

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Gun and Mortar Batteries)

COAST DEFENSES OF THE COLUMBIA.....
FORT. CANBY, WASHINGTON.....
*BATTERY HARVEY ALLEN.....
No. of guns 2 Caliber 6-inch Carriage Dis.L.F

Form 1 Corrected to June 30, 1921.

Battery commenced	Aug., 1904	Sources of electric current	Central Power Plant.
Battery completed	Dec., 1905		
Date of transfer	2/27/1906	Max. kw. required for lights	4.5 kw.
Material of construction	Concrete	Max. kw. required for motors	None.
Portland or Rosendale cement	Portland		
Cost to date of transfer	\$58,935.00		
Connected to water supply	Yes	Present condition of battery	Good.
Connected to sewer	Yes	Rooms wet or dry	Dry.
Type of latrine	Syphon		
Type of data transmission	None	How ventilated	6" dia. shafts, Star tops, galv. steel. No ventilating doors.
Trunnion elevation in battery	208.00'	Remarks-	
Datum plane	M.L.L.W.		

ARMAMENT.

Emplacement or mortar No	Guns or Mortars						Carriages				
	Cal.	length	model	Serial No.	Manufacturer	mounted	Type	model	Serial No.	Manufacturer	Motor
1	6"	309.8"	1905	13	Watervliet A.	C.A.C.	Dis.L.F.1903	86	So. Bethlehem	None	
2	6"	309.8"	1905	17	Watervliet A.	C.A.C.	Dis.L.F.1903	87	So. Bethlehem	None	
3	6"	309.8"	1905	16	Watervliet A.	C.A.C.	Dis.L.F.1903	88	So. Bethlehem	None	
4	Above guns shipped away; Guns now						Carriage No. 88	sold and removed.			
5	mounted were transferred from Battery O'Flyng.										
6	6"	309.8"	1905	1	Watervliet A.	C.A.C.	Dis.L.F.1903	86	So. Bethlehem	None	
7	6"	309.8"	1905	11	Watervliet A.	C.A.C.	Dis.L.F.1903	87	So. Bethlehem	None	

HOISTS.

Emplacement Number	Type	Delivery	Motor					Date of transfer	Remodeled for long points
			Serial No.	Maker	H.P.	Volts	RPM		
1	None								
2	"	*Battery Allen is eliminated from Harbor Defense Project, H.D. Columbia						and equip will be disposed of in accordance with	
3	"	ASF Manual M416, Nov. 1944. CE 400.93(Columbia River)CM 130022 dated 21 May 1945 (Memo fr. ASF)							

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Battery Plan)

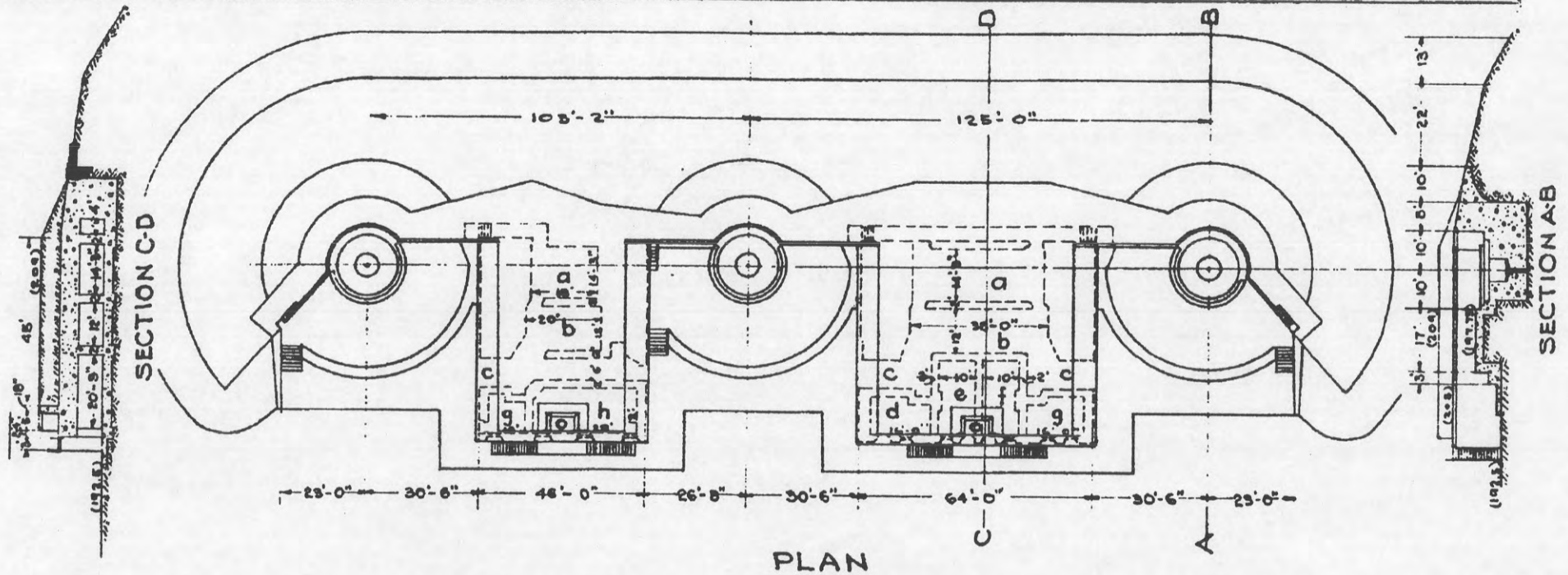
COAST DEFENSES OF THE COLUMBIA
FORT CANBY

BATTERY HARVEY ALLEN

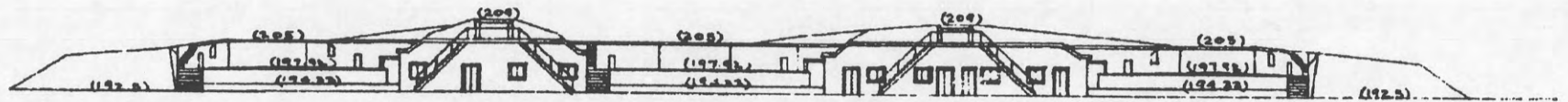
No. of Guns 3 Caliber 6" Carriage "Dis." L.H.

Form 7.

Corrected to



PLAN



REAR ELEVATION

LEGEND

- | | |
|--------------------------|-----------------------|
| a - Powder Room | g - Store Room |
| b - Shell Room | h - Sleeping Room |
| c - Passage Way | o - Observing Station |
| d - Storage Battery Room | |
| e - Guard Room | |
| f - Office | |

Note: Plane of Reference - Mean Lower Low Water.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Battery Plan)

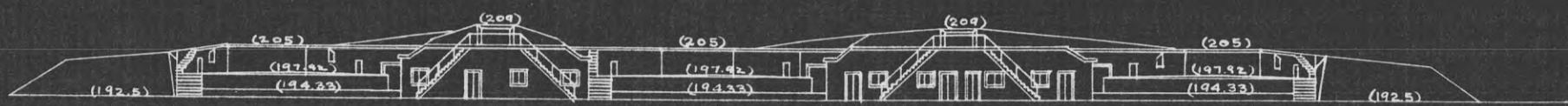
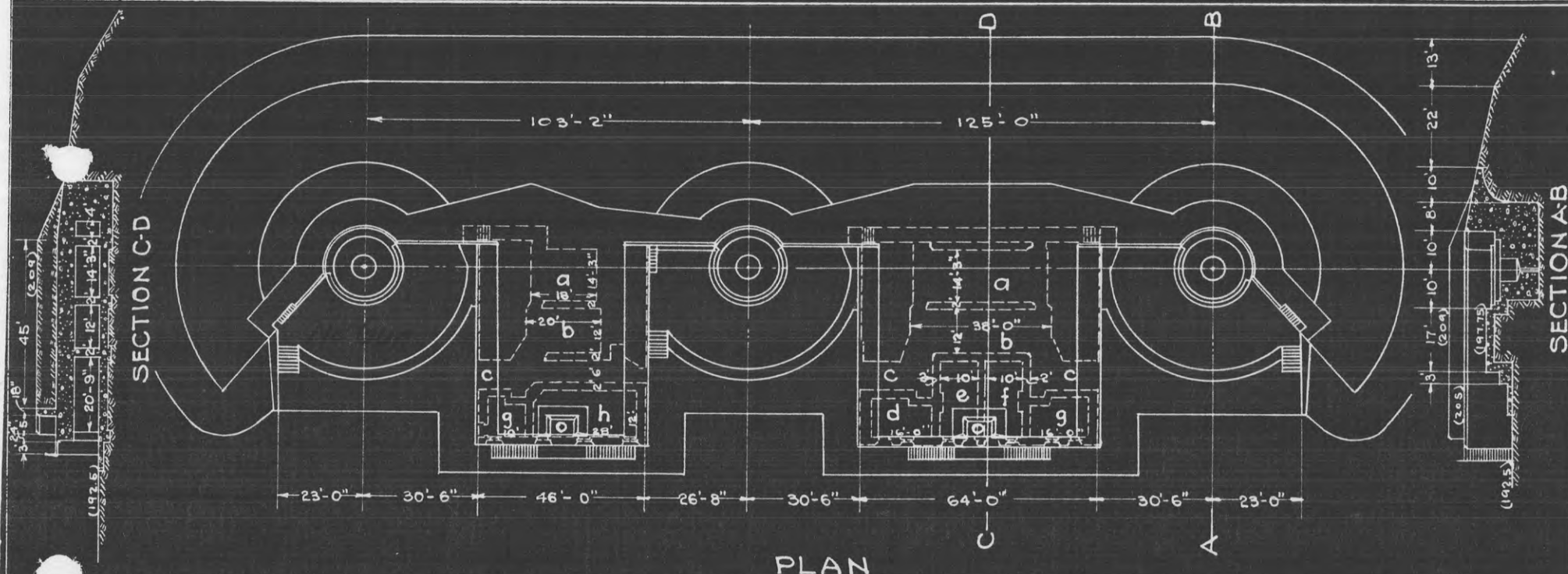
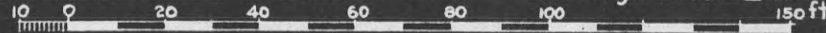
COAST DEFENSES OF THE COLUMBIA
FORT CANBY

BATTERY HARVEY ALLEN

No. of Guns 3 Caliber 6" Carriage "Dis." "L.F."

Form 7.

Corrected to



LEGEND

- a - Powder Room
- b - Shell Room
- c - Passage Way
- d - Storage Battery Room
- e - Guard Room
- f - Office
- g - Store Room
- h - Sleeping Room
- o - Observing Station

Note: Plane of Reference - Mean Lower Low Water.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Battery Plan)

COAST DEFENSES OF THE COLUMBIA
FORT CANBY

BATTERY HARVEY ALLEN

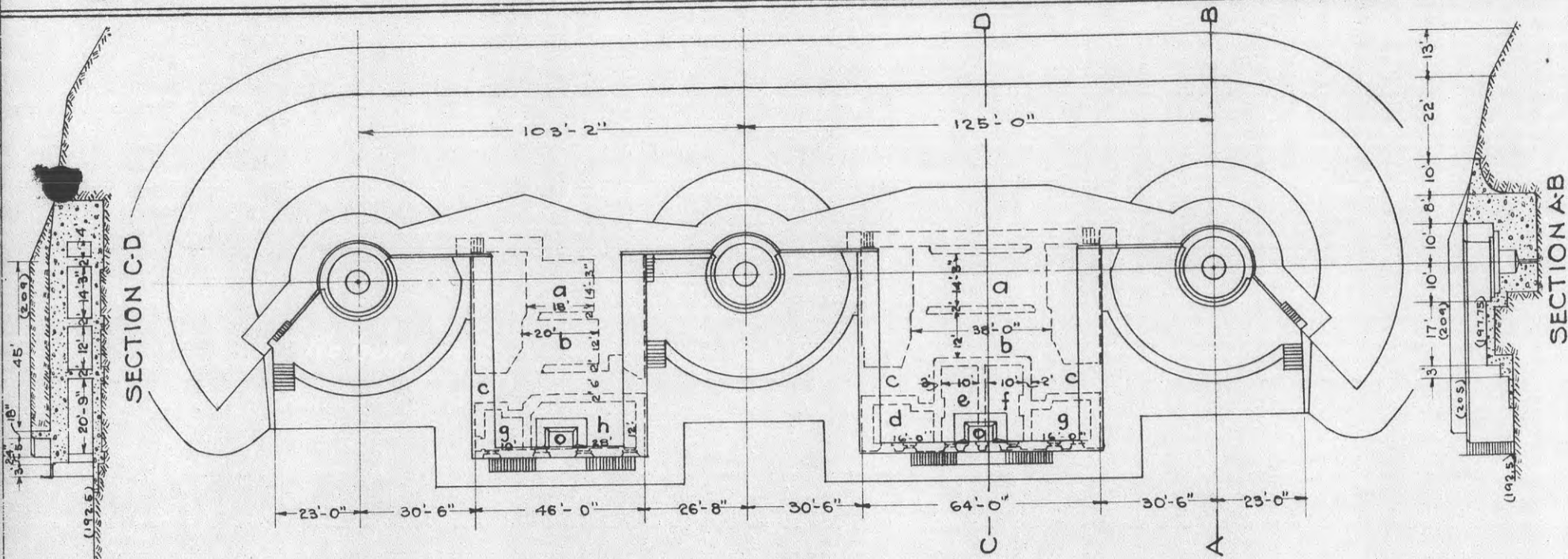
No. of Guns 3

Caliber 6"

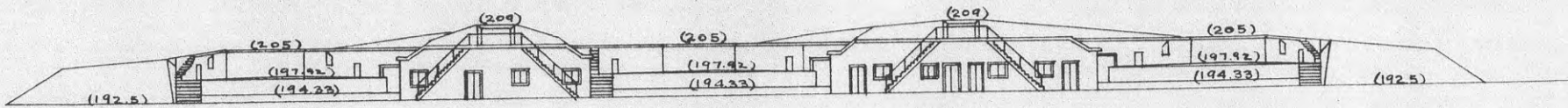
Carriage "Dis." "L.F."

Form 7.

Corrected to



PLAN



REAR ELEVATION

LEGEND

- a - Powder Room
- b - Shell Room
- c - Passage Way
- d - Storage Battery Room
- e - Guard Room
- f - Office
- g - Store Room
- h - Sleeping Room
- o - Observing Station

Note: Plane of Reference - Mean Lower Low Water.

COAST DEFENSES OF Columbia.

FORT Canby BATTERY Allen No. of GUNS: 3 CALIBER: 6"

	EMPLACEMENT NUMBER 1	EMPLACEMENT NUMBER 2.	EMPLACEMENT NUMBER 3.	EMPLACEMENT NUMBER 4.
1-a. Azimuth.	153°03'36"	296°00'20"	296°00'20"	
b. Distance.	911.67 ft.	124.91 ft.	103.19 ft.	
2-a. Model of Gun.	1905	1905	1905	
b " " Carriage	L.F. 1903	L.F. 1903	L.F. 1903	
c. Type of " "	Dis.	Dis.	Dis.	
3- Elevations of				
a. Gun trunnions (in battery)	208.0	208.0	208.0	
b. Interior crest.	206.0	206.0	206.0	
c. Loading platform.	198.9	198.9	198.9	
4- Angle of depression.	2°30'	4°00'	2°30'	
5- Limiting azimuths of field of fire as determined by:	FROM. 325°45'	TO. 0°1'	FROM. 295°35'	TO. 0°1'
a Construction of emplacement.	325°45'	136°36'	116°36'	275°18'
b Interference by adjacent emplacements.	325°45'	136°36'	91°0'	275°18'
c Interference of other obstacles external to emplacement.	325°45'	108°0'	116°36'	308°0'
d Position of Ordnance stops.	325°45'	136°36'	116°36'	275°18'

NOTES.

1. Azimuth and distance of emplacement No 2 are given with reference to No.1, of No.3, with reference to No.2, etc. Azimuth and distance of No.1, are given with reference to Canby Light
3. Above plane of M. L. L. W.
- 5-c. Nature of obstacles: No. 3, High bluff - location of F'4
No. 1, Bluff in front of B'5

2-c Use one of following abbreviations or designations: Dis; Nordis; Alt. gun-lift; Turret; Casemate; Ped; B.P.

Co-ordinates Gun No.1: N. 812.74, W. 413.04 (Origin- Canby Light).

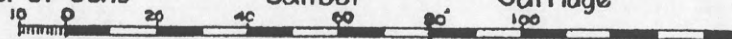
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Battery Plan)

COAST DEFENSES OF THE COLUMBIA
FORT CANBY
BATTERY ELIJAH O'FLYNG

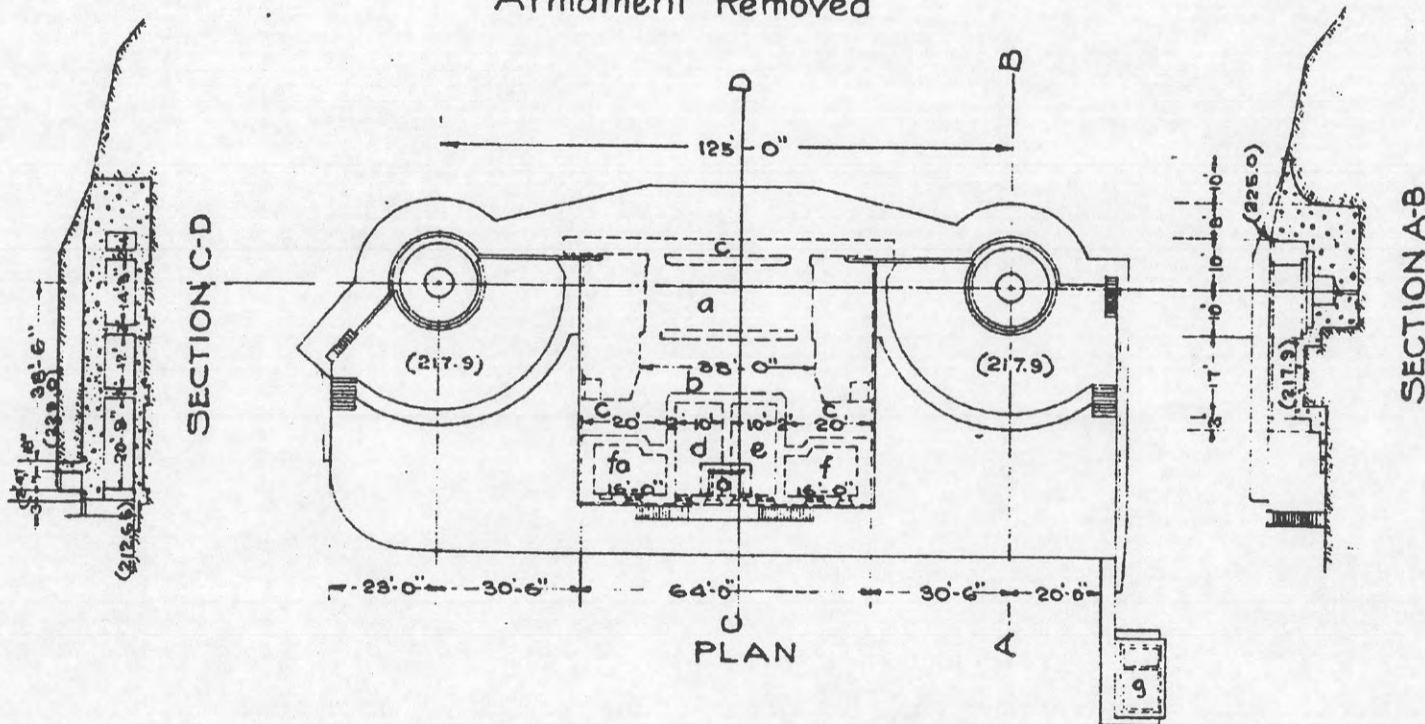
Form 7.

Corrected to

No. of Guns Caliber Carriage

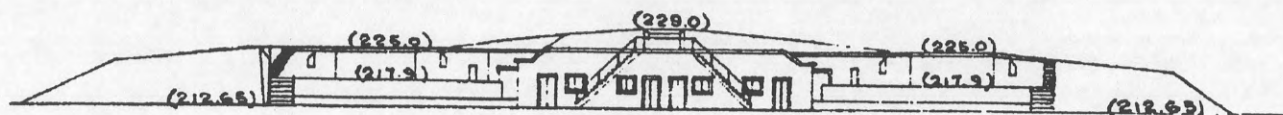


Armament Removed



LEGEND

- a - Powder Room
- b - Shell Room
- c - Passage Way
- d - Guard Room
- e - Office
- f - Store Room
- g - Latrine
- o - Observing Station
- fa - Plotting Room



REAR ELEVATION

Note: Plane of Reference - Mean Lower Low Water.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Battery Plan)

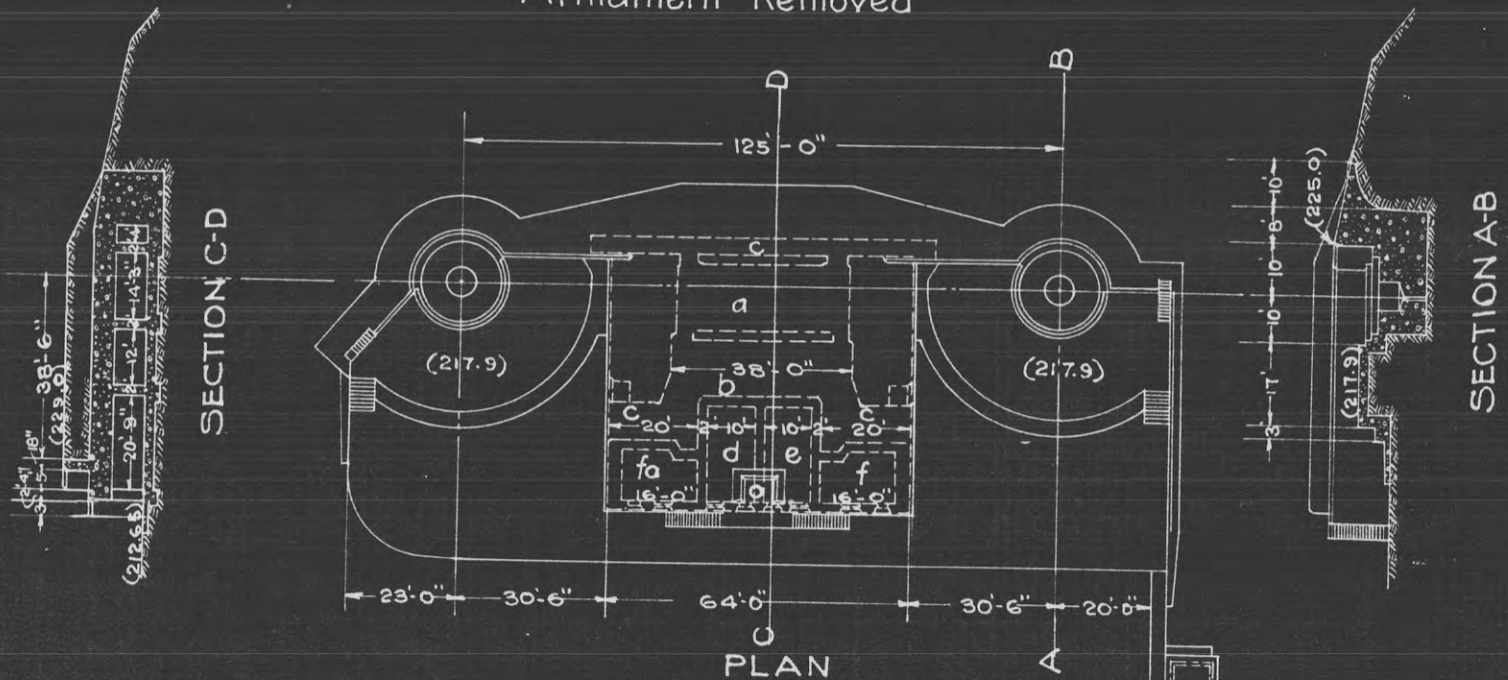
COAST DEFENSES OF THE COLUMBIA
FORT CANBY
BATTERY ELIJAH O'FLYNG

Form 7.

Corrected to

No. of Guns Caliber Carriage

Armament Removed



LEGEND

- a - Powder Room
- b - Shell Room
- c - Passage Way
- d - Guard Room
- e - Office
- f - Store Room
- g - Latrine
- o - Observing Station
- fa - Plotting Room



REAR ELEVATION

Note: Plane of Reference - Mean Lower Low Water.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Battery Plan)

COAST DEFENSES OF THE COLUMBIA
FORT CANBY
BATTERY ELIJAH O'FLYNG

Form 7.

Corrected to

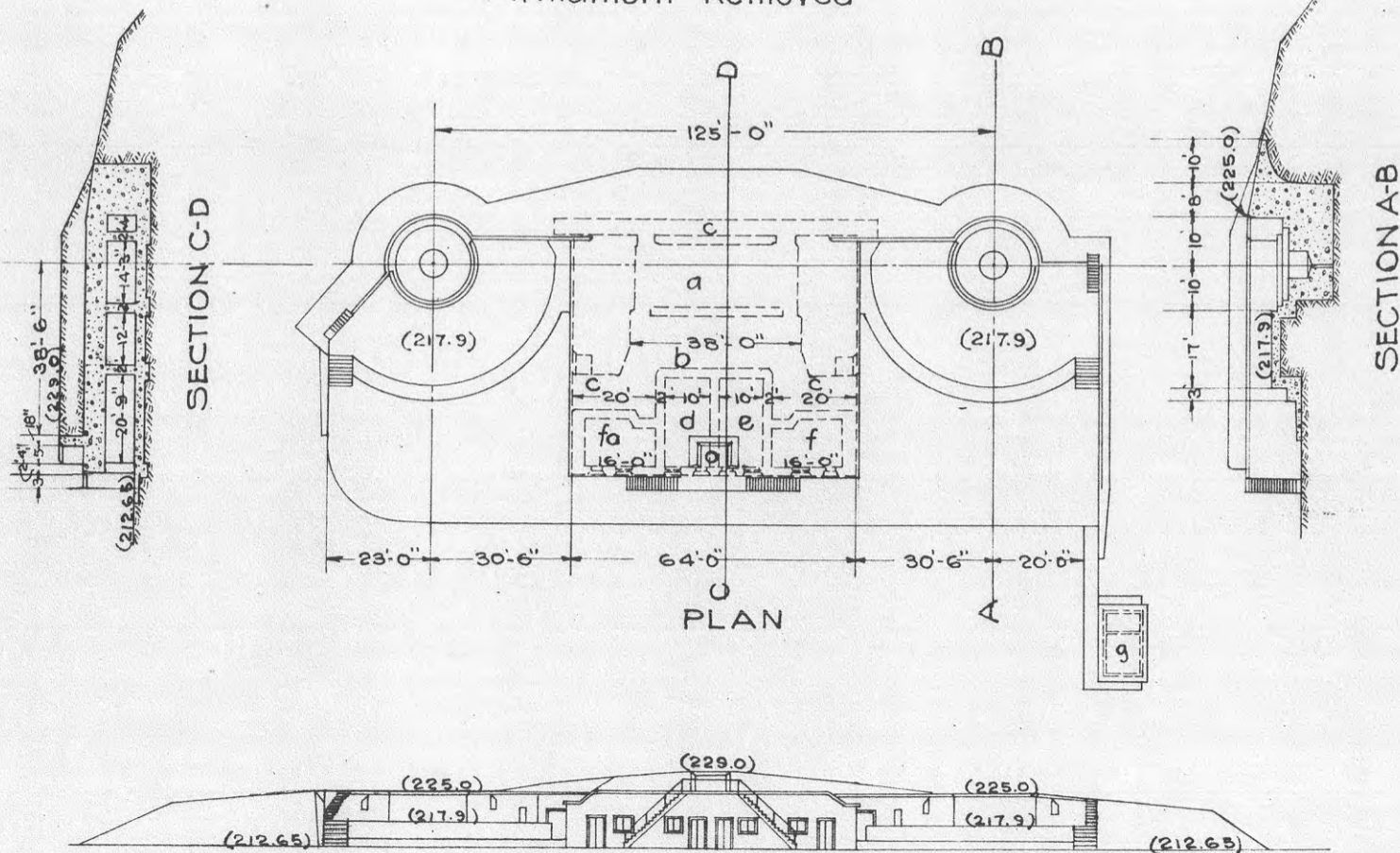
No. of Guns

Caliber

Carriage



Armament Removed



LEGEND

- a - Powder Room
- b - Shell Room
- c - Passage Way
- d - Guard Room
- e - Office
- f - Store Room
- g - Latrine
- o - Observing Station
- fa - Plotting Room

REAR ELEVATION

Note: Plane of Reference - Mean Lower Low Water.

COAST DEFENSES OF Columbia.

FORT Canby BATTERY 0' Flying NO. OF GUNS: 2 CALIBER: 6"

	EMPLACEMENT NUMBER 1.	EMPLACEMENT NUMBER 2.	EMPLACEMENT NUMBER 3.	EMPLACEMENT NUMBER 4.
1-a Azimuth.	252°27'46"	240°30'00"		
b. Distance.	1189.78 ft.	125.02		
2-a Model of Gun.	1905	1905		
b " " Carriage	L.F. 1903	L.F. 1903		
c " " Type of " "	Dis.	Dis.		
3- Elevations of				
a Gun trunnions (in battery)	227.0	227.0		
b Interior crest.	225.0	225.0		
c Loading platform.	217.9	217.9		
4- Angle of depression.	4°30'	4°30'		
5- Limiting azimuths of field of fire as determined by:				
a construction of emplacement.	FROM 260°15' TO 0°18'	FROM 0°15' TO 0°18'		
b Interference by adjacent emplacements.	272 0 41 18	219 50 30 46		
c Interference of other obstacles external to emplacement.	260 15 26 00	219 50 30 46		
d Position of Ordnance stops.	260 15 41 18	219 50 30 46		

NOTES.

1. Azimuth and distance of emplacement No 2 are given with reference to No.1, of No.3, with reference to No.2, etc. Azimuth and distance of No.1, are given with reference to Canby Light
3. Above plane of M.I.L.W.
- 5-c Nature of obstacles: High bluff on right flank.

2-c Use one of following abbreviations or designations: Dis, Nondis, Alt, gun-lift, Turret, Casemate, Ped; B.P.

Co-ordinates Gun No.1: N.358.51, E.1134.48 (Origin- Canby Light).

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON

Part I Corrected to 1 March 1945

~~CONFIDENTIAL~~

BATTERY: 247 No. of Guns: 2
Caliber: 6" Carriage: Barbette M-4

DATA TRANSMISSION

Type: Telephones furnished and installed by the Signal Corps.

REMARKS

This battery and its facilities were constructed by Government forces. The construction was authorized by Dir. Cons. No. FS-284 and was designated Job No. McKenzie Head FS-1. Construction detail plans are on file at the District Engineer's office of the Portland, Oregon District, Portland, Oregon and at the Post Engineer's office at Fort Stevens, Oregon. Supplemental work directives also covered by this report are as follows:

- Dir. No. PD-T-474, Job No. Fort Stevens-5
- Dir. Cons. No. FS-1555, Job No. The Columbia FS-5
- Dir. Cons. No. FS-1587, Job No. The Columbia FS-7.

