48920 S

COMPLETED BATTERIES, ETC.

DEFENSES OF

PUGET SOUND, WASH.

October 10 ,1903

District in the charge of MAJOR JOHN MILLIS,

Corps of Engineers

REPORT OF COMPLETED BATTERIES, ETC.

DEFENSES OF PUGET SOUND, WASH.

OCTOBER 10,1903.

In charge of Major John Millis, Corps of Engineers.

Name of Harbor	Name and Armament of Battery	Date when turned over to Artillery	Total cost to that date	Remarks
		Architery		
Admiratty	FORT FLAGLER			and the second
Inlet	Battery Wilhelm.	August 17	\$191,190.68	Garrisoned
Puget	Mounted	1902	•	This battery
Sound	4 10-inch B.L.Rifles, Model			was built by
	1888,MII,Nos.28B,29B,30B	,		contract in
	and 35B, Bethlehem Iron Co			1897-99
	4 10-inch nondisappearing			
	carriages, Model 1893, Nos.	J .		
	3,4, and 5, Water town Arsen-	3		•
	al, and No.10, Morgan Engi-]	:	
•	neering Co.	,	-	•
	2 12-inch B.L.Rifles, Model			
	1888, MII, Nos. 25 and 35,			
	Watervliet Arsenal.	,	. •	
•	2 12-inch nondisappearing			
	carriages, Model 1891, Nos.			
	1 and 2 Water town Arsenal,			
	(altered gun lift)	:		
	Emp.1,Rifle 35,Car.10			
	28, 3			•
	25, 1	e .		
	35, # 2			
	" 5 " 29, " 4 W		·	
	" 6 " 30, " 5 💉			
			_	
	Battery Lee	August 17,	\$ 15,000.00	Garrisoned
· ·	Mounted	1902		,
•	2 5-inch R.F.Guns, Model	· ·		•
	1897, Nos. 5 and 8, Bethle-	į		
	hem Iron Co.	·		
	2 5-inch balanced pillar			
	mounts, Model 1896, Nos. 31			
•	and 32, Detrick & Harvey		•	
	Machine Co.	ν.		
A. S.	Emp.1,Gun 5,Car.31		·	·
	" 2 " 8, " 32 V		·	
	A			
				·
	and the second s			(A)
				V.
	The state of the s			
Mark are a		Ī		
	The state of the s			
<i>e</i>	The second secon			

Name of Harbor	Name and Armanent of Battery	Date when turned over to Attillery	Total cost to that date.	Remarks.
	Battery Mounted: 8 12-inch B.L.Mortars, Model 1890, Nos. 67, 77, 90, 114, 128, 133, 134, and 137, Watervliet Arsenal. 8 12-inch Mortar carriages Model 1896, Nos. 269, 270, 27; 272, 273, 274, 275, and 276,	1902	\$ 89,584.47	Garrisoned
	Rarig Engineering Co. Pit A: Platf.l, Mortar 114, Car. 269 77, " 270 3, " 133, " 271 134, " 1790, " 272 Pit B:		اد الله الله الله الله الله الله الله ال	
.,	Pit B: Platf.l, Mortar 134, Car. 273 " 2, " 67, " 274 " 3, " 128, " 275 " 4, " 137, " 276			
				D
		!		

		Data miam	Total cost	Remarks
Name of Harbor	Name and Armament of Battery.	Date when turned over to Artillery	to that date.	Wellet VD
	B.C.Station, Emplacements 1 and 2, Battery Wilhelm.	June 30,) 1902)		Ref.of site, 118.17 Ref.of instru-
		}	\$6,654.99	ment axis, 144.57 One room; 10 feet by 10 feet. Steel tower.
	B.C.Station, Emplacements 3 and 4, Battery Wilhelm.	June 30,) 1902		Ref.of site 118.17 Ref.of instru-
				ment axis, 144.57 One room, 10 feet by 10 feet. Steel tower.
	i singelore mple 1 mag 7,500 pery			Not conspicuous at a distance of four miles when viewed from the usual channels of approach

Name of	Name and Armament of Battery	Date when turned		Remarks
		over to Artillery.	date.	·
And the second s		At ozziory.		
Admiralty Inlet, Puget Sound	FORT CASEY. Battery Mounted: 4 10-inch B.L.Rifles, Model 1895, Nos.11, 12, 15, and 16, Watervliet Arsenal. 4 10-inch disappearing car- riages, L.F. Model 1896, Nos 59,60, and 61, Bethlehem Iron Co., and No.64 South-	June 16, 1902.	Empls 1-4, \$103,894.49	Garrisoned. Emplacements 1,2,3,and 4 built by contract in 1897-1898.
	wark Foundry & Machine Co. Not Mounted: 2 10-inch B.L.Rifles, Model 1895, MII, Nos. 40B and 43B Bethlehem Iron Co.	7		
	2 10-inch disappearing carriages, L.F., Model 1896, Nos 71 and 72, Midvale Steel Works. Empl.1, Rifle 12, Car. 59. 2, " 15, " 60. 3, " 16, " 61. 4, " 11, " 64.			
	Battery Mounted: 2 5-inch R.F.guns, Model 1897, Nos.12 and 25, Beth- leham Iron Co. 2 5-inch balanced pillar mounts, Model 1896, Nos.18 and 19, Bethlehem Steel Co Empl.1, Gun 12, Car.18. 2, " 25 " 19.	June 16, 1902	\$18,850.0	Garrisoned.

b	were the second	-6-	·	
		•		
Name of Harbor	Name and Armament of Battery.	Date when turned over to Artillery	Total cost to that date.	Remarks
Admiralty Inlet, Puget	FORT WORDEN. Battery Mounted	June 16,	\$232,554.97	Garriso
Sound.	5 10-inch B.L.Rifles; Model 1888, MII, Nos. 6, 36, 37, and Bethlehem Iron Co.; Model 1888, No. 12, Water:	nd		
	vliet Arsenal. 5 10-inch nondisappearing carriages, Model 1893, No. 1 and 11, Watertown Arsenal; Nos. 7, 8, and 9, Morga)\$. e-		
	Engineering Co. 2 12-inch B.L.Rifles, Mode 1888, MII, Nos. 9B and 101 Bethlehem Iron Co.	3,		
ma () an	2 12-inch nondisappearing carriages, Model 1892, No. 3 (altered gun-lift) as 27, Watertown Arsenal.	s.		
•	Empl.1,Rifle 39,Car. 7. 8. 8. 8. 8. 9.			
	" 4, " 37," 1. " 5, " 10," 3. " 6, " 9," 27. " 7, " 12," 11.			
	Battery Mounted: 2 5-inch B.I.Rifles, Mode: 1897, Nos. 9 and 22 Beth lehem Iron Co.	June 16, 1902	\$ 11,000.00	
	2 5-inch balanced pillar mounts, Model 1896, Nos. and 20, Bethlehem Steel Co.	9		
	Empl. 1,Gun 22,Car.20.			
				P

Name of Harbor	Name and Armament of Battery	Date when turned over to Artillery.	Total cost to that date.	Remarks.
	Battery Mounted: 16 12-inch B.L.Mortars, Model 1890 MI; Nos. 27,49,	June 16, 1902	\$162,102.12	
	50,51,and 52,Builders Iron Foundry; Nos.1,15,16,20,21, 22,and 24,Niles Tool Works; Nos.32,54,56,and 105,Watervliet Arsenal.			
	16 12-inch Mortar carriages Model 1896, Nos. 244, 245, 246 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, ar 259, Rarig Engineering Co.	3 ,		
	Pit A: Platf.l, Mortar 51, Car. 259	, T		
	Pit B: Platf.l, Mortar 49, Car. 255.	.4		
	1 3, " 21, " 252. " 4, " 56, " 253. Pit C:			
	Platf.l, Mortar 16, Car. 251 2, " 1, " 250 3, " 52, " 248 4, " 15, " 249	; 7		
	Pit D: Platf.1, Mortar 27, Car. 247 " 2, " 105, " 246 " 3, " 20, " 244 " 4, " 22, " 245			
				P

	and the contract of the contra	-8-		•
·		•		·
				•
Name of Harbor.	Name and Armament of	Date when turned over to Artillery.	Total cost to that date	Remarks.
Richs Passage Puget Sound	FORT WARD. Battery Mounted: 3 8-inch B.L.Rifles; Model 1888, Nos. 2 and 6, West Point Foundry; Model 1888, MII, No. 42, Watervliet Arsenal. 3 8-inch disappearing carriages, L.F., Model 1896, Nos. 36, 37, and 38, Water- town Arsenal.			Not garri-
	Empl.1, Rifle 6, Car.36.			
			10 900 10 10 10 10 10 10 10 10 10 10 10 10 10	
	ACTION OF ACTION OF ACTIONS OF AC		·	

Name of Harbor.	Name and Armament o	f Date when turned over to Artillery		Remarks.
Richs Passage,	MIDDLE POINT. 1 Torpedo Storehouse.			Not garri-
Puget Sound		, a company of the co		Completed, except elec- tric light
				and power plant.
	in die			
			e, to	

Seattle, Washington, October 16,1903.

Respectfully submitted,

Major, Corps of Engineers.

John Millis

REPORT OF COMPLETED BATTERIES, ETC..

DEFENSES OF PUGET SOUND, WASH.

December 31, 1909.

In Charge of Major C. W. Kutz, Corps of Engineers.

Name and armament of: Date when Name of : Total cost: Harbor battery : turned over: to that REMARKS. : to Artill-: date : ery the first the transport to the transport on the second Admiralty FORT FLAGLER Inlet, Battery John Rawlins) These - - -Puget Mounted: teries Sound. 2 10-in.B.L.Rifles.Modbuilt '. el 1888, MII, Nos. 28 &) contract in 35, Bethlehem Iron Co.) 1897-9 2 10-in.nondisappearing) Magazines carriages, Model 1893.) dry. No.3, Watertown Arsenal and No.10 Morgan Eng-) ineering Company. Emp.1, Rifle 35, Car.10 2, " 28, " 3 Battery Wilhelm Mounted: 2 12-in.B.L.Rifles.Mod-) el 1888, MII, Nos. 25 &) August 17 **\$191,190.68** Garrisoned 35, Watervliet Arsenal) Magazines dry 2 12-in.nondisappearing) The 2-12-in. carriages, Model 1891,) guns are at Nos.1 & 2 Watervliet) this date Arsenal(altered gun dismounted lift) and alterat-Emp.1, Rifle 35, Car.2 ions of the 25, carriages being made by Battery Paul Revere Ord.Department Mounted: 2 10-in.B.L.Rifles, Mod-) el 1888, MII, Nos. 29 &) Magazines dry 30. Bethlehem Iron Co.) 2 10-in.nondisappearing) carriages, Model 1893,) Nos.4 & 5, Watertown Arsenal Emp.1, Rifle 29, Car.4 30, "

Electric wires for light and power installed at Batteries Rawlins, Wilhelm and Revere. Electric fixtures installed.

Name of Harbor		Date when turned over to Artil-	to that	REMARKS.
=======================================				
	Mounted: 2 5-in. R.F.Guns, Model 1897, Nos. 5 & 8, Beth- lehem Iron Company))	\$15,000.00	Garrisoned Magazines dry
	2 5-in.balanced pillar mounts, Model 1896, Nos.31 & 32, Detrick & Harvey Machine Co. Emp.1, Gun 5, Car.31 "2, "8, Car.32			
	Battery Henry Bankhead Mounted 8 12-in.B.L.Mortars Model 1890 MI., Nos' 67,77,90,114,128,133 134 & 137, Watervliet		\$89,584.47	Garrisoned. Magazines dry
	Arsenal. 8 12-in.Mortar Car- riages, Model 1896, No 269,270,271,272,273 274,275 & 276, Rarig Engineering Company)) s.))		
	PIT "A" Car Plat 1, Mortar 114, 269 " 2, " 77, 270 " 3, " 90, 272 " 4, " 133, 271))))		Magazines dry
	PIT "B" Car Plat 1, Mortar 134,273 " 2, " 67,274 " 3, " 137,276 " 4, " 128,275))))		Magazines dry

Fixtures and wires for lighting installed at Battery Bankhead.

fixtures and

wiring in battery.

Name and armament of: Date when Total Cost: Name of: : turned over: to that : REMARKS. battery Harbor to Artildate lery. FORT FLAGLER: \$89,500.00 Garrisoned. Battery James Calwell) April 23, Magazines dry 1907 Mounted. Central elec-4 6-in.B.L.Rifles, Model) tric plant for 1903, Nos. 48, 60, 65 & 70) light and power Watervliet Arsenal 4 6-in.d/isappearing carcompleted. No provision riages, L.F. Model 1903) made for light Nos.53,54,55 & 72; and power wires Detrick & Harvey Mach) to, or fixtures ine Co. and wiring in Emp.1, Rifle 48, Car.53 60 m 54 battery. 2 65," 55 3, 70 " 72 \$48,000.00 Garrisoned. Battery John Grattan,) April 23, 1907 Magazines dry Mounted: 2 6-in.B.L.Rifles, Model Central Electric plant 1903, Nos. 68 & 69, Wat-) ervliet Arsenal. for light and power complet-2 6-in.disappearing car-) riages, L.F. Model 1903,) ed. No.73, Detrick & Harvey) No provisions made for light Machine Co. and No.45 and power Wellman, Seaver, Morgan wires to, or Company.

Emp.1, Rifle 68, Car.73

69, "

and wiring in

battery.

Name and armament of: Date when Total Cost: Name of: : turned over: to that REMARKS. Harbor battery : to Artil- : date. lery. \$12,000.00 Garrisoned.) April 23, FORT FLAGLER. Battery Edward Downes) Magazines dry. 1907 Central elec-1 15 pdr. (3 in) B.L. tric plant for Rifle, Model 1903, #27) light and power Watervliet Arsenal completed. No 2 Pedestal mounts, Model) provision made 1903, Nos. 78 & 79, Watertown Arsenal.) Emp.1, Rifle 27, Car.78) for light and power wires to, or fix-" 2, No"rifle Rec.Car) 79) tures and wiring in battery. \$14,000.00 Garrisoned. April 23, Battery Thomas Magazines dry 1907 Wansboro. Central elec-Mounted tric plant for 2 15 pdr.(3in)B.L.Rifles light and power Model 1903, Nos. 35 &) completed. No 36. Watervliet Arsenal) provision made 2 Pedestal mounts, Model) 1903, Nos. 16 & 17, Wat-) for light and power wires to, ertown Arsenal. or fixtures

Emp.1, Rifle 35, Car 16

n 2, n

36, " 17)

The supplier of the control of the c					
Name of Harbor	Name and armament of battery	Date when turned over: to Artil- lery.	to that	: REMARKS. : (All references : are to mean low : water.	
	and compromise and promise design through the group of the constitution of the compromise and the second transfer compromise and transfer compromise a				
	FORT FLAGLER. 2 (Flagler) Observation room 16'x20' x 7' high Dormitory 11' x 13' 8" x 12' high. F'7 (Bankhead) Observation room			Ref. of site 121.37. Ref. of inst. axis 154.37	
	13' x 20' x 7' high. Plotting room 20' x 23' x 8'11" high.	June 5, 1908	\$8,495.13	121.37 Ref.of inst. axis 149.87.	
	5 telephone booths each 3' x 3'6" x 12' high. Above stations in one building. Sewell type.				
	F' (Rawlins) 8 Additions to plot- ting room ll'6" x 15'6" x 9'5½" high 4 Telephone booths each 3'6" x 3'6" x 9'5½" high.)) June 5,) 1908))	\$1,500.00	Ref.of site	
	Dormitory, detached building, Sewell type 72' in rear of F'9(Flagler). Officers' room 10' x 16' x 9' high. Men's room, 16' x 19 x 9' high.)))) June 5,) 1908)	\$1,268.09		

x = Not conspicuous at a distance of four miles when viewed from the usual channels of approach.

	第四回	AND THE	THE THE PROPERTY OF THE PARTY OF THE THE PARTY OF THE	
Name of Harbor	Name and armament of battery	Date when turned over to Artil-lery	co chac	REMARKS (All references are to mean low water.
	त्रक्षेत्रक व्यवस्थात्र विकास	and well well more than the program of the bound of the b	த் <u>திர் இர்</u> பார் அத்த அத்த அத்த அத்த அதி இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தில் அதி இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தில் இருந்தி	
•	FORT FLAGLER.			
X	F ' Primary Station, 8 Fire Command, Battery John Rawlins Furnish ranges also to Batteries Lee, Grattan & Wansboro	June 30, 1902	\$3,327.50	Ref. of site 118.17. Ref. of inst. axis,144.57 One room 10' x 10'x 7' high, steel tower.
x	F ' Primary Station 9 Fire Command Batteries Wilhelm and Revere. Furnish ranges also to Batteries Calwell and Downes. Addition of 2 tel- ephone booths made since transfer of station. Each booth 3'6" x 3'6" x 7'6" high.	June 26,) 1905)))))))	\$4,318.24 \$276.10	Ref. of site 123. Ref. of inst. axis, 128.87 Two rooms. Inst. room 11' x 16' x 6'11" high .Plotting room 15'4" x 16'x 7'6" high. Reinforced concrete. Glass lenses in roof of plotting
				room.

x = Not conspicuous at a distance of four miles when viewed from the usual channels of approach.

= ===================================	======================================	म्बूच व्यवस्था क्षाया व्यवस्था व्यवस्था व्यवस्था व्यवस्था व्यवस्था व्यवस्था व्यवस्था व्यवस्था व्यवस्था व्यवस्थ स्थानिक व्यवस्था व्य	And the state of t	The contract of the contract o	•
Name Harb		Name and armament of battery	Date when turned over to Artil-	CO CITATO	REMARKS. (All references are to mean lov water.
====		・ では、大学・大学・大学・大学・大学・大学・大学・大学・大学・大学・大学・大学・大学・大			
	x B'	FORT FLAGLER. 11 Primary Station, Battery Command Battery John Rawlins) 1905	\$4,651.36	Ref.of site 118.17 Ref.of inst. axis,144.57.
					Two rooms Inst.room 8'x 8'x6'3" high.
\$ 1					Plotting room 14'11-1/2"x 14' 11½" x 6'3" high.
					Concrete foundation and steel tower construction.
				÷ . *	Glass roof.
		12 Primary Station, Battery Command, Battery Wilhelm) June 30,) 1902	\$3,327.49	Ref.of site 118.17 Ref.of inst. axis 144.57. One room 10' x 10' x 7' high. Steel tower.
	x I	Battery Command Battery Paul Revere Originally built for primary station on site of 11. Mov	_	\$3,495.22	Ref.of site 115.87 Ref.of inst. axis 142.27 One room 10'x 10'x 7' high. Steel tower.
	•	to present site and transferred to Artil lery.	-) Feb.10,) 1905.	\$6,115.44	
				The second secon	

 $\mathbf{x} = \text{Not conspicious at a distance of four miles when viewed from the usual channels of approach.}$

Name of Harbor	Name and armament of battery	turned over:	to that	: REMARKS. :(All references : are to meanlow : water.
	B 13(Revere) Plotting room, 18' x 20' x 8' high Sewell type, in traverse behind battery. F 7 (Bankhead) Secondary.Observation) room 10' x 10' x 7' high. Sewell type.	June 5, 1908 June 5, 1908	\$1,543.33 \$ 877.80	Ref.of site 121.37 Ref.of site 81.37 Ref.of inst.
	F'''7 (Bankhead) Supplementary. Observing Room,9' 11" x 10' x 7' high B"11 (Rawlins) Secondary, Observation room 9'11" x 10' x 7' high.Above two stations in one building, with dor- mitory in rear, 10' x 20'6" x 9' high. Sewell type.	June 5, 1908	\$1,816.10	Ref. of site 148.37 Ref. of inst. axis 153.37 Ref. of site 148.37 Ref. of inst axis 153.37
	B"12 (Wilhelm) Secondary. Observation room 9'll"x 10' x 7' high) B"13 (Revere) Secondary. Observation room 9'll"x 10' x 7' high. Two stations in) one building with dormitory in rear, 16' x 20' x 9' high Sewell type.	June 5, 1908	\$1,831.20	Ref.of site 84.37 Ref.of inst. axis 90.37 Ref.of site 84.37 Ref.of inst. axis 90.37

Above stations not conspicuous at a distance of four miles when viewed from the usual channels of approach.

Name of Harbor	: battery :		: to that	REMARKS. (All references are to mean low water.
	B'12 (Wilhelm) Plotting room, 18' x 20' x 8' high, Sewell type, in traverse behind battery.			Ref.of site
	Switchboard station, 16' x 20' x 8' high, & Storage battery room 20'x 20'6"x 8' high One building, Sewell			Ref.of site 120.87
	type, in traverse behind battery Wilhelm M 3 Meteorological Station. 5'x 5'x 8' high, in corner of	June 5, 1908	\$4,656.66	
	Plotting room Battery Wilhelm, switchboard station, storage bat- tery room and meteor ological station in one building.			
	T 3 Tide Gauge Station One room, 8'x 10'x 8' 6" high. Frame build- ing on Engineer wharf	June 5, 1908	\$1,400.00	Ref.of site
	One Dormitory,	Nov.2,1908	\$ 958.76	
	One Latrine: One building, 21'x36'-) 9',6" high. Sewell type. On terrain in rear of C 2. Officers end; 3 closed) stalls. 3 lavatories, 2 urinals. Mens end: 10 closed	Tot	\$3567.90 i wer 882.59 ta1\$4450.49	Ref.of site (118.87
	stalls; 8 lavatories,) 10 urinals.			

Above stations not conspicuous at a distance of four miles when viewed from the usual channels of approach.

Name of Harbor	Name and Armament of battery	Date when turned over to Artil-	Total: Cost to: that Date	REMARKS
Admirality Inlet	FORT FLAGLER: Latrine, in rear of primary station. Two rooms, Officers room 10'6" x 19';9'6" high. Mens room 19'x 24';9'6" high. Sewell Type.) June 11,1909	\$4264.85	
)))))		
)) ;)		
))))		•

FORT FLAGLER.

ELECTRIC PLANT.

CENTRAL PLANT:

Reinforced concrete building with concrete roof.

Boiler room, 38'0" x 41'0" x 20'6" high. Engine room, 31'0" x 41'0" x 16'0" high. Storage Battery room, 24 6" x 41 0" x 16 0" high. Work room, 8'0" x 14'0" x 16'0" high.

Location, 1400 feet south and 600 feet west from Battery Wilhelm.

Reference of site, (boiler room floor) 87.37 above mean lowwater.

Boilers. Two Babcock and Wilcox water tube boilers, 150 HP each,

purchased June 30,1904.

Engines: Three McEwen steam engines, each 150 HP, stroke 14-inch, bore 15-inch, speed 275 R.P.M. Numbers 1420,1430 and 1431. Purchased June 30, 1904.

