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FINAL SITE INSPECTION REPORT FOR FORT STORY VA

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SITE INSPECTION REPORT
FORT STORY, VIRGINIA
MILITARY MUNITIONS RESPONSE PROGRAM

Prepared for

U.S. Army Corps of Engineers, Baltimore District
10 South Howard Street
Baltimore, Maryland 21203

September 2008

URS Group, Inc.
200 Orchard Ridge Drive, Suite 101
Gaithersburg, MD 20878
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FINAL

SITE INSPECTION REPORT
FORT STORY, VIRGINIA

DoD Contract Number: W912DR-06-C-0028

Reviewed and Approved by:

Scott McClelland, PG
Program Manager
URS Group, Inc.

SEPTEMBER 2008

EXECUTIVE SUMMARY

Fort Story (also referred to as the Installation) is located on Cape Henry at the northern end of Virginia Beach, VA. Founded in 1914, construction at Fort Story began in 1916 and was integrated into the Coast Defenses of Chesapeake Bay. Following World War I (WWI), the Installation remained relatively inactive until the beginning of World War II (WWII) when the headquarters of the Harbor Defense Command moved to Fort Story from Fort Monroe, VA, and the Installation served as a key component of the coastal defense network.

During WWI, armaments at Fort Story included several permanent batteries containing 5-inch and 6-inch guns; railway artillery including 14-inch, 12-inch, and two 8-inch guns; and anti-aircraft guns. During WWII, additional coastal artillery batteries were constructed, including four 16-inch guns. Following WWII, Fort Story's mission changed with the arrival of the 458th Amphibious Truck Company in 1946 and the decommissioning of the coastal artillery guns in 1949. Between 1958 and 1974, a Nike missile station was constructed and maintained at the site.

Currently, Fort Story is the Army's only training facility for logistics-over-the-shore operations to train troops on amphibious equipment and to practice the transfer of military cargo from ship to shore. The unique coastal resource features at the Installation are also used as training areas for a variety of military units representing the U.S. Army, Navy, Marine Corps, and Air Force.

Under the Military Munitions Response Program (MMRP), a survey was conducted in 2003 (the Closed, Transferring, and Transferred [CTT] Range Inventory) that identified one closed range: the Small Arms Range (STORY-001-R-01).

A Historical Records Review (HRR) was then performed in support of the MMRP Site Inspection (SI) of Fort Story. The HRR included archive searches, site visits, interviews, and other research performed to obtain additional information pertaining to the Small Arms Range and other sites potentially eligible for investigation under the MMRP. Based on the findings of the HRR, information regarding the MMRP sites at Fort Story was considered sufficient to determine whether the sites required additional investigation, an immediate response, or No Further Action. Therefore, the HRR findings were incorporated into this SI Report, and no field activities were required to complete the SI.

Based on current activities at Fort Story, the operational range area originally identified in the CTT Range Inventory Report increased. Thus, the Small Arms Range site now lies completely within the operational range area and is not eligible for study under the MMRP.

Research performed during the HRR identified the presence of coastal artillery batteries at Fort Story that were not identified in the CTT Range Inventory Report. These batteries provided coastal protection from aircraft, ships, and submarines from WWI through WWII. Records were used to develop the historical firing fans of the guns, and the portions of the historical firing fans of guns believed to have fired munitions filled with high explosives (HE) were complexed together to create a new MRS called the Inner Coastal Defense Range (AEDB-R No. STORY-002-R-01). This site extends offshore of Fort Story into the Atlantic Ocean and Chesapeake Bay and comprises 258,510 acres. The battery names, type of guns, and potential munitions and explosives of concern (MEC) associated with the site are presented in Table ES-1.

Table ES-1: Batteries, Guns, and Munitions Associated with the Inner Coastal Defense Range MRS

Battery	Type of Gun	Potential Munitions
Batteries A and B	M1903 5-inch gun M1900 6-inch gun	5- and 6-inch mortars
Battery AA-1	1917M1A2 gun	3-inch MKI shrapnel and high explosive
Railguns	37 caliber gun mounted on railgun	37-mm subcaliber
Examination Battery	M1902M1 gun	3-inch MK1 HE
Battery 21	M1 90-mm AMTB gun .50 caliber machine gun 37-mm gun	90-mm HE M71/ .50 caliber ball/ 37-mm
Battery 22	M1 90-mm AMTB gun .50 caliber machine gun 37-mm gun	90-mm HE M71/ .50 caliber ball/ 37-mm
Battery 7A	Underwater mines	M1, M2, and M4 mines
Mine Casemate 1/2	Underwater mines	M6 mines
Railway Artillery (Fort Custis)	37 caliber guns mounted on railguns	37-mm subcaliber
Battery Lee (Fishermans Island)	M1902 M1 gun	3-inch MK 1HE
AMTB Battery 24 (Fishermans Island)	M1 90-mm AMTB gun	90-mm ME
Emergency Battery (Fishermans Island)	M1903 6-inch gun	5-inch mortars

As noted in Table ES-1, potential munitions from batteries associated with two formerly used defense sites (FUDS)—Fort Custis and Fishermans Island—are included as part of the MEC potentially present in the Inner Coastal Defense Range MRS. Based on documents reviewed during the SI, historical firing fans from these guns were identified as overlapping the Inner Coastal Defense Range MRS. Therefore, the portions of these historical firing fans that overlap the Inner Coastal Defense Range MRS are incorporated into this site. If portions of these historical range fans extend beyond the Inner Coastal Defense Range MRS, they fall under the responsibility of the FUDS MMRP.

Based on the conceptual site model developed for the Inner Coastal Defense Range MRS, potentially complete pathways exist for receptors that may come in contact with MEC during activities such as dredging and fishing with drag nets.

These findings were reviewed and discussed by all MMRP stakeholders. It was agreed that the historical information gathered during the HRR was sufficient to reasonably determine additional investigation was required because of the potential presence of MEC at the Inner Coastal Defense Range MRS, and this site was recommended to proceed to a Remedial Investigation (RI). The findings and recommendations of the SI are summarized in Tables ES-2 and ES-3.

Table ES-2: Summary of SI Findings

Site Name	AEDB-R Number	CTT vs. SI Acreage	Comments
Small Arms Range	STORY-001-R-01	3/0	This site is located within the operational range area and is ineligible for the MMRP.
Inner Coastal Defense Range	STORY-002-R-01	NA/258,510	Information indicated that several batteries potentially fired HE rounds into this area; therefore, this was identified as a new MMRP site.

NA = Not available

Table ES-3: Summary of SI Recommendations

MRS (AEDB-R)	MRSPP Priority	Recommendations		Basis for Recommendation	
		MEC	MC	MEC	MC
Inner Coastal Defense Range (STORY-002-R-01	3	RI	No Further Action	Potential MEC fired from batteries at Fort Story and TPP2 decision to move the site forward.	MC unlikely to have adverse impact on human health or ecological receptors. However, if MEC investigation identifies areas of concern, MC sampling may be warranted.

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TABLE OF ACRONYMS AND ABBREVIATIONS

Acronym	Definition
AEC	Army Environmental Command
AEDB-R	Army Environmental Database-Restoration
A/I	Active/Inactive
AMTB	Anti-Motor Torpedo Boat
AP	Armor Piercing
AR	Army Regulation
ARS	Advance Range Survey
ASR	Archive Search Report
CA	Corrective Action
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
CI	Cast Iron
CSM	Conceptual Site Model
CTC	Cost to Complete
CTT	Closed/Transferring/Transferred
DERP	Defense Environmental Restoration Program
DMM	Discarded Military Munitions
DNT	Dinitrotoluene
DoD	Department of Defense
DODD	Department of Defense Directive
DPW	Directorate of Public Works
EP	Engineering Pamphlet
EOD	Explosive Ordnance Disposal
FUDS	Formerly Used Defense Site
FY	Fiscal Year
GPF	Grande Puissance Filloux
HE	High Explosives
HRR	Historical Records Review

Acronym	Definition
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Restoration Program
ITAM	Integrated Training Area Management
ITRC	Interstate Technology and Regulatory Council
MACOM	Major Command
MC	Munitions Constituents
MD	Maryland
MEC	Munitions and Explosives of Concern
mm	Millimeter
MMRP	Military Munitions Response Program
MRS	Munitions Response Site
MRSPP	Munitions Response Site Prioritization Protocol
NFA	No Further Action
NARA	National Archives and Records Administration
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historic Places
OEW	Ordnance and Explosives Waste
OPAREA	Operating Areas
PA	Preliminary Assessment
Pb	Lead
POC	Point of Contact
RAC	Risk Assessment Code
RG	Records Group
RI/FS	Remedial Investigation/Feasibility Study
SARA	Superfund Amendments and Reauthorization Act
Sb	Antimony
SI	Site Inspection
TNT	Trinitrotoluene
TP	Target Practice
TPP	Technical Project Planning

Acronym	Definition
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USCG	U.S. Coast Guard
USEPA	U.S. Environmental Protection Agency
UXO	Unexploded Ordnance
VA	Virginia
VDEQ	Virginia Department of Environmental Quality
WWI	World War I
WWII	World War II

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GLOSSARY OF TERMS

Closed Range – A military range that has been taken out of service as a range and either has been put to new uses that are incompatible with range activities, or is not considered by the military to be a potential range area. A closed range is still under the control of a Department of Defense (DoD) component.

Defense Site – All locations that are or were owned by, leased to, or otherwise possessed or used by the DoD. The term does not include any operational range, operating storage or manufacturing facility, or facility that is used or was permitted for the treatment or disposal of military munitions.

Discarded Military Munitions (DMM) – Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance, military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of consistent with applicable environmental laws and regulations.

Explosive Ordnance Disposal (EOD) – The detection, identification, onsite evaluation, safe rendering, recovery, and final disposal of unexploded explosive ordnance. It may also include explosive ordnance that has become hazardous by damage or deterioration.

Explosives Safety – A condition where operational capability and readiness, personnel, property, and the environment are protected from the unacceptable effects of an ammunition or explosives mishap.

Formerly Used Defense Site (FUDS) – A DoD program that focuses on compliance and cleanup efforts at sites that were formerly used by the DoD. A FUDS property is eligible for the Military Munitions Response Program if the release occurred prior to October 17, 1986; the property was transferred from DoD control prior to October 17, 1986; and the property or project meets other FUDS eligibility criteria.

Military Munitions – All ammunition products and components produced for or used by the armed forces for natural defense and security, including ammunition products or components under the control of the DoD, the U.S. Coast Guard, the U.S. Department of Energy, and the U.S. National Guard. The term includes confined gaseous, liquid, and solid propellants; explosives; pyrotechnics; chemical and riot control agents; and smokes and incendiaries, including bulk explosives and chemical warfare agents; chemical munitions; rockets; guided and ballistic missiles; bombs; warheads; mortar rounds; artillery ammunition; small arms ammunition; grenades; mines; torpedoes; depth charges; cluster munitions and dispensers; demolition charges; and devices and components of the above. The term does not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components, other than non-nuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization operations under the Atomic Energy Act of 1954 have been completed.

Munitions and Explosives of Concern (MEC) – This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks, means unexploded ordnance, DMM, or munitions constituents (e.g., trinitrotoluene [TNT], cyclotrimethylenetrinitramine [RDX]) present in sufficiently high concentrations to pose an explosives hazard.

Munitions Constituents (MC) – Any materials originating from unexploded ordnance, DMM, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions.

Operational Range – A range that is under the jurisdiction, custody, or control of the Secretary of Defense and that is used for range activities; or, although not currently being used for range activities, that is still considered by the Secretary to be a range and has not been put to a new use that is incompatible with range activities (10 U.S.C. 101(e)(3)(A) and (B)). Also includes "military range," "active range," and "inactive range," as those terms are defined in 40 CFR §266.201. See reference (f).

Other-than-Operational Range – Includes all property that is under jurisdiction, custody, or control of the Secretary of Defense that is not defined as an Operational Range.

Range – A designated land or water area set aside, managed, and used for range activities of the DoD. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pits, impact areas, electronic scoring sites, buffer zones with restricted access and exclusionary areas, and airspace areas designated for military use in accordance with regulations and procedures prescribed by the Administrator of the Federal Aviation Administration.

Transferred Range – A range that is no longer under military control and had been leased by the DoD, transferred, or returned from the DoD to another entity, including Federal entities. This includes a military range that is no longer under military control, but was used under the terms of an executive order, special-use permit or authorization, right-of-way, public land order, or other instrument issued by the Federal land manager. Additionally, property that was previously used by the military as a range, but did not have a formal use agreement, also qualifies as a transferred range.

Transferring Range – A range that is proposed to be leased, transferred, or returned from the DoD to another entity, including Federal entities. This includes a military range that was under the terms of a withdrawal, executive order, special-use permit or authorization, right-of-way, public land order, or other instrument issued by the Federal land manager or property owner. An active range will not be considered a transferring range until the transfer is imminent (generally defined as the transfer date being within 12 months and a receiving entity having been notified).

Unexploded Ordnance (UXO) – Military munitions that have been primed, fused, armed, or otherwise prepared for action; have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or materiel; and remain unexploded either by malfunction, design, or any other cause.

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Several organizations and personnel provided significant contributions and documents that aided in the preparation of this Site Inspection Report. URS Group, Inc. (URS) would like to acknowledge the following people and their organizations for their contributions:

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Of special note are the contributions made by the Old Coast Guard Station, Virginia Beach, VA, and its Executive Director, Col. Fielding Lewis Tyler (Ret.). Col. Tyler is the author of the book *Images of America, Fort Story and Cape Henry*, and provided URS with access to numerous historical documents related to Fort Story that are retained at the Old Coast Guard Station Museum located in Virginia Beach. Col. Tyler also led URS on a detailed site visit of Fort Story and the various coastal artillery batteries still present at the Installation.

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1.0 INTRODUCTION

The United States (U.S.) Congress established the Military Munitions Response Program (MMRP) in 2002 under the Defense Environmental Restoration Program (DERP) to address Department of Defense (DoD) sites with unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC) located on current and former military installations. Sites that are not eligible for the MMRP include: sites that had releases after September 30, 2002; properties classified as operational military ranges; permitted disposal facilities; and operating munitions storage facilities. The U.S. Army (Army) maintains an inventory of closed, transferring, and transferred (CTT) military ranges and defense sites with UXO-, DMM-, or MC-identified sites eligible for action under the MMRP. At Fort Story, VA, (also referred to as the Installation), one closed range (or munitions response site [MRS]) was identified in the *Closed, Transferring, and Transferred Inventory Report, Fort Story, Virginia* (Malcolm Pirnie, 2002b), hereafter referred to as the *CTT Range Inventory Report*.

This document presents the findings of the MMRP Site Inspection (SI) conducted at Fort Story, VA, and includes the findings of the Historical Records Review (HRR). The SI was conducted in support of the U.S. Army Corps of Engineers (USACE) and U.S. Army Environmental Command (AEC) under Contract W912DR-06-C-0028. Overall coordination of the SI and contract management was provided by the USACE Baltimore District. This SI is part of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process and will complete the Preliminary Assessment (PA)/SI requirement for the MRSs at Fort Story.

1.1 PURPOSE/SCOPE

The primary goal of the MMRP SI is to collect the information necessary to make one or more of the following decisions:

1) Determine whether a Remedial Investigation/Feasibility Study (RI/FS) is required at the site

2) Determine whether an immediate response is needed

3) Determine whether the site qualifies for No Further Action (NFA)

The Installation-wide SI at Fort Story addresses: 1) munitions and explosives of concern (MEC), which include UXO, DMM, and MC in sufficiently high concentrations to pose an explosives hazard, and 2) MC issues for the MMRP sites. The secondary goals of the SI include collecting data to allow the Army to prepare better Cost to Complete (CTC) estimates and complete the Munitions Response Site Prioritization Protocol (MRSPP) for each site. In compliance with Title 32 of the Code of Federal Regulations (CFR) § 179.5, the MRSPP score for the MRS included in this SI is considered interim pending stakeholder input.

An HRR was performed for Fort Story, and the results of that research are incorporated into this SI report. The HRR provided sufficient information needed to complete the MMRP SI evaluation at Fort Story. The information gathered during the HRR was reviewed and discussed by stakeholders from Fort Eustis (Fort Story's command installation), USACE, AEC, and the Virginia Department of Environmental Quality (VDEQ) at Technical Project Planning (TPP) meetings held on June 12, 2007; March 18, 2008; and August 25, 2008. All stakeholders agreed that the HRR information was sufficient to reasonably determine the likely presence of MEC at the one MRS (Inner Coastal Defense Range [Army Environmental Database-Restoration (AEDB-R) STORY-002-R-01]) identified to be eligible for investigation under the MMRP. Since no significant data gaps were identified, field work activities were not conducted as part of this SI. The discussions, decisions, and associated rationale for this decision are included in the TPP meeting minutes (Appendix E).

1.2 PROJECT DRIVERS

Federal, State, and local laws, as well as DoD and Army regulations and guidance, provide the regulatory structure for managing MMRP sites at Fort Story. The final structure of the MMRP is uncertain, as DoD and the U.S. Environmental Protection Agency (USEPA) are still resolving key issues at the national level. However, key legislative and administrative precedents will influence the final regulatory framework for the MMRP, and these items include:

Defense Environmental Restoration Program (DERP) Management Guidance (September 2001)

The DERP Management Guidance establishes a MMRP component for MEC and MC defense sites. DERP dates back to the Superfund Amendments and Reauthorization Act (SARA) of 1986, and the scope of the DERP is defined in 10 United States Code (U.S.C.) §2701(b), which states that the:

> Goals of the program shall include the following: (1) The identification, investigation, research and development, and cleanup of contamination from hazardous substances, pollutants, and contaminants. (2) Correction of other environmental damage (such as detection and disposal of unexploded ordnance) which creates an imminent and substantial endangerment to the public health or welfare or to the environment.

National Defense Authorization Act (Fiscal Year [FY] 02) (Sections 311-312)

Sections 311-312 of the National Defense Authorization Act of FY02 tasked DoD to develop and maintain an inventory of defense sites that are known or suspected to have MEC or MC. Section 311 requires DoD to develop a protocol for prioritizing defense sites for response activities in consultation with the States and Tribes. Section 312 requires the DoD to create a separate program element to ensure that the DoD can identify and track munitions response funding.

DoD Directive 3200.15 (DODD 3200.15), Subject: Sustainment of Ranges and Operating Areas (OPAREAs) (January 10, 2003)

"This directive establishes policy and assigns responsibilities [...] for the sustainment of test and training ranges and OPAREAs in the Department of Defense."

The directive's policies include:

"4.1. Ranges and OPAREAs shall be managed and operated to support their long-term viability and utility to meet the National defense mission. All functional elements of installation, range, and OPAREA management shall be integrated fully to support the DoD testing and training missions.

"4.2. Planning and management for the DoD range and OPAREA-sustainment program shall:

"4.2.1. Identify current and future operational air, ground, sea and/or undersea, space, and frequency spectrum range and OPAREA requirements necessary to meet test and training needs.

"4.2.2. Identify range and OPAREA encroachment concerns, environmental considerations, financial obligations, and safety factors that may influence current or future range and OPAREA activities, including reasonably anticipated future uses if the range has a finite withdrawal or lease period that shall not be renewed. When developing a new range, ensure that plans consider all aspects of a range's lifecycle including development, use, and closure.

"4.2.3. Evaluate current and future mission requirements in light of concerns identified in subparagraph 4.2.2., above, and develop and implement responsive range management plans [...]"

The directive's responsibilities include that the Under Secretary of Defense for Personnel and Readiness shall:

"5.1.1.2. Ensure that inventories of training ranges and OPAREAs are completed, updated every 5 years, and maintained in a GIS readily accessible by installation and range decision-makers."

DoD Directive 4715.11/12 (DODD 4715.11/12), Subject: Environmental and Explosives Safety Management on Operational Ranges within the United States (May 10, 2004)

This directive updated previous policy directives in order to "establish policy and assign responsibilities [...] for the [...] sustainable use and management of operational ranges located within the United States, [and] the protection of DoD personnel and the public from explosive hazards on operational ranges located within the United States." (DODD 4715.11)

The directive's specific DoD policies on operational ranges are:

"4.1 Use and manage operational ranges in a manner that supports national security objectives and maintains the high state of operational readiness essential to the U.S. Armed Forces, consistent with DoD Directive 3200.15 (reference (f)).

"4.2 Ensure the long-term viability of operational ranges while protecting human health and the environment.

"4.3 Limit, to the extent practical, the potential for explosives mishaps and the damaging effects of such to personnel, operational capability, property, and the environment.

"4.4 Resolve conflicts between explosive safety and other requirements with the objective of minimizing explosives hazards.

"4.5 Design and use operational ranges and the munitions used on them, to the extent practical, to minimize both potential explosive hazards and harmful environmental impacts and to promote resource recovery and recycling.

"4.6 Enhance the ability to prevent or respond to a release or substantial threat of a release of munitions constituents from an operational range to off-range areas." (DODD 4715.11)

Implementing authority for these operational range policies are given to the DoD Components (military services) in the directive's Section 5.4.

Munitions Response Site Prioritization Protocol (MRSPP) (32 CFR Part 179)

The MRSPP was promulgated in October 2005, in compliance with Section 311 of the National Defense Authorization Act of FY02. This protocol provides the method by which DoD will assign a relative priority for munitions responses to each MRS in the inventory of defense sites known or suspected of containing MEC or MC.

The September 2001 Management Guidance for the DERP and the National Defense Authorization Act of FY02, described above, established the MMRP. The DERP and the MMRP provide guidance and methods for conducting a baseline inventory of defense sites containing, or potentially containing, MEC or MC; and the MRSPP provides the

method for DoD to assign a relative priority for subsequent munitions response. Data collected during the SI will be used to prepare the MRSPP for each MRS.

1.3 BACKGROUND

The *CTT Range Inventory Report* for Fort Story is considered by the Army to serve as the CERCLA PA phase of work. The SI is the subsequent phase in the CERCLA process. Upon conclusion of the SI, the PA/SI requirements for the MMRP sites will be considered complete.

The Army conducted its Range Inventory in three phases. The first phase (Phase 1) involved a data call issued through the AEC requesting general information about ranges on various installations under each U.S. Army Major Command (MACOM). The Phase 1 Inventory was conducted using a questionnaire named the Advance Range Survey (ARS). The ARS allowed the Army to meet the short-term data goal of supporting the DoD preparation of Senate Report 106-50.

The Phase 1 inventory for Fort Story was completed in November 2000. The Integrated Training Area Management (ITAM) Coordinator, Johnny Noles, was identified as the point of contact (POC) for the ARS. No CTT ranges were identified in the ARS for Fort Story. The Fort Story ARS data were submitted to AEC and compiled into a master database of Army installations.

The ARS met the Army's initial needs; however, the long-term needs required a more detailed inventory that could not be obtained from information in the ARS. The follow-on inventory was divided into two phases. The Phase 2 inventory addressed operational ranges (formerly referred to as active/inactive [A/I] ranges), whereas, the Phase 3 inventory covered CTT ranges and sites with MEC or MC. The Army conducted the Phase 2 inventory for Fort Story in fall 2000. The results of the Fort Story Phase 2 inventory concluded that approximately 50 percent of the Installation was considered to be operational range areas (i.e., A/I ranges), and the findings were documented in an A/I-range inventory binder.

The Phase 3 inventory was completed for Fort Story in August 2002, and the findings were presented in the *CTT Range Inventory Report* (Malcolm Pirnie, 2002b). The Phase 3 inventory identified one closed range at the Installation totaling 3 acres. Additional information regarding the results of the Phase 3 inventory is discussed in Sections 2.2 and 3.3.

1.4 REPORT ORGANIZATION

This SI has the following sections:

- Executive Summary
- Section 1 – Introduction
- Section 2 – Preliminary Assessment Findings
- Section 3 – Data Collection and Document Review Process
- Section 4 – Historical Records Review Findings
- Section 5 – Conceptual Site Model (CSM)
- Section 6 – Munitions Response Site Prioritization Protocol (MRSPP) Results
- Section 7 – Conclusions and Recommendations
- Section 8 – References

The following supporting information and analyses are included in the SI appendices:

- Archives Searched/Data Resources (Appendix A)
- Archive Documents (Appendix B)
- Interview Records (Appendix C)
- Munitions Technical Data Sheets (Appendix D)
- Technical Project Planning Meeting Minutes (Appendix E)
- MRSPP Worksheets (Appendix F)
- MRSPP Notification and Public Announcement (Appendix G)

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2.0 PRELIMINARY ASSESSMENT FINDINGS

2.1 INSTALLATION DESCRIPTION

Fort Story is located on Cape Henry in the northern end of Virginia Beach, VA, in the tidewater region of the State as illustrated in Figure 2-1. The Installation occupies approximately 1,458 acres and is bounded by the Chesapeake Bay and Atlantic Ocean to the north and First Landing State Park to the south. U.S. 60 forms the southern boundary of the Installation, and residential and commercial areas of the City of Virginia Beach abut the southeast Installation boundary.

Originally known as Cape Henry Military Reservation, Fort Story was founded in 1914 when the Virginia General Assembly gave six parcels of land totaling 343 acres to the U.S. Government for military purposes. Construction on the Installation was initiated in 1916, and during World War I (WWI), the Installation was integrated into the Coast Defenses of Chesapeake Bay that also included Fort Monroe, Fishermans Island Military Reservation, and Fort Wool, VA. During WWI, armaments at Fort Story included several permanent batteries containing 5-inch and 6-inch guns; railway artillery including 14-inch, 12-inch, and two 8-inch guns; and anti-aircraft guns.

Following WWI, Fort Story remained relatively inactive until the beginning of World War II (WWII), when the headquarters of the Harbor Defense Command was moved from Fort Monroe to Fort Story. During this time, additional land was acquired that consolidated the entire cape into the Installation, and additional 16-inch guns were constructed. During WWII, Fort Story, along with Fort Custis and Fishermans Island Military Reservation (located across the bay from Fort Story on Cape Charles, VA) served to protect the entrance to the Chesapeake Bay, and both Fort Monroe and Fort Wool provided additional protection of the Hampton Roads area. Near the end of 1944, Fort Story's mission changed from being a coastal artillery garrison to a convalescent hospital that aided over 13,000 veterans of WWII.

Following WWII, the mission of Fort Story changed again, with the arrival of the 458th Amphibious Truck Company in 1946 and the decommissioning of the coastal artillery guns in 1949. Between 1958 and 1974, a Nike missile station was constructed and

maintained at the Installation. Fort Story was declared a permanent Installation on December 5, 1961. On July 1, 1962, it was re-designated a Class I sub-installation of Fort Eustis, and it remains as that designation.

Currently, Fort Story is the Army's only training facility for logistics-over-the-shore operations to train troops on amphibious equipment and to practice the transfer of military cargo from ship to shore. The unique coastal resource features at the Installation are also used to provide training areas to a variety of military units representing the U.S. Army, Navy, Marine Corps, and Air Force.

2.2 MMRP SITE DESCRIPTIONS

The *CTT Range Inventory Report* (Malcolm Pirnie, 2002b) was completed for the Installation in August 2002. This report marked the completion of the PA phase of work under CERCLA. The purpose of the *CTT Range Inventory Report* for Fort Story was to identify CTT ranges. The specific requirements of this investigation included: mapping CTT ranges and sites with MEC or MC; collecting and preparing the data for inclusion in Army databases; conducting an assessment of explosives safety risk using the Risk Assessment Code (RAC) on each CTT range or site; and determining which sites potentially qualify for the MMRP. The RAC process required the completion of a worksheet that consisted of a series of questions regarding each CTT range or site. Based on the results of the worksheet, a relative score (RAC score) was assigned to each area. The RAC score is an estimate of the relative explosives safety risk, which was reported as a number from 1 (high explosives [HE] safety risk) to 5 (negligible explosives safety risk).

The *CTT Range Inventory Report* identified one closed range, the Small Arms Range, totaling 3 acres. The location of the Small Arms Range site is illustrated in Figure 2-2, and Table 2-1 summarizes the information presented in the *CTT Range Inventory Report.*

Table 2-1: CTT Range Inventory Report and Site Summary

RANGE/ SITE NAME	MMRP AEDB-R#	CLASSIFICATION	TOTAL AREA (ACRES)	MUNITIONS TYPE(S)	RAC SCORE
SMALL ARMS RANGE	STORY-001-R-01	CLOSED	3	SMALL ARMS	5

AEDB-R = Army Environmental Database-Restoration

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

N
W E
S

1:4,800,000

50 25 Kilometers

50 25 0 50 100 Miles

File: G:\Projects\MMRP\Fort_Story\Projects\Figure2-1.mxd
Date: 10/9/07
Created: VAL
Checked:
Senior:

Figure 2-1
Installation Location
Fort Story, VA

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URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Installation Boundary
- CTT Range
- Operational Range Area
- Wooded/Vegetated
- Heavy Duty Road

N
W E
S

1:28,000

1,000 500 0 Meters

2,000 1,000 0 2,000 Feet

File G:\Projects\MMRP\Fort_Story\Projects\Figure2-2.mxd
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Figure 2-2
CTT Range and UXO-MC Sites
Fort Story, Virginia

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The following description of the Small Arms Range site is taken verbatim from the *CTT Range Inventory Report.* The site history and data are refined in the SI, and the quoted text is the point of departure for the subsequent analysis provided in Section 4 of this document:

> Small Arms Range: The Small Arms Range was established during the early 1940s for rifle and pistol training. The range covered approximately five acres. However, only 3 acres are included in the CTT Inventory because the remainder is classified as A/I range. The Small Arms Range is located roughly 800 feet northeast of the installation's east entrance. The range had sixteen firing points that fired northeast toward the water.

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3.0 DATA COLLECTION AND DOCUMENT REVIEW PROCESS

The first step of the SI was to perform the HRR. The following primary sources of information were researched as part of the data collection effort for the HRR:

1) National and regional archives records group (RG) search
2) Installation site visits
3) Review of historical documents archived at the Old Coast Guard Station Museum, Virginia Beach, VA
4) Interviews
5) Review of the CTT Range Inventory and backup data

Relevant archival records repositories and RGs were selected based on guidance set forth in:

- *Technical/Regulatory Guidelines, Munitions Response Historical Records Review*, (Interstate Technology and Regulatory Council Unexploded Ordnance Team, 2003)
- *Environmental Cleanup at Former and Current Military Sites: A Guide to Research*, U.S. Army Corps of Engineers (USACE) Engineering Pamphlet (EP) 870-1-64, November 2001.

3.1 DATA COLLECTION METHODS

3.1.1 National and Regional Archives

The search of national and local archival repositories produced useful information concerning the history of ranges and training at Fort Story. The findings and sources for archival research services provided by Heritage Research Center, Ltd., are presented in Appendix A. Copies of these documents are included on the enclosed compact disk in Appendix B.

The archival repositories and RGs that were searched are listed below.

National Archives, National Archives and Records Administration (NARA), College Park, MD

- RG 51, Records of the Office of Management and Budget
- RG 77, Office of the Chief of Engineers
- RG 92, Office of the Quartermaster General
- RG 94, Adjutant General's Office, 1780-1917
- RG 107, Secretary of War
- RG 111, Office of the Chief Signal Officer
- RG 156, Office of the Chief of Ordnance
- RG 159, Office of the Inspector General
- RG 160, Headquarters, Army Service Forces
- RG 165, War Department General and Special Staffs
- RG 168, National Guard Bureau
- RG 175, Chemical Warfare Service
- RG 177, Office of Chief of Arms
- RG 319, Army Staff
- RG 330, Department of Defense
- RG 334, Records of Inter-Service Agencies
- RG 335, Secretary of the Army
- RG 337, Records of Headquarters Army Ground Forces, 1916-1954
- RG 338, U.S. Army Commands, 1942-present
- RG 392, U.S. Army Coast Artillery Districts and Defenses
- RG 394, U.S. Army Commands, 1920-1942
- RG 407, Adjutant General's Office
- RG 429, Organizations in the Executive Office of the President
- RG 546, U.S. Army Continental Command, 1942-present
- RG 553, U.S. Army Training and Doctrine Command

National Archives and Records Administration, Still Pictures Branch – College Park, MD

- RG 111, Office of the Chief Signal Officer

National Archives and Records Administration, Cartographic and Aerial Photography Branch – College Park, MD

- RG 77, Office of the Chief of Engineers
- RG 319, Army Staff
- Series CE, Photographs of U.S. and Foreign Nations, 1942-64
- Series CF, Photos of Posts and Camps in U.S., 1946-66

National Archives and Records Administration – Washington, DC

- RG 393, U.S. Army Central Command, 1821-1920, Part 5

National Archives and Records Administration – Mid-Atlantic Region, Philadelphia, PA

- RG 77, Office of the Chief of Engineers
- RG 156, Office of the Chief of Ordnance
- RG 269, General Services Administration
- RG 270, War Assets Administration
- RG 291, Federal Property Resources Service
- RG 338, U.S. Army Commands, 1942-present
- RG 392, U.S. Army Coast Artillery Districts and Defenses

Military History Institute, Carlisle Barracks, PA

Old Coast Guard Station Museum, Virginia Beach, VA

Newport News Public Library

U.S. Army Transportation Museum, Fort Eustis, VA

Virginia Heritage: Guide to Manuscript and Archival Collections

Virginia Historical Society

Fort Eustis Historical and Archaeological Association

Casement Museum, Fort Monroe, VA

Throughout this SI, various historical documents are referenced. Copies of these documents are included in Appendix B. As the source and type of document vary, the following reference codes are used in this report to distinguish the sources of the documents:

- FTSxxx — National archive record obtained from the Fort Monroe Historical Records Review Report (Malcolm Pirnie, 2006)
- FTSMxxx — Historical map obtained from Fort Story and Fort Eustis
- STORxxx — Archive document obtained from national and regional archives by Heritage Research Services, Inc.

- OCGSxxx — Historical document obtained from the Old Coast Guard Station Museum repository
- USCGMxxx — Historical map obtained from the Old Coast Guard Station Museum repository
- EDRxxxx — Historical topographic maps and aerial photographs obtained from Environmental Data Resources, Inc.

3.1.2 Web Search

In addition to data sources listed above, research was conducted on the Internet to supplement the archival data and information received from the Installation. The Internet sources that were searched are based on Appendix B of the *Technical/Regulatory Guidelines for Munitions Response Historical Records Review* (ITRC, 2003). A complete list of all Web sources searched is located in Appendix A.

Internet sources primarily provided general information about the Installation and specific information about munitions types. Details from the Internet search are provided as pertinent in the MRS descriptions in Section 4.

3.1.3 Site Visit

A site visit was performed by Scott McClelland of URS on June 12, 2007, and by Col. Fielding Tyler (Ret.) of the Old Coast Guard Station. While on site, URS toured the entire Installation, observed the historical batteries that are still in existence (note that the guns have been removed), and observed the Small Arms Range. A summary of the site visit observations is included in Appendix C. URS also reviewed environmental reports and documents for the Installation located at the Environmental Division offices of both Fort Story and Fort Eustis.

3.1.4 Existing Archive Search Report and FUDS Information Review

No Archive Search Report (ASR) exists for Fort Story. However, URS obtained a copy of the *Archives Search Report, Findings, Fort Wool and Portions of Fort Monroe, October 1998 (USACE, 1998).* The ASR presents the findings of an historical records search and SI for ordnance and explosives waste (OEW) presence located at these

Formerly Used Defense Sites (FUDSs) located in close proximity to Fort Story that shared a similar coastal defense mission during WWI and WWII. While these documents contained general information regarding coastal defense activities, they did not contain information specific to Fort Story that proved useful in this SI.

3.2 ARCHIVAL/HISTORICAL AND OTHER RECORDS COLLECTED

The following subsections summarize the data collected from the various sources outlined in Section 3.1. Although additional records may have been reviewed from the sources presented above, the records listed in this section represent the data that were determined to be relevant to the analysis of potential MRSs and the development of CSMs for Fort Story.

3.2.1 Documents/Reports

Table 3-1 is a list of published documents that provided relevant information for the former range and training areas and activities within Fort Story. These documents have been published, and consequently are not reproduced in Appendix B of this report.

Table 3-1: Summary of Documents and Relevant Information

Document Name	General History	General Installation Information	Munitions Use	MC
Closed, Transferred, and Transferring (CTT) Range/Site Report, Fort Story, Virginia. Malcolm Pirnie, Inc. August 2002.	X	X	X	X
Integrated Natural Resource Management Plan, U.S. Army Transportation Center, Fort Story, Virginia. GeoMarine, Inc. March 2005.	X	X		
Preliminary Assessment Report for Fort Story. Roy F. Weston, Inc. November 1, 1990.	X	X		
Preliminary Assessment Report Addendum for Fort Story, VA. Roy F. Weston, March 1992.		X		
Final Report, Remedial Investigation Firefighter Training Area (FTSTY-04), LARC 60 Maintenance Area (FTSTY-06), Auto Craft Building Area (FTSTY-07), Fort Story, Virginia. Malcolm Pirnie, May 2002.	X	X		
Fort Story Installation Action Plan. April 18, 2006.	X	X	X	X
Images of America, Fort Story and Cape Henry. Fielding Lewis Tyler, 2005.	X	X	X	
Fort Story World War II and Cold War Era Building Survey, Virginia Beach, Virginia. Engineering and Environment, Inc. December 1999.	X			X
Coastal Artillery Drill Regulations, 1914. War Department, 1915.	X		X	

Document Name	General History	General Installation Information	Munitions Use	MC
Technical Manual 9-471, 16-Inch Seacoast Gun Materiel, Gun MK. II M1, Barbette Carriage M4. War Department, November 3, 1942.	X		X	
Technical Manual 4-205, Coast Artillery Ammunition. War Department, February 17, 1940.	X		X	X
Technical Manual 4-235, Coast Artillery Target Practice. War Department, February 27, 1941.	X		X	
Field Manual 4-10, Coast Artillery Gunnery. War Department, May 20, 1944.	X		X	

3.2.2 Archival Records

Numerous documents were obtained from the National Archives and other repositories. These documents include reports, memoranda, correspondence, maps, and photographs. Table 3-2 provides an index of the archive documents used. Unless embedded in the text of this document, copies of these records are included in Appendix B.

Table 3-2: Index of Archive Documents

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Environmental	Munitions/ Storage	
FTS001	January 8, 1917	General Orders	RG 165, Box 311			X	General, not specific
FTS002	November 26, 1926	Target Practice Reports, Battery "A"	RG 394, Box 337			X	Batteries Pennington and Walke
FTS003	August 17, 1920	Sea Coast Target Practice	RG 394, Box 337			X	Batteries A and B
FTS004	March 13, 1940	Operations Memorandum	RG 394, Box 1378			X	All
FTSM01	October 1968	Fort Story, VA, Master Plan Basic Information Reservation Map	Fort Eustis, VA	X		X	Small Arms Range, Nike Missile area
FTSM02	January 1960	Site Map Sheet 2 of 5	Fort Eustis, VA	X		X	Bunkers and Magazines
FTSM03	January 1960	Site Map Sheet 4 of 5	Fort Eustis, VA	X		X	Bunkers and Magazines
FTSM04	October 1968	Fort Story, VA, Master Plan Basic Information Map	Fort Eustis, VA	X	X	X	Small Arms Range, Missile Launch Area
FTSM05	April 26, 1991	Fort Story, Master Plan Basic Information Map, General Site Map	Fort Eustis, VA	X	X	X	EOD Area
FTSM06	December 1968	Fort Story, VA, Master Plan Basic Information Map, Reservation Plan	Fort Eustis, VA	X	X	X	Small Arms Range and Missile Launch Area, Training Areas
FTSM07	August 1992	Fort Story, VA, Master Plan, Installation Land Use Map	Fort Eustis, VA	X	X	X	Training Areas, EOD area
FTSM08	September 1982	Fort Story, VA, Master Plan, Capability Site Plan	Fort Eustis, VA	X		X	None
FTSM09	September 1982	Fort Story, VA, Capability Reservation Plan	Fort Eustis, VA			X	Bunkers for Ammunition Storage
FTSM10	June 1987	Fort Story, VA, Master Plan, Mobilization Reservation Plan	Fort Eustis, VA	X		X	Training Areas
FTSM11	April 1958	Fort Story, VA Rehabilitate Pistol Range	Fort Story, VA			X	Small Arms Range

Table 3-2: Index of Archive Documents

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Environmental	Munitions/ Storage	
FTSM12	March 1963	Fort Story, VA, Basic Information Map, General Site Map	Fort Story, VA	X	X	X	Small Arms Range
STOR0001	July 15, 1938	Agreement concerning the Army and Navy Gunnery Areas for fiscal year 1939	RG 168, Entry 344A, Box 478			X	All
STOR0005	May 1, 1967	Photograph of Fort Story, VA firing line of the post range for M-16 rifles	NA - College Park, MD, Still Picture Branch			X	Small Arms Range
STOR0008	October 16, 1941	Memo regarding cooperative air missions	RG 177, Entry 9, Box 31			X	Antiaircraft guns
STOR0012	NA	Map of Fort Story	RG 429, Entry 12, Box 49			X	Small Arms Range
STOR0014	February 21, 1941	Training Facilities Completed	RG 407, Entry 363-A, Box 3964			X	Small Arms Range
STOR0017	December 23, 1940	Memo regarding additional towing airplanes and towing windlasses for 3rd Observation Squadron, The Coast Artillery School	RG 177, Entry 9, Box 31			X	Antiaircraft guns
STOR0021	October 29, 1934	Letter regarding Air Corps Corporative Flying Equipment	RG 177, Entry 9, Box 30			X	.50 and .30 caliber antiaircraft guns
STOR0023	December 1, 1934	Memo regarding total flying hours for Fiscal Year 1935	RG 177, Entry 9, Box 30			X	155mm and 8" guns, Antiaircraft
STOR0028	May 11, 1931	Memo regarding the submission of a list of Air Corps missions required by the Coast Artillery Board	RG 177, Entry 9, Box 30			X	Antiaircraft guns

Table 3-2: Index of Archive Documents

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Environmental	Munitions/ Storage	
STOR0030	May 19, 1931	Memos regarding list of missions of the Coast Artillery from July 1, 1931 to June 30, 1932	RG 177, Entry 9, Box 30			X	Antiaircraft guns
STOR0033	March 16, 1934	Record of Communication Received regarding Aerial Missions, CAS Remainder of Present Fiscal Year	RG 177, Entry 9, Box 30			X	75mm gun firing and 8" gun firing
STOR0036	May 25, 1931	Memo regarding total flying hours, fiscal year 1932	RG 177, Entry 9, Box 30			X	Antiaircraft guns
STOR0038	December 18, 1934	Memo regarding Letter of Commendation for Flight A, 16th Observation Squadron	RG 177, Entry 9, Box 30			X	Antiaircraft guns
STOR0040	January 1, 1948	Daily Bulletin, Fort Story, VA	RG 337, Entry 108, Box 50			X	Firing Battery Cramer; Firing of 40mm, and .50 caliber machine guns near Battery Cramer
STOR0045	October 16, 1954	Aerial Photograph - Fort Story, VA	RG 145 Frame: ON040041/10279967-DGH-1N-174			X	Small Arms Range
OCGS001	September 1, 2002	Harbor Defenses of Chesapeake Bay: Fort Story, Virginia a Tour of the WW2 Seacoast Artillery Positions	Fielding Tyler			X	Batteries and mine casemates
OCGS002	September 17, 2004	Email RE: Ammunition Magazines	Fielding Tyler			X	Six ammunition magazines
OCGS003	1941	Annexes to Harbor Defense Project, Harbor Defenses of the Chesapeake Bay	OCGS			X	Batteries, mine casemates, and anti-aircraft batteries

Table 3-2: Index of Archive Documents

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Environmental	Munitions/ Storage	
OCGS004	June 26, 2007	The Guns of Fort Story: Railway Firing Platforms	Fielding Tyler	X			Railway gun platforms, but guns never placed
OCGS005	October 7, 1941 - December 31, 1941	Fort Story Daily Bulletins	OCGS	X	X	X	Battery Worchester
OCGS006	May 14, 1948	Memo Re: Harbor Defense Installations, Surplus	OCGS	X		X	Battery Ketcham
OCGS007	May 24, 1949	Memo Re: Harbor Defense Installations, Surplus	OCGS	X		X	Battery Cramer; Batteries 10, 21, 22,
OCGS008	April 8, 1985	Jurisdictional Statement for Fort Story	OCGS	X			Batteries
OCGS009	Undated	Guns at the Capes: The Artillery Batteries at the Entrance to the Chesapeake Bay 1917 - 1948, compiled by Fielding Tyler	multiple	X		X	Batteries 19, 21, 22
OCGS010	Undated	Railway Artillery at Fort Story: 8-inch and 12-inch Mortars, compiled by Fielding Tyler	multiple	X		X	Railway mortars
OCGS011	Undated	The Guns of Fort Story: Pennington and Walke, compiled by Fielding Tyler	multiple	X		X	Batteries Pennington and Walke
OCGS012	1940	Coast Artillery Field Manual (FM 4-85), Seacoast Artillery, Service of the Piece, 16-inch Gun and Howitzer, partial	Chief of Coast Artillery			X	None

Table 3-2: Index of Archive Documents

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Environmental	Munitions/ Storage	
OCGS013	1945	Coast Artillery Field Manual (FM- 4-25), Seacoast Artillery, Service of the Piece, 155-MM Gun (G.P.F.), partial	Chief of Coast Artillery			X	None
OCGS014	1944	Coast Artillery Field Manual (FM- 4-91), Seacoast Artillery, Service of the Piece, 90-MM Gun M1 on 90-MM Mount M3, partial	Chief of Coast Artillery			X	Batteries 21 and 22
OCGS015	Undated	The Guns of Fort Story: Antiaircraft Battery No. 1, compiled by Fielding Tyler	multiple	X		X	Battery Anti-Aircraft 1
OCGS016	Undated	Anti-Aircraft Artillery, Coast/Harbor Defenses of Chesapeake Bay, compiled by Fielding Tyler	multiple	X		X	Battery Anti-Aircraft 1
OCGS017	1945	History of the Chesapeake Bay Sector	BG Rollin Tilton	X	X	X	Batteries and mine casemates
OCGS018	September 2000	Driving Armament Tour, Fort Story, VA, CDSG Conference	Fielding Tyler	X		X	Batteries
USCGM1	October 12, 1942	Fort Story , VA, General Plan	Corps of Engineer, Office of the Post Engineer, Ft Story, VA	X	X	X	Batteries, ammunition storage, and small arms range
USCGM2	October 1926	Entrance to Chesapeake Bay, VA Study Showing Water Areas and Ranges of Fire	U.S. Army Engineer District, Norfolk	X		X	None
USCGM3	February 1941	Master Plan, Fort Story and Vicinity	Office of the Constructing Quartermaster	X			None

Table 3-2: Index of Archive Documents

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Environmental	Munitions/ Storage	
USCGM4	October 1926	Fort Story, VA, Study of Locations for 16 Inch Gun Battery and Accessories	U.S. Engineer Office, Norfolk, VA			X	Batteries Walke and Pennington
USCGM5	September 5, 1929	Unidentified Zoom, possibly preceding drawing	U.S. Corps of Engineers			X	Batteries Walke and Pennington
USCGM6	February 1917	Location of Tracks and Right of Ways	U.S. Engineer Office, Norfolk, VA	X			None
USCGM7	August 1934	Harbor Defenses of Chesapeake Bay, VA , Fort Story Reservation, VA (Parcel A)- Survey of January ~ April, 1934 in three sheets - Sheet 2	U.S. Engineer Office, Norfolk, VA			X	155-mm batteries, Batteries Pennington and Walke
USCGM8	October 1944	Real Estate, Fort Story Military Reservation	U.S. Engineer Office, Norfolk, VA	X			None
USCGM9	September 1934	Harbor Defenses of Chesapeake Bay, VA Fort Story Reservation, VA (Parcel A)- Survey of January ~ April, 1934 in One Sheet	U.S. Engineer Office, Norfolk, VA	X		X	Battery U, 155-mm batteries, Batteries Pennington and Walke, Mine casemate 1/2
USCGM10	Jun 1934	Government Owned Parcels Between Lynhaven Inlet and Va. State Rifle Range, Survey of February - March 1934	U.S. Engineer Office, Norfolk, VA	X			None
USCGM11	October 1944	Real Estate, Fort Story Military Reservation	U.S. Engineer Office, Norfolk, VA	X			None
USCGM12	August 1934	Harbor Defenses of Chesapeake Bay, VA Fort Story Reservation, VA (Parcel A)- Survey of January ~ April, 1934 in three sheets - Sheet 1	U.S. Engineer Office, Norfolk, VA			X	Mine casemate 1/2

Table 3-2: Index of Archive Documents

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Environmental	Munitions/ Storage	
USCGM13	January 1943	Temporary Buildings, S.L. 7&8, S.L. 9&10, East End Towers, Battery 6 (Const. 224), Towers "A" and "B"	U.S. Engineer Office, Norfolk, VA	X		X	Batteries Walke, Pennington, Cramer, Worchester, No. 4, Ketchum, AA-1
USCGM14	Unknown	Untitled	Untitled	X		X	Battery U, Batteries Pennington and Walke
USCGM15	October 1944	Real Estate, Fort Story Military Reservation	U.S. Engineer Office, Norfolk, VA	X			None.
USCGM16	March 1961	Master Plan Future Development Plan General Site Plan	U.S. Engineer Office, Norfolk, VA	X			Nike Missile Site
USCGM17	Unknown	Color Map, No Title, Site use plan, Fort Story	Unknown	X			Nike Missile Site
EDR001	Various	USGS Topographic Maps from 1907 to 1986	U.S. Geological Service	X	X		All
EDR002	December 8, 1959	Fort Story Aerial photograph	U.S. Geological Service	X			All
EDR003	May 7, 1970	Fort Story Aerial photograph	U.S. Geological Service	X			All
EDR004	February 28, 1994	Fort Story Aerial photograph	U.S. Geological Service	X			All
EDR005	March 30, 1963	Fort Story Aerial photograph	U.S. Geological Service	X			All
EDR006	April 2, 1982	Fort Story Aerial photograph	U.S. Geological Service	X			All

Table 3-2: Index of Archive Documents

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3.2.3 Interviews

The following interviews were conducted to collect information for the SI. Interview records from these interviews are included in Appendix C.

Old Coast Guard Station Museum – The data collection team interviewed Col. Fielding Lewis Tyler (Ret.), the Executive Director of The Old Coast Guard Station Museum and the author of *Images of America, Fort Story and Cape Henry,* on June 12 and 13, 2007. Col. Tyler also led URS personnel on a site visit of the Installation on June 12, 2007. He provided URS access to the repository of information on Fort Story retained at The Old Coast Guard Station Museum, and provided information on the knowledge of operations at Fort Story he gained from the research he performed in the preparation of his book as well as from various tours he has led of the Installation.

Fort Story Directorate of Public Works (DPW) – The data collection team interviewed Gary Longmire, of the Fort Story DPW. Mr. Longmire has worked at Fort Story since the late 1980s and was familiar with current and prior history of the Installation. He also provided URS with access to available Installation records and maps. During the interview, he was asked if he was aware of any MEC discoveries during his tenure at Fort Story, and he responded he was not aware of any MEC discoveries. Mr. Longmire also provided information on current explosive ordnance disposal (EOD) activities/training conducted at the Installation.

Fort Monroe – The data collection team interviewed Mr. Dan Musel of Fort Monroe regarding his knowledge of munitions-related studies at Fort Story. Mr. Musel was the Installation's environmental POC during the conduct of the *CTT Range Inventory Report.* He was asked if he knew the reason why only the Small Arms Range was identified as an MRS but none of the coastal artillery batteries were identified as such in the *CTT Range Inventory Report.* He stated that he did not know the reason for this, and it was his thought that with the presence of coastal artillery batteries throughout the Installation, most of it would be considered ranges.

USACE, Norfolk District – The data collection team interviewed Mr. Andy Reid of the Operations Office of the District regarding the dredging of sediments to maintain shipping channels located offshore of Cape Henry and Fort Story. Mr. Reid provided information that several years ago, there was an explosion on one of the dredges working the channels in the vicinity of Cape Henry, but it was unknown whether this was caused by a munition or not, and he referred the data collection team to Mr. Tom Friberg. Mr. Reid informed URS that dredge materials were placed in the Dam Neck Disposal Site, located offshore of Dam Neck, and this area is located in an operational firing fan used by the U.S. Navy.

Mr. Tom Friberg was interviewed regarding his knowledge of the explosion on one of the dredging vessels mentioned by Mr. Reid. Mr. Friberg confirmed that an explosion did occur in 2006 during the dredging of the Atlantic Ocean Channel and it was suspected that the explosion was caused by MEC based on the fact that a 2-inch thick cast iron pipe used to dredge the sediments was cracked. Mr. Friberg also indicated that MEC had been encountered during other dredging activities off of Fort Story, including dredging in the Cape Henry Channel.

3.3 PHASE 3 ARMY RANGE INVENTORY RESULTS

The purpose of the *CTT Range Inventory Report* (Malcolm Pirnie, August 2002b) was to identify CTT ranges that are not within Fort Story operational range areas. The specific requirements of this inventory included: mapping CTT ranges and sites with MEC or MC; collecting and preparing the data for inclusion in Army databases; conducting an assessment of explosives risk using the RAC on each CTT range or site; and determining which sites potentially qualify for the MMRP.

The *CTT Range Inventory Report* identified one closed range, the Small Arms Range, totaling 3 acres. The inventory summary for this range was presented in Section 2.2.

The RAC process requires the completion of a worksheet that consists of a series of questions regarding each CTT range or site. Relative values for the severity and probability of explosives safety risk associated with the range area are assigned. The severity and probability values are then combined to arrive at an overall score (RAC

score), which is reported as a number from 1 (HE safety risk) to 5 (negligible explosives safety risk). A RAC score of 5 for the Small Arms Range was developed because this range was used only for small arms training. The RAC scores were developed based on the findings during the CTT Range Inventory and do not represent new or additional information regarding these ranges/sites obtained during the SI.

3.4 SUMMARY OF OTHER PREVIOUS INVESTIGATIONS

Preliminary Assessment Report for Fort Story, November 1, 1990 (Roy F. Weston, 1990)

At the time of the Preliminary Assessment Report, 13 sites located at Fort Story were monitored under the Installation Restoration Program (IRP). Two of the sites, Landfill #3 and the adjacent pond, were under the RI/FS phase. One site, the 600 Block, was under the RI/FS/Design phase for the removal of abandoned underground heating oil tanks. The remaining 11 sites were in the PA/SI phase. The report identified one indoor small arms range, one outdoor firing range, and MEC that was occasionally found on the beach that resulted from warship activities, accidents, and ships sunk during WWII.

Preliminary Assessment Report Addendum for Fort Story, March 1992 (Roy F. Weston, 1990)

This report was prepared to address deficiencies noted in the 1990 PA, and provided the information necessary to revise the Hazard Rank Score of the Installation. This report includes information prepared in response to specific questions regarding the 1990 PA, and includes the analytical results of a limited background study for site soils.

2006 Fort Story Installation Action Plan

The Fort Story Installation Action Plan identifies 11 AEDB-R sites, 10 of which have achieved Remedy Complete. The sites comprised a multitude of uses and addressed the following contaminants of concern: polychlorinated biphenyls, petroleum/oil/lubricants, metals, and volatile organic compounds. Affected media includes surface water, groundwater, soil, and sediment. One MMRP site is also documented as identified in the CTT Inventory.

Final Report, Remedial Investigation, Firefighter Training Area (FTSTY-04), LARC 60 Maintenance Area (FTSTY-06), Auto Craft Building Area (FTSTY-07), Fort Story, Virginia (Malcolm Pirnie, May 2002)

This remedial investigation report presented the results of site-specific investigations conducted at these sites located at Fort Story. Although these are not MMRP sites, this report provides useful information pertaining to the physical characteristics of the Installation and also provides information regarding the natural concentrations of inorganics (i.e., metals).

Integrated Natural Resources Management Plan (INRMP), U.S. Army Transportation Center, Fort Story, Virginia (GeoMarine, March 2005)

The purpose of the INRMP is to guide natural resources management at Fort Story from 2004 through 2008. The program is designed to conserve the Installation's land and natural resources and helps to ensure compliance with environmental laws and regulations. The 12 program components under the INRMP include: urban forestry; wildlife, fisheries, and habitat management; threatened and endangered species management; Chesapeake Bay Program; integrated training area management; land management; outdoor recreation; community awareness; natural resources law enforcement; cultural resources protection; ecosystem management; and pest management.

4.0 HISTORICAL RECORDS REVIEW FINDINGS

Information not previously identified or available regarding Fort Story ranges/sites was obtained through the research performed for this SI. This information resulted in adjustments to the original MMRP site descriptions and boundaries derived from the *CTT Range Inventory* as presented in Section 2.2. Based on the information obtained during the HRR, additional MMRP sites and other areas of potential concern were identified and evaluated at Fort Story. Many of these sites are related to coastal artillery batteries and ancillary defensive gun positions associated with the historical mission of this Installation as part of the coastal defense of the Chesapeake Bay. None of the batteries, firing points, or associated range fans were included as sites in the *CTT Range Inventory Report.*

In order to present the information gathered during the HRR in a logical manner, discussion is first presented about the Small Arms Range identified in the *CTT Range Inventory Report.* Following discussion of this site, information obtained on each of the batteries and gun positions is presented in a chronological order based on when the various guns and batteries were emplaced. This information is then used to identify additional sites that may need to be assessed under the MMRP.

4.1 SMALL ARMS RANGE (STORY-001-R-01)

The Small Arms Range was described in the *CTT Range Inventory Report* as a former small arms training range located about 800 feet northeast of the southern entrance to the Installation that was established in the early 1940s for rifle and pistol training. The historical range reportedly covered 5 acres. However, because the operational range area of Fort Story overlapped a portion of the historical range, only the 3 acres of the range that fell outside the operational range area was eligible for inclusion under the MMRP.

During the research for this SI, additional information was obtained that more accurately described the Small Arms Range. Document STOR0014, dated February 21, 1941, listed the Small Arms Range as being complete and available for training for pistol and rifle firing. Based on a design drawing (FTSM11), in 1958 the range was rehabilitated and 16 bobbing targets installed. The photograph in Figure 4-1 (STOR0005) shows soldiers firing newly acquired M-16 rifles at the Small Arms Range in 1967. A Master Plan map

for Fort Eustis from 1968 (FTSM04) illustrated the location of this site and identified its use as a Small Arms Range.

Figure 4-1: Firing at Small Arms Range, 1967
(source: U.S. National Archives and Records Administration)

Based on a review of 1970 and 1980 aerial photographs illustrated in Figures 4-2 and 4-3, scarring is still evident in the target berm in 1970, indicating that the range was still active at this time. The 1980 aerial photograph shows that the range is becoming overgrown, indicating that training in the area ceased sometime during the 1970s.

Figure 4-2: 1970 Aerial Photograph of Small Arms Range (source: Old Coast Guard Station Museum)

Figure 4-3: 1980 Aerial Photograph of Small Arms Range (source: Old Coast Guard Station Museum)

With the exception of the photograph depicting the firing of M-16 rifles, no other references to the actual types of weapons fired were found. Based on the time period of operation, the small arms fired at this range likely included .30 caliber, .45 caliber, 7.62-mm, 5.56-mm rifles; and .22 caliber, .38 caliber, and .45 caliber pistols.

During the time period between the completion of the *CTT Range Inventory Report* and this SI, the operational range areas originally identified during the Phase 2 conducted in the Fall of 2000 were updated as required by DODDs 3200.15 and 4715.11/12 (see Section 1.2). In accordance with these DODDs, this update was conducted by Fort Eustis and Fort Story range operations personnel in 2005. Based on this update, several parcels of land that were not identified for other uses were redefined as operational range areas to enable them to be used for training.

The updated operational range area defined in 2005 reflected the fact that the area surrounding the Small Arms Range is now used for training as part of the Inchon Beach Range, and this area is now defined as an operational range area. Figure 4-4 illustrates that the site is located within the operational range area. Based on these findings, the Small Arms Range is not eligible under the MMRP.

4.2 COASTAL ARTILLERY GUNS AND BATTERIES

Based on documents obtained during the HRR, Table 4-1 provides a listing of the guns and batteries that were emplaced at Fort Story. Most of these weapons were installed as part of the Coastal Defense of Chesapeake Bay. Specific information regarding each of these batteries is presented in detail in the following subsections, and Figure 4-5 illustrates the locations of these batteries.

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Installation Boundary
- CTT Range
- Operational Range Area

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1,000 500 0 Meters

2,000 1,000 0 2,000 Feet

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Figure 4-4
Location of Small Arms Range
Fort Story, Virginia

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URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Batteries
- Operational Range
- Installation Boundary

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400 200 Meters
3,000 1,500 0 Feet

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Figure 4-5
Coastal Defense Guns and Batteries
Fort Story, Virginia

Table 4-1: List of Coastal Defense Guns and Batteries

Gun/Battery Name	Name Used in HRR	No. of Guns and Type	Period of Use
Batteries A and B	Batteries A and B	M1903, 5-inch; M1900, 6-inch	1917-1919
Battery AA-1	Battery AA-1	3 1917M1A2 3-inch	1921-1928; 1943-1949
Battery 7A	Battery 7A	M1, M2, and M4 water mines	1922-1949
Not applicable	Railguns	4 1890 M1, 12-inch railway mortars; 4 1888 M1 8-inch mortars	1924 -1942
Battery Pennington	Battery Pennington No. 1 Battery Pennington No. 2	2 M1920 16-inch howitzers	1924-1949
Battery Walke	Battery Walke No. 3 Battery Walke No. 4	2 M1920 16-inch howitzers	1924-1949
Temporary 155-mm Mobile Battery 5	Mobile Battery 5	4 155-mm G.P.F. Model 1917 A1 guns	1931-1935
Battery U	Battery U	4 155-mm G.P.F. Model 1917 A1 guns	1934-1943
Mine Casemate 1/2	Mine Casemate 1/2	Mark 6 water mines	1932-1945
Battery Worcester/ Battery 6	Battery Worcester	2 6-inch M1900BC guns	1941-1949
Battery Cramer/Battery 5	Battery Cramer	2 6-inch M1903 guns	1942-1949
Examination Battery/Battery 19	Examination Battery	2 M1902M1 3-inch guns	1942-1945
Battery 21	Battery 21	4 M1 90-mm AMTB guns; 2 .50 caliber machine guns; 2 37-mm guns	1942-1949
Battery 22	Battery 22	4 M1 90-mm AMTB guns; 2 .50 caliber machine guns; 2 37-mm guns	1943-1948
Battery 10	Battery 10	2 6-inch M1900 guns	1943-1949
Battery Ketcham/Battery 1	Battery Ketcham	2 16-inch Mark II, Mod. 1 guns	1943-1948
Battery 4	Battery 4	2 16-inch Mark II, Mod. 1 guns	1943-1949
Nike Missile Battery	Nike Missile Battery	Nike Ajax missiles	1958-1974

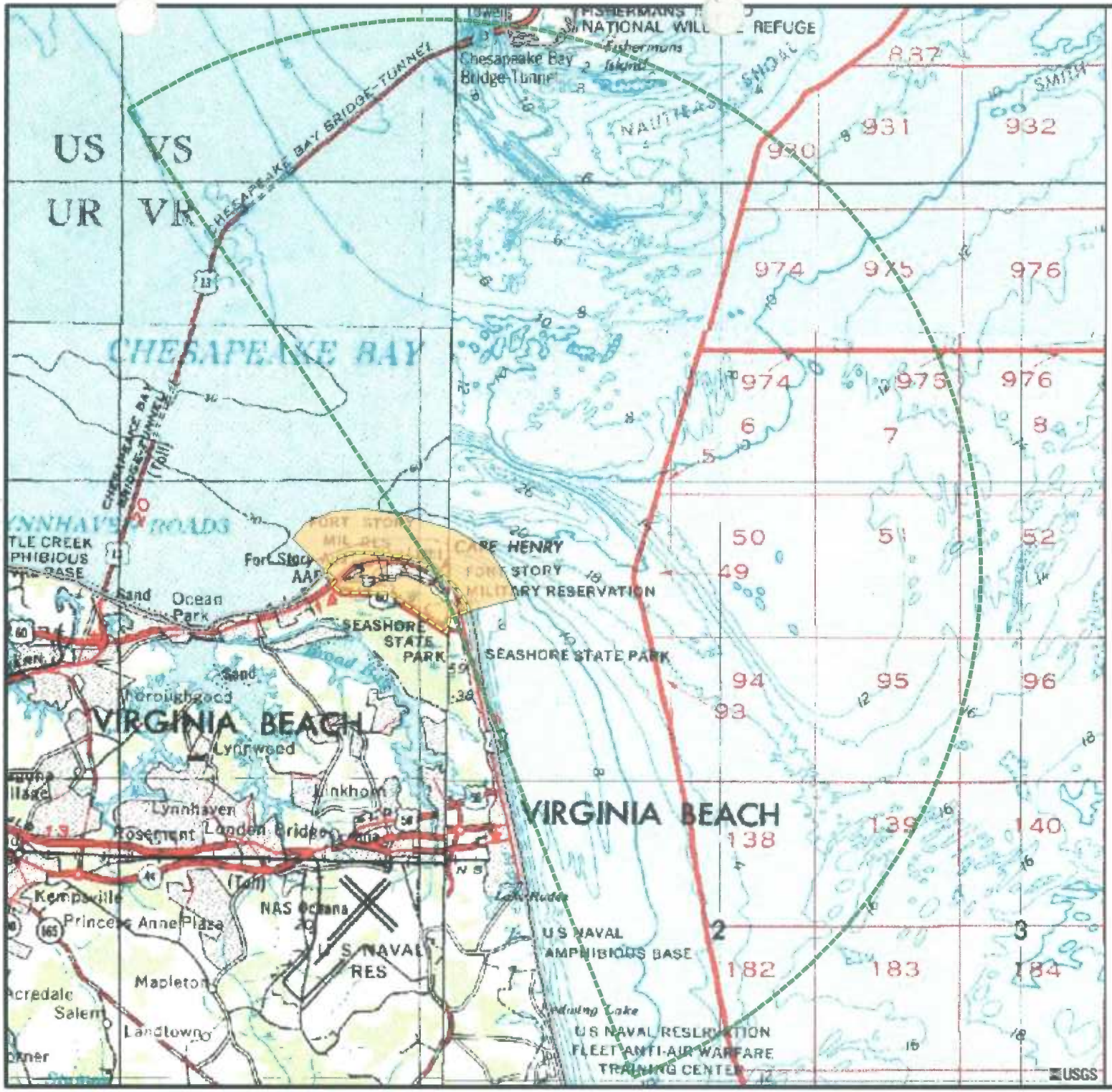
4.3 BATTERIES A AND B

When Fort Story was first established during WWI, Batteries A and B were constructed as the first permanent coastal artillery battery (OCGS018). As illustrated in Figure 4-5, these batteries were located approximately 600 feet east of the "new" Cape Henry Lighthouse constructed in 1881. Due to coastal erosion processes, the location of this battery is currently offshore, although remnants may be visible during extreme low tide as illustrated in Figure 4-6.

Figure 4-6: Remnants of Battery A
(source: Old Coast Guard Station Museum)

The guns that were installed included a 5-inch M1903 gun at Battery A and a 6-inch M1900 gun at Battery B. The guns were considered obsolete when they were installed (Tyler, 2005), and were removed following the end of WWI. No records were found regarding the firing of these guns or the area that they were intended to protect, other than general information that these guns, in conjunction with guns placed on Fisherman Island at Cape Charles, were used to defend the entrance to the Chesapeake Bay.

Based on the maximum effective range of a 6-inch gun being 20,000 yards (OCGS003), and understanding that the intent of these batteries was to protect the Chesapeake Bay, the firing fan illustrated in Figure 4-7 was prepared to depict the historical firing fan coverage of this battery.



URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

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6,000 3,000 0 Meters

12,000 6,000 0 12,000 Feet

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Figure 4-7
Batteries A and B Historical Firing Fan
Fort Story, Virginia

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4.4 BATTERY AA-1

First established in 1921, Battery AA-1 was an anti-aircraft battery established as part of the coastal defenses. This battery consisted of three to four 1917M1A2 3-inch guns, and was located approximately 300 feet east of Batteries A and B (see Figure 4-5). Battery AA-1 had two distinct operational periods, the first from 1921-1928, and the second from 1943-1949 during WWII (OCGS003, OCGS015; OCGS016).

Although not originally constructed on the shoreline, during WWII this battery was exposed to coastal erosion as illustrated in Figure 4-8. Currently, some of the former mounts for the guns are partially buried in the dune line and others are completely exposed during high tide as illustrated in Figure 4-9.

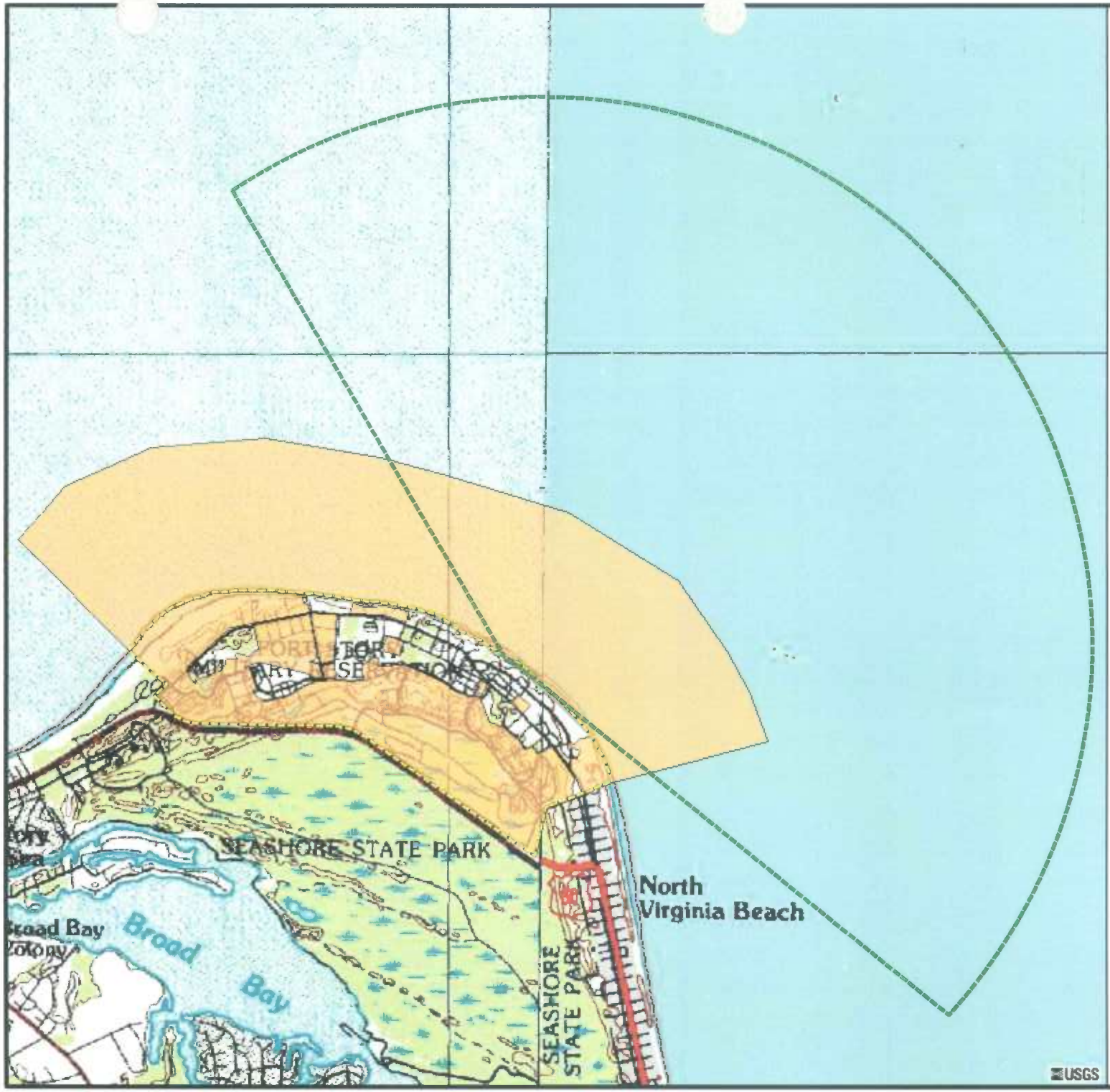
Figure 4-8: Battery AA-1 during WWII
(source: Old Coast Guard Station Museum)

Figure 4-9: Gun Mount from Battery AA-1 (source: Old Coast Guard Station Museum)

Based on the effective range of these guns being 6,000 yards (OCGS003), the historical firing fan was established as illustrated in Figure 4-10. These guns had the ability to rotate and fire in all directions (i.e., 360-degree field of fire). However, training records obtained during the HRR indicated that anti-aircraft training used towable targets (STOR008, STOR0017) pulled by airplanes over water. Thus, the historical range fan was drawn to include only portions of the firing fan that were over the Atlantic Ocean where training would not pose a threat to land.

4.5 BATTERY 7A AND MINE CASEMATE 1/2

As part of the coastal defenses, underwater defenses were established to protect the Chesapeake Bay. The outer mine defense was controlled by casemates located on Fort Story. Battery 7A was established in 1922 and operated through 1949. Located in Building 900, which is still present (see Figure 4-5), Battery 7A controlled the operation of M1, M2, and M4 mines placed in the water that were attached by underground cable to the casemates. A second casemate, Casemate 1/2, was constructed in 1932 behind the old lighthouse as illustrated in Figure 4-5. While used only during training maneuvers from 1922 through 1941, following the attack on Pearl Harbor, these underwater defenses were expanded to include 365 Navy Mark 6 mines and maintained in active status until 1945 (OCGS009). In total, the mine field consisted of 22 mine groups in four lines.



URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

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2,000 1,000 0 Meters

4,000 2,000 0 4,000 Feet

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Figure 4-10
Battery AA-1 Historical Firing Fan
Fort Story, Virginia

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The first and third lines were 50-feet deep and the second and fourth lines installed at 15-foot depths (OCGS009). Figure 4-11 illustrates the locations of the mine fields as presented in OCGS003.

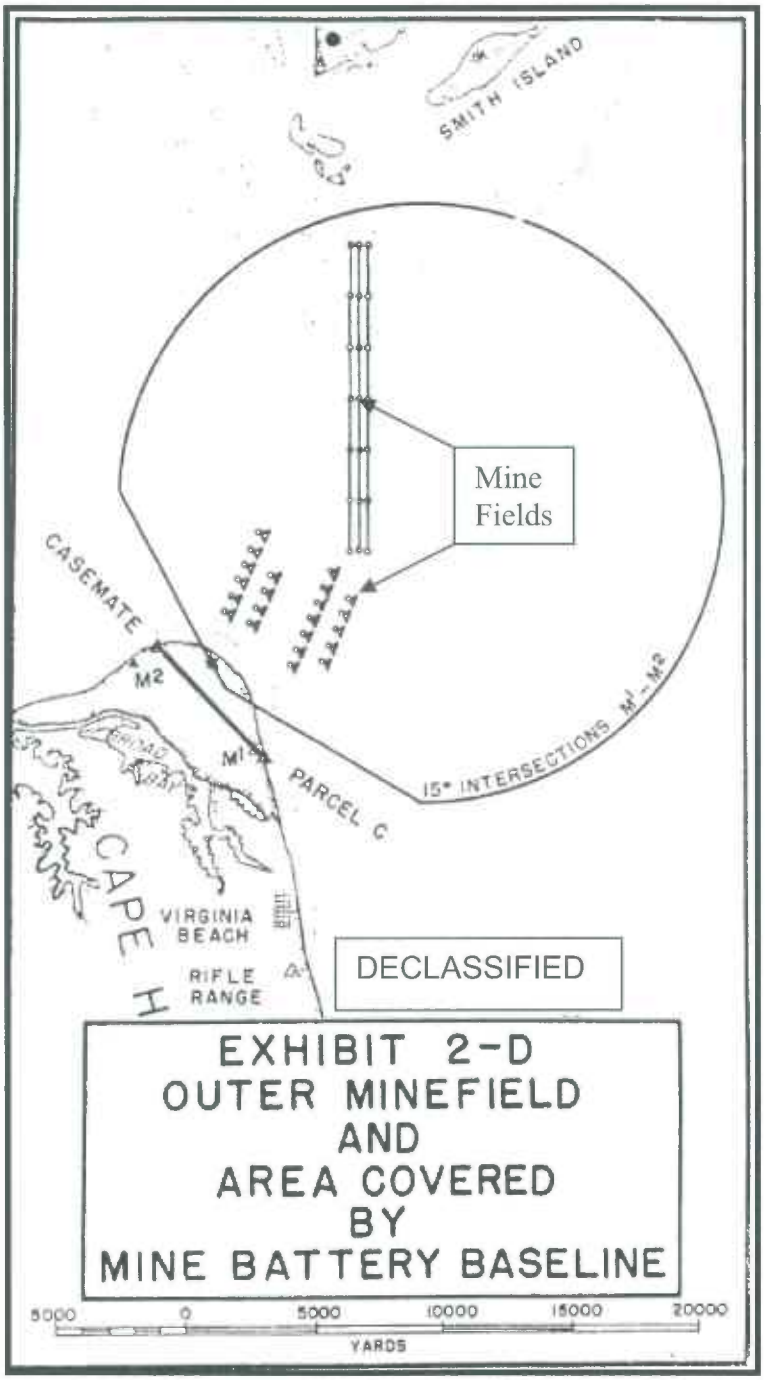


Figure 4-11: Location of Minefield
(source: Old Coast Guard Station Museum, OCGS003)

The typical operation of the mine fields comprised the use of moored mines that were installed at pre-determined locations, and had fixed cable lengths to control the depth that the mine resided below the surface. These mines were wired back to mine casemates from where they could either be automatically detonated or switched to a "contact" configuration, which would result in their detonation if they came into contact with a ship or submarine.

With the exception of the U.S. tanker *E.H. Blum*, which struck a mine and sank on February 16, 1942, there were no reported instances of ships coming in contact with the mine field. There are several recorded instances of mines being placed in the area by German U-boats that resulted in the sinking of vessels entering the harbor.

Following WWII, the mine fields were removed (OCGS009), although no specific documentation was found regarding the method of removal. It is noted that navigational charts of this area have restrictions regarding anchoring, dredging, or conducting similar type of activity because of residual danger from mines on the bottom. As this area was also mined by German U-boats during WWII, it is uncertain if this risk originates from this war-time activity or from un-recovered mines placed as part of the coastal defenses operated by Fort Story.

4.6 RAILGUNS

From approximately 1922 through 1942, various guns mounted on rail cars were either stationed at Fort Story or transported there from Fort Eustis and used for training. Records reviewed during this SI indicate that these guns consisted of 1890 M1, 12-inch railway mortars and 1888 M1 8-inch guns. While maps depicting locations for the permanent emplacement of railguns were identified during research conducted during this HRR, other records were found that indicated the guns were never permanently installed because of the general ineffectiveness of the guns in hitting their intended targets and because other, more accurate guns were installed at the site, making the railguns obsolete (OCGS010).

Although railguns were never permanently installed, records related to railgun firing for training were obtained (OCGS010), and, based on these records, the location of these

guns is illustrated in Figure 4-5. Figure 4-12 provides photographs of the 8-inch railguns as placed during training at Fort Story, and Figure 4-13 provides a photograph of a 12-inch mortar gun.

Figure 4-12: 8-inch Railguns at Fort Story
(source: Old Coast Guard Station Museum)

Figure 4-13: 12-inch Railgun Mortar at Fort Story
(source: Old Coast Guard Station Museum)

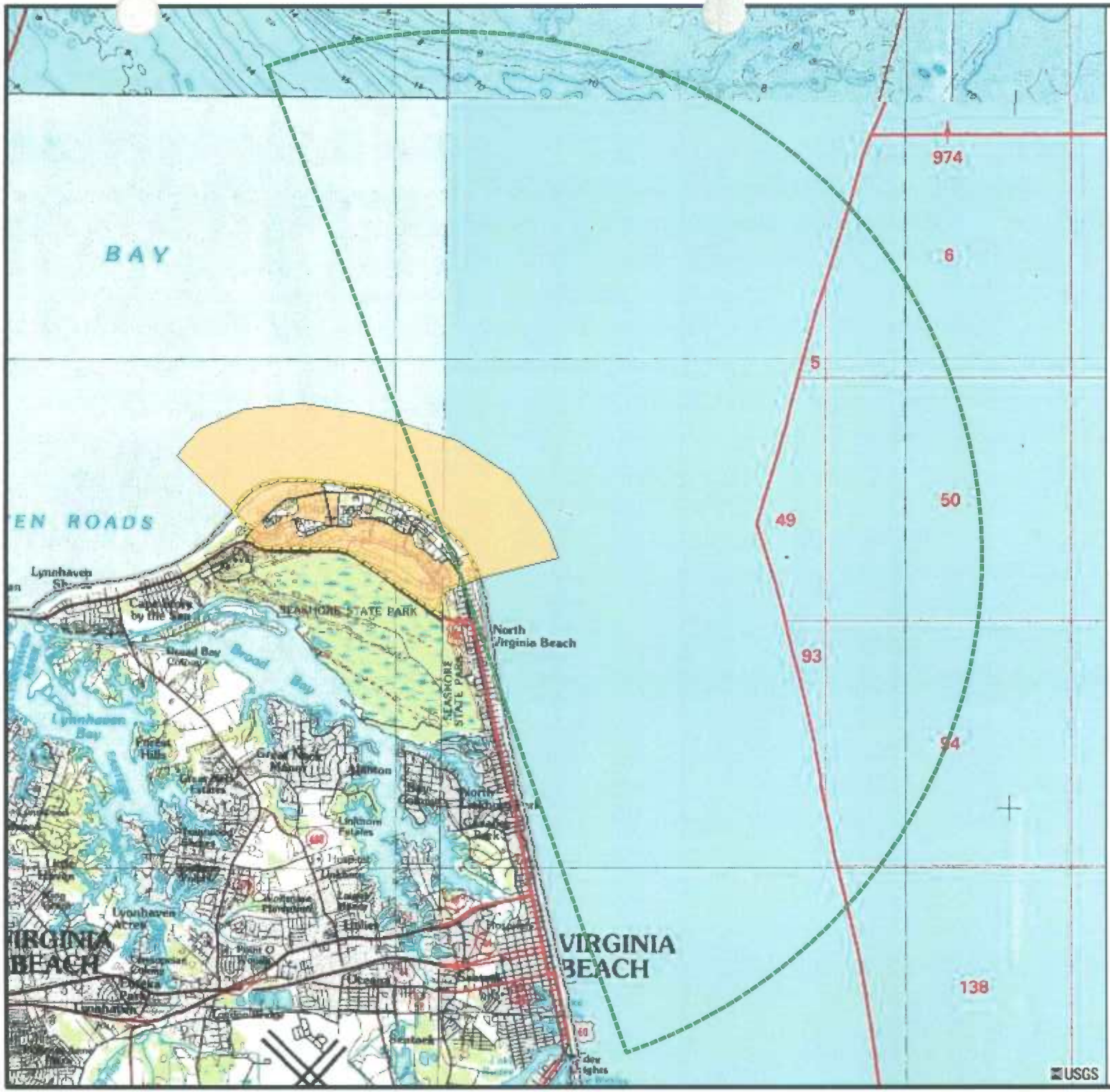
Records of training conducted with the 8-inch mortars in 1929 were obtained during the HRR (OCGS010). Based on these documents, training took place using subcaliber (37-mm and 75-mm sand-filled) and 200-pound and 700-pound battle practice mortar ammunition. When weather allowed, targets were towed in the Atlantic Ocean by ships provided by Fort Monroe. Based on the statement that the mortars were not fired on May 27, 1929, because the powder furnished was too great to aim at targets towed at a distance of 8,500 yards from shore (OCGS010), it is concluded that targets were typically set at a distance greater than 8,500 yards. However, the actual distance and locations of the targets could not be determined from the records obtained.

Based on the range of a 12-inch mortar being 11,000 yards (OCGS010), and assuming that the target practice conducted firing out over the Atlantic Ocean, a historical firing fan was developed for the railguns as illustrated in Figure 4-14.

4.7 BATTERIES PENNINGTON AND WALKE

Originally constructed in 1924 as Battery Pennington, this battery consisted of four M1920 16-inch howitzer guns with a 25 caliber barrel length (OCGS011). In 1941, guns Nos. 3 and 4 were renamed Battery Walke. These guns were unique in that only five of these gun barrels were ever made, and all resided at Fort Story, with the fifth barrel serving as a replacement, if needed. Although not casemated, these guns did receive armored shields during WWII.

As illustrated in Figure 4-5, these guns were constructed in the southeastern portion of the Installation along a series of rail lines that connected the shell rooms and powder magazines with the guns (Figure 4-15). These guns were reduced to caretaker and maintenance status in 1943, and were cut up and sold for scrap in 1949 (OCGS011). Currently, little physical evidence remains of these batteries with the exception of the plotting room casemate (building 401); a tunnel that was constructed through a dune line from the plotting room casemate to the rail line; and magazines and shell rooms that housed the powder bags and projectiles.



URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

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Figure 4-14
Railguns Historical Firing Fan
Fort Story, Virginia

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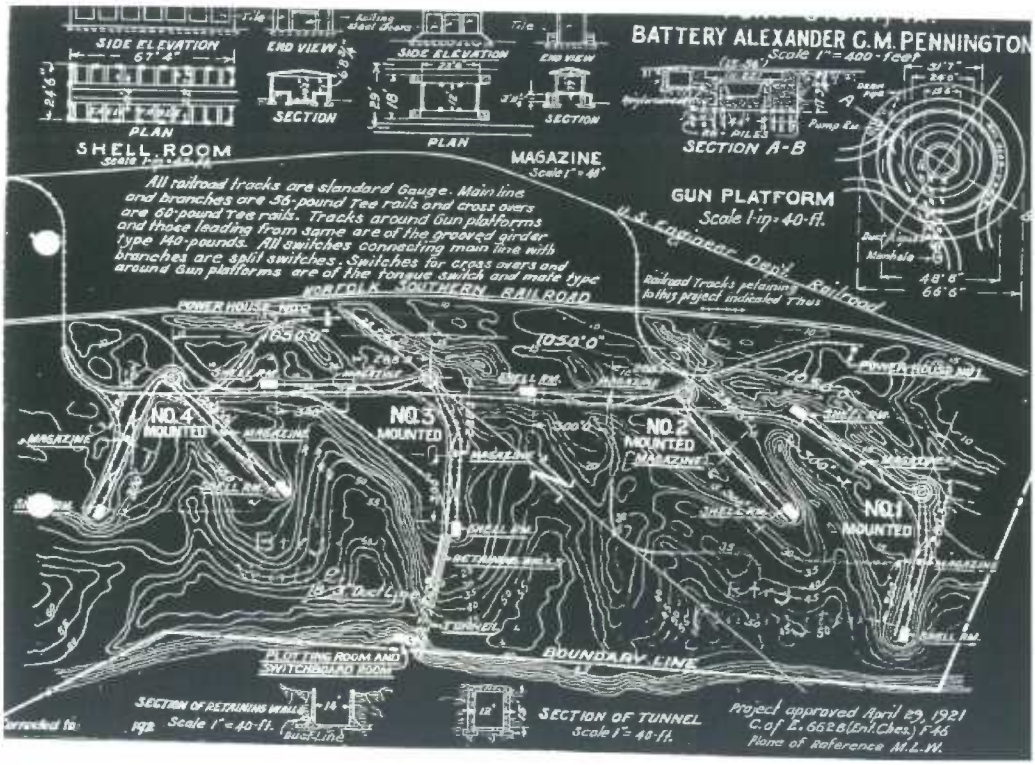

Figure 4-15: Plan of Battery Pennington
(source: Old Coast Guard Station Museum, OCGS011)

Records were obtained during the HRR that indicated these guns were proof-fired in 1925 (OCGS011). No other written records of the firing of these guns were obtained during the research performed during this SI. However, based on the 1941 photographs depicted in Figure 4-16, it appears that these guns were occasionally fired.

Figure 4-16: Practice Firing of Guns at Batteries Pennington and Walke in 1941
(source: Old Coast Guard Station Museum)

With a maximum range of approximately 24,500 yards, these guns were designed to fire a 2,100-pound armor-piercing projectile carrying a charge of approximately 35 pounds of explosives and fitted with a Base Fuse Mk X. The projectile was fired using a 296-pound charge of smokeless powder divided into six sections to ease handling (OCGS011).

Based on the field of fire of Batteries Pennington and Walke as presented in OCGS003 (Exhibits 3-B and 4-B of OCGS003), the historical range fans for each of the four guns that comprised Batteries Pennington and Walke were developed as illustrated in Figures 4-17 through 4-20.

4.8 MOBILE BATTERY 5

Four temporary 155-mm Grande Puissance Filloux (GPF) Model 1917 A1 guns were installed at Fort Story in 1931 and were present through 1934 when they were moved and installed at Battery U (OCGS009). The location of this battery is illustrated in Figure 4-5, and the concrete gun platforms are still present. No historical information was obtained regarding the actual training that may have taken place at this battery, although it is assumed that training did occur.

Based on the reported range of fire of these 155-mm guns being 17,000 yards (OCGS003), the historical range fan of this battery was developed as illustrated in Figure 4-21.

4.9 BATTERY U

Battery U was constructed in 1934 along the southern shoreline of Fort Story (see Figure 4-5), and the guns present at Mobile Battery 5 were moved to this position to better cover boats anchoring in the entrance to the bay (OCGS017). This battery remained in active service until July 1943 (OCGS009) when Battery 10 was activated. Although no training records for this battery were identified, as illustrated in Figure 4-22, the guns were fired.

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
S

1:228,000

4,000 2,000 0 4,000 Meters

12,000 6,000 0 12,000 Feet

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Source of Imagery: Terraserver

Figure 4-17
Battery Pennington No.1
Historical Firing Fan
Fort Story, Virginia

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URS
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Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
S

1:228,000

4,000 2,000 0 4,000 Meters

12,000 6,000 0 12,000 Feet

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Source of Imagery: Terraserver

Figure 4-18
Battery Pennington No.2
Historical Firing Fan
Fort Story, Virginia

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200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
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1:228,000

4,000 2,000 0 4,000 Meters

12,000 6,000 0 12,000 Feet

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Source of Imagery: Terraserver

Figure 4-19
Battery Walke No.3
Historical Firing Fan
Fort Story, Virginia

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Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
S

1:228,000

4,000 2,000 0 4,000 Meters

12,000 6,000 0 12,000 Feet

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Figure 4-20
Battery Walke No.4
Historical Firing Fan
Fort Story, Virginia

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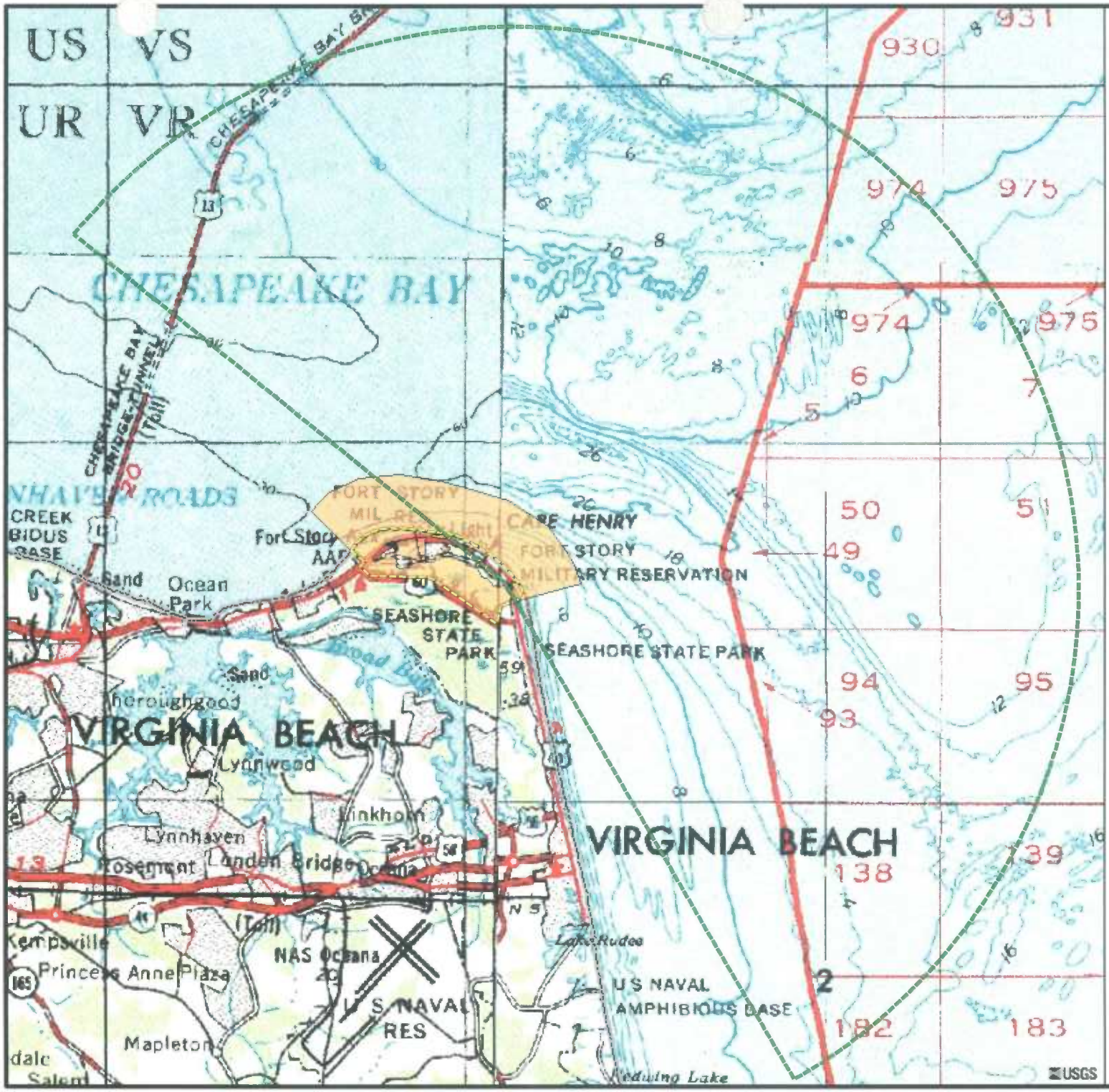

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200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
S

1:150,000

3,000 1,500 0 3,000 Meters

12,000 6,000 0 12,000 Feet

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Source of Imagery: Terraserver

Figure 4-21
Mobile Battery 5
Historical Firing Fan
Fort Story, Virginia

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Figure 4-22: Firing of 155-mm Guns at Battery U
(source: Old Coast Guard Station Museum)

This battery is currently covered by a dune line, although it has periodically been uncovered following major storms, as evidenced in Figure 4-23.

Figure 4-23: Battery U Gun Emplacement in 2000
(source: Old Coast Guard Station Museum)

The reported range of fire of these 155-mm guns was 17,000 yards (OCGS003); the historical range fan of this battery was developed as illustrated in Figure 4-24.

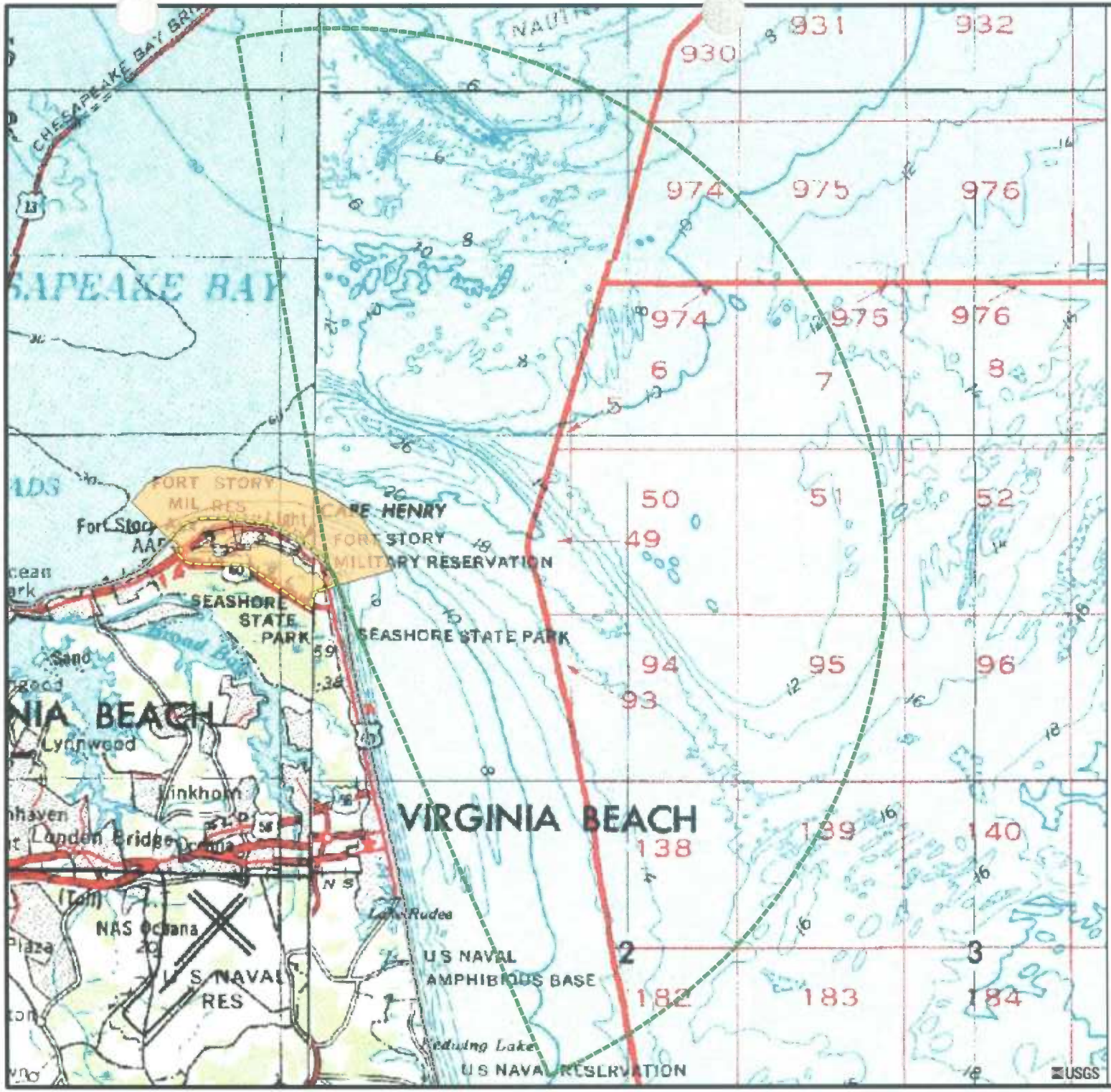
4.10 BATTERY WORCESTER

Also referred to in historical documents as Battery 6, Battery Worcester was constructed in 1941 and contained two 6-inch M1900 guns on barbette carriages. The location of this battery is illustrated in Figure 4-5. Building 309, which served as the battery itself, is still present, and the guns were positioned on either side of the battery. The projectiles were housed in the battery. Operational from its time of construction until the end of WWII, the guns were declared surplus and removed in 1949. These guns were designed to fire both 90- and 108-pound armor piercing (AP) and HE-filled rounds. One record was found indicating that guns from this battery were fired (OCGS005), and based on other records reviewed, it is assumed that at a minimum, annual service practice was performed.

The field of fire of this battery was presented on Exhibit 8-B of OCGS003, and was used to develop the historical firing fan that extends 15,000 yards into the Atlantic Ocean as depicted in Figure 4-25.

4.11 BATTERY CRAMER

Also referred to in historical documents as Battery 5, Battery Cramer consisted of two 6-inch M1903 guns, and was located at the southeastern portion of the Installation as illustrated in Figure 4-5. This battery is still present as Building 101, which is used by the U.S. Navy as an electronic system evaluation facility. The guns that resided on either side of the battery are no longer present. Figure 4-26 illustrates the battery during construction during 1941-1942, and one of the two guns is visible to the right. Operational from 1942 until the end of WWII, the guns were declared surplus and removed in 1949. These guns were designed to fire both 90- and 108-pound AP and HE-filled rounds.



Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
S

1:156,000

2,000 1,000 0 2,000 Meters

12,000 6,000 0 12,000 Feet

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Figure 4-24
Battery U Historical Firing Fan
Fort Story, Virginia

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URS
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Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
S

1:120,000

2,000 1,000 0 2,000 Meters

6,000 3,000 0 6,000 Feet

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Figure 4-25
Battery Worcester
Historical Firing Fan
Fort Story, Virginia

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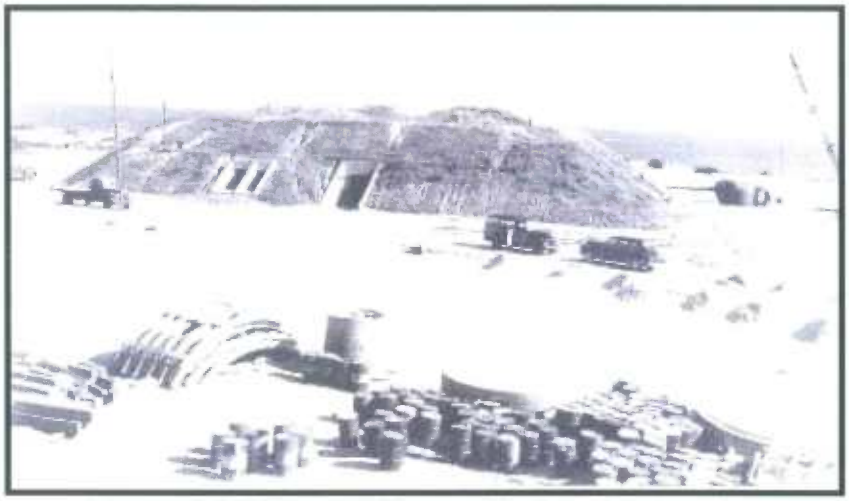


Figure 4-26: Battery Cramer Under Construction (source: Old Coast Guard Station Museum)

Two documents were found during the HRR indicating that guns from this battery were fired (OCGS003, STOR0040). Based on these records, 15 rounds of 6-inch, 108-pound cast iron (CI) shells were allotted for examination firing following the construction of the battery, and on July 22, 1948, the guns were also fired (STOR0040). This later document also indicated that 40-mm guns and machine gun firing out over the water took place from the vicinity of Battery Cramer on July 23, and from August 4-6, 1948. Based on other records reviewed during the course of this SI, it is assumed that at a minimum, annual service practice of the 6-inch guns occurred.

The field of fire of this battery was presented on Exhibit 7-B of OCGS003, and was used to develop the historical firing fan that extends 20,000 yards into the Atlantic Ocean as depicted in Figure 4-27.

4.12 EXAMINATION BATTERY

Also referred to in historical documents at Battery 19, the Examination Battery was constructed in 1942. Located at the western end of Fort Story as illustrated in Figure 4-5, this battery was used to support boats used to examine merchant ships and small craft entering or departing the bay. If a vessel did not adhere to the commands of the

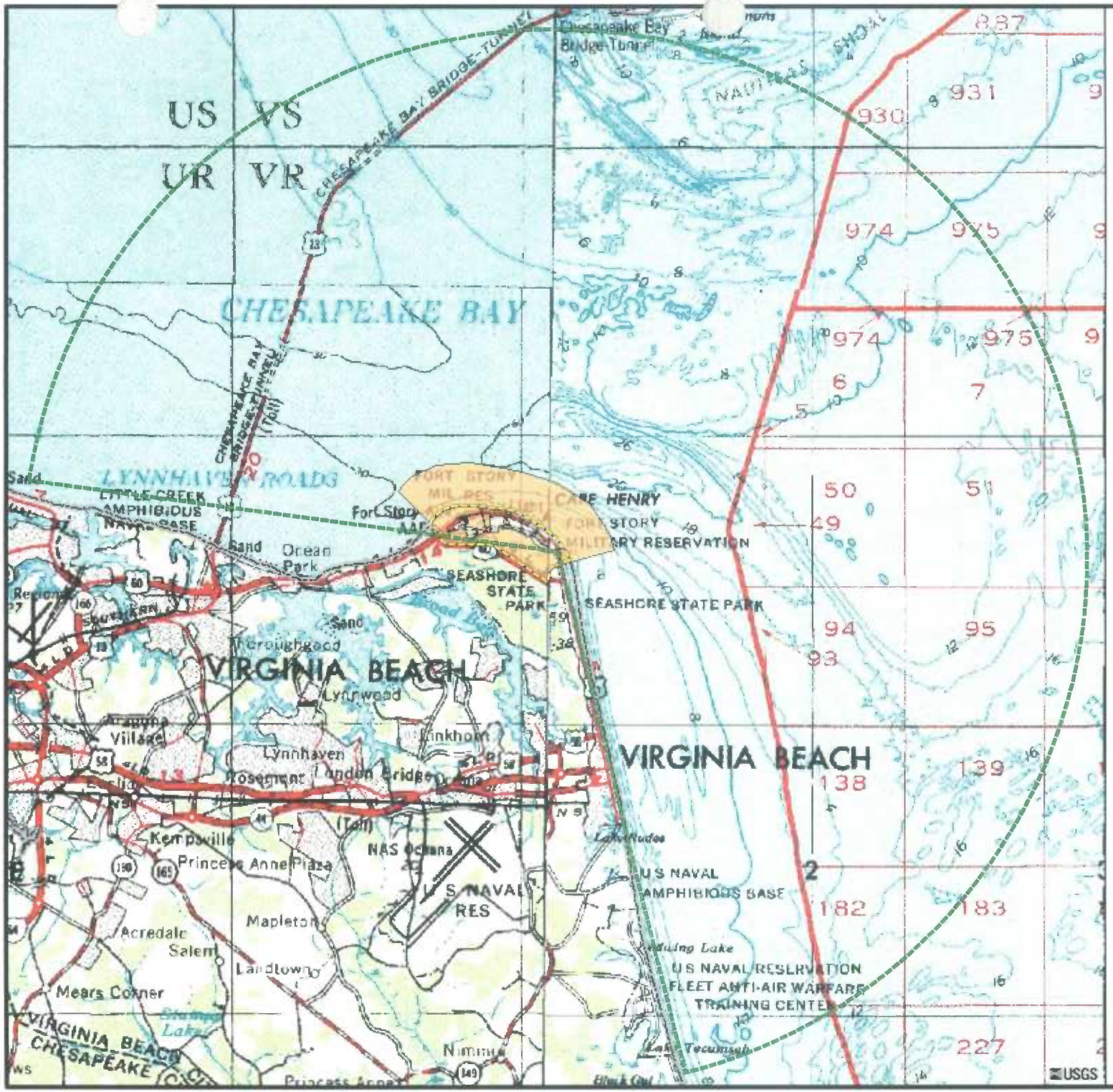
examination vessels, the Examination Battery was directed to fire a shot across the bow of the errant boat to have it comply with the order (OCGS009).

Located inside the Installation boundary and adjacent to the Fort Story Club, the Examination Battery consisted of two M1902M1 3-inch caliber guns (OCGS009, OCGS003) with a reported range of approximately 9,000 yards. Records also indicate that two .50 caliber machine guns were located at the Examination Battery. This battery was operational from 1942 until it was removed in July 1945, and Figure 4-28 illustrates the battery during its operational period. Based on this photograph and records in OCGS009, the 3-inch guns were located forward of the magazine and the range finder for the guns was located on the top of the magazine.

During the course of this SI, no historical documentation was found regarding training conducted at this battery. However, it is assumed that, at a minimum, annual service practice was performed, and based on the effective range of 3-inch guns being 9,000 yards (OCGS003), the historical firing fan of this battery was developed as illustrated in Figure 4-29.

4.13 BATTERY 21

Completed in October 1942, Battery 21 consisted of two M1 90-mm anti-motor torpedo boat (AMTB) guns constructed on two concrete gun blocks supported by wooden piles (OCGS009) along the shoreline north of Building 704, as illustrated in Figure 4-5. The magazine for the guns was located approximately 100 feet south of the guns. These guns were used as coastal protection against motor torpedo boats, but could also be used against surfaced submarines, minesweepers, landing craft, and airplanes. These guns had a maximum range of 19,560 yards (OCGS014), and were supplemented with two .50 caliber machine guns and two 37-mm guns. The mounted guns were designed to fire 90-mm M71 HE shells with M48 fuzes, and were placed in maintenance status in 1945. The guns were scrapped in 1950 (OCGS009). Figure 4-30 is a photograph of the 90-mm M1 gun used at this battery.



URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
S

1:186,000

3,000 1,500 0 3,000 Meters

12,000 6,000 0 12,000 Feet

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Figure 4-27
Battery Cramer
Historical Firing Fan
Fort Story, Virginia

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Figure 4-28: Examination Battery
(source: Old Coast Guard Station Museum)

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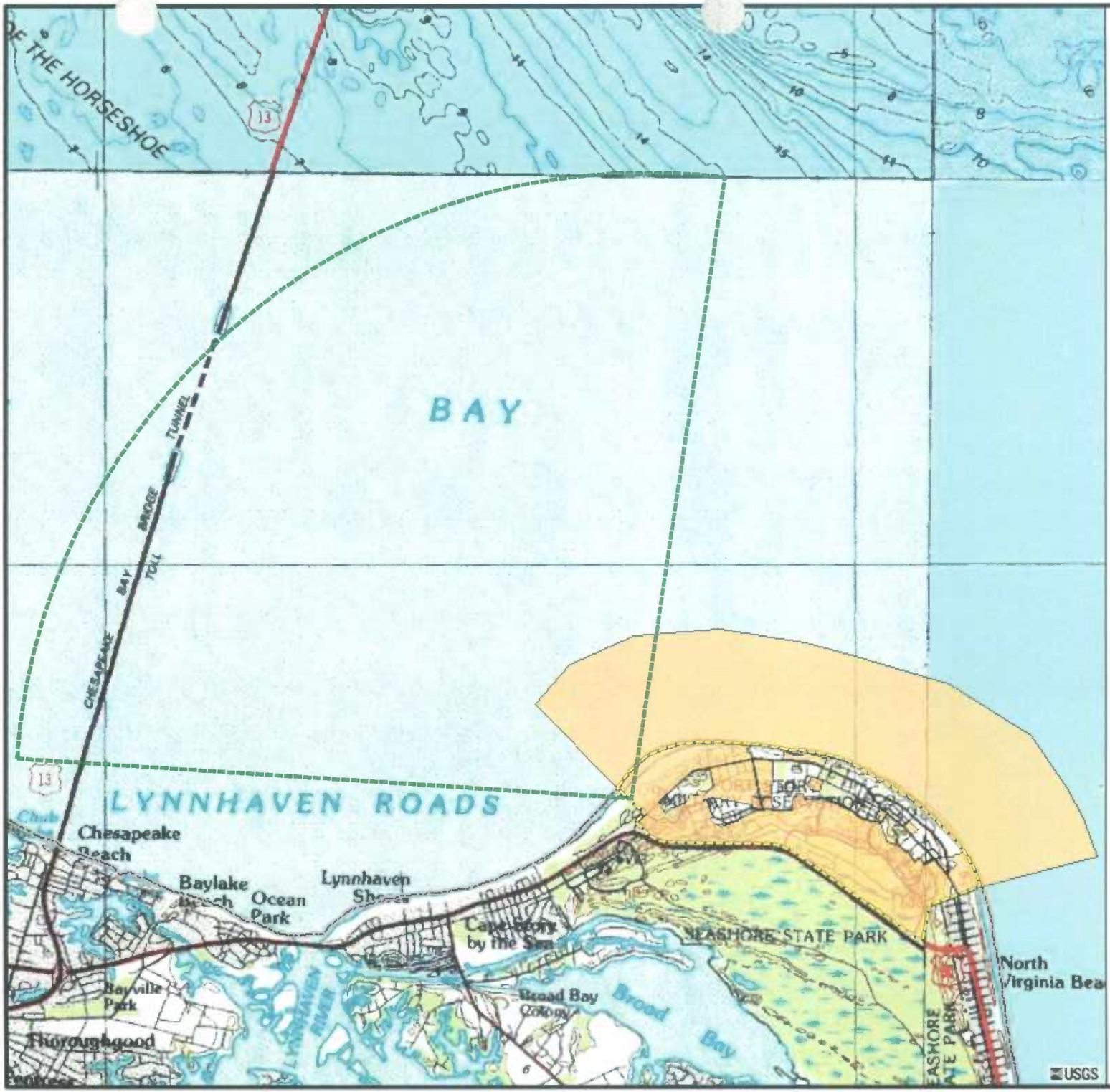

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
S

1:72,000

2,000 1,000 0 Meters

6,000 3,000 0 6,000 Feet

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Figure 4-29
Examination Battery
Historical Firing Fan
Fort Story, Virginia

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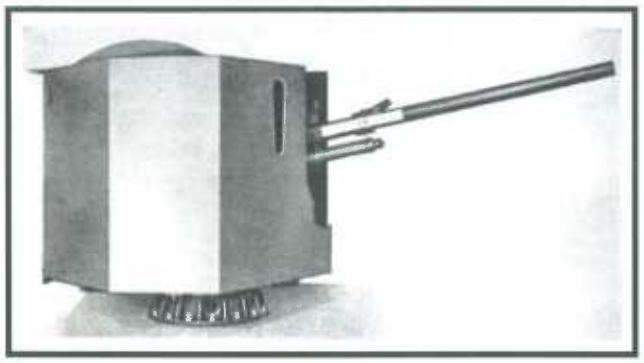


Figure 4-30: 90-mm M1 AMTB Gun
(source: http://www.geocities.com/fort_tilden/amtb.html)

The concrete blocks that supported this battery are no longer present because the erosion of Fort Story's coastline has caused the destruction of the former battery, and this location is currently offshore.

During the course of this SI, no historical documentation was found regarding training or firing from this battery. However, it is assumed that, at a minimum, annual service practice was performed, and based on the maximum range of these guns being 19,560 yards (OCGS014), the historical firing fan of this battery was developed as illustrated in Figure 4-31.

4.14 BATTERY 22

Completed in August 1943, Battery 22 was similar to Battery 21; it also consisted of two M1 90-mm AMTB guns constructed on two concrete gun blocks supported by wooden piles (OCGS009). Located along the shoreline north of Building 999 as illustrated in Figure 4-5, the magazine for the guns was located approximately 100 feet south of the guns. These guns were used as coastal protection against motor torpedo boats, but could also be used against surfaced submarines, minesweepers, landing craft, and airplanes. These guns had a maximum range of 19,560 yards (OCGS014), and were supplemented with two .50 caliber machine guns and two 37-mm guns. The mounted guns were designed to fire 90-mm M71 HE shells with M48 fuses, and were placed in maintenance status in 1945. The guns were scrapped in 1950 (OCGS009). Figure 4-30 provides a photograph of the 90-mm M1 gun used at this battery.

As illustrated in Figure 4-32, the concrete pads that supported this battery were barely visible in 2001, and currently are not visible from the shoreline, having been completely covered by the advancing ocean.

During the course of this SI, no historical documentation was found regarding training or firing from this battery. However, it is assumed that, at a minimum, annual service practice was performed, and based on the maximum range of these guns being 19,560 yards (OCGS014), the historical firing fan of this battery was developed as illustrated in Figure 4-33.

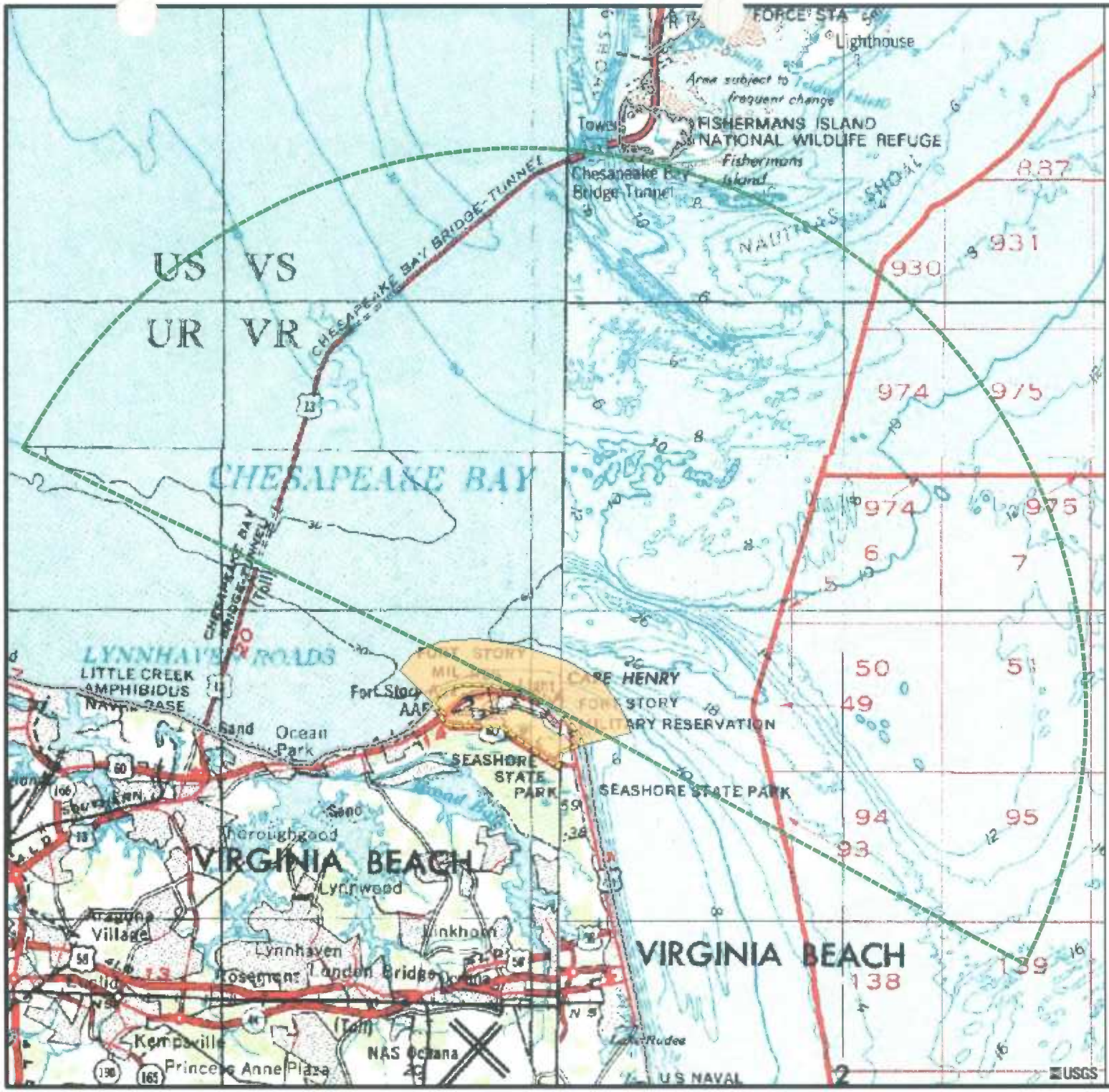
4.15 BATTERY 10

Located near the southeastern entrance to Fort Story, Building 317 served as Battery 10 from the time of its completion in October 1943 until the guns were scrapped in 1949 (OCGS001, OCGS003). The location of this battery is illustrated in Figure 4-5, and it consisted of two 6-inch M1900 guns that were mounted on either side of the battery itself. Used to replace the 155-mm guns at Mobile Battery 5 (Section 4.2.6), this battery was intended to fire both HE and AP, 6-inch rounds as part of the coastal defenses.

During the course of this SI, no historical documentation was found regarding training or firing from this battery. However, it is assumed that, at a minimum, proof firing and annual service practice were performed. The field of fire of this battery was presented on Exhibit 14-B of OCGS003, and was used to develop the historical firing fan that extends 20,000 yards into the Atlantic Ocean as depicted in Figure 4-34.

4.16 BATTERY KETCHAM

As illustrated in Figure 4-5, Battery Ketcham was located in the east-central portion of Fort Story. Constructed in 1943, Battery Ketcham was one of two 16-inch gun batteries constructed at Fort Story as part of the coastal defense of the Chesapeake Bay. Comprising two 16-inch Mark II M1 Navy guns, this battery had an effective range of 44,680 yards (OCGS003). Along with similar guns installed at Battery 4, Battery Ketcham provided the furthest limit of the coastal protection by the guns at Fort Story. Figure 4-35 depicts Battery Ketcham following its construction.



URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
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1:174,000

4,000 2,000 0 Meters

12,000 6,000 0 12,000 Feet

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Figure 4-31
Battery 21 Historical Firing Fan
Fort Story, Virginia

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**Figure 4-32: Remnants of Battery 22 in 2001
(source: Old Coast Guard Station Museum)**

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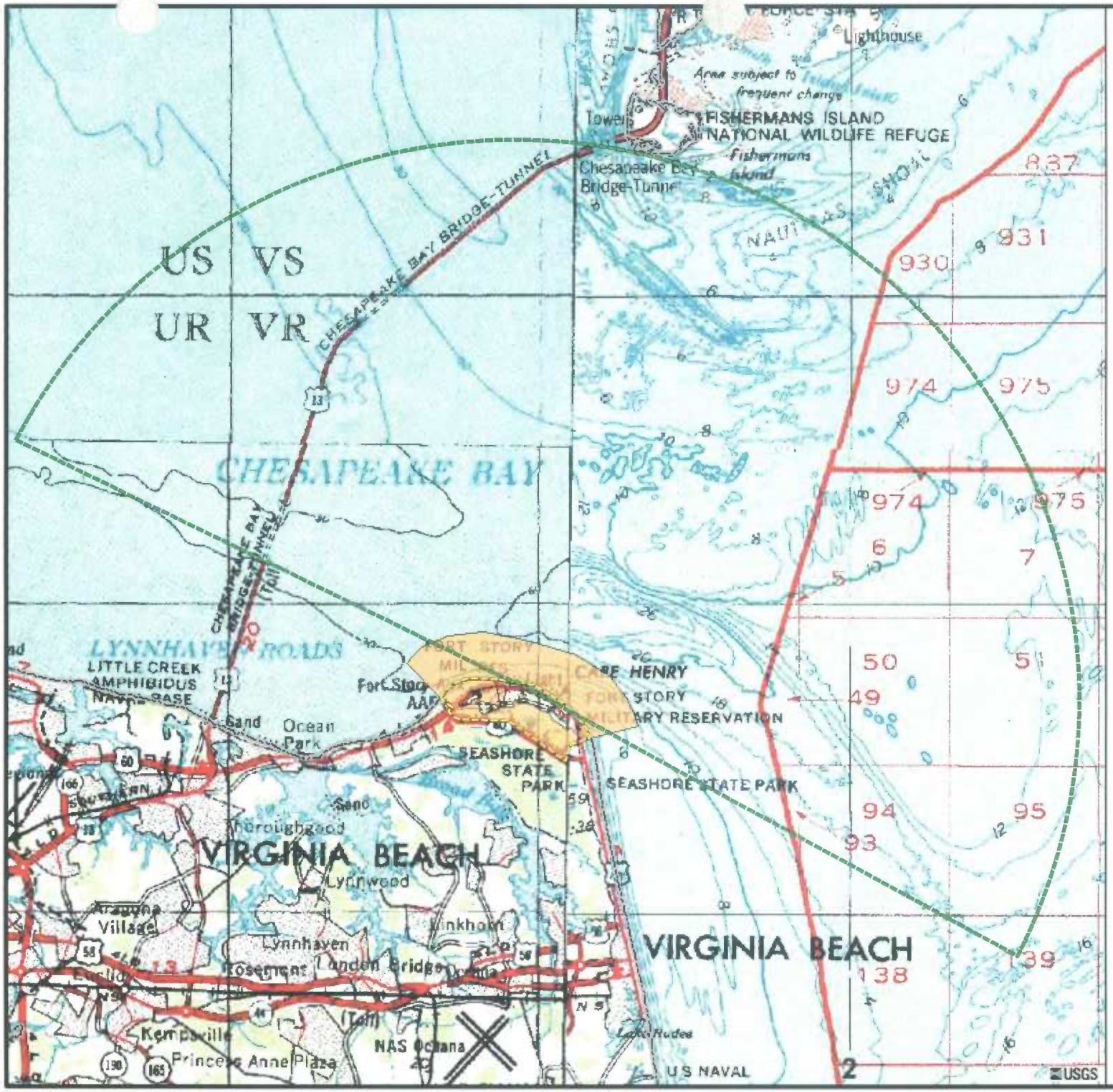

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

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1:174,000

4,000 2,000 0 Meters

12,000 6,000 0 12,000 Feet

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Figure 4-33
Battery 22 Historical Firing Fan
Fort Story, Virginia

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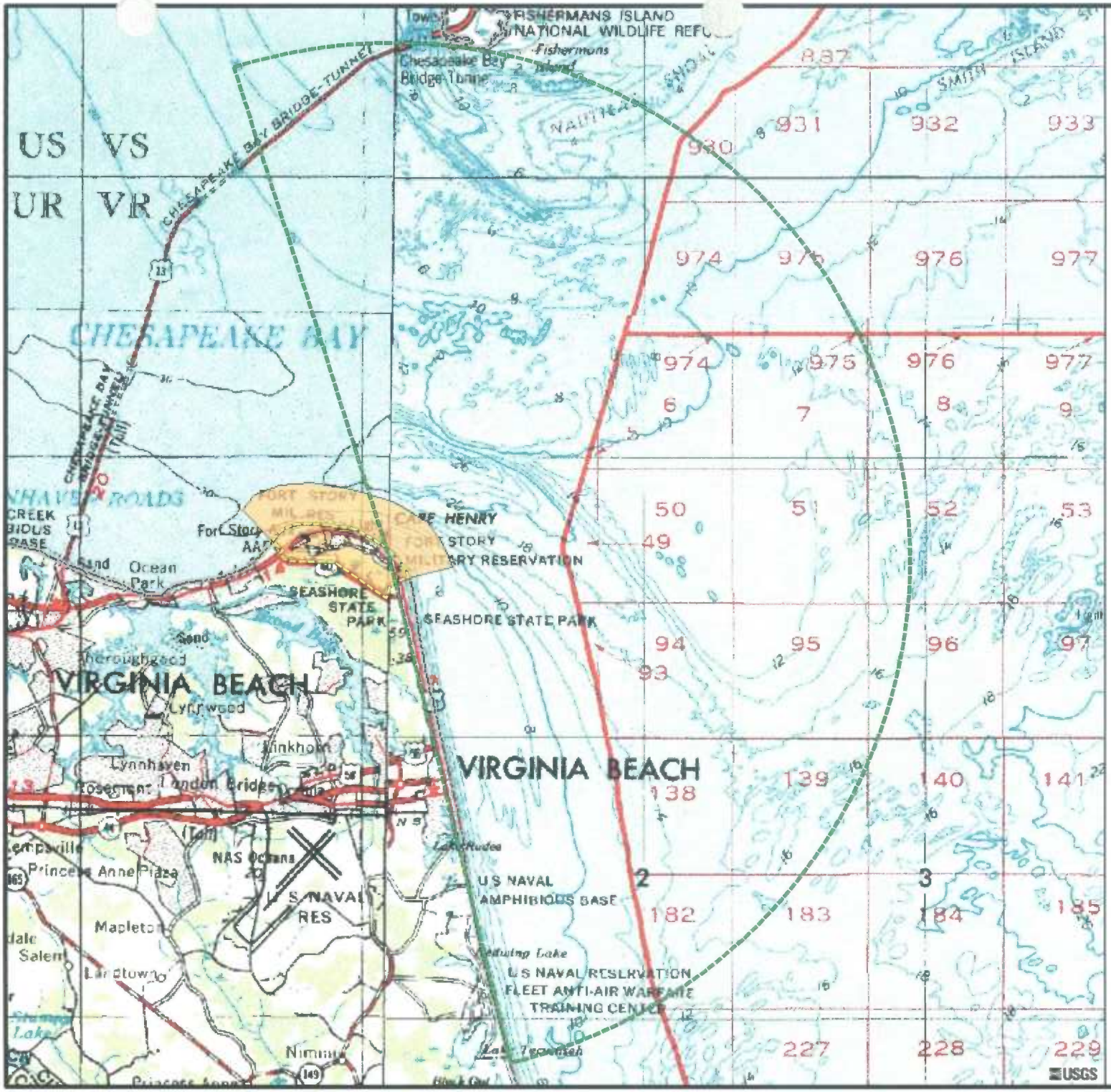

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
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1:192,000

3,000 1,500 0 3,000 Meters

12,000 6,000 0 12,000 Feet

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Figure 4-34
Battery 10 Historical Firing Fan
Fort Story, Virginia

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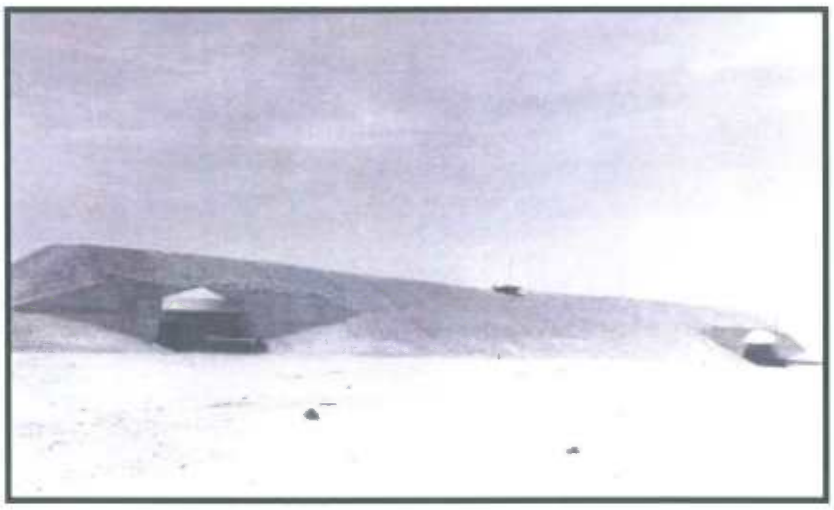

Figure 4-35: Battery Ketcham circa 1943
(source: Old Coast Guard Station Museum)

The guns were declared surplus in 1948 and removed (OCGS006); however, the battery itself still remains as Building 605. From approximately 1978 until 1995, the building was used by Explosive Ordnance Disposal Training and Evaluation Unit 2 (EOD TEU 2), and the interior was modified to support this use (OCGS001). The building is currently unoccupied and secured.

Given the nature of these guns and the limited number of shots allotted to the barrel life, it is assumed that firing for training purposes was limited. However, two pictures (Figure 4-36) were obtained during the HRR that depicted firing of 16-inch guns. It is unknown whether the left photograph is a gun at Battery Ketcham or Battery 4; however, the photograph on the right was identified as being a proof firing of a gun at Battery Ketcham.

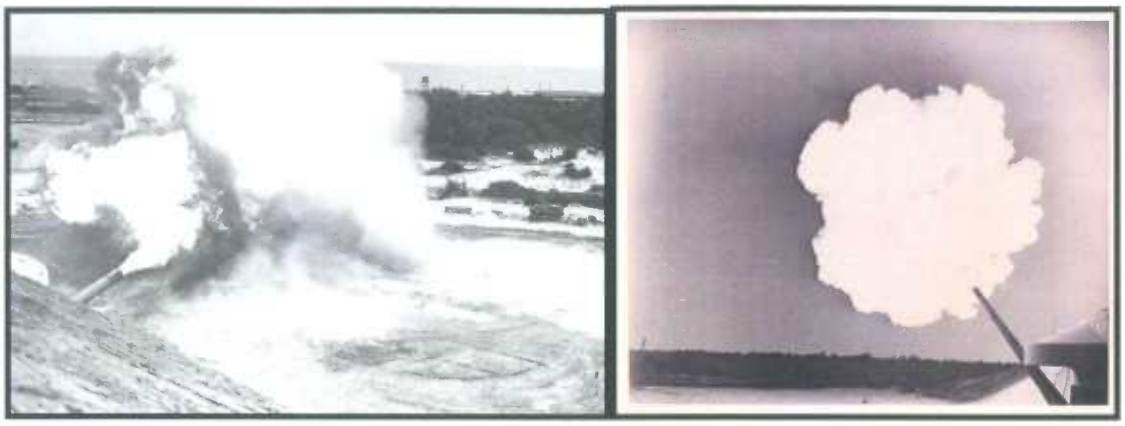

Figure 4-36: Firing of 16-inch Guns at Battery Ketcham and Battery 4 (source: Old Coast Guard Station Museum)

Based on information provided in *Technical Manual 9-471 16-Inch Seacoast Gun Materiel, Gun MKIIM1, Barbette Carriage M4* (War Department, 1942c), each round fired from these guns consisted of three separately loaded components: the primer, the propellant, and the projectile. The propellant and an igniter are assembled together in a silk-wrapped ammunition bag (or powder charge). Six ammunition bags were required for each full round.

Primer: The primer is a small brass cartridge filled with 30 grains of black powder. The primer used in the 16-inch guns could be triggered by either electrical pulse or percussion (in case the electrical pulse did not work).

Ammunition Bags: The ammunition bags each contained 12 ounces of black powder igniter, and either 108 pounds or 112 pounds of smokeless powder propellant. Black powder is a mixture of sulfur, carbon, and potassium nitrate (saltpeter). The smokeless powder used for the 16-inch guns was nitrocellulose, created by nitrating cellulose.

Projectiles: The projectiles available for use in the gun were grouped according to their use, as follows:

- Service Ammunition. Two types of AP projectiles were available for use in combat. The AP projectile was "a thick-walled shell fitted with an armor-piercing cap and filled with explosive charge."

- Practice Ammunition: Target practice (TP) projectiles were similar to service projectiles in size, shape, weight, and center of gravity to simulate their trajectory when fired. Four types of TP projectiles were available: two CI and two AP. All four types of projectiles had no explosive fill. Only one of the four projectile types (Mk II M1) had a fuze.

- Dummy Ammunition: Three types of dummy ammunition were available. The dummy ammunition was used to practice loading and unloading the gun, but not for firing. The dummy projectile has the same exterior dimensions as an AP or TP projectile. The ammunition bags loaded with it were inert, but of the same weight and dimension as the bags used in service or TP.

- Subcaliber Ammunition: The subcaliber ammunition was available for use in practice firing of the gun. The ammunition came in the form of a fixed, complete round; had inert sand filler; and weighed approximately 20 pounds, with a 75-mm diameter, and 26-inch length.

With the exception of the photographs presented in Figure 4-36, no additional documents pertaining to the actual firing of these guns were found during the HRR. However, it is considered likely that these guns were occasionally used for service or TP. The field of fire of this battery was presented on Exhibit 2-B of OCGS003, and was used to develop the historical firing fan that extends 44,680 yards into the Atlantic Ocean as depicted in Figure 4-37.

4.17 BATTERY 4

During its use as a coastal defense battery from 1943 until it was declared surplus in 1948 and the guns removed in 1949, Battery 4 was identical in every respect to Battery Ketcham. Located approximately 1,900 feet west of Battery Ketcham, this battery currently is used by EOD TEU 2 for training. Figure 4-38 provides a close view of one of the actual 16-inch guns placed at these batteries.

The historical firing fan of this battery was developed using the same information provided for Battery Ketcham, and is illustrated in Figure 4-39.

4.18 NIKE MISSILE BATTERY

This battery consisted of the launcher site for Nike-Hercules Air Defense missiles. Located immediately west of Battery 4 (see Figure 4-5), this launch area was built in 1958 and dismantled in 1974. This site contained three underground magazines and elevators for raising the missiles to firing positions, although no missiles were ever fired from this site.

4.19 OTHER GUNS

During the review of documents obtained as part of the HRR, several references and photographs were obtained regarding training or firing of guns from unspecified locations. These guns were primarily used for close-in protection and anti-aircraft defenses. These guns were mobile, and included .20, .30, and .50 caliber machine guns. Based on the photographs provided in Figure 4-40 that were taken in the late 1940s, as well as on records of anti-aircraft training practice firing at targets towed by aircraft in the 1930s and 1940s (STOR0017–STOR0040), it is inferred that this type of firing likely took place from at least the 1930s through the 1940s. One document (STOR0040) was found that indicated machine guns were set up in the eastern portion of the Installation near Battery Cramer and fired at towed targets on July 23, 1948. Based on the documents obtained, this type of training appears limited to firing at aerial targets towed out over the Atlantic Ocean.

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

N
W E
S

1:408,000

6,000 3,000 0 6,000 12,000 Meters

24,000 12,000 0 24,000 Feet

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Figure 4-37
Battery Ketcham
Historical Firing Fans
Fort Story, Virginia

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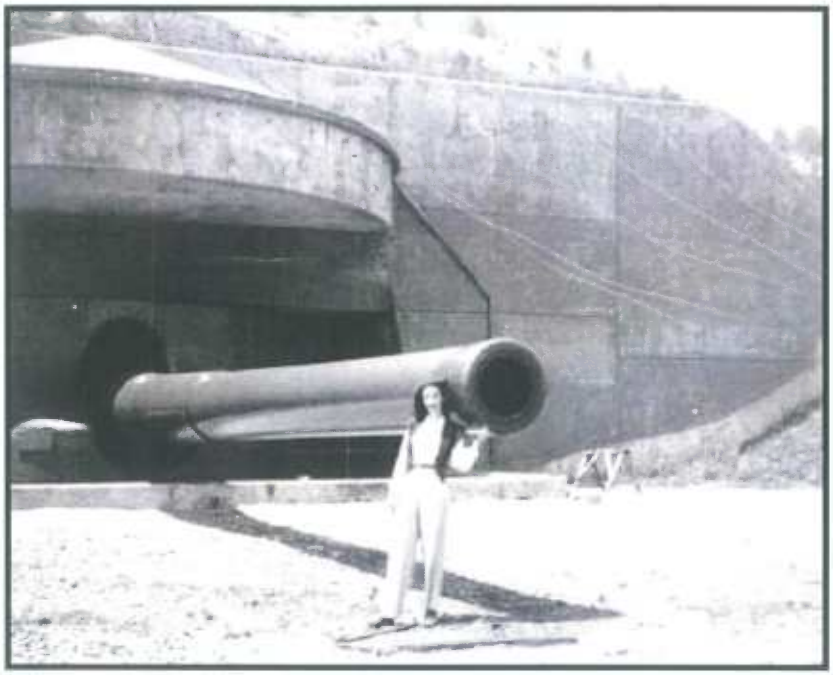

Figure 4-38: 16-Inch Gun at Battery 4 or Battery Ketcham (source: Old Coast Guard Station Museum)

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URS
200 Orchard Ridge Drive
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Legend

- Operational Range
- Batteries
- Installation Boundary
- Historical Firing Fan

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1:408,000

6,000 3,000 0 6,000 Meters

24,000 12,000 0 24,000 Feet

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Figure 4-39
Battery 4 Historical Firing Fan
Fort Story, Virginia

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Figure 4-40: Examples of Mobile AA Guns from Late 1940s (source: Old Coast Guard Station Museum)

4.20 AMMUNITION TYPES

Three general types of ammunition were used in coastal artillery guns: HE-filled, AP, and TP. TP rounds were also referred to as CI or sand-filled rounds. Various Army Regulations (including AR 775-10, AR 775-15, and AR 435-55) detailed the authorized allowances provided for training for selected years during 1924-1943 for various size guns, and this information is provided in Table 4-2 for the various batteries located at Fort Story.

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Table 4-2: Summary of Batteries and Ammunition Types

Gun/Battery Name	Gun Type	Period of Use	Munition Type	Ammunition Allowance for Training				
				Shrapnel	HE Shell	Sand Loaded HE Shell	Cast Iron Projectile	Sub-caliber
Batteries A and B	M1903, 5-inch; M1900, 6-inch	1917 - 1919	5-inch and 6-inch HE mortars	N/A	N/A	N/A	N/A	N/A
Battery AA-1	1917M1A2, 3-inch	1921 - 1928; 1943 - 1949	3-inch shrapnel; 3-inch HE	1924 - 150 1925 - 150 1927 - 150 1941 - 375 1943 - 190	1941 - 125 1942 - 190	None	None	None
Battery 7A	N/A	1922 - 1949	M1, M2, and M4 water mines	N/A	N/A	N/A	N/A	N/A
Railguns	1890 M1, 12-inch mortars; 8-inch mortars	1929 - 1942	12-inch and 8-inch sand loaded or cast iron practice; 37 mm subcaliber; 75 mm sand-loaded subcaliber	None	None	1930 - 15 8” 1934 - 14 8” 1939 - 14 8” 1941 - 14 8” 1942 - 14 8”	1930 - 24 12” 1931 - 15 8” 1931 - 24 12” 1932 - 15 8” 1932 - 24 12” 1934 - 24 12” 1939 - 24 12” 1941 - 24 12” 1942 - 24 12”	1930 - 400 8” 1930 - 100 12” 1931 - 400 8” 1931 - 100 12” 1932 - 350 8” 1932 - 150 12” 1934 - 300 8” 1934 - 150 12” 1939 - 300 8” 1939 - 150 12” 1941 - 300 8” 1941 - 150 12” 1942 - 300 8” 1942 - 150 12”
Battery Pennington No. 1 and No. 2	16-inch M1920 Howitzers	1924 - 1949	16-inch Mk HM2, 2100# CI, 296 lbs propellant in six sections	None	None	None	1924 - 20 1942 - 14	None

Gun/Battery Name	Gun Type	Period of Use	Munition Type	Ammunition Allowance for Training				
				Shrapnel	HE Shell	Sand Loaded HE Shell	Cast Iron Projectile	Sub-caliber
Battery Walke No. 3 and No. 4	16-inch M1920 Howitzers	1924 - 1949	16-inch Mk HM2, 2100# CI, 296 lbs propellant in six sections	None	None	None	1924 - 20 1942 - 14	None
Mobile Battery 5	155mm G.P.F. Model 1917 A1 guns	1931 -1935	H.E Sand loaded; 75 mm sand loaded subcaliber	None	None	1931 - 71 1932 - 71 1934 - 34	None	1931 - 400 1932 - 350 1934 - 300
Battery U	155mm GPF 1917 A1 guns	1931 - 1942	H.E Sand loaded; 75 mm sand loaded subcaliber	None	None	1931 - 71 1932 - 71 1934 - 34 1939 - 34 1941 - 34 1942 - 75	None	1931 - 400 1932 - 350 1934 - 300 1939 - 300 1941 - 300 1942 - 300
Mine Casemate 1/2	N/A	1933 - 1945	Mark 6 water mines	None	None	None	None	None
Battery Worcester	6-inch M-1900 BC guns	May 1941 - 1949	6-inch sand loaded HE shells; 75 mm sand loaded subcaliber	None	None	1941 - 24 1942 - 24 1943 - 48	None	1941 - 300 1942 - 300 1943 - 600
Battery Cramer	6-inch M1903 guns	May 1942-1949	6-inch sand loaded HE shells; 75 mm sand loaded subcaliber	None	None	1942 - 24 1943 - 48	None	1942 - 300 1943 - 600
Examination Battery	M1902M1 3-inch	July 1942 - July 1945	3-inch HE	None	1942 - 540 1943 - 540	None	None	None

Gun/Battery Name	Gun Type	Period of Use	Munition Type	Ammunition Allowance for Training				
				Shrapnel	HE Shell	Sand Loaded HE Shell	Cast Iron Projectile	Sub-caliber
Battery 21	M1 90mm Anti-Motor Torpedo Boat (AMTB) guns; .50 cal machine guns; 37 mm guns	October 1942 - 1949	90mm shell HE M71 with fuze M48, .50 caliber; 37 mm	None	1942 - 470 90 mm 1943 - 1350 90 mm	None	None	None
Battery 22	M1 90mm Anti-Motor Torpedo Boat (AMTB) guns; .50 cal machine guns; 37 mm guns	August 1943 - 1948	90mm shell HE M71 with fuze M48, .50 caliber; 37 mm	None	1942 - 470 90 mm 1943 - 1350 90 mm	None	None	None
Battery 10	6-inch M1903 guns	October 1943 - 1949	6-inch sand loaded HE shells; 75 mm sand loaded subcaliber	None	None	1942 - 24 1943 - 48	None	1942 - 300 1943 - 600
Battery Ketcham	16-inch Mark II, Mod. 1	November 1943 - 1948	2100# CI shells; 75 mm sand-loaded subcaliber	None	None	None	1943 - 28	1943 - 460
Battery 4	16-inch Mark II, Mod. 1	November 1943 - 1949	2100# CI shells; 75 mm sand-loaded subcaliber	None	None	None	1943 - 28	1943 - 460

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4.21 POTENTIAL MEC AND MC ON FORT STORY

Based on the existence and documented firing of various guns located at historical batteries and gun placements discussed in Section 4.2, the potential for MEC and MC on portions of Fort Story property that are identified as other-than-operational range areas was evaluated. Figure 4-41 depicts the various historical firing fans emanating from each of the batteries, as well as the manner in which they overlap Fort Story and the other-than-operational range areas of the Installation. As depicted in this figure, these historical firing fans cover nearly all of Fort Story and all of the other-than-operational range areas. Offshore areas where MEC and/or MC may be present are discussed in the following subsection of this report.

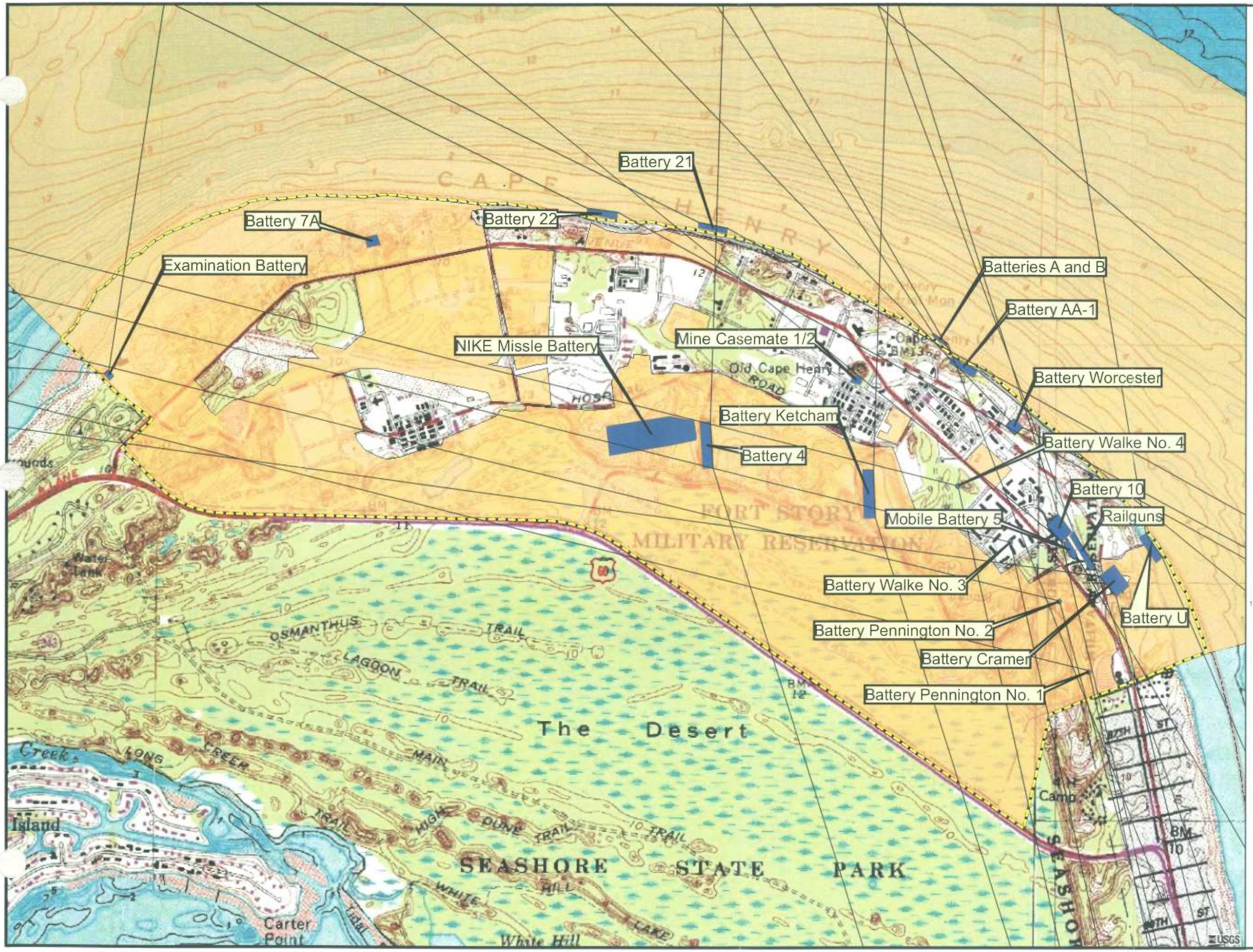
The standard training conducted at coastal artillery batteries involved firing the guns at water targets that were towed by boats or aerial targets towed by aircraft (War Department, 1941b). Documents obtained during the HRR indicate that the only training that took place at these batteries involved firing at offshore targets (FTS002, STOR0001, STOR0008, STOR0017–STOR0040, OCGS003, OCGS005, OCGS0010, and OCGS0015). Given the range of these guns, it can be established with a high degree of confidence that no land-based targets existed at Fort Story; therefore, there are no impact (or target) areas at Fort Story where MEC may be present.

Given the range of the guns that were fired, the only manner in which the firing of the guns could have resulted in MEC being present on Fort Story would be if a gun misfired and the projectile did not reach the water. Procedures existed to address misfired munitions that included recovery of the projectile or removal of the projectile from the gun if the misfiring were the result of the primer or propelling charge not firing properly (War Department, 1940b). These procedures required either the destruction of the munitions by the ordnance officer or the disposal of the munitions in accordance with local regulations. Given the existence of these procedures, the developed nature of the Installation (even during its earliest period of use), and the lack of any discovery of MEC during any of the construction that has taken place at Fort Story over time, it is considered highly unlikely that MEC is present due to the misfiring of the guns during training.

Another potential for MEC to be present at Fort Story is if munitions or propellant bags were purposely buried or disposed of at the Installation. These items would be considered DMM. No records were found during the HRR to indicate that any such burial or disposal of propellant bags or munitions took place, and, given that the emplacements of the guns were permanently manned positions during their operation, the disposal of munitions in the immediate vicinity of the batteries is considered unlikely. One document (OCGS006) was obtained that provides documentation regarding the requirement to place in surplus and dispose of seacoast artillery materiel (which includes the propellant, primers, and projectiles) from selected batteries following WWII in accordance with applicable laws and regulations, but no records documenting how these materiel were actually disposed of were found during the HRR.

A review of aerial photographs taken following WWII conducted as part of this SI did not indicate the presence of any obvious open areas that could have been used for open burning of propellants or detonating munitions within the other-than-operational range areas of the Installation. Given the construction and development that has taken place adjacent to many of the former batteries, and the fact that no DMM has been discovered, it is considered unlikely that such disposal occurred in these areas.

The potential for MC contamination to be present in other-than-operational areas of Fort Story could have resulted from firing the guns, which can result in propellant being expelled from the barrel of the gun and depositing on the ground surface, or from burning propellant bags, which occurred when the propellant was found to be inadequate for use or needed to be disposed of. As discussed previously, no documentation was found regarding the burning of propellant bags, and no evidence was visible on aerial photographs that indicate any areas where burning may have occurred within portions of Fort Story that are defined as other-than-operational areas.



Legend

- Historical Firing Fans
- Batteries
- Installation Boundary
- Operational Range

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500 250 Meters

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Source of imagery: Terraserver

Figure 4-41
Batteries and Historical Firing Fans
Fort Story, Virginia

Research regarding the distribution and concentration of MC at historical firing points is not readily available, although studies have been conducted on the distribution of MC from current training. This research indicates that MC (primarily nitrocellulose, trinitrotoluene (TNT), dinitrotoluene, and nitroglycerine) is present in the surface soils immediately following the firing of artillery (USACE, 2005). This study indicated that MC may extend over 30 meters from the firing point of a 105-mm howitzer, although the concentrations of TNT were less than 0.007 mg/kg, dinitrotoluene was less than 4 mg/kg, and nitroglycerine was not detected.

MC data presented in SI Reports prepared under the FUDS MMRP have been reviewed to evaluate the persistence of MC in the environment around former ranges. These data indicate that MC is rarely detected near former firing points (Walker, 2007). The absence of MC in these areas is likely attributable to factors such as the natural degradation of MC in the environment and reworking of the soil in the area by subsequent construction activities after the firing point was used.

The batteries at Fort Story were evaluated to determine if areas existed where the firing that occurred may have resulted in MC impacts to surface soils. This analysis included:

- An evaluation of the location of the battery with respect to operational range areas to identify if the "plume" of propellant expelled during firing would extend beyond the limits of the operational area where it would be eligible for inclusion in the MMRP

- An evaluation of soil disturbance that may have occurred in the area that would have resulted in mixing the surface soils with subsurface soils, thus limiting the potential for MC to be detectable

- The number and type of guns that may have contributed to MC in the area

This evaluation resulted in the following conclusions:

- Batteries A and B, Battery AA-1, Battery 21, Battery 22, Battery Worcester, and Battery U were all located along the shoreline, and erosion of the shoreline and

dunes has removed the soils on which any MC would be deposited. Therefore, MC is unlikely to be present at these batteries.

- Battery 4, Battery Ketcham, Examination Battery, Battery Pennington Nos. 1 and 2, and Battery Cramer were eliminated from consideration under the MMRP because these batteries were all located sufficiently within current operational range areas that the "plume" would not extend beyond the operational range area.

- Battery Walke No. 4 is located in an area that is now heavily vegetated, and, given the long duration of time that has transpired since the end of WWII when the guns were last fired, any residue has likely biodegraded.

- Battery Walke No. 3, Battery 10, Mobile Battery 5, and the railguns were all located in areas that have been heavily developed since WWII, resulting in the movement of soil associated with construction, making the detection of the low concentrations of MC present at the time of firing (if it did not subsequently biodegrade) unlikely.

Based on this analysis, it is considered highly unlikely that MC poses a threat to human health or the environment in the soils present on Fort Story, and no additional sites within the Installation boundary are identified for evaluation under the MMRP.

4.22 DEVELOPMENT OF OFFSHORE MUNITIONS RESPONSE SITES

Based on the research performed during the HRR, extensive information was obtained regarding the various coastal batteries that existed from the WWI timeframe through the end of WWII. As discussed in Section 4.2, records were obtained that documented these guns were fired as part of initial proofing of the guns as well as annual service practice. However, no information was obtained regarding where the targets were located.

The historical firing fans developed and presented in Section 4.2 for each of the batteries were consolidated into a single map as illustrated in Figure 4-42.

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Historical Firing Fans
- Installation Boundary

N
W E
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1:325,000

6,000 3,000 Meters

15,000 7,500 0 15,000 30,000 Feet

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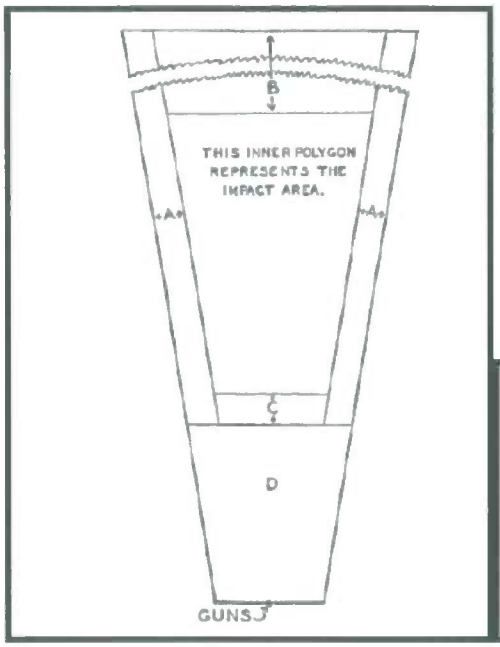
Source of imagery: Terraserver

Figure 4-42
Compilation of Historical Firing Fans
Fort Story, Virginia

Many of the firing fans overlap, and munitions fired during training from different batteries were likely fired into the same area. The one exception is the portion of the historical firing fans from Battery Ketcham and Battery 4, which extended significantly farther from their firing points on Fort Story (44,680 yards) than did fans from the other batteries (maximum of 20,000 yards).

As discussed in Section 4.2, these historical firing fans were developed based on maps included in OCGS003 that depicted the field of fire, or the maximum firing range of the gun when a map did not exist. It is important to note that these historical firing fans depict either the coverage area that the guns were designed to protect (i.e., field of fire) as part of the coastal defenses or the maximum range of the guns. However, these maps do not depict, nor should they be interpreted as, a representation of the area where munitions were fired during training. While targets for training would have been located within these areas, they would not have comprised the entire historical range fan.

Since specific information on the location of target areas was not discovered during the archive searches performed, the historical firing fans were used as the starting point to develop the limits of the offshore area where munitions may have been fired. According to research performed regarding coastal defense sites, no regulations have been found that governed the firing of coastal artillery at offshore targets prior to 1931. Training Regulation 140-5, *Range Regulation for Firing Ammunition in Time of Peace* (War Department, 1931b); Army Regulation 750-10, *Range Regulations for Firing Ammunition in Time of Peace* (War Department, 1939b); and Army Regulation 750-10, *Range Regulations for Firing Ammunition for Training and Target Practice* (War Department, 1942b) provided information on the general range fan layout to be applied for such training. These range diagrams provided specific distances that danger areas should be established around all sides of the target area. The danger areas differed, depending on the caliber of gun being fired, with shorter danger zones extending beyond the target area for 75-mm caliber or smaller, larger danger zones for 90-mm to 155-mm, and even larger danger zones for 7-inch to 240-mm caliber guns. Figure 4-43 depicts a typical target area layout.



Danger areas

Caliber	Width of area		
	A	B	C
	Yards	Yards	Yards
37-mm or less	600	2,000	200
40-mm to 75-mm, incl.	600	2,000	400
90-mm to 155-mm, incl.	800	2,000	600
7-inch to 240-mm, incl.	1,000	[1] 3,000	1,000

[1] 2,000 yards if firing at more than 15° elevation.

Figure 4-43: Typical Offshore Target Area Layout

Because documents depicting the placement of offshore target areas were not found during the course of the HRR, the historical firing fans developed in Section 4.2 were used as the starting point to identify areas where MEC may be present as a result of training activities. As training records obtained indicated that only offshore targets were used for training, portions of the historical firing fans that overlapped land were eliminated as part of the MRSs. It was also inferred that the targets would not be towed in areas where potential misfires would strike the land; therefore, the distance that any target would be located would allow for the safety danger zone to be established without overlapping any land. As illustrated in Figure 4-43, the lateral safety danger zones established for guns with a caliber of 75-mm or less was 600 yards, and the distance beyond the target zone was established as 2,000 yards. By definition, these safety danger zones were established because of the potential for misfires to miss the target area by this amount. Therefore, in order to provide adequate protection of persons and property on land, it is assumed that these safety danger zones would not overlap the land and be established so that the edge of the danger zone was at least the same distance away from land as it was from the edge of the target area (i.e., 600 yards from the side of the target area and 2,000 yards beyond the target area).

Based on the assumptions presented above, two offshore areas were preliminarily developed: the Outer Coastal Defense Zone and the Inner Coastal Defense Zone, as illustrated in Figure 4-44. The Outer Coastal Defense Zone comprises the portions of the historical firing fans from Battery Ketcham and Battery 4 that extended beyond the other historical firing fans. This site was developed because only the projectiles fired from these two batteries have the potential to be present in this area. Based on the information obtained pertaining to the ammunition allowances for training (Table 4-2), the only ammunition fired from Battery Ketcham and Battery 4 were either CI projectiles or sand-filled 75-mm subcaliber rounds. Neither of these items is considered MEC because they are not explosives-filled. Therefore, the Outer Coastal Defense Zone is not considered eligible under the MMRP because MEC and MC are not believed to be present.

The Inner Coastal Defense Zone was developed by complexing the various historical firing fans located closer to Fort Story. The munitions potentially present in this range include those fired from all of the batteries identified at Fort Story. However, as indicated by the information presented in Table 4-2, the only batteries that fired munitions potentially containing explosives (i.e., not CI or sand-filled practice rounds) were Battery AA-1; Railguns (37-mm subcaliber); Examination Battery; Battery 21, and Battery 22. As no records were obtained regarding the types of munitions fired from Batteries A and B, which existed from 1917-1919, it is assumed that these batteries may have fired HE-filled rounds.

Figure 4-45 illustrates the historical firing fans from each of the six batteries listed above as potentially firing HE-filled munitions relative to the configuration of the Inner Coastal Defense Zone. This zone also includes historical firing fans from Battery Pennington No. 1 and No. 2, Battery Walke No. 3 and No. 4, Mobile Battery 5, Battery U, Battery Worcester, and Battery Cramer. As is evident in Figure 4-45, the historical firing fans from the batteries that may have fired HE-filled munitions do not comprise the entire limit of the Inner Coastal Defense Zone. Therefore, the historical firing fans from these six batteries were used to revise the extent of the impact area with the potential to contain MEC. This area has been identified as the Inner Coastal Defense Range MRS and is illustrated in Figure 4-46.

In addition to these historical firing fans, the underwater mines associated with Battery 7A and Mine Casemate 1/2 were also located in this area. Although these mines were placed as part of the coastal defenses during WWII, according to notations on National Oceanic and Atmospheric Administration (NOAA) Chart 12208, *Approaches to the Chesapeake Bay*, there is a warning that while the area is open to navigation, vessels are restricted from anchoring, laying cable, dredging, or trawling because of residual danger from mines on the bottom of the ocean in this area.

The Inner Coastal Defense Range MRS is comprised of 258,510 acres, and consists of portions of the historical firing fans from Batteries A and B, Battery AA-1; Railguns (37-mm subcaliber), Examination Battery, Battery 21, and Battery 22 where training may have occurred. This site also includes the area where underwater mines were located and controlled from Battery 7A and Mine Casemate 1/2. Based on the operational periods of these various batteries, this site (or portions thereof) was used from 1917-1949. It is also possible that inert training rounds from other batteries are located within this site.

4.23 OVERLAPPING FIRING FANS

As mentioned in Section 2.1, during WWI Fort Story, along with Fort Monroe, Fort Wool, and Fishermans Island Military Reservation (Fishermans Island), served as a coastal defense site to protect the Chesapeake Bay. During WWII, Fort Custis, located on Cape Charles, VA (across the bay entrance from Fort Story), was added to the coastal defenses of the bay. Each of these installations had batteries that presumably were used for training as well as coastal defense.

Based on a review of the *Fort Monroe Historical Records Review* (Malcolm Pirnie, 2006), the firing fans from Fort Monroe are considered unlikely to have fired munitions that would have reached the Inner Coastal Defense Range site; therefore, they do not affect the findings of this SI. The SI Report for Fort Wool (Alion Science and Technology, 2007) depicts range fans emanating from Fort Wool; none of which overlap with the Inner Coastal Defense Range at Fort Story, meaning that munitions fired from Fort Wool should not be present in the Inner Coastal Defense Range.

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Coastal Defense Zone

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6,000 3,000 Meters

15,000 7,500 0 15,000 30,000 Feet

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Figure 4-44
Inner and Outer Coastal Defense Zones
Fort Story, Virginia

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Operational Range
- Historical Firing Fan
- Inner Coastal Defense Zone

N
W E
S

1:228,000

4,000 2,000 0 4,000 Meters

12,000 6,000 0 12,000 Feet

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Figure 4-45
Historical Firing Fans of Batteries That Fired HE Filled Munitions
Fort Story, Virginia

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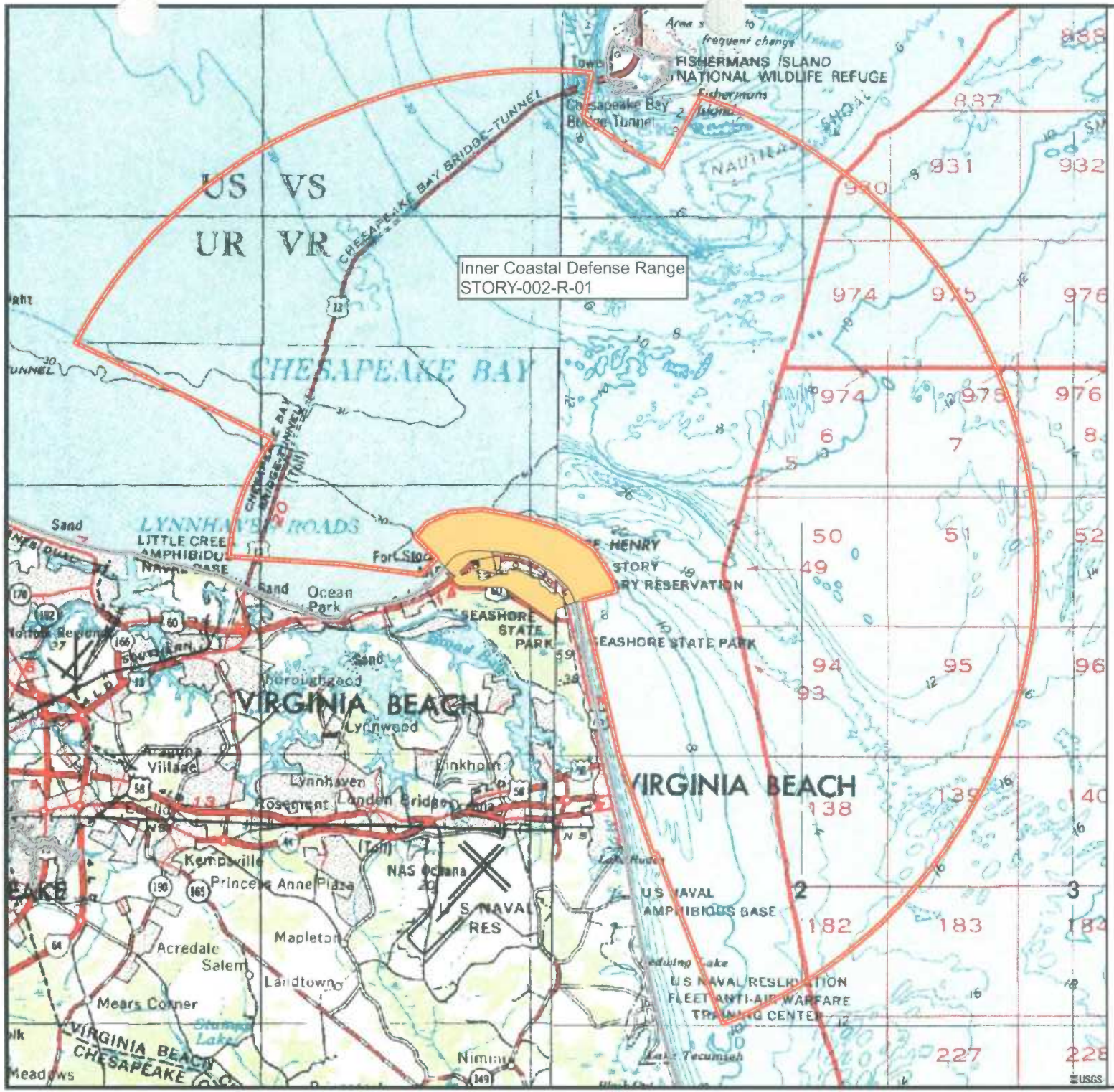

Legend

- Operational Range
- MRS

N
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4,000 2,000 0 Meters

12,000 6,000 0 12,000 Feet

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URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Figure 4-46
Inner Coastal Defense Range MRS
Fort Story, Virginia

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Based on a limited records review from information provided by the American Forts Network (www.geocities.com/hrforts/harbor.htm), Coastal Defense Study Group (www.cdsg.org/cdsgrep/chesapk.htm), and the Old Coast Guard Station Museum (OCGS003), the batteries present at Fishermans Island and Fort Custis included:

Fort Custis:

- Battery Winslow (Battery 7): two 16-inch Navy guns (1943-1948)
- Railway Artillery (Battery 8): four 8-inch guns (1942-1944)
- Temporary Battery (Battery 9): four 155mm guns (1942-1944)

Fishermans Island Military Reservation:

- Battery 227 (Battery 11): two 6-inch guns (1943-1965)
- Battery Lee (AMTB Battery 20): two 3-inch guns (1942-1944)
- AMTB Battery 24: two 90mm guns (1943-1946)
- Emergency Battery: four 5-inch pedestal mount guns (1917-1919)

Figure 4-47 depicts some of the fields of fire for the various guns emplaced at Fort Custis and Fishermans Island, and reference OCGS003 contains additional illustrations of the fields of fire for guns installed at these locations. Based on an analysis of these fields of fire, it is inferred that the guns fired from these installations overlap with the Inner Coastal Defense Range site identified at Fort Story. Based on the operational similarity of Batteries Winslow, Temporary Battery (Battery 9) at Fort Custis, and Battery 227 (Battery 11) at Fishermans Island with identical guns at Fort Story, and records pertaining to the ammunition types authorized for firing from these guns presented in Table 4-2, it is considered unlikely that HE-filled munitions were fired from these batteries. However, no such documentation exists to dismiss the firing of HE-filled munitions from the Railway Artillery (Battery 8—likely 37-mm subcaliber) at Fort Custis, or Battery Lee, AMTB Battery 24, and Emergency Battery at Fishermans Island. Therefore, the

munitions fired from these guns may be present in the Inner Coastal Defense Range site, although they were not fired from Fort Story.

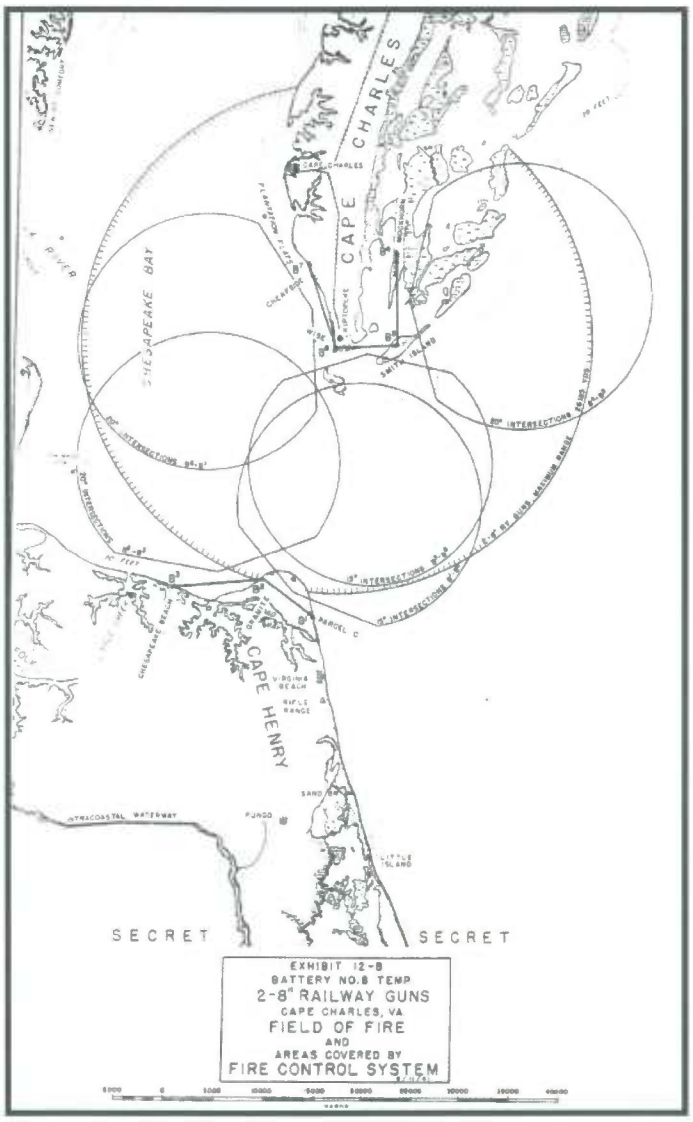


Figure 4-47: Fields of Fire from Guns at Cape Charles, VA
(Source: Old Coast Guard Station Museum)

4.24 POTENTIAL MEC AND MC

Map 4-47 presents the MRS boundary for the Inner Coastal Defense Range based on the findings of this SI. Table 4-3 presents the potential MEC and the associated MC that may be present at this site based on information obtained regarding the types of weapons

and munitions reportedly fired from each of the batteries that fired munitions containing HE.

Table 4-3: Summary of Potential MEC and MC
Inner Coastal Defense Range

Battery	Potential Munitions	Primary Release Mechanism	Potential MEC	Potential MC
Batteries A and B	5- and 6-inch mortars	M1903 5-inch gun M1900, 6-inch gun	UXO	Black powder (potassium nitrate, sulfur, and charcoal), smokeless powder (nitrocellulose, dinitrotoluene, dibutylphthalate, and diphenylamine), TNT, lead azide, tetryl, mercury fulminate
Battery AA-1	3-inch MKI shrapnel and HE	1917M1A2 gun	UXO	Black powder, nitrocellulose, diphenylamine, mercury fulminate, TNT, lead azide, tetryl, lead (Pb), antimony (Sb)
Railguns	37-mm subcaliber	37 caliber gun mounted on railgun	UXO	Black powder, lead azide, tetryl, TNT, cyclotrimethylenetrinitramine (RDX), Pb, Sb
Examination Battery	3-inch MK1 HE	M1902M1 gun	UXO	Black powder, nitrocellulose, diphenylamine, mercury fulminate, TNT, lead azide, tetryl, Pb, Sb
Battery 21	90-mm HE M71/.50 caliber ball/37-mm	M1 90-mm AMTB gun .50 caliber machine gun 37-mm gun	UXO	Black powder, nitrocellulose, dinitrotoluene, dibutylphthalate, diphenylamine, TNT, RDX, lead azide, tetryl, Pb, Sb
Battery 22	90-mm HE M71/.50 caliber ball/37mm	M1 90-mm AMTB gun .50 caliber machine gun 37-mm gun	UXO	Black powder, nitrocellulose, dinitrotoluene, dibutylphthalate, diphenylamine, TNT, RDX, lead azide, tetryl, Pb, Sb
Battery 7A	M1, M2, and M4 mines	Unrecovered mine, broken cable	UXO	TNT
Mine Casemate 1/2	M6 mines	Unrecovered mine, broken cable	UXO	TNT
Railway Artillery (Fort Custis)	37-mm subcaliber	37 caliber guns mounted on railguns	UXO	Black powder, lead atide, tetryl, TNT, RDX, Pb, Sb
Battery Lee (Fishermans Island)	3-inch MK1 HE	M1902 M1 gun	UXO	Black powder, nitrocellulose, diphenylamine, mercury fulminate, TNT, lead azide, tetryl, Pb, Sb

Battery	Potential Munitions	Primary Release Mechanism	Potential MEC	Potential MC
AMTB Battery 24 (Fishermans Island)	90-mm HE	M1 90-mm AMTB gun	UXO	Black powder, nitrocellulose, dinitrotoluene, dibutylphthalate, diphenylamine, TNT, RDX, lead azide, tetryl, Pb, Sb
Emergency Battery (Fishermans Island)	5-inch mortars	M1903 5-inch gun	UXO	Black powder (potassium nitrate, sulfur, and charcoal), smokeless powder (nitrocellulose, dinitrotoluene, dibutylphthalate, and diphenylamine), TNT, lead azide, tetryl, mercury fulminate

5.0 CONCEPTUAL SITE MODEL

CSMs for the Inner Coastal Defense Range site identified during the SI are presented in this section. In the event that additional MMRP sites are identified in the future at Fort Story, information pertaining to the geographical, physical, land use, ecological, cultural, and environmental setting is presented herein. As the one MMRP site identified during this SI exists wholly offshore, following the discussion of Fort Story, the CSM for the Inner Coastal Defense Range site is presented and site-specific information for this area is provided to supplement the general information on Fort Story.

5.1 GENERAL FORT STORY PROFILE

5.1.1 Geography

Fort Story is located on Cape Henry, which is bordered on the northeast by the Atlantic Ocean and on the northwest by the Chesapeake Bay. To the south, it is bordered by the 2,770-acre First Landing State Park and is adjacent to Virginia Beach, VA. Fort Story is the satellite Installation of Fort Eustis, situated about 45 miles northwest (GeoMarine, 2005).

5.1.2 Land Use and Demographics

Fort Story is a 1,458-acre Installation located on the tip of Cape Henry. The 430-acre cantonment area is located throughout the central and northern part of the Installation. This area contains the highest concentration of land uses and infrastructure including housing, recreation, indoor training, and the Installation's administrative functions (GeoMarine, 2005).

The Installation is located north of Virginia Beach, VA, which has a population of 435,619 according to the 2006 U.S. Census. It is primarily a resort city, and tourism is the largest industry (GeoMarine, 2005).

5.1.3 Physical Profile

5.1.3.1 Climate

The total annual precipitation in the Fort Story area is 45 inches, and most falls from April to September. The average winter temperature is 42 degrees, and the average

summer temperature is 77 degrees. The highest recorded temperature is 103 degrees, and the lowest recorded temperature is 5 degrees. The warmest month is normally July, and the coldest is January. The average daily maximum temperature is 68 degrees, and the minimum is 51 degrees. The prevailing wind is from the southwest, and nor'easters are common. Thunderstorms occur approximately 37 times each year, and hurricanes and tropical storms occur mainly in the late summer to early fall (GeoMarine, 2005).

5.1.3.2 Geology

Fort Story is underlain with unconsolidated Coastal Plain sediments from the Quaternary, Tertiary, and Cretaceous periods overlaying a crystalline basement. The top layer of Quaternary and Tertiary deposits contains formations of Holocene, Pleistocene, Pliocene, and Miocene ages and is about 900 to 1,100 feet deep. Below this layer sits the upper Cretaceous; the top part of this layer is about 90 to 100 feet thick and is composed of gray-to-green, clayey and silty, fine-to-coarse pebbly sand. The middle of the Upper Cretaceous is about 60 feet thick and is composed of fine-to-coarse glauconitic quartz. The lower part is about 200 feet thick and is composed of laminated to thick-bedded, olive-gray silt, clay, and fine sand that is in part glauconitic and shelly. The lower Cretaceous is a clastic wedge that thickens northeastward and eastward and is fluvial-deltaic in origin. This deposit consists of quartzo-feldspathic sands, gravels, silts, and illite/smectite clays (GeoMarine, 2005).

Fort Story is located in Earthquake Hazard Zone 1, which means that if an earthquake occurred, there would be a slight possibility for damage. No earthquakes have ever been centered over Fort Story since records have been kept, and earthquakes in Virginia are rarely strong, although Virginia is considered to be seismically active (GeoMarine, 2005).

The front of the Installation is a coastal zone of 19,000 feet of beaches that are exposed to wind and wave energy. The western and northern shorelines front the Chesapeake Bay, and the south shorelines front the Atlantic Ocean. The eastern shoreline has experienced recession at a constant rate due to the net transport of sand from east to west (GeoMarine, 2005).

5.1.3.3 Topography

The Fort Story area is in the eastern part of a partially submerged section of the Atlantic Coastal Plain physiographic province. Topography of this area is mainly narrow, well-drained ridges intermixed with poorly drained flatlands and coastal areas (GeoMarine, 2005). At Fort Story, topography is dominated by linear sand ridges, sand flats, and wetland areas, as illustrated in Figure 5-1. A large central sand ridge runs parallel to the coastline and bisects the majority of Fort Story. This ridge reaches a maximum elevation of 85 feet above mean sea level. A second series of sand ridges exists along the eastern shoreline of the Installation and consists of an active sand dune complex that ranges from 5 to 15 feet above mean sea level.

5.1.3.4 Soil

The INRMP identified 11 soil types at Fort Story. Corolla-Duckston is found at coastal dunes and flats, and consists of fine, moderately well-to-poorly drained sands. Duckston is found in low flats and shallow depressions between coastal dunes, and consists of fine, poorly drained, hydric sands. Flipp is found on high, wooded coastal dunes and consists of excessively drained fine sand and sand. Lakehurst Variant is found on low, wooded dunes and tow slopes, and consists of moderately well-drained fine sand and sand. Newhan is found on grass- and shrub-covered high sand dunes in coastal areas and consists of excessively drained fine sand. Newhan-Corolla is found in coastal areas, mostly behind the primary foredune, and consists of excessively drained-to-somewhat poorly drained fine sand. Pamlico-Lakehurst Variant Complex is found in low, wooded swamps and low dunes, and consists of moderately well-to-very poorly drained sand and partially decomposed organic material. Pamlico mucky peat is found in depressions and troughs between wooded and coastal dunes, and consists of very poorly drained hydric partially decomposed organic material. Psamments is found in disturbed or dredged coastal areas, and consists of moderately well-to-well drained disturbed sandy material.

Urban areas, where greater then 80 percent of the surface is covered by parking lots, buildings, and other structures, have no soils characteristics. Soil slopes range from 0 percent to 30 percent; however, most are nearly level. Hydric soils are found in the southeastern to south-central part of the Installation (GeoMarine, 2005).

5.1.3.5 Hydrogeology

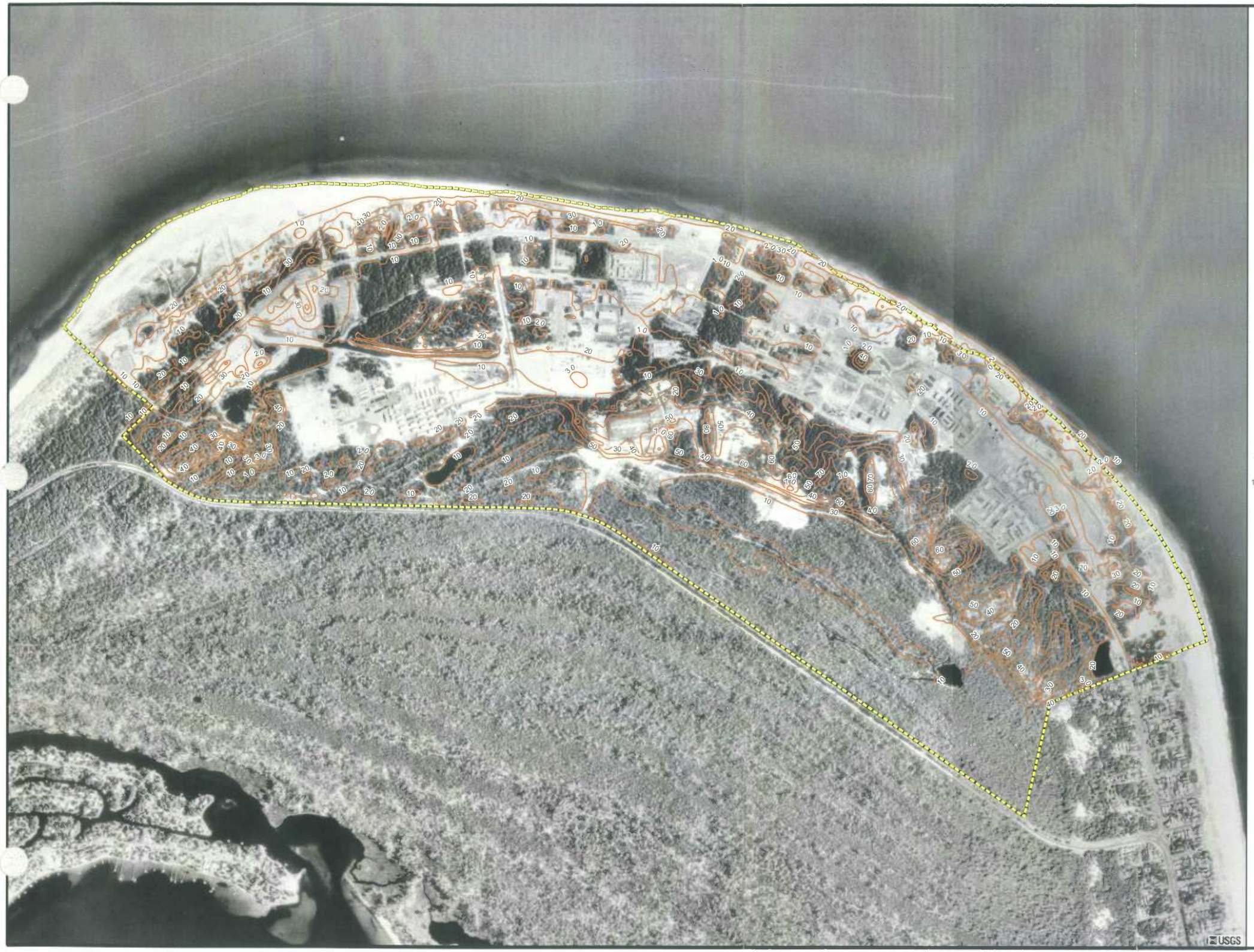
The average depth to groundwater at Fort Story is 10 feet, and depth to groundwater ranges from 0 feet near the shore to 40 feet at high areas. There are six aquifer units that are found in the Fort Story region and are separated by intervening semi-confining units. The aquifers in order of increasing depth are: the Columbia Aquifer, the Yorktown-Eastover Aquifer, the Chickahominy-Piney Point Aquifer, the Upper Potomac Aquifer, the Middle Potomac Aquifer, and the Lower Potomac Aquifer. Shallow groundwater in the Fort Story area forms a mound that extends into the Installation from the First Landing State Park area. Flow is away from the dome in the direction of the coastline and southward towards the wooded wetland. Potable water for Fort Story comes mainly from surface reservoirs. The nearby cities of Virginia Beach and Norfolk, as well as private wells, supplement their water supply with deep wells into the Yorktown-Eastover aquifer (GeoMarine, 2005).

5.1.3.6 Hydrology

Storm water at Fort Story runs into ditches that convey the water via drainage ditches or storm lines to the Chesapeake Bay, Atlantic Ocean, and wetlands. There are no streams on Fort Story, which means that runoff that flows into wetlands either infiltrates into the soil or is lost through evaporation or evapotranspiration (GeoMarine, 2005). Several small ponds are also located at Fort Story, and the southernmost portion of the Installation is comprised nearly entirely of a low-lying wetland.

5.1.3.7 Vegetation

Fort Story has approximately 507 acres of maritime forest that is habitat for loblolly pine, pignut hickory, American Holly, Black gum, sweetleaf, sassafras, muscadine grape, greenbrier, and yellow Jessamine. The interior of the Installation is habitat to young swamp black gum-red maple-bald cypress forested swamp.



URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

Installation Boundary

Contours

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Figure 5-1
Topographic Map
Fort Story, Virginia

There are 160 acres of sand beaches and dunes that are habitat to beachgrass, broomsedge, sea oats, panic grasses, dune sandbur, black cherry, live oak, scrub pine, persimmon, and lespedeza (GeoMarine, 2005).

Fort Story's ponds are habitat to several rare plants. The most significant is the viviparous spikerush, which is a small vegetatively proliferous graminoid that is common in the shallow aquatic and drawdown zones. In Virginia, this plant is known to exist only at Fort Story. Another rare plant is the sedge American lipocarpha, which grows in wet sandy shores on one of the Installation's lakes and is found in only one other site in Virginia. Other species found in this habitat are creeping rush, coast flatsedge, warty panic grass, Richard yellow-eyed grass, water-thread pondweed, and a bladderwort species (GeoMarine, 2005).

Fort Story is also habitat to landscape trees and shrubs, including Kentucky bluegrass, tall fescue, domestic rye grass, Bermuda grass, redtop, crab grass, orchard grass, and white clover. Also found on the Installation are some common invasive species, including kudzu, Japanese honeysuckle, camphorweed, sheep sorrel, cockle bur, phragmites, and spotted cat's ear (GeoMarine, 2005).

5.1.3.8 Beneficial Resources

The Installation's lakes are habitat to game species, including largemouth bass and bluegill, which are the most common. Also found were gambusia, pumpkinseed sunfish, brown bullhead, golden shiner, bluespotted sunfish, black crappie, and white perch. Marine fauna are found offshore of Fort Story and include Atlantic croaker, American eel, bay anchovy, black sea bass, common squid, cownose ray, dusky shark, king mackerel, oyster toadfish, sand tiger shark, silver perch, spiny dogfish, spotted sea trout, striped bass, striped flounder, and winter skate. Thirty reptiles and 16 amphibian species occur in the region, including many species of frogs, salamanders, snakes, and turtles (GeoMarine, 2005).

Fort Story is listed as a Historic District in the National Register of Historic Places under the National Historic Preservation Act. Within Fort Story are two historical lighthouses, and some of the buildings and structures constructed from 1918 to 1949 at Fort Story are

considered historically significant. The Cape Henry Memorial that commemorates the site where a wooden cross was erected by early English settlers when they landed at Cape Henry in 1607 is also located at the Installation.

5.1.3.9 Ecological Profile

Fort Story has four designated conservation areas to protect rare species and heritage resources. The West Beach Dunes Conservation area, a 150-acre region of beach, dune, and maritime scrub/forest habitats, is home to 4 State-ranked rare plant species and possibly the rare tiger beetle, along with 26 other plant species. The East Beach Dunes Conservation area is a 70-acre region similar to the West Beach Dunes Conservation area and provides habitat to sea-coast marsh elder and coast bedstraw, which are on the State watch list. The Interior Dunes and Wetlands Conservation area is a 450-acre region that provides habitat to five State rare plant species and three State rare animal species. The State rare plants are American lipocarpha, pineland tick-trefoil, viviparous sprikerush, wild olive, and bluejack oak. State rare animal species include eastern big-eared bat, fine-lined emerald, and comet darner. The East Gate Lake Conservation area is 2.5 acres and is home to a medium-sized population of viviparous spikerush. This is the only location where this species occurs in Virginia (GeoMarine, 2005).

The Fort Story and Cape Henry area are home to at least 30 species of mammals, including shrews, moles, bats, otters, minks, foxes, raccoons, mice, muskrats, opossums, and rabbits. Approximately 140 bird species live in the area, including Acadian flycatcher, black and white warbler, black crowned night heron, brown-headed nuthatch, cedar waxwing, golden-crowned kinglet, great egret, greater scaup, green heron, osprey, red-shouldered hawk, red-tailed hawk, spotted sandpiper, snowy egret, Wilson's snipe, and yellow-bellied sapsucker (GeoMarine, 2005).

The threatened loggerhead turtle could nest on Fort Story's beach, but it has never been seen on the Installation. Within a 2-mile radius of Fort Story, there are State-listed endangered species, including the chicken turtle, the eastern big-eared bat, 13 plant species, and 9 invertebrate species (GeoMarine, 2005).

5.1.4 Security

Access to Fort Story is restricted through the use of manned security gates that control access to the Installation. The majority of the Installation is fenced, with the exception of the shoreline along the Atlantic Ocean and Chesapeake Bay. Access to the Installation is restricted to Army personnel, authorized civilian personnel, contractors, and visitors. Security personnel routinely patrol the Installation by vehicle. Access to portions of the Installation is restricted based on the activities being conducted by various tenant organizations.

5.2 INNER COASTAL DEFENSE RANGE (STORY-002-R-01)

5.2.1 Area and Layout

The Inner Coastal Defense Range is located offshore of Fort Story and comprises portions of the Atlantic Ocean and the Chesapeake Bay. This site consists of a complex of historical firing fans emanating from former coastal defense batteries where training with HE-filled munitions was conducted, and historical underwater mine fields were located. The site is comprised entirely of open water, and there are no land masses (or islands) located within its boundaries.

5.2.2 Structures

The only structure within the site is a section of the Chesapeake Bay Bridge-Tunnel located in the northwestern portion of the site. This structure was built in the early 1960s and consists of a series of bridges and tunnels that connects southeastern Virginia to the Delmarva Peninsula to the north. No other structures other than navigational buoys are located within the site.

5.2.3 Utilities

Other than utilities associated with the Chesapeake Bay Bridge-Tunnel, there are no identified utilities marked on navigational maps of the area (NOAA, 1999).

5.2.4 Boundaries

The land uses outside the boundaries of the Inner Coastal Defense Range are described as follows:

- Western boundary: Chesapeake Bay, Fort Story, and Virginia Beach
- Eastern boundary: Atlantic Ocean
- Northern boundary: Fishermans Island National Wildlife Refuge, Chesapeake Bay, and Atlantic Ocean
- Southern boundary: Atlantic Ocean

5.2.5 Security

The site resides completely offshore, and is accessible to recreational, commercial, and military ships and boats. Owing to the extensive use of this area as the primary entry for commercial shipping into the Chesapeake Bay, there are established and regulated shipping lanes for commercial and military ships that pass through the area, including the Thimble Shoal Channel, Chesapeake Channel, Cape Henry Channel, Atlantic Ocean Channel, and North Channel. Of these channels, the Thimble Shoal Channel, the Cape Henry Channel, and the Atlantic Ocean Channel comprise the major shipping channels off the coast of Fort Story. The Thimble Shoal Channel is the southernmost channel and ranges from 1,900 feet wide with a 50-foot minimum depth and a section that is 2,500 feet wide with a 40-foot minimum depth. The Cape Henry Change (part of the Chesapeake Channel) is the northernmost channel and includes a section that is 1,700 feet wide with a 50-foot minimum depth, and another portion that is 2,300 feet wide with a 40-foot minimum depth. The Atlantic Ocean Channel is located to the east/northeast of Fort Story and is also maintained with a 50-foot minimum depth. These shipping channels are maintained by USACE, Norfolk District, and shipping in these channels is regulated by the U.S. Coast Guard.

5.2.6 Physical and Ecological Profile

The physical profile of the Inner Coastal Defense Range is similar to that presented in Section 5.1.3 regarding climate and the underlying geology. The natural bathymetry of the area slopes steeply away from Fort Story toward Fishermans Island to the north, and reaches a depth of over 40 feet within 0.5 mile of the shoreline to over 85 feet within the Chesapeake Channel located approximately 2 nautical miles offshore. The water then

shallows to depths less than 20 feet approximately 4 nautical miles to the north of Fort Story, and then continues to shallow toward Fishermans Island. The maintained shipping lanes and dredged channels control the bathymetry in these areas with water depths exceeding 40 feet.

Potential cultural resources in the area include shipwrecks in the waters around Cape Henry. Some of the wrecks are still present today and are noted on nautical charts. Local weather patterns and swirling tidal currents during storm events have unearthed and washed parts of wrecks ashore at Fort Story and along Virginia Beach.

Marine fauna found in this portion of the Atlantic Ocean and Chesapeake Bay include the Atlantic croaker, American eel, bay anchovy, black sea bass, common squid, cownose ray, dusky shark, king mackerel, oyster toadfish, sand tiger shark, silver perch, spiny dogfish, spotted sea trout, striped bass, striped flounder, and winter skate. Right whales also are known to migrate through this area.

5.2.7 Land Use and Exposure Profile

5.2.7.1 Current Land Use/Activities

Owing to the offshore location of this site, current land use is comprised of marine activities. The primary activity is the commercial and military passage of vessels within established shipping lanes and the maintained shipping channels. An area located to the west of Fort Story is identified as a mooring area for military and commercial vessels with explosives. Both commercial and recreational fishing are also conducted in the area, although there is a danger area annotated on nautical charts and restrictions on anchoring or dredging due to the potential for underwater mines on the ocean bottom.

5.2.7.2 Current Human Receptors

The potential human receptors are persons who may come in contact with MEC or MC present in the sediments. The most likely means of this contact is through dredging sediments to maintain shipping channels or commercial fishing using dredging techniques that ignore the posted restrictions.

5.2.7.3 Potential Future Land Use

Potential land use is expected to be consistent with the current use (commercial, military, and recreational shipping/boating).

5.2.7.4 Potential Future Receptors

Potential future human receptors are the same as current receptors.

5.2.7.5 Ecological Receptors

No ecologically sensitive species are known to be located at this site.

5.2.8 Munitions/Release Profile

Table 5-1 presents a summary of the types of munitions that may potentially exist at the site based on information obtained during this SI. The mechanisms by which the munitions were released into the environment are also presented in this table. The typical release mechanisms for the Inner Coastal Defense Range were intentional firing into target areas or the unintended release of underwater mines.

Table 5-1: Summary of Potential Munitions Types

Battery	Potential Munitions	Primary Release Mechanism
Batteries A and B	5- and 6-inch mortars	M1903 5-inch gun M1900, 6-inch gun
Battery AA-1	3-inch MKI shrapnel and HE	1917M1A2 gun
Railguns	37-mm subcaliber	37 caliber gun mounted on railgun
Examination Battery	3-inch MK1 HE	M1902M1 gun
Battery 21	90-mm HE M71/.50 caliber ball/37-mm	M1 90-mm AMTB gun .50 caliber machine gun 37-mm gun
Battery 22	90-mm HE M71/.50 caliber ball/37-mm	M1 90-mm AMTB gun .50 caliber machine gun 37-mm gun
Battery 7A	M1, M2, and M4 mines	Unrecovered mine, broken cable
Mine Casemate 1/2	M6 mines	Unrecovered mine, broken cable
Railway Artillery (Fort Custis)	37-mm subcaliber	37 caliber guns mounted on railguns
Battery Lee (Fishermans Island)	3-inch MK1 HE	M1902 M1 gun
AMTB Battery 24 (Fishermans Island)	90-mm HE	M1 90-mm AMTB gun
Emergency Battery (Fishermans Island)	5-inch mortars	M1903 5-inch gun

5.2.8.1 Maximum Probable Penetration Depth

The maximum probable penetration depths of the various munitions fired into this range are dependent upon the trajectory the munitions were fired, the munitions type, and the depth of water that the munitions travelled through prior to reaching the sediments in the Atlantic Ocean or Chesapeake Bay. Munitions that were fired at targets closer to Fisherman Island, where the water is generally shallower, may have penetrated the sediments, although accurate estimates of the penetration depths are not available. Munitions fired from mortars and artillery that had a high trajectory of firing (such as those fired from Batteries A and B; Battery AA-1; and the Railguns) are more likely to have penetrated the sediments than the munitions fired from the Examination Battery or Battery 21 and 22, which had lower trajectories and would have decelerated through the water prior to coming to rest on the ocean bottom. Any underwater mines that were released would likely reside on the floor of the ocean as opposed to penetrating the sediments.

5.2.8.2 MEC Density

According to the historical records obtained during this SI, the targets used for firing practice were towed behind boats or pulled by airplanes. Records indicate that shipping traffic was alerted and halted when training occurred, but no records were found that identified specific target areas. Therefore, establishing areas of potentially high or low MEC density is difficult. Based on the historical firing fans of the batteries that were used to define this site (Figure 4-45), MEC density is estimated to be greater in the areas where a larger number of historical firing fans overlapped, and lower near the edges of the firing fans that define the boundaries of the site. The area predicted to have the highest density of MEC extends in a northeasterly direction from Fort Story, although the actual MEC density is unknown.

5.2.8.3 Associated Munitions Constituents

As noted in Table 4-1, the MC associated with this site includes the following: black powder (potassium nitrate, sulfur, and charcoal); smokeless powder (nitrocellulose, dinitrotoluene (DNT), dibutylphthalate, and diphenylamine); nitrocellulose; TNT; RDX; tetryl; lead azide; mercury fulminate; Pb, and Sb.

5.2.8.4 Transport Mechanisms/Migration Routes

The primary transport mechanisms and their viability and potential significance at the Inner Coastal Defense Range site include the following:

Erosion/Sedimentation: This range is located offshore in the Atlantic Ocean and Chesapeake Bay. This area is subject to tidal action as well as erosion and deposition during storm events. In areas of shallow water, storms may cause sediments to be disturbed and MEC moved. This area is also subject to sedimentation, as evidenced by the dredging required to maintain the shipping channels. Sedimentation would result in the covering of MEC that would restrict its potential movement.

Given the volume and flow of water present in the area, the potential transport and migration of MC is probably undetectable.

***Sediment Disturbance*:** Disturbance of the sediments via wave action or dredging of sediments could lead to the transport and migration of MEC and associated MC.

5.2.9 Pathway Analysis

Figure 5-2 presents a MEC pathway analysis for the Inner Coastal Defense Range. The primary exposure pathway for human receptors is contact with MEC during dredging or fishing activities that use dredge-type or bottom-dragging nets. Benthic organisms in the ocean/bay floor could also contact MEC, although this contact would not affect biota populations; therefore, this pathway is considered incomplete. Installation personnel and authorized contractors or visitors to Fort Story are not considered to have complete pathways because this range is located completely offshore.

As discussed in Section 5.2.5, dredging activities, conducted by USACE Norfolk District and its contractors, are known to occur in the Chesapeake Channel and Thimble Shoal Channel. Portions of both of these channels exist within the Inner Coastal Defense Range. Although these channels have been dredged in the past, they are required to be periodically dredged as sediments continue to fill them, and the potential exists for MEC to migrate along with the sediments; thus providing a potential for exposure to workers operating the dredges.

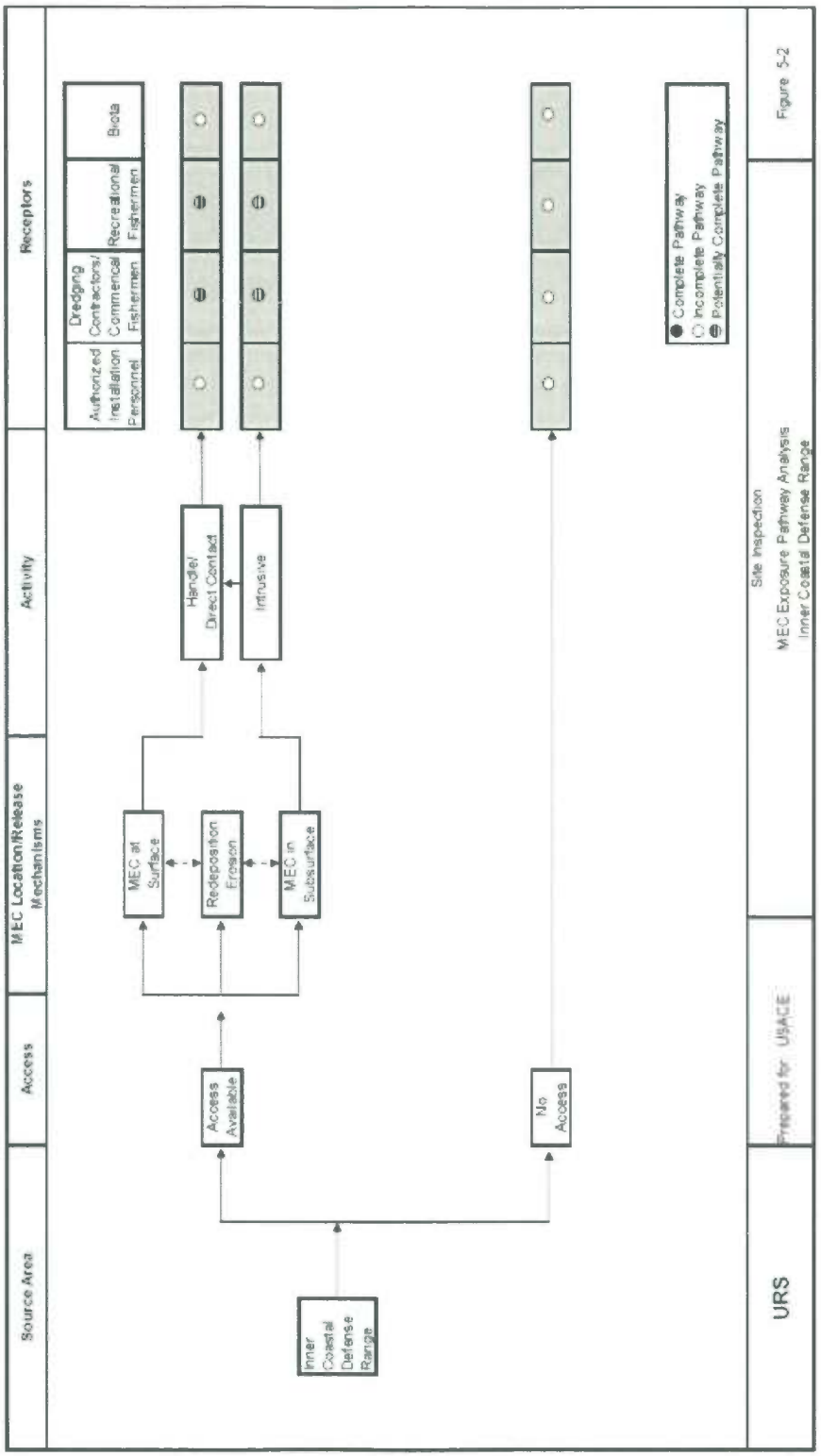

Figure 5-2: MEC Exposure Pathway, Inner Coastal Defense Range

URS contacted USACE Norfolk District regarding the dredging activities, and inquired regarding any encounters with MEC and the location where dredge materials were placed. According to the Operations Office of the Norfolk District, which is in charge of the dredging (see Appendix C), MEC has been encountered during dredging of various channels in the area, and in 2006 there was an explosion that cracked a 2-inch thick cast iron pipe used to dredge the sediments in the Atlantic Ocean Channel. According to the Norfolk District, the dredge materials are placed in the Dam Neck Off-shore Disposal Site. This site is located within an existing operational firing fan used by the Naval Air Station Oceana Dam Neck Annex. As this is an operational range area, this site is not eligible for inclusion under the Fort Story MMRP. However, a potentially complete pathway does exist for dredge workers maintaining the shipping channels in portions of the Inner Coastal Defense Range site.

Figure 5-3 presents a MC pathway analysis for the site. No complete pathways are anticipated under the vegetation or domestic animal food chain pathway exposure routes. The pathways between game/fish/prey and all receptors are considered unlikely to be complete because the quantity of water flowing through the area makes the measurable impact that MC would have on fish harvested and consumed by humans or other biota unlikely.

Potentially complete pathways for ingestion and dermal contact exist between surface water/sediment, because biota may have contact with sediments that are affected with MC; however, this input is considered unlikely to affect a biota's population, and therefore is considered to be incomplete. The only human receptor pathways considered potentially complete are dredge worker and commercial fisherman, because these receptors may contact sediments during the course of their work. However, given the quantity of surface water flowing in this area and the localized nature of any MC in the sediment, it is improbable that any MC in surface water or sediment that a receptor would come in contact with would be present at a concentration to have an adverse health effect. Therefore, this pathway is considered to be incomplete.

Groundwater, subsurface soil, and surface soil exposure routes are incomplete because these media are not present at the site.

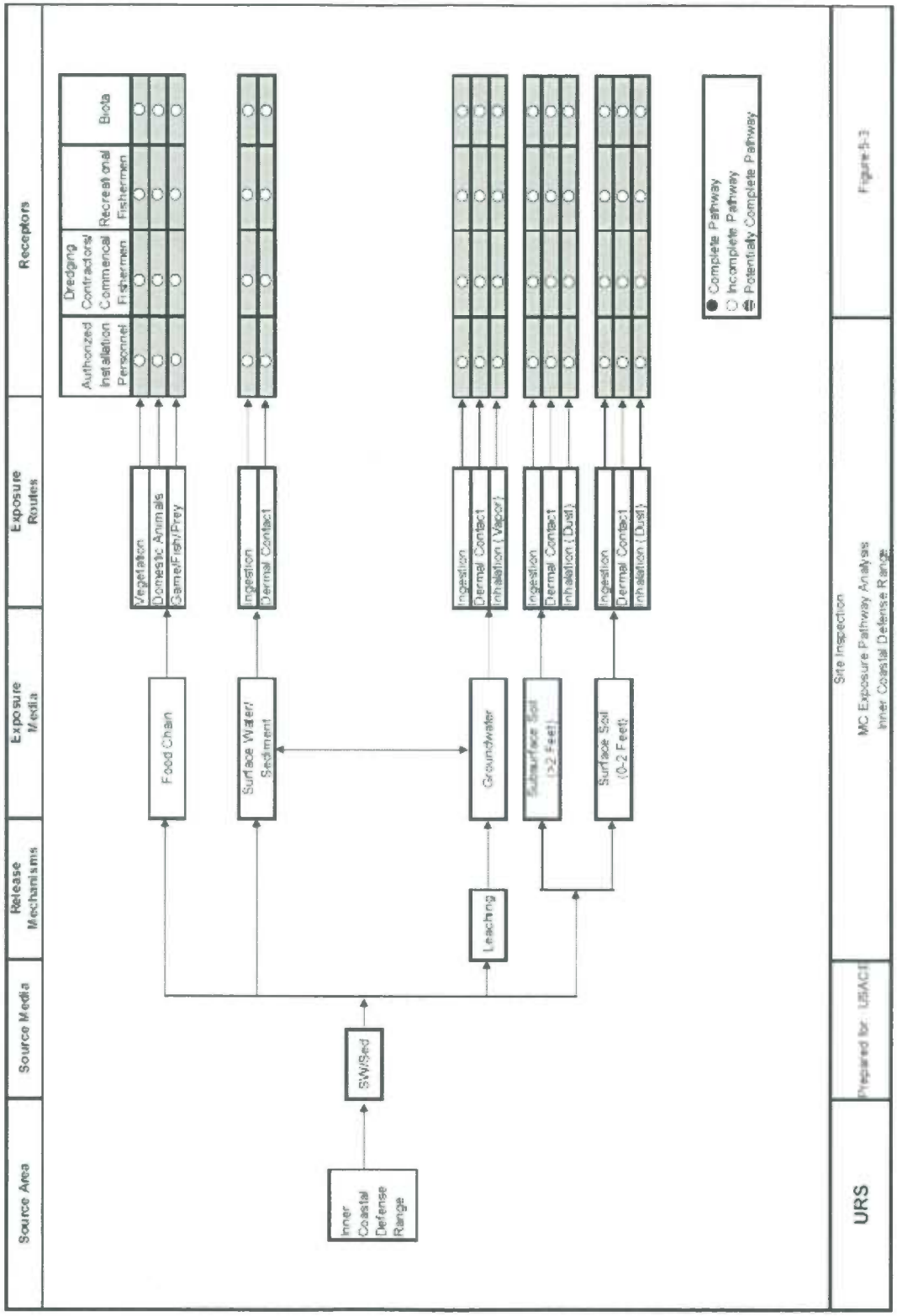

Figure 5-3: MC Exposure Pathway Analysis, Inner Coastal Defense Range

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6.0 MUNITIONS RESPONSE SITE PRIORITIZATION PROTOCOL RESULTS

An MRSPP ranking was completed for the one MRS associated with Fort Story based on information obtained during the HRR. The MRSPP rankings are used by the DoD to prioritize sites for further action. In general, the lower the numerical ranking, the higher the priority the site is given. In compliance with 32 CFR §179.5, the U.S. Army provided notification to VDEQ on August 1, 2007, that it was performing the MRSPP ranking and provided VDEQ with the opportunity to participate in the application of the MRSPP rule. The Army also published public announcements in *The Virginian-Pilot*, Norfolk, VA, on August 8 and 9, 2007; and *The Wheel* (a local publication for the personnel at Fort Eustis), on August 7, 2007. These announcements requested information from the public pertinent to prioritization or sequencing decisions of the MRS to ensure that the local community was aware of the opportunity to participate in the application of the rule. Copies of the notification and announcements are included in Appendix G.

VDEQ did participate as a stakeholder in the review of this SI Report, and no response was obtained from the public to the announcement. The MRSPP worksheets are included as Appendix F, and Table 6-1 summarizes the MRSPP ranking.

Table 6-1: Summary of MRSPP Priority Ranking

MRS Name	AEDB-R Number	Priority Ranking
Inner Coastal Defense Range	STORY-002-R-01	3

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7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the *CTT Range Inventory Report*, one MMRP site, the Small Arms Range (STORY-01-R-01), was originally identified at Fort Story. Information obtained regarding a change in the operational ranges of Fort Story resulted in this site being found ineligible for inclusion in the MMRP because it was located in an operational range area.

A review of historical documents obtained during the SI identified the presence of several coastal batteries that were not identified in the *CTT Range Inventory Report*. Documentation was found that indicated guns at these batteries were fired, and that several of the batteries fired munitions that may have contained HE. Based on these findings, a new MRS was defined, the Inner Coastal Defense Range (STORY-002-R-01). This site comprises 258,510 acres and is located beyond the Installation boundary of Fort Story within the Atlantic Ocean and Chesapeake Bay, as illustrated in Figure 7-1. MC was not considered a concern near the batteries because of coastal erosion, soil removal during construction, and the lack of persistence of MC in soils at this type of firing point.

Table 7-1 presents a summary of the findings for both of the sites evaluated during this SI, including the one found to be ineligible for further inclusion under the MMRP. A brief discussion of the Inner Coastal Defense Range follows this table.

Table 7-1: Summary of SI Findings

Site Name	AEDB-R Number	CTT vs. SI Acreage	Comments
Small Arms Range	STORY-001-R-01	3/0	This site is located within the operational range area and is ineligible for the MMRP.
Inner Coastal Defense Range	STORY-002-R-01	NA/258,510	Information indicated that several batteries potentially fired HE rounds into this area; therefore, this was identified as a new MMRP site.

NA = Not available

The Inner Coastal Defense Range MRS was developed by complexing portions of the historical firing fans of batteries that may have fired munitions potentially containing explosives (i.e., not CI or sand-filled practice rounds). These batteries included Batteries A and B; Battery AA-1; Railguns (37-mm subcaliber); Examination Battery; Battery 21,

and Battery 22. This site also comprises areas where underwater mines associated with Battery 7A and Mine Casemate 1/2 were located. Although these mines were placed as part of the coastal defense during WWII, according to notations on NOAA Chart 12221, *Chesapeake Bay Entrance*, there is a warning that while the area is open to navigation, vessels are cautioned not to anchor, lay cable, dredge, or trawl because of residual danger from mines on the bottom of the ocean in this area.

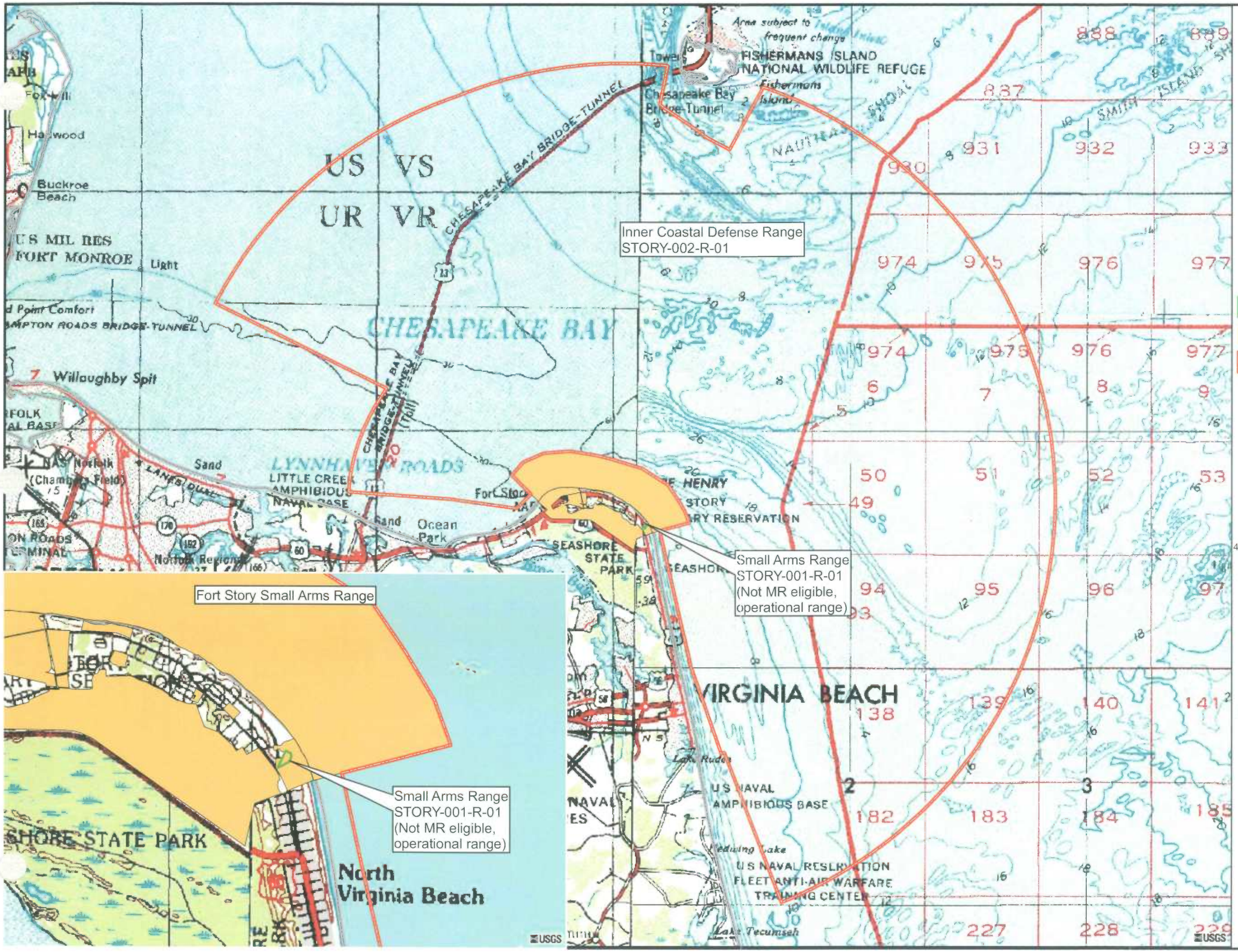
Based on the operational periods of these various batteries, this site (or portions thereof) was used from 1917-1949. It is also possible that inert training rounds from other batteries that only fired this type of projectile are located within this site. In addition, it is possible that both HE-filled munitions and inert training rounds fired from guns emplaced at Fort Custis and on Fishermans Island are present within the Inner Coastal Defense Range MRS.

During the second and third TPP meetings held on March 18 and August 25, 2008, respectively (Appendix E), the stakeholders agreed that the Inner Coastal Defense Range MRS did not require any field investigation as part of the SI, but would require additional investigation for MEC during an RI. Based on the CSM, MC is not expected to pose a hazard to human health or the environment; therefore, NFA is recommended for MC. However, if during the investigation for MEC, areas of concern are identified, sampling for MC may be warranted. The SI recommendations are summarized in Table 7-2.

Table 7-2: Summary of SI Recommendations

MRS (AEDB-R)	MRSPP Priority	Recommendations		Basis for Recommendation	
		MEC	MC	MEC	MC
Small Arms Range (STORY-001-R-01)	N/A	N/A	N/A	Ineligible for the MMRP. Located within an operational range.	Ineligible for the MMRP. Located within an operational range.
Inner Coastal Defense Range (STORY-002-R-01	3	RI	No Further Action	Potential MEC fired from batteries at Fort Story and TPP2; decision to move the site forward.	MC unlikely to have adverse impact on human health or ecological receptors. However, if MEC investigation identifies areas of concern, MC sampling may be warranted.

N/A = Not applicable



URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

Legend

- Small Arms Range
- Operational Range
- MRS

N
W E
S

1:150,000

4,000 2,000 0 Meters

12,000 6,000 0 12,000 Feet

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Figure 7-1
Munitions Response Sites
Fort Story, Virginia

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APPENDIX A

Archives Searched/Data Resources

Fort Story, VA
Archival Research Report
Heritage Research Center, Ltd.
August 6, 2007

Heritage Research Center, Ltd. conducted archival research related to this installation. The following lists the repositories visited and sources reviewed in that effort. The list reflects the entries/collections and boxes we actually reviewed. It should be noted that Heritage reviewed finding aids and catalogs extensively for each repository, entry and collection to identify potentially relevant materials for review.

National Archives and Records Administration – College Park, MD

Textual Branch

RG 51, Records of the Office of Management and Budget

- Entry 127, Records of the Office of Management and Organization, Property and Supply Management Branch, 1953-1960
    - Box 1 - Nothing relevant; records concerned other installations.

RG 77, Office of the Chief of Engineers

- Entry 391, Construction Completion Reports, 1917-1943
    - Boxes 47-49, 55-58, 67, 125, 268, 269- Nothing relevant; records concerned other installations.
    - Box 308, 309 – Contained records related to For Story, but nothing relevant to range areas or ordnance.
- Entry 391B, Construction Completion Reports, 1917-1943
    - Boxes 13-16, 19, 79 - Nothing relevant; records concerned other installations.
    - Box 90 – Contained reports concerning Fort Story, but nothing relevant to range areas or ordnance.
- Entry 393, Historical Record of Buildings, 1905-1942
    - Boxes 23-25, 37, 38, 78, 82, 219– Nothing relevant; records concerned other installations.
    - Box 256 – Records related to Fort Story, but nothing relevant to range areas or ordnance.
- Entry 1013, General Correspondence with Districts, 1941-1945
    - Boxes 92-101, 136-145, 206-213, 233-243, 273-280, 312-322, 340-344 - Nothing relevant; records concerned other installations.
- Entry 1014, Correspondence with Divisions, 1941-1945
    - Boxes 15-27, 108-118, 122-127 - Nothing relevant; records concerned other installations.

RG 92, Office of the Quartermaster General

- Entry 1974A, Completion Reports, 1917-1919

    - Boxes 35, 36, 122, 123, 198, 201, 230 - Nothing relevant; records concerned other installations.
- Entry 1975, Completion Reports, 1917-1938
    - Boxes 1-7 - Nothing relevant; records concerned other installations.
- Entry 1888, General Correspondence, 1917-1922
    - Boxes 8814, 8856, 9596-9615 - Nothing relevant; records concerned other installations.
- Entry 1889, General Correspondence, 1922-1935
    - Boxes 204, 205, 705, 706 - Nothing relevant; records concerned administrative matters.
- Entry 1890, General Correspondence, 1936-1945
    - Boxes 5, 6, 125-128, 273, 518, 723-728, 737 - Nothing relevant; records concerned administrative matters.

RG 107, Secretary of War

- Entry 101, Cross-Reference Sheets to General Correspondence, 1943-1946
    - Boxes 1-15 - Contains nothing of relevance.
- Entry 102, Administration Assistant to the Secretary of War, 1943-46
    - Boxes 37 (decimal 333) - Contains nothing of relevance.
- Entry 108, Army and Navy Munitions Board, 1946-1947
    - Boxes 1-10 - Contains nothing of relevance.
- Entry 159, Under Secretary, Special Assistant for Construction, General Correspondence, 1940-45
    - Boxes 893-905 - Contains nothing of relevance.
- Entry 168, Purchase and Contract Branch Construction Section, Subject Files, 1940-1942
    - Boxes 1206-1210 - Contains nothing of relevance.
- Entry 216, Office of Assistant Secretary of War for Air
    - Boxes 178-187 - Contains nothing of relevance.

RG 111, Office of the Chief Signal Officer

- Entry 1023A, Unclassified Central Decimal Files, 1941-1945
    - Boxes 868-881 - Nothing relevant; records concerned other installations.
    - Box 885 – Contained records related to Fort Story, but nothing relevant to range areas or ordnance.
    - Boxes 2004, 2365 - Nothing relevant; records concerned other installations.
- Entry 1023B, Unclassified Central Decimal Files, 1946-1948
    - Boxes 177-179, 397, 477 – Nothing relevant; records concerned other installations.
- Entry 1023C, Unclassified Central Decimal Files, 1948-1950
    - Boxes 133-136, 295, 325 - Nothing relevant; records concerned administrative matters.

RG 156, Office of the Chief of Ordnance

- Entry 646, Histories of Ordnance Field Installations and Activities, 1940-45

    - Boxes 145-148 – Contains nothing of relevance.
- Entry 654I, Histories of Ordnance Field Installations and Activities, 1940-45
    - Boxes 69-92 - Contains nothing of relevance.
- Entry 700, Inspections and Investigative Reports, 1942-44
    - Boxes 23-38 - Contains nothing of relevance.
- Entry 775, Industrial Service, Executives Division, Installations Branch, Records Relating to Ordnance-Owned and Contractor Operated Facilities, 1941-45
    - Boxes 28-46 - Contains nothing of relevance.
- Entry 776, Industrial Service; Executives Division; Installations Branch; Records Relating to Ordnance-Owned and Contractor Operated Facilities, 1941-45
    - Boxes 47-48 - Contains nothing of relevance.
- Entry 815, Industrial Service; Ammunition Division, Production Engineering Branch, Research and Development Project and Progress Reports Prepared by the Radford Ordnance Works, 1942-45
    - Boxes 342-359 – Contains nothing of relevance.
- Entry 1023A, Histories of Ordnance Field Installations and Activities, 1946-54
    - Boxes 17-23, 48-51, 73-74, 77-78, 87, 92-93, 101-102, 108-111 - Contains nothing of relevance.
- Entry 1023B, Executive Office, Historical Branch, Histories of Ordnance Field Installations and Activities, 1946-54
    - Boxes 1-47, 52-72, 75, 113-157 – Contains nothing of relevance.
- Entry 1124A, Inspection General Office, General Investigative Files, 1950-55
    - Boxes 9, 11-12, 20-23, 26-40 - Contains nothing of relevance.
- Entry 1124B, Inspection General Office, General Investigative Files, 1950-55
    - Boxes 1-4 - Contains nothing of relevance.
- Entry 1125, Office of the Ordnance Inspector General, IG Inspector Files, 1950-1956
    - Boxes 1-24 - Contains nothing of relevance.
- Entry 1126, Investigation and Inquiry Files, 1955-62
    - Boxes 45-49 - Contains nothing of relevance.
- Entry 1138B, Reports of Ordnance Observers, 1946-54
    - Boxes 1-2 - Contains nothing of relevance.
- Entry 1284, Industrial Division, Weapons and Fire Control Branch, Facilities and Resources Section, Records Relating to the Expansion or Rehabilitation of Ordnance Facilities, 1953-54
    - Box 266 - Contains nothing of relevance.
- Entry 1337, Installation Status Directive Files, 1954-61
    - Box - Contains nothing of relevance.

RG 159, Office of the Inspector General

- Entry 26B, General Correspondence, 1917-1934
    - Boxes 6-8, 13-28, 33, 39 – Nothing relevant; records concerned administrative matters.
- Entry 26C, General Correspondence, 1935-1939

    - Boxes 40, 41, 49, 52, 55-58, 71, 77-78, 226, 250, 251, 257 - Nothing relevant; records concerned administrative matters.
- Entry 26D, General Correspondence, 1939-1947
    - Boxes 395, 403, 410, 412, 426, 510, 519, 520, 524, 528-530, 533, 534 - Nothing relevant; records concerned other installations.
    - Box 535 – Contained records related to Fort Story; but nothing relevant to range areas or ordnance.
    - Boxes 707-713, 715-717, 721, 722, 760, 768, 915 - Nothing relevant; records concerned other installations.
    - Boxes 955-959 – Nothing relevant; records concerned the Virginia National Guard.
    - Boxes 1080, 1085 - Nothing relevant; records concerned administrative matters.
- Entry 26E, General Correspondence, 1939-1947
    - Boxes 131-137, 145, 177, 181, 185-187, 190-191 – Nothing relevant; records concerned other installations.
    - Box 194 – Contained records related to Fort Story; but nothing relevant to range areas or ordnance.
    - Boxes 315, 327, 614, 684 - Nothing relevant; records concerned other installations.

RG 160, Headquarter Army Service Forces

- Entry 25, Director of Plans and Operation Liaison and Control Branch Subject File, 1942-1944
    - Boxes 1-18 - Nothing relevant; records concerned other installations.
- Entry 153, Army Service Forces, Director of Military Training, Central Decimal File, Series 1
    - Box 164 – Contained records related Fort Story, but nothing relevant to range areas or ordnance.
    - Boxes 165-168, 344-352, 564-566 - Nothing relevant; records concerned other installations.
- Entry 155, Army Special Forces Director of Military Training Army Specialized Training, 1942-1946, Historic File, Series 4
    - Boxes 1-4 - Nothing relevant; records concerned other installations.

RG 165, War Department General and Special Staffs

- Entry 484, Legislative and Liaison Division, Legislative Branch, Correspondence, Reports, and Other Papers Relating to Proposed Legislation Affecting War Department, January 1943-August 1946, Correspondence and Other Papers Relating to Pending Passing Legislation Affecting the War Department, January 1943-August 1946
    - Boxes 202, 243, 311-313 – Nothing relevant; records concerned administrative matters.
- Entry 484C, Card File of Approved WPA National Defense Projects, 1941-1942
    - Boxes 1-5 - Nothing relevant; records concerned other installations.

- Entry 484D, War Department Special Staff Legislation and Liaison Division Federal Agencies Branch, Federal Works Agency Project Files, 1940-1946
    - Boxes 7-9, 39-41, 62-67, 69-72 – Nothing relevant; records concerned other installations.

RG 168, National Guard Bureau

- Entry 344A, State Decimal File, 1922-1945
    - Boxes 354-415, 475 - Nothing relevant; records concerned administrative matters.
    - Box 478 - COPIED a 1939 map which showed heavy bombing targets north of Fort Story and a range area.

RG 177, Office of Chief of Arms

- Entry 4, Office of the Chief of Coast Artillery Document File, 1901-1917, 387-1044
    - Box 3 - Nothing relevant; records concerned other installations.
- Entry 8A, Office of the Chief of Coast Artillery, General Correspondence
    - Boxes 212, 213, 262, 263 - Nothing relevant; records concerned administrative matters.
- Entry 8B, Office of the Chief of Coast Artillery, General Correspondence
    - Boxes 596-599, 726 - Nothing relevant; records concerned administrative matters.
- Entry 9, Office of the Chief Coast Artillery Anti-Aircraft Command 1918-1942
    - Boxes 26, 29 – Nothing relevant; records concerned other installations.
    - Box 30 – COPIED two 1931 memorandums regarding Fort Story tow target missions and the use of AA guns. Also copied documents regarding 1934-1935 aerial missions for anti-aircraft firing.
    - Box 31 – COPIED a 1941 memorandum regarding anti-aircraft training.
    - Boxes 32, 33, 136, 137, 150 - Nothing relevant; records concerned other installations.
- Entry 10, Station Books of Artillery Officers, 1878-1900
    - Box 1 - Nothing relevant; records concerned administrative matters.
- Entry 34, Office Chief of Artillery, Correspondence 1917-1942
    - Boxes 40-41, 131-132 - Nothing relevant; records concerned other installations.

RG 319, Army Staff

- Entry 47C, Army Intelligence; Project Decimal File, 1941-1945
    - Boxes 1157-1160, 1171, 1172, 1183-1186, 1212, 1221, 1245, 1266, 1274, 1286– Nothing relevant; records concerned other installations.
    - Box 1316 – Contained documents related to Fort Story, but nothing relevant to range areas.
    - Boxes 1325 - Nothing relevant; records concerned other installations.
    - Box 1660 - Contained documents related to Fort Story, but nothing relevant to range areas.

RG 330, Department of Defense

- Entry 173, Subject File, 1951-1955
  - Boxes 253-260 – Nothing relevant; materials concerned other installations.
- Entry 179, Assistant Secretary of Defense for Property, Director of Real Property Management, Real Estate Division, General Subject File, 1951-53
  - Boxes 40-52 - Nothing of relevance.

RG 334, Records of Inter-Service Agencies

- Entry 15, Records of the Armed Services Explosives Safety Board, 1939-1948
  - Boxes 1-19 – Documents concerning explosion reports, but nothing relevant to this installation.

RG 335, Secretary of the Army

- Entry 58B, General Correspondence, Security Classified, 1955-1962
  - Boxes 96-105, 107, 156-157, 272-278, 280-281, 322, 325 – Contained information on inspections and training, but not at this installation.
- Entry 60, General Correspondence, 1964-1964
  - Boxes 59-60, 88-95 – Contained miscellaneous, administrative materials; nothing relevant to this installation.

RG337, Records of Headquarters Army Ground Forces, 1916 – 1954

- Entry 1, Inspection Reports, 1948-1953
  - Box 16 – Nothing relevant; concerned other installations.
  - Box 21 – Contained materials concerning Fort Story, but nothing relevant to range area.
- Entry 1B, Chief of Staff Journals, March 30, 1942 – September 13, 1945
  - Boxes 1-4 – Nothing relevant; concerned administrative matters.
- Entry 30, Inspection Reports, 1942-1944
  - Boxes 177-178, 181 – Nothing relevant; concerned other installations.
- Entry 55, General Correspondence, 1942-48
  - Boxes 508, 671, 723, 1098, 1121-1123 – Contained documents concerning inspections, training and ranges, but nothing relevant to this installation.
- Entry 55B, General Correspondence, 1942-54
  - Boxes 38-41, 106 – Contained documents concerning inspections, but nothing relevant to this installation.
- Entry 91, Special Staff Ordnance Section; Classified Decimal Files, 1945-48
  - Boxes 1-10 – Nothing of relevance.
- Entry 108, Army Ground Forces/Army Field Forces Installations
  - Boxes 46, 49 and 50 – COPIED information concerning Ft. Story.

RG338. U.S. Army Commands, 1942-present

- Entry 78L, US Army Commands, 1933-66
  - Boxes 1-2 - Nothing of relevance.
- Entry 109, Operating Program Records, 1968-78
  - Boxes 1-4 - Nothing of relevance.

- Entry 189, Historical Reports, 1950-58, 8th Army
    - Boxes 1-3 - Nothing of relevance.

RG 407, Adjutant General's Office

- Entry 360B, Army AG Classified Decimal File, 1943-1945
    - Boxes 2125, 2203-2210, 3089, 3095, 3111 - Nothing relevant; records concerned other installations.
- Entry 363A, Army AG Classified Decimal File, 1940-1942
    - Boxes 414, 500, 957 - Nothing relevant; records concerned administrative matters.
    - Box 958 – COPIED a map relevant to bombing ranges in the western command.
    - Boxes 961, 995, 2651-2671, 3963, 3985 - Nothing relevant; records concerned other installations.
- Entry 363B, Army AG Decimal File, 1946-1948
    - Boxes 1132, 1223-1233, 1503, 1506, 1519 - Nothing relevant; records concerned other installations.
- Entry 363D, Army AG Decimal File, 1951-1952
    - Boxes 505, 569-91, 941, 944, 956 - Nothing relevant; records concerned other installations.
- Entry 363E, Army AG Decimal File
    - Boxes 194, 212-218, 356, 357, 359 - Nothing relevant; records concerned other installations.
- Entry 363F, Army Central Decimal File, 1940-1956
    - Boxes 97-106 - Nothing relevant; records concerned administrative matters.
- Entry 377, Station Lists
    - Boxes 1-7 - Nothing relevant; records concerned administrative matters.

RG 429, Organizations in the Executive Office of the President

- Entry 12, Records of the Federal Property Council: Central Real Property Surveys
    - Box 45 - Nothing relevant; records concerned other installations.

RG 553, U.S. Army Training and Doctrine Command

- Entry 171, Field Artillery Board
    - Box 1 - Nothing relevant; records concerned administrative matters.
- Entry 173, USA Artillery Board
    - Box 1 - Nothing relevant; records concerned administrative matters.

Finding aids for the following RGs were reviewed, also, but no relevant materials were identified for review:

- RG 94, Adjutant General's Office, 1780-1917
- RG 175, Chemical Warfare Service
- RG 392, U.S. Army Coast Artillery Districts and Defenses
- RG 394, US. Army Commands, 1920-1942

- RG 546, U.S. Army Continental Command, 1942-present

National Archives and Records Administration, Still Pictures Branch – College Park, MD

RG 111, Office of the Chief Signal Officer
- Series SC, WWII section
  - Boxes 1 (new box list), 11-12 (new), 17 (new), 19 (new), 23 (new), 47 (new), 62 (new), 147 (new), 201 (new), 356 (new), 424 (new), 444 (new), 831 (new), 834 (new); box 250 (old box list), 268 (old), 282 (old) - Contains nothing of relevance.
- Series SC, Vietnam section
  - Boxes 335, 350, 368, 407, 418, 421 - Contains nothing of relevance.
  - Box 407 – COPIED photo COPIED 1967 photo of the firing line at the range used for M-16 rifles.

National Archives and Records Administration, Cartographic and Aerial Photography Branch – College Park, MD

RG 77, Office of the Chief of Engineers
- Real Estate Division, Ft. Story, VA - Contains nothing of relevance.

RG 319, Army Staff
- Series CE, Photographs of US and Foreign Nations, 1942-64
  - Box 48, folders 133-134 - Nothing of relevance.
- Series CF, Photos of Posts and Camps in US, 1946-66
  - Boxes 2, 10, 13 and 14 - Nothing of relevance.

National Archives and Records Administration – Washington, DC

RG 393, U.S. Army Central Command, 1821-1920, Part 5
- Entry 1, Correspondence, June 1918-1919, Camp Hill, Virginia
  - Boxes 1-6 - Nothing relevant; records concerned other installations.

National Archives and Records Administration – Mid-Atlantic Region, Philadelphia, PA

RG 338, U.S. Army Commands, 1942-present
- This RG contained materials for Fort Story, but nothing relevant to range areas.

Finding aids for the following RGs were reviewed, also, but no relevant materials were identified for review:
- RG 77, Office of the Chief of Engineers
- RG 156, Office of the Chief of Ordnance
- RG 269, General Services Administration
- RG 270, War Assets Administration
- RG 291, Federal Property Resources Service
- RG 392, U.S. Army Coast Artillery Districts and Defenses

Military History Institute, Carlisle Barracks, PA

- *TRADOC Installation Guide*, 1981 (1981) – N/A (UA26.U57 U73 1981)
    - Nothing relevant; concerned other installations.
- Fort Story, Virginia (October 10, 1961) – William J. Ellenberger (UA26.S76 F67)
    - Contained a brief overview of the Fort; but nothing relevant to ranges or ordnance.
- Fort Story, Virginia (1964) – N/A (Unit History 1302-10 1964)
    - Contained a Fort Story yearbook; but nothing relevant to ranges or ordnance.

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia
FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
DOD Information Sources					
1	Air Force Historical Research Agency, Maxwell Air Force Base, AL	http://www.maxwell.af.mil/au/afhra/	yes	0	Search for "fort story" did not yield relevant results. 6/6/07.
			yes	0	Numbered USAF Historical Studies. http://www.maxwell.af.mil/au/afhra/numbered_studies/studiesintro.asp. The historical studies listed in this link have been prepared primarily for use within the Air Force, but are available for loan or purchase under certain conditions. There are 200 numbered studies. Word search for "story" did not yield any hits in the titles of the numbered studies. Link accessed 6/6/07.
			yes	0	Army Air Forces in World War II, Vol VI. http://www.maxwell.af.mil/au/afhra/photo_galleries/aaf_wwii_vol_vi/Army_Air_Forces_in_WWII.htm. Photos did not show relevant information. 6/6/07.
2	Defense Environmental Network & Information Exchange	https://www.denix.osd.mil/	yes		Word Search of "fort story" yielded the 52 links links in the public domain. Only the first 40 could be reviewed. 6/6/07.
					Links found with no MMRP specific info, only site details, printed:
				1	FY2001 Secretary of https://www.denix.osd.mil/denix/Public/News/OSD/SecDef01/NRC/nrcsi_eustis.pdf
				1	Underground Storage Tanks https://www.denix.osd.mil/denix/Public/ES-Programs/ES/appendix_b.pdf
					Links found pertaining to munitions

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia

FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
				1	Perchlorate https://www.denix.osd.mil/denix/Public/Library/Water/Perchlorate/Correspondence/enclosure3preliminary_occurrence_survey_data.pdf
				1	Table J-2; https://www.denix.osd.mil/denix/Public/News/OSD/DEP2005/appJ-attach2.pdf
					Word Search of "fort story" yielded the 20 links links in the DoD secure domain, https://www.denix.osd.mil/denix/DOD/dod.html . No documents of relevance were located. 6/6/07.
3	Defense Environmental Restoration Program—Formerly Used Defense Sites (DERP-FUDS),	http://www.lrb.usace.army.mil/derpfuds/	yes	0	DERP-FUDS January 2000 Fact Sheet and Risk Assessment March 2002 Fact Sheet. http://www.lrb.usace.army.mil/derpfuds/facts/fs-derpfuds.pdf and http://www.lrb.usace.army.mil/derpfuds/facts/fs-risk.pdf. No relevant information. 6/6/07.
4	Defense Supply Center Richmond, Richmond, VA	http://www.dscr.dla.mil/	yes	0	No relevant information. 6/6/07.
5	Defense Technical Information Center	http://www.dtic.mil/	yes		Search for "fort story munition" yielded several links. 6/6/07.
				1	ADERP FEBFY06 https://aero.apgea.army.mil/pIAP-Doc/FortStory.pdf

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia
FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
				1	http://www.eustis.army.mil/publications/TCFE%20publications/TCFE%20Reg%20350-1.pdf "4-6. Global Information System (GIS) Training Area Maps. Training Division is responsible for providing support to Fort Eustis and Fort Story units with training area-mapping requirements. Through the GIS database training area map requirements can be supported based on the need of the unit. Requests for maps or other GIS support can be made to the GIS analyst at 878-2097."
6	Defense Visual Information Center	http://www.dodmedia.osd.mil/dvic/index.htm	yes	112	Search for "fort story " yeilded 112 ammunition, berm, and aerial photos. 6/6/07. http://www.dodmedia.osd.mil/DVIC_View/Public_Still_Search.cfm
7	Department of Defense Publications Archive	www.defenselink.mil/pubs/archive.html	yes	0	http://www.defenselink.mil/sites/e.html Searched "Fort Story" exact phase with munition which yielded 6 links with no relevant information. 6/6/07
8	DoD Explosives Safety Board (DDESB)	http://www.ddesb.pentagon.mil/	yes	0	
9	Explosive ordnance disposal detachments at nearby military facilities		yes	0	Googled: Explosive ordnance disposal detachments + "Fort Story" History of home to, but no actual detachments nearby found.