ARMAMENT

Emplacement No.	GUNS						CARRIAGES				
	Cal.	Length	Model	Serial No.	Manufacturer	Mounted	Type	Model	Serial No.	Manufacturer	Motor
1	6"	309.90"	T2	15	Watervliet Arsenal New York, N.Y.	Apr. 1944	Barbette	M4	3	Wellman Eng. Co. Akron, Ohio	10 h.p. 70V, DC
2	6"	309.90"	T2	17	Watervliet Arsenal New York, N.Y.	Apr. 1944	Barbette	M4	4	Wellman Eng. Co. Akron, Ohio	10 h.p. 70V, DC

~~CONFIDENTIAL~~

ED Form A-162A
16 Sept. 1943

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON

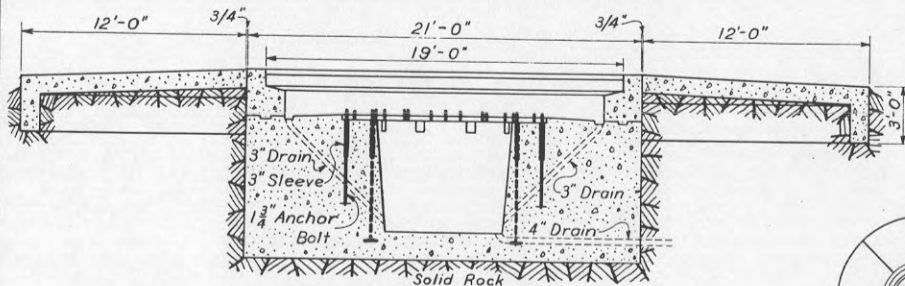
BATTERY 247

NO. OF GUNS 2 CALIBER 6 IN. CARRIAGE BARBETTE M-4

SCALES AS SHOWN

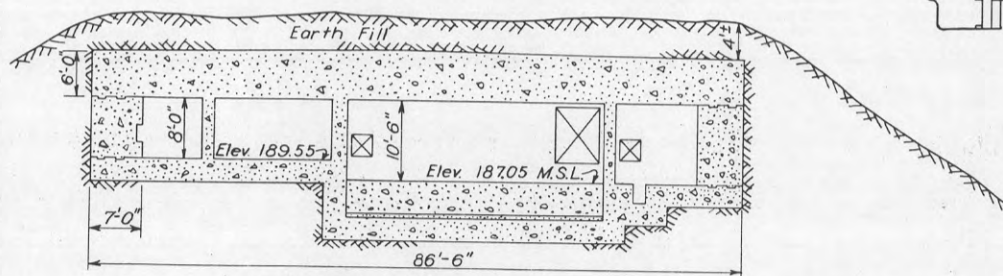
PART VII

CORRECTED TO 1 APRIL 1944



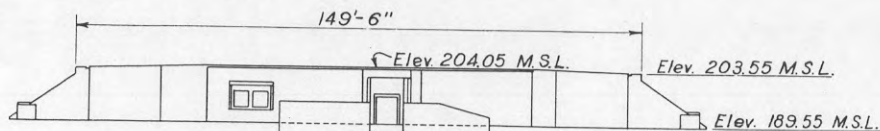
SECTION B-B

SCALE IN FEET
0 5 10 15 20



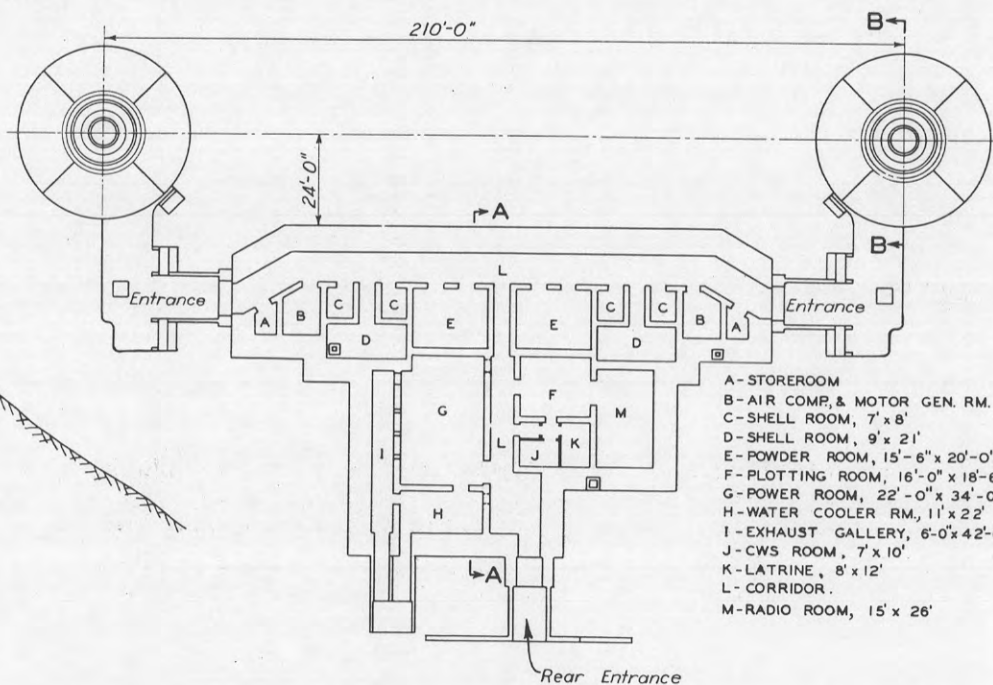
SECTION A-A

SCALE IN FEET
10 5 0 10 20 30 40 50



REAR ELEVATION

SCALE IN FEET
20 10 0 20 40 60 80 100



- A - STOREROOM
- B - AIR COMP. & MOTOR GEN. RM.
- C - SHELL ROOM, 7' x 8'
- D - SHELL ROOM, 9' x 21'
- E - POWDER ROOM, 15'-6" x 20'-0"
- F - PLOTTING ROOM, 16'-0" x 18'-6"
- G - POWER ROOM, 22'-0" x 34'-0"
- H - WATER COOLER RM., 11' x 22'
- I - EXHAUST GALLERY, 6'-0" x 42'-6"
- J - CWS ROOM, 7' x 10'
- K - LATRINE, 8' x 12'
- L - CORRIDOR.
- M - RADIO ROOM, 15' x 26'

PLAN

SCALE IN FEET
20 10 0 20 40 60 80 100

600,914 (Col Riv) 90645
 REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
 (Batteries)

HARBOR DEFENSES OF THE COLUMBIA
 FORT CANBY, WASHINGTON
 BATTERY: No. 2 Number of Guns: 2
 Caliber: 90 mm. Carriages: M3

Part I Corrected to 1 January 1944

~~CONFIDENTIAL~~

Control Approval Symbol SPEKM-1

GENERAL:

Battery commenced 10 June 1943.
 Battery completed: The Engineer work of constructing the emplacement and its facilities was completed 30 June 1943; however the installation of the armament wasn't completed until 24 December 1943.
 Date of transfer: 5 April 1944.
 Cost to date of transfer: \$10,031.05.
 Materials of construction: Reinforced concrete of a 1:2:4 mixture.
 Battery new or modernized: This is a new battery.
 Trunion elevation in battery: 19.66 feet.
 Datum plane of reference is Mean Sea Level.

UTILITIES:

WATER SUPPLY

Source: No water is supplied to the battery; however, water is furnished the nearby troop quarters by a 1½" Galv. pipe extended from the Fort Canby system.
 Alternate Source: None.

SEWER

No sewer was constructed. A pit-type latrine, constructed with the troop quarters, is nearby.

ELECTRIC POWER

Source: One M-7 generating plant.
 Procured by Ord. Dept. Is a portable unit.
 Characteristics: 125 volts of AC; 3 phase.

UTILITIES (Cont'd.)

ELECTRIC POWER (Cont'd.)

No. of units and capacity: One unit of 35 KVA.
 Max. KW required for utilities: None.
 Max. KW required for non-battle conditions: None.
 Commercial power provided: No. (Commercial power is provided to the nearby troop quarters).
 Auxiliary power unit provided: No.
 Type of lighting fixtures: None.
 Dehumidifying Unit: None.
 Rooms Wet or Dry: No rooms.

DATA TRANSMISSION:

Type: By telephones furnished and installed by the Signal Corps.

REMARKS:

This battery, with its facilities, was constructed by Government forces with funds from P/A 8-32439 P 270 A 0905-24. The facilities includes three munitions storage buildings, a height finder platform and a tower in which the tracker room, the B.C. Station and a shelter for the power unit are all constructed. All of these facilities are of a temporary nature and are constructed of wood. This work was designated Job No. Columbia FS-1 by Directive Consecutive No. 1055. For construction details of the battery emplacement see drawings numbered DMCR 1138.1D and 1138.1E.

ARMAMENT

Emplacement No.	Cal.	Length	Model	Guns			Carriages				
				Serial No.	Manufacturer	Mounted	Type	Model	Serial No.	Manufacturer	Motor
1	90 mm.	186.15"	M1	6926	Gen.Mtrs.Corp.	12/20/43	90AA	M3	114	Gen.Mtrs.Corp.	-
2	90 mm.	186.15"	M1	6925	Gen.Mtrs.Corp.	12/20/43	90AA	M3	120	Gen.Mtrs.Corp.	-

ED Form A-162A
 16 Sept. 1943

FS-1055 Proj Card 52

CONFIDENTIAL

90645
 11/20/43
 PROCEEDINGS

REPORT OF COMPLETED WORKS—SEACOAST FORTIFICATIONS

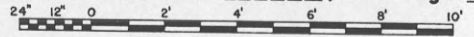
HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON

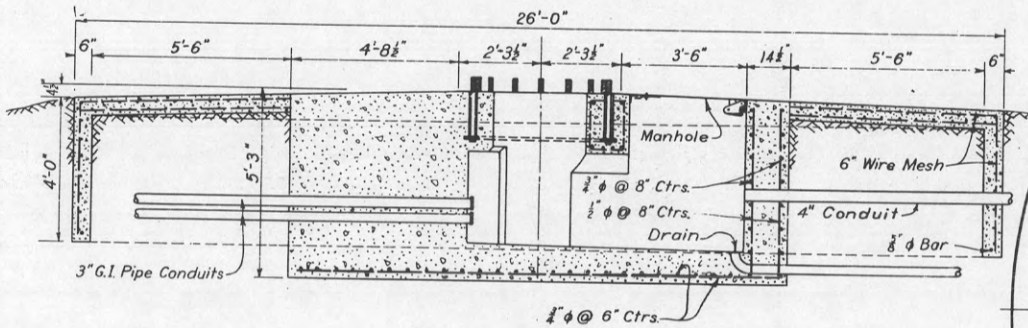
BATTERY 2

No. of Guns 2, Caliber 90mm., Carriage T 3

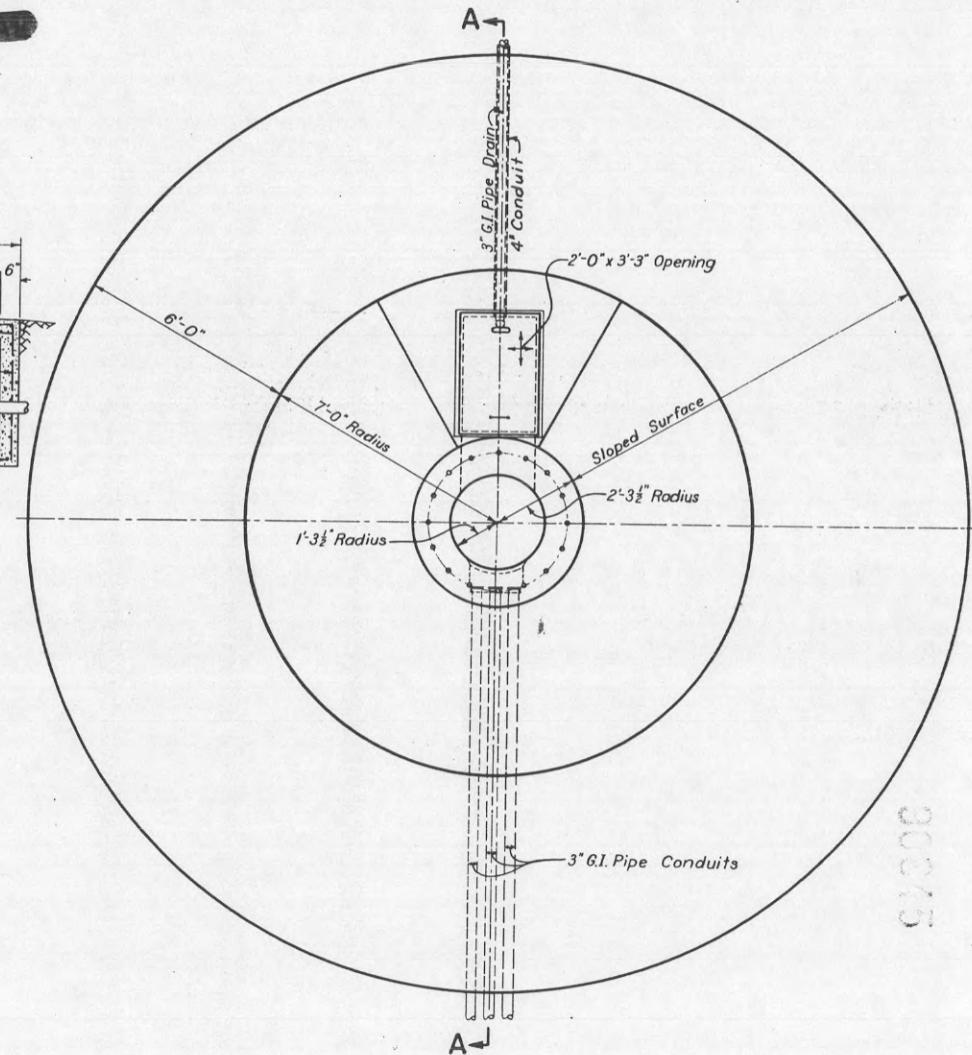
PART VII

Corrected to January 1944

SCALE 

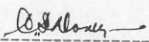


SECTION A-A



PLAN OF FIRING PLATFORM

ED Form A-162G
16 Sept. 1943

APPROVED: 
C.S. DONEY
COLONEL, C.A.C., COMMANDING

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Gun and Mortar Batteries)

COAST DEFENSES OF THE COLUMBIA.....
FORT. CANBY, WASHINGTON.....
* BATTERY.. Francis L. Guenther. (Mortar Battery).....
No. of guns 4 Caliber 12" Carriage ARF

Form 1 Corrected to June 30, 1922

Battery commenced	June, 1918	Sources of electric current	Central or Reserve Power Plants
Battery completed	July, 1921*		
Date of transfer	June 30, 1922	Max. kw. required for lights	4.88 kw.
Material of construction	Concrete	Max. kw. required for motors	None
Portland or Rosendale cement	Portland		
Cost to date of transfer	\$178,155.49		
Connected to water supply	Yes	Present condition of battery	Good
Connected to sewer	Yes	Rooms wet or dry	Dry
Type of latrine	Syphon		
Type of data transmission	None	How ventilated	8" dia. shaft, conical tops; no ventilating doors.
Trunnion elevation in Pit "A" battery	29.48'	Remarks-	The cost includes \$42,317.84 additional work to protect the structure against settlement.
Datum plane	M.L.L.W.		

ARMAMENT

Emplacement or mortar No	Guns or Mortars					Carriages					
	Cal.	length	model	Serial No.	Manufacturer mounted	Type	model	Serial No.	Manufacturer	Motor	
Pit "A" Gun 1	12"	129.25"	1890M	29	Builders Iron Foundry	CAC	ARF	1896M1	124	Am. Hoist & D. Co.	None
Pit "A" Gun 2	12"	129.25"	1890M	35	Builders Iron Foundry	CAC	ARF	1896M1	123	Am. Hoist & D. Co.	None
Pit "B" Gun 1	12"	129.25"	1890M	48	Watervliet Arsenal	CAC	ARF	1896M1	119	Am. Hoist & D. Co.	None
Pit "B" Gun 2	12"	129.25"	1890M	52	Watervliet Arsenal	CAC	ARF	1896M1	120	Am. Hoist & D. Co.	None

The mortars and carriages were transferred from Battery Clark, Fort Stevens.
HOISTS.

Emplacement Number	Type	Delivery	Motor					Date of transfer	Remodeled for long points
			Serial No.	Maker	H.P.	Volts	RPM		
1/2									

*Except installation of telephones not received until May 1922.

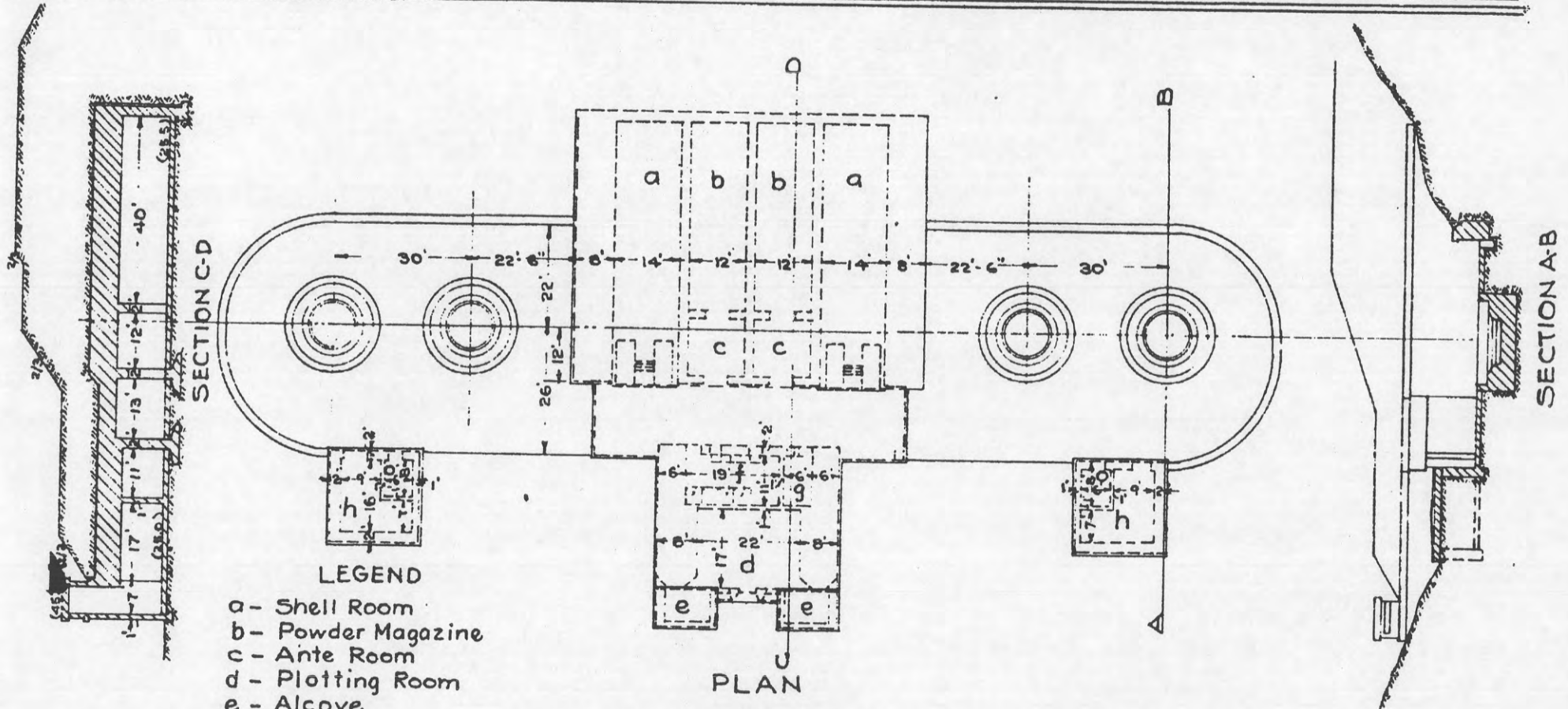
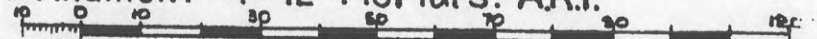
* Armament to be salvaged - 400.93 (Col. River) - EM 14090

REPORT OF COMPLETED WORKS-SEACOAST FORTIFICATIONS
(Battery Plan)

COAST DEFENSES OF THE COLUMBIA
FORT CANBY
BATTERY GUNTHER
Armament 4-12" Mortars. A.R.F.

Form 7

Corrected to June 30, 1922.



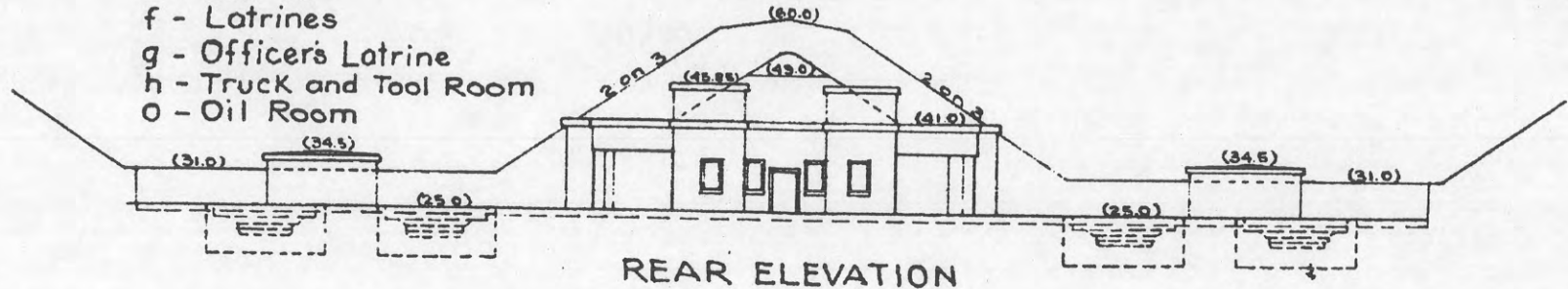
SECTION C-D

SECTION A-B

LEGEND

- a - Shell Room
- b - Powder Magazine
- c - Ante Room
- d - Plotting Room
- e - Alcove
- f - Latrines
- g - Officer's Latrine
- h - Truck and Tool Room
- o - Oil Room

PLAN



REAR ELEVATION

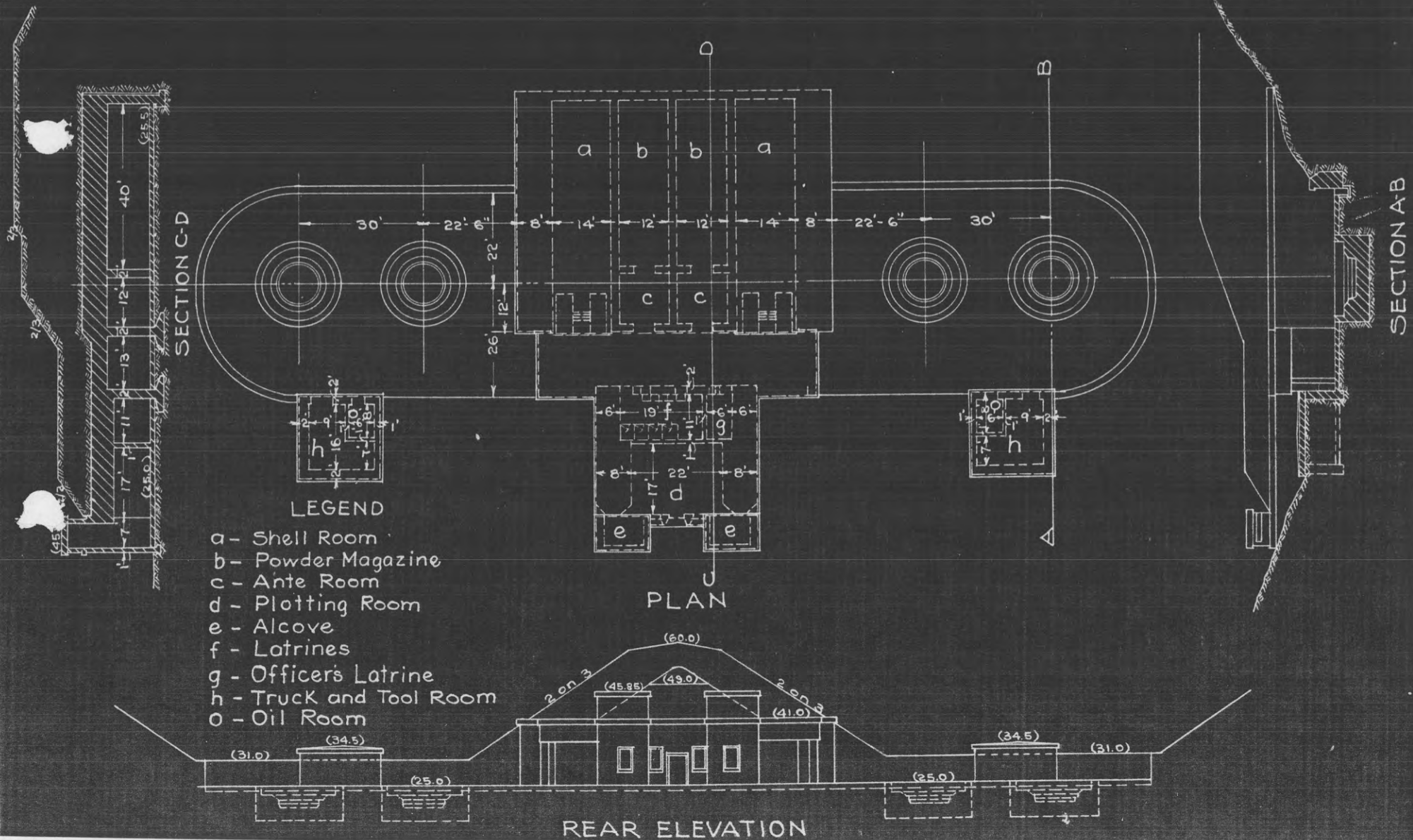
REPORT OF COMPLETED WORKS—SEACOAST FORTIFICATIONS
(Battery Plan)

COAST DEFENSES OF THE COLUMBIA
FORT CANBY
BATTERY GUNTHER
Armament 4-12" Mortars. A.R.F.

Form 7

Corrected to June 30, 1922.

10 0 10 30 50 70 90 120 FT.

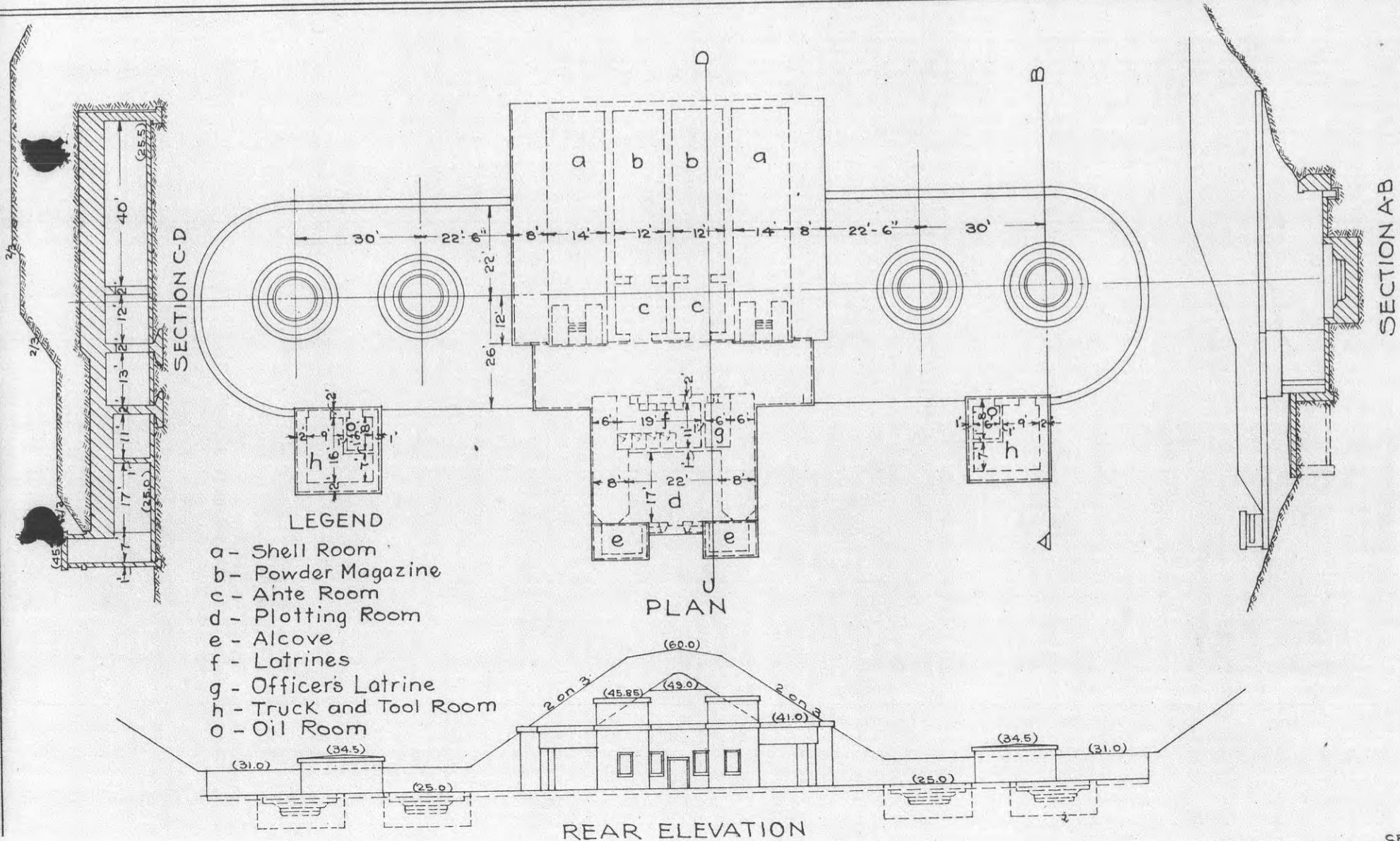
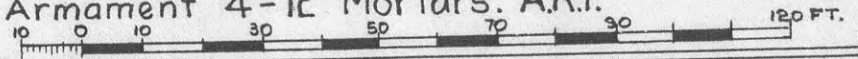


REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Battery Plan)

COAST DEFENSES OF THE COLUMBIA
FORT CANBY
BATTERY GUNTHER
Armament 4-12" Mortars. A.R.F.

Corrected to June 30, 1922.

Form 7



REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

(Electric Plants)

RESERVE POWER PLANT (MORTAR BATTERY)

Form 5.

Corrected to June 30, 1921.

COAST DEFENSES OF THE COLUMBIA.....

FORT CANBY, WASHINGTON.....

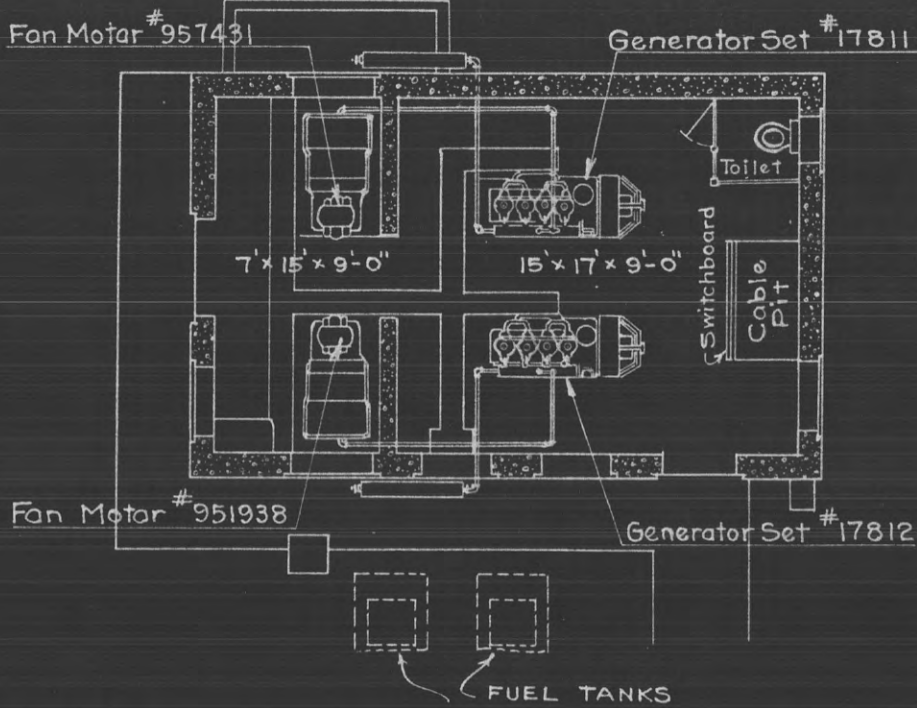
POWER FOR...RESERVE... (Saf. Guenther) See 13P.....

	Serial No.	Type	Size	Mfr.	Date of transfer	Cost	Con- dition	RPM	Belt or Direct Drive	Radiator for Engine No.	Fuel	Switchboard		
												Mater- ial.	No. of Panels	
Boiler No. 1	None													
No. 2	-													
No. 3	-													
Engine No. 1	17811	GM12-A2	43/54	Gen.E.Co.	3-11- 2-3-1921	\$6,501.41	Good	560			Gas.	220DC 2	* No	
No. 2	17812	GM12-A2	43/54	Gen.E.Co.	3-11- 2-3-1921		Good	560			Gas.	220DC 2	* No	
No. 3	-													
Generator														
No. 1	924321	MPC	25kw.220V	Gen.E.Co.	2-3-1921	Structure and installation of sets,	Good		dir.				* Commercial power now used. In an emergency will us for QM power.	
No. 2	924322	MPC	25kw.220V	Gen.E.Co.	2-3-1921		Good		dir.					
No. 3	-													
Radiator														
No. 1	17318	Auto.	--	Gen.E.Co.	2-3-1921		Good			17811				
No. 2	17319	Auto.	--	Gen.E.Co.	2-3-1921		Good			17812				
No. 3	-													
Motor Generator	None													
No. 1	-													
No. 2	-													
No. 3	-													
Switchboard	821-822-823	M	20"x82"	Gen.E.Co.	2-3-1921		Good						Asbestos wood, 3 panel.	
Storage Battery	None													
Transformer	None													
No. 1	-													
No. 2	-													
No. 3	-													
Auxiliaries	None													
No. 1	-													
No. 2	-													
No. 3	-													

DISTRIBUTION OF KW.

Dismantled Batteries	Lights	2.8 kw
Fortifications	Lights	13.0 kw
Switchboard room	Power,	1.0 kw
	Total	17.0 kw

FORT CANY, WASHINGTON.
 POWER PLANT FOR MORTAR BATTERY.
 SCALE $\frac{1}{8}$ " = 1 FT.



Switchboard	Motor- No. of Panels	Generator Fuel for Engine No.
See List (P. C.A.)		
Q.M. Power used for	250 DC 2 * No	Gas.
	250 DC 2 * No	Gas.
* Commercial power now used. In an emergency will use Q.M. power.		

17811
17812

Storage Battery	Transformer	Auxiliaries	Switchboard room	Fortifications	Dismantled Batteries	Total
No. 1	-	No. 1	None	None	None	17.0 kw
No. 2	-	No. 2	None	None	None	1.0 kw
No. 3	-	No. 3	None	None	None	13.0 kw
						2.8 kw

DISTRIBUTION OF KW.

Switchboard room
 Fortifications
 Dismantled Batteries
 Lights 2.8 kw
 Lights 13.0 kw
 Power 1.0 kw
 Total 17.0 kw

wood, 3 panel.
Asbestos

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF THE COLUMBIA
FORT. CANBY, WASHINGTON
STRUCTURE NEW SWITCHBOARD ROOM

Form 2.

Corrected to June 30, 1921.

Location

About 1300' N.E. of Canby light.

Type of data transmission

Modernized

Date of transfer

February 5, 1921

Date of transfer

Cost to that date

\$14,937.05

Cost of data transmission equipment

Type of construction

Bombproof

(a) Roof

Reinforced concrete

For tide stations give description of tide gauge

(b) Remainder of building

Plain concrete

For datum points give Forts from which visible

How concealed

Behind hill and with earth cover.

How protected

Concrete roof, earth cover and hill to front.

For dormitories give stations served

Height above concealment

None

For cable hut give S. C. type

Height above protection

None

Conspicuous at.....yards

Rear visible from above & also about 1000 yds to rear Central or Reserve Power Plant 1.6 kw.

Source of electric current

E.D. Standard.

Kilowatts required

Type of lighting fixtures

How heated

Stove.

Connected to water mains

Yes

Connected to sewer

Yes

Type of latrine

Syphon

Permanent or temporary installation

Permanent

Present condition

Good

Reference of site

About 14' above M.L.L.W.

