, to be purchased by the C.A. School authorities for instruction purposes. Set will also serve as a reserve for Battery Parrott and for searchlights Nos. 6 and 7. Approved by W.D., Sep. 5, 1914. D.E.O. reports completion of power house (R. of O., March, 1915).

September 24, 1915, (38959/248)<sup>4</sup> funds allotted for construction of power house to accommodate two 30-kw. motor generator sets for use with 60-inch searchlights Nos. 6 and 7. Plant to be located on site of old chuckert plant.

Central Plant, Fort Wool: 2 25-kw. generating sets.  
Set No. 1: 1 43/54-h.p. G.E. gas. engine and 1 25-kw., 115-volt., d.c. generator No. 324506 (G.E.). Transferred June 17, 1912.  
Set No. 2: 1 43/54-h.p. G.M. gas. engine No. 10890, and 1 25-kw., 115-volt., G.E., d.c. generator. Transferred September 24, 1915.  
Plant furnishes current for lighting emplacements, f.c. stations, and 2 36-inch searchlights,  
(38959/268 and r.c.b. therewith).

Searchlight No. 8 Plant: Located near railroad about 600 yards north of Battery Ruggles. G.E. gas. engine No. 5496 and 25-kw. generator No. 189211. Plant furnishes current for 60-inch searchlight No. 8. Set transferred Mar. 20, 1915. Power house transferred May 18, 1916. (\*)  
Reserve set: Located on parade in rear of right flank wall of Battery Parrott. G.E. gas. engine No. 10888 and 25-kw. generator No. 435420. Plant ~~furnishes current~~<sup>used</sup> for instruction purposes and as a reserve plant for Battery Parrott. Transferred May 18, 1916. Concrete power house.  
(\*) Power house frame building with tin roof.  
Above statement based on supp. sheets for r.c.b. which accompanied letter of D.E.O., (35200/657).

25-kw. generating set No. 10888<sup>1</sup> removed to Cape Henry for emergency installation (104849/33)

1

The Engineer Depot was instructed under date of Oct. 31, 1914, (38959/227) to ship to Fort Monroe for installation in connection with searchlight No. 8 the 25 kw. set originally ordered for Boston but which has more recently been diverted to New York. The matter of cable to be taken up with the Norfolk office, and the New York district officer ~~and~~ requested to ship the tank and switchboard of the set to Fort Monroe. Funds allotted for the installation ~~of this set~~ under date of October 21, 1914 (38959/225). *Spencer*

2

C.O., C.D. of Chesapeake Bay, Dec. 3, 1914, (38959/232) reports as available for transfer power plant removed from B. Buckroe. Jan. 20, 1915, papers to Q.M.G. offering above plant for transfer to Q.M.G. Back from Q.M.G., Jan. 26, 1915, recommending instructions be given for transfer of set to Quartermaster, Fort Monroe. (generating set only). Ind. to C. of S. Jan. 28, 1915, recommending authority for transfer to Q.M.C. Approved Jan. 30, 15 by C. of C.A. ~~Raza~~ C.O., C.D. of Ches. Bay, recommends Lidgerwood boiler be placed before inspectors Ind. of March 17, 1915, to C. of S. concurring with last recomdn.

3

Comdt., C.A. School, Ft. Monroe, Mar. 2, 1915, (38959/249) requests authority to exchange 25-kw. set received at school in 1910 for 25-kw. set (new) ordered shipped to Fort Monroe, Oct. 31, 1914 (See 38959/227). Approved by C. of E., Mar. 10, 1915. D.E.O. states set on hand. Metal power house not received. (March R. of O.)



NUMBER 103

HAMPTON ROADS, VA.

12-Ft. Curve shown thus -----

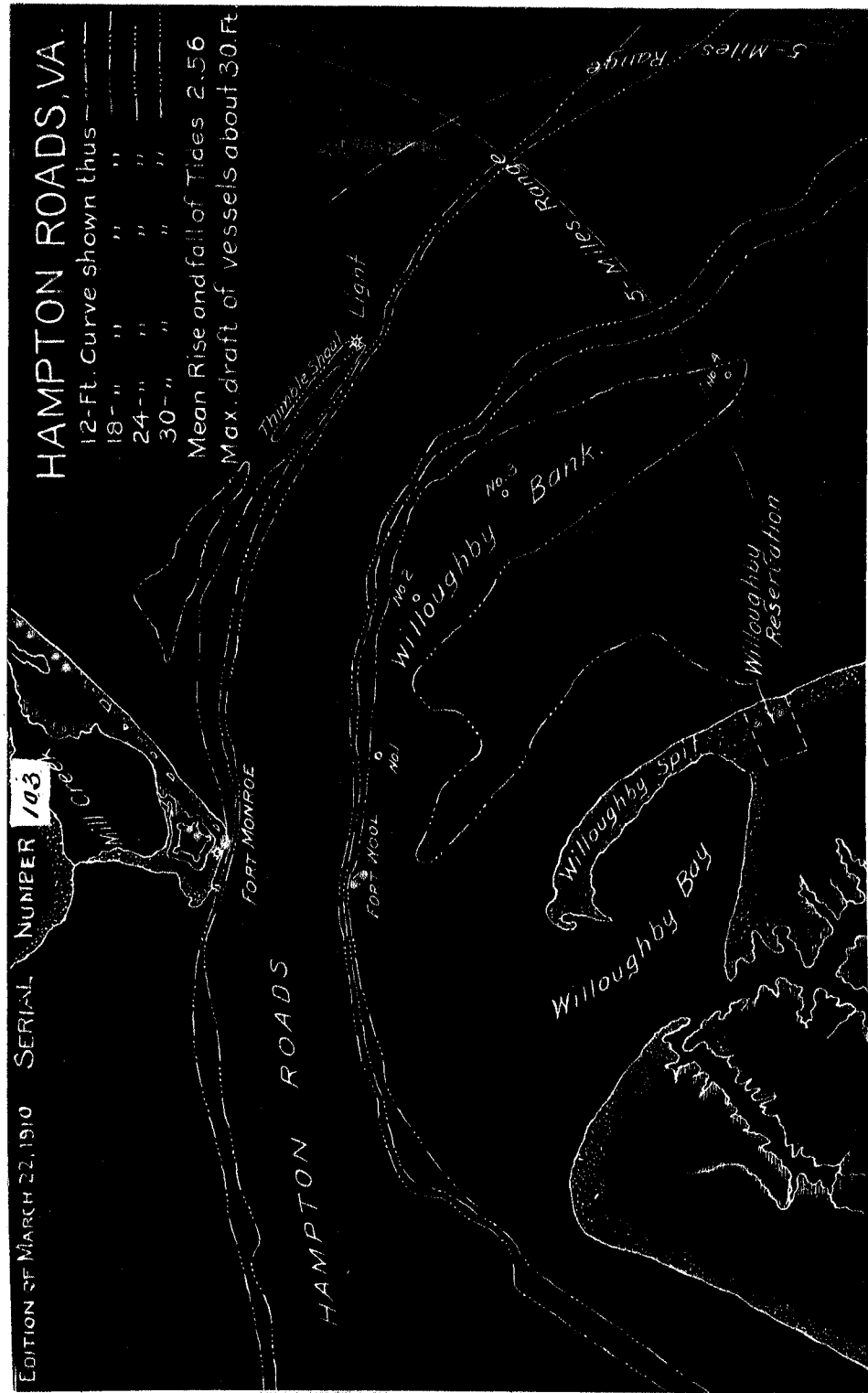
18-11-11

24-11 11 11 11

30- " " "

Mean Rise and fall of Tides 2.56

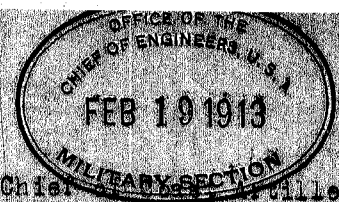
max. draft of vessels about 30.Ft.



Ledger  
Searchlights

SUMMARY.

Size	Light No.	Location	Remarks
60"	1	:Willoughby Spit.	Installation to await hostilities
60"	2	: " "	:Installation to await hostilities
36"	3	:East end of island, Fort Wool	:Temp. installation
36"	4	:West " " " " " "	" "
36"	5	:S.E. corner of Engr. Wharf, Ft.:	
		: Monroe	" "
60"	6	:East end Front No. 3, Ft. Monroe:	
60"	7	:South " " " 4, " "	
60"	8	:North of Batt. Ruggles, Ft. Monroe	
60"	9	: " " " " " "	:Shipped to Fishermans Island
60"	10	:Buckroe Beach, north end of re-:	
		: servn., Ft. Monroe	:Shipped to Cape Henry.
30"	11	:Buckroe Beach, Ft. Monroe	
30"	"Gottlieb"	:	
	: light.	:On ramps east front of old	
		: works, Ft. Monroe.	:Not in operation
24"	-----	:Artillery School Building	:Used for instruction
36"	-----	: " " " " " "	" " "
36"	-----	:Mounted on auto truck, with power	" " "
36"	-----	: " " " " " "	" " "
60"	-----	:In School Building	
60"	-----	: " " " "	
12"	-----	:In possession of Artillery Engr. Used for signaling	
30"	-----	:In Artillery Engr. Storehouse.:	Not in use



Project calls for 11 60-inch lights. The Chief of Artillery, in his memorandum submitting the project for approval states:

"Lights Nos. 1 & 2 can not be provided at this time; lights Nos. 3, 4, & 5, should be provided from the lights of sizes less than 60" now in the Artillery District of Chesapeake Bay, and lights Nos. 6, 7, 8, 9, 10 & 11, can be provided by using the six 60" lights now in the district."

The status of the lights under the project is as follows:  
[All lights are called for as of 60" diameter, size given is that of light on hand.]

No.	Size	Place	Estimated cost for installation.
1	60"	Longby Spit	Defer.
2	60"	do	Defer.
3	36"	Wool.	\$569.20
4	36"	do	569.20
5	36"	Chf. Monroe	Provided
6	60"	Parapet do	Provided, \$300 to move engine 60565/819
7	60"	do	\$1,475.00
8	60"	N. Ruggles	Provided
9	60"	do	Provided
10	60"	Beach	Provided
11	60"	do	\$1,160.00



No. 1. Location: Willoughby Spit.

Projector: 60"

Cable:

Generator:

Shelter:

For projector:

For generator:

Controller:

Remarks: Installation to await hostilities. Purchase deferred.

*Omit for present. (j-12) (j-1)*

No. 2. Location: Willoughby Spit.

Projector: 60"

Cable:

Generator:

Shelter:

For projector:

For generator:

Controller:

Remarks: Installation to await hostilities. Purchase deferred

*Omit for present. (j-12) (j-1)*

✓ No. 3. Location: Fort Wool.