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia
FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
					http://www.globalsecurity.org/military/agency/navy/eodmu2.htm Explosive Ordnance Disposal Unit Two EODMU TWO's mission is to eliminate hazards from ordnance which jeopardize operations conducted in support of the national military strategy by providing specially trained, combat ready, highly mobile forces to the fleet. EOD UNIT TWO Headquarters moved from Charleston to Fort Story, Virginia in 1968, became EOD Group TWO relocated to the Naval Amphibious Base, Little Creek, Virginia in December 1988. EODGRU TWO is currently composed of EOD Mobile Unit TWO, EOD Mobile Unit SIX, EOD Mobile Unit EIGHT, EOD Mobile Unit TEN, EOD Mobile Unit TWELVE, EOD Training and Evaluation Unit TWO, Mobile Diving and Salvage Unit TWO and 18 permanent ashore detachments throughout the CINCLANTFLT area of responsibility.
10	National Imagery and Mapping Agency, Bethesda, MD	http://www.nima.mil/	yes	0	Search "Fort Story", Just a brac citation. 6/6/07
11	Naval Construction Battalion Centers, Port Hueneme, CA	http://www.ncbc.navfac.navy.mil/	0		Cannot find server. This page cannot be displayed. 6/6/07.
12	Naval Facilities Historian's Office, Port Hueneme, CA	http://www.ncbc.navfac.navy.mil/cecmuseum/historian.htm	0		Cannot find server. This page cannot be displayed. 6/6/07.
13	Naval Historical Center, Washington, DC	http://www.history.navy.mil/	yes		boolean search, fort and story and virginia

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia
FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
				1	1921 Naval Experiments off the Virginia capes http://www.history.navy.mil/library/online/navybomb1.htm
14	U.S. Air Force Safety Center, Kirtland AFB, NM	http://afsafety.af.mil/	0		Error 403 Access Denied. 6/6/07
15	U.S. Army Center for Health Promotion of Preventive Medicine, Aberdeen Proving Ground, MD	http://chppm-www.apgea.army.mil/	yes	0	Search for "fort story" yeilded no documents matching query. 6/6/07
16	U.S. Army Center of Military History, Fort McNair, Washington, DC	http://www.army.mil/cmh-pg/	yes	0	search "Fort Story" yeilded no match. 6/6/07
17	U.S. Army Soldier and Biological Chemical Command	http://www.sbccom.army.mil/about/sbccom.htm	0		Cannot Find Server. The page cannot be displayed. 6/6/07.
18	U. S. Army Corps of Engineers District Offices	http://www.usace.army.mil/where.html	0		Error 404. Object not found. 6/6/07.
19	U. S. Army Corps of Engineers Office of History, Alexandria, VA	http://www.hq.usace.army.mil/history/	yes	0	Link to brief history of USACE http://www.hq.usace.army.mil/history/brief.htm. No relevant information found. 6/8/07.
			yes	0	Online Resources. Articles link. http://www.hq.usace.army.mil/history/the.htm. Subject listings did not appear to have specific information on Fort Story. 6/8/07.
			yes	0	search for "fort story" led to a redirected search page ►http://usasearch.gov/ search for "fort story" led to over 1500 irrelevent links. 6/8/07:

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia
FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
20	U.S. Army Corps of Engineers Topographic Engineering Center (TEC), Alexandria, VA	http://www.tec.army.mil/	yes	0	search for fort story yeilded no matches.. 6/8/07.
21	U.S. Army Military History Institute, Carlisle, PA	http://carlisle-www.army.mil/usamhi/	yes	0	"Fort Story" + munitions = 6 irrelevant hits. 6/8/07.
22	U.S. Army Ordnance Museum, Aberdeen Proving Ground, MD	http://www.ordmusfound.org/	yes	0	Searched museum website's photo gallery. http://www.ordmusfound.org/Littledavidslideshow.htm. There were no photo captions. 6/8/07.
			yes	0	Museum collection. http://www.ordmusfound.org/muscollection.htm. No site specific information. 6/8/07.
23	U.S. Army Safety Center, Fort Rucker, AL	http://safety.army.mil/home.html	0		Cannot find server. Page cannot be displayed. 6/8/07.
24	U. S. Army Technical Center for Explosives Safety, McAlester, OK	http://www.dac.army.mil/es/	0		Unable to access website because a user ID and password are required. 6/8/07
25	U.S. Army Technical Escort Unit Historical Office, Aberdeen Proving Ground, MD	google		0	Your search - "U.S. Army Technical Escort Unit" + "Fort Story" - did not match any documents. 6/8/07
26	U.S. Army Test and Evaluation Command	http://www.atec.army.mil/	yes	0	No specific information. 6/8/07.
27	U.S. Army War College Library, Carlisle Barracks, PA	http://carlisle-www.army.mil/library/	yes	0	USAWC Library Catalog. http://www.carlisle.army.mil/library/. Searched for "Story". No information. 6/8/07

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia
FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
			yes	7	http://www.ahco.army.mil/site/index.jsp serach produced several references on a shlef, printed.
28	U.S. Naval District, Washington, DC	http://www.ndw.navy.mil/	yes	0	search for "Fort Story" produced no hits. 6/8/07.
29	U.S. Naval Explosive Ordnance Disposal Technology Division, Indian Head, MD	https://naveodtechdiv.navsea.navy.mil/B-2	0		Cannot find server. 6/8/07.
30	U.S. Naval Ordnance Safety and Security Activity, Ordnance Environmental Support Office	google		0	Your search - "U.S. Naval Ordnance Safety" + "Fort Story" - did not match any documents. 6/8/07.
31	U.S. Naval War College Archives, Newport, RI	http://www.nwc.navy.mil/	yes	no	Library http://www.nwc.navy.mil/library/ ►Merlin Catalog and Naval Historical Collection. No search engine. 6/8/07.
32	U.S. Navy Safety Center, Naval Air Station, Norfolk, VA	http://www.safetycenter.navy.mil/	yes	0	Removed the text and link worked. Search for "Fort Story" yeild no results. 6/8/07.
Other Federal Government Information Sources					
33	Department of the Interior (DOI)	http://www.doi.gov/	yes	1	search for "Fort Story" yeilded 14 hits. http://www.nps.gov/archive/fowa/torpedo.htm. , printed. 6/8/07.
34	Department of the Interior Bureau of Land Management	http://www.blm.gov/	yes	0	Search for "Fort Story" produced one irrelevant hit. 6/8/07.
35	Department of the Interior, U.S. Geological Survey (USGS)	http://www.usgs.gov/	yes	0	Search for "Fort Story" produced one irrelevant hit. 6/8/07.

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia
FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
36	Federal Geographic Data Committee (geographic information systems)	http://www.fgdc.gov/	yes	0	Search for "Fort Story" produced one irrelevant hit. 6/8/07.
37	General Services Administration	http://www.gsa.gov/	yes	0	Search for "Fort Story" produced one irrelevant hit. 6/8/07.
38	The Library of Congress, Geography and Map, and Prints and Photographs Divisions, Washington, DC	http://www.loc.gov/	yes	869	The Library of Congress American Memory. http://memory.loc.gov/ammem/index.html. Search "Fort Story" yeilds 869 pictures which cost money. 6/8/07.
					http://memory.loc.gov/cgi-bin/query/D?fsaall:33:./temp/~ammem_FoNt::@@@mdb=mcc,gottscho,detr,nfor,wpa,aap,cwar,bbpix,cowellbib,calbkbib,consrvbib,bdsbib,dag,fsaall,gmd,pan,vv,presp,varstg,suffrg,nawbib,horyd,wtc,toddbib,mgw,ncr,ngp,musdibib,hlaw,papr,lhbu
39	U.S. EPA Environmental Photographic Interpretation Center (EPIC)	http://www.epa.gov/nerlesd1/land-sci/epic/default.htm	yes	0	No documents were found for "Fort Story" This query was conducted against the epic collection. 6/8/07.
40	U.S. National Archives and Records Administration (NARA)	http://www.archives.gov/	yes	1	Search for "Fort Story" yeilded 3 links. One link records movie reels of guns on rails. http://www.archives.gov/research/guide-fed-records/groups/070.html. 6/8/07.
41	National Archives at College Park, MD, Washington				Searched by Heritage Research Services.
42	National Records Center Regional Records Services Facility (regional offices)				Searched by Heritage Research Services.

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia
FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
43	National Personnel Records Center Military Branch, St. Louis, MO		yes	3	Referenced National Archive records searched by Heritage Research Services.
State and Local Information Sources					
44	City and county clerk's office (court documents, fire and police records, civil and criminal indices, property suits, ownership and title, proven association with property, dates of original construction)		no		Not applicable.
45	Commercial property history		no		Not applicable.
46	Corporate records		no		Not applicable.
47	Local law enforcement offices		no		Not applicable.
48	Local libraries		yes		Newport News Public Library
49	Local newspapers		yes		Obtained via historical files in other repositories
50	State and local historical organizations		yes		contacted directly, not via web search
51	State government archives		yes		contacted directly, not via web search
Private Information Sources					
52	American Legion	http://www.legion.org/	yes	0	Search results for: "fort story", No results found. 6/8/07.

POTENTIAL MR HRR INFORMATION SOURCES *(Appendix B, ITRC Guidelines)*

Installation: Fort Story, Virginia
FFID: VA321372087500

#	Source	Web Site (if any)	Source Checked?	Documents Found?	Comments
53	Environmental activist groups				
54	LEXIS/NEXIS (for media search by keyword)	http://www.lexis-nexis.com/	yes	0	Requires subscription for use. 6/8/07.
55	Mining or forestry companies				
56	Veterans of Foreign Wars (VFW)	http://www.vfw.org/	yes	0	Search for "fort story". No speciifc information. 6/8/07.
57	Other veteran's organizations (good source for personal interviews)		no		no needed

APPENDIX B

Archive Documents

(On CD)

FINAL
Site Inspection Report
Fort Story, Virginia
URS
Appendix B: Archive Documents
Military Munitions Response Program

APPENDIX B

Archive Documents

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Enviromental	Munitions/ Storage	
FTS001	January 8, 1917	General Orders	RG 165, Box 311			X	General, not specific
FTS002	November 26, 1926	Target Practice Reports, Battery "A"	RG 394, Box 337			X	Batteries Pennington & Walke
FTS003	August 17, 1920	Sea Coast Target Practice	RG 394, Box 337			X	Battteries A and B
FTS004	March 13, 1940	Operations Memorandum	RG 394, Box 1378			X	All
FTSM01	October 1968	Fort Story, VA, Master Plan Basic Information Reservation Map	Fort Eustis, VA	X		X	Small Arms Range, NIKE Missile area
FTSM02	January 1960	Site Map Sheet 2 of 5	Fort Eustis, VA	X		X	Bunkers and Magazines
FTSM03	January 1960	Site Map Sheet 4 of 5	Fort Eustis, VA	X		X	Bunkers and Magazines
FTSM04	October 1968	Fort Story, VA, Master Plan Basic Information Map	Fort Eustis, VA	X	X	X	Small Arms Range, Missile Launch Area
FTSM05	4/26/1991	Fort Story, Master Plan Basic Information Map, General Site Map	Fort Eustis, VA	X	X	X	EOD Area
FTSM06	December 1968	Fort Story, VA, Master Plan Basic Information Map, Reservation Plan	Fort Eustis, VA	X	X	X	Small Arms Range and Missle Launch Area, Training Areas
FTSM07	August 1992	Fort Story, VA, Master Plan, Installation Land Use Map	Fort Eustis, VA	X	X	X	Training Areas, EOD area.
FTSM08	September 1982	Fort Story, VA, Master Plan, Capability Site Plan	Fort Eustis, VA	X		X	None
FTSM09	September 1982	Fort Story, VA, Capability Reservation Plan	Fort Eustis, VA			X	Bunkers for Ammunition Storage
FTSM10	June 1987	Fort Story, VA, Master Plan, Mobilization Reservation Plan	Fort Eustis, VA	X		X	Training Areas
FTSM11	April 1958	Fort Story, VA Rehabilitate Pistol Range	Fort Story, VA			X	Small Arms Range
FTSM12	March 1963	Fort Story, VA, Basic Information Map, General Site Map	Fort Story, VA	X	X	X	Small Arms Range
STOR0001	15-Jul-38	Agreement concerning the Army and Navy Gunnery Areas for fiscal year 1939.	RG 168, Entry 344A, Box 478			X	All
STOR0005	01-May-67	Photograph of Fort Story, VA firing line of the post range for M-16 rifles	NA - College Park, MD, Still Picture Branch			X	Small Arms Range

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Enviromental	Munitions/ Storage	
STOR0008	16-Oct-41	Memo regarding cooperative air missions	RG 177, Entry 9, Box 31			X	Anitaircraft guns
STOR0012	NA	Map of Fort Story	RG 429, Entry 12, Box 49			X	Small Arms Range
STOR0014	21-Feb-41	Training Facilities Completed	RG 407, Entry 363-A, Box 3964			X	Small Arms Range
STOR0017	23-Dec-40	Memo regarding additional towing airplanes and towing windlasses for 3rd Observation Squadron, The Coast Artillery School	RG 177, Entry 9, Box 31			X	Anitaircraft guns
STOR0021	29-Oct-34	Letter regarding Air Corps Corporative Flying Equipment	RG 177, Entry 9, Box 30			X	.50 and .30 caliber antiaircraft guns
STOR0023	01-Dec-34	Memo regarding total flying hours for Fiscal Year 1935	RG 177, Entry 9, Box 30			X	155mm and 8" guns, Antiaircraft
STOR0028	11-May-31	Memo regarding the submission of a list of Air Corps missions required by the Coast Artillery Board.	RG 177, Entry 9, Box 30			X	Anitaircraft guns
STOR0030	19-May-31	Memos regarding list of missions of the Coast Artillery from July 1, 1931 to June 30, 1932	RG 177, Entry 9, Box 30			X	Anitaircraft guns
STOR0033	16-Mar-34	Record of Communication Received regarding Aerial Missions, CAS Remainder of Present Fiscal Year	RG 177, Entry 9, Box 30			X	75mm gun firing and 8" gun firing
STOR0036	25-May-31	Memo regarding total flying hours, fiscal year 1932	RG 177, Entry 9, Box 30			X	Anitaircraft guns
STOR0038	18-Dec-34	Memo regarding Letter of Commendation for Flight A, 16th Observation Squadron	RG 177, Entry 9, Box 30			X	Anitaircraft guns
STOR0040	01-Jan-48	Daily Bulletin, Fort Story, VA	RG 337, Entry 108, Box 50			X	Firing Battery Cramer; Firing of 40mm, and .50 caliber machine guns near Battery Cramer

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Enviromental	Munitions/ Storage	
STOR0045	16-Oct-54	Aerial Photograph - Fort Story, VA	RG 145 Frame: ON040041/10279967-DGH-1N-174			X	Small Arms Range
OCGS001	September 1, 2002	Harbor Defenses of Chesapeake Bay: Fort Story, Virginia a Tour of the WW2 Seacoast Artillery Positions	Fielding Tyler			X	Batteries and mine casemates
OCGS002	September 17, 2004	Email RE: Ammunition Magazines	Fielding Tyler			X	Six ammunition magazines
OCGS003	1941	Annexes to Harbor Defense Project, Harbor Denfenses of the Chesapeake Bay	OCGS			X	Batteries, mine casemates, and anti-aircraft batteries
OCGS004	June 26, 2007	The Guns of Fort Story: Railway Firing Platforms	Fielding Tyler	X			Railway gun platforms, but guns never placed
OCGS005	October 7, 1941 - December 31, 1941	Fort Story Daily Bulletins	OCGS	X	X	X	Battery Worchester
OCGS006	May 14, 1948	Memo Re: Habor Defense Installations, Surplus	OCGS	X		X	Battery Ketcham
OCGS007	May 24, 1949	Memo Re: Habor Defense Installations, Su	OCGS	X		X	Battery Cramer; Batteries 10, 21, 22,
OCGS008	April 8, 1985	Juristictional Statement for Fort Story	OCGS	X			Batteries
OCGS009	undated	Guns at the Capes: The Artillery Batteries at the Entrance to the Chesapeake Bay 1917 - 1948, compiled by Fielding Tyler	multiple	X		X	Batteries 19, 21, 22
OCGS010	undated	Railway Artillery at Fort Story: 8-inch and 12-inch Mortars, compiled by Fielding Tyler	multiple	X		X	Railway motars
OCGS011	undated	The Guns of Fort Story: Pennington and Walke, compiled by Fielding Tyler	multiple	X		X	Batteries Pennington and Walke
OCGS012	1940	Coast Artillery Field Manual (FM 4-85), Seacoast Artillery, Service of the Piece, 16-inch Gun and Howitzer, partial	Chief of Coast Artillery			X	None

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Enviromental	Munitions/ Storage	
OCGS013	1945	Coast Artillery Field Manual (FM- 4-25), Seacoast Artillery, Service of the Piece, 155-MM Gun (G.P.F.), partial	Chief of Coast Artillery			X	None.
OCGS014	1944	Coast Artillery Field Manual (FM- 4-91), Seacoast Artillery, Service of the Piece, 90-MM Gun M1 on 90-MM Mount M3, partial	Chief of Coast Artillery			X	Batteries 21 and 22
OCGS015	undated	The Guns of Fort Story: Antiaircraft Battery No. 1, compiled by Fielding Tyler	multiple	X		X	Battery Anti-Aircraft 1
OCGS016	undated	Anti-Aircraft Artillery, Coast/Habor Defenses of Chesapeake Bay, compiled by Fielding Tyler	multiple	X		X	Battery Anti-Aircraft 1
OCGS017	1945	History of the Chesapeake Bay Sector	BG Rollin Tilton	X	X	X	Batteries and mine casemates
OCGS018	September 2000	Driving Armament Tour, Fort Story, VA, CDSG Conference	Fielding Tyler	X		X	Batteries
USCGM1	October 12, 1942	Fort Story , Virginia, General Plan	Corps of Engineer, Office of the Post Engineer, Ft Story, VA	X	X	X	Batteries, ammunition storage, and small arms range
USCGM2	October 1926	Entrance to Chesapeake Bay, VA Study Showing Water Areasand Ranges of Fire	U.S. Army Engineer District, Norfolk	X		X	None.
USCGM3	February 1941	Master Plan, Fort Story and Vicinity	Office of the Constructing Quartermaster	X			None.
USCGM4	October 1926	Fort Story, VA, Study of Locations for 16 Inch Gun Battery & Accessories	U.S. Engineer Office, Norfolk, VA			X	Batteries Walke and Pennington
USCGM5	September 5, 1929	Unidentified Zoom, possibly preceding drawing	U.S. Corps of Engineers			X	Batteries Walke and Pennington
USCGM6	Februaruy 1917	Location of Tracks and Right of Ways	U.S. Engineer Office, Norfolk, VA	X			None.

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Enviromental	Munitions/ Storage	
USCGM7	August 1934	Harbor Defenses of Chesapeake Bay, VA , Fort Story Reservation, VA (Parcel A)- Survey of January ~ April, 1934 in three sheets - Sheet 2	U.S. Engineer Office, Norfolk, VA			X	155-mm batteries, Batteries Pennington and Walke
USCGM8	October 1944	Real Estate, Fort Story Military Reservation	U.S. Engineer Office, Norfolk, VA	X			None.
USCGM9	September 1934	Harbor Defenses of Chesapeake Bay, VA Fort Story Reservation, VA (Parcel A)- Survey of January ~ April, 1934 in One Sheet	U.S. Engineer Office, Norfolk, VA	X		X	Battery U, 155-mm batteries, Batteries Pennington and Walke, Mine casemate 1/2
USCGM10	Jun 1934	Government Owned Parcels Between Lynhaven Inlet and Va. State Rifle Range, Survey of February - March 1934	U.S. Engineer Office, Norfolk, VA	X			None.
USCGM11	October 1944	Real Estate, Fort Story Military Reservation	U.S. Engineer Office, Norfolk, VA	X			None.
USCGM12	August 1934	Harbor Defenses of Chesapeake Bay, VA Fort Story Reservation, VA (Parcel A)- Survey of January ~ April, 1934 in three sheets - Sheet 1	U.S. Engineer Office, Norfolk, VA			X	Mine casemate 1/2
USCGM13	January 1943	Temporary Buildings, S.L. 7&8, S.L. 9&10, East End Towers, Battery 6 (Const.224), Towers "A" & "B"	U.S. Engineer Office, Norfolk, VA	X		X	Batteries Walke, Pennington, Carmer, Worchester, No.4, Ketchum, AA-1
USCGM14	Unknown	Untitled	Untitled	X		X	Battery U, Batteries Pennington and Walke
USCGM15	October 1944	Real Estate, Fort Story Military Reservation	U.S. Engineer Office, Norfolk, VA	X			None.
USCGM16	March 1961	Master Plan Future Development Plan General Site Plan	U.S. Engineer Office, Norfolk, VA	X			NIKE Missile Site
USCGM17	Unknown	Color Map, No Title, Site use plan, Fort Story	Unknown	X			NIKE Missile Site
EDR001	Various	USGS Topographic Maps from 1907 to 1986	U.S. Geological Service	X	X		All

Document Number	Date	Title	Source	Information Type			Applicable Sites
				General	Enviromental	Munitions/ Storage	
EDR002	December 8, 1959	Fort Story Aerial photograph	U.S. Geological Service	X			All
EDR003	May 7, 1970	Fort Story Aerial photograph	U.S. Geological Service	X			All
EDR004	February 28, 1994	Fort Story Aerial photograph	U.S. Geological Service	X			All
EDR005	March 30, 1963	Fort Story Aerial photograph	U.S. Geological Service	X			All
EDR006	April 2, 1982	Fort Story Aerial photograph	U.S. Geological Service	X			All

REPRODUCED AT THE NATIONAL ARCHIVES

Monroe Jan. 8, 1917

[G. O. 6.]

GENERAL ORDERS, No. 6.

WAR DEPARTMENT, WASHINGTON, *January 8, 1917.*

General Orders, No. 10, War Department, 1916, in so far as it relates to target practice for Coast Artillery Troops, is rescinded and the following substituted therefor:

1. Target year.—The target year will begin on January 1 and end on December 31.

2. Annual allowances.—(*a*) The annual allowances of ammunition for the instruction of organizations of Coast Artillery will be fixed until further orders as herein prescribed.

(*b*) Requisitions for such ammunition and other material as may be required at posts during the calendar year in accordance with the provisions of this order, will be submitted by the ordnance officers of the coast defense commands in which the target practice is to be held immediately upon receipt of copies of this order, provided such requisitions have not already been submitted, or information received indicating that the ammunition has been ordered issued.

3. Blank ammunition.—Full information and instructions are contained in Ordnance Department pamphlet No. 1658.

4. Table of annual allowances of ammunition for Coast Artillery instruction and target practice:

For each battery in service.	Service rounds.	Subcaliber rounds.	Additional primers for drill.	
			Service.	Drill.[1]
3-inch (15-pounder guns)	80	4,000	.....	.....
4-inch guns	80	900	.....	.....
4.72-inch guns	80	900	.....	.....
5-inch guns	31	900	60	400
6-inch Armstrong guns	31	900	.....	.....
6-inch Ordnance Department guns	31	900	60	400
8-inch guns	17	600	60	400
10-inch guns	17	600	60	400
12-inch guns	17	600	60	400
14-inch guns	17	600	60	400
12-inch mortars	36	150	200	400

[1] Necessary components to fire this number of primers in addition to the 150 primer bodies authorized by Ordnance Department pamphlet No. 1872.

Credit for subcaliber cartridge cases.—In addition to the allowance of subcaliber ammunition specified in paragraph 4 of this order, there may be expended subcaliber ammunition to the money value of the empty cartridge cases, caliber

X ammunition
Y ammunition

T.P.

RG 165, War Dept., Gen. & Sp. Staffs
E 310 (NM-84), Coast Artill. Corps
Box 311

.30, turned in to ordnance establishments. A credit of 10 cents per pound will be allowed for such cases.

5. Submarine mine equipment.—The annual allowance of submarine mines will be as follows: To each mine command, 2 mines; to each mine detachment, 2 mines.

6. Ammunition for land defense cannon.—The allowance of ammunition for land defense cannon, including subcaliber ammunition, will not exceed the amount specified in the following table:

Coast defenses.	Amounts.	Coast defenses.	Amounts.
Portland	$1,040.00	Key West	$80.00
Portsmouth	80.00	Tampa	160.00
Boston	1,040.00	Pensacola	320.00
New Bedford	80.00	Mobile	160.00
Narragansett Bay	640.00	New Orleans	160:00
Long Island Sound	1,040.00	Galveston	160.00
Eastern New York	480.00	San Diego	160.00
Southern New York	720.00	San Francisco	1,360.00
Sandy Hook	480.00	The Columbia	240.00
The Delaware	320.00	Puget Sound	1,040.00
Baltimore	320.00	Oahu	880.00
The Potomac	240.00	Manila and Subic Bays	1,280.00
Chesapeake	720.00	Cristobal	480.00
The Cape Fear	160.00	Balboa	640.00
Charleston	320.00		
Savannah	320.00	Total	15,120.00

Coast defense commanders are authorized to arrange the program for their commands, and may utilize one type of cannon for the firing, or may distribute the firing among two or more types. In computing the cost the following values per round will be used:

2.24-inch cast-iron shell, empty or sand filled	$2.70	6-inch siege shrapnel	$36.20
3-inch shrapnel	8.00	shell	31.20
shell	8.90	7-inch howitzer shrapnel	20.16
3.2-inch shrapnel	6.24	steel shell	26.55
steel shell	8.20	cast-iron shell	14.14
cast-iron shell	4.11	.30 subcaliber	.026
4.7-inch shrapnel	23.50	.45 subcaliber	.016
shell	24.05		
5-inch siege shrapnel	15.11		
steel shell	18.18		
cast-iron shell	9.22		

7. Supply of targets, towlines, and anchors for Coast Artillery target practice, to be issued only upon requisition of the coast defense ordnance officer.—The manufacture of the large seacoast target has been discontinued and

these targets will be no longer issued after the supply now on hand is exhausted. Additional seacoast targets, pyramidal, model of 1911, will be issued up to the number specified under the heading, "Seacoast targets, large, model of 1911," when the coast defense command can not be supplied with the prescribed equipment of large targets.

Coast defenses.	Seacoast targets, large, model of 1911.	Seacoast targets, small, model of 1910.	Seacoast targets, pyramidal, model of 1911.	Towlines.	Anchors.
Long Island Sound	6	5	9	[1]5	5
Puget Sound, San Francisco, Chesapeake Bay, Portland, Boston, Sandy Hook, and Manila and Subic Bays	6	5	3	[1]5	5
Narragansett Bay, Balboa, and Cristobal	2	5	3	[1]3	3
Charleston, Pensacola, San Diego, the Columbia, Baltimore, and Mobile	2	5	2	[1]3	3
The Cape Fear, Savannah, Key West, and Tampa	1	5	2	[1]3	3
Galveston	1	3	2	[1]3	3
The Delaware	.....	4	2	[1]2	3
Oahu	4	6	4	[1]4	4
Eastern New York and Southern New York	[2]1	.....	1	1	1
New Bedford	2	2	1	[3]1	3
Portsmouth	.....	2	.....	[1]1	3
New Orleans	.....	1	.....	[3]1	2

[1] 2,000 feet.
[2] To be taken to station where practice is held, if practicable.
[3] 1,500 feet.

Full information in regard to the above supplies is given in Ordnance Department Form No. 1991, "Coast Artillery targets and accessories."

Two standard sizes of towlines are issued, 4 inches and 8 inches in circumference. Requisitions should state the size desired. The 8-inch towline is for use with the 30-foot by 60-foot target and when towing more than 1 target.

On account of the size and weight, considerable difficulty has been experienced in handling 8-inch rope and 6-inch has been found satisfactory in some coast defenses for this purpose. For each anchor 200 feet of 4-inch rope is allowed.

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As the standard sizes of towlines are not always satisfactory on account of local conditions, other sizes may be issued when considered desirable, provided the total allowance is not exceeded.

8. Single section charges.—Single section, core igniter, cartridge bags will be used in place of the regular service multiple section bags for target practice with all major caliber guns. The powder charges to be used for target practice for this year will be removed from the multiple section bags and put up in single section, core igniter, bags just prior to the first practice for each organization. While the total weight of the igniters in the single section charge is less than that in the multiple section charge, no increase in the weight of smokeless powder for the charge will be authorized. The use of the single section charge should be accompanied by a decrease in pressure of about 3,000 pounds per square inch and a slight decrease in muzzle velocity as compared to the pressure and velocity to be expected from the same weight of charge of smokeless powder when made up in multiple section bags.

Long cartridge storage cases will be provided for the storage of single section charges. These cases are constructed for storage purposes only and should not be used as loading trays; the latter will be improvised at posts. The allowance of cartridge cases for each battery is fixed at 17 for each battery command of the Regular Army holding target practice at that battery.

Coast defense ordnance officers should forward to the Chief of Ordnance, through military channels, timely requisitions for such single section, core igniter, cartridge bags and cartridge storage cases for single section charges as may be necessary for the use of those organizations of the Regular Army and of the National Guard assigned for target practice to major caliber guns in each coast defense command. In the Philippine Department such requisitions will be forwarded to and acted upon by the chief ordnance officer of that department.

At the end of the target practice season in each coast defense command such multiple section cartridge bags as remain after making up single section charges will be shipped from coast defense commands in the Eastern and Southern Departments to Picatinny Arsenal, from coast

defense commands in the Western and Hawaiian Departments to Benicia Arsenal, and from the Coast Defense Command of Manila and Subic Bays to the Manila Ordnance Depot.

9. To assemble single section charges.—The following method of assembling single section charges is employed at Picatinny Arsenal and has been found to give satisfactory results:

a. Weigh bag and record the weight.

b. Weigh powder and record the weight.

c. Place the powder in the bag through the opening left at one end.

d. Sew up the opening with silk thread.

e. Roll charge to distribute the powder.

f. Lace one side of the bag, beginning at the end. Make the stitches about 1½ inches long and tie every sixth stitch or about every 9 inches.

g. Roll the charge again and lace the pleat as tightly as possible.

h. Roll the charge again and tighten lacing if necessary.

i. Secure the primer protecting caps on the ends of the charge and place in the storage case.

NOTE.—Platform scales should be placed on a level floor, or platform, and balanced before each weighing. Before using the scales a test weight should be used. The sliding weight should be placed as far out on the scale arm as practicable when the accuracy of the scales is being tested.

10. Reduced velocity for target practice with 14-inch guns.—Until further notice all target practice with 14-inch guns, models of 1909 and 1910, will be conducted with a muzzle velocity of 2,250 feet per second in lieu of the service muzzle velocity of 2,350 feet per second.

11. Powder lots not to be used in target practice.—The following lots of smokeless powder will not be used for target practice in the guns or mortars indicated without special authority from the Chief of Ordnance:

12-inch guns.

Picatinny Arsenal: Lot 36 of 1910 and lots 56 and 68 of 1911.

DuPont: Lots 55 and 84 of 1911 and lot 116 of 1913.

Laflin & Rand: Lot 8 of 1908.

International: Lot 11 of 1908.

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10-inch guns.

Picatinny Arsenal: Lot 35 of 1910.
DuPont: Lot 1 of 1904 and lot 21 of 1910.
International: Lot 61 of 1910.

8-inch guns.

Laflin & Rand: Lot 3 of 1908.
DuPont: Lot 60 of 1911.

6-inch guns.

DuPont: Lot 3 of 1900 and lot 5 of 1901.
Laflin & Rand: Lot 5 of 1903.

5-inch guns.

California Powder Works: Lot 1 of 1900.

12-inch mortars.

[1] DuPont: Lot 5 of 1901.
[1] Laflin & Rand: Lot 5 of 1903.
[2] Laflin & Rand: Lot 4 of 1904.
[2] International: Lot 112 of 1913.
[3] Picatinny Arsenal: Lot 139 of 1913.

12. Misfires.—Rounds of fixed ammunition, or primers which have missed fire, will be reported to the armament officer. Blank ammunition which has misfired should be disposed of as indicated by Ordnance Department pamphlet No. 1658.

13. Care of ammunition.—For detailed information see Ordnance Department pamphlet No. 1888, Regulations for the Care and Test of Smokeless Powder and other Explosive Materials in Store at Ordnance Establishments and in Service and Ordnance Department pamphlet No. 1872, Seacoast Artillery Ammunition and Instructions for its Preparation, Care, and Use.

[1872234 I—A. G. O.]

BY ORDER OF THE SECRETARY OF WAR:

H. L. SCOTT,
Major General, Chief of Staff.

OFFICIAL:

H. P. McCAIN,
The Adjutant General.

[1] May be used for all zones up to and including the seventh, but not for zones beyond these.
[2] May be used for all zones up to but not including the ninth.
[3] May be used for all zones up to and including the ninth.

REPRODUCED AT THE NATIONAL ARCHIVES

Nov. 26th, 1926

353.17

HEADQUARTERS, 12TH COAST ARTILLERY
OFFICE OF THE REGIMENTAL COMMANDER
FORT MONROE, VIRGINIA

November 26, 1926.

SUBJECT: Target Practice Reports, Battery "A", 12th Coast Artillery.

TO: The Adjutant General, War Department, Washington, D.C.
(Thru Channels.)

1. There are enclosed the target practice reports of the special practices held by Battery "A", 12th Coast Artillery, at Battery "Montgomery", Fort Monroe, Virginia, and at Fort Story, Virginia, using 155 m/m guns. This report is approved.

2. The following conforms as far as possible to the required Fire Commander's Report and is submitted in accordance with paragraph 32, TR 435-55.

3. The Analysis has been verified as far as possible. No critiques were held outside those within the battery firing.

4. The delay in the submitting of this report can be explained by the following facts:

(1) The great volume and intricacy of the work involved.
(2) The absence of forms and methods of procedure.
(3) The constant interruptions of the work due to other duties required of the battery officers. While the 61st Coast Artillery was absent from the post, all administrative duties devolved upon the few officers of this regiment.

It must be borne in mind, that although this is the first report made on a complete adjustment problem, fired by aerial control, the system and methods used were described in detail, in a report of preliminary firing by this same organization, and forwarded from this office, under date of June 11, 1926. In order to read this report understandingly, reference should be made, to the earlier report.

5. Major George F. Moore, 12th C.A., acted as Fire Commander during this firing. He has since been relieved. While the whole procedure departs widely from the routine service practice, the battery commander adhered as closely as possible, to the system of reports, required by TR 435-55. The Fire Commander's ndorsement is replaced by a letter inclosed herewith.

jih

3-[illegible]-17 Ft Monroe-
3-[illegible]-17-

RG 394 Rec. of U.S. Army Commands E. 83 3rd, Serv. Com.
Forts File 1925-26 Box #337

6. In my opinion, this firing was most satisfactory, and indicates

(a) The feasibility and practicability of this method of fire control.

(b) Noteworthy resourcefulness, knowledge of gunnery and devotion to duty on the part of the officers, immediately in charge of conducting the firing.

7. I cannot concur in the recommendations, to transfer the fire control graph to the plotting board. My reasons are set forth below. With the entire operation carried out, on the plotting board

(a) Too many persons will be crowded around the board and confusion may result.

(b) Analysis of practice is most essential in this kind of firing. It would appear that a larger scale graph on a separate board where it is less liable to be erased or mutilated, affords in conjunction with the plotting board graph, more data for analysis.

(c) During firing of this kind, a clear unconfused picture of the shoot should be available at all times, for he Battery Commander to enable him, to make bold, so-called "arbitrary" corrections. On a cluttered up plotting board of small scale, this is not available. Keeping of two plots naturally entails more work, but during a long shoot the division of duties would lighten the work, of any one man.

8. I believe, there is still more to be learned, by another year work, at comparatively short ranges. Such matters as

(1) The use of but one graph, (that on the plotting board)

(2) The methods of correction of the course, as discussed on page 3, should be thoroughly tested out at short ranges, with a plentiful supply, of comparatively inexpensive ammunition. However, it is recommended

(a) That the supervision of the work be taken over by he Coast Artillery Board, so that continuity may be maintained between this short range work, and the long range work, which naturally follows. There is no armament in this command, of sufficient great range for a complete long range test.

(b) That the actual firing be made, the annual service practice of Battery "A", 12th Coast Artillery, for next year.

(c) That it be fired from 155 C.P.F. guns, at Fort Story, Virginia.

(d) That the ammunition allowance, be doubled.

(e) That whenever long range firing be taken up, it be fired with Railway Guns, at Fort Story, Virginia. This recommendation is based, on the experience of the past summer. Thirteen (13) attempts to fire this practice were made, at Fort Monroe, without success. Shipping interfered to such an extent, that a sufficient number of consecutive shots, could not be obtained, to make an adjustment. It would appear, that more or less interference of this nature would be found with long ranges, at Fort Tilden, N.Y., where firings of this nature were contemplated, for this calendar year. An uninterrupted string of at least tens

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shots is an absolute essential for a test and work with the high priced large caliber ammunition, should not be attempted, where conditions are not the best.

9. Aerial control of fire, properly developed, cannot fail to be a great adjunct to harbor defenses. The peace time development thereof is handicapped by safety considerations. The towing vessel is the ever present element, that is in danger. A radio controlled launch to be used as a target, would appear feasible and, in the general case, not uneconomical.

10. The greatest credit is due the officers of the Air Corps of Langley Field, for their cooperation in this work. Early pplication to The Chief of he Air Corps for assistance, from this same source for next year's work, is recommended.

4 Incls.
Incl. 1-Letter 353.17, Special Target Practice Reports (Aerial Fire Control) November 22, 1926, written by Major G. F. Moore, C.A.C.
Incl. 2-Target Practice Report Special Aerial Fire Control, Forts Monroe and Story, for The Adjutant General.
Incl. 3-Target Practice Report Special Aerial Fire Control, Forts Monroe and Story, for he Commanding General, 3rd C.A.
Incl. 4-Target Practice Report Special Aerial Fire Control, Forts Monroe and Story, for The Chief of Ordnance.

A. H. SUNDERLAND,
Lieut. Colonel, 12th C.A.,
Commanding.

1st Ind.

Headquarters, Harbor Defenses of Chesapeake Bay, Fort Monroe, Virginia, November 30, 1926. To: The Commanding General, Third Coast Artillery District, Fort Monroe, Virginia.

1. Concurring in paragraphs 6, 8, 9 and 10, of the basic letter.

2. Opinions on the ideas expressed in par. 7, basic letter are reserved, until further test firings are held.

4 Incls.
No Change.
jih

COURTESY OF THE NATIONAL ARCHIVES

ARTHUR S. CONKLIN,
Colonel, C.A.C.,
Commanding.

jih

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355.1 -- 12th CA 2nd Ind.

THIRD COAST ARTILLERY DISTRICT, Ft. Monroe, Va., Dec. 2, 1926.-- To: CG, Third Corps Area, Baltimore, Maryland.

1. The inclosed reports cover two stages in the firings to test out the use of aerial observation exclusively for position finding and fire adjustment. The special report for May 7, 1926, covers in detail the methods developed to that date for this type of firing, as used with the 6-inch fixed guns at Battery Montgomery. As shipping conditions rendered successful practices at Fort Monroe impossible, the later practices were fired with 155 m/m guns at Fort Story. The special report from May 12, 1926, to Sept. 1, 1926, covers several short practices at Battery Montgomery and the later very successful practices at Fort Story, during which complete adjustment problems were fired.

2. Paragraphs 6, 8, 9 and 10 of basic letter are concurred in.

3. Further firings should be held with the entire fire control operation carried out on the plotting board before the questions of a separate fire control graph and the methods of correction of the course are decided; as in only the last two problems, fired on Sept. 1st, was the fire control graph used on the plotting board. In the previous firings it was constructed separately and the necessary data transferred to the board.

4. It is believed that too much consideration cannot be given to the development of long range fire control observation and adjustment. The accompanying reports offer methods that, with further tests, promise to give a satisfactory solution to the problem of firing sea coast guns when no terrestrial observation is possible, due to the extreme range of the target or the condition of visibility.

5 Incls.
Added Incl 5.
Target Practice Rpt. Special Aerial Fire Control May 7, 1926.

R. E. CALLAN,
Brigadier General, U.S.A.,
Commanding.

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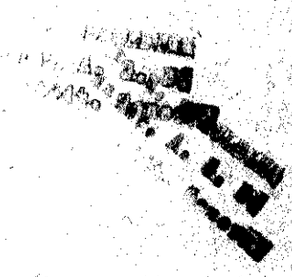
353.17-Btry "A" 12th CA (11-26-26)
24 (13) 3rd Ind.

HQ THIRD CORPS AREA, Baltimore, Md, December 3, 1926. To: The Adjutant General, War Department, Washington, DC.

Concurring in the 2nd indorsement.

For the Commanding General:



5-incls (incls Nos 1, 2 & 5)
incls Nos 3 & 4 withdrawn.

Copy to:

The Commanding General, Third Coast Artillery District,

Fort Monroe, Va

1-incl
(Incl #3)

Incl No 4 routed to Ordnance Officer for action.

Action directed by G-3

DIGITIZED AT THE NATIONAL ARCHIVES

HEADQUARTERS
COAST DEFENSES OF CHESAPEAKE BAY,
Fort Monroe, Virginia. JBM/rh.

17 August, 1920.

MEMORANDUM NO. 130-A.

SUBJECT: Sea Coast Target Practice.

1. Pursuant to Par. 10, Instruction of Coast Artillery Troops, 1920, and verbal instructions from the Commanding General, C.A.T.C., the Coast Artillery organizations of this command will hold their annual artillery target practice as follows:

Fort Monroe, Virginia.

2. The 3rd Company, manning Battery Montgomery; the 4th Company, manning Battery Anderson; and the 7th Company, manning Battery Parrott, will hold two practices as follows:

(a) Battery Practice Monday, August 23, 1920.
(b) Problem firing, Thursday, August 26, 1920.

At the Battery Practice the following ammunition will be expended:

Battery Anderson----------18 rounds.
Battery Montgomery----------25 rounds.
Battery Parrott----------10 rounds.

The Fort Commander will by means of his plotting and spotting base lines furnish the battery commanders with the polar coordinates of the target and with the deviations of the shots.

Each Battery Commander will fire ranging shots at the moving target and when he has to his satisfaction adjusted his fire on the target, will then comme improvement fire.

When sufficient amount of improvement fire has been delivered to ascertain whether the fire adjustment has been properly carried out the Fort Commander wi order "Cease Firing" and the firing renewed on a new course of the target.

To carry out the Problem Firing, (b) above, the Coast Artillery Board has furnished the following problem:

About five salvos of two guns each from batteries Parrott, Montgomer and Anderson. These salvos will be fired simultaneously "on the bell", under the direction of the fort commander. The rate of fire probably wil not be greater than one salvo every five minutes.

The central directing point of the fort will be the point D, which this case may be taken for convenience as the directing point of Battery now out of service.

The Fort base line will be B' B'' battery Y.

The fort plotting station will be the plotting room of battery Y. The Plotting board of Battery Y will be set up with the gun arm pivoted at D.

Telephone communication will be established from the fort plotting station to :

B', Battery Y;	Plotting room, Battery Anderson,
B", Battery Y;	Fort Commander's Station,
Plotting room, Battery Parrott,	B', Battery Z,
Plotting room, Battery Montgomery,	B", Battery Z.

B' B", battery Z, now out of service will be the base line for the fort spotting system. The spotting board will be set up in the fort plotting station.

The fort plotting station will track the target and send to the plotting rooms of batteries Parrott, Montgomery and Anderson, the ranges and azimuths of the target from the fort directing point.

The plotting boards at batteries Parrott, Montgomery and Anderson, will be set up as if to use a depression position finder located at D.

3. The 5th and 6th Companies (Anti-Aircraft Sector) will hold their target practices (800 rounds) from time to time and will complete their firings by Nov. 30, 1920. The character of fire and the methods to be pursued will be left to the discretion of the Sector Commander and the Fort Commander. They will bear in mind that the maximum benefit must be derived from the firing in working out problems of fire and in testing new methods and materiel.

4. The 3rd and 8th Companies (Skeletonized), (Mine Command) will hold their mine practice on or about September 8th, at which time two mines will be fired (par. 5, S.R. #33).

Sub-mine practice will be held before and after the regular practice during the time work on the water is being carried out with the "Mine Planter Mills". The number of practices of this character will be left to the discretion of the Fort Commander.

5. The 2nd Company (Mine command) will hold its practice at Battery "A" as follows:

(a) Battery practice, Tuesday, August 24, 1920.
(b) Problem firing, Friday, August 27, 1920.

The battery practice will be that of a minor caliber battery firing ranging shots at a moving target and following immediately thereafter by improvement fire.

When the battery has fired a sufficient number of shots for improvement to demonstrate that the adjustment has been properly done, the Fort Commander will order cease firing and the firing will again be started on the same target using a new course.

To carry out firing (b) above the Coast Artillery Board has furnished the following problems.

About twelve two gun salvos from the 6" battery at Fort Story fired for vessel tracking. In this practice the endeavor will be to track the target by observation fire alone, it being assumed that the target is beyond the visibility range of the shore observing station.

No material target will be used. A hypothetical track will be laid out on a plotting board by the fort commander, each plotted point being marked in minutes of time.

At the beginning of the practice the approximate location, speed and direction of the target will be furnished the battery plotting room. In the battery plotting room the track of the target will be estimated and firing data sent to the battery. The center of impact of the first salvo will be plotted by the fort commander, and the approximate deviations from the target as determined by the fort commander from his plotting room. The battery plotter will correct his estimated track of the target accordingly, and determine the necessary firing data. This will be continued until the track of the target has been determined and the fire adjustment made.

6. The Fort Commanders of Forts Monroe & Story are charged with the carrying out of the above firings and will give the necessary orders to see that all details of personnel and materiel function properly.

7. The Coast Defense Artillery Engineer, Ordnance Officer and Quartermaster will at once communicate with the Fort Commanders of Forts Monroe and Story relative to the cooperation of their departments during these firings.

8. The following safety regulations will be strictly carried out at all firings and the Fort Commanders will be charged with their observance:

(a) Special Regulations No. 22, paragraphs 22 and 43.
(b) Chapter 16, Coast Artillery Drill Regulations.
(c) Special Regulations No. 22, Par. 16 and 68 (Mine practice)

9. The Fort Commanders will communicate directly with the air service authorities at Langley Field regarding the assistance desired from the air service in observing fire.

10. The following analysis boards are hereby appointed to carry out the provisions of Par. 16, Instructions Coast Artillery Troops, 1920.

FORT MONROE, VIRGINIA

Captain Peter H. Ottosen, C.A.C.
Captain Daniel N. Swan, Jr., C.A.C.
Captain Sydney S. Winslow, C.A.C.

In addition battery commanders will be members of the board during the analysis of the firings from their batteries.

FORT STORY, VIRGINIA.

Captain Thomas O. Humphreys, C.A.C.
Captain John A. Zeller, C.A.C.
Captain Napoleon Boudreau, C.A.C.

11. Fort Commanders will as soon as possible after the completion of any firing render to these headquarters the necessary reports as called for in par. 17, I.C.A.T., 1920.

12, Before any firings are held the Fort Commanders will satisfy themselves that all officers of their commands are familiar with the contents of the following:

(a) So much of C.A.D.R. as pertains to target practice.
(b) Instructions of Coast Artillery Troops, 1920.
(c) Special Regulations No. 33.
(d) Artillery Notes No. 38.
(e) Safety regulations for all firings.

By order of COLONEL MITCHELL:

J. A. GREEN,
Major, C.A.C.,
Adjutant.

March 13, 1940

AIR BASE HEADQUARTERS
Office of the Base Operations Officer
Langley Field, Virginia

OP-H/s

March 13, 1940

OPERATIONS MEMORANDUM)
NUMBER...4.....)

1. Submitted herewith map of Bombing & Gunnery Ranges & Air Space Reservations which will be attached to Operations Circular 11-2, dated March 4, 1940, already distributed. This map rescinds maps or sketches pertaining to gunnery and bombing ranges.

By order of Colonel HARVEST:

R. L. MAUGHAN,
Major, Air Corps,
Operations Officer.

OFFICIAL:
WILLIAM G. LEE, Jr.,
1st Lieut., Air Corps,
Adjutant.

DIST: "A"

Incl:-
Copies of map, Bomb & Gunnery
Ranges & Air Space Reservations.

353 - Air Corps (3-13-40)

686
686 - Gunnery
686 - Bombing
384.4
016 Air Space Reservations

RG 394, US Army Commands
E-80, Decimal File, 1940
Box 1378

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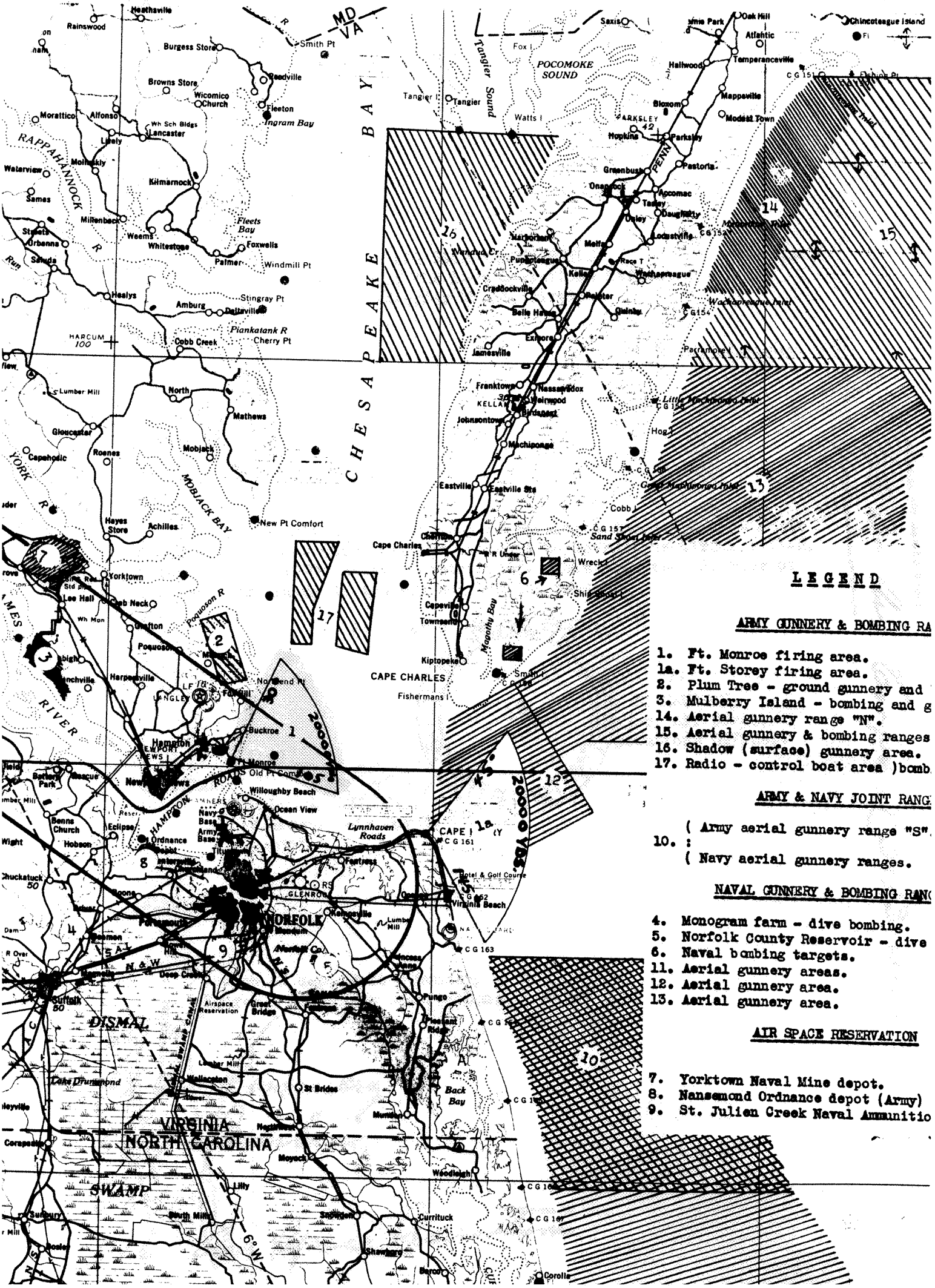


LEGEND

ARMY GUNNERY & BOMBING RA

1. Ft. Monroe firing area.
1a. Ft. Storey firing area.
2. Plum Tree - ground gunnery and
3. Mulberry Island - bombing and g
14. Aerial gunnery range "N".
15. Aerial gunnery & bombing ranges
16. Shadow (surface) gunnery area.
17. Radio - control boat area)bomb

ARMY & NAVY JOINT RANG

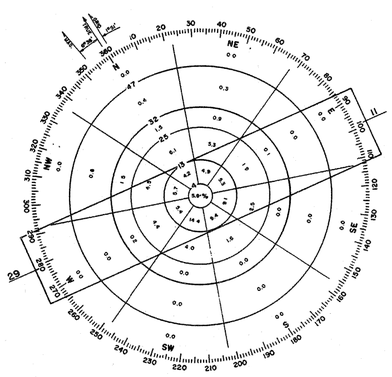
10. (Army aerial gunnery range "S"
: (Navy aerial gunnery ranges.

NAVAL GUNNERY & BOMBING RAN

4. Monogram farm - dive bombing.
5. Norfolk County Reservoir - dive
6. Naval bombing targets.
11. Aerial gunnery areas.
12. Aerial gunnery area.
13. Aerial gunnery area.

AIR SPACE RESERVATION

7. Yorktown Naval Mine depot.
8. Nansemond Ordnance depot (Army)
9. St. Julien Creek Naval Ammunitio



WIND ROSE

SOURCES OF INFORMATION:
1. REAL ESTATE MAP IN 4 SHEETS, FORT STORY, DATED 19 OCT 44, REVISION OF 29 MARCH 60, FILE NO 14.0 67
2. REAL PROPERTY INVENTORY DATED 30 JUNE 62.

NOTES
1. DISTANCES AND BEARINGS SHOWN ARE FROM DEED DESCRIPTIONS AND PLATS
2. RESERVATION CONTAINS 1439.13 ACRES

SCALE IN FEET

FORT STORY
VIRGINIA BEACH, VIRGINIA

U.S. ARMY ENGINEER DISTRICT, NORFOLK
CORPS OF ENGINEERS
NORFOLK, VIRGINIA

MASTER PLAN
BASIC INFORMATION MAPS

RESERVATION MAP

RECOMMENDED BY THE INSTALLATION PLANNING BOARD FOR APPROVAL
Franklin A. Williams
FOR LT. COL. F.A. WILLIAMS, C.E.
POST ENGINEER
DATE: 10 OCT. 1968

REVIEWED & COMMENTED ON BY MAJOR COMMANDER & FORWARDED TO THE CHIEF OF ENGINEERS
DATE: _____

DATE	DRAWING NO.
OCT 1968	18-02-33
SHEET NO.	FILE NO.
2 of 10	FS 266-2.2

FISM 01

CORPS OF ENGINEERS

U.S. ARMY

E 2,724,000 E 2,725,000 E 2,726,000 E 2,727,000 E 2,728,000 E 2,729,000 E 2,730,000 E 2,731,000

N 227,500

N 226,500

N 225,500

N 224,500

N 223,500

N 222,500

ATLANTIC OCEAN

ASSOCIATION FOR THE PRESERVATION OF VIRGINIA ANTIQUITIES

N 20°-00' E 265'

N 70°-00' W 418.00'

S 20°-00' W 19.00'

BUNKER NO. 539

S-582

MATCH SHEET 1

MATCH SHEET 3

MATCH SHEET 4

Va State Grid(South zone), 1927 North American datum.
Elevations referred to Mean Sea Level, 1929 general and 1936 southeastern supplementary adjustments.
Primary control, Horizontal and Vertical, by U.S.C. & G.S.

Compiled from aerial photographs flown during Jan. 1960

SCALE: 1" = 200'

200 0 2 4 6 8 1000 FT.

CONTOUR INTERVAL = 2 FEET

SHEET 2 OF 5 SHEETS

CORPS OF ENGINEERS
OFFICE OF THE DISTRICT ENGINEER
NORFOLK, VIRGINIA

FORT STORY, VIRGINIA

CORPS OF ENGINEERS

U.S. ARMY

E 2,724,000 E 2,725,000 E 2,726,000 E 2,727,000 E 2,728,000 E 2,729,000 E 2,730,000 E 2,731,000

N 222,500

N 221,500

N 220,500

N 219,500

N 218,500

N 217,500

MATCH SHEET 2

MATCH SHEET 5

Va. State Grid(South Zone), 1927 North American datum.
Elevations referred to Mean Sea Level, 1929 general
and 1936 southeastern supplementary adjustments.
Primary control, Horizontal and Vertical, by U S C & G S.

Compiled from aerial photographs flown during Jan. 1960.

SCALE: 1" = 200'

200 0 2 4 6 8 1000 FT.

CONTOUR INTERVAL = 2 FEET

SHEET 4 OF 5 SHEETS

CORPS OF ENGINEERS
OFFICE OF THE DISTRICT ENGINEER
NORFOLK, VIRGINIA

FT30103

SOURCES OF INFORMATION:

1. PHOTOGRAMMETRIC MAPS, 200 SCALE, PREPARED BY PHOTO SCIENCE, INC., SILVER SPRING, MD., FROM AERIAL PHOTOGRAPHS FLOWN JAN. 1960.
2. AERIAL PHOTOGRAPHS FLOWN MARCH 1962.
3. FIELD CHECKED BY POST ENGINEER, JULY 1962.
4. REAL PROPERTY INVENTORY DATED 30 JUNE 1962..

ATLANTIC OCEAN

CHESAPEAKE BAY

DEPT. OF COMMERCE (WEATHER BUREAU)

DEPT. OF THE INTERIOR CAPE HENRY MEMORIAL

TREASURY DEPT. (U.S. COAST GUARD)

U.S. NAVY

SOCIETY FOR PRESERVATION OF VIRGINIA ANTIQUITIES

OBSTACLE COURSE T-201

NAVY QUONSET HUTS

SANITARY FILL

55 x 2000 PSP F/W RUNWAY
AIRFIELD ELEV. +10 MSL

U.S. ROUTE NO. 60

SCALE IN FEET
400 0 400 800 1200

LEGEND

- BUILDING OR STRUCTURE, PERMANENT
- BUILDING OR STRUCTURE, SEMIPERMANENT
- BUILDING OR STRUCTURE, TEMPORARY
- ROADS AND PARKING
- TRAIL OR EARTH ROAD
- FENCE
- MARSH
- SHORE LINE
- RESERVATION BOUNDARY
- INDEX CONTOUR
- INTERMEDIATE CONTOUR

FORT STORY
VIRGINIA BEACH, VIRGINIA

U.S. ARMY ENGINEER DISTRICT, NORFOLK
CORPS OF ENGINEERS
NORFOLK, VIRGINIA

MASTER PLAN
BASIC INFORMATION MAPS

GENERAL SITE MAP

RECOMMENDED BY THE INSTALLATION PLANNING BOARD FOR APPROVAL

Franklin F. Williamson
FOR LT COL. F.A. WILLIAMS C.E.
POST ENGINEER

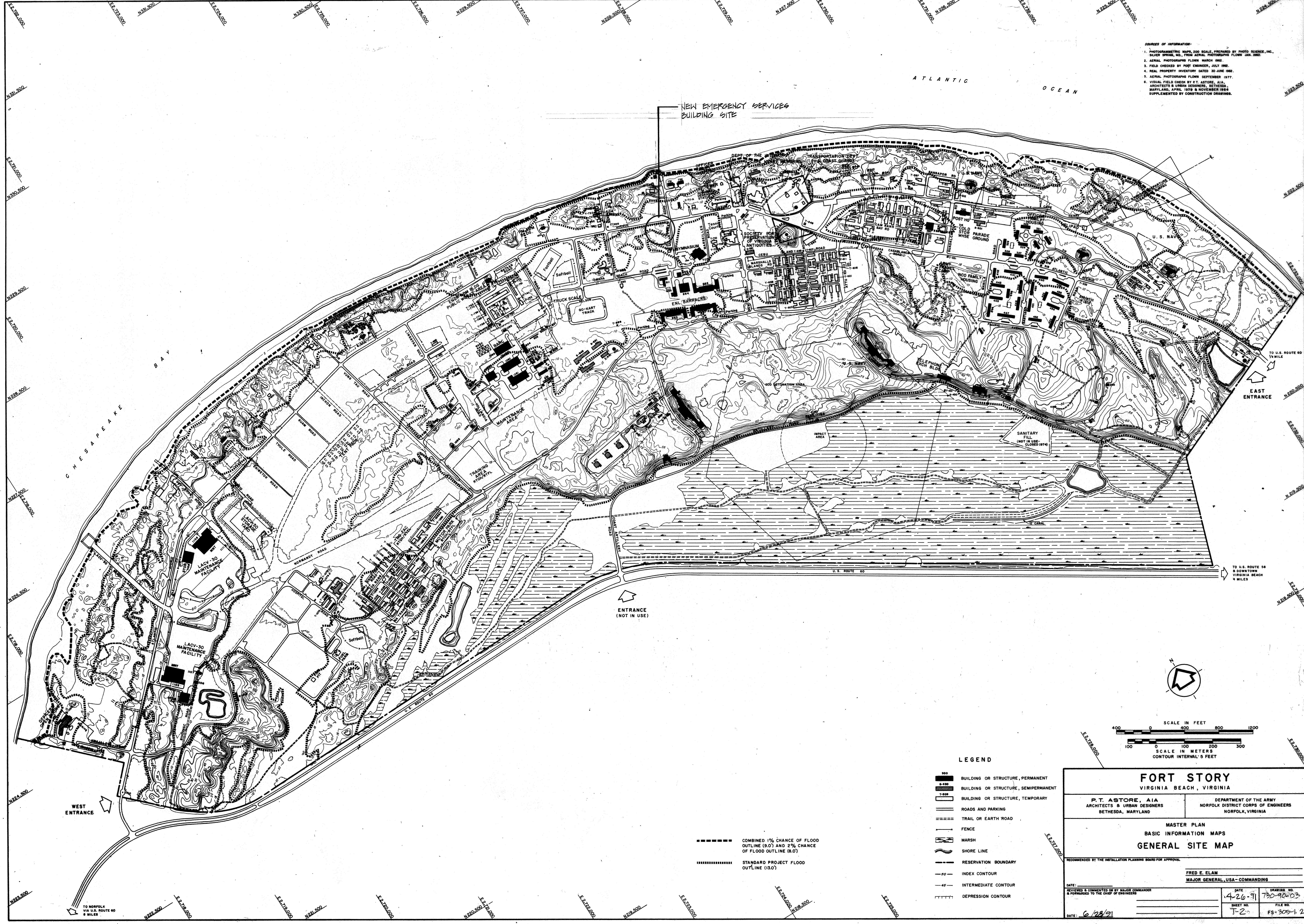
DATE: 10 OCT 1968

REVIEWED & COMMENTED ON BY MAJOR COMMANDER & FORWARDED TO THE CHIEF OF ENGINEERS

DATE:

DATE	DRAWING NO.
OCT 1968	18-02-33
SHEET NO.	FILE NO.
3 or 10	FS 266-2.3

FTSM04



SOURCES OF INFORMATION:

1. PHOTOGRAMMETRIC MAPS, 200 SCALE, PREPARED BY PHOTO SCIENCE, INC., SILVER SPRING, MD., FROM AERIAL PHOTOGRAPHS FLOWN JAN. 1960.
2. AERIAL PHOTOGRAPHS FLOWN MARCH 1962.
3. FIELD CHECKED BY POST ENGINEER, JULY 1962.
4. REAL PROPERTY INVENTORY DATED 30 JUNE 1962.
5. AERIAL PHOTOGRAPHS FLOWN SEPTEMBER 1977.
6. VISUAL FIELD CHECK BY P.T. ASTORE, AIA, ARCHITECTS & URBAN DESIGNERS, BETHESDA, MARYLAND, APRIL 1979 & NOVEMBER 1984 SUPPLEMENTED BY CONSTRUCTION DRAWINGS.

SCALE IN FEET: 400 0 400 800 1200

SCALE IN METERS: 100 0 100 200 300

CONTOUR INTERVAL 5 FEET

LEGEND

- 300 BUILDING OR STRUCTURE, PERMANENT
- S-430 BUILDING OR STRUCTURE, SEMIPERMANENT
- T-509 BUILDING OR STRUCTURE, TEMPORARY
- ROADS AND PARKING
- TRAIL OR EARTH ROAD
- FENCE
- MARSH
- SHORE LINE
- RESERVATION BOUNDARY
- 50 INDEX CONTOUR
- 45 INTERMEDIATE CONTOUR
- DEPRESSION CONTOUR

FORT STORY

VIRGINIA BEACH, VIRGINIA

P.T. ASTORE, AIA ARCHITECTS & URBAN DESIGNERS BETHESDA, MARYLAND	DEPARTMENT OF THE ARMY NORFOLK DISTRICT CORPS OF ENGINEERS NORFOLK, VIRGINIA

MASTER PLAN

BASIC INFORMATION MAPS

GENERAL SITE MAP

RECOMMENDED BY THE INSTALLATION PLANNING BOARD FOR APPROVAL

DATE: ______

FRED E. ELAM

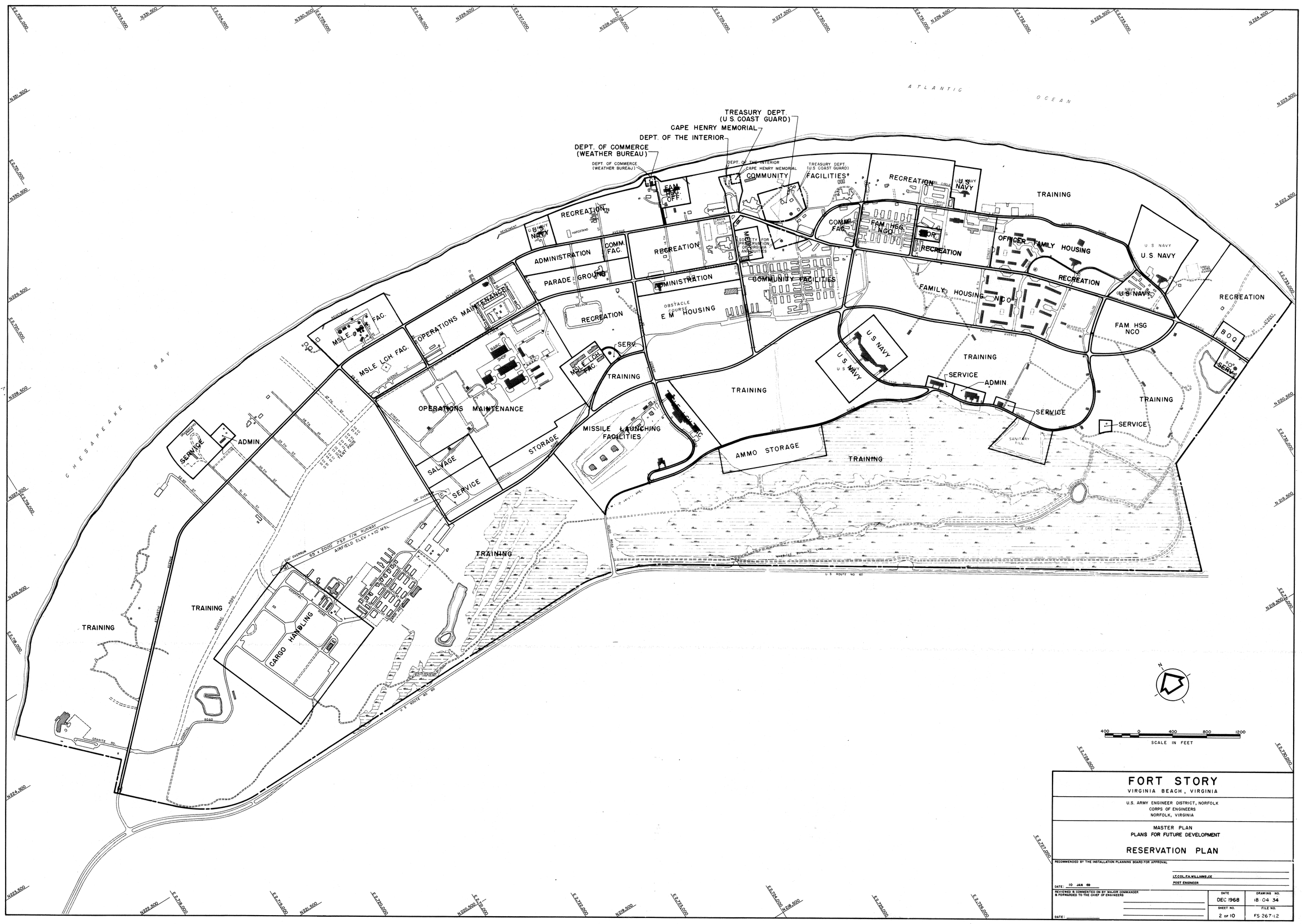
MAJOR GENERAL, USA-COMMANDING

REVIEWED & COMMENTED ON BY MAJOR COMMANDER & FORWARDED TO THE CHIEF OF ENGINEERS

DATE: 6/28/91

DATE	DRAWING NO.
4-26-91	730-90-03
SHEET NO.	FILE NO.
T-2	FS-305-1.2

SPEC. NO. 2670



FORT STORY

VIRGINIA BEACH, VIRGINIA

U.S. ARMY ENGINEER DISTRICT, NORFOLK
CORPS OF ENGINEERS
NORFOLK, VIRGINIA

MASTER PLAN
PLANS FOR FUTURE DEVELOPMENT

RESERVATION PLAN

RECOMMENDED BY THE INSTALLATION PLANNING BOARD FOR APPROVAL

LT.COL. F.A. WILLIAMS, CE
POST ENGINEER

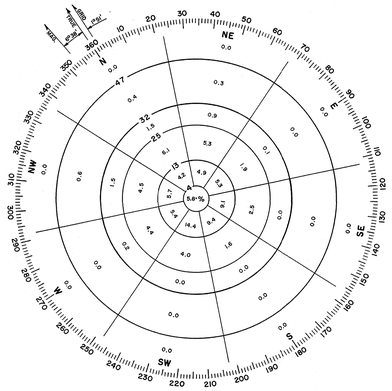
DATE: 10 JAN 69

REVIEWED & COMMENTED ON BY MAJOR COMMANDER & FORWARDED TO THE CHIEF OF ENGINEERS

DATE: _____

DATE	DRAWING NO.
DEC 1968	18-04 34
SHEET NO.	FILE NO.
2 of 10	FS 267-12

FTSM06



WIND ROSE

ATLANTIC OCEAN

CHESAPEAKE BAY

SEASHORE STATE PARK

SWAMP

TRAINING (OUTDOOR)

RECREATION

TROOP HSG & SUPPORT FAC

MEDICAL

COMM FAC

ADMIN

FAM HSG OFF

FAM HSG NCO

HISTORICAL

CAPE HENRY LIGHT STA

PARADE GROUND

RECREATION (ARMY TRAVEL CAMP)

ARMY TRAVEL CAMP

NCO FAMILY HOUSING

OFFICER FAMILY HOUSING

HELIPAD

U. S. NAVY

ADMIN (U.S. NAVY)

REC

SERV

STOR

AMMO STOR

SERV & STOR

LANDFILL (NOT IN USE - CLOSED 1974)

ENGR ADM BLDG PUBLIC WORKS AREA

SERVICE

CRANE MOTOR PARK

TRAINING AREA RETAINTAIL

LACV-30 MAINTENANCE FACILITY

LACV-30 STORAGE

SERVICE & TRAINING

CARGO TRAINING AREA

AIRFIELD

DRIVER TRAINING TRAILS

ECO DETONATION AREA

ECO FACILITIES

IMPACT AREA

RED BEACH NO. 1

RED BEACH NO. 2

BLUE BEACH

GREEN BEACH

DEPT. OF THE INTERIOR CAPE HENRY MEMORIAL

TRANSPORTATION DEPT. (U.S. COAST GUARD)

OLD LIGHTHOUSE

OFFICERS OPEN DINING

ENTRANCE (NOT IN USE)

SEASHORE STATE PARK WEST ENTRANCE

TO NORFOLK VIA U.S. ROUTE 60 6 MILES

TO U.S. ROUTE 60 1/2 MILE

EAST ENTRANCE RESIDENTIAL

TO U.S. ROUTE 58 & DOWNTOWN VIRGINIA BEACH 4 MILES

U.S. ROUTE 60

PROPERTY LINE IS 60 FEET FROM CENTERLINE OF ROAD

E 17,965'

E 14,444'

N 13,965'

LAND USE ABBREVIATIONS

ADM/ADMIN	=	ADMINISTRATION
AMMO	=	AMMUNITION
COMM	=	COMMUNITY
FAM	=	FAMILY
FAC	=	FACILITIES
HSG	=	HOUSING
NCO	=	NONCOMMISSIONED OFFICERS
OFF	=	OFFICERS
REC	=	RECREATION
SERV	=	SERVICE
STA	=	STATION
STOR	=	STORAGE
TNG	=	TRAINING
UEQ	=	UNACCOMPANIED ENLISTED QUARTERS
UOQ	=	UNACCOMPANIED OFFICERS' QUARTERS

NOTES:

1. DISTANCES AND BEARINGS SHOWN ARE FROM DEED DESCRIPTIONS AND PLATS.
2. RESERVATION CONTAINS 1,450.95 ACRES. THIS TOTAL EXCLUDES THE CAPE HENRY LIGHT STATION (4.00 AC.), CAPE HENRY MEMORIAL (0.23 AC) AND OLD LIGHTHOUSE (2.00 AC).
3. SEE RESERVATION MAP AND ANALYSIS OF EXISTING FACILITIES/ENVIRONMENTAL ASSESSMENT REPORT FOR DESCRIPTIONS OF OUTDOOR TRAINING AREAS.

LEGEND

EXISTING LAND USE RETAINED

EXISTING LAND USE REALLOCATED FOR MOBILIZATION

SCALE IN FEET: 400 0 400 800 1200

SCALE IN METERS: 100 0 100 200 300

FORT STORY

VIRGINIA BEACH, VIRGINIA

ASTORE, ARCHITECTS & URBAN DESIGNERS, BETHESDA, MARYLAND

DEPARTMENT OF THE ARMY, NORFOLK DISTRICT CORPS OF ENGINEERS, NORFOLK, VIRGINIA

MASTER PLAN
MOBILIZATION DEVELOPMENT PLANS

INSTALLATION LAND USE

RECOMMENDED BY THE INSTALLATION PLANNING BOARD FOR APPROVAL

DATE:

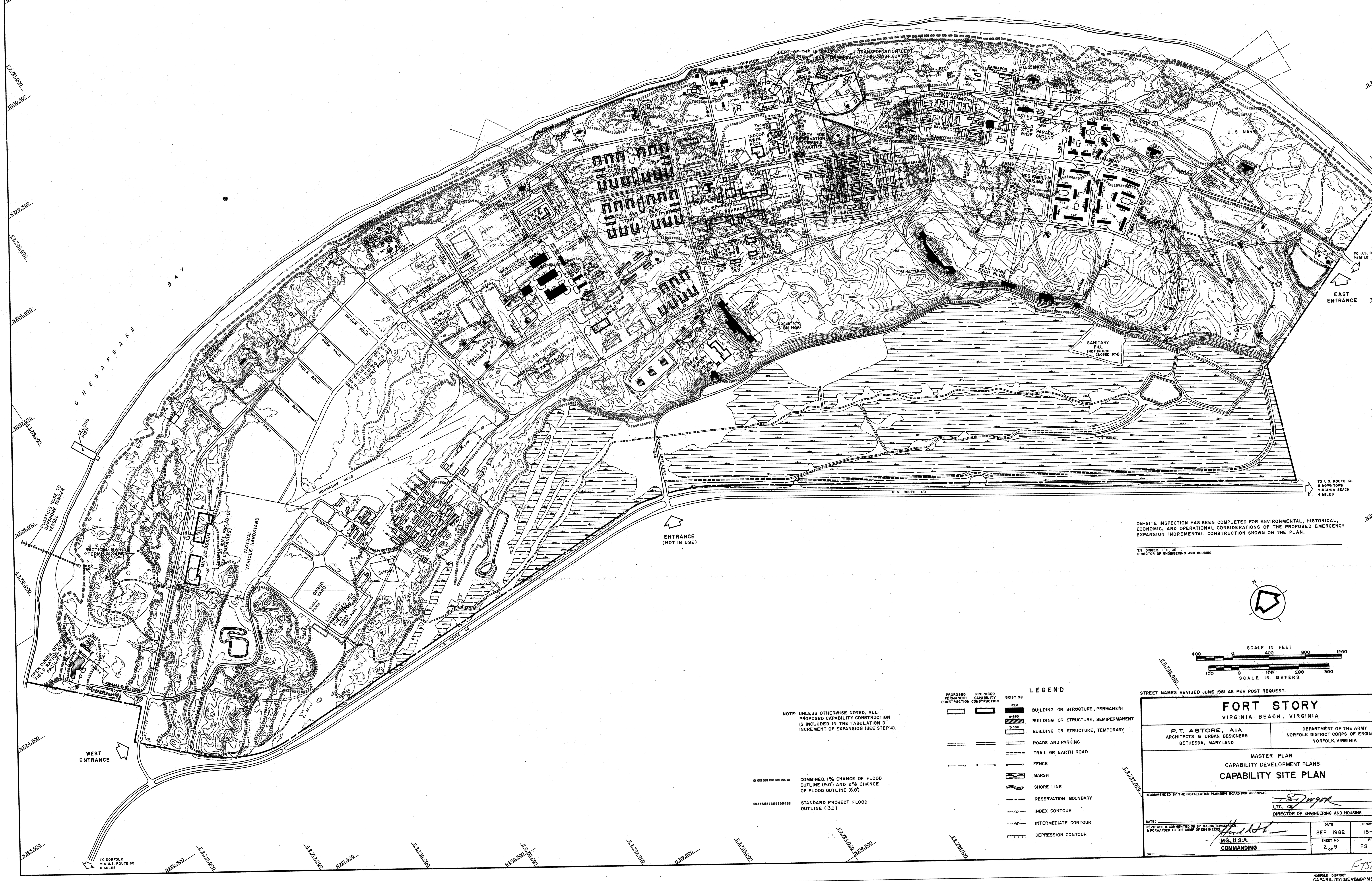
REVIEWED & COMMENTED ON BY MAJOR COMMANDER & FORWARDED TO THE CHIEF OF ENGINEERS

DATE:

DATE	DRAWING NO.
AUGUST 1992	18-05-13
SHEET NO.	FILE NO.
1 of 2	FS 300-1.1A

SOURCES OF INFORMATION:

1. PHOTOGRAMMETRIC MAPS, 200 SCALE, PREPARED BY PHOTO SCIENCE, INC., SILVER SPRING, MD., FROM AERIAL PHOTOGRAPHS FLOWN JAN. 1960.
2. AERIAL PHOTOGRAPHS FLOWN MARCH 1962.
3. FIELD CHECKED BY POST ENGINEER, JULY 1962.
4. REAL PROPERTY INVENTORY DATED 30 JUNE 1962.
5. AERIAL PHOTOGRAPHS FLOWN SEPTEMBER 1977.
6. VISUAL FIELD CHECK BY P.T. ASTORE, AIA, ARCHITECTS & URBAN DESIGNERS, BETHESDA, MARYLAND, APRIL 1979.



ON-SITE INSPECTION HAS BEEN COMPLETED FOR ENVIRONMENTAL, HISTORICAL, ECONOMIC, AND OPERATIONAL CONSIDERATIONS OF THE PROPOSED EMERGENCY EXPANSION INCREMENTAL CONSTRUCTION SHOWN ON THE PLAN.

T.S. DINGER, LTC, CE
DIRECTOR OF ENGINEERING AND HOUSING

SCALE IN FEET: 400 0 400 800 1200

SCALE IN METERS: 100 0 100 200 300

NOTE: UNLESS OTHERWISE NOTED, ALL PROPOSED CAPABILITY CONSTRUCTION IS INCLUDED IN THE TABULATION D INCREMENT OF EXPANSION (SEE STEP 4).

COMBINED 1% CHANCE OF FLOOD OUTLINE (9.0') AND 2% CHANCE OF FLOOD OUTLINE (8.0')

STANDARD PROJECT FLOOD OUTLINE (13.0')

LEGEND

PROPOSED PERMANENT CONSTRUCTION | PROPOSED CAPABILITY CONSTRUCTION | EXISTING

- 300 — BUILDING OR STRUCTURE, PERMANENT
- S-430 — BUILDING OR STRUCTURE, SEMIPERMANENT
- T-509 — BUILDING OR STRUCTURE, TEMPORARY
- ROADS AND PARKING
- TRAIL OR EARTH ROAD
- FENCE
- MARSH
- SHORE LINE
- RESERVATION BOUNDARY
- 50 — INDEX CONTOUR
- 45 — INTERMEDIATE CONTOUR
- DEPRESSION CONTOUR

STREET NAMES REVISED JUNE 1981 AS PER POST REQUEST.

FORT STORY

VIRGINIA BEACH, VIRGINIA

P.T. ASTORE, AIA
ARCHITECTS & URBAN DESIGNERS
BETHESDA, MARYLAND

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT CORPS OF ENGINEERS
NORFOLK, VIRGINIA

MASTER PLAN
CAPABILITY DEVELOPMENT PLANS

CAPABILITY SITE PLAN

RECOMMENDED BY THE INSTALLATION PLANNING BOARD FOR APPROVAL

LTC, CE
DIRECTOR OF ENGINEERING AND HOUSING

DATE:

REVIEWED & COMMENTED ON BY MAJOR COMMANDER & FORWARDED TO THE CHIEF OF ENGINEERS

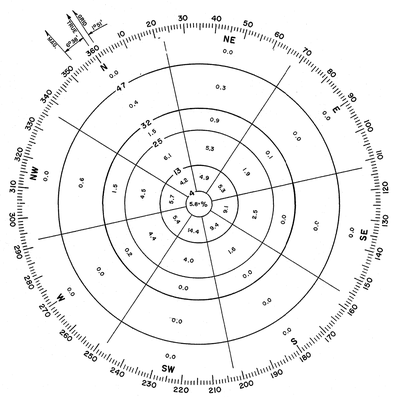
MG, U.S.A.
COMMANDING

DATE:

DATE	DRAWING NO.
SEP 1982	18-06-05
SHEET NO.	FILE NO.
2 OF 9	FS 296-1.2

FTSM08

NORFOLK DISTRICT
CAPABILITY DEVELOPMENT PLANS
FORT STORY
CAPABILITY SITE OVERLAY



WIND ROSE

SOURCES OF INFORMATION:
1. REAL ESTATE MAP IN 4 SHEETS, FORT STORY, DATED 19 OCT 44, REVISION OF 28 MARCH 60, FILE NO. N.A.O. 47.
2. REAL PROPERTY INVENTORY DATED 30 JUNE 62.
3. FACILITIES LIST-BUILDINGS, DATED 15 AUGUST 1979.

ATLANTIC OCEAN

CHESAPEAKE BAY

SEASHORE STATE PARK

SWAMP

BLUE BEACH

RED BEACH NO. 2

RED BEACH NO. 1

GREEN BEACH

TRANSPORTATION DEPT. (U.S. COAST GUARD)

CAPE HENRY LIGHT STA

OLD LIGHTHOUSE

CAPE HENRY MEMORIAL

TRAINING (OUTDOOR)

RECREATION

HISTORICAL

STORAGE

PARADE GROUND

FAM HSG OFF HELIPAD

FAM HSG NCO

TROOP HSG & SUPPORT FAC

BOQ

BEQ

ADMIN

COMM FAC

FAM HSG OFF

RECR

STOR

SERV

TNG (INDOOR)

TRAINING (OUTDOOR)

U.S. NAVY ADMIN (U.S. NAVY)

TAC AREA G

TAC AREA E

TAC AREA F

TAC AREA A

TAC AREA B

TAC AREA C

TAC AREA D

ADMIN AREA A

FORMER AIRFIELD

AMMUNITION STORAGE

LANDFILL (NOT IN USE - CLOSED 1974)

DRIVER TRAINING TRAILS

CARGO TRAINING AREA

ENTRANCE (NOT IN USE)

SEASHORE STATE PARK WEST ENTRANCE

TO U.S. ROUTE 60 1/4 MILE

TO U.S. ROUTE 58 & DOWNTOWN VIRGINIA BEACH 4 MILES

TO NORFOLK VIA U.S. ROUTE 60 & MILES

U.S. ROUTE 60

PROPERTY LINE IS 60 FEET FROM CENTERLINE OF ROAD

RESIDENTIAL

EASEMENT

LAND USE ABBREVIATIONS

ADM / ADMIN	=	ADMINISTRATION
BEQ	=	BACHELOR ENLISTED QUARTERS
BOQ	=	BACHELOR OFFICERS QUARTERS
COMM	=	COMMUNITY
FAM	=	FAMILY
FAC	=	FACILITIES
HSG	=	HOUSING
NCO	=	NONCOMMISSIONED OFFICERS
OFF	=	OFFICERS
RECR	=	RECREATION
SERV	=	SERVICE
STA	=	STATION
STOR	=	STORAGE
TNG	=	TRAINING

NOTES:
1. DISTANCES AND BEARINGS SHOWN ARE FROM DEED DESCRIPTIONS AND PLATS.
2. RESERVATION CONTAINS 1,450.95 ACRES. THIS TOTAL EXCLUDES THE CAPE HENRY LIGHT STATION (4.00 AC.), CAPE HENRY MEMORIAL (0.23 AC) AND OLD LIGHTHOUSE (2.00 AC).

LEGEND

LAND USE AREA

RETAINED AS PRESENTLY EXISTS

REALLOCATED FOR OTHER USE

SCALE IN FEET 400 0 400 800 1200

SCALE IN METERS 100 0 100 200 300

STREET NAMES REVISED JUNE 1981 AS PER POST REQUEST.

FORT STORY
VIRGINIA BEACH, VIRGINIA

P.T. ASTORE, AIA
ARCHITECTS & URBAN DESIGNERS
BETHESDA, MARYLAND

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT CORPS OF ENGINEERS
NORFOLK, VIRGINIA

MASTER PLAN
CAPABILITY DEVELOPMENT PLANS

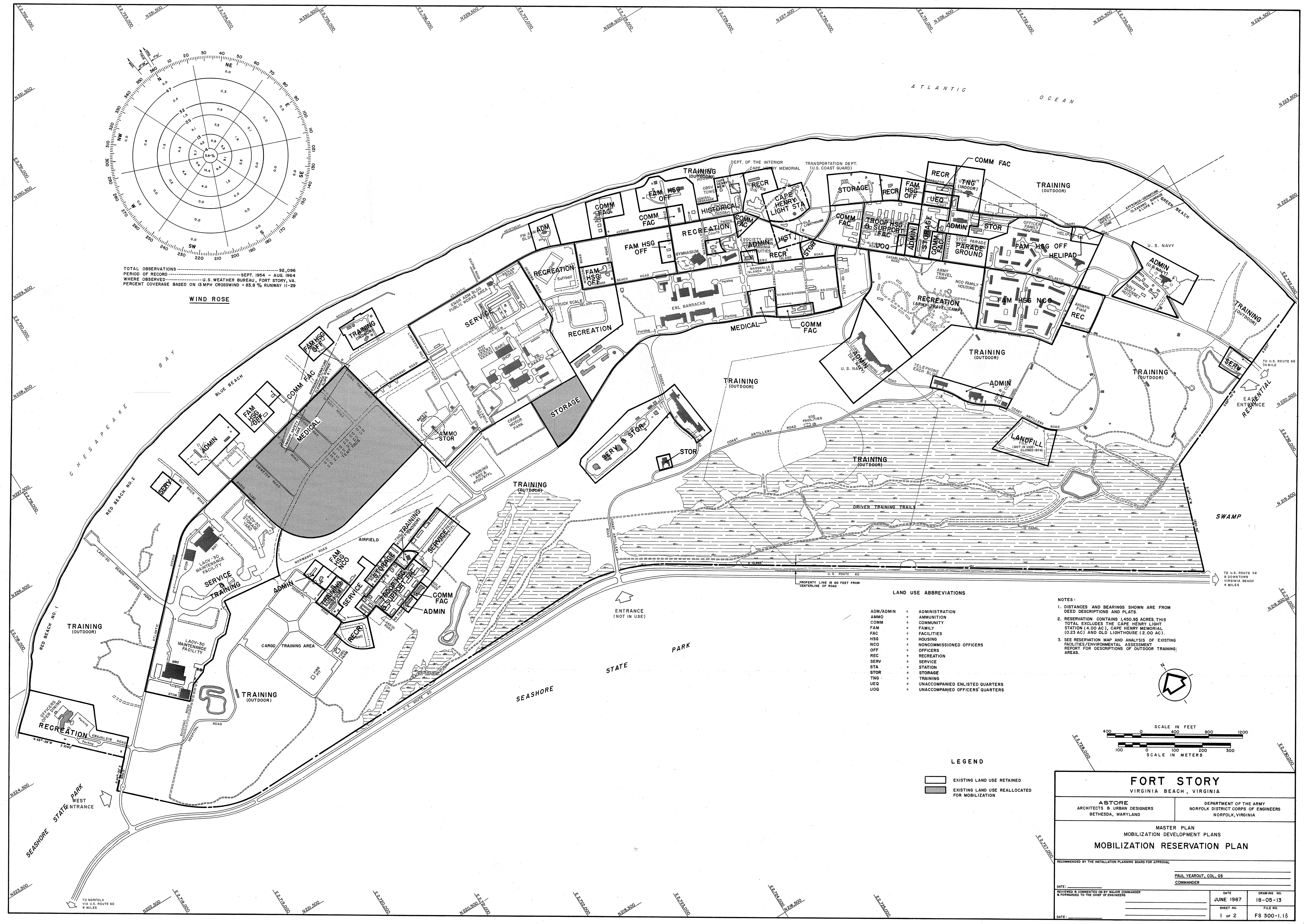
CAPABILITY RESERVATION PLAN

RECOMMENDED BY THE INSTALLATION PLANNING BOARD FOR APPROVAL
DATE:
LTC, CE
DIRECTOR OF ENGINEERING AND HOUSING

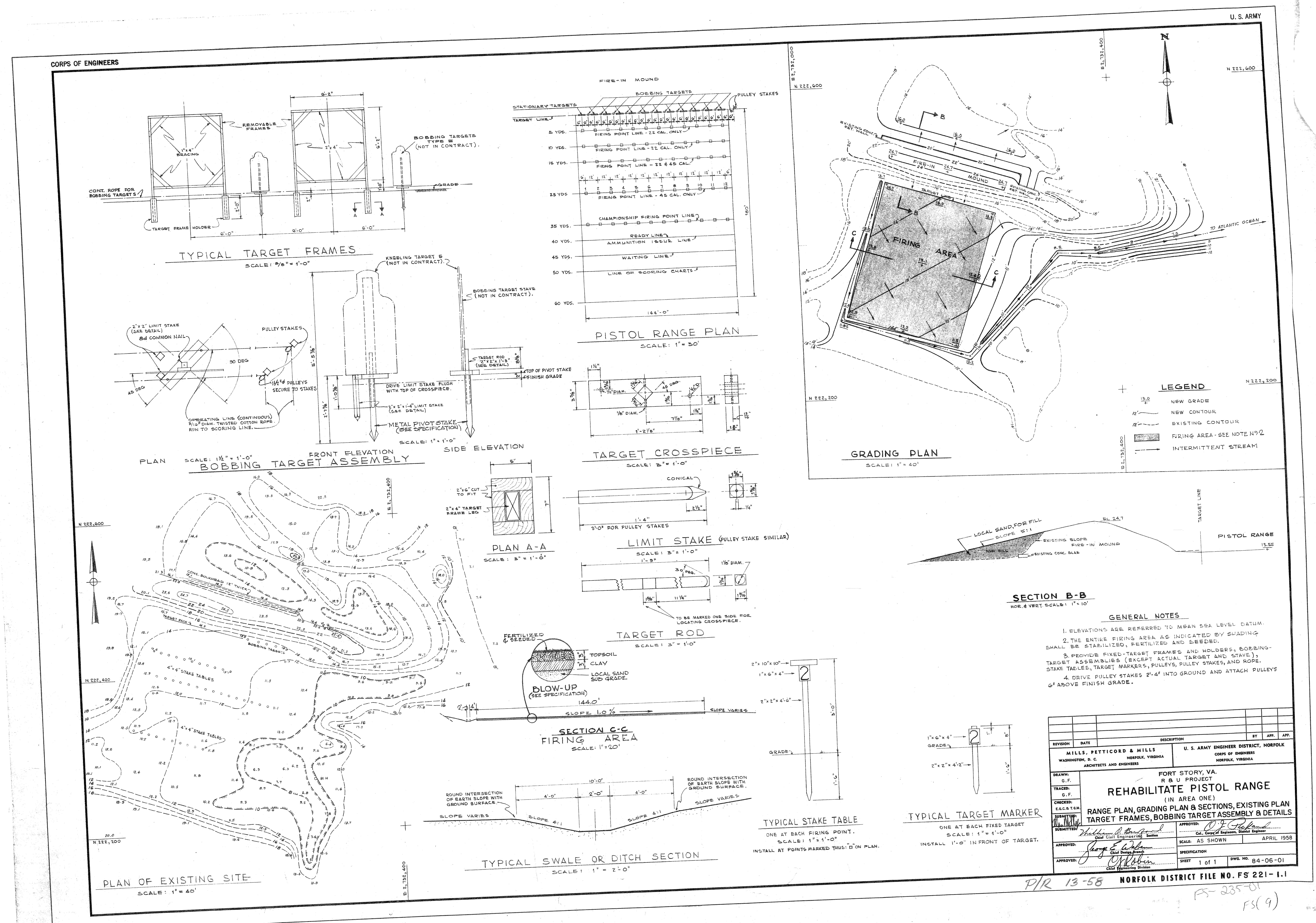
REVIEWED & COMMENTED ON BY MAJOR COMMANDER & FORWARDED TO THE CHIEF OF ENGINEERS
DATE:
MG, U.S.A
COMMANDING

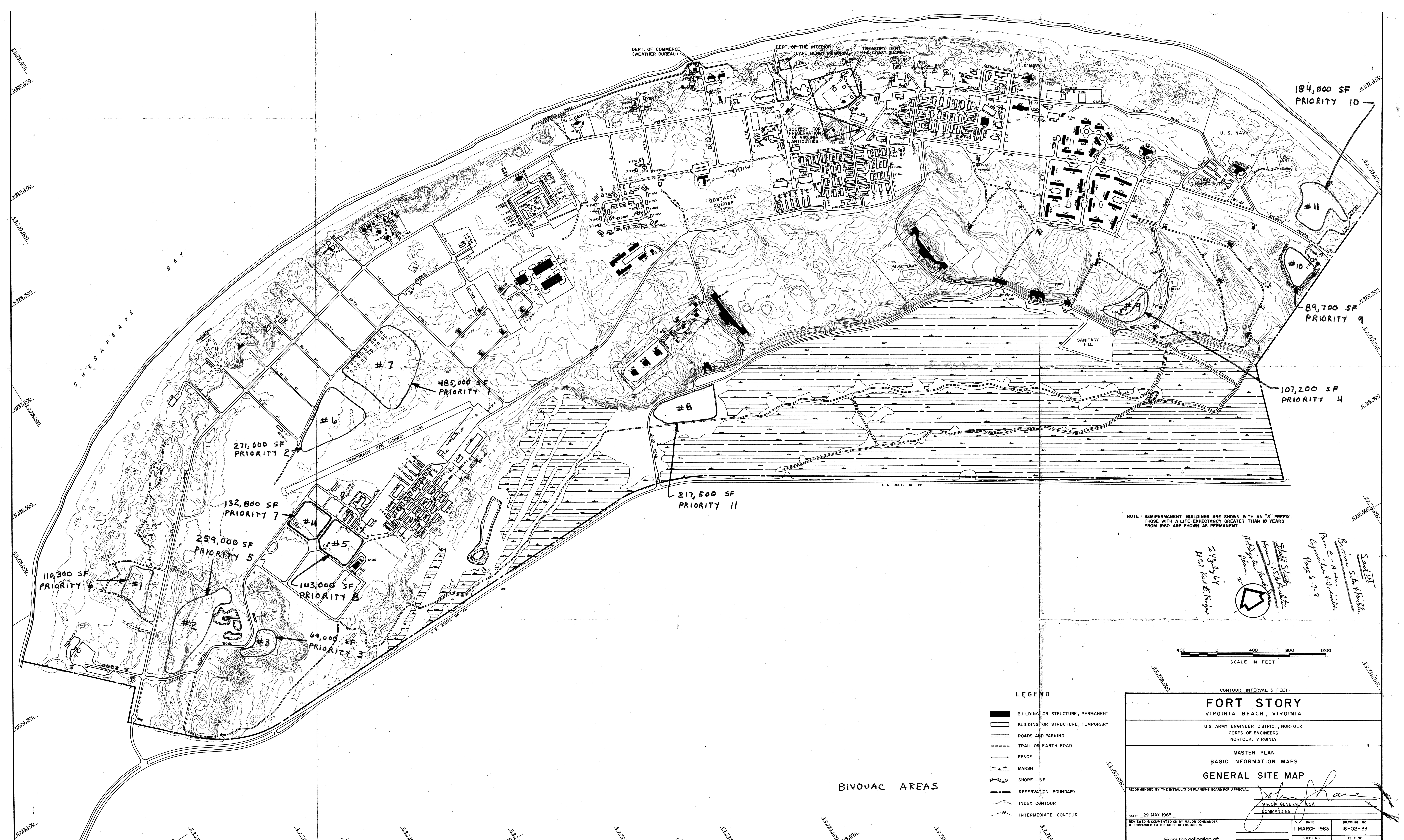
DATE: SEP 1982
SHEET NO. 1 OF 9
DRAWING NO. 18-06-05
FILE NO. FS 296-1:1

SUPERSEDES: RESERVATION PLAN OVERLAY FOLIO SITE MAP



ASTORE, ARCHITECTS & URBAN DESIGNERS


U. S. ARMY
CORPS OF ENGINEERS
TYPICAL TARGET FRAMES
SCALE: 3/8" = 1'-0"
REMOVABLE FRAMES
BOBBING TARGETS TYPE III (NOT IN CONTRACT).
CONT. ROPE FOR BOBBING TARGETS
TARGET FRAME HOLDER
GRADE
FIRE-IN MOUND
BOBBING TARGETS
STATIONARY TARGETS
PULLEY STAKES
TARGET LINE
FIRING POINT LINE - 22 CAL. ONLY
FIRING POINT LINE - 22 & 45 CAL.
FIRING POINT LINE - 45 CAL. ONLY
CHAMPIONSHIP FIRING POINT LINE
READY LINE
AMMUNITION ISSUE LINE
WAITING LINE
LINE OF SCORING CHARTS
144'-0"
PISTOL RANGE PLAN
SCALE: 1" = 30'
KNEELING TARGET E (NOT IN CONTRACT).
BOBBING TARGET STAVE (NOT IN CONTRACT).
2"x2" LIMIT STAKE (SEE DETAIL)
8d COMMON NAIL
PULLEY STAKES
90 DEG
45 DEG
1½"ø PULLEYS SECURE TO STAKES
OPERATING LINE (CONTINUOUS) 3/16" DIAM. TWISTED COTTON ROPE. RUN TO SCORING LINE.
TARGET ROD 2"x2"x 1'-3" (SEE DETAIL)
TOP OF PIVOT STAKE FINISH GRADE
DRIVE LIMIT STAKE FLUSH WITH TOP OF CROSSPIECE.
2"x2"x 1'-6" LIMIT STAKE (SEE DETAIL)
METAL PIVOT STAKE (SEE SPECIFICATION)
PLAN SCALE: 1½" = 1'-0"
FRONT ELEVATION
SIDE ELEVATION
SCALE: 1" = 1'-0"
BOBBING TARGET ASSEMBLY
TARGET CROSSPIECE
SCALE: 3" = 1'-0"
CONICAL
3'-0" FOR PULLEY STAKES
LIMIT STAKE (PULLEY STAKE SIMILAR)
SCALE: 3" = 1'-0"
TO BE MARKED ONE SIDE FOR LOCATING CROSSPIECE.
TARGET ROD
SCALE: 3" = 1'-0"
2"x6" CUT TO FIT
2"x4" TARGET FRAME LEG
PLAN A-A
SCALE: 3" = 1'-0"
GRADING PLAN
SCALE: 1" = 40'
FIRE-IN MOUND
FIRING AREA
TO ATLANTIC OCEAN
EXISTING CONC. RET. WALL
LEGEND
NEW GRADE
NEW CONTOUR
EXISTING CONTOUR
FIRING AREA - SEE NOTE No 2
INTERMITTENT STREAM
N 222,600
N 222,400
N 222,200
LOCAL SAND, FOR FILL
SLOPE 5:1
EXISTING SLOPE
FIRE-IN MOUND
EXISTING CONC. SLAB
NEW FILL
EL. 24.7
TARGET LINE
PISTOL RANGE
SECTION B-B
HOR. & VERT. SCALE: 1" = 10'
GENERAL NOTES
1. ELEVATIONS ARE REFERRED TO MEAN SEA LEVEL DATUM.
2. THE ENTIRE FIRING AREA AS INDICATED BY SHADING SHALL BE STABILIZED, FERTILIZED AND SEEDED.
3. PROVIDE FIXED-TARGET FRAMES AND HOLDERS, BOBBING-TARGET ASSEMBLIES (EXCEPT ACTUAL TARGET AND STAVE), STAKE TABLES, TARGET MARKERS, PULLEYS, PULLEY STAKES, AND ROPE.
4. DRIVE PULLEY STAKES 2'-4" INTO GROUND AND ATTACH PULLEYS 6" ABOVE FINISH GRADE.
CONC. BULKHEAD 12" THICK
BOBBING TARGETS
4"x4" STAKE TABLES
PLAN OF EXISTING SITE
SCALE: 1" = 40'
FERTILIZED & SEEDED
TOPSOIL
CLAY
LOCAL SAND SUB GRADE
BLOW-UP (SEE SPECIFICATION)
144.0'
SLOPE 1.0%
SLOPE VARIES
SECTION C-C
FIRING AREA
SCALE: 1" = 20'
ROUND INTERSECTION OF EARTH SLOPE WITH GROUND SURFACE.
SLOPE 4:1
SLOPE VARIES
TYPICAL SWALE OR DITCH SECTION
SCALE: 1" = 2'-0"
2"x10"x10"
1"x6"x4"
2"x2"x4'-6"
GRADE
TYPICAL STAKE TABLE
ONE AT EACH FIRING POINT.
SCALE: 1" = 1'-0"
INSTALL AT POINTS MARKED THUS: "□" ON PLAN.
1"x6"x4"
2"x2"x4'-2"
TYPICAL TARGET MARKER
ONE AT EACH FIXED TARGET
SCALE: 1" = 1'-0"
INSTALL 1'-0" IN FRONT OF TARGET.
REVISION | DATE | DESCRIPTION | BY | APP.
MILLS, PETTICORD & MILLS
WASHINGTON, D. C. NORFOLK, VIRGINIA
ARCHITECTS AND ENGINEERS
U. S. ARMY ENGINEER DISTRICT, NORFOLK
CORPS OF ENGINEERS
NORFOLK, VIRGINIA
FORT STORY, VA.
R & U PROJECT
REHABILITATE PISTOL RANGE
(IN AREA ONE)
RANGE PLAN, GRADING PLAN & SECTIONS, EXISTING PLAN
TARGET FRAMES, BOBBING TARGET ASSEMBLY & DETAILS
DRAWN: G.F.
TRACED: G.F.
CHECKED:
SUBMITTED:
Chief Civil Engineering Section
APPROVED:
Chief Design Branch
Chief Engineering Division
Col., Corps of Engineers, District Engineer
SCALE: AS SHOWN
APRIL 1958
SPECIFICATION
SHEET 1 of 1
DWG. NO. 84-06-01
P/R 13-58
NORFOLK DISTRICT FILE NO. FS 221-1.1
FS-235-01
FS(9)


CHESAPEAKE BAY
DEPT. OF COMMERCE (WEATHER BUREAU)
DEPT. OF THE INTERIOR CAPE HENRY MEMORIAL
TREASURY DEPT (U.S. COAST GUARD)
U.S. NAVY
SOCIETY FOR PRESERVATION OF VIRGINIA ANTIQUITIES
OBSTACLE COURSE
NAVY QUONSET HUTS
SANITARY FILL
TEMPORARY T/W RUNWAY
U.S. ROUTE NO. 60
184,000 SF PRIORITY 10
#11
#10
89,700 SF PRIORITY 9
#9
107,200 SF PRIORITY 4
#8
217,500 SF PRIORITY 11
#7
485,000 SF PRIORITY 1
#6
271,000 SF PRIORITY 2
132,800 SF PRIORITY 7
#4
#5
259,000 SF PRIORITY 5
143,000 SF PRIORITY 8
110,300 SF PRIORITY 6
#1
#2
#3
69,000 SF PRIORITY 3
NOTE: SEMIPERMANENT BUILDINGS ARE SHOWN WITH AN "S" PREFIX. THOSE WITH A LIFE EXPECTANCY GREATER THAN 10 YEARS FROM 1960 ARE SHOWN AS PERMANENT.
400 0 400 800 1200
SCALE IN FEET
CONTOUR INTERVAL 5 FEET
LEGEND
BUILDING OR STRUCTURE, PERMANENT
BUILDING OR STRUCTURE, TEMPORARY
ROADS AND PARKING
TRAIL OR EARTH ROAD
FENCE
MARSH
SHORE LINE
RESERVATION BOUNDARY
INDEX CONTOUR
INTERMEDIATE CONTOUR
BIVOUAC AREAS
FORT STORY
VIRGINIA BEACH, VIRGINIA
U.S. ARMY ENGINEER DISTRICT, NORFOLK
CORPS OF ENGINEERS
NORFOLK, VIRGINIA
MASTER PLAN
BASIC INFORMATION MAPS
GENERAL SITE MAP
RECOMMENDED BY THE INSTALLATION PLANNING BOARD FOR APPROVAL
MAJOR GENERAL - USA
COMMANDING
DATE: 29 MAY 1963
REVIEWED & COMMENTED ON BY MAJOR COMMANDER & FORWARDED TO THE CHIEF OF ENGINEERS
DATE
1 MARCH 1963
DRAWING NO.
18-02-33
SHEET NO.
FILE NO.

DATA ITEM NUMBER: STOR0001

INSTALLATION NAME:

0706 -
- ___ Fort A. P. Hill, VA
- ___ Camp McCain, MS
- ___ Radford Army Ammunition Plant, VA
- X Fort Story, VA
- ___ MTA Camp Clark, MO
- ___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: N/A

TITLE/DESCRIPTION: Army & Navy Gunnery Areas, Fiscal Year 1939

DOCUMENT DATE: 7/15/1939

PAGES COPIED: 3

DATA LOCATION:

REPOSITORY:
- X NA – College Park, MD
- ___ NA – Atlanta, GA
- ___ NA – Kansas City, KS
- ___ NA – Fort Worth, TX
- ___ NA – Philadelphia, PA
- ___ MHI - Carisle Barracks, PA
- ___ TSL&A – Austin, TX
- ___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 168, E 3[illegible], 3.478

DATE/TIME OF DOCUMENT INSPECTION: 6/19/07

RESEARCHER'S NAME: MK Henry

COMMENTS:

Includes map of Ft. Story area

REPRODUCED AT THE NATIONAL ARCHIVES

RG 68, E 348
B.478
(16)

UNITED STATES FLEET
AIRCRAFT BATTLE FORCE
CARRIER DIVISION TWO
U.S.S. YORKTOWN, Flagship

A4-3(3)/FF11-2
13-my(3079)

Fleet Air Detachment
U.S. Naval Air Station
Norfolk, Virginia
15 July 1938

From: Commander Carrier Division TWO.
To : FLEET AIR DETACHMENT.

Subject: Army and Navy Gunnery Areas, Fiscal Year 1939 - agreement concerning.

Enclosure: (A) Chart of F.A.D. Operating Areas dated 15 July 1938.

1. At a meeting of the Local Joint Army and Navy Planning Committee held at Fortress Monroe on 17 June 1938 the following agreement was made relative to assignment of gunnery and bombing areas to the Army and Navy in the vicinity of Hampton Roads:

(a) That the agreement reached at this meeting shall be effective throughout the fiscal year 1939 unless unforeseen contigencies arise which make changes mandatory to this agreement. Proposed changes shall be referred to the Local Joint Planning Committee.

(b) That the Coast Artillery restrict their gunnery and other firings to the Fortress Monroe and Fort Story areas, except in event of an emergency when the matter will be adjusted by the local commanders concerned. If these officers cannot agree the matter shall be referred to the Local Joint Planning Committee for study and recommendations.

(c) That both the Army and Navy Air Forces will keep clear of the danger areas of Fort Story and Fortress Monroe whenever firings are scheduled from those points.

(d) That the Army Air Corps is assigned the sea area at least two miles off-shore between Coast Guard Stations 163 and 166, through all practical altitudes and for an unlimited distance to sea, during forenoons only for a period of three consecutive weeks in each month, beginning with the first Monday of each calendar month.

(e) That the off-shore sea area between Coast Guard Stations 163 and 166 is available to the Navy at all times when this area is not assigned to the Army as described in subparagraph (d) above.

(f) That the operations of the Navy are unrestricted in the off-shore sea area south of Coast Guard Station 166 and north of Coast Guard Station 163 to latitude 37° 30' except for the Fort Story restricted area.

(g) That the operations of the Army are unrestricted north of latitude 37° 30'.

STOR0002

of the southern shore of the James River and of Hampton Roads.

(i) That in case any service finds it unnecessary to use the areas normally assigned to that service, it shall notify the other services as far in advance as is practicable in order that the other services may use the areas being temporarily abandoned.

(j) That Army and Navy aircraft be given free and direct access between their bases (or auxiliary fields) and their gunnery areas except in the restricted areas of Fort Story and Fortress Monroe.

(k) That each service shall keep the other services informed as far in advance as practicable of that service's contemplated operations in the areas assigned."

2. The above agreement automatically cancels all previous agreements made on the same subject. Aircraft of the Fleet Air Detachment will operate in accordance with the above agreement during the current fiscal year. Assumption will be made that areas assigned to the Army Air Corps and Coast Artillery are being used by these organizations unless definite word to the contrary is officially disseminated.

3. Fleet Air Detachment Operating Areas are defined as follows: (See Enclosure (A)).

S1. Sea and Inland Water Area east of Cape Charles bounded on the north by latitude 37° 30'N and on the south by the extension of a line from Smith Island Light to Chesapeake Lightship.

S2. Sea Area bounded by a line from Cape Henry to Fisherman's Island thence to the southern boundary of S1 and on the south by the northern boundary of S3.

S3. Sea Area within 20,000 yards of Cape Henry through bearings 45° to 145°.

S4. Off-shore area between C.G. 163 and C.G. 164.

S5. Off-shore area between C.G. 164 and C.G. 165.

S6. Off-shore area between C.G. 165 and C.G. 166.

S7. Off-shore area between C.G. 166 and C.G. 167.

S8. Off-shore area between C.G. 167 and C.G. 168.

S9. Off-shore area between C.G. 168 and C.G. 169.

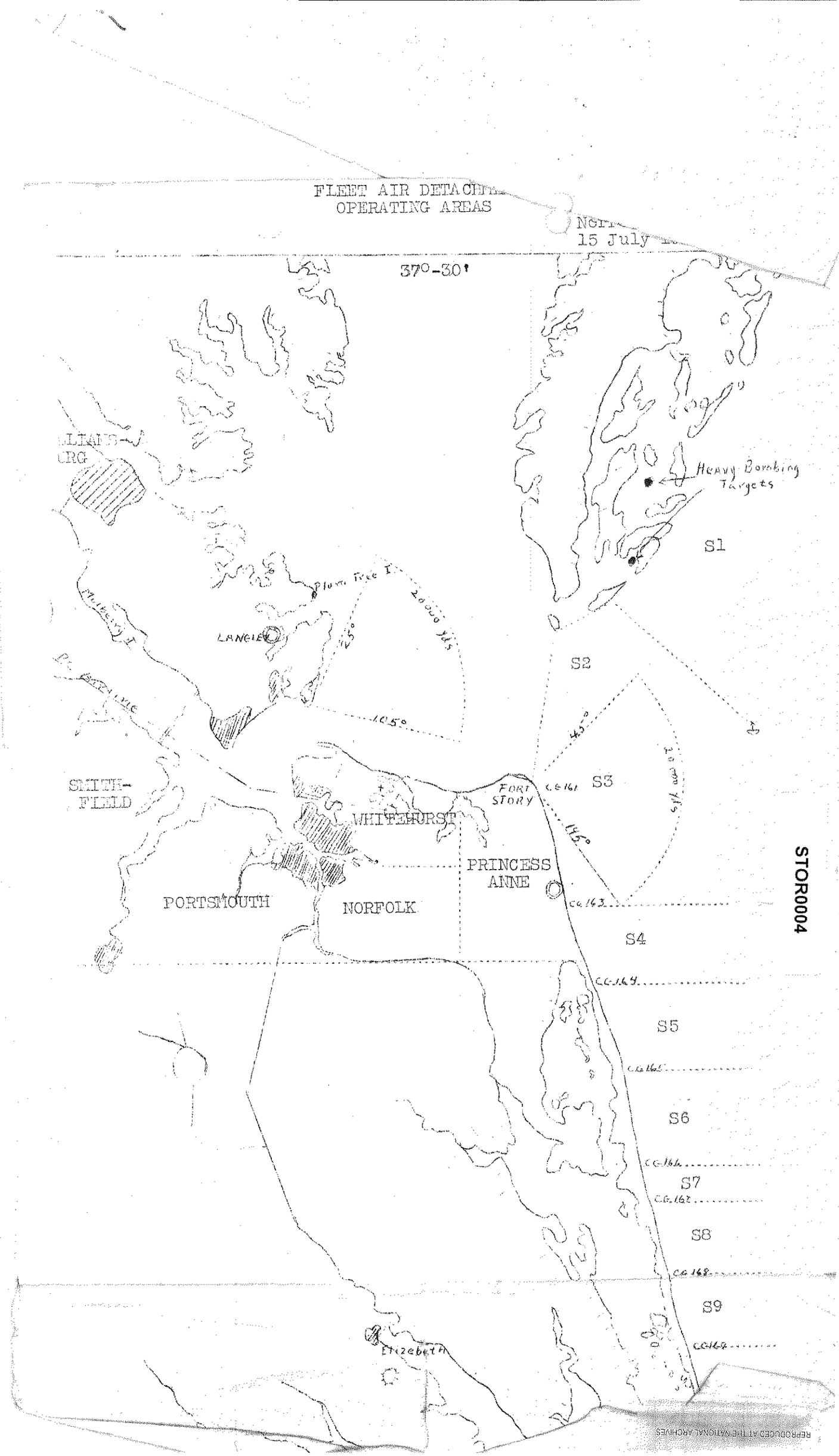
S10. Off-shore area between C.G. 169 and C.G. 170.

S11. Off-shore area between C.G. 170 and C.G. 171.

S12. Off-shore area between C.G. 171 and C.G. 172.

STOR0003

REPRODUCED AT THE NATIONAL ARCHIVES



STOR0004

REPRODUCED AT THE NATIONAL ARCHIVES

DATA ITEM NUMBER: STOR0005

INSTALLATION NAME:

0706 - ___Fort A.P. Hill, VA
___Camp McCain, MS
___Radford Army Ammunition Plant, VA
__/__Fort Story, VA
___MTA Camp Clark, MO
___Camp Bowie, TX

707- ___Fort William Henry Harrison, MT
___Camp Murray, WA
___Biak Training Center, OR
___Los Alamitos Armed Forces Reserve Center, CA
___Camp Roberts, CA

DATA SOURCE:

AUTHOR: US Army Signal Corps

TITLE/DESCRIPTION: firing range Ft. Story

DOCUMENT DATE: 5/16/1

PAGES COPIED: 2

DATA LOCATION:

REPOSITORY:

__/__NA – College Park, MD, Still Picture Branch
___NA – Atlanta, GA
___NA – NYC, NY
___NA – Philadelphia, PA
___NA – Waltham, MA
___MHI–Carlisle Brcks, PA

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL:

DATE/TIME OF DOCUMENT INSPECTION: _____

RESEARCHER'S NAME: _____

COMMENTS:

REPRODUCED AT THE NATIONAL ARCHIVES

STOR0006

6-248-6/AH-67 - SC 639231 1 May 1967

PROJECT: FORT STORY, VIRGINIA

FORT STORY, RECEIVES NEW M-16's

Members of the 408th Transportation Company, Fort Story, Virginia, are on the firing line of the post range to qualify with the newly received M-16 rifles.

Photographed by : Irvine
Post Photo Lab
Fort Story, Virginia

STOR0007

REPRODUCED AT THE NATIONAL ARCHIVES

DATA ITEM NUMBER: STOR0008

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
_x_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: P.S. Clark, The Coast Artillery School, Fort Monroe, Virginia

TITLE/DESCRIPTION: Memorandum concerning cooperative air missions.

DOCUMENT DATE: October 16, 1941

PAGES COPIED: 3

DATA LOCATION:

REPOSITORY:

_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 177, Entry 9, Box 31, Office of the Chief of Arms, Office of the Chief Coast Artillery Anti-Aircraft Command 1918-1942, Correspondence 323.41 – 334.1

DATE/TIME OF DOCUMENT INSPECTION: 6/23/07

RESEARCHER'S NAME: D. Horne

COMMENTS: Letter from P.S. Clark, The Coast Artillery School at Fort Monroe Virginia to the Chief of Coast Artillery. The letter discusses schedule of anti-aircraft training at Fort Story, Fort Monroe, Camp Pendleton, and Fort Eustis.

REPRODUCED AT THE NATIONAL ARCHIVES

THE COAST ARTILLERY SCHOOL
OFFICE OF THE COMMANDANT
FORT MONROE, VIRGINIA

October 16, 1941

Subject: Cooperative Air Missions.

To: The Chief of Coast Artillery.

1. Referring to your teletype dated October 8th, 1941, concerning the impending transfer of the 3rd Observation Squadron and the assignment of an Air Force unit to furnish the air missions for the Coast Artillery School and other Coast Artillery activities in this area, an analysis has been made and its main features presented below, of the missions requested, scheduled, cancelled and furnished for the period from June 9th to October 10th, 1941, both dates inclusive.

2. Under instructions from higher authority the 3rd Observation Squadron furnishes airplane missions to the Coast Artillery School with eight departments requiring generally different types of missions, the Coast Artillery Board, the Harbor Defenses of the Chesapeake Bay in this area which is composed of two batteries of the 2nd and two batteries of the 246th Coast Artillery at Fort Monroe, two batteries of the 246th Coast Artillery and the 71st Coast Artillery (AA) at Fort Story and the 74th Coast Artillery (AA) at Camp Pendleton, the eight training battalions which comprise the Coast Artillery Replacement Center at Fort Eustis, the Submarine Mine Depot, and on occasion, various other activities.

3. A tabulation of the totals for the period referred to above is as follows:

	C.A.S.	C.A.B.	H.D.	Repl. Cnter.	Misc.	Total
Requested	401	135	591	100	42	1279
Scheduled	363	125	497	89	30	1104
Cancelled	132	55	263	51	8	508
Furnished	231	70	234	38	22	596

4. The above tabulation is indicative only of actual past requirements and should not be considered as truly illustrative of future needs in as much as the Replacement Center initiated its schedule of tracking missions in July with a maximum of three scheduled missions per week. The training program of the Replacement Center has now been extended to include daily missions, one-third of which will be towing. In addition, the Harbor Defenses have not in the past requested all of the missions required to comply with current directives.

STOR0009

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5. Cancellations were broken down to show that of all missions cancelled, 186 or 36.7% resulted from lack of airplanes and the balance because of weather, failure of test equipment to arrive as scheduled, changes in training schedules, special troop missions, etc. The number of missions cancelled because of lack of airplanes is, however, significant.

6. The detailed analysis further indicated that of all missions scheduled, 824 were for tracking and 455 or 35% were for towing. Also that 330 missions were combined into 97, i.e., where it was possible for more than one agency to use the same plane, the missions were combined. In some instances as many as five agencies used the same plane.

7. As an indication of the daily and weekly upper and lower limits of missions requested and furnished, the following is illuminating:

	Day	Week
Highest number requested	23	97
Highest number furnished	11	45
Lowest number requested	6	59
Lowest number furnished	0	13

A tabulation of the daily and weekly averages of missions requested and furnished, data upon which the determination of airplane strength should be based, is presented below:

Daily average	Morning	Afternoon	Night	Total
Requested	4.4	4.8	2.6	13.5
Scheduled	3.5	3.5	2.6	11.9
Cancelled	1.7	1.87	1.4	5.5
Furnished	1.9	1.6	1.2	6.4
Weekly average				
Requested	21.8	23.8	13.2	66.3
Scheduled	17.7	17.7	13.0	58.1
Cancelled	8.3	9.3	7.4	26.7
Furnished	9.4	8.2	6.1	31.4

Note: The morning, afternoon and night averages cover only a nine week period and are included to show the proportion of mission performed during these hours. The totals cover the entire nineteen week period and are therefore more accurately indicative of actual conditions.

STOR0010

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8. It is clear then, that of all daily missions requested, only 88% could be scheduled and disregarding all cancellations except those incident to lack of airplanes, only 66.6% could be furnished. The weekly average shows slight change, being 87.6% and 72.85% respectively. These figures are based on an airplane strength of seven O-47A and two B-10B airplanes. Of the former, one was lost at sea in August, a second was damaged so severely when a P-40C taxied into it that a major overhaul is required and a third was slightly damaged when landed with the wheels retracted. The latter is at present in the Depot and is expected to be available within a short time. The accidents which made the latter two planes ineffectives occurred during the latter part of September and cannot be said to seriously affect the data presented.

9. No mention has been made of the airplane requirements for the Unit training program, flying for pilot proficiency and administrative requirements. At least three airplanes are necessary for these purposes alone. Unit training and pilot proficiency have suffered severely because the urgent requirements of the Coast Artillery units has not permitted releasing airplanes for these missions. Administrative flights have been permitted only when necessary and whenever possible have been combined with some phase of training.

10. From the above data it is evident, considering the past requirements of the Coast Artillery only, that a minimum airplane strength of five airplanes in operating condition is essential to meet the demand. This, of course, does not take into consideration the increased requirements of the Coast Artillery Replacement Center, as mentioned above, nor of the fact that because of limited equipment the Harbor Defenses have not requested all of the missions desired and which are required by Training Directives, nor that the greater majority of the missions furnished the Coast Artillery Board are classed as urgent since the investigations and decisions of the Board effect modification and the production of new equipment and that any delay in these matters may have a serious repercussion resulting from the slowing down or stoppages in plants manufacturing badly needed materiel. These further factors considered, the number of operating planes required can justifiably be increased to seven. Add to this figure the three required for Unit training and incidental flying and three in reserve for maintenance inspection, overhaul, engine change, minor and major repair and other causes and a required strength of thirteen airplanes assigned is demonstrated. Of these, not less than one-third should be equipped for towing.

11. In view of the increasing speed of modern airplanes consideration should be given to assigning faster ships in order that the using personnel may be accustomed to tracking and firing on targets that more nearly approach the speed of aircraft that they may be expected to engage. Also there is only a very limited need for a Liasison type of airplane. Because of the limitations inherent in this type craft, it can be used only for occasional observation missions and short administrative missions.