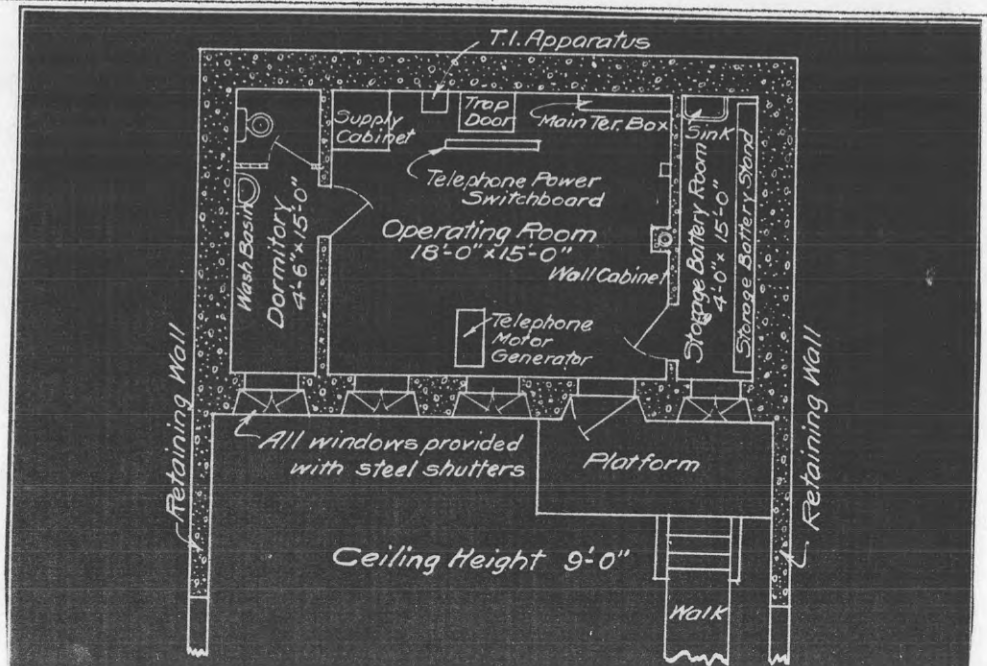
Reference of instrumental axis

Type of observing inst.

Type of plotting board

Type and capacity of crane

Max. dimensions of reel handled



Part II

Corrected to 15 June 1944

CONFIDENTIAL

Control Approval Symbol SPEKM-1

ED Form A-162B
16 Sept. 1943

99394 STRUCTURE:

Location: The Switchboard Room is located within the U.S. Military Reservation of Fort Canby, Harbor Defenses of The Columbia, Washington.

General: This supplemental project of gasproofing the Switchboard Room at Fort Canby consisted of constructing an addition to house the collective protectors, installation of the collective protectors and of remodeling the openings of the original structure so the collective protectors would be affective. All new equipment, the piping and all exterior concrete surfaces were painted.

Date of Transfer: Of the supplemental work was 23 May 1944.

Cost to date of Transfer: Of the supplemental work was \$2591.75; the cost of the collective protector assemblies not being included.

Type of construction: This addition is constructed of reinforced concrete of a 1:2:4 mix. The walls and floor are 8" in thickness and the roof is 12" in thickness. The interior partitions are constructed of structural, hollow clay tile. The interior dimensions are 11'-6" x 11'-6" with a ceiling height of 8'-0".

Concealment: The addition is not concealed in any way except it is painted to conform to the surrounding vegetation.

UTILITIES:

Electric power: Power for this addition and the equipment was obtained by extending the circuits

UTILITIES (Cont'd.)

of the original structure.
Characteristics: 110 volts, AC, single phase.
Kilowatts required for this addition and the equipment is approximately 1.0.
Type of lighting fixtures: Are incandescent lamps in porcelain lamp receptacles.

Other Utilities: No other utilities were provided in this addition; the utilities of the original structure being available.

EQUIPMENT:

Two Protector M-1A1 Collective Assemblies were installed in this project. The collective protectors, the special fittings and the extra canisters were received by requisition on the Chief of Engineers. All the piping, pipe fittings and the gas-proof doors were purchased locally.

REMARKS:

This supplemental work was constructed with funds having Advise No. 5-(CAC)-115 P 270 A 1204-24 (FC). Construction work was accomplished by Government forces and was started 1 January 1943 but was not completed until 26 April 1944 due to slow delivery of the collective protectors. The work was designated Job Number Fort Canby FS-2 by Directive Consecutive No. FS-442. For construction details see drawings numbered DMCR 1071.1 and DMCR 1071.2.

FS-44 ✓ Proj Card 37

CONFIDENTIAL

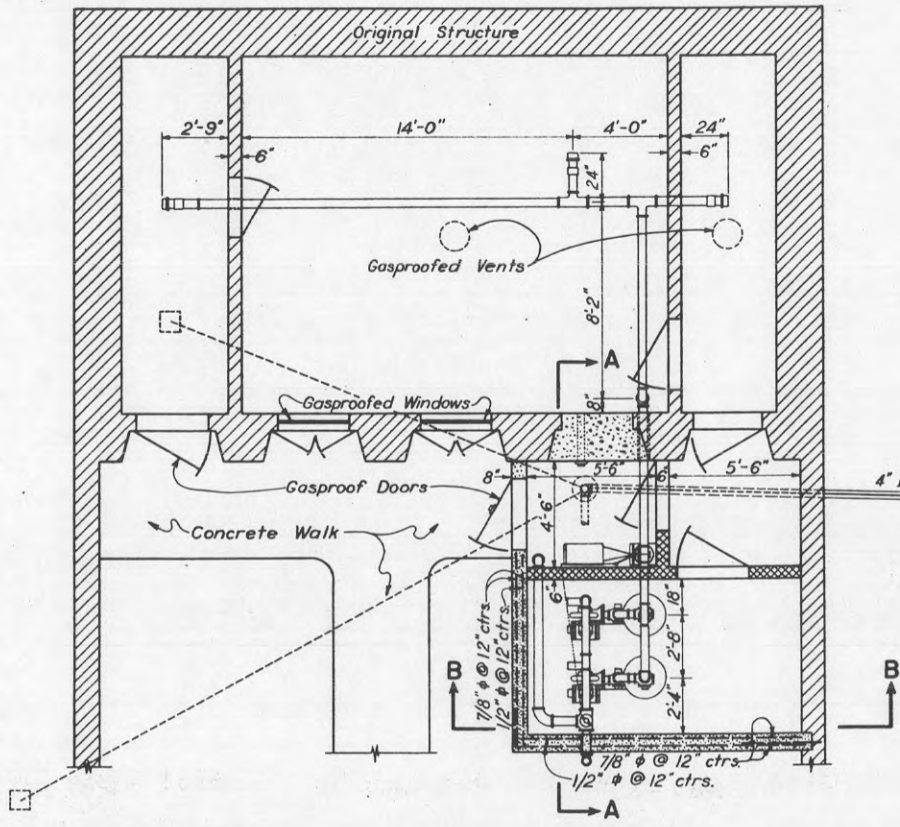
HARBOR DEFENSES OF THE COLUMBIA
SWITCHBOARD ROOM GASPROOFING
FORT CANBY, WASHINGTON

APPROVED: *C. S. Doney*
C. S. DONEY
COLONEL, G.A.C., COMMANDING

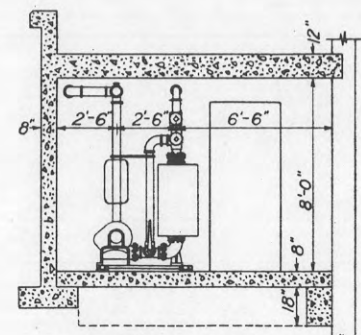
SCALE IN FEET
1" = 1'-0"

U.S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT	
SUBMITTED: <i>John J. ...</i>	APPROVED: 16 MAY 1917 <i>Robert ...</i>
RECOMMENDED: <i>John J. ...</i>	COLONEL, CORPS OF ENGINEERS DISTRICT ENGINEER
PRINCIPAL ENGINEER	DATE MAY 1917 TRACED M.E.H. CHECKED

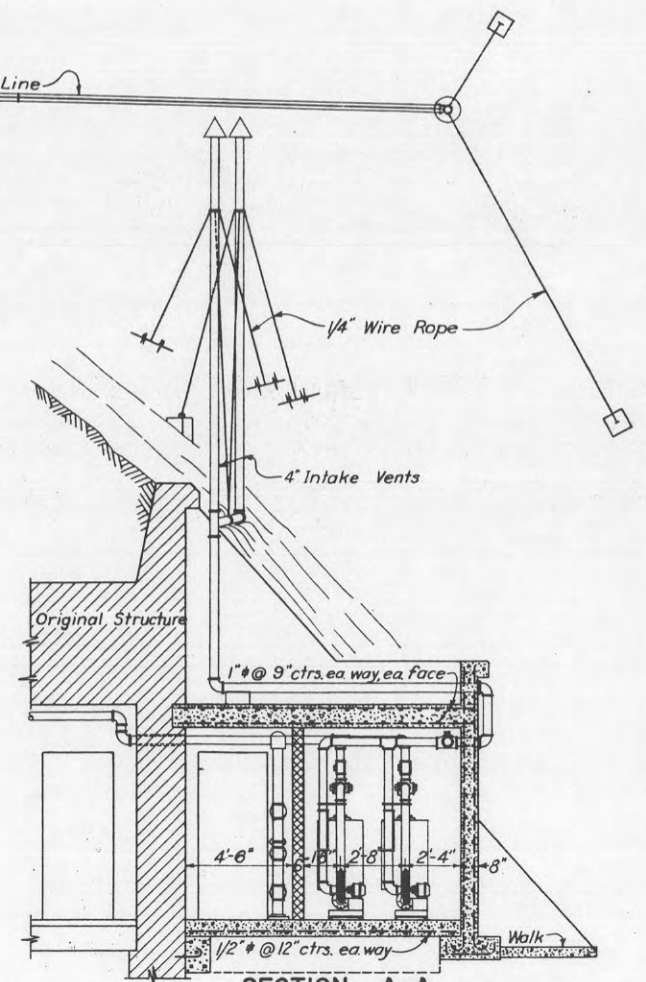
CONFIDENTIAL



PLAN



SECTION B-B



SECTION A-A

600,914 (Col Review) 73827
REPORT OF COMPLETED WORKS—SEACOAST FORTIFICATIONS
(Fire Control Structures)

CONFIDENTIAL

North Head, Washington
HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
TOWER & OPERATIONS BUILDING FOR
GENERAL SURVEILLANCE DETECTOR SCR-682

Part II

Corrected to 10 November 1943

STRUCTURE:

Location by co-ordinates: North 2,983.99 yards
West 1,995.67 yards

Origin of co-ordinates for this Harbor Defense
is Canby Light located on Cape Disappointment,
Fort Canby, Wash.

Location by site description: Is on North Head,
Washington in U.S. Military Reserve north of,
and adjacent to, the Fort Canby Military Reser-
vation.

Date of transfer: 7 August 1943.

Cost to date of transfer: \$2,799.68.

Type of station: Tower

Type of construction:

73827
Tower: The tower on which the detector is to
be installed is of wooden frame con-
struction and is constructed on top of
the operations building. The tower,
over-all, is 10 feet in height; is con-
structed of 6"x6" posts, 3"x6" bracing,
6"x6" caps and 3"x6" stringers with a
2"x12" decking. The posts are fixed to
the roof of the concrete operations
building by $\frac{1}{2}$ "x2" iron straps. The tow-
er is bolted together by $\frac{1}{2}$ " machine
bolts.

Operations Building:

Roof: Is constructed of reinforced con-
crete of a 1:2:4 mix and is from 12" to
14" in thickness.

Remainder of Building: Is a single room
constructed of reinforced concrete of a
1:2:4 mix and the walls are 12" in thick-
ness. The interior dimensions are 12'-
0" x 12'-0" by a ceiling height of 8'-0".

STRUCTURE: (Cont'd.)

How concealed: This structure is not concealed in
any way except it is painted to conform to the
surrounding vegetation.

Conspicuous at 10,000 yards from either directly
south or from directly north but as seen from
the open sea it blends in with the background
of the hills and trees.

UTILITIES:

Electric Power:

Is commercial power from the P.U.D. No. 2 of
Pacific County, Washington. Auxiliary power
for this station is to be furnished from the
auxiliary power plant of a neighboring SCR-
296 Detector Station upon its completion,
which will be in the near future.

Characteristics: Voltage of 110 Ac, single
or triple phase. 2300 volts is available at
the terminus of the commercial line which is
approximately 325 feet from the subject station.

Kilowatts required: 5.0 KW

Type of lighting fixtures: The lighting fix-
tures in the operations building are incan-
descent lamps in porcelain lamp receptacles.

Heat:

No heating facilities were provided for this
station but plug-in receptacles were install-
ed that electric heaters may be used.

Water and Sewer:

No water nor sewage facilities were provided
for this station, however, these facilities
are available in another near by station.

Control Approval Symbol SPEXM-1

ED Form A-162B
16 September 1943

FS-838 Proj Carb 51

CONFIDENTIAL

REPORT OF COMPLETED WORKS--SEACOAST FORTIFICATIONS
(Fire Control Structures)

CONFIDENTIAL

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
TOWER & OPERATIONS BUILDING FOR
GENERAL SURVEILLANCE DETECTOR SCR-682

Part II

Corrected to 10 November 1943

REFERENCE:

The elevation of the deck at the top of the tower is 259.65 feet. The datum plane of reference being Mean Sea Level.

INSTRUMENTS & EQUIPMENT:

This tower and operations building were constructed for the installation of a 682 General Surveillance Detector, which will be furnished and installed by the Army Signal Corps.

DATA TRANSMISSION:

Data Transmission is by telephones which were furnished and installed by the Army Signal Corps.

REMARKS:

This station was constructed by Government forces with funds from P/A 3-3564 P 233 A 0605-24. Construction work was started on 1 May 1943 and was completed 30 June 1943. The work was designated Job Number North Head FS-1 under Directive Consecutive Number FS-838. For construction details see drawing number DMCR 1098.

ED. Form A-162R
16 September 43

CONFIDENTIAL

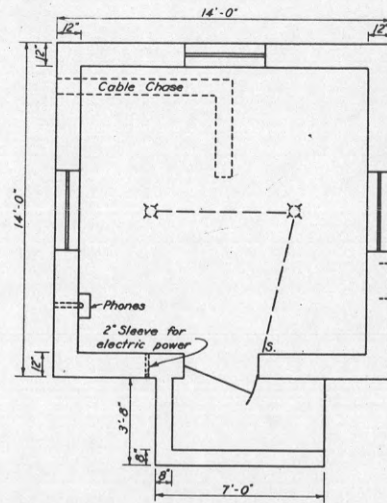
TOWER
SCR 682

NORTH HEAD, WASHINGTON

SCALE: 1/8" = 1'-0"

U.S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT

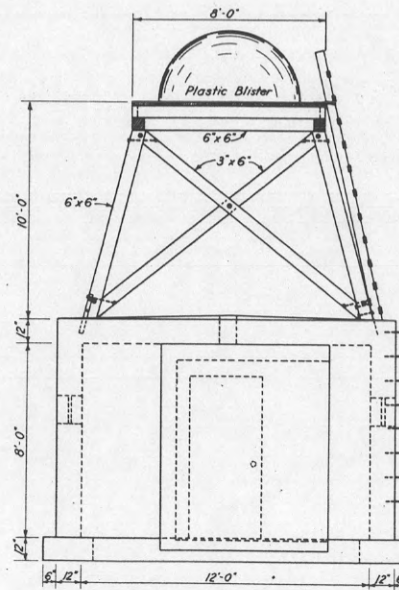
SUBMITTED	<i>J. H. ...</i> SENIOR ENGINEER	APPROVED: 7 Dec. 1943	<i>W. H. ...</i> LT COL, CORPS OF ENGINEERS DISTRICT ENGINEER
RECOMMENDED	<i>R. ...</i> PRINCIPAL ENGINEER	DRAWN: M.E.H.	DATE: 28 NOV 43
		TRACED: R.W.H.	CHECKED: ...



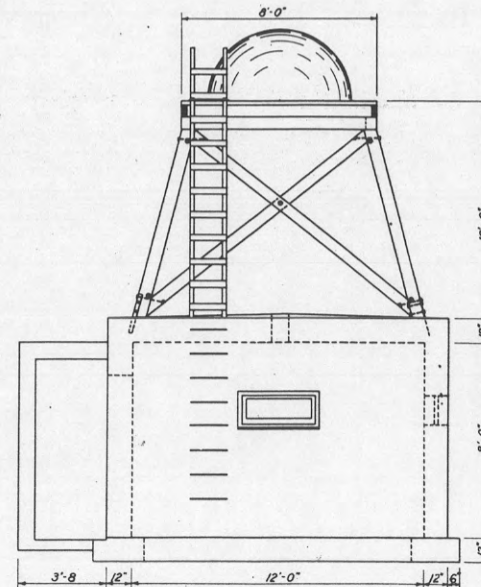
FLOOR PLAN

APPROVED: *C. S. Doney*
COLONEL, C.A.C., COMMANDING

CONFIDENTIAL



SIDE ELEVATION



FRONT ELEVATION

Part II

Corrected to 15 July 1944

CONFIDENTIAL *Box 246**RAD 9-1014*STRUCTURE:

Location by co-ordinates: North 2,940.99 yards
West 1,710.29 yards.

Origin of co-ordinates for this Harbor Defense is Cape Disappointment Lighthouse, which is on Cape Disappointment, Fort Canby, Washington.

Location by site description: The station is located on North Head, which is in the northernmost portion of the Military Reservation of Fort Canby, Harbor Defenses of The Columbia, Washington.

Date of transfer: 17 May 1944.

Cost to date of transfer: \$10,652.62.

Type of station: Tower.

Type of construction:

Tower: Is a 100 foot prefabricated steel tower constructed on footings of reinforced concrete of a 1:2:4 mix. The shelter, housing the radar equipment on the tower, is a prefabricated wooden structure. The elevator, which operates within the tower, is operated by a 4 h.p. electric motor. The Corps of Engineers constructed the footings and erected the tower and the shelter. The Signal Corps furnished all prefabricated materials and furnished and installed the radar equipment.

Transmitter Building and the Two Power Houses: The floors are constructed of reinforced concrete of a 1:2:4 mix. The buildings are of a prefabricated steel construction, the prefabricated materials being furnished by the Signal Corps. Conduit and cableways were constructed in the concrete floors. The Engineer Dept. constructed all concrete work and erected the buildings and the Signal Corps furnished and installed all the operating equipment.

Access Road: Approximately 1,150 feet of ac-

cess road was constructed to this station and the power houses. The road bed is approximately 10 feet in width and is surfaced with crushed gravel.

Concealment: The transmitter and power buildings are concealed from the open sea and the approach river channel by trees and vegetation and are partially concealed from the air by the overhanging of trees and brush. The tower, extending well above the surrounding trees and hills, is not concealed in any way except that when seen from the open sea the tower has a few trees for a background. All structures were painted to conform, in color, to the surrounding vegetation and all scarred areas on the ground were seeded or covered with sod.

Conspicuousness: The tower can be seen from as far at sea as the curvature of the earth allows. The transmitter building and power buildings are not conspicuous at any distance.

UTILITIES:Electric Power:

Source: Power for this station is drawn from the commercial lines of the Fort Canby Military Reservation. Power for the Reservation is purchased from the P.U.D. No. 2 of Pacific County, Washington. To extend commercial power to the station it was necessary to construct 400 feet of pole line and approximately 115 feet of underground line. The pole line is constructed of No. 6, bare, hard drawn, copper wire; Carries 7200 volts, single phase, of power. The underground line, extending from a 15 KVA transformer at the end of the pole line, is of 2, No. 4 lead covered cables, carrying 110 volts, single phase.

Characteristics: 110 volts, AC, single phase, SCR-296-A declared obsolete, ltr. AG 17 Jan. 46, file AG 413.44(15 Jan. 46)OB-S-SPOPS. Tower and equipment to be disposed of. Bldgs. to be retained

Control Approval Symbol SPEKCM-1

ED Form A-162B
16 Sept. 1943**CONFIDENTIAL***FS-1321 x 1503*

CONFIDENTIAL

Part II Corrected to 15 July 1944

within the transmitter building.

Kilowatts required: A maximum of 14.

Type of lighting fixtures: Are incandescent lamps in porcelain lamp receptacles with indirect lamp shades. These fixtures were furnished and installed by the Signal Corps.

Auxiliary Power: In each of the two power houses is installed one 25 KW set to provide auxiliary power for this station. These 25 KW sets were furnished and installed by the Signal Corps.

Heat: The transmitter building is heated by 2, 1,000 watt, electric heaters which were furnished and installed by the Signal Corps.

Water & Sewer: None installed.

Latrine: A latrine is located nearby in the quarters constructed for the operating personnel of this station. The construction of these quarters was not a part of this job.

Fuel Storage: One, 1,000 gallon, fuel storage tank was installed next to each power house. The storage tanks were set approximately 3 ft. underground and piping was installed from the tanks to within the power houses. The Signal Corps furnished the tanks and connected the pipes to the generators.

REFERENCE:

The elevation of the detector dipole is at 419.57 feet, the datum plane of reference being Mean Sea Level.

INSTRUMENTS & EQUIPMENT:

SCR-296 Detector furnished and installed by the Signal Corps.

DATA TRANSMISSION:

Data transmission is by telephones which were furnished and installed by the Signal Corps.

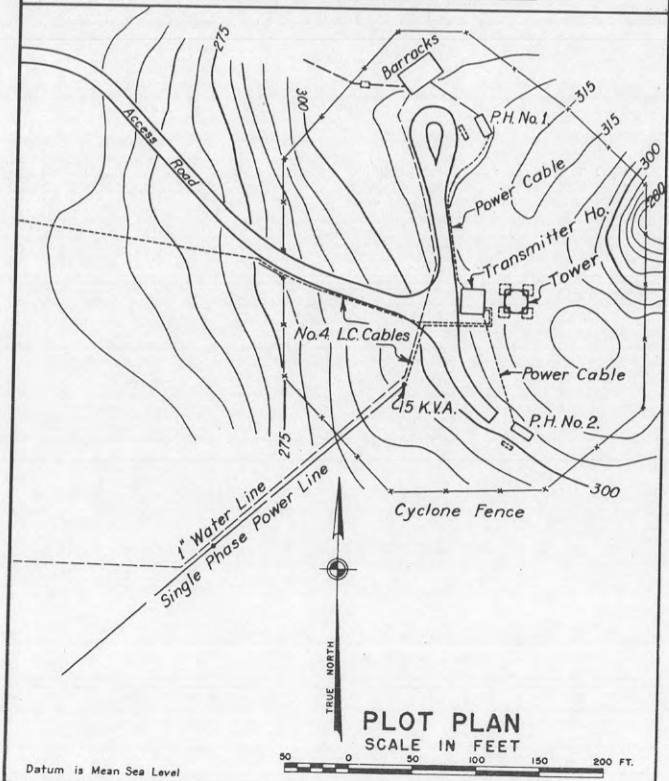
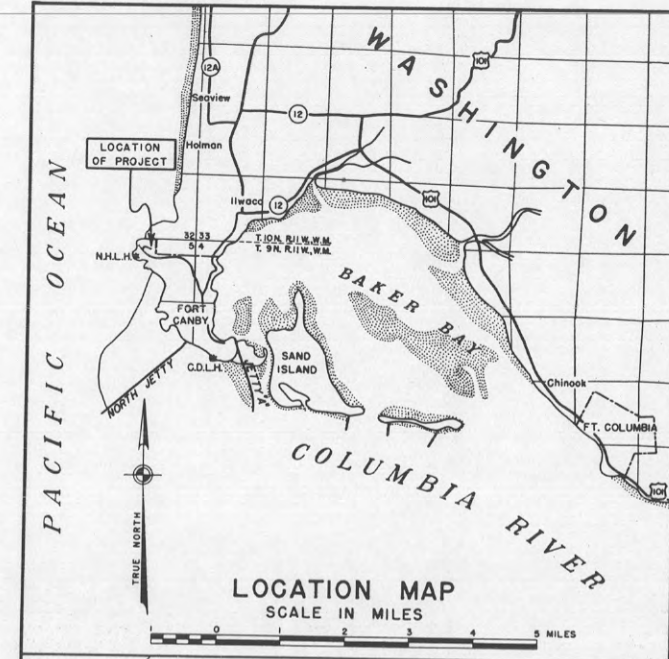
REMARKS:

This station was constructed with funds having Advise No. 3-3564 P 233 A 0605-24. The Engineer construction work was accomplished by Government forces; was started 26 November 1943 and was completed 29 April 1944. This construction was designated Job No. North Head FS-2 by Directive Consecutive No. FS-1321. Supplementing the construction work was a job for Passive Protection. This passive protection was accomplished by Government forces with funds having Advise No. 3-3227 P 230 A 0605-24. The passive protection work was started 29 May 1944 and was completed 30 June 1944; was part of the job designated No. The Columbia FS-4 by Directive Consecutive No. FS-1503. For layout plan see DMCR-1176 and for standard Signal Corps plans used in this construction see drawings numbered ES-D-8981, ES-D-10727, ES-D-11083 and ES-D-11085.

ED Form A-162B
16 Sept. 1943**CONFIDENTIAL**

WAR DEPARTMENT

CORPS OF ENGINEERS, U.S. ARMY



Dipole Elev. 419.57 M.S.L.
Coordinates: N. 8822.96 FT.
W. 5130.86 FT.

HARBOR DEFENSES OF THE COLUMBIA
SCR-296 STATION D-1
FORT CANBY, WASHINGTON

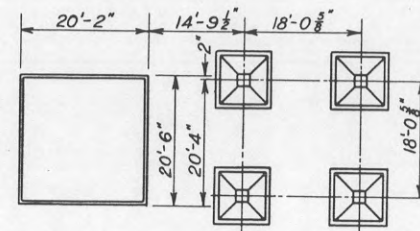
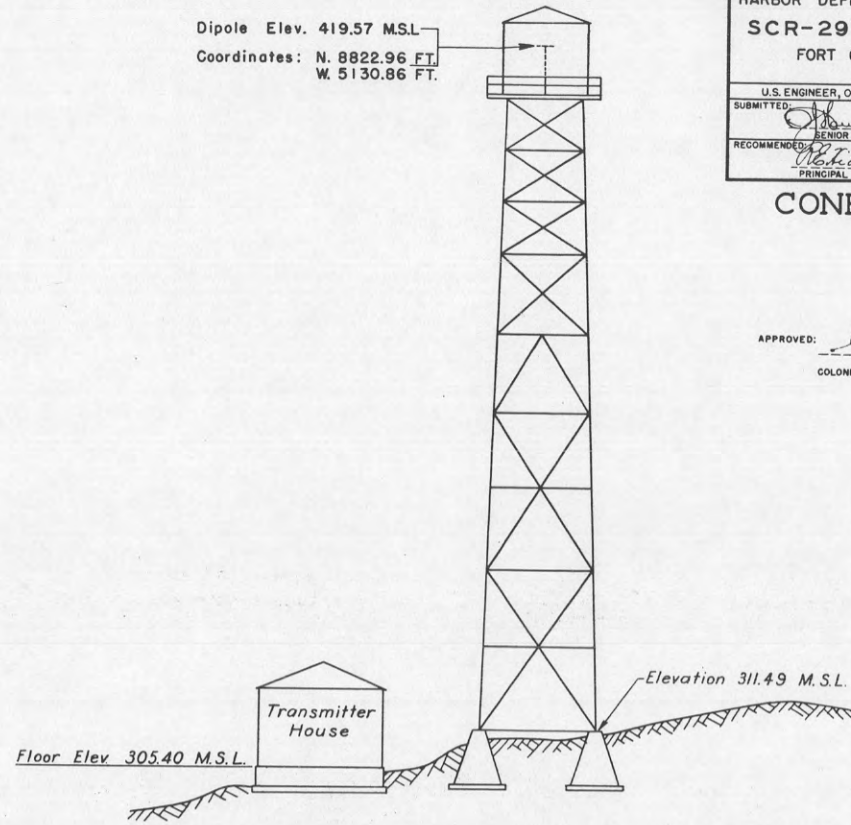
SCALES AS SHOWN
U.S. ENGINEER, OFFICE, PORTLAND, OREGON, DISTRICT

SUBMITTED: <i>[Signature]</i>	APPROVED: 29 June 1944 <i>[Signature]</i>
RECOMMENDED: <i>[Signature]</i>	COLUMEL CORPS OF ENG'RS
PRINCIPAL ENGINEER	DISTRICT ENGINEER

DRAWN: M.E.H. DATE JUNE 1944
TRACED: M.E.H. CHECKED:

CONFIDENTIAL

APPROVED: *[Signature]*
C. S. DONEY
COLONEL, C. A. C., COMMANDING



DMCR 1175

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Fire Control Structures)

SECRET

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
SURFACE CRAFT DETECTOR SCR-296

5/22/43

Form 2.

Corrected to April 20, 1943

43174

STRUCTURE:

665 (Col. River) CNI 43174

Location : This station is located on Cape Dis-
: appointment within the U.S. Military
: Reservation.

Date of transfer : April 1, 1943.

This set assigned to Battery #241

Cost to date of transfer . . . : \$7,974.37.

Type of Construction:

Transmitter Building and the
two Power Houses : The floors are constructed of rein-
: forced concrete of a 1:2:4 mix. The
: buildings are of a prefabricated
: steel construction, the materials
: being furnished by the Signal Corps.
: The motors are mounted on bases of
: reinforced concrete. Conduit and
: cableways were set in the concrete.

See Attached Plan

→ See Map File

Tower : Is a 25 foot prefabricated steel
: tower furnished by the Signal Corps.
: The tower is constructed on rein-
: forced concrete footings. The shelter
: on the tower is a prefabricated wood-
: en structure; the materials being
: furnished by the Signal Corps. The
: Engineer Dept. installed the motor
: for the hoist and grounded the tower.

No. 92-98-44

Latrine : Is constructed on a reinforced con-
: crete floor; is a wooden frame struct-
: ure having corrugated iron roof,
: beveled cedar siding and is lined with
: plywood. Facilities provided include
: a toilet, urinal and a lavatory.

SCR 296-A declared obsolete, letter AG 17 Jan. 46, file AG 413.44(15 Jan. 46)OB-S-SPOPS.
Tower and equipment to be disposed of. Buildings to be retained.

SECRET

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Fire Control Structures)

SECRET

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
SURFACE CRAFT DETECTOR SCR-296

Form 2. Corrected to April 20, 1943

Access road : Approximately 400 lin. feet of access road was constructed to this
: station. The road bed is approximately 10 feet wide and is sur-
: faced with crushed gravel.

How concealed : The transmitter building, power houses and latrine are all con-
: structed in a thickly wooded area; only the tower being out in the
: open. All buildings and the tower are painted to conform to the
: surrounding trees and foliage.

ELECTRIC CURRENT:

Source of : Power is drawn from the commercial lines of Fort Canby. The
: power for Fort Canby is purchased from PUD no. 2 of Pacific County
: Washington. Approximately 700 lin. feet of lateral line was
: constructed to supply this station with 220 volts, single phase.

Kilowatts required : Approximately one.

Type of lighting fixtures : Porcelain lamp receptacles for incandescent lamps.

HEAT : Transmitter Building is heated by unit electric heaters.

WATER & SEWER:

Water : Is obtained from the nearby storage tank recently constructed for
: Battery Allen and is carried by gravity in a 1" galv. iron pipe
: a distance of approximately 700 feet to the station area. A 6"
: wooden pipe supplies water from Ilwaco, Washington to the Fort
: Canby Reservation.

er : Sewage from the latrine is treated by a small septic tank which,
: in turn, is drained to the natural drainage of the vicinity.

Class of installation : Structures and utilities are all permanent.

Present condition : Excellent.

SECRET

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Fire Control Structures)

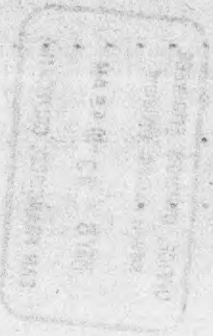
SECRET

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
SURFACE CRAFT DETECTOR SCR-296

Form 2.

Corrected to April 20, 1943

REFERENCE : Origin of co-ordinates for detector axis is Canby Light located on
: Cape Disappointment, Fort Canby. Co-ordinates for the detector
: are as follows:
: N. 464.70 Yards
: W. 402.70 Yards
:
:
DATA TRANSMISSION:
Type of : Telephones. The telephones and lines were furnished and in-
: stalled by the Signal Corps.
:
REMARKS : This station was constructed by Government forces with funds from
9 : P/A CAC-207 P 34 A 1204-N. Construction work was started July 9,
: 1942 and was completed January 31, 1943. As part of this completion
: report attached is a plot plan of the station. Detailed con-
: struction plans for a SCR 296 Detector Set were produced by the
: Signal Corps and are standard plans.