Projector: 60"

Cable:

Generator: 35-Kw of m. gen set in power plant

Shelter:

For projector:

For generator:

Controller:

Remarks: 36" on hand for temp. instln. (j-1) Installed (j-7)  
*See (j-12)*

✓ No. 4. Location: Fort Wool.

Projector: 60"

Cable:

Generator: 25-hp g. m. gen. set in power plant

Shelter:

For projector:

For generator:

Controller:

Remarks: 36" on hand for temp. instln. (j-1) Installed (J-7)  
see (j-12)

✓ No. 5. Location: Fort Monroe.

Projector: 60"

Cable:

Generator:

Shelter:

For projector.

For generator.

Controller:

Remarks: 36" temp. instld. on Engr. wharf. Current from Bat. by  
Parrott plant (j-1)

see (j-12)

✓ No. 6. Location: Fort Monroe, Parapet.

Projector: 60"

Cable:

Generator: 30 kw. (j-1) m. g.

Shelter:

For projector: Power house being constructed for m. g.

For generator: set for m. 6+7 (J-5)

Controller:

Remarks: Transferred May 25, 1905 (j-1)

Perry Pyroscope Co. offer to substitute for the old lamp  
in sl. No 6 one of their new & improved lamps (J-1)

✓ No. 7. Location: Fort Monroe, Right end curtain No. 4, old fort (j-1)

Projector: 60"

Cable:

Generator: 30-Kw. Westing house - m-g (j-2) (j-5)

Shelter:

For projector: Frame Structure on tower (j-7)

For generator:

Controller:

Remarks: Completed (j-4) Transferred May 18, 1916 (j-7)  
See (j-12)

✓ No. 8. Location: Beach, north of Battery Ruggles.

Projector: 60"

Cable:

Generator: 25 kw. set. (j-7)

Shelter:

For projector: }  
For generator: } Combine 5 schlt & generator room (j-1)

Controller:

Remarks: Transferred May 31, 1909 (j-1)

No. 9. Location: Beach, north of Battery Ruggles.

Projector: 60" on hand (j-1)

Cable:

Generator: 25-Kw. Sprague - g-m set. (j-2)

Shelter:

For projector:

For generator:

Controller:

Remarks: <sup>Light</sup> Shipped to Fisherman's Island (j-1)  
See (j-12)

No. 10. Location: Buckroe Beach. 600 ft. from north end of resvn. (j-7)

Projector: 60"

Cable:

Generator: 35 Kw steam set (j-2)

Shelter:

For projector: Frame shelter on tower 39' above m.l.w. (j-7)  
For generator: Power house on beach near Buckroe (j-2)

Controller:

Remarks: Transferred May 18, 1916. (j-7) <sup>Light</sup> Shipped to Cape Henry (j-10)  
see (j-12)

✓ No. 11. Location: Buckroe Beach.

Projector: 60"

Cable:

Generator: 35 kw. (Schuckert) steam plant at Buckroe. (j-2)

Shelter:

For projector: On tower near Buckroe. (j-3)  
For generator: Frame power house on beach near Buckroe. (j-2)

Controller:

Remarks: Transferred June 19, 1914. (j-3)  
see (j-12)

✓ <sup>on iron structure</sup> Location: On ramps, east front of alt works (j-11)

Projector: 60"

Cable:

Generator:

Shelter:

for projector:  
for generator:

Controller:

Remarks: Known as "Kottlieb" light. Hasn't been in operation for some time

✓ 60-inch projectors:

Installed:

Permanent: 5 (8-143)

Temporary:

On hand: 2 X (j-10) 2 (at C.A. School)

Ordered:

Projected:

9 (8-1)

✓ 36-inch projectors:

Installed:

Permanent:

Temporary:

1 (j-1) mounted on road truck, C.A. School (8-10)

On hand:

2 (j-1) mounted on auto trucks at C.A. School (8-10)

Ordered:

Projected:

3

36-inch portables:

Installed:

Permanent:

Temporary:

On hand:

1 (j-1) (C.A. School)

Ordered:

Projected:

✓ 30-inch projectors:

Installed:

Permanent:

Temporary:

On hand:

1 (j-1) In Artillery Engr storehouse (8-10)

Ordered:

Projected:



✓ 24-inch projectors: ✓

Installed:

Permanent:

Temporary:

On hand: 1 (j-1) at a school for instruction purpose. (9-10)

Ordered:

Projected:

25 kw. generating sets:

Installed:

Permanent:

Temporary:

On hand:

Ordered:

Projected:

✓ 12-inch projector:

Installed:

On hand: in possession of Artillery Engrs. (8-10)

Ordered:

Projected:

1  
Based on project, dated Dec. 1910. (35200/403)

Nos. 1 and 2, 60-inch, Willoughby Spit: Installation deferred until time of threatened hostilities. (35200/403). (35200/411).

No. 3, 30-inch, Fort Wool: Projector on hand. Estimated cost of installation \$569.20 providing for construction of wooden tower about 40 feet above m.l.w. (35200/442). 60" called for.

No. 4, 36-inch, Fort Wool: Projector on hand. Estimated cost of installation \$569.20, providing for construction of wooden tower about 40 feet above m.l.w. (35200/442). 60" called for.

No. 5, 36-inch, Fort Monroe: Mounted in shelter about 20 feet above m.l.w. at Engineer wharf. Plant at Battery Parrott. Transferred May 25, 1905. (R.C.B.25). 60" called for. *Extinguished Battery Parrott plant.*

No. 6, 60-inch, Fort Monroe: Mounted on tower at left end, 3rd curtain, old fort, 80' above m.l.w. Operated from 30 kw. set in motor generator house at foot of tower. Transferred May 25, 1905 (R.C.B.25).

No. 7, 60-inch, Fort Monroe: Projector on hand. Estimated cost of installation \$1,475. (35200/442). *Installation completed.*

No. 8, 60-inch, Beach north of Ruggles; Fort Monroe: Located in combined searchlight shelter and power room at site on beach about 600 yards north of Battery Ruggles. Transferred May 31, 1909. (R.C.B.24) Operated by 30 kw set in same building Transferred May 25, 1905. (R.C.B.23)

No. 9, 60-inch, Beach north of Ruggles, Fort Monroe: Projector on hand. *See J-11.*

No. 10, Buckroe Beach: Projector on hand. *See J-11*

No. 11, Buckroe Beach: Projector on hand. Estimated cost of installation \$1,160/

Project calls for 11 60-inch lights. The Chief of Coast Artillery in his memorandum submitting the project for approval states "Lights Nos. 1 & 2 can not be provided at this time; lights Nos. 3, 4, & 5, should be provided from the lights of sizes less than 60" now in the Artillery District of Chesapeake Bay, and lights Nos. 6, 7, 8, 9, 10 & 11, can be provided by using the six 60" lights now in the district." ((35200/411).

There are on hand in the district 6 60" lights, 2 36" lights, 1 30" light, and 2 24" lights, AND 1 36" PORTABLE (35200/403)

It is not understood that the above statement of the Chief of Coast Artillery involves a change in the project as to positions 3, 4, and 5, but that these positions will eventually be supplied with 60" projectors.

2

The following is the status of searchlight plants in the Defenses of Hampton Roads:

Installed:

No.6: Westinghouse 30 kw., 125 volt. motor generator set in frame power house at foot of tower, left end, 3rd curtain, old fort.

No. 8: Westinghouse 30 kw., 125 volt. motor generator set in frame building of beach 600 yards north of Ruggles.

No.9: A 25 kw. generating set consisting of a Dock engine and a 25 kw. Sprague 125 volt. 25 kw. generator located in same power house with No.8 plant.

Nos.10 and 11: 2 35 kw. steam sets located in frame power house on beach near Buckroe. The No.11 plant is known as the Schukert plant.

Proposed:

No.7: Install a 30 kw. Westinghouse motor generator set formerly used with battle light and now installed near Battery Eustis.

Nos.6 and 7: Install a 25 kw. set for reserve service.

No. 8: Replace the present 30 kw. motor generator with a 25 kw. set.

NOTE: For a more detailed statement in regard to these plants see under "Electrical Installations" this binder.

3

NO.11: 60-inch Sautter Harle projector mounted on wooden tower on beach near Buckroe. Transferred June 19, 1914.

4

Installation of searchlight No. 7, Fort Monroe, completed. (See progress report for September, 1915, of Bd. of Officers convened by par. 24, S.O.76, W.D. 1915., 35-200/656)

5

Funds allotted Sept. 24, 1915, for construction of power house to accommodate 2 30-kw. motor-generator sets for use with 60-inch searchlights Nos. 6 and 7. (38959/248)

6

Extract from letter of C.A.D., Dec. 17, 1915 (81728/8):

\*\*\* 2. In order that the proper assignment of 36" searchlights may be made, it is believed that the following lights should be considered as assigned to the coast defenses as follows: \*\*\*

3 from Hampton Roads to Delaware. \*\*\*

4. It is not intended to ship these lights at the present time.\*\*\*

7

Searchlight No.10: 60-inch searchlight. Located in frame shelter on ~~22~~ wooden tower 39' above m.l.w. on beach 600 feet from north end of reservation. Transferred May 18, 1916.

Searchlight No. 8: Operated by 25-kw. generating set .

Searchlight No.7: 60-inch searchlight located in frame structure on tower at right end of curtain No.4, old fort. Transferred May 18, 1916..

Searchlights Nos.3 and 4: Located in frame shelters on towers at Ft. Wool, 30' high, No. 3 located ~~at east end of fort~~ <sup>on west end of fort</sup> and No. 4 located at ~~west end of fort~~ <sup>on west end of fort</sup>. Transferred May 18, 1916.

Above based on supp.sheets for r.c.b.received with 35200/657)

8

The following searchlights have been transferred to ~~Far~~ Cape Henry for emergency installation:

60-inch searchlight Schukert No.5282N Lamp No.5605

60-inch searchlight Schukert no number. Lamp No.5616.

60-inch searchlight G.E. Lamp No.5606.

60-inch searchlight G.E.No.7981. Lamp No.9966.

(104849/33)

9

Mar. 10, 1917, the D.E.O., Norfolk, Va., forwarded letter from the Commanding Officer, Coast Defense of Chesapeake Bay, dated Mar. 2, 1917, (38959/287) in which the C.O., C.D. of C.B. stated the Sperry Gyroscope Co. had requested permission to replace the Sperry Lamp at Searchlight No. 6, Fort Monroe, with one of their new and improved lamps - the change to be made without expense to the Government. The letter was referred to the Engineer Depot, Washington Barracks, which Depot stated it would ~~take~~ <sup>work</sup> with the Sperry Gyroscope Co. the question of arranging for the substitution of the new lamp.