Generators: Three Thompson-Ryan direct connected generators, capacity 75 KW, 300 amperes, 250 volts, speed 265 R.P.M.. Numbers 544,549 and 550. Purchased June 30, 1904.

Transformers: None. Storage Batteries. None. The Central plant will furnish all current Independent Plants. None. for light and power at all emplacements at Fort Flagler. No power to be furnished for searchlights, as each searchlight has its own plant.

For inside and outside illumination of defensive works, 31 KW Kilowattage Required: For motors, 32 KW For searchlights, none. For telautographs, 8 KW For Post lighting, 77 KW

Power house and plant is designed and built to permit installation of one more parallel unit for future demands. Total cost of plant \$88000 (Paid from Engineer Dept.funds \$63000, from Q.M.Department funds \$25000.) Transferred to Coast Artillery, June 26, 1908.

GENERAL DESCRIPTION OF THE TIDE-GAUGE

AT

FORT FLAGLER, WASH.

A cedar float treated in boiling parafine wax, enclosed in a wooden box and supporting a wooden graduated staff extending up through the house on which the height of the tide is denoted by a pointer.

An observer in the house transmits the data by telephone to the observing and the plotting rooms.

SEARCHLIGHTS.

FORT FLAGLER.

One 30-inch diameter. General Electric Co.
Date of purchase unknown. Received by transfer from Capt.R.H.C.Kelton, Artillery Corps, Fort Terry, N.Y., March 29, 1904.
Electrically and hand controlled.
Independent power plant.
Plant fixed. Projector mounted on truck.
Degree of mobility limited by length of conductor.
Returns made by Artillery.
Cost of projector unknown.
Transferred to Artillery, February 11,1905.

One 36-inch diameter. General Electric Co. No.22.

Date of purchase unknown.

Received by transfer from Chief of Engineers, U.S.A.

Dec.17, 1907.

Electrically and hand controlled.

Independent power plant.

Plant and projector mounted on track.

Degree of mobility unlimited; the entire outfit is portable.

Returns made by Artillery.

Cost of projector unknown.

Transferred to Artillery, March 25,1908.

DATUM POINT.

FORT FLAGLER, WASH.

Two temporary datum points located on wharf approach on west side of reservation.

Not transferred to Artillery.

Cost \$10,00

One visible from Fort Worden and one from Fort Casey.

```
Name of:
         Name and armament of: Date when
                                                Total Cost:
Harbor
                battery
                                : turned
                                                             REMARKS.
                                               to that
                                  over to
                                               date
                                : Artillery
         Admirality
 Inlet,
              FORT CASEY.
           Battery William Worth, )
Puget
                                                            Magazine
 Sound
           Mounted:
                                                            No.1 lined
         2 10-in.B.L. Rifles,
                                                            with copper
           Model 1895, Nos.12 & 15)
                                                            and cedar, dry.
           Watervliet Arsenal.
                                                            Garrisoned.
         2 10-in. disappearing
                                                            Emplacements 1
           carriages, L.F., Model
                                                            2,3,& 4 built
           1896, Nos. 59 & 60
                                                            by contract in
                                   Empls.1-4) Emps.1-4
                                                            1897-1898
           Bethlehem Iron Co.
          Emp.1, Rifle 12, Car. 59
                                   June 16, )$103,894.49
            " 2, " 15,
                           # 60
                                     1902.
          Battery James Moore.
                                                           Magazine
          Mounted:
                                             )Emps.5-7
                                                           No.1 lined
        3 10-in.B.L.Rifles, Model)
                                             )$138,392.41
                                                            with copper
          1895, Nos.11 & 16 Water-
                                   Emp.5.
                                                            and cedar, dry.
          vliet Arsenal, and
                                   Nov. 27,
          Model 1895 MII, No. 40,
                                    1905
          Bethlehem Iron Co.
        3 10-in. disappearing car
                                                           Magazine #2 in
          riages, L.F.Model, 1896)
                                                           Battery Worth,
          No.61 Bethlehem Iron
                                                           Nos.2&3 in Battery
          Co. No.64 Southwick
                                                           Moore, and Nos.1
          FoundYY &Machine Co.
                                                           and 2 in Battery
          and No.72 Midvale Steel
                                                           Kingsbury, usually
          Works.
                                                           dry, but
          Emp.1, Rifle 16, Car.61
                                                           occasionally damp.
              2,
                      11, "
              3,
                      40, "
          Rifle 40 moved to #2
          Kingsbury, replaced by
          rifle 29.
         BatteryHenryKingsbury
                                  ) Nov.27
         Mounted.
                                     1905
       1 10-in B.L.Rifle, Model
         1895 MII, No. 43, Bethle
         hem Iron Co.
       1 10-in. B.L.Rifle, Model))
         1900 No.9, Watervliet
         Arsenal
       1 10-in. disappearing Car
         riage, L.F. Model 1896. )
         No.71, Midvale Steel Wks.
       1 10-in.disappearing car)
         riage,L.F.Model 1901. )
         No.8 Watertown Arsenal)
         Emp.1, Rifle 43, Car 71)
                       9 "
```

Rifle 9 dismounted; lies on adjacent slope.

```
Name and armament of : Date when
                                                  Total Cost
Name of
                                                                REMARKS
                                                 to that
                                  : Turned
                    battery.
Harbor
                                                : date.
                                  : over to
                                  : Artillery. :
  maatun tahuta min mangam mangampangan sampa ila padi pingangan alabuta, alami mpagan mangan malaban minagan pa
             FORT CASEY.
                                                 $18,850.00
                                                                Garrisoned.
          Battery Reuben Turman) June 16,
                                                                Magazines dry.
                                      1902
          Mounted.
           5-in. R.F.Guns, Model
           1897, Nos.12 & 25,
           Bethlehem Iron Co.
           5-in. balanced pillar)
           mounts, Model 1896, Nos)
           18 & 19 Bethlehem
           Steel Company.
           Emp.1, Cun 12, Car 18
                   " 25, "
            n 2,
           Battery Seymour
                                    June 16,
           Mounted:
                                                                 Garrisoned
                                                  $93,207.00
                                     1902
           12-in. B.L.Mortars,
                                                                 These emplace-
           Model 1890, Nos.5,8,
                                                                 ments were
        59, and 60, Watervliet Ar-)
                                                                 built by con-
           senal, No.53, Bethlehem)
                                                                 tract in 1898-
           Iron Co. Nos'17,18,19)
                                                                 1899.
           Niles Tool Works.
                                                                 Magazines dry.
           12-in. Mortar Carriages
           Model 1896, Nos.113,114
           115,117 Providence
           Steam Engine Co., Nos.)
           134,135,136,138 Amer-)
           ican Hoist & Derrick )
           Company.
PIT A.
                                                                 All mortars of
         Plat 1, Mortar 19, Car.115
                                                                 Batteri es
                         18 "
                                113
               2,
                                                                  Seymour and
                                134
                         59,
               3,
                                                                  Schenck
                         17,
                                114
                                                                  dismounted;
                  PIT B.
                                                                  carriages
        Plat 1, Mortar 60, Car. 136)
                                                                  being
                         5, "
              2,
                              117)
                                                                  remodelled
                               138)
              3,
                         8.
                        53,
            Battery Alexander
                                                                  Magazines dry
                      Schenck
            Mounted;
            12-in.B.I. Mortars
            Model 1890, No.55c
            Watervliet Arsenal
            Nos.45,47,48a,Build-
            ers Iron Foundry, Nos.)
            48b, 54,55d, Bethlehem)
            Iron Co.No.14 Niles
            Tool Works.
            12-in. Mortar carriages
            Model 1896,#112,Pro-)
            vidence Steam EngineCo
            \#126,127,137,139,140,
```

141 American Hoist&DerrickCo.

```
Name of : Name and armament of : Date when : Total Cost :
Harbor : battery : Turned : to that : REMARKS
: over to : date :
: Artillery : :
```

```
FORT CASEY
   Battery Alexander
              Schenck
       (Continued)
 Nos.293 Rarig Engineering)
 Company.
PIT A.
Plat 1, Mortar 48b, Car. 141
               55d, "
                        139
     2 "
               48a,
                        140
               47
                        137
           PIT B.
Plat 1, Mortar 45, Car. 293
               54, "
55c, "
14, "
  n 2, n
                        126
                        112
```

Conduit ducts for electric wires have been laid connecting all batteries and primary fire control stations, except Batteries Thomas Parker and Isaac Van Horne.

and the first transfer of the contract of the

```
Name of: Name and armament of: Date when
                                                                                                                    : Total Cost :
Harbor
                                           battery
                                                                                    : turned over: to that
                                                                                                                                                          : REMARKS
                                                                                    : to Artil-
                                                                                                                      : date.
                                                                                    : lery
### CONTROL POLICE OF A SECTION OF A SECTION
                                        FORT CASEY:
                        Battery John Valleau,
                                                                                       ) May 22,
                                                                                                                          $92,125.00
                                                                                                                                                             Garrisoned
                        Mounted:
                                                                                              1907
                                                                                                                                                             Magazines dry
                        6-in. R.F.Rifles, Model)
                        1905, Nos.18, 20, 21, 22
                        Watervliet Arsenal
                        6-in.disappearing car-
                        riages, Model 1903, Nos.
                        76,77,78 Detrick &
                        Harvey Machine Co. and )
                        No.83 Bethlehem SteelCo)
                        Emp.1, Rifle 18, Car.76
                                                        20, "
                                  2
                                                                           77
                                                        21, "
                                   3
                                                                           78
                                                        22,
                                                                           83
                       Battery Thomas Parker,
                                                                                                                                                             Garrisoned
                                                                                          May 22,
                                                                                              1907
                                                                                                                         $50,380.00
                       Mounted:
                                                                                                                                                            Magazines dry
                        6-in. R.F.Rifles, Model
                       1905, Nos. 3 & 12 Water-
                       vliet Arsenal.
                        6-in.disappearing car-
                        riages, Model 1903, Nos.
                        74 & 75 Detrick & Har-
                        vey Machine Co.
                       Emp.1, Rifle 3, Car.74
2, 12, 75
Battany John ""
                                                                                           May 22,
                       Battery John Trevor
                                                                                                                         $15,800.00
                                                                                              1907
                                                                                                                                                             Garrisoned
                       Mounted:
                       3-in. 15 pdr.Guns, Model)
                                                                                                                                                            Magazines dry
                       1903, Nos. 39 & 50
                       Watervliet Arsenal.
                       15 pdr.barbette car-
                       riages, Model 1903, Nos.
                       20 & 21. Watertown Ar-
                        senal.
                       Emp.1, Gun 39, Car.20
                    " 2, " 50, " 21
Battery Isaac VanHorne
                                                                                          May 22,
                       Mounted;
                                                                                              1907
                                                                                                                         $14.695.00
                                                                                                                                                             Garrisoned.
               2 3-in.15 pdr.Guns, Model
                                                                                                                                                            Magazines dry.
                       1903, Nos. 37 & 38, Water-
                       vliet Arsenal.
                       15-pdr.barbette car
                       riages , Model 1903, Nos
                       18 & 19, Watertown
                       Arsenal.
                       Emp.1, Gun 37, Car.18
                          " 2,
                                           " 38, " 19
```

material telephone and the best file.

Name of: Name and armament of: Date when: Total Cost: REMARKS
Harbor: battery.: turned over: to that: (All references: to Artil-: date.: are to mean low: lery.: water.

F 16 FORT CASEY. X Primary Station, Fire) Ref. of site Command, Batteries 96.20 Kingsbury, Valleau and) Ref. of inst. Trevor. axis 104.28 Feb.4. \$8,370.00 (a)x B'8 Primary Station, Bat-1904 Ref. of site tery Command, Battery 87.70 William Worth. Ref. of inst. (Changed from B'9 axis 95.78 (Moore) since Decemb-) er 31, 1907).

x Concrete structures, one room on two levels.Plotting room 7'6"x15' x 10'6" high. Observation room 10'x12'6" x 7'6" high.

Not conspicuous at a distance of four miles when viewed from the usual channels of approach.

(a) Plotting room enlarged to 15'x 20' x 10'6" high.

B'10 Primary Station Bat-) Oct.6, tery Command, Bat-) 1905. \$3,905.34 tery Henry Kingsbury)

Ref.of site 80.18 Ref. of inst. axis 90.28 One room on two levels. Plotting room 15'4"x 16'x 7'6" high. Observation room ll'x l6'x 7' high. Reinforced concrete, steel roof supports and shutters. Roof of plotting room glass lenses set in concrete. Not conspicuous at a distance of four miles when viewed from the usual channels of approach.

```
Harbor
                                 : turned over: to that
                battery
                                                            :(All references
                                 : to Artil- : date.
                                                             :are to mean low
                                 : lery.
                                                             :water.
= ariamentalista ana alamanas sa salatan sa sa ariamena ariamenana kan mengang mengang kan kalan kenara kan ka
            Fort Casey
                                                             Ref of site
             (Seymour)
            Observation room
                                                               105.28
            14'x 20' x 7' high.
                                                             Ref. of inst.
             Plotting room 18'x 20'
                                                             axis 122.28
             x 8' high.
             Storeroom, 10'6"x 20')
            x 10'8" high.
       317
             (Schenck)
                                                             Ref. of site
            Observation room
                                                                105.28
             14'x 20' x 7' high
                                                             Ref. of inst.
                                                             axis 117.28
            Plotting room
                                    June 11.
             18' x 20' x 8' high
                                     1908
                                                $11,005.70
             Storeroom 10'6"x 20')
            x 5'8" high.
       F 5
             (Casey)
                                                            Ref.of site
            Observation room
                                                               105.28
            14' x 20' x 6'10"
                                                             Ref. of inst.
            high.
                                                             axis 112.28.
            Telephone Booths,
            each 3'2"x3'6"x8'
            high.
            Room in rear, 18' x
            20' x 8' high.
            Above three stations)
             in one building.
            Sewell type.
       B'8
            (Worth)
            Extension of plot-
             ting room 12'6"x15'x)
            10'6" high concrete )
            walls, wire glass roof
                                      June 11,
            in iron rafters.
                                       1908
                                                 $1.175.33
       B'9
            (Moore)
            Observation room
                                                              Ref. of site
            11'x 16' x 7' high
                                                                  80.18
                                    June 11,
            Plotting room
                                                              Ref.of inst
            16'x 18'x 7'6" high )
                                      1908
                                                 $ 3,855.68
                                                              axis 90.28
            High site.Reinforced)
            concrete structure. )
```

See to the second of the secon

Name of : Name and armament of : Date when : Total Cost : REMARKS

These stations not conspicuous at a distance of four miles when viewed from the usual channels of approach.

```
Name of: Name and armament of: Date when
                                             Total cost : REMARKS.
                battery.
                              : turned over: to that
Harbor
                                                        :(All references
                              : to Artil- : date.
                                                        :are to mean low
                              : lery
                                                        : water.
FORT CASEY.
          4 (Seymour)
                                                         Ref.of site
            Supplementary +
                                                            10.28
            Room 9'11"x 10'x 7'
                                                         Ref. of inst.
            high.
                                                         axis 20.28
      B" 17
            (Schenck)
                                                         Ref.of site
            Supplem entary
                                 June 11.
                                                             10.28
                                                         Ref of Inst.
            Room 9'11"x 10'x7'
                                  1908
                                            $2,634.94
            high.
                                                         axis 20.28
      B" 10 (Kingsbury)
            Supplementary.
            Room 9' 10"x 10'x7'
                                                         Ref of site
                                                             10.28
            Above three stations)
                                                         Ref. of inst.
                                                         axis 20.28.
            in one building
            Sewell type.
                                                         Ref. of site
      F#4
            (Casey)
            Room 9'11"x 10'x7'
                                                           158.28
                                                         Ref.of inst
            high.
                                                         axis 163.28
      B"7
            (Schenck)
            Room 91 11"x 10'x 7!
                                                         Ref of Site.
            high.
                                 June 11.
                                                           158.28
                                   1908
                                            $ 2,001.68
                                                         Ref. of inst.
                                                         axis 163.28
            Above two stations
            in one building
            Sewell type, with
            dormitory 10'x20'6"
            x 9' high, in rear
      B"8
            (Worth)
                                                         Ref. of site
            Room 9'11"x 10'x 7'
                                                           162.28
                                                         Ref. of inst.
            high.
                                                         axis 167.28
      B"9
                                                         Ref.of site
            (Moore)
                                 June 11,
                                                           162.28
            Room 9'11"x10'x7'
                                  1908
                                            $ 2.029.01
                                                         Ref. of inst.
            high.
                                                         axis 167.28
            Above two stations
            in one building.
            Sewell type with
            dormitory 10'x 20'6")
            x 9' high in rear.
```

The state of the s

These stations not conspicuous at a distance of four miles when viewed from the usual channels of approach.

Name of : Name and armament of : Date when : Total Cost : REMARKS. battery. : turned over: to that : (All references : to Artil- : date. :are to mean low : lery. : water. FORT CASEY: Switchboard Station. Room 16'x 20' x 8') June 11, Ref of Site. 1908 \$3,270.08 70.08 Storage battery room 20'x 20'6"x 8' high. Switchboard and storage battery rooms in one building, Sewell type located in traverse of) left flank Battery Trevor. Meteorological Station) Room 6'x 6'x7' high.) June 11, \$ 428.03

F'6 (Casey). T 2 Tide Gauge Station June 11 One room 8'x10'x7' 1908. \$ 871.69 Ref of site high. Frame building) 18.88 on Engineer Department) Wharf.

1908

These stations are not conspicuous at a distance of four miles when viewed from the usual channels of approach.

Detached building.Sew-)

ell type, adjacent to

One	dormitory) Nov.2,		
) 1908	\$ 900.06	Ref.of site
				162.6

Ref.of site

98.78

GENERAL DESCRIPTION OF THE

TIDE-GAUGE AT

FORT CASEY, WASH.

A cedar float treated in boiling parafine wax, inclosed in a wooden box and supporting a wooden graduated staff extending up through the house on which the height of tide is denoted by a pointer.

An observer in the house transmits the data by telephone to the observing and the plotting rooms.

FORT CASEY.

SEARCHLIGHTS.

One 30-inch diameter. General Electric Co.
Date of purchase unknown. Received by transfer from
Lieut. R.M.Mitchell, Artilhery Corps, Fort Wright, N.Y.
February 8, 1904.
Electrically and hand controlled.
Independent power plant.
Plant fixed. Projector mounted on truck.
Degree of mobility limited by length of conductor.
Returns made by Artillery.
Cost of projector unknown.
Transferred to Artillery February 6, 1905.

One 30-inch diameter, General Electric Co.

Date of purchase unknown. Received by transfer from

Major J.G.D.Knight, Corps of Engineers, November 14,1898.

Electrically and hand controlled.

Independent power plant.

Plant fixed, projector mounted on truck.

Degree of mobility limited by length of conductor.

Returns made by Artillery.

Cost of projector unknown.

Transferred to Artillery August 7, 1905.

One 36-inch diameter. General Electric Co. No.23.

Date of purchase unknown. Received by transfer from Chief of Engineers, U.S. Army, December 17,1907.

Electrically and hand controlled.

Independent power plant.

Plant on truck. Projector mounted on truck.

Degree of mobility unlimited. The entire outfit is portable.

Returns made by Artillery.

Cost of projector unknown.

Transferred to Artillery March 25, 1908.

DATUM MARKS.

FORT CASEY.

One known as "Shields" located off the shore of Admirality
Bay in 14 feet of water at low tide, aximuth from F'6 302.19°, range
7.093.98 yards.

One known as "Jenne" located under secondary stations B"8 and B"9 in 15 feet of water at low tide.

Each datum mark consists of a cluster of creosoted piles on which white boards are nailed and a black square painted. The center of the square is 10 feet above mean low water.

Cost of the two \$275.00.

Not transferred to Artillery.

Datum points visible from Forts Worden, Casey and Flagler.

	inden en e		ddamadadaar	era rena merena ara ara ara
Name of		Date when:	Total cost	
Harbor		turned over:		: REMARKS.
	:	to Artil- :	date	•
	:	lery. :		•
***************************************	NO THAN THAN A THE SAME AND		process makes and process of the same state of t	
Admiralt			بست بالتالة	
Inlet,	Battery Alanson Randol,		\$232,554.97	
Puget) 1902	• • • •	Alteration to
Sound 2	10-in.B.L.Rifles, Model)		batteries com-
	1888 MII, Nos.6 &39)		pleted.
	Bethlehem Steel Co.)		Magazines dry.
2	10-in. nondisappearing)		
	carriages, Model 1893,)		Battery Randol
	Nos.7,8, Morgan Engin-	} .		2 guns only
	eering Company.)		Empls.1 & 2.
	Emp.1, Rifle 39, Car. 7	<u>)</u>		
	¹¹ 2, ¹¹ 6, ¹¹ 8)		
)		
	Battery Augustus Quarles)		Magazines dry
	Mounted.)		
3	10-in.B.L.Rifles, Model			Battery Quarles
	1888 MII, No.36&37,)		3 guns, by
	Bethlehem Steel Co.)		addition of
	Model 1888, No.12,)		gun No.3 of
	Watervliet Arsenal.)		Randol which is
3	10-in. nondisappearing-	<u>)</u> .		Empl.No.1 of
•	carriages, Model 1893,) '		Quarles.
	Nos.1 & 9 and 11, Water-)		
	town Arsenal.)		
	Emp.1, Rifle 36, Car.9)	*	
	" 2 " 37, " 1)		
	" 3, " 12, " 11) x	x	=This gun placed
)		out of com-
	Battery Joseph Ash.)		mission March
	Mounted.)		16, 1909.
2	12-in.B.L.Rifles Model) .		
	1888 MII, Nos.9 & 10,)		3 # 3
•	Bethlehem Steel Co.	?		Magazines dry.
2	12-in.nondisappearing	1		
	carriages, Model 1892)		
	Nos.3 (altered gun lift	}		
	& 27, Watertown Arsenal	,		
	Emp.1, Rifle 9, Car.27	}		
	" 2, " 10, " 3)		

Batteries Randol, Quarles and Ash altered at a cost of \$50,215.00 since date of original transfer to Artillery.