SECRET

WAR DEPARTMENT

600,914 (Columbia River) CM 81275

CORPS OF ENGINEERS, U.S. ARMY

HARBOR DEFENSES OF THE COLUMBIA
PLOT PLAN OF SCR-296
FORT CANBY, WASHINGTON

SCALE AS SHOWN

U.S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT

SUBMITTED: *[Signature]* APPROVED: *[Signature]* 24 JAN 1924

SENIOR ENGINEER DISTRICT ENGINEER

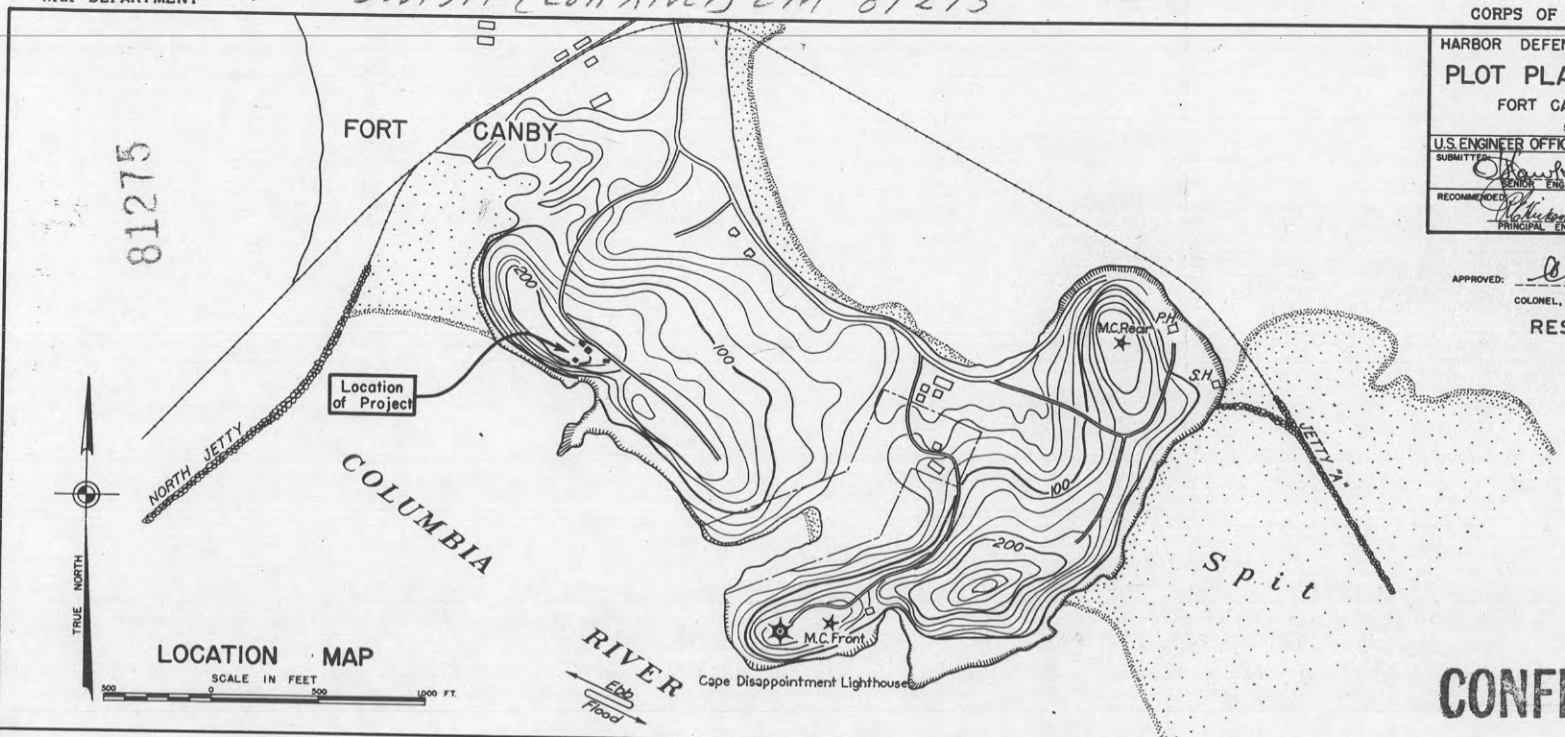
RECOMMENDED: *[Signature]* DATE: 1924

PRINCIPAL ENGINEER TRACED: M.E.H. CHECKED:

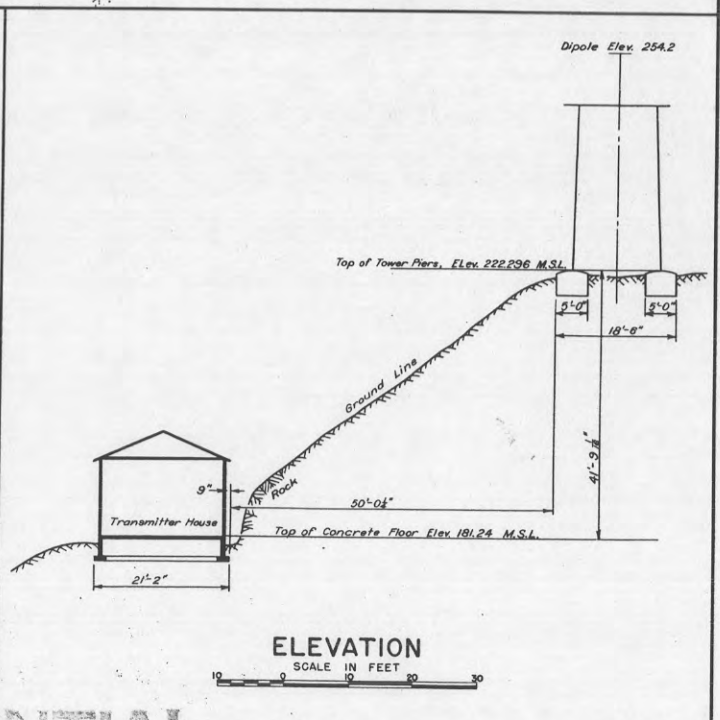
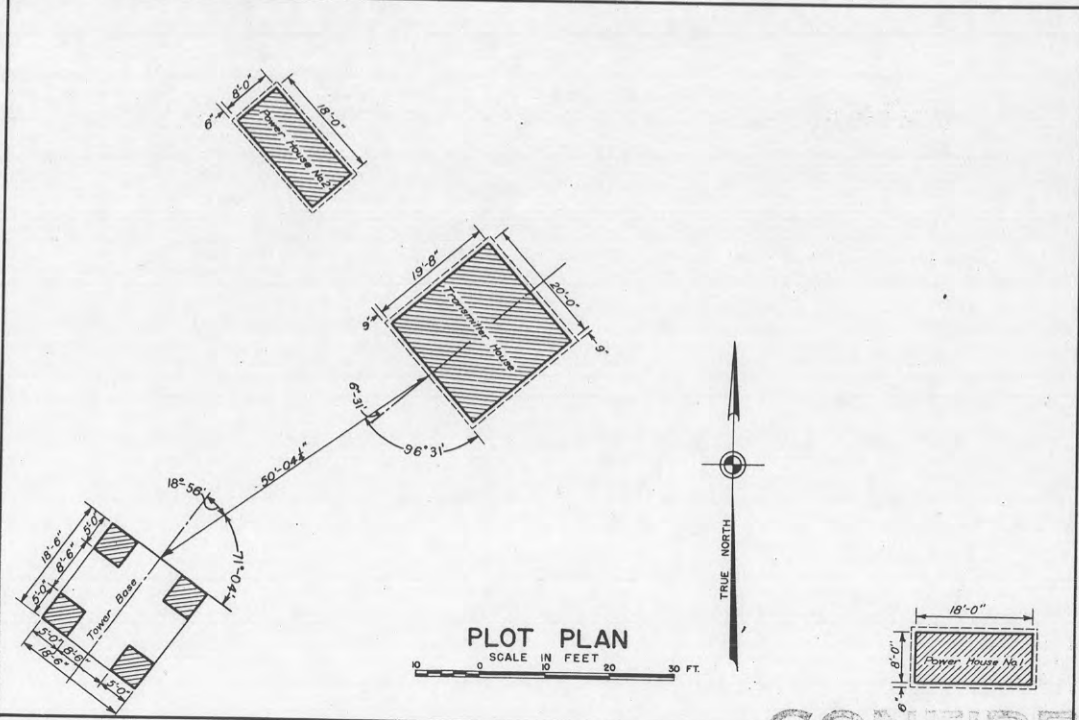
APPROVED: *[Signature]*

C.S. DOWNEY
COLONEL, C.A.C., COMMANDING

RESTRICTED



CONFIDENTIAL



CONFIDENTIAL

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Part II Corrected to 15 July 1944

STRUCTURE:

General: This supplemental report is written to cover the installation of commercial power adequate to operate the SCR-296 Detector Station D-2.

Location: Of Station D-2: North 464.70 yds.
West 402.70 yds.

The origin of co-ordinates for this Harbor Defense being the Cape Disappointment Light-house.

Location: This Station and the commercial power extension line are within the U.S. Military Reservation of Fort Canby, Harbor Defenses of The Columbia, Washington.

UTILITIES:

Electric Power:

Date of transfer: Of this commercial power installation was 21 June 1944.

Cost to date of transfer: Of this supplemental work was \$1,814.23.

Type of construction: This power line consists of 800 feet of pole line and 150 ft. of underground cables. The pole line is of No. 6, hard drawn, bare wire; carries 2300 volts, single phase of power; and approaches to within 120 feet of the station's

UTILITIES (Cont'd.)

transmitter building. Two No. 4 lead covered underground cables carries 110 volts, single phase, from a 15 KVA transformer, at the end of the pole line, to within the transmitter building.

Source: Power is drawn from the commercial lines extending thru the Fort Canby Reservation. The power for this Reservation is purchased from PUD No. 2 of Pacific County, Washington.

Characteristics: 110 volts, AC, single phase within the transmitter building.

Kilowatts required: Maximum of 14.

REMARKS:

This supplemental work was constructed with funds having Advise No. 3-3227 P 230 A 0605-24. Construction work was accomplished by Government forces; was started 12 May 1944 and was completed 29 May 1944. The work was designated Job No. Fort Canby FS-3 by Directive Consecutive Number FS-1486. For plan of the power line see drawing numbered DMCR 1172.

SCR-296-A declared obsolete, ltr AG 17 Jan. 46, file AG 413.44(15 Jan. 46)OB-S-SPOPS.
Tower and equipment to be disposed of. Buildings to be retained.

Control Approval Symbol SPEKM-1
102973

ED Form A-162B
16 Sept. 1943.

FS-1486

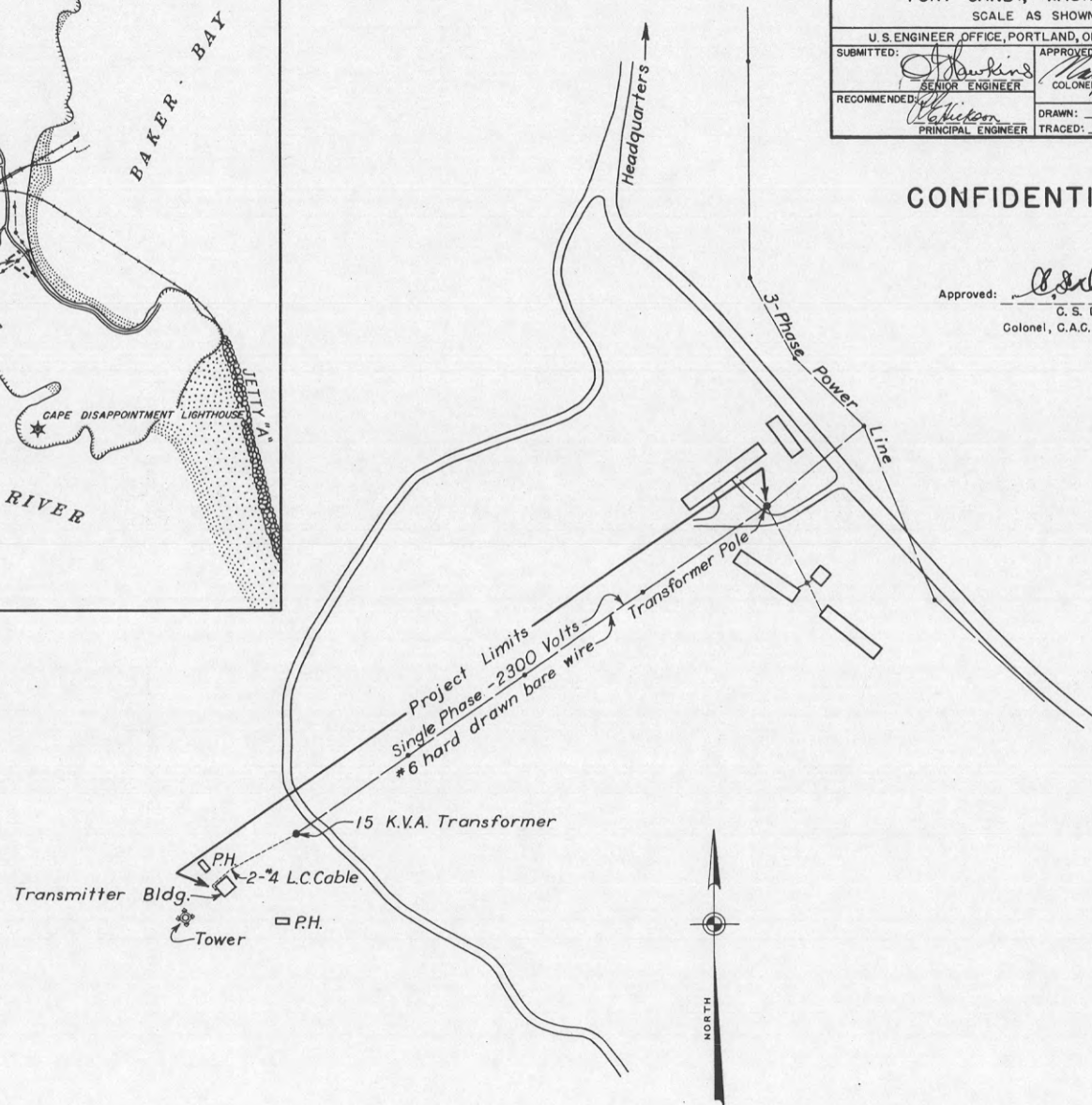
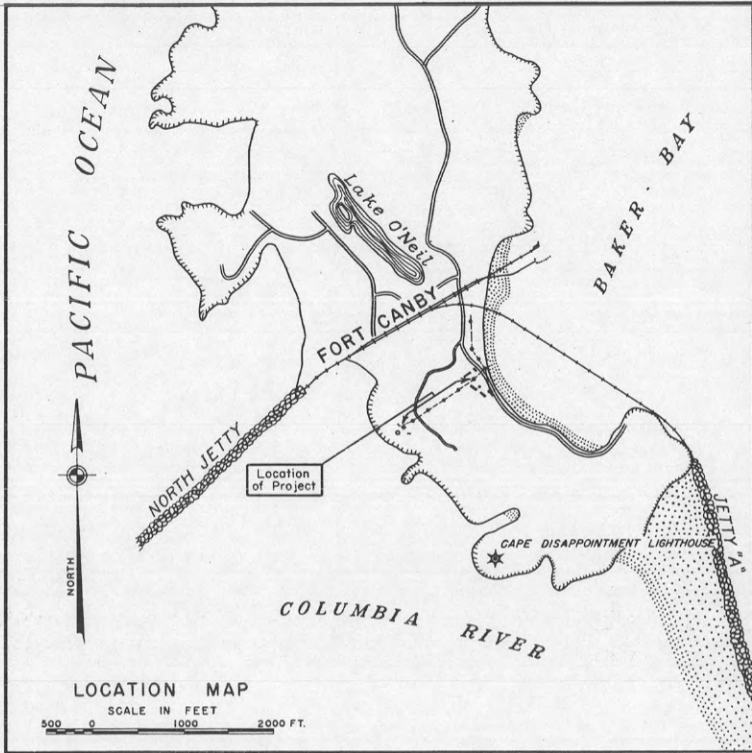
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HARBOR DEFENSES OF THE COLUMBIA
 COMMERCIAL POWER LINE
 TO SCR-296 STATION D2
 FORT CANBY, WASHINGTON
 SCALE AS SHOWN

U.S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT	
SUBMITTED: <i>J. H. ...</i> SENIOR ENGINEER	APPROVED: 17 JUNE 1944 <i>M. E. H.</i> COLONEL, CORPS OF ENGINEERS DISTRICT ENGINEER
RECOMMENDED: <i>W. H. ...</i> PRINCIPAL ENGINEER	DRAWN: M.E.H. DATE June 1944 TRACED: M.E.H. CHECKED: _____

CONFIDENTIAL

Approved: *C. S. Doney*
 C. S. Doney
 Colonel, C.A.G., Commanding



600.914 (Col. River) CM 81955

REPORT OF COMPLETED WORKS—SEACOAST FORTIFICATIONS
(Fire Control Structures)

CONFIDENTIAL

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
BASE END STATION BCL & B1/1 S1/1 #247

PART II

Corrected to 20 November 1943

STRUCTURE:

Location by co-ordinates:

- Of the southernmost instrument base N 1,027.21 yds.
W 1,136.57 yds.
- Of the northernmost instrument base N 1,029.09 yds.
W 1,138.03 Yds.

81955

The origin of the co-ordinates for this Harbor Defense is Canby Light which is located on Cape Disappointment, Fort Canby, Washington.

Location by site description: Is on a prominent knoll known as McKenzie Head which is on the westerly side of the Fort Canby Military Reservation. The station is constructed on top of the magazine of Battery No. 247.

Date of transfer: 12 November 1943.

Cost to date of transfer: \$6,488.76.

Type of station: Concrete and earth-covered.

Type of construction:

- (a) Roof: Is constructed of reinforced concrete of a 1:2:4 mix and is 12" to 14" in thickness.
- (b) Remainder of bldg: Is constructed of reinforced concrete of a 1:2:4 mix. The walls are 12" in thickness and the floor is 8" in thickness. The structure has only one room with interior dimensions of 16'-4" x 15'-4" with a ceiling height of 7'-0". The building is entered by way of a small access tunnel also constructed of reinforced concrete. The building and its facilities are permanent type construction and are in excellent condition.

Concealment: The structure was covered with earth embankment and then sodded, leaving only the windows and a portion of the front exposed. The

STRUCTURE: (Cont'd)

exposed portion is painted to conform to the surrounding vegetation.

Conspicuousness: Is not considered conspicuous at any distance.

UTILITIES:

Electric Power:

Source: Commercial power for the Fort Canby Reservation is purchased from the P.U.D. No. 2 of Pacific County, Washington. Their substation is located at Ilwaco, Washington and is supplied from Bonneville. The power for this Base End Station is drawn from the switchboard of the battery magazine which is directly below the station.

Characteristics: Power within the station is of 110 volts Ac, single phase.

Kilowatts required: Approximately 3 if an electric heater is used.

Type of lighting fixtures: Incandescent lamps in porcelain lamp receptacles.

Heating:

No heating facilities were provided for this station, however, plug-in receptacles are provided that electric heaters may be used and also a 6" vent was provided so a small stove could be installed.

Water & Sewer:

No water nor sewage facilities were provided for this station. The nearby battery facilities are available for the operating personnel of this station.

CONFIDENTIAL

Control Approval Symbols SPERM-1

ED Form A-162B
16 September 1943

REPORT OF COMPLETED WORKS--SEACOAST FORTIFICATIONS
(Fire Control Structures)

CONFIDENTIAL

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
BASE END STATION BCL & B1/1 SL/1

PART II

Corrected to 20 November 1943

REFERENCE:

Elevations of instrument positions:

Top of concrete instrument base, southerly instrument position is at elevation 204.98.

Top of pipe pedestal, northerly instrument position is at elevation 208.93.

The datum plane of reference is Mean Sea Level.

INSTRUMENTS:

Type of observing instruments: Two Azimuth Instruments M-1910 A1 and one Depression Position Finder, M-1, Class 3 are being provided by the Ordnance Dept. for use in this station.

DATA TRANSMISSION:

Type of: Telephones.

The telephones and lines were furnished and installed by the Signal Corps.

REMARKS:

This station was constructed by Government forces with funds from P/A 8-(CAC)-252 P 34 A 1204-24. Construction work was started on 17 May 1943 and was completed 30 June 1943.

CONFIDENTIAL

WAR DEPARTMENT

CORPS OF ENGINEERS, U.S. ARMY

HARBOR DEFENSES OF THE COLUMBIA

STATION BC I & B | S |

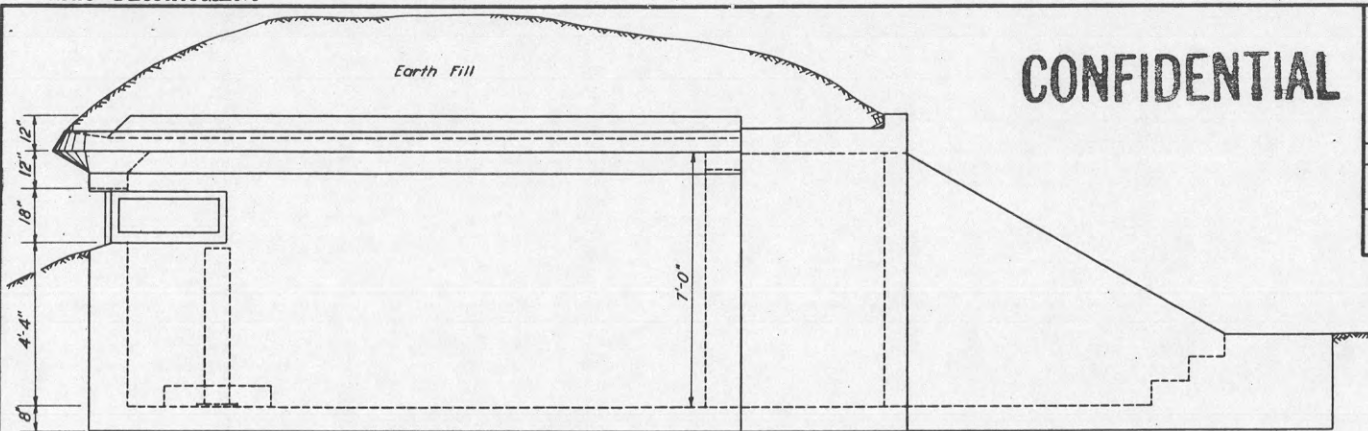
FORT CANBY, WASHINGTON

SCALE 3/16"=1'-0"

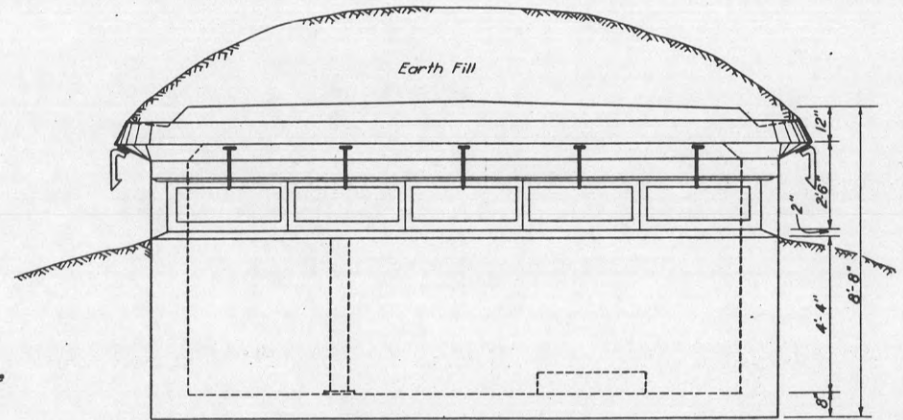
U.S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT

SUBMITTED:	APPROVED:
BY: <i>[Signature]</i> ENGINEER	BY: <i>[Signature]</i> LT. COL. CORPS OF ENGINEERS DISTRICT ENGINEER
RECOMMENDED:	DATE: 3. Dec. 1943
BY: <i>[Signature]</i> PRINCIPAL ENGINEER	TRACED: M.E.N. CHECKED: _____

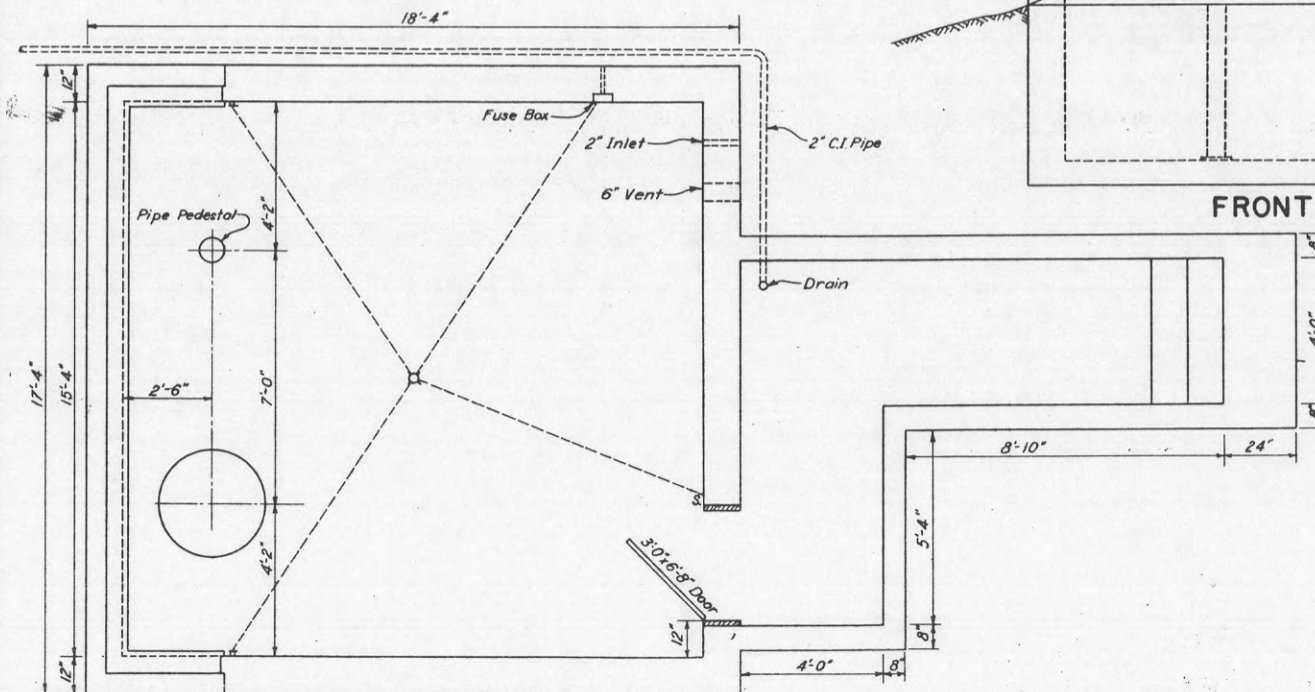
CONFIDENTIAL



SIDE ELEVATION



FRONT ELEVATION



PLAN

APPROVED: *[Signature]*
C. S. Doney
Colonel, C.A.G., Commanding

600,914 (Col. River) CM 74062
REPORT OF COMPLETED WORKS-SEACOAST FORTIFICATIONS
(Fire Control Structures)

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON (Tioga Beach)
BASE END STATION B7/1S7/1 #247

CONFIDENTIAL

Part II

Corrected to 15 November 1943

STRUCTURE:

Location by co-ordinates: The co-ordinates of the southern-most concrete pedestal are:

N 11,340.87 Yards
W 202.13 Yards

The origin of co-ordinates for the instrument axis is Canby Light located on Cape Disappointment, Fort Canby, Washington.

Location by site description: This station is located in Section 9 of T.10 N. R.11 W. and is on a tract of land comprised of lots 3,4,5 and 6 of block number 12 of Pioneer Tract Pacific County, Washington; and is also located approximately 200 feet west of Washington State Highway No. 12-A and approximately 500 feet north of the City Limits of Long Beach, Washington.

Date of transfer: 26 July 1943.

Cost to date of transfer: \$7,726.92.

Type of station: Cottage.

Type of construction: This is a two story building with the living quarters on the lower floor and the observation room on the upper floor. With the exception of the instrument bases, the entire building is of a wooden frame construction. On the interior the walls are finished with V'd ceiling and the room ceilings are finished with 1/4" veneer. The exterior walls are finished with 8" beveled cedar siding and the roof is covered with cedar shingles. The instrument bases are circular columns 24" in diameter extending from the ground to the second floor and are constructed of reinforced concrete of a 1:2:4 mix. For construction details and interior dimensions see construction drawing numbers DMCR 1068.4 and 1068.5.

STRUCTURE:(Cont'd)

A garage which is to be used as a portable search-light shelter, was constructed along with the station. It is likewise a wooden frame building but is constructed on a concrete floor and foundation. The exterior walls are finished with 8" beveled cedar siding and the roof with cedar shingles. The interior is not finished. The interior dimensions are 19'-3" x 19'-3" with a over-head clearance of 8'-8".

The building to house the auxiliary power plant is a wooden frame structure constructed on a concrete floor and foundation. This building is finished on the interior with V'd ceiling and on the exterior the same as the station itself. The interior dimensions are 9'-6" x 13'-6" with a ceiling height of 8'-0".

The station and its facilities are entirely enclosed by a four foot picket fence.

How concealed: This station is not concealed in any way but it is located among beach houses and is constructed to appear as one.

UTILITIES:

Electric Power:

Source: Power for this station is drawn from lines of P.U.D. No. 2 of Pacific County, Wash. These power lines run along Washington State Highway No. 12-A and approximately 330 lin. feet of lateral line was necessary to get power to the station.

CONFIDENTIAL

Control Approval Symbol SPEKM-1

74062

ED Form A-162B
16 Sept. 1943

S. D. 71

REPORT OF COMPLETED WORKS—SEACOAST FORTIFICATIONS
(Fire Control Structures)

CONFIDENTIAL

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON (Tioga Beach)
BASE END STATION B7/1S7/1

Part II

Corrected to 15 November 1943

UTILITIES: (Cont'd)

Characteristics: Voltage 110 or 220 Ac; triple phase.

Kilowatts required: Approximately 4.0

Type of lighting fixtures: Are incandescent lamps in porcelain lamp receptacles.

Heating: Heat for the station is provided by one Army No. 1 space heater. Plug-in receptacles are provided in each room so that electric heaters may be used if the one space heater should be inadequate during the cold seasons.

Hot water is provided by a 40 gal. automatic electric heater.

Water & Sewage: Water is obtained from a 1" lateral of the Mountain Springs Water Company's system of Long Beach, Washington. Water is carried 145 feet to the station by a 1" galvanized iron pipe.

The sewage from this station is treated by a small septic tank which, in turn, is drained to a 300 sq.ft. covered sludge bed.

The latrine is located on the first floor of the station. The facilities provided include one toilet, one wash basin and one shower head.

REFERENCE:

The elevations of the top of the concrete instrument bases are:

Of the southern-most 38.882 feet

Of the northern-most 38.379 feet

The datum plane of reference being Mean Sea Level.

INSTRUMENTS & EQUIPMENT:

Observing instruments: Two azimuth instruments
M1910 A1 is being provided by the Ordnance Department for this station.

DATA TRANSMISSION:

Type of : Telephones.

The telephones and lines were furnished and installed by the Signal Corps.

REMARKS:

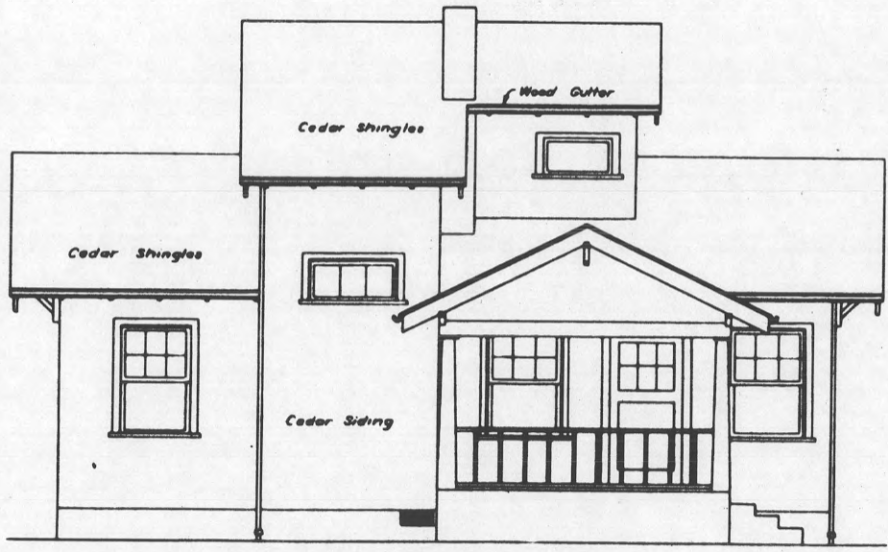
This station was constructed by Government forces with funds from P/A CAC-115 P 270 A 1204-24. Construction work was started on 31 December 1942 and was completed 22 May 1943. For construction details see drawing numbers DMCR 1068.3, 1068.4 and 1068.5.

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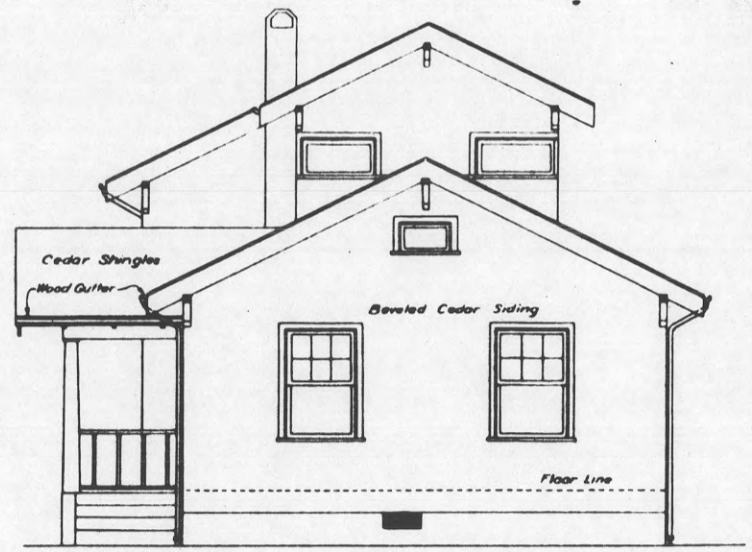
HARBOR DEFENSES OF THE COLUMBIA		
STATION B 7 S 1		
LOCATION F C 16		
IN 2 SHEETS	SCALE 1/8"=1'-0"	SHEET NO. 1
U.S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT		
SUBMITTED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>	DATE MAY 20 1913
RECOMMENDED BY <i>[Signature]</i>	DATE MAY 20 1913	BY M.L.L.