9 NOV OCT 9 6 1941 OCGA

F. S. CLARK,
Brigadier General, C.A.C.,
Commandant.

STOR0011

DATA ITEM NUMBER: STOR0012

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
__x_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: unknown

TITLE/DESCRIPTION: Map of Fort Story

DOCUMENT DATE: unknown

PAGES COPIED: 1

DATA LOCATION:

REPOSITORY:

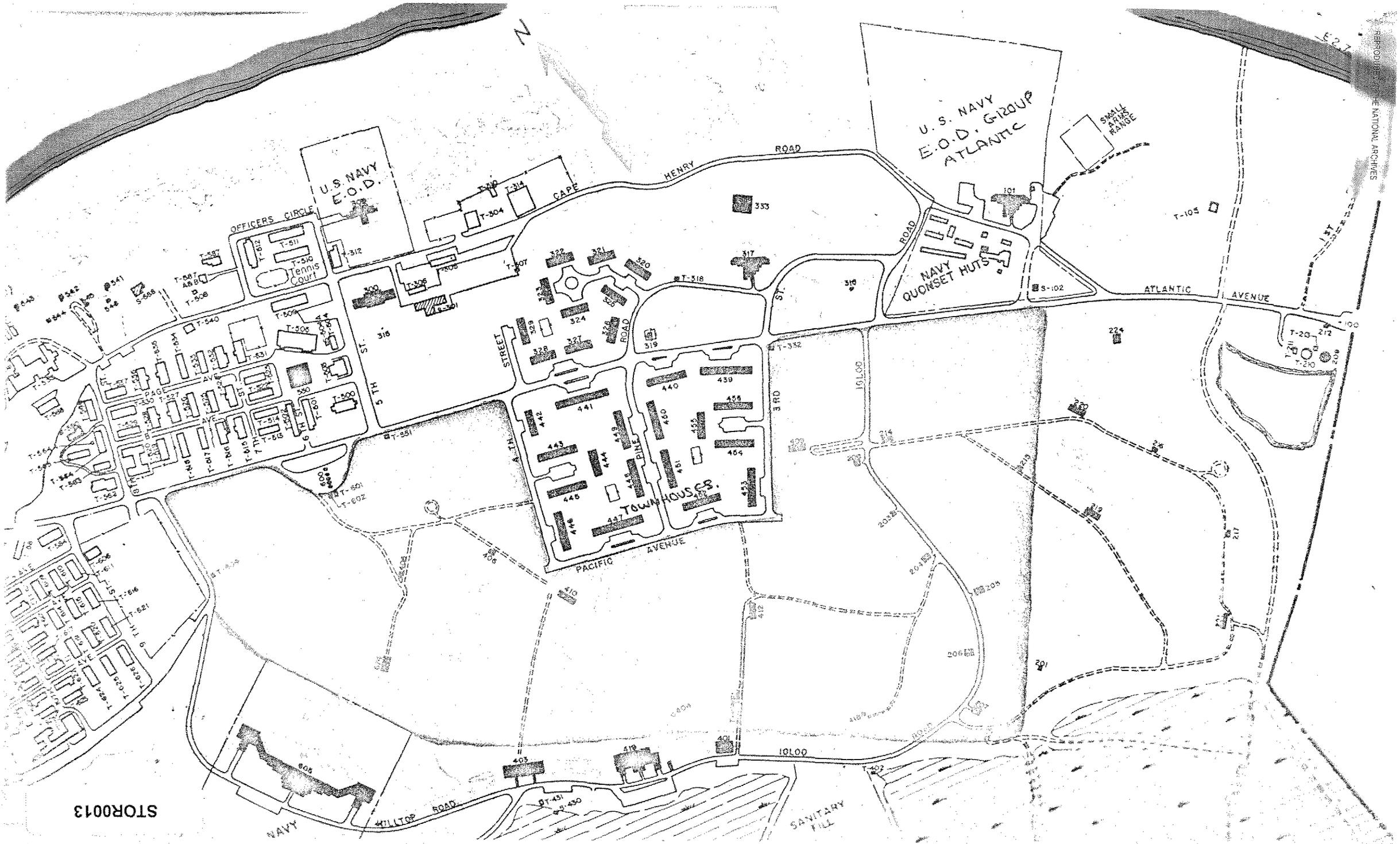
_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 429, Entry 12, Box 49, Organizations in the Executive Office of the President, Records of the Federal Property Council: Central Real Property Surveys, File Name Fort Story Military Reservation

DATE/TIME OF DOCUMENT INSPECTION: 6/15/07

RESEARCHER'S NAME: D. Horne

COMMENTS: Map of the Fort Story facility that includes small arms range.


U.S. NAVY E.O.D.
U.S. NAVY E.O.D. GROUP ATLANTIC
NAVY QUONSET HUTS
SMALL ARMS RANGE
OFFICERS CIRCLE
CAPE HENRY ROAD
ATLANTIC AVENUE
PACIFIC AVENUE
IGLOO
TOWNHOUSES
Tennis Court
NAVY
SANITARY FILL
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STOR0013

DATA ITEM NUMBER: STOR0014

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
_X_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: Department of Army

TITLE/DESCRIPTION:

Training Facilities Completed

DOCUMENT DATE: February 21, 1941

PAGES COPIED: 2

DATA LOCATION:

REPOSITORY:

_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL:

RG 407, Entry 363-A, Box 3964, Adjutant General's Office, Army AG Project Decimal File , 1940-45, 614 (8-1-40 to7-31-41)

DATE/TIME OF DOCUMENT INSPECTION: June 23, 2007

RESEARCHER'S NAME: D. Horne

COMMENTS:

Table with Fort Story listing status of completion of firing range.

GENERAL FILE

PERSONNEL FILE

BULKY PACKAGE FILED IN ROOM STORAGE

DRAWER No. _____

CLASS No. AG 614

PAPER No. 1-30-41

CASE OF 8-13-40 (1)

REMARKS: Miscellaneous reports from the armies, and army corps concerning the progress of construction of training facilities

4/21/41 lc

STOR0015

Form No. 625, A. G. O.
Ed. No. 27-22.

U. S. GOVERNMENT PRINTING OFFICE 16—18452

STOR0016

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STATION	NATURE	TRAINING FACILITIES WHEN REQUIRED	TRAINING FACILITIES COMPLETE OR ESTIMATED DATE	ADEQUACY	REMARKS
THIRD COAST ARTILLERY DISTRICT					
Fort Monroe, Va.	Ranges, small arms and pistol	Available	Complete	Satisfactory	Plans now being prepared for increases in AA and Mobile Arty. FP
Fort Story, Va.	Ranges, small arm	Current	April 1st	Satisfactory	Now under construction
	Artillery TP	Available	Complete	Satisfactory	
	Ranges, 1000" and pistol	Available	Complete	Satisfactory	
Camp Pendleton, Va.	Ranges, small arm	Available	Complete	Satisfactory	
	Firing Points, Arty.				Plans prepared; will be submitted at an earl
	Bivouac & Maneuver Areas	April			Surveys underway dat

Resume of report held in Hq 1st Army as of February 21, 1941.

Incl. #3

Incl #3

STOR0017

DATA ITEM NUMBER:

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
__x_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: F.S. Clark, The Coast Artillery School, Fort Monroe, Virginia

TITLE/DESCRIPTION: Memorandum concerning additional towing airplanes and towing windlasses for 3d Observation Squadron, The Coast Artillery School

DOCUMENT DATE: December 23, 1940

PAGES COPIED: 3

DATA LOCATION:

REPOSITORY:

_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 177, Entry 9, Box 31, Office of the Chief of Arms, Office of the Chieft Coast Artillery Anti-Aircraft Command 1918-1942, Correspondence 323..41 – 334.1

DATE/TIME OF DOCUMENT INSPECTION: 6/23/07

RESEARCHER'S NAME: D. Horne

COMMENTS: Letter from P.S. Clark, The Coast Artillery School at Fort Monroe Virginia to the Chief of Coast Artillery. The letter discusses additional towing airplanes and towing windlasses for 3d Observation Squadron at the Coast Artillery School. Fort Story is listed as performing cooperative air mission for the 71st Coast Artillery and 246th Coast Artillery.

REPRODUCED AT THE NATIONAL ARCHIVES

THE COAST ARTILLERY SCHOOL
FORT MONROE, VIRGINIA

December 23, 1940.

Subject: Additional Towing Airplanes and Tow[illegible] Assignments for 3d Observation Squadron, The Coast Artillery School.

To: Chief of Coast Artillery.

Reed 12-26-40

1. Reference is made to the following communications:

352.14/[illegible]

a. War Department letter dated Nov. 12, 1940, Subject: "Exempted Stations" (AGO 352-10/19/40-M-Misc. C-C). This letter lists the Coast Artillery School, the Coast Artillery Board, and the 3d Observation Squadron (A.C.) (Stationed at Langley Field, Va.) as remaining in an exempted status, and under the direct supervision of the Chief of Arm.

352.14/[illegible]

b. War Department letter dated Dec. 9, 1940, Subject: "Exempted Stations", (AGO 352-12/4/40-M-[illegible], C-C). This letter refers to the letter of November 12, 1940 and states: "It is the intention that these Air Corps units be assigned to the schools indicated and that they operate under the supervision of the Chief of Arm having control of the school".

2. a. The 3d Observation Squadron performs cooperative air missions as follows:

Fort Monroe, Va.-
The Coast Artillery School.
The Coast Artillery Board.
The 74th Coast Artillery (AA)
Battery C, 2d Coast Artillery
Special demonstrations
(Additional batteries of the 246th Coast Artillery, now used in harbor defense armament, will be used in establishment armament at Fort Monroe [illegible] near future).

Fort Story, Va.
71st Coast Artillery (AA)
246th Coast Artillery (3" AA batteries)

Camp Pendleton, Va.
213th Coast Artillery (AA)

-1-

353/[illegible]

STOR0018

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b. Antiaircraft artillery troops at Fort Monroe, in addition to performing their own training, are used practically continuously, and those at Fort Story occasionally, in antiaircraft work of the Coast Artillery School and the Coast Artillery Board, and frequently for special demonstrations for visiting missions. No other troops are available for this work. Having all of the cooperative air missions performed by the 3d Observation Squadron, under one coordinating head, results in economy of time and number of air missions and prevents interference and conflicts of missions that might result from operation of two squadrons, each under separate command, in the same general area.

3. The 3d Observation Squadron has made, and continues to make, every possible effort to carry out required missions, but has been continuously handicapped by insufficient planes and target towing equipment of suitable types and in good condition. The Coast Artillery commanders, and the Coast Artillery air liaison officer have made every possible effort to keep down the number of missions required, and to use missions concurrently for different purposes, in so far as possible while meeting training needs. The number of missions required will be greatly increased in the near future because of larger numbers of students at the Coast Artillery School and increases in antiaircraft artillery troop training requirements.

4. I plan to have a study made of the number of planes of different types, target towing equipment and personnel, required by the 3d Observation Squadron for probable future cooperative missions. Observation planes can perform tracking missions satisfactorily, but for target towing missions larger planes with O-5 towing windlasses are essential. B-10 planes are used at present but are not satisfactory as they require a large amount of maintenance, cannot reach required altitudes, and with towing windlass installed are open underneath so that they are cold for personnel when flying in cold weather.

5. At present the 3d Observation Squadron has the following planes:

8 planes, O-47A - not equipped for towing, but can be used on tracking missions.
1 plane, O-47A - equipped with O-4 windlass, for which it is very difficult to procure repair parts.
1 plane, B-10, equipped with O-5 windlass.
1 plane, B-10, now at Middletown Air Depot awaiting installation of a O-5 windlass.
1 plane, O-52, observation type.

6. It is essential that the 3d Observation Squadron have at least four B-10 planes, or better, equipped with O-5 windlasses, in addition to observation planes.

-2-

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STOR0019

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7. In order to improve conditions in the immediate future, it is urgently recommended that:

a. Installation of the C-5 windlass in the B-10 plane now at Middletown Air Corps Depot be accomplished at once and the plane returned.

b. Two additional B-10, or preferably B-18, planes, equipped with C-5 windlasses be furnished as soon as practicable.

Prompt action on these recommendations is extremely important. In the past it has frequently occurred that no plane equipped for towing has been available, or that missions started have not been completed, on account of material failure. Recently it was necessary to obtain assistance from the Navy in order to provide towing missions. Training of antiaircraft artillery is being seriously handicapped.

8. As a basis for future planning, information is requested as to what types and numbers of planes will become available for the 3d Observation Squadron within the next few months. Prior to detailed study, it appears that minimum requirements will be:

4 B-10 planes, all equipped with C-5 windlasses for towing missions

6 Observation planes, for tracking missions.

9. Attention is invited to the inclosed copy of a letter dated December 6, 1940 from the Commanding General, First Army to the Commanding General, 3d Coast Artillery District, subject: "Tracking and Towing Missions for Fixed AA Batteries (First Army file no. AG-Misc-P-353), and 2d and 3d Indorsements thereon. A copy of the present communication has been furnished for the Commanding General, 3d Coast Artillery District.

F. S. CHASE,
Brigadier General, U.S.A.,
Commandant.

3 incl. as stated

353 / I 17

STOR0020

DATA ITEM NUMBER: STOR 0021

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
_X_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: Cotter, CE, Major, Coast Artillery Corps, Senior Member Present, Fort Monroe, VA

TITLE/DESCRIPTION: Letter regarding Air Corps Cooperative Flying Equipment

DOCUMENT DATE: 10/29/1934

PAGES COPIED: 2 pages

DATA LOCATION:

REPOSITORY:

_X_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL:
RG 177, Entry 9, Box 30, Office of the Chief of Arms, Office of the Chief Coast Artillery Anti-Aircraft Command 1918-1942, Correspondence 353/CT-FN

DATE/TIME OF DOCUMENT INSPECTION: 6/23/2007

RESEARCHER'S NAME: Horne, D

COMMENTS:

REPRODUCED AT THE NATIONAL ARCHIVES

O. C. C. A 353/CS-31

COAST ARTILLERY BOARD
Fort Monroe, Virginia.

Project No. 1012

October 29, 1934.

SUBJECT: Air Corps Cooperative Flying Equipment.

TO: Chief of Coast Artillery, Washington, D. C.,
(THRU Commandant, C. A. School).

471.307/A-15

1. Because of interference by shipping in field of fire of .50 caliber machine guns, it is expected that the Coast Artillery Board firings in connection with Project No. 1012, Antiaircraft Machine Gun Fire Control, will be held at Fort Story. The majority of the .30 caliber firings on that project have been completed. The period October 29 to November 10 will be used by the Coast Artillery School for instructional firings. Accordingly, the .50 caliber firings have been scheduled to commence November 12 and to continue until completed, probably about December 7.

2. The progress of the .30 caliber firings thus far has been materially expedited by the punctual and efficient service given by the Air Corps cooperative unit, using three Type O-25-C airplanes. This unit has given exceptionally prompt and reliable service. The Commanding Officer, Langley Field, now reports that due to the prospective loss of one O-25-C plane, through shipment to Wright Field, cooperative service at Fort Story may be hindered to some extent because of the normal requirement that each plane spend a certain amount of time in overhaul and maintenance, leaving no extra plane to take care of emergencies occurring during the execution of missions. The inclosed radiograms state the situation in this regard. It is particularly desirable that the flying missions for the Coast Artillery Board tests be carried out promptly in order that all firings may be completed before the advent of winter weather.

3. It is recommended that, if deemed advisable by you, the Chief of Air Corps be requested to revoke the order for transfer of one O-25-C plane or in the event transfer cannot be cancelled, that the transfer be delayed until after December 10, 1934.

4. It is further requested that any modification of the present orders in regard to transfer of the O-25-C plane be sent by radio.

C. E. COTTER,
Major, Coast Artillery Corps,
Senior Member Present.

2 Incls (Radiograms)

To Chief of Coast Artillery:

353/CS-31

Fort Monroe—8-13-26-2000

J. P. T. - 1 -

STORAGE A

REPRODUCED AT THE NATIONAL ARCHIVES

2nd Ind. 3/20/34 Flight "A" 16th Obs.Squadron To: C.O. C.A.S. thru C.O. Langley Field, Virginia.

1. The program submitted above will require more personnel than is now available with this organization. This condition exists through the loss of personnel assigned to the air mail project.

2. If present conditions continues it is very probable that adjustments and curtailments will be necessary in the schedule of aerial missions requested.

353-AC-CA(Flight A)

3d Ind. 3/20/34 Hq. Langley Field, Va. To: District Commander 3rd C.A.D.

1. The normal complement of Flight A, 16th Observation Squadron, is six pilots and observers, and three observation airplanes. There are now present for duty, 1 officer observer(Commanding Flight), 1 enlisted pilot, and two airplanes in commission.

2. It is obviously impracticable to carry out the schedule herewith submitted. One plane and one team (pilot and observer) can be made available on call for any daylight flight desired. No night flight should be attempted under the present conditions.

353-AC-CA (3-16-34)

4th Ind. 3/23/34 C.A.S. To: C. of C.A.

1. School training will be affected very adversely if no night flights can be conducted and if but one team is available.

2. Request action be taken with a view to performing the missions indicated in the basic letter.

(9)

STOR0022

DATA ITEM NUMBER: STOR0023

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
__x_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: H.L. Steele, The Coast Artillery School, Fort Monroe, Virginia

TITLE/DESCRIPTION: Memorandum discussing total flying hours for Fiscal Year 1935

DOCUMENT DATE: December 1, 1934

PAGES COPIED: 4

DATA LOCATION:

REPOSITORY:

_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 177, Entry 9, Box 30, Office of the Chief of Arms, Office of the Chief Coast Artillery Anti-Aircraft Command 1918-1942, Correspondence 353/CT-FN

DATE/TIME OF DOCUMENT INSPECTION: 6/23/07

RESEARCHER'S NAME: D. Horne

COMMENTS:

Aerial missions for antiaircraft firing for 1934-1935 for Fort Story and Fort Monroe. Fort Story is listed for seacoast firing as well as aerial cooperation missions for 1935.

REPRODUCED AT THE NATIONAL ARCHIVES

THE COAST ARTILLERY SCHOOL, Fort Monroe, Virginia, December 1, 1934 -- To Chief of Coast Artillery.

1. The aerial missions required by The Coast Artillery School during the remainder of the current fiscal year are as follows:

a. For Antiaircraft Firing -- Regular Course, 1934-35.

Locality	Dates	Hours per day	Total Hours	Planes	Mission
Fort Monroe Objective -- Ft.Monroe	4/29	5	5	1 1	Tracking drill Searchlight drill
Fort Monroe	4/30	7-1/4	7-1/4	1	Tow target for AA gun and machine gun firing.
Fort Monroe	5/1	3	3	1	"
Fort Monroe	5/2	7-1/4	7-1/4	1	"
Fort Monroe	5/3	5-1/4	5-1/4	1	"
Fort Monroe	5/6	7-1/4	7-1/4	1	"
Fort Monroe	5/7	7-1/4	7-1/4	1	"
Fort Monroe firing point	5/7	1/4	1/4	Minimum of 3 planes	Simulate attack on gun position using tactics and formations of attack aviation
Fort Monroe	5/8	3	3	1	Tow target for AA gun and machine gun firing.
Fort Monroe	5/9 and 5/10	-- Plane to stand by to tow targets in case inclement weather has prevented completion of scheduled firing.			

353/C5-31

STOR0024

REPRODUCED AT THE NATIONAL ARCHIVES

b. For Seacoast Firing, Regular Course, 1934-35.

Locality	Dates	Hours per day	Total hours	Planes	Mission
Off Ft.Story	6/13	2	2	1	Spot for 155 mm firing
"	6/14	3	3	1	"
"	6/19	4	4	1	Spot for 8" firing
"	6/20	2	2	2	Drill for battle practice
"	6/21	3	3	2	Spot for battle practice

2. So far as can be foreseen at the present time, the Coast Artillery Board requirements for aerial cooperation missions during the remainder of the fiscal year 1935 will be as follows:

Locality	Date	Hours per day	Total hours	Planes	Mission
Ft. Story	12/3-7	6	30	1	Tow target, Project 1012
Ft. Story	12/10-14	6	30	1	"
Ft.Monroe	April-May (Tentative)	3	6	1	Tow target, test of Spotter T5.
Ft.Monroe	April-May (Tentative)	3	30	1	Tow target and tracking, test of two-station Frankford Arsenal Height Finder.
Ft.Monroe	March (Tentative)	3	12	1	Tow target, test of T-25 AA machine gun mount, modified.
Ft.Monroe	June	3	12	1	Observation & radio, High Speed Target, Project 953.

STOR0025

353/(CS-9)

REPRODUCED AT THE NATIONAL ARCHIVES

3. The last four entries in the table of Coast Artillery Board requirements are based upon the possibility that the materiel mentioned will be ready for test during the fiscal year 1935, although there is at present no definite assurance that such will be the case.

H. L. STEELE,
Colonel, C.A.C.,
Asst. Commandant.

2 incls - no change.

BACK DEC 3 1934 O.C.C.A.
2 Incs.

353/CS-31 7th Ind.

War Department, O.C.C.A., April 15, 1935 - To Commandant, Coast Artillery School.

Information is requested as to the present prospects of securing the necessary planes from Langley Field to carry out the missions outlined in the 6th Indorsement.

For and in the absence of the Chief of Coast Artillery:

F. P. HARDAWAY.
Lt. Colonel, C.A.C.,
Acting Executive Assistant.

2 Incls--No change.

REC'D C.A. SCHOOL FORT MONROE, VA. APR 16 1935

8th Ind.

THE COAST ARTILLERY SCHOOL, Fort Monroe, Va. April 17, 1935. To: Chief of Coast Artillery.

1. The two planes at Langley Field have been placed in as good condition as possible. Barring accidents to either, the entire program for antiaircraft firing as outlined in 6th Ind. can be carried out without interruption. However, there has been no firing period in the past which has been free from interruption due to minor accidents and there

STOR0026

353/CS-31,

REPRODUCED AT THE NATIONAL ARCHIVES

1st Ind.

THE COAST ARTILLERY SCHOOL, Fort Monroe, Va. October 29, 1934. To: Chief of Coast Artillery.

1. The transfer of one O-25-C plane from Langley Field will seriously handicap the instruction work at the Coast Artillery School.

2. It is strongly recommended that the transfer order be revoked.

JOS. P. TRACY,
Brigadier General, U.S. A.,
Commandant.

2 Incls.

REC'D OCT 30 1934 O.C.C.A.

2 Incs.

353/CS-31 2nd Ind.

War Department, O.C.C.A., October 31, 1934. - To President, Coast Artillery Board (THRU Commandant, Coast Artillery School, Ft. Monroe, Virginia).

Arrangements have been made whereby the transfer of this plane will be delayed until December 1, 1934. It is requested that this office be notified on November 27th as to the necessity for the further use of this plane.

By order of the Chief of Coast Artillery:

H. T. BURGIN,
Lt. Colonel, C.A.C.,
Executive Assistant.

2 Incls.
(No change)

REC'D C. A. SCHOOL FORT MONROE, VA. NOV 1 1934
TO: PRESIDENT, C. A. BOARD

RECEIVED NOV 8 1934

STOR0027

353/CS-31

Fort Monroe—8-13-26-2000

IMMEDIATE ACTION

DATA ITEM NUMBER: STOR0028

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
__x_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: Colonel H.L. Steele, Coast Artillery Corps

TITLE/DESCRIPTION: Memorandum from Colonel H.L. Steele to the President of Coast Artillery Board

DOCUMENT DATE: May 11, 1931

PAGES COPIED: 1

DATA LOCATION:

REPOSITORY:

_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 177, Entry 9, Box 30, Office of the Chief of Arms, Office of the Chief Coast Artillery Anti-Aircraft Command 1918-1942, Correspondence 353/CT-FN

DATE/TIME OF DOCUMENT INSPECTION: 6/23/07

RESEARCHER'S NAME: D. Horne

COMMENTS:

Memorandum from Colonel H.L. Steele of Coast Artillery Corps to President of Coast Artillery Board requesting list of Air Corps missions required by the Coast Artillery Board be submitted.

Below this memo on lower part of page is another from Colonel J.C. Ohnstead dated May 16, 1931 to the Chief of Coast Artillery. In this memo, it is stated that Fort Story will have a total of four tow target missions for antiaircraft firing during the Fall of 1931.

REPRODUCED AT THE NATIONAL ARCHIVES

353/CS-19 1st Wrapper Ind.

War Department, O.C.C.A., May 11, 1931 - To the President, Coast Artillery Board (THRU the Commandant, Coast Artillery School).

353/CS-18

It is desired that a list of Air Corps missions required by the Coast Artillery Board be submitted as soon as practicable. This list should not include any missions which may have been reported in connection with letter AG 353 (2-26-31) Misc., same subject, dated March 2, 1931, which requested a report on requirements for the Coast Artillery School and the Third Coast Artillery District.

By order of the Chief of Coast Artillery:

H. L. STEELE,
Colonel, Coast Artillery Corps,
Executive Assistant.

REC'D C. A. SCHOOL FORT MONROE, VA. MAY 12 1931

TO: President,
C. A. Board.
R.K.T.

RECEIVED MAY 12 1931 373 CAB

2d Wrapper Ind.

COAST ARTILLERY BOARD, Ft. Monroe, Va., May 16, 1931 - To Chief of Coast Artillery (THRU Commandant, C. A. School).

1. The following is the general statement of the air missions that will be required by the Coast Artillery Board during the Fiscal Year 1932:

a. One mission to photograph gas concentration to be placed over Battery DeRussy.

b. About 6 tracking missions for tests of Lavallois Stereoscopic Height Finder, provided that this test is to be held at Fort Monroe. If this test is to be held at the Aberdeen Proving Ground, the same number of missions will be required at that station.

c. Four tow target missions for antiaircraft firings at Fort Story during the Fall of 1931.

d. Four tow target missions for machine gun firings.

e. Four night missions in connection with test of mortar pit illumination.

J. C. OHNSTAD
Colonel, C.A.C.,
President.

REC'D C. A. SCHOOL FORT MONROE, VA. MAY 15 1931

To Chief of Coast Artillery.

S.O.E. & R.K.T.
S.D.E.

9 BACK MAY 19 1931 R.C.S.A.

STOR0029

DATA ITEM NUMBER: STOR0030

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
__x_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: Colonel H.L. Steele, Coast Artillery Corps

TITLE/DESCRIPTION: Memorandum from Colonel H.L. Steele to the President of Coast Artillery Board

DOCUMENT DATE: May 19, 1931

PAGES COPIED: 2

DATA LOCATION:

REPOSITORY:

_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 177, Entry 9, Box 30, Office of the Chief of Arms, Office of the Chief Coast Artillery Anti-Aircraft Command 1918-1942, Correspondence 353/CT-FN

DATE/TIME OF DOCUMENT INSPECTION: 6/23/07

RESEARCHER'S NAME: D. Horne

COMMENTS:

Special delivery letter from Colonel H.L. Steele of Coast Artillery Corps to President of Coast Artillery Board requesting list of Air Corps missions be submitted in proper format by June 1, 1931.

Below this memo on lower part of page is another from Colonel J.C. Ohnstead dated May 21, 1931 to the Chief of Coast Artillery. In this memo, the missions are listed from July 1, 1931 through June 30, 1932. In addition , it is stated that Fort Story will conduct tow target missions.

REPRODUCED AT THE NATIONAL ARCHIVES

SPECIAL DELIVERY LETTER

This communication will receive the immediate attention given to a telegram, and prompt action will be taken when necessary.

IN REPLY REFER TO

WAR DEPARTMENT
OFFICE OF THE CHIEF OF COAST ARTILLERY
WASHINGTON

353/CS-19 3d Wrapper Ind.

War Department, O.C.C.A., May 19, 1931 - To the President, Coast Artillery Board (THRU the Commandant, Coast Artillery School), Ft.Monroe,Va.

1. Attention is invited to Paragraph 2 of the enclosed letter which indicates the form in which the list of missions must be submitted. This office is unable to compile the information required from 2d Wrapper Indorsement.

2. It is desired that the list of missions be submitted in the form prescribed with the least practicable delay as the information must be furnished to the War Department by June 1, 1931.

By order of the Chief of Coast Artillery:

H. L. STEELE,
Colonel, Coast Artillery Corps,
Executive Assistant.

REC'D C. A. SCHOOL FORT MONROE, VA. MAY 21 1931

RECEIVED MAY 21 1931 CAB

To: President,
C. A. Board,
R.K.T.

373 4th Wrapper Ind.

COAST ARTILLERY BOARD, Ft. Monroe, Va., May 21, 1931 - To Chief of Coast Artillery (THRU Commandant, C. A. School).

1. The following is the list of missions, for the information required in the basic letter, that will be required by the Coast Artillery Board during the period July 1, 1931, to June 30, 1932.

2. The total number of missions required is 19, divided as follows:

a. Types of missions desired: photographic, tracking, tow target, and observation.

b. Number of missions of each type: one photographic, six tracking (without target), four tow target for antiaircraft guns, four tow target for antiaircraft machine guns, and four for night observation.

c. Where individual missions are to be executed: photographic at Fort Monroe, Virginia; tracking at Fort Monroe, Virginia, or Aberdeen Proving Ground; tow target missions for guns, Fort Story, Virginia; tow target missions for machine guns, Fort Monroe, Virginia; night observation missions at Fort Monroe, Virginia.

STOR0031

Form No. 22— O. C. C. A.

3—8157

IMMEDIATE ACTION

REPRODUCED AT THE NATIONAL ARCHIVES

IN REPLY
REFER TO

WAR DEPARTMENT

(4th Ind., CABoard File 373 cont'd)

d. Date of each individual mission: The exact dates of the individual missions cannot at this time be given since they will depend upon receipt of materiel to be tested, which information is not at present available to the Coast Artillery Board. The photographic mission is for photographing of gas concentration of Battery DeRussy, which will take place sometime in July, this year. The tracking missions are for the test of the Levallois Height Finder, which test should take place in June or July. Tow target missions for guns will take place about the first or second week of October. The machine gun missions and night observation missions will depend upon the receipt of machine gun ammunition and upon the installation of lights in the mortar pits.

e. Estimated number of flying hours per pilot for each mission: photographic mission, one hour; tracking missions, each four hours, total 24 hours; tow target missions for guns, each two hours, total 8 hours; tow target missions for machine guns, each one hour, total 4 hours; night observation missions, each one hour, total 4 hours. Total flying time required for all missions, 41 hours.

f. Estimated flying time from home station to point of execution and return is included in the estimated flying time required by each mission.

g. Estimated number of aircraft required for each individual mission: but one airplane will be required for each mission.

REC'D C.A. SCHOOL FORT MONROE, VA. MAY 2 1931

J. C. Ohnstad.
J. C. OHNSTAD,
Colonel, C.A.C.,
President.

To Chief of Coast Artillery:

S. D. E.

BACK MAY 25 1931 A.G.C.A.

File

STOR0032

Q. M. C. Form 356 (Old Form 493)
Approved December 1, 1922

3—8494 GPO

IMMEDIATE ACTION

DATA ITEM NUMBER:

STOR0033

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
_x_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: Major E.H. Metsger, Office of the Chief of Coast Artillery

TITLE/DESCRIPTION: Record of Communication Received

DOCUMENT DATE: March 16, 1934

PAGES COPIED: 2

DATA LOCATION:

REPOSITORY:

_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 177, Entry 9, Box 30, Office of the Chief of Arms, Office of the Chief Coast Artillery Anti-Aircraft Command 1918-1942, Correspondence 353/CT-FN

DATE/TIME OF DOCUMENT INSPECTION: 6/23/07

RESEARCHER'S NAME: D. Horne

COMMENTS:

A record of communication received from Major E.H. Metsger of the Office of the Chief of Coast Artillery to C.O. Flight A, 16th Observation Squadron regarding aerial missions for the remainder of Fiscal Year 1934. Missions of seacoast artillery for Fort Story listed.

REPRODUCED AT THE NATIONAL ARCHIVES

OFFICE OF THE CHIEF OF COAST ARTILLERY

353-AC-CA(Flight A) RECORD OF COMMUNICATION RECEIVED.

From: Hqrs. 3rd C.A.D. (Major E.H. Metsger.) Dated: Mar.16/34

To: C.O. Flight A, 16th Observation Squadron Thru Commanding Officer, Langley Field, Va. Recd. OCCA: March 26/34

Subject: Aerial Missions, C.A.S. Remainder of Present Fiscal Year.

1. Missions required:

Item	Date and Hour	Missions	Hours	Purpose
1	May 3 - 7:30 to 9:30 PM	1	2	Target for Searchlight Drill
2	May 4 - 10:00 to 11:00 AM 1:30 to 2:30 PM	2	2	Tracking missions AA Gun.
3	May 7 - 9:00 AM to Noon. 1:45 PM to 4:00 PM 7:30 PM to 9:30 PM	3	7¼	Tow target for AA Gun and Machine Gun Firing.
4	May 8 - 9:00 AM to Noon 1:45 to 4:00 PM 7:30 to 9:00 PM	3	7¼	Tow Target for AA Gun and Machine Gun firing.
5	May 9 - 9:00 AM to Noon	1	3	Tow target for AA Gun and Machine Gun firing.
	11:30 AM	1	10-15 min.	Flight of 3 planes to simulate attack on gun position using tactics and formations of attack planes.
6	May 10-9:00 AM to Noon 1:45 to 4:00 PM 7:30 to 9:00 PM	3	7¼	Tow target for AA Gun and Machine Gun firing.
7	May 11-9:00 AM to Noon 1:45 to 4:00 PM	2	5¼	Tow target for AA Gun and Machine Gun firing.
8	May 14-10:00 AM to 3:00 PM	1	4	Tow target AA Gun firing. Grand View.
	7:30 PM to 9:30 PM	1	2	Tow target AA Machine Gun Practice.
9	May 15 - All Day	-		Plane to stand by to tow targets in case inclement weather has prevented completion of scheduled firing.
	May 16th - AM Only.			

353/CS-25

STOR0034

STOR0035

10 - May 21 - PM	1	3	Spotting 75MM Gun firing.
11 - May 23 - AM	1	3	Spotting 75 MM Gun Firing.
12 - May 24 - PM	1	2	Spotting drill preparatory to firing with aerial observation only.
13 - May 25 - PM	1	2	Spotting drill preparatory to firing with aerial observation only.
14 - May 28 - PM	1	3	Spotting for firing with aerial observation only.
15 - June 1 - PM	1	3	Spotting for 8" Gun firing.
16 - June 7 - PM	1	2	Two planes - Drill for Battle practice.
17 - June 8 - AM	1	2	Two planes.Spotting for Battle practice.

2. Missions for Antiaircraft:

Items 1 to 9, inclusive, Fort Monroe, except Item 8 (day) at Grand View.

3. Missions for seacoast artillery: Items 10 to 17, inclusive - at Fort Story. These dates are tentative and subject to change because of unfavorable weather conditions. Definite dates will be arranged by conference as firing progresses.

4. It is requested that during antiaircraft firing two planes completely equipped be made available at all times, one to be in the air and one on the ground, ready to take off on call. Planes should be equiped for two-way radio communication.

5. All details to be arranged for by Major H.H.Acheson, Coast Artillery Corps, Department of Artillery, Coast Artillery School, Telephone 265, Fort Monroe, or his representative.

6. Please inform this office as soon as possible if it will be necessary to make any adjustments or curtailments in the schedule of Aerial Missions requested.

7. Few other aerial missionf for the remainder of the present fiscal year will be required.

At this time it is not possible to inform you definitely what is desired. However it is hoped to inform you of this in the near future.

353 AC-CA(Flight A)
1st Ind. 3/20/34 Hq.Langley Field, Va. To: C.O.Flight A, 16th Obs.Squadron.
For remark.

REPRODUCED AT THE NATIONAL ARCHIVES

STOR0036

DATA ITEM NUMBER:

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
__x_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: H.L. Steele, The Coast Artillery School, Fort Monroe, Virginia

TITLE/DESCRIPTION: Memorandum discussing total flying hours for Fiscal Year 1932

DOCUMENT DATE: May 25, 1931

PAGES COPIED: 1

DATA LOCATION:

REPOSITORY:

_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 177, Entry 9, Box 30, Office of the Chief of Arms, Office of the Chief Coast Artillery Anti-Aircraft Command 1918-1942, Correspondence 353/CT-FN

DATE/TIME OF DOCUMENT INSPECTION: 6/23/07

RESEARCHER'S NAME: D. Horne

COMMENTS:

Memorandum from H.L. Steele, Colonel, Coast Artillery Corps at Coast Artillery Board, Fort Monroe to The Adjutant General dated May 25, 1931. A table of proposed missions for Fort Story and Fort Monroe is presented. Fort Story was scheduled for October 1931 for a tow target for AA guns.

Herrick/brp

May 25, 1931.

Subject: Total Flying Hours, Fiscal Year 1932.

To: The Adjutant General.

The following table showing the total number of flying hours required for missions of cooperation for activities under the jurisdiction of this office is submitted in compliance with letter A.G. 353 (4-30-31) Misc. C. of A.C. All missions listed below are required in connection with tests to be conducted by the Coast Artillery Board. The exact date of each individual mission can not be stated as this depends upon date of receipt of material which can not be definitely fixed at this time. The table does not include missions required by the Coast Artillery School as report on this was requested in letter A.G. 353 (2-26-31) Misc. to the Commanding General, Third Corps Area, dated March 2, 1931.

353/CS-19

353/CS 19 Corr 1

No. of Missions	Type of Mission	Place	Date	No. Flying Hours Each Mission	Total No. Flying Hours	No. Aircraft Each Mission
1	Photographic	Ft. Monroe, Va.	July, 1931	1	1	1
6	Tracking	Ft. Monroe, Va.	July, 1931	4	24	1
4	Tow Target for AA guns	Ft. Story, Va.	October, 1931	2	8	1
4	Tow Target for AA Machine Guns	Ft. Monroe, Va.	Not Known	1	4	1
4	Night Observation	Ft. Monroe, Va.	Not Known	1	4	1
19					41	

For the Chief of Coast Artillery:

MAY 26 1931

H. L. STEELE,
Colonel, Coast Artillery Corps,
Executive Assistant.

353/CS-20

STOR0037

DATA ITEM NUMBER: STOR0038

INSTALLATION NAME:

0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
__x_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:

AUTHOR: C. E. Cotter, The Coast Artillery School, Fort Monroe, Virginia

TITLE/DESCRIPTION: Letter of Commendation for Flight A, 16th Obeservation Squadron

DOCUMENT DATE: December 18, 1934

PAGES COPIED: 1

DATA LOCATION:

REPOSITORY:

_x_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 177, Entry 9, Box 30, Office of the Chief of Arms, Office of the Chief Coast Artillery Anti-Aircraft Command 1918-1942, Correspondence 353/CT-FN

DATE/TIME OF DOCUMENT INSPECTION: 6/23/07

RESEARCHER'S NAME: D. Horne

COMMENTS:

Letter from C.E. Cotter, Major, Coast Artillery Corps at Coast Artillery Board, Fort Monroe to Chief of Coast Artillery dated December 18, 1934. Letter thanks the 16th Observation Squadron at Langley Field, Virginia for the antiaircraft machine gun firings conducted at Fort Story and Fort Monroe from October 15 to December 15, 1934.

REPRODUCED AT THE NATIONAL ARCHIVES

IN REPLY REFER TO:
201.22

COAST ARTILLERY BOARD
FORT MONROE, VIRGINIA.

December 18, 1934

Subject: Letter of Commendation for Flight A, 16th Observation Squadron.

To: Chief of Coast Artillery (THRU Commandant, C. A. School).

1. The Coast Artillery Board desires to express its appreciation for the exceptionally able work of Flight A, 16th Observation Squadron, Langley Field, Va., in connection with antiaircraft machine gun firings conducted at Fort Monroe and Fort Story during the period October 15 to December 15, 1934.

2. The splendid cooperation rendered by the personnel of this organization, under conditions requiring the towing of targets for lengthy missions day after day, in daylight and darkness, and under adverse weather conditions, together with their efficient execution of the missions required, assisted greatly in completing, on schedule, the test program for Coast Artillery Board Project No. 1012.

3. The following officers of Flight A took part in these tests and were responsible, both as individuals and as team members, for the success of the Air Corps participation.

Captain Arthur J. Melanson, A.C., Commanding
First Lieutenant Jack W. Wood, A.C.
Second Lieutenant Harold Q. Huglin, A.C.
Second Lieutenant James W. Williams, A.C.-Res.

4. It is recommended that the Chief of Coast Artillery send, through channels, a letter of appreciation for the services of Flight A and the individual officers of that unit, as outlined above.

C. E. COTTER
Major, Coast Artillery Corps,
Senior Member Present.

To Chief of Coast Artillery:

(7)

J. P. T.

353/CS-34

STOR0039

DATA ITEM NUMBER: STOR0040

INSTALLATION NAME:

0706 - ___Fort A.P. Hill, VA
___Camp McCain, MS
___Radford Army Ammunition Plant, VA
__✓__Fort Story, VA
___MTA Camp Clark, MO
___Camp Bowie, TX

707- ___Fort William Henry Harrison, MT
___Camp Murray, WA
___Biak Training Center, OR
___Los Alamitos Armed Forces Reserve Center, CA
___Camp Roberts, CA

DATA SOURCE:

AUTHOR: US Army Army Ground Forces

TITLE/DESCRIPTION: Description of Firing Excercises at Ft. Story

DOCUMENT DATE: 1948

PAGES COPIED: 3

DATA LOCATION:

REPOSITORY:

__✓__ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – NYC, NY
___ NA – Philadelphia, PA
___ NA – Waltham, MA
___ MHI–Carlisle Brcks, PA

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL: RG 337, Entry 108, box 50, Daily Bulletin 1-146

DATE/TIME OF DOCUMENT INSPECTION: _____

RESEARCHER'S NAME: _____

COMMENTS:

REPRODUCED AT THE NATIONAL ARCHIVES

H E A D Q U A R T E R S
2134th ASU
HARBOR DEFENSES OF CHESAPEAKE BAY

1 9 4 8

FILE NO: DAILY BULLETIN**FORT STORY, VIRGINIA

SUBJECT: BULLETIN # -1- to 146 CLOSED 28th of July 1948

NOTE: PLEASE DO NOT REMOVE THIS FILE FROM POST HEADQUARTERS
AFTER USING RETURN TO FILE ROOM P. HEADQUARTERS 2134th
HARBOR DEFENSES OF CHESAPEAKE BAY

STOR0041

REPRODUCED AT THE NATIONAL ARCHIVES

4. (cont'd)

d. IT IS VERY IMPORTANT THAT ALL EMPLOYEES NOW WORKING IN TEMPORARY OR WAR SERVICE INDEFINITE STATUS IN EITHER OF THE TWO POSITIONS FILE FOR THIS EXAMINATION, AS ALL POSITIONS WILL BE FILLED FROM ELIGIBLES RESULTING THEREFROM.

5. FIRING NOTICE

Firing of 40mm guns is scheduled from 0800 to 1700 hours daily for 4 to 6 August 1948 inclusive. The guns will be fired over the water from a point in the vicinity of Battery Cramer (South end of Fort Story). Limits of the DANGER AREA will be designated by the display of RED FLAGS. All unauthorized personnel are cautioned to keep well clear of the guns and beach from the south extremity of the OFFICERS' BEACH to the south end of the Fort Story Reservation.

6. HOURS OF OPERATION

Effective Monday, 2 August 1948, this headquarters and all activities this command will operate from 0800 to 1200 and 1300 to 1700 hours Monday through Friday. Training schedules will be changed accordingly.

7. POLICE OF BUILDINGS AND GROUNDS

The police of buildings and the grounds adjacent thereto is the responsibility of the occupant or the official to whom the building is assigned. Thorough policing includes mowing of grass. Occupants of quarters and custodians of buildings will take immediate steps to see that grass and weeds are cut around buildings to a minimum of fifty feet from the building.

BY ORDER OF LIEUTENANT COLONEL HEMPSTEAD:

JESSE L. FOWLER
CWO, USA,
Adjutant.

OFFICIAL:

Jesse L. Fowler

JESSE L. FOWLER
CWO, USA,
Adjutant.

CO
EXECUTIVE
ADJUTANT
SGT MAJ
FILE CLERK

I N F O R M A T I O N

1. POST THEATER - MOVIES - 1930 HOURS

Today ——— NOT OPEN.
Friday ——— CORONER CREEK (color) with Randolph Scott. (Family Audience).

2. NCO CLUB

Today ——— BINGO PARTY - starts at 2000 hours. Cash prize awarded to winner of each game, also a cash prize to the high, second high and low score winners, plus a cash jackpot. Kitchen open for eats!

Friday ——— GENERAL MEETING - for purpose of amending the Club By-Laws. All members are urged to be present. Meeting starts at 1830 hours.

3. CIVILIAN CLUB

Saturday — DANCE to the music of Ed Gregory and his Orchestra. Starts at 2130 hours. Beverages and snacks at the Bar.

J. L. F.

STOR0042

REPRODUCED AT THE NATIONAL ARCHIVES

DAILY BULLETIN)
: FILE COPY
NUMBER 141)

HQ 2134th ASU, HD of CHESAPEAKE BAY
Fort Story, Va., 22 July 1948

O F F I C I A L

1. OFFICER OF THE DAY

		Phone Office	Quarters
1ST LT ORVAL S WEAVER ----	Thursday, 22 Jul 48 ----------	191 ---	455
CWO SAMUEL O JACKSON -----	Friday, 23 Jul 48 ----------	194 ---	100
MAJ WILLIAM H LAMBERT ----	Saturday & Sunday, 24-25 Jul 48-	216 ---	463
CAPT GRADY F RIALS -------	Monday, 26 Jul 48 ----------	198 ---	100
2D LT JAMES E GRAY -------	Tuesday, 27 Jul 48 ----------	202 ---	100
1ST LT CLAYTON M KORNEGAY-	Wednesday, 28 Jul 48 ----------	240 ---	496

2. COMMISSARY HOURS

Effective 26 July 1948, the Sales Commissary Store will be open from 0800 to 1300 hours daily, except Saturdays, Sundays and Holidays. With the change of hours the Commissary will be open to personnel residing on the post exclusively, from 0800 to 1000.

3. FIRING NOTICE

Firing of 6" guns, Battery Cramer, will be conducted 22 July 1948, between the hours of 0800 and 1700. All personnel are warned to keep out of the beach areas extending from the southern limits of the officers' beach to the southern limit of the Fort Story reservation. During the actual target practice between the hours of 1000 to 1200 and 1300 to 1700 all personnel stationed at Fort Story and their families who desire to witness the firing are welcome as spectators.

4. FIRING NOTICE

Firing of .50 Cal Machine Guns is scheduled from 1000 to 1400 hours 23 July 1948. The guns will be fired at ground targets from a point in the vicinity of Battery Cramer (South end of Fort Story). Limits of the DANGER AREA will be designated by the display of RED FLAGS. All unauthorized personnel are cautioned to keep well clear of the guns and beach in this area. THIS FIRING IS IN ADDITION TO ALL OTHER SCHEDULED FIRING.

5. UNCONVERTED NATIONAL SERVICE LIFE INSURANCE

Public Law 838, approved 29 June 1948, permits any unconverted National Service Life Insurance policy expiring on or after 8 October 1948 which was issued prior to 1 January 1948 to be renewed without medical examination for another term period of five years at the rate for attained age on date of expiration of present five or eight year term policy. Privilege of reinstatement of any lapsed policy by submission of simple comparative health statement instead of full medical examination will expire after 31 July 1948. Timely action by those concerned including civilian employees that are veterans will preserve valuable rights and relieve future medical examining facilities.

STOR0043

BY ORDER OF LIEUTENANT COLONEL HEMPSTEAD:

OFFICIAL: Jesse L. Fowler
JESSE L. FOWLER
CWO, USA
Adjutant

CO
EXECUTIVE
JESSE L. FOWLER
CWO, USA SGT MAJ
Adjutant FILE CLERK

- O V E R -

REPRODUCED AT THE NATIONAL ARCHIVES

FILE COPY

DAILY BULLETIN)
:
NUMBER 130)

HQ 2134th ASU, HD of CHESAPEAKE BAY
Fort Story, Va., 7 July 1948

O F F I C I A L

1. OFFICER OF THE DAY

		Phone Office	Quarters
2D LT WILLIAM R ROBERTS	Wednesday, 7 Jul 48	203	100
MAJ WILLIAM H LAMBERT	Thursday, 8 Jul 48	216	463
2D LT THOMAS O MORRIS JR	Friday, 9 Jul 48	194	100
CAPT CHARLES F LENNING	Saturday & Sunday, 10-11	9	100
CAPT RAYMOND J NEUMANN	Monday, 12 Jul 48	190	426
2D LT ARTHUR L KELLEY	Tuesday, 13 Jul 48	198	482

2. QUARTERMASTER PROPERTY WAREHOUSE
The Quartermaster Property Warehouse will be closed today and tomorrow, 7 and 8 July 1948 for inventory. The laundry and shoe repair services will operate as usual during the inventory period.

3. FIRING NOTICE
Firing of 40mm guns is scheduled from 1300 to 1630 hours 8 July 1948. The guns will be fired over the water from a point in the vicinity of Battery Cramer (South end of Fort Story). Limits of the DANGER AREA will be designated by the display of RED FLAGS. All unauthorized personnel are cautioned to keep well clear of guns and beach in this area.

4. OVERDUE REPORT
Monthly Abstracts Cook's Work Sheet due 1 July 1948 for month of June will be forwarded to the Post Food Service Supervisor's office without further delay.

5. FERRY AND BRIDGE TICKETS
Effective immediately vehicle and passenger tickets required for passage on ferries and/or bridges will be obtained from the Dispatcher, Post Motor Pool at the time vehicle is dispatched.

6. SIGNATURE
Correspondence prepared for the signature of the Commanding Officer will be as follows:

E. B. HELPSTEAD
Lt Col, CAC,
Commanding.

BY ORDER OF LIEUTENANT COLONEL HELPSTEAD:

JESSE L. FOWLER
CWO, USA,
Adjutant.

OFFICIAL:

Jesse L. Fowler
JESSE L. FOWLER
CWO, USA,
Adjutant.

- O V E R -

STOR0044

DATA ITEM NUMBER: STOR0045

INSTALLATION NAME:
0706 - ___ Fort A. P. Hill, VA
___ Camp McCain, MS
___ Radford Army Ammunition Plant, VA
_X_ Fort Story, VA
___ MTA Camp Clark, MO
___ Camp Bowie, TX

DATA SOURCE:
AUTHOR:

TITLE/DESCRIPTION: Aerial Photograph – Fort Story, VA

DOCUMENT DATE: October 16, 1954

PAGES COPIED:

DATA LOCATION:
REPOSITORY:
_X_ NA – College Park, MD
___ NA – Atlanta, GA
___ NA – Kansas City, KS
___ NA – Fort Worth, TX
___ NA – Philadelphia, PA
___ MHI - Carisle Barracks, PA
___ TSL&A – Austin, TX
___ Other _____

CALL NUMBER/RECORD GROUP, BOX, FILE NAME/URL:
RG 145 Frame: ON040041/10279967-DGH-1N-174

DATE/TIME OF DOCUMENT INSPECTION: August 7, 2007

RESEARCHER'S NAME: Morrow, K

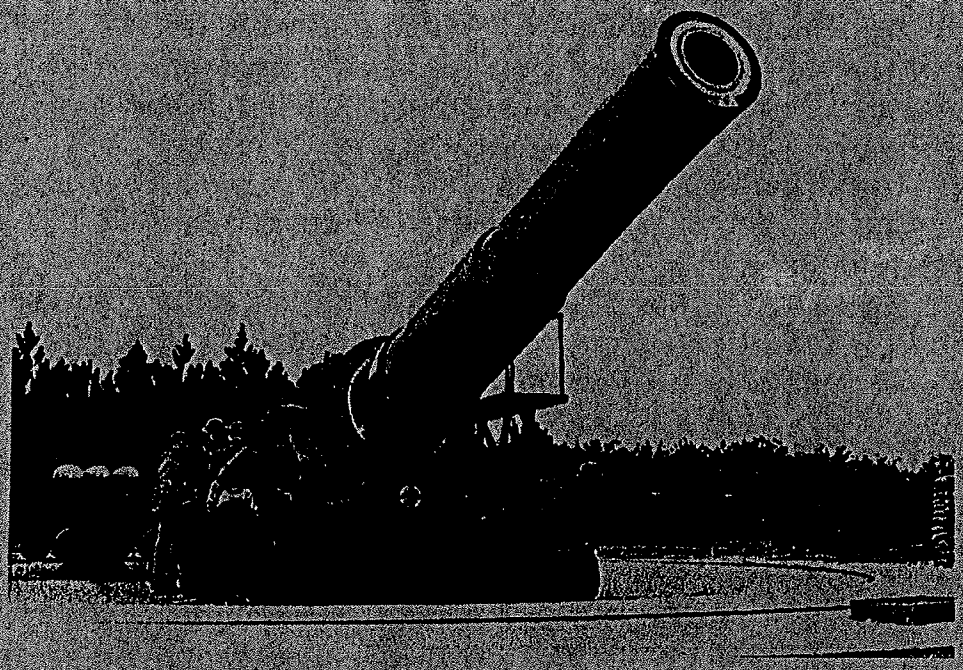
COMMENTS: Should show Small Arms Range

DGH-1N-174
STOR0046

OGGS001

Harbor Defenses of Chesapeake Bay: Fort Story, Virginia

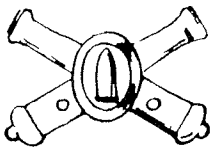
a tour of the World War Two seacoast artillery positions



Hosted by:

Headquarters, Fort Story, Fort Story, Virginia.
The Old Coast Guard Station Museum

driving armament tour, Fort Story, Virginia



START IN PARKING LOT.FORT STORY CLUB:

1. **Fort Story Club**. Site of Battery 19, commonly called Examination Battery. Completed July 1942 and manned by soldiers from Battery H, 246th Coast Artillery Regiment. Armament consisted of two 3-inch guns to cover the convoy marshaling area in Lynnhaven Roads. Battery dismounted in July 1945. The site was designated as Granite and three fire control towers and a combined switchboard and cable hut were located here. Inside West Gate at Kwajlein Road on bay front. **Only battery magazine and switchboard building remain.**

2. **Mine Casemate**. Designated as Battery 7-A . This tract of land acquired by US Army in 1914. Casemate constructed in 1922 and operated a portion of the controlled mine field at the entrance to the Chesapeake Bay. Manned by soldiers from Battery E, 2d Coast Artillery Regiment. The mine field removed following WW II and control site abandoned. Later used by US Army Harbormaster and currently not in use. Off Atlantic Avenue at Eniwetok Road. **Present site consists of mine casemate (Building 900), a concrete observation post and steel frame observation tower.**

3.**Integrated Fire Control (IFC) Area, Hercules Missile Battery**. Former site of Nike-Hercules radar control system operational in 1958 . Initially manned by soldiers from Battery D, 4th Battalion, 59th Artillery. Battery inactivated and the missile site closed down by April 1974. Radar domes removed at a later date. Remaining buildings currently occupied by Amphibious Reconnaissance School, U.S. Marine Corps. **Buildings intact and in use.**

4.**Battery 21**. Modern-type 90mm gun position with battery commanders station completed October 1942. Armament consisted of a pair of fixed 90mm Anti-Motor Torpedo Boat (AMTB) guns with shields. Armament removed following WW II. Building 704 formerly served as Military Police Station. Nearby **Battery 22** also mounted a pair of 90mm AMTB guns. Battery came online in August 1943 with crew from Battery I, 246th Coast Artillery. Placed in maintenance status in July 1945 and scrapped in 1950. Off Atlantic

Avenue. **Battery 21 and battery commanders station currently used by the 396th Harbormaster Detachment, U.S. Army Battery 22 only fallen concrete platforms remain on beach.**

5.**Post Commanders Quarters** Originally constructed in 1918 as US Weather Station. Served for many years in that capacity. During WW II used as Joint-Service Harbor Entrance Control Point for the Army harbor defense commander and the Navy Approach and Entrance Force. Building 734 currently serves as quarters for the post commander and his family. Off Atlantic Avenue at Leyte Road on beachfront. **Private quarters. access restricted.**

6.**Mine Casemate**. Constructed in 1933 initially as a Harbor Defense Command Station. Later served as Mine Casemate Number 1 to control a portion of the underwater mines at the entrance to the Chesapeake Bay. Later redesignated as Number 2. In use by US Army. Off Cebu Island Road under the old Cape Henry Lighthouse. **Access restricted.**

7.**Battery AA No.1**. Three concrete open antiaircraft (AA) gun emplacements with covered magazines completed in August 1943. Replaced 3 3-inch AA gun positions emplaced on the sites around 1918. Armament consisted of three 3-inch Model 1917 M1A2 fixed guns originally on site. Armament removed following WW II. In primary dune line east of Cape Henry Road at end of Algiers Road. **Currently not used, partially sand-filled and overgrown with oak trees and brush.**
In 1917 5-inch M1903 designated Battery B and 6-inch M1900 guns of Battery A mounted to east of AA guns Removed following WW I. **Concrete mounts underwater. nothing visible.**
8.**Battery Worcester**. An early prewar protoype battery completed in May 1941. Armament consisted of a pair of 6-inch M-1900 guns on barbette carriages with battery commanders station on top. Manned by soldiers from Battery E, 246th Coast Artillery Regiment during WW II. Following conflict armament removed and scrapped. Casemate currently in use. Battery commanders station not in use. On Sansapor Road behind Post Headquarters. **Access restricted**

9.**Battery Cramer**. Modern-type 6-inch gun position completed May 1942 . Armament consisted of a pair of 6-inch M1903 guns with a cast steel shield. Armament removed in 1949. Adjacent to US Navy Shipboard Electronic System Evaluation Facility(SESEF) Off Atlantic Avenue on Cape Henry Road near East Gate. **Building 101 used as storage by SESEF.**

9A. **Battery U**. A pre-World War II (1931) supplemental 155 mm battery with 4

guns. Mounted on 180 degree traverse reinforced concrete emplacements termed "Panama mounts." Battery replaced by modern 6-inch guns. **Panama Mount for Gun No. 1 partially covered in dune line.Three other Panama Mounts on beach, uncovered by storm in summer 1999.**

10.**Battery 10** Modern-type 6-inch gun position completed in October 1943. Armament consisted of a pair of 6-inch Model T2 guns with a 4 to 6 inch cast steel shield. Manned by soldiers from Battery H, 246th Coast Artillery Regiment during WW II. Armament removed following the war. Building 317 off Atlantic Avenue on Vera Cruz Road. **Used as fire training facility on occasion. Restricted access.**

11.**Batteries Pennington and Walke**. Originally a four -gun 16-inch M1920 howitzer battery designated Battery Alexander C.M. Pennington. Construction on gun platforms, magazines, shell rooms and interconnecting railroad tracks completed and transferred to the Coast Artillery in October 1922. Mounting of armament completed in October 1924. In 1940 two left guns designated Battery Walke. Gun positions covered with steel shields late in 1944. Guns cut up and sold for scrap about 1949. West of Atlantic Avenue off Coast Artillery Road on south end of installation . **A number of magazines and shell rooms used as storage by US Army. Two gun platform remain, covered with brush. Gun platforms 3 and 4 were located in present-day enlisted housing area and Army Travel Camp. The Battery Commanders Station for Battery Walke was located in the Cape Henry Lighthouse on the level below the lantern room. No access.**

12.**Plotting Rooms, Batteries Pennington and Walke** Concrete casemate built in 1923 in reverse of secondary dune. Provided rooms for plotting targets and adjusting gunfire. Instruments required to be some distance from the concussion of weapons firing. Building 401 also provided room for the post switchboard. Later received upgrade. Adjacent to **Reinforced Concrete Tunnel** 280 feet in length with 225 foot retaining wall connecting the gun positions with the reverse of the secondary dune. Constructed 1922-1923, it provided a concealed and protected location for the ammunition and shell railway cars. On Coast Artillery Road. **Plotting room currently used on occasion as Army classroom. No access to tunnel.**

13.**Harbor Defense Command Post.** Concrete multi-room casemate built into the reverse of the secondary dune. During WW II, Headquarters, Harbor Defenses of Chesapeake Bay (HDCB) moved from Fort Monroe to Fort Story. Permanent complex to house the HDCB headquarters completed on 1 November 1943. This facility closed following the war and the HDCB inactivated by 1 January 1950. Complex utilized by transportation battalions and Post personnel offices following World War II. On Coast Artillery Road.

Presently not in use. No access.

14.**Plotting,Spotting and Radio (PSR) Room, Battery Ketcham** Concrete casemate built into reverse of secondary dune. Provided room for plotting targets and adjusting gunfire. Instruments required to be away from the concussion of weapons firing. On Coast Artillery Road. **Building 403 in use by Directorate of Information Management, Ft. Story.**

15.**Battery Ketcham** Modern-type 16-inch casemated gun position completed in November 1943. Armament consisted of a pair of Mark II, Mod.1 Navy guns. Manned by soldiers from Battery C, 246th Coast Artillery Regiment during WW II. Armament removed and scrapped around 1949. From about 1978 until 1995 Building 605 was occupied by Explosive Ordnance Demolition Training and Evaluation Unit 2(EOD TEU 2), US Navy and the interior was modified for their use. Later occupied by units of the U.S. Army Reserve. On First Landing Road. **Currently not in use. No access.**

16. **Plotting, Spotting and Radio(PSR) Room, Battery 4** . Concrete casemate built into reverse of secondary dune. Provided room for plotting targets and adjusting fire for 16-inch guns. Instruments required to be away from the concussion caused by the firing of the main armament. On Al Jubayl Road. **Building 809 in use by the EOD Shipboard Training facility.**

17. **Battery Number 4**. Modern-type 16-inch casemated gun position completed in November 1943. Armament consisted of two Mark II, Mod.1 Navy guns separated by 500-foot gallery. Assigned battery Fire Control Tower still standing at 68th Street at the North End in Virginia Beach. Armament removed and scrapped around 1949. Later used as maintenance facility for adjacent U.S. Army Nike-Hercules surface-to-air missile battery. In 1995 Navy Explosive Ordnance Disposal Training & Evaluation Unit 2 (EOD TEU2) moved into new building sited on southern side of battery. **Sections of battery in use by US Navy EOD TEU 2 .**

18. **NIKE missile launch area.** former launcher site for NIKE-Hercules Air Defense Artillery missile battery which was built in 1958 and dismantled in 1974. Contained underground magazines and elevator for raising missiles to surface for firing. Other buildings for assembly, testing, storage , repair and liquid filling. On Al Jubayl Road off Hospital Road. **Underground entry restricted. Some buildings in use by US Army.**

END TOUR. Return To Fort Story Club via Hospital Road.

Fort Story elements. Harbor Defenses of Chesapeake Bay. WW II

The Harbor Defenses of Chesapeake Bay (HDCB) also had other major armament in the form of mobile railway guns and 155mm GPF weapons . These were gradually replaced by modern weapons. Smaller caliber weapons and machine guns were in place for close-in protection of the batteries. Searchlight platforms, seacoast radar towers, command post towers in addition to fire control towers completed the armament package for the HDCB. A number of the towers were located off the installation along the oceanfront to the south of Fort Story. As of this writing only two of these fire control remain. The Casemate tower is on dune above the Mine Casemate and is not in use. The other is located on the beach at 68th Street and is excess to the need of the Navy and will be dismantled in 2001. Of the other support facilities, in many cases only pieces of concrete remain of the once powerful seacoast defense system.

Sources

This tour and armament list is intended solely for the occasional visitor and is by no means comprehensive. The serious student of seacoast artillery should consult other available information on the subject. The Coast Defense Study Group at www.cdsg.org offers additional information on seacoast artillery.

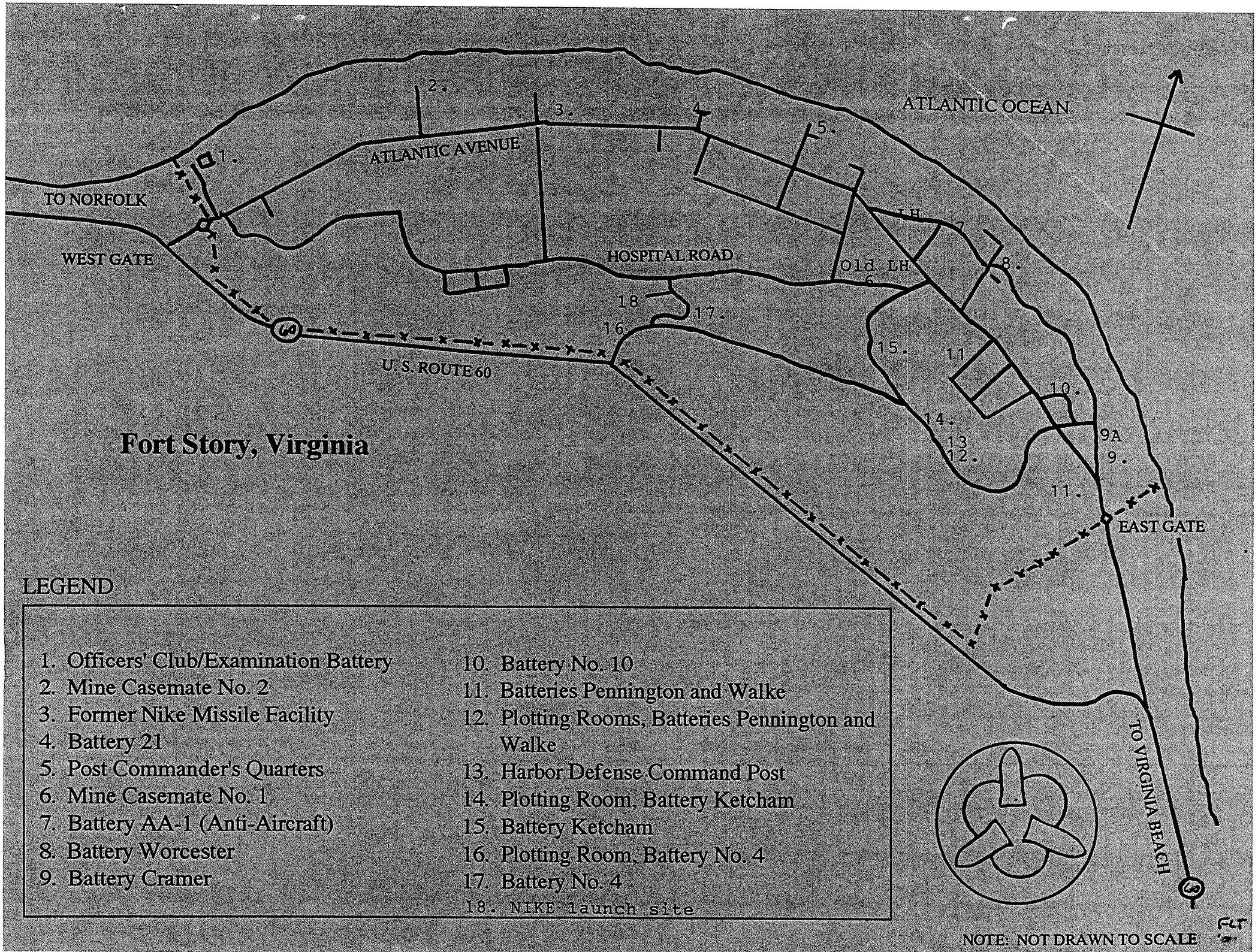
For additional information please contact the Public Affairs Officer, at Fort Story, Virginia (757) 422-7101, extension 230 or the author of this paper, Fielding L. Tyler at The Old Coast Guard Station on 24th Street in Virginia Beach. Station phone is (757) 422-1587, FAX at (757)491-8606 or e-mail at FTylerVB2@aol.com.

Recommended reading:

Weinert, Richard P.Jr., Defender of the Chesapeake. Shippensburg, PA. White Mane Publishing Company, Inc.,1989.

Lewis,E.Raymond, Seacoast Fortifications of the United States. Annapolis, MD, Originally published by Smithsonian Institution Press,1970 Republished by U.S. Naval Institute Press. 1979,1985,1988,1990, 1992,1993.

updated to September 2002.



Fort Story, Virginia

LEGEND

1. Officers' Club/Examination Battery
2. Mine Casemate No. 2
3. Former Nike Missile Facility
4. Battery 21
5. Post Commander's Quarters
6. Mine Casemate No. 1
7. Battery AA-1 (Anti-Aircraft)
8. Battery Worcester
9. Battery Cramer
10. Battery No. 10
11. Batteries Pennington and Walke
12. Plotting Rooms, Batteries Pennington and Walke
13. Harbor Defense Command Post
14. Plotting Room, Battery Ketcham
15. Battery Ketcham
16. Plotting Room, Battery No. 4
17. Battery No. 4
18. NIKE launch site

OCGS002

Subj: **RE: Ammunition Magazines**
Date: Friday, September 17, 2004 12:58:06 PM
From: HartmanS@eustis.army.mil
To: FTylerVB2@aol.com

FIELDING;
THANKS AGAIN. THAT'S MORE THAN WE HAD. I'LL RELAY TO THE INTERESTED PARTIES. YOU ARE TRULY THE MAN.

SAM

v/r
Samuel J. Hartman
Post Operations Officer

(757) 422-7101, ext 231 Office
(757) 422-7737 Fax
DSN 438
(757) 478-2112 Cell

-----Original Message-----
From: FTylerVB2@aol.com [mailto:FTylerVB2@aol.com]
Sent: Friday, September 17, 2004 11:51 AM
To: HartmanS@eustis.army.mil
Subject: Ammunition Magazines

Sam: The "Reports of Completed Works" for the magazines in the 1000 Area are

among the few records of construction at Fort Story not available in the National Archives.
There were six igloo magazines constructed in 1943 along 26th Street (present Vung Tau Road) in the western portion of the installation. They were
numbered 1000-1005 and later designated 1093-1098. The magazines had a buttressed

concrete blast wall across from the entrance. The main gun batteries has their ammunition stored on site. These magazines probably held the battle allowance for the secondary armament. More than likely they contained 90 mm HE in addition to 3-inch HE rounds. By 1948 those weapons had been declared surplus and the ammunition removed. By that time there was probably only small arms ammunition stored on post, so they more than likely a few of the magazines continued to be used in some form.
Best we can do at the time.

Fielding Tyler
Old Coast Guard Station
Virginia Beach

---------- Headers ----------
Return-Path: <HartmanS@eustis.army.mil>
Received: from rly-xk04.mx.aol.com (rly-xk04.mail.aol.com [172.20.83.41]) by air-xk03.mail.aol.com (v101_r1.4) with ESMTP id MAILINXK32-58d414b178c2cd; Fri, 17 Sep 2004 12:58:06 -0400
Received: from eustmldoim01.eustis.army.mil (eustmldoim01.eustis.army.mil [155.217.100.15]) by rly-xk04.mx.aol.com (v101_r1.4) with ESMTP id MAILRELAYINXK41-58d414b178c2cd; Fri, 17 Sep 2004 12:57:49 -0400
Received: by eustmldoim01.eustis.army.mil with Internet Mail Service (5.5.2657.72)
id <SVHSTP1H>; Fri, 17 Sep 2004 12:56:47 -0400
Message-ID:
<BDD15F98C22DF44C9A0DC966A2EFC7AB110FCD@stormldoim01.eustis.army.mil>
From: "Hartman, Samuel J" <HartmanS@eustis.army.mil>
To: FTylerVB2@aol.com
Subject: RE: Ammunition Magazines
Date: Fri, 17 Sep 2004 12:53:42 -0400
MIME-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2657.72)
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X-AOL-SCOLL-SCORE: 0:0:0:
X-AOL-SCOLL-URL_COUNT: 0

OCGS003

SECRET

HISTORICAL FILE

ANNEXES

TO

HARBOR DEFENSE PROJECT

HARBOR DEFENSES OF CHESAPEAKE BAY

1941

TACTICAL ORGANIZATION—HARBOR DEFENSES OF CHESAPEAKE BAY

HARBOR DEFENSE
C.P. at Fort Story

C-1 CAPES GROUPMENT
C.P. at Fort Story

G-1 GROUP 1 FORT STORY
- Btry. 1, 2-16" Guns
- Btry. 2, 2-16" Hows. Pennington
- Btry. 3, 2-16" Hows. Wolke
- Btry. 4, 2-16" Guns

G-2 GROUP 2 FORT STORY
- Btry. 5, 2-6" Guns
- Btry. 5 Temporary, 4-155mm Guns
- Btry. 6, 2-6" Guns
- Btry. 7, Mines
- Btry. 10, 2-6" Guns

G-3 GROUP 3 CAPE CHARLES
- Btry. 8, 2-16" Guns
- Btry. 8 Temp., 2-8" Ry. Guns
- Btry. 9, 2-6" Guns
- Btry. 9 Temp., 4-155mm Guns.
- Btry. 11, 2-6" Guns
- Btry. 12, 2-16" Guns

19 Seacoast Searchlights

C-2 HAMPTON ROADS GROUPMENT
C.P. at Fort Monroe

G-4 GROUP 4 FORT MONROE
- Btry. 18, 2-16" Guns

Outmoded Batteries
- Btry. 10, 2-12" Guns Parrott
- Btry. 11, 3-12" Guns DeRussy
- Btry. 18, 4-12" Mortars Anderson
- Btry. 19, 4-12" Mortars Ruggles

G-5 GROUP 5 FORT MONROE
- Btry. 13, 2-6" Guns Gates
- Btry. 14, 2-3" Guns Hindman
- Btry. 15, Mines
- Btry. 16, 4-3" Guns. Lee
- Btry. 17, 2-6" Guns Montgomery

7 Seacoast Searchlights

ANTIAIRCRAFT GROUPMENT
C.P. at H.D.C.P.

G-6 GROUP 6 FORT STORY
- A.A. Btry. No. 1
- A.A. S.L. Btry. less 2-Platoons 5-A.A. S.L.
- A.A. Auto. Weapons Btry. No. 1
- A.A. Auto. Weapons Btry. No. 2

G-7 GROUP 7 CAPE CHARLES
- A.A. Auto. Weapons Btry. No. 3
- A.A. Auto. Weapons Btry. No. 4

G-8 GROUP 8 FORT MONROE
- A.A. Btry. No. 2
- A.A. Btry. No. 3
- 2-Plats. A.A. S.L. Btry. 10-A.A. S.L.
- A.A. Auto. Weapons Btry. No. 5
- A.A. Auto. Weapons Btry. No. 6

11/20/40

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

Fort Monroe, Va.
Jan. 3. 1941.

Received from the President, Coast Artillery Board, the following

Secret Document: X-2

Copy of 1941 Revision of "Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay, ~~(less Exhibit B.)~~" MMB

R. L. T.
Brig. Gen. USA

Please accomplish and return to:
President, Coast Artillery Board,
Fort Monroe, Virginia.

SUBJECT: Examination Ammunition.

AG 471 (9 Aug 43)OB-S-E
WD, AGO, 10 October 1943. 6th Ind. KLS/gc-2B-939-Pentagon

To: Commanding General, Eastern Defense Command.

1. The following allowances of ammunition for examination batteries in the Harbor Defenses of Chesapeake Bay are revoked:

Battery "U", 4 - 155mm	Fort Story	15 rounds
Battery T-9, 4 - 155mm	Fishermans Island, Fort John Custis	15 rounds

2. The following batteries in the Harbor Defenses of Chesapeake Bay are presently designated as examination batteries:

Battery No. 19	2 - 3 inch	Fort Story
Battery Worcester	2 - 6 inch	Fort Story
Battery Cramer	2 - 6 inch	Fort Story
Battery (Constr. No.)227	2 - 6 inch	Fort John Custis
Battery 21	4 - 90mm	Fort Story
Battery 22	4 - 90mm	Fort John Custis

3. The following additional allowances of 6-inch CI Shell, 108 lbs. for examination firing in the Harbor Defenses of Chesapeake Bay are authorized:

Battery Cramer	Fort Story	15 rounds
Battery (Const. No.)227	Fort John Custis	15 rounds

4. Pending the availability in quantities of 90mm shell, practice, M71, the following allowances of 90mm shell, HE M71 with fuze, are authorized for examination firing.

Battery 21, 4 - 90mm	Fort Story	20 rounds
Battery 22, 4 - 90mm	Fort John Custis	20 rounds

By order of the Secretary of War:

A. J. REHE
Adjutant General.

(C O P Y)

CHESAPEAKE BAY SECTOR

HARBOR DEFENSES OF CHESAPEAKE BAY

NO. OF BTRIES MANNED: PRESENT: 21 - 2 S/L
FUTURE: 22 - 2 S/L

NO. OF LETTERED BTRIES AVAILABLE: PRESENT: 21
FUTURE: 21

NO. OF LETTERED BTRIES TO BE TRANSFERRED: NONE

ARMAMENT	PRESENT STATUS	FUTURE STATUS	REMARKS
16"			
Ketcham #120	Incomplete	A	
Pennington (H)	A	B	
Walke (H)	A	B	
#121	Under Construction	B	Due July, 1943
#122	" "	A	Due April, 1943
12" DC			
DeRussy	A	C	
Fy IR	A	A	
8" Fy IR	A	A	
6" DC			
Montgomery	A	A	
Cramer #225	A	A	
Worchester #224	A	A	
(Custis) #228	Under Construction	-	Due Feb. 1944
Fisherman's #227	" "	A	Due May, 1943
Gates #229	" "	-	Due Jan. 1944
#226	" "	-	Due Oct. 1943
155-mm			
Custis (Fisherman's)	A	No Longer Required	Upon Completion of #227.
3"			
Hindman	A	A	
Lee	B	-	
Guard	A	A	(Dual with AMTB)
Examination	A	A	(Dual with AMTB)
90-mm AMTB (Barrott)			
AMTB 90-mm (#24)	Not Received	A	
AMTB 90-mm (#22)	" "	A	(Dual with 3" Exam)
AMTB 90-mm (#21)	Incomplete	A	(" " 3" Guns)
		A	

CHESAPEAKE BAY SECTOR

(Cont'd)

ARMAMENT	PRESENT STATUS	FUTURE STATUS	REMARKS
AA 3"			
#1	A	A	
#2	A	A	
#3	A	A	
Mine			
Inner Field	A	A	
Outer Field	A	A	
Outer Field	A	A	
SL			
Fort Story	A	A	
Fort Monroe	A	A	

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

ANNEX A

SEACOAST GUNS

ANNEXES
to
HARBOR DEFENSE PROJECT
HARBOR DEFENSES OF CHESAPEAKE BAY
1941

AUTHORITIES

1. This document contains Annexes to the document entitled "Harbor Defense Projects for Harbor Defenses included in the Chesapeake Bay Area, Parts I and II," (Short Title CCA-P-CB). The latter document was approved by the Secretary of War in 5th Indorsement, (AG 660.2 (10-31-32) (Misc.) E) (OCCA 662.1/6-A).

2. The original Annexes to Harbor Defense Projects, Harbor Defenses of Chesapeake Bay were prepared by a Board of Officers appointed by paragraph 3, S.O. No. 260, Headquarters, Third Corps Area, October 26, 1932, pursuant to letter dated the Office of The Adjutant General, June 2, 1933, subject "Harbor Defense Project, Chesapeake Bay Area," (AG 660.2 (6-1-33) (Misc.) (OCCA 662.1/6-A-1). The original Annexes were approved by the Secretary of War in 21st Indorsement dated the Office of The Adjutant General, February 19, 1937, on letter subject "Annexes, Harbor Defense Project, Chesapeake Bay Area," dated Headquarters Third Corps Area, Baltimore, Md., June 5, 1934 (AG 660.2 (6-5-34) (Misc. E) (Hqrs. 3d CAD. 660.2) (OCCA 662.1/6-A-2). Short Title of the approved Annexes was "CCA-AN-CB".

3. The first revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay was directed in 7th Indorsement dated the Office of The Adjutant General, April 20, 1939, on letter subject "Harbor Defense Project," dated Headquarters Third Coast Artillery District, January 5, 1939 (AG 660.2 (1-5-39) (Misc.) E) (Hqrs. 3d CADist. SECRET 660.2) (OCCA 662.1/6-G). The first revision of the Annexes was approved by the Secretary of War in 21st Indorsement on the above communication, under date of December 18, 1939 (AG 660.2 (1-5-39) M-WPD) (OCCA 662.1/6-G).

4. This second revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay, was directed by letter, WD, AGO, September 27, 1940 (AG 660.2 (9-13-40) M-WPD-M), subject "Modernization of Harbor Defense Projects, continental United States." These revised Annexes were approved by the Secretary of War in 4th Indorsement, WD, AGO, April 17, 1941 (AG 660.2 (12-28-40) M-WPD) (OCCA 662.1/6-J-6).

SECRET

9592 - W

WAR DEPARTMENT
The Adjutant General's Office
Washington

AG 660.2 (11-12-42)
OB-S-E

MNE/hlo-2B-939 Pentagon.

November 13, 1942.

SECRET

SUBJECT: Seacoast Modernization Program.

Auth:.....T.A.G.....
Initials:..A.J.R.....
Date:...Nov.13.1942...

TO: Commanding General, Eastern Defense Command.

1. In order to place this program in a workable condition and to effect a reduction in the requirements for seacoast batteries in line with the acute shortage of critical materials, the following 16" batteries are eliminated from the harbor defense projects in your Command:

Constr. No.	Harbor Defense	Location
110	Narragansett Bay	Beavertail
123	Chesapeake Bay	Fort Custis
114	Long Island Sound	Watch Hill
125	Charleston	James Island
119	Delaware	Fort Miles
106	Boston	Fourth Cliff
101	Portland	Cape Elizabeth
117	New York	Jamaica Sea Airport
124	Chesapeake Bay	Fort Monroe

2. It is desired that the harbor defense projects for your Command be revised accordingly.

By order of the Secretary of War:

/S/ A. J. REIE,
Adjutant General.

CA-360.2

1st Ind.

HEADQUARTERS EASTERN DEFENSE COMMAND AND FIRST ARMY, Governors Island, N.Y.,
NOV 19 1942
TO: Commanding Generals, All Sectors, Eastern Defense Command and First Army.

For your information and compliance with paragraph 2, basic communication.

By command of Lieutenant General DRUM:

R.L.T.

Rec'd Hq. Ches. Bay Sect. NOV 20 1942

NOV 21 1942

SECRET

C. Z. SHUGART
Colonel, A. G. D.,
Adjutant General

A N N E X A

SEACOAST GUNS

1. Armament. a. The Harbor Defenses of Chesapeake Bay are divided into the outer defenses at Cape Henry (Fort Story) and Cape Charles and the inner defenses at Fort Monroe and Fort Wool. The outer defenses are designed to insure freedom of movement in and out of Chesapeake Bay by our Navy as well as to deny enemy access to Chesapeake Bay and to protect shipping and harbor facilities in the bay from naval bombardment. The stated mission of the harbor defenses is to hold enemy capital ships at a range of at least 35,000 yards from the line joining Cape Henry Lighthouse and the buoy 6,500 yards north thereof. The armament, existing and authorized, is listed below. Outmoded batteries are listed in subparagraph d, succeeding.

Battery No.	Construction No.	
1	120	Two 16" guns, Ft. Story, under construction.
2	-	Two 16" howitzers, Ft. Story, existing.
3	-	Two 16" howitzers, Ft. Story, existing.
4	121	Two 16" guns, Ft. Story, authorized.
5	225	Two 6" BC guns, Ft. Story, authorized.
6	224	Two 6" BC guns, Ft. Story, existing.
7	-	Mine battery, Ft. Story (see Annex D).
* 8	123	Two 16" guns, Cape Charles, authorized.
9	228	Two 6" BC guns, Cape Charles, authorized.
10	226	Two 6" BC guns, Ft. Story, authorized.
11	227	Two 6" BC guns, Fisherman Island, authorized.
12	122	Two 16" guns, Cape Charles, under construction.
13	229	Two 6" DC guns, Ft. Wool, existing (see note).
14	-	Two 3" BC guns, Ft. Wool, existing.
15	-	Mine battery, Ft. Monroe, (see Annex D).
16	-	Four 3" BC guns, Ft. Wool, existing.
17	-	Two 6" BC guns, Ft. Monroe, existing.
* 18	124	Two 16" guns, Ft. Monroe, authorized.

Note: Btry. No. 13 (Gates): To be replaced by barbette mounts.

* See WD AGO LTR on opposite page.
11/23/42
HWS.

SECRET

b. (1) Sites for the following batteries were approved by the Secretary of War in 6th Indorsement, November 27, 1940 (AG 660.2; 10-5-40; M-WPD):

Battery No. 1 (Construction No. 120), two 16-inch guns at Fort Story.
Battery No. 4 (Construction No. 121), two 16-inch guns at Fort Story.
Battery No. 5 (Construction No. 225), two 6-inch guns at Fort Story.
Battery No. 10 (Construction No. 226), two 6-inch guns at Fort Story.
Battery No. 11 (Construction No. 227), two 6-inch guns at Fisherman Island.
Battery No. 18 (Construction No. 124), two 16-inch guns at Fort Monroe.

(2) The site for Battery No. 13 (Construction No. 229) (Gates) was approved by the Secretary of War in 13th Indorsement, February 1, 1941 (AG 660.2; 10-5-40; M-WPD).

(3) Sites for the following batteries were approved by the Secretary of War in 21st Indorsement, April 7, 1941 (AG 660.2; 10-5-40; M-WPD):

Battery No. 8 (Construction No. 123), two 16-inch guns at Cape Charles.
Battery No. 9 (Construction No. 228), two 6-inch guns at Cape Charles.
Battery No. 12 (Construction No. 122), two 16-inch guns at Cape Charles.

(4) Sites for outmoded batteries not yet installed were approved by the Secretary of War as follows:

For the 8-inch railway and 155 mm batteries at Cape Charles, in 5th Indorsement, November 24, 1933 (AG 660.2; 11-3-33; Misc. E).

c. Under the provisions of the Harbor Defense Project approved by the Secretary of War in 5th Indorsement, May 23, 1933 (AG 660.2; 10-31-32; Misc. E), the three 10-inch Batteries Bomford, Church and Eustis at Fort Monroe are no longer required. Batteries Church and Eustis are to be retained until completion of the modernization program in a Class B maintenance status for test purposes and the training of civilian components. Battery Bomford is to be scrapped.

d. Outmoded batteries. Under the modernization program approved by the Secretary of War on September 5, 1940 (AG 602; 7-21-40; WPD 4279-2), the batteries listed below are classed as outmoded. These batteries are to be retained in service pending construction of the authorized batteries listed in subparagraph c above. The numbers which they have heretofore borne are retained, followed by "temporary."

Battery No. 5 temp., four 155 mm guns at Ft. Story.
Battery No. 8 temp., two 8-inch Ry., at Cape Charles.
Battery No. 9 temp., four 155 mm guns at Cape Charles.
Battery No. 10 temp., (Parrott), two 12" DC guns at Fort Monroe.
Battery No. 11 temp., (DeRussy), three 12" DC guns at Fort Monroe.
Battery No. 18 temp., (Anderson), four 12" mortars at Fort Monroe.
Battery No. 19 temp., (Ruggles), four 12" mortars at Fort Monroe.

e. The field of fire of each of the modern and outmoded batteries of the harbor defense listed respectively in subparagraphs a and d above is shown in an exhibit appended to Annex B, this exhibit showing also the effective area covered by the fire control system of the battery.

f. The 6-inch gun and mount, the latter now under design, are expected to have a nominal maximum range of 26,000 yards. In the exhibits included in these Annexes, an effective range of 20,000 yards is assumed in order to avoid presenting a false conception of the areas covered, since a projectile of this caliber will incur prohibitive deviations beyond that approximate range.

2. Tactical organization. The organization of the armament of the harbor defense into three groupments and eight groups is shown in Exhibit 1-A.

a. The underwater defense with its rapid fire batteries forms one group with command post at Fort Story and one group with command post at Fort Monroe. The work of installing and maintaining the controlled mines in both fields will be coordinated by the harbor defense commander so as to make the best use of planting and loading personnel and equipment. Details of the underwater defense appear in Annex D.

b. The antiaircraft defense is organized into a groupment for the purpose of collecting and disseminating information and for the coordination of training. The groups in this groupment may be assigned to the Capes and Hampton Roads Groupments by the harbor defense commander when he deems it advisable. The command post of the antiaircraft groupment including the antiaircraft intelligence center is at the harbor defense command post. Details of the antiaircraft defense are given in Annex E.

c. As the harbor defense and groupment commanders will be at Fort Story and Fort Monroe respectively, the only fort commanders needed are at Cape Charles and Fort Wool. In order to provide for the eventuality of a landing attack or the severance of communications, the commander of Group 3 is designated as the fort commander at Cape Charles and the senior battery commander as the fort commander at Fort Wool.

3. BATTERIES INCLUDED IN MODERNIZATION PROGRAM.

a. Battery No. 1 (Construction No. 120), two 16-inch guns at Fort Story. This battery is under construction 500 yards south of old Cape Henry Lighthouse. In order that Case II pointing shall be assured over as great a portion of the field of fire as practicable, the level of the gun platforms is to be as high as the ground level at the West End tower. The directrix is 265 degrees 30 minutes, enabling both guns to fire nearly to the beach on the south. The rate of fire to be expected is about one shot per gun per minute. The location of the battery is shown in Exhibit 2-A; the field of fire is shown in Exhibit 2-B.

b. Battery No. 2 (Pennington), two 16-inch howitzers at Fort Story. The rate of fire is about one shot per howitzer per ninety seconds. The location of the battery is shown in Exhibit 2-A; the field of fire is shown in Exhibit 3-B. Overhead cover is to be provided.

c. Battery No. 3 (Walke), two 16-inch howitzers at Fort Story. The rate of fire is about one shot per howitzer per ninety seconds. The location of the battery is shown in Exhibit 2-A; the field of fire is shown in Exhibit 4-B. Overhead cover is to be provided.

d. Battery No. 4 (Construction No. 121), two 16-inch guns at Fort Story. This battery is to be constructed 600 yards west of Battery No. 1. The level of the gun platforms as constructed should be 50 feet or more above mean low water, in order that view through the sights shall be obtained over a portion of the field of fire. The directrix is 265 degrees, enabling both guns on the right of the field of fire to bear on the water area nearly to the 20-foot hydrographic line. The rate of fire to be expected is about one shot per gun per minute. The location of the battery is shown in Exhibit 2-A; the field of fire is shown in Exhibit 5-B.

e. Battery No. 5 (Construction No. 225), two 6-inch BC guns at Fort Story. This battery is to be constructed approximately 100 yards east of the present location of the 12-inch railway mortar battery and 225 yards southeast of the 155 mm battery. The location is shown in Exhibit 2-A. The azimuth of the line of gun centers, from No. 1 to No. 2, is 148 degrees; the directrix is 238 degrees. The field of fire, shown in Exhibit 7-B, covers both the controlled mine field and the contact mine field. Fire through the sights should be provided for over the widest practicable field of fire. A rate of fire of five shots per gun per minute may be expected. Two low dunes at the left of the field of fire must be scarped off, and the former Coast Guard buildings removed.

f. Battery No. 6 (Construction No. 224), two 6-inch BC guns at Fort Story. The location of this battery is shown in Exhibit 2-A. The field of fire is shown in Exhibit 8-B. Three low dunes in the foreground should be levelled off and five temporary frame dwellings (Buildings Nos. 14, 19, 22, 24 and 25) must be removed. The controlled mine field and also the contact mine field are covered. The azimuth of the line of gun centers, from No. 1 to No. 2, is 135 degrees, giving a directrix of 225 degrees. The expected rate of fire is five shots per gun per minute.

g. Battery No. 8 (Construction No. 123), two 16-inch guns at Cape Charles. The location of this battery is shown in Exhibit 4-A and its field of fire in Exhibit 9-B. The azimuth of the line of gun centers, from No. 1 to No. 2, is 231 degrees. Case II pointing is to be assured over as great a portion of the field of fire as practicable particularly on either side of the directrix, which is 303 degrees 30 minutes. The rate of fire to be expected is about one shot per gun per minute.

h. Battery No. 9 (Construction No. 228), two 6-inch BC guns at Cape Charles. This battery is to be constructed on the high ground overlooking the marsh, between the two 16-inch batteries; the location (about 150 yards southwest of 16-inch battery No. 8) is shown in Exhibit 4-A. The azimuth of the line of gun centers, from No. 1 to No. 2, is to be 258 degrees, giving a directrix of 348 degrees. Fire through the sights should be provided for, from Smith Island on the left to Fisherman Island on the right (an arc of approximately 50 degrees), and to the right of Fisherman Island as far as is practicable. The field of fire is shown in Exhibit 10-B. The expected rate of fire is five shots per gun per minute.

i. Battery No. 10 (Construction No. 226), two 6-inch BC guns at Fort Story. This battery is to be constructed at the present location of Nos. 1 and 2 guns of the 155 mm battery. The site is shown in Exhibit 2-A. The field of fire is shown in Exhibit 14-B. Two low dunes in the foreground should be levelled off and the former Coast Guard buildings and frame dwelling (Building No. 14) must be removed. The controlled mine field and the southern part of the contact mine field are covered. Case II fire should be provided for over the widest practicable field of fire. The azimuth of the line of gun centers, from No. 1 to No. 2, is to be 148 degrees, giving a directrix of 238 degrees. The rate of fire to be expected is five shots per gun per minute.

j. Battery No. 11 (Construction No. 227), two 6-inch BC guns at Fisherman Island. This battery is to be constructed at the location shown in Exhibit 6-A, with No. 1 gun about 120 feet east of a concrete cistern. The azimuth of the line of gun centers, from No. 1 to No. 2, is 255 degrees, giving a directrix of 345 degrees. The contact mine field within the limit of visibility is covered, as well as channels in the northern portion of the entrance between the Capes. Case II fire should be ensured. The expected rate of fire is five shots per gun per minute.

k. Battery No. 12 (Construction No. 122), two 16-inch guns at Cape Charles. This battery is to be constructed on the high ground just north of the marsh, 900 yards southwest of Battery No. 8. The azimuth of the line of gun centers, No. 1 to No. 2, is 230 degrees. Case II pointing is to be assured over as great a portion of the field of fire as practicable particularly on either side of the directrix, which is 320 degrees. The rate of fire to be expected is about one shot per gun per minute. The location of the battery is shown in Exhibit 4-A; the field of fire is shown in Exhibit 17-B.

l. Battery No. 13 (Gates) (Construction No. 229), two 6-inch BC guns at Fort Wool. This battery is to be reconstructed from the existing 6-inch disappearing battery to provide shields and to increase the range and rate of fire. The field of fire, effectively covering the inner mine field, is shown in Exhibit 18-B. After modernization, a rate of fire of five shots per gun per minute may be expected. The directrix is 258 degrees.

m. Battery No. 14 (Hindman), two 3-inch BC guns at Fort Wool. The battery faces north. Exhibit 19-B shows the field of fire of the guns. No. 1 gun is prevented by local structures from firing over the southern portion of the mine field; and neither gun bears on the approaches thereto from the east and southeast. The battery fires to the south as shown in Exhibit 19-B, provided the personnel of Battery Lee is removed. The shields of these guns are to be modernized. A rate of fire of ten shots per gun per minute may be expected.

n. Battery No. 16 (Lee), four 3-inch BC guns at Fort Wool. The battery faces south. The area to the east including most of the mine field is masked. Fire to the north is practicable if the personnel is removed from Battery Hindman. See Exhibit 20-B. The shields of these guns are to be modernized. The rate of fire is the same as that of Battery Hindman.

o. Battery No. 17 (Montgomery), two 6-inch BC guns at Fort Monroe. The field of fire is shown in Exhibit 21-B. The inner mine field is effectively covered. The shields of these guns are to be modernized. A rate of fire of five shots per gun per minute may be expected.

p. Battery No. 18 (Construction No. 124), two 16-inch guns at Fort Monroe. This battery is to be constructed immediately north of old Battery Ruggles. The azimuth of the line of gun centers, No. 1 to No. 2, is to be 160 degrees; the directrix, 250 degrees. Case II pointing shall be assured over as great a portion of the field of fire as practicable. The location of the battery is shown in Exhibit 7-A; the field of fire is shown in Exhibit 23-B. The rate of fire is expected to be about one shot per gun per minute.

4. OUTMODED BATTERIES

a. Battery No. 5 temporary, four 155 mm guns at Fort Story. Concrete bases affording 180-degree traverse have been provided. The azimuth of the line of gun centers, from No. 1 to No. 4, is 164 degrees, giving a directrix of 254 degrees. The field of fire, shown in Exhibit 6-B, covers both the controlled and the contact mine fields. A rate of fire of three shots per gun per minute may be expected for short periods. Two low dunes at the left of the field of fire should be scarped off; and the former Coast Guard buildings should be removed. The location of the battery is shown in Exhibit 2-A.

b. Battery No. 8 temporary, two 8-inch railway guns at Cape Charles. The general location of this battery is on the military reservation at Kiptopeke, shown in Exhibit 4-A; its field of fire is shown in Exhibit 12-B. The exact location is to be selected by the local authorities when an emergency occurs. The battery is to be emplaced at that time, the firing spurs being then constructed. The guns should be located approximately 150 yards apart to permit one to fire over the other. The azimuth of the line of gun centers, No. 1 to No. 2, should be 232 degrees, giving a directrix of 322 degrees. The rate of fire to be expected is about one shot per gun each fifty seconds. This outmoded battery is to be replaced by 16-inch battery No. 8.

c. Battery No. 9 temporary, four 155 mm guns at Cape Charles. The general location of the battery, about 1400 yards south by east of Kiptopeke station, is on the military reservation at Kiptopeke, shown in Exhibit 4-A. The field of fire is shown in Exhibit 13-B. This battery is to be provided with concrete emplacements constructed when an emergency arises and affording all-around fire. The guns, which are on hand at Fort Monroe, are to be sited in pairs to provide the maximum volume of fire through 360 degrees. The directrix of the right platoon is to be approximately 3 degrees; of the left platoon, approximately 9 degrees. If, when an emergency arises, the position described (by the Site Board, 1933) is not available, another suitable location in the vicinity may be selected. The expected rate of fire is three shots per gun per minute for short periods. This outmoded battery is to be replaced by 6-inch battery No. 9.

d. Battery No. 10 temporary (Parrott), two 12-inch DC guns at Fort Monroe. The field of fire is shown in Exhibit 11-B. A rate of fire of one shot per gun each forty seconds using Case II and fifty seconds using Case III may be expected.

e. Battery No. 11 temporary (DeRussy), three 12-inch DC guns at Fort Monroe. The field of fire is shown in Exhibit 15-B. A rate of fire of approximately one shot per gun each forty seconds using Case II and fifty seconds using Case III may be expected.

f. Batteries Nos. 18 and 19 temporary (Anderson and Ruggles), four 12-inch mortars each, at Fort Monroe. The fields of fire are shown in Exhibits 22-B and 24-B, respectively. A rate of fire of one 2-mortar salvo may be expected of each battery each thirty seconds.

5. Camouflage. a. Experimental and development work are in progress to determine methods and materials best suited to the camouflage of seacoast artillery installations. Such study has developed to the point where it is known that concrete surfaces exposed to view from the sea or air may to advantage be treated with asphalt emulsion (not paint), and that structures so coated have markedly reduced visibility. The cost including labor is estimated as $150 per battery.

b. In order that camouflage may be undertaken in this harbor defense when methods and materials shall have been decided on, the cost estimate appearing as Exhibit 9-A includes $1,200 for each battery included in the modernization program.

6. Local Ground Defense. a. Plans of the local authorities and requirements in materiel to meet these plans are undergoing changes as the elements of the modernization program are constructed. Automatic weapons provided for antiaircraft defense (see Exhibit 3-E of Annex E) are available to assist in local ground defense. In any plans which may be adopted, there will be required in each fort in varying quantities, barbed wire, portable iron machine gun emplacements and materials for constructing concrete pill boxes. All-around perimeter wire obstacles, covered by machine gun fire will be required in the case of certain essential elements in each fort. The labor of construction of rifle trenches and obstacles can be performed by the troops.

b. To provide for the average estimated requirements in materials, there is included in Exhibit 9-A, Cost Estimate and Priority Guide, an allowance of $16,000 for each fort for the items included in subparagraph a above. The cost of barbed wire is taken as $3.80 per 1300-foot roll; of portable machine gun emplacements (Alternate Design A) as $978 each; and of concrete as $8.50 per cubic yard in place.

c. The local ground defense herein considered is that for which the garrison of the fortifications is responsible and is in addition to such defense as may be provided by detachments of the sub-sector forces.

7. Ammunition. The war reserve and the battle allowance of ammunition for the batteries of the harbor defenses are shown in Exhibit 8-A, which also prescribes the place of storage of the battle allowance when it cannot be stored at the battery to which it pertains. The provisions of TR 1370-A to include Changes No. 6 are complied with except in the case of Battery No. 12 (Construction No. 122) where additional land is required.

8. Land. a. For land to be acquired including rights of way, see cost estimate and priority guide. Cost of survey and search of records to determine ownership is included.

b. Kiptopeke Area. For the site of 16-inch battery No. 8 (Construction No. 123) and 6-inch battery No.9(Construction No. 228), a land area of slightly over 100 acres is to be acquired. For Battery No. 12 (Construction No. 122), in order to provide for the requirements of quantity-distances, to provide for local defense, and to provide space for the plotting room, additional area will be required. Estimate is included in the cost estimate and priority guide.

9. Costs. The estimate is appended as Exhibit 9-A. Those items which should be procured and installed in peace are marked A. Those that should be procured in peace but the installation of which may be deferred until an emergency arises are marked B. Those items to be procured and installed when an emergency arises are marked C.

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND 735042
By RB/MB NARA, Date 11-18-94

TACTICAL ORGANIZATION—HARBOR DEFENSES OF CHESAPEAKE BAY

HARBOR DEFENSE
C P at Fort Story

C-2
HAMPTON ROADS GROUPMENT
C.P. at Fort Monroe

ANTIAIRCRAFT GROUPMENT
C P at H.D.C.P

G-1
GROUP 1
FORT STORY

Btry 1, 2-16" Guns
Ketcham
Btry 2, 2-16" Howe
Pennington
Btry. 3, 2-16" Howe.
Wolke

Searchlights
Nos. 1, 2, 3, 4, 5, 6, 7, 8, 11 & 12

G-2
GROUP 2
FORT STORY

Btry 5, 2-6" Guns
Btry 5, Temp.
4-155mm Guns
Btry 6, 2-6" Guns
Worcester
Btry 7A, Mines
Btry 7B, Mines
Btry. 19, 2-3" Guns
Examination Btry.

Searchlights
Nos 9 & 10

G-3
GROUP 3
CAPE CHARLES

Btry. 8 Temp.
2-8" Ry Guns
Btry 9 Temp.
4-155mm Guns
Btry 20, 2-3" Guns

Searchlights
Nos. 13, 14, 15, 16, 17, 18, 19

G-4
GROUP 4
FORT MONROE

Btry. 10, 2-12" Guns
Parrott
Btry. 11, 3-12" Guns
DeRussy
Btry. 18, 4-12" Mortars
Anderson
Btry 19, 4-12" Mortars
Ruggles
All Btries Temporary

Searchlights
Nos. 20, 23, 24, 25 & 26

G-5
GROUP 5
FORT MONROE

Btry 13, 2-6" Guns
Gates
Btry 14, 2-3" Guns
Hindman
Btry 15, Mines
Btry 16, 2-3" Guns
Lee
Btry 17, 2-6" Guns
Montgomery

Searchlights
Nos. 21 & 22

G-6
GROUP 6
FORT STORY

A A Btry No 1

A A. S L Btry
less 2- Platoons
5 - A A S L

A A Auto Weapons
Btry No. 1

A A. Auto. Weapons
Btry. No. 2

G-7
GROUP 7
CAPE CHARLES

A.A. Auto Weapons
Btry. No. 3

A.A. Auto. Weapons
Btry. No. 4

A.A. Observers
Mockhorn - A
Smith Island - B
Wise - A
Cheapside

G-8
GROUP 8
FORT MONROE

A.A Btry. No. 2
A.A. Btry. No. 3
2-Plats A.A. S.L. Btry.
10 - A.A.S.L.
A.A. Auto. Weapons
Btry. No. 5
A.A. Auto. Weapons
Btry. No. 6
A.A. Observers
Chamberlin Hotel
Ocean View
G-8 Station
North Buckroe
Langley Field

GROUPMENT A.A. OBSERVERS

Little Island
Sandbridge
Rifle Range - B
Hollies - B
Fort Story G-6
Granite - B
Chesapeake Beach-A
Little Creek

THIS TACTICAL ORGANIZATION IS TEMPORARY
PENDING COMPLETION OF NEW BATTERIES

RESTRICTED

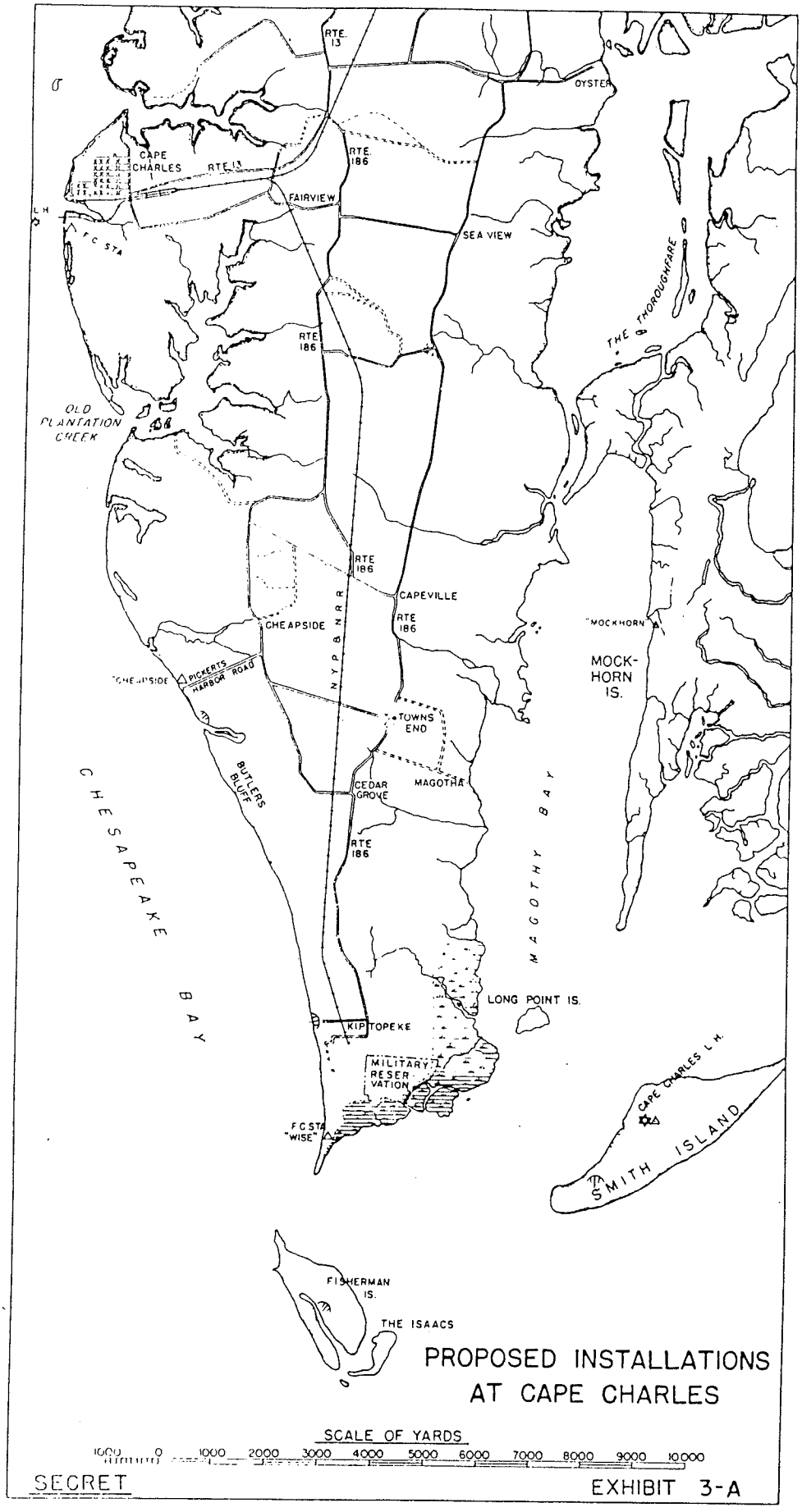
6/25/42

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

By RB/MB NARA, Date 11-18-94

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

By RB/MB NARA, Date 11-18-94



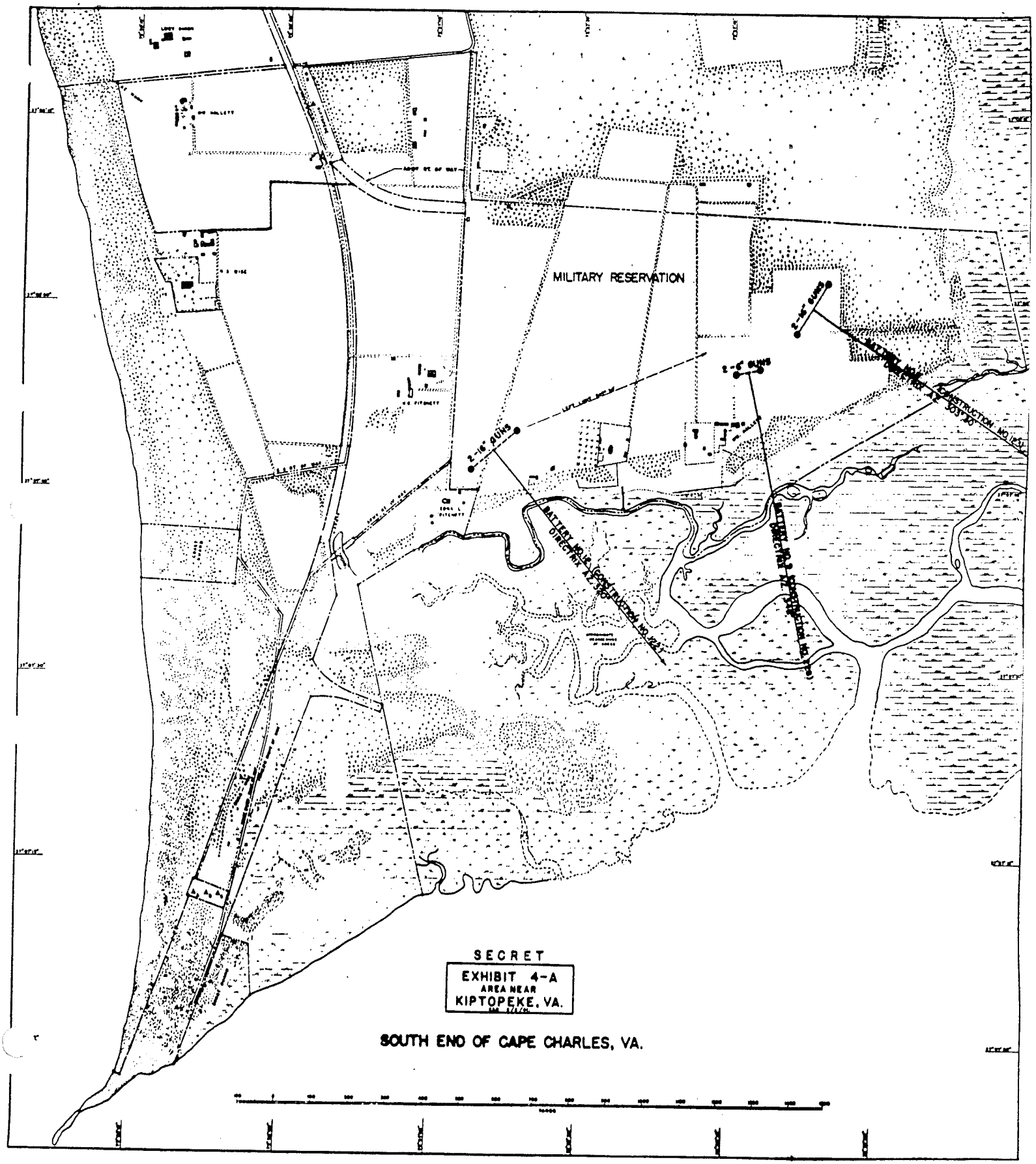
PROPOSED INSTALLATIONS AT CAPE CHARLES

SCALE OF YARDS

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

SECRET

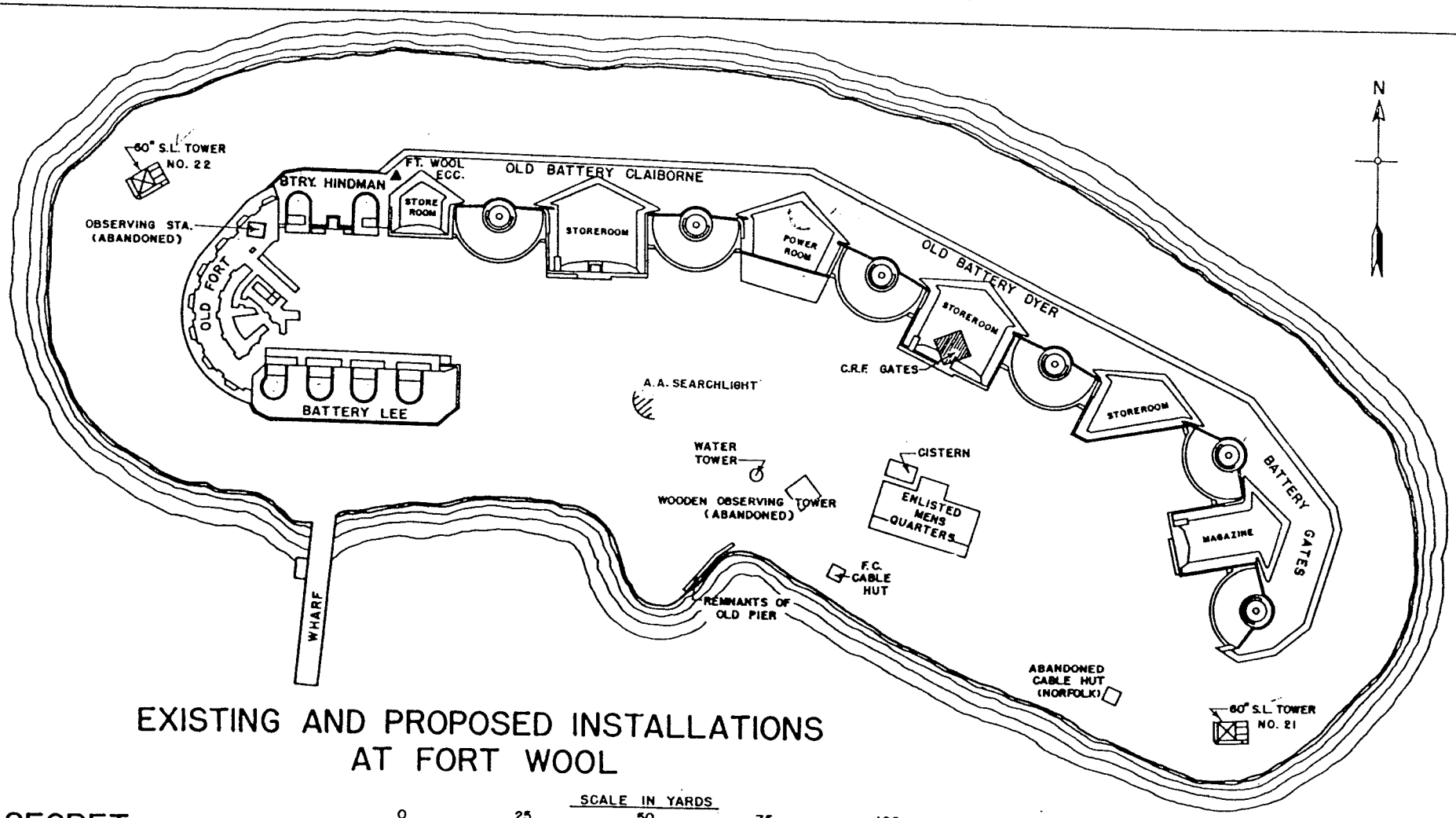
EXHIBIT 3-A



SECRET

EXHIBIT 4-A
AREA NEAR
KIPTOPEKE, VA.

SOUTH END OF CAPE CHARLES, VA.



EXISTING AND PROPOSED INSTALLATIONS AT FORT WOOL

SCALE IN YARDS

0 25 50 75 100

SECRET

EXHIBIT 5-A

10/31/40

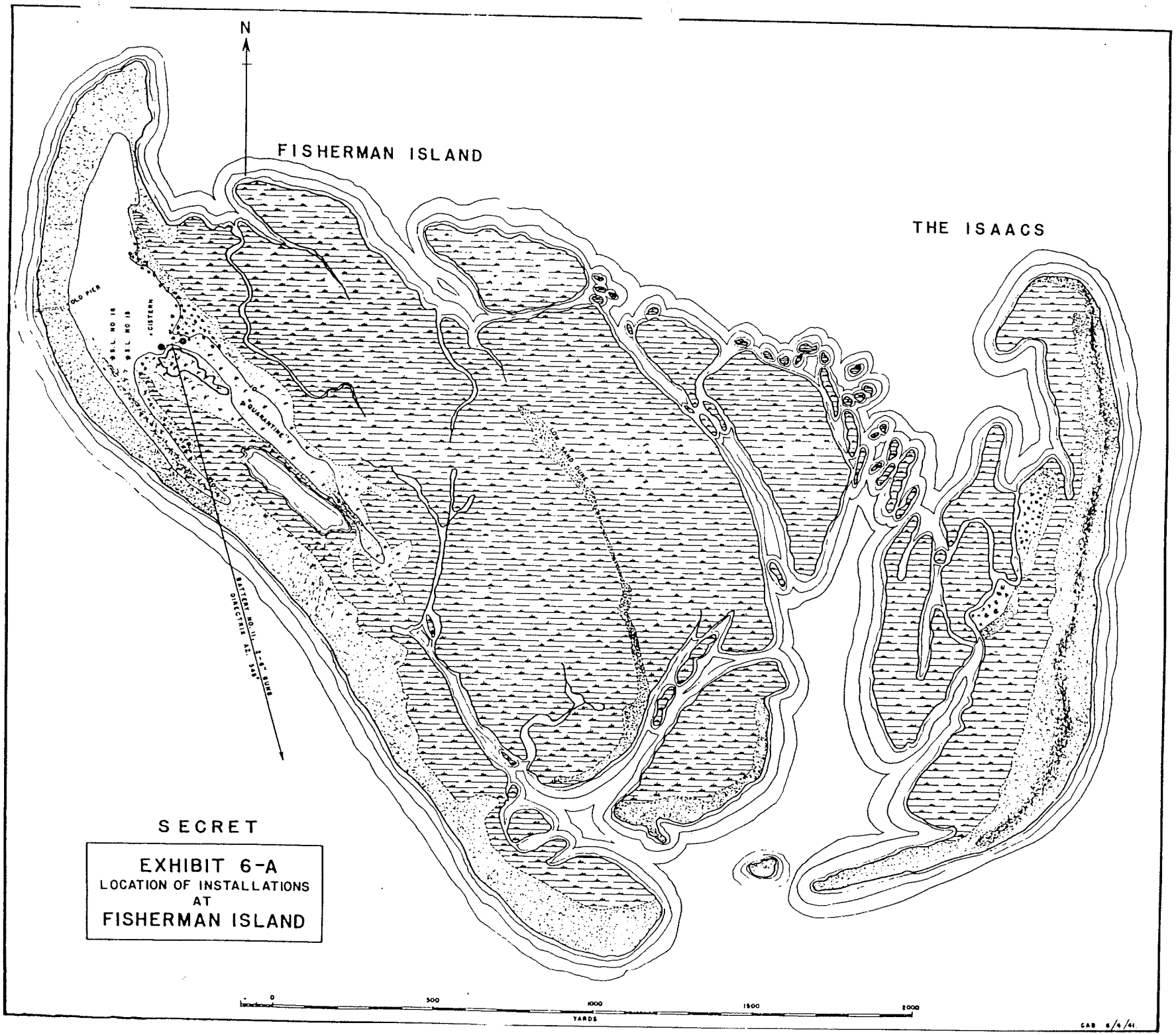


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EXHIBIT 6-A
LOCATION OF INSTALLATIONS
AT
FISHERMAN ISLAND

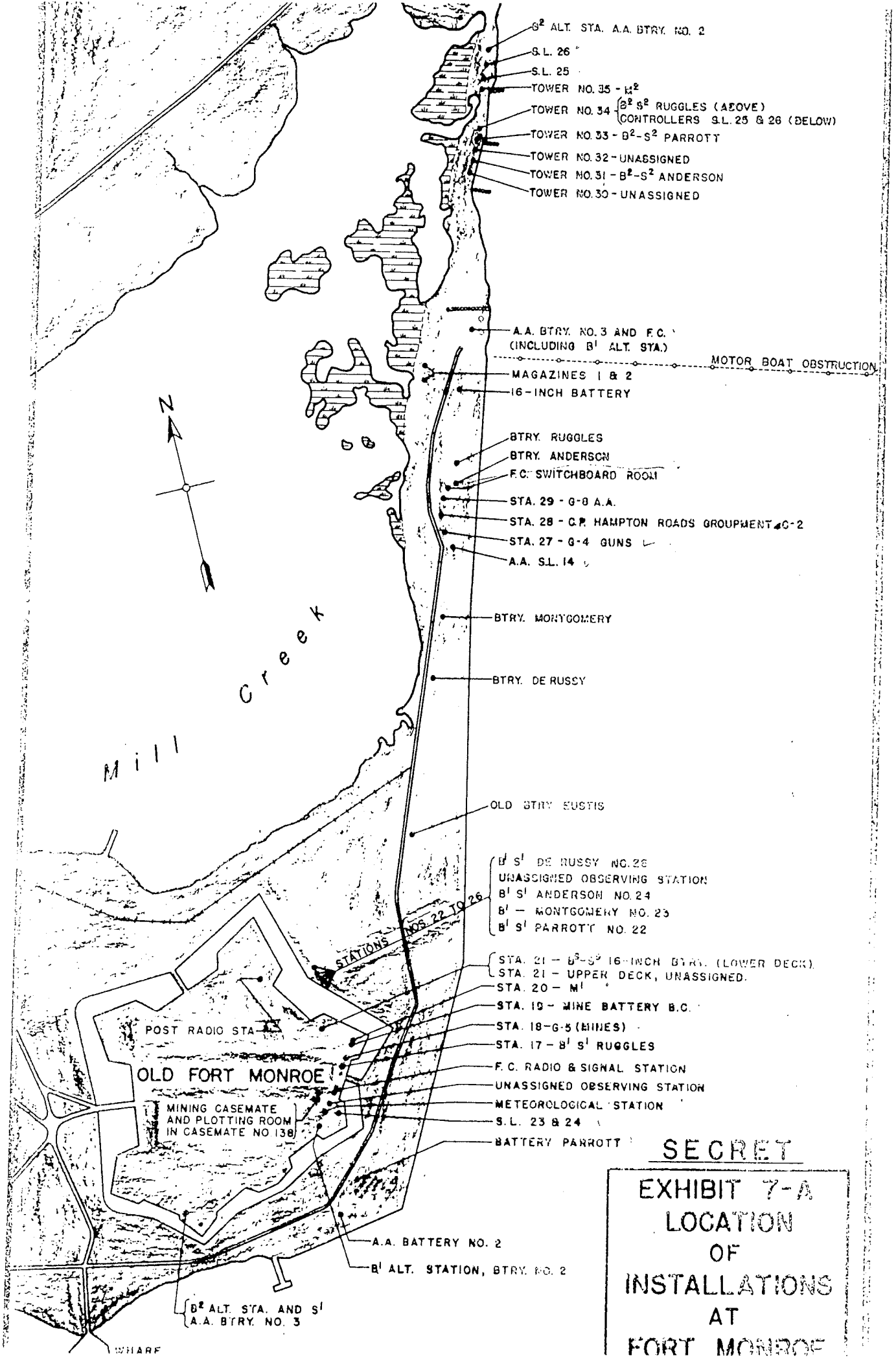

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EXHIBIT 7-A
LOCATION
OF
INSTALLATIONS
AT
FORT MONROE

WAR RESERVE AND BATTLE ALLOWANCE OF AMMUNITION

HARBOR DEFENSES OF CHESAPEAKE BAY

Battery	Number of Guns	Caliber & Type	Projectile	Rounds per Battery W/R	Rounds per Battery B/A	Place of Storage
No. 1 (Constr. No. 120)	2	16"		400	200	At battery
No. 2, Pennington	2	16" How		400	125 *	At battery
No. 3, Walke	2	16" How		400	125 *	At battery
No. 4 (Constr. No. 121)	2	16"		400	200	B/A to be held in C/R until battery is constructed; then at battery
No. 5, Temp.	4	155 mm		1600	600 *	B/A to be stored in igloo type magazines, Ft. Story
No. 5 (Constr. No. 225)	2	6" BC	AP HE	1200 400	800 400	B/A to be held in C/R until battery is constructed; then at battery
No. 6 (Constr. No. 224)	2	6" BC	AP HE	1200 400	800 400	At battery
No. 8, Temp.	2	8" Ry	HE Mk I	400		B/A to be held in C/R until battery is emplaced; then at battery
No. 8 (Constr. No. 123)	2	16"		400	200	B/A to be held in C/R until battery is constructed; then at battery
No. 9, Temp.	4	155 mm		1600	600 *	B/A propelling charges to be stored in magazine No. 1 (No.20), Ft. Monroe; projectiles in magazines of mortar btrys. at Ft. Monroe
No. 9 (Constr. No. 228)	2	6" BC	AP HE	1200 400	800 400	B/A to be held in C/R until battery is constructed; then at battery
No. 10, Parrott, Temp.	2	12" DC	870#	200	160 *	At battery
No. 10 (Constr. No. 226)	2	6" BC	AP HE	1200 400	800 400	B/A to be held in C/R until battery is constructed; then at battery
No. 11, DeRussy, Temp.	3	12" DC	1070#	300	200 *	At battery
No. 11 (Constr. No. 227)	2	6" BC	AP HE	1200 400	800 400	B/A to be held in C/R until battery is constructed; then at battery
No. 12 (Constr. No. 122)	2	16"		400	200	B/A to be held in C/R until battery is constructed; then at battery
No. 13, Gates	2	6" DC	AP HE	1200 400	600 * 200	At battery
No. 14, Hindman	2	3" BC		800	800 *	At battery
No. 16, Lee	4	3" BC		1600	1600 *	At battery
No. 17, Montgomery	2	6" BC	AP HE	1200 400	300 * 100	At battery
No. 18, Anderson, Temp.	4	12" M	700# 1046#	200 100 **	200 100 **	At battery
No. 19, Ruggles, Temp.	4	12" M	700# 1046#	200 100 **	200 100 **	At battery
No. 18 (Constr. No. 124)	2	16"		400	200	B/A to be held in C/R until battery is constructed; then at battery

* Battle Allowances of these batteries were approved by the Secretary of War in 8th Indorsement, WD, AGO, July 25, 1933 (AG 381.4; 6-5-33; Misc. E).