Changes in Randol and Quarles authorized by Secretary of War March 9, 1909. G.O. No.8, Hdqrs. Artly District of Puget Sound March 16, 1909.

```
Name of: Name and armament of: Date when
                                             : Total cost
                               : turned over: to that
                                                          : REMARKS.
                 battery
Harbor
                               : to Artil- : date.
                                : lery.
              FORT WORDEN:
Admirality
                                              $142,500.00
                                                           Garrisoned
          Battery Henry Benson )
Inlet.
                                                           Magazines dry.
Puget
          Mounted;
 Sound 2 10-in.B.L.Rifles, Model)
                                                           Retracting
          1900, Nos. 12 and 14,
                                                           motors have
                                   April 24,
          Watervliet Arsenal
                                                           been installed,
                                    1.908
        2 10-in. disappearing
                                                           but are not
          carriages, Model 1901
                                                           connected with
          Nos.6 & 7 Watertown
                                                           the power lines.
           Armenal
          Emp.1, Rifle 12, Car.6
                                                           No other motors
                                                            to be installed.
                      14, "
       Electric fixtures and light and power mains installed at
batteries Randol, Quarles, Ash and Benson.
               FORT WORDEN:
          Battery Thomas Vicars ) June 16,
                                                            Garrisoned
                                              $11,000.00
                                                           Magazines dry.
                                    1902
          Moun ted:
           5-in.B.T..Rifles, Model
          1897, Nos.9 & 22 Beth-)
          lehem Steel Company.
           5-in. balanced pillar
          mounts. Model 1896, Nos.)
           9 & 20. Bethlehem Steel)
           Company.
           Emp.1, Gun 22, Car.20
                     9, "
           Battery John Brannan
                                  )June 16, x= $162,102.12
                                                            Garrisoned
           Mounted:
                                                            Magazines dry
                                  ) 1902
           12-in. B.I..Mortars,
                                                            except in
           Model 1890 MI, Nos. 49,
                                                            Pit B.
           50,51 Builders Iron
           Foundry, Nos.21,24 Nil-)
           es Tool Works; Nos.32
           54,56 Watervliet Arsen)
           al.
           12-in.Mortar carriages)
           Model 1896, Nos. 252,
           253, 254, 255, 256, 257,
           258,259 Rarie Engin-
           eering Company.
```

Plat 1, Mortar 51, Car. 259

2,

3,

50, "258

54,

32,

" 256

" 257

x = Total cost Batteries
Brannan and Powell.

```
Name of: Name and armament of: Date when
                                                             : REMARKS.
Harbor
                 battery.
                                 : turned over: to that
                                 : to Artil-
                                               : date.
                                 : lery.
              FORT WORDEN.
          Rattery John Brannan,
             (Continued)
                 PIT B
        Plat 1, Mortar 49, Car. 255)
              2,
                        24, "
                               254)
                        21,
                               252)
                               253)
                        56,
           Battery James Powell,
           Moun ted:
                                                               Magazines dry
        8 12-in.B.L.Mortars,
           Model 1890 MI, Nos27&52)
           Builders Iron Foundry,)
           Nos.1,15,16,20,22,
           Niles Tool Works: #105
           Watervliet Arsenal,
        8 12-in. Mortar carriag-)
           es Model 1896, Nos. 244,)
           245, 246, 247, 248, 249, 250
           251. Rarig Engineering)
        Plat 1, Mortar 16, Car. 251)
              2,
                         1,
                        52,
                               248)
                       15,
                               249)
                 Pit B.
        Plat 1, Mortar 27, Car. 247)
                      105, "
              2,
                               246)
                        22, " 245)
              3,
```

Lighting fixtures and mains installed at Batteries Brannan and Powell.

244)

20,

and wiring in

battery. No motors are to be placed on these car-

riages.

```
Name of: Name and armament of: Date when
                                               : Total cost :
                 battery.
Harbor.:
                                 : turned over: to that
                                                             : REMARKS.
                                 : to Artil- : date.
                                 : lery.
              FORT WORDEN:
          Battery Cornelius
                                    May 21,
                                                $104,500.00
                                                              Garrisoned
                                     1907
                    Tolles,
                                                              Magazines dry
          Mounted:
                                                              Central Elec-
          6-in. B.L. Rifles, Model)
                                                              tric plant for
          1903, Nos. 39, 50, 58 &66 )
                                                              light and power
          Watervliet Arsenal
                                                              completed.Wires
          6-in.disappearing car-)
                                                              and fixtures
          riages, L.F. Model 1903,)
                                                              for lighting
          Nos.56,58,59& 60 Det-
                                                              installed. No
          rick & Harvey Machine
                                                              provision made
        Company.
Empl.1, Rifle 66, Car. 60
                                                              for power wires
                                                              to battery. No
                      58, "
                              59
             2, "
                                                              motors are to
                      50,
                              58
                                                              be placed on
                      39,
                              56
                                                              these carriages
          Battery Amos Stoddard )
          Mounted;
          6-in.B.L.Rifles, Model )
                                    May 21,
                                                $91,000.00
                                                              Garrisoned.
          1903, Nos.17, 19, 45, 61
                                     1907
                                                              Magazines dry.
          Watervliet Arsenal
                                                              Central elec-
          6-in.disappearing car-)
                                                              tric plant for
          riages, L.F. Model 1903,)
                                                              light and power
          Nos.44,43,89,90 Wellman
                                                              completed. No
          Seaver, Morgan Co.
                                                              provisions made
        Emp.1, Rifle 17, Car. 43
                                                              for light and
                     19, "
             2,
                             44
                                                              power wires to.
                     45,
                             89
                                                              or fixtures
```

61,

Name of: Name and armament of: Date when: Total cost:
Harbor: battery.: turned over: to that: REMARKS:
to Artil-: date.
: lery.:

FORT WORDEN.

Battery Samuel Walker)
No guns er mounts on)
hand.

2 3-in.pedestal mounts in place. #76 & 77, Model 1903, Watertown Arsenal. 15 pdr.Rifles not yet received.

Battery Haldimand Putnam

Mounted:

- 2 3-in.,15 pdr.Rifles Nos.23 and 24, Model 1903, Watervliet Arse-)
- 2 3-in.pedestal mounts,)
 Nos.14 and 15, Model
 1903, Watertown Arsenal)
 Emp. 1, Rifle 23, Car.14
 2, "24, "15)

May 21, 1907 \$12,000.00

Garrisoned.

Magazines dry
Central electric plant for
light and power
completed. No
provisions
made for light
and power
wires to,or
fixtures and
wiring in battery.

\$12,000.00

Garrisoned.
Magazines dry
Central electric plant for
light and power
completed. No
provisions made
for light and
power wires to,
or fixtures and
wiring in
battery.

```
Name of : Name and armament of : Date when
                                             : Total cost : REMARKS.
                                : turned over: to that
                                                           :(All references
                 battery
Harbor
                                 to Artil- : date.
                                                           :are to mean low
                                                           : water).
                                : lery.
               FORT WORDEN.
                                                            Ref. of site
        C 1 Battle Command
                                                              278.28
          Observation room 16' x)
                                                            Ref. of inst
                                                            axis 292.39
          18'4"x7' high Dist.
          Commander's room 8'2"
          x 10' x 8' high
          Meterrological room
                                              $4,027.38
          8'2"x 8'6"x 8' high
                                  June 16.
          Storeroom 8' x 8' x 8')
                                    1908
          Nine telephone booths
          Two 3'x 3'6"x 8' high
          Five 3'2"x 3'5"x 8'
          high.
          Two 3'8"x 3'10"x 8'
          high.
          Sewell type building.
                                                            Ref. of inst.
       B'3 (Benson)
                                                            axis 278.39
          Observation room.
                                                            Ref. of site
                                   June 16.
          16'3"x 14'x 7' high
                                    1908
                                                            272.07
          Plotting room.
          16'3"x 12'6"x 8'4"
          high.
                                                            Refof site
                                 )June 16.
       F'2 (Worden)
                                                              277.07
                                    1908
          Observation room
          17'x 14'x 7' high
                                               $5,213.74
                                                            Ref. of inst.
                                                            axis 283.39
          Plotting room
          17'x 17'6"x 8'4" high
          Telephone booths (two)
          4'6"x 4'6"x 8'4" high
          Above two stations in
          one building. Sewell
          type.
```

These stations not conspicuous at a distance of four miles when viewed from the usual channels of approach.

```
Name of : Name and armament of : Date when : Total cost : REMARKS
Harbor : battery. : turned over: to that : (All references : to Artil- : date : are to mean low : lery. : : water).
```

FORT WORDEN.

B'l (Powell) Observation room. 20' x 14' x 7' high Plotting room 20' x 18' x 8'4" high,)			Ref of site 268.07 Ref.of inst. axis 274.39
F'l (Brannan) Observation room, 20' x 14' x 7' high Plotting room, 20' x 18' x 13'4" high) Storeroom 20' x 14' x 5' high)	June 16, 1908	\$9 , 246 . 93	Ref.of site 268.07 Ref.of inst axis 279.39
B'2 (Ash) Observation room, 16' x 14' x 7' high Plotting room, 16' x 18' x 8'4" high Officers' room 7'5" x 9'6" x 9'8" high. Mens' room, 16'x 18'x 9'8" high Above three stations in one building, Sewell type.			Ref.of site 268.07 Ref.of inst. axis 284.39

These stations are not conspicuous at a distance of four miles when viewed from the usual channels of approach.

```
Name of : Name and armament of : Date when : Total cost : REMARKS.

Harbor : battery. : turned over: to that : (All references : to Artil- : date. : are to mean : lery. : :low water)
```

FORT WORDEN: Ref. of site B'5 (Quarles) 262.95 Observing room, Ref. of inst. 16' x 14' x 7' high, axis 282.39 Plotting room, 16' x 18' x 8' high Officers' room, 7'5"x 10'6"x 8' high Mens' room 16' x 18' x 8' high Storeroom 16' x 14' x 4'2" high F'3 (Worden) Ref.of site Observing room 262.95 16'x 14' x 7' high Ref. of inst. Plotting room, 16' x 18' x 8' high axis 282.39 Officers' room 7'5"x 10'6"x 8' high June 16, \$9,571.41 1908 Mens' room 16'x 18' x 8' high Storeroom, 16'x 14'x 4'2" high Ref. of site B'6 (Randol) 262.95 Observation room Ref. of inst. 18' x 14'x 7' high axis 282.39 Plotting room 18' x 18' x 8' high Officers' room. 9' x 10'6" x 8' high Mens' room, 18' x 18' x 8' high Storeroom,

These stations are not conspicuous at a distance of four miles hen viewed from the usual channels of approach.

18' x 14' x 4'2" high Above three stations in one building, Sewell

type.

THE PART OF THE PA

These stations are not conspicuous at a distance of four miles hen viewed from the usual channels of approach.

C 1 and B'5 in excavation)

```
Name of : Name and armament of :: Date when : Total cost : REMARKS.
                                :turned over : to that
                                                           : (All references
                battery.
Harbor
                                             : date.
                                                           :ate to mean low
                                :to Artil-
                                                           :water).
                                :lery.
              FORT WORDEN.
                                                            Ref.of site
          Central Quarters
                                                               260.49
                   Building.
          Officers' rooms, two
          each 16'x 30'6"x 9'
          high.
          Officers' wash rooms,
          two each 16'x 8'x 9'
          high.
          Mens' room, two, each
          26' x 39'x 9' high.
          Mens' wash rooms, two,
          each 12'x 16'x 8'3"
                                              $9,674.81
                                   June 16.
          high.
                                    1908
          Location, between C 1
          and B'l in excavation
          Latrine in rear, with
          two rooms, each 13' x
          12'6"x 9'5" high. all
          Sewell type.
        T 1 Tide Gauge Station )
          One room, 10'x 10'x 8'
                                                            Ref of site
          high. Frame building
                                 ) June 16,
```

The stations are not conspicuous at a distance of four miles when viewed from the usual channels of approach.

1908

on the Quartermaster

Department wharf.

\$1,021.87

12.18

Name of Harbor	Name and Armanent of battery	Date when: Transferred: To: Artillery:	Cost to that	REMARKS
Admirality Inlet.	FORT WORDEN: One district signal station Brick structure with concrete foundation and slate roof, outside dimensions 18 ft.by 24 ft.6 in. Three rooms, operating room 12 ft.by 16 ft generator room 8 ft by 10 ft.; work room 6 ft.10 in.by 7 ft.6 in. All rooms 8 ft. high. Observation station on roof.	June 16, 1909	\$2800 :	

---0---

ELECTRIC PLANT. (Central)

Location;

About 600 feet south of Battery Brannan and 1,200 feet west of Battery Stoddard.

Boilers;
Two Babcock & Wilcox water tube boilers, 150 HP. Purchased June 30, 1904.

Engines;
Three McEwen steam engines, 150 HP each, stroke 14-inches, bore 15 inches, speed 275 R.P.M., Nos. 1419, 1421 and 1422. Purchased June 30, 1904.

Generators;
Three Thomas-Ryan direct connected generators, capacity 75 kilowatts, 300 amperes, 250 volts, speed 265 R.P.M., Nos. 543, 545 and 546. Purchased June 30, 1904.

Transformers;

Storage Batteries;
None.

Independent Plants:

None. The central station will furnish all current for light and power at all emplacements at Fort Worden. No power to be furnished for searchlights, as each searchlight has its own portable plant.

Kilowattage required:

For inside and outside illumination of defensive works; 50 KW.

For motors; 45 K.W.

For searchlights; none. For telautographs; 4 KW For post lighting; 75 KW

Power house and plant has been so designed as to permit of one parallel unit for future demands.

Total cost of plant \$89000(Paid.from Engineer Department funds \$64000, from Q.M.Department funds \$25000).

Transferred to Coast Artillery on June 20,1907.

SEARCHLIGHTS.

One 36-inch diameter, General Electric Co.
Date of purchase unknown. Received by transfer from
Lieut.S. Avery, Jr., Artillery Corps, Fort Howard, Md.
January 11,1904.
Electrically and hand controlled.
Independent power plant.
Plant fixed. Projector mounted on truck.
Degree of mobility limited by length of conductor.
Returns made by Artillery.
Cost of the projector unknown.
Transferred to Artillery February 6,1905.

namenteriorista de la comença d

One 30-inch diameter, General Electric Co.
Date of purchase unknown. Received by transfer from
Major J.G.D.Knight, Corps of Engineers, November 14,1898.
Electrically and hand controlled.
Independent power plant.
Plant fixed. Projector mounted on truck.
Degree of mobility limited by length of conductor.
Returns made by Artillery.
Cost of projector unknown.
Transferred to Artillery August 7,1905.

TIDE - GAUGE.

The tide gauge is located in T 1 -Tide Gauge Station, which contains one room, 10' x 10' x 8' and is furnished with one vertical tide gauge.

Transferred to the Artillery June 16, 1908.

Cost of frame building and tide gauge, \$1,021.87.

Ref. of site 12.18 (M.L.W.)

DATUM POINTS.

Datum point located south of Quartermaster wharf at 1446.09 S 1882.91 E rebuilt in May 1907. Now in use. Cost \$125.00. Transferred to Artillery in January, 1905. Visible from Forts Flagler and Casey.

"Simms" datum at 588.92 S For use of Fort Worden only. Visible from Fort Casey.

NOTE: = "Wilson" datum carried away by storm November 30,1909.

```
Name and Armament of
                                                                                                     : Date when
                                                                                                                                             : Total
Name of
                                                                                                                                             :cost to : REMARKS.
                                                                                                        turn ed
                                                       battery.
Harbor
                                                                                                                                             :that date:
                                                                                                     : over to
                                                                                                     : Artillery
                                                                                          ்று பது மது மது முது முது முற்ற சன்ற மன்ற முற்ற நடிய முற்ற முக்கும் இரு முற்ற முற்ற முற்ற முற்ற முற்ற முற்ற முற
முற்ற நடிய முறு முறு முறு முறு முற்ற ம
AND THE REAL PROPERTY AND THE PROPERTY A
Richs
                                        FORT WARD:
Passage,
                                                                                                                                          $120,432.00 Garrisoned
                                                                                                         )Jan.18,
Puget
                              Battery Francis Nash,
                                                                                                                                                                               Magazines wet
                                                                                                              1904
   Sound.
                              Mounted:
                                                                                                                                                                               from condens-
                         38-in. B.L.Rifles, Model
                                                                                                                                                                               ation.
                               1888, Nos.2 & 6, West
                              Point Foundry; Model
                               1888, MII, No. 42, Water-
                               vliet Arsenal.
                         3 8-in.disappearing car-
                               riages, L.F. Model 1896
                               Nos.36,37 and 38 Water-
                               town Arsenal.
                               Emp.1, Rifle 6, Car.36
                                                                42, "
                                           2,
                                                                                   - 37
                                                                                                                                          $ 24.934.96 Garrisoned
                                                                                                          ) Jan 18.
                               Battery William Warner
                                                                                                                                                                               Magazines wet
                                                                                                                 1904
                               Mounted:
                                                                                                                                                                                from condens-
                         2 5-in. B.L.Rifles, Model
                                                                                                                                                                                ation.
                               1900, Nos. 15 & 19, Water-)
                                vliet Arsenal.
                         2 Pedestal mounts, Model
                               1903, Nos.12 & 13, Morgan)
                                Engineering Company
                               Emp.1, Gun 15, Car.12
                                        2, " 19, " 13
                                                                                                               Jan 18, $ 10,966.50 Garrisoned
                               Battery John Vinton
                                                                                                                                                                                Magazines wet
                               Mounted:
                                                                                                                 1904
                                                                                                                                                                                from condens-
                          2 3-in. B.L.Rifles, Model
                                                                                                                                                                                ation
                                1898. Nos. 2 and 5.
                               Driggs Seabury Gun &
                                Ammunition Manufacturing)
                                Company.
                          2 3-in. Masking parapet
                               mounts, Model 1898, Nos.
                                2 and 5, Driggs Seabury
                                Gun & Ammunition Manu-
                                facturing Company.
                                Emp. 1, Gun 2.
                                         2, Gun 5.
```

Independent generating set/installed for light and power at Battery Nash. Wiring and fixtures installed.

```
: Name and Armament of
                               : Date when
                                            :Total
                               : turned over :cost to: REMARKS
Harbor.
                battery.
                               : to Artillery:date
FORT WARD:
                                           $21,884.50 Garrisoned
        Battery Thomas Thornburgh Jan. 18,
                                                     Magazines wet
                                 1904
        Mounted:
                                                     from condens-
       4 3-in.B.L.Rifles, Model
                                                     ation.
        1898, Nos. 9, 15, 40 & 45
        Driggs Seabury Gun&Ammun-)
         ition Manufacturing Co.
      4 3-in.masking parapet mounts,
        Model 1898, Nos. 9, 15, 40 & )
        45 Driggs Seabury Gun &
        Ammunition Manufacturing
        Company.
        Emp. 1, Gun 9.
             2,
                  15,
                   40.
             3,
                  45.
            MIDDLE POINT.
Richs
                                           $9,473.00
                                                      Garrisoned
        Battery Robert Mitchell, ) Jan.18,
Passage
                                                      Magazines wet
        2 Emplacements for 3-in. ) 1904
Puget
                                                      from condens-
        R.F.guns on pedestal
Sound
                                                      ation.
        mounts. (No guns or mounts)
        on hand)
              FORT WARD.
                                                      Ref of site
                                ) June 28,
                                           $ 6,252.28
        Primary Station
                                                       209.67 Ref.
                                ) 1905
        Battery Francis Nash
                                                       of inst.axis
                                                       221.21. Two
                                                       rooms. Instru-
                                                      ment room, 10'
                                                       6"x 15'4"x7'
                                                      high.Plotting
                                                       room 15'5"x
                                                       16'x7'5" high.
                                                      Reinforced con
                                                       crete structure
                                                      Not conspicu-
                                                       ous at a dis-
                                                       tance of four
                                                      miles when
                                                       viewed from the
                                                      usual channels
                                                       of approach.
```

No provision made for electric plant, wiring or fixtures for Batteries Warner, Vinton, Thornburgh and Mitchell.

: Name and Armament of : Date when : Name of : turned Harbor battery : cost to : over to : that : Artillery:: date and the common the commentation and the common the comm MIDDLE POINT: x 1 Torpedo Storehouse) Dec.4. \$9,000.00 Garrisoned Outside dimcomplete. 1905 ensions 53'x 78' Brick and concrete. \$5,900.00) Dec.4, Three rooms: (x) 1 Mining casemate 7'9"x22'; 11' complete.) 1905 9"x 22'; and 11"x 22'.Outside dimensions of build ing 26'x37'6" \$5,900.00) Dec.4. Outside 1 Cable tank, complete) 1905 dimensions except apparatus for 23'x 80' handling cable. concrete tank with wooden roof.

x Dry. No provision made for heating or lighting.

(x) Damp.



DEFENSES OF PUGET SOUND, WASH.

December 31, 1909.

In Charge of Major C. W. Kutz, Corps of Engineers.

Name of : Name and armament of : Date when : Total cost : : REMARKS. : turned over: to that battery Harbor : to Artill -: date : ery FORT FLAGLER miralty These bet-Battery John Rawlins) teries were Mounted: 2 10-in.B.L.Rifles, Mod-) built by and. contract in el 1888, MII, Nos. 28 &) 35, Bethlehem Iron Co.) 1897-9 Magazines 2 10-in.nondisappearing) dry. carriages, Model 1893,) No.3, Watertown Arsenal and No.10 Morgan Eng-) ineering Company. Emp.1, Rifle 35, Car.10 2, 28, 3 🕽 gran bek enjásá kelő 🧸 A Battery Wilhelm Mounted: 2 12-in.B.L.Rifles, Mod-) el 1888, MII, Nos. 25 &) August 17 \$191,190.68 Garrisoned Magazines dry 1902 35. Watervliet Arsenal) The 2-12-in. 2 12-in.nondisappearing) guns are at carriages, Model 1891,)
Nos.l & 2 Watervliet this date dismounted Arsenal(altered gun) and alterat-

Battery Paul Revere Mounted:

Emp.1, Rifle 35, Car.2

25, " 1

lift)

- 2 10-in.B.L.Rifles, Mod-) el 1888, MII, Nos. 29 &) 30, Bethlehem Iron Co.)
- 2 10-in.nondisappearing)
 carriages, Model 1893,
 Nos.4 & 5, Watertown
 Arsenal

Emp.1, Rifle 29, Car.4

Magazines dry

being made by Ord. Department

ions of the

carriages

Electric wires for light and power installed at Batteries Rawlins, Wilhelm and Revere. Electric fixtures installed.

```
Name of : Name and armament of : Date when :
                                               Total Cost
                                                          : REMARKS.
                                 turned over: to that
                  battery
                                                date
                                  to Artil- :
                                    lery
                                               $15,000.00
                                                            Garrisoned
                                 August 17,
             Battery Lee
                                                            Magazines dry
                                   1902
              Mounted:
         2 5-in. R.F.Guns, Model)
            1897, Nos. 5 & 8, Beth-)
            lehem Iron Company
          2 5-in.balanced pillar)
           mounts, Model 1896,
            Nos.31 & 32, Detrick
            & Harvey Machine Co.
          Emp.l, Gun 5, Car.31
              2, 8, Car. 32
                                                             Garrisoned.
                                                $89,584.47
                                  August 17,
          Battery Henry
                                                             Magazines dry
                                               Town Core .
                                  1902
              Bankhead Mounted
                                 🕽 (ស្របូកគម្លាប់ នេះប្រសិន្តិភ
          8 12-in.B.L.Mortars
            Model 1890 MI., Nos'
            67,77,90,114,128,133)
            134 & 137, Watervliet)
            Arsenal.
          8 12-in.Mortar Car-
            riages, Model 1896, Nos.
            269,270,271,272,273
            274,275 & 276, Rarig
            Engineering Company
                 PIT "A"
                             Car
                                                             Magazines dry
          Plat 1, Mortar 114, 269
               2, "
                          77,270
                          90,272
                         133,271
                  PIT "B"
                             Car )
                                                              Magazines dry
          Plat 1, Mortar 134, 273 ) 32 44 34 44
                2, "
                          67,274
                         137,276)
                3,
                         128,275
```

Harbor

Fixtures and wires for lighting installed at Battery Bankhead.