Approved: *[Signature]*
C.S. Doney
Colonel, C.A.C., Commanding

CONFIDENTIAL



FRONT ELEVATION



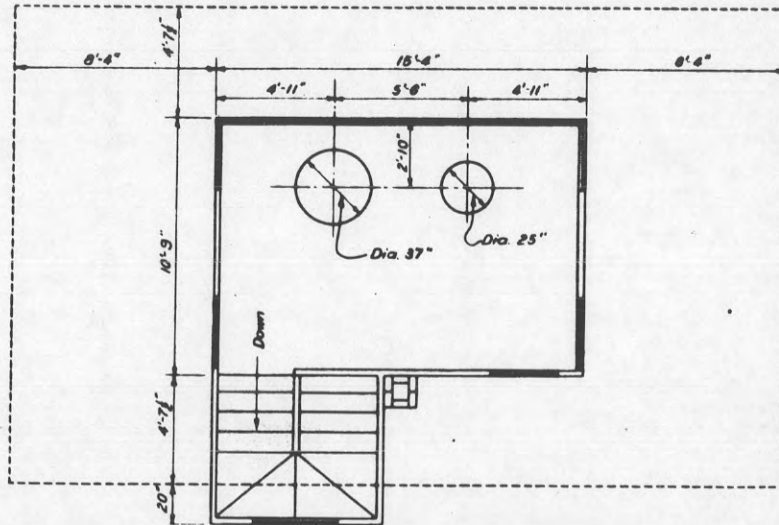
SIDE ELEVATION

HARBOR DEFENSES OF THE COLUMBIA
STATION B 7 S 1
 LOCATION FC 16

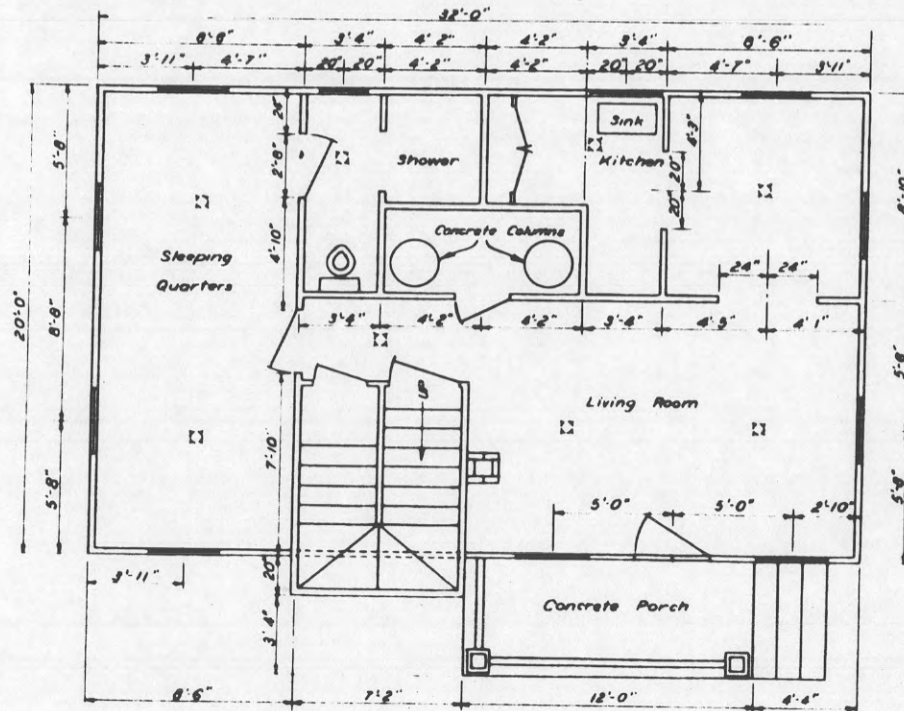
IN 2 SHEETS	SCALE 1/8"=1'-0"	SHEET NO. 2
U.S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT		
SUBMITTED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>	DISTRICT ENGINEER DATE: 20 11 42
DRAWN BY <i>[Signature]</i>	CHECKED BY RM	TRACED BY M.E.M.

CONFIDENTIAL

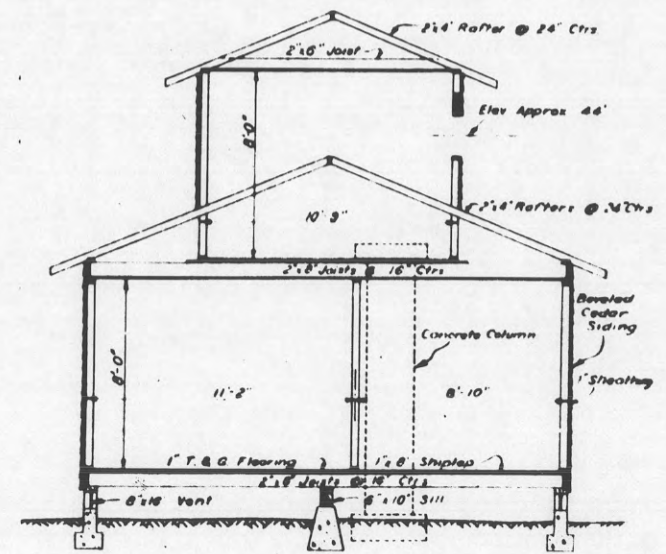
Approved: *[Signature]*
 U.S. Army
 Colonel, C.A.C., Commanding



SECOND FLOOR PLAN



FIRST FLOOR PLAN



SECTION

660 (Col. River) CM 42722
 REPORT OF COMPLETED WORKS-SEACOAST FORTIFICATIONS
 (Fire Control Structures)

SECRET

HARBOR DEFENSES OF THE COLUMBIA
 FORT CANBY, WASHINGTON
 TRIPLE BASE END STATION
 B4/1, S4/1, B4/2, S4/2 & B7/3, S7/3
 ON NORTH HEAD, WASHINGTON

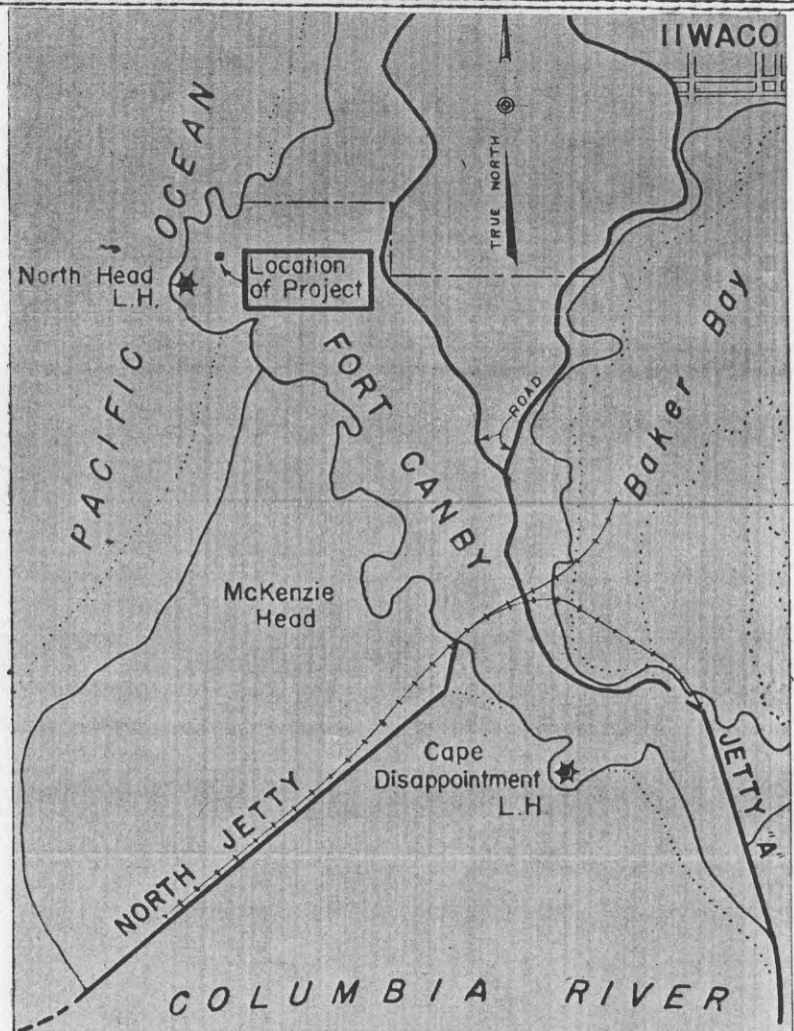
B¹S¹ #247
 B³S³ #246
 B⁵S⁵ #245

Form 2.

Corrected to February 20, 1943.

STRUCTURE:

Location : On North Head, Washington in U.S.
 : Military Reserve adjacent to the
 : Fort Canby Military Reservation.
 :
 Date of transfer : March 31, 1943
 :
 Cost to date of transfer : \$9,432.10
 :
 Type of construction : Entire structure is constructed of
 : reinforced concrete of a 1:2:4 mix.
 : The building is comprised of three
 : rooms each with interior dimensions
 : of: 12'-0"x12'-3"x a height of 7'-0".
 : The concrete of the roof is 12" in
 : thickness.
 :
 How concealed : The structure is covered with earth
 : leaving only the windows and part
 : of the front exposed. The exposed
 : part is painted to conform with the
 : immediate surroundings.
 :
 ELECTRIC CURRENT:
 :
 Source of : Commercial power thru the reserve.
 K watts required : One kilowatt.
 Type of lighting fixture : 200 watt & 100 watt incandescent
 : lamp.
 :
 HEAT : None provided.
 :
 WATER & SEWER
 :
 Connection to water mains : 1500 feet of 1" service pipe was run
 : from a 3" main of the Fort Canby
 : Reservation.
 :
 :



CONFIDENTIAL
 HARBOR DEFENSES OF THE COLUMBIA
 FORT CANBY, WASHINGTON
 STATIONS B₃S₃ B₄S₄ B₁S₁
 FEBRUARY, 1943
 SCALE 1:40000

SECRET

WAR DEPARTMENT

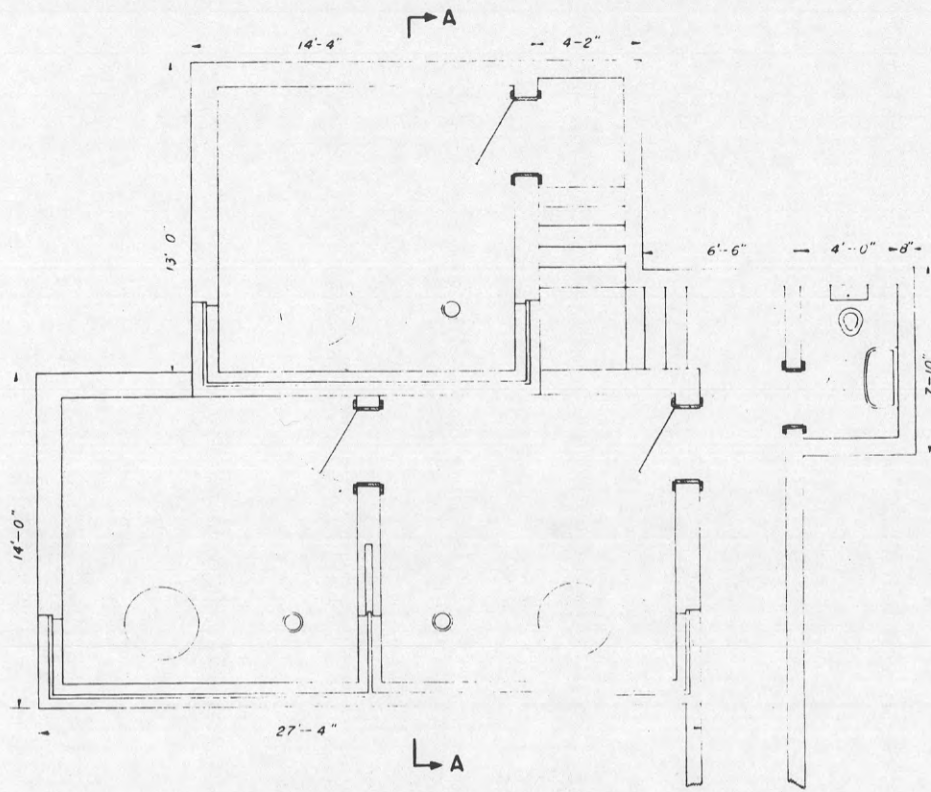
CORPS OF ENGINEERS, U.S. ARMY

HARBOR DEFENSES OF THE COLUMBIA
BASE END STATIONS
B₃ S₃ B₂ S₂ B₁ S₁
NORTH HEAD, WASHINGTON

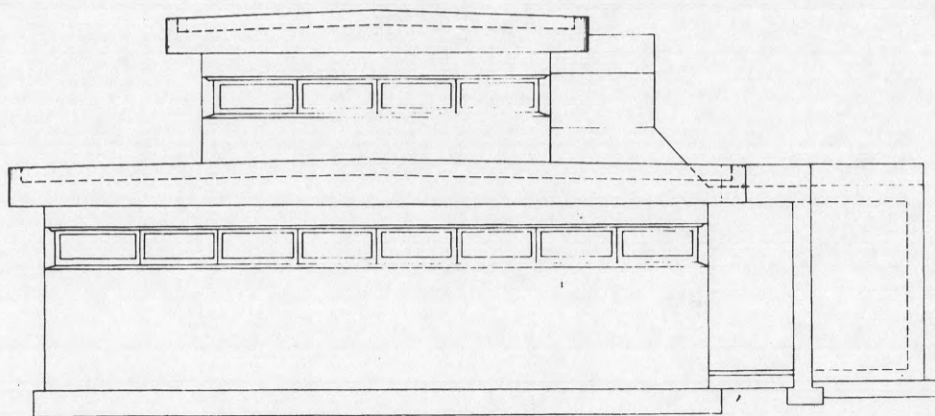
FEBRUARY 1943
SCALE 1/8" = 1'

U.S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT

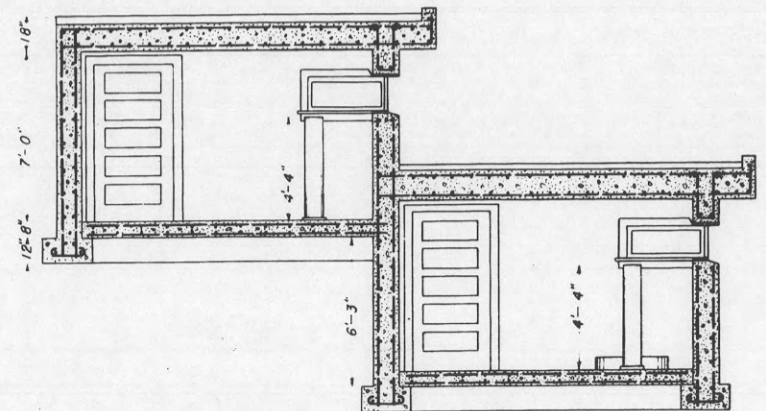
Drawn SUBMITTED: *J. Hawkins*
Traced SENIOR ENGINEER
MEH. RECOMMENDED: *R. E. Vinton*
Checked PRINCIPAL ENGINEER
APPROVED: *[Signature]*
COLONEL, CORPS OF ENGINEERS



FLOOR PLAN



FRONT ELEVATION



SECTION A-A

CONFIDENTIAL

SECRET

REPORT OF COMPLETED WORKS--SEACOAST FORTIFICATIONS
(Fire Control Structures)

SECRET

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
TRIPLE BASE END STATION
B4/1S4/1, B4/2S4/2 & B7/3S7/3
OF NORTH HEAD, WASHINGTON

Form 2.

Corrected to February 20, 1943.

Sewage : This station is serviced by a separate
: septic tank which is drained into the
: ocean.
:
Type of latrine : The latrine is constructed of rein-
: forced concrete and adjoins the
: station. Fixtures within the latrine
: consists of one wash-down toilet, one
: urinal and one wash basin.
:
Class of installation . . : Structure and utility installations
: are all permanent.
:
Present condition : Excellent.
:
REFERENCE: : Origin of co-ordinates for instrument
: axis is Canby Light located on Cape
: Disappointment, Fort Canby. Co-ordin-
: ates for the three stations are as
: follows:
: B4/1S4/1 N2981.0 W2009.2
: B4/2S4/2 N2984.4 W2004.8
: B7/3S7/3 N2986.6 W2009.1
:
INSTRUMENTS:
:
Type of observing
instrument : One Depression Position Finder, M1,
: Class 3, for each station. Instru-
: ments furnished by Ordnance Dept.
:
DATA TRANSMISSION:
:
Type of : Telephones furnished and installed by
: Sig. Corps.

SECRET

SECRET

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
TRIPLE BASE END STATION
B4/1S4/1, B4/2S4/2 & B7/3S7/3
ON NORTH HEAD, WASHINGTON

Form 2.

Corrected to February 20, 1943.

REMARKS : This station was constructed by
: Government forces and was completed
: on November 30, 1942; was construct-
: ed with funds from P/A CAC-252 P 34
: A 1204-23. For construction details
: see attached plan which is part of
: this completion report.

SECRET

Obsolete

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF THE COLUMBIA
FORT. CANBY, WASHINGTON.
STRUCTURE... F.C. STATION F/4. CONTROLLER.
BOOTH FOR SEARCHLIGHT #8 AND DORMITORY.

Form 2. Corrected to June 30, 1921.

Location On Cape Disappointment about 950' northeasterly from Canby light. November 6, 1911.

Date of transfer

Cost to that date \$4,749.69

Type of construction
(a) Roof Asphalt, gravel, paper & wood
(b) Remainder of bld Wood frame, diamond mesh, plaster and concrete.

How concealed Behind hill.

How protected By hill.

Height above concealment 3 feet.

Height above protection 3 feet.

Conspicuous at.....yards About 3,000 yds.

Source of electric current Central or Reserve Power Plant.

Kilowatts required 0.8 kw.

Type of lighting fixtures Commercial, ceiling & wall fixtures.

How heated Stove

Connected to water mains Yes

Connected to sewer Yes

Type of latrine Syphon

Permanent or temporary installation Permanent

Present condition Good

Reference of site 295' above M.L.L.W.

Reference of instrumental axis 296' above M.L.L.W.

Type of observing inst. Swasey, D.P.F. Type A-II #1 and observing telescope

Type of plotting board None.

Type and capacity of crane

Max. dimensions of reel handled

Type of data transmission

Date of transfer

Cost of data transmission equipment

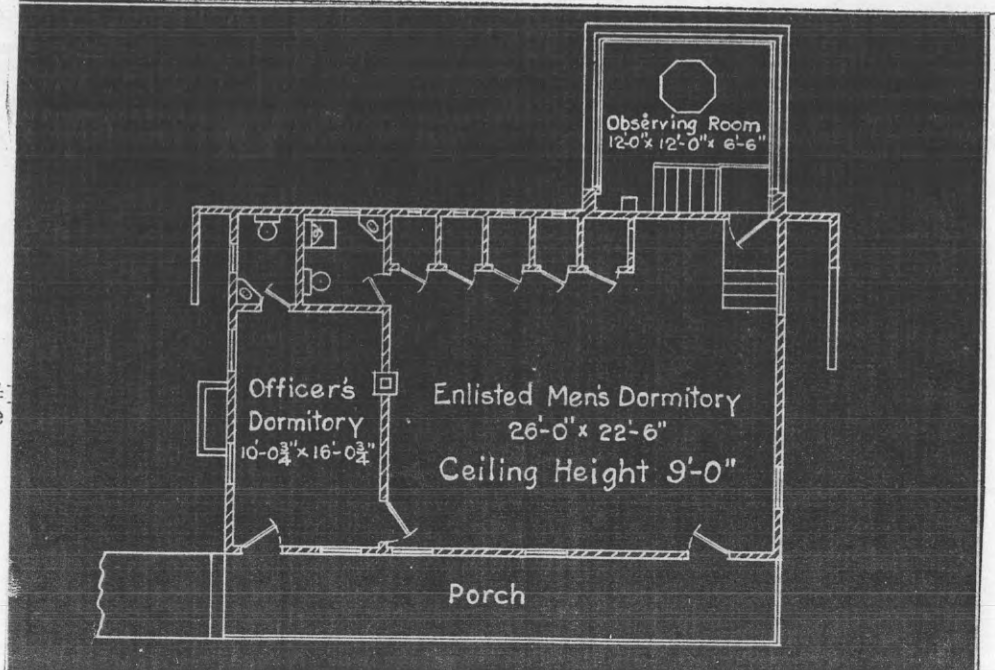
For tide stations give description of tide gauge

For datum points give Forts from which visible

For dormitories give stations served

For cable hut give S. C. type

F IV/3, B I/2, B I/4 and Searchlight No. 8.



obsolete

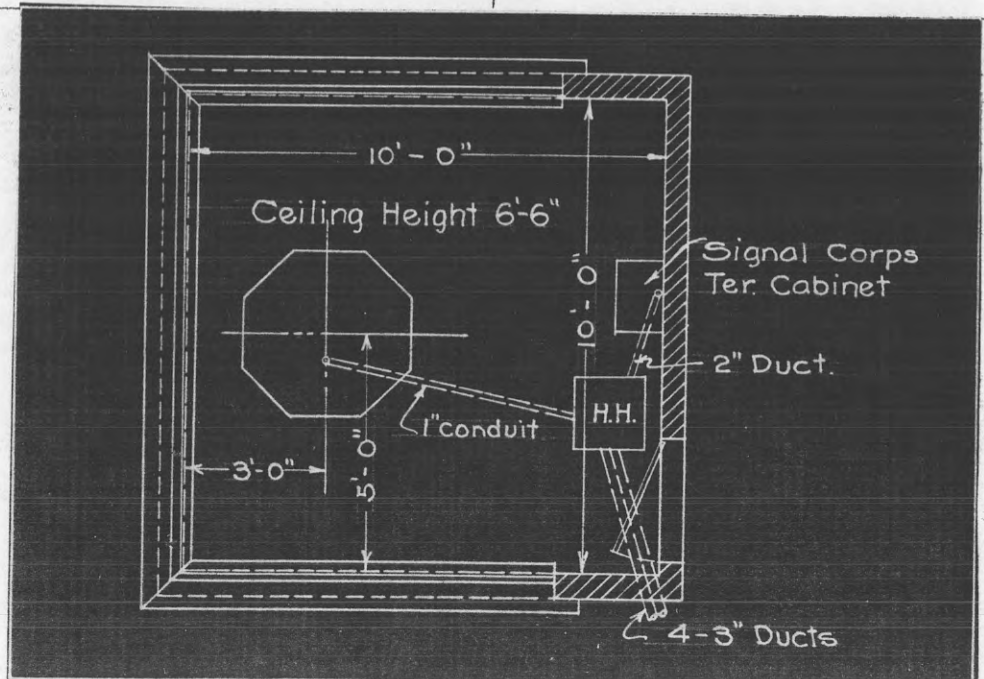
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF THE COLUMBIA.....
FORT. CANBY, WASHINGTON,.....
STRUCTURE..F.C..STATION.B./5.....

Form 2. Corrected to June 30, 1921.

BC
B5

Location	310 feet northwesterly from Battery Allen.	Type of data transmission	
Date of transfer	November 6, 1911.	Date of transfer	
Cost to that date	\$1,020.58	Cost of data transmission equipment	
Type of construction	Sewell type.	For tide stations give description of tide gauge	
(a) Roof	Gravel, asphalt, paper & wood	For datum points give Forts from which visible	
(b) Remainder of building	Wood frame, diamond mesh & plaster.	For dormitories give stations served	
How concealed	Earth fill to slot, trees behind.	For cable hut give S. C. type	
How protected	Earth fill to slot.		
Height above concealment	3 ft. above ground.		
Height above protection	3 ft.		
Conspicuous at.....yards	About 3000 yds.		
Source of electric current	Central & Reserve Power Plants.		
Kilowatts required	0.1 kw.		
Type of lighting fixtures	Commercial		
How heated	None		
Connected to water mains	No		
Connected to sewer	No		
Type of latrine	None		
Permanent or temporary installation	Permanent		
Present condition	Good		
Reference of site	222 ft. above M.L.L.W.		
Reference of instrumental axis	223 ft. " M.L.L.W.		
Type of observing inst.	Swasey DPF, type A-II #116		
Type of plotting board	None		
Type and capacity of crane			
Max. dimensions of reel handled			



REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF THE COLUMBIA
FORT. CANBY, WASHINGTON
STRUCTURE. Supplementary Station

Form 2.

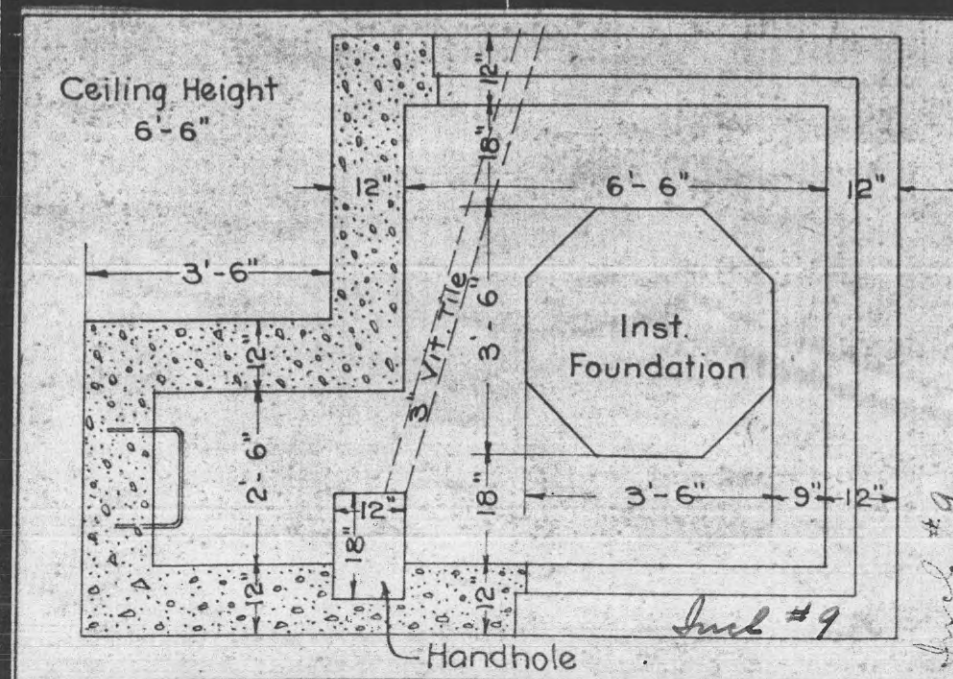
Corrected to June 25, 1922.

P.V./3. B.V.

Location On Cape Disappointment, Wash. about 850' N.E. from Canby Light.
Date of transfer April 15, 1922.
Cost to that date \$2,020.40
Type of construction Dug-in.
(a) Roof Reinforced concrete.
(b) Remainder of bld. Reinforced concrete.
How concealed Dug in to slot with earth cover & trap door.
How protected Dug in to slot with reinforced concrete roof & walls with earth cover.
Height above concealment 2 feet.
Height above protection 2 feet.
Conspicuous at... 1,000 yards
Source of electric current Central or reserve power plant.
Kilowatts required 0.1 kw.
Type of lighting fixtures E.D. standard.
How heated None.
Connected to water mains No.
Connected to sewer No.
Type of latrine None.
Permanent or temporary installation Permanent.
Present condition Good.
Reference of site 287 feet above M.L.L.W.
Reference of instrumental axis 287.96' above M.L.L.W.
Type of observing inst. D.P.F.
Type of plotting board None.
Type and capacity of crane
Max. dimensions of reel handled

Type of data transmission
Date of transfer APR 15 1922
Cost of data transmission equipment
For tide stations give description of tide gauge
For datum points give Ports from which visible
For dormitories give stations served
For cable hut give S. C. type

Recommended for disposal by Lt. HD Col to WDC 5 Nov 45 file 660.2/ HD Col.
#8, Let. 27 Dec 45.
#8, Let. 22 Jan 46



Incl #9

Incl #9

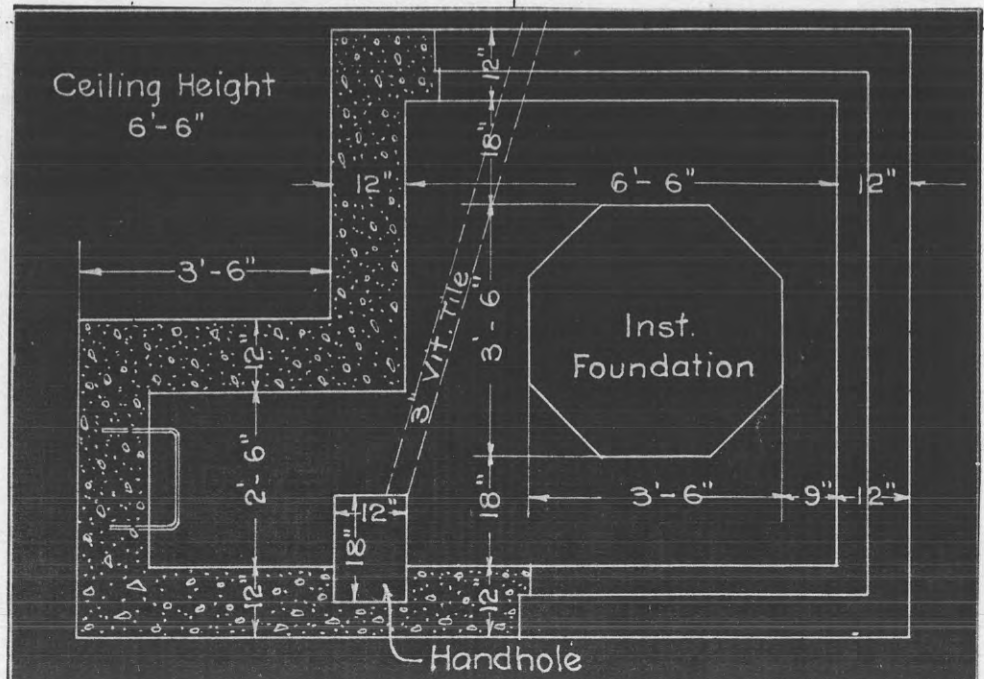
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

Absolute

COAST DEFENSES OF.. THE COLUMBIA
FORT. CANBY, WASHINGTON.....
STRUCTURE.. ~~Supplementary Station~~ *Ga. (Mine)*.....
p. 11/5.

Form 2. Corrected to June 25, 1922.

Location	On Cape Disappointment, Wash. about 850' N.E. from Canby Light.	Type of data transmission	
Date of transfer	April 15, 1922.	Date of transfer	APR 15 1922
Cost to that date	\$2,020.40	Cost of data transmission equipment	
Type of construction	Dug-in.	For tide stations give descrip- tion of tide gauge	
(a) Roof	Reinforced concrete.	For datum points give Forts from which visible	
(b) Remainder of bld	Reinforced concrete.	For dormitories give stations served	
How concealed	Dug in to slot with earth cover & trap door.	For cable hut give S. C. type	
How protected	Dug in to slot with rein- forced concrete roof & walls with earth cover.		
Height above concealment	2 feet.		
Height above protection	2 feet.		
Conspicuous at... 1,000 yards			
Source of electric current	Central or reserve power plant.		
Kilowatts required	0.1 kw.		
Type of lighting fixtures	E.D. standard.		
How heated	None.		
Connected to water mains	No.		
Connected to sewer	No.		
Type of latrine	None.		
Permanent or temporary installation	Permanent.		
Present condition	Good.		
Reference of site	287 feet above M.L.L.W.		
Reference of instrumental axis	287.96' above M.L.L.W.		
Type of observing inst.	D.P.F.		
Type of plotting board	None.		
Type and capacity of crane			
Max. dimensions of reel handled			



REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF THE COLUMBIA
FORT. CANBY, WASHINGTON.
STRUCTURE F.C. Station B-1/A

Form 2.

Corrected to June 25, 1922.

B556 #245

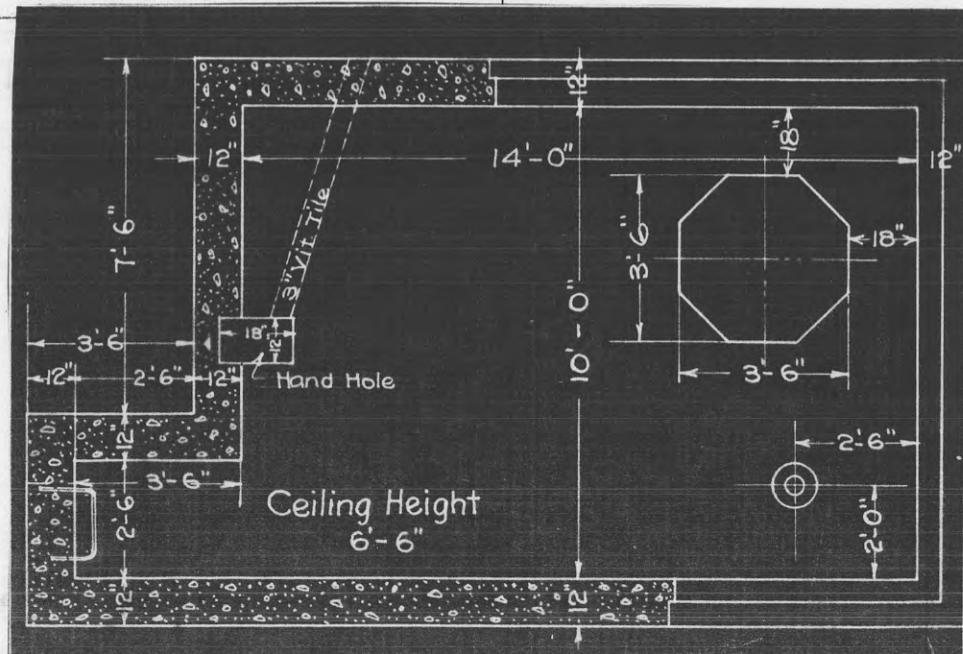
(53)

Location
Date of transfer
Cost to that date
Type of construction
(a) Roof
(b) Remainder of bld
How concealed
How protected
Height above concealment
Height above protection
Conspicuous at....
Source of electric current
Kilowatts required
Type of lighting fixtures
How heated
Connected to water mains
Connected to sewer
Type of latrine
Permanent or temporary installation
Present condition
Reference of site
Reference of instrumental axis
Type of observing inst.
Type of plotting board
Type and capacity of crane
Max. dimensions of reel handled

On Cape Disappointment,
Wash. about 720' N.E.
from Canby Light.
April 15, 1922.
\$3,916.36
Dug-in.
Reinforced concrete.
Reinforced concrete.
Dug in to slot with earth
cover & trap door.
Dug in to slot with rein-
forced concrete roof &
walls with earth cover.
2 feet.
2 feet.
Central or reserve power plant.
0.2 kw.
E.D. standard.
None.
No.
No.
None.
Permanent.
Good.
264.00' above M.L.L.W.
265.05' above M.L.L.W.
D.P.F. and azimuth.
None.