10

Searchlights in possession of Artillery School,  
Ft. Monroe, Va., as reported by D.E.

1 24-in. G.E. Searchlight No. 2603; mounted in Artillery School building for instructions-operated from main power plant (36587/160)

1 36-in. G.E. Searchlight No. 3044; mounted on road truck at school building for instruction purposes. Operated from its own plant, (36587/160)

2 36-in. Searchlights; mounted on auto trucks with power. To be used for instruction purposes. (36587/160)

1 60-in. Sperry Searchlight, No 102.

1 60-in. G.E. Searchlight, No. 9444,

Both of these lights are mounted in school building for instructions, and are operated by 25 - kw motor generator set, formerly at Batt. Anderson. (36587/160)

Searchlights in Possession of Artillery Engineer.

1 12-in. Searchlight, used for signaling; mounted on Signal Station (36587/160)

1 30-in. G.E. Searchlight, No. 299; in Artillery Engr. Storehouse - not in use. (36587/160)

11

- 1 60-in. s.l., known in the Norfolk District as the "Gottlieb" light, is mounted on iron structure located on ramps, east front of old works. It has not been in operation for some time.  
(36587/160)

Searchlights formerly designated as numbers 9 & 10 have been shipped and installed in emergency fortifications at Cape Henry and Fishermans Island. (36587/160)

12

Project approved February 28, 1920, provides for the following:

No. 1. Omit for the present.

" 2. " " " "

" 3. Present 36" light to be replaced by 60" high-intensity light.

" 4. ditto.

" 5. ditto

" 6. No change.

" 7. No change, except "Beck" light to be replaced by 60" G. E. barrel type.

" 8. No change.

" 9. To be replaced by 60" high-intensity light.

" 10. " " " " " " " "

" 11. Present 60" Sautter-Harle light to be replaced by 60" high-intensity light.

(470.35(Ches) #4, #5, #6).

Oct. 14, 1913. Letter of Commanding Officer, Coast Defense, Chesapeake Bay, Sept. 18, 1913, recommending following changes:

- (a) Transfer 15 kw set from Battery Parrott to power room at Battery Eustis.
  - (b) That 30 kw set in bldg. near left flank of Battery Eustis be removed to bldg. to be constructed for purpose and serve as preliminary source of power for light No. 7.
  - (c) Installation of 25 kw sets for service of Lights Nos. 8 and 9.
  - (d) That 25 kw set be installed as reserve for lights 6 and 7.
  - (e) Transfer to Buckroe of steam (Schukert) plant for primary service of No. 11 and reserve for No. 10. (38959/192) [To R.E.O. Oct. 14/13]
- =====

Oct. 31, 1914, - A 25 kw. set originally ordered for Boston, more recently diverted to New York, has been ordered shipped to Fort Monroe for installation in connection with searchlight No. 8. (38959/227) and funds have been allotted for its installation. (38959/225) -

Owing to the excessive cost of modifications to Gottlieb light necessary before the light could be mounted at position No. 7, the D.E.O., Norfolk, under date of Oct. 17, 1914, (38959) was instructed to confer with the Commandant of the C.A. School as to the possibility of making arrangements whereby the searchlight belonging to the school could be mounted in lieu of the Gottlieb light. C. Comdt., C.A. School, Oct. 30, 1914 (38959.224) stating no objection to such use. D.E.O. requests authority to transfer searchlight from school, Nov. 13, 1914. Papers to C. of S., Nov. 20, 1914. Papers back, Nov. 24, 1914, approved under date of Nov. 23, 1914. Papers to D.E.O., Norfolk, 12/1/14 (38959/224)

Letter from District Engineer, Norfolk, Va., March 13, 1918 (470.3 (Ches)F1) as follows:

FORT MONROE, VA.

- One (1) 36" searchlight, (designated as No. 3), No. 3009, Type EC, Form L, General Electric Co., located on east end of island.
- One (1) 36" searchlight, (designated as No. 4), No. 271, Type ECA, General Electric Co., located on west end of island.

These lights receive power from two 25 KW gasoline electric generating sets, installed in power room between Batteries Claiborn and Dyer.

FORT MONROE, VA.

- One (1) 36" searchlight, (designated as No. 5), No. 3006, Type EC, Form L, General Electric Co., located on southeast corner of Engineer Wharf.

This light receives power from 50 KW motor generating set installed in power room in west end of Battery Parrott.

Memoranda - 2  
Searchlights

One (1) 60" searchlight, (designated as No. 6), No. 9440, Type EC, Fort N-5, General Electric Co., (Sperry), located on old work, east end of Front No. 3.

One (1) 60" searchlight, (designated as No. 7), No. 13175, Type EC, Form N-7, General Electric Co., (Beck), located on old work, south end of Front No. 4.

These two searchlights receive power from two 30 KW motor generating sets, installed in power house, located in Bastion No. 5, of the old works.

One (1) 60" searchlight, (designated No. 8), No. 7938, Type EC, Form N-1, General Electric Co., located in shelter on beach north of Battery Buggles.

This light receives its power from 25KW gasoline electric generating set, installed in metal building located in the woods about 100 yards west of light.

One (1) 60" searchlight, (designated No. 11), No. 3068, Sauter-Harle, located on beach near Buckroe, north end of reservation.

This light receives power from 50 hp. turbine engine installed in frame power house located near light.

One (1) 60" searchlight, (known locally as the "Gottlieb" light), mounted on iron structure, located on ramps east front of old works. Not in operation.

Source of power, temporary line to power house for searchlights Nos. 6 and 7.

ARTILLERY SCHOOL.

One (1) 24" searchlight, No. 2605, General Electric Co., mounted in artillery School Building for instructions. - This light is operated from main power plant.

One (1) 36" searchlight, No. 3044, General Electric Co., mounted on road truck at school building for instructions. Operated by its own plant, or from school plant.

Two (2) 36" searchlights, mounted on auto trucks, with power. To be used for instructions.

One (1) 60" searchlight, No. 102, Sperry, in school building.

One (1) 60" searchlight, No. 9444, General Electric Co., in school building.

These lights receive power from one 25 KW motor generator set.

IN POSSESSION OF ARTILLERY ENGINEER.

One (1) 12" searchlight, used for signaling. Mounted on Signal Station.

One (1) 30" searchlight, No. 299, General Electric Co. Located in Artillery Engineer Storehouse. - Not in use.

FORT MONROE

Structure: Casemate. (j-1)

Location: Bastion 4, Fort Monroe. (j-1)

Kind of construction:

Status: Transferred May 14, 1906. (j-1)

Remarks:

Structure: Storehouse. (j-1)

Location: Fort Monroe. (j-1)

Kind of construction: Brick structure with slate roof. (j-1)

Status: Transferred July 7, 1908. (j-1)

Remarks:

Structure: Two cable tanks. (j-1)

Location: Fort Monroe. (j-1)

Kind of construction:

Status: One transferred December 31, 1901. The other July 7, 1908. (j-1)

Remarks:

Structure: Loading room. (j-1)

Location: Fort Monroe. (j-1)

Kind of construction: Structure of corrugated galvanized iron. (j-1)

Status: Transferred July 7, 1908. (j-1)

Remarks:



Structure: Cable terminal. (j-1)

Location: Fort Monroe. (j-1)

Kind of construction:

Status: Transferred June 19, 1906. (j-1)

Remarks:

Structure: Cable terminal and gallery. (j-1)

Location: Fort Monroe. (j-1)

Kind of construction:

Status: Transferred June 12, 1909. (j-1)

Remarks:

Structure: M'. Two structures. (j-1)

Location: Terre-plein of front 4, Fort Monroe. (j-1)

Kind of construction: Wooden structures. (j-1)

Status: Transferred April 29, 1905. (j-1)

Remarks:

Structure: M". (j-1)

Location: Between Batteries Anderson and Church, Fort Monroe. (j-1)

Kind of construction: Concrete. (j-1)

Status: Transferred April 29, 1905. (j-1)

Remarks:

Structure: M". (j-1)

Location: On top of old work at west end of Fort Wool. (j-1)

Kind of construction: Frame building. (j-1)

Status: Transferred August 18, 1908. (j-1)

Remarks:

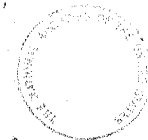
Structure: Wharf. (j-1)

Location: Fort Monroe. (j-1)

Kind of construction:

Status: Transferred July 7, 1908. (j-1)

Remarks:



ADDITIONAL STRUCTURES

Structure: Casemate. (j-1)

Location: Near Battery Bomford, Fort Monroe. (j-1)

Kind of construction:

Status: Transferred December 31, 1901. (j-1)

Remarks: Abandoned. (j-1)



1

The project for the torpedo defense of Hampton Roads, approved December 20, 1904, (24953/57), is as follows:

FORT MONROE:

Casemate:

Storehouse:

Cable tank: Repair of existing tank and construction of new tank

Loading Room:

Tramway:

Wharf:

M' and M".

STATUS OF WORK

The following statement, unless otherwise indicated, is based on the report of completed batteries.

FORT MONROE:

Casemate: Located in Bastion 4, Fort Monroe. Transferred May 14, 1906.

Storehouse: Brick structure with slate roof. Transferred July 7, 1908.

Cable tank: Two cable tanks, one transferred December 31, 1901, the other transferred July 7, 1908.

Loading Room: Structure of corrugated galvanized iron. Transferred July 7, 1908.

Cable terminal: Transferred June 19, 1906.

Cable terminal and Gallery: Transferred June 12, 1909.

M': Two wooden structures located on terre-plein of front 4, Fort Monroe. Transferred April 29, 1905.

M'': Concrete structure on beach between Batteries Anderson and Church. Transferred April 29, 1905.

M'': Frame building located on top of old work at west end of Fort Wool. Transferred August 18, 1908.

Wharf: Transferred July 7, 1908.