Total Cost: : Date when Name of : Name and armament of : REMARKS. : turned over: to that battery Harbor date : to Artil- : lery. FORT FLAGLER: Battery James Calwell) April 23, \$89,500.00 1907 Mounted. 4 6-in.B.L.Rifles, Model) 1903, Nos. 48, 60, 65 &70)

Watervliet Arsenal 4 6-in.dfisappearing carriages, L.F. Model 1903) Nos.53,54,55 & 72; Detrick & Harvey Mach) ine Co. Emp.1, Rifle 48, Car.53 60 " 54 65, " 55

Garrisoned. Magazines dry Central electric plant for light and power completed. No provision made for light and power wires to, or fixtures and wiring in battery.

Mounted:

2 6-in.B.L.Rifles, Model) 1903, Nos. 68 & 69, Wat-) April 1909 ervliet Arsenal.

2 6-in.disappearing car-) riages, L.F. Model 1903, No.73, Detrick & Harvey) Machine Co. and No. 45 Wellman, Seaver, Morgan Company.

Emp.1, Rifle 68, Car.73 2, " 69, " 45

Battery John Grattan,) April 23, 48,000.00 1907

Garrisoned. Magazines dry Central Electric plant for light and power completed. No provisions made for light and power wires to, or fixtures and wiring in battery.

: Total Cost : Name of : Name and armament of : Date when REMARKS. turned over: to that battery Harbor : to Artil- : date. lery.

> FORT FLAGLER. Battery Edward Downes) 1 15 pdr. (3 in) B.L. Rifle, Model 1903, #27) Watervliet Arsenal 2 Pedestal mounts, Model) 1903, Nos. 78 & 79. Watertown Arsenal.)
> Emp.1, Rifle 27, Car. 78)
> 2, No rifle Rec. Car)

\$12,000.00 April 23. 1907

Garrisoned. Magazines dry. Central electric plant for light and power completed. No provision made

for light and power wires to, or fixtures and

wiring in bat-

tery.

Battery Thomas Wansboro. Mounted 2 15 pdr.(Sin)B.L.Rifles Model 1903, Nos. 35 &) 36, Watervliet Arsenal) 2 Pedestal mounts, Model) 1903, Nos. 16 & 17, Wat-) ertown Arsenal. Emp.1, Rifle 35, Car 16 2, " 36, " 17 1

) April 23, \$14,000.00) 1907

Tissic

Garrisoned. Magazines dry Central electric plant for light and power completed. No provision made for light and power wires to, or fixtures and wiring in battery.

```
Name of : Name and armament of : Date when : Total Cost : REMARKS.
                                                         :(All references
                               : turned over: to that
                  battery
Harbor
                                                          :are to mean low
                               : to Artil- : date.
                                                          : water.
                                : lery.
             FORT FLAGLER.
                                                           Ref. of site
        C 2 (Flagler)
  X
                                                           121.37.
           Observation room
                                                           Ref. of inst.
           16'x20' x 7' high
                                                           axis 154.37
           Dormitory 11' x 13'
           8" x 12' high.
        F'7 (Bankhead)
  x
                                                           Ref.of site
           Observation room
                                                           121.37
           13' x 20' x 7' high.) June 5,
                                             $8,495.13
                                                           Ref. of inst.
                                   1908
           Plotting room
                                                           axis 149.87.
           20' x 23' x 8'11"
           high.
            5 telephone booths
           each 3 x 3 6" x 12')
            high.
            Above stations in
            one building.Sewell ) 1 //.
            type.
        F ' (Rawlins)
           8 Additions to plot-
                                             $1,500.00
                                                           Ref. of site
            ting room 11'6" x
                                ) June 5,
                                                           118.17
            15'6" x 9'51" high
                                  1908
            4 Telephone booths
            each 3'6" x 3'6" x
            9'53" high.
          Dormitory, detached
            building , Sewell ) type 72' in rear of )
                                            $1,268.09
            F'9(Flagler). Of- ) June 5,
            ficers' room 10' x
                                  1908
            16' x 9' high.
            Men's room, 16' x 19!
            x 9' high.
```

x = Not conspicuous at a distance of four miles when viewed from the usual channels of approach.

	大学 に 一般 に 一	
Name of Harbor	Name and armament of Date when Total Costattery turned over to that to Artil-date.	t : REMARKS : (All references : are to mean low : water.
2555555	AND THE PARTY OF T	
	FORT FLAGLER.	•
x	F Primary Station, June 30, \$3,327.50 8 Fire Command, 1902 Battery John Rawlins Furnish ranges also to Batteries Lee, Grattan & Wansboro	Ref. of site 118.17. Ref. of inst. axis,144.57 One room 10' x 10'x 7' high, steel tower.
x	F ' Primary Station) June 26, \$4,318.24 9 Fire Command 1905 Batteries Wilhelm and Revere. Furnish ranges also to Batteries Calwell and Downes. Addition of 2 telephone booths made \$276.10	Ref.of site 123. Ref.of inst. axis,128.87 Two rooms. Inst.room 11' x 16' x 6'11" high .Plotting room 15'4" x 16'x 7'6" high.
	since transfer of station. Each booth 3'6" x 3'6" x 7'6" high.	Reinforced con-

x = Not conspicuous at a distance of four miles when viewed from the usual channels of approach.

		production county county group group and group group county county of the county county of the county county of the county county of the county count	1985年 1985	
Name of Harbor	Name and armament of battery	Date when : turned over: to Artil- : lery.	date	REMARKS. :(All references : are to mean lov : water.
ments and made and ring truly rand and		to the company of the		
x	FORT FLAGLER. B'll Primary Station, Battery Command Battery John Rawlins) 1905	\$4,651.36	Ref.of site 118.17 Ref.of inst. axis,144.57.
				Two rooms Inst.room 8'x 8'x6'3" high. Plotting room 14'11-1/2"x 14'
		Company of the compan		high. Concrete foundation and steel tower construction. Glass roof.
x	B'12 Primary Station, Battery Command, Battery Wilhelm) June 30,) 1902	\$3,327.49	Ref.of site 118.17 Ref.of inst. axis 144.57. One room 10' x 10' x 7' high. Steel tower.
x	B'13 Primary Station, Battery Command Battery Paul Revere Originally built for primary station on site of 11. Move to present site and		\$3,495.22	Ref. of site 115.87 Ref. of inst. axis 142.27 One room 10'x 10'x 7' high. Steel tower.
	transferred to Artil	-) Feb.10,	\$6,115.44	

x = Not conspicious at a distance of four miles when viewed from the usual channels of approach.

lery.

) 1905.

			in the state of th	g and a view transp transp transp transp transp transp transp transp transport to the transport
Name of Harbor	Name and armament of battery	Date when turned over to Artil-lery.	date.	: REMARKS. : (All references : are to meanlow : water.
Applied streets access places (French Trackey 111/20 St.	: ::::::::::::::::::::::::::::::::::::			
	B 13(Revere) Plotting room, 18' x 20' x 8' high Sewell type, in traverse behind battery.	June 5, 1908	\$1,543.33	Ref.of site
	F 7 (Bankhead) Secondary.Observation) room 10' x 10' x 7' high. Sewell type.	June 5, 1908	\$ 877.80	Ref.of site 81.37 Ref.of inst. axis 86.37.
	F'''7 (Bankhead) Supplementary. Observing Room,9' 11" x 10' x 7' high	Maria (K. 122) Crambal (M. 124) Con All (A. 1) Larry Control (A. 1)		Ref.of site 148.37 Ref.of inst. axis 153.37
	B"ll (Rawlins) Secondary, Observation room 9'll" x 10' x 7' high. Above two stations in one building, with dor- mitory in rear, 10' x 20'6" x 9' high. Sewell type.	June 5, 1908	\$1,816.10 22,000	Ref.of site 148.37 Ref.of inst axis 153.37
	B"12 (Wilhelm) Secondary. Observation room 9'11"x 10' x 7' high	\$ - 2,5456 \$ - 2,5456 \$ - 2,556 \$ - 3,566 \$ - 3,566		Ref.of site 84.37 Ref.of inst. axis 90.37
	B"13 (Revere) Secondary. Observation room 9'11"x 10' x 7' high. Two stations in one building with dormitory in rear, 16' x 20' x 9' high Sewell type.	June 5,1908	\$1,831.20	Ref.of site 84.37 Ref.of inst. axis 90.37

Above stations not conspicuous at a distance of four miles when viewed from the usual channels of approach.

	the control of the co	THE PART THE THE PART AND THE	· · · · · · · · · · · · · · · · · · ·	the same ones was the way with any time you may make the best time time time time time time time time
****	AND THE COLUMN TWO AND			•
Name of Harbor	battery	turned over: to Artil-: lery.	to that	: REMARKS. :(All references :are to mean los :water.
	THE PARTY NAME AND ADDRESS OF THE PA	the control was the control wa		
	B'12 (Wilhelm) Plotting room, 18' x 20' x 8' high, Sewell type, in traverse behind battery.			Ref.of site 120.87
	Switchboard station, 16' x 20' x 8' high,& Storage battery room			Ref.of site 120.87
	20'x 20'6"x 8' high One building, Sewell type, in traverse be-		g este a la la compania de la compa La compania de la co	
•	hind battery Wilhelm M 3 Meteorological	June 5,	\$4,656.66 data	
	Station. 5'x 5'x 8' high, in corner of switchboard room.	() BO IN THE STATE OF A STATE OF	(- 100 to 100 kg) : : : : : : : : : : : : : : : : : : :	
	Plotting room Battery Wilhelm, switchboard station, storage bat- tery room and meteor ological station in one building.			
	T 3 Tide Gauge Station One room, 8'x 10'x 8' 6" high. Frame build- ing on Engineer wharf) June 5,) 1908	\$1,400.00	Ref.of site
) Nov.2,1908	\$ 958.76	
•	One Latrine: One building, 21'x36'- 9',6" high. Sewell type. On terrain in rear of C 2. Officers end; 3 closed) 1909. Ad) Se) To	\$3567.90 d wer 882.59 ta1\$4450.49	Ref.of site (118,87
	stalls. 3 lavatories, 2 urinals. Mens end: 10 closed stalls; 8 lavatories, 10 urinals.			

Above stations not conspicuous at a distance of four miles when viewed from the usual channels of approach.

Name of Harbor	Name and Armament of battery	Date when turned over to Artil-	Total Cost to that Date	REMARKS
Admirality Inlet	FORT FLAGLER: Latrine, in rear of primary station. Two rooms, Officers room 10'6" x 19';9'6" high. Mens room 19'x 24';9'6" high. Sewell Type.) June 11,1909	\$4264.8	5
•	is the second of			: : : :

n Anglanda Barangan (1996) Ngga Pangalan (1986)

John Congress (1986) bittoricum

ELECTRIC PLANT.

CENTRAL PLANT:

Reinforced concrete building with concrete roof.

Boiler room, 38'0" x 41'0" x 20'6" high. Engine room, 31'0" x 41'0" x 16'0" high. Storage Battery room, 24'6" x 41'0" x 16'0" high. Work room, 8'0" x 14'0" x 16'0" high.

Location, 1400 feet south and 600 feet west from Battery Wilhelm.

Reference of site, (boiler room floor) 87.37 above mean low water.

Boilers. Two Babcock and Wilcox water tube boilers, 150 HP each, purchased June 30,1904.

Engines: Three McEwen steam engines, each 150 HP, stroke 14-inch, bore 15-inch, speed 275 R.P.M. Numbers 1420,1430 and 1431. Pur-

chased June 30, 1904.

Generators: Three Thompson-Ryan direct connected generators, capacity 75 KW, 300 amperes, 250 volts, speed 265 R.P.M.. Numbers 544,549 and 550. Purchased June 30, 1904.

Transformers: None.

Storage Batteries. None. The Central plant will furnish all current for light and power at all emplacements at Fort Flagler. No power to be furnished for searchlights, as each searchlight has its own plant.

e Required: For inside and outside illumination of defensive works, 31 KW Kilowattage Required: For motors, 32 KW | Hara Alee Machel Stude For searchlights, none. For telautographs, 8 KW For Post lighting, 77 KW

Power house and plant is designed and built to permit installation of one more parallel unit for future demands. Total cost of plant \$88000 (Paid from Engineer Dept.funds \$63000, from Q.M. Department funds \$25000.) Transferred to Coast Artillery, June 26, 1908.

> e in subsect the plant will The same thing a lab bill be graded in the first

n de la companya de la co

GENERAL DESCRIPTION OF THE TIDE-GAUGE

AT

FORT FLAGLER, WASH.

A cedar float treated in boiling parafine wax, enclosed in a wooden box and supporting a wooden graduated staff extending up through the house on which the height of the tide is denoted by a pointer.

An observer in the house transmits the data by telephone to the observing and the plotting rooms.

THE REPORT OF STREET AND MAKEN THE PA

and the contract of the contra

SEARCHLIGHTS.

FORT FLAGLER.

One 30-inch diameter. General Electric Co.
Date of purchase unknown. Received by transfer from Capt.R.H.C.Kelton, Artillery Corps, Fort Terry, N.Y., March 29, 1904.
Electrically and hand controlled.
Independent power plant.
Plant fixed. Projector mounted on truck.
Degree of mobility limited by length of conductor.
Returns made by Artillery.
Cost of projector unknown.
Transferred to Artillery, February 11,1905.

The said grade him

One 36-inch diameter. General Electric Co. No.22.

Date of purchase unknown.

Received by transfer from Chief of Engineers, U.S.A.

Dec.17, 1907.

Electrically and hand controlled.

Independent power plant.

Plant and projector mounted on track.

Degree of mobility unlimited; the entire outfit is portable.

Returns made by Artillery.

Cost of projector unknown.

Transferred to Artillery, March 25,1908.

ាក្រុម មិនប្រជាទៅ ស្រើមតានគឺ បានមហិងការសំពុះ មិនប្រកាសមានសមាន សំពេញ នៃសិស្សាងការសំពុំ

i para sa i dasagrija albem kanye. Ililay 1946 a

THE SECOND SECTION OF THE RESIDENCE AND THE

ján medzasításánsak nekető élő melépít el neketősik negy meleten sádájá 1968ák

्राप्ता के क्षेत्र के अस्ति के किया है। कि किया कि किय

THE BOOK OF THE RESERVE

DATUM POINT.

FORT FLAGLER, WASH.

Two temporary datum points located on wharf approach on west side of reservation.

Not transferred to Artillery.

Cost \$10,00

One visible from Fort Worden and one from Fort Casey.

The state of the latter of the state of the state of

```
Name and armament of : Date when
                                                                                                             Total Cost:
Name of:
                                                                                                                                       : REMARKS.
                                                                                                        : to that
                                                                          : turned
                                      battery
Harbor
                                                                          : over to
                                                                                                        : date
                                                                          : Artillery
                    네트 (IR THE PROPERTY AND THE PROPERTY AN
Admirality
                                 FORT CASEY.
   Inlet,
                                                                                                                                        Magazine
                          Battery William Worth,)
  Puget
                                                                                                                                        No.1 lined
                         Mounted:
  Sound
                                                                                                                                         with copper
                     2 10-in.B.L. Rifles,
                                                                                                                                         and cedar, dry.
                          Model 1895, Nos.12 & 15)
                                                                                                                                         Garrisoned.
                          Watervliet Arsenal.
                                                                                                                                         Emplacements 1
                     2 10-in. disappearing
                                                                                                                                         2,3,& 4 built
                          carriages, L.F., Model
                                                                                                                                         by contract in
                          1896, Nos. 59 & 60
                                                                                                                                        1897-1898
                                                                                  Empls.1-4) Emps.1-4
                           Bethlehem Iron Co.
                          Emp.1, Rifle 12, Car. 59
                                                                              ) June 16, )$103,894.49
                                                               7 60
                                                                                    1902.
                                                                                                                                        Magazine
                         Battery James Moore,
                         Mounted;
                                                                                                        )Emps.5-7
                                                                                                                                        No.1 lined
                                                                                                        )$138,392.41
                    3 10-in.B.L.Rifles, Model)
                                                                                                                                        with copper
                         1895, Nos.11 & 16 Water- Emp.5.
                                                                                                                                        and cedar. dry.
                         vliet Arsenal, and
Model 1895 MII, No. 40,
                                                                             ) Nov.27,
                                                                                  1905
                         Bethlehem Iron Co.
                    3 10-in. disappearing car
                                                                                                                                        Magazine #2 in
                          riages, L.F.Model, 1896)
                                                                                                                                        Battery Worth,
                         No.61 Bethlehem Iron
                                                                                                                                        Nos.2&3 in Battery
                          Co. No.64 Southwick
                                                                                                                                        Moore, and Nos.1
                                                                                                                                        and 2 in Battery
                          Found Y & Machine Co.
                          and No.72 Midvale Steel
                                                                                                                                        Kingsbury, usually
                         Works.
Emp.1, Rifle 16, Car.61
                                                                                                                                        dry, but
                                                                                                                                        occasionally damp.
                                                     11, 7 64 )
                                  2, "
                         Rifle 40 moved to #2
                         Kingsbury, replaced by )
                          rifle 29.
                        BatteryHenryKingsbury
                                                                               ) Nov.27
                        Mounted.
                                                                                 1905
                    1 10-in B.L.Rifle, Model ) a day and
                        1895 MII, No. 43, Bethle
                        hem Iron Co.
                    1 10-in. B.L.Rifle, Model))
                         1900 No.9, Watervliet
                         Arsenal
                    1 10-in. disappearing Car
                         riage, L.F. Model 1896, )
                        No.71, Midvale Steel Wks.
                    1 10-in.disappearing car)
                        riage, L.F. Model 1901, )
                        No.8 Watertown Arsenal)
                         Emp.1, Rifle 43, Car 71)
                                                       9 "
                                                                       8 V 3
```

Rifle 9 dismounted; lies on adjacent slope.

```
Total Cost:
          Name and armament of
                                 Date when
Name of
                                                            REMARKS
                                               to that
                                 Turned
                  battery.
Harbor
                                              date.
                                : over to
                                : Artillery. :
        FORT CASEY.
         Battery Reuben Turman) June 16,
                                             $18,850.00
                                                            Garrisoned.
                                                            Magazines dry.
                                   1902
         Mounted.
         5-in. R.F.Guns, Model
         1897, Nos.12 & 25,
         Bethlehem Iron Co.
         5-in. balanced pillar)
         mounts, Model 1896, Nos)
          18 & 19 Bethlehem
          Steel Company.
          Emp.1, Gun 12, Car 18
           n 2,
                 " 25, "
          Battery Seymour
         Mounted:
                                 June 16.
         12-in. B.L.Mortars.
                                  1902
                                             $93,207.00
                                                            Garrisoned
                                                            These emplace-
         Model 1890, Nos.5,8,
      59, and 60, Watervliet Ar-)
                                                            ments were
                                                            built by con-
tract in 1898-
          senal, No.53, Bethlehem)
          Iron Co. Nos'17,18,19)
          Niles Tool Works.
                                                            1899.
                                                            Magazines dry.
         12-in. Mortar Carriages
         Model 1896, Nos.113,114
         115,117 Providence
          Steam Engine Co., Nos.)
         134,135,136,138 Amer-)
          ican Hoist & Derrick )
         Company.
PIT A.
                                                            All mortars of
       Plat 1, Mortar 19, Car.115
                      18 " 113
59, " 134
                                                            Batteri es
             2, "
                                                            Seymour and
             3,
                      17,
                             114
                                                            Schenck
                PIT B.
                                                            dismounted;
      Plat 1, Mortar 60, Car. 136)
                                                            carriages
                      5, " 117)
           2,
                                                            being
                      8, "
            3,
                                                            remodelled
                            138)
                     53,
                            135)
          Battery Alexander
                   Schenck
                                                            Magazines dry
         Mounted:
         12-in.B.L. Mortars
      8
         Model 1890, No.55c
         Watervliet Arsenal
         Nos.45,47,48a, Build- )
          ers Iron Foundry, Nos.)
          48b, 54,55d, Bethlehem)
          Iron Co.No.14 Niles
          Tool Works.
         12-in. Mortar carriages
         Model 1896,#112,Pro-
         vidence Steam EngineCo
         #126,127,137,139,140,1
```

141 American Hoist&DerrickCo.

```
Name of : Name and armament of : Date when : Total Cost :
Name of : Name and armament of : Turned : to that : REMARKS
Harbor : over to : date
: Artillery :
```

```
FORT CASEY
   Battery Alexander
             Schenck
       (Continued)
 Nos.293 Rarig Engineering)
 Company.
          PIT A.
Plat 1, Mortar 48b, Car. 141 )
                       139 )
              55d, "
     2 "
                       140 )
              48a,
                       137
              47
           PIT B.
Plat 1, Mortar 45, Car. 293 ) at a value of the built
                       126 June 30 1 1 10 4000
               54,
     2,
                       112 )
               55c, "
     3,
                       127 )
               14,
```

Conduit ducts for electric wires have been laid connecting all batteries and primary fire control stations, except Batteries Thomas Parker and Isaac Van Horne.

	and the second of the second o			
Name of	: Name and armament of :	Date when :	Total Cost	5
Harbor	battery	turned over:		: REMARKS
110, 210 02		to Artil- :	date.	•
	•	lery :		•
	् व्यापकार के प्राप्त । का व्यापकार करता तक स्वापकार विशेष करता एक स्वापकार स्वापकार स्वापकार स्वापकार स्वापकार		है । प्रिक्त प्रत्येक प्रत्ये इ.स.च्या प्रत्येक	प्रस्कृत क्षण्य करते । एकं १९४५ अस्त्र १०५५ अस्त्र अस्त्र अस्त्र अस्त्र अस्त्र केस्कुलस्य केस्त्र १०५० एकं ६०४ एकं १०५६ १०५६ १०५६ १०५६ १०५
	TODM CACTUA			
	FORT CASEY: Battery John Valleau,	May 22,	\$92,125.00	Garrisoned
	Mounted:	1907	100,000	Magazines dry
4				
•	1905, Nos.18, 20, 21, 22			·
	Watervliet Arsenal)		
4	a de la companya del companya de la companya de la companya del companya de la co			
	riages, Model 1903, Nos.			
	76,77,78 Detrick &			
	Harvey Machine Co. and)		
•	No.83 Bethlehem SteelCo) \		
	Emp.1, Rifle 18, Car.76	\		
	" 2 " 20, " 77 " 3 " 21, " 78		en e	
	" 4, " 22, " 83			
	Battery Thomas Parker,) May 22,	A STATE OF THE STA	Garrisoned
•	Mounted:		\$50,380.00	Magazines dry
2	6-in. R.F.Rifles, Model)		
	1905, Nos.3 & 12 Water-)		
	vliet Arsenal.).		
2	6-in.disappearing car-) lay fil	142, 200 . L	
	riages, Model 1903, Nos.			
	74 & 75 Detrick & Har-	{		
	vey Machine Co.	{		
	Emp.1, Rifle 3, Car.74	Ϋ́	***	
	Battery John Trevor) May 22,		
	Mounted:) 1907	\$15,800.00	Garrisoned
2	3-in. 15 pdr. Guns, Model)		Magazines dry
	1903, Nos. 39 & 50)		. •
	Watervliet Arsenal.)		
2	15 pdr.barbette car-)	•	
	riages, Model 1903, Nos.			
	20 & 21, Watertown Ar-			
	senal. Emp.1, Gun 39, Car.20		n og fra detakti. Događenja kalenti	
	" 2, " 50, " 21		A CONTRACT OF A	
	Battery Isaac VanHorne	May 22,		
•	Mounted;) 1907	\$14,695.00	Garrisoned.
2	3-in.15 pdr.Guns, Model			Magazines dry.
	1903, Nos.37 & 38, Water-	🕽 – Paris Paris 🗀 🗀		
	vliet Arsenal.	<i>)</i> ;		
2	15-pdr.barbette car	J.		
•	riages , Model 1903, Nos	<i>!</i>	•	
	18 & 19, Watertown			
	Arsenal.	<i>J</i>		

Arsenal.
Emp.l, Gun 37, Car.18
" 2, " 38, " 19

Name of : Name and armament of : Date when : Total Cost : REMARKS
Harbor : battery. : turned over: to that : (All references : to Artil- : date. : are to mean low : lery. : water.