Type of data transmission
Date of transfer
Cost of data transmission
equipment
For tide stations give descrip-
tion of tide gauge
For datum points give Forts
from which visible
For dormitories give
stations served
For cable hut give
S. C. type

APR 15 1922



REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

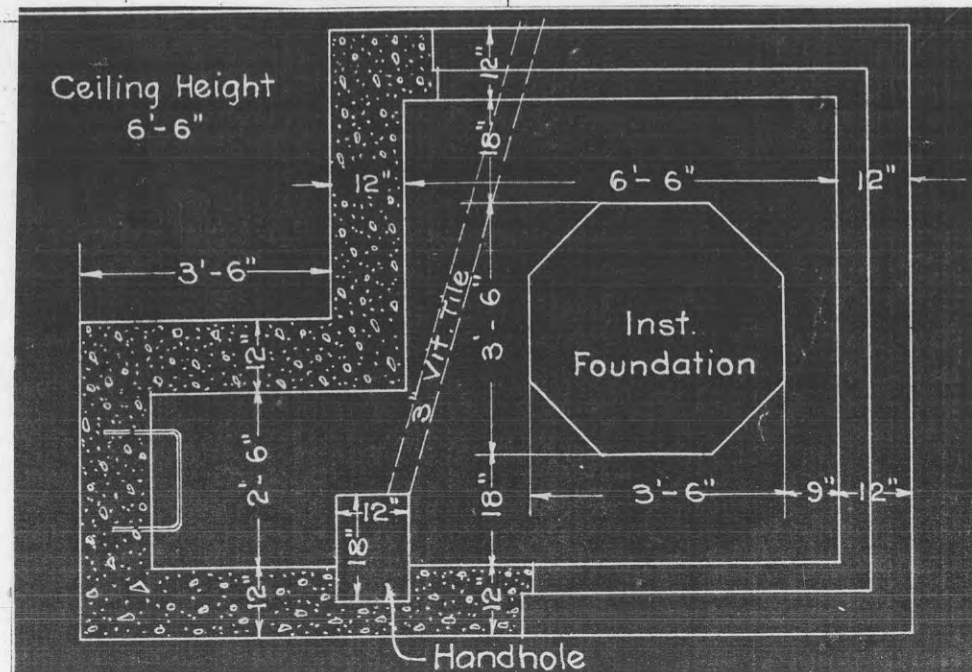
COAST DEFENSES OF THE COLUMBIA
FORT. CANBY, WASHINGTON.
STRUCTURE. Supplementary Station

Form 2.

Corrected to June 25, 1922.

Bⁱⁿ/2 B³S³ #296

Location	On Cape Disappointment, Wash. about 760' N.E. from Canby Light.	Type of data transmission	
Date of transfer	April 15, 1922.	Date of transfer	APR 15 1922
Cost to that date	\$1,971.98	Cost of data transmission equipment	
Type of construction	Dug-in.	For tide stations give descrip- tion of tide gauge	
(a) Roof	Reinforced concrete.	For datum points give Forts from which visible	
(b) Remainder of bld	Reinforced concrete.	For dormitories give stations served	
How concealed	Dug in to slot with earth cover & trap door.	For cable hut give S. C. type	
How protected	Dug in to slot with rein- forced concrete roof & walls with earth cover.		
Height above concealment	2 feet.		
Height above protection	2 feet.		
Conspicuous at...1,000..yards			
Source of electric current	Central or reserve power plants.		
Kilowatts required	0.1 kw.		
Type of lighting fixtures	E.D. standard.		
How heated	None.		
Connected to water mains	No.		
Connected to sewer	No.		
Type of latrine	None.		
Permanent or temporary installation	Permanent.		
Present condition	Good.		
Reference of site	274.80' above M.L.L.W.		
Reference of instrumental axis	275.92' above M.L.L.W.		
Type of observing inst.	D.P.F.		
Type of plotting board	None.		
Type and capacity of crane			
Max. dimensions of reel handled			



obsolete

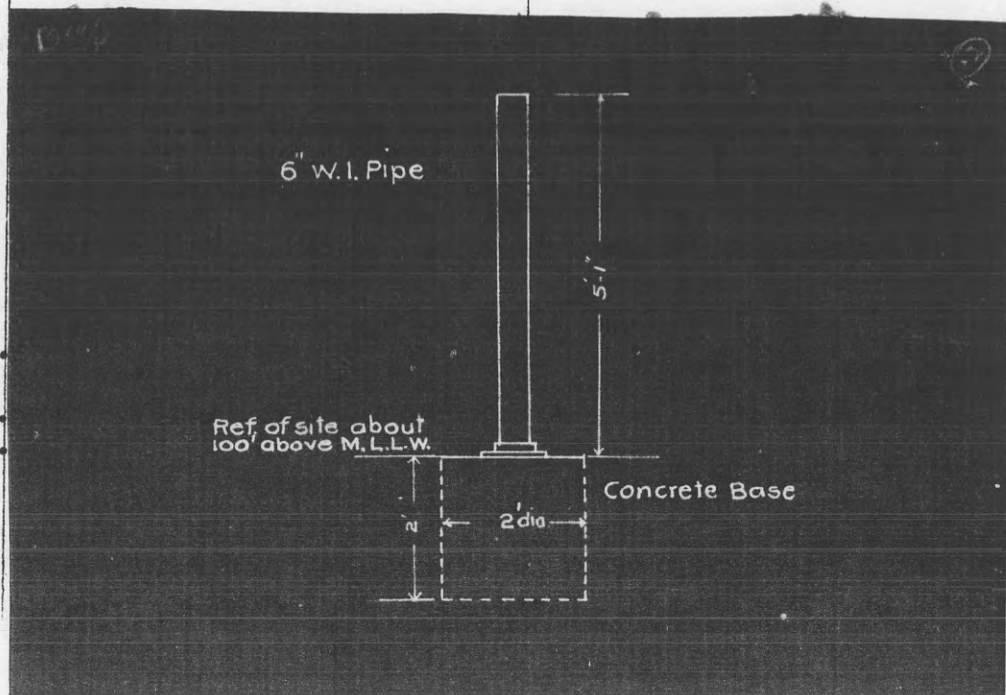
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF THE COLUMBIA.....
FORT. CANBY, WASHINGTON.....
STRUCTURE. Supplementary Station.....
B¹¹/4

Form 2. Corrected to June 25, 1922..

Location	On edge of bluff about 5700' northerly from North Head Lighthouse.
Date of transfer	April 15, 1922.
Cost to that date	\$89.78
Type of construction	6" pipe set in concrete base.
(a) Roof	
(b) Remainder of bld	
How concealed	Hill to rear.
How protected	Hill to rear.
Height above concealment	None.
Height above protection	None.
Conspicuous at..1,000..yards	
Source of electric current	None.
Kilowatts required	
Type of lighting fixtures	
How heated	
Connected to water mains	
Connected to sewer	
Type of latrine	
Permanent or temporary installation	Permanent.
Present condition	Good.
Reference of site	133.50
Reference of instrumental axis	About 100' above M.L.L.W.
Type of observing inst.	Instrument not installed.
Type of plotting board	Instrument not installed.
Type and capacity of crane	None.
Max. dimensions of reel handled	

Type of data transmission	
Date of transfer	APR 15 1922
Cost of data transmission equipment	
For tide stations give description of tide gauge	
For datum points give Forts from which visible	
For dormitories give stations served	
For cable hut give S. C. type	



REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Electric Plants)

COAST DEFENSES OF... THE COLUMBIA
FORT... CANBY, WASHINGTON.....
POWER FOR FORTIFICATIONS AND POST LIGHTING.....

Form 5. (CENTRAL POWER PLANT) Corrected to June 25, 1922.

	Serial No.	Type	Size	Mfgr.	Date of transfer	Cost	Con- dition	RPM	Belt or Direct Drive	Radiator for Engine No.	Fuel	Switchboard	
												Mater- ial.	No. of Panels
Boiler No. 1	None											See 675.1	(9th C.A.) 1
No. 2	-											Volts	Wire
No. 3	-											220 DC	2
1 line No. 1	5538	GML2-A2	43/54	Gen.E.Co.	11-26-1912	\$8,886	Good	560			Gas	220 DC	2
No. 2	6879	GML2-A2	43/54	Gen.E.Co.	11-26-1912	7,500	Good	560			Gas	220 DC	2
No. 3	-					\$15,595							
Generator						Set No. 1,						* Commercial	power now
No. 1	189033	MPC	25kw 230V	Gen.E.Co.	11-26-1912	Set No. 2,	Good		dir.			used. In emergency	QM power.
No. 2	368929	MPC	25kw 230V	Gen.E.Co.	11-26-1912	Estimated cost, machinery,	Good		dir.			will use for	QM power.
No. 3	-												
Radiator													
No. 1	-	Auto	-	Rome TR Co.	11-26-1912		Good			5538			
No. 2	8135	Auto	-	Gen.E.Co.	11-26-1912		Good			6879			
No. 3	-												
Motor Generator	None												
No. 1	-												
No. 2	-												
No. 3	-												
Switchboard	99	M1	40"x82"	Walker E.Co.	11-26-1912		Good					Marble	2
Switchboard	137	M1	20"x82"	West 'h'Co.	11-26-1912		Good					Marble	1
Storage Battery	None												
Transformer	None												
No. 1	-												
No. 2	-												
No. 3	-												
Auxiliaries	None												
No. 1	-												
No. 2	-												
No. 3	-												

DISTRIBUTION OF KW.

Fortification,	Lights	13.2 kw.
Switchboard room,	Power	1.0 kw.
Dismantled batteries,	Lights	2.8 kw.
		17.0 kw.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Gun and Mortar Batteries)

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
* BATTERY ALLEN & GROUP STATIONS
(Supplemental Report)

SECRET
45168

Form 1.

Corrected to May 14, 1943

GENERAL : This supplemental work consisted of con-
: structing water supply line extensions to
: Battery Allen and the Group Stations at
: Fort Canby, Washington.

Location : These water line extensions are located
: on Cape Disappointment within the U. S.
: Military Reservation of Fort Canby,
: Washington.

Date of transfer : of supplemental work: March 31, 1943

Cost to date of transfer : of supplemental work: \$9,059.38.

(See Plan Attached)

CONSTRUCTION : Two individual pipe lines were construct-
: ed; one to serve Battery Allen and one
: to serve the Group Stations. The pipe
: lines are of 2" galvanized pipe laid to
: an average depth of 18". The line to
: Battery Allen is 920 feet in length and
: the line to the Group Stations is 970
: feet in length. The pipe lines are con-
: nected to the 2½" main running thru that
: part of Fort Canby. Booster pumps were
: installed at the take-off of each line.
: These pumps are Auroras Model GG-5; are
: centrifugal, two stage pumps run by
: electric, 2 h.p. A.C. motors which turn
: 1760 r.p.m. The motors are 220-440 volt,
: 3 phase; are complete with magnetic
: starters and float switch. The pumps
: put out 750 gal. per hour against a total
: head of 200 feet. The line to Battery
: Allen terminated at a concrete tank con-
: structed for a water system which has
: been out of use many years. The line to
: the Group Stations terminates at a

See Map File

No. 92-98-48

*Battery Allen is eliminated from H.D. Project, H.D. Columbia/in accordance with ASF Manual M416, Nov. 1944.
CE 400.93(Columbia River)CM 130022 (Memo dated 21 May 1945 fr. ASF)

SECRET

SECRET
45168

Form 1.

Corrected to May 14, 1943

45168

CONSTRUCTION : storage tank installed as part of this project. This tank is a
: 675 gallon wooden stave tank, constructed on a wooden frame tower.
: The float valves of the tanks are connected to the pump motor
: starters by lines installed in a 1/2 conduit adjacent to the
: water lines. The pumps are housed in small concrete shelters.
:
ELECTRIC CURRENT : Electric current for operating the pump motors is obtained from
: the reservation commercial system. No appreciable amount of
: work was necessary to make the connections, as the power lines
: pass close by the pump houses.
:
REMARKS : This work was authorized by Western Defense Command as Urgent
: Emergency Construction, and on March 24, 1942, the Office Chief of
: Engineers provided funds under P/A Eng.-30,009 P 221 A 0905-23.
: The work was performed by hired labor; was started on January 5, 1942,
: and was completed March 20, 1942. See drawing no. DMCR 1115 for
: layout plan.

SUPPLEMENTARY REPORT.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Searchlights)

COAST DEFENSES OF THE COLUMBIA.
FORT CANBY, WASHINGTON.
SEARCHLIGHT NO.

Form 4. Corrected to June 30, 1921. Size 30" Portable or fixed. Fixed.

<p>PROJECTOR</p> <p>Location: In storehouse.</p> <p>Manufacturer: General Electric Co.</p> <p>Type of projector: E.C.F.</p> <p>Form of projector:</p> <p>Serial No. of projector ...: 332.</p> <p>Type of lamp: H.F.</p> <p>Model of lamp:</p> <p>Serial No. of lamp: 325.</p> <p>Electric or hand control...: Electric.</p> <p>Material of mirror: Glass.</p> <p>Date received in district : 1911.</p> <p>From whom received: Dist. Engr., Seattle, Wash.</p> <p>Age of mirror: Not known.</p> <p>Condition of mirror: Broken.</p> <p>Date last repaired: None.</p> <p>Switchboard, serial No....: None.</p> <p>CABLE #</p> <p>Power plant to searchlight</p> <p>Type</p> <p>Length and size</p> <p>In conduits or in air</p> <p>Controller to light</p> <p>Type</p> <p>Length and size</p> <p>In conduit or in air</p> <p>Aux. controller to light ..</p> <p>Length and size</p> <p>In conduit or in air</p>	<p>INSTALLATION</p> <p>General character</p> <p>Date transferred to</p> <p>troops</p> <p>Cost to that date</p> <p>Shelter</p> <p>Materials of construction</p> <p>Interior of dimensions</p> <p>Height and type of tower :</p> <p>Means by which projector :</p> <p>is placed in operating :</p> <p>position</p> <p>Reference axis of project-</p> <p>or in operating position:</p> <p>Kind of protection in :</p> <p>operating position</p> <p>Concealment of day shelter</p> <p>from approach channel :</p> <p>Dates & cost of extensive:</p> <p>remodeling or reconstruc-</p> <p>tion</p> <p>POWER PLANT</p> <p>Location</p> <p>Maximum demand KW</p> <p>Type and size</p> <p>CONTROLLERS</p> <p>Location</p> <p>Type</p> <p>Form</p> <p>Serial No.</p> <p>How protected or con-</p> <p>cealed</p>	<p>This searchlight is now obso-</p> <p>lete and the disposition of</p> <p>same is with the Artillery in</p> <p>accordance with circular let-</p> <p>ter O. C. of E., July 15,</p> <p>1920, 400.7-F (See 2nd Ind.,</p> <p>O. C. of E., April 15, 1921</p> <p>400.F(Col.R)Fl, Reqn. 4010).</p> <p>E.C.B.</p>
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SUPPLEMENTARY REPORT.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Searchlights)

COAST DEFENSES OF THE COLUMBIA.

FORT CANBY, WASHINGTON.

SEARCHLIGHT NO. Removed from Position No. 6. *

Form 4.

Corrected to June 30, 1921. Size 60" Portable or fixed. Fixed.

PROJECTOR

Location: In storehouse. At Fort
Stevens *

Manufacturer: General Electric Co.

Type of projector: H.C.

Form of projector: N-14.

Serial No. of projector ...: 21743.

Type of lamp: Mark V.

Model of lamp: Model 10.

Serial No. of lamp: 466.

Electric or hand control...: Hand control.

Material of mirror: Glass.

Date received in district : January, 1920.

From whom received: General Electric Co.

Age of mirror: Not known.

Condition of mirror: Good.

Date last repaired: None.

Switchboard, serial No....:

CABLE #

Power plant to searchlight.

Type

Length and size

In conduits or in air

Controller to light

Type

Length and size

In conduit or in air

Aux. controller to light ..

Length and size

In conduit or in air

INSTALLATION

General character

Date transferred to: Tentative estimates of cost for
troops installation of this light at
Cost to that date: Position No. 11 in the vicinity
Shelter ... of North Head, Wash., were sub-
Materials of construction mitted with Fortification Es-
Interior of dimensions timate Data Sheets April 25,
Height and type of tower : 1921 in compliance with circular
Means by which projector : letter Fort No. 24, C. of E.
is placed in operating : 660H-F, dated O.C.E. March 14,
position: 1921.

Reference axis of project-
or in operating position:
Kind of protection in :
operating position

Concealment of day shelter
from approach channel :
Dates & cost of extensive:
remodeling or reconstruc-
tion

POWER PLANT

Location

Maximum demand KW

Type and size

CONTROLLERS

Location

Type: Hand controlled.

Form

Serial No.

How protected or con-
cealed

* See 470.31 A-2302, 12/13/30
In storage at Ft. Stevens

660 (Col. River) CM 42722
 REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
 (Fire Control Structures)

SECRET

HARBOR DEFENSES OF THE COLUMBIA
 FORT CANBY, WASHINGTON
 PORTABLE SEARCHLIGHT SHELTER

Form 2.

Corrected to January 20, 1943.

STRUCTURE:

Location Fort Canby, Washington
 Date of transfer March 31, 1943
 Cost to date of transfer \$2,188.00
 Type of construction Wooden frame structure with corrugated iron siding and roof. Floor is of reinforced concrete of 1:2:4 mix. Interior dimensions of 49'-4" x 23'-4" x height of 10'-0".
 concealed Is not concealed.
 Conspicuous at Indefinite distance.

ELECTRIC CURRENT:

Source of Commercial power thru the Fort.
 Kilowatts required One kilowatt
 Type of lighting fixtures 100 watt incandescent bulbs with reflectors.

HEAT:

None

WATER & SEWER:

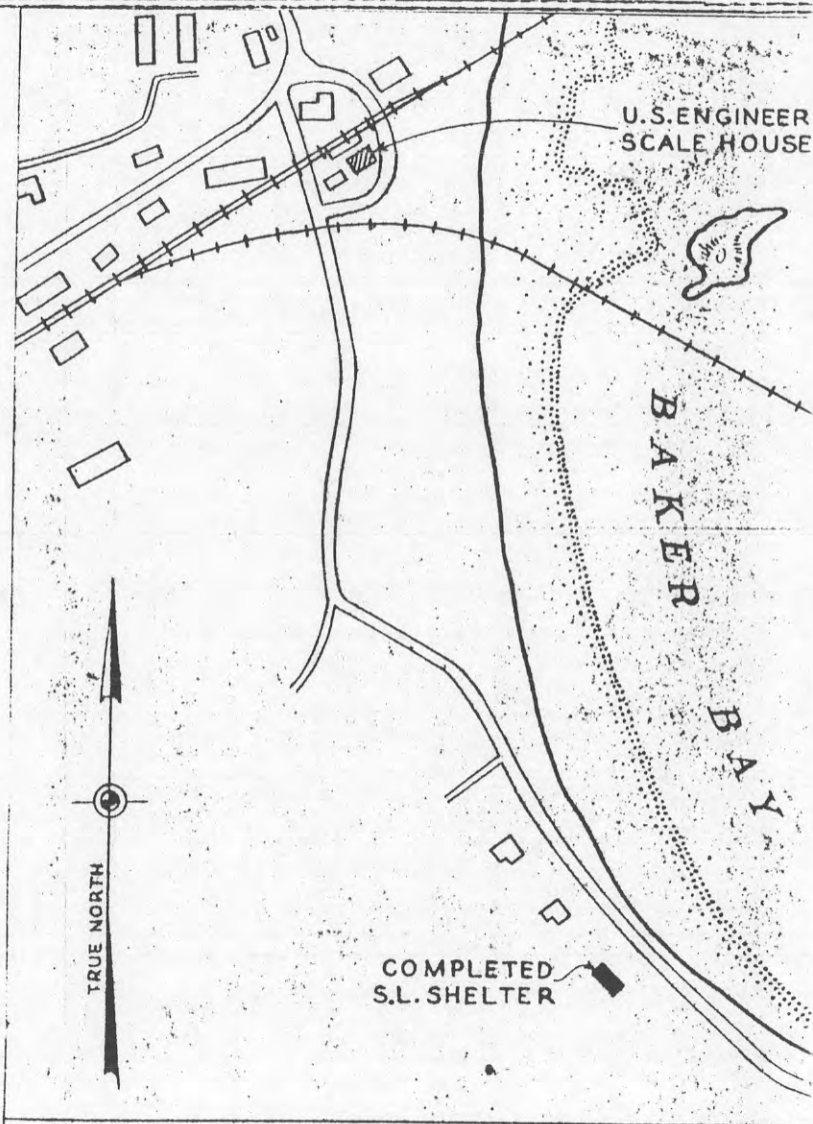
Connected to water mains By 3/4" service line from a nearby 2-1/2" main.
 Connected to sewer No sewer. Floor and downspout drains run to bay.
 Type of latrine None
 tallation Permanent

PRESENT CONDITION:

Excellent

REMARKS:

This is a new shelter, for portable searchlights, constructed by Government forces and completed April 10, 1942. Constructed with funds from P/A Eng-24366 P 1 A 0540-23. See Plan D.M.C.R. 987.



HARBOR DEFENSES OF THE COLUMBIA
 FORT CANBY, WASH.

PORTABLE SEARCHLIGHT SHELTER

APRIL 1942

SCALE 1:3,800

SECRET

SECRET

Form 4. Corrected to May 21, 1943

(Supplemental Work)

CONTROLLER BOOTH: :

Location : See the attached plot plan for location relative to the searchlights.

Type of construction : Is a wooden frame building with wooden floor, corrugated iron siding
: and roofing and is finished inside with 1/4" veneer. The interior
: dimensions are 8'-0"x8'-0" with a ceiling height of 6'-4".

Concealment : Is located on the hillside and has brush and trees for a background
: when seen from the approach channel or open sea. The booth is paint-
: ed to conform to the surrounding vegetation.

Cable Installations : The controller cables from the controller booth to the searchlights
: are the same cables as previously used. These cables were laid to a
: depth of approximately 2 ft.

REMARKS : This supplemental work of re-locating Searchlights Nos. 1 & 2 was
: accomplished with funds allotted by the Engineer, Ninth Corps Area from
: P/A Eng.-46 P 11 A 1204-2. The work was performed by Government forces;
: construction work was started December 16, 1941 and was completed on
: June 6, 1942. The projectors, mirrors, switchboard, controllers, control
: cables, power cables and the power plants are all the same as used pre-
: viously. For construction details and the job layout see the attached
: detailed plans which are a part of this completion report.

SECRET

SECRET

Form 4. Corrected to May 21, 1943

Reference axis of projector
in operating position : The axis of projector No. 1 is at Elevation 146.54. The axis
: of projector No. 2 is at Elevation 170.41. The co-ordinates
: are as follows:
: Projector No. 1 N 3117.90 yards.
: W 2122.34 yards.
: Projector No. 2 N 3106.16 yards.
: W 2109.14 yards.
: The datum plane of reference is M.L.L.W. and the origin of the
: co-ordinate system for this Harbor Defense is Canby Light,
: located on Cape Disappointment, Washington.

Concealment : These shelters are located on a hill side and have brush and
: trees for a background when seen from the approach channel or
: open sea. The shelters are painted to conform to the surround-
: ing vegetation and the roofs are covered with sod and other
: foliage.

POWER HOUSE:
Type of construction : The power house is located behind the hill from the searchlights.
: (See attached plot plan for position relative to the searchlight).
: This building is constructed of reinforced concrete of a 1:2:4
: mix. The interior dimensions are 20'-0"x30'-0" with a ceiling
: height of 10'-0". The windows are of Fenestra steel sash and
: the doors are fabricated of steel. The building is located among
: trees and is painted to conform to the surrounding vegetation.

Cable Installation : The power cables from the power house to the searchlights are
: the same cables as previously used. These cables are laid to
: a depth of approximately 2 feet.

Water supply : Water for the power plant is supplied by a line of 1800 feet of
: 1" galv. pipe and 630 feet of 3/4" galv. pipe. The 1" pipe
: connects to a 3" main which is supplied by pumping from the Fort
: Canby system.

SECRET

Form 4: Corrected to May 31, 1943

INSTALLATION:

50241

General character : This supplemental work consisted of
: moving Searchlights Nos. 1 and 2 from
: McManis Road to North Head, Washing-
: ton. New searchlight shelters, a new
: controller booth and a new powerhouse
: were constructed. All the old equip-
: ment was reinstalled in the new build-
: ings.

Location : The new installations were made on a
: Military Reserve on North Head, Wash-
: ington. This reserve is north of,
: and adjacent to, the Military Reser-
: vation of Fort Canby, Washington.

(See plans attached)

Date transferred to troops of supplemental work: March 31, 1943

Cost to date of transfer of supplemental work: \$8,250.31

INSTALLATION:

Shelters : The shelters are constructed of rein-
: forced concrete of a 1:2:4 mix. The
: sliding doors are constructed of wood
: and are metal clad. The doors are
: hand operated and are hung on barn
: door hangers from a number 31 trolley
: track. The shelters are constructed
: on solid rock. The interior dimen-
: sions are 17'-0" x 12'-0" with a ceil-
: ing height of 12'-0".

Means by which projector is
placed in operating position : The fronts of the shelters are opened
: by a series of sliding doors. The
: projectors are stationary on the floors
: of the shelters.

RESTRICTED

Part IV Corrected to 1 December 1945

INSTALLATION:

Location by co-ordinates:

Projector No. 5 North 3,117.90 Yards.
West 2,122.34 Yards.
Projector No. 6 North 3,106.16 Yards.
West 2,109.14 Yards.

The origin of the co-ordinate system for this Harbor Defense is the Cape Disappointment Lighthouse located at Fort Canby, Washington.

Location - Site Description: Is within a Military Reservation on North Head, Washington; said Reservation being north of, and adjacent to, the Military Reservation of Fort Canby, Washington.

General Character: This supplemental work consisted of replacing the fixed type searchlights with portable type searchlights. The portable lights were installed in the shelters which housed the fixed type lights; the portable lights rest on their jacks astride the pits which were below the fixed lights. The generators for the fixed type lights were removed from the power house and the portable generators installed in their place. Concrete foundations were prepared for the portable generators to take the weight off of the tires. The power house exhaust system was also remodeled to accommodate the portable generators. A new controller booth was constructed. The new searchlights, generators, and controllers were furnished by the Army and the work of making the changes was performed by the Corps of Engineers. The old removed equipment is in the custody of the U.S. Engineer Dept. and is to be sold as surplus

property or shipped to the Dept. of Commerce, Office of Surplus Property.

Date of transfer of this supplemental work:
30 November 1945.

Cost to date of transfer of this supplemental work: \$3,287.07.

Shelters:

Materials of construction: The same shelters were used for the portable type lights as for the fixed lights, which were removed. The shelters are constructed of reinforced concrete of a 1:2:4 mix. The sliding doors are constructed of wood and are metal clad. The doors are hand operated and are hung on barn door hangers from a number 31 trolley track.

Interior dimensions: 17'-0" x 12'-0" with a ceiling height of 12'-0".

Substructure: The shelters are constructed on solid rock.

Means by which projector is placed in operating position: The fronts of the shelters are opened by a series of sliding doors. The projectors, resting on their jacks, are stationary within the shelters.

Reference axis of projectors in operating position:

Projector No. 5, Elevation 141.9 ft.

Projector No. 6, Elevation 166.4 ft.

The datum plane of reference is Mean Sea Level.

Control Approval Symbol SPEKM-1

ED Form No. A-162D
16 Sept. 1943
#17**RESTRICTED**

RESTRICTED

Part IV

Corrected to 1 December 1945

Concealment of shelters: These shelters are located on a hillside and have brush and trees for a background when seen from the approach channel or open sea. The shelters are painted to conform to the surrounding vegetation and the roofs are covered with sod and other foliage.

POWER PLANTS:

Location: The shelter, housing the generators, is located behind the hill from the searchlights. (See plot plan for position relative to the searchlights.) The generators, for the fixed type searchlights, were removed from the powerhouse and the portable generators were installed in their place. This powerhouse is constructed of reinforced concrete and its interior dimensions are 20'-0" x 30'-0" with a ceiling height of 10'-0". The only alteration made at the powerhouse was in remodeling the foundations for the generators and providing a different exhaust for the portable generators. The building is located among trees and is painted to conform to the surrounding vegetation.

Maximum demand on each generator: 16.5 KW.

Type and size of generators: Two G.E. generators, Model 1942, for 60" Portable Searchlights.

CONTROLLERS:

Location: The controllers are located within a new controller booth which was constructed approxi-

mately 600 ft. up on the hillside from the searchlights. See the plot plan for location relative to the searchlights.

Controller Booth: The new controller booth is constructed of reinforced concrete of a 1:2:4 mix. The interior dimensions are 6'-0" x 12'-0" with a ceiling height of 7'-0". Controllers for both lights are in the same booth. The old controller has been abandoned.

	For S.L. No. 5	For S.L. No. 6
Type:	Anti-aircraft	Anti-aircraft
Form:	For Portable S.L.	For Portable S.L.
Serial Nos:	G.E. #49110	G.E. #57768
	C. of E. #6644	C. of E. #7799

Concealment: The controller booth is covered with earth embankment, leaving only the windows and part of the front exposed. The exposed portion is painted to conform to the surrounding vegetation.

PROJECTORS:

Manufacturer: General Electric, Schenectady, New York.

Type of projectors: Anti-aircraft.

Form of projectors: For portable type light.

Serial Nos. of projectors:

Projector No. 5: G.E. #48255.
C. of E. #6543.

Projector No. 6: G.E. #48187.
C. of E. #6509.

Type of lamps: Arc.

ED Form No. A-162D
16 Sept. 1943

- 2 -
RESTRICTED

RESTRICTED

SEARCHLIGHTS NOS. 5 and 6

SIZE: 60". Portable Lights - Permanent Positions
(Supplemental Work)

Part IV

Corrected to 1 December 1945

Model of lamps: Projector No. 5 is a 1942.
Projector No. 6 is a 1942.

Serial Nos. of lamps: None given.

Control: Electric and remote.

Date received in this Harbor Defense: 21 May 1945.

From whom received: A.S.F. Depot, Utah.

MIRRORS:

Type: Metal.

Date received in this Harbor Defense: 21 May 1945.

Present condition: Good.

Date last repaired: No repairs to date.

SWITCHBOARDS:

Serial Nos: There is no separate switchboard for these portable lights.

CABLES:Power Plant to Searchlights

Type: Single conductor, lead covered.

Length and size:

To Searchlight No. 5 is 120 feet of No. 3/0.

To Searchlight No. 6 is 50 feet of No. 3/0.

Installed in entrenched conduit.

Controllers to Lights

Type: Lead covered controller cable.

Length and size:

To Searchlight No. 5 is: 200 feet of 9 conductor, #16 wires, and 530 feet of 11 conductor, #16 wires.

To Searchlight No. 6 is: 665 feet of 11 conductor, #16 wires.

Cable is entrenched.

Auxiliary Controller to Light

There is no auxiliary controller.

REMARKS:

This supplemental work of replacing the fixed type searchlights with portable lights was accomplished with Government forces using funds having Advise Nos. 508-2015 P 270 A 212/51204(FC) and 608-3810 P 270 A 212/61204(FC). The work was part of the project designated Job No. The Columbia FS-9 by Directive Consecutive No. FS-1620; was started on 20 April 1945 and was completed on 15 October 1945. For construction details see drawings numbered 1195 & 1192. (DMCR)

Note here: That Searchlights Nos. 5 and 6 were previously known as Searchlights No. 1 and 2, respectively.