ADDITIONAL STRUCTURES

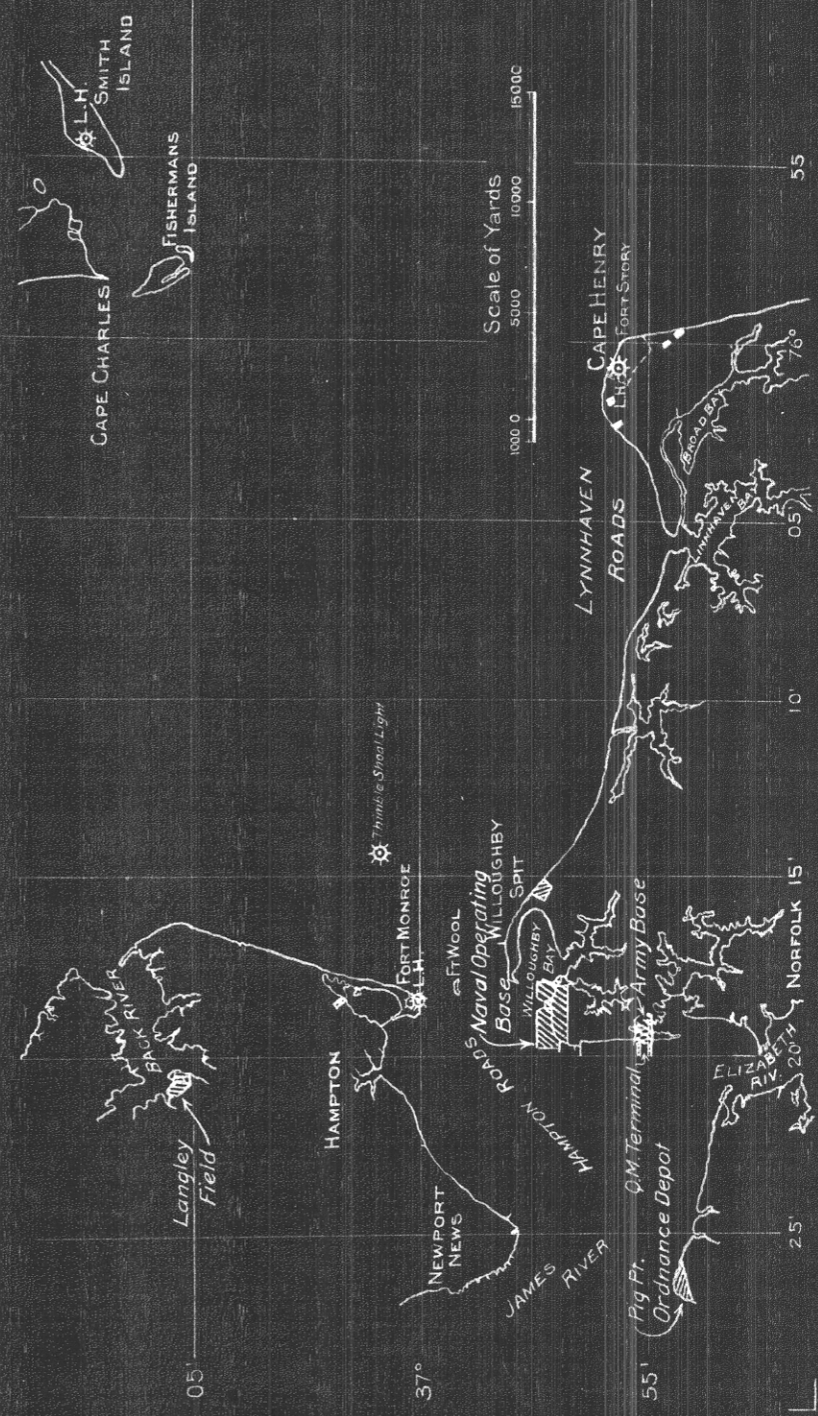
Casemate: Located near Battery Bonford, Fort Monroe. Transferred December 31, 1901. Abandoned.



# ENTRANCE TO CHESAPEAKE BAY

SERIAL NUMBER

EDITION OF NOV. 8, 1916.  
REVISIONS, MAR. 21, 1919.





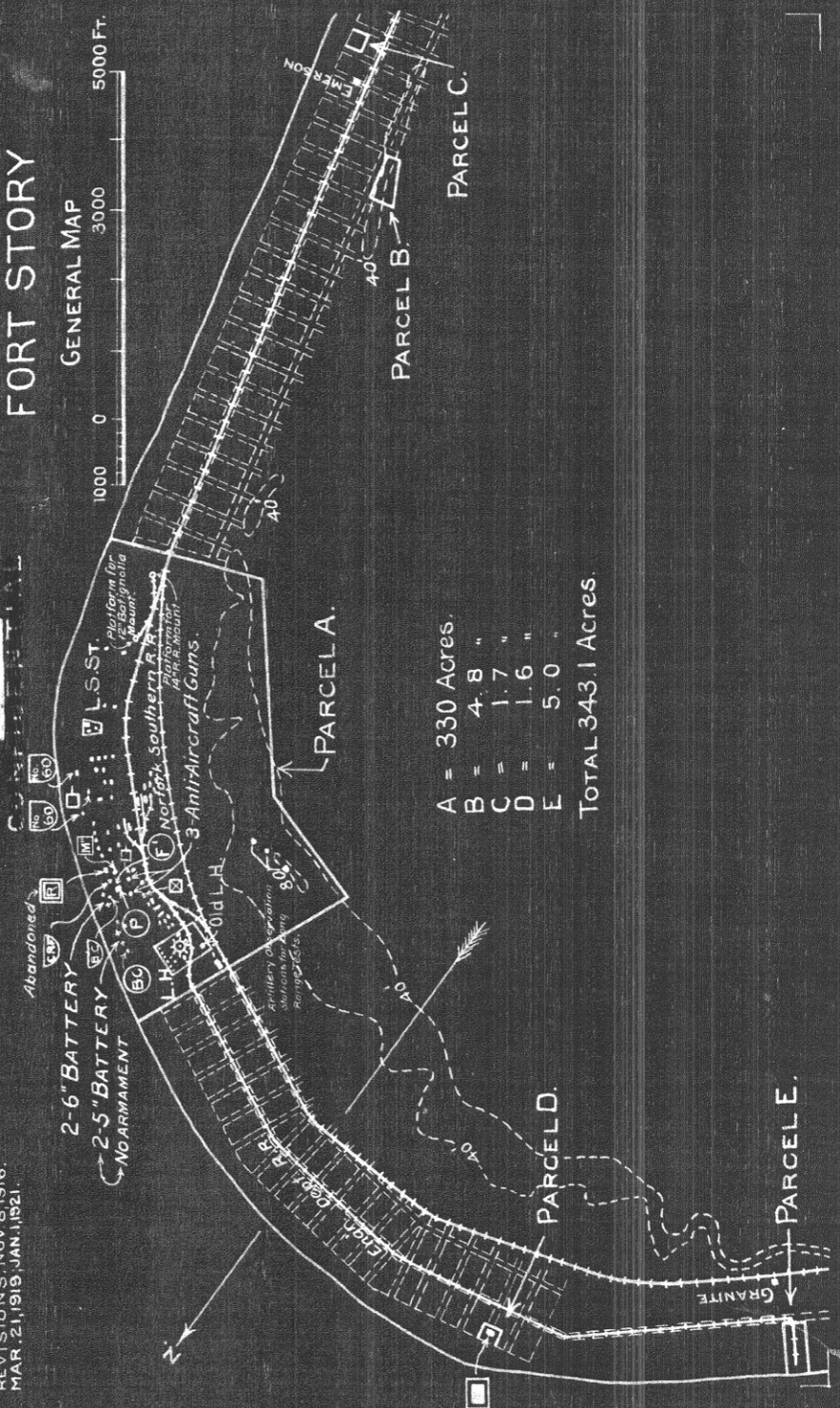
EDITION OF JAN 14, 1915.  
 REVISIONS: NOV 8, 1916.  
 MAR 21, 1919, JAN 1, 1921.

SERIAL NUMBER

ENTRANCE TO CHESAPEAKE BAY

# FORT STORY

GENERAL MAP



- A = 330 Acres.
- B = 4.8 "
- C = 1.7 "
- D = 1.6 "
- E = 5.0 "

TOTAL 343.1 Acres.

# LEGEND

1. ADMINISTRATION BLDG.
2. COMM OFFICERS QRS.
3. OFFICERS QRS.
4. HOSPITAL.
6. N.C. OFFICERS QRS.
7. BARRACKS.
8. GUARD HOUSE.
9. POST EXCHANGE.
10. MESS.
11. POST BUILDING.
- 12.
13. OIL HOUSE.
20. Q.M. QUARTERS.
21. Q.M. WATER TOWER.
22. Q.M. STABLE TOWER.
23. Q.M. FIRE HOSE HOUSE.
24. Q.M. STORE HOUSE.
25. Q.M. LAVATORY.
26. Q.M. BATH.
27. Q.M. COMMISSARY SHOP.
28. Q.M. CARPENTER SHOP.
29. Q.M. COAL BIN.
30. ORDNANCE QRS.
40. C.D. OFFICE.
41. E.D. CEMENT HOUSE.
42. E.D. SHOP.
43. E.D. & Q.M. WATER TOWER.
44. E.D. BOILER ROOM.
45. C.D. LOCOMOTIVE HO.
46. E.D. LUMBER SHED.
47. E.D. COAL BIN.
48. E.D. QUARTERS.
49. E.D. OIL HOUSE.
- 49a. E.D. FIRE HOSE HOUSE.
400. E.D. MESS.
401. E.D. STORE HOUSE.
70. SERVICE CLUB.
90. N.A.S. R.R. PASS SHED.
91. N.A.S. R.R. FREIGHT PLAT.
92. N.A.S. R.R. DEPOT AT CAPE HENRY.