** War Reserve and Battle Allowances of these mortar batteries were approved by the Secretary of War in 3rd Indorsement, WD, AGO, September 19, 1940 (AG 471; 4-17-40; M-WPD).

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ANNEX A EXHIBIT 8-A

SECRET

BATTERY	CALIBER AND TYPE	TYPE OF AMMUNITION	CENTRAL STORAGE	POINT OF STORAGE
No. 1	16" Gun (Navy	2100# Shell	400	Being loaded at Picatinny
		Charges	400	" " " "
Nos. 2 and 3 (Pennington)	16" Howitzer	2100# Shell	550	" " " "
		Charges	550	Nansemond
No. 4	12" Gun	975# Shell	600	Being loaded at Picatinny
		Charges	600	Raritan
No. 5	155-mm	Mk.IIIA1 Shell	1,600	Nansemond
		Charges	1,600	Nansemond
No. 6	6"	108# Shell	1,200	Being loaded at Picatinny
		90# Shell	400	Nansemond
		Charges	1,600	Raritan
No. 8	8" Railway	240# Shell)		
		Charges	500	Being loaded at Picatinny
No. 9	155-mm	Mk. IIIA1 Shell	1,600	Nansemond
		Charges	1,600	Nansemond
Parrott	12" Gun	870# Shell	240	Delaware
		Charges	240	Being loaded at Picatinny
DeRussy	12" Guns	975# Shell	360	Being loaded at Picatinny
		Charges	360	Raritan
No. 12	16" Gun (Navy)	2100# Shell	400	Being loaded at Picatinny
		Charges	400	" " " "
Gates	6"	108# Shell	600	" " " "
		90# Shell	200	Nansemond
		Charges	800	Raritan
Hindman	3" B.C.	Complete Rounds	---	All ammunition to be stored in battery.
Lee	3" B.C.	" "	---	All ammunition to be stored in battery.
Montgomery	6"	108# Shell	900	Being loaded at Picatinny
		90# Shell	300	Nansemond
		Charges	1,200	Raritan
Anderson	12" Mortar	700# Shell	120	Nansemond
		1046# Shell	60	Nansemond
		Charges	180	Raritan
Ruggles	12" Mortar	700# Shell	120	Nansemond
		1046# Shell	60	Nansemond
		Charges	180	Raritan

The figures for the column "Central Storage" for batteries now installed represent the difference between the battle allowances and the war reserve. For batteries not installed, (indicated by number) the figures represent the full war reserve to be held in central storage.

COST ESTIMATE AND PRIORITY GUIDE

H. D. of Chesapeake Bay

Priorities subject to change based on availability of funds

Item	Class	Priority	DESCRIPTION	Ordnance	Engineer			TOTAL
					Materiel	Labor	Land	
1	A	3	Btry. No. 1 (Constr. No. 120), 2-16" Guns, Fort Story. Gun Carriages (two) Battery Emplacement (2 guns casemated). See Note (5)	$ 870,000(1)	$ 1942 500,000(2)	1942 750,000(2)	$	$ 2,120,000
2	A	4	Btry. No. 12 (Constr. No. 122), 2-16" Guns, Cape Charles. Gun Carriages (two) Battery Emplacement (2 guns casemated). See Note (5) Piling, if required. See Note (6)	870,000(1)	$1,200,000 - 1942 500,000 100,000(6)	 750,000(3) 150,000(6)		2,370,000(6)
3	A	6	Btry. No. 2, Pennington, 2-16" Howitzers, Fort Story. Shields	80,000				80,000
4	A	7	Btry. No. 3, Walke, 2-16" Howitzers, Fort Story. Shields	80,000				80,000
5	A	5	Btry. No. 11 (Constr. No. 227), 2-6" Guns, Fisherman Island. Gun Carriages (two) Battery Emplacement (2 guns). See Notes (4) Wharf Piling	200,000	 60,000 25,000 10,000	 90,000 25,000 12,000		422,000
6	A	8	Btry. No. 5 (Constr. No. 225), 2-6" Guns, Fort Story. Gun Carriages (two) Battery Emplacement (2 guns). See Note (4)	200,000	1941 60,000	1941 90,000		350,000
7	A	9	Btry. No. 10 (Constr. No. 226), 2-6" Guns, Fort Story. Gun Carriages (two) Battery Emplacement (2 guns). See Note (4)	200,000	60,000	90,000		350,000
8	A	10	Btry. No. 9 (Constr. No. 228), 2-6" Guns, Cape Charles. Gun Carriages (two) Battery Emplacement (2 guns). See Note (4)	200,000	60,000	90,000		350,000
9	A	1	Land, Kiptopeke Area. 349⅛ acres @ $215.60 per acre..... $75,360 Wise and two Fitchett houses 50,500 Removal of graves 4,500 Cost of survey by District Engineer 1,603			4,500 1,603	125,860	1941 131,963
10	A	11	Btry. No. 4 (Constr. No. 121), 2-16" Guns, Fort Story. Gun Carriages (two) Battery Emplacement (2 guns casemated). See Note (5) Piling, if required. See Note (6)	~~800,000~~	1942 500,000 100,000(6)	1942 750,000 150,000(6)		2,370,000(6)
11	A	12	Btry. No. 13 (Constr. No. 229), 2-6" Guns, Fort Wool. Replace by barbette mounts Modification of emplacements	200,000	4,000	6,000		210,000
12	A	2	Btry. No. 8 (Constr. No. 123), 2-16" Guns, Cape Charles. Gun carriages (two) Battery Emplacement (2 guns casemated). See Note (5) Land, 116⅛ acres (this includes land for Item 8) Cost of survey by District Engineer Piling, if required. See Note (6)	870,000	500,000 100,000(6)	750,000 1,773 150,000(6)	39,806 1941	2,411,579(6)
13	A	13	Btry. No. 18 (Constr. No. 124), 2-16" Guns, Fort Monroe. Gun Carriages (two) Battery Emplacement (2 guns casemated). See Note (5) Piling, if required. See Note (6)	870,000	500,000 100,000(6)	750,000 150,000(6)		2,370,000(6)
14	A	14	Btry. No. 17, Montgomery, 2-6" Guns, Fort Monroe. Shields	30,000				30,000
15	A	15	Btry. No. 14, Hindman, 2-3" Guns, Fort Wool. Shields	10,000				10,000
16	A	16	Btry. No. 16, Lee, 4-3" Guns, Fort Wool. Shields	20,000				20,000
17	A	17	Camouflage materials @ $1,350 per battery for 16 batteries of modernization program		21,600			21,600
18	A	18	Local ground defense materials @ $16,000 per fort for 4 forts		64,000			64,000
			TOTALS -	$5,570,000	$3,264,600	$4,760,876	$165,666	$13,761,142

NOTES:
(1) Funds have been provided for this item.
(2) $625,000 has been allotted for this item.
(3) $30,000 has been allotted for this item.
(4) Cost of emplacement includes Bomb & Gas-proofed Plotting Room, and Switchboard Room.
(5) Cost of emplacement includes Plotting Room, Switchboard Room, Radio Station (Bomb & Gas-proofed).
(6) An additional amount of $250,000 for piling is estimated by the District Engineer for this battery.
(7) No expenditure of funds by the Chemical Warfare Service, Signal Corps or the Coast Artillery Corps is contemplated by this Annex.
(8) Class A - To be procured and installed in peace.

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Exhibit 9-A

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

ANNEX B

FIRE CONTROL INSTALLATIONS

ANNEXES
to
HARBOR DEFENSE PROJECT
HARBOR DEFENSES OF CHESAPEAKE BAY
1941

AUTHORITIES

1. This document contains Annexes to the document entitled "Harbor Defense Projects for Harbor Defenses included in the Chesapeake Bay Area, Parts I and II," (Short Title CCA-P-CB). The latter document was approved by the Secretary of War in 5th Indorsement, (AG 660.2 (10-31-32) (Misc.) E) (OCCA 662.1/6-A).

2. The original Annexes to Harbor Defense Projects, Harbor Defenses of Chesapeake Bay were prepared by a Board of Officers appointed by paragraph 3, S.O. No. 260, Headquarters, Third Corps Area, October 26, 1932, pursuant to letter dated the Office of The Adjutant General, June 2, 1933, subject "Harbor Defense Project, Chesapeake Bay Area," (AG 660.2 (6-1-33) (Misc.) (OCCA 662.1/6-A-1). The original Annexes were approved by the Secretary of War in 21st Indorsement dated the Office of The Adjutant General, February 19, 1937, on letter subject "Annexes, Harbor Defense Project, Chesapeake Bay Area," dated Headquarters Third Corps Area, Baltimore, Md., June 5, 1934 (AG 660.2 (6-5-34) (Misc. E) (Hqrs. 3d CAD. 660.2) (OCCA 662.1/6-A-2). Short Title of the approved Annexes was "CCA-AN-CB".

3. The first revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay was directed in 7th Indorsement dated the Office of The Adjutant General, April 20, 1939, on letter subject "Harbor Defense Project," dated Headquarters Third Coast Artillery District, January 5, 1939 (AG 660.2 (1-5-39) (Misc.) E) (Hqrs. 3d CADist. SECRET 660.2) (OCCA 662.1/6-G). The first revision of the Annexes was approved by the Secretary of War in 21st Indorsement on the above communication, under date of December 18, 1939 (AG 660.2 (1-5-39) M-WPD) (OCCA 662.1/6-G).

4. This second revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay, was directed by letter, WD, AGO, September 27, 1940 (AG 660.2 (9-13-40) M-WPD-M), subject "Modernization of Harbor Defense Projects, continental United States." These revised Annexes were approved by the Secretary of War in 4th Indorsement, WD, AGO, April 17, 1941 (AG 660.2 (12-28-40) M-WPD) (OCCA 662.1/6-J-6).

A N N E X B.

FIRE CONTROL INSTALLATIONS.

1. The tactical organization of the batteries of the harbor defense is shown in Exhibit 1-A. The system of communication between the elements of the command is shown in the communications diagram for the eventual status of the harbor defense, which accompanies this annex as Exhibit 25-B. The location on the ground of the major elements of the fire control system, provided for in this project is shown in Exhibit 1-B.

2. In determining the fire control system needed by a battery, cognizance is taken of the following:

a. The angle of intersection at the target must be 15 degrees or greater; and the area within 15 degrees of the baseline (as measured at both base-ends) is to be excluded because the construction of the plotting board arms does not permit utilizing this area. The maximum range covered by a baseline is 3.6 times its length.

b. The DPF may be depended on to furnish reasonably accurate ranges to a distance of 800 yards for each 10 feet of its height above sea level. The DPF is more dependent on clear weather than either the horizontal base or the SCRF since accurate waterlining is essential. For the horizontal base or the SCRF, sighting on the mast is sufficient and haze or low islands may not interfere with accurate range finding.

c. Atmospheric conditions in this region are such that visibility extends beyond 20,000 yards on exceptionally clear days only; it may be depended on up to 15,000 yards; and is ordinarily in the vicinity of 18,000 yards. It is greater outside the Capes than inside of Chesapeake Bay.

3. a. The orientation of the elements of the fire control system of the Harbor Defenses of Chesapeake Bay is based on a local system of rectangular coordinates on the Lambert system with standard parallels 36°38'30" and 37°21'30"; along these parallels there is true scale. Zero is south. A survey was completed and computations made in 1940 by the Coast and Geodetic Survey with a precision of second order triangulation, which is the standard of precision required for fire control determinations. The new coordinates have been applied to all existing batteries and fire control installations.

b. Exhibit 27-B and the tables following show the location of triangulation stations, instrument centers, tower centers and directing guns; there also are shown a number of nearby Coast and Geodetic Survey triangulation stations. The exhibit shows the form of computation required (with tables) for converting the geographical coordinates of known points in the vicinity, to rectangular coordinates of the artillery grid.

4. Requirements of the Communications Net.

a. Fire control system.

(1) There is appended as Exhibit 25-B, a communications diagram showing the telephone and TI bell circuits required in each locality; and as Exhibit 26-B, a routing of the principal cables called for by this project.

(2) Communications equipment should be designed to provide a high grade installation, satisfactory for transmission of fire control data (which is similar to code), with an overall loss preferably not exceeding 15 decibels between any base-end station and the plotting room. The cables should employ 16-gauge wire where needed and should be loaded if required.

(3) Whenever changes in the fire control system are to be made (such as the laying of new cables), the communications diagram shall constitute a guide and shall be consulted in order that the trend of new work shall be to provide for the eventual needs of the command.

(4) Whenever alterations in the annexes are authorized, affecting the fire control system, the diagram should be modified to accord with the alterations. The communications diagram of the eventual status of the harbor defenses will be maintained and kept up-to-date at all times.

b. Fire control equipment for outmoded batteries. The minimum fire control equipment which will permit service employment of outmoded batteries has been provided in this project. No new base-end stations, fire control instruments or cables are included herein especially for outmoded batteries, the new materiel needed by such batteries being designed primarily for use with batteries of the modernization program when these batteries are completed.

c. Post telephone system.

(1) To provide for the administrative and supply requirements of the troops, two post telephone circuits are set aside for each fort, leading to the harbor defense administrative headquarters fort. This provision for post telephone purposes is considered adequate.

(2) This results in there being reservedfrom Cape Charles to Granite, two pairs; from Fort Story to Granite, two pairs; from Granite to Little Creek, four pairs; from Little Creek to Fort Wool, six pairs; and from Fort Wool to Fort Monroe, eight pairs.

(3) Teletype communication between Cape Charles and Fort Story and between Fort Story and Fort Monroe is provided for as follows; no additional pairs in the cables are required, circuits being formed by simplexing:

(a) Between Cape Charles and Fort Story, one sending set and one receiving set at each fort.

(b) Between Fort Story and Fort Monroe, one sending set and one receiving set at each fort.

(4) Within the fort, one post telephone line to the post telephone switchboard is provided at each battery, group or higher command post, and at each plotting room which is distant from the BC station. One line from the post telephone switchboard is to be provided to each important administrative office.

(5) Few additional post telephones should be authorized. These provisions will enable the harbor defense to operate efficiently and permit a greater percentage of funds to be devoted to the fire control system. The existing post telephone system at Fort Monroe should be continued in use on mobilization.

d. Navy requirements. In accordance with decision of the War Department to provide certain circuits for use of the Navy, as expressed in letter of the Secretary of War to the Secretary of the Navy, August 24, 1940, "Inter-communications between Army and Navy Activities" (WD 676; 12-13-39; M-WPD) (WPD 4242), the following circuits are to be provided for Naval use:

3 between Fort Wool and Fort Monroe.
4 between Fort Wool and Fort Story.
2 between Fort Story and Cape Charles.

5. Spotters. A spotter with azimuth instrument is provided at each base-end station of the batteries of major caliber armament. Such batteries employ magnitude spotting. At the present time, rapid fire batteries are provided with one spotter, located at the battery. These batteries are not provided with equipment for magnitude spotting, employing sensing only.

6. The next succeeding paragraphs are concerned with locations on the ground of proposed and existing fire control stations. Following the description of these sites are paragraphs dealing with the requirements of each battery. Exhibit 1-B shows the locations described; they are numbered consecutively commencing with the most southerly site.

7. Site No. 1, Little Island.

a. This location is adjacent to the Little Island Coast Guard station on the south, approximately 150 yards inshore from the beach and 7300 yards south of Sand Bridge fire control station. The site is reached via Sand Bridge road and the beach.

b. The property is owned by the Sand Bridge Gunning Club, P.O. address Virginia Beach. Approximately one acre should be purchased. Survey to determine metes and bounds has been made. The ground level is about 7 feet above mean low water.

c. The Little Island site is required as a base-end station for 16-inch batteries Nos. 1 and 4 at Fort Story. An antiaircraft observer also is to be located here. One two-deck tower with platform on roof should be constructed.

d. The lower HI should be approximately 60 feet above mean low water. Azimuth instruments for both observing rooms should be provided. The arc of view required is from azimuth 162 degrees on the north clockwise to azimuth 342 degrees on the south.

8. Site No. 2, Sand Bridge.

a. This location is 500 yards inshore from the beach, 200 yards SE of Raineys Pond and 400 yards north of Sand Bridge road. It is 4700 yards south of Dam Neck Coast Guard station No. 164. The site is reached via the Pongo road, 7.4 miles south from Oceana (west of Virginia Beach), thence east by winding roads 5.7 miles to the beach.

b. The property was donated by the Sand Bridge Gunning Club. Title to approximately two acres and right of way thereto was acquired May 21, 1940. The ground level is about 8 feet above mean low water.

c. The Sand Bridge site is required as a base-end station for 16-inch batteries Nos. 1 and 4 at Fort Story, for Batteries Pennington and Walke; and for the two 16-inch batteries at Cape Charles. An antiaircraft observer also is to be located here.

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d. One three-deck tower, A, with platform on roof for an antiaircraft observer has been constructed, providing observing rooms (from the upper downward) for 16-inch battery No. 1 at Fort Story and for Batteries Pennington and Walke.

e. A second tower, B, should be provided, located so as to avoid interference, at not less than 290 feet from Tower A at azimuth 340 degrees. This tower is required for base-end stations (from the top down) for 16-inch battery No. 4 at Fort Story and for the two 16-inch batteries Nos. 8 and 12 at Cape Charles. The lowest HI should be approximately 60 feet above mean low water.

f. All observing rooms should be equipped with azimuth instruments. Both towers require an arc of view from azimuth 163 degrees on the north clockwise to azimuth 338 degrees on the south.

9. Site No. 3, Rifle Range.

a. This location is 9550 yards from Site No. 2. Tower A on the north contains two observing rooms, being B^2S^2 Pennington (upper) and B^2S^2 Walke, the upper equipped with a DPF and to be provided with an azimuth instrument, and the lower to be equipped with two azimuth instruments. Two additional towers, B and C, are required, of three observing rooms each. The additional base-end stations are required for the batteries tabulated below. An HI of not less than 90 feet above mean low water should be provided for the lowest instruments of Towers B and C in order amply to clear the woods in the foreground. Tower B should provide a platform on roof for an antiaircraft observer.

	Tower B	Tower C
Upper	16" Story No. 1	16" Story No. 4
Middle	16" Charles No. 8	16" Monroe No. 18
Lower	16" Charles No.12	6" Story No. 5

b. All of the observing instruments of Towers B and C require a view from azimuth 172 degrees clockwise to azimuth 344 degrees. To provide such distance between stations that interference will be minimized, a small additional plot must be obtained. The area required is approximately 100 feet square with right of way, lying about 200 feet south of Tower B at azimuth 341 degrees. The location of the instrument center of Tower B has been marked by a standard monument and surveyed. The ground level is about 12 feet above mean low water.

10. Site No. 4, Hollies. The present plot contains one single-room tower, B^3S^3 Walke, with HI of 115 feet, and a second tower, B, with two rooms. The upper room of Tower B is B^2S^2 16-inch battery No. 18 at Fort Monroe, and overlooks Tower A. The lower room is B^1 6-inch battery No. 10 at Fort Story. It is masked by Tower A from azimuth 171 degrees to azimuth 183 degrees; and on the left is limited by the Cavalier Hotel to azimuth 341 degrees. The controllers of searchlights Nos. 5 and 6 are to be located in the lower room of Tower B. An antiaircraft observer's platform is provided on the roof of Tower B.

11. Site No. 5, Parcel C.

a. This plot, near the shoreline north of Virginia Beach between 105th and 106th streets, contains one three-room tower, A, these rooms being base-end stations (from the top downward) for 6-inch battery No. 6, the 155 mm (outmoded) battery and the mine battery. The middle room is assigned to 6-inch battery No. 10 when constructed.

b. A second tower, B, is required for base-end stations (from the top downward) for 16-inch battery No. 4 at Fort Story and two 16-inch batteries Nos. 8 and 12 at Cape Charles. Pending construction of 16-inch battery No. 8, the middle observing room is assigned as B^1S^1 to the 8-inch railway battery (outmoded) at Cape Charles. The tower must be constructed in rear of and overlook Tower A in order to provide the required arc of view from azimuth 141 degrees (15 degrees north of Granite) clockwise to azimuth 338 degrees (15 degrees east of Rifle Range). The lower observing room will require an HI of approximately 95 feet 3 inches to clear Tower A.

12. Site No. 6, Emerson.

a. This plot contains one single-room tower, A, with HI of 115 feet above mean low water (being B^4S^4 of 16-inch battery No. 1 at Fort Story; and one single-room tower, B, with HI of approximately 125 feet (being B^3S^3 Pennington). Tower B overlooks Tower A. A second room should be constructed below the existing room of Tower A, as B^2 of 6-inch battery No. 5 at Fort Story.

13. Site No. 7, Fort Story. Exhibit 2-A shows the location of the principal elements of the fortification included in the Fort Story reservation.

a. There is being constructed a splinterproof concrete building 30 by 90 feet inside dimensions, divided by movable partitions into 6 rooms on each side of a 5-foot central hallway, with short tunnel approach, excavated into the sand dune 60 yards west of the fire control switchboard room. The floor is at about the 15-foot level to provide an ample sand overhead cover.

b. This building is planned to provide for the following:

Harbor Defense CP.
Inshore Patrol CP.
Capes Groupment CP.
AA Groupment CP including antiaircraft intelligence center.

c. (1) The upper room of the East End tower is assigned as the command post of Group 1. Telephone communication with the controllers of searchlights Nos. 7 and 8 should be provided. The lower room is the BC station of Battery Pennington.

(2) The West End tower is the command post of Group 2, the mine group. The controllers of Searchlights Nos. 9 and 10 are located in this station. When construction of 16-inch battery No. 4 has rendered this station untenable on account of blast, a new station is to be provided for Group 2 and the searchlight controllers, on the dune 225 yards southeast of the FC switchboard room.

(3) The existing concrete observation station 300 yards west of No. 2 howitzer of Battery Walke is assigned as the command post of Group 6, the antiaircraft group. When construction of 16-inch battery No. 1 has rendered this station untenable, a new station is to be provided for Group 6 on the dune referred to above. This station should have a platform on roof for an antiaircraft observer.

(4) On the ridge of the dunes, in the locations near the FC switchboard room shown in Exhibit 2-A, two towers should be erected for the activities tabulated below. The observing rooms of both towers should have the widest arc of view practicable, extending from 16-inch battery No. 1 on the left at azimuth approximately 155 degrees to azimuth approximately 334 degrees on the right. The observing rooms should be not less than 12½ feet square, inside dimensions, in order to accommodate the activities to be provided for, including radio and observing instruments. The lowest instrument height should be sufficient only to clear amply the trees in the foreground.

	Tower A	Tower B
Upper room	Signal Station	AA Group OP
Middle room	Inshore Patrol OP	Mine Group OP
Lower room	Harbor Defense OP	Groupment OP

(5) The BC station of Battery Walke has been constructed on the existing platform of Cape Henry lighthouse. Movable azimuth instrument pedestals are to be employed. In letter September 2, 1940, the Secretary of the Treasury approved construction by the War Department of the battery commander's station on the lighthouse platform and also approved installation of a telephone cable (AG 660.2; 9-3-40; M-D).

d. Other existing elements at Fort Story are:

Mine casemate No. 2, South of old lighthouse.
Fire control switchboard room.
Radio station.
Meteorological station.

14. Site No. 8, Casemate.

a. This site, 2400 yards west of Cape Henry lighthouse, is the location of mine casemate No. 1, the plotting room of the mine battery and a fire control tower.

b. The three-deck tower erected on top of the bombproof provides base-end stations (from the top downward) for 6-inch battery No. 6, the 155 mm (outmoded) battery and the mine battery. When 6-inch battery No. 10 has been constructed, the observing room now assigned to the 155 mm battery is to be assigned to Battery No. 10. The arc of view on the right extends to the left flank of 16-inch battery No. 1 at approximate azimuth 295 degrees.

15. Site No. 9, Granite.

a. This site contains a single-room tower (being B^4S^4 Battery Walke) having an HI of 115 feet above mean low water; and a second tower, C, 600 feet toward the beach, having three observing rooms (stated from the top downward) for Battery Pennington, and 16-inch batteries Nos. 12 and 8 at Cape Charles. Until 16-inch battery No. 8 is constructed, the lower observing room is assigned as B^2S^2 of the 8-inch railway battery (outmoded) at Cape Charles. A second observing room should be constructed below the existing room of Tower A, to provide B^3 of 6-inch battery No. 5 at Fort Story.

b. Tower B is to be erected abreast (southwest) of Tower A. A monument has been set to show the location of the instrument center, and surveyed. It should contain three observing rooms for 16-inch batteries Nos. 1 and 4 at Fort Story and 16-inch battery No. 18 at Fort Monroe. The required field of view is from azimuth 101 degrees on the left (15 degrees from Chesapeake Beach) clockwise to azimuth 305 degrees (15 degrees from Emerson). The lower HI should be 125 feet to overlook the traverses of the 16-inch batteries at Fort Story. An antiaircraft observer should be provided for on the roof of Tower B.

16. Site No. 10, Chesapeake Beach.

a. This location is approximately 400 yards northwest of the shore end of Route 460, a macadam road known as the Chesapeake Beach road. The site is on the second line of dunes, about 220 yards from and 16 feet above mean low water. It is approximately 25 yards north of the East End of Chubb Lake. It is 9050 yards west of Site No. 9, Granite.

b. A plot approximately 100 feet by 250 feet with right of way thereto has been acquired.

c. The Chesapeake Beach site is required as base-end stations for 16-inch gun batteries Nos. 12 at Cape Charles and No. 18 at Fort Monroe; for the 8-inch railway battery at Cape Charles (outmoded); and for the 16-inch howitzer batteries at Fort Story. Two towers of three decks each should be constructed, the lower HI in each case being approximately 55 feet above mean low water. Monuments have been placed to designate their location, and surveyed. An arc of view from azimuth 113 degrees on the left clockwise to azimuth 273 degrees on the right must be provided. Observing rooms are assigned from the upper down: Tower A: Battery Pennington, 16-inch Monroe No. 18 and 8-inch railway battery at Cape Charles; Tower B: Battery Walke and 16-inch battery No. 12 at Cape Charles. The lower deck of Tower B is not now required but should be constructed to meet possible future need. Tower A should provide a platform on the roof for an antiaircraft observer.

17. Site No. 11, Little Creek. This site has been acquired for shore installations of the underwater defense; see Annex D.

18. Site No. 12, Mockhorn Island.

a. This site is located on a low island lying off the east shore of Cape Charles. A plot of approximately one acre has been purchased from the estate of Larimer A. Cushman who owned the island. The post office address of the executors is Towns End, Virginia. The island is conveniently reached by small boat from Magotha.

b. The site contains one tower providing base-end stations for 16-inch batteries Nos. 8 and 12 at Cape Charles and No. 1 at Fort Story. Pending construction of 16-inch battery No. 8, the upper room is assigned to the 8-inch railway battery (outmoded) at Cape Charles. An antiaircraft observer is provided for on the roof of Tower A. The arc of view is from azimuth 272 degrees on the left clockwise to azimuth 34 degrees on the right.

c. A second tower, B, should be constructed to provide base-end stations for 16-inch battery No. 4 at Fort Story and for 6-inch battery No. 9 at Cape Charles. The required arc of view is the same as for Tower A. A third observing room is not now required but in view of the small increased cost, should be provided for possible future need. Tower B should be located at least 200 feet at azimuth 20 degrees from Tower A.

d. In emergency, such as the destruction of the base-end stations on Smith Island, a baseline Mockhorn-Wise may be improvised.

19. Site No. 13, Smith Island.

a. This site is adjacent to the Cape Charles lighthouse on the southeast. The land, approximately two acres, was purchased from Percy R. Pyne, 2d, 263 Madison Avenue, New York, New York, and associates, who own the island. Mail for the Coast Guard station on Smith Island is obtained daily at Towns End.

b. The site is required as base-end stations for the two howitzer batteries at Fort Story, the two 16-inch batteries at Cape Charles, the two 16-inch gun batteries at Fort Story, the 16-inch gun battery at Fort Monroe and for the two 6-inch batteries at Fisherman Island and Cape Charles. One tower, B, has been constructed. Monuments have been placed to designate the location of Towers A and C, and surveyed.

c. An arc of view of 212 degrees from azimuth 72 degrees on the right counterclockwise to azimuth 220 degrees on the left is required by the two 16-inch batteries at Cape Charles and the two 16-inch gun batteries at Fort Story, having a baseline from Mockhorn Island. An arc of view of 155 degrees is required by the other base-end stations, from azimuth 72 degrees on the right counterclockwise to azimuth 277 degrees on the left. The site of Tower A, serving 16-inch batteries Nos. 8, 12 and 1, is to the east of Tower B, at azimuth 271 degrees and the two towers are separated by over 100 feet. The lowest HI in Towers A and C

should be at least 73 feet above mean low water. In Tower A, observing rooms are assigned from the top down: 16-inch No. 8 at Cape Charles, 16-inch No. 12 at Cape Charles and 16-inch No. 1 at Fort Story. Pending construction of 16-inch battery No. 8, the upper observing room of Tower A is assigned to the 8-inch railway battery (outmoded) at Cape Charles. In Tower B, the rooms are similarly assigned: 16-inch No. 4 at Fort Story, Battery Pennington and Battery Walke. In Tower C, the rooms are assigned to the 6-inch battery at Cape Charles, the 6-inch battery at Fisherman Island and the 16-inch battery at Fort Monroe. Pending construction of the 6-inch battery at Cape Charles, the upper observing room at Tower C is assigned to the 155 mm battery (outmoded) at Cape Charles. An anti-aircraft observer is provided for on the roof of Tower B.

20. Site No. 14, Wise.

a. This location near the tip of Cape Charles is required for base-end stations for the 16-inch gun batteries at Cape Charles, Fort Story, and Fort Monroe, the howitzer batteries at Fort Story and the 6-inch batteries at Cape Charles and Fisherman Island. Approximately one acre of land has been acquired.

b. Three towers, A, B, and C, are required. Tower B has been constructed. Tower A, to the west of Tower B, will provide three observing rooms (from the top downward): for the two 16-inch batteries at Cape Charles and 16-inch battery No. 1 at Fort Story, and requires an arc of view from azimuth 282 degrees (15 degrees south of a line to Smith Island) clockwise to azimuth 162 degrees (15 degrees west of a line to Cheapside station); this is an arc of 240 degrees. Pending construction of 16-inch battery No. 8, the upper room of Tower A is assigned to the 8-inch railway battery (outmoded) at Cape Charles. Tower B contains observing rooms for 16-inch battery No. 4 at Fort Story, Battery Pennington and Battery Walke, in that order from the top down. The upper observing room has an arc of view from azimuth 287 degrees (15 degrees south of a line to Smith Island) clockwise to azimuth 168 degrees (15 degrees west of a line to Cheapside). This is an arc of 241 degrees. The two lower rooms should have an arc of view from azimuth 282 degrees clockwise to azimuth 78 degrees. The lowest HI of Towers A and C should be 73 feet or more above mean low water. Tower C provides observing rooms for the 16-inch battery at Fort Monroe and 6-inch batteries at Cape Charles and Fisherman Island (in that order from the top down). Pending construction of 6-inch battery No. 9, the middle observing room of Tower C is assigned to the 155 mm battery (outmoded) at Cape Charles. An antiaircraft observer should be provided for on the roof of Tower A. Monuments have been placed to show the location of Towers A and C, and surveyed.

c. A combined cable hut and small switchboard room has been constructed at this site, where the cables from Smith Island, Fisherman Island, Kiptopeke switchboard and Cape Henry terminate.

21. Site No. 15, Kiptopeke. 112½ acres of land has been acquired on which to construct 16-inch battery No. 12. See Exhibit 4-A. A switchboard room has been constructed on this plot. A station should be provided for the CP of Group 3 (Guns) and Group 7 (AA). Additional land at Kiptopeke is required.

22. Site No. 16, Cheapside.

a. This location is required for one fire control tower containing observing rooms, from the top down, for the 16-inch battery at Fort Monroe and 6-inch battery at Fisherman Island. An antiaircraft observer should be provided for. The third observing room is not permanently required but should be provided when the tower is built. It is assigned to the 8-inch railway battery (outmoded) at Cape Charles. The site is approximately 100 yards north of the shore end of the macadam road (Pickerts Harbor road) leading west from near Cheapside, and is about 50 yards from high water. Approximately one acre of land has been acquired.

b. The lowest HI should be not less than 60 feet above ground level in order to clear the trees. The ground level is approximately 20 feet above mean low water. The field of view required is from azimuth 345 degrees clockwise to 166 degrees, an arc of 181 degrees. A monument has been placed to designate the location of the instrument center, and surveyed.

23. Site No. 17, Cape Charles village.

a. This location is approximately 50 yards inshore and 100 yards south of the shore end of jetty on the south side of the harbor entrance, on open grassland the property of the Pennsylvania Railroad whose division superintendent is located at Cape Charles, Virginia. The ground level is about 11 feet above mean low water. A plot of approximately one acre with right of way thereto will be required. A survey monument has been established at the proposed instrument center and its coordinates determined.

b. One tower with two observing rooms and platform for an antiaircraft observer should be constructed for the 16-inch battery at Fort Monroe. The second observing room is not required permanently but should be included for possible future needs, in view of the small additional cost; it is assigned temporarily to the 8-inch railway battery (outmoded) at Cape Charles. The lower HI should be approximately 70 feet above mean low water. The arc of view required by both base-end stations is from azimuth 344 degrees clockwise to azimuth 170 degrees.

24. Site No. 18, Ocean View.

a. One seacoast searchlight No. 20, an antiaircraft searchlight and observer and a cable hut are to be located at this site, which is near the shore, northeast of the intersection of Norfolk Avenue and East Ocean View Avenue. The lights and observer should be connected by telephone with the Fort Monroe switchboard.

b. Approximately one-half acre of land should be acquired.

25. Site No. 19, Fort Wool. Exhibit 5-A shows the location of the principal elements at Fort Wool. The presence of two seacoast searchlights in the small area of this island prevents the successful use of the reservation for base-end stations except for short range employment.

26. Site No. 20, Fort Monroe. Exhibit 7-A shows the locations of the principal elements of the defenses at Fort Monroe.

a. Command Posts.

(1) Hampton Roads Groupment CP is assigned existing tower No. 28 (formerly designated "C" station) between Batteries Anderson and Montgomery.

(2) Group 4 CP (Guns) is assigned tower No. 27 next south of the C-2 station. Telephone communication with searchlights Nos. 23 and 26 should be provided.

(3) Group 8 CP (AA) is assigned tower No. 29 next north of the C-2 station, adjacent to the FC switchboard room.

(4) Group 5 CP (Mines) is assigned station No. 18 on the parapet of the old fort north of the East Gate and next south of the mine battery BC station. Telephone communication with the mine searchlights, Nos. 21 and 22 at Fort Wool, should be provided.

c. Other existing elements at Fort Monroe, shown in Exhibit 7-A, are:

Submarine mine shore installations (see Annex D).
Fire control switchboard room.
FC and post radio stations.
Base-end stations, specified under each battery.

27. Site No. 21, North Buckroe. This location is 1.0 mile north of Bay Avenue at the center of Buckroe Beach, 6600 yards from Fort Monroe lighthouse and approximately 40 yards inshore. A plot of approximately one-fourth acre with right of way thereto has been acquired from Malo, Incorporated, whose president is E.E. DesPortes, 601 East Franklin Street, Richmond, Va.

28. One tower with three observing rooms and platform for an antiaircraft observer has been constructed, for the 16-inch battery at Fort Monroe, and for Batteries Montgomery and Gates. Pending construction of the 16-inch battery, the upper room is assigned to outmoded Battery DeRussy.

29. Site No. 22, Messick. This location is southeast of the village of Messick. A plot of about one acre with right of way thereto should be obtained on which to erect a fire control tower for the 16-inch battery at Fort Monroe and an antiaircraft observer. The HI should be approximately 82 feet above mean low water, in order to provide sufficient height amply to clear the trees in the foreground.

30. Battery No. 1 (Construction No. 120), two 16-inch guns at Fort Story. Exhibit 2-B.

a. BC station is to be constructed at battery. A switching device for setting up a local net including base-end observers should be included.

b.

B^1S^1: Upper deck of tower at Site 1, Little Island.
B^2S^2: Upper deck of Tower A at Site 2, Sand Bridge.
Baseline B^1 - B^2, approximately 7300 yards.
B^3S^3: Upper deck of Tower B at Site 3, Rifle Range.
Baseline B^2 - B^3, 9459 yards.
B^4S^4: Upper deck of Tower A at Site 6, Emerson.
Baseline B^3 - B^4, 8940 yards.
B^5S^5: Upper deck of Tower B at Site 9, Granite.
Baseline B^4 - B^5, 5920 yards.
B^6S^6: Lower deck of Tower A at Site 12, Mockhorn.
B^7S^7: Lower deck of Tower A at Site 13, Smith Island.
Baseline B^6 - B^7, 9248 yards.
B^8S^8: Lower deck of Tower A at Site 14, Wise.
Baseline B^7 - B^8, 6116 yards.

c. A DPF and azimuth instrument should be provided for B^1 at Little Island, B^4 at Emerson and B^7 at Smith Island. Other stations should be equipped with two azimuth instruments.

d. The plotting room is to be constructed at battery. The battery should be provided with a seacoast computor in addition to plotting equipment. A switching device for setting up a local net including base-end readers and spotters should be provided.

31. Battery No. 2, Pennington, two 16-inch howitzers at Fort Story. Exhibit 3-B.

a. BC station: Lower deck of East End tower. A switching device as specified in paragraph 30 a should be installed.

b.

B^1S^1: Middle deck of Tower A at Site 2, Sand Bridge.
B^2S^2: Upper deck of Tower A at Site 3, Rifle Range.
Baseline B^1 - B^2, 9554 yards.
B^3S^3: Tower B at Site 6, Emerson.
Baseline B^2 - B^3, 8941 yards.
B^4S^4: Upper deck of Tower C at Site 9, Granite.
Baseline B^3 - B^4, 5908 yards.
B^5S^5: Upper deck of Tower A at Site 10, Chesapeake Beach.
Baseline B^4 - B^5, 8936 yards.
B^6S^6: Middle deck of Tower B at Site 13, Smith Island.
B^7S^7: Middle deck of Tower B at Site 14, Wise.
Baseline B^6 - B^7, 6049 yards.

c. B^2 at Rifle Range and B^3 at Emerson are equipped with DPF and azimuth instrument. B^4 at Granite, B^6 at Smith Island and B^7 at Wise should be so equipped. The remaining stations should be equipped with two azimuth instruments.

d. The existing plotting room, located in rear of the sand dunes, should be provided with a seacoast computor in addition to plotting equipment and a switching device as described in paragraph 30 d.

32. Battery No. 3, Walke, two 16-inch howitzers at Fort Story. Exhibit 4-B.

a. BC station: In enclosure of platform on Cape Henry lighthouse. A switching device as described in paragraph 30 a should be provided.

b.

B^1S^1: Lower deck of Tower A at Site 2, Sand Bridge.
B^2S^2: Lower deck of Tower A at Site 3, Rifle Range.
Baseline B^1 - B^2, 9554 yards.
B^3S^3: Tower A at Site 4, Hollies.
Baseline B^2 - B^3, 6115 yards.
B^4S^4: Upper deck of Tower A at Site 9, Granite.
Baseline B^3 - B^4, 8222 yards.
B^5S^5: Upper deck of Tower B at Site 10, Chesapeake Beach.
Baseline B^4 - B^5, 9051 yards.
B^6S^6: Lower deck of Tower B at Site 13, Smith Island.
B^7S^7: Lower deck of Tower B at Site 14, Wise.
Baseline B^6 - B^7, 6049 yards.

c. B^2 at Rifle Range, B^4 at Granite, B^6 at Smith Island and B^7 at Wise should be equipped with DPF and azimuth instrument. B^3 and B^4 are now equipped with DPF. All other stations require two azimuth instruments.

d. The existing plotting room, located in rear of the sand dunes, should be provided with a seacoast computor in addition to plotting equipment and a switching device as described in paragraph 30 d.

33. Battery No. 4 (Construction No. 121), two 16-inch guns at Fort Story. Exhibit 5-B.

a. BC station is to be constructed at battery. A switching device as described in paragraph 30 a should be provided.

b.

B^1S^1: Lower deck of tower at Site 1, Little Island.
B^2S^2: Upper deck of Tower B at Site 2, Sand Bridge.
Baseline B^1 - B^2, 7300 yards.
B^3S^3: Upper deck of Tower C at Site 3, Rifle Range.
Baseline B^2 - B^3, 9500 yards.
B^4S^4: Upper deck of Tower B at Site 5, Parcel C.
B^5S^5: Middle deck of Tower B at Site 9, Granite.
Baseline B^4 - B^5, 6479 yards.
B^6S^6: Upper deck of Tower B at Site 12, Rockhorn.
B^7S^7: Upper deck of Tower B at Site 13, Smith Island.
Baseline B^6 - B^7, 9200 yards.
B^8S^8: Upper deck of Tower B at Site 14, Wise.

c. B^1 at Little Island, B^4 at Parcel C and B^7 at Smith Island should be equipped with DPF and azimuth instrument. All other stations require two azimuth instruments.

d. The plotting room is to be constructed at battery. It should be provided with a seacoast computor in addition to plotting equipment, and a switching device as described in paragraph 30 d.

34. Battery No. 5 (Construction No. 225), two 6-inch guns at Fort Story. Exhibit 7-B.

a. Plotting room to be the lower room of a 2-story splinterproof structure to be erected near the battery, the upper room to house an SCRF which requires an arc of view from azimuth 329 degrees on the right counterclockwise to azimuth 153 degrees on the left. A platform on the roof will provide a BC and spotter's station.

b.

B^1: Lower deck of Tower C at Site 3, Rifle Range.
B^2: Lower deck of Tower A at Site 6, Emerson.
Baseline B^1 - B^2, 9000 yards.
B^3: Lower deck of Tower A at Site 9, Granite.
Baseline B^2 - B^3, 5723 yards.

c. Each base-end station should be equipped with an azimuth instrument.

35. Battery No. 5 temporary, four 155 mm guns at Fort Story. Exhibit 6-B.

a. Plotting room to be the lower room of a 2-story splinterproof building to be erected near the battery, the upper room to house an SCRF which requires an arc of view from azimuth 329 degrees on the right counterclockwise to azimuth 153 degrees on the left. A platform on the roof will provide a BC and spotter's station.

b.

B^1: Lower deck of Tower B at Site 4, Hollies.
B^2: Middle deck of Tower A at Site 5, Parcel C.
Baseline B^1 - B^2, 2500 yards.
B^3: Middle deck of tower at Site 8, Casemate.
Baseline B^2 - B^3, 6161 yards.

c. B^1 should be equipped with DPF; other base-end stations should be equipped with azimuth instruments.

d. The fire control equipment and baselines of this battery are assigned to Battery No. 10, Construction No. 226, two 6-inch guns, when that battery is constructed.

36. Battery No. 6 (Construction No. 224), two 6-inch guns at Fort Story. Exhibit 8-B.

a. Plotting room to be the lower room of a 2-story splinterproof building to be erected near the battery, the upper room to house an SCRF which requires an arc of view from azimuth 326 degrees on the right counterclockwise to azimuth 162 degrees on the left. A platform on the roof will provide a BC and spotter's station.

b.

B^1: Upper deck of Tower A at Site 5, Parcel C.
B^2: Upper deck of tower at Site 8, Casemate.
Baseline $B^1 - B^2$, 6161 yards.

c. Each base-end station should be equipped with an azimuth instrument.

37. Battery No. 7, Mines, Fort Story. Exhibit 2-D.

a. The mine battery commander's station is combined with the M^2 base-end station at Site 8, Casemate. The plotting room is adequately provided for in the bombproof housing the existing casemate, at Site 8.

b.

M^1: Lower deck of Tower A at Site 5, Parcel C.
M^2: Lower deck of tower at Site 8, Casemate.
Baseline $M^1 - M^2$, 6161 yards.

c. Each base-end station should be equipped with an azimuth instrument.

38. Battery No. 8 (Construction No. 123), two 16-inch guns at Cape Charles. Exhibit 9-B.

a. BC station to be constructed at battery. A switching device as specified in paragraph 30 a should be provided.

b.

B^1S^1: Middle deck of Tower B at Site 2, Sand Bridge.
D^2S^2: Middle deck of Tower B at Site 3, Rifle Range.
Baseline $B^1 - B^2$, 9459 yards.
B^3S^3: Middle deck of Tower B at Site 5, Parcel C.
Baseline $B^2 - B^3$, 8515 yards.
B^4S^4: Lower deck of Tower C at Site 9, Granite.
Baseline $B^3 - B^4$, 6665 yards.
B^5S^5: Upper deck of Tower A at Site 12, Mockhorn.
B^6S^6: Upper deck of Tower A at Site 13, Smith Island.
Baseline $B^5 - B^6$, 9243 yards.
B^7S^7: Upper deck of Tower A at Site 14, Wise.
Baseline $B^6 - B^7$, 6116 yards.

c. For all base-end stations except B^3 (at Parcel C) and B^6 (at Smith Island) two azimuth instruments should be provided. For B^3 and B^6, a DPF and an azimuth instrument are required.

d. Plotting room is to be constructed at the battery. In addition to the plotting board, a seacoast computor should be furnished, and a switching device as described in paragraph 30 d should be provided.

39. Battery No. 8 temporary, two 8-inch railway guns at Cape Charles. Exhibit 12-B.

a. BC station in railway car near battery. A switching device as described in paragraph 30 a should be provided.

b.

B^1S^1: Middle deck of Tower B at Site 5, Parcel C.
B^2S^2: Lower deck of Tower C at Site 9, Granite.
Baseline B^1 - B^2, 6665 yards.
B^3S^3: Lower deck of Tower A at Site 10, Chesapeake Beach.
Baseline B^2 - B^3, 8936 yards.
B^4S^4: Upper deck of Tower A at Site 12, Mockhorn.
B^5S^5: Upper deck of Tower A at Site 13, Smith Island.
Baseline B^4 - B^5, 9248 yards.
B^6S^6: Upper deck of Tower A at Site 14, Wise.
Baseline B^5 - B^6, 6116 yards.
B^7S^7: Lower deck of tower at Site 16, Cheapside.
Baseline B^6 - B^7, 8811 yards.
B^8S^8: Lower deck of tower at Site 17, Cape Charles village.
Baseline B^7 - B^8, 9296 yards.

c. For all base-end stations except B^1 (at Parcel C) and B^5 (at Smith Island)two azimuth instruments should be provided. For B^1 and B^5, a DPF and an azimuth instrument are required.

d. The fire control equipment of base-end stations B^1, B^2, B^4, B^5, and B^6 is assigned to Battery No. 8, Construction No. 123, two 16-inch guns at Cape Charles, when that battery is completed.

40. Battery No. 9 (Construction No. 228), two 6-inch guns at Cape Charles. Exhibit 10-B.

a. BC station and plotting room to be constructed at battery.

b.

B^1: Middle deck of Tower B at Site 12, Mockhorn.
B^2: Upper deck of Tower C at Site 13, Smith Island.
Baseline B^1 - B^2, 9400 yards.
B^3: Middle deck of Tower C at Site 14, Wise.
Baseline B^2 - B^3, 5990 yards.

c. For B^1 an azimuth instrument is required. For B^2 at Smith Island and B^3 at Wise, a DPF should be provided.

41. Battery No. 9 temporary, four 155 mm guns at Cape Charles. Exhibit 13-B.

a. BC and plotting room of temporary construction is to be provided near the battery. On the roof of this structure, an elevated platform should be built for spotter with azimuth instrument.

b.

B^1: Upper deck of Tower C at Site 13, Smith Island.
B^2: Middle deck of Tower C at Site 14, Wise.
Baseline $B^1 - B^2$, 5990 yards.

c. Each base-end station should be provided with an azimuth instrument.

d. The fire control equipment and baseline of this battery is assigned to Battery No. 9, Construction No. 228, two 6-inch guns at Cape Charles, when that battery is completed.

42. Battery No. 10 (Construction No. 226), two 6-inch guns at Fort Story. Exhibit 14-B.

a. BC and spotter's station and plotting room to be constructed at battery, the station to house an SCRF which requires an arc of view from azimuth 340 degrees on the right counterclockwise to azimuth 155 degrees on the left.

b.

B^1: Lower deck of Tower B at Site 4, Hollies.
This observing room also houses the controllers of searchlights Nos. 5 and 6.
B^2: Middle deck of Tower A at Site 5, Parcel C.
Baseline $B^1 - B^2$, 2500 yards.
B^3: Middle deck of tower at Site 8, Casemate.
Baseline $B^2 - B^3$, 6161 yards.

c. B^1 should be equipped with a DPF; B^2 and B^3 with azimuth instruments.

43. Battery No. 10 temporary, Parrott, two 12-inch DC guns at Fort Monroe. Exhibit 11-B.

a. BC station and plotting room at battery.

b.

B^1S^1: Station No. 22, outside moat at Fort Monroe.
B^2S^2: Tower No. 33, south of Buckroe Beach.
Baseline $B^1 - B^2$, 3289 yards.

c. Each base-end station should be equipped with azimuth instrument for spotter and one for observer.

44. Battery No. 11 (Construction No. 227), two 6-inch guns at Fisherman Island. Exhibit 16-B.

a. BC station, plotting room, SCRF and spotter's station to be constructed at battery.

b.

B^1: Middle deck of Tower C at Site 13, Smith Island.
B^2: Lower deck of Tower C at Site 14, Wise.
Baseline B^1 - B^2, 5990 yards.
B^3: Middle deck of tower at Site 16, Cheapside.
Baseline B^2 - B^3, 8900 yards.

c. B^1 and B^2 should be equipped with DPF's; B^3 with azimuth instrument.

45. Battery No. 11 temporary, DeRussy, three 12-inch DC guns at Fort Monroe. Exhibit 15-B.

a. BC station and plotting room at battery.

b. B^1S^1: Station No. 26, outside moat at Fort Monroe.
B^2S^2: Lower deck of tower at Site 21, North Buckroe.
Baseline B^1 - B^2, 6207 yards.

c. Each base-end station should be equipped with observer's and spotter's azimuth instruments.

46. Battery No. 12 (Construction No. 122), two 16-inch guns at Cape Charles. Exhibit 17-B.

a. BC station is to be constructed at battery. A switching device as specified in paragraph 30 a should be installed.

b.

B^1S^1: Lower deck of Tower B at Site 2, Sand Bridge.
B^2S^2: Lower deck of Tower B at Site 3, Rifle Range.
Baseline B^1 - B^2, 9800 yards.
B^3S^3: Lower deck of Tower B at Site 5, Parcel C.
Baseline B^2 - B^3, 8515 yards.
B^4S^4: Middle deck of Tower C at Site 9, Granite.
Baseline B^3 - B^4, 6665 yards.
B^5S^5: Middle deck of Tower B at Site 10, Chesapeake Beach.
Baseline B^4 - B^5, 8904 yards.
B^6S^6: Middle deck of Tower A at Site 12, Mockhorn.
B^7S^7: Middle deck of Tower A at Site 13, Smith Island.
Baseline B^6 - B^7, 9248 yards.
B^8S^8: Middle deck of Tower A at Site 14, Wise.
Baseline B^7 - B^8, 6116 yards.

c. For B^7 at Smith Island and B^4 at Granite, a DPF and azimuth instrument are required. For the remaining base-end stations, two azimuth instruments should be furnished.

d. Plotting room is to be constructed at the battery. In addition to the plotting board, a seacoast computor should be furnished, and a switching device as described in paragraph 30 d should be provided.

47. Battery No. 13 (Construction No. 229), Gates, two 6-inch guns at Fort Wool. Exhibit 18-B.

a. A tower is to be constructed on flank of battery providing a BC, spotting and base-end station. Pending its construction the crows nest may be used; its instrument pillar has been surveyed and is the battery directing point.

b.

B^1: At Fort Wool (in crows nest pending construction).
B^2: Lower deck of tower at North Buckroe.
Baseline B^1 - B^2, 8500 yards.

c. Plotting room is at the battery. CRF station is located on the traverse of abandoned Battery Dyer; a survey marker including staff in 1939 was set in roof and surveyed.

d. Two azimuth instruments are required at B^1 and two at B^2.

48. Battery No. 14, Hindman, two 3-inch guns at Fort Wool. Exhibit 19-B.

BC station and spotting station in crows nest at battery; the instrument pillar is the battery directing point. SCRF station to be erected at battery. Plotting room is not required.

49. Battery No. 15, Mines, at Fort Monroe. See Annex D, Exhibit 3.

a. The mine battery commander's station, No. 19, and plotting room are on the parapet of the old fort north of the East Gate at Fort Monroe. The casemate is nearby. Annex D provides for transfer of plotting room and casemate into existing Casemate No. 133 of the old fort.

b. M^1 is assigned station No. 20, north of the East Gate at Fort Monroe, next to the Mine BC station.
M^2 is assigned Tower 35 south of Buckroe Beach.
Baseline M^1 - M^2, 3584 yards.

c. Instruments are on hand for each of the three stations.

d. The old frame M^3 station at Fort Wool is dilapidated and unsuitable and is no longer required.

50. Battery No. 16, Lee, four 3-inch guns at Fort Wool. Exhibit 20-B.

BC, SCRF and spotting station to be constructed at battery. Plotting room is not required. The directing point, between No. 2 and No. 3 guns, was in 1939 marked with a metal disc set in parapet and its coordinates determined.

SECRET

51. Battery No. 17, Montgomery, two 6-inch BC guns at Fort Monroe. Exhibit 21-B.

a. BC, SCRF and spotting station in two-deck structure to be erected at battery. Plotting room in battery.

b.

B^1: Station No. 23, outside moat at Fort Monroe.
B^2: Middle deck of tower at Site 21, North Buckroe.
Baseline B^1 - B^2, 6215 yards.

c. An azimuth instrument is on hand for each base-end station and one for spotter and one for the battery commander.

d. A standard survey disc has been set in the seawall to the south of the battery, as an orienting point, and its coordinates determined.

52. Battery No. 18 (Construction No. 124), two 16-inch guns at Fort Monroe. Exhibit 23-B.

a. BC station is to be constructed at battery. A switching device for setting up a local net including base-end observers should be included.

b.

B^1S^1: Middle deck of Tower C at Site 3, Rifle Range.
B^2S^2: Upper deck of Tower B at Site 4, Hollies.
Baseline B^1 - B^2, 8600 yards.
B^3S^3: Lower deck of Tower B at Site 9, Granite.
Baseline B^2 - B^3, 8240 yards.
B^4S^4: Middle deck of Tower A at Site 10, Chesapeake Beach.
Baseline B^3 - B^4, 9034 yards.
B^5S^5: Lower deck of Tower C at Site 13, Smith Island.
B^6S^6: Upper deck of Tower C at Site 14, Wise.
Baseline B^5 - B^6, 5990 yards.
B^7S^7: Upper deck of tower at Site 16, Cheapside.
Baseline B^6 - B^7, 8800 yards.
B^8S^8: Upper deck of tower at Site 17, Cape Charles.
Baseline B^7 - B^8, 9296 yards.
B^9S^9: Lower deck of station 21 at Fort Monroe.
$B^{10}S^{10}$: Upper deck of tower at Site 21, North Buckroe.
Baseline B^9 - B^{10}, 6200 yards.
$B^{11}S^{11}$: Tower at Site 22, Messick.
Baseline B^{10} - B^{11}, 8900 yards.

c. For B^2 at Hollies and B^6 at Wise, a DPF and azimuth instrument are required. For the remaining base-end stations, two azimuth instruments should be furnished.

SECRET

d. Plotting room is to be constructed at the battery. In addition to the plotting board, a seacoast computor should be furnished, and a switching device for setting up a local net including base-end readers and spotters should be provided.

53. Battery No. 18 temporary (Anderson), four 12-inch mortars at Fort Monroe. Exhibit 22-B.

a. BC station and plotting room at battery.

b.

B^1S^1: Station No. 24, outside the moat at Fort Monroe.
B^2S^2: Tower No. 31, south of Buckroe Beach, Baseline B^1 - B^2, 3130 yards. This baseline, while short, is reasonably adequate considering the mission of the battery.

c. Two azimuth instruments are on hand for each base-end station, and one for battery commander.

54. Battery No. 19 temporary (Ruggles), four 12-inch mortars at Fort Monroe. Exhibit 24-B.

a. BC station and plotting room at battery.

b. B^1S^1: Station No. 17 on parapet of old fort, N. of East Gate.
B^2S^2: Tower No. 34, south of Buckroe Beach. Baseline B^1 - B^2, 3486 yards. This baseline, while short, is reasonably adequate considering the mission of the battery.

c. Two azimuth instruments are on hand for each base-end station and one for battery commander.

55. CABLES.

a. The general cable layout of the harbor defenses is shown in Exhibit 26-B which in connection with the details included in the cost estimate furnishes a statement of cable requirements.

b. Exhibit 28-B shows the cable routings at Fort Story with the number of pairs required and the size of cable installed or proposed.

c. The important 84-pair cable between Cape Charles and Cape Henry terminates in a small combined switchboard room-cable hut at Site 9, Granite, and Site 14, Wise, where amplifiers are provided for; this cable has 20 quads (40 circuits) of 16-gauge wire and 22 quads (44 circuits) of 19-gauge wire. The Smith Island and Fisherman Island cables likewise terminate at Wise. The circuits from the Smith Island-Wise baselines (which serve four Fort Story and one Fort Monroe batteries) thus are not required to go to the Kiptopeke switchboard room to be powered.

d. A 27-pair cable has been laid from Site 12, Mockhorn, via Magotha to the RJ south of Towns End, where it is to join a cable from Site 17, Cape Charles, via Site 16, Cheapside), and connect with a 75-pair cable which has been provided, to the existing switchboard room at Kiptopeke. From the switchboard room, a 200-pair cable has been provided to the Wise cable hut.

e. For wire communication connecting the 16-inch battery at Fort Monroe with its observing stations on Cape Charles and Cape Henry, and for administrative, command and intelligence purposes, there is to be provided a 25-pair cable from Fort Monroe to Fort Wool (where there is now installed a 50-pair cable), and a 50-pair cable from Fort Wool to Site 11, Little Creek via Site 18, Ocean View. A submarine cable is to be employed from Fort Wool to Ocean View and a land cable thence to Little Creek.

f. From Little Creek to Chesapeake Beach and from Chesapeake Beach to Granite, a 50-pair cable is required. From Granite to Fort Story, a 200-pair cable has been installed.

g. The present interior cable system at Fort Monroe is adequate with slight modifications. A 50-pair cable has been installed from Fort Monroe to Site 21, North Buckroe. A 10-pair cable is required from North Buckroe to Site 22, Messick.

56. Armor for observing rooms. Reasonably adequate protection of personnel manning fire control stations from airplane machine gun fire is to be provided by use of five-eights-inch steel plate extending from floor to sighting slot and covering the ceiling.

57. Land. For land to be acquired, including rights of way, see cost estimate and priority guide. Cost of survey and search of records to determine ownership is included in cost of land.

58. Costs. The estimate is appended as Exhibit 29-B. Those items which should be procured and installed in peace are marked A. Those that should be procured in peace but the installation of which may be deferred until an emergency arises are marked B. Those items to be procured and installed when an emergency arises are marked C.

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

BY RB/MB NARA, Date 11-18-94

Sept 23, 1941

Received from the President, Coast Artillery Board, the following

Secret Document:

Memorandum from Col. Bowen to CG, HDCB, Sept. 22, 1941, with 1 Incl. (Exh. 1-B - in dup)

[redacted]

Please accomplish and return to:
President, Coast Artillery Board,
Fort Monroe, Virginia.

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

COAST ARTILLERY BOARD
FORT MONROE, VIRGINIA

IN REPLY REFER TO:

SECRET
BY AUTHORITY OF THE CHIEF OF COAST ARTILLERY
DATE Sept. 22,1941 INITIALS W.S.B.

MEMORANDUM for Commanding General, Harbor Defenses of Chesapeake Bay.

There are inclosed two photostats which are reproductions of Exhibit 1-B of the Annexes, on which have been noted the observing instruments (either DPF's or azimuth instruments) which are required.

It is suggested that one copy be furnished the Ordnance officer.

In the case of Little Island, azimuth instruments are noted as required, instead of DPF's, in conformity with letter OCCA, August 25, 1941, and 2nd Indorsement, which directed that DPF's be not furnished for this low height of site.

W. S. BOWEN,
Colonel, Coast Artillery Corps.

2 Incls: -
Exh. 1-B (in dup.)

S4 - [illegible] 00 [illegible] I [illegible] Project

R.L.T.

SEP 23 1940

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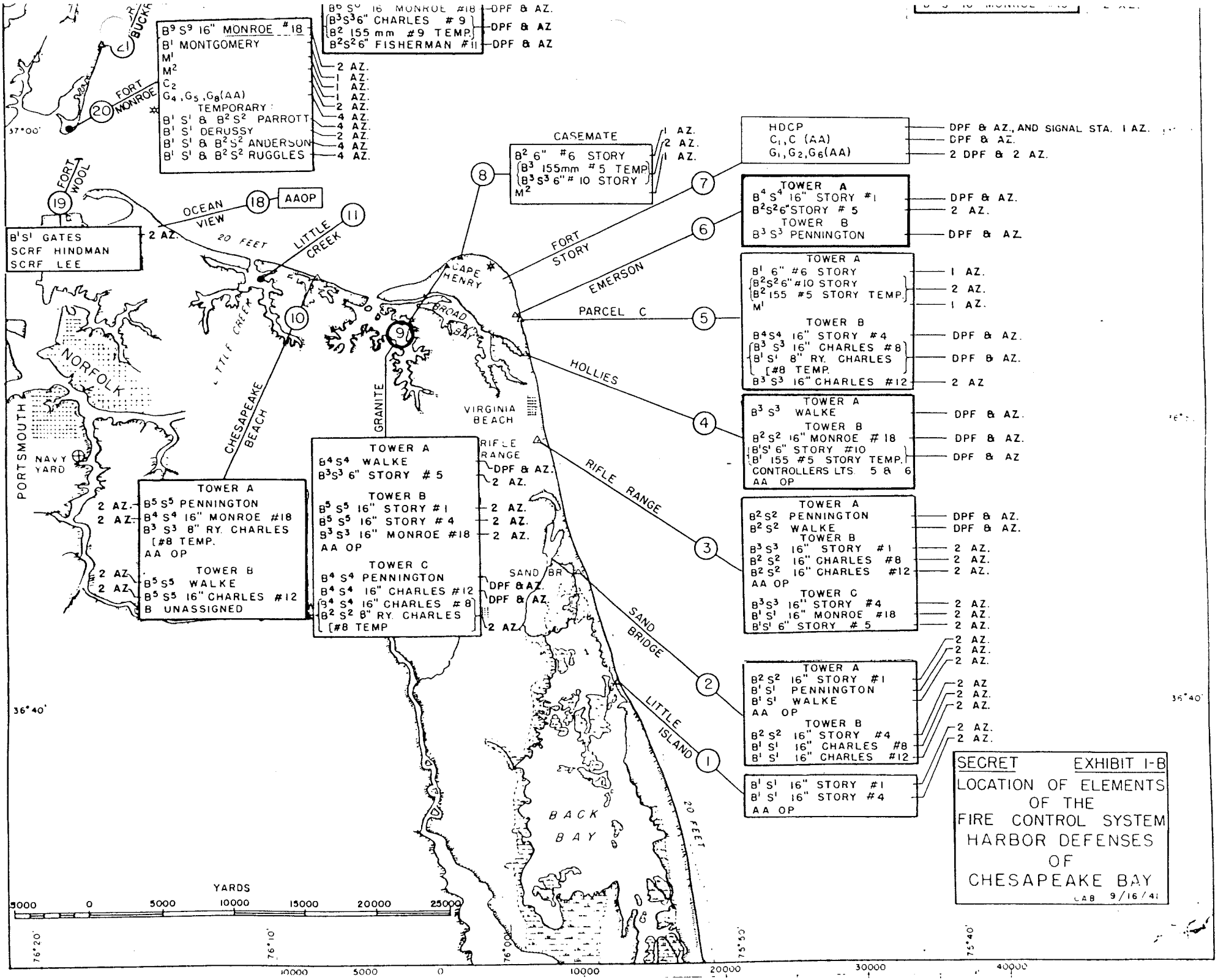
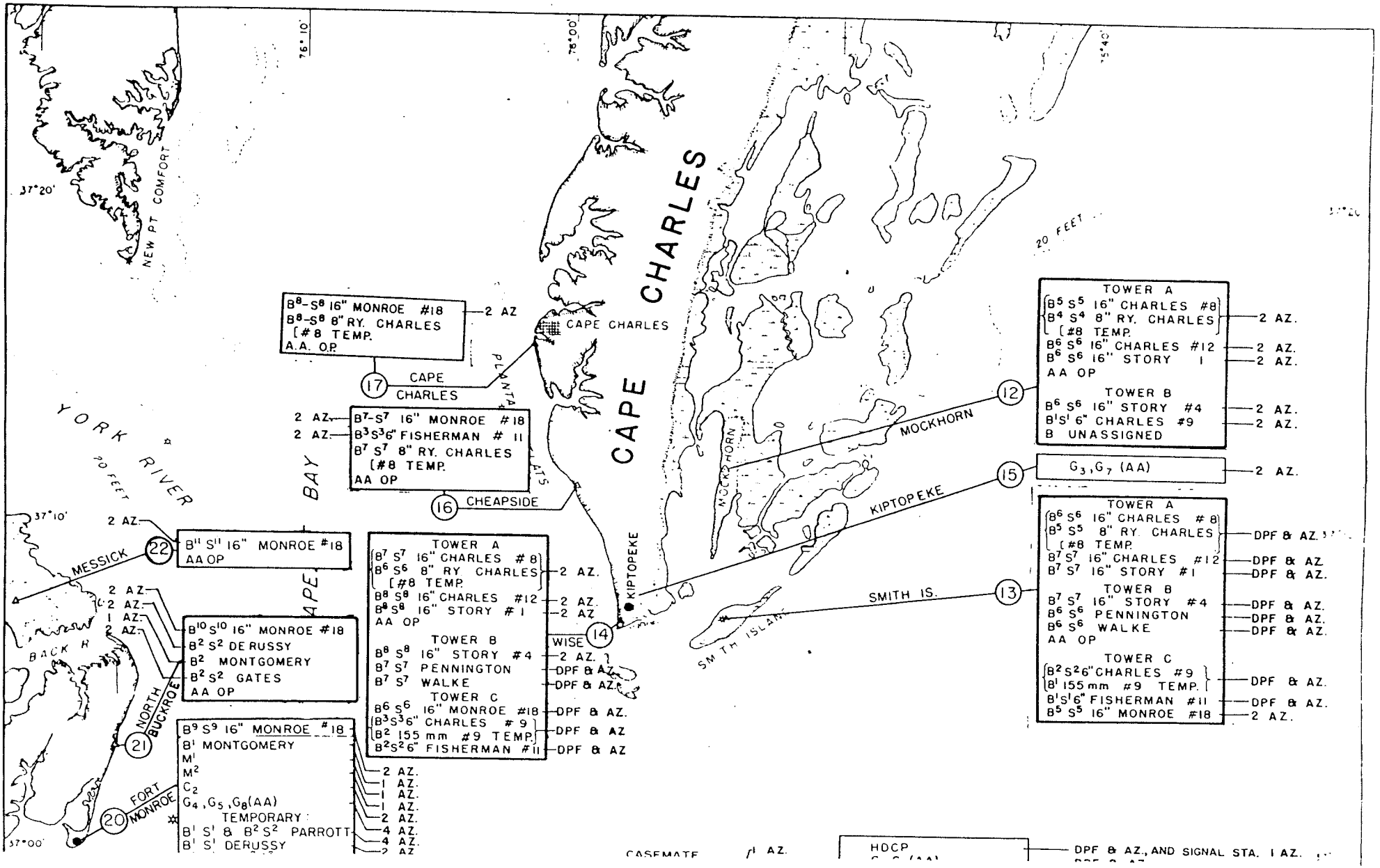
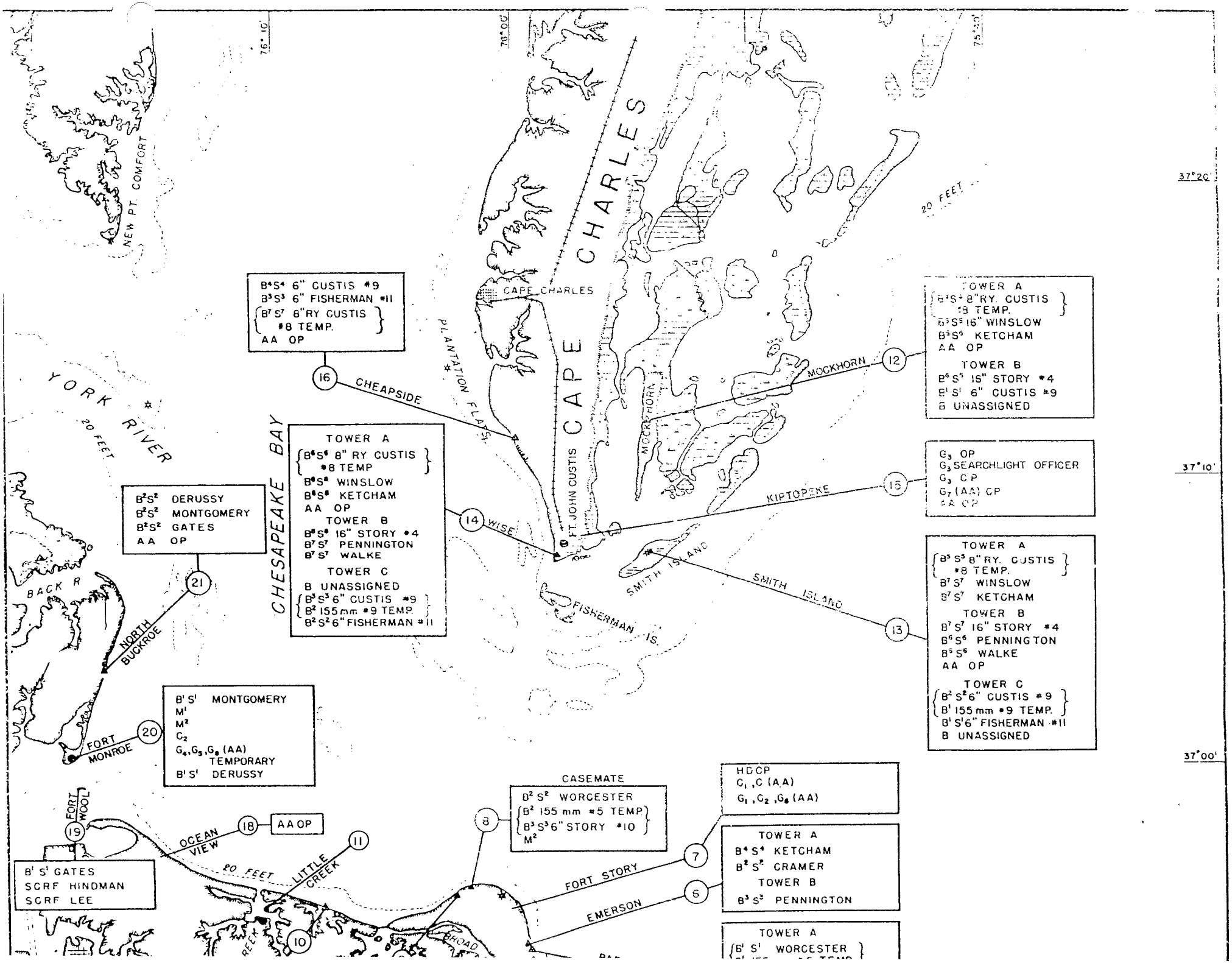
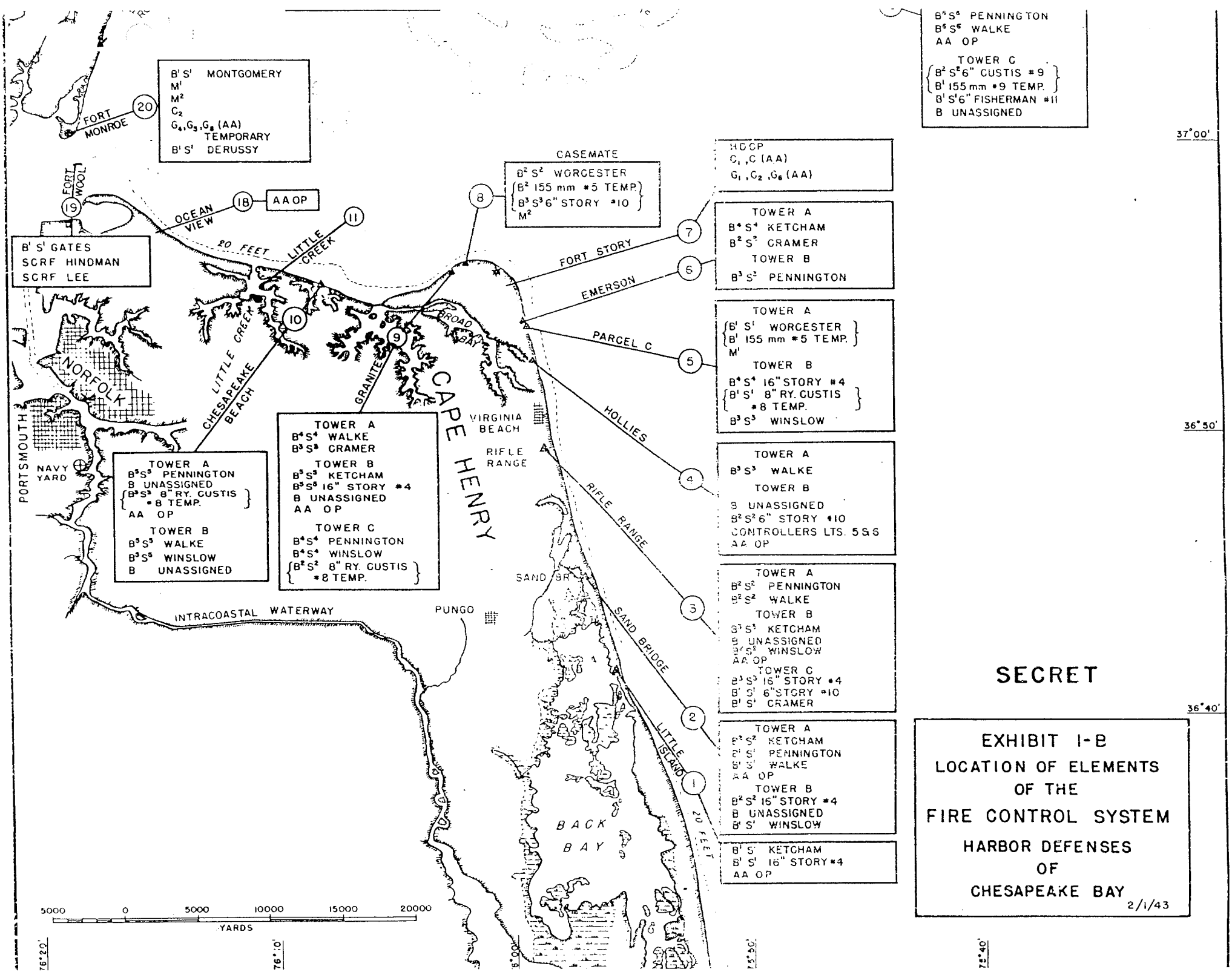

B⁹ S⁹ 16" MONROE #18
B¹ MONTGOMERY
M¹
M²
C₂
G₄, G₅, G₈(AA)
TEMPORARY
B¹ S¹ & B² S² PARROTT
B¹ S¹ DERUSSY
B¹ S¹ & B² S² ANDERSON
B¹ S¹ & B² S² RUGGLES
2 AZ.
1 AZ.
1 AZ.
1 AZ.
2 AZ.
4 AZ.
4 AZ.
2 AZ.
4 AZ.
4 AZ.
B⁵ S⁵ 16" MONROE #18 DPF & AZ.
B³ S³ 6" CHARLES # 9 DPF & AZ
B² 155 mm #9 TEMP.
B² S² 6" FISHERMAN #11 DPF & AZ
CASEMATE
B² 6" #6 STORY
B³ 155mm #5 TEMP.
B³ S³ 6" # 10 STORY
M²
1 AZ.
2 AZ.
1 AZ.
HDCP
C₁, C (AA)
G₁, G₂, G₆(AA)
DPF & AZ., AND SIGNAL STA. 1 AZ.
DPF & AZ.
2 DPF & 2 AZ.
TOWER A
B⁴ S⁴ 16" STORY #1
B² S² 6" STORY # 5
TOWER B
B³ S³ PENNINGTON
DPF & AZ.
2 AZ.
DPF & AZ.
TOWER A
B¹ 6" #6 STORY
B² S² 6" #10 STORY
B² 155 #5 STORY TEMP.
M¹
TOWER B
B⁴ S⁴ 16" STORY #4
B³ S³ 16" CHARLES #8
B¹ S¹ 8" RY. CHARLES [#8 TEMP.
B³ S³ 16" CHARLES #12
1 AZ.
2 AZ.
1 AZ.
DPF & AZ.
DPF & AZ.
2 AZ
TOWER A
B³ S³ WALKE
TOWER B
B² S² 16" MONROE # 18
B¹ S¹ 6" STORY #10
B¹ 155 #5 STORY TEMP.
CONTROLLERS LTS. 5 & 6
AA OP
DPF & AZ.
DPF & AZ.
DPF & AZ
TOWER A
B² S² PENNINGTON
B² S² WALKE
TOWER B
B³ S³ 16" STORY #1
B² S² 16" CHARLES #8
B² S² 16" CHARLES #12
AA OP
TOWER C
B³ S³ 16" STORY #4
B¹ S¹ 16" MONROE #18
B¹ S¹ 6" STORY # 5
DPF & AZ.
DPF & AZ.
2 AZ.
2 AZ.
2 AZ.
2 AZ.
2 AZ.
2 AZ.
TOWER A
B² S² 16" STORY #1
B¹ S¹ PENNINGTON
B¹ S¹ WALKE
AA OP
TOWER B
B² S² 16" STORY #4
B¹ S¹ 16" CHARLES #8
B¹ S¹ 16" CHARLES #12
2 AZ.
2 AZ.
2 AZ.
2 AZ.
2 AZ.
2 AZ.
B¹ S¹ 16" STORY #1
B¹ S¹ 16" STORY #4
AA OP
TOWER A
B⁵ S⁵ PENNINGTON
B⁴ S⁴ 16" MONROE #18
B³ S³ 8" RY. CHARLES [#8 TEMP.
AA OP
TOWER B
B⁵ S⁵ WALKE
B⁵ S⁵ 16" CHARLES #12
B UNASSIGNED
2 AZ.
2 AZ.
2 AZ.
2 AZ.
TOWER A
B⁴ S⁴ WALKE
B³ S³ 6" STORY # 5
TOWER B
B⁵ S⁵ 16" STORY #1
B⁵ S⁵ 16" STORY # 4
B³ S³ 16" MONROE #18
AA OP
TOWER C
B⁴ S⁴ PENNINGTON
B⁴ S⁴ 16" CHARLES #12
B³ S³ 16" CHARLES # 8
B² S² 8" RY. CHARLES [#8 TEMP
RIFLE RANGE
DPF & AZ.
2 AZ.
2 AZ.
2 AZ.
2 AZ.
DPF & AZ.
DPF & AZ.
2 AZ.
B¹ S¹ GATES
SCRF HINDMAN
SCRF LEE
2 AZ.
AAOP
OCEAN VIEW
FORT WOOL
FORT MONROE
BUCKROE
LITTLE CREEK
20 FEET
CAPE HENRY
FORT STORY
EMERSON
PARCEL C
HOLLIES
RIFLE RANGE
SAND BRIDGE
LITTLE ISLAND
BROAD BAY
LITTLE CREEK
NORFOLK
PORTSMOUTH
NAVY YARD
CHESAPEAKE BEACH
GRANITE
VIRGINIA BEACH
SAND BR
BACK BAY
20 FEET
37°00'
36°40'
35°40'
YARDS
5000 0 5000 10000 15000 20000 25000
10000 5000 0 10000 20000 30000 40000
76°20'
76°10'
76°00'
75°50'
75°40'
SECRET
EXHIBIT 1-B
LOCATION OF ELEMENTS OF THE FIRE CONTROL SYSTEM HARBOR DEFENSES OF CHESAPEAKE BAY
CAB 9/16/41


CAPE CHARLES
NEW PT COMFORT
YORK RIVER
BACK R
BAY
CAPE CHARLES
CAPE CHARLES
PLANTATION
MOCKHORN
MOCKHORN
KIPTOPEKE
KIPTOPEKE
SMITH IS.
SMITH ISLAND
MESSICK
NORTH BUCKROE
FORT MONROE
WISE
20 FEET
37°20'
37°10'
37°00'
76°10'
76°00'
75°40'
B8-S8 16" MONROE #18
B8-S8 8" RY. CHARLES
[#8 TEMP.
A.A. O.P.
2 AZ
17 CAPE CHARLES
2 AZ
2 AZ
B7-S7 16" MONROE #18
B3S3 6" FISHERMAN # 11
B7 S7 8" RY. CHARLES
[#8 TEMP.
AA OP
16 CHEAPSIDE
2 AZ
22
B11 S11 16" MONROE #18
AA OP
2 AZ
2 AZ
1 AZ
2 AZ
B10 S10 16" MONROE #18
B2 S2 DERUSSY
B2 MONTGOMERY
B2 S2 GATES
AA OP
21
B9 S9 16" MONROE #18
B1 MONTGOMERY
M1
M2
C2
G4, G5, G8(AA)
TEMPORARY
B1 S1 & B2 S2 PARROTT
B1 S1 DERUSSY
2 AZ.
1 AZ.
1 AZ.
1 AZ.
2 AZ.
4 AZ.
4 AZ.
2 AZ
20
TOWER A
B7 S7 16" CHARLES #8
B6 S6 8" RY. CHARLES
[#8 TEMP.
2 AZ.
B8 S8 16" CHARLES #12
2 AZ.
B8 S8 16" STORY #1
2 AZ
AA OP
TOWER B
B8 S8 16" STORY #4
2 AZ.
B7 S7 PENNINGTON
DPF & AZ.
B7 S7 WALKE
DPF & AZ.
TOWER C
B6 S6 16" MONROE #18
DPF & AZ.
B3S3 6" CHARLES #9
B2 155 mm #9 TEMP.
DPF & AZ
B2S2 6" FISHERMAN #11
DPF & AZ
14
TOWER A
B5 S5 16" CHARLES #8
B4 S4 8" RY. CHARLES
[#8 TEMP.
2 AZ.
B6 S6 16" CHARLES #12
2 AZ.
B6 S6 16" STORY 1
2 AZ.
AA OP
TOWER B
B6 S6 16" STORY #4
2 AZ.
B1S1 6" CHARLES #9
2 AZ.
B UNASSIGNED
12
G3, G7 (AA)
2 AZ.
15
TOWER A
B6 S6 16" CHARLES #8
B5 S5 8" RY. CHARLES
[#8 TEMP.
DPF & AZ.
B7 S7 16" CHARLES #12
DPF & AZ.
B7 S7 16" STORY #1
DPF & AZ.
TOWER B
B7 S7 16" STORY #4
DPF & AZ.
B6 S6 PENNINGTON
DPF & AZ.
B6 S6 WALKE
DPF & AZ.
AA OP
TOWER C
B2S2 6" CHARLES #9
B1 155 mm #9 TEMP.
DPF & AZ.
B1S1 6" FISHERMAN #11
DPF & AZ.
B5 S5 16" MONROE #18
2 AZ.
13
CASEMATE
1 AZ.
HDCP
DPF & AZ., AND SIGNAL STA. 1 AZ.


76° 10'
76° 00'
75° 50'
37° 20'
37° 10'
37° 00'
NEW PT. COMFORT
YORK RIVER
20 FEET
CHESAPEAKE BAY
PLANTATION FLATS
CAPE CHARLES
FT. JOHN CUSTIS
MOCKHORN
SMITH ISLAND
FISHERMAN IS.
BACK R
B⁴S⁴ 6" CUSTIS #9
B³S³ 6" FISHERMAN #11
B⁷S⁷ 8"RY CUSTIS #8 TEMP.
AA OP
16 CHEAPSIDE
TOWER A
B⁶S⁶ 8" RY CUSTIS #8 TEMP.
B⁸S⁸ WINSLOW
B⁸S⁸ KETCHAM
AA OP
TOWER B
B⁸S⁸ 16" STORY #4
B⁷S⁷ PENNINGTON
B⁷S⁷ WALKE
TOWER C
B UNASSIGNED
B³S³ 6" CUSTIS #9
B² 155mm #9 TEMP.
B²S²6" FISHERMAN #11
14 WISE
TOWER A
B⁵S⁵ 8"RY. CUSTIS #8 TEMP.
B⁵S⁵ 16" WINSLOW
B⁵S⁵ KETCHAM
AA OP
TOWER B
B⁶S⁵ 15" STORY #4
B¹S¹ 6" CUSTIS #9
B UNASSIGNED
12 MOCKHORN
G₃ OP
G₃ SEARCHLIGHT OFFICER
G₃ CP
G₇ (AA) CP
AA OP
15 KIPTOPEKE
TOWER A
B³S³ 8" RY. CUSTIS #8 TEMP.
B⁷S⁷ WINSLOW
B⁷S⁷ KETCHAM
TOWER B
B⁷S⁷ 16" STORY #4
B⁶S⁶ PENNINGTON
B⁵S⁵ WALKE
AA OP
TOWER C
B²S²6" CUSTIS #9
B¹ 155mm #9 TEMP.
B¹S¹6" FISHERMAN #11
B UNASSIGNED
13 SMITH ISLAND
B²S² DERUSSY
B²S² MONTGOMERY
B²S² GATES
AA OP
21 NORTH BUCKROE
B¹S¹ MONTGOMERY
M¹
M²
C₂
G₄,G₅,G₈ (AA) TEMPORARY
B¹S¹ DERUSSY
20 FORT MONROE
FORT WOOL
19
B¹S¹ GATES
SCRF HINDMAN
SCRF LEE
18 AA OP
OCEAN VIEW
20 FEET
LITTLE CREEK
11
10
CASEMATE
B²S² WORCESTER
B² 155 mm #5 TEMP.
B³S³6" STORY #10
M²
8
HDCP
C₁ ,C (AA)
G₁ ,G₂ ,G₈ (AA)
7 FORT STORY
TOWER A
B⁴S⁴ KETCHAM
B²S² CRAMER
TOWER B
B³S³ PENNINGTON
6 EMERSON
TOWER A
B¹S¹ WORCESTER
BROAD



SECRET

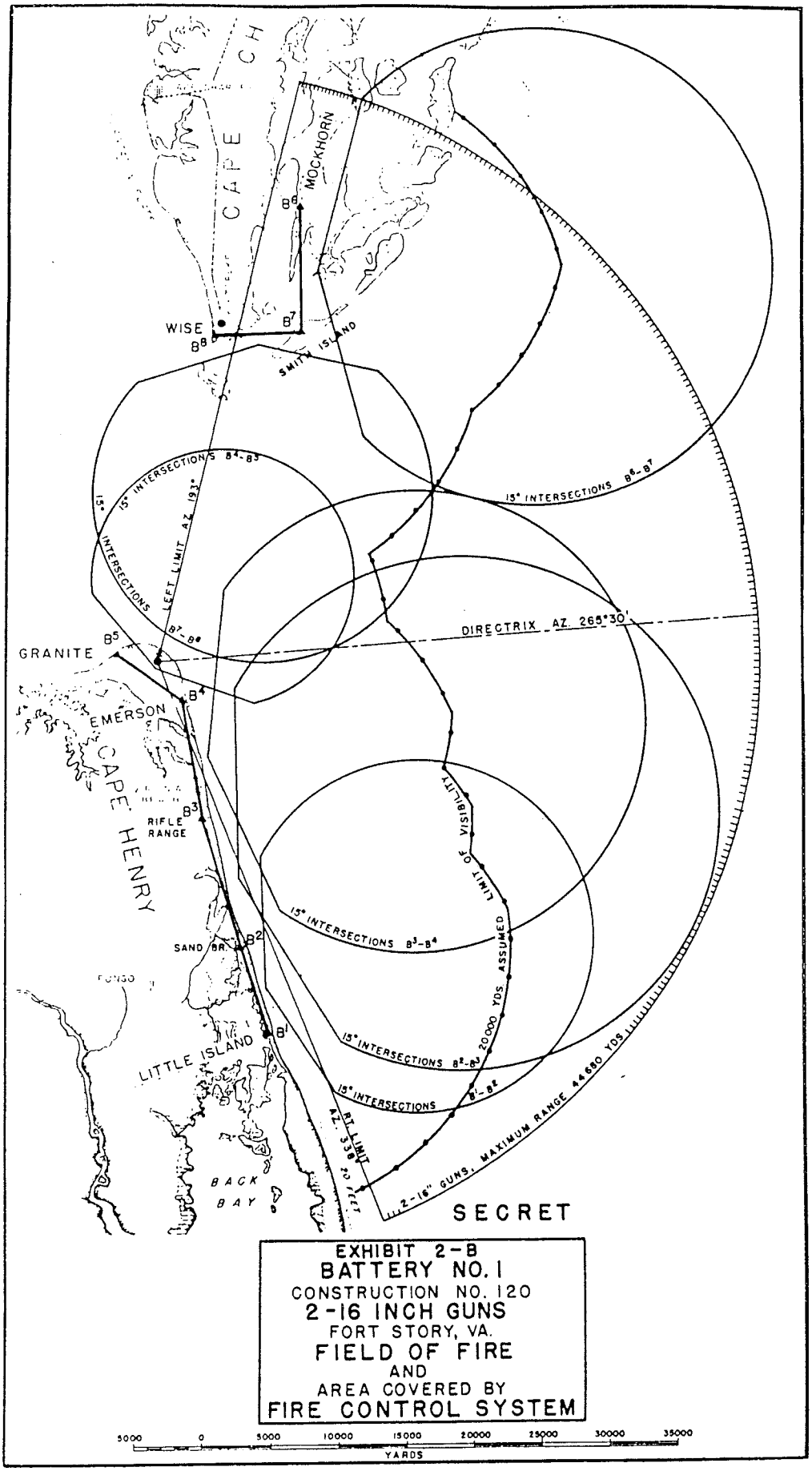
EXHIBIT 1-B

LOCATION OF ELEMENTS OF THE

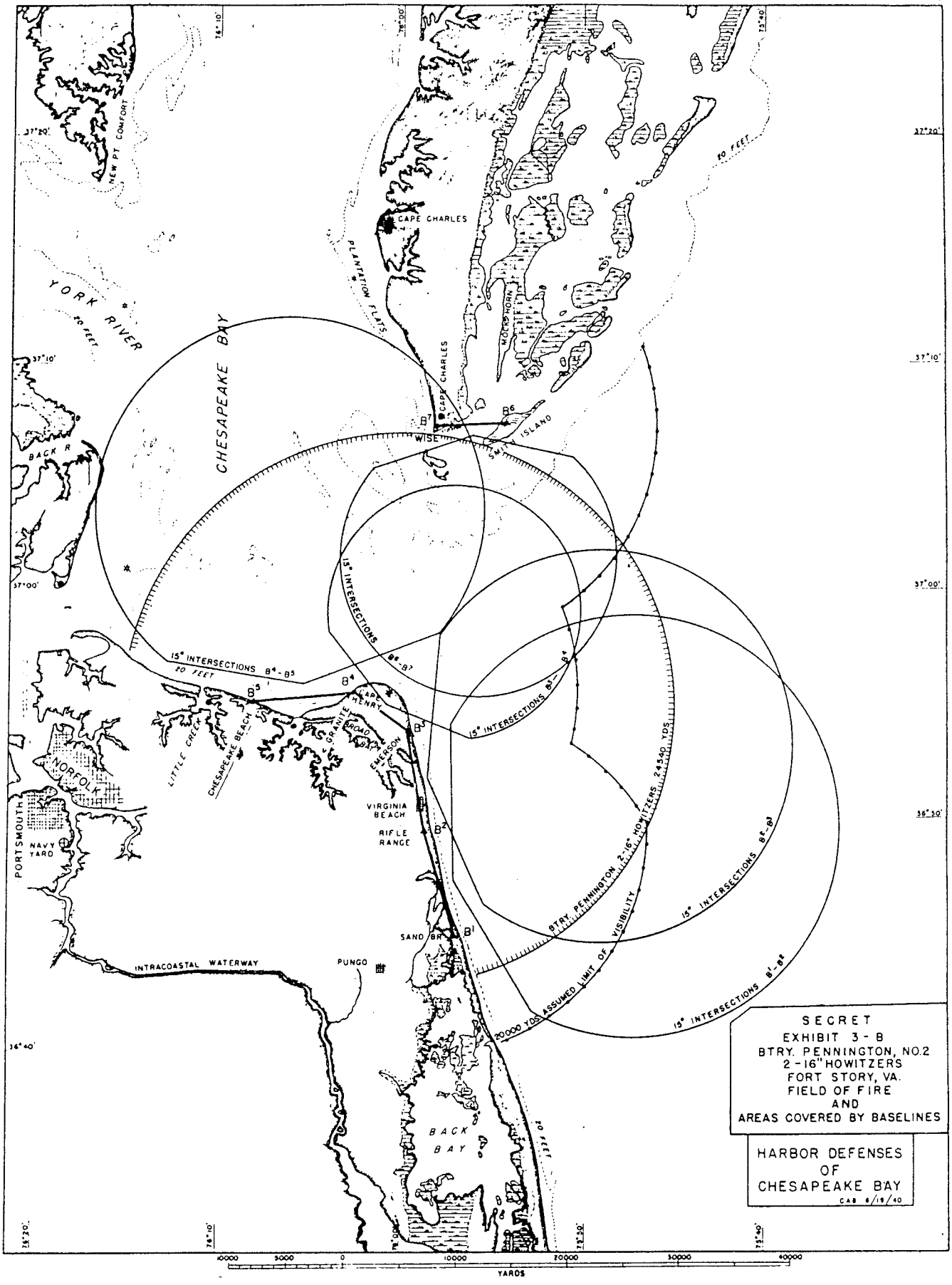
FIRE CONTROL SYSTEM

HARBOR DEFENSES OF CHESAPEAKE BAY

2/1/43

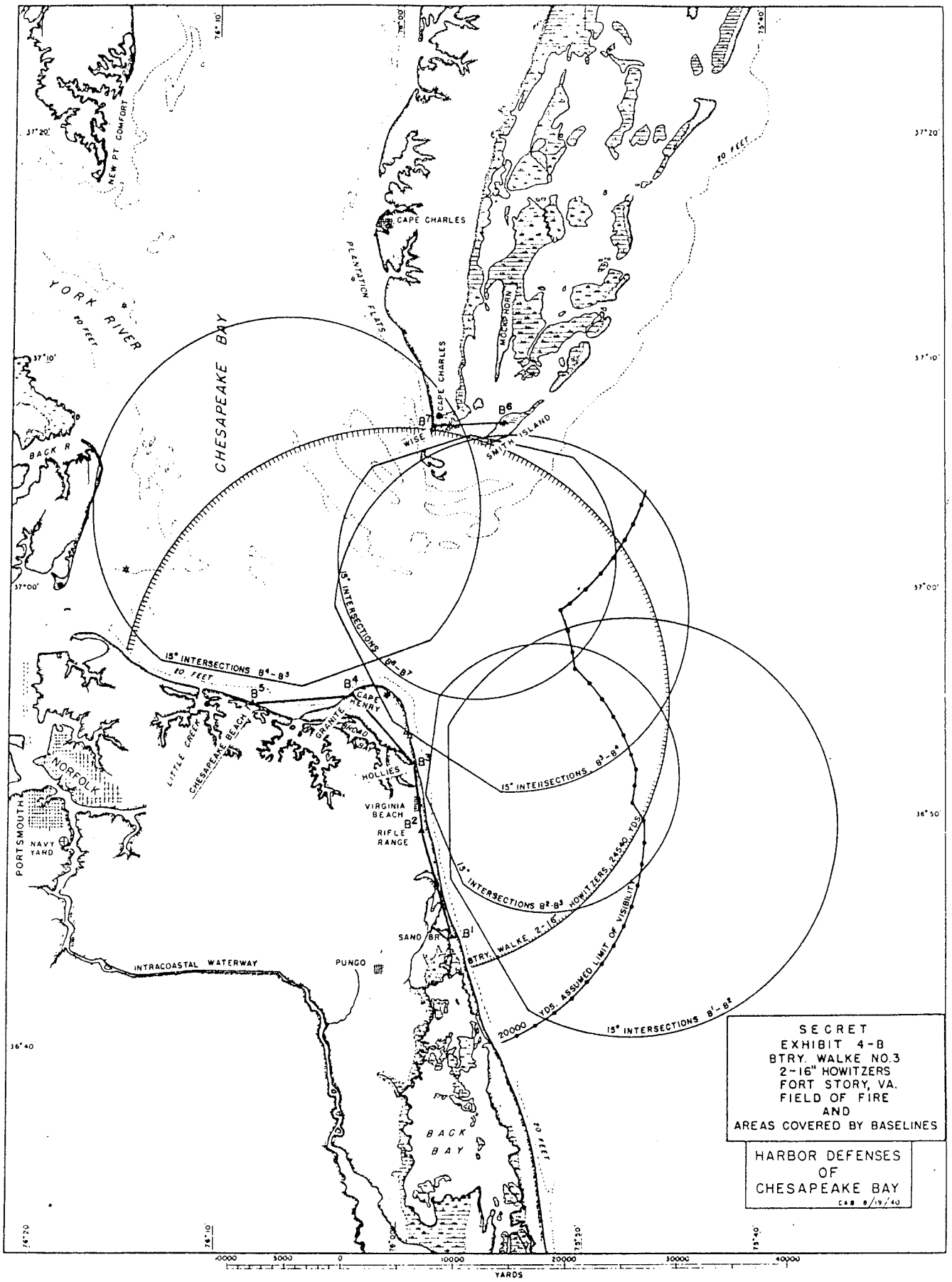


DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

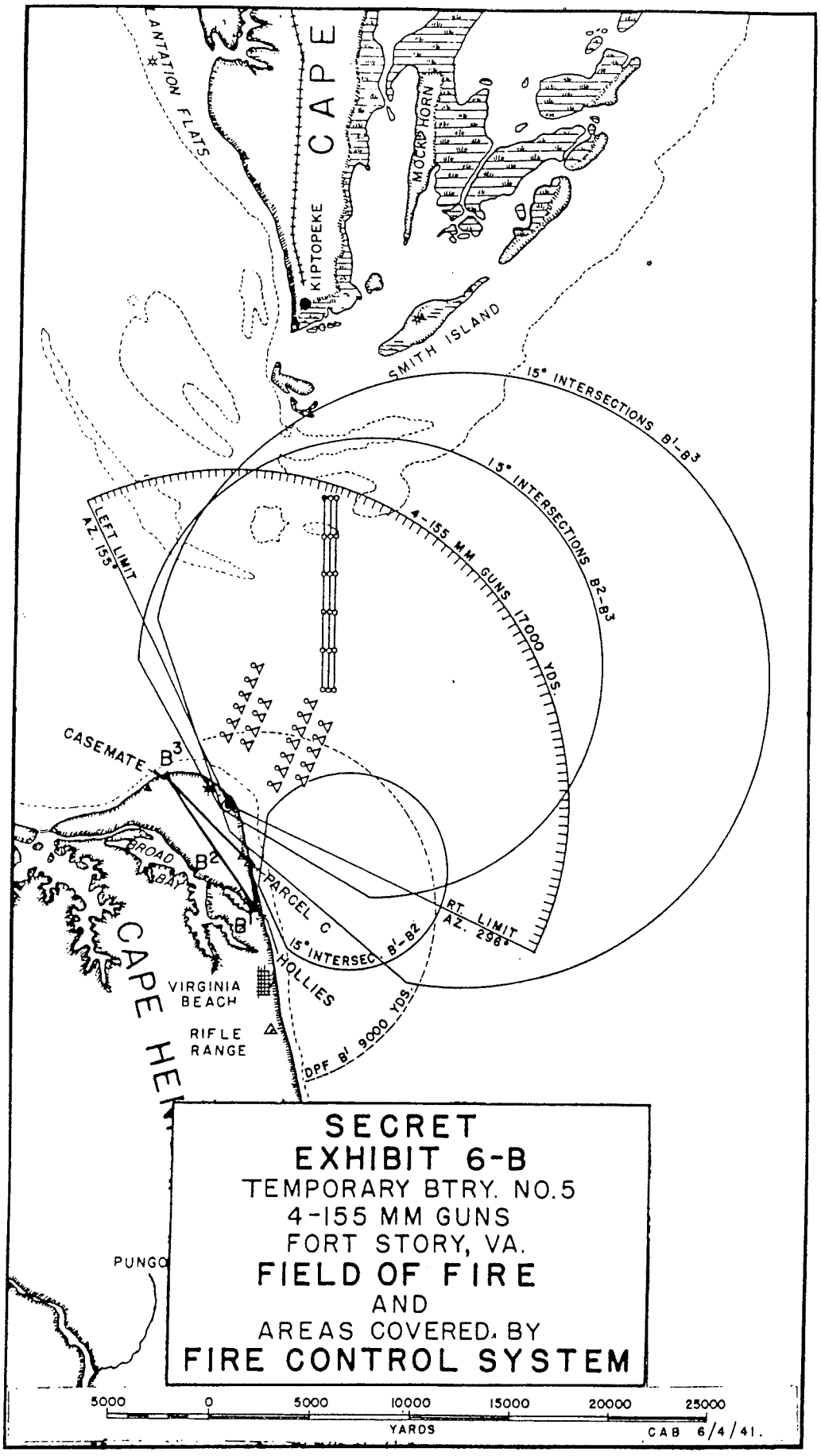


SECRET
EXHIBIT 3 - B
BTRY. PENNINGTON, NO.2
2 - 16" HOWITZERS
FORT STORY, VA.
FIELD OF FIRE
AND
AREAS COVERED BY BASELINES

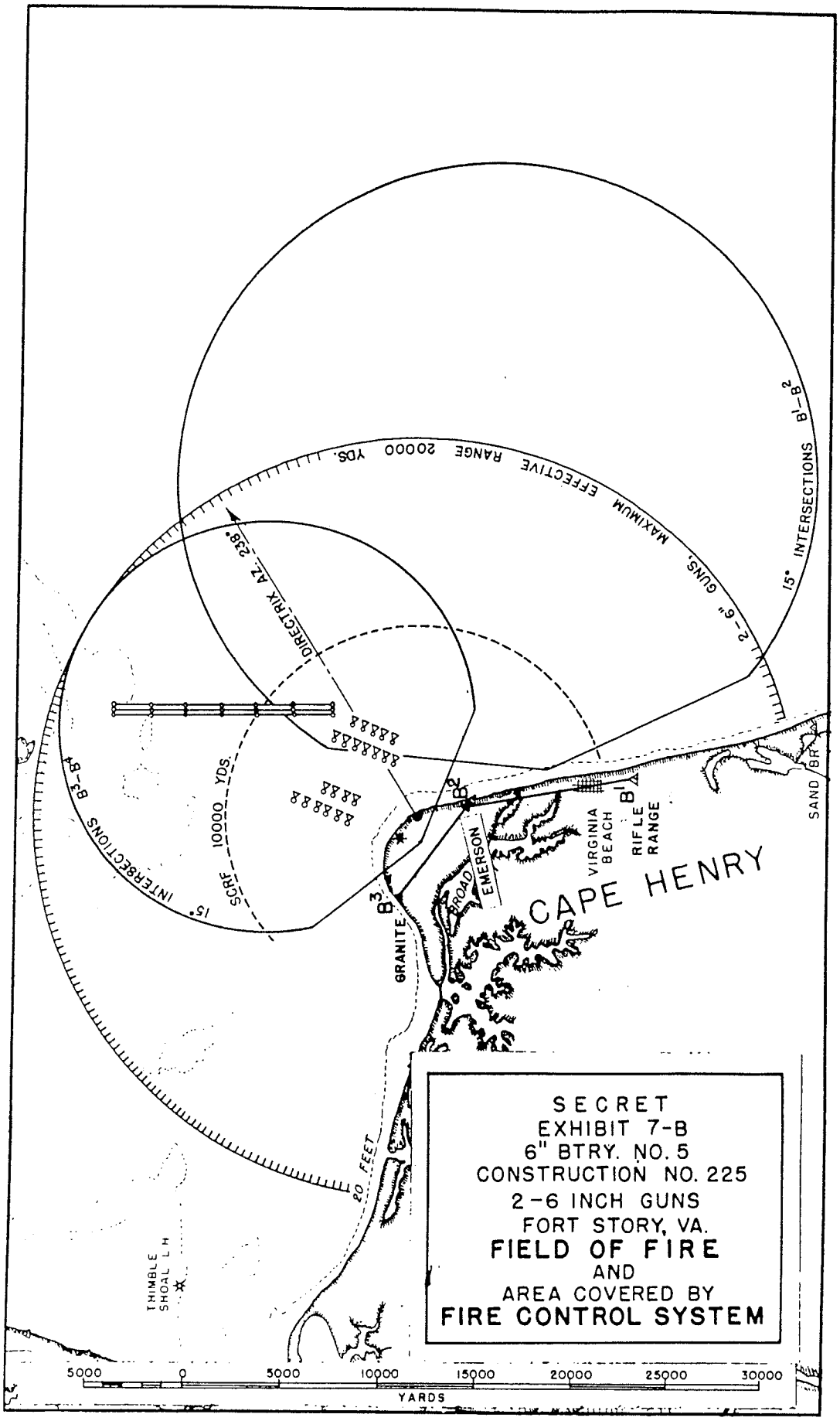
HARBOR DEFENSES
OF
CHESAPEAKE BAY
CAB 6/19/40


SECRET
EXHIBIT 4-B
BTRY. WALKE NO.3
2-16" HOWITZERS
FORT STORY, VA.
FIELD OF FIRE
AND
AREAS COVERED BY BASELINES
HARBOR DEFENSES
OF
CHESAPEAKE BAY
CAB 8/19/40
CHESAPEAKE BAY
YORK RIVER
CAPE CHARLES
NEW PT COMFORT
PLANTATION FLATS
MOCKHORN
SMITH ISLAND
WISE
BACK R
NORFOLK
PORTSMOUTH
NAVY YARD
LITTLE CREEK
CHESAPEAKE BEACH
GRANITE
CAPE HENRY
HOLLIES
VIRGINIA BEACH
RIFLE RANGE
SAND BAR
INTRACOASTAL WATERWAY
PUNGO
BACK BAY
B1
B2
B3
B4
B5
B6
B7
15° INTERSECTIONS B4-B3
15° INTERSECTIONS B2-B1
15° INTERSECTIONS B3-B4
15° INTERSECTIONS B2-B3 HOWITZERS 24540 YDS
BTRY. WALKE 2-16" HOWITZERS
20000 YDS. ASSUMED LIMIT OF VISIBILITY
15° INTERSECTIONS B1-B2
10 FEET
20 FEET
37°20'
37°10'
37°00'
36°50'
36°40'
76°10'
76°00'
75°50'
75°40'
40000
30000
20000
10000
5000
0
YARDS

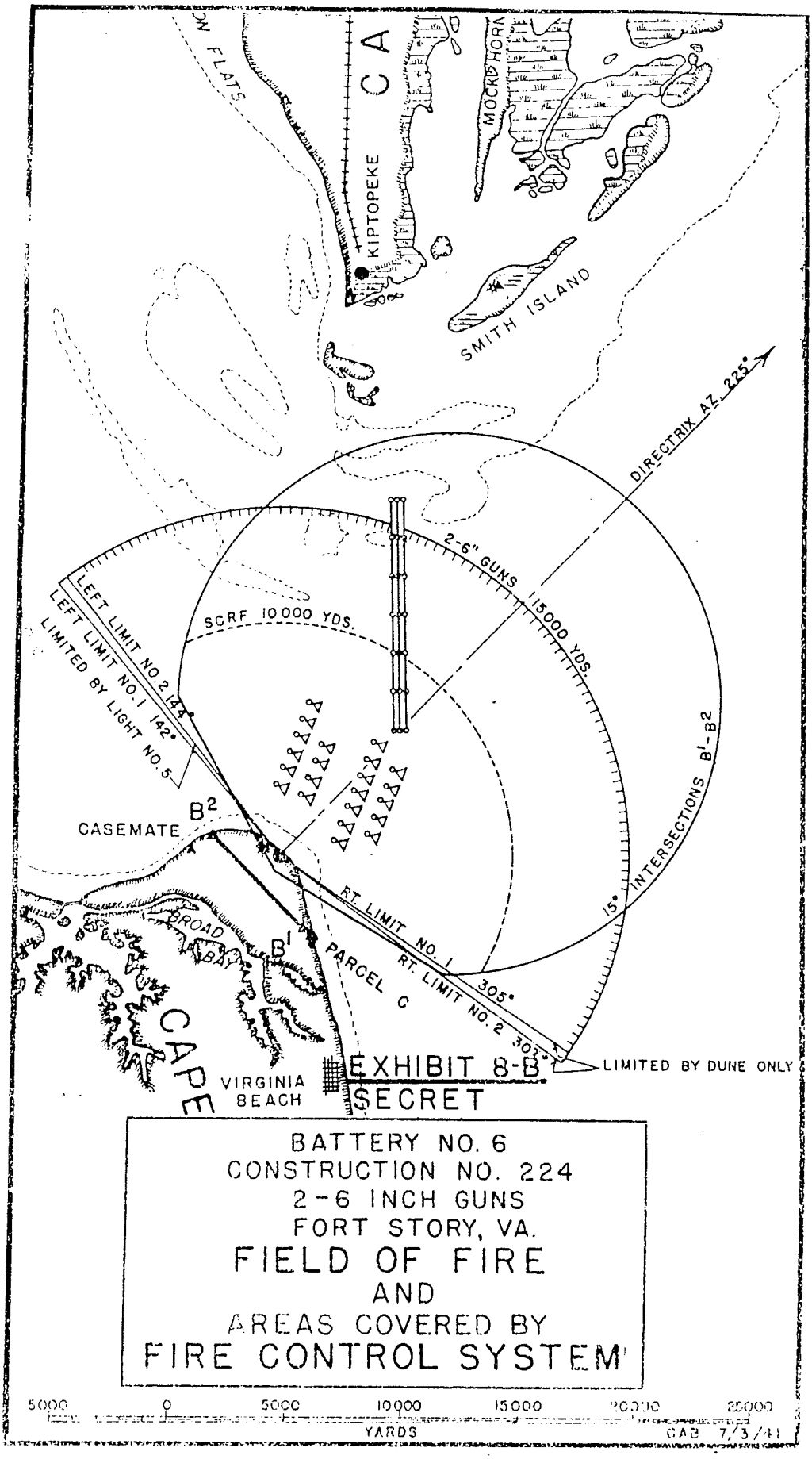
DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94



DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

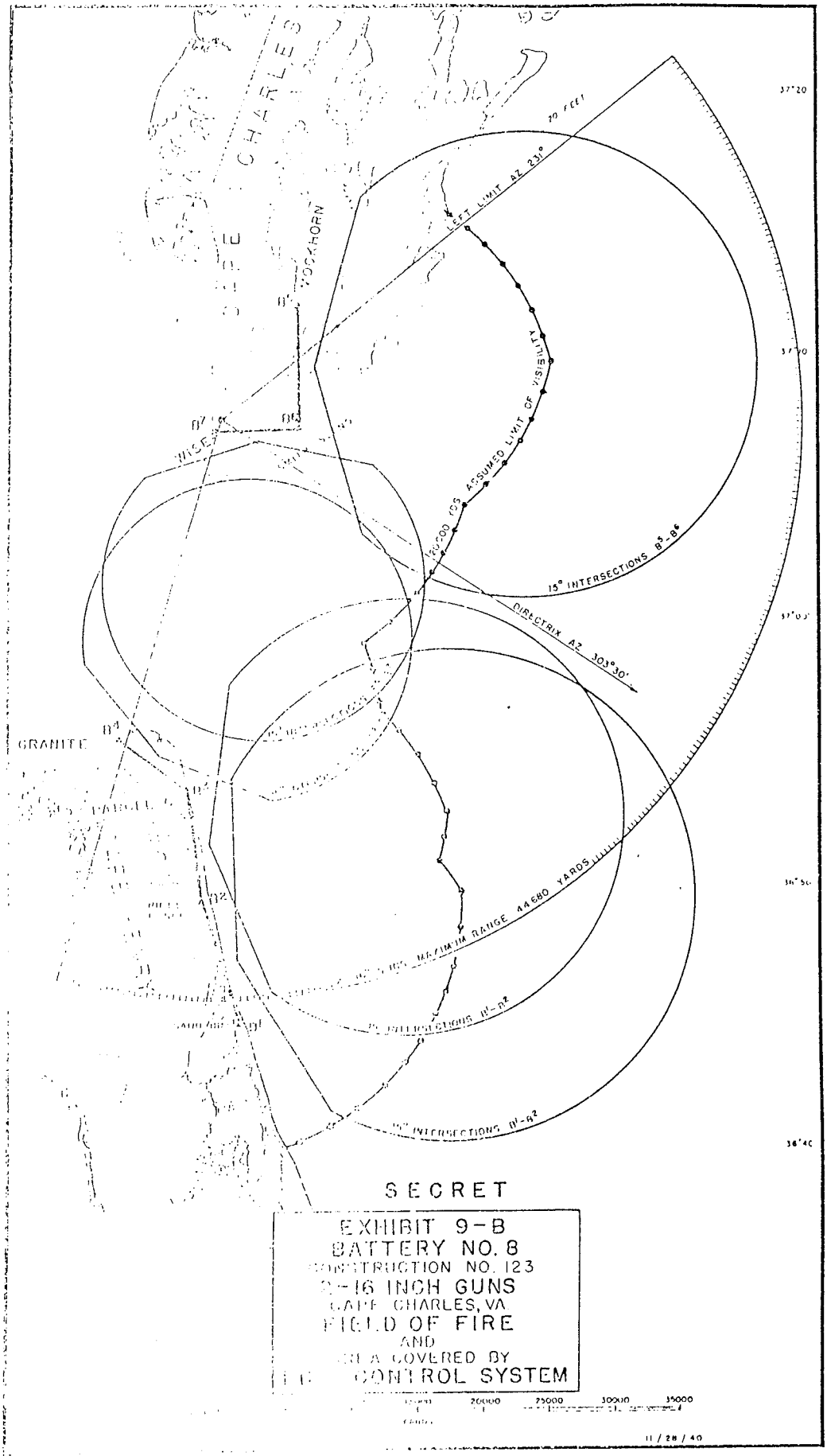


DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94



DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

By RB/MB NARA, Date 11-18-94



SECRET

EXHIBIT 9-B
BATTERY NO. 8
CONSTRUCTION NO. 123
2-16 INCH GUNS
CAPE CHARLES, VA
FIELD OF FIRE
AND
AREA COVERED BY
CONTROL SYSTEM