F' 6 FORT CASEY. X Ref. of site Primary Station, Fire) 96.20 Command, Batteries Ref. of inst. Kingsbury, Valleau and) axis 104.28 Trevor. Feb.4. \$8,370.00 Ref.of site B'8 Primary Station, Bat-) 1904 (a)x87.70 tery Command, Battery) Ref. of inst. William Worth. axis 95.78 (Changed from B'9 (Moore) since Decemb-) er 31. 1907).

x Concrete structures, one room on two levels. Plotting room
7'6"x15' x 10'6" high. Observation room 10'x12'6" x 7'6" high.
Not conspicuous at a distance of four miles when viewed from
the usual channels of approach.

(a) Plotting room enlarged to 15'x 20' x 10'6" high.

ne e degla se no e di la vive di Parcilia de le celle. Permoneny e la ceptara di North de Control

化乙基氯氯化乙烷 医二氏病 计二进载表码机 人名

Control of the State of the Control of the Control

\$6,574E, 15

B'10 Primary Station Bat-) Oct.6, tery Command, Bat-) 1905. \$3,905.34 tery Henry Kingsbury) Ref.of site 80.18 Ref. of inst. axis 90.28 One room on two levels. Plotting room 15'4"x 16'x 7'6" high. Observation room ll'x 16'x 7' high. Reinforced concrete, steel roof supports and shutters. Roof of plotting room glass lenses set in concrete. Not conspicuous at a distance of four miles when viewed from the usual channels of approach.

```
Name of : Name and armament of : Date when : Total Cost : REMARKS
                                                       :(All references
                               : turned over: to that
              battery
Harbor
                                                        :are to mean low
                               : to Artil- : date.
                                                        : water.
                               : lery.
쁉컽맩잲궦뱮궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦궦
            Fort Casey
                                                        Ref of site
            (Seymour)
                                                          105.28
            Observation room
       F'4
                                                        Ref. of inst.
            14'x 20' x 7' high. )
                                                        axis 122.28
            Plotting room 18'x 20'
            x 8' high.
            Storeroom, 10'6"x 20')
            x 10'8" high.
                                                        Ref.of site
            (Schenck)
       317
                                                           105.28
            Observation room
                                                        Ref. of inst.
            14'x 20' x 7' high
                                                        axis 117.28
                                  June 11.
            Plotting room
                                 1908 $11,005.70
            18' x 20' x 8' high )
                                  gan a transfer of the second of the co
            Storeroom 10'6"x 20!)
            x 5'8" high.
                                  Compare Services 110 April 1777
                                                        Ref.of site
       F*5
            (Casey)
                                                           105.28
            Observation room
                                                         Ref. of inst.
            14' x 20' x 6'10"
                                                         axis 112.28.
            high.
            Telephone Booths,
             each 3'2"x3'6"x8'
            high.
            Room in rear, 18' x
             20' x 8' high.
             Above three stations)
             in one building,
             Sewell type.
             (Worth)
        B'8
             Extension of plot- )
             ting room 12'6"x15'x)
             10'6" high concrete )
             walls, wire glass roof June 11,
             in iron rafters. ) 1908 $1,175.33
        B'9
             (Moore)
                                                          Ref. of site
             Observation room
                                                              80.18
             11'x 16' x 7' high
                                                          Ref. of inst
                                  June 11,
             Plotting room
                                               $ 3,856.68
                                                          axis 90.28
                                    1908
             16'x 18'x 7'6" high )
             High site.Reinforced)
```

These stations not conspicuous at a distance of four miles when riewed from the usual channels of approach.

concrete structure.)

```
Name of : Name and armament of : Date when : Total cost : REMARKS.
                                                                   battery. : turned over: to that :(All references : to Artil- : date. : are to mean low
Harbor
                                                                                                                                                                                                                                      :water.
                                                                                                                               : lery
FORT CASEY.
                                                                                                                                                                                                                                           Ref. of site
                         F" 4 (Seymour)
                                                                                                                                                                                                                                                       10.28
                                                  Supplementary,
                                                  Room 9'11'x 10'x 7' )
                                                                                                                                                                                                                                           Ref. of inst.
                                                                                                                                                                                                                                          axis 20.28
                                                  high.
                                                                                                                                                                                                                                           Ref.of site
                                                   (Schenck)
                          B" 7
                                                                                                                                                                                                                                                          10.28
                                                                                                                                   ) June 11,
                                                   Supplem en tary
                                                  Room 9'11"x 10'x7' ) 1908
                                                                                                                                                                                                                                           Ref of Inst.
                                                                                                                                                                                        $2,634.94
                                                                                                                                                                                                                                            axis 20.28
                                                  high.
                          B" 10 (Kingsbury)
                                                   Supplementary.
                                                                                                                                                                                                                                            Ref of site
                                                   10.28
                                                                                                           le le from )Merce des la comita de la Malesta de la comita del comita de la comita del comita de la comita del comita de la comita de la comita del comita de la comita del comita de la comita de la comita de la comita del c
                                                   Above three stations) & grant prost was to the contract
                                                                                                                                                                                                                                            Ref. of inst.
                                                                                                                                                                                                                                             axis 20.28.
                                                    in one building at )the Astronomy of Cart a
                                                   Sewell type.
                                                                                                                                                                                                                                            Ref.of site
                          T#4
                                                    (Casey)
                                                                                                                                                                                                                                                    158.28
                                                    Room 9'11"x 10'x7'
                                                                                                                                                                                                                                             Ref.of inst
                                                    high.
                                                                                                                                                                                                                                             axis 163.28
                                                    (Schenck)
                           B"7
                                                                                                                                                                                                                                             Ref of Site.
                                                    Room 9' 11"x 10'x 7')
                                                                                                                                                                                                                                                     158.28
                                                                                                                                             June 11,
                                                    high.
                                                                                                                                                                                        $ 2,001.68
                                                                                                                                                                                                                                             Ref. of inst.
                                                                                                                                               1908
                                                                                                                                                                                                                                             axis 163.28
                                                                                                                                                                                        The state of the s
                                                     Above two stations
                                                     in one building
                                                    Sewell type, with
                                                    dormitory 10 x20 6"
                                                    x 9' high, in rear : ) -
                                                                                                                                                                                                                                            Ref. of site
                            B"8
                                                      (Worth)
                                                                                                                                                                                                                                                      162.28
                                                    Room 9'11"x 10'x 7' ) as a line of the second
                                                                                                                                                                                                                                             Ref. of inst.
                                                     high.
                                                                                                                                                                                                                                              axis 167.28
                                                                                                                                                                                                                                              Ref. of site
                                                                                                                                       ) June 11,
                            B"9
                                                      (Moore)
                                                                                                                                                                                           $ 2,029.01
                                                                                                                                                                                                                                                      162.28
                                                     Room 9 111 "x10 x7 1
                                                                                                                                                  1908
                                                                                                                                                                                                                                              Ref. of inst.
                                                      high.
                                                                                                                                                                                                                                              axis 167.28
                                                      Above two stations
                                                      in one building. )
Sewell type with )
                                                      dormitory 10'x 20'6")
                                                     x 9' high in rear. )
```

These stations not conspicuous at a distance of four miles when viewed from the usual channels of approach.

Name of : Name and armament of : Date when : Total Cost : REMARKS. : turned over: to that : (All references Harbor: battery. : to Artil- : date. :are to mean low :water. : lery.

ing and property of the Section of t

FORT CASEY: Switchboard Station. Room 16'x 20' x 8'

Ref of Site. 70.08

Storage battery room) 20'x 20'6"x 8' high. Switchboard and storage battery rooms in one building, Sewell type) located in traverse of) left flank Battery Trevor.

Meteorological Station) Waste Wight and State M 2 Room 6'x 6'x7' high. () June 11, 400 \$ 428.03 Detached building. Sew-) 1908 La Canton ell type, adjacent to) in the state of the

Ref. of site 98.78

Tide Gauge Station) June 11 T 2 One room 8'x10'x7') 1908 high. Frame building) on Engineer Department) Wharf.

\$ 871.69 Ref of site 18.88

These stations are not conspicuous at a distance of four miles when viewed from the usual channels of approach.

One dormitory

) Nov.2, 1908

Committee of the contract of the second of t

a Millardina Jarahanan and Adjar William Salaha.

A DAMEST

Der juli de <mark>de de la b</mark>ylode de de de de 人名英格兰人姓氏格兰人名

\$ 900.06

Ref.of site 162.6

GENERAL DESCRIPTION OF THE TIDE-GAUGE AT FORT CASEY, WASH.

A cedar float treated in boiling parafine wax, inclosed in a wooden box and supporting a wooden graduated staff extending up through the house on which the height of tide is denoted by a pointer.

An observer in the house transmits the data by telephone to the observing and the plotting rooms.

CONTROL OF THE SERVICE OF THE

The second of the second of the second

to the Soline of marketing was, in the

ing and the second seco

- makendar jorga itom militar policed

en ig og det eksperiere i han i Miller fortelskepieler. Han i kansalistere i det eksperiere i franskepieler. Han fransfrigt fortelskip i de skriver i de kommenter.

alan walanza Marata at kacamata

and the state of t

Alexina e legicologico.

in the state of th

The Arthurson Commencer of Section 1994

na di Alaman yan i

FORT CASEY.

SEARCHLIGHTS.

- One 30-inch diameter. General Electric Co.
 Date of purchase unknown. Received by transfer from
 Lieut. R.M.Mitchell, Artillery Corps, Fort Wright, N.Y.
 February 8, 1904.
 Electrically and hand controlled.
 Independent power plant.
 Plant fixed. Projector mounted on truck.
 Degree of mobility limited by length of conductor.
 Returns made by Artillery.
 Cost of projector unknown.
 Transferred to Artillery February 6, 1905.
- One 30-inch diameter, General Electric Co.

 Date of purchase unknown. Received by transfer from

 Major J.G.D.Knight, Corps of Engineers, November 14,1898.

 Electrically and hand controlled.

 Independent power plant.

 Plant fixed, projector mounted on truck.

 Degree of mobility limited by length of conductor.

 Returns made by Artillery.

 Cost of projector unknown.

 Transferred to Artillery August 7, 1905.
- One 36-inch diameter. General Electric Co. No.23.

 Date of purchase unknown. Received by transfer from Chief of Engineers, U.S. Army, December 17,1907.

 Electrically and hand controlled.

 Independent power plant.

 Plant on truck. Projector mounted on truck.

 Degree of mobility unlimited. The entire outfit is portable.

 Returns made by Artillery.

 Cost of projector unknown.

 Transferred to Artillery March 25, 1908.

TO A STREET AND THE STREET OF STREET AND THE STREET

antina di kacamatan kang belang di kacamatan di kacamatan

Comment of the Section of the Contract of the

THE BUILDING BOOK OF THE STATE OF

The control of the co

1996年 - 《京教·李林春》、《宋代》《宋代》 (1997年) 1997年 - 夏森州黎斯 (1994年) (1947年)

DATUM MARKS.

FORT CASEY.

뀵쯗궦궦짟찞찞궦궦윘궦짟뱮찞찞궦섫뱮뫢짟뫱켂뱮뫢뙲찞뇶찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞찞

One known as "Shields" located off the shore of Admirality
Bay in 14 feet of water at low tide, aximuth from F'6 302.19°, range
7.093.98 yards.

One known as "Jenne" located under secondary stations B"8 and B"9 in 15 feet of water at low tide.

Each datum mark consists of a cluster of creosoted piles on which white boards are nailed and a black square painted. The center of the square is 10 feet above mean low water.

Cost of the two \$275.00.

Not transferred to Artillery.

Datum points visible from Forts Worden, Casey and Flagler.

The second control of the control of the control of

and the second of the second o

الأنوار والمتعاولية والمتعالجة المقادر والمتاريين

y pala though a car bed fine

mound district booking James

The company of the State of the second of the second

under de la Bergera de la Berg

and the second of the second of the

	The course was the part of the course of the	THE THE THE PART AND THE	********
Name of Harbor	battery.	Date when : Total cost turned over: to that to Artil- : date	REMARKS.
		lery.	•
			and the said wife was the two was the said the s
Admiralty	FORT WORDEN.		
Inlet,	Battery Alanson Randol,	June 16, \$232,554.97	Garrisoned
Puget	Mounted;	1902	Alteration to
Sound 2	10-in.B.L.Rifles, Model		batteries com-
504	1888 MII.Nos.6 &39		pleted. Magazines dry.
	Bethlehem Steel Co.		Magazines diy.
2	10-in. nondisappearing		Battery Randol
	carriages. Model 1893,		2 guns only
	Nos.7,8, Morgan Engin-		Empls.1 & 2.
	eering Company.		-mg
	Emp.1, Rifle 39, Car. 7		•
	n 2, n 6, n 8	\	
	Battery Augustus Quarles	The state of the s	Magazines dry
	Mounted.	Santa is the age of the best forces	
72		Market Six of the Mark	Battery Quarles
3	1888 MII, No.36&37,	Star Artister for the	3 guns, by
	Bethlehem Steel Co.	july,	addition of
	Model 1888, No.12,		gun No.3 of
	Watervliet Arsenal.)	Randol which is
3		🔰 ourse i say e e distribution i fili	Empl.No.1 of
	carriages. Model 1893,		Quarles.
	Nos.1 & 9 and 11, Water-		
	+aum Angenel		
	Emp.1, Rifle 36, Car.9	<i>}</i>	
			=This gun placed
	" 3, " 12, " 11) x	out of com-
	Tananh Ach		mission March
	Battery Joseph Ash.	3	16, 1909.
_	Mounted.		•
2	12-in.B.L.Rifles Model 1888 MII, Nos.9 & 10,	· Ś	
	Bethlehem Steel Co.	And the second of the second of the second	Magazines dry.
٠ 2	12-in.nondisappearing	Strong where well a strong and	
ے	carriages, Model 1892	You have a servery for all the	
	Nos.3 (altered gun lift	t) and the discount of	
	& 27 Watertown Arsenal	3	
	Emp.1, Rifle 9, Car.27		•
	n 2 n 10 n 3)	

Batteries Randol, Quarles and Ash altered at a cost of \$50,215.00 since date of original transfer to Artillery.

Changes in Randol and Quarles authorized by Secretary of War March 9, 1909. G.O. No.8, Hdqrs. Artly District of Puget Sound March 16, 1909.

				1 52.4.1			이 보다	An Special State S
a mana of	===	Name	and am	mament of	: I	ate when :	Total cost	TOTAL A TOTAL
Mame of Harbor	•	11001110	batt	ery	: ः	urnea over:	to that	REMARKS.
nar bor	į				: 1	o Artil- :	date.	•
	•				:]	ery. :		
the train from the train drive design from	====	e eo eo eo eo		Date Date Street	=====	to these Case Gree Que Que Case Gree Que Que Que Case Que Que Case Case Case Case Case Case Case Cas	a data rigna, grow dans durin benig dans dinas dinas grow dinas di	Sale Sale Sale Sale Sale Sale Sale Sale
Admiral	4 + •	tr	FORT WO	RDEN:				
	. I U.			ry Benson)	·	\$142,500.00	Garrisoned
Inlet,				The positions	j"			Magazines dry.
Puget	_	Moun	itea;	iflor Mode	ווב			
Sound	2	10-1	$\mathbf{n} \cdot \mathbf{n} \cdot \mathbf{n} \cdot \mathbf{n}$	ifles, Mode	- + /			Retracting
		1900	Nos TE	and 14,	*	April 24,		motors have
		Wate	LATIEL	Arsenal	- (1908		been installed,
	2	10-i	n. disa	ppearing	- 4	1300		but are not
•		carr	iages, N	Model 1901				connected with
				Vatertown	- {		•	the power lines
		Arse	enal					No other motors
		Emp	1,Rifle	12, Car.6	·)		· · · · · · · · · · · · · · · · · · ·	to be installed
		n T	2. "	14, " 7	<u> </u>		•	O be Installed
						en ja	SAMPLE CONTRACTOR (CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONT	* 6 F
	El	ectr:	ic fixtu	ares and 1	igh	t and power	mains instal	rred at
batter	ies	Ranc	dol, Qua	arles, Ash	ar	for penbour •	i ilija karansa i	
20000				?	à	to a state of	a design of the same	
			FORT W			1. 4. 2. 3. 4.	4	O - mud a o m o d
		Bat	tery The	omas Vicar	s)	June 16,		Garrisoned
			n ted;			1902	\$11,000.00	Magazines dry.
	2	5-1	n B.T.R	ifles, Mode	1)	1		a second
	Z.	1.80	7 Nos	9 & 22 Bet	h-)			
		TOP	om Stee	1 Company.				
	_	T 677	m hale	nced pills	ne i			
	2	2-1	n. vara	el 1896, No	8			
		mou	nts, mou	hlehem Ste	6	Sulphay Hall		
				UTettern per	.01		The state of the s	
		Com	pany.	00 Com 00				
				22, Car.20				
		- 11	2, "	Jan Danna				
		Bat	tery	hn Brannar	1	June 16. X	\$162,102.12	Garrisoned
		Mo	unted:	San) 1902	4200 y =	Magazines dry
	8	12-	in. B.L	.Mortars,		1 1902	and the second s	
		Mod	el 1890	MI, NOS.48	,	Albania (n. 1844). National de la companya (n. 1844).	g participation (IV) (10) Victorial Communication (IV)	Pit B.
		50,	51 Buil	ders iron				
		Fou	indry, No	s.21,24 N	14-	j ahatean mas		
		es	Tool Wo	rks; Nos.3	2	Najvijas programa	er en	
		54.	56 Wate	rvliet Ar	sen) 478.		
		al.	* 1				and the second of the second o	
	8	12-	in.Mort	tar carria	ges			
	Ū	Mod	el 1896	, Nos.252,)		
		253	254.25	55,256,257)		
		200	259 Rs	rig Engin	, -)		·
		200	ring Con	mpany.	٠.,	.)		
		<u> </u>	PIT)		
	רס	g + 1		51.Car.25	9	•		
	I .			50, "25	8)	and the second of the second o	
				54, " 25		1		_
		" ວຸ	, "	32, 2 5	7) x	= Total cos	t Batteries
			2	CONTRACTOR OF THE PROPERTY OF			Brannan ai	nd Powell.
							2 *** ** **	
						A Commence	entransis de la companya della companya de la companya de la companya della companya della companya de la companya de la companya della compa	
				and the second	3			
			Jan Station	palage of a	w.		r Arched Collan.	
				and the second	i ist			
)	The second second	

```
Name of : Name and armament of : Date when
                                                            : REMARKS.
                                 : turned over: to that
                battery.
                                              : date.
                                 : to Artil-
                                 : lery.
              FORT WORDEN.
          Battery John Brannan, )
             (Continued)
                 PIT B
        Plat 1, Mortar 49, Car. 255)
                       24, "
              2, "
                               254)
                               252)
                        21,
                        56,
                               253)
           Battery James Powell,
                                                              Magazines dry
           Mounted:
         8 12-in.B.L.Mortars,
           Model 1890 MI, Nos27&52)
           Builders Iron Foundry,)
           Nos.1,15,16,20,22,
           Niles Tool Works: #105 )
           Watervliet Arsenal, )
         8 12-in. Mortar carriag-)
es Model 1896, Nos. 244,)
           245,246,247,248,249,250
           251. Rarig Engineering)
           Company.
                  PIT A:
         Plat 1, Mortar 16, Car. 251)
                        1, " 250)
              2, "
                        52,
                                248)
              3,
                        15,
                               249)
                  Pit B.
         Plat 1, Mortar 27, Car. 247)
                       105, " 246)
22, " 245)
               2, "
                        20,
```

Harbor

: Total cost :

Lighting fixtures and mains installed at Batteries Brannan and Powell.