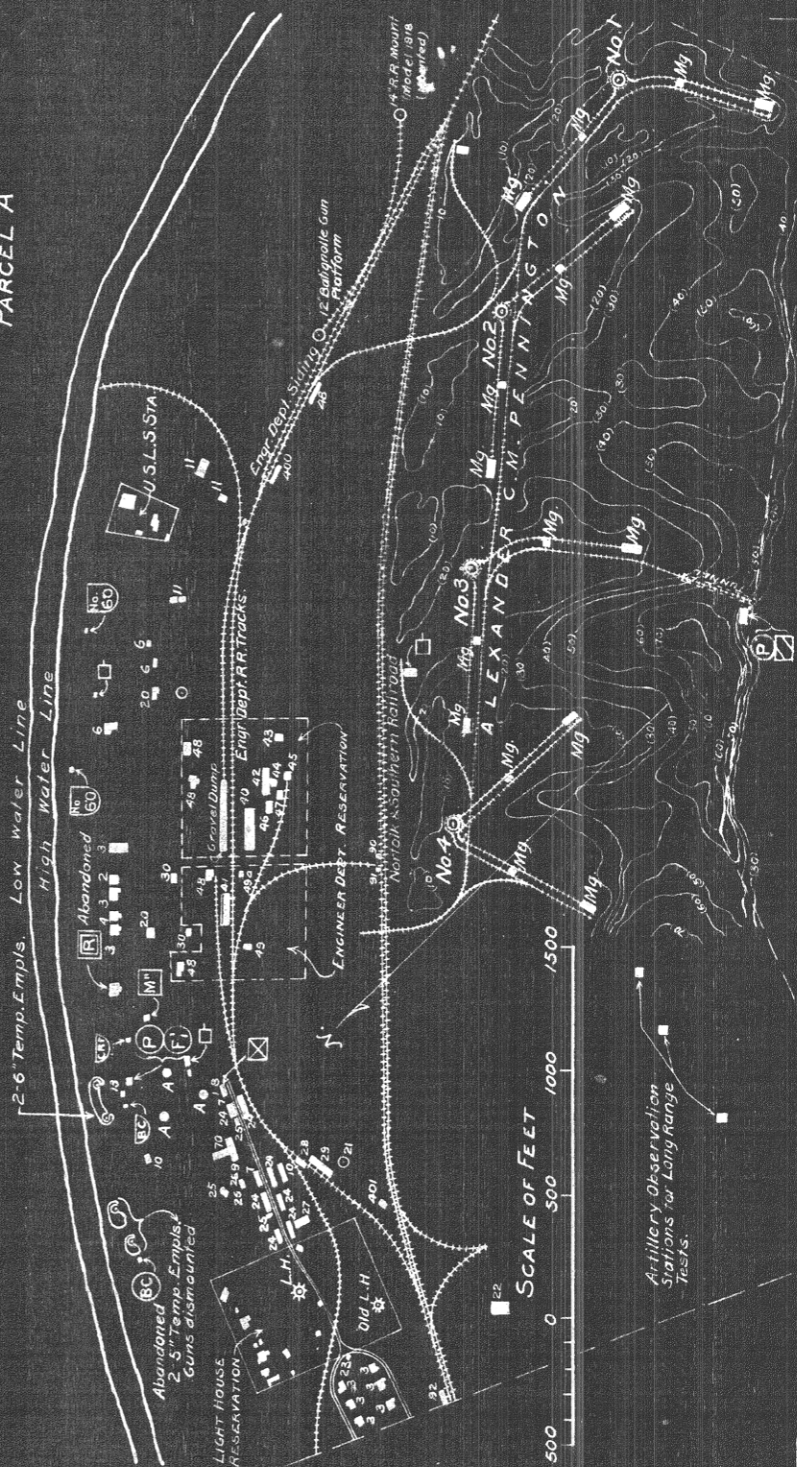
EDITION OF JAN. 1, 1921.  
REVISIONS JUNE 9, 1922.

SERIAL NUMBER

ENTRANCE TO CHESAPEAKE BAY  
**FORT STORY D-1.**  
PARCEL "A"

PENNINGTON...4-16"H.  
A-Anti-Aircraft gun 3-3"

CONFIDENTIAL



Artillery Observation  
Stations for Long Range  
Tests.

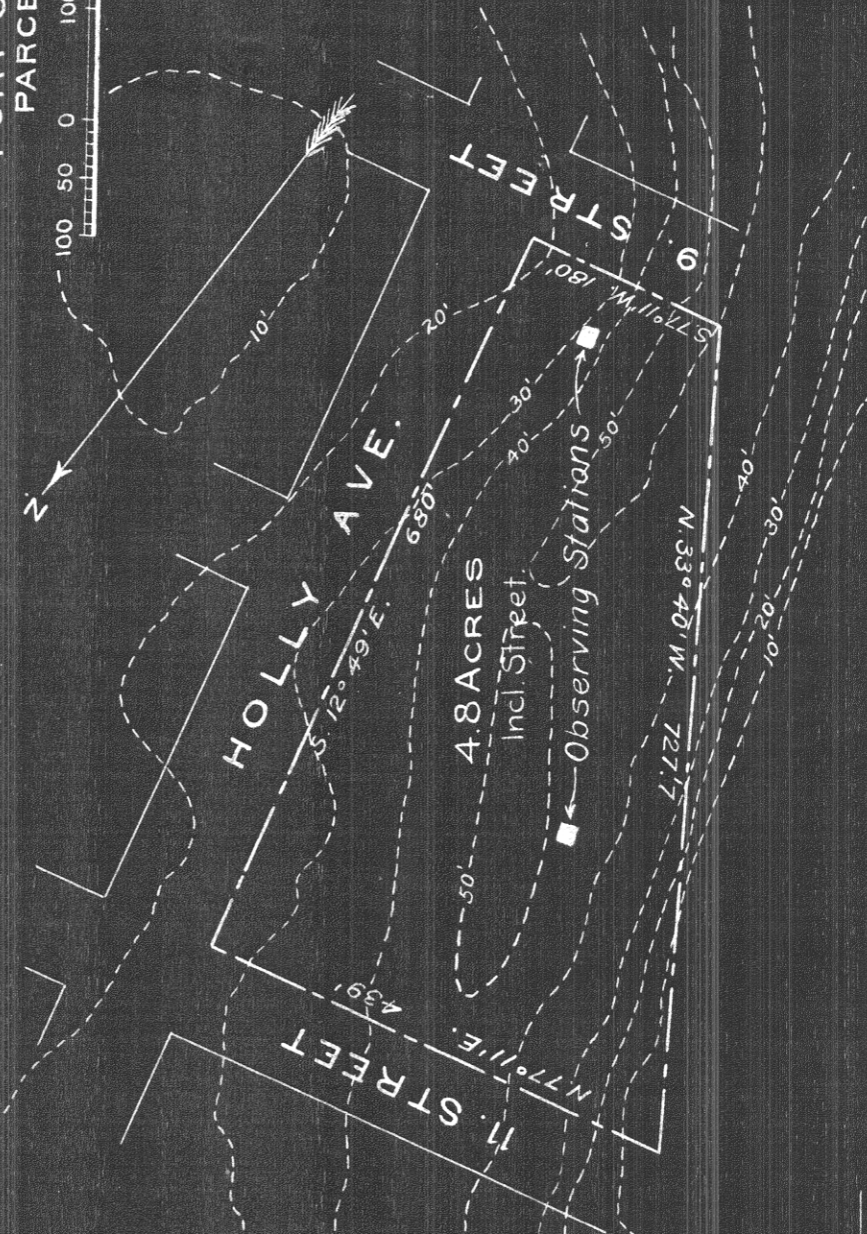


EDITION OF JAN 14, 1915.  
REVISIONS: NOV 8, 1916; APR 1, 1921.

SERIAL NUMBER

ENTRANCE TO CHESAPEAKE BAY

# FORT STORY D-2 PARCEL "B"





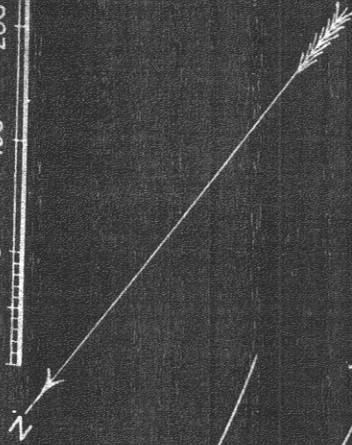
EDITION OF JAN. 14, 1915.  
REVISIONS NOV. 5, 1916

SERIAL NUMBER

CONFIDENTIAL

ENTRANCE TO CHESAPEAKE BAY

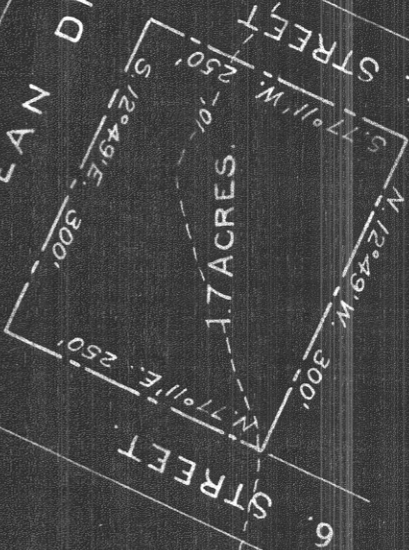
# FORT STORY D-3 PARCEL "C"



L. W.

H. W.

OCEAN DRIVE



00000000

ENTRANCE TO CHESAPEAKE BAY  
FORT STORY D-5  
PARCEL "E"



PROCEEDINGS OF THE CAPE HENRY FORTIFICATION BOARD  
War Department, Washington, D. C., March 11, 1914.

The Board met, pursuant to call of its president, at 2.30 p.m., in the office of the Assistant Chief of Staff.

Present.

Major General W. W. Wotherspoon, General Staff Corps,  
Colonel E. Burr, Corps of Engineers,  
Lieutenant Colonel E. M. Winslow, Corps of Engineers,  
Major E. P. O'Hern, Ordnance Department,  
Major George Blakely, Coast Artillery Corps,  
Major William Chamberlaine, Coast Artillery Corps.

Major E. P. O'Hern was detailed as a member by paragraph 3, Special Orders, No. 288, War Department, 1913.

The Board, after consideration of the studies submitted by Lieut. Col. Winslow, recommends as follows:

1. That the Armament consist of -
  - 4 - 14-inch B.L.Rifles (See par.3)
  - 8 - 12-inch mortars
  - 4 - 6-inch B.L.Rifles.
2. That the 12-inch mortars be emplaced in two batteries of two pits, of two mortars in each pit; the batteries to be located as shown on accompanying chart.
3. That pending the construction and proof of the 16-inch carriage to be emplaced at Perico Island, Coast Defenses of Balboa; that 14-inch guns be provisionally adopted for the defense of Cape Henry.
4. That the estimates of cost include those required for 14-inch guns, and also those required for 16-inch guns, in case it be decided in the future that the latter caliber be desirable.
5. That a copy of the accompanying chart, showing the location of the batteries, be furnished the Chief of the Quartermaster Corps, with the request that plans and estimates of cost be prepared for a complete post consisting of headquarters and four companies of Coast Artillery, including water supply and sewerage disposal.
6. That a copy of the accompanying chart be furnished to the Chief of Ordnance, with the request that estimates be prepared for -
  - 4 - 16-inch rifles, on disappearing carriages.
  - 4 - 14-inch " " " "
  - 4 - 6-inch rifles, on disappearing carriages
  - 8 - 12-inch mortars.
7. That a copy of the accompanying chart be furnished the Chief of Engineers, with the request that estimates be prepared for the following -
  - Emplacing in one-gun emplacements
    - 4 - 14-inch guns on disappearing carriages
    - 4 - 16-inch guns on disappearing carriages
  - Emplacing in two-gun batteries
    - 4 - 6-inch guns on disappearing carriages.
  - Emplacing in batteries of two pits of two mortars each
    - 8 - 12-inch mortars.

Purchase and installation of six 60-inch searchlights  
 Construction and installation of central power plant  
 Mining casemate  
 Mining storehouse  
 Mining wharf and breakwater  
 One fort commander's station, 90' hill  
 Two fire commanders' stations " "  
 One Mine commander's station, " "  
 Four primary stations (14") " "  
 Two primary stations (mortar) " "  
 Two primary stations (6") " "  
 One primary station (mine) " "  
 Four secondary stations (14") near Emerson's  
 Two secondary stations (mortar) " "  
 One secondary station (mine) not located.  
 Four secondary stations (14") near mine wharf.  
 Two secondary stations (mortar) " " "  
 And such other structures as are furnished by the  
 Engineer Department.