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

By RB/MB NARA, Date 11-18-94

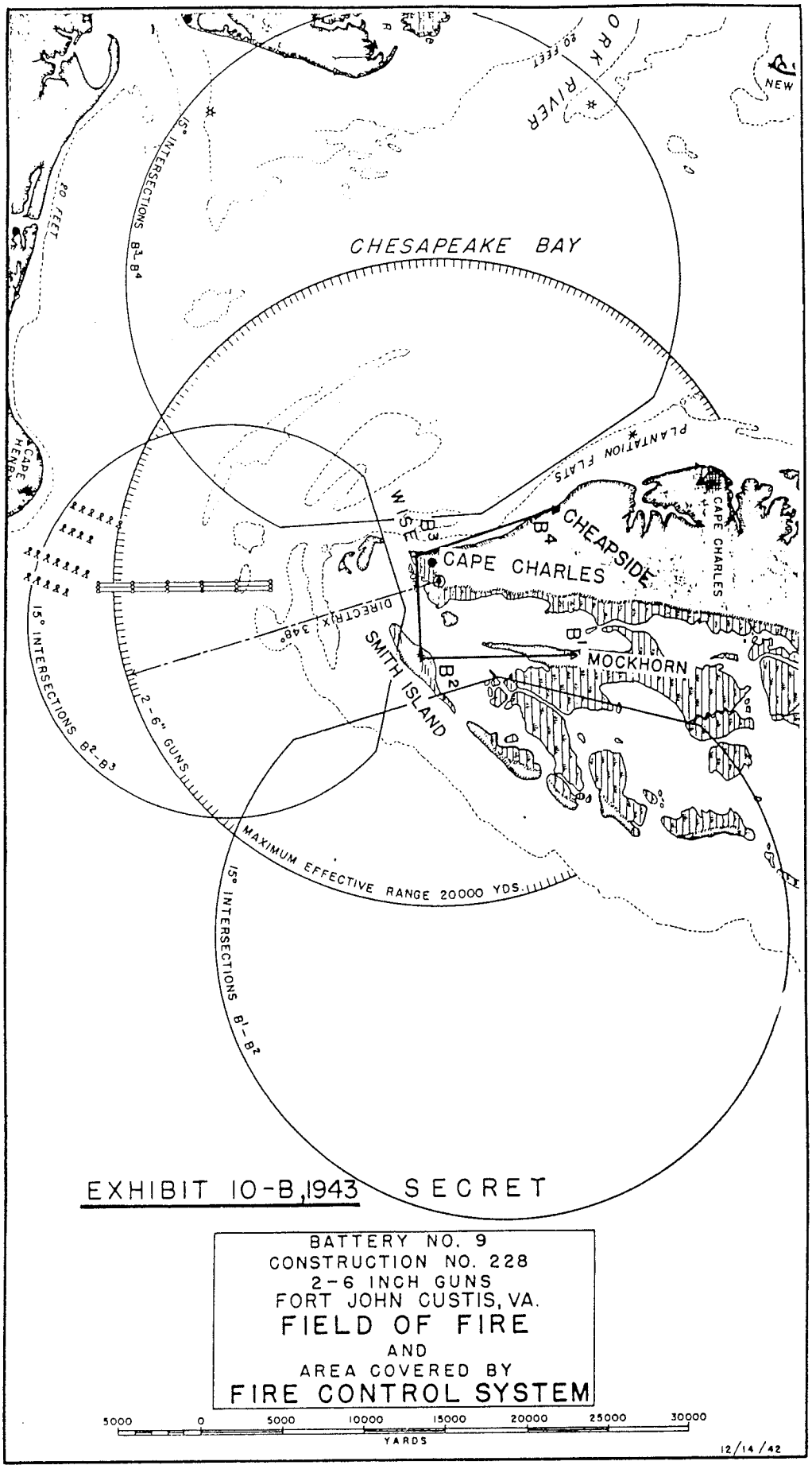
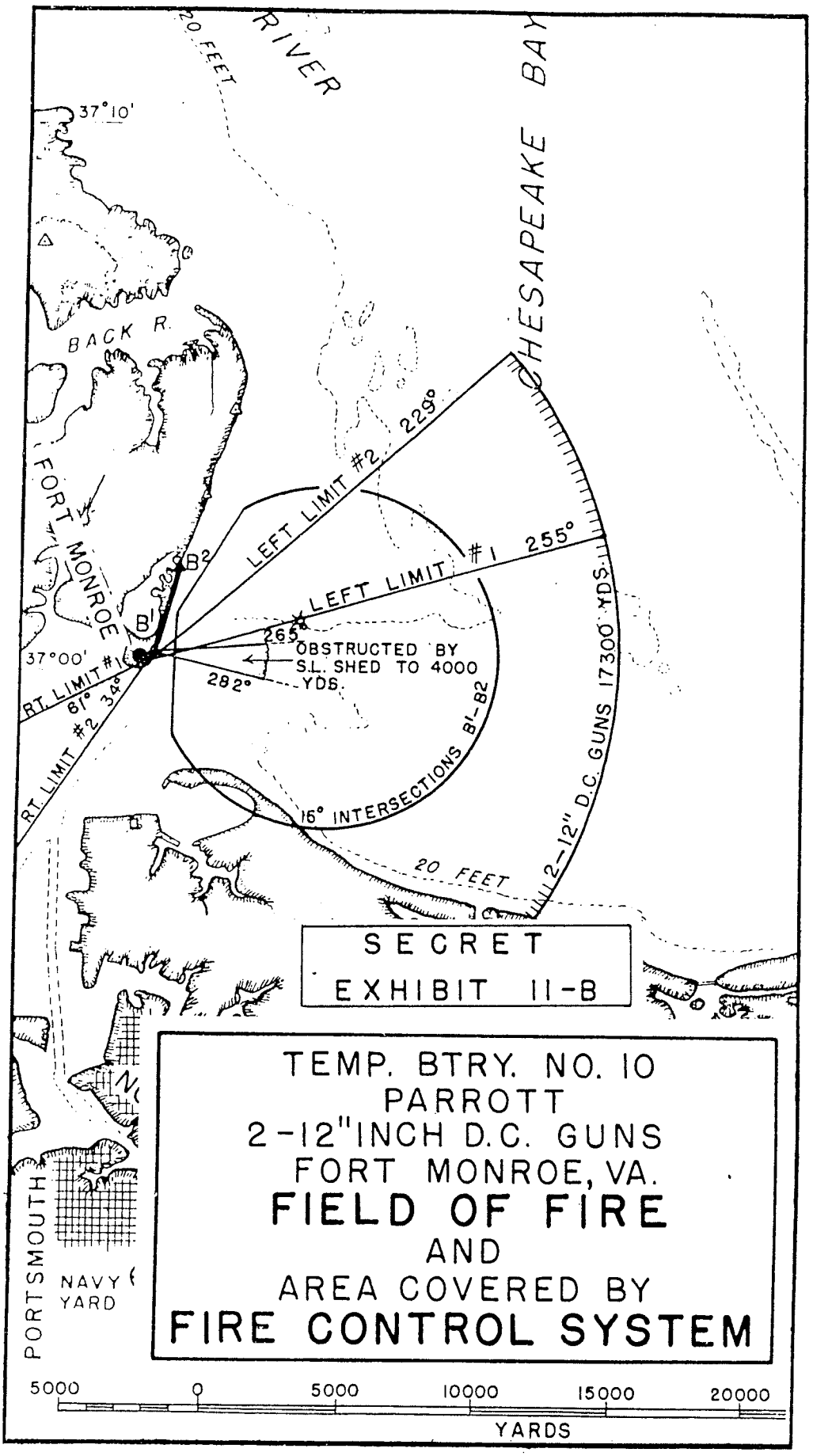


EXHIBIT 10-B, 1943 SECRET

BATTERY NO. 9
CONSTRUCTION NO. 228
2-6 INCH GUNS
FORT JOHN CUSTIS, VA.
FIELD OF FIRE
AND
AREA COVERED BY
FIRE CONTROL SYSTEM

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
BY RB/MB NARA, Date 11-18-94



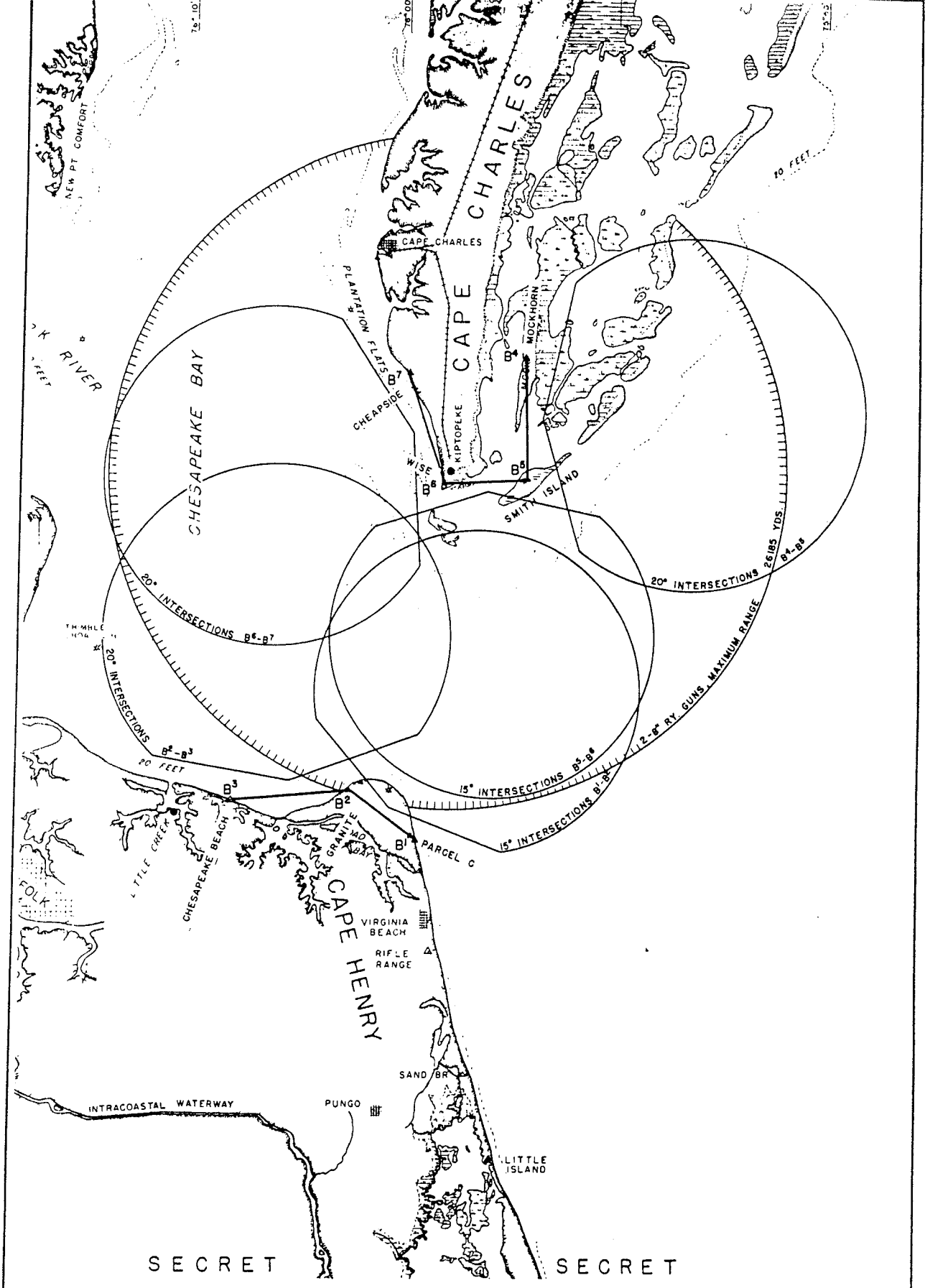


EXHIBIT 12-B
BATTERY NO. 8 TEMP.
2-8" RAILWAY GUNS
CAPE CHARLES, VA.
FIELD OF FIRE
AND
AREAS COVERED BY
FIRE CONTROL SYSTEM

5/11/41

5000 0 5000 10000 15000 20000 25000 30000 35000 40000
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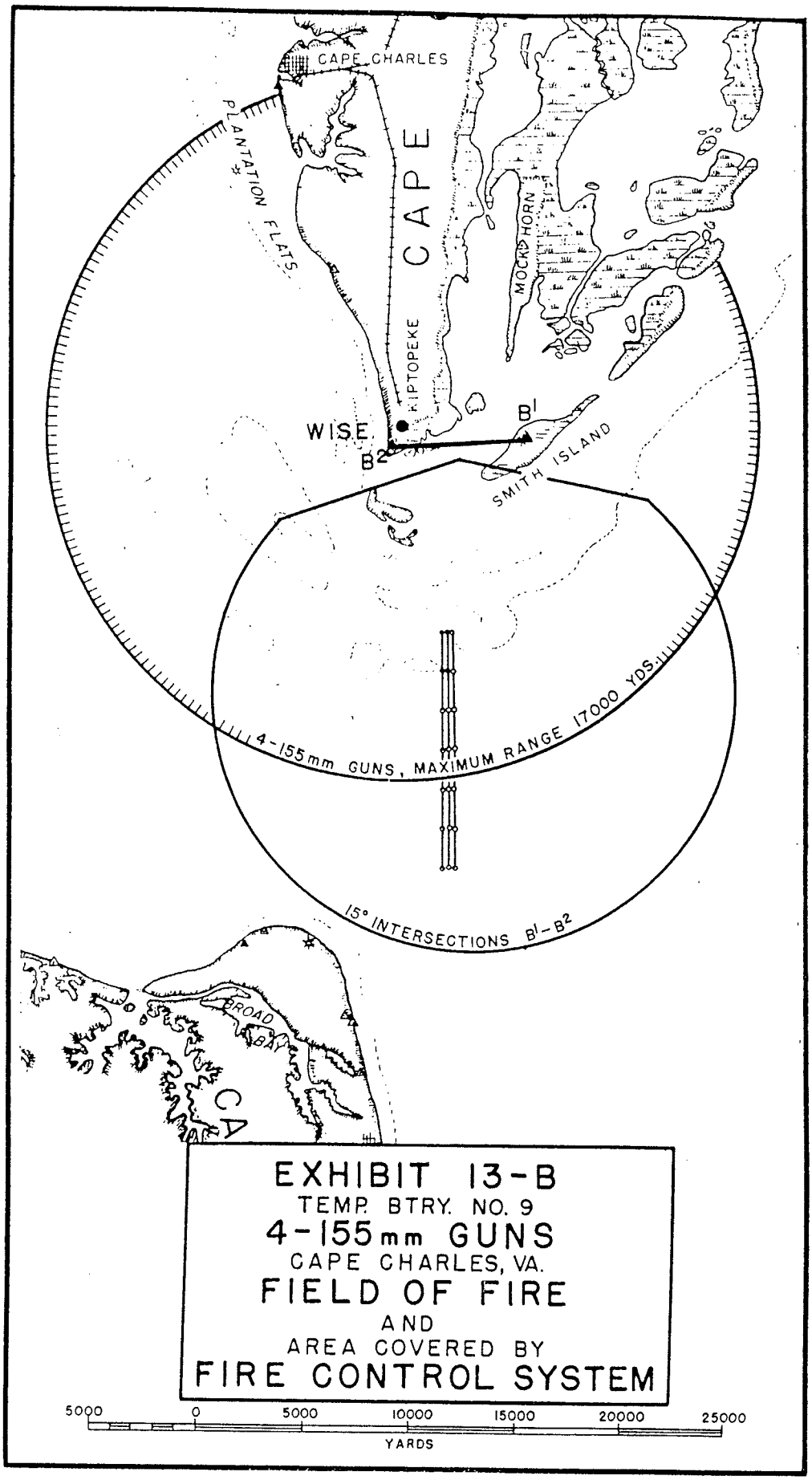
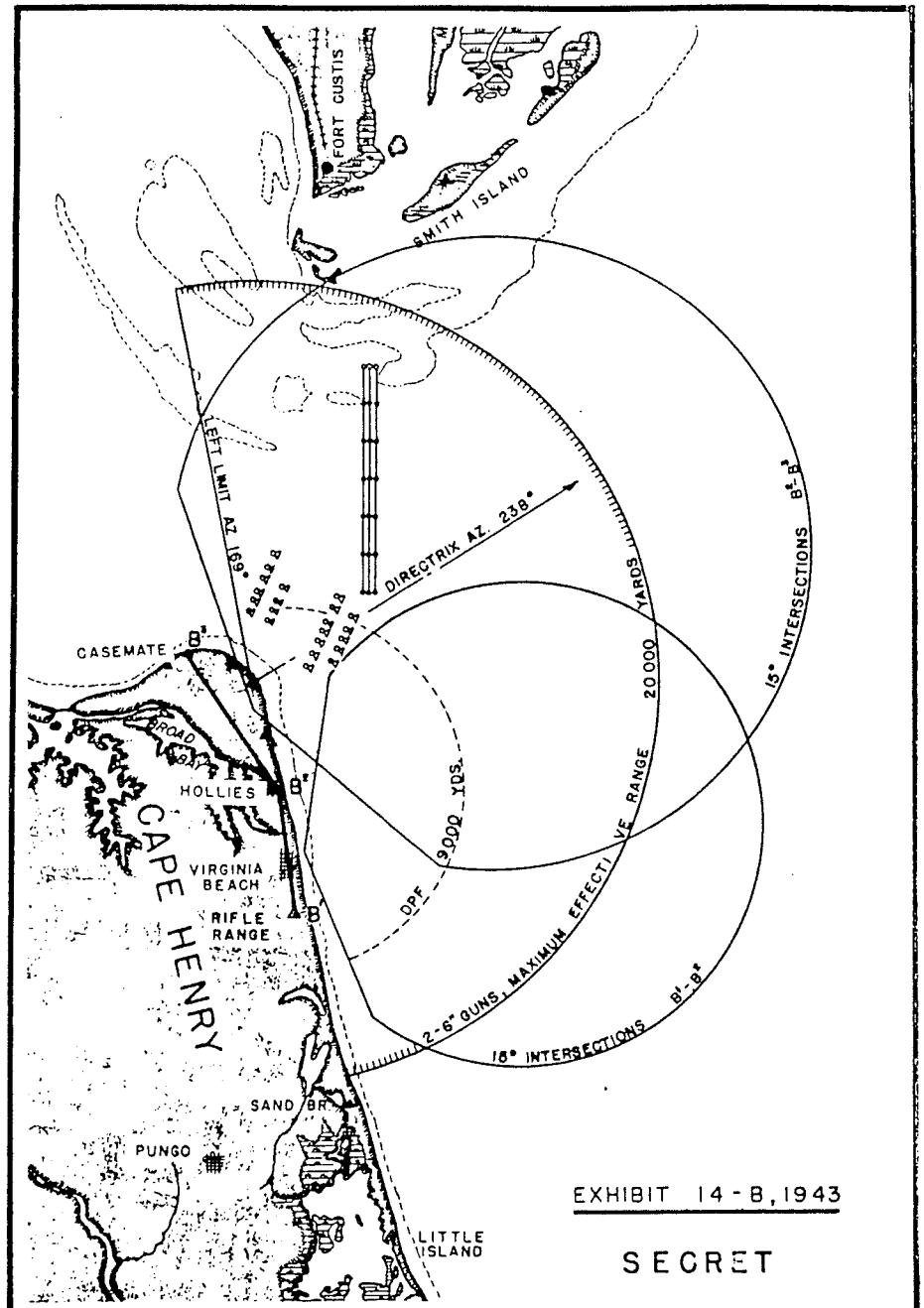
DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

By RB/MB NARA, Date 11-18-94



DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94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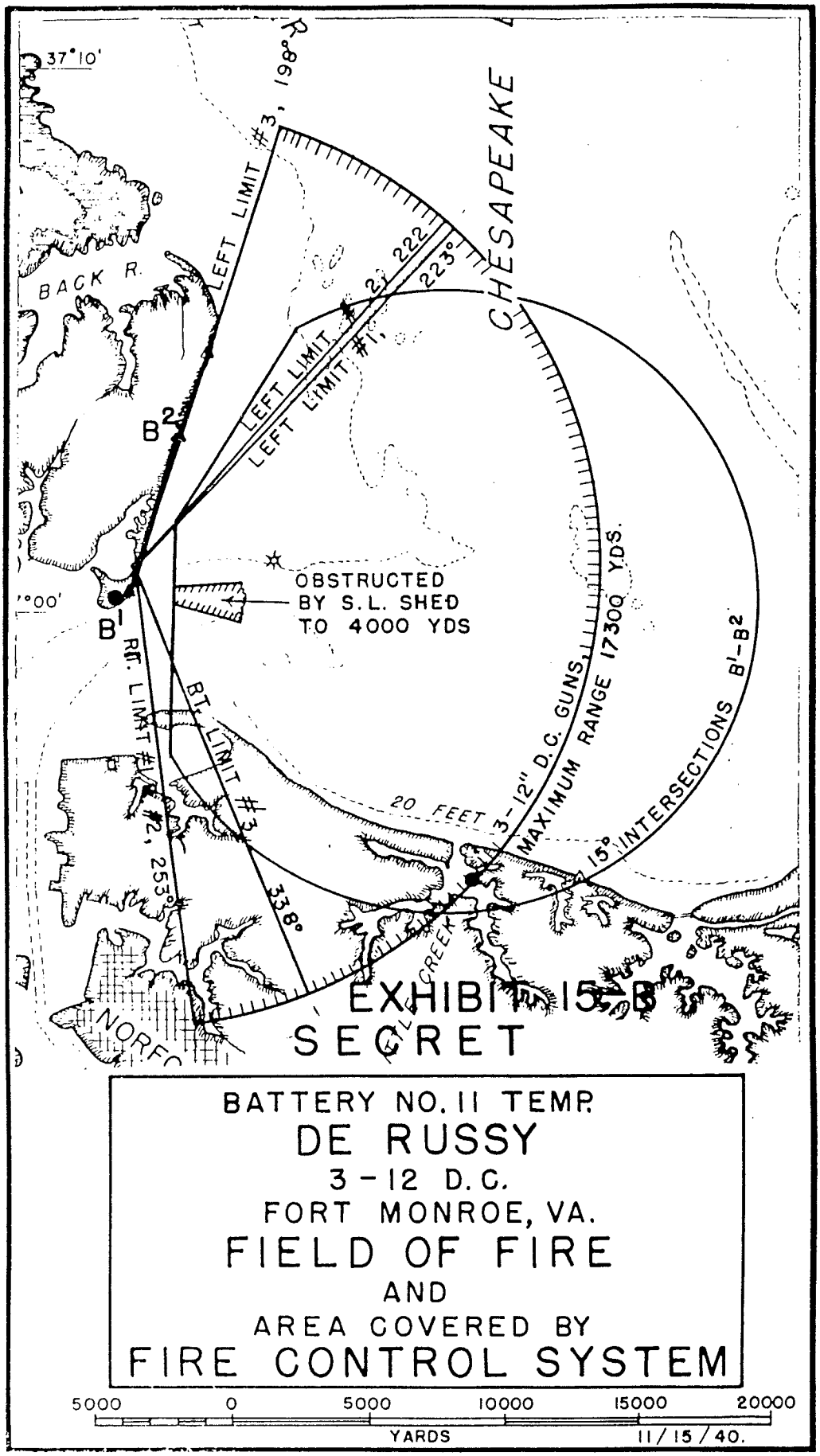
DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94



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By RB/MB NARA, Date 11-18-94

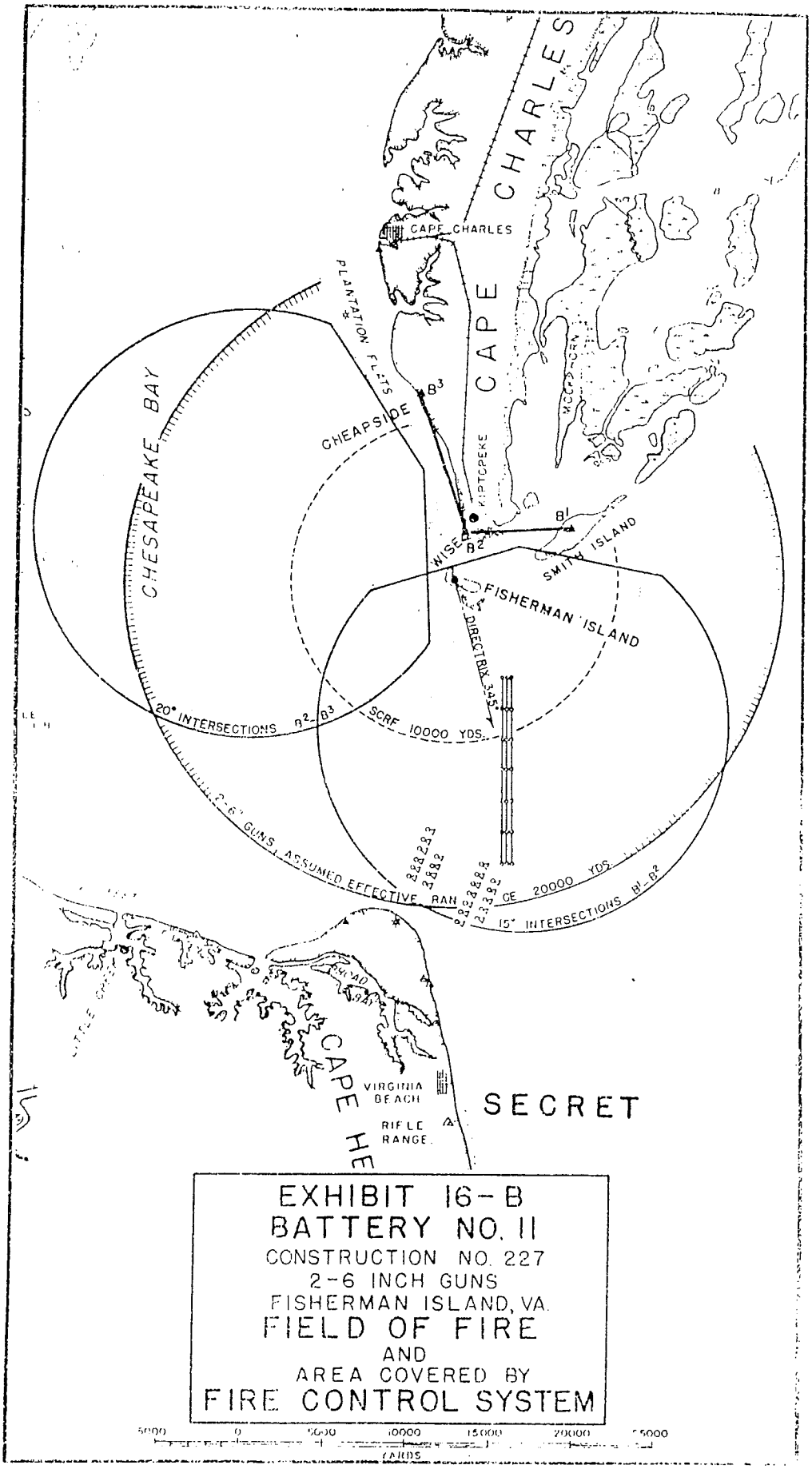


EXHIBIT 16-B
BATTERY NO. 11
CONSTRUCTION NO. 227
2-6 INCH GUNS
FISHERMAN ISLAND, VA.
FIELD OF FIRE
AND
AREA COVERED BY
FIRE CONTROL SYSTEM

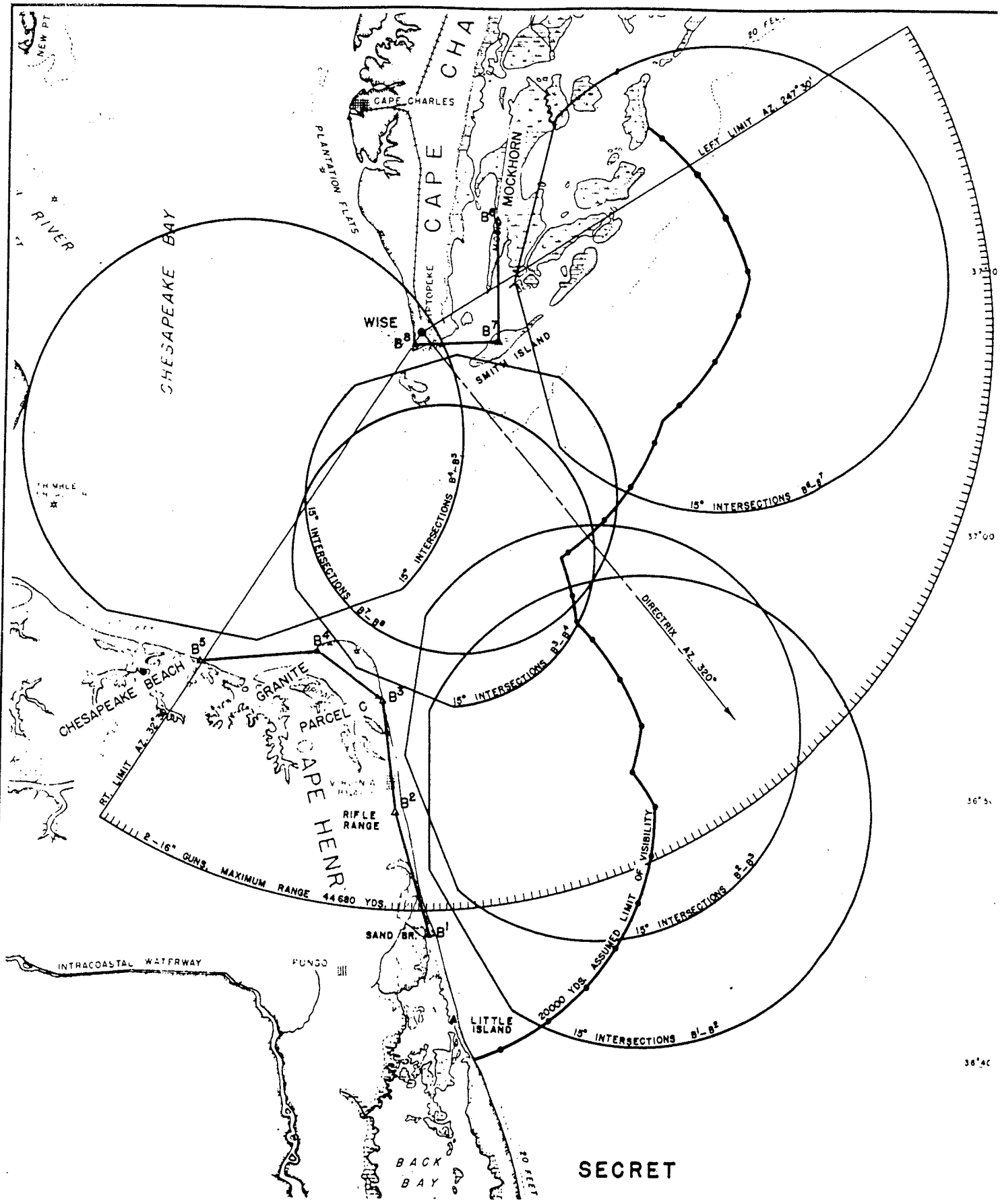
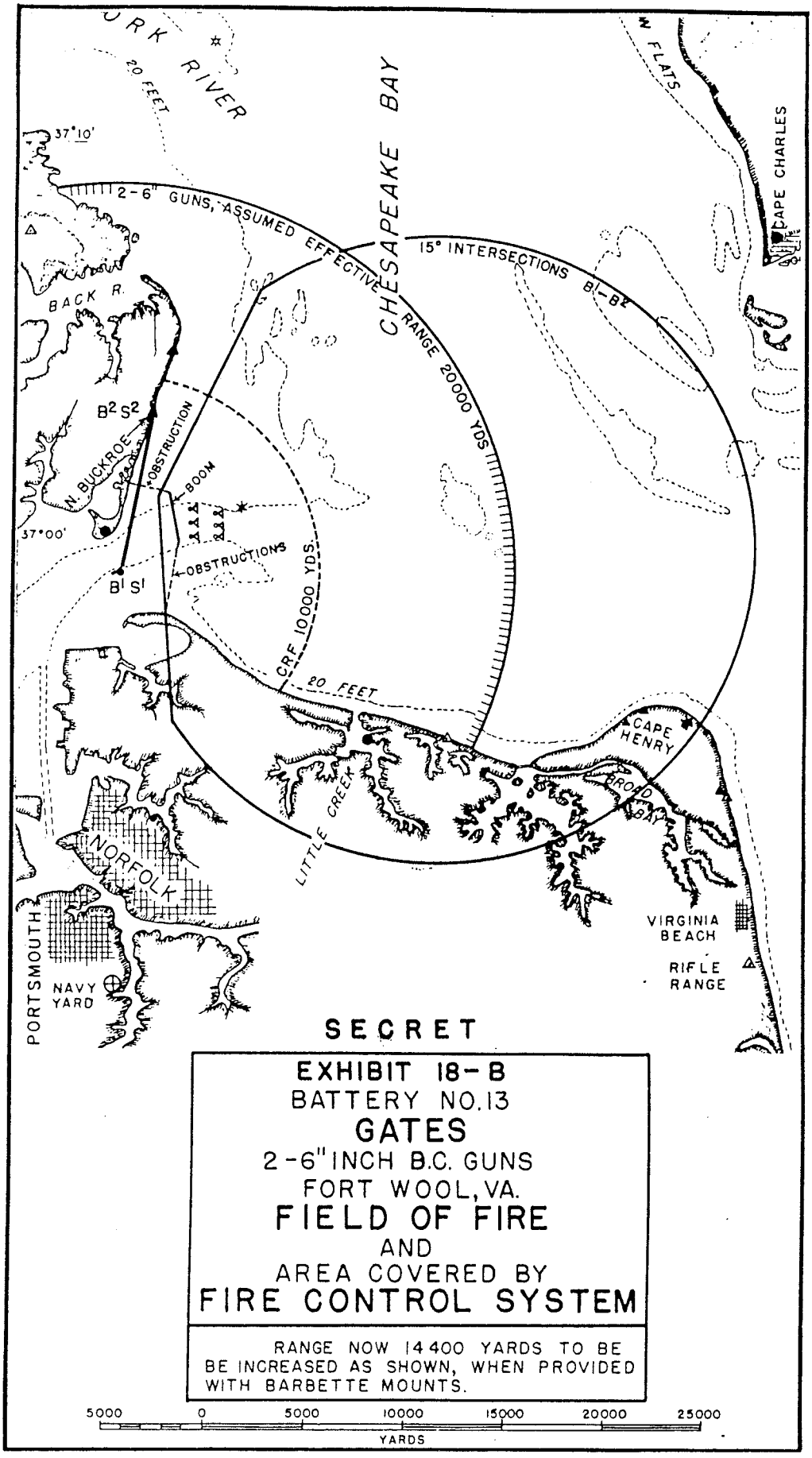


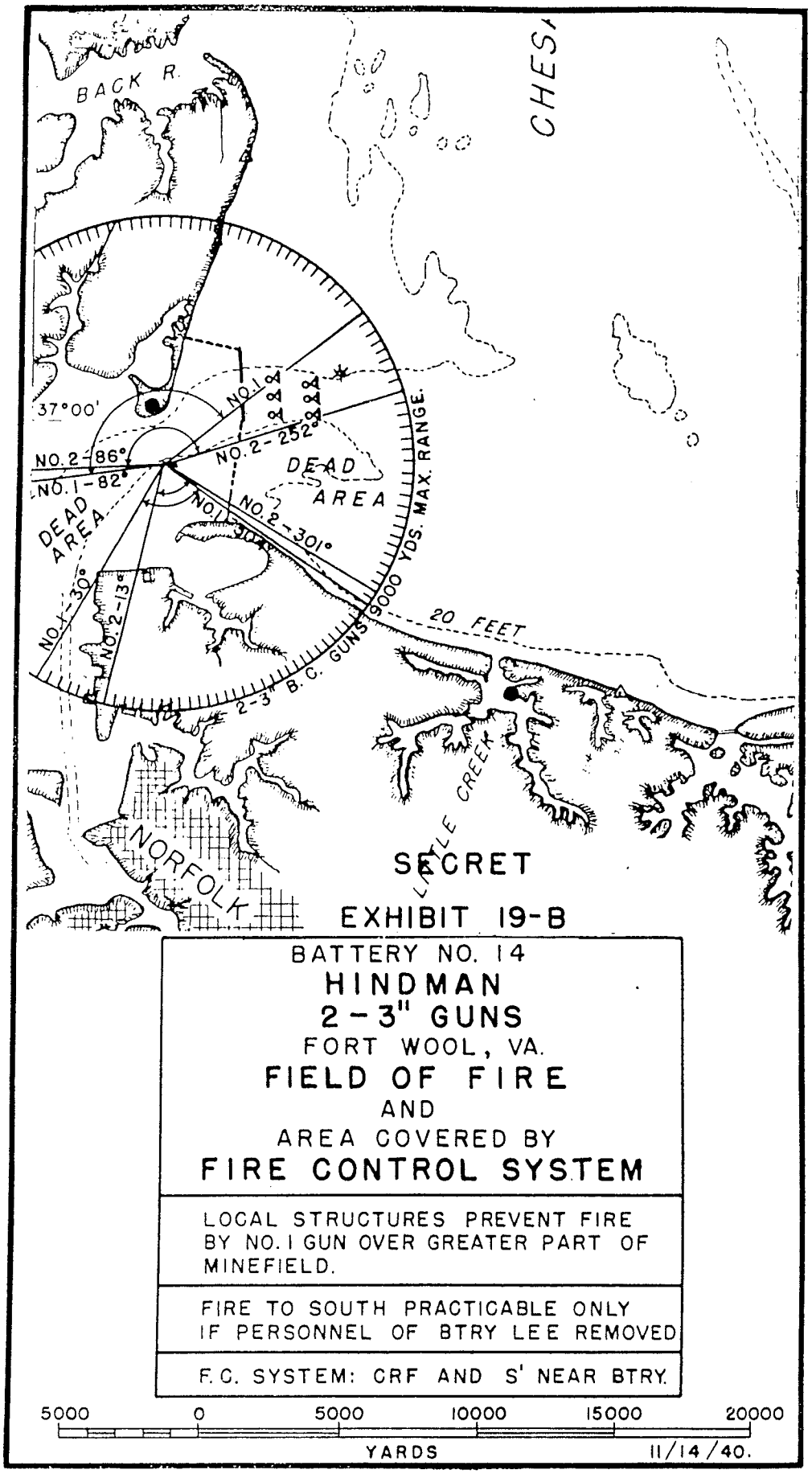
EXHIBIT 17-B
BATTERY NO. 12
CONSTRUCTION NO. 122
2-16 INCH GUNS
CAPE CHARLES, VA.
FIELD OF FIRE
AND
AREA COVERED BY
FIRE CONTROL SYSTEM

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94



DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

By RB/MB NARA, Date 11-18-94



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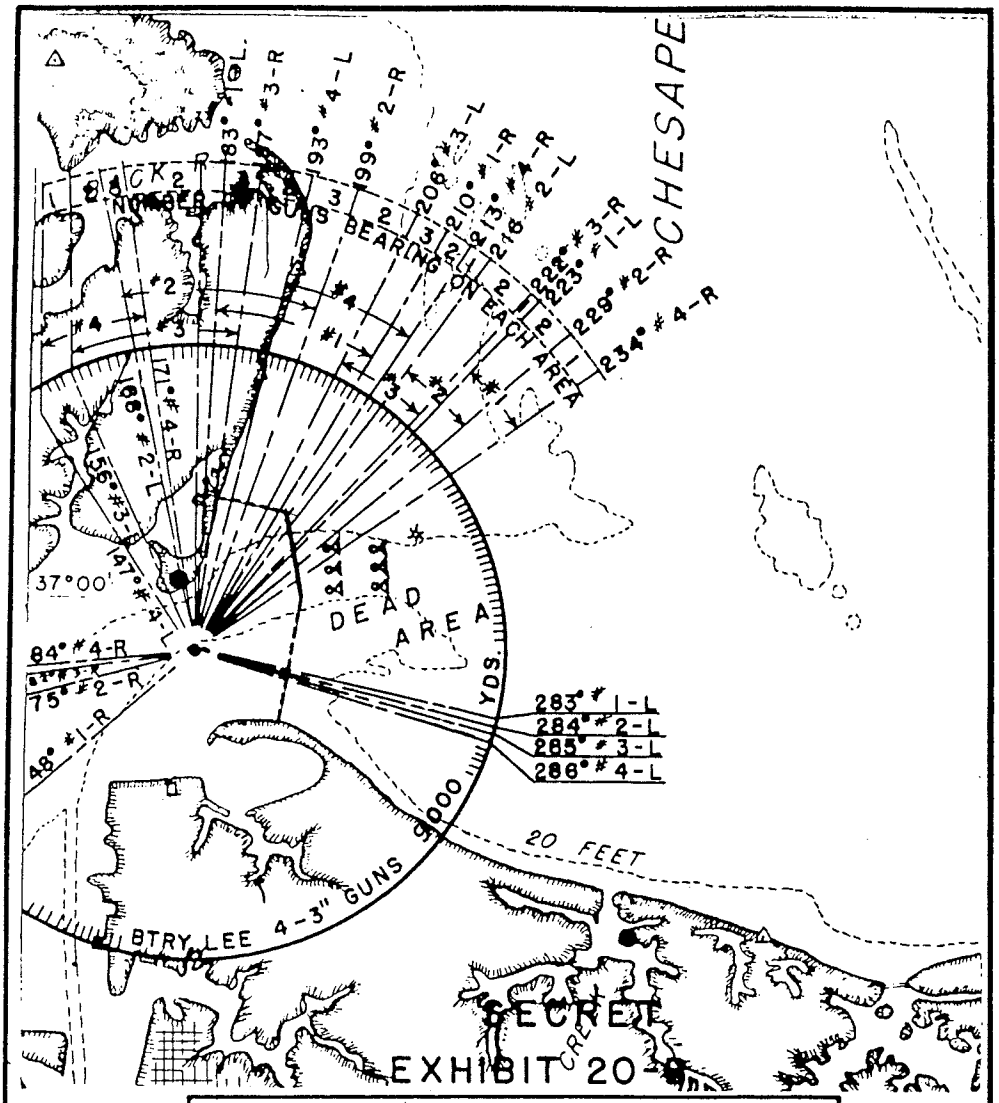
By RB/MB NARA, Date 11-18-94



BATTERY NO. 16

LEE
4 – 3" GUNS
FORT WOOL, VA.

FIELD OF FIRE
AND
AREA COVERED BY
FIRE CONTROL SYSTEM

AREA TO EAST IS MASKED BY TRAVERSE BETWEEN BTRY. HINDMAN AND ABANDONED BTRY. WITH MAGAZINES BELOW.
FIELD TO N.E. IS SATISFACTORY.
FIELD TO N. PRACTICABLE ONLY IF PERSONNEL OF BTRY. HINDMAN REMOVED.

CRF AT BTRY. COVERS SOUTH FIELD OF FIRE, AND COVERS NORTH FIELD WITH SOME OBSTRUCTIONS.

5000 0 5000 10000 15000 20000
YARDS

11 14 40

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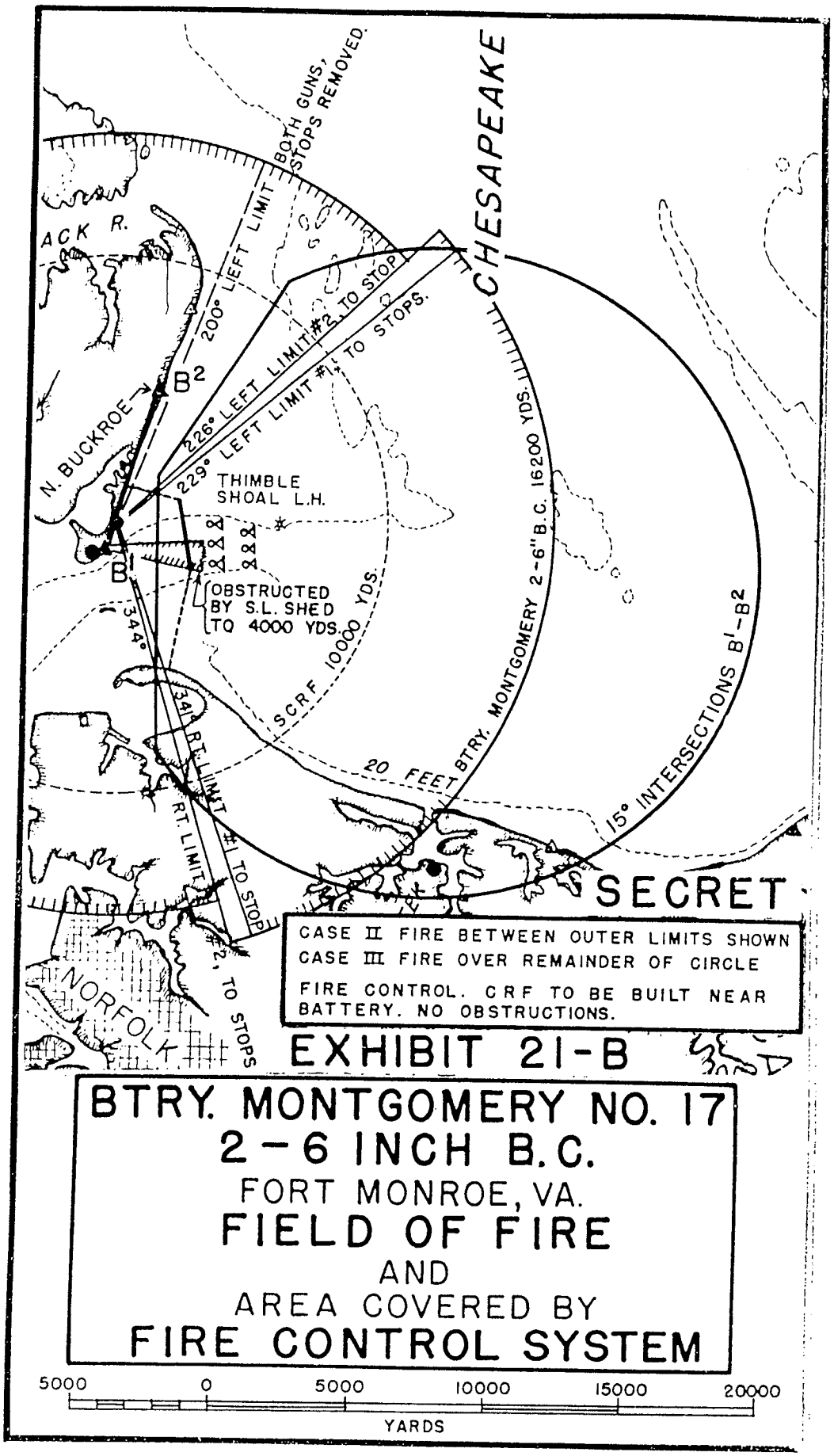
By RB/MB NARA, Date 11-18-94



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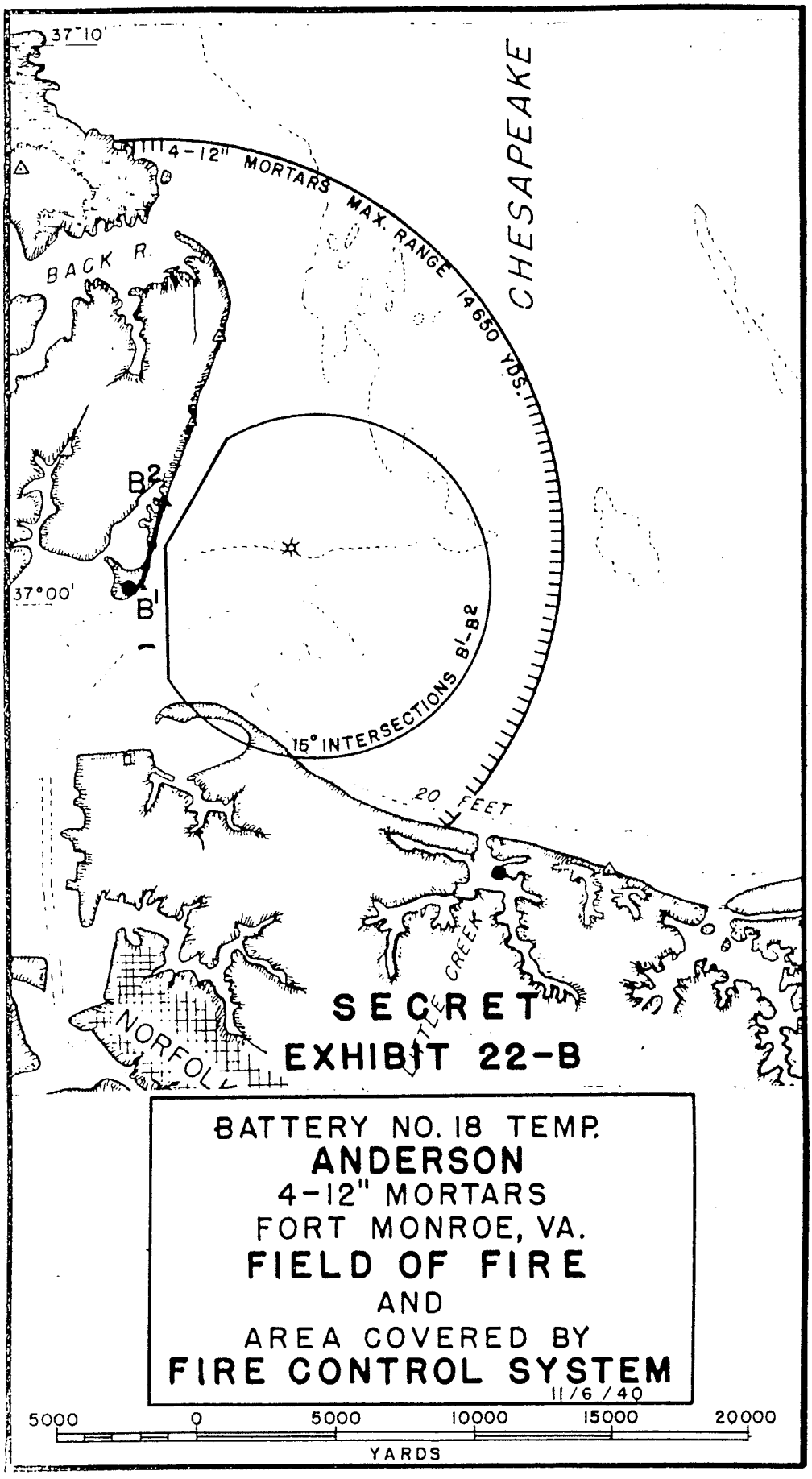
By RB/MB NARA, Date 11-18-94



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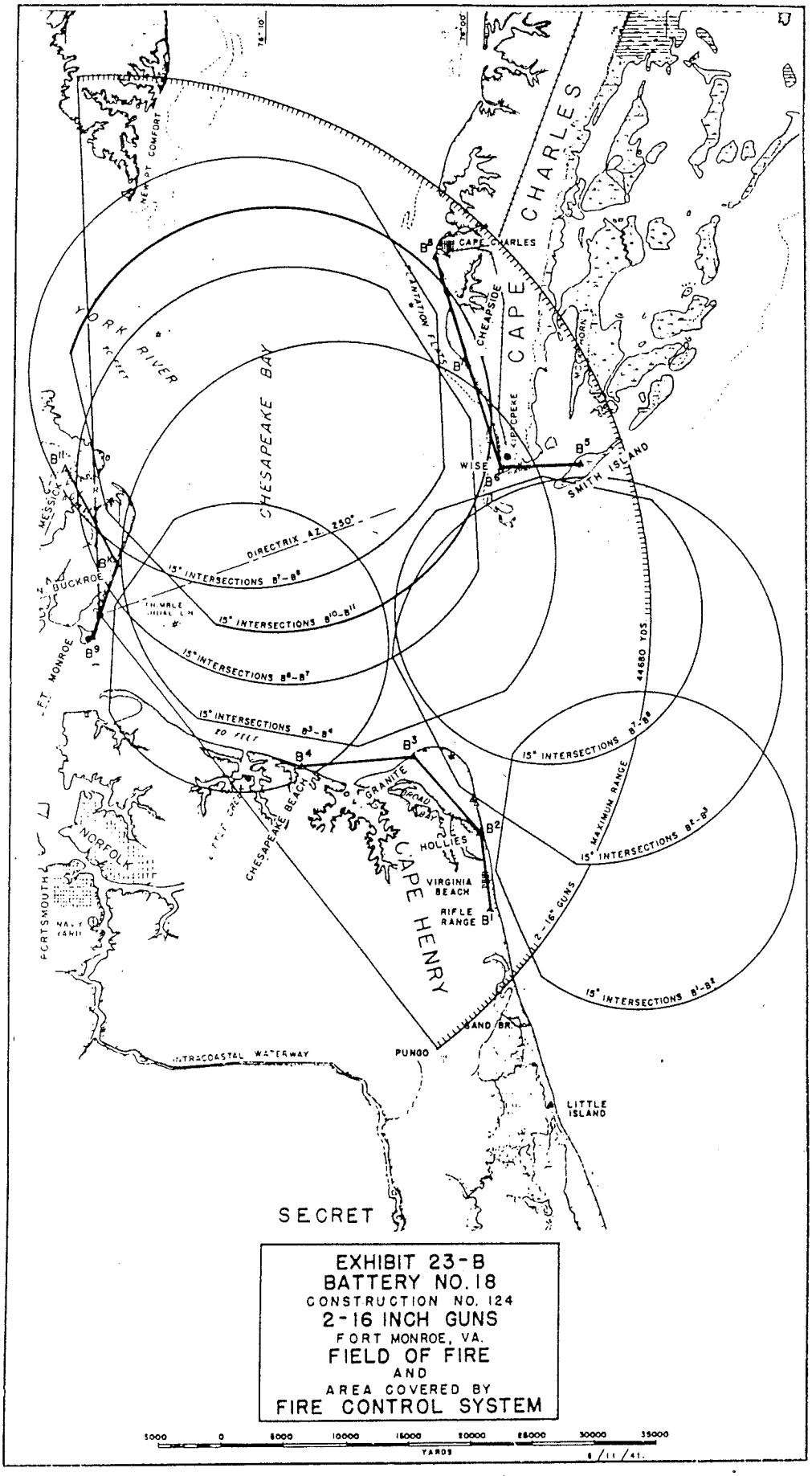

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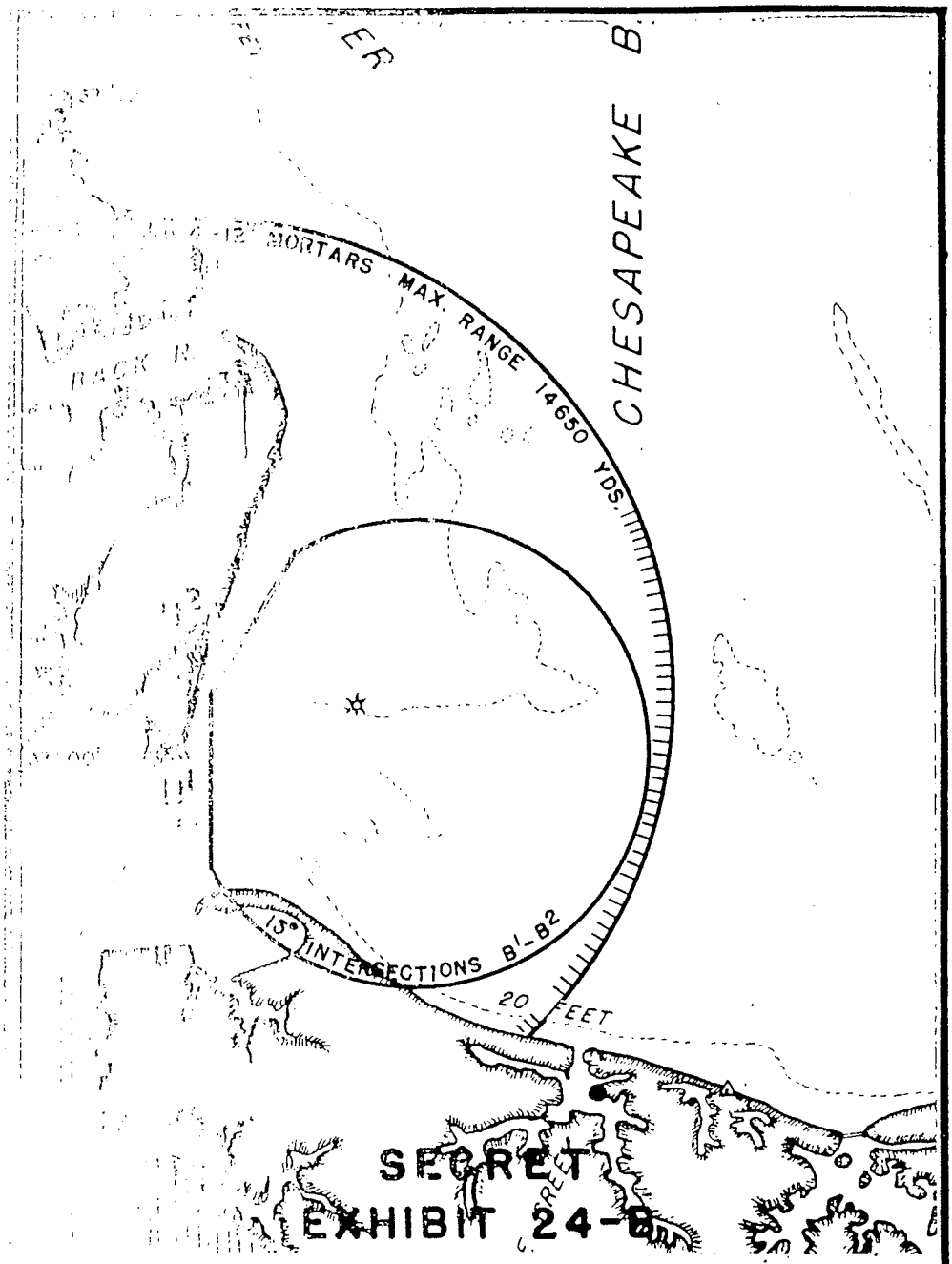
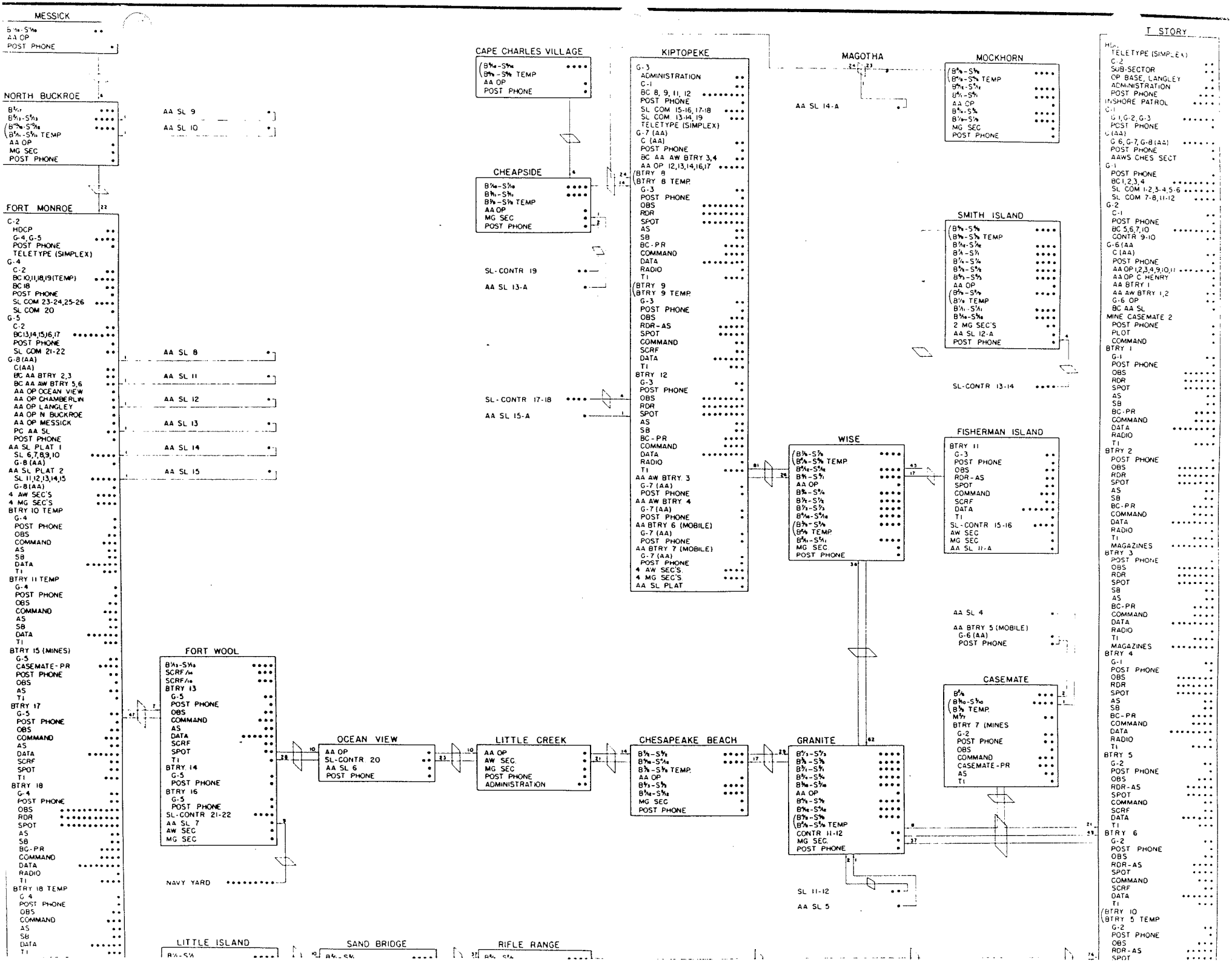


SECRET
EXHIBIT 24-B

BATTERY NO. 19 TEMP.
RUGGLES
4-12" MORTARS
FORT MONROE, VA.
FIELD OF FIRE
AND
AREA COVERED BY
FIRE CONTROL SYSTEM
11/6/40

5000 10000 15000 20000
YARDS


MESSICK
AA OP
POST PHONE
NORTH BUCKROE
AA OP
MG SEC
POST PHONE
AA SL 9
AA SL 10
FORT MONROE
HDCP
POST PHONE
TELETYPE (SIMPLEX)
AA OP OCEAN VIEW
AA OP LANGLEY
AA OP N BUCKROE
AA OP MESSICK
POST PHONE
SL COM 21-22
4 AW SEC'S
4 MG SEC'S
BTRY 10 TEMP
POST PHONE
BTRY 11 TEMP
POST PHONE
BTRY 15 (MINES)
CASEMATE-PR
POST PHONE
BTRY 17
POST PHONE
BTRY 18
POST PHONE
BTRY 18 TEMP
POST PHONE
AA SL 8
AA SL 11
AA SL 12
AA SL 13
AA SL 14
AA SL 15
CAPE CHARLES VILLAGE
AA OP
POST PHONE
CHEAPSIDE
AA OP
MG SEC
POST PHONE
SL-CONTR 19
AA SL 13-A
KIPTOPEKE
ADMINISTRATION
POST PHONE
SL COM 15-16, 17-18
SL COM 13-14, 19
TELETYPE (SIMPLEX)
AA OP 12,13,14,16,17
BTRY 8
BTRY 8 TEMP.
POST PHONE
OBS
RDR
SPOT
AS
SB
BC-PR
COMMAND
DATA
RADIO
TI
BTRY 9
BTRY 9 TEMP.
POST PHONE
OBS
RDR-AS
SPOT
COMMAND
SCRF
DATA
TI
BTRY 12
POST PHONE
OBS
RDR
SPOT
AS
SB
BC-PR
COMMAND
DATA
RADIO
TI
AA AW BTRY. 3
POST PHONE
AA AW BTRY 4
POST PHONE
AA BTRY 6 (MOBILE)
POST PHONE
AA BTRY 7 (MOBILE)
POST PHONE
4 AW SEC'S.
4 MG SEC'S
AA SL PLAT
SL-CONTR 17-18
AA SL 15-A
MAGOTHA
AA SL 14-A
MOCKHORN
AA OP
MG SEC
POST PHONE
SMITH ISLAND
2 MG SEC'S
AA SL 12-A
POST PHONE
SL-CONTR 13-14
WISE
AA OP
POST PHONE
FISHERMAN ISLAND
POST PHONE
SL-CONTR 15-16
AW SEC
MG SEC
AA SL 11-A
AA SL 4
AA BTRY 5 (MOBILE)
POST PHONE
CASEMATE
BTRY 7 (MINES
POST PHONE
CASEMATE-PR
AS
TI
FORT WOOL
SCRF
BTRY 13
POST PHONE
OBS
COMMAND
AS
DATA
SCRF
SPOT
TI
BTRY 14
POST PHONE
BTRY 16
POST PHONE
SL-CONTR 21-22
AA SL 7
AW SEC
MG SEC
NAVY YARD
OCEAN VIEW
AA OP
SL-CONTR 20
AA SL 6
POST PHONE
LITTLE CREEK
AA OP
AW SEC.
MG SEC
POST PHONE
ADMINISTRATION
CHESAPEAKE BEACH
AA OP
MG SEC
POST PHONE
GRANITE
AA OP
CONTR 11-12
MG SEC.
POST PHONE
SL 11-12
AA SL 5
LITTLE ISLAND
SAND BRIDGE
RIFLE RANGE
T STORY
TELETYPE (SIMPLEX)
SUB-SECTOR
OP BASE, LANGLEY
ADMINISTRATION
POST PHONE
INSHORE PATROL
POST PHONE
G-6, G-7, G-8 (AA)
POST PHONE
AAWS CHES SECT
POST PHONE
BC 1, 2, 3, 4
SL COM 1-2, 3-4, 5-6
SL COM 7-8, 11-12
POST PHONE
BC 5, 6, 7, 10
CONTR 9-10
C (AA)
POST PHONE
AA OP 1, 2, 3, 4, 9, 10, 11
AA OP C HENRY
AA BTRY 1
AA AW BTRY 1, 2
G-6 OP
BC AA SL
MINE CASEMATE 2
POST PHONE
PLOT
COMMAND
BTRY 1
POST PHONE
OBS
RDR
SPOT
AS
SB
BC-PR
COMMAND
DATA
RADIO
TI
BTRY 2
POST PHONE
OBS
RDR
SPOT
AS
SB
BC-PR
COMMAND
DATA
RADIO
TI
MAGAZINES
BTRY 3
POST PHONE
OBS
RDR
SPOT
SB
AS
BC-PR
COMMAND
DATA
RADIO
TI
MAGAZINES
BTRY 4
POST PHONE
OBS
RDR
SPOT
AS
SB
BC-PR
COMMAND
DATA
RADIO
TI
BTRY 5
POST PHONE
OBS
RDR-AS
SPOT
COMMAND
SCRF
DATA
TI
BTRY 6
POST PHONE
OBS
RDR-AS
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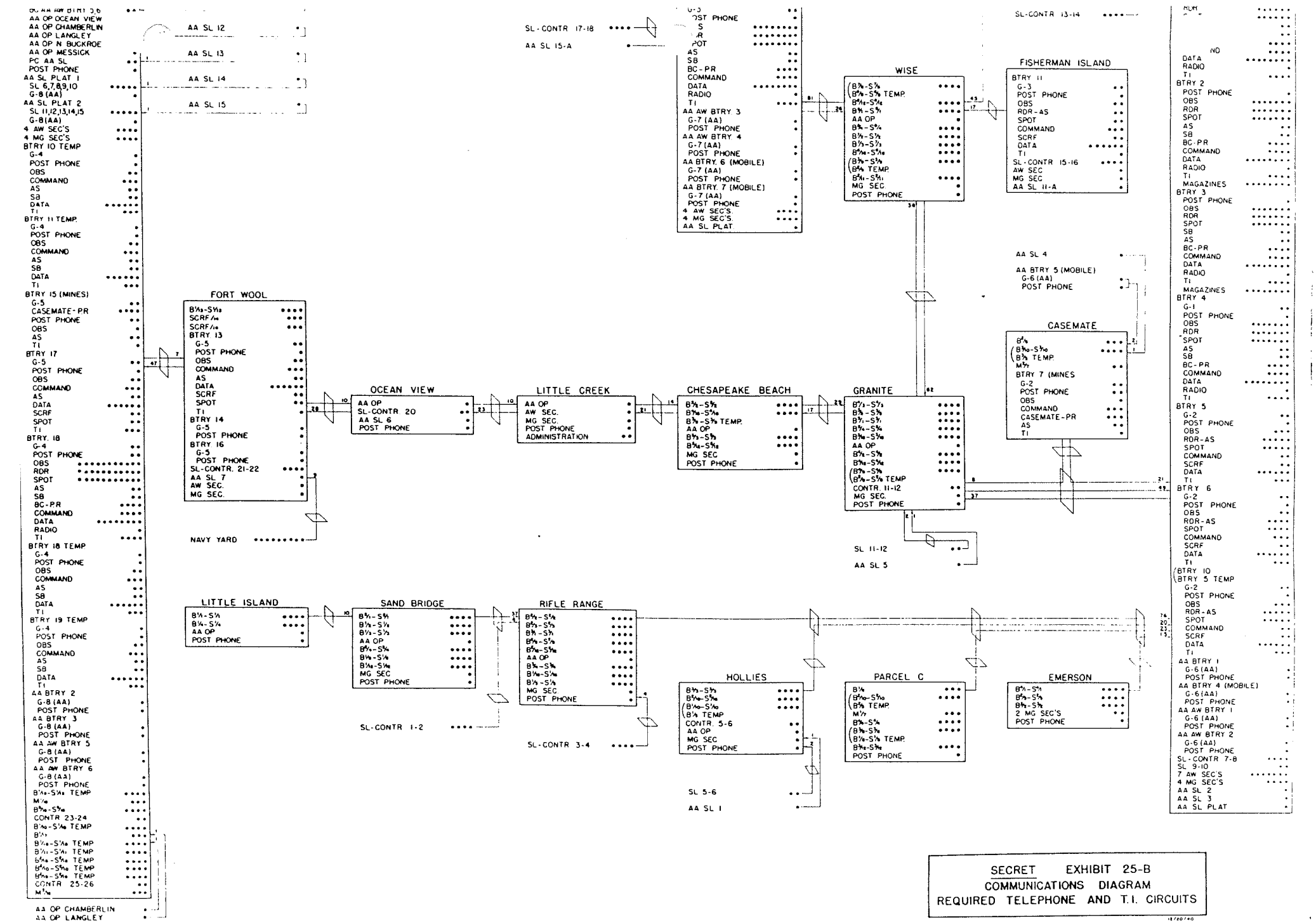
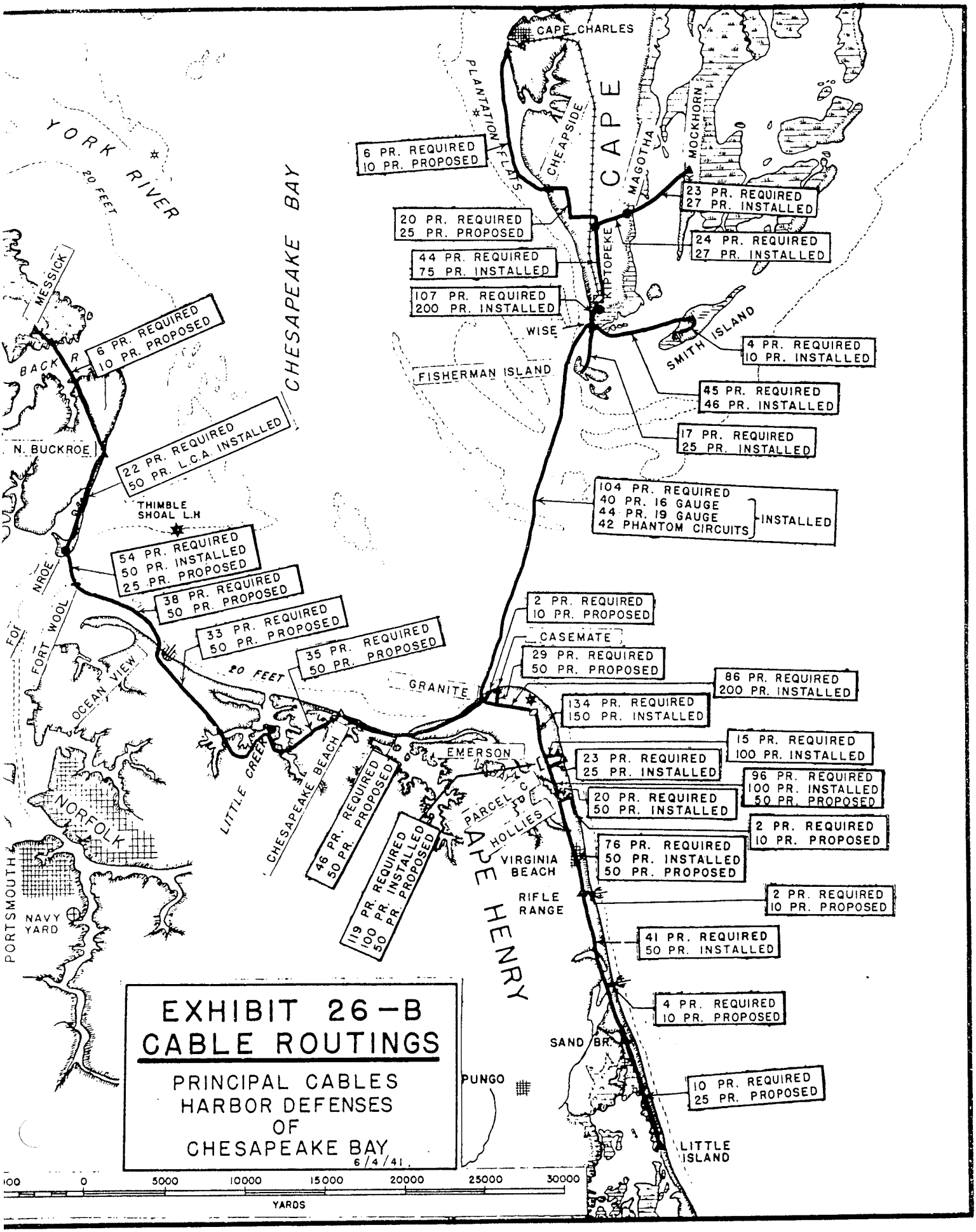
COMMAND
SCRF
DATA
TI
BTRY 10
BTRY 5 TEMP
POST PHONE
OBS
RDR-AS
SPOT


FORT WOOL
OCEAN VIEW
LITTLE CREEK
CHESAPEAKE BEACH
WISE
FISHERMAN ISLAND
GRANITE
CASEMATE
LITTLE ISLAND
SAND BRIDGE
RIFLE RANGE
HOLLIES
PARCEL C
EMERSON
NAVY YARD
SL 11-12
AA SL 5
SL 5-6
AA SL 1
SL-CONTR 1-2
SL-CONTR 3-4
SECRET EXHIBIT 25-B
COMMUNICATIONS DIAGRAM
REQUIRED TELEPHONE AND T.I. CIRCUITS


CAPE CHARLES
PLANTATION FLATS
CHEAPSIDE
CAPE
MAGOTHA
MOCKHORN
YORK RIVER
20 FEET
CHESAPEAKE BAY
6 PR. REQUIRED
10 PR. PROPOSED
23 PR. REQUIRED
27 PR. INSTALLED
20 PR. REQUIRED
25 PR. PROPOSED
24 PR. REQUIRED
27 PR. INSTALLED
44 PR. REQUIRED
75 PR. INSTALLED
107 PR. REQUIRED
200 PR. INSTALLED
KIPTOPEKE
WISE
SMITH ISLAND
4 PR. REQUIRED
10 PR. INSTALLED
FISHERMAN ISLAND
45 PR. REQUIRED
46 PR. INSTALLED
17 PR. REQUIRED
25 PR. INSTALLED
MESSICK
BACK R
6 PR. REQUIRED
10 PR. PROPOSED
N. BUCKROE
22 PR. REQUIRED
50 PR. L.C.A. INSTALLED
THIMBLE SHOAL L.H
104 PR. REQUIRED
40 PR. 16 GAUGE
44 PR. 19 GAUGE
42 PHANTOM CIRCUITS
INSTALLED
54 PR. REQUIRED
50 PR. INSTALLED
25 PR. PROPOSED
38 PR. REQUIRED
50 PR. PROPOSED
33 PR. REQUIRED
50 PR. PROPOSED
35 PR. REQUIRED
50 PR. PROPOSED
2 PR. REQUIRED
10 PR. PROPOSED
CASEMATE
29 PR. REQUIRED
50 PR. PROPOSED
86 PR. REQUIRED
200 PR. INSTALLED
GRANITE
134 PR. REQUIRED
150 PR. INSTALLED
15 PR. REQUIRED
100 PR. INSTALLED
23 PR. REQUIRED
25 PR. INSTALLED
96 PR. REQUIRED
100 PR. INSTALLED
50 PR. PROPOSED
20 PR. REQUIRED
50 PR. INSTALLED
2 PR. REQUIRED
10 PR. PROPOSED
76 PR. REQUIRED
50 PR. INSTALLED
50 PR. PROPOSED
2 PR. REQUIRED
10 PR. PROPOSED
41 PR. REQUIRED
50 PR. INSTALLED
4 PR. REQUIRED
10 PR. PROPOSED
10 PR. REQUIRED
25 PR. PROPOSED
FORT WOOL
OCEAN VIEW
LITTLE CREEK
CHESAPEAKE BEACH
EMERSON
PARCEL C
HOLLIES
VIRGINIA BEACH
RIFLE RANGE
CAPE HENRY
NORFOLK
PORTSMOUTH
NAVY YARD
SAND BR.
PUNGO
LITTLE ISLAND
46 PR. REQUIRED
50 PR. PROPOSED
119 PR. REQUIRED
100 PR. INSTALLED
50 PR. PROPOSED
EXHIBIT 26-B
CABLE ROUTINGS
PRINCIPAL CABLES
HARBOR DEFENSES
OF
CHESAPEAKE BAY
6/4/41
100 0 5000 10000 15000 20000 25000 30000
YARDS

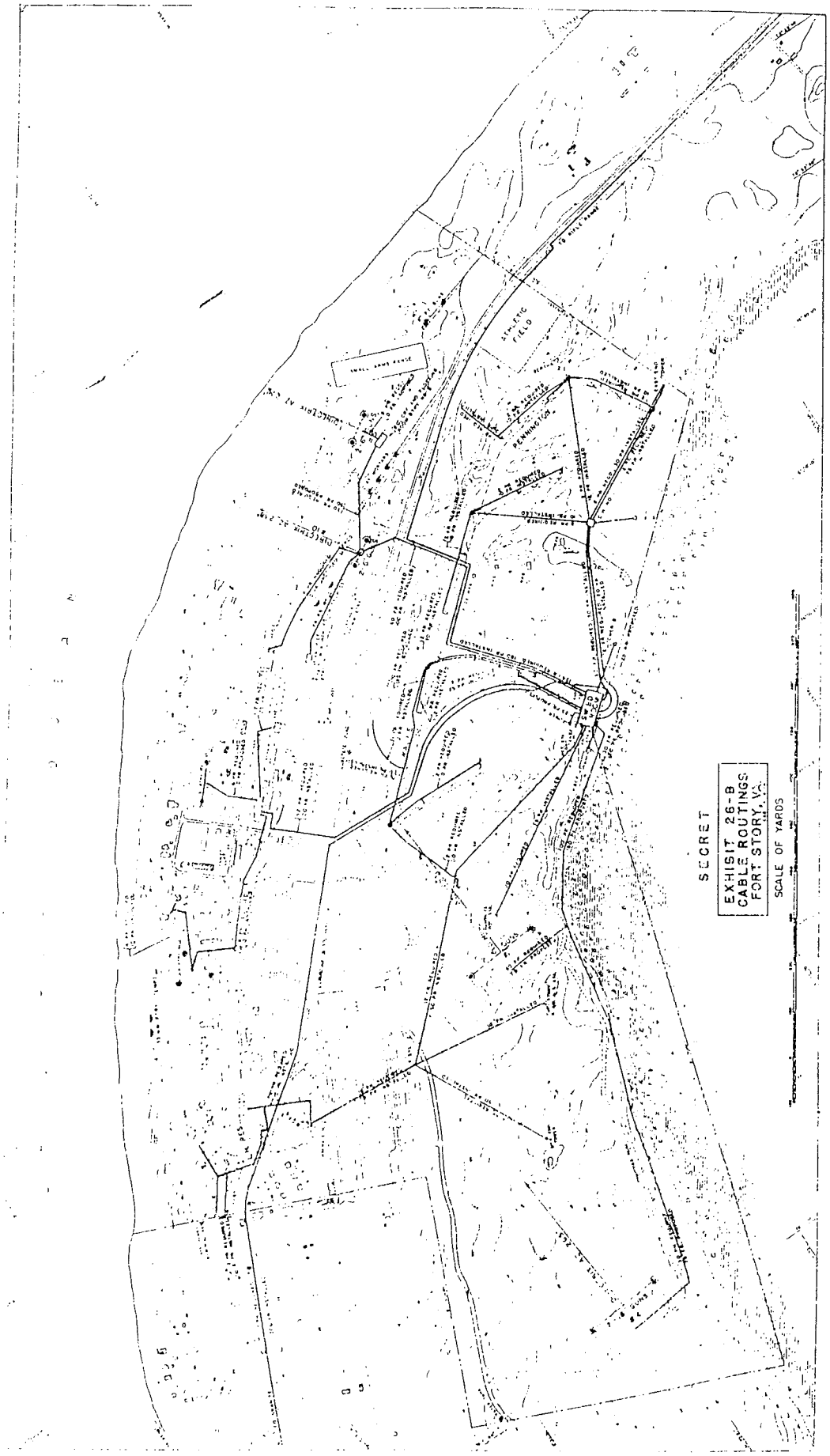
DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

EXHIBIT 27-B REMOVED AND FILED SEPARATELY AS

ORIENTATION DATA HDCB.

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

By RB/MB NARA, Date 11-18-94



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By RB/MB NARA, Date 11-18-94

ANNEX C

SEARCHLIGHTS

ANNEXES
to
HARBOR DEFENSE PROJECT
HARBOR DEFENSES OF CHESAPEAKE BAY
1941

AUTHORITIES

1. This document contains Annexes to the document entitled "Harbor Defense Projects for Harbor Defenses included in the Chesapeake Bay Area, Parts I and II," (Short Title CCA-P-CB). The latter document was approved by the Secretary of War in 5th Indorsement, (AG 660.2 (10-31-32) (Misc.) E) (OCCA 662.1/6-A).

2. The original Annexes to Harbor Defense Projects, Harbor Defenses of Chesapeake Bay were prepared by a Board of Officers appointed by paragraph 3, S.O. No. 260, Headquarters, Third Corps Area, October 26, 1932, pursuant to letter dated the Office of The Adjutant General, June 2, 1933, subject "Harbor Defense Project, Chesapeake Bay Area," (AG 660.2 (6-1-33) (Misc.) (OCCA 662.1/6-A-1). The original Annexes were approved by the Secretary of War in 21st Indorsement dated the Office of The Adjutant General, February 19, 1937, on letter subject "Annexes, Harbor Defense Project, Chesapeake Bay Area," dated Headquarters Third Corps Area, Baltimore, Md., June 5, 1934 (AG 660.2 (6-5-34) (Misc. E) (Hqrs. 3d CAD. 660.2) (OCCA 662.1/6-A-2). Short Title of the approved Annexes was "CCA-AN-CB".

3. The first revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay was directed in 7th Indorsement dated the Office of The Adjutant General, April 20, 1939, on letter subject "Harbor Defense Project," dated Headquarters Third Coast Artillery District, January 5, 1939 (AG 660.2 (1-5-39) (Misc.) E) (Hqrs. 3d CADist. SECRET 660.2) (OCCA 662.1/6-G). The first revision of the Annexes was approved by the Secretary of War in 21st Indorsement on the above communication, under date of December 18, 1939 (AG 660.2 (1-5-39) M-WPD) (OCCA 662.1/6-G).

4. This second revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay, was directed by letter, WD, AGO, September 27, 1940 (AG 660.2 (9-13-40) M-WPD-M), subject "Modernization of Harbor Defense Projects, continental United States." These revised Annexes were approved by the Secretary of War in 4th Indorsement, WD, AGO, April 17, 1941 (AG 660.2 (12-28-40) M-WPD) (OCCA 662.1/6-J-6).

A N N E X C.

SEARCHLIGHTS.

1. The maximum dependable range of the 60-inch searchlight in clear weather in this region is assumed to be 9000 yards. It is usually greater on the Atlantic side of the Capes than inside Chesapeake Bay. Exhibit 1-C shows the areas illuminated by the existing and authorized lights. In silhouette, as between Cape Henry and Cape Charles, large targets may be seen at somewhat longer ranges.

2. Sites for searchlights should be acquired in peace to the extent required for illumination of the most vital areas, only. Outlying sites may be leased and the lights rapidly installed, when an emergency arises.

3. a. The effective range of a searchlight is increased by elevating the light up to approximately 60 feet. Those lights which are to be installed in peace are to be mounted on steel towers. Those which are to be installed in an emergency are to be stored in the harbor defenses with the steel required for their towers.

b. Searchlights provided for in this project except No. 19 and No. 20 are to be mounted in pairs, both lights having substantially the same sector. The lights of a pair should be separated by 150 feet or more to avoid damage to both by one explosion and to avoid mutual interference.

4. a. The searchlights, existing and authorized, are as follows:

No. of Light	Location	Status
1 and 2	N. of Sand Bridge Road	Authorized.
3 and 4	Near Rifle Range	Authorized.
5 and 6	Near shore opp. Hollies	To be installed.
7 and 8	Near 6" battery, Ft. Story	Installed.
9 and 10	N.W. of Cape Henry L.H.	Installed.
11 and 12	400 yds. E. of Granite	Authorized.
13 and 14	Smith Island	To be installed.
15 and 16	Fisherman Island	To be installed.
17 and 18	2100 yds. N. of Wise	Authorized.
19	Cheapside	Authorized.
20	Ocean View	Authorized.
21 and 22	Fort Wool	Installed.
23 and 24	On parapet, Ft. Monroe	Installed.
25 and 26	S. of Buckroe Beach	Installed.

b. In addition to the ten lights installed and six lights to be installed, eleven seacoast searchlights are required, one being needed in reserve; all should be of the portable type. Fifteen antiaircraft searchlights, of the same type, are provided for in Annex E.

5. The following subparagraphs describe the several searchlight installations.

a. Lights 1 and 2: To be stored at Fort Story for installation in an emergency, on leased land on the low dunes 1000 yards south of Dam Neck Mills Coast Guard station No. 163, on platforms providing a height of approximately 50 feet above high water. The light controllers are to be located near the searchlights.

b. Lights 3 and 4: To be stored at Fort Story for installation in war, on leased land near the shore, approximately opposite the fire control towers at Site 3, Rifle Range, on platforms providing a height of about 50 feet above high water. The light controllers are to be located nearby.

c. Lights 5 and 6: To be installed in peace, on ground which has been acquired, near Site 4, Hollies, on towers providing a height of 60 feet above high water. The controllers are to be located in or near Hollies FC towers.

d. Lights 7 and 8: These lights are installed on the Fort Story reservation, 150 feet apart, near fixed AA battery No. 1. See Exhibit 2-A of Annex A. The lights are mounted on steel towers providing an elevation of approximately 50 feet above high water, and illuminate a sector from approximately 125 degrees on the left clockwise to 305 degrees on the right. Temporary frame dwellings (Buildings Nos. 14, 19, 22, 24 and 25) must be removed. The controllers are to be located on a platform above the administration building and are to be connected by telephone with the Group 1 station.

e. Lights 9 and 10: These mine field lights are installed north of Cape Henry lighthouse. The controllers are installed in the West End tower (Group 2 station).

f. Lights 11 and 12: To be stored in the harbor defenses for installation in war near the shoreline approximately 800 yards west of Site 8, Casemate and 400 yards east of Site 9, Granite. The controllers should be located at or near Tower C, Granite. The lights should be mounted 150 feet apart on towers providing a height of approximately 50 feet above high water.

g. Lights 13 and 14: To be installed in peace on land which has been acquired near the southwest shore of Smith Island. See Exhibit 2-C. The site is a knoll approximately 1300 yards from the observing stations of Site 13 and to seaward of the timber. The lights should be located about 150 feet apart and a height of approximately 60 feet should be provided. The controllers should be located nearby, with telephone communication from Group 3 station.

h. Lights 15 and 16: To be installed in peace, on Fisherman Island, about 150 yards from the 6-inch battery and 150 feet apart, on towers providing approximately 50 feet elevation above high water. See Exhibit 6-A. The controllers should be located nearby, with telephone communication from Group 3 station.

i. Lights 17 and 18: To be stored on the reservation at Kiptopeke for installation in war, near the shore, approximately 2100 yards north of Site 14, Wise, and due west of Kiptopeke. The searchlights should be mounted on platforms to provide an elevation of approximately 60 feet above high water. The controllers should be located conveniently nearby and connected by telephone with Group 3 station.

j. Light 19: To be procured and stored on the reservation at Kiptopeke for installation in war, on leased land approximately 600 yards south of Cheapside fire control tower and 6000 yards north of Lights 17 and 18. The light should be mounted on a platform to provide an elevation of approximately 60 feet above high water. The controller should be located about 200 yards north of the light, and should be connected by telephone with Cheapside FC tower.

k. Light 20: To be procured and stored in the harbor defenses for installation in an emergency, on land to be acquired near the shore east of the intersection of Norfolk Avenue and Ocean View Avenue East, in Ocean View. The light should be given an elevation of approximately 50 feet above high water; the ground level is 10 feet. The controller should be located in a convenient structure about 200 yards from the light, with telephone connection to the Fort Monroe fire control switchboard.

l. Lights 21 and 22: These lights are now installed at Fort Wool, with elevation of 46 feet. The controllers are now in Battery Gates' CRF station and should be moved to space to be provided in Gates' BC station when constructed. They are connected by telephone with the Fort Monroe fire control switchboard for telephone control by the mine group commander.

m. Lights 23 and 24: These lights are now installed on the parapet of old Fort Monroe. Their elevations are 69 feet and 71 feet respectively. The controllers are installed in Station 21 on the parapet.

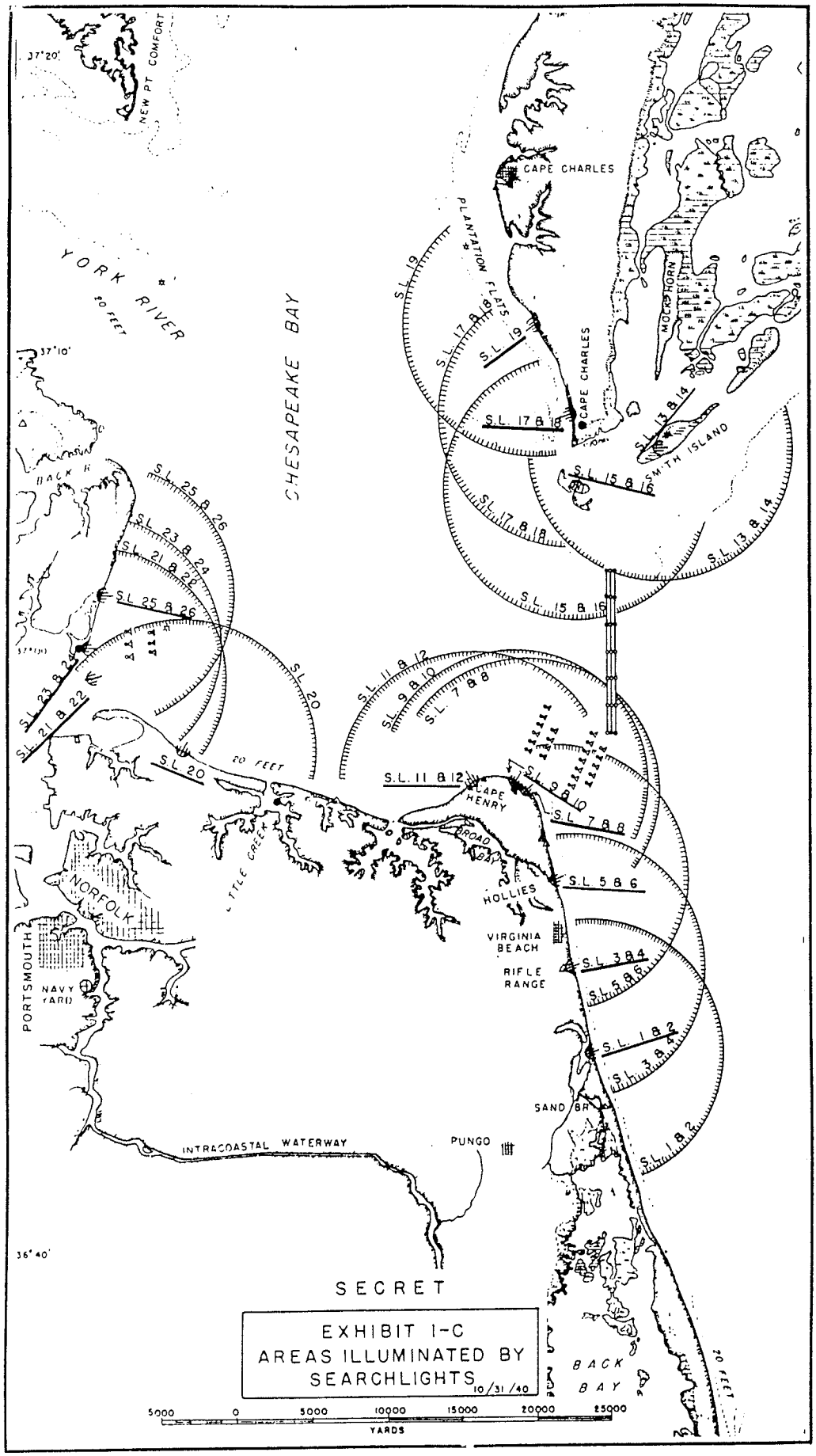
n. Lights 25 and 26: These lights are now installed south of Buckroe Beach. They have an elevation of 48 feet. Controllers are located on the lower deck of tower No. 34.

6. Land. No purchase of land is contemplated in this Annex. No estimate of cost of leasing the land required in emergency or damage which may be incurred is included in the cost estimate and priority guide.

7. Costs. A cost estimate and priority guide is appended as Exhibit 3-C. Those items which are to be procured and installed in peace are marked A. Those which should be procured in peace but installed in an emergency are marked B. Those items to be procured and installed when an emergency arises are marked C.

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

By RB/MB NARA, Date 11-18-94



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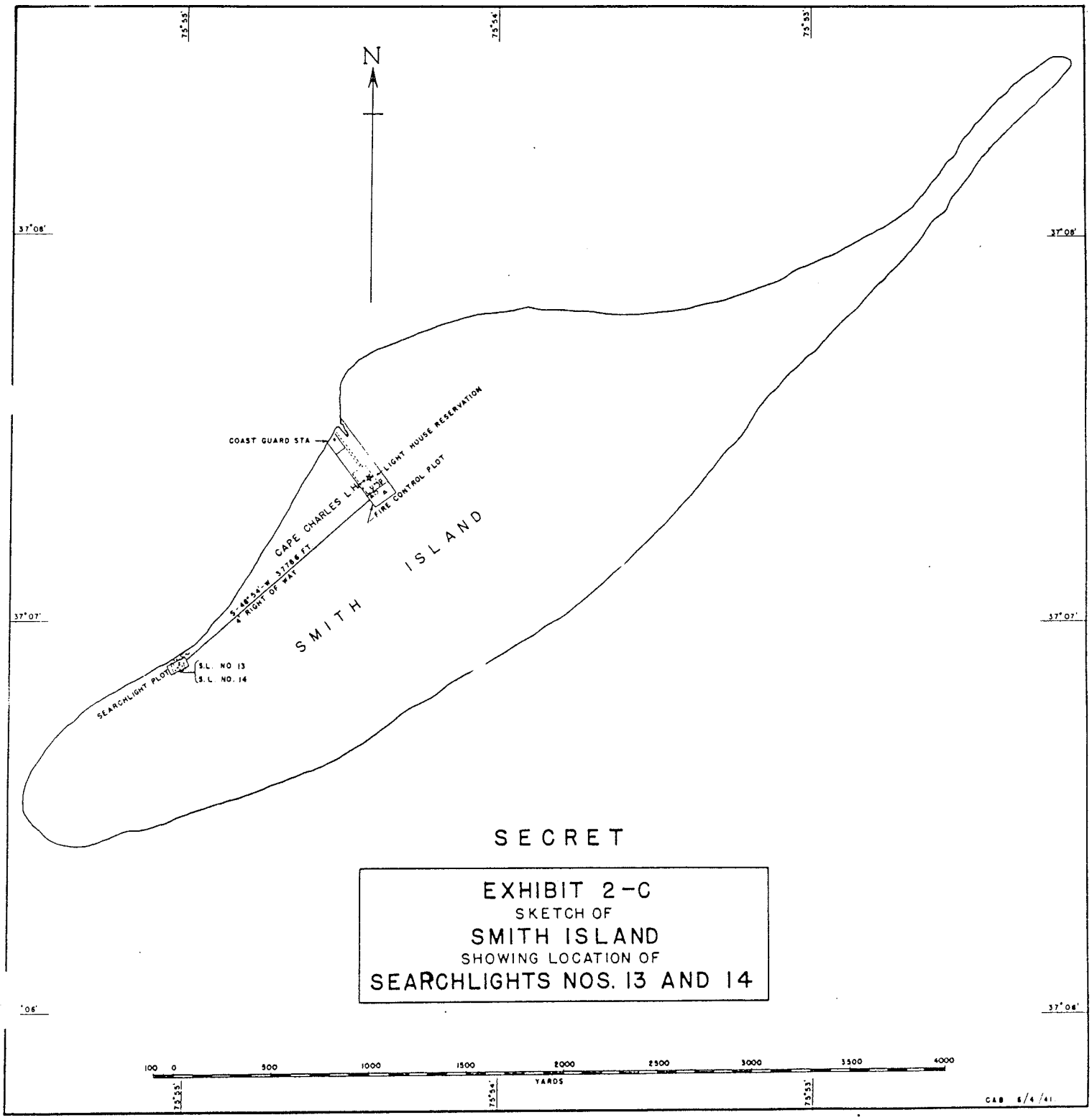


SECRET

EXHIBIT 2-C
SKETCH OF
SMITH ISLAND
SHOWING LOCATION OF
SEARCHLIGHTS NOS. 13 AND 14

COST ESTIMATE AND PRIORITY GUIDE

Priorities subject to change based on availability of funds

ITEM	CLASS	PRIORITY	DESCRIPTION	ORDNANCE	ENGINEER			SIGNAL		TOTAL
					MATERIEL	LABOR	LAND	MATERIEL	LABOR	
				$	$	$	$	$	$	$
1	B	11	Searchlights Nos. 1 and 2, N. of Sand Bridge road. Engineer: 2 Lights, portable (AA type) with controllers and power plant $42,000 Signal: 4 Telephones, field $ 140 Contingencies, 20% 28 $ 168		42,000			168		42,168
2	B	9	Searchlights Nos. 3 and 4, near Rifle Range. Engineer: 2 Lights, portable (AA type) with controllers and power plant $42,000 Signal: 2 Telephones, field $ 70 2 Telephones, EE-91 with Head and Chest Set HS-17-A 252 Contingencies, 20% 64 $ 386		42,000			386		42,386
3	A	5	Searchlights Nos. 5 and 6, near shore opp. Hollies. Signal: 2 Telephones, field $ 70 2 Telephones, EE-91 with Head and Chest Set HS-17-A 252 Contingencies, 20% 64 $ 386					386		386
4	A	2	Searchlights Nos. 7 and 8, near 6" Btry. No. 6. Signal: 2 Telephones, EE-73 with Head and Chest Set HS-17-A $ 228 2 Telephones, EE-91 with Head and Chest Set HS-17-A 252 Contingencies, 20% 96 $ 576					576		576
5	A	1	Searchlights Nos. 9 and 10, NW of Cape Henry L.H. Signal: 2 Telephones, EE-73 with Head and Chest Set HS-17-A $ 228 2 Telephones, EE-91 with Head and Chest Set HS-17-A 252 Contingencies, 20% 96 $ 576					576		576
6	B	6	Searchlights Nos. 11 and 12, 400 yds. E. of Granite. Searchlight No. 11 is on hand. Engineer: 1 Light, portable (AA type) with controller and power plant $21,000 2 controller cables, 1200' each 1,800 $22,800 Signal: 2 Telephones, field $ 70 2 Telephones, EE-91 with Head and Chest Set HS-17-A 252 Contingencies, 20% 64 $ 386		22,800			386		23,186
7	A	3	Searchlights Nos. 13 and 14, Smith Island. Signal: 4 Telephones, field $ 140 Contingencies, 20% 28 $ 168					168		168

Priorities subject to change based on availability of funds

ITEM	CLASS	PRIORITY	DESCRIPTION	ORDNANCE	ENGINEER			SIGNAL		TOTAL
					MATERIEL	LABOR	LAND	MATERIEL	LABOR	
8	A	4	Searchlights Nos. 15 and 16, Fisherman Island. Signal: 4 Telephones, field $140 Contingencies, 20% 28 $168	$	$	$	$	$ 168	$	$ 168
9	B	7	Searchlights Nos. 17 and 18, 2100 yds. N. of Wise. Engineer: 2 Lights, portable (AA type) with controllers and power plant $42,000 Signal: 4 Telephones, field $140 Contingencies, 20% 28 $168		42,000			168		42,168
10	B	10	Searchlight No. 19, Cheapside. Engineer: 1 Light, portable (AA type) with controller and power plant $21,000 1 Tower, 10' 500 1 Controller cable, 600' 450 $21,950 Signal: 2 Telephones, field $70 Contingencies, 20% 14 84		21,700	250		84		22,034
11	B	8	Searchlight No. 20, Ocean View. Engineer: 1 Light, portable (AA type) with controller and power plant $21,000 1 Controller cable, 600' 450 Land - - - Seen Annex B. $21,450 Signal: 2 Telephones, field $70 Contingencies, 20% 14 $84		21,450			84		21,534
12	B	12	IN RESERVE Engineer: 1 Light, portable (AA type) with controller and power plant $21,000		21,000					21,000
			TOTALS.....	$	$ 212,950	$ 250	$	$ 3,150	$	$ 216,350

Class A - To be procured and installed in peace.
Class B - To be procured in peace and installed when an emergency arises.
Class C - To be procured and installed when an emergency arises.

NOTE: No expenditure of funds by the Ordnance, Chemical Warfare Service, or Coast Artillery is contemplated in this Annex.

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

ANNEX D

UNDERWATER DEFENSE

ANNEXES
to
HARBOR DEFENSE PROJECT
HARBOR DEFENSES OF CHESAPEAKE BAY
1941

AUTHORITIES

1. This document contains Annexes to the document entitled "Harbor Defense Projects for Harbor Defenses included in the Chesapeake Bay Area, Parts I and II," (Short Title CCA-P-CB). The latter document was approved by the Secretary of War in 5th Indorsement, (AG 660.2 (10-31-32) (Misc.) E) (OCCA 662.1/6-A).

2. The original Annexes to Harbor Defense Projects, Harbor Defenses of Chesapeake Bay were prepared by a Board of Officers appointed by paragraph 3, S.O. No. 260, Headquarters, Third Corps Area, October 26, 1932, pursuant to letter dated the Office of The Adjutant General, June 2, 1933, subject "Harbor Defense Project, Chesapeake Bay Area," (AG 660.2 (6-1-33) (Misc.) (OCCA 662.1/6-A-1). The original Annexes were approved by the Secretary of War in 21st Indorsement dated the Office of The Adjutant General, February 19, 1937, on letter subject "Annexes, Harbor Defense Project, Chesapeake Bay Area," dated Headquarters Third Corps Area, Baltimore, Md., June 5, 1934 (AG 660.2 (6-5-34) (Misc. E) (Hqrs. 3d CAD. 660.2) (OCCA 662.1/6-A-2). Short Title of the approved Annexes was "CCA-AN-CB".

3. The first revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay was directed in 7th Indorsement dated the Office of The Adjutant General, April 20, 1939, on letter subject "Harbor Defense Project," dated Headquarters Third Coast Artillery District, January 5, 1939 (AG 660.2 (1-5-39) (Misc.) E) (Hqrs. 3d CADist. SECRET 660.2) (OCCA 662.1/6-G). The first revision of the Annexes was approved by the Secretary of War in 21st Indorsement on the above communication, under date of December 18, 1939 (AG 660.2 (1-5-39) M-WPD) (OCCA 662.1/6-G).

4. This second revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay, was directed by letter, WD, AGO, September 27, 1940 (AG 660.2 (9-13-40) M-WPD-M), subject "Modernization of Harbor Defense Projects, continental United States." These revised Annexes were approved by the Secretary of War in 4th Indorsement, WD, AGO, April 17, 1941 (AG 660.2 (12-28-40) M-WPD) (OCCA 662.1/6-J-6).

A N N E X D.

UNDERWATER DEFENSE.

1. The underwater defense project of the Joint Board was approved by the Chief of Staff on January 4, 1941. It provides in the outer defenses for 22 groups of controlled mines in two fields of two lines each, in the main channel northeast of Cape Henry; and in the inner defenses for 6 groups in two lines in Chesapeake Bay near Thimble Shoal Light. The locations of all mine fields and nets are shown on C. & G. S. chart 1222, "Defensive Coastal Areas and Underwater Defenses, Chesapeake Bay" prepared in 1940, photostat copies of which are on file at Headquarters of the Harbor Defenses of Chesapeake Bay; the essentials are reproduced herein as Exhibit 1-D. The locations are shown also in Exhibits 2-D and 3-D. The controlled mines of the outer defenses are operated from Cape Henry; of the inner defenses from Fort Monroe.

2. a. This present project contemplates early completion of construction at Little Creek of the shore installations required for the outer mine field. For the inner mine field, the existing installations at Fort Monroe, with the modifications provided below, are adequate.

b. This project includes provision for the shore installations, boats and wharves required for the underwater defense project. Table of Allowances for Submarine Mine Projects approved by 2d Indorsement, WD, AGO, dated December 20, 1939--file AG 400.34 (12-7-39)Pub., is the basis for the issue for submarine mine equipment and supplies sufficient for each project including maintenance for one year. The items listed in this table of allowances are procured on the basis of separate annual estimates. All cable and operating equipment required for the Harbor Defenses of Chesapeake Bay has been provided.

OUTER DEFENSE

3. a. The outer mine defense is organized as Group 2, consisting of outmoded Battery No. 5, four 155 mm guns (see Exhibit 6-B): Battery No. 5, two 6-inch guns (see Exhibit 7-B): Battery No. 6, two 6-inch guns (see Exhibit 8-B); Battery No. 7, the mine battery; and Battery No. 10, two 6-inch guns (see Exhibit 12-B). The area covered by the mine battery baseline is shown in Exhibit 2-D. Searchlights 9 and 10 are assigned normally to Group 2. Locations of those elements of the mine defense which are on the Fort Story reservation are shown in Exhibit 2-A.

b. The group commander's station is the upper room of the West End tower, affording a view of the contact and controlled mine fields with approaches thereto. A DPF should be provided.

c. The mine battery commander's station is combined with M^2 of the mine battery, the lowest room of the fire control tower at Site 8, Casemate. An azimuth instrument for the battery commander's use is required.

d. One plotting room and one baseline which satisfactorily covers the mine field and approaches thereto are considered sufficient. Should a second installation be decided on in future, the casemate at Site No. 8 is ample to accommodate another plotting room.

4. It is desirable to have two casemates to serve so large a mine field.

a. The existing mine casemate, a splinterproof structure, is located 2385 yards west of Cape Henry lighthouse. It includes the plotting room. The casemate, except the engine room, should be gas-proofed. A low parados should be constructed to protect the rear face of the casemate.

b. A second casemate has been provided, in a splinterproof structure 21 x 35 feet, located in the hill back of the old lighthouse; this casemate, No. 2, should be gas-proofed.

c. The reduction in lengths of cables by providing for operation of one of the two outer mine fields from Fort Story effects a saving (over operating from Casemate No. 1) of approximately $25,900, and simplifies the problem of avoiding the tangling of cables.

5. Little Creek.

a. There has been acquired from the Pennsylvania Railroad 14½ acres of land at Site 11, Little Creek, on which the shore installations listed below are being erected to serve the Cape Henry mine defense. A 50-foot right of way from the Mine Reservation southward to Route 60 has been acquired as an easement.

Mine storehouse, 100 feet by 170 feet.
Cable tank, 60 feet by 156 feet.
Two loading rooms, each 35 feet by 40 feet.
Power house, 10 feet by 15 feet.
Two magazines, each 10 feet by 10 feet.

b. No wharf is required. A bulkhead has been constructed and channel and basin dredged. The site has been graded to bring up the northernportion of the building site to a uniform level of 10 feet above mean low water.

c. The Little Creek mine installations should be equipped, maintained and supplied in peace for immediate use. The wide entrance to Chesapeake Bay between Cape Henry and Cape Charles makes the submarine mine defense of great importance.

d. A plan of the Little Creek installations is appended as Exhibit 4-D.

e. At present, the TNT for the mines of the outer defense is stored at Nansemond Ordnance Depot and Fort Wool. This project provides for two service magazines with capacity of one day's supply. The two magazines should be barricaded on the western side. The explosive may remain at Nansemond and Fort Wool for transfer to the service magazines as the situation demands.

INNER DEFENSE

6. The Hampton Roads mine defense is organized as Group 5 and consists of Battery No. 13 (Gates), two 6-inch guns; Battery No. 14 (Hindman), two 3-inch guns; Battery No. 15 (the mine battery); Battery No. 16 (Lee), four 3-inch guns; and Battery No. 17 (Montgomery), two 6-inch guns. Searchlights 21 and 22 at Fort Wool are assigned normally to Group 5. Location of the elements of Group 5 is shown on Exhibits 5-A and 6-A, diagrams of Forts Wool and Monroe respectively.

7. a. The group commander's station and the mine battery commander's station are located in existing adjacent buildings on the parapet of the old fort whence a good view of the mine field and the anti-submarine net with approaches thereto is afforded. Each station is equipped with a DPF.

b. The mine battery baseline amply covers the mine field and approaches as shown in Exhibit 3-D. M^1 is located in the double observing station which also houses the mine BC station. M^2 is in tower No. 35 south of Buckroe Beach.

8. Casemate and Plotting Room.

a. The present mine casemate is a frame building located inside the old fort. It is protected from low-angle gun fire by the parapet of the old fort but is not protected against aerial bombardment. It is proposed to transfer the casemate into existing casemate QM No. 138 of the old fort, approximately 25 yards distant. The proposed location will provide protection against light demolition and fragmentation bombs, at minimum expense. The casemate should be made gas-proof and damp-proof. Details are shown in attached cost estimate.

b. The existing plotting room is a frame building located on the parapet of the old fort and has little protection. There is ample space in Casemate No. 138 for both plotting room and mine casemate. It is proposed to move the plotting room into Casemate No. 138.

9. The mine storehouse for the inner defense mine field, located at Fort Monroe, is adequate for the storage of materiel and equipment pertaining to the inner mine field. The existing cable tank house is adequate in capacity for the inner mine field but should be equipped with a power hoist. The existing loading room, cable hut and wharf are satisfactory.

BOATS

10. Two mine planters, three DB boats and seven motor mine yawls are needed to plant and maintain the submarine mines included in the project. In addition, for use during the period of planting, there should be provided two barges with power booms capable of handling the heavier mine materiel, and a tug.

11. a. Mine Planters. The General J. M. Schofield, a 165-foot mine planter, is available. The Reno, a 96-foot harbor boat, has insufficient deck space for mine planting and cannot be used as an auxiliary mine planter as has been planned in the past. Until a second mine planter can be provided, a lighthouse tender or similar vessel should be procured in time of emergency for service as a mine planter. Planting equipment except deck fittings for an emergency mine planter, as specified in the tables of allowances, is on hand in the harbor defenses.

b. DB Boats. The L-57 and the L-66, 64-foot DB boats, are assigned to these harbor defenses. The H-1, a 64-foot hoisting retriever, is available and fairly satisfactory for use as a DB boat. One DB boat can be improvised from the power fishing boats equipped with hoisting boom which are common in this vicinity.

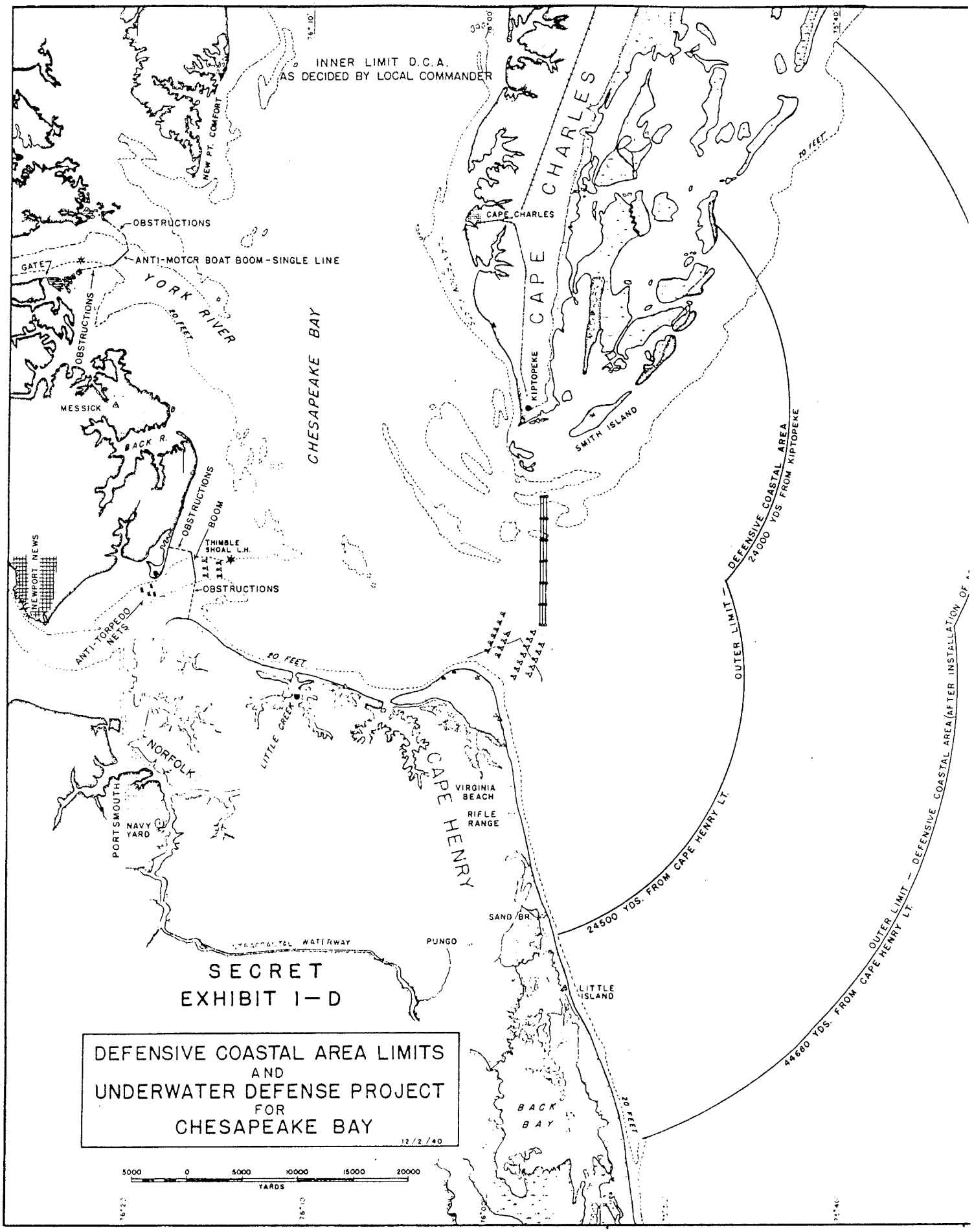
c. Motor Yawls. There are six 26-foot mine yawls available. The one additional motor yawl required can be procured locally in an emergency.

d. Barges and Tug. The two barges and tug required to transfer mine materiel within the harbor defenses can be procured locally when an emergency arises.

12. Land. No acquisition of land is required for the installations included in this Annex.

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

13. Costs. A cost estimate and priority guide is appended as Exhibit 5-D. This estimate lists the details of work to be done to carry out the project. Those items which should be procured and installed in peace are marked A. Those which should be procured in peace but whose installation may be deferred until an emergency arises are marked B. Those items to be procured and installed when an emergency arises are marked C.