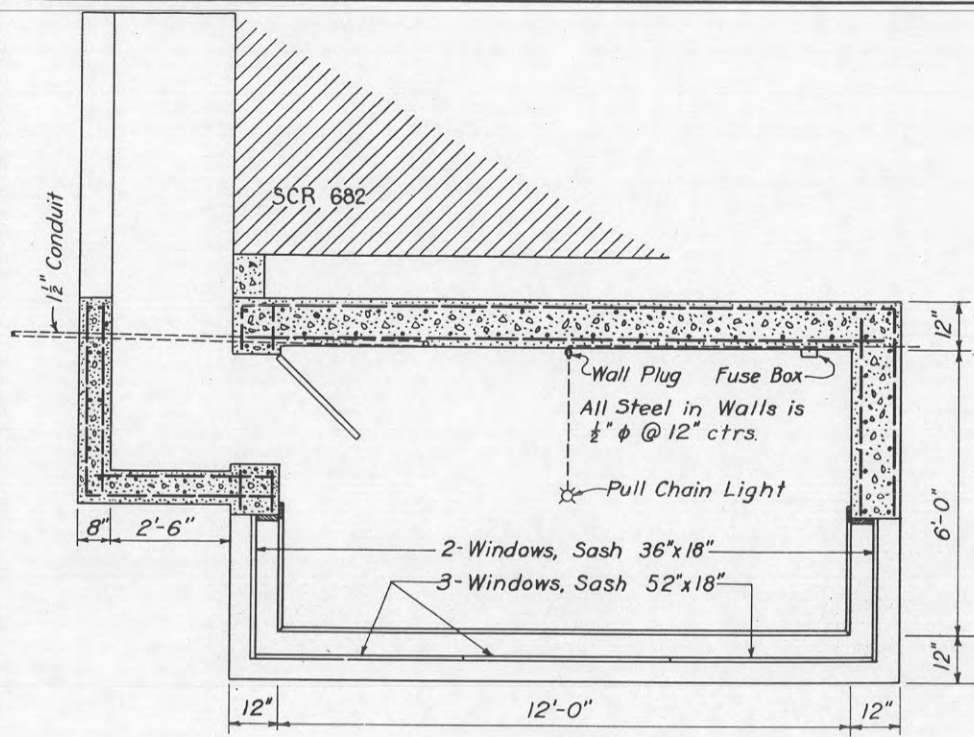
RESTRICTED

HARBOR DEFENSES OF THE COLUMBIA
SEARCHLIGHT CONTROLLER BOOTHS
FOR SEARCHLIGHTS 5 & 6, 11 & 12
FORT CANBY, AND FORT COLUMBIA, WASHINGTON

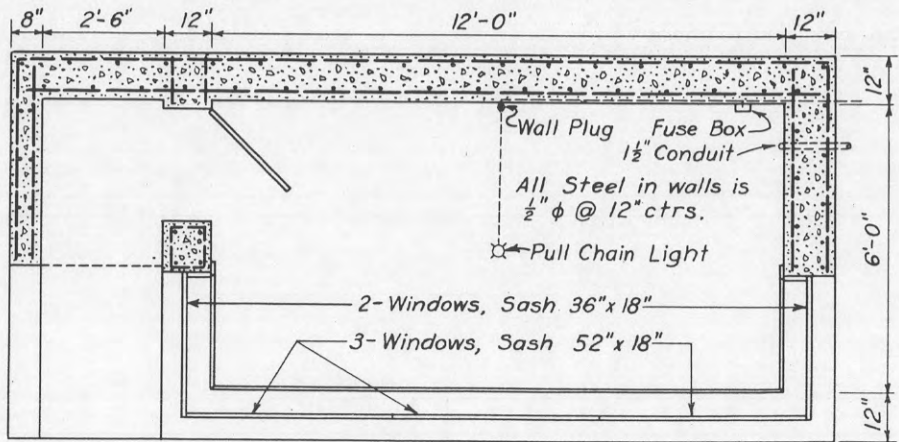
SCALE
24" 12" 0 2' 4'

U.S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT

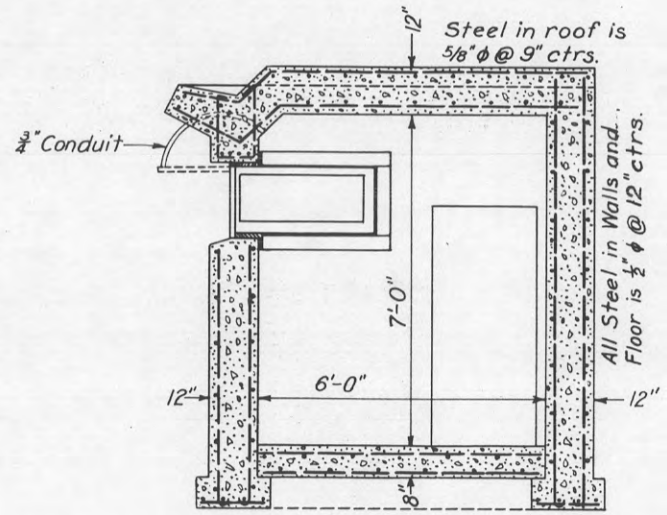
SUBMITTED: *[Signature]* APPROVED: 21 JAN. 1948
SENIOR ENGINEER COLONEL, CORPS OF ENGINEERS
RECOMMENDED: *[Signature]* DISTRICT ENGINEER
DRAWN BY: M.E.H. DATE 8-45
HEAD ENGINEER TRACED BY: M.E.H.



PLAN
CONTROLLER BOOTH FOR
SEARCHLIGHTS 5 & 6



PLAN
CONTROLLER BOOTH FOR
SEARCHLIGHTS 11 & 12



SECTION

APPROVED: *[Signature]*
C. S. DONEY
COLONEL, C.A.C., COMMANDING

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Searchlights)

COAST DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON.
SEARCHLIGHT NO. 6 → No. 1 ①

Form 4.

Corrected to June 25, 1922. Size 60" Portable or fixed. Fixed

PROJECTOR : On McKenzie Head 280' south-
: westerly from S.L. Power INSTALLATION :
Location : Plant for lights Nos. 6 & 7. General character : In shelter
: : : Date transferred to :
Manufacturer : General Electric Co. : troops : March 7, 1912
Type of projector : E. C. : Cost to that date : About \$850, including cost of
Form of projector : Form N-10 : Shelter : controller booth.
Serial No. of projector .. : 21767 : Materials of construction : Concrete base, wood frame,
Type of lamp : Mark V : Interior of dimensions : 10' x 17' x 11.7' high.
Model of lamp : Model 8 : Height and type of tower : None
Serial No. of lamp : 310 : Means by which projector :
Electric or hand control .. : Electric : is placed in operating :
Material of mirror : Glass : position : Opening of sliding doors.
Date received in district : March 11, 1921. : Reference axis of project- :
From whom received : General Electric Co. : or in operating position: : 168.09' above M.L.L.W.
Age of mirror : New : Kind of protection in :
Condition of mirror : Good : operating position : Corrugated iron roof.
Date last repaired : No repairs : Concealment of day shelter :
Switchboard, serial No. : 205146 : from approach channel : None
: Dates & cost of extensive :
: remodeling or reconstruc- : None
: tion :
: POWER PLANT :
: Location : McKenzie Head, 280' N.E. of
: Maximum demand KW : 16.5 kw. Searchlight No. 6. (Nos. 6&7)
: Type and size : GM12, 2-25kw sets, 115V for S.L.

CABLE #
Power plant to searchlight:
Type : "A" L.C.
Length and size : 379' 4/0
In conduits or in air : Conduit
Controller to light
Type : "C" L.C. and L.C. & A.
Length and size : 3954', 11 conductor.
In conduit or in air : 354' in conduit, 3600' in trench.
Aux. controller to light : None.
Length and size :
In conduit or in air :

CONTROLLERS
: Location : Booth 2000' N.W. of S. L. No. 6.
: Type :
: Form : Form N-12
: Serial No. : 400436
: How protected or con- : Controller booth, wood frame and
: cealed : cover.

See O.C.E. 470.31 A - 1912
Mirror 5/4 #6 - Shifting position, affects light beam some.
3rd Ind. - Recommend Dist. Engr. to ship mirror to San Francisco
to be reshipped at a cost of \$4500 by local dealer.
Report of Oper. Forts, April 1937, D.E. Office in Portland, Ore., page 3 cont.
"Demanded and tested mirror 5/11/37"

Superseded; See ① See 675.1 (9th C.A.)
New designation No. 1

Form 4 corrected to 5/21/43

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Searchlights)

COAST DEFENSES OF THE COLUMBIA

FORT CANBY, WASHINGTON

SEARCHLIGHT NO. ⑦ → No. 2 ①

Form 4.

Corrected to Dec. 31, 1923 Size 60" Portable or fixed. Fixed

PROJECTOR	: McKenzie Head about 225'	:	
	: S.W. of Searchlight Power	:	INSTALLATION
Location	: Plant for lights Nos. 6&7	:	General character
	:	:	In shelter.
	:	:	Date transferred to
Manufacturer	: General Electric Co.	:	troops
Type of projector	: E. C.	:	March 7, 1912.
Form of projector	: Form N-2	:	Cost to that date
Serial No. of projector	: 8223	:	\$850, including cost of controller
Type of lamp	: Mark V	:	Shelter
Model of lamp	: Model 4	:	booth.
Serial No. of lamp	: 140	:	Materials of construction
Electric or hand control	: Electric	:	Concrete base, wood frame,
Material of mirror	: Glass	:	Interior of dimensions 10' x 17' ^{cor. iron} x 11.7' high.
Date received in district	: 1910	:	Height and type of tower
From whom received	: General Electric Co.	:	: None.
Age of mirror	: 11 years	:	Means by which projector
Condition of mirror	: Good	:	: is placed in operating
Date last repaired	: Not repaired	:	position
Switchboard, serial No.	: 77628	:	: Opening of sliding doors.

CABLE #

Power plant to searchlight	
Type	: "A" L.C.
Length and size	: 365' 4/0
In conduits or in air	: Conduit
Controller to light	
Type	: "C" L.C.
Length and size	: 712, 9 conductor
In conduit or in air	: Conduit
Aux. controller to light	
Length and size	: None
In conduit or in air	

POWER PLANT	: McKenzie Head about 225' N.E.
Location	: of Searchlight No. 7.
Maximum demand KW	: 16.5 kw.
Type and size	: GM 12, 2-25kw, 115V for S.L. Nos. 6&7.
CONROLLERS	
Location	: Booth 350' S.E. of light No. 7.
Type	: E.C.
Form	: Form N-2
Serial No.	: 5965
How protected or concealed	: Controller booth, wood frame and cover.

Superseded: see

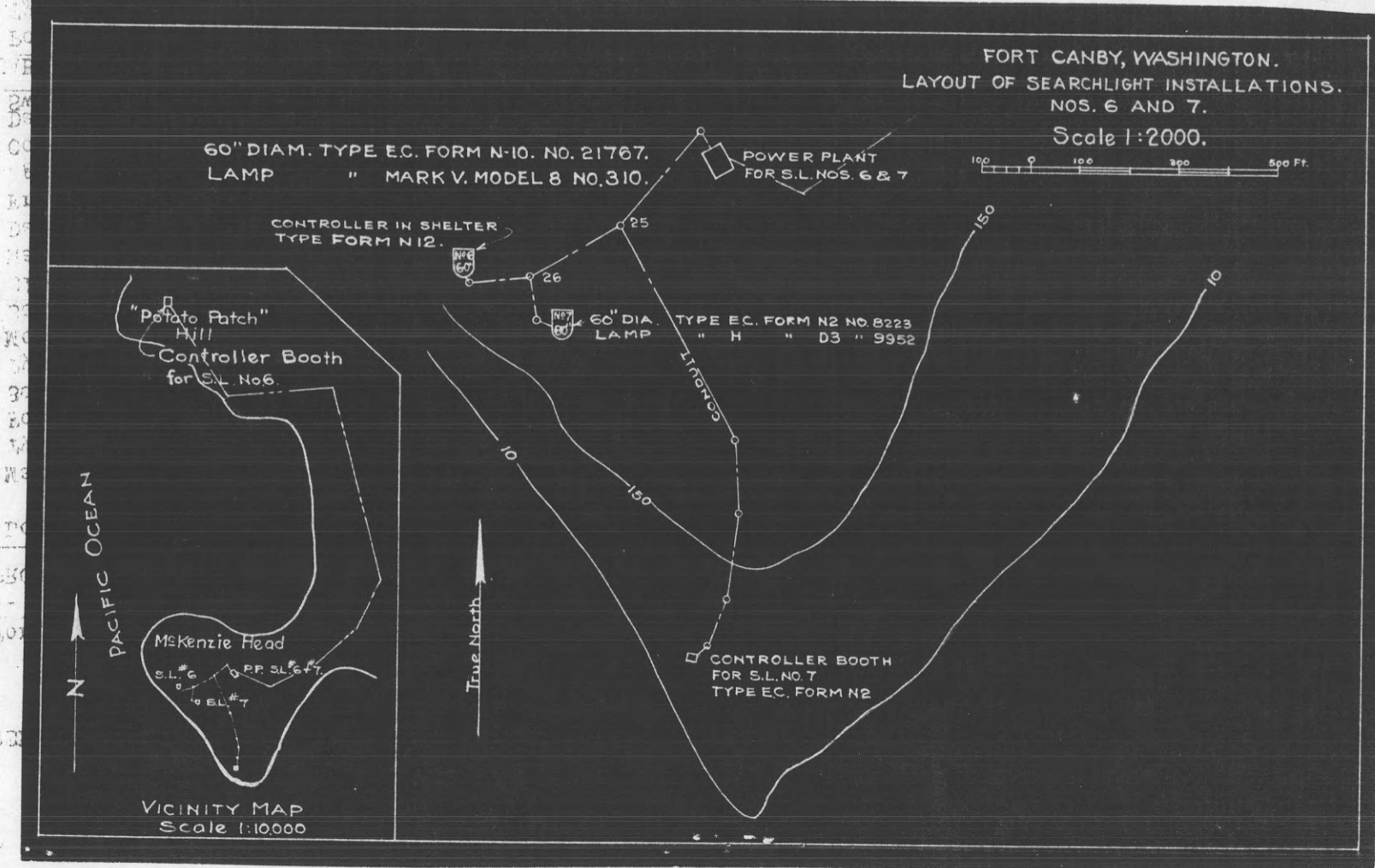
① See 675.1 (9th C.A.)
New designation No. 2

Form 4 corrected to 5/21/43



IN CONDUCT OF THE ...
 RESEARCH AND ...
 BY COMPLETION OF THE ...
 IN CONDUCT OF THE ...
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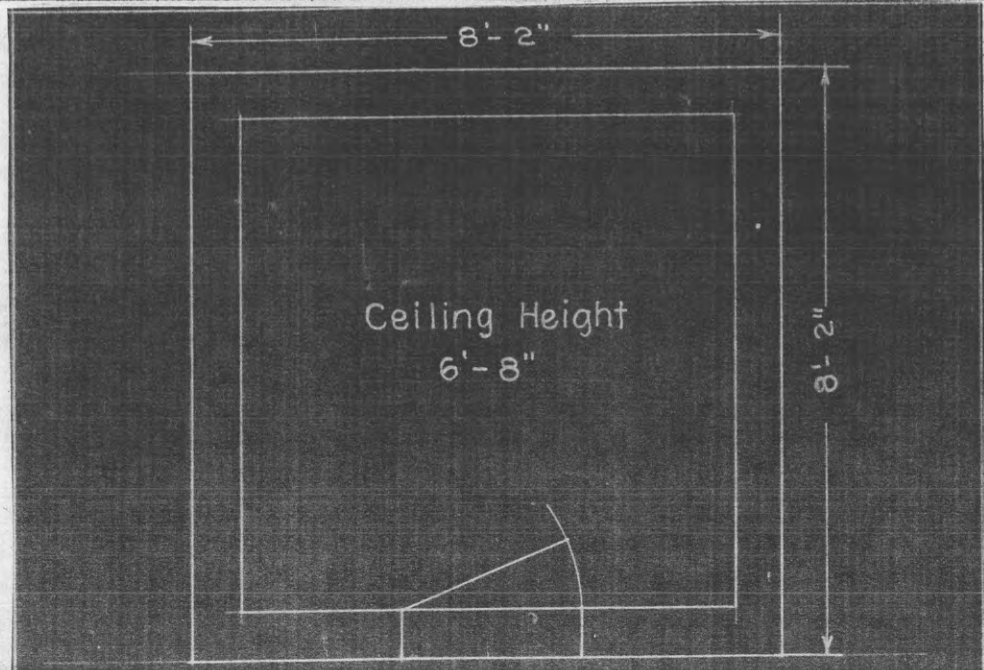
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF THE COLUMBIA
FORT. CANBY, WASHINGTON
STRUCTURE... SEARCHLIGHT CONTROLLER BOOTH NO. 6.

Form 2.

Corrected to June 30, 1921.

Location	About 2,100' N.W. of searchlight shelter No. 6.	Type of data transmission	
Date of transfer	March 7, 1912.	Date of transfer	
Cost to that date	\$850, including cost of shelter.	Cost of data transmission equipment	
Type of construction		For tide stations give description of tide gauge	
(a) Roof	Sheathing, paper & shingles	For datum points give Forts from which visible	
(b) Remainder of bld	" " "	For dormitories give stations served	
How concealed	Hill and timber behind.	For cable hut give S. C. type	
How protected	None.		Booth is elevated on timber supports, about 12' above site.
Height above concealment	None.		
Height above protection			
Conspicuous at.....yards	About 2 miles.		
Source of electric current	None		
Kilowatts required	None		
Type of lighting fixtures	None		
How heated	None		
Connected to water mains	No		
Connected to sewer	No		
Type of latrine	None		
Permanent or temporary installation	Permanent		
Present condition	Good		
Reference of site	About 205' above M.L.L.W.		
Reference of instrumental axis			
Type of observing inst.			
Type of plotting board			
Type and capacity of crane			
Max. dimensions of reel handled			



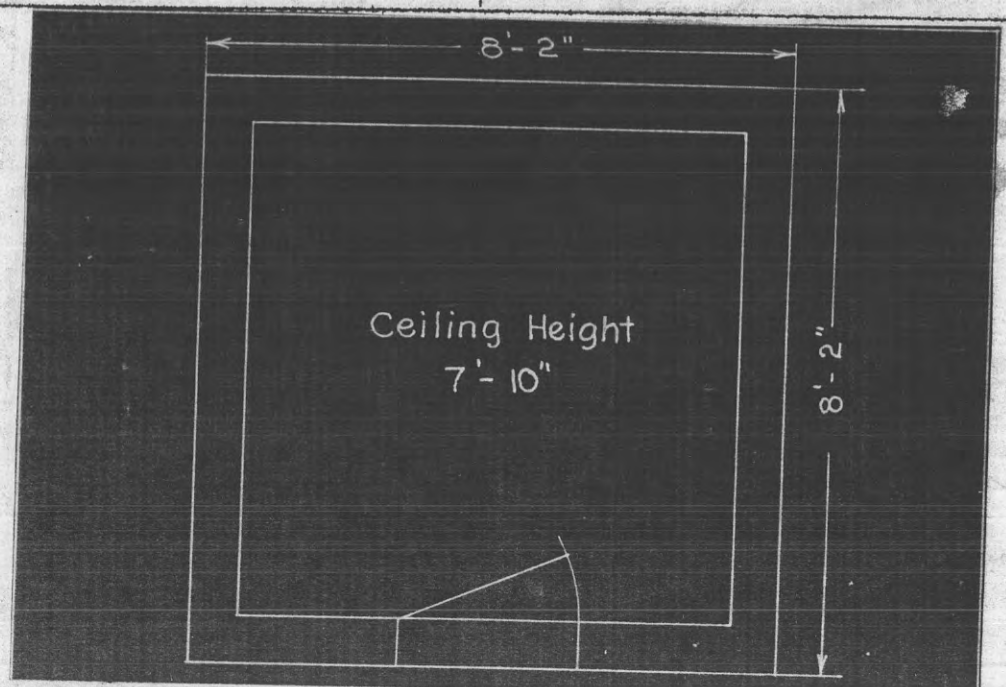
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
 (Fire control or Torpedo Structures)

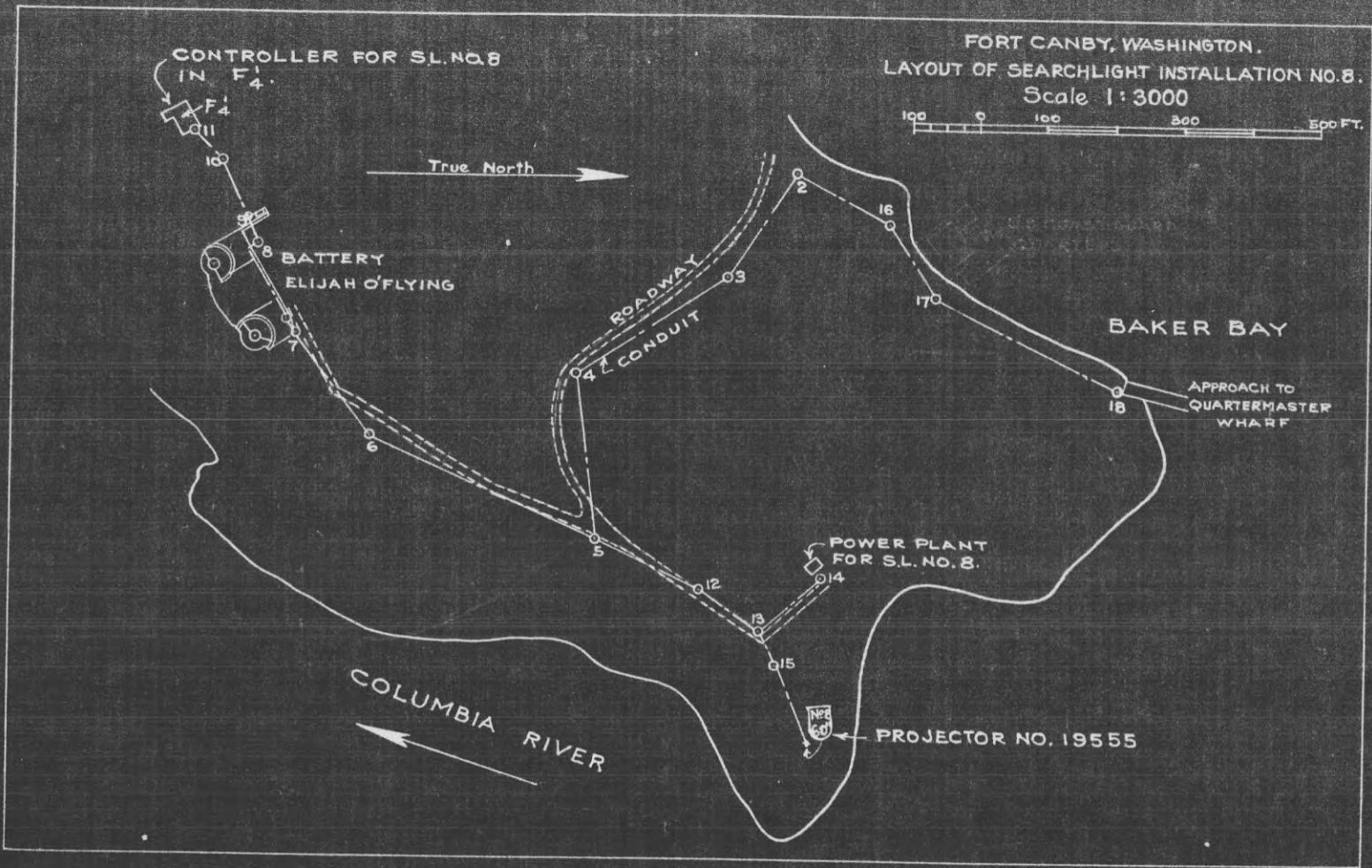
COAST DEFENSES OF THE COLUMBIA
 FORT. CANBY, WASHINGTON
 STRUCTURE... CONTROLLER BOOTH SEARCHLIGHT No. 7

Form 2.

Corrected to June 30, 1921.

Location	At McKenzie Head, on face of bluff, about 360' S.E. of Searchlight No. 7.	Type of data transmission	
Date of transfer	March 7, 1912.	Date of transfer	
Cost to that date	\$850, including cost of shelter.	Cost of data transmission equipment	
Type of construction	Sheathing, paper & shingles	For tide stations give description of tide gauge	
(a) Roof	" " "	For datum points give Forts from which visible	
(b) Remainder of bld	" " "	For dormitories give stations served	
How concealed	Hill behind.	For cable hut give S. C. type	
How protected	None		
Height above concealment	None		
Height above protection	None		
Conspicuous at.....yards	About 4 miles.		
Source of electric current	None		
Kilowatts required	None		
Type of lighting fixtures	None		
How heated	None		
Connected to water mains	No		
Connected to sewer	No		
Type of latrine	None		
Permanent or temporary installation	Permanent		
Present condition	Good		
Reference of site	About 102' above M.L.L.W.		
Reference of instrumental axis			
Type of observing inst.			
Type of plotting board			
Type and capacity of crane			
Max. dimensions of reel handled			





Collected to 2000 22, 1888. size 200. diameter of pipe. 21860

SEARCHLIGHT NO. 8

NO. 19555

COVER DRAWING OF THE SEARCHLIGHT

(continued)

REPRODUCED FROM THE ARCHIVES OF THE NATIONAL ARCHIVES

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

(Electric Plants)

Electric Plant for Searchlights

Form 5.

Corrected to June 30, 1921

COAST DEFENSES OF THE COLUMBIA

FORT. CANBY, WASHINGTON

POWER FOR SEARCHLIGHTS NO. 6 & 7

Nos. 1 & 2 (1)

	Serial No.	Type	Size	Mfgr.	Date of transfer	Cost	Con- dition	RPM	Belt or Direct Drive	Radiator for Engine No.	Fuel	Switchboard		
												Material.	No. of Panels	
Boiler No. 1	None													
No. 2	-													
No. 3	-													
Line No. 1	6845	GM12-A2	43/54	Gen.E.Co.	3-7-1912		Good	560			Gas.	See 675.1 (9th C.A.) 110 DC 2	(9th C.A.) No	
No. 2	6846	GM12-A2	43/54	Gen.E.Co.	3-7-1912		Good	560			Gas.	110 DC 2	No	
No. 3	-													
Generator														
No. 1	324513	MPC	25kw 115V	Gen.E.Co.	3-7-1912	\$5,400	Good		dir.					
No. 2	324504	MPC	25kw 115V	Gen.E.Co.	3-7-1912	\$7,360	Good		dir.					
No. 3	-					\$12,760								
Radiator														
No. 1	8111	FF54	--	Gen.E.Co.	3-7-1912		Good			6845				
No. 2	8112	FF54	--	Gen.E.Co.	3-7-1912		Good			6846				
No. 3														
Motor Generator	None													
No. 1	-													
No. 2	-													
No. 3	-													
Switchboard	130	2 B's	40"x82"	WalkerE.Co.	3-7-1912		Good						Marble 2 gen	
Storage Battery	None													
Transformer	None													
No. 1	-													
No. 2	-													
No. 3	-													
Auxiliaries	None													
No. 1	-													
No. 2	-													
No. 3	-													

DISTRIBUTION OF KW.

2 - 60" projectors 33.0 kw
 Inside illumination 0.7 kw
 Total 33.7 kw

(1) See 675.1 (9th C.A.) 1:-
 New designation Nos. 1 & 2.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Electric Plants)

COAST DEFENSES OF THE COLUMBIA
FORT. CANBY, WASHINGTON
POWER FOR SEARCHLIGHT NO. ⑧ → No. 4 ①

Form 5.

Corrected to June 30, 1921.

	Serial No.	Type	Size	Mfr.	Date of transfer	Cost	Con- dition	RPM	Belt or Direct Drive	Radiator for Engine No.	Fuel	Switchboard		
												Mater- ial.	No. of Panels	
Boiler No. 1	None													
No. 2	--													
No. 3	--													
Engine No. 1	5513	GM12-A2	43/54	Gen.E.Co.	3-7-1912	3,450.00	Good	560			Gas	See 675.1 (9th C.A.) 1	Volts Wires	Used for O.M. Power
No. 2	--					3,500.00						110DC 2	2	No
No. 3	--					6,950.00								
Generator														
No. 1	195123	MPC	25kw 115V	Gen.E.Co.	3-7-1912		Good		Dir.					
No. 2	--													
No. 3	--													
Radiator														
No. 1	---	Auto.	--	Rome T-R Co.	3-7-1912		Good			5513				
No. 2	--													
No. 3	--													
Motor Generator														
No. 1	None													
No. 2	--													
No. 3	--													
Storage Battery	86	B.	20"x82"	Walker E. Co.	3-7-1912		Good					Marble		1
Transformer	None													
No. 1	--													
No. 2	--													
No. 3	--													
Auxiliaries	None													
No. 1	--													
No. 2	--													
No. 3	--													

Power House and installation of machinery

DISTRIBUTION OF KW.

1	60" Projector	16.5 kw
	Inside illum.	0.6 kw
	Total	17.1 kw

① See 675.1 (9th C.A.) 1
New designation No. 4

RESTRICTED

Part IV

Corrected to 1 December 1945

INSTALLATION:

Location:

Searchlight No. 9 was located on the southeasterly point of Cape Disappointment which is within the U.S. Military Reservation of Fort Canby, Washington.

General:

This supplemental work consisted of removing the searchlight together with its power plant, controller and switchboard. This equipment is in the custody of the U.S. Engineer Dept. and is to be sold as surplus property or shipped to the Dept. of Commerce, Office of Surplus Property. The buildings, that housed this equipment have been abandoned.

Dates for performing the work: Removal of equipment was started on 20 April 1945; the equipment was stored and ready for shipment, and some shipped, on 31 August 1945.

Cost of removing the equipment: \$458.53.

REMARKS:

This work of removing Searchlight No. 9, and its allied equipment, was performed by Government forces using funds having Advise Nos. 508-2015 P 270 A 212/51204(FC) and 608-3810 P 270 A 212/61204(FC). The work was part of a project designated Job No. The Columbia FS-9 by Directive Consecutive No. FS-1620. For Plot Plan see drawing numbered DMCR-108.

Note here that Searchlight No. 9 was previously designated as Searchlight No. 4.

Control Approval Symbol SPEKM-1

ED Form No. A-162D
16 Sept. 1943
Incl # 21

RESTRICTED

600.914 (Col. River) CH 71829
REPORT OF COMPLETED WORKS—SEACOAST FORTIFICATIONS
(Searchlights)

CONFIDENTIAL

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
SHELTERS FOR SEARCHLIGHTS NOS. 13 & 14
60" Portable Searchlights

Part IV

Corrected to 15 November 1943

INSTALLATION:

Location by site description: The location allotted Searchlights Nos. 13 & 14 is on Peacock Spit which is in the Military Reservation of Fort Canby, Washington.

71829
62817

General Character: These two shelters were constructed to house the 60" portable searchlights numbers 13 and 14. The shelters themselves are portable in that they are made up in sections which are bolted together. These shelters are made portable as it is anticipated that it will be desirable to be able to move them about this Harbor Defense. A shelter can be dismantled and re-erected in approximately 4 hours time.

Date transferred to troops: 26 July 1943.

Cost to date of transfer: \$886.22 for an average cost of \$443.11 each.

Shelter:

Materials of construction: The shelters are framed of fir lumber. The studding, knee braces, joists and rafters are all of 2x4's; the siding is of 1" T. & G. and the roof sheathing is 1" lumber. A medium weight roofing paper is provided. The sections are all painted with an olive drab paint and are bolted together with 1/2" machine bolts.

Interior dimensions: 11'-5" x 19'-3" with an overhead clearance of 8'-2".

REMARKS:

These shelters were constructed by Government forces with funds under allotment advise number 5--(CAC)-115 P 270 A 1204-24. The work was auth-

REMARKS: (Cont'd.)

Orized under Directive Consecutive Numbers FS-449 & FS-450. Construction work was started 1 December 1942 and was completed 31 March 1943. For construction details see drawing number DMCR 1094.

Note:

No co-ordinates are supplied for these searchlight positions as the searchlights will be at a different location each time they are taken from the shelters.

CONFIDENTIAL

ED Form No. A-162D
16 September 1943

Control Approval Symbol
SPECIM-1

Incl #3
FS 449 & 450 Proj. Cont. 44 & 45

600.914 (Coh. River) CM 71829

REPORT OF COMPLETED WORKS—SEACOAST FORTIFICATIONS
(Searchlights)

CONFIDENTIAL

HARBOR DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
SHELTERS FOR SEARCHLIGHTS NOS. 15 & 16
60" Portable Searchlights

Part IV

Corrected to 15 November 1943

INSTALLATION:

Location by site description: The location allotted Searchlights Nos. 15 and 16 is at Tioga Beach, Washington which is north of and adjacent to Long Beach, Washington.

General Character: These two shelters were constructed to house the 60" portable searchlights numbers 15 and 16. The shelters themselves are portable in that they are made up in sections which are bolted together. These shelters are made portable as it is anticipated that it will be desirable to be able to move them about this Harbor Defense. A shelter can be dismantled and re-erected in approximately 4 hours time.

Date transferred to troops: 26 July 1943.

Cost to date of transfer: \$886.22, for an average cost of \$443.11 each.

Shelter:

Materials of construction: The shelters are framed of fir lumber. The studding, knee braces, joists and rafters are all of 2x4's; the siding is of 1" T.& G. and the roof sheathing is 1" lumber. A medium weight roofing paper is provided. The sections are all painted with an olive drab paint and are bolted together with 1/2" machine bolts.

Interior dimensions: 11'-5" x 19'-3" with an overhead clearance of 8'-2".

REMARKS:

These shelters were constructed by Government forces with funds under allotment advise number 5-(CAC)-115 P 270 A 1204-24. The work was auth-

REMARKS: (Cont'd.)

erized under Directive Consecutive Numbers FS-451 and FS-452. Construction work was started 1 December 1942 and was completed 31 March 1943. For construction details see drawing number DMCR 1094.

Note:

No co-ordinates are supplied for these searchlight positions as the searchlights will be at a different location each time they are taken from the shelters.

71829

Control Approval Symbols SPEM-1

ED Form No. A-162D
16 September 1943

FS 4514452 Proj Card 46 \$47

CONFIDENTIAL

CONFIDENTIAL

Part IV

Corrected to 15 November 1943

INSTALLATION:

Location by site description: The location allotted Searchlights Nos. 17 and 18 is at Ocean Park Beach, Washington which is approximately 9 miles north of Long Beach, Washington.

General Character: These two shelters were constructed to house the 60" portable searchlights

71829 numbers 17 and 18. The shelters themselves are portable in that they are made up in sections which are bolted together. These shelters are made portable as it is anticipated that it will be desirable to be able to move them about this Harbor Defense. A shelter can be dismantled and re-erected in approximately 4 hours time.

Date transferred to troops: 26 July 1943.

Cost to date of transfer: \$886.22, for an average cost of \$443.11 for each shelter.

Shelter:

Materials of construction: The shelters are framed of fir lumber. The studding, knee braces, joists and rafters are all of 2x4's; the siding is of 1" T.& G. and the roof sheathing is 1" lumber. A medium weight roofing paper is provided. The sections are all painted with an olive drab paint and are bolted together with 1/2" machine bolts.

Interior dimensions: 11'-5" x 19'-3" with an overhead clearance of 8'-2".

REMARKS:

These shelters were constructed by Government forces with funds under allotment advise number 5-(CAC)-115 P 270 A 1204-24. The work was authorized under

REMARKS: (Cont'd.)

Directive Consecutive Numbers FS-453 and FS-454. Construction work was started 1 December 1942 and was completed 31 March 1943. For construction details see drawing number DMCR 1094.

Note:

No co-ordinates are supplied for these searchlight positions as the searchlights will be at a different location each time they are taken from the shelters.