W. W. WOTHERSPOON,

Major General, General Staff, U.S.A.  
 President.

WILLIAM CHAMBERLAINE,  
 Major, Coast Artillery Corps,  
 Recorder.

Approval recommended.  
 LEONARD WOOD  
 Major General, Chief of Staff.

APPROVED:

*(sgd) Lindsey M. Garrison*

Secretary of War.

On Incl. 3 to  
 2-176643-E

1st Ind.

War Dept., A.G.O., March 26, 1914 - To the Chief of Engineers, with request  
 that the plans and estimates referred to herein be furnished as promptly as  
 possible. By order of the Secretary of War.

(Orig. Incl. 6  
 accompanying)

H.O.S. HEISTAND  
 Adjutant General.

1 incl.

The above paper was referred to the D.E.D., Norfolk, by wrapper of Mar. 30,  
 1914, (61757/107) for preparation of plans and estimates. The D.E.O. by ind. of  
 Apr. 6, 1914, on 61757/107, states plans and estimates will be forwarded as  
 they are completed.

SUPPLEMENTARY PROCEEDINGS OF THE CAPE HENRY FORTIFICATION BOARD  
WAR DEPARTMENT, WASHINGTON, D. C., October 10, 1914.

The board met, pursuant to the call of its President, at 10 a.m., October 10, 1914.

Present:

Major General W. W. Wotherspoon, General Staff Corps,  
Colonel John W. Ruckman, Coast Artillery Corps,  
Colonel Richmond P. Davis, Coast Artillery Corps,  
Lieutenant Colonel E. E. Winslow, Corps of Engineers,  
Major Edward P. O'Hern, Ordnance Department.

Absent:

Colonel Edward Burr, Corps of Engineers.

1. Colonel Davis was detailed as a member by paragraph 13, Special Orders, No. 209, War Department, 1914.

2. The Board then considered the estimates called for in its proceedings of March 11, 1914, submitted by the Chief of Engineers, the Quartermaster General, the Chief of Ordnance, and the Chief Signal Officer, and finds that the cost of the Cape Henry Fortification project, according to these estimates, will be approximately as follows: (Exhibit A):

Items:

1. Purchase of land,-----	\$ 181,000.00
2. Buildings and accessories, Q.M. Corps,-----	702,800.00
3. Submarine Mines,-----	452,750.00
4. Fire Control Equipment,-----	136,000.00
5. Engineer Installations,-----	2,382,000.00
6. 4 14-inch guns,-----	488,000.00
7. 8 12-inch mortars,-----	220,000.00
8. 4 66-inch guns,-----	106,000.00
	<u>\$ 4,668,550.00</u>

3. If 16-inch guns be installed in lieu of 14-inch guns, it will be necessary to add \$494,000.00, an increase of 10.6%, approximately, making the total cost of the defenses with the 16-inch armament, \$5,162,550.00 (Exhibits A and B).

cost of the

4. No estimate of the establishment of a fresh water supply for the Cape Henry defenses has been included in the amount above stated. The Board understands that certain projects for bringing water to Cape Henry from the Norfolk water supply system are in contemplation by a civil organization. If these projects are realized, the water supply question can be satisfactorily met by purchase; if not, then a special estimate covering the cost of a water supply system will have to be made.

5. No provision is made in the foregoing estimates, nor is it possible at this time to make any provision for the items referred to in a report from Lieut. Colonel Winslow (pages 9-10 Exhibit A), in the following terms:

"3. A large part of the surface of all five of the parcels consists at present of sand. In places this sand is held to some extent by vegetation, but over the larger part of the area there are sand dunes that drift here and there as the winds may change. Experience at Virginia Beach, about 5 miles to the south, has shown that if the sand surfaces be properly graded, and if some clay soil be mixed and arrangements be made for irrigation during the dry

spells, a good growth of grass and other vegetation can be induced that will hold the sand from drifting as long as vegetation is maintained.

"4. In connection with layout of the post proper, roads must be constructed, the ground must be graded and the grass must be held and vegetation encouraged. On the post proper, this undoubtedly pertains to the Quartermaster's Department, but in the immediate vicinity of the batteries it may be that the Engineer Department will be called upon to do some work of this character, for it is extremely essential that the drifting of sand be stopped so that it may not be blown into the gun carriages and other machinery.

"5. Another item of possible Engineer Department work, which may come up in the future, is the question of sea walls. As far as can be learned, the shore line at Cape Henry is unusually stable for a sea beach, but this stability is due to the present equilibrium of forces. At times the same is forced up by the waves and when dry is blown in shore, and at other times the breezes from the land drive the sand towards the sea and deposit it along the fore shore. If the drifting of the sand on shore be stopped, this equilibrium will to some extent be destroyed, and this may be followed, as has happened at other places, by the slow eating away of the shore."

6. The Board approves the preliminary searchlight, power, and fire control project, prepared by Lieut. Colonel Winslow, and submitted by the Chief of Engineers.

7. The general layout of the Quartermaster Corps buildings is not approved by the Board, and it will be necessary, in the opinion of the Board, for a representative of the Quartermaster Corps, the Engineer Corps, and the Coast Artillery Corps to submit at a later date a project made on the ground. This, in the opinion of the Board, will not add to the cost of these features of the project.

8. In general, the storehouses, shops, and buildings of that character should, in the opinion of the Board, be near the railroad station at the northwest corner of the reservation; the officers and noncommissioned officers' quarters at the eastern end, and the barracks approximately where they are indicated on the accompanying sketch.

9. The Board believes that, on account of the proximity of the buildings to the batteries, some method of interior lining for these buildings should be adopted which will minimize damage from the shock of explosion.

10. Miscellaneous information concerning the Cape Henry project is contained in appendix "C".

11. The Board then adjourned sine die.

W.W. WOTHERSPOON

Major General, General Staff Corps, U.S.A.,  
President.

Richmond P. Davis,  
Coast Artillery Corps,  
Recorder.

APPROVAL RECOMMENDED:  
W.W. Wotherspoon,  
Major General, Chief of Staff.

APPROVED:  
LINDLEY M. GARRISON?  
SECRETARY OF WAR.

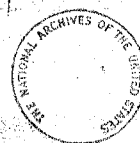
Ledger  
Batteries  
CAPE HENRY &  
FISHERMANS ISLAND.

SUMMARY (M-1)

Fort	Battery	3"	4"	4.7"	5"	6"	8"	10"	12"	12"M	2.24"
Cape Henry (Story)	-----	:	:	:	:	2	:	:	:	:	:
" "	( " )	-----	:	:	:	2✓	:	:	:	:	:
Fishermans	-----	:	:	:	:	:	:	:	:	:	:
Island	:	:	:	:	:	4✓	:	:	:	:	:

✓ Guns to be scrapped.

Transfer of emplacements, railroad tracks, powder  
and shell rooms, tunnel and retaining walls of  
Battery Pennington, Fort Story, Va., Oct. 21, 1922.  
662 B (Ent. Ches) 792



Ledger - 1  
Batteries  
ENT. CHES. BAY.

BATTERY

Guns: 1 - 16"  
Carriages: 1 - 16" disappearing. (A.R.F.) (j-3).  
Status:  
Hoists: None.  
Remarks: Deferred (662B(Ent.Ches)F17)

BATTERY

Guns: 1 - 16".  
Carriages: 1 - 16" disappearing (L.F.) (j-3).  
Status:  
Hoists: None.  
Remarks: Deferred (662B(Ent.Ches.)F17)



BATTERY:

Guns: 1 - 16" (j-1).  
Carriages: 1 - 16" disappearing. (L.F.) (j-3).  
Status:  
Hoists: None.  
Remarks: Deferred (662B(Ent.Ches)F17).

BATTERY

Guns: 1 - 16" (j-1).  
Carriages: 1 - 16" disappearing. (L.F.) (j-3).  
Status:  
Hoists: None.  
Remarks: Deferred (662B(Ent.Ches)F17).

Ledger - 3.  
Batteries  
ENT. CHES. BAY.

BATTERY

Guns: 4 16" mortars (j-1 & 2).  
Carriages:  
Status:  
Hoists: None.  
Remarks: Deferred. (662B(Ent. Ches)F17).

BATTERY

Guns: 4 16" mortars. (j-1 & 2).  
Carriages:  
Status:  
Hoists: None.  
Remarks: Deferred. (662B(Ent. Ches)F17).

BATTERY Alexander C. M. Pennington. (j-8).

Guns: 4 16" howitzers. Model 1920

Carriages: Model 1920

Status: Transferred Oct. 21/22

Hoists: No hoists

Remarks: Allotment made and work begun. (j-7).

BATTERY

Guns: 2 - 6" (j-1).

Carriages: 2 disappearing. (A.R.F.) (j-3).

Status:

Hoists: None.

Remarks: 2 6-inch guns and 2 Barbette carriages transferred from  
Battery Montgomery, Fort Monroe, Va. Feb., 1917.

Ledger - 5.  
Batteries.  
ENT. CHES. BAY.

Battery:

Guns: 2 6-inch guns. (j-1).

Carriages: 2 disappearing (A.R.F.) (j-3).

Status:

Hoists: None.

Remarks:

1

The project of the Cape Henry Board, for the defenses of Cape Henry, dated March 11, 1914, (61757/204), approved by the Secretary of War, and proceedings supplementary thereto, dated October 10, 1914, (61757/204) approved by the Secretary of War, provided for a defense to consist of 4 14-inch guns (provisional), 8 12-inch mortars, and 4 6-inch rifles.

By memorandum of March 10, 1915, (61757/202) the Acting Chief of Staff stated that the Secretary of War has approved the modification, by the Board of Review, War Department, of the above project, in that the estimates ~~was~~ should be based on the emplacement of 16-inch guns, instead of 14-inch guns the project to include 4 16-inch guns, 8 12-inch mortars, and 4 6-inch guns.

By letter of September 18, 1914, (61757) the District Engineer Officer Norfolk, Va., (61757) submitted estimates as follows:

4 batteries of 16-inch guns,.....	\$ 832,000
Mortar batteries,....	440,000
2 6-inch batteries,.....	<u>270,000</u>
	\$1,542,000
Plant,.....	50,000
Construction railroad,.....	<u>60,000</u>
	\$1,652,000

The above estimates are based on the emplacement of the direct fire guns on disappearing carriages.