INNER LIMIT D.C.A.
AS DECIDED BY LOCAL COMMANDER
NEW PT. COMFORT
OBSTRUCTIONS
ANTI-MOTOR BOAT BOOM - SINGLE LINE
GATE
YORK RIVER
OBSTRUCTIONS
40 FEET
CHESAPEAKE BAY
CAPE CHARLES
CAPE CHARLES
KIPTOPEKE
SMITH ISLAND
MESSICK
BACK R.
OBSTRUCTIONS
BOOM
THIMBLE SHOAL L.H.
OBSTRUCTIONS
NEWPORT NEWS
ANTI-TORPEDO NETS
40 FEET
DEFENSIVE COASTAL AREA
24000 YDS FROM KIPTOPEKE
OUTER LIMIT
LITTLE CREEK
NORFOLK
PORTSMOUTH
NAVY YARD
CAPE HENRY
VIRGINIA BEACH
RIFLE RANGE
24500 YDS. FROM CAPE HENRY LT.
SAND BR.
PUNGO
SECRET
EXHIBIT I-D
LITTLE ISLAND
44680 YDS. FROM CAPE HENRY LT.
OUTER LIMIT - DEFENSIVE COASTAL AREA AFTER INSTALLATION OF
BACK BAY
20 FEET
DEFENSIVE COASTAL AREA LIMITS
AND
UNDERWATER DEFENSE PROJECT
FOR
CHESAPEAKE BAY
12/2/40
5000 0 5000 10000 15000 20000
YARDS

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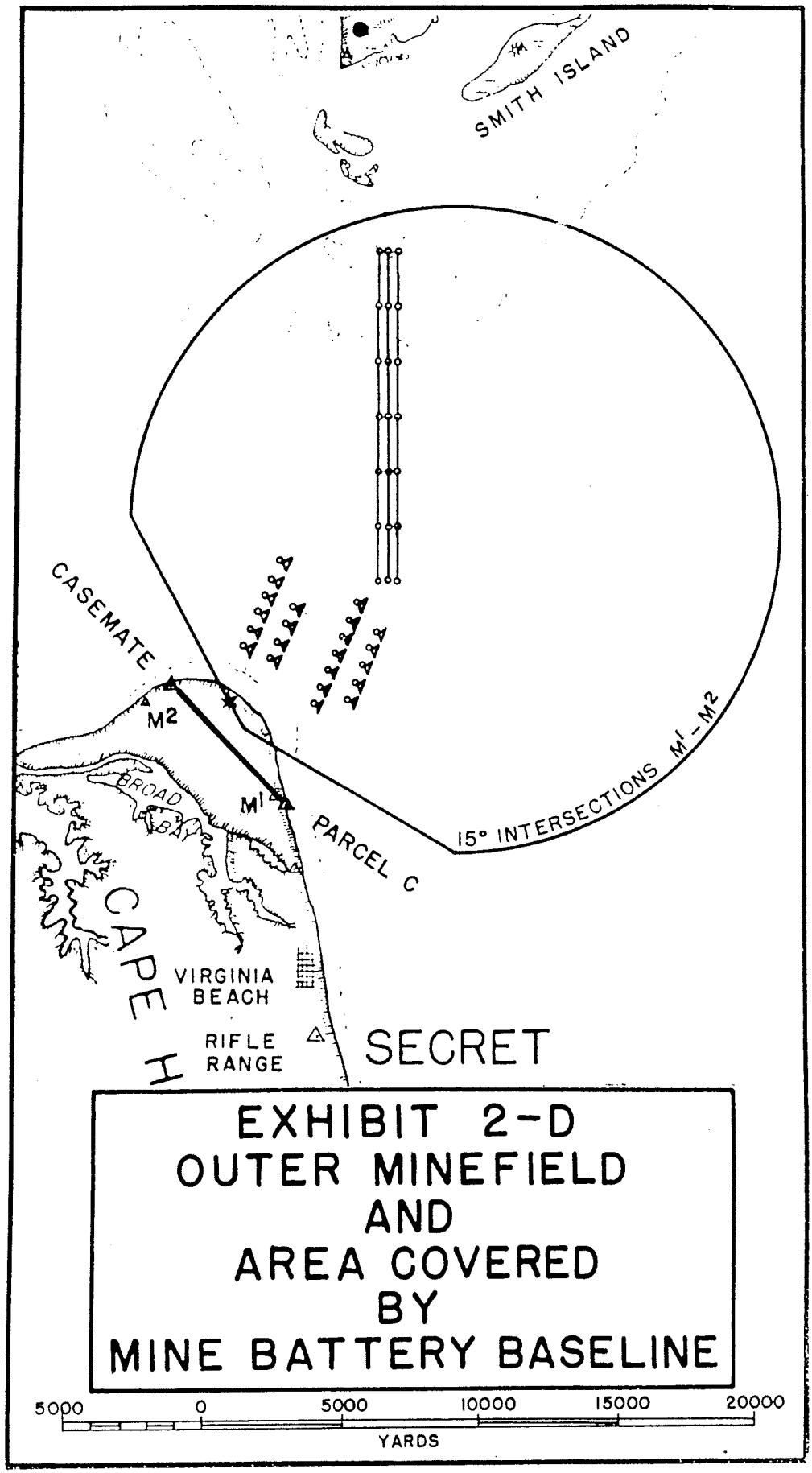
By RB/MB NARA, Date 11-18-94



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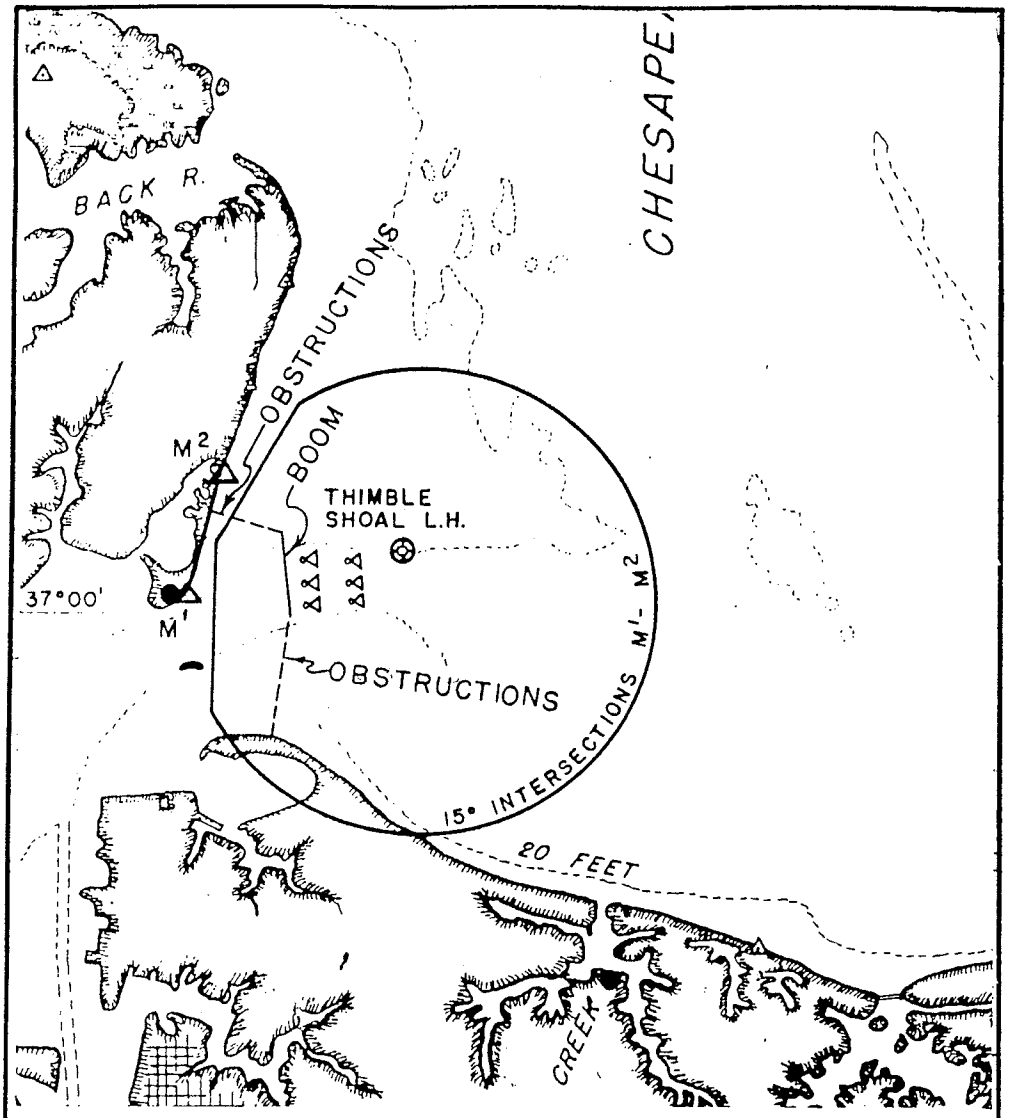

SECRET

EXHIBIT 3-D

INNER MINEFIELD AND AREA COVERED BY MINE BATTERY BASELINE

SCALE OF YARDS

5000 0 5000 10000 15000 20000

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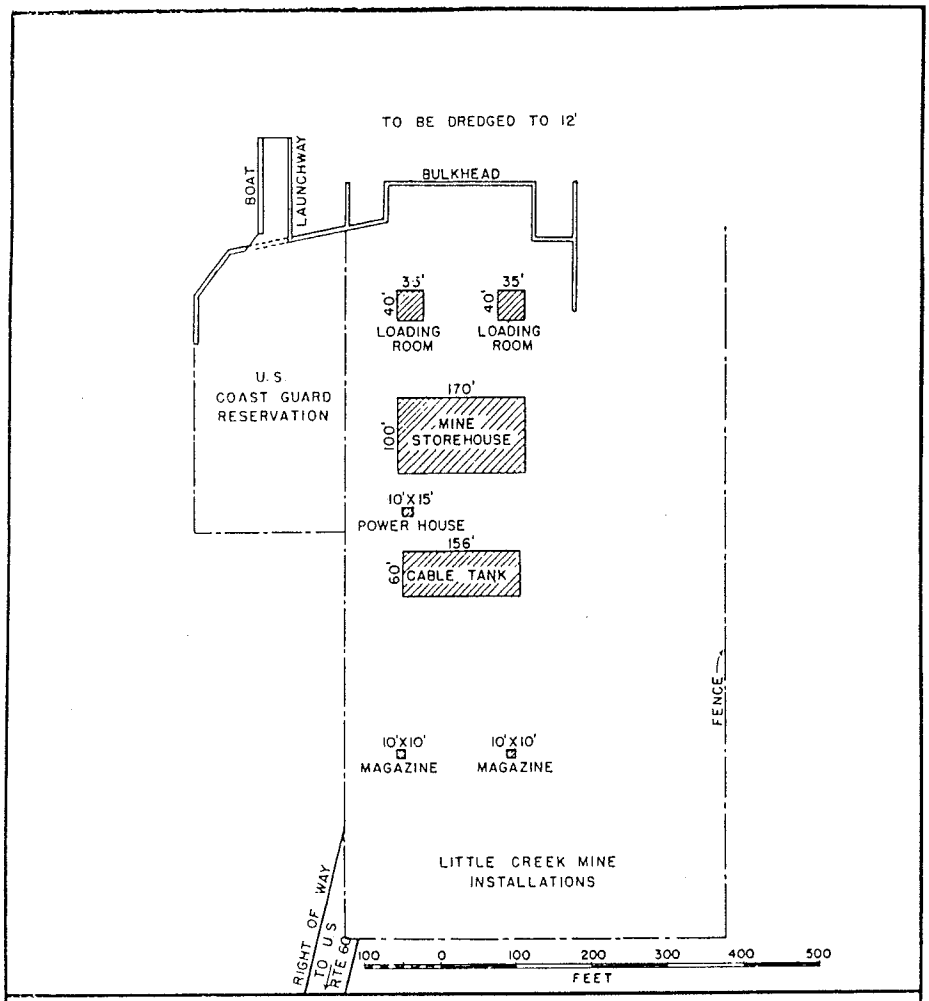
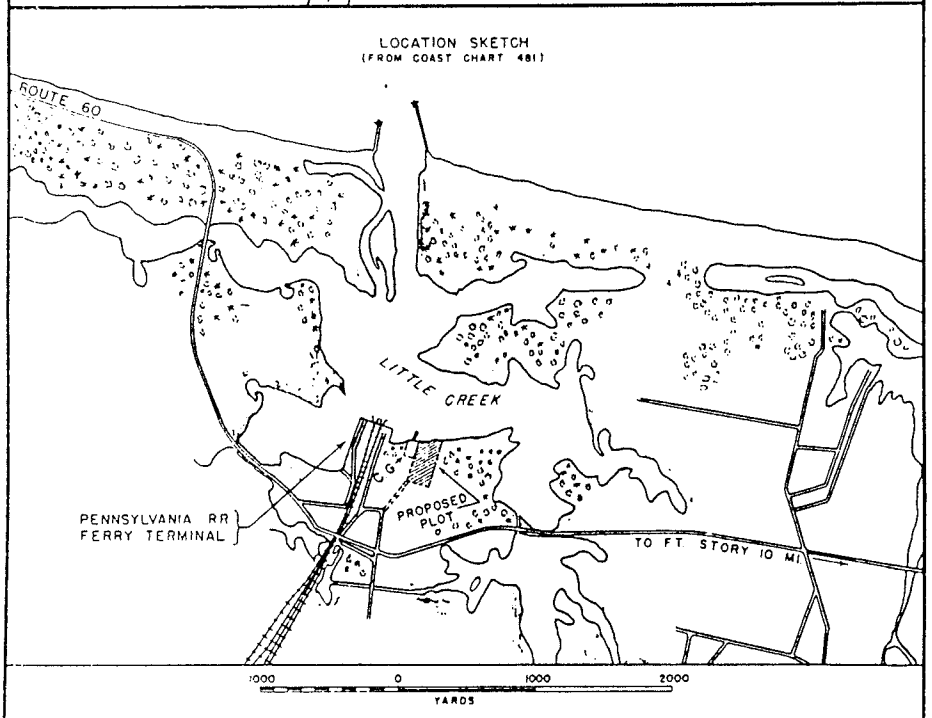
By RB/MB NARA, Date 11-18-94





SECRET

EXHIBIT 4-D
LITTLE CREEK
MINE INSTALLATIONS
10/31/40

SECRET

COST ESTIMATE AND PRIORITY GUIDE

H. D. OF CHESAPEAKE BAY

PRIORITIES SUBJECT TO CHANGE BASED ON AVAILABILITY OF FUNDS

Item	Class	Priority	DESCRIPTION OF PROJECT	ENGINEER Materiel	ENGINEER Labor	ENGINEER Total
			MINE DEFENSE, FORT STORY			
1	C	4	Construction of parados for protection of Casemate No. 1	$	$ 400	$ 400
			MINE DEFENSE, FORT MONROE			
2	A	2	Relocating Casemate in new Casemate QM-138:			
			Removing old wood floor		150	
			Concrete base 4" thick - 14 cubic yards	100	110	
			Floor covering-asphalt tile-800 square feet	80	80	
			Partitions-4" tile-528 square feet	83	75	
			Plastering new partitions-1056 square feet	40	65	
			Refinishing walls and ceilings	200	300	
			5 Wood doors, installed	60	40	
			Water closet and lavatory, installed	75	75	
			Heating unit, installed	125	25	
			Lighting fixtures and cables	200	100	
			Sealing chimney and small shaft	10	10	
			Installation mine casemate materiel and equipment		150	
			Installation plotting room materiel and equipment		100	
			Contingencies and overhead		586	2,839
			$1,800 has been allotted for these items -			1,800
						1,039
3	A	3	Power hoist, 5-ton	1,000		1,000
			COMPLETION OF MINE PROJECT			
4	A	1	Single conductor system) Mine equipment) - Under current procurement Single conductor cable)			
			AGGREGATE -			$ 2,439

Class A - To be procured and installed in peace.
Class C - To be procured and installed when an emergency arises.

Note: No expenditure of funds by the Coast Artillery Corps, Signal Corps, Chemical Warfare Service or Ordnance is contemplated in this Annex.

SECRET

EXHIBIT 5-D

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

ANNEX E

ANTIAIRCRAFT GUN DEFENSE

ANNEX E

ANNEXES
to
HARBOR DEFENSE PROJECT
HARBOR DEFENSES OF CHESAPEAKE BAY
1941

AUTHORITIES

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A N N E X E.

ANTIAIRCRAFT GUN DEFENSE

1. Exhibit 1-A shows the elements and organization of the antiaircraft defense of the harbor defenses, consisting of 3 fixed gun batteries, 6 automatic weapons batteries, 15 searchlights, and the antiaircraft intelligence service. Sites of the gun batteries are shown in Exhibit 2-A and Exhibit 6-A, maps of Fort Story and Fort Monroe respectively. Desirable locations are indicated below for searchlights and automatic weapons but are intended as suggestions only, the final selection of positions being determined by the local commander when operations are imminent.

2. Under War Department policy (AG 320.2 Coast Artillery Corps; 9-11-40; M-WPD), all mobile gun batteries in the Continental United States are considered as constituting a reserve, to be used for the protection (among other establishments) of military installations. Four mobile gun batteries are considered essential to reinforce the three fixed batteries, in order to provide a reasonable defense of the harbor defenses of Chesapeake Bay. The recommended disposition of the reinforcing units is shown in this Annex.

3. a. Guns. The fixed antiaircraft gun defense is shown in Exhibit 1-E. In preparing this exhibit the assumptions are made that the targets are traveling at 250 miles per hour, at an altitude of 12,000 feet; and that the effective horizontal range of the batteries at that altitude is 6,000 yards.

b. Searchlights. One disposition of antiaircraft searchlights is shown in Exhibit 2-E. All of these lights are to be of the portable type.

c. Automatic weapons. One disposition of antiaircraft automatic weapons is shown in Exhibit 3-E. These weapons are organized into six batteries. Two batteries are to be located at Fort Story and vicinity; two batteries at Cape Charles; and two batteries at Fort Monroe, Fort Wool and vicinity.

4. The antiaircraft groupment.

a. This command includes all elements of the antiaircraft defense in the harbor defenses. It includes Group 6 at Fort Story, Group 7 at Cape Charles and Group 8 at Fort Monroe and Fort Wool. The groupment commander is responsible for organizing and supervising the antiaircraft intelligence service and for the training of the groups. His station is in the harbor defense command post at Fort Story.

b. (1) Antiaircraft observers are to be located at the following places:

FC tower at Site 1, Little Island.
FC tower at Site 2, Sand Bridge.
FC tower at Site 3, Rifle Range.
FC tower at Site 4, Hollies.
Group 6 observing tower at Site 7, Ft. Story.
FC tower at Site 9, Granite.
FC tower at Site 10, Chesapeake Beach.
Site 11, Little Creek.
The above observers are to be connected directly to the AA Intelligence Center in the harbor defense command post at Fort Story.

FC tower at Site 12, Mockhorn.
FC tower at Site 13, Smith Island.
FC tower at Site 14, Wise.
FC tower at Site 16, Cheapside.
FC tower at Site 17, Cape Charles village.
The above observers are to be connected directly to Group 7.

Site 18, Ocean View.
Hotel Chamberlin, Fort Monroe.
FC tower at Site 21, North Buckroe.
FC tower at Site 22, Lessick.
Cupola, airship hangar, Langley Field.
The above observers are to be connected directly to Group 8.

(2) In addition to the antiaircraft observers enumerated above, who are especially designated as such, antiaircraft intelligence may originate with each antiaircraft gun battery, automatic weapons detachment and searchlight.

(3) Provision for intelligence from the vessels of the Inshore Patrol and the stations of the Coast Guard including the Lighthouse Service, is a function of plans for the aircraft warning service of the Delaware-Chesapeake Sector, with which the harbor defense antiaircraft intelligence will be connected.

5. AA Group No. 6.

a. This group is to protect the elements of the harbor defenses located at and near Fort Story. It is composed of antiaircraft gun battery No. 1, automatic weapons batteries Nos. 1 and 2 and the antiaircraft searchlight battery less two platoons. The group commander's station is the existing concrete observing station 300 yards west of No. 2 howitzer of Battery Walke. See paragraph 13 c (3) of Annex B.

b. AA Battery No. 1. This battery is located on the Fort Story reservation, 300 yards east of Cape Henry lighthouse as shown in Exhibit 2-A. The director is located near the battery.

c. Reinforcing batteries. Two additional gun batteries are considered essential. One of these batteries should be located near the south limit of the Fort Story reservation, either on or just south of the reservation, where open ground exists at the time. The second battery should be located off the reservation to the west, between Casemate No. 1 and Cape Henry lighthouse. At both sites, the directors may be located within 150 yards of the batteries.

d. AA Searchlights. The five portable searchlight units with sound locators comprising this platoon are designated as antiaircraft searchlights Nos. 1, 2, 3, 4 and 5. Twisted pair is to be used to connect the light units to the fire control system. The lights are to be located initially as follows:

No. 1 west of Route 60, near 58th Street, Virginia Beach.
No. 2 on open farm land south of Broad Bay, approximately 5500 yards southwest of Cape Henry lighthouse.
No. 3 about 2000 yards south of Cape Henry lighthouse near beach.
No. 4 between Site 8, Casemate, and Cape Henry lighthouse.
No. 5 on fore dune, 700 yards east of Bay Shore Club (2 miles west of Granite).

These locations are shown in Exhibit 2-E.

e. Auto. Weapons Battery No. 1. The suggested locations of units of this battery are shown in Exhibit 3-E.

f. Auto. Weapons Battery No. 2. The suggested locations of units of this battery are shown in Exhibit 3-E.

6. AA Group No. 7.

a. This group is to protect the elements of the harbor defenses on Cape Charles and is composed of automatic weapons batteries Nos. 3 and 4. There is no fixed gun battery at Cape Charles and no antiaircraft searchlights are provided. The group commander's station is to be constructed on the military reservation near Kiptopeke with the commander of Group 3.

b. Reinforcing batteries. Two gun batteries are considered essential. One of these batteries should be located near the south tip of Cape Charles, and one near the northwest border of the military reservation at Kiptopeke. At both sites, the directors may be located within 150 yards of the batteries.

c. Reinforcing searchlights. Five searchlight units with sound locators comprising one platoon are considered essential. Twisted pair is to be used to connect the light units to the fire control system. The lights should be located initially as follows:

Fisherman Island.
Smith Island.
About 1200 yards southwest of FC Station Cheapside.
Near Magotha.
About 500 yards north of Kiptopeke.

These locations are shown in Exhibit 2-E.

d. Auto. Weapons Battery No. 3. The suggested locations of units of this battery with elements to be protected are shown in Exhibit 3-E.

e. Auto. Weapons Battery No. 4. The suggested locations of units of this battery with elements to be protected are shown in Exhibit 3-E.

7. AA Group No. 8.

a. This group is to protect the elements of the harbor defenses at and near Fort Monroe and Fort Wool and is composed of fixed antiaircraft gun batteries Nos. 2 and 3, automatic weapons batteries Nos. 5 and 6, and two antiaircraft searchlight platoons of five searchlights each. The group commander's station is located in Tower 29 adjacent to the Hampton Roads Groupment CP.

b. AA Gun Battery No. 2. The three fixed 3-inch guns of this battery are installed southwest of outmoded Battery Parrott (see Exhibit 6-A). The director is to be located on the parapet of Battery Parrott at a distance of 150 yards from the center of the antiaircraft battery.

c. AA Gun Battery No. 3. The three fixed 3-inch guns of this battery are installed near the north end of the Fort Monroe reservation. The director location is near the center of the battery.

d. AA Searchlights. The ten portable searchlight units with sound locators are organized as to platoons and designated as antiaircraft searchlights Nos. 6 to 15. Twisted pair is to be used to connect the nearby lights to the fire control system and the outlying lights to the nearest commercial telephone terminal. The lights are to be located initially as shown in Exhibit 2-E, as follows:

Site 18, Ocean View.
Fort Wool.
End boundary of Fort Monroe reservation, S. of Buckroe Beach.
1300 yards SE of Blocksomes Corners.
Grand View, near beach, 170 yards S. of end of paved road.
Hampton Heights Dairy Farm, 200 yards S. of southern building.
600 yards ESE of RJ on Back River road and 900 yards NW of Southwest Branch Bridge on same road.
SE corner of Veterans Administration Hospital.
On beach between Hampton and Newport News, S. of Merrimac and Monitor Memorial Highway opposite Manteo Avenue.
100 yards SW of junction of Merrimac and Monitor Memorial Highway and Walnut Avenue.

e. Auto. Weapons Battery No. 5. The suggested locations of units of this battery with elements to be protected are shown in Exhibit 3-E.

f. Auto. Weapons Battery No. 6. The suggested locations of units of this battery with elements to be protected are shown in Exhibit 3-E.

8. Ammunition. The war reserve and battle allowance of ammunition and the storage locations are shown in Exhibit 5-E.

9. Land. No purchase of land is required for the installations contemplated in this Annex.

10. Costs. A cost estimate and priority guide is appended as Exhibit 6-E. Those items which are to be procured in peace are marked A. Those which should be procured in peace but installed in an emergency are marked B. Those items to be procured and installed when an emergency arises are marked C.

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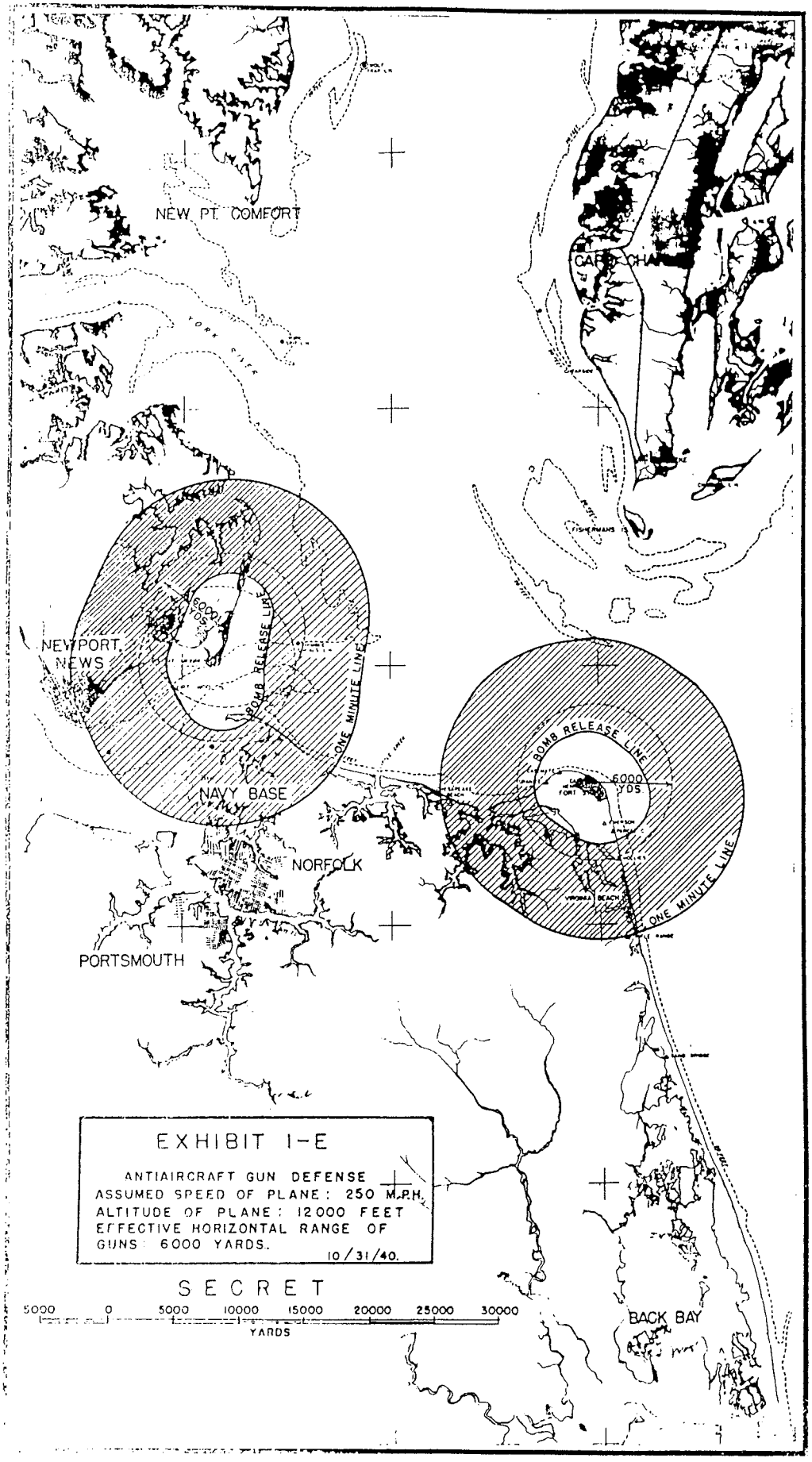

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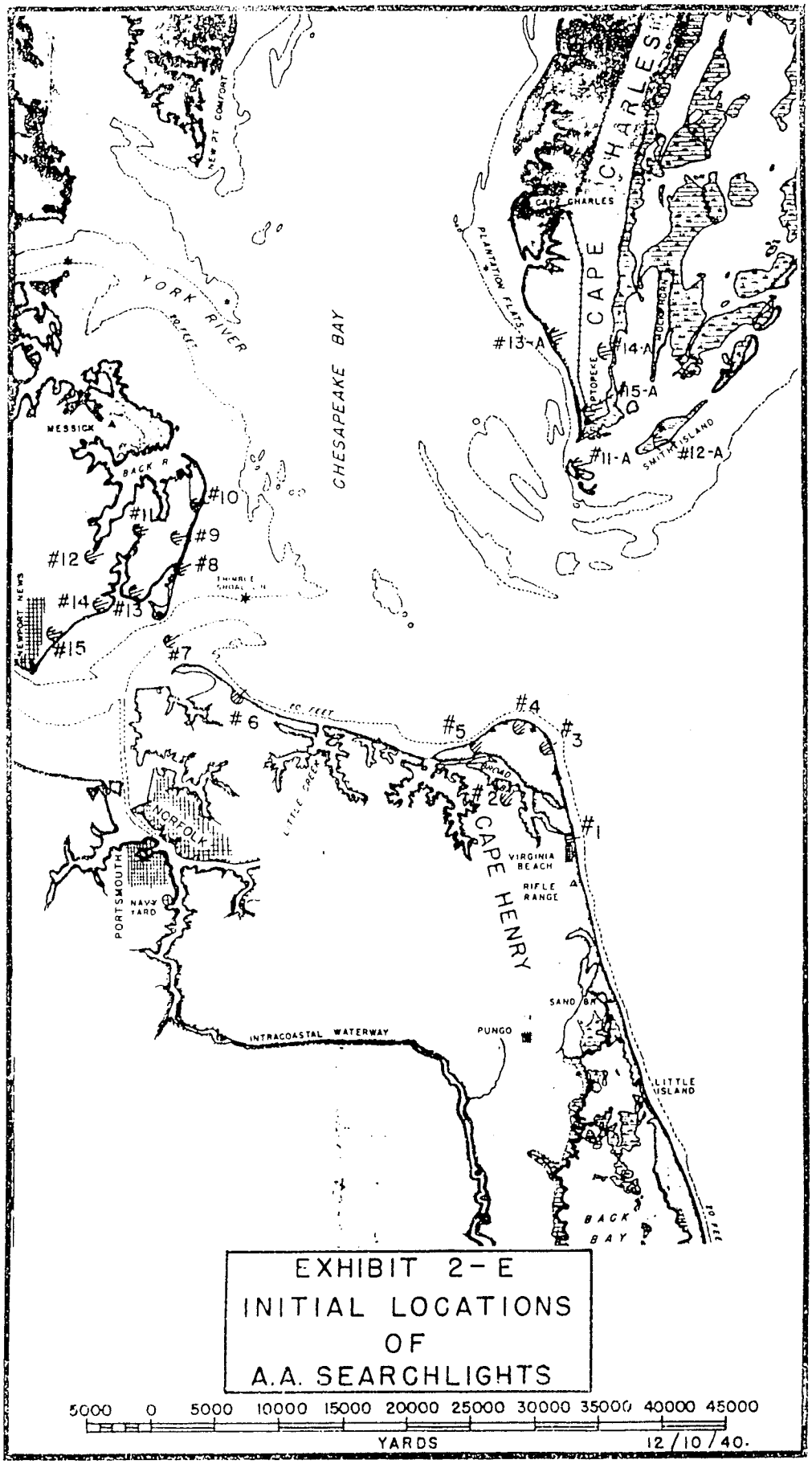


EXHIBIT 2-E
INITIAL LOCATIONS
OF
A.A. SEARCHLIGHTS

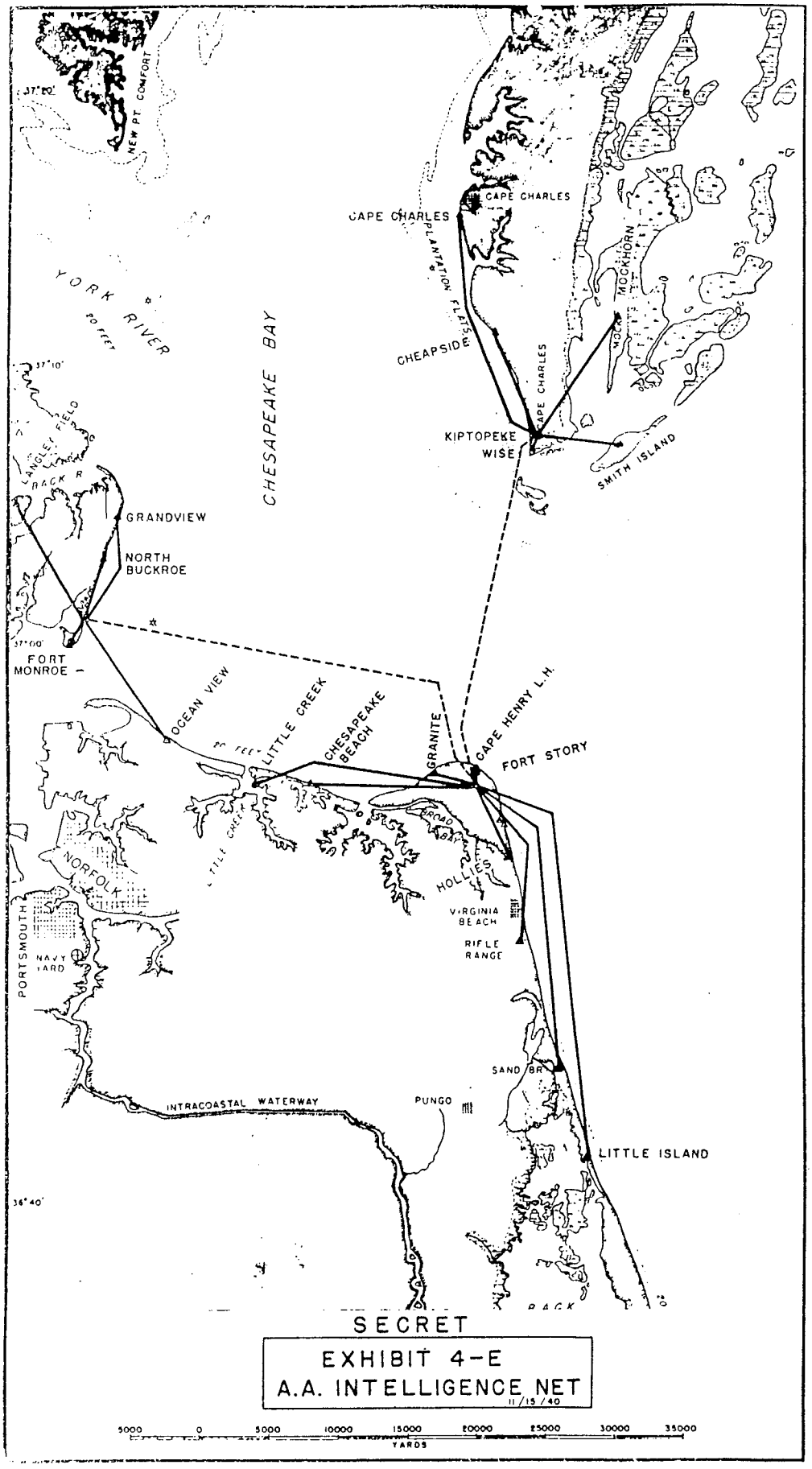
AA AUTOMATIC WEAPONS

SUGGESTED INITIAL LOCATIONS

Location	Installations to be protected	Number of	
		37-mm Guns	Cal. .50 MG's
	CAPE HENRY AREA		
Vicinity Sand Bridge	Base-end stations		2
Vicinity Rifle Range	Base-end stations; searchlights		2
Vicinity Hollies	Base-end stations; searchlights		2
Vicinity Parcel C - Emerson	Base-end stations; searchlights		4
Fort Story area, including Site 8, Casemate	Batteries; searchlights; FC stations; HD and Group CP's.	14	8
Granite	Base-end stations; searchlights		2
Chesapeake Beach	Base-end stations		2
Little Creek	Submarine mine installations	2	2
	CAPE CHARLES AREA		
Mockhorn Island	Base-end stations		2
Smith Island	Base-end stations; searchlights		4
Vicinity Cheapside	Base-end stations; searchlights		2
S. end Cape Charles	Base-end stations		2
Fisherman Island	Battery; searchlights	2	2
Kiptopeke area	Batteries; Group CP's; FC Swbd. room	8	8
	FORT MONROE-FORT WOOL AREA		
North Buckroe	Base-end station		2
S. of Buckroe Beach	Base-end stations; searchlights	2	2
Fort Monroe proper	Batteries; searchlights; base-end stations; CP's; submarine mine installations	6	7
Fort Wool	Batteries; searchlights	2	2
	TOTAL REQUIREMENTS:	36	57

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042

By RB/MB NARA, Date 11-18-94



SECRET

EXHIBIT 4-E
A.A. INTELLIGENCE NET
11/15/40

WAR RESERVE AND BATTLE ALLOWANCE OF ANTIAIRCRAFT AMMUNITION

HARBOR DEFENSES OF CHESAPEAKE BAY

BATTERY	NUMBER & CALIBER OF GUNS	ROUNDS PER BATTERY		PLACE OF STORAGE
		W/R	B/A	
AA Battery No. 1, Fort Story	3-3"	3600	1800	B/A to be stored in igloo type magazines at Fort Story.
AA Battery No. 2, Fort Monroe	3-3"	3600	1800	B/A to be stored at Battery Parrott.
AA Battery No. 3, Fort Monroe	3-3"	3600	1800	B/A to be stored at Battery Parrott.

Battle allowances approved by the Secretary of War in 8th Indorsement, WD, AGO, July 25, 1933, AG 381.4; 6-5-33; Misc. E.

SECRET

EXHIBIT 5-E

COST ESTIMATE AND PRIORITY GUIDE

Priorities subject to change based on availability of funds

ITEM	CLASS	PRIORITY	DESCRIPTION	ORDNANCE	ENGINEER MATERIEL	ENGINEER LABOR	ENGINEER LAND	SIGNAL MATERIEL	SIGNAL LABOR	TOTAL
				$	$	$	$	$	$	$
			<u>AA GROUP NO. 6, FORT STORY</u>							
1	A	1	<u>AA Battery No. 1, 3-3", Fixed (Installed).</u> <u>Ordnance:</u> 1 Power plant $ 600 2 Instruments, Observation, AA BC 2,500 2 Binoculars 200 2 Glasses, Field 110 $ 3,410 <u>Signal:</u> 2 Telephones, field $ 70 2 Miles field wire 70 1 Switchboard, BD-72 150 Contingencies, 20% 58 $ 348	3,410				348		3,758
2	B	2	<u>Auto. Weapons Batteries Nos. 1 and 2.</u> <u>Ordnance:</u> 16 Guns, 37-mm, complete with mounts $320,000 8 Sets, control equipment 20,000 24 Guns, machine, Cal. .50, complete with mounts 72,000 22 Glasses, field 1,210 $413,210 <u>Signal:</u> 22 Telephones, field $ 770 44 Miles, field wire 1,540 2 Switchboards, BD-72 150 Contingencies, 20% 492 $ 2,952	413,210				2,952		416,162
3	B	3	<u>AA SL Battery (less 2 platoons), 5-AA SL's.</u> <u>Engineer:</u> Lights on hand. <u>Ordnance:</u> 5 Locators, sound $ 30,000 6 Glasses, field 330 $ 30,330 <u>Signal:</u> 6 Telephones, field $ 180 12 Miles field wire 360 1 Switchboard, BD-72 150 Contingencies, 20% 138 $ 828	30,330				828		31,158
4	B	4	<u>AA Observers:</u> <u>Ordnance:</u> 8 Glasses, field $ 440 <u>Signal:</u> 8 Telephones, EE-73, with Head and Chest Set HS-17-A (1 on hand) $ 898 Contingencies, 20% 180 $ 1,078	440 [illegible]				1,078		1,518
			<u>AA GROUP NO. 7, CAPE CHARLES</u>							
5	B	10	<u>Auto. Weapons Batteries Nos. 3 and 4.</u> <u>Ordnance:</u> 10 Guns, 37-mm, complete with mounts $200,000 5 Sets, control equipment 12,500 20 Guns, Machine, Cal. .50 complete with mounts 60,000 17 Glasses, field 935 $273,435 <u>Signal:</u> Continued on next page.	273,435						273,435

Note: F.Y. 1942: [illegible] furnished: 3 EE 91 phones w/ HS17A [illegible], Rifle Range B, Hollies B, Tower B F+O [illegible]

COST ESTIMATE AND PRIORITY GUIDE

Priorities subject to change based on availability of funds

ITEM	CLASS	PRIORITY	DESCRIPTION	ORDNANCE	ENGINEER			SIGNAL		TOTAL
					MATERIEL	LABOR	LAND	MATERIEL	LABOR	
5	B	10	Auto. Weapons Batteries Nos. 3 and 4. Signal: 17 Telephones, field $595 34 Miles field wire 1,190 2 Switchboards, BD-72 300 Contingencies, 20% 417 $2,502					2,502		2,502
6	B	11	AA Observers: Ordnance: 5 Glasses, field $275 Signal: 5 Telephones, EE-73, with Head and Chest Set HS-17-A $570 Contingencies, 20% 114 684 Should be.	275				684		959
			AA GROUP NO. 8, FORT MONROE							
7	B	8	AA Battery No. 2, 3-3", Fixed, (Installed). Ordnance: 2 Glasses, field $110 Signal: 2 Telephones, field 70 2 Miles, field wire 70 1 Switchboard, BD-72 150 Contingencies, 20% 58 $348	110				348		458
8	B	5	AA Battery No. 3, 3-3", Fixed, (Installed) Ordnance: 1 Director, complete with DTS $32,000 2 Glasses, field 110 $32,110 Signal: 2 Telephones, field $70 2 Miles field wire 70 1 Switchboard, BD-72 150 Contingencies, 20% 58 $348	32,110				348		32,458
9	B	6	Auto. Weapons Batteries Nos. 5 and 6. Ordnance: 10 Guns, 37-mm, complete with mounts $200,000 5 Sets, Control equipment 12,500 13 Guns, machine, Cal. .50, complete with mounts 39,000 15 Glasses, field 815 $252,315 Signal: 13 Telephones, field $455 26 Miles field wire 910 2 Switchboards, BD-72 300 Contingencies, 20% 231 $1,886	252,315				1,886		254,201

Note: F.Y. 1942: Following furnished: 5 EE91 phones w/ HS17A 2 Con BE 63, for Wise A, Chesapeake, Ft. Winslow Group Sta., Mockhorn A and Smith Pt. B

Priorities subject to change based on availability of funds

ITEM	CLASS	PRIORITY	DESCRIPTION		ORDNANCE	ENGINEER			SIGNAL		TOTAL
						MATERIEL	LABOR	LAND	MATERIEL	LABOR	
					$	$	$	$	$	$	$
10	B	8	Two Platoons, AA SL Battery, 10-AA SL's.		42,110				1,872		43,982
			Engineer:								
			10 lights on hand.								
			Ordnance:								
			10 Locators, sound (3 on hand)	$ 42,000							
			2 Glasses, field	110							
				$ 42,110							
			Signal:								
			12 Telephones, field	$ 420							
			24 Miles field wire	840							
			2 Switchboards, BD-72	300							
			Contingencies, 20%	312							
				$ 1,872							
11	B	9	AA Observers.		275				494		769
			Ordnance:								
			5 Glasses, field	$ 275							
			Signal:								
			3 Telephones, EE-73 with Head and Chest Set HS-17-A	$ 342							
			2 Telephones, field	70							
			Contingencies, 20%	82							
			See Item 11	$ 494							
			TOTALS		$1,048,020	$	$	$	$ 13,340	$	$1,061,360

Class A - To be procured and installed in peace.
Class B - To be procured in peace and installed when an emergency arises.
Class C - To be procured and installed when an emergency arises.

Note: - No expenditure of funds by the Chemical Warfare Service, Coast Artillery or Corps of Engineers is contemplated by this Annex.

Note: F.11.1942: Following furnished: 1 EE 91 w/ HS17A & box BE 63, for N. Buckner.

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND735042
By RB/MB NARA, Date 11-18-94

ANNEX F

SUPPORTING AIRCRAFT

ANNEXES
to
HARBOR DEFENSE PROJECT
HARBOR DEFENSES OF CHESAPEAKE BAY
1941

AUTHORITIES

1. This document contains Annexes to the document entitled "Harbor Defense Projects for Harbor Defenses included in the Chesapeake Bay Area, Parts I and II," (Short Title CCA-P-CB). The latter document was approved by the Secretary of War in 5th Indorsement, (AG 660.2 (10-31-32) (Misc.) E) (OCCA 662.1/6-A).

2. The original Annexes to Harbor Defense Projects, Harbor Defenses of Chesapeake Bay were prepared by a Board of Officers appointed by paragraph 3, S.O. No. 260, Headquarters, Third Corps Area, October 26, 1932, pursuant to letter dated the Office of The Adjutant General, June 2, 1933, subject "Harbor Defense Project, Chesapeake Bay Area," (AG 660.2 (6-1-33) (Misc.) (OCCA 662.1/6-A-1). The original Annexes were approved by the Secretary of War in 21st Indorsement dated the Office of The Adjutant General, February 19, 1937, on letter subject "Annexes, Harbor Defense Project, Chesapeake Bay Area," dated Headquarters Third Corps Area, Baltimore, Md., June 5, 1934 (AG 660.2 (6-5-34) (Misc. E) (Hqrs. 3d CAD. 660.2) (OCCA 662.1/6-A-2). Short Title of the approved Annexes was "CCA-AN-CB".

3. The first revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay was directed in 7th Indorsement dated the Office of The Adjutant General, April 20, 1939, on letter subject "Harbor Defense Project," dated Headquarters Third Coast Artillery District, January 5, 1939 (AG 660.2 (1-5-39) (Misc.) E) (Hqrs. 3d CADist. SECRET 660.2) (OCCA 662.1/6-G). The first revision of the Annexes was approved by the Secretary of War in 21st Indorsement on the above communication, under date of December 18, 1939 (AG 660.2 (1-5-39) M-WPD) (OCCA 662.1/6-G).

4. This second revision of Annexes to Harbor Defense Project, Harbor Defenses of Chesapeake Bay, was directed by letter, WD, AGO, September 27, 1940 (AG 660.2 (9-13-40) M-WPD-M), subject "Modernization of Harbor Defense Projects, continental United States." These revised Annexes were approved by the Secretary of War in 4th Indorsement, WD, AGO, April 17, 1941 (AG 660.2 (12-28-40) M-WPD) (OCCA 662.1/6-J-6).

ANNEX F.

SUPPORTING AIRCRAFT

1. Mission. To furnish aerial observation and surveillance missions for the gun defenses of Fort Story, Cape Charles and Fort Monroe.

2. Equipment required. Two flights of observation airplanes (three operating airplanes each) equipped with two-way radio for aerial observation missions during daylight or darkness and over land or water.

3. Landing fields.

a. Base - Langley Field.

b. Emergency (established fields):

(1) Chambers Field, Norfolk Naval Base.

(2) Norfolk, Va., Municipal Airport.

(3) Brown Field and Turner Field (auxiliary flying fields of Norfolk Naval Base).

(4) Glenrock Airport, Norfolk, Va.

(5) National Guard Airport, Virginia Beach.

(6) Elizabeth City, North Carolina, 2 landing fields.

(7) Kallam Field, Va., 16 miles north of Cape Charles village, Va.

(8) Newport News Airport, Newport News, Va.

c. Desirable to establish:

(1) Cape Charles, near Kiptopeke. The terrain here is flat and an emergency landing field can be established readily near the military reservation.

4. Communications.

a. Telephone:

(1) Fort Monroe to Langley Field, by leased commercial lines.

(2) Fort Story to National Guard Airport, by field wire from base-end station at Site 3.

(3) Cape Charles FC switchboard to Kiptopeke emergency landing field, by field wire.

b. Radio: Airplane to ground, by two-way radio.

ANNEX G

GAS DEFENSE

ANNEXES
to
HARBOR DEFENSE PROJECT
HARBOR DEFENSES OF CHESAPEAKE BAY
1941

AUTHORITIES

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ANNEX G.

GAS DEFENSE.

1. a. For batteries included in the modernization program, provision is made in this project for complete gas-proofing of the plotting rooms, and of a rest room where a room is available without undertaking new construction. Aid stations are to be established in the rest rooms.

b. For personnel outside of gas-proofed rooms, reliance is placed on gas masks, protective clothing and decontamination of personnel, structures and areas.

c. Power plants, isolated fire control stations and the short range batteries of the secondary armament are not provided with standard gas-proofing installations under this project. It is not contemplated that collective protectors will be provided for batteries to be eliminated under the modernization program (3d Ind., OCCA, April 7, 1941; 662.1/6-J-6).

2. a. This project contemplates the use of the collective protector unit M1 or later model, including dehumidifier, having a rated capacity of 200 cubic feet per minute. One unit will supply a maximum of 20 persons actively engaged or 67 persons not active and will supply the necessary slight positive air pressure to a room of not more than 10,000 cubic feet capacity. Each person is allowed at least 150 cubic feet of space.

b. The basis for providing canisters is that the life of the canister is 40 hours, and the assumption is made that there may be two gas attacks of eight hours each, each week for three months. This is a very ample allowance.

3. Provision for gas defense is to be included in new construction. Should changes be made in the design of new batteries, the preceding paragraphs in connection with the appended cost estimate will constitute a guide.

4. This project contemplates the use of decontaminating apparatus and materials, for each battery as follows:

2 sets of 3-gallon hand demustardizing apparatus of the pressure type.
One ton of demustardizing agent (chloride of lime).
3750 pounds of acetylene tetrachloride.

5. An estimate of cost and priority guide is appended as Exhibit 1-G; this estimate enumerates the installations which it is planned to gas-proof with standard equipment. Those items which should be procured and installed in peace time are marked A. Those items which should be procured during peace time but whose installation may be deferred until an emergency arises are marked B. Those items to be procured and installed when an emergency arises are marked C.

COST ESTIMATE AND PRIORITY GUIDE

H. D. OF CHESAPEAKE BAY — PRIORITIES SUBJECT TO CHANGE BASED ON AVAILABILITY OF FUNDS

Item	Class	Priority	DESCRIPTION OF PROJECT	Cubic feet	No. of persons	No. of collective protectors	No. of reserve canisters	Chemical Warfare Service	ENGINEER		TOTAL
									Material	Labor	
			GAS DEFENSE, FORT STORY								
1	A	1	F.C. switchboard room	3,670	17	1	4	$ 1,880	$ 180	$ 270	$ 2,330
2	A	2	Plotting room, Pennington	3,840	26	1	4	1,880	180	270	2,330
3	A	3	Plotting room, Walke	4,360	29	1	4	1,880	180	270	2,330
4	A	4	Casemate No. 2 (old bombproof)	3,400	35	1	4	1,880	180	270	2,330
5	A	5	Casemate No. 1 (Site 8)	7,557	51	1	4	1,880	399	521	2,800
6	A	6	Mine plotting room	3,000	20	1	4	1,800	281	389	2,550
7	A	14	Each 16-inch battery:								
			Plotting room	5,760	24	1	4				
			Rest room	20,000	150	3	12				
			Small rooms	6,000	25	1	4				
			Total, one battery			5	20	(9,400)			
			Two 16-inch batteries			10	40	18,800			18,800
8	A	12	Each 6-inch battery:								
			Plotting room	2,016	16	1	4				
			Rest room	12,000	75	2	8				
			Small rooms	1,525	25	1	4				
			Total, one battery			4	16	(7,520)			
			Three 6-inch batteries			12	48	22,560			22,560
			Decontaminating apparatus and materials for 7 batteries:								
9	A	17	Apparatus - $15 per battery					105			
10	C	20	Materials - $398 per battery					2,786			2,891
			GAS DEFENSE, CAPE CHARLES								
11	A	15	Each 16-inch battery:								
			Plotting room	5,760	24	1	4				
			Rest room	20,000	150	3	12				
			Small rooms	6,000	25	1	4				
			Total, one battery			5	20	(9,400			
			Two 16-inch batteries			10	40	18,800			18,800
12	A	13	Each 6-inch battery:								
			Plotting room	2,016	16	1	4				
			Rest room	12,000	75	2	8				
			Small rooms	1,525	25	1	4				
			Total, one battery			4	16	(7,520)			
			Two 6-inch batteries			8	32	15,040			15,040
			Decontaminating apparatus and materials for 4 batteries:								
13	A	18	Apparatus - $15 per battery					60			
14	C	21	Materials - $398 per battery					1,592			1,652
			GAS DEFENSE, FORTS MONROE AND WOOL								
15	A	7	F.C. switchboard room	5,795	39	1	4	1,880	758	992	3,630
16	A	8	Plotting room, Montgomery	2,172	15	1	4	1,880	271	329	2,480
17	A	9	Plotting room, Gates	1,582	12	1	4	1,880	208	292	2,380
18	A	10	Casemate	6,400	37	1	4	1,880	210	100	2,190
19	A	11	Mine plotting room	2,966	20	1	4	1,880	281	670	2,831
20	A	16	One 16-inch battery:								
			Plotting room	5,760	24	1	4				
			Rest room	20,000	150	3	12				
			Small rooms	6,000	25	1	4				
			Total			5	20	9,400			9,400
			Decontaminating apparatus and materials for 7 batteries:								
21	A	19	Apparatus - $15 per battery					105			
22	C	22	Materials - $398 per battery					2,786			2,891
			TOTALS -					$112,714	$ 3,128	$ 4,373	$120,215

Class A - To be procured and installed in peace.
Class C - To be procured and installed when an emergency arises.
Class B - Reserve canisters, to be procured in peace and installed when an emergency arises.

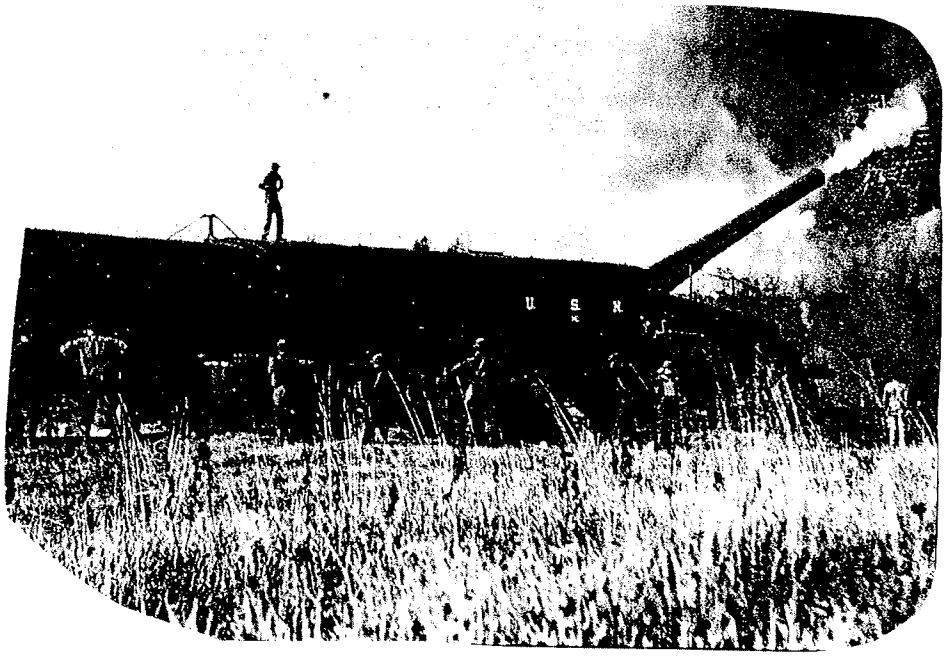
NOTE: No expenditure of funds by the Ordnance, Signal Corps or Coast Artillery Corps is contemplated in this Annex.

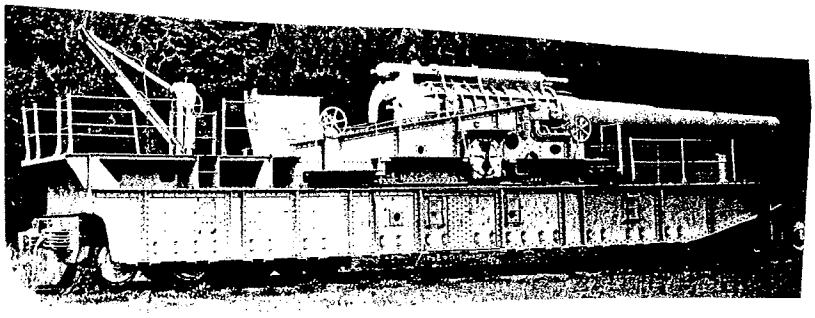
SECRET

EXHIBIT 1-G

OCGS004

The guns of Fort Story: railway firing platforms





prepared by: Fielding L. Tyler,US Army,Retired

The Guns of Fort Story: railway firing platforms

In the sand dunes on the south end of the Army post at Fort Story, historians uncovered a 12-inch railway gun base ring and a firing platform for a 14-inch railway gun. These type weapons were never on the post so why were the positions built? This is the story as best as can be determined at this time. First the 14-inch story.

As early as 1906 the Taft Board in its recommendations for seacoast defense called for new batteries of 14 and 16-inch rifles. Major General J.P. Story, for whom Fort Story would be later named, noted in the board memorandum his preference for the 14-inch gun. The final draft of the report called for six 14-inch rifles at the Chesapeake Bay. Some of the guns were to be mounted on an artificial island in the middle of the channel.

In April 1918, the first round was fired from an American 14-inch railway gun. This was the first firing of a rail mounted gun since the Civil war. And on this occasion the crew was comprised of sailors . The original 14-inch railway guns developed by the United States were manned by the US Navy in World War I and saw action in France. Following that conflict the operations of that weapons system was transferred to the Army Coast Artillery Corps. As a result of the successful use in France, the 14-inch Model 1920 was developed using the best features of the earlier models. Four of these guns were built. Mobile seacoast artillery came in two types, railway and tractor drawn. This mobile armament following World War I had not originally been designed for seacoast defense. In fact these weapons has limitations when placed in a harbor defense situation. One was the accuracy of the guns and the second was the inability to move rapidly to engage a moving target.

For seacoast defense which requires a traverse exceeding 7 degrees is was necessary to have a prepared platform. The emplacement, which provided a 360 degree traverse consisted of a concrete block 42 feet in diameter. A circular steel base plate and a base ring were bolted to the emplacement. To employ the weapon the gun is moved by rail to the fixed position and lowered down onto the prepared platform.

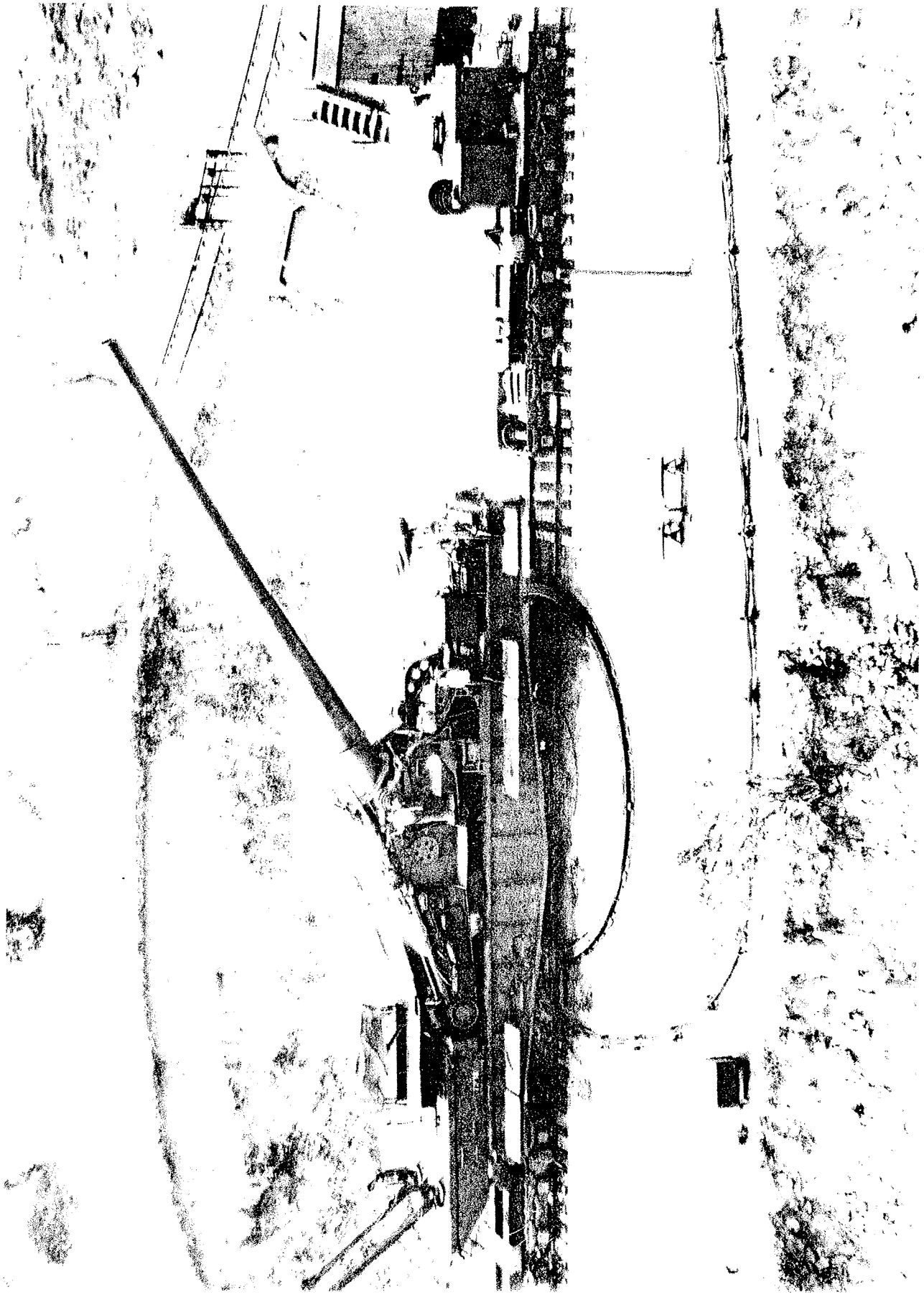
By 1921 a concrete gun emplacement had been built on the southern end of the reservation at Fort Story to accommodate a 14-inch gun. A rail line was laid to move a weapon to the position. But after that work no 14-inch railway guns were ever assigned to the Coast Defenses of Chesapeake Bay. The successful development of the 16-inch gun and the relative abundance of them made further development of the 14-inch gun unnecessary. Of the four

Model 1920 guns that were built two served in Panama and the other two were located at Fort MacArthur in the Harbor Defenses of Los Angeles.

In 1933 the US Army canceled the railway program. To date the only remaining 14 inch railway gun is located at the Washington Navy Yard. The 14-inch railway platform remains adjacent to the gatehouse at the East Gate . It is under a layer of sand and was discovered using old maps in 2001.

Now the story of the 12-inch railway gun. Again none of these weapons were ever stationed at Fort Story, but a concrete firing platform was built on post.

The only remaining 12-Inch railway gun in the inventory is at Dahlgren Naval Weapons Center in Virginia.



OCG5005

Fort Story Daily Bulletin project

In February 2001 Headquarters, Fort Story delivered a collection of Daily Bulletins produced at Fort Story and dated from 7 October 1941 thru 31 December 1941. Also found was a daily ledger with was appears to be a mess hall head count for 1943. In the ledger were a number of commissary shipping lists, Motor Pool trip tickets and gas delivery receipts for 1943 . These items represent an important segment of daily life on the installation at the time the United States was entering World war II. They provide a limited insight into the activity on post during the period.

The collection was found by a US Navy individual in building 1047 and delivered in a paper package to the Public Affairs Officer Fort Story at an unknown date. They have been storage in an uncontrolled environment for part of that time. Possibly in the Visitors Center until it was closed in 1979. As a result they are in poor condition.

They were discovered in a search of old PAO files temporarily stored on by the installation commander and the Director of the Old Coast Guard Station.

As a historical project ,The Old Coast Guard Station has reviewed and compiled the collection and has taken proper conservation measures with the papers. With the measures taken the documents should remain intact and provide a platform for research into the history of Fort Story.

Fielding L. Tyler
Old Coast Guard Station
Virginia Beach, Virginia

www.oldcoastguardstation.com
FTylerVB2@aol.com

February 2001

THESE ARE MUSEUM COPIES.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 234)

---T-U-E-S-D-A-Y--- October 7, 1941

1. DETAILS FOR WEDNESDAY, OCTOBER 8, 1941:
Officer of the Day ---------- Capt. W.A. Garbee, 246th CA
Medical Officer of the Day ---------- 1st Lt. J.C. Risher, MC 246th CA
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Wednesday, October 8, 1941, as prisoner guards.

3. VISIT BY COMMANDING GENERAL: Major General HENRY C. PRATT, U.S.A., Commanding General, Third Corps Area, will make an informal visit to Fort Story on Wednesday, October 8, 1941. Strict attention is directed to policing of designated areas. Enlisted men will be correctly attired in the prescribed uniform. Mixed uniforms will not be worn.

4. AMATEUR SHOWS: All men interested in amateur theatricals are earnestly requested to give their name to their unit morale officer. This includes anyone who is skilled in any form of stage entertainment such as singing, whistling, acrobatics, music, magic, etc. Amateur shows will be held on the post from which some fine entertainment is anticipated.

Morale officers will bring this to the attention of all the men and submit a report to the Post Morale Officer.

5. FOR RENT: 6-room house completely furnished, 22nd Street and Bolter Avenue, Va. Beach. 3-bedrooms, oil furnace-$75.00 per month year around. $65.00 per month during the winter. Contact Mrs. BARCO, at the above address.

Room, Enrose Cottage, 3507 Atlantic Ave. Va. Beach. 1-room $7.50 per week for one person, $10.00 per week for two persons. Meals served if desired. Call Mrs. PHILIP SMITH, Va. Beach 851-J.

6. COMPLAINTS: Any member of the garrison desiring to make a complaint or allegation to the Inspector may do so by reporting to the Inspector at the Library in the Enlisted Men's Service Club at 4:15 P.M., today.

Officers and Nurses may see the Inspector by special appointment.

The Chaplain will make arrangements to have all personnel clear the Library before 4:15 P.M., today.

7. MOVIE: Tonight. "FATHER TAKES A WIFE" w/ Adolphe Menjou and Gloria Swanson.

8. FATIGUE DETAILS: The 246th CA will detail three (3) Officers, six (6) NCO's and fifty (50) men to report to the Police and Prison Officer at the Parad Ground 1:00 P.M., today.

The 246th CA will detail four (4) men to report to Chaplain POCH at the Post Recreation Room 1:00 P.M., today.

9. BOARD OF GOVERNORS MEETING: There will be a meeting of the Board of Governors of the N.C.O. Club, at the Club, this evening at 8:00 P.M.

10. PARAGRAPH NO. 1, DAILY BULLETIN NO. 233: So much of Par. 1, D.B. No. 23 dated October 6, 1941, as pertains to "Officer of the Day" is amended to delete the name of Capt. J.F. Fitchett, 246th CA and substitute the name of 1st Lt. T.M. NANCE, 246th CA.

11. MESS COUNCIL: The following Officers are appointed as Mess Council to meet from time to time as the president may direct:

Captain JAMES S. JONES, 246th CA
1st Lt. JOHN C. RISHER, MC 246th CA
1st Lt. WILLIAM A. NUSSER, VC, Mess Officer, 1327th S.U.
1st Lt. PAUL F. LANDIS, VC 1327th S.U.

12. ROAD TO HARBOR DEFENSE COMMAND POST: The road leading from route 60 to the Harbor Defense Command Post is barred to all motor vehicle traffic with the following exceptions:

Passenger cars of; Commanding General, 3rd Coast Artillery District and Harbor Defenses of Chesapeake Bay.
Commanding Officer, Fort Story, Virginia.
Commanding Officer, Capes Groupment.

(OVER)

NOTE:

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 235)

---W*E-D-N-E-S-D-A-Y--- October 8, 1941.

1. DETAILS FOR THURSDAY, OCTOBER 9, 1941:
Officer of the Day---------- Capt. M.W. Richwine, 246th CA.
Medical Officer of the Day---------- Capt. L. F. Rogel, MC 246th CA.
Bugler of the Guard---------- Pvt. Wood, Battery B, 246th CA.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Thursday, October 9, 1941, as prisoner guards.

3. ATTACHED FOR RATIONS: Corporal DONALD T. KLEUGH, 13009359, Battery F, 71st Coast Artillery is attached to the Station Hospital for rations effective with the noon meal, October 7, 1941.

4. TELEPHONE NUMBER: The home telephone number of First Lieutenant L. B. WILSON, QMC., is Virginia Beach 1465.

The home telephone number of Second Lieutenant E. J. LAWLER, 1327th Service Unit, is changed from Virginia Beach 722 to Virginia Beach 1239-W.

5. SMOKING RESTRICTIONS: Smoking in the vicinity of Battery Number 6 is prohibited. Strict compliance will be observed by both civilian and military personnel. For the benefit of civilian personnel this is known as Project 224.

6. CORRECTION: ROAD TO HARBOR DEFENSE COMMAND POST: The road leading from route 60 past power plant No. 2, along the railroad tracks through the tunnel leading to the Harbor Defense Command Post is barred to all motor vehicle traffic with the following exceptions:

Passenger cars of; Commanding General, 3rd Coast Artillery District and Harbor Defenses of Chesapeake Bay.
Commanding Officer, Fort Story, Virginia.
Commanding Officer, Capes Groupment.

7. BINGO PARTY:NCO CLUB: Tommorow night THURSDAY,October 9, 1941, at the NCO Club, 8:00 P.M. Refreshments will be served. Bring a new NCO member.

8. CORRECTION: ATTACHED FOR RATIONS: Corporal JOSEPH URBANSKI, 33026581, Battery E, 71st Coast Artillery is attached to the Station Hospital for rations effective with the noon meal, October 7, 1941.

9. MOVIE: Tonight. "NEW WINE" w/ Alan Curtis, Ilona Massey, Binnie Barnes and Billy Gilbert.

10. FATIGUE DETAILS: The 246th CA will detail one (1) officer, four (4)NCO's and thirty (30) men to report to the Police and Prison Officer at the Military Police Barracks at 1:00 P.M., to-day. Four (4) men with scythes and twenty-six (26) with rakes and shovels.

NOTE;- A COPY OF THIS DAILY BULLETIN WILL BE POSTED ON ALL BULLETIN BOARDS.

By order of Colonel HENDON:

E. G. Mulling

E. G. MULLING,
Captain., A. G. D.
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 236) ---T-H-U-R-S-D-A-Y*-- October 9, 1941.

1. DETAILS FOR FRIDAY, October 10, 1941:
Officer of the Day---------- Capt. J. S. Jones, Jr., 246th CA.
Medical Officer of the Day---------- Capt. C. F. Davis, MC., 246th CA.
Bugler of the Guard---------- Pvt. Kiernan, Battery C, 246th CA.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Friday, October 10, 1941, as prisoner guards.

3. BOWLING LEAGUES: Bowling leagues are now being formed. It is desired that each Battery, Unit, and other organizations of Fort Story enter at least one team in these leagues. Unit Recreation officers will submit report to the Post Morale Officer by October 20th. This report will include the names of members of each team Suitable prizes will be awarded.

4. EXAMINATION FOR WARRANT OFFICER, USAMPS: Applications of qualified candidates for examination as Warrant Officers USAMPS will be submited to this headquarters not later than October 12, 1941. Letters giving pertinent information were forwarded by 3rd indorsement file 210.1, this headquarters, October 6, 1941.

5. BINGO PARTY: To-Night at 8:00 P.M., at the N. C. O. Club. Refreshments will be served. Bring a new NCO member.

6. MOVIE: Tonight. "NEW WINE" w/ Alan Curtis, Ilona Massey, Binnie Barnes and Billie Gilbert.

7. CHANGE OF ADDRESS: Second Lieutenant E. M. FORD, from R.F.D. #1 London Bridge, Virginia to Harris Cottage 102nd Street, Virginia Beach, Virginia.

Lieutenant Commander RICHARD P. HODSDON, from 111 West Ocean View Avenue, Crystal Apartments, Norfolk, Va., to Traymore Apartments, Atlantic Avenue, Virginia Beach, Va. Telephone Va. Beach 539-W.

8. REPORTS ON LOSSES AND GAINS OF MOTOR VEHICLES: Reports on Losses and Gains of Motor Vehicles will be submitted to this headquarters in quintuplicate (5).

9. FOR RENT: Furnished House, 120th St., Virginia Beach, Va. 4-Bedrooms, 2-Baths, Oil Circulating heat, reasonable winter rates. Call George N. Badran, Norfolk Rental Service, Inc. Phone 21844 or Res. 32037.

10. FOOTBALL GAME: The "Fighting Soldiers" will play the Camp Croft Team at the Virginia Beach Ball Park Sunday, October 12, at 2:30 P.M., Admission for soldiers will be twenty-five cents (25¢) in cash. Transportation will leave from the Parade Ground at 1:45 P.M., Sunday.

11. REGULAR WEEKLY DANCE; OFFICERS CLUB: The regular weekly dance will be held Saturday, October 11, 1941. The Orchestra will be present.

12. ROOM FOR RENT: Bernard Apartments corner of 99th and Atlantic Blvd, Va. Beach. 1-large bed room, twin-beds, private bath, oil heat, hot water. Two persons $15.00 per. week, One person $12.00 per week. Call Mrs. J. W. Martin, Va. Beach 854.

13. FATIGUE DETAILS: The C. O. Battery E, 246th CA will detail eight (8) men to report to Capt. Frantz, at the Quartermaster warehouse 7:30 A.M., and 1:00 P.M., October 10, 1941.

By order of Colonel HENDON:

E. G. Mulling

E, G. MULLING,
Captain., A. G. D.
Adjutant.

NOTE:- A COPY OF THIS DAILY BULLETIN WILL BE POSTED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 237) --- F-R-I-D-A-Y--- October 10, 1941.

1. DETAILS FOR SATURDAY, October 11, 1941:
Officer of the Day---------- 1st Lt. James H.B. Peay, 246th CA.
Medical Officer of the Day---------- 1st Lt. Herbert S. Raines, 160th S.H.
Bugler of the Guard---------- Pvt Hight, Battery C, 246th CA.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Saturday, October 11, 1941, as prisoner guards.

3. MOVIE: Tonight. "DOWN IN SAN DIEGO" w/ Bonita Granville, Ray Mc Donald, and Lee Gorcey.

4. FOOTBALL GAME: The "Fighting Soldiers" will play the Camp Croft team at the Virginia Beach Ball Park Sunday, October 12, 1941., at 2:30 P.M., Admission for soldiers will be twenty-five cents (25¢) in cash. Transportation will leave from the Parade Ground at 1:45 P.M., Sunday.

5. POST EXCHANGE NOTICE: Coupon books will be issued to all batteries starting today.

6. FATIGUE DETAILS: The C. O., 159th Station Hospital will detail ten (10) men to report to Tech. Sgt. Locklin, at the Ordnance Store Room, Post Headquarters, 1:00 P.M. today.

7. TELEGRAM: The following telegram, Headquarters Third Corps Area, Baltimore, Maryland, dated October 9, 1941, to Commanding Officer, Fort Story, Va., is qouted for the information of all concerned:

"ON MONDAY OCTOBER THIRTEENTH LT TOLBERT COOKE PERSONNEL DIVN OFFICE OF CHIF SIGNAL OFFICER WILL BE AT ORC HDQRS ROOM 205 POST OFFICE BUILDING NORFOLK VIR TO INTERVIEW APPLICANTS FOR COMMISSION AS SECOND LTS IN SIGNAL CORPS RESERVE STOP APPLICANTS MUST BE UNMARRIED BETWEEN 21 AND 36 GRADUATE ELECTRICAL ENGINEERS ELECTRONIC PHYSICISTS OR EQUIVALENT AND VOLUNTEER FOR DUTY OUTSIDE CONTINENTAL LIMITS OF U S PAY AND ALLOWANCE WILL RANGE BETWEEN ONE HUNDRED AND EIGHTY THREE AND THREE HUNDRED AND SIXTY THREE DOLLARS PER MONTH DEPENDING ON DUTY PERFORMED STOP REQUEST PERSONNEL UNDER YOUR COMMAND BE INFORMED OF POSSIBILITIES FOR TRANSFER TO OR COMMISSION IN SIGNAL CORPS RESERVE-"
COLTON WASHINGTON DC

By order of Colonel HENDON:

E. G. MULLING,
Captain., A. G. D.,
Adjutant.

NOTE- A COPY OF THIS DAILY BULLETIN WILL BE POSTED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 237)

--- F-R-I-D-A-Y---

October 10, 1941.

1. DETAILS FOR SATURDAY, October 11, 1941:
Officer of the Day---------- 1st Lt. James H.B. Peay, 246th CA.
Medical Officer of the Day---------- 1st Lt. Herbert S. Raines, 160th S.H.
Bugler of the Guard---------- Pvt Hight, Battery C, 246th CA.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Saturday, October 11, 1941, as prisoner guards.

3. MOVIE: Tonight. "DOWN IN SAN DIEGO" w/ Bonita Granville, Ray Mc Donald, and Lee Gorcey.

4. FOOTBALL GAME: The "Fighting Soldiers" will play the Camp Croft team at the Virginia Beach Ball Park Sunday, October 12, 1941., at 2:30 P.M., Admission for soldiers will be twenty-five cents (25¢) in cash. Transportation will leave from the Parade Ground at 1:45 P.M., Sunday.

5. POST EXCHANGE NOTICE: Coupon books will be issued to all batteries starting today.

6. FATIGUE DETAILS: The C. O., 159th Station Hospital will detail ten (10) men to report to Tech. Sgt. Locklin, at the Ordnance Store Room, Post Headquarters, 1:00 P.M. today.

7. TELEGRAM: The following telegram, Headquarters Third Corps Area, Baltimore, Maryland, dated October 9, 1941, to Commanding Officer, Fort Story, Va., is qouted for the information of all concerned:

"ON MONDAY OCTOBER THIRTEENTH LT TOLBERT COOKE PERSONNEL DIVN OFFICE OF CHIF SIGNAL OFFICER WILL BE AT ORC HDQRS ROOM 205 POST OFFICE BUILDING NORFOLK VIR TO INTERVIEW APPLICANTS FOR COMMISSION AS SECOND LTS IN SIGNAL CORPS RESERVE STOP APPLICANTS MUST BE UNMARRIED BETWEEN 21 AND 36 GRADUATE ELECTRICAL ENGINEERS ELECTRONIC PHYSICISTS OR EQUIVALENT AND VOLUNTEER FOR DUTY OUTSIDE CONTINENTAL LIMITS OF U S PAY AND ALLOWANCE WILL RANGE BETWEEN ONE HUNDRED AND EIGHTY THREE AND THREE HUNDRED AND SIXTY THREE DOLLARS PER MONTH DEPENDING ON DUTY PERFORMED STOP REQUEST PERSONNEL UNDER YOUR COMMAND BE INFORMED OF POSSIBILITIES FOR TRANSFER TO OR COMMISSION IN SIGNAL CORPS RESERVE-"
COLTON WASHINGTON DC

By order of Colonel HENDON:

E. G. MULLING,
Captain., A. G. D.,
Adjutant.

NOTE- A COPY OF THIS DAILY BULLETIN WILL BE POSTED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 238)

---S-A-T-U-R-D-A-Y--- October 11, 1941.

1. DETAILS FOR SUNDAY, October 12, 1941:
Officer of the Day---------- 2nd Lt. Henry E. Mecready, 1327th S.U.
Medical Officer of the Day---------- 1st Lt. Carl A. Wirts, MC 159th S.H.
Bugler of the Guard---------- Pvt. Bateman, Battery A, 246th C. A.

2. DETAILS FOR MONDAY, October 13, 1941:
Officer of the Day---------- 2nd Lt. William T. Tilden, 1327th S.U.
Medical Officer of the Day---------- Capt. G. R. Gallagher, MC 160th S.H.
Bugler of the Guard---------- Pvt. Wood, Battery B, 246th C. A.

3. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Monday, October 13, 1941, as prisoner guards.

4. RELIEF FROM SPECIAL DUTY: The following named enlisted men are relived from special duty with the Military Police Detachment, effective this date:

Sgt. CLARENCE S. CARROLL, 20368265, Battery C, 246th C. A.
Pvt. HENRY T. HARRIS, 33040240, Battery C, 246th C. A.
Pvt. EDWARD L. HALL. 33040220, Battery B, 246th C. A.
Pvt. DANIEL K. MORRIS, 33045999, Det. Med. Dept, 1327th S. U.
Pvt. MORRIS C. MUNDY, 33045996, Det. Med. Dept, 1327th S. U.

Pvt. CLARENCE A. FOUTZ, 20369291, Battery I, 246th C. A., is relieved from Special Duty with the Post Fire Department effective this date.

5. SPECIAL DUTY: The following named enlisted men of the 246th C. A., are detailed on Special Duty with the Military Police Detachment effective this date:

Pvt. JOHN H. ALLEY, 33040151, Battery C, 246th C. A.
Pvt. WILLIAM E. MOORE, 33040186, Battery C, 246th C. A.
Pvt. JAMES S. ARTHUR, 23045063, Battery B, 246th C. A.
Pvt. CARL H. AKERS, 33041221, Battery A, 246th C. A.
Pvt. WOODROW DELOACH, 33045349, Battery B, 246th C. A.

Pvt. MELVIN E. MURPHY, 33040228, Battery C, 246th C. A., is detailed on Special Duty with the Post Fire Department effective this date.

6. POST EXCHANGE SUB-COUNCIL: All organization commanders will submit to this headquarters, not later than 3:00 P.M., October 13, 1941, the names of non-commissioned officers to serve on the Post Exchange Sub-council for the following branches

Main Post Exchange. Branch #2.
Branch #1. Branch #3.

7. SPECIAL DUTY: The following named enlisted men organizations indicated are detailed on Special Duty with the Post Motor Pool as truck drivers:

Pvt. CHARLES F. DUNCAN, 34141740, Med. Det, 1327th S. U.
Pvt. WILLIAM F. TUBBS, 34141838, Med. Det, 1327th S. U.
Pvt. JOHN C. HOOVER, 34140564, Med. Det, 1327th S. U.
Pvt. EDWARD L. KESSLER, 6995964, Med. Det, 1327th S. U.
Pvt. JOHN M. PALMER, 33045990, 160th Station Hospital.
Pvt. LESTER N. ROBINSON, 33006790, 160th Station Hospital.
Pvt. RICHARD S. DOYLE, 35014782, 159th Station Hospital.
Pvt. EVERETT S. HAVENS, 35031056, 159th Station Hospital.
Pfc. ALBERT F. STRUBE, 33006985, 159th Station Hospital.
Pvt. HERMAN N. MOORE, 34141620, 159th Station Hospital.

8. MOVIES: Tonight-Double Feature. "SMILING GHOST" w/Wayne Morris, Brenda Marshall, and Alan Hale. Also. "HURRICANE SMITH" w/Ray Middleton, and Jane Wyawt.
Sunday and Monday- "NAVY BLUES" w/ Jack Okie, Jack Haley, Ann Sheridan, and Martha Raye.

(OVER)

NOTE- A COPY OF THIS DAILY BULLETIN WILL BE PLACED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO: 239)

--- M-O-N-D-A-Y--- October 13, 1941.

1. DETAILS FOR TUESDAY, October 14, 1941:
Officer of the Day----------2nd Lt. Edward J. Lawler, 1327th S. U.
Medical Officer of the Day----------1st Lt. John D. Snider, 159th S.H.
Bugler of the Guard----------Pvt. Kiernan, Battery C, 246th C. A.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Tuesday, October 14, 1941, as prisoner guards.

3. DISTRIBUTION OF FORMS 303, REPORTS OF CHANGE: It has been brought to the attention of this headquarters that duplicate copies of Change are being erronously forwarded. Attention is invited to the fact that these carbon copies are not required to be sent to the Chief of Chaplains, Chief of Cavalry, Chief of Infantry or the Chief of Field Artillery.

For further information regarding the forwarding of duplicate copies of Reports of Change attention is invited to paragraph 9, AR 345-800, dated September 16, 1941 covering distribution of duplicate copies of Report of Change.

4. REQUESTS FOR TRANSPORTATION: Request for transportation, except in emergencies, will be submitted to Capt. Behrle, phone 11, not later than 4:00 PM on week days and 10:00 A.M. on days proceding week-ends and holidays of the day prior to the day on which transportation is desired.

5. PRISONER CLOTHING: Effective at once, all prisoners confined in the Post Guard House will be equipped with the following clothing.

2 Blankets, wool, o.d.
1 Comforter
2 Suits, working
1 Hat, working
3 Undershirts, cotton
3 Drawers, cotton
3 Pair Stockings, cotton or wool
2 Pair Shoes, service
1 Overcoat or Mackinaw
1 Raincoat
1 Pair Gloves, leather, working

In the future, all prisoners sent to the Post Guard House for confinement, will be required to bring with them at the time of confinement, the above articles of clothing.

6. REGIMENTAL PARADE; 246th CA: There will be a regimental parade of the 246th CA (HD) this afternoon. Adjutant's call 4:45 P.M.

7. MOVIE: Tonight. "NAVY BLUES" w/ Jack Oakie, Jack Haley, Ann Sheridan, and Martha Raye.

8. FATIGUE DETAILS: The 246th CA will detail four (4) men to report to Lieut. Leary at the Quartermaster Warehouse 7:30 A.M., and 1:00 P.M. this date.

9. RELEASE OF SPECIAL DUTY MEN FOR PARADE: All men of the 246th CA who can be spared will be released to their organizations at 3:45 P.M. this afternoon for the purpose of attending parade with their organization.

10. ATTACHMENT FOR RATIONS: The following named enlisted men are attached to Battery G, 246th CA for rations beginning with the noon meal this date:
Pvt. Benjamin R. Barnes, 33615812, Battery D, 71st CA.
Pvt. Paul Trickett, 33009168, Battery D, 71st CA.

11. RELEASE FROM ATTACHMENT FOR RATIONS AND QUARTERS: The enlisted men listed under par. 4, Daily Bulletin No. 238 are relieved from attachment for rations and quarters with the 1327th S.U., effective October 11, 1941.

12. ATTACHMENT FOR RATIONS AND QUARTERS: The enlisted men listed under par. 5, Daily Bulletin No. 238 are attached for rations and quarters with the 1327th S.U., effective October 11, 1941.

13. FATIGUE DETAIL: The 246th CA will detail fifteen (15) men, with shovels, to report to the Military Police Barracks at 1:00 P.M., this date. These men will be released from this detail at 3:30 P.M.

(OVER)

NOTE:- A COPY OF THIS DAILY BULLETIN WILL BE PLACED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 240)

---T-U-E-S-D-A-Y--- October 14, 1941.

1. DETAILS FOR WEDNESDAY, October 15, 1941:
Officer of the Day---------- 2nd Lt. Edward J. Lawler, 1327th S.U
Medical Officer of the Day---------- Capt. H.A. Sapira, MC 246th CA.
Bugler of the Guard---------- Pvt. Hight, Battery C, 246th CA.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Wednesday, October 15, 1941, as prisoner guards.

3. SICK CALL: Sick Call for dental patients of the 246th CA will be at 1:00 PM daily henceforth, with the exception of Wednesdays and Saturdays, on which days it will be at 8:00 AM. The Dental Officer will receive only men, who are in pain and in need of immediate treatment, at times other than stated above.

4. HOUSE FOR RENT: Bird Neck Point, Opposite the ninth green Cavalier golf course. Completly furnished, 3 bed rooms, bath, large living room, breakfast room and separate house for servants. $60.00 monthly. Call Va. Beach 118 W or write Box 193.

Six Room House at waters edge on Lynnhaven Bay Inlet. Near Lynnhaven Bridge Ocean Park, Virginia. 2 car garage, bath, nicely furnished. $50.00 monthly. If interested see Mr. McLaughlin at the "SEA BREEZE", 141st St. Cape Henry, Virginia. Phone Va. Beach 20 W 2.

5. CHANGE OF ADDRESS: 1st Lt. JOHN P. LEARY,JR., QMC, 1327th S.U., from Officers Tent Camp to 118th St. at Atlantic Avenue, Virginia Beach, Va. Telephone Va. Beach 48-J-12.

6. FATIGUE DETAILS: The 246th CA will detail ten (10) men to report to the Utilities Officer at 7:30 AM and at 1:00 PM. this date.
The 246th CA will detail six men to report to Lt. Leary at the Quartermaste Warehouse at 7:30 AM and 1:00 PM this date.

7. DELINQUENT POST EXCHANGE ACCOUNTS: The attention of members of this command is invited to the ever increasing number of delinquent Post Exchange accounts. Prom payment of all accounts and especially Post Exchange and Commissary charge accounts is the duty of all concerned. It is the intention of the Commanding Officer to rigidly enforce payment of government bills by each individual or, if necessary, collection from the pay of the individual concerned. Credit will be terminated for those whose accounts become delinquent. All accounts not paid by the 10th of the month following that for which accounts are rendered are declared delinquent.

8. MOVIE: Tonight---"ALL THAT MONEY CAN BUY" w/ Edward Arnold, Nancy Kelly, Harry Carey and Buddy Ebsen.

9. FATIGUE DETAIL: The 246th CA will detail fifteen (15) men to report to the Provost Marshall at the Military Police Barracks at 1:00 PM on the following days; Tuesday, Thursday and Friday. This detail will bring five shovels.

10. FOUND: Key Case containing one key. Owner can obtain same at Post Sgt. Major's desk.

11. RELIEF FROM SPECIAL DUTY: The following named men are relieved from special duty effective this date:
Pvt. Arnett S. Oliver, 20367558, Hq. Btry. 246th CA is relieved from special duty with the Artillery Engineers.
Pvt. Elwood J. Wilgus, 33040272, Btry. E, 246th CA is relieved from special duty as janitor at Post Headquarters.

12. SPECIAL DUTY: The following named enlisted men are detailed on special duty effective this date:
Pvt. Raymond M. Hall, 33041210, Hq. Btry. 1st Bn. 246th CA is detailed on special duty with the Artillery Engineers.
Pvt. Stanley Davis, 33002185, Btry. E, 246th CA is detailed on special duty as janitor at Post Headquarters.

NOTE-- A COPY OF THIS BULLETIN WILL BE PLACED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 241)

---W-E-D-N-E-S-D-A-Y--- October 15, 1941.

1. DETAILS FOR THURSDAY, October 16, 1941:
Officer of the Day---------- 2nd Lt. Paul R. Bickford, 1327th S.U.
Medical Officer of the Day---------- Capt. C. F. Davis, MC 246th CA.
Bugler of the Guard---------- Pvt. Bateman, Battery A, 246th CA.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Thursday, October 16, 1941, as prisoner guards.

3. PARAGRAPH NO. 1 DAILY BULLETIN NO. 240: So much of Par. 1, D.B. No. 240, dated October 14, 1941, as pertains to "Officer of the Day" is amended to delete the name of 2nd Lt. Edward J. Lawler, 1327th S.U. and substitute the name of 1st Lt. Lawrence R. Harkness, 1327th S.U.

4. EXCHANGE OF CLOTHING: The practice of individuals trying to exchange clothing at the Quartermaster Warehouse will cease. The procedure outlined in W.D. Cir. 147, dated December 7, 1940, Paragraph No. 5, change in AR 35-6560 will govern.

5. PARAGRAPH NO. 12 DAILY BULLETIN NO. 240: So much of Par. 12, D.B. No. 240, as pertains to Pvt. Stanley Davis, 33002185, Battery E, 246th CA is revoked.

6. RELIEF FROM SPECIAL DUTY: The following named enlisted men are relieved from special duty at the officers mess effective this date:
Pvt. Stanley Davis, 33002185, Battery E, 246th CA.
Pfc. Earl Talley, 20368148, Battery B, 246th CA.

7. SPECIAL DUTY: The following named enlisted men are detailed on special duty effective this date:
Pvt. Jesse R. Thomasson, 33045185, Btry. B, 246th CA is detailed on special duty with the Officers Mess.
Pvt. Elwood J. Wilgus, 33040272, Btry. E, 246th CA is detailed on special duty with the Officers Mess.
Pvt. Stanley Davis, 33002185, Btry. E, 246th CA is detailed on special duty as janitor at Post Headquarters .

8. CARD PARTY; NCO CLUB: There will be a card party at the NCO Club, Thursday, October 16, 1941, at 8:00 P.M. Bring a prospective member.

9. FATIGUE DETAILS: The 246th CA will detail twenty (20) men to report to Mr. Richardson at the U. S. Engineer Office, Thursday, October 16 and Friday, October 17, 1941 at 7:40 A.M. Each man will carry a lunch.
The 246th CA will detail six (6) men to report to Lt. Leary at the Quartermaster Warehouse at 7:30 A.M., this date.

10. MOVIE: Tonight "PARACHUTE BATTALION" w/ Robert Preston, Nancy Kelly, Harry Carey and Buddy Ebsen.

11. RADIOGRAM: The following radiogram, War Department, Washington, D.C., dated October 9, 1941, is quoted for the information of all concerned:

THE COMPTROLLER GENERAL RULED UNDER DATE OCTOBER THREE ENLISTED MEN OF ARMY MAY COUNT ARMY AND MARINE CORPS SERVICE BUT NOT REPEAT NOT NAVY OR COAST GUARD SERVICE FOR LONGEVITY PAY PURPOSES UNDER ACT SEPTEMBER SIXTEEN NINETEEN FORTY STOP NUMBER OF YEARS SERVICE OF ENLISTED MEN HERETOFORE COUNTING NAVY OR COAST GUARD SERVICE FOR LONGEVITY WILL BE SHOWN ON PAYROLLS EXCLUSIVE REPEAT EXCLUSIVE OF SUCH SERVICE FOR PERIODS SUBSEQUENT TO SEPTEMBER THIRTIETH NINETEEN FORTY ONE STOP NO REPEAT NO COLLECTIONS WILL BE MADE FOR PAYMENTS COVERING PERIODS PRIOR TO OCTOBER ONE NINETEEN FORTY ONE FOR LONGEVITY PAY BASED ON NAVY OR COAST GUARD SERVICE
ADAMS

12. VAUDEVILLE SHOW: The Eva Morris School of Dancing will give a performance at the Service Club at 8:30 P.M. today. All membersof the Post are most cordially welcome.

NOTE- A COPY OF THIS DAILY BULLETIN WILL BE PLACED ON ALL BULLETIN BOARDS.

13. NATIONAL SERVICE LIFE INSURANCE: All persons leaving the service who are now carrying National Life Insurance have the privilege of continuing same after they return to civil life. Premiums are payable in advance and may be paid either monthly, quarterly, semi-annually or annually, direct to the Veterans' Administration, Washington, D. C. If a change is desired in method of premium payment, written notification should be made direct to Veterans' Administration. Anyone desiring additional information on this subject may contact Private Smith, Administration Center.

14. TALK ON COURT-MARTIAL, COURT MARTIAL PROCEDURE: Major Milton E. Woodhouse, Judge Advocate, Third Coast Artillery District, will give a talk on court-martial, court-martial procedure at the Recreation Building of the 246th CA at 7:30 P.M. on Monday, October 20, 1941. All officers who are members of courts-martial are urged to attend. Major Woodhouse will answer all questions and will make an effort to clear up many questions relative to court-martial procedure.

By order of Colonel Hondon.

E. G. MULLING,
Captain, A. G. D.
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 242)

---T-H-U-R-S-D-A-Y--- October 16, 1941.

1. DETAILS FOR FRIDAY, October 17, 1941:
Officer of the Day---------- 1st Lt. John P. Leary, 1327th S. U.
Medical Officer of the Day---------- 1st Lt. Herbert S. Raines, 160th S.H.
Bugler of the Guard---------- Pvt. Brauer, Battery K, 246th CA

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Friday, October 17, 1941, as prisoner guards.

3. STATE PREMARITAL LAWS: The United States Public Health Service has advised the War Department that the following states have laws making a medical examination a pre-requisite to the issuing of a marriage license:

Alabama	Kentucky	North Carolina	Utah
California	Louisiana	North Dakota	Vermont
Colorado	Maine	Oregon	Virginia
Connecticut	Michigan	Pennsylvania	West Virginia
Illinois	New Hampshire	Rhode Island	Wisconsin
Indiana	New Jersey	South Dakota	Texas
Iowa	New York	Tennessee	Wyoming

Any person in the military service contemplating marriage should inform himself of the requirements of the premarital law in the state in which the marriag will be performed and comply therewith. Further information may be obtained from letter, 726.1, Headquarters Third Corps Area, October 6, 1941, copies of which have been furnished regimental and separate unit commanders.

4. WORK ORDERS: Work orders sent to Post Headquarters for approval of the Adjutant will be prepared as follows:
E. G. MULLING,
Captain, A. G. D.,
Adjutant.

5. BREAKAGE ALLOWANCE: The breakage allowance for chinaware and glassware is .0702 per man per quarter for the balance of the fiscal year 1942. The procedure as outlined in WD Cir. 113, 1941, will govern.
Statements of charges for any items of chinaware and glassware will be prepared from prices as shown in AR 30-3010 dated, September 12, 1941.

6. FOR RENT: Seven Room Cottage. For months of October and November. Completly furnished, linen, silver and covers. $40.00 weekly. Deal after 4:00 PM. Call Norfolk 39447. Ask for C.C. Douthal.

7. RATIONING OF PRISONERS: Prisoners will mess with battery G, 246th CA effective at breakfast, Sunday, October 19, 1941.

8. MOVIE: Tonight "PARACHUTE BATTALION" w/ Robert Preston, Nancy Kelly, Harry Carey and Buddy Ebsen.

9. TEACHERS MEETING: The Post Sunday School Teachers will meet at the Post Chaplains Office at 7:00 PM. today.

10. CHILDRENS CHOIR: The Boys and Girls of the Post Childrens Choir will meet for an important rehearsal in the 71st CA (AA) Recreation Building at 4:00 PM. to-day.

11. FATIGUE DETAIL: The 246th CA will detail four (4) men to report to Chaplain Poch at the Post Recreation Hall at 8:00 AM., Thursday, October 17, 1941.

12. OFFICERS UNIFORM DISPLAY: Representative of the Lusid Uniform Company will be at Barracks "C" Officers Quarters Friday, October 17, 1941.

NOTE- A COPY OF THIS DAILY BULLETIN WILL BE PLACED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 243)

---F-R-I-D-A-Y---

October 17, 1941.

1. DETAILS FOR SATURDAY, October 18, 1941:
Officer of the Day---------- 1st Lt. William H. Dickerson, 2nd CA.
Medical Officer of the Day---------- 1st Lt. John D. Snider, 159th S.H.
Bugler of the Guard---------- Pvt. Bateman, Battery A, 246th CA.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., October 18, 1941, as prisoner guards.

3. PENNSYLVANIA MOTOR VEHICLE INSPECTION: "If, on being stopped by the Police, the motor vehicle operator concerned will make affidavit before a Notary Public or other officer authorized to administer oaths, stating that the car which he is found to be operating has been out of the boundaries of the State of Pennsylvania for thirty (30) days or more, continuously preceding the date of apprehension and had left the state previous to the expiration of the inspection period immediately preceding the date such persons was stopped, the motor vehicle operator will be directed to proceed immediately to an official inspection station and have his car inspected, sticker attached and report such action, displaying such sticker to the Police Sub-Station nearest the scene of the apprehension within a period of forty-eight (48) hours following the receipt of such instructions."

4. AMERICAN RED CROSS: Major M. L. Todd will begin a course of weekly First Aid Instruction authorized by the America Red Cross at 7:45 PM, Wednesday, October 22, 1941 at the Presbyterian Church, Virginia Beach, Va. All interested in enrolling are requested to be present.

5. REDUCED FARES FOR PERSONNEL OF THE U.S.ARMY TRAVELING IN UNIFORM: The following letter from the Commanding General, Third Corps Area, Baltimore, Md., dated October 14, 1941 is quoted in part for the information and quidance of all concerned.

THIS OFFICE HAS BEEN INFORMED BY RAILROAD CHAIRMEN THAT RAILROADS IN UNITED STATES WILL CONTINUE UNTIL OCTOBER 31 1942 THE SO CALLED REDUCED FURLOUGH FARE ARRANGEMENTS WHICH ARE NOW IN EFFECT..******* REQUEST ALL CONCERNED INCLUDING EXEMPTED ACTIVITIES AND TRAINING PLACES BE INFORMED OF FOREGOING.

6. POST EXCHANGE SUB-COUNCIL: All organizations who have not complied with par. 6, Daily Bulletin No. 238, dated October 11, 1941 will submit reports without furthe delay.

7. RADIO BROADCAST ENTERTAINMENT IN BALTIMORE: The sponsors of the radio broadcast, "MILITARY MATINEE", have extended an invitation to military personnel in uniform to attent the performance given each Sunday at 4:00 P.M. at the station W.F.B.R., Radio Center, 10 East North Avenue, Baltimore, Maryland. Soldiers attending will receive gifts.

8. CHANGE IN ROUTE FOR CONVOYS: The bridge on route 30 between Barhamsville and route 33, New Kent County has a temporary posted load limit of 3 tons.
It is requested that all convoys using route 30 to West Point, use route 168 and 33 until November 1, 1941.

9. MOVIE: Tonight. "LADY SCARFACE" w/ Dennis O'Keefe and Frances Neal.

By order of Colonel HENDON:

E. G. MULLING,
Captain, A. G. D.,
Adjutant.

NOTE-- A COPY OF THIS DAILY BULLETIN WILL BE PLACED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 243)

---F-R-I-D-A-Y--- October 17, 1941.

1. DETAILS FOR SATURDAY, October 18, 1941:
Officer of the Day---------- 1st Lt. William E. Dickerson,2nd CA.
Medical Officer of the Day---------- 1st Lt. John D. Snider, 159th S.H.
Bugler of the Guard---------- Pvt. Bateman, Battery A, 246th CA.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., October 18, 1941, as prisoner guards.

3. PENNSYLVANIA MOTOR VEHICLE INSPECTION: "If, on being stopped by the Police, the motor vehicle operator concerned will make affidavit before a Notary Public or other officer authorized to administer oaths, stating that the car which he is found to be operating has been out of the boundaries of the State of Pennsylvania for thirty (30) days or more, continuously preceding the date of apprehension and had left the state previous to the expiration of the inspection period immediately preceding the date such persons was stopped, the motor vehicle operator will be directed to proceed immediately to an official inspection station and have his car inspected, sticker attached and report such action, displaying such sticker to the Police Sub-Station nearest the scene of the apprehension within a period of forty-eight (48) hours following the receipt of such instructions."

4. AMERICAN RED CROSS: Major M. L. Todd will begin a course of weekly First Aid Instruction authorized by the America Red Cross at 7:45 PM, Wednesday, October 22, 1941 at the Presbyterian Church, Virginia Beach, Va. All interested in enrolling are requested to be present.

5. REDUCED FARES FOR PERSONNEL OF THE U.S.ARMY TRAVELING IN UNIFORM: The following letter from the Commanding General, Third Corps Area, Baltimore, Md., dated October 14, 1941 is quoted in part for the information and guidance of all concerned.

THIS OFFICE HAS BEEN INFORMED BY RAILROAD CHAIRMEN THAT RAILROADS IN UNITED STATES WILL CONTINUE UNTIL OCTOBER 31 1942 THE SO CALLED REDUCED FURLOUGH FARE ARRANGEMENTS WHICH ARE NOW IN EFFECT.******* REQUEST ALL CONCERNED INCLUDING EXEMPTED ACTIVITIES AND TRAINING PLACES BE INFORMED OF FOREGOING.

6. POST EXCHANGE SUB-COUNCIL: All organizations who have not complied with par. 6, Daily Bulletin No. 238, dated October 11, 1941 will submit reports without further delay.

7. RADIO BROADCAST ENTERTAINMENT IN BALTIMORE: The sponsors of the radio broadcast, "MILITARY MATINEE", have extended an invitation to military personnel in uniform to attent the performance given each Sunday at 4:00 P.M. at the station W.F.B.R., Radio Center, 10 East North Avenue, Baltimore, Maryland. Soldiers attending will receive gifts.

8. CHANGE IN ROUTE FOR CONVOYS: The bridge on route 30 between Barhamsville and route 33, New Kent County has a temporary posted load limit of 3 tons.

It is requested that all convoys using route 30 to West Point, use route 168 and 33 until November 1, 1941.

9. MOVIE: Tonight. "LADY SCARFACE" w/ Dennis O'Keefe and Frances Neal.

By order of Colonel HENDON:

E. G. MULLING,
Captain, A. G. D.,
Adjutant.

NOTE-- A COPY OF THIS DAILY BULLETIN WILL BE PLACED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 245)

---M-O-N-D-A-Y---

October 20, 1941.

1. DETAILS FOR TUESDAY, October 21, 1941:
Officer of the Day---------- 1st Lt. James F. Ewell, 1327th S.U.
Medical Officer of the Day---------- Capt. C. F. Davis, MC 246th CA.
Bugler of the Guard---------- Pvt. Bateman, Battery A, 246th CA.

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:30 A.M., October 21, 1941 as prisoner guards.

3. PARAGRAPH NO. 2 DAILY BULLETIN NO. 244: So much of Par. 2, D.B. No. 244, dated October 18, 1941, as pertains to "Officer of the Day" is amended to delete the name of 1st Lt. Lewis B. Wilson, 1327th S.U. and substitute the name of 1st Lt. Otis D. Smith, 1327th S.U.

4. TALK ON COURT-MARTIAL, COURT MARTIAL PROCEDURE: Major Milton E. Woodhouse, Judge Advocate, Third Coast Artillery District, will give a talk on court-martial and court-martial procedure at the Recreation Building of the 246th CA at 7:30P.M. tonight, October 20, 1941. All officers who are members of courts-martial are urged to attend. Major Woodhouse will answer all questions and will make an effort to clear up many questions relative to court-martial procedure.

5. AMERICAN RED CROSS: Major M. L. Todd will begin a course of weekly First Aid Instruction authorized by the American Red Cross at 7:45 PM, Wednesday, Octo. 22, 1941 at the Presbyterian Church, Virginia Beach, Va. All interested in enrolling are requested to be present.

6. EMPLOYMENT OF ENLISTED MEN RELEASED FROM ACTIVE DUTY: All enlisted men to be discharged or released from active duty are advised that the government has made available for their use an employment service for the purpose of providing assistance in reemployment. Your acceptance of this assistance is entirely up to you. In filling out DSS Form 128, Previous to discharge or release from active duty, the question, "Do you wish assistance in securing employment," may be answe either "yes" or "no". If the answer is "yes"; this headquarters will make arrangements for you to be interviewed by the employment service, previous to your discharge or release.

7. LOST: One (1) green canvas suit bag, containing 1 officers blouse and 2 civilian suits. Finder please return to Lt. Frankfort, Battery B, 71st CA (A.).

8. MOVIES: Tonight "INTERNATIONAL LADY" w/ George Brent, Ilona Massey, Basil Rathbone and Glen Lockhart.

9. RELIEF FROM SPECIAL DUTY: Sgt. William H. Dean, 6766799-RAR, 1327th Servi Unit is relieved from special duty with the Military Police Detachment effective this date.

10. SPECIAL DUTY: Sgt. William H. Dean, 6766799-RAR, 1327th Service Unit is detailed on special Duty at Post Headquarters effective this date.

11. POST EXCHANGE NOTICE: "All Organization Commanders of the 246th CA and attached units will return to the Post Exchange Office all unissued coupon books and signed BREMS not later than 4.00 PM this date."

"Organization Commanders of the 71st CA may draw coupon books at the Post Exchange Office between the hours 1.30 PM and 4.00 PM today. Unissued coupon books and BREMS will be returned to the Post Exchange Office between the hours 8.00 AM and 11.00 AM; 1.30 PM and 4.00 PM, Tuesday, October 21, 1941."

12. SICK CALL: "Attention of all personnel is directed to the Army Regulation requiring all persons coming to a Regimental Dispensary Sick Call or coming through a Regimental Dispensary to the Station Hospital to present their 258 form before receiving any medical attention.

This is necessary to protect both the individual and the government by keeping in one place, on the 258 form, a complete chronolological record of diseas injuries, and treatment incurred in service."

NOTE- A COPY OF THIS DAILY BULLETIN WILL BE PLACED ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 246)

---T-U-E-S-D-A-Y---

October 21, 1941

1. DETAILS FOR WEDNESDAY, OCTOBER 22, 1941:
Officer of the Day ---------- Capt. George W. Boys, 71st CA
Medical Officer of the Day ---------- Capt. L.F. Rogel, MC 246th CA
Buglers of the Guard ---------- Pvt. Glenn, Battery C, 71st CA
Pvt. Brauer, Battery K, 246th CA

2. ADDITIONAL GUARD: The 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Wednesday, October 22, 1941, as prisoner guards.

3. EMPLOYMENT OF ENLISTED MEN RELEASED FROM ACTIVE DUTY: All enlisted men to be discharged or released from active duty are advised that the government has made available for their use an employment service for the purpose of providing assistance in employment. Your acceptance of this assistance is entirely up to you. In filling out DSS Form 128, previous to discharge or release from active duty, in question, "Do you wish assistance in securing employment", may be answered either "Yes" or "No". If the answer is "yes"; this headquarters will make arrangements for you to be interviewed by the employment service, previous to your discharge or release.

4. NOTICE: Personnel being admitted as patients to the Station Hospital, Fort Story, Virginia, will not bring their personal cars to the hospital with them, but will leave them in their battery area.

5. EMERGENCY CALLS; UTILITIES: Effective at once, all emergency calls for Utilities from 4:30 P.M., to 7:30 A.M., Monday through Friday, and from 12 noon Saturday and all day Sundays and Holidays, be placed at the Refrigeration Plant, 'phone 225.

6. CHANGE OF ADDRESS: Captain JOHN W. FARRELL, from: Bachelor Quarters "C" to: Traymore Apartments, Apt. B-2, Va. Beach, Va. Phone Va. Beach 1267-W.

7. BINGO PARTY: There will be a bingo party at the non-commissioned officers Club at 8:00 P.M., tonight. Refreshments will be served. Bring a new member.

8. TROUPERS CLUB: The Troupers Club of the Navy Y.M.C.A. in Norfolk, Va., will put on a number of vaudeville acts in the Service Club at 8:30 P.M., today. All members and friends of the garrison are most cordially invited.

9. DANCE; N.C.O. CLUB: There will be a dance at the non-commissioned officers Club Thursday night, October 23, 1941, at 8:00 P.M., in honor of the 71st Coast Artillery (AA). Refreshments will be served commencing at 7:30 P.M.

10. SAFETY OFFICER: Major PETER J. STEVENSON, 71st CA is detailed as Safety Officer for the firing of the 6 inch guns at Fort Story, Va., 10:00 A.M., October 22, 1941.

11. MOVIE: Tonight. "WILD GEESE CALLING" w/ Henry Fonda - Joan Bennett and Warren Williams.

12. OFFICER'S CLUB MEMBERS: Stag Party tonight beginning about eight o'clock or earlier. Bridge and other games in order. Those who wish to play "Draw Bridge" might help by bringing the necessary accessories to the game. This is a splendid apportunity for the officers of the post to become better acquainted and converse if cards are "against your religion".

Halloween Dance, Saturday night of this week. Simple costumes desirable, but not required. Paul Jones is promised. New officers come and meet your fellow officers and their families.

13. NOTICE: Immediate compliance with Paragraph 4, Daily Bulletin No. 234, dated October 7, 1941, and paragraph 3, Daily Bulletin No. 236, dated October 9, 1941, is requested.

14. SPECIAL DUTY: Private JESSE M. POLLARD, 33041164, Battery K, 246th CA is detailed on special duty with the Post Fire Department vice Pvt. 1cl LOLLON J. BRINDLE, 20367717, Battery K, 246th CA relieved effective this date.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 247)

---W-E-D-N-E-S-D-A-Y--- October 22, 1941

1. DETAILS FOR THURSDAY, OCTOBER 23, 1941:
Officer of the Day ---------- Capt. John W. Squire, 246th CA
Medical Officer of the Day ---------- 1st Lt. Jack E. Torin, 71st CA MC
Buglers of the Guard ---------- Pvt. Foote, Battery E, 246th CA
Pvt. Henry, Battery D, 71st CA

2. ADDITIONAL GUARD: The C.O. Battery B, 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Thursday, October 23, 1941, as prisoner guards.

3. CORRECTION; PAR. 2, D.B. NO. 246: So much of Par. 2, D.B. No. 246, dated October 21, 1941, as pertains to "Prisoner Guards" is amended to read "The 71st CA".

4. DISPLAY, OFFICER'S UNIFORMS: Representative of Shulman and Company will display Officers uniform in Bachelor Quarters "C" Tuesday, October 28th.

5. RED CROSS FIRST AID CLASS: A Red Cross first aid class will be conducted by Major TODD, retired Army Doctor, at the Presbyterian Church at 36th and Pacific Streets, Virginia Beach, Va., beginning at 7:45 P.M., this evening. All American Citizens are eligible to take this course. This invitation includes men as well as women. The course will be completed prior to Christmas. A shorter course covering the motor corps will also be conducted.

6. FOR RENT: New furnished Apartments, 4-rooms. Rent weekly, monthly or yearly. Winter rates $45.00 per month. Also additional rooms in steam heated building, maid service-$15.00 per month. Apply Ocean Terrace Hotel, Va. Beach, Va., 'phone 355.

FURNISHED COTTAGE - 114th Street, Virginia Beach. Large living room and dining room (together), 2-bedrooms, kitchen, bath, porch, automatic oil burner heat, hot water heater, new electric frigerator, new hotpoint electric stove, furnished in maple, available November 1st, $75.00 per month. Call Mrs. F.H. ROBINSON, 'phone Norfolk 32031 or 43987 after 6:00 P.M.

7. RELIEF FROM SPECIAL DUTY: The following named enlisted men of the 246th CA are relieved from special duty with the Military Police Detachment, effective this date:

Pvt. WILLIAM A. SHEPHERD, 20367971, Battery A
Pvt. WILLIAM E. MOORE, 33040148, Battery C
Pvt. EDWARD D. TABOR, 33045055, Battery C

8. SPECIAL DUTY: The following named enlisted men of the 246th CA are detailed on special duty with the Military Police Detachment, effective this date:

Pvt. THURMAN S. CRUMP, 33040231, Battery A
Pvt. EDWARD E. TYREE, 20368276, Battery C
Pvt. ARTHUR M. WORRELL, 33045085, Battery C

9. ALL UNIT AND BATTERY COMMANDERS: The attention of all unit and battery commanders is directed to the prices in AR 30-3000, dated August 4, 1941, and AR 30-3010, dated September 12, 1941. These prices are now in effect and prices in Army Regulations other than the ones referred to will not be used.

10. CHILDRENS CHOIR: The Children's Choir of Fort Story, Va., will meet on Friday instead of Thursday.

By order of Col. HENDON:

E. G. MULLING,
Captain, A. G. D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-H-U-R-S-D-A-Y--- October 23, 1941
NO. 248)

1. DETAILS FOR FRIDAY, OCTOBER 24, 1941:
Officer of the Day ---------- Capt. H.H. Coleman, 246th CA
Medical Officer of the Day --------- 1st Lt. Herbert S. Raines, 160th S.U.
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

2. ADDITIONAL GUARD: The C.O. Battery C, 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Friday, October 24, 1941, as prisoner guards.

3. CLOTHING SALVAGE INSPECTOR: Major M.G. RAMEY, F.A. 1327th S.U. is detailed as Inspector for salvaged clothing of the 1327th Service Unit.

4. ALL ORGANIZATIONS: A report will be submitted to the Post Quartermaster not later than Friday, October 24th, showing the amounts on hand of the following items: Foot lockers, Wall lockers, Mattresses, Pillows and cots, folding, steel.

5. AMERICAN RED CROSS MEETING: You are invited to attend the annual meeting of the Princess Anne County chapter, American Red Cross, on October 28th, at 7:00 P.M., in the Social Hall of the Virginia Beach Presbyterian Church.

Feature attractions of the evening will include a mock radio skit, and demonstrations by uniform volunteer personnel and men of the armed forces. Supper will be served (30¢). Notify Red Cross Representative at Virginia Beach Presbyterian Church if you will attend. Telephone 571-J.

6. SPECIAL DUTY: The following named enlisted men of the 71st CA are detail on special duty with the military police detachment, effective this date:

Pvt. BERNARD M. WARD, 33001997, Battery A
Pvt. JOHN S. PAPANIA, 33009608, Battery A
Pfc. JOHN F. WHALEN, 33031707, Battery D
Pvt. WILLIAM W. AIKEN, 33026446, Battery D
Pvt. JOSEPH JOCUNSKAS, 33031803, Battery D
Pfc. RAYMOND W. MATCZAK, 33026666, Battery E
Cpl. THADDEUSS GRABINSKI, 33032088, Battery E
Cpl. JOHN P. METZ, 33032698, Battery H.
Pvt. M.A. STEFANICK, 33020893, Battery H
Pvt. JOSEPH A. REMMELIN, 33027284, Reg. Hq. Btry.
Pvt. HOMER R. SPRINKLE, 33043290, Hq. Btry., 1st Bn
Pfc. JOHN MATHIAS, 33030716, Hq. Btry., 1st Bn.

Private FRANK W. MILNER, 33032787, Battery E, 2nd CA is detailed on special duty with the Post Fire Department vice Private JAMES J. FLYNN, 13005078, Battery E, 2nd CA relieved, effective this date.

7. CHANGE IN EDUCATIONAL EXAMINATION FOR FLYING CADET APPOINTMENT: Immediate Action letter, Headquarters Third Corps Area, file 341.1-Flying Cadet Rctg. subject as above, dated June 7, 1941, is on file at this headquarters and may be referred to by anyone interested.

8. MOVIE: Tonight. "SUN VALLEY SERENADE" w/ Sonja Henie - John Payne - Glenn Miller's orchestra.

9. CHANGE OF ADDRESS: Lieut. JAMES T. EWELL, Ord. Dept. from: 1015 - 50th Street, Norfolk, Va., to: 53 E. Lakeside Avenue, Virginia Beach, Va.

10. EMERGENCY CALLS; CORRECTION: Paragraph No. 5, D.B. No. 246, dated Oct. 21 1941, as reads 'phone 225 is amended to read "'phone 255.

11. FATIGUE DETAILS: The C.O. of the following listed organizations will detail the enlisted men indicated to report to the Police and Prison Officer at the Provost Marshal's Office 1:00 P.M. today:

Battery K, 246th CA -------- Three (3) NCO's and ten (10) men
Battery E, 246th CA -------- Ten (10) men

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---F-R-I-D-A-Y--- October 24, 1941
NO. 249)

1. DETAILS FOR SATURDAY, OCTOBER 25, 1941:
Officer of the Day ---------- Capt. T.M. Nance, 246th CA
Medical Officer of the Day ---------- 1st Lt. Carl A. Wirts, MC 159th SH
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. ADDITIONAL GUARD: The C.O. Battery , 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Saturday, October 25, 1941, as prisoner guards.

3. COURT MARTIAL JURISDICTION: War Department General Order No. 10, September 10, 1941, authorizes the Commanding General, Third Coast Artillery District to exercise General Court-Martial jurisdiction over troops of the Third Coast Artillery District.

All Court-Martial records pertaining to troops of the Third Coast Artillery District, heretofore forwarded to Third Corps Area will in the future be forwarded to Headquarters Third Coast Artillery District.

4. ATTACHED FOR RATIONS AND QUARTERS: The 12 men of the 71st CA detailed on special duty with military police by paragraph 6, D.B. No. 248, October 23, 1941, are attached to the 1327th Service Unit for rations and quarters, effective with breakfast today.

The following named enlisted men of the 246th CA are attached to the 1327th Service Unit for rations and quarters, effective with breakfast Saturday, October 25, 1941:

Pvt. THURMAN S. CRUMP, 33040231, Battery A
Pvt. EDWARD E. TYREE, 20368276, Battery C
Pvt. ARTHUR M. WORRELL, 33045085, Battery C

5. RELIEF FROM ATTACHMENT: The following named enlisted men of the 246th CA are relieved from attached to the 1327th Service Unit for rations and quarters, effective with breakfast Saturday, October 25, 1941:

Pvt. WILLIAM A. SHEPHERD, 20367971, Battery A
Pvt. WILLIAM E. MOORE, 33040148, Battery C
Pvt. EDWARD D. TABOR, 33045055, Battery C

Private lcl GEORGE T. FEIGLEY, 7026150, Company A, 80th Qm is relieved from attached to Battery E, 2nd C.A. for rations and is attached to the 1327th Service Unit for rations, effective 6:00 A.M., Saturday, October 25, 1941.

6. POST EXCHANGE NOTICE: The Management of the Bayne Theater has called to the attection of the Exchange Officer the fact that "Fort Story Block Tickets" for Military Personnel are falling into the possession of Civilians and are being presented by them for theater admission.

Attention is directed to the fact that these tickets are for the exclusive use of Military Personnel and dependent members of their families. Future abuse of this privilege will result in the withdrawal of the reduced rate.

7. APPEARANCE OF PRISONER GUARDS: Prisoner guards have been reporting for duty in improper uniform and presenting a general untidy appearance. Organization commanders are directed to take necessary steps to correct this condition.

8. CHANGE OF ADDRESS: Captain JOHN H. GRUVER, 71st CA (AA) from: 118th St., Va. Beach, 'phone 1353-W to: 203 Avenue A, Va. Beach, Va., 'phone 559.

9. ATTACHED FOR RATIONS: The following named enlisted men of the 71st CA are attached to the Station Hospital for rations, effective with noon meal today:

Pvt. lcl FRANK SOLOMAN, 33008850, Hq. Btry 2nd Bn.
Pvt. lcl GEORGE TOMCHICK, 33026432, Hq. Btry 2nd Bn.
Pvt. CHARLES HILLIARD, 33013389, Hq. Btry. 2nd Bn.
Sgt. ANTHONY C. CHUCHECK, 13002139, Battery E
Pvt. lcl FRANK DURAND, 33044104, Battery F
Pvt. JAMES T. WATSON, 33040448, Battery F
Pvt. ALEXANDER C. BOGDANSKI, 33026619, Battery G
Pvt. JOSEPH MADERO, 33003947, Battery G
Pvt. WALTER KURKO, 33026649, Battery G
Sgt. EARL KEMMERER, R-3528134, Battery H

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---S-A-T-U-R-D-A-Y--- October 25, 1941
NO. 250)

1. DETAILS FOR SUNDAY, OCTOBER 26, 1941:
Officer of the Day ----------1st Lt. L.B. Wilson, QMC 1327th S.U.
Medical Officer of the Day ---------1st Lt. John D. Snider, MC 150th S.U.
Bugler of the Guard ----------Pvt. Brauer, Battery K, 246th CA

2. DETAILS FOR MONDAY, OCTOBER 27, 1941:
Officer of the Day ---------- Capt. E.B. Miars, Inf., 1327th S.U.
Medical Officer of the Day --------- Capt. H.A. Sapira, MC 246th CA
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

3. ADDITIONAL GUARD: The C.O. Battery K, 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Monday, October 27, 1941, as prisoner guards.

4. OPERATION OF FURNACES: Each battery commander will be held responsible for the care and operation of furnaces and hot water heaters in his buildings. A school of instruction will be held in the 246th CA Assembly Hall at 10:00 A.M., Monday, October 27, 1941. Each battery commander should have the detail he designates to operate these units present at that time.
Mr. THOMAS, the Utilities Representative will instruct these men.

5. LADIES BRIDGE TEA: The regular ladies bridge tea will be held Monday at the Officer's Club. Hostesses will be Mrs. GANTT and Mrs. GRUVER.

6. ATTENTION MOTHERS: There will be a nursery school held every Monday, Wednesday and Friday at the 71st CA Recreation building from 1:00 to 5:00 P.M. Mrs. LEONARD will supervise. For further details call any of the following:

Chaplain POCH - Fort Story, Va. 'phone 81
Mrs. J. COX, Va. Beach, Va. 'phone 48W11
Mrs. J. NELSON, Va. Beach, Va. 'phone 1114-W

7. CORRECTION; ATTACHED FOR RATIONS: So much of Par. 10, D.B. No. 249, dated October 24, 1941, as reads "Battery G, 246th CA" is amended to read "The 1327th Service Unit".

8. MOVIE: Tonight. "TANKS A MILLION" w/ William Tracy - James Gleason and Noah Beery, Jr. Also "MOUNTAIN MOONLIGHT" w/ The Weaver Bros. and Elviria.
SUNDAY and MONDAY -"I WANTED WINGS w/ Ray Milland - William Holden - Constance Moore and Veronica Lake.

9. OFFICERS CLUB: Special attention to ladies exercise in slimming. Class to be held at the Officers Club every Tuesday and Friday from 11:30 A.M., to 12 noon. Class starts this Friday. Everyone interested be on hand ready to work.

10. LOST: Bulova Wrist watch, Serial No. 0617873, in or near Wible's Store. $5.00 reward if returned to Sergeant GLASS, Battery C, 246th CA.

11. OFFICERS CLUB MEMBERS: The Halloween Dance tonight will be with orchestra. Costumes or uniforms may be worn. Paul Jones dancing will be held to get all the new officers acquainted. Come one! Come all!
Officers are reminded of the "Stag Party" to be held next Tuesday night. The last one was a big success. Lets make this one equally so.

12. RELIEF FROM SPECIAL DUTY: Private CHARLES WAGNER, 33045210, Battery A, 246th CA is relieved from special duty with Post Headquarters, effective this date.

13. SPECIAL DUTY: Private EDWARD W. SNYDER, 33041157, Hq. Btry. 3rd Bn. 246th CA is detailed on special duty with the Post Fire Department vice Private 1cl LAWRENCE R. HUGHES, 20367747, Hq. Btry. 3rd Bn. 246th CA relieved, effective this date.

14. PARAGRAPH NO. 1, DAILY BULLETIN NO. 249: So much of Par. 1, D.B. No. 249, October 24, 1941, as pertains to "Officer of the Day" is amended to delete the name of Capt. T.M. NANCE, 246th CA and substitute the name of Capt. W.A. Garbee, 246th CA.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 252)

---T-U-E-S-D-A-Y---

October 28, 1941

1. DETAILS FOR WEDNESDAY, OCTOBER 29, 1941:
Officer of the Day ---------- Capt. T.M. Nance, 246th CA
Medical Officer of the Day ---------- 1st Lt. Herbert S. Raines, MC 160t
Bugler of the Guard ---------- Pvt. Kiernan, Battery C, 246th CA

2. ADDITIONAL GUARD: The C.O. Battery B, 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Wednesday, October 29, 1941, as prisoner guards.

3. POST EXCHANGE NOTICE: Change lists for the October 31st pay-day will be submitted to the Post Exchange not later than noon October 29th.

4. RELIEF FROM SPECIAL DUTY: The following named enlisted men of the 246th CA are relieved from special duty with the Harbor Entrance Control Post, effective this date:

Pvt. WALTER L. GRANT, 20367544, Hq. Btry.
Pvt. PAUL N. McMHORTER, 20367552, Hq. Btry.
Pvt. OTWA W. BELTON, 20367925, Hq. Btry., 1st Bn.

5. RED CROSS NOTICE: There will be a meeting in the Recreation Building of the 246th CA at 8:00 P.M., Tuesday, October 28, 1941, of all battery and other unit representatives, pertaining to instructions for the Annual Red Cross Roll Call beginning October 31, 1941.

The meeting will be short to enable all officers to attend the Stag Party at the Officers Club.

6. CHANGE OF ADDRESS: 1st Lieut. HERBERT S. RAINES, MC, 160th Station Hospital, from: 123rd Street, Va. Beach, Va. to: 113th Street, Va. Beach, Va. 'phone Va. Beach 1528-W.

2nd Lt. RICHARD F. GUERRANT, 246th CA, from : Bachelor Quarters "C" to: Pine Wood Hotel, Virginia Beach, Va. 'phone 296.

7. FOR RENT: Furnished house, near Fort Story, Va., 5-rooms, shower, all modern electrical appliances, $40.00 per month. See Capt. INNES, 1327th S.U.

8. BOWLING LEAGUE: The bowling league will start as soon as the bowling alleys open. All units who have not entered teams for this should do so at once.