Control Approval Symbol SPEKM-1

ED Form No. A-162D
16 September 1943

FS 453 & 454 Proj Card 48449
Incl. 5

CONFIDENTIAL

FORM 8.

Corrected to Sept. 30, 1926. ENGINEER DEPARTMENT STRUCTURES.

On this sheet list any existing structures of a permanent or semipermanent nature used wholly or in part by the Engineer Department, such as wharves, storehouses, quarters, office buildings, railroads and railroad equipment, giving for each a short description, dimensions, materials of construction, present use, location, etc. and cost if known.

Quarters No. 1 - - - - - Built in 1913; dimensions, 40' x 24'; construction, frame, plastered; condition, fair; original cost, \$2,700.00; present use, not used.

Quarters No. 3 - - - - - Built in 1913; dimensions, 42' x 26'; construction, frame, plastered; condition, fair; original cost, \$2,949.48; present use, not used.

Quarters No. 5 - - - - - Built in 1913; dimensions, 31' x 31'; construction, frame, shingled; condition, poor; original cost, \$1,100.00; present use, not used.

Quarters No. 7 - - - - - Built in 1913; dimensions, 28' x 28'; construction, frame, plastered; condition, poor; original cost, \$2,919.96; present use, not used.

Hospital No. 13 - - - - - Built in 1907; dimensions, 45' x 20'; construction, frame, plastered; condition, fair; original cost, \$2,015.00; present use, not used.

Quarters No. 15 - - - - - Built in 1913; dimensions, 46' x 29'; construction, frame; condition, good; original cost, \$4,470.00; present use, not used.

Office No. 16 - - - - - Built in 1913; dimensions, 53' x 26'; offset 16' x 13'; construction, frame; condition, good; original cost, \$2,213.98; present use, not used.

Commissary No. 17 - - - - - Built in 1913; dimensions, 96' x 26'; construction, frame; condition, good; original cost, \$2,097.46; present use, not used.

Oil House No. 18 - - - - - Built in 1913; dimensions, 24' x 13'; construction, concrete; condition, good; original cost, \$314.00; present use, oil and paint house for fortification preservation and repair work.

Storehouse No. 20 - - - - - Built in 1913; dimensions, 100' x 30'; construction, frame, corrugated iron; condition, fair; original cost, \$1,995.37; present use, not used.

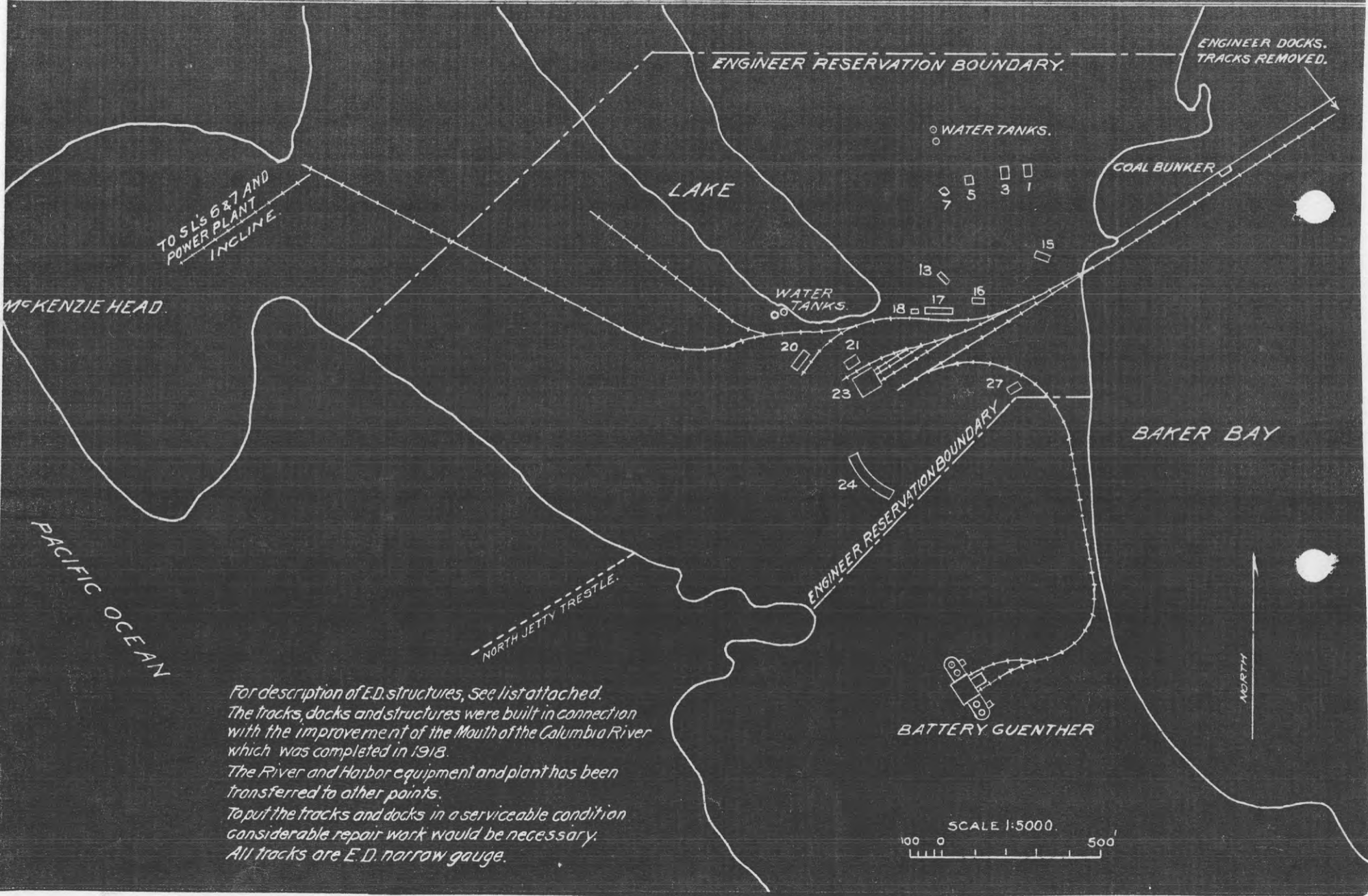
- Power Plant No. 21 - - - Built in 1913; dimensions, 56' x 40'; construction, frame, corrugated iron; condition, poor; original cost, \$4,513.51; present use, not used.
- Carpenter Shop No. 23 - Built in 1913; dimensions, 84' x 70'; construction, frame, corrugated iron; condition, fair; original cost, \$4,722.92; present use, used for storage purposes.
- Round House No. 24 - - - Built in 1913; dimensions, 190' x 30'; construction, corrugated iron; condition, fair; original cost, \$5,520.97; present use, not used.
- Quarters No. 27 - - - - Built in 1913; dimensions, 55' x 30'; construction, frame; condition, fair; original cost, \$1,969.68; present use, not used.

The above listed Engineer Department structures were built for use in connection with the construction of the North Jetty, at the Mouth of the Columbia River.

Form 6.

Corrected to Sept, 30, 1926.

ENGINEER DEPARTMENT STRUCTURES.



TO S L's 6 & 7 AND
POWER PLANT
INCLINE.

MCKENZIE HEAD.

ENGINEER RESERVATION BOUNDARY.

ENGINEER DOCKS,
TRACKS REMOVED.

WATER TANKS.

LAKE

COAL BUNKER

WATER TANKS.

BAKER BAY

PACIFIC OCEAN

NORTH JETTY TRESTLE.

ENGINEER RESERVATION BOUNDARY

BATTERY GUENTHER

NORTH

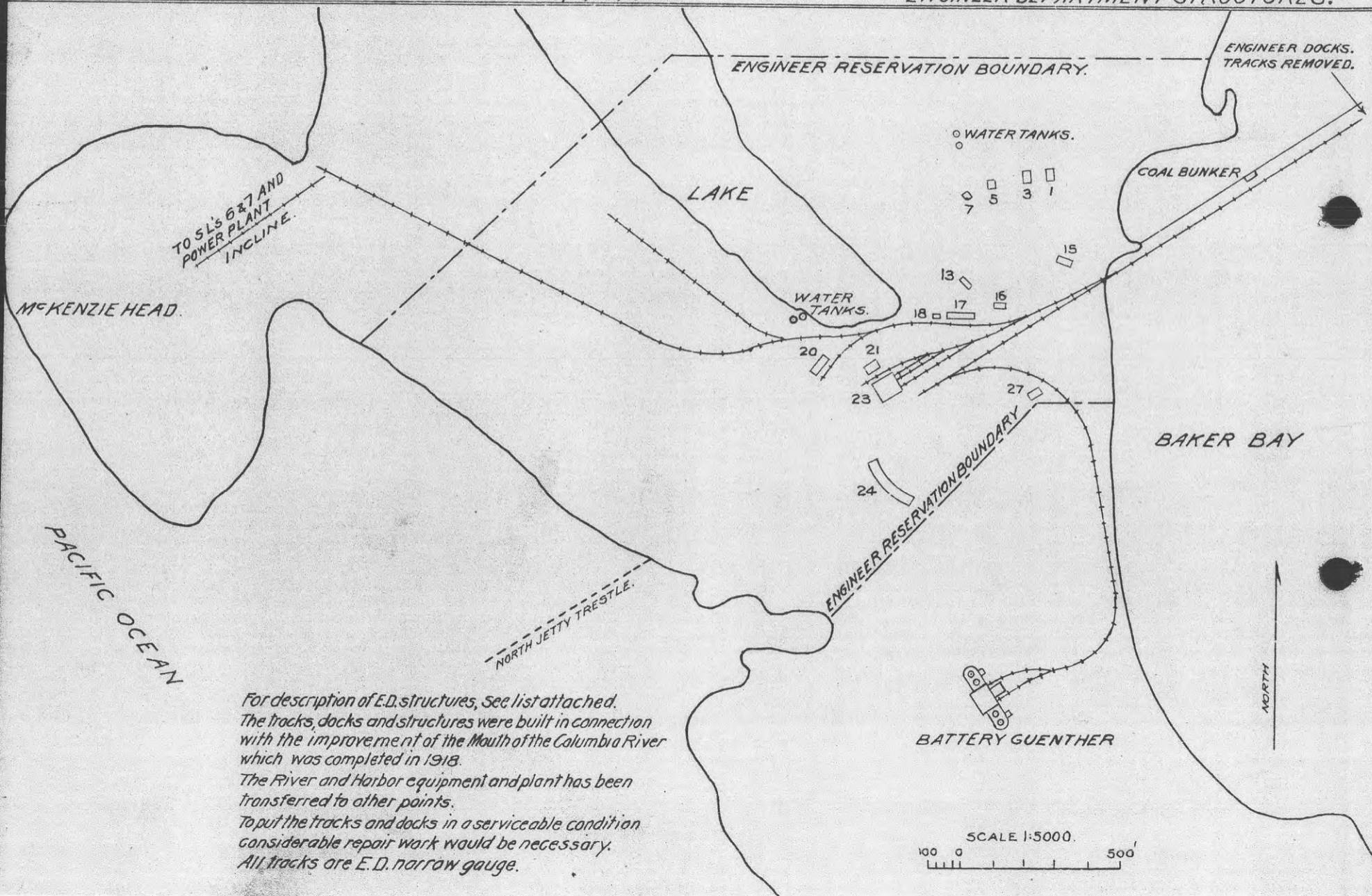
SCALE 1:5000.
100 0 500'

*For description of E.D. structures, See list attached.
 The tracks, docks and structures were built in connection
 with the improvement of the Mouth of the Columbia River
 which was completed in 1918.
 The River and Harbor equipment and plant has been
 transferred to other points.
 To put the tracks and docks in a serviceable condition
 considerable repair work would be necessary.
 All tracks are E.D. narrow gauge.*

Form 6.

Corrected to Sept, 30, 1926.

ENGINEER DEPARTMENT STRUCTURES.



For description of E.D. structures, See list attached.
 The tracks, docks and structures were built in connection
 with the improvement of the Mouth of the Columbia River
 which was completed in 1918.
 The River and Harbor equipment and plant has been
 transferred to other points.
 To put the tracks and docks in a serviceable condition
 considerable repair work would be necessary.
 All tracks are E.D. narrow gauge.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Road & Searchlight Shelter)

HARBOR DEFENSES OF THE COLUMBIA
Searchlight Shelter and *Ft. Canby*
Surfacing of Roadway
(Completion of Shelter & Roadway)

Form 3

Corrected to December 15, 1941

For searchlight No. 3.

Road & Shelter for Searchlight:
No. Three

Location ----- : Fort Canby, Washington

Date of transfer ----- : -----

Cost to date ----- : \$3,335.01

aid for by ----- : U. S. Engineer Department

Type of construction ----- : Shelter: All reinforced concrete.
: Inside demensions of 22'10"x10'10"x
: height of 10'0". Metal door &
: fenestra steel window sash.
: Roadway: 12 foot crushed gravel
: roadbed. Length of improved road-
: way is 1500 feet.

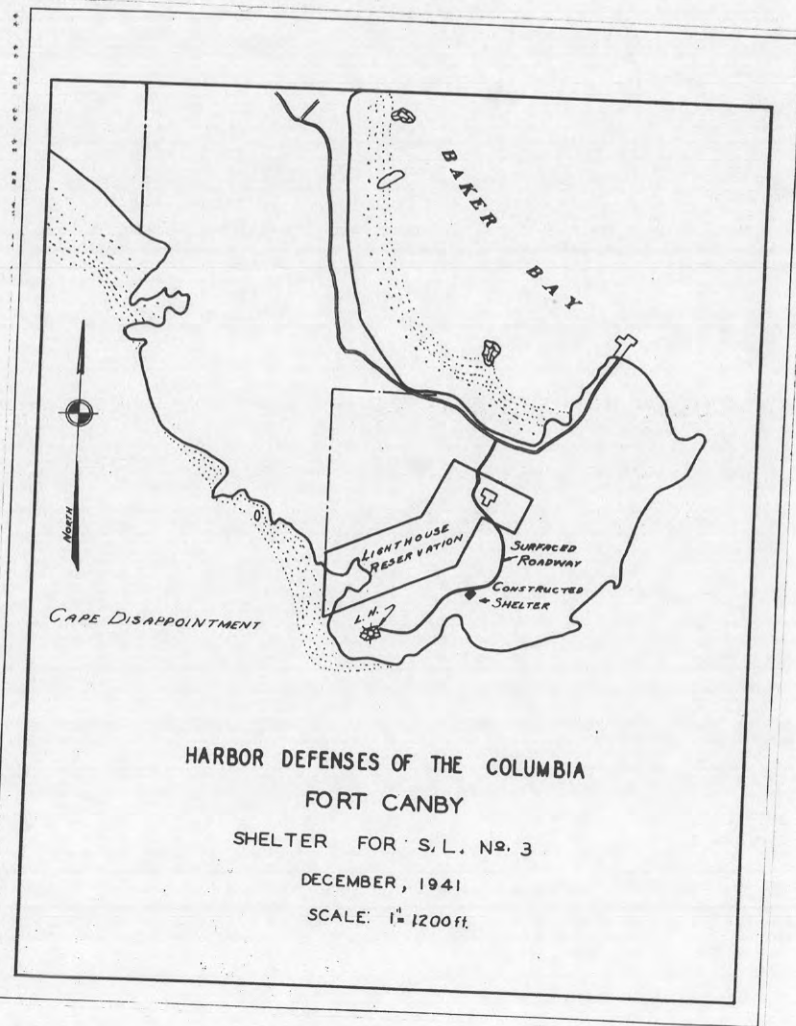
Materials of construction -- : Shelter: Concrete with steel
: reinforcing.
: Roadway: Gravel, crushed to 3/4"
: minus.

Type of concrete ----- : 1 : 2 : 4 mix for entire structure

Condition ----- : Excellent

Remarks ----- : The shelter is a new structure con-
: structed by Government forces and
: completed December 1, 1941. The
: roadway was an improvement over an
: old roadway; all work being done by
: the Engineer Department

: Constructed with funds under allot-
: ment: CAC-110 P 99 A 34 1205-N.



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Proo Card 20

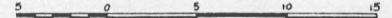
WAR DEPARTMENT

CORPS OF ENGINEERS, U. S. ARMY

HARBOR DEFENSES OF THE COLUMBIA
PORTABLE SEARCHLIGHT
SHELTER

FORT CANBY, WASHINGTON

SCALE: 3/32"=1'-0"



U. S. ENGINEER OFFICE, PORTLAND, OREGON, DISTRICT

Submitted: *[Signature]* Approved: May 20, 1942

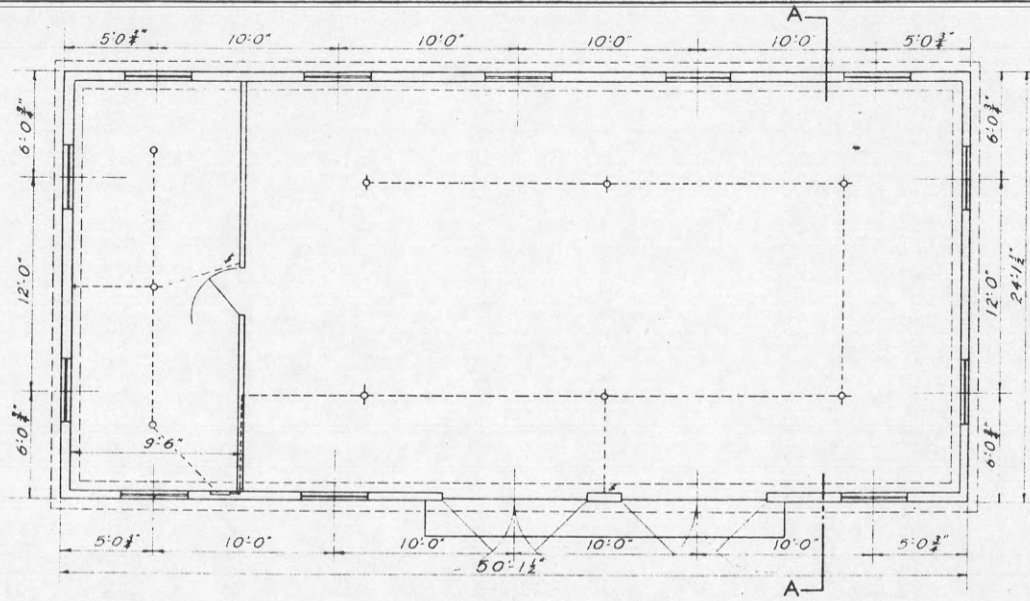
Recommended: *[Signature]* Engineer

[Signature]
Lt Col., Corps of Engineers

[Signature]
Principal Engineer

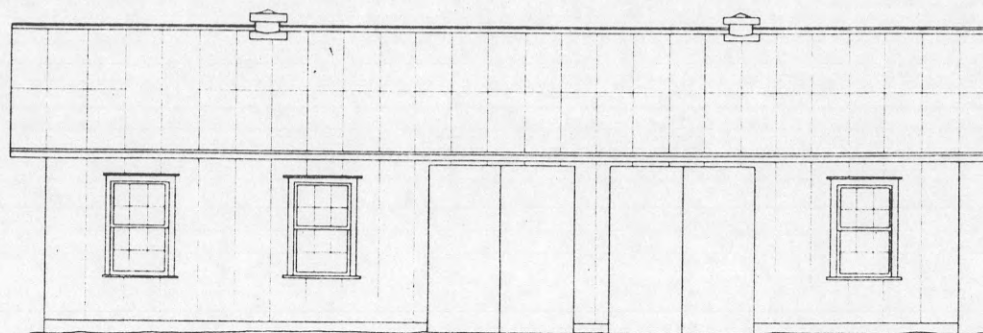
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Traced: W.F.H.

FOR DETAILED PLANS SEE DMC 982

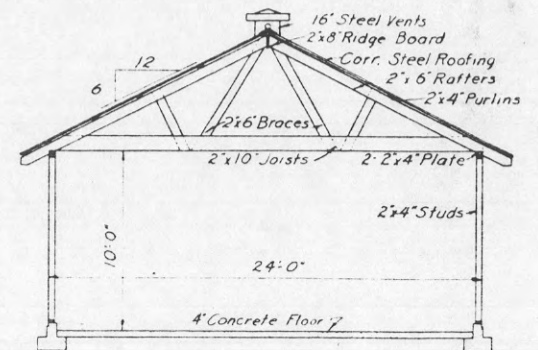


PLAN

SECRET



FRONT ELEVATION



SECTION A-A

Obsolete

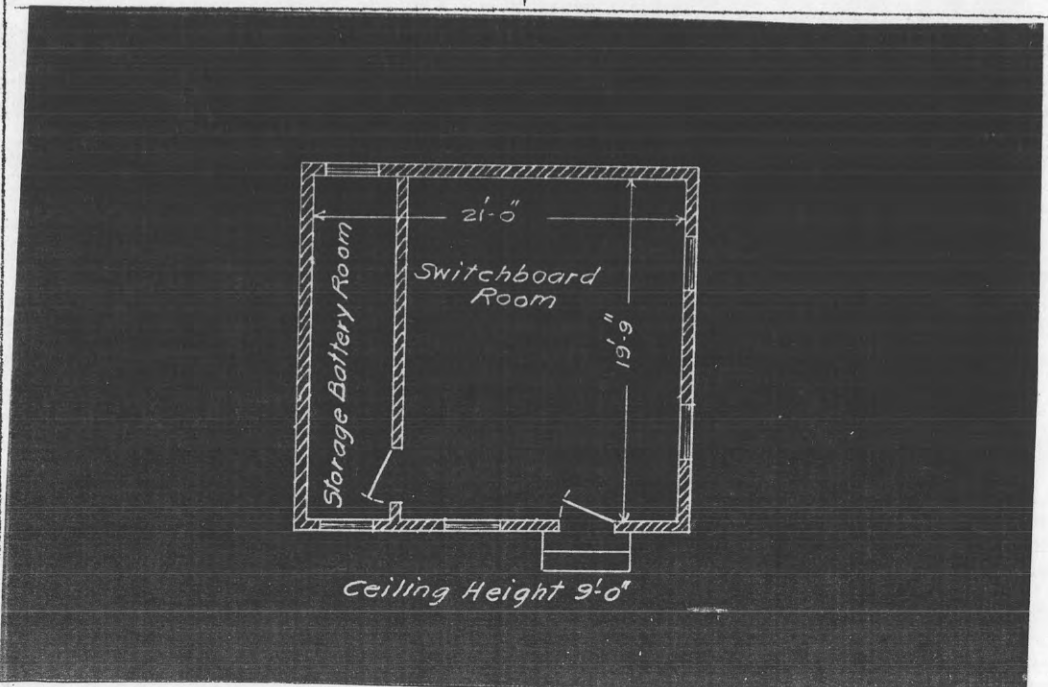
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF THE COLUMBIA.....
FORT. CANBY, WASHINGTON.....
STRUCTURE..OLD SWITCHBOARD ROOM.....

Form 2.

Corrected to June 30, 1921.

Location	About 1,300 feet N.E. of Canby light.	Type of data transmission	
Date of transfer	November 6, 1911	Date of transfer	
Cost to that date	\$2,636.35	Cost of data transmission equipment	
Type of construction	Sewell type	For tide stations give description of tide gauge	
(a) Roof	Wood, asphalt, paper & gravel	For datum points give Forts from which visible	
(b) Remainder of building	Expanded metal, lath & plaster	For dormitories give stations served	
How concealed	Behind hill	For cable hut give S. C. type	Used as emergency store room.
How protected	By hill		
Height above concealment	None		
Height above protection	None		
Conspicuous at.....yards	Visible from above and about 3000 yds to the rear.		
Source of electric current	Central or Reserve Power Plant.		
Kilowatts required	0.5		
Type of lighting fixtures	Commercial		
How heated	Stove		
Connected to water mains	Yes		
Connected to sewer	Yes		
Type of latrine	Syphon		
Permanent or temporary installation	Permanent; abandoned for new switchboard room.		
Present condition	Fair		
Reference of site	About 14' above M.L.L.W.		
Reference of instrumental axis			
Type of observing inst.			
Type of plotting board			
Type and capacity of crane			
Max. dimensions of reel handled			



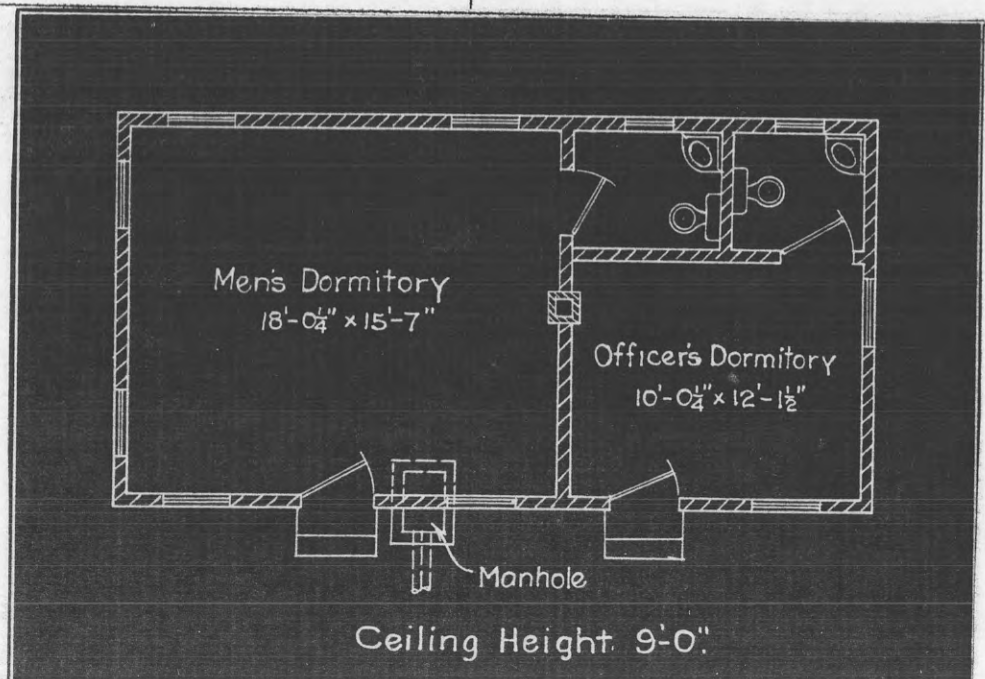
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REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF THE COLUMBIA.....
FORT. CANBY, WASHINGTON.....
STRUCTURE... DORMITORY B¹/5.....

Form 2. Corrected to June 30, 1921.

Location	350' northwesterly from Battery Allen.	Type of data transmission	
Date of transfer	November 6, 1911.	Date of transfer	
Cost to that date	\$2,072.76	Cost of data transmission equipment	
Type of construction	Sewell	For tide stations give description of tide gauge	
(a) Roof	Wood, asphalt, paper & gravel	For datum points give Forts from which visible	
(b) Remainder of building	Wood frame, diamond mesh & plaster	For dormitories give stations served	
How concealed	Behind hill in woods.	For cable hut give S. C. type	Battery Allen and B ¹ /5
How protected	None		
Height above concealment	None		
Height above protection			
Conspicuous at.....yards	Visible from above only.		
Source of electric current	Source or Reserve Power Plants.		
Kilowatts required	0.4 kw.		
Type of lighting fixtures	Commercial		
How heated	Stove		
Connected to water mains	Yes		
Connected to sewer	Yes		
Type of latrine	Syphon		
Permanent or temporary installation	Permanent		
Present condition	Good		
Reference of site	About 204' above M.L.L.W.		
Reference of instrumental axis			
Type of observing inst.			
Type of plotting board			
Type and capacity of crane			
Max. dimensions of reel handled			



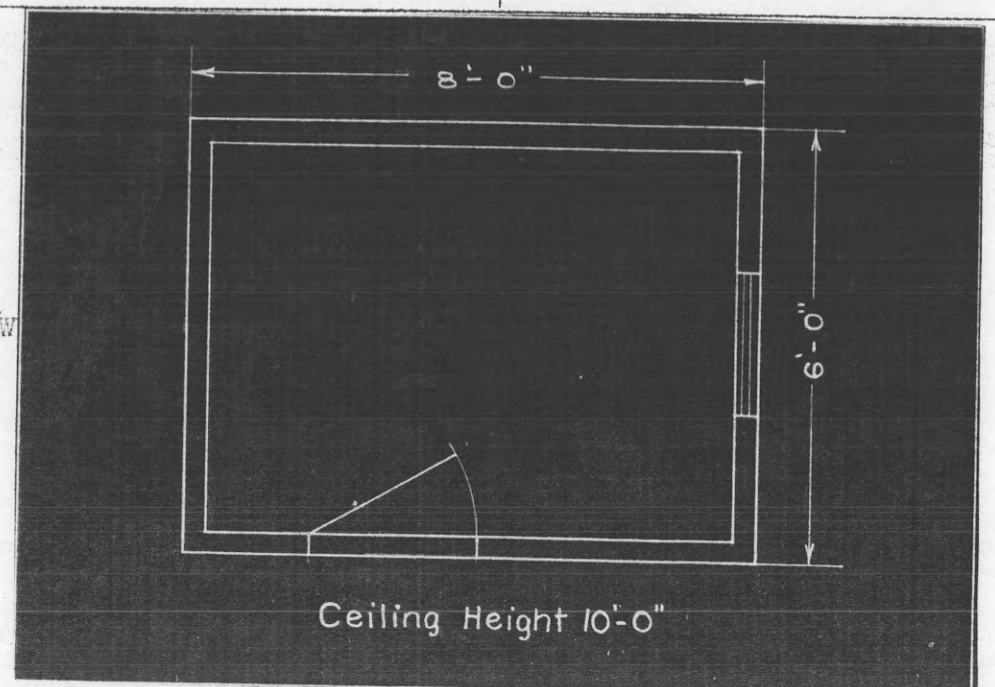
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REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF... THE COLUMBIA
FORT. CANBY, WASHINGTON
STRUCTURE... TIDE STATION

Form 2. Corrected to June 30, 1921.

Location	Quartermaster Wharf.	Type of data transmission	
Date of transfer	August, 1908.	Date of transfer	
Cost to that date	\$200	Cost of data transmission equipment	
Type of construction	Wood frame	For tide stations give description of tide gauge	Disc type as per 3rd supplement to Mimeo. No. 62.
(a) Roof	Shingle	For datum points give Forts from which visible	
(b) Remainder of bld	Wood	For dormitories give stations served	
How concealed	Quartermaster Wharf	For cable hut give S. C. type	
How protected	Quartermaster Wharf		
Height above concealment	None		
Height above protection	None		
Conspicuous at about 500 yards	Visible from rear only.		
Source of electric current	None		
Kilowatts required	None		
Type of lighting fixtures	None		
How heated	None		
Connected to water mains	No		
Connected to sewer	No		
Type of latrine	None		
Permanent or temporary installation	Permanent		
Present condition	Out of commission		
Reference of site	M.L.L.W. Floor of station		
Reference of instrumental axis	is about 16' above M.L.L.W.		
Type of observing inst.			
Type of plotting board			
Type and capacity of crane			
Max. dimensions of reel handled			



REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Searchlights)

COAST DEFENSES OF THE COLUMBIA
FORT CANBY, WASHINGTON
SEARCHLIGHT NO. 8 No. 4 1

Form 4. Corrected to June 25, 1922. Size 60" Portable or fixed. Fixed

PROJECTOR	: On S.E. point of Cape Dis-	:
	appointment, about 2250'	: <u>INSTALLATION</u>
Location	northeasterly from Canby	: General character
	Light.	: Date transferred to
Manufacturer	General Electric Co.	: troops
Type of projector	E. C.	: Cost to that date
Form of projector	Form N-10	: Shelter
Serial No. of projector ...	19555	: Materials of construction
Type of lamp	Mark V	: Interior of dimensions
Model of lamp	Model 8	: Height and type of tower :
Serial No. of lamp	293	: Means by which projector :
Electric or hand control...	Electric	: is placed in operating :
Material of mirror	Glass	: position
Date received in district :	July 12, 1920	: Reference axis of project-
From whom received	General Electric Co.	: or in operating position:
Age of mirror	1 year.	: Kind of protection in :
Condition of mirror	Good	: operating position
Date last repaired	No repairs	: Concealment of day shelter
Switchboard, serial No....	205079	: from approach channel :
		: Dates & cost of extensive:
		: remodeling or reconstruc-
		: tion
<u>CABLE #</u>		: None.
Power plant to searchlight:		
Type	"A" L. C.	: <u>POWER PLANT</u>
Length and size	377' 4/0	: Location
In conduits or in air	Conduit	: Maximum demand KW
Controller to light		: Type and size
Type	"C" L.C.	: <u>CONTROLLERS</u>
Length and size	1489', 11 conductors	: Location
In conduit or in air	Conduit	: Type
Aux. controller to light ..		: Form
Length and size	None	: Serial No. ...
In conduit or in air		: How protected or con-
		: cealed

1 See 675.1 (9th C.A.) 1
New Designation No. 4

SECRET

Form 4. Corrected to May 21, 1943

INSTALLATION:

50241
General character : This supplemental work consisted of
: moving Searchlights Nos. 1 and 2 from
: McKenzie Head to North Head, Washing-
: ton. New searchlight shelters, a new
: controller booth and a new powerhouse
: were constructed. All the old equip-
: ment was reinstalled in the new build-
: ings.

Location : The new installations were made on a
: Military Reserve on North Head, Wash-
: ington. This reserve is north of,
: and adjacent to, the Military Reser-
: vation of Fort Canby, Washington.

(See plans attached)

Date transferred to troops : of supplemental work: March 31, 1943

Cost to date of transfer : of supplemental work: \$8,250.31

INSTALLATION:

Shelters : The shelters are constructed of rein-
: forced concrete of a 1:2:4 mix. The
: sliding doors are constructed of wood
: and are metal clad. The doors are
: hand operated and are hung on barn
: door hangers from a number 31 trolley
: track. The shelters are constructed
: on solid rock. The interior dimen-
: sions are 17'-0"x12'-0" with a ceil-
: ing height of 12'-0".

Means by which projector is
placed in operating position : The fronts of the shelters are opened
: by a series of sliding doors. The
: projectors are stationary on the floors
: of the shelters.

SECRET