I HART BERNER BERKER

or fixtures

battery. motors are to be placed on these car-

riages.

and wiring in

```
Name of : Name and armament of : Date when
                                             : Total cost
                                : turned over: to that
                battery.
Harbor. :
                                            : date.
                                : to Artil-
                                : lery.
                            FORT WORDEN:
                                              $104,500.00
                                                            Garrisoned
          Battery Cornelius
                                   May 21,
                                                            Magazines dry
                                    1907
                    Tolles,
                                                            Central Elec-
          Mounted;
                                                            tric plant for
          6-in. B.I. Rifles, Model)
                                                            light and power
          1903, Nos. 39, 50, 58 &66 )
                                                            completed.Wires
          Watervliet Arsenal
                                                            and fixtures
          6-in.disappearing car-) riages, L.F. Model 1903,
                                                            for lighting
                                                            installed. No
          Nos.56,58,59& 60 Det- )
                                                            provision made
           rick & Harvey Machine )
                                                            for power wires
           Company.
                                                            to battery. No
        Empl.1, Rifle 66, Car. 60
                                                            motors are to
                             59
              2,
                      58, "
                                                            be placed on
                      50, "
                             58
                                                            these carriages
                             56
           Battery Amos Stoddard )
           Mounted;
                                               $91,000.00
                                                            Garrisoned.
           6-in.B.L.Rifles, Model ) May 21,
                                                            Magazines dry.
                                     1907
           1903, Nos.17,19,45,61
                                                            Central elec-
           Watervliet Arsenal
                                                            tric plant for
           6-in.disappearing car-)
                                                            light and power
           riages, L.F. Model 1903,)
                                                            completed. No
           Nos.44,43,89,90 Wellman
                                                            provisions made
           Seaver, Morgan Co.
         Emp.1, Rifle 17, Car.43
                                                            for light and
                                                            power wires to,
```

19, "

45,

61,

89

90

2,

Name of : Name and armament of : Date when : Total cost : : turned over: to that : REMARKS battery. Harbor : to Artil- : date. : lery.

> FORT WORDEN. Battery Samuel Walker) May 21, No guns en mounts on hand.

2 3-in.pedestal mounts in place. #76 & 77, Model 1903, Watertown Arsenal. 15 pdr.Rifles not yet received.

Battery Haldimand Putnam

Mounted:

- 2 3-in.,15 pdr.Rifles Nos.23 and 24, Model 1903, Watervliet Arse-) Law 28 ong mga 🛊 🕽
- 2 3-in.pedestal mounts,) Nos.14 and 15, Model 1903, Watertown Arsenal) Emp. 1, Rifle 23, Car.14) 2, " 24, " 15)

1907

3,467

\$12,000.00

Garrisoned. Magazines dry Central electric plant for light and power completed. No provisions made for light and power wires to, or fixtures and wiring in battery.

\$12,000.00

elanomed towns to the co

Garrisoned. Magazines dry Central electric plant for light and power completed. No provisions made for light and power wires to, or fixtures and wiring in battery.

Name of : Name and armament of : Date when : Total cost : REMARKS : turned over: to that : (All references battery. Harbor : to Artil- : date :are to mean low :water). : lery.

FORT WORDEN.

B'1 (Powell) Observation room. 20' x 14' x 7' high Plotting room 20' x 18' x 8'4" high,) F'1 (Brannan) Observation room,) June 16. 20' x 14' x 7' high 1908 Plotting room, 20' x 18' x 13'4" high) house the many of Markets have a second Storeroom 20' x 14' x 5' high English to Walter American Co. B'2 (Ash) Observation room, 16' x 14' x 7' high Plotting room, 16' x 18' x 8'4" high Officers' room 715" x 916" x 918" high. Mens' room, 16'x 18'x 9'8" high)
Above three stations) in one building, Sewell type.

Ref of site 268.07 Ref. of inst. axis 274.39 Ref.of site 268.07 Ref. of inst

Ref.of site 268.07 Ref. of inst. axis 284.39

axis 279.39

\$9,246.93

These stations are not conspicuous at a distance of four miles when viewed from the usual channels of approach.

COM Date on, Son Mill Sto. Son Dr. Sto. Say then Silly gas date for, Str. Col. then does done for the find gas date for gas and the silly say the silly gas date for the son bed by the silly say the silly gas date for the son bed by the bed by the silly say the sill say the silly say the sill s Name of : Name and armament of : Date when : Total cost : REMARKS. : turned over: to that :(All references battery. Harbor : :are to mean : to Artil- : date. :low water) : lery.

FORT WORDEN:

B'5 (Quarles) Observing room, 16' x 14' x 7' high, Plotting room, 16' x 18' x 8' high Officers' room, 7'5"x 10'6"x 8' high Mens' room 16' x 18' x 8' high Storeroom 16' x 14' x 4'2" high Ref. of site 262.95 Ref. of inst. axis 282.39

F'3 (Worden) Observing room 16'x 14' x 7' high Plotting room, 16' x 18' x 8' high Officers' room 7'5"x 10'6"x 8' high Mens' room 16'x 18' x 8' high Storeroom,

Ref. of site 262.95 Ref. of inst. axis 282.39

16'x 14'x 4'2" high

\$9,571.41 June 16, 1908

B'6 (Randol) Observation room 18' x 14'x 7' high Plotting room 18' x 18' x 8' high Officers' room, 9' x 10'6" x 8' high Mens' room, 18' x 18' x 8' high Storeroom, 18' x 14' x 4'2" high Above three stations in one building, Sewell type.

Ref. of site 262.95 Ref. of inst. axis 282.39

These stations are not conspicuous at a distance of four miles hen viewed from the usual channels of approach.

```
Name of : Name and armament of : Date when : Total cost : REMARKS
                              turned over: to that
                                                        :(All references
                battery.
Harbor
                                                        :are to mean low
                              : to Artil- : date.
                              : lery.
                                                        : water.
FORT WORDEN.
                                                         Ref.of site
      B' 4
            (Tolles)
                                 June 16,
                                                            232.07
        Observation room,
                                                         Ref. of inst.
                                            $2,874.30
        16' x 14' x 7' high
                                  1908
       Plotting room,
                                                         axis 238.39
        16' x 16' x 8'4" high
        Sewell type construction)
            (Brannan)
      B''1
            (Powell)
      B113
            (Benson)
      B' 14
           (Tolles)
           (Ash)
      B112
                                                         Ref. of site
                                ) June 16, $6,030.11
        5 Observation rooms
                                                          106.41
        each, 12'x 12'x 7' high
                               Ref. of inst.
        Officers' room
                                I the street of the fit of the beautiful to
       16'x 20'8" x 9' high
                               ) to we have a water
                                                         axis 113.39
        Mens' room,
        16'x 41'4"x 9' high,
        Five secondary stations
        in one building.
        Sewell type.
                                 Jane 6.
                                  1906
      Fill
             (Brannan)
      \mathcal{B}111\mathbf{J}
             (Powell)
                                                         Ref.of site
      F113
             (Worden)
                                                            68.41
      B116
             (Randol)
                                                         Ref. of inst.
      B' 15
             (Quarles)
                                                         axis 75.39
        5 Observation rooms.
                                ) June 16,
                                            $5,493.51
        each 12'x 12'x 7' high
                                  1908
        Officers' room,
16'x 20'8"x 9' high
        Mens' room,
                                 16'x 41*4"x 9' high
        Two supplementary and
        three secondary stat-
        ions in one building.
        Sewell type.
      Switchboard Station Room
                                                         Ref. of site
        20'x 16' x 9' high
                                  June 16,
                                                             262.11
                                   1908
                                            $3,231.03
      Storage battery room 20'x 20'6"x9' high
      One building, Sewell type,
      with cellar 19'x 36'x 6'5")
      high. Location between
      C 1 and B'5 in excavation )
```

These stations are not conspicuous at a distance of four miles hen viewed from the usual channels of approach.

```
Name of: Name and armament of: Date when: Total cost: REMARKS.

Harbor: battery. : turned over: to that :(All references : to Artil-: date. :ate to mean low : lery. : water).
```

FORT WORDEN. **:**) Ref.of site Central Quarters 260.49 Building. Officers' rooms, two each 16'x 30'6"x 9' high. Officers' wash rooms,) two each 16'x 8'x 9') Mens' room, two, each 26' x 39'x 9' high. Mens' wash rooms, two,) each 12'x 16'x 8'3" () - 10 c x (en x 3e vx)) June 16, \$9,674.81 high.) 1908 Location, between C 1 and B'l in excavation Latrine in rear, with) two rooms, each 13 x) 12'6"x 9'5" high. all) Sewell type. T 1 Tide Gauge Station) One room, 10 x 10 x 8') high. Frame building) June 16, on the Quartermaster) 1908 Ref of site \$1,021.87 12.18 Department wharf.

The stations are not conspicuous at a distance of four miles when viewed from the usual channels of approach.

Name of	Name and Armament of	Date when:		
Harbor	battery)	Transferred: To	that	REMARKS
	:	Artillery:	Date	
THE STATE OF THE NAME AND ADDRESS ASSESSMENT OF THE STATE		Control of the Contro		
Admirality	FORT WORDEN:			
Inlet.	: One district signal)	•	:	
	: station Brick stru-)			
	cture with concrete)		·	•
	: foundation and : slate roof, outside)	· ·		•
	dimensions 18 ft.by)	:		
	: 24 ft.6 in. Three	June 16,	\$2800 :	•
	rooms, operating	1909		•
	room 12 ft.by 16 ft. generator room 8 ft.			•
	by 10 ft.; work room		•	:
	: 6 ft.10 in.by 7 ft.	Horning to a state of	t.	•
	: 6 in. All rooms 8			•
	<pre>: ft. high. : Observation station</pre>			• · · · · · · · · · · · · · · · · · · ·
	on roof.			:
			t z na ega a	•
			•	•
			•	•
	: ・	,)	•	•
•)	.	•
	•)	:	:

Janes Janes Say

grade (1241) and (1341) and (1341). The state of the sta

___0__

ELECTRIC PLANT. (Central)

Location;

About 600 feet south of Battery Brannan and 1,200 feet west of Battery Stoddard.

Boilers;
Two Babcock & Wilcox water tube boilers, 150 HP. Purchased June 30, 1904.

Engines:
Three McEwen steam engines, 150 HP each, stroke 14-inches, bore 15 inches, speed 275 R.P.M., Nos. 1419, 1421 and 1422. Purchased June 30, 1904.

Generators;
Three Thomas-Ryan direct connected generators, capacity 75 kilowatts, 300 amperes, 250 volts, speed 265 R.P.M., Nos. 543, 545 and 546. Purchased June 30, 1904.

Transformers;

Storage Batteries;
None.

Independent Plants:

None. The central station will furnish all current for light and power at all emplacements at Fort Worden. No power to be furnished for searchlights, as each searchlight has its own portable plant.

Kilowattage required:

For inside and outside illumination of defensive works; 50 KW.

For motors; 45 K.W.

For searchlights; none.

For telautographs; 4 KW

For post lighting; 75 KW

Power house and plant has been so designed as to permit of one parallel unit for future demands.

Total cost of plant \$89000(Paid.from Engineer Department funds \$64000, from Q.M.Department funds \$25000).

Transferred to Coast Artillery on June 20,1907.

er krei (j. g. kom kom getil fri Ottom getil og kom græde fri forsker

A PERSONAL OF LESS BEING TO A PERSON TO THE PROPERTY OF THE PERSON OF TH

FORT WORDEN, WASH.

_---0---

SEARCHLIGHTS.

- One 36-inch diameter, General Electric Co.
 Date of purchase unknown. Received by transfer from
 Lieut.S. Avery, Jr., Artillery Corps, Fort Howard, Md.
 January 11,1904.
 Electrically and hand controlled.
 Independent power plant.
 Plant fixed. Projector mounted on truck.
 Degree of mobility limited by length of conductor.
 Returns made by Artillery.
 Cost of the projector unknown.
 Transferred to Artillery February 6,1905.
- One 30-inch diameter, General Electric Co.

 Date of purchase unknown. Received by transfer from
 Major J.G.D.Knight, Corps of Engineers, November 14,1898.

 Electrically and hand controlled.

 Independent power plant.

 Plant fixed. Projector mounted on truck.

 Degree of mobility limited by length of conductor.

 Returns made by Artillery.

 Cost of projector unknown.

 Transferred to Artillery August 7,1905.

Congress Congress to the Landian

以意见的人的比较级的人的。

and the state of t

ses joinney from say by a with.

galger man in greek begreken († 1866) 1 maardig weer groek in die konstant in die steel van die steel 1 maardig jaard 1868 – George prochinger

医多形性结肠 医胚层 医结合 医血管 医电路电影线 華田市

The Branch American Branch of the State of t

garage (franchische Joseph St. 1886) auf Communication

FORT WORDEN, WASH.

TIDE - GAUGE.

The tide gauge is located in T 1 -Tide Gauge Station, which contains one room, 10' x 10' x 8' and is furnished with one vertical tide gauge.

Transferred to the Artillery June 16, 1908.

Cost of frame building and tide gauge, \$1,021.87.

Ref. of site 12.18 (M.L.W.)

Therefore the Told Plant and Told Helm

Section of the group of the Stanfold at the winds

FORT WORDEN, WASH.

DATUM POINTS.

Datum point located south of Quartermaster wharf at 1446.09 S 1882.91 E rebuilt in May 1907. Now in use. Cost \$125.00. Transferred to Artillery in January, 1905. Visible from Forts Flagler and Casey.

"Simms" datum at 588.92 S For use of Fort Worden only. Visible 15990.14 W

from Fort Casey.

NOTE: = "Wilson" datum carried away by storm November 30,1909.

The Name of the second of the first of

granding desperients.

The second property of the second second

gagagia kepadapan kehintahan kehintah kehintah

COMPANIES AND ANGLES

医二氯甲基甲基甲基甲基

```
: Name and Armament of : Date when
                                            : Total
Name of
                                                     : REMARKS.
                                            cost to
                               : turn ed
Harbor
                 battery.
                                            :that date:
                               : over to
                               : Artillery
Richs
            FORT WARD:
Passage,
                                 )Jan.18,
                                           $120,432.00 Garrisoned
         Battery Francis Nash,
Puget
                                                      Magazines wet
                                  1904
 Sound.
         Mounted:
                                                      from condens-
       3 8 - in. B.L.Rifles, Model
                                                      ation.
         1888, Nos.2 & 6, West
         Point Foundry: Model
         1888, MII, No. 42, Water-
         vliet Arsenal.
        3 8-in.disappearing car-
         riages, L.F. Model 1896
         Nos.36,37 and 38 Water-
          town Arsenal.
         Emp.1, Rifle 6, Car. 36
           " 2, " 42, " 37
                                           $:24,934.96 Garrisoned
         Battery William Warner . ) Jan 18,
                                                      Magazines wet
                                   Mounted:
                                                      from condens-
        2 5-in. B.L.Rifles, Model )
                                                      ation.
          1900, Nos. 15 & 19, Water-)
          vliet Arsenal.
        2 Pedestal mounts, Model
          1903, Nos.12 & 13, Morgan)
          Engineering Company
          Emp.1, Gun 15, Car.12
           " 2, " 19, " 13
                                 ) Jan 18, $ 10,966.50 Garrisoned
          Battery John Vinton
                                                      Magazines wet
                                   1904
          Mounted:
                                                       from condens-
        2 3-in. B.L.Rifles, Model
                                                       ation
          1898, Nos. 2 and 5.
          Driggs Seabury Gun &
          Ammunition Manufacturing)
          Company.
        2 3-in. Masking parapet
          mounts, Model 1898, Nos.
          2 and 5, Driggs Seabury )
          Gun & Ammunition Manu-
          facturing Company.
          Emp. 1, Gun 2.
" 2, Gun 5.
```

Independent generating set/installed for light and power

at Battery Nash. Wiring and fixtures installed.

viewed from the usual channels of approach.

```
Name of : Name and Armament of
                                   : Date when :Total :
                                   : turned over :cost to: REMARKS
                  battery.
Harbor.
                                   : to Artillery:date
FORT WARD:
                                                 $21,884.50 Garrisoned
         Battery Thomas Thornburgh Jan. 18,
                                                             Magazines wet
                                    1904
         Mounted;
        4 3-in.B.L.Rifles, Model
                                                             from condens-
                                                             ation.
         1898, Nos.9, 15, 40 & 45
          Driggs Seabury Gun&Ammun-)
           ition Manufacturing Co. )
        4 3-in.masking parapet mounts,
          Model 1898, Nos. 9, 15, 40 & )
          45 Driggs Seabury Gun &
          Ammunition Manufacturing )
          Company.

Emp. 1, Gun 9.

2, " 15,

3, " 40.
              MIDDLE POINT.
Richs
         Battery Robert Mitchell, ) Jan.18, 2 Emplacements for 3-in. ) 1904
R.F.guns on pedestal mounts. (No guns or mounts)
                                                 $9,473.00
                                                              Garrisoned
Passage
                                                              Magazines wet
Puget
                                                              from condens-
Sound
                                                              ation.
          on hand)
          FORT WARD.

Primary Station ) June 28, $ 6,252.28
                                                              Ref of site 209.67 Ref.
          Battery Francis Nash | 1905
                                                              of inst.axis
                                                              221.21. Two
                                                              rooms. Instru-
                                                              ment room, 10'
                                                              6"x 15'4"x7'
                                                             high.Plotting
                                                           room 15'5"x
16'x7'5" high.
                                                             Reinforced con
                                                 crete structure
Not conspicu-
                                                             ous at a dis-
                                                            tance of four
                                                              miles when
```

No provision made for electric plant, wiring or fixtures for Batteries Warner, Vinton, Thornburgh and Mitchell.

FORT FLAGLER:

Projectile hoists installed in Batteries Rawlins, Wilhelm and Revere.

Type, Taylor-Raymond, back delivery.

Voltage, 220

Speed, 1060 R. P. M.

Rated capacity of motors:

Rawlins and Revere, 5 H. P.

Wilhelm, 72H.P.

BATTERY RAWLINS:

Emplacement 1,
Serial number of hoist, 64
Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 65 Transferred to Artillery, September 26, 1907.

BATTERY WILHELM:

Emplacement 1,
Serial number of hoist, 29
Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 30 Transferred to Artillery, September 26, 1907.

BATTERY REVERE:

Emplacement 1,
Serial number of hoist, 66
Transferred to Artillery, September 26, 1907.

aralina kraj da Bember de, a est

Emplacement 2, Serial number of hoist, 67 Transferred to Artillery, September 26, 1907.

医双氯化氯氯 医鞭门

the productions, he combes Si,

grafia i karata ka ka ka

FORT CASEY:

Projectile hoists installed in Batteries Worth, Moore and Kings-bury.

Type, Taylor-Raymond, back delivery.

Voltage, 220

Speed, 1060 R.P.M.

Rated capacity of motors, 5 H. P.

BATTERY WORTH:

Emplacement 1, Serial number of hoist, 60 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 61 Transferred to Artillery, September 26, 1907.

e wanted months a son delivery.

ក្នុងស. ភ្នំស្នងមន្ត្រី ខ្នុងសមាធិបាល សម៌ 🗀

no apadigety to reminer the con-

Something the state of the stat

ကြောင့်သည်မြန်မှု ခြေသည့်သူမျှသည်များက မြောင်းသည်သည

BATTERY MOORE:

Emplacement 1, Serial number of hoist, 62 Transferred to Artillery September 26, 1907.

Emplacement 2, Serial number of hoist, 63 Transferred to Artillery, September 26, 1907

Emplacement 3, Serial number of hoist, 31 Transferred to Artillery, September 26, 1907.

BATTERY KINGSBURY:

Emplacement 1, Serial number of hoist, 30 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 29 Transferred to Artillery, September 26, 1907.

a percenta a militar de la compania O servición de la compania de la co

FORT WORDEN: Projectile hoists installed in Batteries Randol, Quarles, Ash and Benson.

Taylor-Raymond, back delivery.

a Ramping that Ant Das 29 E

Land giraharipateh katim

220. Voltage,

1060 R.P.M. Speed,

Rated capacity of motors:
Randol, Quarles, and Benson 5 H-P.
Ash, 7 H-P.

BATTERY RANDOL:

read the Arthur Bridge Areas in Emplacement 1,

Serial number of hoist, 68 Transferred to Artillery, September 26, 1907

Emplacement 2,

Serial number of hoist, 69 Transferred to Artille ry, September 26, 1907.

BATTERY QUARLES: Parties to Are living September

Emplacement 1,

Serial number of hoist, 70

Transferred to Artillery September 29, 1906.

Emplacement 2,

Serial number of hoist, 71

graph resemble now and in this to Alle

Transferred to Artillery, September 29, 1906.
Emplacement 3,
Serial number of hoist, 72 Transferred to Artillery, September 26, 1907.

BATTERY ASH: A CONTROL OF AND LEGETTS AND LEGETTS AND LEGETTS

Emplacement 1, Serial number of hoist, 31 Transferred to Artillery, September 30, 1907.

Emplacement 2, Serial number of hoist, 32 Transferred to Artillery, September 30, 1907.

BATTERY BENSON:

Emplacement 1. Serial number of hoist, 32 Transferred to Artillery, April 24, 1908.

Emplacement 2, Serial number of hoist, 33 Transferred to Artillery, April 24, 1908.

-0-

FORT WARD:

Projectile hoists installed in Battery Nash.

Type, Taylor-Raymond, back delivery.

Voltage, 110.

Speed, 1060 R.P.M.
Rated capacity of motor, 31 H-P.

BATTERY NASH:

Emplacement 1

Serial number of hoist, 4 Transferred to Artillery April 28, 1907.

Emplacement 2,

Serial number of hoist, 5 Transferred to Artillery, April 28, 1907.

The section Has a sychology with the control

The Law Classes in the River 1967.

a se a bilipin, y rain 22, iron.

Emplacement 3,

Serial number of hoist, 6 Transferred to Artillery, April 28, 1907.

The state of the s

ELECTRIC PLANT.

Central Plant:

Reinforced concrete building with concrete roof. Outside doors of 3/16 steel plate; window frames, sash and inside doors of wood.

Boiler room:
Al feet by 36 feet, 21 feet 9 inches high.

44 feet by 32 feet, 13 feet 9 inches high.
Floor area of engine room includes a lavatory 8 feet by 7 feet, and a storeroom 8 feet 6 inches by 7 feet.

Location:

480 feet south 35° east from center of Pit "B". Battery Schenck.

Reference of site (boiler room floor) above mean low water, 14.28.

Boilers:

Two, E. Keeler & Co., water tube boilers, 150 H.P. each, oil burners, purchased July 24, 1909.

Engines:

Two Buffalo Forge Co. steam engines, 150 H.P. each, stroke
14 inches, bore 15 inches, speed 275 R.P.M., Nos. 12913 and
12914. Purchased July 24, 1909.

Generators:

Two Western Electric Co., direct connected generators, capacity
75 K.W. each. 300 amperes, 250 volts, speed 275 R.P.M., Nos.
48123 and 48124, Purchased July 24, 1909

Transformers:

None.

Storage batteries:

Independent Plants:

None. The central plant will furnish all current for light and power at all defensive works at Fort Casey. No power to be furnished for searchlights. Each searchlight has its own plant.

ing the constitute was beautiful.

in phone in estados in destados.

e ly tolynoù med na biolor de

Kilowattage required.

For inside and outside illumination of defensive works, 45 K.W.