Consideration is being given to the matter of providing turret mounts for the Cape Henry project. Plans for turret mounts are prepared on basis of two guns per turret (See E.D.ind.of Dec.15,1914,(61757/173), Preliminary estimates covering mounting of ~~gun~~ 16-inch guns in turrets, two guns per turret, \$415,000, submitted to Chief of Staff Feb.15,1915, (61757)

2

The Secretary of War has approved recommendation of the War Department Board of Review "That the mortars to be emplaced in seacoast defenses erected in future should be of 16-inch caliber". (95991/31) It was decided that the project for Cape Henry should be reconsidered and that there should be substituted for the 8 12-inch mortars an equal number of 16-inch mortars (61757/240)

3

The Board of Review recommends that 1 16-inch gun at Cape Henry be mounted on an all around fire disappearing carriage and that the remaining three 16-inch guns should be mounted on limited fire disappearing carriages. The board also recommends that the 4 6-inch guns to be mounted at Cape Henry be mounted for all around fire on disappearing carriages. (proceedings of Sept.8, 1916)

EMERGENCY BATTERIES.

4

February 6, 1917 the Secretary of War authorized the transfer of 2 6-inch guns and 2 Barbette carriages, model of 1900, to Cape Henry for mounting in an emergency emplacement. (104847/2) Plans requested February 9, 1917. (104849/7) Money allotted.

(Note- above armament to be transferred from Battery Montgomery, Fort Monroe, Virginia.).

February 7, 1917 2 5-inch guns and 2 Barbette carriages, model of 1903, were ordered transferred to Cape Henry for installation in an emergency battery. (104847/3). Plans requested February 9, 1917 (104849/7) Money allotted.

(Note- the above armament to be transferred from Battery Rice, Fort Andrews, Massachusetts.).

5

Confirming authority previously obtained informally from the Public Health Service, the Secretary of the Treasury in letter dated February 13, 1917 gave permission for the utilization of the quarantine reservation on Fishermans Island for mounting guns in emergency batteries. (104849/17).

6

July 22, 1919, the A.G.O. approved the scrapping of the 2 5-inch guns at Fort Story and the 4 5-inch guns at Fishermans Island. (472.3-F35).

7

June 17, 1921 Allotment made in sum of \$370,500.00 for construction of gun platforms, magazines, tunnel, retaining wall and railroad tracks for the four 16-inch howitzer at Fort Story and work begun. 662B(Ent.Ches)F.

8

Letter of A.G.O., March 23, 1922, inclosing advance copy of G.O. No. 13, 1922, giving the name of Alexander G. M. Pennington to the battery of four 16-inch howitzers, Ft. Story, in honor of Major General Alexander G. M. Pennington. 600.05(Batteries)F7.

*Batt. Pennington transferred to arty. Oct. 21/22*



Memoranda - 1  
Batteries  
ENT. CHES. BAY.

1  
Letter from District Engineer, Norfolk, Va., March 14, 1918 (662A  
(Ches)F2) as follows:

1. In reply to your confidential letter of February 21, 1918,  
(File No. 662A, Ches F), in regard to armament in service at the  
defenses of Chesapeake Bay, I have to report as follows:

\* \* \* \* \*

4. It is not understood whether it is intended that this  
report shall include the temporary armament at Fort Story and  
Fishermans Island, Va.; but in order to bring this information  
before you, a statement of the guns at these localities is ap-  
pended as follows:

Fort Story, Va.

Two 5-inch guns.

Two 6-inch guns.

Fishermans Island, Va.

Four 5-inch guns.



Structures to be served:

Units:

Voltage:

Connections:

Location: Central plant. (j-1).

Status: Plant to generate alternating current. Batteries to take same through transformers. Searchlights to take same through motor generators. (j-1).

Structures to be served: Searchlight.

Units: M.G. (j-1). Current from C. P. (j-1).

Voltage:

Connections:

Location:

Status:



Structures to be served: Searchlight

Units: M. G. (j-1). Current from C. P. (j-1).

Voltage:

Connections:

Location:

Status:



Structures to be served: Searchlight.

Units: M. G. (j-1) Current from C. P. (j-1).

Voltage:

Connections:

Location:

Status:

Structures to be served: Searchlight.

Units: M. G. (j-1) Current from C.P. (j-1).

Voltage:

Connections:

Location:

Status:



Structures to be served: Searchlight.

Units: Motor Generator: (j-1) Current from Central Power (j-1).

Voltage:

Connections:

Location:

Status:

Structures to be served:

Units: Motor Generator. (j-1) Current from Central Power (j-1)

Voltage:

Connections:

Location:

Status:

Structures to be served: Battery reserve. (j-1).

Units: 1 - 25 K.W. set. (j-1).

Voltage:

Connections:

Location:

Status:



Structures to be served: Battery reserve. (j-1).

Units: 1 25 KW. set (j-1).

Voltage:

Connections:

Location:

Status:

Structures to be served:

Units: 1 25 K.W. set. (j-1).

Voltage:

Connections:

Location:

Status:

Structures to be served: Battery Reserve. (j-1).

Units: 1 25 K.W. set. (j-1).

Voltage:

Connections:

Location:

Status:



Structures to be served: Battery Reserve. (j-1).

Units: 1 25 K.W. set. (j-1).

Voltage:

Connections:

Location:

Status:

Structures to be served: Battery reserve. (j-1).

Units: 1 25 K.W. set. (j-1).

Voltage:

Connections:

Location:

Status:

Structures to be served: Searchlight reserve. (j-1).

Units: 1 25 KW. set (j-1).

Voltage:

Connections:

Location:

Status:



Structures to be served: Searchlight reserve. (j-1).

Units: 1 25-KW. set. (j-1).

Voltage:

Connections:

Location:

Status:

Structures to be served: Searchlight reserve. (j-1).

Units: 1 25 KW. set. (j-1).

Voltage:

Connections:

Location:

Status:

Structures to be served: Searchlight reserve. (j-1).

Units: 1 25 KW. set. (j-1).

Voltage:

Connections:

Location:

Status:



Structures to be served: Searchlight reserve. (j-1).

Units: 1 - 25 KW. set. (j-1).

Voltage:

Connections:

Locations:

Status:

Structures to be served: Searchlight reserve. (j-1).

Units: 1 25 K.W. set. (j-1).

Voltage:

Connections:

Location:

Status:

EMERGENCY INSTALLATIONS

Structures served: 2 60-inch searchlights. (j-2)

Units: 1 25-kw. generating set No. 10888. (j-2)

Voltage:

Connections:

Location: Cape Henry. (j-2)

Status:

Remarks: Set removed from Fort Monroe. (j-2)

Structures served: 2 60-inch searchlights. (j-2)

Units: 1 25-kw. generating set No. 125 (j-2)

Voltage:

Connections:

Location: Fishermans Island (j-2)

Status:

Remarks: Set removed from Fort Hunt. (j-2)

1  
The Cape Henry Board, in its proceedings of March 11, 1914, (61757/204), approved by the Secretary of War, recommended that estimates be prepared for the construction of a central power plant for the defenses at Cape Henry.

The District Engineer Officer, Norfolk, Va., September 18, 1914, (61757/147) submitted estimates for a central power plant, generating alternating current, to be located between batteries A and G, on parcel "A". Tension to be stepped down at batteries, buildings, etc., by transformers; motor-generators to be installed at searchlight stations to change the A.C. to D.C.

In addition to the central plant installation, the district officer considers the installation of 25-kw. sets as reserves at batteries and searchlights necessary:

The estimated cost of the above installation is as follows:

Power house and parapet,.....	\$ 35,000
Central power plant,.....	80,000
Cables,.....	18,000
6 battery reserve plants,.....	27,000
motor-generator, transformers, etc.,....	10,000
	<u>\$170,000</u>

NOTE: Reserves for schlts. included in searchlight estimate.

The Cape Henry Board, in its proceedings of October 10, 1914, (61757/204), approved by the Secretary of War, approved the preliminary power project prepared by Lieut. Col. Winslow, and submitted by the Chief of Engineers.

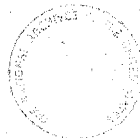
2  
On account of the existing emergency the following generating sets have been installed:

Cape Henry: 1 25-kw. generating set No. 10888. Removed from Fort Monroe, Va.

Fishermans Island: 1 25-kw. generating set No. 125, removed from Fort Hunt.

Each set furnishes current for 2 60-inch searchlights.

(104849/33)





Ledger  
Searchlights  
ENTRANCE CHESAPEAKE BAY

SUMMARY.


Size	:	Light No	:	B	Location	:	Remarks
60"	:	1	:		:East of Batteries "L" and "M":	:	
	:		:		: Fishermans Island, Va.	:	
60"	:	2	:		:East of Batteries "L" and "M":	:	
	:		:		: Fishermans Island, Va.	:	
60"	:	1	:		:East of Cape Henry Lighthouse	:	
	:		:		: Cape Henry (Fort Story) Va.	:	
60"	:	2	:		: East of Cape Henry Lighthouse	:	
	:		:		: Cape Henry (Fort Story) Va.	:	

Location: Parcel "C" (j-1).  
Projector: 60". (j-1).  
Cable:  
Generator: Motor Generator (j-1) 25 K.W. for reserve. (j-1).  
Shelter: For projector:  
For generator:  
Remarks:

Location: Parcel "C" (j-1).  
Projector: 60" (j-1).  
Cable:  
Generator: M-G. (j-1). 25 K.W. set for reserve. (j-1).  
Shelter: For projector:  
For generator:  
Remarks:

Location: On or near torpedo wharf. (j-1).  
Projector: 60" (j-1).  
Cable:  
Generator: Motor Generator. (j-1). 25 K.W. set for reserve. (j-1).  
Shelter: For projector:  
For generator:  
Remarks:

Location: Parcel "A" (j-1)  
Projector: 60" (j-1).  
Cable:  
Generator: Motor Generator. (j-1). 25 K.W. set for reserve. (j-1).  
Shelter: For projector  
For generator:  
Remarks:



Location: Parcel "A" (j-1).

Projector: 60" (j-1).

Cable:

Generator: Motor Generator. (j-1). 25 k.w. set for reserve. (j-1).

Shelter: For projector:

For generator:

Remarks:

Location: Parcel "A" (j-1).

Projector: 60" (j-1).

Cable:

Generator: Motor Generator: (j-1). 25 K.W. set for reserve. (j-1).

Shelter: For projector:

For generator:

Remarks:



EMERGENCY INSTALLATIONS

Location: Cape Henry. (j-2)

Projector: 60-inch G.E. Lamp No.5606. (j-2)

Cable:

Generator: 25-kw.generating set No.10888 (j-2)

Shelter: For projector:

For Generator:

Status: Searchlight and generating set removed from Fort Monroe (j-2)  
Sperry modified lamp mechanisms ordered. (j-3).