For motors, 54 K.W.

For searchlights, None.

For telautographs, 8 K.W.

For post lighting, 83 K.W.

Power house and plant is designed and built to permit installation of one more parallel unit and two balancer sets.

Total cost of plant \$51,499.20.

. There is no building to be the control of the con

one salabem of the bring the form

Transferred to Coast Artillery October 5, 1910.

	•	Date when	To÷ol	
Name		:Transferred		
of	:Name and Armament of	: to	that	
Harbor.	: Battery.	: Artillery.	date.	Remarks.
Richs	: FORT WARD:	•	-	
Passage,	One mining case-			
Puget	: mate, frame struc-	•		
Sound.	: ture on concrete	• •		
	foundation, with			·
	: concrete retaining : walls and earth pro-			
	: tection. Four rooms			•
	: Dormitory, 9' X 21'			
	: 9" X 8' 10" high.	25,	\$6975 :	
•	Operating room, 15	1910.	:	.
	: 9" X 21' 9" X 8' : 10" high.			
	Engine room, 11' 9"			
	: X 21' 9" X 9' 8"			
•	: high. Storage batt			
	: ery room, 7' 9" X :		:	
	: 21' 9" X'9' 8" high		:	
	•		:	
	: One Torpedo Store-	•	•	
	: house, frame struc-		•	
	: ture, with concrete;		:	
	: floor and founda- :	:	:	
	: tion. Inside dimen-: sions 28' 8" X 88':	:	•	
	: 8" X 16' 11" high	February	•	
	: Melting room 15' 7":	25, :	\$5580	
	: X 10' 1" X 11' 10"	1910.		
·	: high. Small store:		:	•
	: -rccm 15' 7" X 10' 1	•		
	: 1" X 11' 10" high. :		:	
	: Traveling crane of : 1500 lbs. capacity :	•		
	installed.	•	•	
	•			
	:	:	:	
	: One torpedo load-:	:	:	
	ing room, frame : structure with con-:	•	•	
	: crete floor and :	• •	:	•
	foundation, inside	•	•	
	: dimensions 22' X :	•	:	•
	: 45' X 12' 8" high. :		:	
	: Concrete tank 7 X: 33' X 5' deep. :	•	:	•
	· oo . o deep.			
	•	•		

Name of Harbor.	Name and Armament of Battery.	Date when Transferred to Artillery.	:Cost to that	::
	Traveling crane of 1000 lbs. capacity installed. Service magazine adjacent, frame structure, inside dimensions 10' X 7' 112" X 7' 8" high.	February	\$2790	i i i i i i i i i i i i i i i i i i i
	One cable tank, reinforced concrete structure. Outside dimensions 23' X 80 ft. X 10' 2" deep. Divided into three compartments with inside dimensions on bottom, 18'X 24' X 9 feet deep. Trayeling crane 10, 000 capacity in- stalled. Testing room adjacent, frame structure,in- side dimensions 5' ll½" X 6' ll½" X 8' l" high.		\$9765	
	Double mine primary station. Observation rooms 14' X 14' X 7' 2" high. Plotting rooms, 14' X 18' X 7' high. Sewell type construction.	February 25, 1910.	\$4185	Ref. of site 114.33 Ref. of axis of inst. 127.70 above mean low water.
	Double mine second: -ary station. Ob- servation rooms 10'; X 10' X 7' 2" high.; Sewell type con- struction.	25, 1910.	\$2092	Ref. of site 15.08 Ref. of axis of inst. 20.95 above mean low water.

 Seattle, Wash., Mar.15,1910

KUTZ, MAJ. C. W. Incloses additional sheets for insertion in his report of completed batteries for December 31,1909.

4 Inclos., E.D., not marked.

T

UNITED STATES ENGINEER OFFICE SEATTLE, WASHINGTON

March 15, 1910.

The Chief of Engineers, United States Army,

Washington, D. C.

Sir:

- I have the honor to acknowledge receipt this date of Depart-1. ment letter of February 18, 1910, (E.D. 48920/18), in reference to omission of data in regard to hoists in my report of completed batteries for December 31, 1909.
- Four additional sheets for insertion in the report are Copies of the additional sheets have been inclosed herewith. furnished the Division Engineer and the Chief Engineer Officer of the Department of the Columbia.
- The omission occurred through misunderstanding the 3. instructions contained in Circular No. 39 and the amended instructions of Circular No. 42, O. C. of E., 1909.

Very respectfully,

Charles to

Major, Corps of Engineers.

4 inclosures.

4892/20

Seattle, Wash. November 15, 191 Additional sheet for incorporation in last report of completed batteries from Seattle district.

Forwarded by

Captain, Corps of Engineers. (In absence of Major C. W. Kutz.

FORT CASEY, WASH.

---0---

ELECTRIC PLANT.

Central Plant:

Reinforced concrete building with concrete roof. Outside doors of 3/16 steel plate; window frames, sash and inside doors of wood.

Boiler room:
41 feet by 36 feet, 21 feet 9 inches high.

Engine room:

44 feet by 32 feet, 13 feet 9 inches high.

Floor area of engine room includes a lavatory 8 feet by 7 feet, a work room 12 feet by 7 feet, and a storeroom 8 feet 6 inches by 7 feet.

Location:

480 feet south 35° east from center of Pit "B". Battery Schenck.

Reference of site (boiler room floor) above mean low water, 14.28.

Boilers:

Two, E. Keeler & Co., water tube boilers, 150 H.P. each, oil burners, purchased July 24, 1909.

Two Buffalo Forge Co. steam engines, 150 H.P. each, stroke 14 inches, bore 15 inches, speed 275 R.P.M., Nos. 12913 and 12914. Purchased July 24, 1909.

Generators:

Two Western Electric Co., direct connected generators, capacity
75 K.W. each. 300 amperes, 250 volts, speed 275 R.P.M., Nos.
48123 and 48124, Purchased July 24, 1909

Transformers:

None.

Storage batteries:

None.

Independent Plants:

None. The central plant will furnish all current for light and power at all defensive works at Fort Casey. No power to be furnished for searchlights. Each searchlight has its own plant.

Kilowattage required.

For inside and outside illumination of defensive works, 45 K.W.

For motors, 54 K.W. For searchlights, None. For telautographs, 8 K.W.

For post lighting, 83 K.W.

Power house and plant is designed and built to permit installation of one more parallel unit and two balancer sets.

Total cost of plant \$51,499.20. Transferred to Coast Artillery October 5, 1910.

-0-

FORT WARD:

Projectile hoists installed in Battery Nash.

Type, Taylor-Raymond, back delivery.

Voltage, 110.

Speed, 1060 R.P.M.
Rated capacity of motor, 32 H-P.

BATTERY NASH:

Emplacement 1

Serial number of hoist, 4 Transferred to Artillery April 28, 1907.

Emplacement 2,

Serial number of hoist, 5 Transferred to Artillery, April 28, 1907.

Emplacement 3,

Serial number of hoist, 6 Transferred to Artillery, April 28, 1907.

FORT WORDEN:
Projectile hoists installed in Batteries Randol, Quarles, Ash and Benson.

Type, Taylor-Raymond, back delivery.

Voltage, 220.

Speed, 1060 R.P.M.

Rated capacity of motors:

Randol, Quarles, and Benson 5 H-P. Ash, 7½ H-P.

BATTERY RANDOL:

Emplacement 1,

Serial number of hoist, 68 Transferred to Artillery, September 26, 1907

Emplacement 2,

Serial number of hoist, 69 Transferred to Artillery, September 26, 1907.

BATTERY QUARLES:

Emplacement 1,

Serial number of hoist, 70 Transferred to Artillery September 29, 1906.

Emplacement 2,

Serial number of hoist, 71 Transferred to Artillery, September 29, 1906.

Emplacement 3,

Serial number of hoist, 72 Transferred to Artillery, September 26, 1907.

BATTERY ASH:

Emplacement 1, Serial number of hoist, 31 Transferred to Artillery, September 30, 1907.

Emplacement 2, Serial number of hoist, 32 Transferred to Artillery, September 30, 1907.

BATTERY BENSON:

Emplacement 1, Serial number of hoist, 32 Transferred to Artillery, April 24, 1908.

Emplacement 2, Serial number of hoist, 33 Transferred to Artillery, April 24, 1908.

-0-

FORT CASEY:

Projectile hoists installed in Batteries Worth, Moore and Kings-bury.

Type, Taylor-Raymond, back delivery.

Voltage, 220

Speed, 1060 R.P.M.

Rated capacity of motors, 5 H. P.

BATTERY WORTH:

Emplacement 1, Serial number of hoist, 60 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 61 Transferred to Artillery, September 26, 1907.

BATTERY MOORE:

Emplacement 1, Serial number of hoist, 62 Transferred to Artillery September 26, 1907.

Emplacement 2, Serial number of hoist, 63 Transferred to Artillery, September 26, 1907

Emplacement 3,

Serial number of hoist, 31

Transferred to Artillery, September 26, 1907.

BATTERY KINGSBURY:

Emplacement 1, Serial number of hoist, 30 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 29 Transferred to Artillery, September 26, 1907.

-0-

FORT FLAGLER:

Projectile hoists installed in Batteries Rawlins, Wilhelm and Revere.

Type, Taylor-Raymond, back delivery.

Voltage, 220

Speed, 1060 R. P. M.

Rated capacity of motors:

Rawlins and Revere, 5 H. P.
Wilhelm, 72H.P.

BATTERY RAWLINS:

Emplacement 1, Serial number of hoist, 64 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 65 Transferred to Artillery, September 26, 1907.

BATTERY WILHELM:

Emplacement 1, Serial number of hoist, 29 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 30 Transferred to Artillery, September 26, 1907.

BATTERY REVERE:

Emplacement 1, Serial number of hoist, 66 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 67 Transferred to Artillery, September 26, 1907.

Trees of the constraint of the e in a norm of the first of the country of the coun ్రాములోని కార్యాలు సాధ్య క్రామంలోని కార్యాలు కార్యాలు క్రామంలోని కార్యాలు కార్యాలు కార్యాలు కార్యాలు కార్యాలు కార్యాలు కార్యాలు కొర్పుకుండి కార్యాలు కార్యాలు క్రామంలోని కార్యాలు కా entration to the entrance of the property of t write it said (beiler said Trans) above near tear atter, teine. ့္ ၁၄၄၈ ရက္ကို အေတြ႔ေတြကို အေတြ႔ အာရေတြောင္း မေတြ႔ေတြ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အေတြ႔ အာရေတြေတြေနတာ အတြဲ႔ အေတြ႔ အေတြက အေတြ႔ မေတြ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြဲ႔ အတြ Forwarded by

ARTHUR WILLIAMS,

(In absence of Major G. W. Kutz.) round of one rounding Todas a testras. Additional sheet for incorporation in last report of completed batteries from Seattle district.

Forwarded by Seattle, Wash.

តារាក្រុមបានសុខសុខ

i kanang makopegana. Butan bija mengangangnata.

FORT CASEY, WASH.

---0---

ELECTRIC PLANT.

Central Plant:

Reinforced concrete building with concrete roof. Outside doors of 3/16 steel plate; window frames, sash and inside doors of wood.

Boiler room:
41 feet by 36 feet, 21 feet 9 inches high.

Engine room:

44 feet by 32 feet, 13 feet 9 inches high.

Floor area of engine room includes a lavatory 8 feet by 7 feet, a work room 12 feet by 7 feet, and a storeroom 8 feet 6 inches by 7 feet.

Location:

480 feet south 35° east from center of Pit "B". Battery Schenck.

Reference of site (boiler room floor) above mean low water, 14.28.

Boilers:

Two, E. Keeler & Co., water tube boilers, 150 H.P. each, oil burners, purchased July 24, 1909.

Two Buffalo Forge Co. steam engines, 150 H.P. each, stroke 14 inches, bore 15 inches, speed 275 R.P.M., Nos. 12913 and 12914. Purchased July 24, 1909.

Generators:

Two Western Electric Co., direct connected generators, capacity
75 K.W. each. 300 amperes, 250 volts, speed 275 R.P.M., Nos.
48123 and 48124, Purchased July 24, 1909

Transformers:

None.

Storage batteries:

None.

Independent Plants:

None. The central plant will furnish all current for light and power at all defensive works at Fort Casey. No power to be furnished for searchlights. Each searchlight has its own plant.

Kilowattage required.

For inside and outside illumination of defensive works, 45 K.W.

For motors, 54 K.W.

For searchlights, None.

For telautographs, 8 K.W.

For post lighting, 83 K.W.

Power house and plant is designed and built to permit installation of one more parallel unit and two balancer sets.

Total cost of plant \$51,499.20.

Transferred to Coast Artillery October 5, 1910.

HOISTS.

-0-

FORT WARD:

Projectile hoists installed in Battery Nash.

Type, Taylor-Raymond, back delivery.

Voltage, 110.

Speed, 1060 R.P.M.
Rated capacity of motor, 32 H-P.

BATTERY NASH:

Emplacement 1

Serial number of hoist, 4 Transferred to Artillery April 28, 1907.

Emplacement 2,

Serial number of hoist, 5 Transferred to Artillery, April 28, 1907.

Emplacement 3,

Serial number of hoist, 6 Transferred to Artillery, April 28, 1907. FORT WORDEN: Projectile hoists installed in Batteries Randol, Quarles, Ash and Benson.

Taylor-Raymond, back delivery. Type,

Voltage, 220.

Speed, 1060 R.P.M.

Rated capacity of motors:

5 H-P. Randol, Quarles, and Benson 7₺ H-P.

BATTERY RANDOL:

Emplacement 1,

Serial number of hoist, 68

Transferred to Artillery, September 26, 1907

Emplacement 2,

Serial number of hoist, 69

Transferred to Artille ry, September 26, 1907.

BATTERY QUARLES:

Emplacement 1,

Serial number of hoist, 70

Transferred to Artillery September 29, 1906.

Emplacement 2,

Serial number of hoist, 71

Transferred to Artillery, September 29, 1906.

Emplacement 3,

Serial number of hoist, 72

Transferred to Artillery, September 26, 1907.

BATTERY ASH:

Emplacement 1, Serial number of hoist, 31 Transferred to Artillery, September 30, 1907.

Emplacement 2, Serial number of hoist, 32 Transferred to Artillery, September 30, 1907.

BATTERY BENSON:

Emplacement 1, Serial number of hoist, 32 Transferred to Artillery, April 24, 1908.

Emplacement 2. Serial number of hoist, 33 Transferred to Artillery, April 24, 1908.

HOISTS.

-0-

FORT CASEY:

Projectile hoists installed in Batteries Worth, Moore and Kings-bury.

Type, Taylor-Raymond, back delivery.

Voltage, 220

Speed, 1060 R.P.M.

Rated capacity of motors, 5 H. P.

BATTERY WORTH:

Emplacement 1, Serial number of hoist, 60 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 61 Transferred to Artillery, September 26, 1907.

BATTERY MOORE:

Emplacement 1, Serial number of hoist, 62 Transferred to Artillery September 26, 1907.

Emplacement 2, Serial number of hoist, 63 Transferred to Artillery, September 26, 1907

Emplacement 3, Serial number of hoist, 31 Transferred to Artillery, September 26, 1907.

BATTERY KINGSBURY:

Emplacement 1, Serial number of hoist, 30 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 29 Transferred to Artillery, September 26, 1907.

HOISTS.

-0-

FORT FLAGLER:

Projectile hoists installed in Batteries Rawlins, Wilhelm and Revere.

Type, Taylor-Raymond, back delivery.

Voltage, 220

Speed, 1060 R. P. M.

Rated capacity of motors:

Rawlins and Revere, 5 H. P.
Wilhelm, 72H.P.

BATTERY RAWLINS:

Emplacement 1, Serial number of hoist, 64 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 65 Transferred to Artillery, September 26, 1907.

BATTERY WILHELM:

Emplacement 1, Serial number of hoist, 29 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 30 Transferred to Artillery, September 26, 1907.

BATTERY REVERE:

Emplacement 1, Serial number of hoist, 66 Transferred to Artillery, September 26, 1907.

Emplacement 2, Serial number of hoist, 67 Transferred to Artillery, September 26, 1907.

FORT WORDEN.

Additional electrical equipment installed in Central Power Plant and at Battery Kinzie.

At Power Plant:

One 45 H.P., 220 volt, D.C. interpole motor, direct connected to a 30 K.V.A. alternating generator, 2400 volts, 3-phase, 60 cycle.

At Battery Kinzie:

One 38 H.P., 220 volt, A.C., motor, 60 cycle, 3-phase, direct connected to one 25 K.W. compound generator, 250 volts, 100 amp. The current is transformed from 2200 volts to 220 volts by 3 10-K.W. transformers.

Cost of equipment, installed, \$5700.

Transferred to Artillery January 10, 1912.

:Date when :Total cost: Name of: Name and armament of: turned to REMARKS that : over to Harbor : battery date Artillery : Garrisoned. FORT WORDEN. Admiral-Magazines dry Battery Kinzie, ty Inlet Puget Mounted. Retracting motors Jan. 10. 2 12-inch disappear) Sound. \$207832.50 for carriages and ing carriages. Model 1912 engimeer terminal 1901, Nos.20 &21 bozes not yet Alliance Mach. Co. received. On hand, not mounted, 2 12-inch B.L. rifle Model 1895, MI. Nos. 60 & 73. Watervliet Arsenal Empl.1, Rifle #60* Car. #21 Empl.2, Rifle #73* Car. #20 * To be mounted

Range transmission device installed in plotting room with dial in rear of each gun platform.

Jan.10,

1912 \$775.00

Electric fixtures and light and power mains installed and connections made with central power plant, except power wires at gun wells.

Sel supplemental report for 12/3//13

g/ Jour

Name of : Name and armament of Harbor : battery	: Date when:Total cos : turned : to : over to : that : Artillery: date	: (All references are : to mean low water)
Admiralty FORT WORDEN Inlet. B'14 Primary Station Puget Battery Kinzie. Sound. Reinforced concrete structure.) 1912. }	Ref.of site 176.53 Ref.of inst.axis 181.51
Observation room 11'8 x11'8"x6'6-3/4" high Plooting room is in battery		
B"14 Secondary Static Battery Kinzie. One room,12'x12'x7' high. Sewell type structure.	Jan.10, \$440.0 0	Ref. of site 86.78 Ref. of inst.axis, 94.41
B"'14 Supplemental Station, Battery Kin zie. One room, 12'x12'x7' high. Sewell type structure.	Jan. 10, \$435.00	Ref.of site, 48.78 Ref.of inst.axis, 56.41

These stations are not conspicuous at a distance of four miles when viewed from the usual channels of approach.

Spm

	* * * * * * * * * * * * * * * * * * *	:Date when:Total cost:
Name of Harbor	Name and armament of battery	turned: to: cver to: that: REMARKS Artillery: date:

FORT WHITMAN

sarato- ga Pas- sage, Puget Sound,	Battery Harrison, Mounted) 4 6-in.disappearing car- riages, L. F. Model, 1905 NI Nos. 14, 15, 16, 17, Water-				
Wash.	town Arsenal, Emp.1,Rifle 0,Car.#14 " 2, " 0, " #15 " 3, " 0, " #16 " 4, " 0, " #17				

detachment. Magmay 9,1911 \$92000 azines dry. Independent light and
power plant installed in battery. Wiring and

fixtures for electric lights and power installed.

In charge of a

Rifle No. 1 Model 1908, Watervliet Arsenal. On hand, not mounted.

Mrning Casemate:
Room in battery suitable for casemate
(See 27054/93)

DATUM MARKS.

PORT WHITMAN.

Located on the west end of Hope Island.

consists of a 3-inch galvanised pipe about 10 feet long erected on a rock. The detum mark is a board 5' x 2' painted black and white and clamped horizontally across pipe. The center is 25' above mean lower low water at Utsaledy, the point of reference for Fort Whitman.

Cost \$150.00.

Not transferred to Artillery.

FORT WORDEN.

Additional Electric Plant.

Location: In storage battery room in central power plant building.

Description: Gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4 cylinders, 7-1/2" diam., 7-1/2" stroke.

Rating of generator: 25 k.w., 230 volts, 109 amp. Rating of motor: 3 H.P., 230 volts, 12 amperes, 1240 revolutions.

Manufactured by General Electric Co., Schenectady, N.Y.

Date of purchase: Unknown.

Received April 23, 1912, from Capt. A. E. Waldron, Corps of Engineers, New London, Conn.

Cost of installation, \$1000.

Transferred to Artillery, May 31, 1912.

Searchlight No. 2.

Diameter of projector, 60 inches.

Projector electrically and hand controlled.

Independent power plant, gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4 cylinder, 7-1/4" diameter, $7\frac{1}{2}$ " stroke.

Rating of generator, 25 k.w. 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenectady, N. Y., and Lynn, Mass.

Date of receipt in district, January 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generating sets, radiators and switchboards for lights Nos. 2 and 3 fixed in power house located 490 feet from secondary station of first fire command, Az. 42° 30'.

Degree of mobility of projector: Projector in fixed position in shelter located 605 feet from secondary station of first fire command, Az. 72°20'.

Controller in shelter on skids, located 978 feet from secondary station of first fire command, Az. 71°30'.

Returns submitted to Engineer Department.

Cost of projector and generating set, \$8,832.00.

Cost of installation of generating set and projector, \$3,299.35

Transferred to Artillery, March 1, 1911.

FORT CASEY.

Searchlight No. 8.

Diameter of projector, 60 inches.

Projector electrically and hand controlled.

Independent power plant; gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4-cylinders, 7-1/4 inches diameter; 7-1/2 inch stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenectady, N. Y., and Lynn, Mass.

Date of receipt in district, Jan. 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generating sets, radiators and switchboards for lights Nos. 8 and 9 fixed in power house located 660 feet from secondary station of fourth fire command. Az. 146°.

Degree of mobility of projector: Projector in fixed pesition in shelter located 760 feet from secondary station of fourth fire command, Az. 140°,15'.

Controller in shelter on skids, located 1614 feet from secondary station of fourth fire command. Az. 141° 15'

Returns submitted to Engineer Department.

Cost of projector and generating set, \$8832.

Cost of installation of generating set and projector, \$3041.50 Transferred to Artillery, April 4, 1911.

Searchlight No. 9.

Diameter of projector, 60 inches.

Projector electrically and hand controlled.

Independent power plant; gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4 cylinders, 7-1/4 inches diameter; 7-1/2 inch stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenectady, N. Y., and Lynn, Mass.

Date of receipt in district: Jan. 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generating sets, radiators and switchboards for lights Nos. 8 and 9 fixed in power house located 660 feet from secondary station of fourth fire command, Az. 146°.

Degree of mobility of projector: Projector in fixed position in shelter located 615 feet from secondary station of fourth fire command. Az. 137° 30'.