Location: Cape Henry (j-2)

Projector: 60-inch G.E.No.7981. Lamp No.9966 (j-2)

Cable:

Generator: 25-kw.generating set No.10888 (j-2)

Shelter: For projector:

For generator:

Status:

Remarks: Searchlight and generating set removed from Fort Monroe (j-2)  
Sperry modified lamp mechanisms. (j-3).

EMERGENCY INSTALLATIONS

Location: Fishermans Island (j-2)

Projector: 60-inch Schukert No.5282N. Lamp No.5605. (j-2)

Cable:

Generator: 25-kw.generating set No.125 (j-2)

Shelter: For projector:

For generator:

Status:

Remarks: Searchlight removed from Fort Monroe. Generating set removed from Fort Hunt. (j-2)

Sperry modified lamp mechanisms ordered. (j-3).

Location: Fishermans Island (j-2)

Projector: 60-inch Schukert. G.E.lamp No.5616 (j-2)

Cable:

Generator: 25-kw.generating set No.125 (j-2)

Shelter: For projector:

For generator:

Status:

Remarks: Searchlight removed from Fort Monroe. Generating set removed from Fort Hunt. (j-2)

Sperry modified lamp mechanisms ordered. (j-3).

1

The Cape Henry Board, in its proceedings of March 11, 1914, (61757/104) approved by the Secretary of War, recommended that estimates be prepared for the purchase and installation of 6 60-inch searchlights at Cape Henry. No location for the lights specified.

The District Engineer Officer, Norfolk, Va., by letter of September 18, 1914, (61757/147) submitted estimate for the installation of 6 60-inch searchlights, 2 on parcel "C", 1 on or near the torpedo wharf, and 3 near the east and west boundaries of site "A". The district officer suggested installations on rolling lift towers, protected when down by sand or concrete parapets. For site "C", however, on account of expense of rolling lift instln., he proposed the construction of two cottages, similar to those surrounding, and the installation of the lights for this locality therein. The power for the lights, according to the district officer's scheme, is to be obtained through motor-generators at lights from a central plant generating A.C. Reserve ~~lights~~ 25-kw. sets for each light are also provided for. The estimated cost, based on installation proposed for site "C", including house and reserve set and instln. thereof, is \$16,000 per light.

The Cape Henry Board, in its proceedings of October 10, 1914, (61757/204), approved the preliminary searchlight \*\*\* project prepared by Lieut. Col. Winslow, and submitted by the Chief of Engineers. The proceedings have been approved by the Secretary of War.

-2-

On account of emergency the following searchlights have been installed in connection with the defenses of Cape Henry:

60-inch searchlight: Located at Cape Henry. Lamp No. 5606. G.E.

60-inch searchlight: " " " " G.E. Lamp No. 9966.

25-kw. generating set No. 10888.

Above equipment removed from Fort Monroe;

60-inch Schukert searchlight: Located at Fishermans Island. No. 5282N  
Lamp No. 5605. Removed from Fort Monroe.

60-inch Schukert without number. Lamp No. 5616. Removed from Fort Monroe.

25kw. generating set No. 125 removed from Fort Hunt, Va.  
(104849/33)

3

In response to request made by the C. O., C. D. of Chesapeake to have the new type of Sperry lamp installed in the four projectors ordered sent to Fisherman's Island and Cape Henry, the Engineer Depot, Washington Barracks, was instructed to furnish four Sperry modified lamp mechanisms for the defenses of Hampton Roads (38959/285).

Memoranda - 1  
Searchlights  
ENTRANCE CHESAPEAKE BAY

<sup>1</sup>  
Letter from District Engineer, Norfolk, Va., March 13, 1918,  
(470.3(Ches)Fl), giving data in re searchlights as follows:

FISHERMAN'S ISLAND, VA.

One (1) 60" searchlight, (designated No. 1), No. 373, Schuckert  
Co. Form A. Type H, located about 630 yards east of Batteries  
"L" and "M".

One (1) 60" searchlight, (designated No. 2), No. 5282, Seimens-  
Schuckert-Werke, Form A, Type H, located about 775 yards east  
of Batteries "L" and "M".

These lights receive power from one 25KW gasoline-driven  
generating set, installed in wooden shelter about 725 yards east  
of Batteries "L" and "M". Only one set being installed at Fisher-  
man's Island, the lights cannot be operated simultaneously.

CAPE HENRY, (FORT STORY) VA.

One (1) 60" searchlight, (designated No. 1), No. 7981, General  
Electric Co., Form D-3, Type H-60, located in tower 2950 feet  
easterly of Cape Henry Lighthouse.

One (1) 60" searchlight, (designated No. 2), No. 5606, General  
Electric Co., Form D-1, Type EC, located in tower 2400 feet  
easterly of Cape Henry Lighthouse.

These lights receive power from a single 25 KW gasoline-  
driven generating set, located 2650 feet easterly of Cape Henry  
Lighthouse. Only one generating set being installed at Cape Henry,  
the lights cannot be operated simultaneously.



Structure: Casemate (and parapet). (j-1).

Location: Parcel "A" (j-1).

Kind of construction:

Status: To be included in 1917 estimates. (M-1).

Remarks: Estimated cost \$43,000 (j-1) Project and Estimate called for July 9, 1915. (m-1).  
New plans submitted by District Engineer, Norfolk, Va., and funds allotted. (j-2).

Structure: Storehouse. (j-1).

Location: Parcel "B" (j-1).

Kind of construction:

Status: To be included in 1917 estimates (M-1).

Remarks: Estimated cost \$70,000 (j-1). Project and Estimate called for July 9, 1915. (M-1).

Structure: Cable tanks. (j-1).

Location: Parcel "B" (j-1).

Kind of construction:

Status: To be included in 1917 estimates. (m-1).

Remarks: Estimated cost \$40,000 (j-1). Project and Estimate called for July 9, 1915. (M-1).

Structure: Loading rooms. (j-1).

Location: Parcel "B" (j-1).

Kind of construction:

Status: To be included in 1917 estimates. (m-1).

Remarks: Estimated cost \$15,600 (j-1). Project and Estimate called for July 9, 1915. (m-1).



Structure:

Location: Parcel "E" (j-1).

Kind of construction:

Status: To be included in 1917 estimates. (m-1).

Remarks: Estimated cost \$1,000 (j-1). Project and Estimate called for July 9, 1915. (m-1).

Structure: Storage magazines. (j-1).

Location: Parcel "E". (j-1).

Kind of construction:

Status: To be included in 1917 estimates. (m-1).

Remarks: Estimated cost \$3,400. (j-1) Project and Estimate called for July 9, 1915. (m-1).

Structure: Wharf, including derrick, boathouse, etc. (j-1).

Location: Parcel "E" (j-1).

Kind of construction:

Status: To be included in 1917 estimates. (m-1).

Remarks: Estimated cost \$43,000 (j-1). Project and Estimate called for July 9, 1915. (m-1).

Structure: Guard house, for dormitory. (j-1).

Location: Parcel "E" (j-1).

Kind of construction:

Status: To be included in 1917 estimates. (m-1).

Remarks: Estimated cost \$4,000 (j-1) Project and Estimate called for July 9, 1915. (m-1).



Structure: Fence. (j-1).

Location: Parcel "E" (j-1).

Kind of construction:

Status: To be included in 1917 estimates. (m-1).

Remarks: Estimated cost \$12,000 (j-1) Project and Estimate called for July 9, 1915. (M-1).

Structure: Duot system. (j-1).

Location:

Kind of construction:

Status: To be included in 1917 estimates. (m-1).

Remarks: Estimated cost \$11,000. (j-1) Project and Estimate called for July 9, 1915. (M-1).

Structure: Mining Casemate (j-2).

Location: Parcel "D" (j-2).

Kind of construction

Status: Funds allotted May 19, 1917. (j-2).

Remarks:



The Cape Henry Board, in <sup>1</sup>its proceedings of March 11, 1914, (61757/104), approved by the Secretary of War, recommended that estimates be prepared for the construction of certain torpedo defense structures at Cape Henry, Va., in connection with the proposed defenses at that point.

The District Engineer Officer, Norfolk, Va., September 17, 1914; (61757/142 and 145), submitted estimates as follows:

Casemate (and protecting parapet),.....	\$ 43,000
Duct system,.....	11,000
Storehouse,.....	70,000
Cable tanks,.....	40,000
Loading rooms,.....	15,600
Service magazines,.....	1,000
Storage magazines,.....	3,400
Wharf, including derricks, boat house, etc.	43,000
Guardhouse, for dormitory,.....	4,000
Fence,.....	12,000
	<u>\$243,000</u>

The casemate is to be located on parcel "A"; all other structures are to be located at Parcel "E", about 1-1/2 miles west of parcel "A".

2

Apr. 20, 1917, the D.E., Norfolk, Va. in accordance with instructions from this office submitted new plans for mining casemate for Fort Story, casemate to be located in Parcel "D" of the U. S. property at Cape Henry. The estimated cost is as follows:

Casemate

Clearing and excavation, 6,600 yards at 30¢	\$1,980.00
Concrete 2,200 cubic yards at 15¢	33,000.00
Steel, hardware, etc.	900.00
Plumbing	300.00
Roofing	250.00
Painting	200.00
Electric installations	600.00
Backfill, 6,000 cubic yards at 50¢	3,000.00
Clay, sail and sed, for slopes	1,850.00

Duct Line

1 terminal manhole	\$ 250.00
400 lineal feet 24 ducts	<u>2,400.00</u>
	<u>2,650.00</u>
	<u>\$44,730.00</u>
Contingencies	<u>4,473.00</u>
Total	<u>\$49,203.00</u>

Funds allotted May 19, 1917 (98255/49)

Memoranda - 1  
Torpedo Defense  
ENTRANCE CHESAPEAKE BAY

C. of C.A., July 2, 1915 (81892/<sup>1</sup>28) states provision should be made for inclusion in the 1917 estimates of work in connection with torpedo defense project for Cape Henry, Va. Detailed plans and estimates called for (based on project contained in j-1) July 9, 1915 (98255).

1  
Fee of railroad right-of-way at Cape Henry, Va., approx. 29A,  
purchased from Norfolk Southern Railroad Co. in March 1917. Map  
88644/206.

2  
Right-of-way at Cape Henry, Va., 25 feet wide along Atlantic Ave.  
from 61st St. to Parcel "A" purchased from Cape Henry Syndicate, by deed  
dated August 1916. Map 88644/222.

3  
Fishermans Island, Va. transferred from Treasury Department for  
Craney Island under S2495, passed by Congress and to President for  
approval. (Nov. 1919) Map 601(Ent.Ches-Fishermans Island)F2/6.

4  
Act transferring Craney Island, Va. from jurisdiction of War Depart-  
ment in exchange for Fishermans Island, Va. (latter having area of 225 A.  
above high water mark) approved November 19, 1919. (Bulletin No.41,  
War Department, December 2, 1919, Section III).