Controller in F"4.

Returns submitted to Engineer Department.

Cost of generating set and projector, \$8832.

Cost of installation of generating set and projector, \$2825.24.

Transferred to Artillery April 4, 1911.

Name :Date when:Total cost: REMARKS. of Hame and armament of turned: to :(All references are Harbor that battery : over to : : to mean lower low :Artillery: date water.) Sarato-FORT WHITMAN ga Pas-F'l and M' Double prisage, Puget mary station for pri-May 9,1911. \$2156 Ref. of site(floor Sound, mary fire command and of observing rooms) Wash. mine command. Reinforc-68.5. ed concrete structure Ref. of inst.axes, with sheet steel roof. 74.0. Two observing rooms, 10 'x10 'x6'6" high.

Plotting room in rear,

15'x15'x7' high

SUPPLEMENTAL SHEET FOR REPORT OF COMPLETED BATTERIES For December 31, 1913. Correcting Report of December 31, 1910.

FORT FLAGLER.

- Page 6 Telephone booth added in Fy (Bankhead) alongside the terminal cabinet.
- Page 7 Telephone booth added in plotting room of F'g, making three in all
- Page 8 Telephone booth added in plotting room of F'8, making five in all.
- Page 10- T3. The tide gauge on the Engineer's wharf is dismantled but the 10 by 8 building remains.

 A new gauge was established in May, 1913, inside the ware-house on the Post wharf at cost of \$230.

 No formal transfer made to the Artillery; (Replacement only) The description on page 12 holds good for the new gauge.
- Page 11- CENTRAL PLANT. Additional equipment installed by the Engineer Department for the Quartermaster Department in June 1911, at cost of \$1144 including a 25 Kw.gesoline engine generating set, which the Quartermaster has since moved to Fort Ward. Balancer set, Kw, 16; speed 975; volts 250/250; amp. on neutral 128; Gen.Elec.Co. No. N.P.2221. Continuous current generator, Comp.wound, No.352560; type C.V.C. 115; form B4; speed 975; Kw.9-1/2; volts 125; amp.76; Gen. Elec.Co. No.N.P.7878.
- Page 13- SEARCHLIGHTS. 30-inch. This page should be cancelled as the light has been transferred from the District.

SUPPLEMENTAL SHEET FOR REPORT OF COMPLETED BATTERIES For December 31, 1913. Correcting Report of December 31, 1910.

FORT CASEY.

- Page 15 Batteries William Worth and James Moore:

 Powder rooms of emplacements Nos. 2 have been dampproofed by interior linings of hollow wall tile, cedar and felt ceilings. Work done in July, 1913; cost for the two \$740.
- Page 18 Electric light wires and fixtures installed in all batteries and primary range-finder stations, and power wires where required.
- Page 20 F'6(Casey) Telephone booth added.
- Page 21 F'4(Seymour) Three telephone booths added.
 F'5(Casey) One telephone booth added, making three in all.
- Page 24 ELECTRIC PLANT. Add: installed by the Const. Quartermaster for Post lighting and pumping:One 120 H.P.non-releasing Corliss 4-valve simple engine made by Harrisburg Foundry & Machine Works, direct connected to a 75 Kw., 2300 V., 3-phase A.C. alternator. One 5 Kw. constant current street-lighting transformer. One 50 KW. A.C.D.C. rotary converter with transformer. Alternator, transformer and converter made by Fort Wayne Electric Co.
- Page 25 SEARCHLIGHTS. 30-inch: lst. item has been transferred by the Artillery to Fort Whitman. 2nd item, the projector is in commission at Fort Ward; the engine, generator and boiler are at Fort Worden in storage.
- Page 27 DATUM MARKS. "Shields" was destroyed in March 1913 and has been replaced in approximately the same position by "SHIELDS azimuth from F'6 294.37°; range 6438 yds. for use of Forts Casey and Flagler only, but visible also from Fort Worden. "Jenne" was destroyed in March, 1913.

FORT WHITMAN

Battery Harrison, Electric Plant.

In power room in battery between Emplacements Nos. 1 & 2. Location:

Gasoline actuated engine, 43-54 H.P., direct con-Description:

nected to 25 k.w. generator.

Manufacturer: General Electric Company, Schenectady, N. Y.

Date of purchase: Unknown.

Received from: Lieut.Col. Harry Taylor, Corps of Engineers,

October 15, 1910.

Transfo mer: None.

Storage Battery: None.

Kilowattage required: For inside and outside illumination of battery,

K. W. - - 4 1/2 K.W.

For motors, None.

For searchlights, None

For telautographs, None.

For lighting fire control structures. (No connections)

(Will require about 1/2 K.W.)

For post lighting, None.

Cost of installation: \$430.28

Transferred to Artillery, May 9, 1911.

SUPPLEMENTAL SHEET FOR REPORT OF COMPLETED BATTERIES.
For December 31, 1913.
Cofrecting Report of December 31, 1910.

FORT WHITMAN.

LATRINE.

DESCRIPTION: Reinforced concrete building, 9 feet by 19 feet,6 inches on parade level across the road between emplacements Nos. 1 & 2. Officers' end: one stall, one urinal, one washbowl; men's end: three stalls, three urinals, one washbowl.

Cost, including sewer, \$1055.

Transferred to the Artillery with Battery Harrison on May 9, 1911.

********	*****	*****	*****
	:Date when : 1	otal cost:	REMARKS.
Name of: Name and Armament of			(All references
Harbor: Battery	: over to :		are to mean low
	:Artillery :		water.)
Admi-		white the state of the state of	and the second s
ralty FORT FLAGLER.) Originally		Ref. of site 118.17
Inlet. * F'8 (Flagler) One roum	June 30,1902		Ref, of inst.axis
10'x10'x7'high. Steel tower)Transferred	\$3327.50	144.57
)Oct.3,1911.		
Plotting room in de-) Originally		
tached building, 11'6" x)June 5,1908	\$1500.00	Ref.of site 118.17
15'6"x9'5-1/2" high)Transferred		
Sewell type. Four tele-)Oct.3,1911.		
phone booths, each 3'6" x	: {		
$3'6" \times 9'5-1/2"$ high.	1		
*B'll Primary Station,)June 26,1905	\$ 4651 36	Ref. of site 118.17
Battery Command	Formally	φ±00±.00	Ref. of inst. axis
Battery John Rawlins.)transferred		144.57.
Day octy o and transmit)Oct.3, 1911		Two rooms. Inst.
	, • • • • • • • • • • • • • • • • • • •		boom 8'x8'x6'3"
			high., Plotting room
			14'11'/ " x 14' 11="
			x6'3" high. Con- 2
			crete foundation
			and steel tower con-
	\	Barrara and a de	struction. Glass roof
*B'12 Primary Station,)June 30,1902	\$3327.49	Ref. of site 118.17
Battery Command,	Formally		Ref. of inst.axis,
Battery Wilhelm,) transferred		144.57. One room 10' x 10'x7' high.
)Oct.3,1911		Steel tower.
#D117 Dwimews Ctetion)June30,1902	\$3495.2 2	Ref. of site 115.87
*B'13 Primary Station, Battery Command,	June 30 , 1302	奉のよるの。たた	Ref. of inst.axis
Battery Paul Revere,	\		142.27. One room
Originally built for pri-	.)		10'x10'x7' high.
mary station on site of	\		Steel tower.
B'll. Moved to present)		•
site and transferred to) Feb.10,1905	\$6115.44	
Artillery.) Formally		
• :)Transferred		•
)Oct.3, 1911.		

Not conspicuous at a distance of four miles when viewed from the usual whannels of approach.

(This sheet is to replace item 1, page 7, and all of page 8, Report for December 31, 1910).

FORT WHITMAN

Sarato-Battery Harrison, Mounted) May 9, ga Pas-4 6-in.B.L.rifles, Model 1908, Watervliet Arsenal, sage, Nos.1,2,3 & 4. Puget 4 6-in.disappearing car-Sound. riages, L.F.Model, 1905 MI) Wash. Nos.14, 15, 16, 17, Watertown Arsenal, Emp.1,Rifle 1,Car.#14 2, 2, " #15 #16 Ħ 3, 11

May 9, \$92000 1911 In charge of a detachment. Magazines dry.
Independent light and power plant installed in battery. Wiring and fixtures for electric lights and power installed.

FORT CASEY.

Searchlight No. 12.

Diameter of projector, 60 inches.

Projector electrically and hand controlled.

Independent power plant, gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4 cylinders, 7-1/4" diameter, 7-1/2" stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenectady, N. Y., and Lynn, Mass.

Date of receipt in district, January 20, 1911.

Received from Lieut. Col., Harry Taylor, Corps of Engineers.

Generating set, radiator and switchboard fixed in power house located 160 feet north of and in rear of tower for projector.

Degree of mobility of projector: Projector in fixed position in tower located 925 feet from F''' 4, Az. 275° 00'

Controller in F'' 4.

Returns submitted to Engineer Department.

Cost of projector and generating set \$8832.

Cost of installation of generating set and projector \$3766.35

Transferred to Artillery December 20, 1911.

FORT CASEY.

Searchlight No. 10.

Diameter of projector, 60 inches.

Projector electrically and hand controlled.

Independent power plant; gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4 cylinders, 7-k/4 inches diameter, 7-1/2 inch stroke.

Rating of generator; 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenectady, N. Y. and Lynn, Mass.

Date of receipt in district: Jan. 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generators, radiators and switchboards for lights and 10 fixed in power house located 60 feet from Emplacement Np. 4. Battery John Valleau. Az. 108°.

Degree of mobility of projector: Projector mounted on car with flanged wheels, and moveable on track from casemate to operating position. Casemate located 590 feet from Emplacement No. 4, Battery John Valleam. Az. 53.

Controller in primary station of fifth fire command.

Returns submitted to Engineer Department.

Cost of projector and generating set, \$8832.

Cost of installation of generating set and projector, \$4220.67.

Transferred to Artillery, April 4, 1911.

Searchlight No. 11.

Diameter of projector, 60 inches.

Projector electrically and hand controller.

Independent power plant; gasoline actuated engine direct connected to generator.

Rating of engine, 50 H.P., 560 R.P.M., 4 cylinders, 7-1/4 inches diameter, 7-1/2 inch stroke.

Rating of generator; 25 k.w. 115 wolts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenectady, N. Y., and Lynn, Mass.

Date of receipt in district, Jan. 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generators, radiators and switchboards for lights and fixed in power house located 60 feet from emplacement No. 4 Battery John Valleau, Az. 108°.

Degree of mobility of projector: Projector mounted on car with flanged wheels, and moveable on track from casemate to operating position. Casemate located 543 feet from Emplacement No. 4, Battery John Valleau. Az. 41°.

Controller in primary station of sixth fire command.

Returns submitted to Engineer Department.

Cost of projector and generating set \$8832.

Cost of installation of generating set and projector, \$4417.32.

Transferred to Artillery, April 4, 1911.

Searchlight No. 16.

Diameter of projector, 60 inches.

Projector electrically and hand controlled.

Independent power plant; gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4 cylinders, 7-1/4" diameter, 7½" stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenettady, N. Y., and Lynn, Mass.

Date of receipt in district, January 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generating set, radiator and switchboard fixed in combined power house and shelter for projector, located 824 feet from B*11, Az. 352°00'.

Degree of mobility of projector. Projector mounted on car with flanged wheels, and moveable on track from shelter to operating position, 110 feet.

Operating position of projector fixed.

Controller located in B"ll.

Returns submitted to Engineer Department.

Cost of projector and generating set, \$8832.00

Cost of installation of projector and generating set, \$3266.14

Transferred to Artillery, March 1, 1911.

HOISTS.

FORT FLAGLER.

Powder hoists installed in Battery Wilhelm,

Type A, 12-inch.

Voltage, 220.

Speed, 1060 R.P.M.

Rated capacity of motor, 3 H.P.

EMPLACEMENT Nº 1,

Serial number of hoist, 2.

Transferred to Artillery, June 7, 1911.

EMPLACEMENT Nº 2.

Serial number of hoist, 3.

Transferred to Artillery June 7, 1911.

FORT CASEY

Independent Electric Plant

LOCATION: In rear of Battery Kingsbury, in teathched building.

DESCRIPTION: Two 50-H.P. gaseline actuated engines, each engine

direct connected to one 25 k was efferator.

MANUFACTURER: General Electric Co. 6

Date of purchase Ankhown.

Received by transfer from Lieut. Col. Harry Taylor,

Corps of Engineers, on November 23, 1910.

TRANSFORMER: None.

STORAGE BATTERY: None.

KILLOWATTAGE Required, 39 k.w.

For inside and outside illumination of Batteries

Kingsbury, Moore and Worth, k.w. 12
For motors, k.w. 23
For searchlights, none.

For telautographs, and Signal Corps work, k.w. 4.

For post lighting, none.

Cost of Installation: \$1500.00

Transferred to Artillery on July 29, 1911.

FOR PROPERTY OF SERVICE OF SERVIC recr of sattentians and collection of the sattentians of the collection of the colle original of the same control moves to the state of the control of .0010:

olegalwed. 20 c.s. Populskije kaa opisiee oleskiide likelikaliseelik lagamery, core and order or secretification isnii**s** bee 35 01 3011 .adeatycousted to · galtagle the ord

00.0031) theirschie ind sect

The section of the captilless on the captilless.

MET YORDEN.

Searthlight No. 6.

Diameter of projector, 60 inches.

Prejector electrically and hand controlled.

Independent power plant, gasoline actuated engine, direct connected to generator.

Rating of engine: 50-H.R.; 560 R.P.M.; 4 cylinders, 7-1/4 inches diemeter; 7-1/2 inch stroke.

Rating of generator: 25 k.w.; 115 volts; 217 amperes.

Prejector, engine and generator made by General Electric Co., Schenetady, N. Y., and Lynn, Mass.

Date of receipt in district, Manuary 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generating et, radiator and switchboard fixed in power house south of and adjaining Chetzemaka Park, Port Townsend, Wash.

Degree of mebility of projector: Projector in fixed position in shelter lecated 56 feet from power house.

Controller located in Pal.

Returns submitted to Engineer Department.

Cost of projector and generating set, \$8832.

Cost of installation of generating set and projector \$3733.26.

Transferred to Artillery, October 3, 1911.

Searchlight No. 13.

Diameter of projector, 60 inches.

Projector electrically and hand controlled.

Independent power plant; gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4 cylinders, 7-1/4" in diameter, 72" stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenectady, M. Y., and Lynn, Mass.

Date of receipt in district, January 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generating set, radiator and switchboard fixed in combined power house and shelter for projector, located 373 feet from B*13, Az. 62°00'.

Degree of mobility of projector. Projector mounted on car with flanged wheels, and moveable on track from shelter to operating position, 90 feet.

Operating position of projector fixed.

Controller located in B"13.

Returns submitted to Engineer Repartment.

Cost of projector and generaling set, \$8832.00

Cost of installation of generating set and projector, \$3799.48.

Transferred to Artillery, Warch 1, 1911.

FORT FLAGLER.

Searchlight No. 14.

Dimmeter of projector, 60 inches.

Projector electrically and hand controlled.

Independent poor plant; gasoline actuated engine, direct connected to generator.

Rating of engine: 50-H.P., 560 R.P.M., 4 cylinders, 7-1/4 inches diameter, 7-1/2 inch stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Company Scheneckety, N.Y., and Lynn, Mass.

Date of receipt in district, Jamuary 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generating sets, radiators and switchboards for lights 14 and 15 fixed in power house 100 feet from Gun No.1, Battery Lee, assauth 200.

Degree of mebility of projector: Projector mounted on car with flanged whoels and movemble on treatle from casemate to operating position lll feet.

Controller located in F*7.

Returns submitted to Engineer Department.

Cost of projector and generating set, \$8832.

Cost of installation of generating set and projector \$5329.53.

Transferred to Artillery, October 3, 1911.

FORT FLAGLER.

Searchlight No. 15.

Diameter of prejector, 60 inches.

Projector electrically and hand controlled.

Independent poter plant, gosoline actuated engine, direct connected to generator.

Rating of eagine: 50 H.P., 560 R.P.M., 4 cylinders, 7-1/4 inches diameter, 7-1/2 inch stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Company, Schemetary, N.Y., and Lynn, Mass.

Date of receipt in district, January 20, 1911.

Received from Lieut. Col., Harry Taylor, Corps of Engineers.

Generating bets, radiators and switchboards for lights 14 and 15 fixed in power house 100 feet from Gun No.1, Battery Lee, asimuth 200.

Degree of mobility of projector: Projector mounted on car with finaged whose and moveable on trootle from commute to epoputing position 120 feet.

Controller located in C.2.

Returns submitted to Engineer Department.

Cost of projector and generating set, \$8832.

Cost of installation of generating set and projector, \$4801.27.

Transferred to Artillery October 3, 1911.

Searchlight No. 3.

Diameter of projector, 60 inches.

Projector electrically and hand controlled.

Independent power plant; gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 RPM, 4 cylinders, 7-1/4" diameter 72" stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenettady, N. Y. and Lynn, Mass.

Date of receipt is district, January 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generating sets, radiators and switchboards for lights Mos. 2 and 3 fixed in power house located 490 feet from secondary station of first fire command, az: 42° 30'.

Degree of mobility of projector: Projector in fixed position in shelter located 256 feet from secondary station of first fire command, az.:85° 15'.

Controller located in Fh.

Returns submitted to Engineer Department.

Cost of projector and generating set, \$8,832.00

Cost of installation of generating set and projector, \$3163.78

Transferred to Artillery, March 1, 1911.

FORT WORDEN.

Searchlight No. 4.

Diameter of projector, 60 inches.

Projector electrically and hand controlled.

Independent power plant; gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4 cylinders, 7-1/4" diameter, 7% stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenectady, N. Y., and Lynn, Mass.

Date of receipt in district, January 20, 1911.

Received from Lieut. Col. Harry Taylor, Corps of Engineers.

Generating set, radiator and switchboard fixed in power house in rear and on right flank of Eattery Tolles.

(See sufflemental in rear and on right flank of Eattery Tolles.

Operating position of projector fixed, 400 feet west of Battery Samual Walker.

Degree of mobility of projector. Projector mounted on car with flanged wheels, and moveable on track from shelter to operating position, 101 feet.

Controller located in F'2, Worden.
Returns submitted to the Engineer Department.
Cost of projector and generating set, \$8,832.00.

Cost of installation of generating set and projector, \$6,131.71.

Transferred to Artillery, February 10, 1911.

FORT WORDEN.

Searchlight No. 5.

Diameter of projector, 60 inches.

Projector electrically and hand controlled

Independent power plant, gasoline actuated engine, direct connected to generator.

Rating of engine: 50 H.P., 560 R.P.M., 4 cylinders, 7-1/4" diameter, 7-1/2" stroke.

Rating of generator: 25 k.w., 115 volts, 217 amperes.

Projector, engine and generator made by General Electric Co., Schenectady, N.Y., and Lynn, Mass.

Date of receipt in district, January 20, 1911.

Received from Lieut. Col., Harry Taylor, Corps of Engineers.

Generating set, radiator and switch board fixed in power house located 710 feet from Gun No.1, Battery Kinzie, Azimuth 255° 45'.

Degree of mobility of projector: Projector in fixed position in tower located 630 feet from Gun. No.1, Battery Kinzie, Azimuth 252° 00'.

Tower provided with moveable roof to permit elevation of projector to operating position.

Controller in station for third fire command.

Returns submitted to Engineer Department.

Cost of projector and generating set, \$8832.

Cost of installation of generating set and projector \$5173.79

Transferred to Artillery, December 20, 1911.

HOISTS

Fort Worden, Wash.

Installed in Battery Kinzie:

Projectile Hoists.

Type, Taylor-Raymond, back delivery

Voltage, 220

Speed, 800 R.P.M.

Rated capacity of motors, 7-1/2 H.P.

Emplacement No. 1, Serial No. 35.

Emplacement No. 2, Serial No. 36.

Transferred to Artillery January 10, 1912.

Powder Hoists.

Type, A, 12-inch.

Voltage, 220

Speed, 1060 R.P.M.

Rated capacity of motors, 3 H.P.

Emplacement No. 1, Serial No. 4.

Emplacement No. 2, Serial No. 5.

Transferred to Artillery January 10, 1912.

HOISTS.

FORT WORDEN.

Powder hoists installed in Battery Benson,

Type, A, 10-inch.

Voltage, 220.

Speed, 1060 R.P.M.

Rated capacity of motors, 3 H.P.

EMPLACEMENT Nº 1,

Serial number of hoist, 17.

Transferred to Artillery, June 7, 1911.

EMPLACEMENT Nº 2.

Serial number of hoist, 18.

Transferred to Artillery, June 7, 1911.

SUPPLEMENTAL SHEET FOR REPORT OF COMPLETED BATTERIES For December 31, 1913. Correcting Report of December 31, 1910.

FORT WORDEN.

- Page 29 Battery Henry Benson: retracting motors have been connected with power lines.

 Battery Thomas Vicars: No provision made for light wires or fixtures in the battery.

 Battery John Brannan: alterations to mortar carriages are completed instead of "in progress, etc."
- Page 29(seq)Battery Kinzie: Two 12-inch rifles have been mounted, viz:Emp.No.1, No.60 on carriage No.21; Emp. No.2, No.73 on
 carriage No.20.
 Retracting motors installed and connected up. Engineer terminal boxes not required.
 Strike out "except power wires at gun wells".
- Page 33 Battery Samuel Walker. Two pdr. rifles have been received and mounted, viz: emplacement No.1, rifle No.84, Mod.1903, Watervliet Arsenal, on carriage No.77; emplacement No.2, rifle No.10, Mod.1903, Watervliet Arsenal, on carriage No. 76.
- Page 34 F'2 (Worden) Two telephone booths added making 4 in all.
- Page 35 F'1 (Brannan) Three telephone booths added.
- Page 36 F'3 (Worden) One telephone booth added.
- Page 41 To be cancelled. The 30-inch and the 36-inch searchlights have been transferred from the District.
- Page 41c- Change operating position to read 400 feet <u>east</u> instead of <u>west</u> of battery Walker.

FORT WARD.

Temporary Searchlight.

One 30-inch . General Electric Company.

Date of purchase, unknown.

Received by transfer from Fort Wright, N. Y., Feb. 8, 1904.

Electrically and hand controlled.

Power furnished by independent 25 k.w. gasoline set installed in Battery Nash.

Plant fixed.

Projector mounted on truck.

Degree of mobility limited by length of conductor.

Return made by Artillery.

Cost of projector unknown.

Originally transferred to Artillery on Feb. 6, 1905.

Moved from Fort Casey by Artillery.

Projector installed at Fort Ward by Engineer Department.

Temporary structure for installation of projector transferred to Artillery on Bec. 7, 1911.