9. AGENT FINANCE OFFICERS: The Agent Finance Officers of the 246th CA, Btry. "E" 2nd C.A., 159th Sta. Hosp., 160th Sta. Hosp. and the 1327th Service Unit will report at 10:00 A.M., October 30, 1941, to the Finance Officer, Fort Story, Virginia, for the purpose of securing checks covering October 1941, pay for troops of their respective organizations.

All Agent Finance Officers will report PROMPTLY at 9:45 A.M., October 31, 1941, to the Finance Officer, Fort Story, Va., for the purpose of securing funds for the payment of troops in their respective organizations.

Immediately after payment and not later than 4:00 P.M., October 31, 1941, all payrolls will be returned to the Finance Officer at Fort Story, Virginia.

10. REQUESTS FOR FERRY TICKETS: All requests for ferry tickets will be made to the Post Motor Transportation Officer at the Post Motor Pool, Telephone No. 256.

11. REQUESTS FOR MOTOR TRANSPORTATION: All requests for Motor Transportation will be made to the Post Motor Transportation Officer at the Post Motor Pool. Telephone No. 256.

12. MOVIE: Tonight. "NAVAL ACADEMY" w/ Freddie Bartholomew and Jimmy Lydon.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 253)

---W-E-D-N-E-S-D-A-Y---

October 29, 1941

1. DETAILS FOR THURSDAY, OCTOBER 30, 1941:
Officer of the Day ---------- Capt. Martin W. Richwine, 246th CA
Medical Officer of the Day ---------- Capt. L.F. Rogol, MC 246th CA
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. ADDITIONAL GUARD: The C.O. Battery C, 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Thursday, October 30, 1941, as prisoner guards.

3. LOST FT. STORY TAG: Anyone finding Fort Story Tag No. 579 is requested to turn same in to Post Headquarters.

4. RESTRICTED AREA: Due to health precautionary measures the following places are designated as "OFF LIMITS" to all members of this command:
LANDING INN - Cape Henry.
ENLISTED MEN'S CLUB - On highway No. 58 - just south of Portsmouth.

5. SPECIAL DUTY: Private CLAUDE E. DAVIS, 33040086, Battery A, 246th CA is detailed on special duty with the Enlisted Men's Service Club, effective this date.

6. ATTACHED FOR RATIONS: Private JAMES T. WATSON, 33040448, Battery F, 71st CA is attached to the Station Hospital for rations, effective with breakfast this date.

7. MOVIE: Tonight. "BROADWAY LIMITED" w/ Victor McLaglen - Dennis O'keefe - Patsy Kelly and Zazu Pitts.

8. SPECIAL PRIVILEGE PASSES (WHITE): Paragraph 1a (1) Section XIV, Post Standing Orders, Fort Story, Virginia, is changed as follows:

(1) (a) Commanders of Batteries, Detachments, and like units are authorized to issue special Privilege Passes to WELL TRAINED SOLDIERS of their organizations whose conduct warrants it. Special Privilege Passes may be issued to all members of the First Three Grades and to thirty percent (30%) of the remaining members of any organization. Holders are authorized to absent themselves from the Reservation between Retreat and Reveille on week days, and, from noon Saturdays to Reveille Mondays; from Retreat on the day before, and until Reveille on the day after a holiday, when not required for duty.

Necessary changes in Post Standing Orders will be made by all concerned.

9. FATIGUE DETAILS: The C.O. Battery C, 246th CA will detail six (6) men to report to Sgt. LaMOTT at the Ordnance Warehouse 7:30 A.M., Thursday, October 30, 1941.

10. OFFICERS CLUB: There will be a dance at the Officers Club Saturday night, November 1st. Orchestra.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE: POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-H-U-R-S-D-A-Y--- October 30, 1941
NO. 254)

1. DETAILS FOR FRIDAY, OCTOBER 31, 1941:
Officer of the Day ---------- Capt. J.F. Fitchett, 246th CA
Medical Officer of the Day --------- 1st Lt. Carl A. Wirts, MC 159th SH
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th CA

2. ADDITIONAL GUARD: The C.O. Battery E, 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Friday, October 31, 1941, as prisoner guards.

3. SPECIAL DUTY: Private JOHN D. BIBB, 20368279, Battery C, 246th CA is detailed on special duty at the Officers Club, Fort Story, Va., effective 6:00 A.M., November 1, 1941.

4. ATTACHED FOR RATIONS AND QUARTERS: Private EDGAR M. MOXLEY, 33009182, Battery C, 71st CA is attached to the 1327th Service Unit for rations and quarters, effective 4:00 P.M., October 29, 1941.

Private WALTER P. BOERNER, 1319th Service Unit, Fort Monroe, Va., is attached to Battery B, 246th CA for quarters and rations, effective after supper October 29, 1941.

5. FOUND: A bundle of laundry containing sheets, pillow cases, civilian trousers, shirts, undergarments, and other artilces of wearing apparel.
Upon identification owner may obtain same by applying at the Provost Marshal's Office.

6. LOST: Ring, Cornelia Stone, in yellow gold setting, near 246th CA parking area. Reward. Please return to Private ROUZER, Battery E, 2nd C.A.

7. ALL CONCERNED: In accordance with Post Standing Orders, all persons possessing dogs on the post must have them protected against rabies. Dogs not having tags showing innoculation within the last six months will be picked up and disposed of.

8. FOOTBALL: The Post Foot Ball Team will play the team representing the Naval Hospital of Portsmouth at the Virginia Beach Ball Park, Saturday night, November 1st. Admission will be twenty-five cents (25¢) to men in uniform. Transportation will handle as many men as possible to and from the game, leaving the 246th CA Recreation Hall at 7:00 P.M.

9. NOTICE: All members of the football squad who are attending the dance at the Hague Club in Norfolk, Va., tonight will report to Lieut. MECREDY, at Post Headquarters 7:30 P.M.

10. ORCHESTRA CONCERT: MORREY BRENNEN and his New York Orchestra, now playing at the Starlight Room of the Monticello Hotel in Norfolk will present a concert at the Service Club, Saturday night, November 2nd, at 7:30 P.M.

11. ORDNANCE SERVICE - FORT STORY: Requests for Ordnance Service and Supplies by organizations and individuals at Fort Story, will be made upon the Ordnance Officer at Fort Story. Direct requests from individuals or organizatio at this station, to the Ordnance Officer, Fort Monroe, is not authorized.

12. TROUSERS, COTTON KHAKI: Effective immediately, every enlisted man will have in his possession, at all times, in serviceable condition, 4 pairs trousers cotton, khaki.
A survey will be made and all unserviceable trousers, cotton, khaki will be disposed of and a requisition will be submitted to the Post Quartermaster so that every enlisted man will have the authorized allowance of this article.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---F-R-I-D-A-Y--- October 31, 1941
NO. 255)

1. DETAILS FOR SATURDAY, NOVEMBER 1, 1941:
Officer of the Day ---------- Capt. William A. Frantz, QMC 1327th
Medical Officer of the Day ---------- Capt. E.A. Sapira, MC 246th CA
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

2. ADDITIONAL GUARD: The C.O. Battery K, 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Saturday, November 1, 1941, as prisoner guards.

3. CONSERVATION OF PAPER: The following letter Headquarters Third Corps Area, file 462 General, 40 S-A, subject as above, dated October 25, 1941, is quoted for the information of all concerned:

"1. Attention is invited to Section III, Circular No. 214, W.D., dated October 10, 1941, which reads as follows:

"Procurement agencies have reported a criticial shortage of printing paper within the general range of book and writing papers. While there is no shortage of mimeograph paper at present, it has been observed that certain agencies are issuing Tables of Basic Allowances, Tables of Allowances, news releases, and other literature in mimeograph form, utilizing only one side of the paper. All concerned are enjoined to exercise the strictest economy in the use of paper of all kinds, and to reduce their requirements to a minimum by methods as follows:

Utilization of both sides of mimeograph paper if possible.
Reduction of margins to a minimum.
Economic arrangement of subject matter.
Strict adherence to bervity.".

2. These instructions will be strictly complied with by all concerned."

4. FOOTBALL: The Post Football Team will play the team representing the Naval Hospital of Portsmouth at the Virginia Beach Ball Park, Saturday night, November 1st. Admission will be twenty-five cents (25¢) to men in uniform. Transportation will handle as many men as possible to and from the game, leaving the 246th CA Recreation Hall at 7:00 P.M.

5. ORCHESTRA CONCERT: Morroy Brennon, and his New York Orchestra, now playing at the Starlight Room of the Monticello Hotel in Norfolk will present a concert at the Service Club, SUNDAY NIGHT, November 2nd, at 7:30 P.M.

6. SPECIAL DUTY: Private JOSEPH STRALIK, 33015287, Battery E, 2nd C.A. is detailed on special duty with the Utilities Officer for a period of one (1) month, effective Monday, November 3, 1941.

7. MOVIE: SATURDAY NIGHT, November 1st. "PRIVATE NURSE" w/ Brenda Joyce - Jane Darwell and Sheldon Leonard. Also "THE SMILING GHOST" w/ Wayne Morris - Brenday Marshall and Alan Hale.

8. ATTACHED FOR RATIONS AND QUARTERS: Sgt. R.J. WICKHAM, 2nd Air Warning Company, Mitchell Field, N.Y., is attached to the 1327th Service Unit for rations and quarters, effective with the noon meal, October 30, 1941.

9. MOVIE: Tonight. "TWO LATINS FROM MANHATTAN" w/ Joan Davis - Don Beddoe and Joan Woodbury.

10. MONTHLY REPORTS: All monthly reports will be submitted to this headquarters by special messenger if necessary, not later than 2:00 P.M., today.

11. HALLOWEEN PARTY: To be held at the Service Club tonight from 8:00 to 11:00 P.M. There will be round and square dancing. Admission will be by pass only. Proper uniform will be worn.

(OV)

ADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---S-A-T-U-R-D-A-Y--- November 1, 1941
NO. 256)

1. DETAILS FOR SUNDAY, NOVEMBER 2, 1941:
Officer of the Day ---------- 2nd Lt. Edward J. Lawlor, QMC, 1327th
Medical Officer of the Day ---------- Capt. G.R. Gallagher, MC 160th S.H.
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

2. DETAILS FOR MONDAY, NOVEMBER 3, 1941:
Officer of the Day ---------- 2nd Lt. Wm. T. Tilden, QMC, 1327th SU
Medical Officer of the Day ---------- 1st Lt. J.D. Snider, MC 159th S.H.
Bugler of the Guard ---------- Pvt. Wood, Battery B, 246th CA

3. ADDITIONAL GUARD: The C.O. Battery A, 246th CA will detail seven (7) men to report to the guardhouse at 7:00 A.M., Monday, November 3, 1941, as prisoner guards.

4. FOOTBALL: The Post Football Team will play the team representing the Naval Hospital of Portsmouth at the Virginia Beach Ball Park, tonight. Admission will be .25¢ to men in uniform. Transportation will handle as many men as possible to and from the game, leaving the 246th CA Recreation Hall at 7:00 P.M.

5. ORCHESTRA CONCERT: Morrey Brennen, and his New York Orchestra, now playing at the Starlight Room of the Monticello Hotel in Norfolk will present a concert at the Service Club, SUNDAY NIGHT, November 2nd, at 7:30 P.M.

6. SPECIAL DUTY: The following named enlisted men of the 246th CA are detailed on special duty with the Utilities Officer, as painters, effective Monday, November 3, 1941:
Pvt. lcl C.E. PARKS, 3304613, Battery K
Pvt. A.V. BURNETT, 33045056, Battery A
Pvt. lcl E.L. CARTER, 20368620, Battery E
Pvt. lcl B.H. HAYSLETT, 20360633, Battery E
Pvt. W.L. BELCHER, 33045281, Battery E

7. EXTENSION OF TOURS OF ACTIVE DUTY, RESERVE OFFICERS: The following letter Headquarters Third Corps Area, file 210.31-Reserve, subject as above, dated October 29, 1941, is republished for the information and guidance of all concerned:
"REMYRAD DATED NINETEEN SEPTEMBER NINETEEN FORTY ONE NO MEDICAL CORPS OFFICERS AVAILABLE AS REPLACEMENTS STOP EXTENDED ACTIVE DUTY EXTENSIONS SHOULD BE EFFECTED FOR ALL MEDICAL CORPS OFFICERS WITH OR WITHOUT OFFICERS CONSENT"

8. NON-PILOT FLYING TRAINING IN OFFICER GRADE IN BOMBARDIERING AND IN NAVIGATION: The following Immediate Action Letter W.D., October 25, 1941, file A.G. 210.4 (10-14-41) MT M, is quoted for information and guidance:
(1) Non-pilot flying training with the Army Air Corps in officer grade, in bombardiering and in navigation is now available for Reserve and National Guard Officers.
(2) The following eligibility requirements are prescribed for candidates desiring to undergo these Air Corps non-pilot flying courses:
a. Recommended by their military superiors for such duty.
b. Have an efficiency rating acceptable to the Chief of the Air Corps
c. Citizens of the United States for not less than 10 years immediately preceding assignment of training.
d. Must agree to serve three years on extended active duty with the Air Corps after successful completion of such training.
e. Must meet the educational requirements prescribed for Aviation Cadets for such training.
f. Must not have passed their 27th birthday.
g. Physically qualified for such training.
(3) Students undergoing training will have the status of student officers and during the period of the course of instruction will receive authorized flight pay in addition to their regular pay and allowances. The scope of training is threefold and is designed to qualify candidates in the technical duties of a bombardier and/or navigator, and in aerial gunnery (flexible), so as to be an officer member of an Air Force combat team.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---M-O-N-D-A-Y--- November 3, 1941
NO. 257)

1. DETAILS FOR TUESDAY, NOVEMBER 4, 1941:
Officer of the Day ---------- 1st Lt. L.R. Harkness, FA 1327th SU
Medical Officer of the Day ---------- 1st Lt. Herbert S. Raines, MC 160th
Bugler of the Guard ---------- Pvt. Kiernan, Battery C, 246th CA

2. VALUE OF RATION: The value of the garrison ration of Fort Story for the month of November 1941, is .5253.

3. RELEASE OF ENLISTED MEN DURING THE REMAINDER OF THE CALENDAR YEAR 1941: The following War Department radiogram dated October 28, 1941, is repeated for the information and guidance of all concerned:

"Men enlisted in the National Guard of the United States who are released to State Control as provided in paragraph 4 c (5) of letter AG 324.71 (8-28-41) EA-A, dated August 29, 1941, and will not repeat not be discharged stop paragraph 159 a of AR 130-10 is modified accordingly."

A notation will be entered in the service record that the period of training and service has been extended eighteen (18) months by Executive Order No. 8862, approved August 21, 1941.

4. CHEVRONS: The wearing by enlisted men of any chevron or insignia denoting specialist ratings is unauthorized and will be discontinued.

Enlisted men who now have any chevron or insignia designating specialist ratings displayed on any part of the uniform will have same removed immediately.

5. SAFEGUARDING MILITARY PROPERTY: It has been brought to the attention of this headquarters that in several instances organization and staff departments were not taking precautions for the proper safeguarding of Government property. Buildings, when checked, have been found unlocked, with rifles in rifle racks, and personnel absent from the premises.

Commanding officers of organizations and staff departments will take necessary measures to properly safeguard all buildings where Government property or military records are kept. Doors will be locked and in no instances will rifles be left unguarded. Personnel of the 71st Coast Artillery (AA), left at this garrison as barracks guards, are charged with safeguarding property of that regiment.

6. ATTACHED FOR RATIONS: Private CARMEN AZZERA, 33026573, Battery A, 71st CA is attached to the 1327th Service Unit for rations, effective 8:30 A.M., Sunday, November 2, 1941.

7. ORDERLIES: Orderlies will report to Post Headquarters at 5:00 P.M., daily, in addition to other normally scheduled trips, for the purpose of securing correspondence which arrives from Fort Monroe, Virginia, via courier about 4:15 P.M., and also which arrives on the last mail from the Post Office.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 258)

---T-U-E-S-D-A-Y---

November 4, 1941

1. DETAILS FOR WEDNESDAY, NOVEMBER 5, 1941:
Officer of the Day ---------- 2nd Lt. P. R. Bickford, QMC, 1327
Medical Officer of the Day ---------- Capt. Donald Donley, MC 246th CA
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. ATTACHED FOR RATIONS: Private JAMES T. WATSON, 33040448, Battery F, 71st CA is attached to the Det. Med. Dept., 1327th Service Unit, for rations, effective November 3, 1941.

3. 246th CA, DENTAL PATIENTS: Sick call for dental patients of the 246th CA will now be held at the Dental Infirmary, Station Hospital, by Lieut. TINSLEY. Time will remain set at 8:00 a.m., Wednesdays and Saturdays, and 1:00 p.m all other week days.

For the convenience of those patients with appointments and for examination, an ambulance will leave the 246th Infirmary "A" at 7:45 a.m., and 12:45 p.m., daily, except Wednesdays and Saturdays, when the ambulance leaves at 7:45 a.m., only. Those missing the ambulance will be responsible for their own method of transportation.

4. LANDING INN RESTRICTIONS: The restrictions placed on LANDING INN, Cape Henry, Va., by Par. 4, D.B. No. 253, October 29, 1941, are removed.

5. FATIGUE DETAILS: The C.O. Battery K, 246th CA will detail three (3) men (with rakes) to report to Lieut. HARKNESS at the main Post Exchange building 1:00 p.m., today.

The C.O. Battery B, 246th CA will detail ten (10) men to report to Lieut BICKFORD, at the old Theater building, 71st CA area, 1:00 p.m., today.

6. CONFINEMENT OF ENLISTED MEN: It is directed that in the future whenever an enlisted man is confined in the Guard House, that three copies of the confinement orders be prepared; two copies to be furnished Post Headquarters and one copy filed at the Guard House.

7. COMMISSARY CREDIT AT FORT MONROE COMMISSARY: Credit at the Fort Monroe Commissary must be established by letter each month for enlisted men. All enlisted men who have submitted orders to be filled this week must have their lette authorizing credit in this headquarters not later than 2:00 p.m., today. Failure to do this will result in your order remaining unfilled.

8. ADDITIONAL FATIGUE: The 246th CA will detail two (2) NCO's and sixteen (16) men to report to the Police and Prison Officer at the Provost Marshal's Office, 1:00 p.m., today.

By order of Col. HENDON:

MYRAH B. FIELDS,
1st Lt. C. A. C.,
Asst. Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 259)

---W-E-D-N-E-S-D-A-Y--- November 5, 1941

1. DETAILS FOR THURSDAY, NOVEMBER 6, 1941:
Officer of the Day ---------- 1st Lt. J.P. Leary, Inf. 1327th SU
Medical Officer of the Day ---------- 1st Lt. Carl A. Wirts, MC 159th SH
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th CA

2. IMPROPERLY COOKED FRESH PORK: It has been observed by Inspectors of the Medical Corps, that fresh pork and fresh pork products have been insufficiently cooked. Fresh pork and fresh pork products will be cooked or fried to that extent that all pink coloration therein be eliminated for the prevention of trichinosis, tape-worm and swine measles.

3. OFFICERS PAY AND ALLOWANCE ACCOUNTS: In the preparation of pay and allowance accounts of commissioned officers (War Department Form No. 336) of all components who are on active duty, there will be entered in Item (1) the component to which the officer belongs, viz:

To: John Doe,	Major, CA (RA)	0-15342	(1)
(Name of payee)	(Rank and Org.)	(Serial No.)	
John Doe,	Major, 71st CA (AA) (RA)	0-15342	(2)
Richard Roe,	Major, 71st CA (AA) (OR)	0-16532	(3)
Richard Roe,	Major, 246th CA (HD) (NG)	0-250582	(4)
John Doe,	2nd Lt. 246th CA (HD) (OR)	0-356451	(5)

4. ATTACHMENT FOR RATIONS: Eight (8) enlisted men (Trainees) of Fort Eustis, Virginia, are attached to the 1327th Service Unit for rations, effective with the noon meal Friday, November 7, 1941.

Eleven (11) enlisted men of the 71st CA are attached to the 1327th Service Unit for rations, effective with breakfast Thursday, November 6, 1941.

Private PETER R. KUTCH, 33013251, Battery F, 71st CA (AA) is relieved from attached to the 1327th Service Unit for rations, and is attached to the Det. Med. Dept., 1327th Service Unit for rations, effective with the noon meal, today.

5. POST EXCHANGE NOTICE: Coupon books may be procured from Lieut. HARKNESS, at the Post Exchange Office starting today.

6. BASEBALL MOVIES: Two American baseball movies, sound, will be shown at the Post Theater at 1:00 p.m., this afternoon. These films are "Touching all Bases" and first century baseball. These are fine pictures. No admission charge.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-H-U-R-S-D-A-Y--- November 6, 1941
NO. 260)

1. DETAILS FOR FRIDAY, NOVEMBER 7, 1941:
Officer of the Day ----------1st Lt. Wm. E. Dickerson, CAC 1327th
Medical Officer of the Day ---------1st Lt. John D. Snider, MC 159th SH
Bugler of the Guard ----------Pvt. Bateman, Battery A, 246th CA

2. FURLOUGH ALLOWANCES: The following letter Headquarters First Army, Hoffman, North Carolina, file 246.81, x 120.12, subject as above, dated October 29, 1941, is republished for the information and compliance of all concerned:

"1. The preparation of final statements without the inclusion of all unpaid furlough certificates covering furloughs granted prior to discharge, has resulted in thousands of claims and endless correspondence connected therewith.

"2. Immediate instructions will be issued to all concerned that final statements and final payrolls will not be completed until each soldier to be discharged has been interrogated relative to this matter."

3. SPECIAL DUTY: The following named enlisted men of the 159th Station Hospital are detailed on special duty with the 246th CA band effective this date:

Private JOHN D. DEMIANKOW, 33037872
Private EDWARD S. GLADYSZ, 33037922

4. ATTACHMENT FOR RATIONS AND QUARTERS: The following named enlisted men of the 159th Station Hospital are attached to the 246th CA band for quarters and rations effective with supper meal this date:

Pvt. JOHN L. DEMIANKOW, 33037872
Pvt. EDWARD S. GLADYSZ, 33037922

5. ATTACHMENT FOR RATIONS: The following named enlisted men of the 71st CA are attached to the 1327th Service Unit for rations effective with the noon meal today:

Pvt. ROBERT H. MURPHY, 6979286 Pvt. DONALD E. PRIDDY, 6662726
Pvt. GEORGE W. BURNETT, 12024610 Pvt. WILFORD C. WILLIAMS, 16025092
Pvt. OWEN D. JACKSON, 14041650

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HF ARTERS FORT STORY
FOR STORY, VIRGINIA

LY BULLETIN)

262)

---S-A-T-U-R-D-A-Y---

November 8, 1941

1. DETAILS FOR SUNDAY, NOVEMBER 9, 1941:

Officer of the Day ---------- 1st Lt. R.G. Stover, CWS, 1327th SU
Medical Officer of the Day --------- 1st Lt. H.S. Raines, MC, 160th S.H.
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. DETAILS FOR MONDAY, NOVEMBER 10, 1941:

Officer of the Day ---------- Capt. Otis D. Smith, INF. 1327th
Medical Officer of the Day ---------- Capt. G.R. Gallagher, MC, 160th SH
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th CA

3. NORTHWESTERN UNIVERSITY GRADUATES, OR STUDENTS: The Alumni Association Northwestern University desires information about its men in military service. All Northwestern University graduates or previous students will submit names to the Personnel Adjutant, by November 12, 1941.

4. SPECIAL DUTY: Private VIRGIL W. SPURLOCK, 33040326, Battery E, 246th CA detailed on special duty with the Post Motor Pool, as truck driver, vice Pvt. JOSEPH R. SIMPSON, JR., 20368614, Battery E, 246th CA relieved, effective this date.

5. RELIEF FROM SPECIAL DUTY: The following named enlisted men of the 246th are relieved from special duty with the Post Fire Department, effective Monday, November 10, 1941:

Pvt. HOWARD T. TRENOR, 20368916, Hq. Btry. 1st Bn.
Pvt. MELVIN E. MURPHY, 33040228, Battery C
Pvt. EARL J. BLANKENSHIP, 33045090, Battery A
Pvt. lcl JAMES L. FRANKLIN, 20368172, Battery B
Pvt. FREDERICK C. MOTT, 33040265, Battery K
Pvt. EDWARD W. SNYDER, 33041157, Hq. Btry. 3rd Bn.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 5)

M O N D A Y — November 10, 1941

1. ARMISTICE DAY: Tomorrow being Armistice Day, legal and post holiday, the Main Store and all branches of the Post Exchange and concessions will be closed for the Day.

2. CHANGES OF ADDRESS: Captain MARTIN W. RICHWINE, Jr., 246th CA from: Officers Quarters "C" to: 123rd Street, Virginia Beach. Telephone Va. Beach 5691.

3. FOOTBALL PRACTICE: There will be football practice this afternoon at 1:30 p.m., as usual.

4. NORFOLK DANCE: The City of Norfolk will sponsor a dance for soldiers at the City Auditorium Tuesday, November 11th from 8:00 to 11:00 p.m. Transportation will leave from the Service Club at 7:15 p.m. No passes will be required. Admission however, will be restricted to men in proper uniform.

5. SERVICE CLUB ACTIVITIES: Wednesday, November 12, 1941, The EVA MORRIS School of Dancing will give a vaudeville performance to which all members of the command are most cordially invited. No admission charge.

6. MOVIES: Tonight. "PARSON OF PANAMINT" w/ Charlie Ruggles - Ellen Drew and Phillip Terry.

WEDNESDAY, Nov. 12th. "LIFE BEGINS FOR ANDY HARDY" w/ Mickey Rooney - Lewis Stone and Judy Garland.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 263)

---M-O-N-D-A-Y---

November 10, 1941

1. DETAILS FOR TUESDAY, NOVEMBER 11, 1941:
Officer of the Day ---------- 1st Lt. L.P. Wilson, QMC 1327th SU
Medical Officer of the Day ---------- Capt. H.A. Sapira, MC 246th CA
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

2. DETAILS FOR WEDNESDAY, NOVEMBER 12, 1941:
Officer of the Day ---------- Capt. H.H. Coleman, 246th CA
Medical Officer of the Day ---------- Capt. Donald Donley, MC 246th CA
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

3. CERTIFICATE OF CLEARANCE - OFFICERS: All officers on duty at this station are reminded that clearances from the post must originate at Post Headquarters. Difficulty has been experienced in the past in officers originating their clearances at regimental headquarters or with the Regimental Personnel Adjutants. This practice is entirely in error for it has been noted that at times the incorrect form has been accomplished and submitted. In order to insure the correct data being forwarded to the proper new station of the officers concerned, all officers of this command when ordered to new stations will secure the correct forms at post headquarters and assure themselves that the proper data is recorded on same.

4. SHOES, GARRISON: Pursuant to instructions contained in letter, Office of The Quartermaster General, Washington, D.C., dated October 28, 1941, File QM 421 S-CE, Subject: "Issue of Shoes, Garrison". Issue of 1 pair of shoes, garrison, is authorized to be issued ONLY to:

Air Corps Personnel
Enlisted Men in fixed hospitals
Military police

on the basis of one pair per Enlisted Men in lieu of one pair of shoes, service. Other issues of shoes, garrison will be made only upon a medical certificate.

5. FIRING SCHEDULE: Notice of scheduled firing will be submitted to this headquarters as far in advance of the actual date of execution as is practicable. In any instance report will be made not later than seventy-two (72) hours prior to the firing date. This is the absolute minimum allowable time and will be rigidly adhered to.

6. CORRECTION; RELIEF FROM SPECIAL DUTY: So much of Par. 5, D.B. No. 262, dated November 8, 1941, as pertains to Pvt. FREDERICK C. MOTT, 33040265, Battery K, 246th CA is corrected to read "Pvt. JESSE M. POLLARD, 33041164, Battery K, 246th CA.

7. CORRECTION; PAR. 2, D.B. No. 262: So much of Par. 2, D.B. No. 262, dated November 8, 1941, as pertains to "Officer of the Day" is amended to delete the name of Capt. Otis D. Smith, Inf. 1327th Service Unit, and substitute the name of Capt. WILMER C. McCALL, 2nd C.A.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 264)

---W-E-D-N-E-S-D-A-Y--- November 12, 1941

1. DETAILS FOR THURSDAY, NOVEMBER 13, 1941:
Officer of the Day ---------- Capt. Martin W. Richwine, 246th CA
Medical Officer of the Day ---------- Capt. L.F. Rogel, MC 246th CA
Bugler of the Guard ---------- Pvt. Kiernan, Battery C, 246th CA

2. FOOD POISONING RESULTING FROM USE OF CERTAIN FOOD CONTAINERS: It has been reported to this headquarters that considerable food poisoning has been traced to organizations using a certain commercial container in which citrus drinks were prepared and transported to troops in the field. This commercial container bears the following label:

HOT AER VOID COLD
Reg. U. S. Pat. Off.
Food or liquid Carrier
Vacuumized and Sealed under the
John L. Fate Patents
Vacuum Can Company - Chicago, U. S. A.

All organizations are warned against the use of this container in the connection with the preparation of and as a receptacle for drinks made from citrus fruits, as well as the use of any other galvanized container for the preparation and transportation of citrus drinks. (Hq. 3rd Corps Area, 414.3 (11-4-41).

3. ATTACHMENT FOR RATIONS: Private GUST J. DOUFFAS, 13016639, Camp Hulen, Texas, is attached to the 1327th Service Unit for rations, effective with the noon meal, November 11, 1941.

4. RELIEF FROM SPECIAL DUTY: The following named enlisted men organizations as indicated are relieved from special duty with the Military Police Detachment, effective this date:
Pvt. ROY P. CROSS, 33045198, Battery C, 246th CA
Pvt. JOSEPH H. LAWLESS, 33041832, Battery K, 246th CA
Pvt. RAY R. SCHROCK, 33015333, Battery E, 2nd C.A.
Pvt. CHARLES T. WILSON, 35030860, 159th Station Hospital

5. SPECIAL DUTY: Pvt. HOWARD L. BRIGGS, 33020885, Battery E, 2nd C.A. is detailed on special duty with the Military Police Detachment vice Pvt. RAY R. SCHROCK, 33015333, Battery E, 2nd CA relieved, effective this date.

6. RELIEF FROM ATTACHMENT: Sgt. R. J. WICKHAM, 2nd Air Warning Company, Mitchell Field, N.Y. is relieved from attached to the 1327th Service Unit for rations and quarters, effective after breakfast today.

7. RELIEF FROM SPECIAL DUTY: The following named enlisted men are relieved from special duty with the Enlisted Men's Service Club, effective this date:
Pvt. WARD W. WALKER, 33041769, Battery C, 246th CA
Pvt. JAMES L. HERBERSON, 33001970, Battery A, 71st CA
Pvt. ERWIN A. DUNN, 33040246, Battery B, 246th CA

8. SPECIAL DUTY: The following named enlisted men are detailed on special duty with the Enlisted Men's Service Club, type "B", effective this date:
Pvt. JAMES W. CARICO, 33045336, Battery I, 246th CA
Pvt. JOHN S. MEHLER, 33045125, Battery A, 246th CA

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-H-U-R-S-D-A-Y--- November 13, 1941
NO. 265)

1. DETAILS FOR FRIDAY, NOVEMBER 14, 1941:
Officer of the Day ---------- Capt. W. A. Garbee, 246th CA
Medical Officer of the Day ---------- 1st Lt. John D. Snider, MC 159th SH
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. CORRECTION; RELIEF FROM SPECIAL DUTY: Paragraph 7, D.B. No. 264, dated November 12, 1941, is corrected to read as follows:
Pvt. WARD W. WALLACE, 33041769, Battery C, 246th CA
Pvt. JAMES L. HERBERSON, 33001970, Battery A, 71st CA
Pvt. STEPHEN M. TYLER, 20368005, Battery A, 246th CA

3. RELIEF FROM ATTACHMENT FOR QUARTERS AND RATIONS: The following named enlisted men are relieved from attached to the 1327th Service Unit for rations and quarters, effective this date:
Pvt. ROY P. CROSS, 33045198, Battery C, 246th CA
Pvt. JOSEPH H. LAWLESS, 33041832, Battery K, 246th CA
Pvt. RAY R. SCHROCK, 33015333, Battery E, 2nd CA
Pvt. CHARLES T. WILSON, 35030860, 159th Station Hospital

4. ATTACHED FOR RATIONS: Pvt. DENVER W. BOUTON, 6900299, Battery E, 2nd CA is attached to the 1327th Service Unit for rations and quarters, effective this date.

5. AMENDMENT TO MANUAL FOR COURT-MARTIAL: The attention of all concerned is called to the amendment to the Manual for Court-Martial published in War Department Bulletin No. 8 (4-25-41) effecting paragraphs 104b and c.
War Department Circular 79, December 29, 1938, publishes changes effecting paragraph 30c, 35a, 94 and Articles of War 50½ and 70.

6. RELIEF FROM ATTACHMENT: The following named enlisted men of Company A, 80th Qm Bn are relieved from attached to the 1327th Service Unit for rations, effective after breakfast November 11, 1941:
Pfc. EARL W. PATTERSON, JR., 6899250 Pvt. MORRIS A. MOSKOW, 33022083
Pfc. GEORGE T. FEIGLEY, 7026150

7. FATIGUE DETAIL: The C.O. Battery E, 246th CA will detail three (3) men to report to Mr. THOMAS, at the Ordnance Work Shop, 1:00 p.m., today.

8. CORRECTION; SPECIAL DUTY: So much of Par. 5, D.B. No. 264, dated November 12, 1941, as reads "Pvt. HOWARD L. BRIGGS, Battery E, 2nd CA is changed to read "Pvt. DENVER W. BOUTON, 6900299, Battery E, 2nd C.A.

9. REPORTS ON CONTROLLED ITEMS OF EQUIPMENT: Reports on controlled items of equipment will be submitted to this headquarters not later than 12:00 noon, November 14, 1941.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 6)

T H U R S D A Y — November 13, 1941

1. DENTAL SERVICE DURING THE NATIONAL EMERGENCY: The following letter, War Department, The Adjutant General's Office, File 703.1 (11-30-40) M-A-M, subject as above, is quoted for the information of all concerned:

"1. Under the current War Department training program, facilities for dental attendances will be provided in accordance with AR 40-510, subject to the following provisions:

a. Dental attendance for all military personnel will be confined to the treatment of emergency cases, infectious conditions, and restoration of carious teeth with amalgam, silicate, or cement fillings, except as provided in subparagraph b below.

b. Replacement of missing teeth will not be made, except when teeth were damaged or lost in performance of duty, while engaged in athletic games, or as a necessary part of treatment. Such replacements will be the standard type of partial or full dentures provided for Army Personnel.

c. Dental attendance for dependents will be limited to emergency treatment. Such treatment will interfere in no instance with the routine dental treatment of the military personnel."

2. BOXING: Boxing practice will be held every Monday and Thursday night in the 246th CA Recreation Hall at 7:00 p.m.
Watch for the announcement on wrestling classes.

3. MOVIES: Tonight. "LIFE BEGINS FOR ANDY HARDY" w/ Mickey Rooney - Lewis Stone and Judy Garland.
FRIDAY, Nov. 14th. "UNDERGROUND" w/ Jeffrey Lynn - Phillip Dorn and Kaaron Verne.

4. FOR RENT: Furnished Cottage - 158th Street, Virginia Beach. Open fireplace, Piano, frigidaire, bath, running water (cold), electric stove, 3-bedrooms, living room, kitchen and large porch facing ocean front. $25.00 per month to May 31st. Information and key may be obtained from Mrs. WARREN, across the street from the cottage. Turn at sign which reads "PEAKE" Call Mrs. ADAMS, Norfolk 'phone No. 45772.

5. MISSING PISTOL: All battery commanders will check their records to see if they have pistol No. 287788, missing from Battery "A" 246th CA. If located notify Capt. W.A. GARBEE.

6. NOTICE: All mail to be delivered to the Officers Club, Fort Story, Va., will be placed in the mail box marked "Officer's Club" in the hall-way at Post Headquarters.

7. CHANGE OF ADDRESS: Capt. WALTER A. GARBEE, 246th CA from: 21st and Arctic Avenue, Va. Beach, to: 126th Street Virginia Beach, 'phone 157-JX.

8. FOR RENT: Furnished house - 55th and Atlantic Avenue, Virginia Beach. 5-rooms down stairs; 2-small bedrooms up stairs, arcola heat, electric stove, ice box, 2-car garage and maid's quarters, $60.00 per month. Call Mrs. E.J. SABOL, Virginia Beach 1315-W.

9. MEMBERS NCO CLUB: There will be a bingo party at the N.C.O. Club at 8:00 p.m., this date. All members are requested to be present. Bring a new member. BINGO.

10. FORT STORY DANCE: The regular Ft. Story Dance will be held at the Service Club Friday, November 14th from 8:00 to 11:00 p.m. Admission by pass and to men in proper uniform only. Passes may be obtained by the various organizations and batteries from the office of the hostess Thursday night and Friday noon.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---F-R-I-D-A-Y--- November 14, 1941
NO. 266)

1. DETAILS FOR SATURDAY, NOVEMBER 15, 1941:
Officer of the Day ---------- Capt. T.M. Nance, 246th CA
Medical Officer of the Day ---------- 1st Lt. H.S. Raines, MC 160th SH
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th CA

2. WAIVER OF ADMISSION FEES AND OTHER CHARGES IN NATIONAL PARKS: The following letter Headquarters Third Corps Area, AG 353.8, (11-8-41), subject as above, dated November 8, 1941, is republished for the information and guidance of all concerned:

"1. Information has been received in the War Department that admission fees and other charges established by rules and regulations of the Department of Interior are being waived for the benefit of members of the armed forces of the United States while visiting National Parks, National Monuments, the National Capitol Parks in the District of Columbia, and other areas under the jurisdiction of the National Park Service, Department of Interior. This general exemption is applicable during the period of Selective Service training, but is extended to all members of the armed forces of the United States, and is limited to persons in uniform.

"2. It is desired that the above information be brought to the attention of all concerned."

3. ATTACHMENT OF ENLISTED MAN: Private IVEY R. BROCK, 14012514, Hq. Det 3rd Bn. 34th Infantry, Fort Jackson, South Carolina, is attached to the 1327th Service Unit for administration effective October 31, 1941.

4. CHANGE OF TELEPHONE NUMBER: Capt. WILLIAM B. JOHNSON, Jr., 246th CA from: 400-M to: Va. Beach 157-RX.

5. RELIEF FROM SPECIAL DUTY: M/ Sgt. ROBERT L. POWELL, 20367504, Hq. Btry. 246th CA (HD) is relieved from special duty with the Artillery Engineers, effective 7:30 A.M., today.

Private JOSEPH E. HAMMOND, 6943287-RAR, DEML, 1327th Service Unit is relieved from special duty with the Military Police Detachment effective this date.

By order of Col. HENDON:

Myrah B. Fields

MYRAH B. FIELDS,
1st Lt. C. A. C.,
Asst. Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---M-O-N-D-A-Y--- November 17, 1941
NO. 268)

1. DETAILS FOR TUESDAY, NOVEMBER 18, 1941:
Officer of the Day ---------- 2nd Lt. Edw. J. Lawler, QMC 1327th
Medical Officer of the Day ---------- Capt. Donald Donley, MC 246th CA
Bugler of the Guard ---------- Pvt. Wood, Battery B, 246th CA

2. RESTRICTIONS AT LANGLEY FIELD: The following announcement from Air Base Headquarters, Langley Field, Virginia, is quoted for the information and compliance of all members of this command:

"No person, civilian or military, will be permitted to take photographs, nor will they introduce cameras, within the limits of the present areas restricted to civilians, except those persons specifically authorized by the base commander. No civilians, except those specifically authorized by the base commander, will be permitted to take any photographs on the Langley Field reservation

3. OFFICERS CANDIDATE SCHOOLS: Attention is invited to paragraph 3, Daily Bulletin No. 267, this headquarters, dated November 15, 1941, which states particulars governing the Officers Candidate School commencing on or about January 1, 1942. Application of enlisted men will be forwarded to the President of the Board of Officers appointed to examine the applicants through this headquarters. No enlisted man will be physically examined until after he has been interviewed to determine his educational qualifications. The President of the Board of Officers will, after examining the applicants, submit to the Surgeon, Fort Story, Virginia, a list of names of applicants who in his opinion possess the necessary qualifications to successfully complete the course at the Officers Candidate School. The Surgeon will then make the prescribed physical examination, will complete WD AGO Form 63 in triplicate, and forwarded same to this headquarters, without letter of transmittal.

4. RELIEF FROM SPECIAL DUTY: Private WALTER B. WIDGEN, 33040273, Battery B, 246th CA is relieved from special duty with Post Headquarters, effective this date.

5. SPECIAL DUTY: Corp. WILLIAM C. FEAGANS, 20368260, Battery C, 246th CA is detailed on special duty, class "B", with the Officers Club, effective this date.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 8)

M O N D A Y — November 17, 1941

1. OFFICERS CLUB MEMBERS: Regular Stag Party tomorrow night at 7:30 P.M. Lets come early, have a lot of fun, and also get some sleep afterwards.

Ladies - please bring us some cheese glasses. All of us have some to spare.

MARDI GRAS CARNIVAL - Biggest party of the year. Begin work on your costumes immediately as the date is November 29th. You can't afford to miss th "WHOOP-IT-UP" affair and the charge at the door is one dollar for each person not in costume. For those in costume ten cents per person will be collected on entrance as a contribution from the Officers Club to the Community Fund. Prizes will be given for the best costume. Bingo prizes will be plentiful. Side shows and pitch-penny games to test your credulity and skill. Dress up so that your best friends won't know you. There will be games enough to take care of the entire membership at once. Begin now to get into the spirit of the carnival.

TAKE A COPY OF THIS BULLETIN HOME TO YOUR WIVES.

2. STAGE PLAY: The Old Dominion Guild will present the play "The Man Who Came to Dinner" at the Camp Pendleton Theater tonight at 8:30 P.M. A limited amount of transportation will leave from the Service Club at 7:45 P.M. No admission charge. Men must be in proper uniform, however, to attend.

3. NOTICE: All are again reminded that the Daily Activities Bulletin will be published by this headquarters on TUESDAY, THURSDAY and SATURDAY of each week. This Bulletin will contain all non-military information pertaining to activities of the command.

Notices to be published will be sent to this headquarters not later than 10:00 A.M., on the day of publication.

4. BOXING: Boxing practice will be held every MONDAY and THURSDAY nights in the 246th CA Recreation Hall at 7:00 P.M.

Watch for the announcement on wrestling classes.

5. MOVIES: Tonight. "OUR WIFE" w/ Melvyn Douglas, Ruth Hussey and Ellen Drew.

TUESDAY, Nov. 18th. "THE MALTESE FALCON" w/ Humphrey Bogart, Mary Astor and Peter Lorre.

WEDNESDAY, Nov. 19th. "CHARLEY'S AUNT" w/ Jack Benny and Kay Francis

6. ARMY SING: A big Army "Sing" will be held in the Service Club tonight at 8:30 P.M. Everyone most cordially welcome.

By order of Col. HENDON:

E.G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-U-E-S-D-A-Y--- November 18, 1941
NO. 269)

1. DETAILS FOR WEDNESDAY, NOVEMBER 19, 1941:
Officer of the Day ---------- Capt. Otis D. Smith, Inf. 1327th
Medical Officer of the Day ---------- Capt. L.F. Rogel, MC 246th CA
Bugler of the Guard ---------- Pvt. Kiernan, Battery C, 246th CA

2. ATTACHMENT OF ENLISTED MAN: Private STEVEN HUNYADY, 20361942, 71st CA is attached to the 1327th Service Unit for ration, quarters and administration, effective with the evening meal November 17, 1941.

3. APPLICATIONS FOR NON-PILOT TRAINING IN OFFICER GRADE: Forms for Officers to make application for non-pilot training with the U.S. Army Air Corps are now available at Post Headquarters. Any Officer interested may secure forms from the file clerk.

4. THANKSGIVING DAY: Thursday, November 20, 1941, having been proclaimed Thanksgiving Day, all duties except the necessary guard, fatigue and care of the sick will be suspended and all calls will be sounded in accordance with the holiday schedule.

5. MAIL DELIVERIES; THOMAS NELSON CIRCLE: Effective December 1, 1941, the Post Office Department will commence R.F.D. delivery of mail to Thomas Nelson Circle.

Occupants of quarters must secure and place mail boxes on the right hand side of driveway. Name must be plainly painted on the box.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 9)

T U E S D A Y — November 18, 1941

1. VAUDEVILLE SHOW: The Troupers Club of Norfolk will put on one of their fine Vaudeville shows at the Service Club beginning at 8:30 P.M., this evening. No admission charge. Everyone most cordially welcome.

2. NORFOLK CHORAL CLUB: The Norfolk Choral Society, composed of 35 mixed voices under the direction of Capt. DELPINO, retired band leader, U.S. Navy, will give a concert in the Service Club Wednesday evening, November 19, 1941, at 8:30 P.M. This is an outstanding group, and will give an excellent performance. There will be no admission charge, and all members and friends of the garrison are most cordially invited to attend.

3. THANKSGIVING DAY SERVICES: The Chaplain of the Post will conduct a joint Thanksgiving Day Service in the new Chapel beginning at 11:00 A.M., on Thanksgiving Day, November 20th. In keeping with the proclamation issued by the President of the United States, and the Governor of the State of Virginia, it is desired that as many as possible take advantage of this opportunity of Thanksgiving for private and public blessings.

4. FOR RENT: 100th Street Virginia Beach. 1-room with connecting bath, steam heat. $20. 00 per month. Call Va. Beach 'phone 1108-W.

COTTAGE - furnished. 5-rooms, fire-place and kerosene heat, available for two months, (December and January), $30.00 per month. 115th Street Va. Beach. Telephone Va. Beach 48W11.

5. OFFICERS CLUB MEMBERS: Regular STAG Party tonight at 7:30 P.M. Come early and have a lot of fun.

6. MOVIE: Tonight. "THE MALTESE FALCON" w/ Humphrey Bogart - Ruth Hussey and Ellen Drew.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---W-E-D-N-E-S-D-A-Y--- November 19, 1941
NO. 270)

1. DETAILS FOR THURSDAY, NOVEMBER 20, 1941:
Officer of the Day ---------- 1st Lt. L.R. Harkness, QMC 1327th
Medical Officer of the Day ---------- 1st Lt. John D. Snider, MC 159th
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th CA

2. DETAILS FOR FRIDAY, NOVEMBER 21, 1941:
Officer of the Day ---------- 2nd Lt. P.R. Bickford, FA 1327th SU
Medical Officer of the Day ---------- 1st Lt. H.S. Raines, MC 160th SH
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

3. POST MOTOR POOL; NEW LOCATION: The Post Motor Pool has moved to a new location in the Second Battalion Area of the 71st Coast Artillery, (AA), and is now designated as a Third Echelon Repair Shop. Telephone No. 408.

4. MAIL DELIVERIES; THOMAS NELSON CIRCLE: Effective December 1, 1941, the Post Office Department will commence R.F.D. delivery of mail to Thomas Nelson Circle.

Occupants of quarters must secure and place mail boxes on the right hand side of driveway. Name must be plainly painted on the box.

5. RELIEF FROM SPECIAL DUTY: Private WILLIAM H. WALL, 33040139, Battery D, 246th CA is relieved from special duty with the Commissary effective this date.

6. POST EXCHANGE NOTICE: Tomorrow being a legal and Post holiday, the Post Exchange offices, warehouse, main store, service station, branches and concessions will be closed all day.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---F-R-I-D-A-Y--- November 21, 1941
NO. 271)

1. DETAILS FOR SATURDAY, NOVEMBER 22, 1941:
Officer of the Day ---------- 1st Lt. John P. Leary, Inf 1327th
Medical Officer of the Day ---------- Capt. G.R. Gallagher, MC 160th SH
Bugler of the Guard ---------- Pvt. Kiernan, Battery C, 246th CA

2. POST EXCHANGE NOTICE: All unissued Coupon Books and signed B.R.E.M.'s to be returned to Lt. HARKNESS, Post Exchange Office, not later than 3:30 P.M., today.

3. RELIEF FROM ATTACHMENT: Private WALTER P. BOERNER, DEML, 1319 Service Unit, Fort Monroe, Virginia, is relieved from attached to Battery B, 246th CA for rations and quarters, effective after the noon meal November 19, 1941.

4. OFFICERS, 1327th S.U.: All Officers of the 1327th Service Unit, who have not been blood typed, will report to the Station Hospital at 1:30 P.M., MONDAY, November 24, 1941, for this purpose.

5. NOTICE: Organization commanders are again reminded that credit authorization for enlisted men at the Fort Monroe Commissary for the month of December must be submitted to this headquarters not later than 4:00 P.M. this date. Letters received after this date will not be forwarded.

6. PARKING REGULATIONS: The attention of the entire personnel of this post is directed to Memorandum No. 42, dated November 21, 1941, which is being distributed this date.

All members of this post will familiarize themselves with this Memorand and will strictly comply with the provisions thereof. This Memorandum will be posted on all bulletin boards.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 271)

---F-R-I-D-A-Y---

November 21, 1941

1. DETAILS FOR SATURDAY, NOVEMBER 22, 1941:
Officer of the Day ---------- 1st Lt. John P. Leary, Inf 1327th
Medical Officer of the Day ---------- Capt. G.R. Gallagher, MC 160th SE
Bugler of the Guard ---------- Pvt. Kiernan, Battery C, 246th CA

2. POST EXCHANGE NOTICE: All unissued Coupon Books and signed B.R.E.M.'s to be returned to Lt. HARKNESS, Post Exchange Office, not later than 3:30 P.M., today.

3. RELIEF FROM ATTACHMENT: Private WALTER P. BOERNER, DEML, 1319 Service Unit, Fort Monroe, Virginia, is relieved from attached to Battery B, 246th CA for rations and quarters, effective after the noon meal November 19, 1941.

4. OFFICERS, 1327th S.U.: All Officers of the 1327th Service Unit, who have not been blood typed, will report to the Station Hospital at 1:30 P.M., MONDAY, November 24, 1941, for this purpose.

5. NOTICE: Organization commanders are again reminded that credit authorization for enlisted men at the Fort Monroe Commissary for the month of December must be submitted to this headquarters not later than 4:00 P.M. this date. Letters received after this date will not be forwarded.

6. PARKING REGULATIONS: The attention of the entire personnel of this post is directed to Memorandum No. 42, dated November 21, 1941, which is being distributed this date.

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By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---S-A-T-U-R-D-A-Y--- November 22, 1941
NO. 272)

1. DETAILS FOR SUNDAY, NOVEMBER 23, 1941:
Officer of the Day ---------- 2nd Lt. Wm. T. Tilden, QMC 1327th
Medical Officer of the Day ---------- Capt. H.A. Sapira, MC 246th CA
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. DETAILS FOR MONDAY, NOVEMBER 24, 1941:
Officer of the Day ---------- 1st Lt. R.G. Stover, CWS 1327th SU
Medical Officer of the Day ---------- Capt. Donald Donley, MC 246th CA
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th CA

3. ATTACHMENT FOR RATIONS: The following named enlisted men of the 71st CA (AA), are attached to the 1327th Service Unit for rations, effective with the noon meal this date:

Pvt. EDDIE N. BRANDENBERG, 34109168 Pvt. KING C. GOVER, 34109075
Pvt. GEORGE H. PHIPPS, 16018988 Pvt. WILLIAM F. HERRINGTON, 34109082
Pvt. JOHN W. CLIFFORD, 6988484 Pvt. GEORGE F. SEABOLT, 6940618

4. RELIEF FROM SPECIAL DUTY: The following named enlisted men of Battery "E" 246th CA are relieved from special duty with the activities as indicated:

Pvt. lcl FRANCIS W. CRAMER, 33002452 - Post Utilities
Pvt. lcl RICHARD C. SNYDER, 33045387 - U.S. Engineer

5. SPECIAL DUTY, CLASS B: The following named enlisted men of Battery "E" 246th CA are detailed on Class"B" special duty with the activities as indicated:

Pvt. lcl FRANCIS W. CRAMER, 33002452 - Post Utilities
Pvt. lcl RICHARD C. SNYDER, 33045387 - U.S. Engineer

6. ATTACHMENT FOR RATIONS: Private AUGUST ARMELIN, 33021289, Company A, 80th QM BN is attached to the 1327th Service Unit for rations, effective Thursday, November 20, 1941.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: --- M-O-N-D-A-Y --- November 24, 1941
NO. 273)

1. DETAILS FOR TUESDAY, NOVEMBER 25, 1941:
Officer of the Day ---------- Capt. Wilmer C. McCall, 2nd C.A.
Medical Officer of the Day ---------- Capt. L.F. Rogel, MC 246th CA
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

2. TO ALL CONCERNED: Effective immediately, all Spool Ends from typewriter ribbons, computing machines and stapling machines will be turned in to the Quartermaster when used.

3. OFFICERS; 1327th S.U.: All officers of the 1327th Service Unit, who have not been blood typed, will report to the Station Hospital at 1:30 P.M., today, for this purpose.

4. ANNUAL ORDNANCE INSPECTION: The annual ordnance inspection, under the direction of the Ordnance Officer, Third Corps Area, to cover items of individual ordnance equipment will be started simultaneously at this post, effective Nov. 24 1941, under the schedule to be issued by the Ordnance Officer, Fort Story, Va.

The inspection of major items of organization equipment and of assigned equipment will follow completion of the inspection of individual ordnance equipment. It is expected that this inspection will start about January 5, 1942.

5. EXCHANGE OF CHRISTMAS CARDS: The following Immediate Action letter, Hq. 3rd Corps Area, file 006-Christmas, 24 (11-21-41) dated November 21, 1941, is republished for the information and compliance of all concerned:

"1. The vast expansion of the Army in the past year and one-half and frequent changes of station have made it extremely difficult for the addresses of organizations and individuals to keep up-to-date in official publications. In order to prevent the handling, through officials channels, of additional burden of mail requiring forwarding addresses, all concerned are requested to curtail the exchange of Christmas cards between military organizations and individuals in the service.

"2. However, the exchange of greetings by military personnel with their friends and the families at home should be encouraged."

6. NOTICE: The Quartermaster clothing warehouse will be closed Tuesday and Wednesday, November 25th and 26th, for inventory.

7. 246th CA: Any member of the 246th CA desiring to make a complaint or allegation to the Inspector may do so by reporting to the Inspector at the office of the Chaplain in the 246th CA Recreation Building at 3:30 P.M., Tuesday, November 25, 1941.

8. BREAD BOXES: Bread boxes are now available for issue at the Utilities Warehouse. All battery commanders should draw these at the earliest possible date.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

ADDITIONAL:

9. NOTICE: All special duty men of the 246th CA except Fire Department and Military Police will be excused on Wednesday, November 26, 1941, and will stand inspection with their organization.

E. G. M.

SPECIAL ORDERS)
:
NUMBER 202)

HEADQUARTERS FORT STORY
Fort Story, Virginia,
November 25, 1941.

1. Pursuant to instructions contained in letter file 431 General over 50, Headquarters Third Corps Area, subject: "Manufacture Inspections", dated November 18, 1941, First Lieutenant PAUL F. LANDIS, (O-401902), V. C., 1327th Service Unit, is detailed to conduct point-of-origin and manufacture inspections of animal food products in Norfolk, Virginia, when required by the Third Corps Area Quartermaster for shipment to Fort Eustis, Virginia.

2. Pursuant to authority contained in letter file 324.71 (8-16-41) The Adjutant General's Office, Washington, D. C., Subject: "Release of Enlisted Men During the Remainder of the Calendar Year 1941", dated August 22, 1941, and to 1st Indorsement thereto, file 220.8, Headquarters Third Corps Area, dated August 27, 1941, the following named enlisted men of the 1327th Service Unit, this station, will be relieved from active duty and transferred to the Enlisted Reserve Corps, effective December 1, 1941, on account of being over twenty-eight years of age on or prior to July 1, 1941, and prior to their induction:

Private HAROLD R. BAUER, 33050417
Private CLARENCE C. CROWNOBLE, 33032645
Private WALTER J. GRINDLAY, 33028780

3. Leave of absence is granted the following named officers for the number of days specified, on or about the date indicated:

NAME	DAYS	EFFECTIVE
Captain FRANK C. BEHRLE, JR.,(O-253725), 71st CA	2	November 27, 1941
1st Lt. MARY B. SCHICK, (N-724140), A.N.C.	7	November 28, 1941
2nd Lt. MABEL M. SCHLEGEL, (N-724136), A.N.C.	10	November 30, 1941
2nd Lt. HENRY E. MECREDY, JR., (O-412807), FA	3	November 28, 1941

4. Pursuant to authority contained in WD Circular 120 and under the provisions of Paragraph 4, AR 40-600, Captain MAURICE SONES, (O-360012), M.C., Private First Class KENT H. STEWART, 7023191, Detachment Medical Department, 1327th Service Unit, Private First Class GEORGE R. SMITH, R-4439705, Detachment Medical Department, 1327th Service Unit, and Private First Class ROBERT P. FERGUSON,13006927, Detachment Medical Department, 1327th Service Unit, will proceed by government ambulance on November 27, 1941, to Walter Reed General Hospital, Army Medical Center, Washington, D. C., for the purpose of delivering the following named enlisted men, organizations as indicated, now patients in the Station Hospital, Fort Story, Virginia, to the Commanding Officer, Detachment of Patients, Walter Reed General Hospital, Washington, D. C. Upon completion of this temporary duty enjoined, Captain SONES, Private First Class STEWART, Private First Class SMITH, and Private First Class FERGUSON, will return to their proper station at Fort Story, Virginia.

1st Sgt. ALEXANDER K. BROCKIE,R-152547,DEML, 1327th S. U.
Pfc. ANTHONY F. PASCALE, 33025615, Btry. E, 2nd C. A.
Pfc. EDLOW L. CARTER, 20368620, Btry. E, 246th C. A.
Pvt. CARLIE H. RIGDON, 7007367, Btry. C, 57th C.A.
Pvt. DONALD FINCH, 32036402, Btry. H, 74th C. A.
Pvt. SALVADORE LOCICERO, 33032381, Btry. D, 57th C. A.
Pvt. JAMES W. ROGERS, 33040444, Btry. D, 57th C. A.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: --- T-U-E-S-D-A-Y --- November 25, 1941
NO. 274)

1. DETAILS FOR WEDNESDAY, NOVEMBER 26, 1941:
Officer of the Day ---------- 1st Lt. L.B. Wilson, QMC 1327th
Medical Officer of the Day ---------- 1st Lt. J.D. Snider, MC 159th SH
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

2. ALLOWANCES OF SHOES: The following radiogram Hq. 3rd Corps Area, dated November 21, 1941, is quoted for the information and guidance of all concerned:

"TABLE OF BASIC ALLOWANCES NUMBER TWENTY ONE DATED OCTOBER ONE NINETEEN FORTY ONE REDUCES ALLOWANCES OF SHOES SERVICE TO TWO PAIRS PER ENLISTED MAN PERIOD ONE PAIR SHOES LOW QUARTER ALSO AUTHORIZED PERIOD PENDING AVAILABILITY OF SHOES LOW QUARTER ONE PAIR SHOES SERVICE IN LIEU THEREOF MAY BE ISSUED"

3. MAIL DELIVERIES; THOMAS NELSON CIRCLE: Effective December 1, 1941, the Post Office Department will commence R.F.D. delivery of mail to Thomas Nelson Circle.

Occupants of quarters must secure and place mail boxes on the right hand side of driveway. Name must be plainly painted on the box.

4. CONTROLLED ITEMS OF EQUIPMENT: Reports on controlled items of equipment will be submitted to this headquarters not later than 11:00 A.M., SATURDAY, November 29, 1941.

5. REPORT OF GOVERNMENT VEHICLES: Reports required by letter file (IGO) 451 subject: "Report of Government Vehicles", Headquarters First Army, dated June 12, 1941, are to be submitted for the bi-monthly period ending November 30, 1941. Reports will be prepared and will be forwarded not later than November 30, 1941.

6. POST EXCHANGE NOTICE: For the purpose of taking the regular monthly inventory, the Post Exchange Main Store will be closed from 1:00 P.M., today until such time tomorrow as the inventory is completed. Post Exchange Branch stores will be closed from 5:00 P.M., today until such time tomorrow as the inventory is completed. The Post Exchange Service Station will be closed tomorrow from 8:00 A.M., to 9:00 A.M. Concessions will remain open as usual.

7. FATIGUE DETAILS: The C.O. of the following listed organizations will detail the enlisted men indicated to report to the P & P Officer at the Provost Marshal's Office 1:00 P.M., today and 1:00 P.M., on Mondays, Tuesdays, Thursdays and Fridays of each week until further orders:

Battery A, 246th CA ---------- One (1) NCO and ten (10) men
Battery B, 246th CA ---------- One (1) NCO and ten (10) men
Battery C, 246th CA ---------- One (1) NCO and ten (10) men
Battery E, 246th CA ---------- One (1) NCO and ten (10) men

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEARQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 11)

T U E S D A Y — November 26, 1941

1. OFFICERS CLUB MEMBERS: Regular stag party tonight at 7:30 P.M. These have been very successful in the past. Come out on time. Short "Smoker" will begin the program.

Don't forget your costumes for this Saturday night. Watch for special bulletin.

2. MOVIES: Tonight. "SMILIN THROUGH" w/ Jeanette MacDonald and Brian Aherne.

Wednesday and Thursday, Nov. 26 - 27. "ONE FOOT IN HEAVEN" w/ Frederic March and Martha Scott.

3. UNIVERSITY OF WISCONSIN ALUMNI: The Wisconsin Alumni Association announces that it will send complimentary copies of the Wisconsin Alumnus to all alumni and former students of the University of Wisconsin now serving in the Army, Navy or Marine Corps who desire this service, which will continue for the duration of the emergency.

Any alumnus, whether or not a graduate of the University, may obtain his free subscription to the Alumnus by writing Association headquarters and asking that his name be placed on the list. Address all requests to: The Wisconsin Alumni Association, 770 Langdon Street, Madison, Wisconsin.

4. LADIES: Slimming classes Tuesday and Friday at 11:15 A.M., at the Officers Club. Its great fun. You must turn out for this.

5. DANCING CLASS; ENLISTED MEN'S SERVICE CLUB: Each Monday evening at 8:0 o'clock a dancing class for enlisted men will be held under competent instructo at the Service Club under the supervision of the Hostesses. In order to provid proper instructions it is requested that only those men who are unable to dance take part in this instructions.

6. ORCHESTRA CONCERT; ENLISTED MEN'S SERVICE CLUB: The well known WTAR Salon Orchestra will give a concert at the Service Club beginning at 8:30 P.M., this evening. All members and friends of the garrison are most cordially invited to this feature attraction.

7. INFORMAL GAME NIGHT; ENLISTED MEN'S SERVICE CLUB: Informal games will be played at the Service Club Wednesday evening, beginning at 8:30 P.M.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEARQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
: T U E S D A Y November 26, 1941
BULLETIN NO. 11)

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E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEARQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
: T U E S D A Y November 26, 1941
BULLETIN NO. 11)

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By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
: T H U R S D A Y November 27, 1941
BULLETIN NO. 12)

1. MOVIES: Tonight. "ONE FOOT IN HEAVEN" w/ Frederic March and Martha Scott.

FRIDAY, Nov. 28th. "BELLE STARR" w/ Randolph Scott and Gene Tierney.

2. LADIES: Slimming classes every Tuesday and Friday at 11:15 A.M., at the Officers Club. Its great fun. You must turn out for this.

3. OFFICERS CLUB MEMBERS: Don't forget the big party this Saturday night at the Officers Club.

4. BOXING: Boxing practice will be held every Monday and Thursday nights in the 246th Recreation Hall at 7:00 P.M.
Watch for the announcement of wrestling classes.

5. SPORTS REVUE, ENLISTED MEN'S SERVICE CLUB: An excellect one hour motion picture boxing and other sports will be shown at the Service Club 7:15 P.M., tonight. No admission charge. Everyone most cordially welcome.

6. FOOTBALL BROADCAST, ENLISTED MEN'S SERVICE CLUB: The Army-Navy football game will be tuned in at the Service Club, Saturday afternoon, beginning at 1:00 P.M. All soldiers interested in this broadcast are invited to spend the afternoon at the Club listening to the game.

7. FORT STORY DANCE, ENLISTED MEN'S SERVICE CLUB: There will be another dance held at the Service Club Friday, November 28, 1941, from 8:00 to 11:00 P.M. Admission by pass and to men in proper uniform only. Organization commanders may obtain their passes from the hostess at the Service Club by noon, Friday, November 28, 1941.

8. BOWLING: Now that the Post bowling alleys have resumed operation, watch for bowling league announcement.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-H-U-R-S-D-A-Y--- November 27, 1941
NO. 276)

1. DETAILS FOR FRIDAY, NOVEMBER 28, 1941:
Officer of the Day ---------- Capt. Martin W. Richwine, 246th CA
Medical Officer of the Day ---------- Capt. G.R. Gallagher, MC 160th SH
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. POST EXCHANGE NOTICE: B.R.E.M.'s may be obtained from Lieut. HARKNESS, Post Exchange Office today.

3. ATTACHED FOR RATIONS: Private PRESTON A. MOSELEY, 6388762, 71st CA is attached to the 1327th Service Unit for rations, effective with supper, Nov. 26, 1941.

4. INVENTORY COMMISSARY: 1st Lt. ALBERT W. HARVEY,(O-397020), 246th CA is detailed as Commissary Inventory Officer. He will report to the Commissary Officer 8:00 A.M., Friday, November 28, 1941.

5. REENLISTMENT IN THE REGULAR ARMY: The reassignment of enlisted men to bring organizations of this command to the authorized quotas of three year enlist ments in the Regular Army will be accomplished during the month of December. At present, there is a shortage of approximately 2600 three-year enlisted men. In order to fill these vacancies, it is desired to discharge and reenlist in the Regular Army, Selective Service Trainees, Regular Army Reserve and National Guard enlisted men. In this connection, the following War Department policy is announced: "To discharge all such men (who reenlist in the Regular Army for three years) for the convenience of the Government at the expiration of three years continuous active Federal Service from the date of the original induction, provided that the soldier requests such discharge in writing, and provided further that such discharge is not in conflict with the interests of National Defense".

Vacancies exist in the numbers indicated in the following organizations in which qualified personnel not now in the Regular Army can make application to enlist:

Headquarters Battery, 3rd Coast Artillery District	-	6
57th Coast Artillery, Camp Pendleton, Virginia	-	1341
71st Coast Artillery (AA), Fort Story, Virginia	-	1258
74th Coast Artillery (AA), Camp Pendleton, Virginia	-	114
159th Station Hospital, Fort Story, Virginia	-	73

As Regular Army men become available in these organizations, Selected Service Trainees and Regular Army Reservists will be transferred from these organizations, in grade of Private, to other organizations. There will thus be many opportunities for advancement for capable men who reenlist for these organizations in the near future.

A simplified blank form for use in the discharge of selectees and reenlistment in the Regular Army is being prepared and will be issued shortly.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE: POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-H-U-R-S-D-A-Y--- November 27, 1941
NO. 276)

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Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

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3. ATTACHED FOR RATIONS: Private PRESTON A. MOSELEY, 6388762, 71st CA is attached to the 1327th Service Unit for rations, effective with supper, Nov. 26, 1941.

4. INVENTORY COMMISSARY: 1st Lt. ALBERT W. HARVEY, (O-397020), 246th CA is detailed as Commissary Inventory Officer. He will report to the Commissary Officer 8:00 A.M., Friday, November 28, 1941.

5. REENLISTMENT IN THE REGULAR ARMY: The reassignment of enlisted men to bring organizations of this command to the authorized quotas of three year enlistments in the Regular Army will be accomplished during the month of December. At present, there is a shortage of approximately 2600 three-year enlisted men. In order to fill these vacancies, it is desired to discharge and reenlist in the Regular Army, Selective Service Trainees, Regular Army Reserve and National Guard enlisted men. In this connection, the following War Department policy is announced: "To discharge all such men (who reenlist in the Regular Army for three years) for the convenience of the Government at the expiration of three years continuous active Federal Service from the date of the original induction, provided that the soldier requests such discharge in writing, and provided further that such discharge is not in conflict with the interests of National Defense".

Vacancies exist in the numbers indicated in the following organizations in which qualified personnel not now in the Regular Army can make application to enlist:

Headquarters Battery, 3rd Coast Artillery District	-	6
57th Coast Artillery, Camp Pendleton, Virginia	-	1341
71st Coast Artillery (AA), Fort Story, Virginia	-	1258
74th Coast Artillery (AA), Camp Pendleton, Virginia	-	114
159th Station Hospital, Fort Story, Virginia	-	73

As Regular Army men become available in these organizations, Selected Service Trainees and Regular Army Reservists will be transferred from these organizations, in grade of Private, to other organizations. There will thus be many opportunities for advancement for capable men who reenlist for these organizations in the near future.

A simplified blank form for use in the discharge of selectees and reenlistment in the Regular Army is being prepared and will be issued shortly.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE: POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---S-A-T-U-R-D-A-Y--- November 29, 1941
NO. 278)

1. DETAILS FOR SUNDAY, NOVEMBER 30, 1941:
Officer of the Day ---------- Capt. W.A. Garbee, 246th CA
Medical Officer of the Day ---------- Capt. Donald Donley, MC 246th CA
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

2. DETAILS FOR MONDAY, DECEMBER 1, 1941:
Officer of the Day ---------- Capt. T.M. Nance, 246th CA
Medical Officer of the Day ---------- Capt. L.F. Rogel, MC 246th CA
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

3. HOLIDAY FURLOUGH TICKETS: The representatives of all Railroad, Boat and Bus Lines will be at the Enlisted Men's Service Club, Tuesday, December 2, 1941, from 9:00 A.M. until 5: P.M. All Holiday Furlough tickets will be purchased at this time, at the furlough rate.

4. FURLOUGH FARES: The following teletype message from the Office of the Quartermaster General, Washington, D.C., dated November 25, 1941, is repeated for the information and guidance of all concerned:
"EFFECTIVE DECEMBER FIVE TARIFFS WILL ELIMINATE REFERENCE TO NECESSITY FOR USE FURLOUGH FARE CERTIFICATES FOR ROUND TRIP FURLOUGH FARES

* * * * * *

IN ELIMINATING FURLOUGH FARE CERTIFICATES FURLOUGHEE MUST BE PREPARED T EXHIBIT FURLOUGH LEAVE OF ABSENCE OR OTHER PASS PAPERS TO TICKET AGENT"

5. RELIEF FROM SPECIAL DUTY: The following named enlisted men of Battery "C" 246th CA are relieved from special duty with the Utilities Officer, effective this date:

Cpl. HARRY S. SHANKLIN, 20368275	Pvt. WILLIAM W. SPENCER, 33045176
Pfc. FRANK R. RAGALND, 20368316	Pvt. JAMES E. TICKLE, 33045134
Pfc. HARRY W. REYNOLDS, 20368016	Pvt. ALBERT T. WIGGINS, 33040125
Pvt. CLAUDE T. SMITH, 33045226	Pvt. JOSEPH P. WINE, 33002173
Pvt. WOODROW D. SORRELS, 33045399	Pvt. ROY T. WRIGHT, 33002181

6. ATTACHMENT FOR RATIONS: Private JOSEPH G. GRYSKIEWICZ, 6949356, 71st CA is attached to the 1327th Service Unit for rations, effective with breakfast, November 29, 1941.

7. RELIEF FROM SPECIAL DUTY; POST UTILITIES: All men heretofore detailed to special duty or duty with the Post Utilities are relieved effective this date.

MILITARY POLICE: The following named enlisted men are relieved from special duty with the Military Police effective this date:
Pvt. JOHN M. GATEWOOD, Battery K, 246th CA
Pvt. EDWARD G. BROWN, Battery K, 246th CA

Private JAMES F. DUFFY, Q.M. Section, 1327th S.U. S.C., is relieved from duty with the Military Police effective this date.

DETAILED TO DUTY, 1327th SERVICE UNIT: The following named men of the 1327th Service Unit, are detailed to duty with the activities as shown opposite their names, effective this date:

Sgt. GEORGE W. McNEILL, Q.M. Section	Military Police
Pvt. lcl GRANVILLE ASHTON, Q.M. Section.	Military Police
Pvt. FRANCIS J. McGEE, Q.M. Section	Military Police
Pvt. ARMAND E. FRANCIOSA, DEML Section	Military Police
Pvt. lcl JOHN Z. BOLK, Q.M. Section	Post Utilities
Pvt. lcl LOUIS A. OPILIO, Q.M. Section	Post Utilities
Sgt. ALBERT J. TIMISKI, Q.M. Section	Post Utilities
Pvt. lcl WALTER SOSNOWSKI, Q.M. Section	Company Duty
Pvt. ANTHONY DiGUGLIELMO, Q.M. Section	Company Duty
Pvt. JAMES F. DUFFY, Q.M. Section	Company Duty

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
: S A T U R D A Y November 29, 1941
BULLETIN NO. 13)

1. RELIGIOUS SERVICES, STATION HOSPITAL RED CROSS BUILDING: The opening Religious Services will be held at the new Station Hospital Red Cross Building, Recreation Room, Sunday, November 30, 1941. Regular services, with choir and special music, each Sunday at 9:00 A.M., conducted by Chaplain CHARLES F. ROBERTS

2. MOVIES: Tonight. Double feature program. "TONTO BASIN OUTLAWS" w/ Range Busters. Also "NINE LIVES ARE NOT ENOUGH" w/ Ronald Reagan and Jerry Perry

SUNDAY and MONDAY, Nov. 30 - Dec. 1st. "INTERNATIONAL SQUADRON" w/ Ronald Reagan, William Lundigan and Olympe Gradna.

3. FOOTBALL BROADCAST, OFFICERS CLUB: The Amy and Navy footbal game will be broadcast at the Officers Club this afternoon. This was a success last year and we knew that it will be even better this year.

4. LADIES TEA; OFFICERS CLUB: Regular ladies tea at the Officers Club, Monday, December 1, 1941.

5. LADIES: Slimming classes every Tuesday and Friday at 11:15 A.M., at the Officers Club. Its great fun. You must turn out for this.

6. OFFICERS CLUB MEMBERS: Don't forget the big party tonight at the Officers Club. Also the regular stag party Tuesday night.

7. FOOTBALL BROADCAST - ENLISTED MEN'S SERVICE CLUB: The Army-Navy football game will be broadcast from the Service Club this afternoon, beginning at 1:15 p.m. Anyone interested is most cordially welcome to come to the Club and listen to this classic.

8. RELIGIOUS SERVICES - ENLISTED MEN'S SERVICE CLUB: Sunday, Nov. 30, 1941:

8:00 a.m. -- Catholic Mass - Father CLETUS.
9:00 a.m. -- Protestant Worship - Chaplain SUTTENFIELD.
9:00 a.m. -- General Worship - Red Cross Building, Hospital Area - Chaplain ROBERTS.
10:00 a.m. -- Post Sunday School and Bible Class.
11:00 a.m. -- Post Protestant Worship - Chaplain ROBERTS.

All services except the service in the Hospital Area will be conducted in the new Post Chapel. The appointments of this building are dignified, and give a church-like atmosphere. Everyone welcome to all services.

Special attention is called to the services now being held in the Hospital Area. Chaplain ROBERTS will conduct the first of these services in the new Red Cross Building at 9:00 a.m., Sunday morning. Everyone is most cordially welcome, and a special invitation is directed particularly to the Hospital personnel.

9. DANCING CLASS: The dancing class for Enlisted Men will be held at the Service Club beginning at 8:00 p.m., Monday evening, December 1st. In order not to overburden the few instructors who are giving of their own time for this purpose, it is requested that only those men who have had no previous instruction in dancing apply for these classes.

10. OFFICERS CLUB MEMBERS: Be sure to be at the BIG PARTY tonight promptly at 8:30. Simple costumes will be sufficient, and chits may be signed at the door for money.

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---M-O-N-D-A-Y--- December 1, 1941
NO. 279)

1. DETAILS FOR TUESDAY, DECEMBER 2, 1941:
Officer of the Day ---------- Capt. Wilmer C. McCall, 2nd C.A.
Medical Officer of the Day ---------- 1st Lt. J.D. Snider, MC 159th S.H.
Bugler of the Guard ---------- Pvt. Wood, Battery B, 246th CA

2. CHANGE IN NOMENCLATURE OF CAPS, FIELD: The following changes in nomenclature have been directed by 2nd Indorsement to The Quartermaster General from The Adjutant General, dated October 16, 1941, file AG 421.1 (9-11-41) MC-D:
a. "Cap, field, cotton, khaki, 8.2 oz." change to "Cap, garrison, khaki."
b. "Cap, field, serge, O.D." change to "Cap, garrison, O.D."
The approved nomenclature should be used in all future references to these two items.

3. RETURN OF REGIMENT: Telegram received this date indicates that the 71st CA (AA) will return to this station from the North Carolina maneuver area on December 3, 1941. All concerned should make necessary provisions for the issue of rations, etc., without delay.

4. TELEPHONE DIRECTORY: Organizations and staff departments will furnish the Post personnel office with the name, home and office telephone number and home address of each officer not later than Wednesday, December 3, 1941.

5. HOLIDAY FURLOUGH TICKETS: The representatives of all Railroad, Boat and Bus Lines will be at the Enlisted Men's Service Club, Tuesday, December 2, 1941, from 9:00 A.M. until 5:00 P.M. All Holiday Furlough Tickets will be purchased at this time, at the furlough rate.

6. ATTACHMENT FOR RATIONS: Private THOMAS J. O'MALLEY, 13004488, Battery D, 71st CA is attached to the 1327th Service Unit for rations, effective with supper, November 30, 1941.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 14)

M O N D A Y — December 1, 1941

1. LOST PISTOL: The following described pistol was lost by Lieut. Wilbur P. Schmader, 2nd C.A. at the Officers Club last Saturday night:
38 Cal. Harrington-Richardson, blue finish, break-action revolver.
Any one finding same or having knowledge of the whereabouts of this revolver, please contact Lt. Schmader or Secretary of the Officers Club, (Lt. Tinsley) immediately. This is of the utmost importance.

2. FOR RENT: 3-rooms, bedroom, living room, dining room, kitchen, and bath - available now $50.00 per month, including water, heat and dishes. Apply - 309 - 16th Street, Virginia Beach Va.

3. OFFICERS CLUB MEMBERS: Remember the regular Stag Party Tuesday night at 7:30.

All bills have been distributed by the Officers Club. If anyone did not get their bill please contact Corp. Feagans at Post Headquarters, Major Martin's Office. Checks will be received by Corporal Feagans, and chits may be obtained at this time.

Reannouncement of Club Hours: Sundays and week days the Club will remain open until 11:00 P.M., except by request, when it will remain open until 12:00 midnight. After Saturday night dances the Club will close at 2:00 A.M.

4. TUG OF WAR: Tug of war preliminiaries will be held on the parade ground at 3:00 P.M. Tuesday.

5. BOWLING: Bowling league schedule and rules will be issued this week.

6. BOXING: There will be boxing every Monday and Thursday in the 246th CA Recreation Hall at 7:00 P.M.

7. MOVIES: tonight. "INTERNATIONAL SQUADRON" w/ Ronald Reagan, William Lundigan and Olympe Gradna.
TUESDAY - "THE FEMININE TOUCH" w/ Don Ameche, Rosalind Russell and Kay Francis.

8. DANCING CLASS - ENLISTED MEN'S SERVICE CLUB: The dancing class for Enlisted Men will be held at the Service Club tonight beginning at 8:00 P.M. In order not to over burden the few instructors who are giving of their own time for this purpose, it is requested that only those men who have had no previous instructions in dancing apply for these classes.

9. LADIES: Slimming classes every Tuesday and Friday at 11:15 A.M., at the Officers Club. Its great fun. You must turn out for this.

10. LADIES TEA - OFFICERS CLUB: The regular ladies bridge tea will be held at the Officers Club today.

By order of Col. HENDON:

E. G. HULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
: T U E S D A Y December 2, 1941
BULLETIN NO. 15)

1. CHILDREN'S CHOIR: The Post Childrens Choir will meet for christmas rehearsal at the Post Chapel this afternoon at 4:00 P.M.

2. SUNDAY SCHOOL STAFF: The Post Sunday School Staff will meet in the Post Recreation Room at 7:00 P.M. today.

3. BINGO PARTY; ENLISTED MEN'S SERVICE CLUB: Informal Bingo will be played in the Service Club, Wednesday, December 3, 1941, at 8:30 P.M.

4. CHILDREN'S CHRISTMAS LIST: Officers and men with children are kindly requested to turn in the childrens Christmas list without delay.

5. LOST PISTOL: The following described pistol was lost by Lieut. WILBUR R. SCHMADER, 2nd C.A. at the Officers Club last Saturday night, November 29th.

38 Cal. Harrington-Richardson, blue finish, break-action revolver.

Anyone finding same or having knowledge of the whereabouts of this revolver, please contact Lt. Schmader or Secretary of the Officers Club, (Lt. Tinsley) immediately. This is of the utmost importance.

6. OFFICERS CLUB MEMBERS: All are again reminded of the Stag Party at the Officers Club tonight at 7:30 P.M.

7. TUG OF WAR: Tug of war preliminiaries will be held on the parade ground this afternoon at 3:00 P.M.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-U-E-S-D-A-Y--- December 2, 1941
NO. 280)

1. DETAILS FOR WEDNESDAY, DECEMBER 3, 1941:
Officer of the Day ---------- Capt. Jesse F. Fitchett, 246th CA
Medical Officer of the Day ---------- 1st Lt. H.S. Raines, MC 160th CH
Bugler of the Guard ---------- Pvt. Kiernan, Battery C, 246th CA

2. MAIL DELIVERIES - FORT STORY POST OFFICE: The following mail schedule of incoming and outgoing mail of the Fort Story Post Office during weekdays, Saturdays and Sundays is announced:

INCOMING AT WINDOW

Weekdays	Saturdays	Sundays
10:15 A.M.	10:15 A.M.	12:00 noon
1:45 P.M.	12:30 P.M.	
4:30 P.M.		

OUTGOING - TO VIRGINIA BEACH

Weekdays	Saturdays	Sundays
8:00 A.M.	8:00 A.M.	10:45 A.M.
12:15 P.M.	10:45 A.M.	1:00 P.M.
3:45 P.M.	1:00 P.M.	
5:00 P.M.		

There is no window service on Sunday, except delivery of mail. The Money Order and Register window will be closed as follows: 4:45 P.M., weekdays and 12:45 P.M., on Saturdays.

3. VALUE OF RATION: The value of the garrison ration for Fort Story, Va., for the month of December, 1941, is .5150.

4. HOLIDAY FURLOUGH TRAVEL: Attention is invited to the fact that while representatives of all transportation agencies will be present at the Service Club today for the purpose of selling tickets, it is not compulsory to buy your tickets at this time. Tickets may be bought at any time, to any place, in the the United States at the Bus Station in Virginia Beach.

5. ATTACHMENT FOR RATIONS: Fifty-four (54) men of the 71st CA (AA), are attached to the organizations as indicated for rations, for four (4) meals, effective with the noon meal today through the noon meal Wednesday, December 3, 1941:

8 men Battery A, 246th CA
8 men Battery B, 246th CA
8 men Battery C, 246th CA
8 men Battery E, 246th CA
6 men Battery K, 246th CA
6 men Battery E, 2nd C.A.
10 men Station Hospital

6. FATIGUE DETAILS: The C.O. of the following listed organizations will detail the enlisted men indicated to report to the P & P Officer at the Provost Marshal's Office 1:00 P.M. today:

Batteries A, B, C, and E, 246th CA --- One (1) NCO and ten (10) men each

7. SPECIAL DUTY: The following named enlisted men of the 246th CA are detailed on special duty with the Utilities, effective this date:
Pvt. ALFRED R. WEISE, 33002224, Battery C
Pvt. H. L. BUSH, 33040162, Battery B
Pvt. ERNEST C. GUTRIDGE, 33002141, Battery C

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE:- POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---W-E-D-N-E-S-D-A-Y--- December 3, 1941
NO. 281)

1. DETAILS FOR THURSDAY, DECEMBER 4, 1941:
Officer of the Day ---------- 2nd Lt. Edw. J. Lawler, QMC 1327th
Medical Officer of the Day ---------- Capt. G.R. Gallagher, MC 160th SH
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. TAILOR SHOP - FORT STORY: The Fort Story Tailor Shop, formerly operated as a concession, is now open for business under the direct operation of the Post Exchange and under the capable management of Mrs. ETHEL LANE, assisted by Mrs. WILLIAM LEONARD. The shop is open daily, weekdays from 8:00 A.M. to 5:00 P.M., and on Saturdays 8:00 A.M. to 1:00 P.M. Repair work, sewing, mending of all descriptions are done at reasonable prices; and cleaning and pressing may be left for return within not to exceed forty-eight hours. This shop is being operated for the convenience of the personnel of this Post and any suggestions or constructive criticism will be welcomed by the Exchange.

3. CHANGE OF DUTY: Pvt. 1cl WILLIAM E. SWEARINGEN, 6941188-RAR, Q.M. Section 1327th Service Unit, is relieved from duty with the Q.M. Refrigeration Plant and is detailed to duty with the Commissary, effective this date.

4. SPECIAL DUTY: Private ARLIE E. CHURCH, 33045843, Battery B, 246th CA is detailed on special duty with the Enlisted Men's Service Club vice Private CLAUDE E. DAVIS, 33040086, Battery A, 246th CA relieved, effective this date.

5. RELIEF FROM ATTACHMENT: All enlisted men of the 71st CA (AA) are relieved from attached to the 1327th Service Unit and the Station Hospital for rations and quarters, effective after the noon meal today, and will rejoin their proper organizations.

6. COLLECTION OF ASHES: It has come to the attention of this office that paper, cans, and other refuse is being mixed with ashes. Hot ashes mixed with rubbish when loaded into trucks have already caused two trucks to catch on fire.
The practice of mixing refuse and other rubbish with ashes will cease immediately.

7. THEATER CLEARANCES: When Theater Clearances are to be submitted, they will be submitted at the Theater Office between the hours of 10:00 A.M. and 11:00 A.M. Clearance of Theater accounts will not be given at any other time.

8. CHANGE OF DUTY - 1327th Service Unit: The following named enlisted men are relieved from their present duties and are detailed to duty with the activities as shown opposite their names, effective this date:

Sgt. KENNETH B. FINLEY, 13009481, Q.M. Section	Company Duty
Sgt. JESSE B. GILLIKIN, 6835475, Q.M. Section	Company Duty
Sgt. HILLERY K. STURGILLE, 6996870, Q.M. Section	Motor Pool
Pvt. 1cl EDWARD J. SWORTZ, 6881889-RAR Q.M. Section	Motor Pool
Pvt. 1cl THOMAS R. SUSSMAN, 33050567, Q.M. Section	Military Police

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE:- POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 16)

T H U R S D A Y — December 4, 1941

1. MOVIES: Tonight. "HOLD THAT GHOST" w/ Abbott & Costello, Andrew Sister Ted Lewis and orchestra.
FRIDAY, Dec. 5th. "MARRIED BACHELOR" w/ Robert Young and Ruth Hussey.

2. FOR RENT: Furnished Bungalow - 113th Street Virginia Beach (second house on right hand side of street) near Fort Story. Large living room, 2-bedrooms, bathroom, oil heater, fireplace, garage and maids room. Available December 15, 1941, $40.00 per month. Contact Capt. INNES, 1327th S.U. 'phone 291 or Post Sgt. Major, 'phone 5.

FOR RENT - 505 - 16th Street Virginia Beach, furnished house (except linen, china or silverware) 2-bedrooms, living room, bath, kitchen, laundry heater, gas, frigidaire - $40.00 per month, including water and lights. Phone Virginia Beach 176M.

FOR RENT - Corner 37th Street and Atlantic Avenue Virginia Beach, furnished 8-room house. Living room, reception room, dining room, kitchen, 4-bedrooms, bath, oil heat, gas stove, electric refrigeration. Rental price- $75.00 per month for winter months; $100.00 per month all year round. Phone Mrs. H.C. MORECOCK, Va. Beach 143.

3. TUG-OF-WAR: The Tug-of-War contest will be completed on the parade ground at 3:00 P.M. Friday, December 5th, with the following contestants:

Btry A, 246th CA vs. Btry B, 246th CA
Btry C, 246th CA vs. Btry E, 246th CA
Btry G, 246th CA vs. Btry I, 246th CA
Hq. Btry 3rd Bn 246th CA vs. 246th CA Med. Det.

4. SPORT PICTURES: The second in a series of Sport Sound Moving Pictures will be shown at the Service Club at 6:45 P.M. today. No admission charge. Everyone most cordially welcome.

5. CHILDRENS' CHOIR: The Post Childrens' Choir will have a Christmas rehearsal at the new Post Chapel at 3:45 P.M. Firday, December 5th.

6. ACCORDION GROUP - ENLISTED MEN'S SERVICE CLUB: A well known group of Accordion Players will give a performance at the Service Club Friday evening, December 5th at 8:30 P.M. All members and friends of the garrison are most cordially welcome.

7. LOST PISTOL: The following described pistol was lost by Lt. W.P. Schmader, 2nd C.A. at the Officers Club, Saturday night November 29th.
38 Cal. Harrington-Richardson, blue finish, break-action revolver.
Anyone finding same or having knowledge of the whereabouts of this revolver, please contact Lt. Schmader or Secretary of the Officers Club (Lt. Tinsley) immediately. This is of the utmost importance.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---F-R-I-D-A-Y--- December 5, 1941
NO. 283)

1. DETAILS FOR SATURDAY, DECEMBER 6, 1941:
Officer of the Day ---------- 1st Lt. L.R. Harkness, FA 1327th
Medical Officer of the Day ---------- Capt. G.R. Gallagher, MC 160th SH
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

2. PRECAUTION AGAINST FREEZING: The following letter Headquarters 3rd Corps Area, File 331.3 (CAPX)29 (12-2-41) subject as above, dated December 2, 1941, is republished for the information and compliance of all concerned:

"1. In posts, camps and stations located in sections of the country where freezing temperatures usually occur during the winter months, it will be necessary to protect the carbonator and compressor installed in soda fountains against damage of freezing".

3. MILITARY PERSONNEL VISITING NATIONAL PARKS: The following letter Hq. 3rd Corps Area, File 353.8 24 (12-3-41) subject as above, dated December 3, 1941, is republished for information and compliance:

"1. Attention is invited to letter from this office, AG 353.8 (11-5-41) MB-M, dated November 5, 1941, subject: "Waiver of admission fees and other charges in National Parks."

"2. Information has been received in the War Department to the effect that privileges extended to soldiers visiting National Parks have been abused in certain instances.

"3. It is desired that the personnel of your command, who take advantage of the privileges granted by the National Park Service, be instructed to observe utmost care in extinguishing cigarettes and other smoking materials before disposition of same, and to refrain from disposing waste matter in a manner that would detract from the appearance of National Parks. Every precaution should be taken in order to prevent forest fires and to conform to regulations of the National Park Service that apply to visitors."

4. FURLOUGH TRAVEL INFORMATION AND PURCHASE OF RAILWAY TICKETS: Furlough-fare tickets will be procured or the battery commander notified that the man being furloughed has means of transportation to destination prior to the issuance of the official furlough. The furlough, when issued, should correspond with the traveling schedule furnished with the ticket. Battery and Unit Commanders will instruct all men granted furloughs of the necessity for complying strictly with the railroad schedule under which he is to make the journey for not only the departures but especially the return trip.

5. HOLIDAY FURLOUGH TICKETS: The representatives of all Railroad, Boat and Bus Lines will be at the Enlisted Men's Service Club, Monday, December 8, 1941, from 9:00 A.M., until 5:00 P.M. All Holiday Furlough Tickets will be purchased at this time, at the furlough rate.

A convoy will leave this station on the morning of December 17th, in time to arrive at Little Creek Ferry by 7:30 A.M.

6. PAYROLLS AND OFFICERS' PAY VOUCHERS: Officers' pay vouchers and payrolls of enlisted men for the month of December will be prepared and submitted to the Post Finance Officer on or before December 12, 1941.

7. RELIEF FROM SPECIAL DUTY: The 12 men of the 71st CA detailed on special duty with military police by paragraph 6, Daily Bulletin No. 248, dated October 23, 1941, are relieved, effective this date.

Private ERNEST C. GUTRIDGE, 33002141, Battery C, 246th CA is relieved from special duty with the Utilities, effective December 3, 1941.

8. SPECIAL DUTY: Private MURRAY ARONSON, 32163949, Q.M. Section 1327th S.U. is detailed on special duty with the Artillery Engineers, effective this date.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 17)

S A T U R D A Y — December 6, 1941

1. FOR RENT: House at the end of 9th Street Virginia Beach. 2-bedrooms, living room, dining room, kitchen, electricity. $25.00 per month year round. Call Mrs. CHAFFEE, 'phone Va. Beach 571-J. Must be seen to be appreciated.

2. FOR SALE: Officers' Sam Brown Belt, size - 34, Blouse, size - 37, garrison cap, size - 7¼. See Capt. SQUIRE, Reg. Hq. 246th CA.

3. MOVIES: Tonight. Double feature program. "BORDER VIGILANTES" w/ William Boyd, as hopalong Cassidy. Also "HIT THE ROAD" w/ Gladys George - Barton MacLane and Billy Halop.

SUNDAY and MONDAY - "YOU'LL NEVER GET RICH" w/ Fred Astaire - Rita Hayworth and Robert Benchley.

4. ATTENTION ALL MOTHERS: Many of you have expressed the wish for more spare time and some place to leave your children in good care. Here is your solution:-

A great deal of time, effort and work has been spent to start a Post Kindergarten and Nursery School on Monday and Friday afternoons, and Wednesday mornings, at $3.00 per child per month. What could be more inexpensive or ideal for the mothers - especially those who would like to have a little spare time, to play bridge or get better acquainted, etc.; and at the same time, it would be beneficial for the children.

There is now a permanent building adequately heated and furnished - just for the Kindergarten alone. Also -

Someone has finally been found who is interested in helping to make a success of the Kindergarten, will take charge of it, and try it out.

On Monday afternoon at 1:30 P.M. prompt, in the same building as Chaplain Poch's office on the post, next to Branch No. I, Post Exchange, Miss Elizabeth Graves, a Kindergarten Teacher from Virginia Beach will be present to take over the Kindergarten.

After all the effort that has been made, all the mothers are asked to do is cooperate and bring their children (from the ages of 2-1/2 and 3 years to 6 years).

Let's see what can be done to make this undertaking a success. For any suggestions or questions from the mothers, that might arise, surely some solution can be found.

The more children the more successful the Kindergarten, the more worth while for the teacher; also the more apt the teacher is to be interested and keep the Kindergarten going.

If you really want something worth while that will last, and that you can depend on, bring your children Monday and give it a fair try.

5. DANCE - N.C.O. CLUB: There will be an informal dance at the N.C.O. Club this date at 8:30 P.M. How about a good turn out. Admission will be on the new membership card only.

6. LADIES: Slimming classes every Tuesday and Friday at 11:15 A.M., at the Officers Club. Its great fun. You must turn out for this.

7. LADIES TEA - OFFICERS CLUB: The regular ladies bridge tea will be held at the Officers Club, Monday, December 8th.

8. OFFICERS CLUB MEMBERS: The regular Saturday night dance at the Officers Club tonight at 9:00 P.M. Orchestra. Don't forget the Stag Party Tuesday night December 9th, at 7:30 P.M.

9. SKATING: The Roller-Drome Skating Rink at Seaside Park solicits the patronage of soldiers, at ten-cents (10¢) admission and fifteen-cents (15¢) for skate rental. Soft drinks to men in uniform at 5¢. Special price on group tickets. Post Exchange coupons will be accepted.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---M-O-N-D-A-Y--- December 8, 1941
NO. 285)

1. DETAILS FOR TUESDAY, DECEMBER 9, 1941:
Officer of the Day ---------- 1st Lt. William A. Mudd, 71st CA
Medical Officer of the Day ---------- 1st Lt. J.D. Snider, MC 179th SH
Buglers of the Guard ---------- Pvt. George, Hq. Btry 1st Bn 71st
Pvt. Foote, Battery E, 246th CA

2. DISSEMINATION OF INFORMATION TO OUTSIDE SOURCES: Effective at once all officers and enlisted men are forbidden to give information of any character to newspapers, radio stations etc. All requests for such information will be referred to this headquarters.

3. PHOTOGRAPHING ON THE FORT STORY MILITARY RESERVATION: Effective at once the taking of photographs on the Fort Story military reservation is prohibited unless authority therefor has been obtained in writing from Post Headquarters in each case.

4. UNIFORM: The wearing of civilian clothing by members of this command is prohibited. Proper military uniform will be worn at all times.

5. PARAGRAPHS NO. 4 and 5, D.B. No. 283: The provisions of Par. 4 and 5, of Daily Bulletin No. 283, this headquarters, dated December 5, 1941, pertaining to the "Purchase of Holiday Furlough Tickets" are revoked.

6. SPECIAL PASSES - THOMAS NELSON CIRCLE: Residents of Thomas Nelson Circle will obtain special passes authorizing them to enter and leave the Fort Story reservation from the Adjutant at Post Headquarters.

7. ASSEMBLY: There will be an assembly at the Post Theater at 3:00 P.M. today, Monday, December 8, 1941, for the purpose of meeting Brigadier General DALE D. HINMAN, U. S. A. All available officers and men will attend.

8. ALL CONCERNED: Third Quarter Requisitions for cleaning and preserving, breakage allowances and office supplies, will be submitted to the Quartermaster not later than December 20, 1941. No issues will be made prior to the beginning of the Third Quarter FY-42.

9. FATIGUE DETAILS: The C.O. of the following listed organizations will detail the enlisted men indicated to report to Captain FRANTZ, QM clothing warehouse 1:00 P.M. Tuesday, December 9, 1941:

Battery A, 71st CA ---------- Five (5) men
Battery B, 71st CA ---------- Five (5) men
Battery C, 71st CA ---------- Five (5) men
Battery D, 71st CA ---------- Five (5) men

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE:- POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
BULLETIN NO. 18)

T U E S D A Y — December 9, 1941.

1. OFFICERS CLUB MEMBERS: Don't forget the regular STAG PARTY tonight (Tuesday) at 7:30. A big attendance is expected.

All Officers are reminded that Officers Club bills are to be paid BY December 10, 1941.

2. LOST: Black Scotty, male. Answers to name of MacGregor, canine identification tags, Dr. Codd. Reward for information leading to return to owner, Lt. Colonel E. W. TIMBERLAKE. Call Fort Story - Ext. 99, or Virginia Beach 867.

3. BOWLING LEAGUE MEETING at the Bowling Alleys Tuesday, December 9th, at 5:30 p.m. A representative from each team will be present.

4. MOVIES: Tonight. "THIS WOMAN IS MINE," w/ Franchot Tone, John Carroll, Walter Brennan, Carol Bruce.

WEDNESDAY and THURSDAY - "TEXAS," w/ William Holden, Glenn Ford, Claire Trevor, George Bancroft.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-U-E-S-D-A-Y--- December 9, 1941
NO. 286)

1. DETAILS FOR WEDNESDAY, DECEMBER 10,1941:
Officer of the Day ---------- 2nd Lt. H.E. Mecredy, FA 1327th
Medical Officer of the Day ---------- Capt. H.A. Sapira, MC 246th CA
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th CA

2. TO ALL CONCERNED: In case of shortage of fuel in organization etc., after working hours, no attempt should be made to secure coal without notifying the Police and Prison Officer. Failure to do so may result in serious consequences.

3. LEATHER EQUIPMENT: In compliance with letter, Headquarters Third Corps Area, Office of the Ordnance Officer, File COO 423.2, dated December 5, 1941. All unserviceable leather equipment issued by the Ordnance Department, will be turned in to the Ordnance Officer for exchange, and will not be placed on an Inventory and Inspection Report for disposition.

4. THE PRESIDENT'S "BILL OF RIGHTS DAY" BROADCAST: The following letter Headquarters Third Corps Area, file 006-Bill of Rights Day,24 (12-5-41) subject as above, dated December 5, 1941. is republished for information and compliance.

"1. Reference is made to letter from this office, December 3, 1941, AG 006 (12-3-41) MB-M, Subject: Bill of rights Day.

"2. On the evening of December 15, 1941, the President will address the nation as part of one hour program over National, Columbia and Mutual radio networks, between the hours of 10:00 and 11:00 P.M., E.S.T.

"3. The first half of the program will be a dramitization of the meaning of the Bill of Rights, which will be played by outstanding screen, stage and radio stars. The President will then speak for 15 minutes and will be preceded by a reading of the Bill of Rights by the Former Chief Justice, Chas. E. Hughes.

"4. It is desired that this information be disseminated to your command so that as many men as possible be afforded the opportunity of hearing this program."

5. CHANGE OF DUTY; 1327th Service Unit: The following named enlisted men of the 1327th Service Unit are relieved from their present duties and are detailed to duty with the activities as shown opposite their names, effective this date:

Pvt. JOSEPH E. HAMMOND, 6943287-RAR DEML Sec.	Service Club
Pvt. ARMAND E. FRANCIOSA, 6874686-RAR DEML Sec.	Company Duty
Pvt. RALPH E. MAXIMOVICZ 6897953-RAR QM Sec.	Fire Department
Pvt. ELMER C. CASPER, 6943862, QM Sec.	Fire Department
Pvt. JAMES DAVIS, 6894754, QM Sec.	Fire Department

6. SPECIAL DUTY: The following named enlisted men of Company A, 80th QM are detailed on special duty with the Military Police and are attached to the 1327th Service Unit for rations and quarters, effective this date:

Pvt. DONATO GERVASIO, 6944620	Pvt. FRANK C. HAHN, 33021845
Pvt. FRANCIS J. HINNEGAN, 13006029	Pvt. JOSEPH JACOBS, 33033258
Pvt. LAWRENCE H. BOWMAN, 7023811	Pvt. JOHN E. MALLOY, 33032973
Pvt. JOSEPH E. BROWN, 33015887	Pvt. MAURICE P. PROCOPIO, 33022094
Pvt. MARTIN GREENBURG, 33027477	Pvt. MORRIS A. MOSKOW, 33022083

The following named enlisted men of Company A, 80th QM are detailed on special duty with the Officer Mess, Fort Story, Va., effective this date:
Pvt. CHARLES W. HEDRICK, 13006051 Pvt. SAMUEL A. OLDHAM, 7025422

7. LEAVES CANCELLED AND DISCHARGES SUSPENDED: All leaves granted officers and enlisted men to take effect on or after December 8, 1941, are hereby rescinded until further orders.

All discharges of enlisted men by reason of over twenty-eight years of age are hereby suspended until further orders.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---W-E-D-N-E-S-D-A-Y--- December 10, 1941
NO. 287)

1. DETAILS FOR THURSDAY, DECEMBER 11, 1941:
Officer of the Day ---------- 2nd Lt. P.R. Bickford, QMC 1327th
Medical Officer of the Day ---------- Capt. G.R. Gallagher, MC 160th SH
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

2. ALL BATTERY AND UNIT COMMANDERS: All Battery and unit commanders will furnish the Postmaster, Fort Story, Virginia, in writing, the name of one reliable enlisted man, a member of their organization, who will be authorized to sign for all insured mail. The enlisted man detailed on this duty will not be relieved without instructions from this headquarters.

3. ATTACHMENT FOR RATIONS: 63 enlisted men of the Aircraft Warning Service are attached to Company A, 80th QM for rations, effective with the noon meal, December 9, 1941.

The following named enlisted men of Hq. Btry. 2nd C.A. are attached to Battery A, 246th CA for rations, effective this date:
Tech. Sgt. HEWIT POOLE, 6883753
Staff Sgt. FREDERICK L. JACOBS, 6820298
Corp. GROVER C. EVERETT, 6752500

4. CORRECTION- ATTACHMENT FOR RATIONS: So much of Par. 9, D.B. No. 286, dated December 9, 1941, as reads "20 men of the 3rd Ord. Service Co." is corrected to read "12 men of the 3rd Ord. Service Co."

5. DETAILED TO DUTY - 1327th Service Unit: The following named enlisted men are detailed to duty with the Post Intelligence Officer effective this date:
Pvt. RUBIN GOLDENBURG, 32180021, DEML Section, 1327th S.U.
Pvt. LOUIS GOLDFARB, 32180018, DEML Section, 1327th S.U.

6. HARBOR DEFENSE EQUIPMENT REPORTS: The submission of all Harbor Defense Equipment Reports is hereby suspended until further notice.

7. RELIEF FROM SPECIAL DUTY: Pvt. RUSSELL E. GARRETT, 33002145, Battery C, 246th CA is relieved from special duty with the Military Police.

Pvt. RUSSELL E. GARRETT, 33002145, DEML Section, 1327th Service Unit, is detailed to duty with the Military Police.

8. TARGET PRACTICE- U.S. NAVY: The U.S. Navy will conduct target firing this week on the days and areas as indicated below:

Wednesday - - - Area 5 and 10
Thursday and Friday - Area 10

9. MARKING OF CLOTHING: Section III, War Department Circular No. 248, dated December 4, 1941, is repeated for the information of all concerned:
"Pending the revision of AR 850-5, September 26, 1936, paragraph 1, of those regulations is changed as follows:

1. Marks required; where placed,-- Clothing will be marked on the inside of each garment with the initial letter of the enlisted man's last name, followed by a dash and the last four figures in the enlisted man's Army serial number; e. g., W-6046. (A.G. 400.161 (10-13-41).)"

10. REPORTS: The initial report required by letter file 330.3 (12-8-41) 17, subject: "Roster of Officers", Headquarters Third Coast Artillery District and HD of CB, dated December 8, 1941, will be submitted by the following organization to this headquarters, not later than 3:00 P.M. this date; subsequent reports will be submitted through this headquarters not later than the 6th and 20th day of each month:

246th CA
159th Station Hospital
Company A, 80th QM BN (LM)
160th Station Hospital
71st Coast Artillery (AA)

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
: T H U R S D A Y December 11, 1941
BULLETIN NO. 19)

1. YOUNG LADY WANTED: Barr Drug Store at 17th and Atlantic Avenue, Virginia Beach wishes to employ the wife or daughter of an N.C.O. or Private for work at their Soda Fountain. Lady must be of good appearance and willing. Opportunity for advancement,

2. FOR RENT: Furnished house - 211 - 14th Street Virginia Beach. Living room, dinette kitchen, bath, 4-bedrooms, electric hot water heater, coal stove heat - $35.00 per month untill May 1st. Apply 416 - 23rd Street. Telephone 261-M Mrs. CHERRY.

3. MOVIES: "TEXAS" Cancelled. Instead, don't miss Ida Leonard and her All-American Girl Revue.

FRIDAY - "BUY ME THAT TOWN" w/ Lloyd Noland and Constance Moore.

4. LADIES: Slimming classes are held every Tuesday and Friday at 11:15 A.M. at the Officers Club. Its great fun. You must turn out for this.

5. GIRL REVUE: Post Theater. Don't miss the All-American Girl Revue at the Post Theater tonight at 7:30 P.M. Admission 20¢ (cash or Post Exchange coupons).

6. FORT STORY DANCE - ENLISTED MEN'S SERVICE CLUB: The semi-monthly soldier dance will be held in the Service Club, Friday, December 12th, from 8:00 to 11:00 P.M. No passes will be required, and field uniforms will be permitted. Men, however, are asked to be neat in appearance.

7. OFFICERS CLUB MEMBERS: Don't forget the regular Saturday night dance at the Officers Club, Saturday, December 13th.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-H-U-R-S-D-A-Y--- December 11, 1941
NO. 288)

1. DETAILS FOR FRIDAY, DECEMBER 12, 1941:
Officer of the Day ---------- 1st Lt. R.G. Stover, CWS 1327th S.U.
Medical Officer of the Day ---------- Capt. H.S. Raines, MC 160th S.H.
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

2. ATTACHMENT OF PRISONERS FOR RATIONS: Effective with the noon meal December 13, 1941, all prisoners will be attached to the 159th Station Hospital, for rations.

3. ATTACHMENT FOR ADMINISTRATION: The following named enlisted men are relieved from attached to Battery E, 2nd C.A. for administration and are attached to the 1327th Service Unit, for administration, effective this date:

Tech. Sgt. ROY R. LaMOTT, 6080345
Tech. Sgt. HORACE M. LOCKLIN, 6360301
Corporal ROBERT B. BARNES, 13020526
Pvt. lcl JOHN P. NOVOK, 13004021
Sgt. CLARENCE W. BACHMAN, 33020777
Corporal JAMES B. BROWN, JR., 33040892
Pvt. lcl ROBERT G. HARING, 33010569
Pvt. lcl RAYMOND S. HUBER, 33010575
Pvt. WILLIAM F. McLAUGHLIN, 3302611
Pvt. CHARLES M. ROUZER, 33004426
Pvt. PIETRO ZIRILLI, 33010911
Cpl. MICHAEL A. MAURER, 6841029-RAF
Pvt. WILLIAM L. SMITH, 36044312
Cpl. H. D. HAMMERSLEY, 20369129
Pvt. GRANVILLE B. BRILL

The following named enlisted men of Hq. Btry 2nd Bn. 2nd C.A. are attached to 1327th Service Unit for administration:

M/ Sgt. JAMES A. BENNETT, R-340463
Tech Sgt. HEWIT POOLE, 6883753
S/Sgt. FREDERICK L. JACOBS, 6920298
Corp. GROVER C. EVERETT, 6752500

4. RELIEF FROM SPECIAL DUTY: The following named enlisted men of Battery E, 2nd C.A. are relieved from special duty with the Fire Department:

Pvt. WALTER KUZMINSKI, 33020936
Pvt. WILLIAM F. MADLE, 33020985
Pvt. JAMES J. FLYNN, 13005078

Private ROBERT G. PENDLETON, 6996967, Battery E, 2nd C.A. is relieved from special duty with the Officer Mess, Fort Story, Va.

5. NOTICE: The provisions of Circular No. 249, War Department, dated December 5, 1941, will be brought to the attention of all personnel of this command.

6. CORRECTION - ATTACHMENT FOR RATIONS: So much of Par. 4, D.B. No. 287, this headquarters, dated December 10, 1941, as reads "12 men of the 3rd Ord. Service Co." is corrected to read "14 men of the 3rd Ord. Service Co."

7. APPLICANTS FOR WARRANT OFFICER: The Army Classification Test for applicants for warrant officer examination will be held at the Station Hospital at 1:30 P.M., December 12, 1941. Applicants should report to the information office, Station Hospital, not later than 1:15 P.M. that date.

8. POST EXCHANGE NOTICE: All signed B.R.E.M's and unissued Coupon Books will be returned to Lieut. HARKNESS, not later than 11:00 A.M., Saturday, Dec. 13th, at the Post Exchange Office. Organization commanders are reminded that the December issue of Coupon Books stops at that time and that the January issue starts on Wednesday, December 17, 1941.

9. TO ALL CONCERNED: All unit Supply Officers will immediately Requisition for Quartermaster Clothing and Equipage, authorized for their respective unit. Requisition will show complete basis for issue.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 289) ---F-R-I-D-A-Y--- December 12, 1941

1. DETAILS FOR SATURDAY, DECEMBER 13, 1941:
Officer of the Day ---------- 2nd Lt. Edw. J. Lawler, QMC 1327th
Medical Officer of the Day ---------- Capt. C.F. Davis, MC 246th CA
Bugler of the Guard ---------- Pvt. Wood, Battery B, 246th CA

2. FURLOUGH TRAVEL DURING THE CHRISTMAS HOLIDAYS: The following Immediate Action Letter, Hq. 3rd Corps Area, file 220.711 (12-10-41), subject as above, dated December 10, 1941, is republished for the information and compliance of all concerned:

"1. Reference is made to letter, this office, November 7, 1941, AG 220.71 (11-5-41)MB-A-M, subject: Furlough Travel During the Christmas Holidays, and to War Department Circular No. 200, September 25, 1941.

"2. Current instructions pertaining to Christmas furloughs are modified to allow not to exceed 25 per cent of the unit to be absent at any one time, priority being extended to individuals visiting their homes. This percentage may be reduced at the discretion of the Commanding Generals, Armies, Corps Areas, Army Air Forces, and the Chief of the Armored Forces.

"3. It is desired that each Corps Area Commander notify the Commanding Officers of all stations including exempted stations within territorial limits of the Corps Area."

3. PREVENTION OF ACUTE CADMIUM POISONING: The following War Department Circular Letter No. 320, Office of the Quartermaster General, dated December 5, 1941, is republished for the information and compliance of all concerned:

"1. Circular Letter No. 284, Office of the Quartermaster General, October 24, 1941, is hereby rescinded and the following substituted therefor:

"2. In order to eliminate the possibility of cadmium poisoning, it is directed that purchase or use of food containers or cooking utensiles plated with cadmium on surfaces in contact with food be immediately discontinued."

4. RELIEF FROM SPECIAL DUTY: The following named enlisted men are relieved from special duty with the Artillery Engineer, effective this date:

Corp. GARLAND L. HYLTON, 20367934, Hq. Btry., 1st Bn., 246th CA
Pvt. MURRAY ARONSON, 32163949, Q.M. Section, 1327th Service Unit.

The following named enlisted men are relieved from special duty with the Military Police:

Pvt. JOSEPH C. ZEBROSKIE, Jr., 36124228, Battery A, 71st CA
Pvt. JOSEPH A. RITOK, 36124161, Battery A, 71st CA

5. MAINTENANCE OF OPTICAL INSTRUMENTS: (Reprint from DB No.289, Hq HDCB) The Harbor Defense Ordnance Officer is in receipt of the following letter from the Commanding General, First Army, which is quoted below for the information and guidance of all concerned:

"1. A letter from the Ordnance Officer, second Corps Area, August 2, 19 same subject, is quoted for your information. Reference is also made to paragraphs 43 and 44 of TR 1320 - B:

'Condition of optical instruments being received by the Ordnance Repair Shop, Fort Hamilton, New York, from harbor defense installations is such as to indicate that an effort is being made to clean the internal parts of thos instruments by untrained personnel in the using services.'

"2. It is requested that you give this matter such attention as appear necessary with the view of avoiding disassembly by unqualified personnel."

6. RELIEF AND ATTACHMENT OF ENLISTED MEN FOR RATIONS: Effective with the evening meal December 11, 1941, twenty-two (22) enlisted men, United States Navy are relieved from attachment for rations only to Battery A, 246th CA, and are attached to the 159th Station Hospital for rations only.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
: S A T U R D A Y December 13, 1941
BULLETIN NO. 20)

1. FOR RENT: 5-room furnished house - 121st Street Virginia Beach. $35.00 per month. Heated by oil stove; ice-box, electric cooking stove. Telephone VB 2398-R.

2. MOVIES: Tonight. Double feature program. "ALL AMERICAN COED" w/ Frances Langford, Johnny Downs, Harry Langdon. Also "THE BLONDE FROM SINGAPORE w/ Florence Rice and Lief Erickson.

SUNDAY and MONDAY, "LOOK WHO'S LAUGHING" w/ Edgar Bergen and Charley McCarthy.

3. LADIES TEA - OFFICERS CLUB: Regular ladies bridge tea will be held at the Officers Club, Monday December 15th.

4. OFFICERS CLUB MEMBERS: Regular dance at the Officers Club to-night (Saturday), beginning at 9:00 P.M.

5. LADIES: Don't forget the slimming classes held every Tuesday and Friday at 11:15 A.M., at the Officers Club.

6. ROAD SHOW - POST THEATER: There will be a big Road Show held at the Post Theater on Thursday, December 18, 1941. Details to be published later.

7. RELIGIOUS SERVICES - Sunday, December 14, 1941:

8:00 A.M. - Catholic Mass - Chaplain MIDURA
9:00 A.M. - Protestant Worship - Chaplain SUTTENFIELD
9:00 A.M. - General Worship Services - Red Cross Building, Hospital Area - Chaplain ROBERTS
10:00 A.M. - Post Sunday School and Bible Class
11:00 A.M. - Post Protestant Worship - Chaplain POCH

All services are pointing toward to the festival of Christmas, and emphasize the Christmas message. Everyone most cordially welcome at any or all of these services.

8. CHESTERFIELD PROGRAM - ENLISTED MEN'S SERVICE CLUB: Free movies on Sports will be held at the Service Club from 6:45 to 8:00 P.M., Monday, December 15th. This promises to be a good show. Everyone welcome.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---S-A-T-U-R-D-A-Y--- December 13, 1941
NO. 290)

1. DETAILS FOR SUNDAY, DECEMBER 14, 1941:
Officer of the Day ---------- Capt. Otis D. Smith, Inf. 1327th
Medical Officer of the Day ---------- 1st Lt. J.D. Snider, MC 159th S.H.
Bugler of the Guard ---------- Pvt. Kiernan, Band, 246th CA

2. DETAILS FOR MONDAY, DECEMBER 15, 1941:
Officer of the Day ---------- 1st Lt. L.R. Harkness, FA 1327th SU
Medical Officer of the Day ---------- Capt. Maurice Sones, MC 1327th SU
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

3. ATTACHMENT OF ENLISTED MEN FOR RATIONS: The following named enlisted men of the 244th Coast Artillery, Camp Pendleton, Virginia, are attached to Hq. Btry., 246th CA for rations and quarters, effective with the noon meal December 12, 1941:

M/ Sgt. ROBERT P. HOERNING, 20260097
S/ Sgt. WILLIAM H. HEINE, 32004904
Pvt. lcl THURSTON OLSON, 36017051
Pvt. lcl WILLIAM R. LAURENZANO, 20259915
Pvt. DONALD FROST, 36051728
Pvt. EDWARD J. O'NEIL, 20259912
Pvt. JAMES V. ORLANDO, 20259897

4. MISSING RIFLE - NO. 835868: All organizations will make a search for rifle # 835868, M-1903, missing from Hq. Btry., 1st Bn., 71st CA. If located, contact Captain F.J. RODDY, 71st CA.

5. PILOT OR NON-PILOT OFFICER TRAINING IN GRADE OF RESERVE AND NATIONAL GUARD OFFICERS: The following War Department letter, file AG 210.63 (12-5-41) MT, subject as above, dated December 9, 1941, is republished for the information of all concerned:

"In connection with mimeographed letter of October 25, 1941, subject: "Non-pilot Flying Training in Officer Grade in Bombardiering and in Navigation," and other instructions relative flying training, applications from Reserve and National Guard officers will be considered for only a single type of training at any one time by the Office Chief of Air Corps. If an applicant has applied for more than one type of training, action will be taken on his first application only, unless he advises the Office Chief of Air Corps that he desires to have his initial application withdrawn and a new application for another type of training submitted therefor."

6. INVENTORY OF POST EXCHANGE: The following named officers are detailed to Inventory the Post Exchange for the month of December 1941:

Inventory Officer	1. Captain JOSEPH E. RUBENS, MC 1327th S.U.
	2. 1st R.G. Stover, 1327th S.U.
	3. 2nd Lt. H.E. Mecredy, 1327th S.U.
	4. 1st Lt. Frank P. Landis, 1327th S.U.
Branch # 1.	1. 1st Lt. Hilliard Cohen, MC 71st CA
	2. 2nd Lt. Henry H. Thomas, Co. A, 80th QM.
Branch # 3.	1. Capt. F.H. Steel, MC 1327th S.U.
	2. 1st Lt. Robert E. Milburn, MC 1327th S.U.
Branch # 4.	1. 1st Lt. Victor E. Sacks, 1327th S.U.
	2. Lieut. C.W. Burkett, 1327th S.U.
Stock Room, Service Station and Bowling Alley	1. 1st Lt. Herbert P. MacNeal, MC 1327th S.U.

The Officers named above will report to the Office, Main Post Exchange, at 7:30 A.M., Tuesday, December 16, 1941, for instructions.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

9. TRANSFER OF PRIVATE AUTOMOBILE LICENSE PLATES: The following letter from the Tidewater Association of Virginia, to Commanding General, Harbor Defenses of Chesapeake Bay, Fort Monroe, Virginia, subject as above, dated December 11, 1941, is republished for the information of all concerned:

"We realize that among the officers and enlisted personnel of the Army there will be many who must either transfer to Virginia registration between now and April 1st or secure renewal plates from their home State. In an effort to be of service we offer the facilities of our office to the Army personnel, regardless of their membership in our Association or any affiliated AAA Club.

We have forwarded to each unit in your district a copy of the "Digest of Motor Laws". However, there are in many instances a great amount of paper work that must be handled in the transfer in securing the original Title or Bill of Sale and to avoid the last minute rush we ask that the Army personnel cooperate by coming to us with all their papers as soon as possible.

Our headquarters office is located in the Monticello Hotel, Norfolk and is open week days from 8:00 A.M., to 9:00 P.M. Sundays and Holidays from 9:00 A.M., to 5:00 P.M.

Our branch offices will also be glad to render this service. They are located as follows: Monroe Hotel, Portsmouth, Va., open week days only from 9:00 A.M. to 5:00 P.M. Warwick Hotel, Newport News, Va., week days only from 9:00 A.M. to 5:00 P.M."

By order of Col. HENDON:

E. G. HULLING,
Captain, A.G.D.,
Adjutant.

NOTE:- POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 291)

---S-U-N-D-A-Y---

December 14, 1941

1. DETAILS FOR MONDAY, DECEMBER 15, 1941:
Officer of the Day ---------- 1st Lt. L.R. Harkness, Inf. 1327th
Medical Officer of the Day. ---------- Capt. Maurice Sones, MC 1327th SU
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. TELETYPE MESSAGE: The following teletype messages from Fort Monroe, Va., to Commanding Officer, Fort Story, Va., dated December 13, 1941, is republished for the information of all concerned:

"IN REPLY CITE HDSP PURSUANT TO POLICIES ANNOUNCED DEC 11, 1941, ON GRANTING LEAVES OR FURLOUGHS FOR ANTIAIRCRAFT AND HARBOR DEFENSE TROOPS THE FOLLOWING REGULATIONS EFFECTIVE UPON RECEIPT OF THIS MESSAGE ARE ANNOUNCED COLON EMERGENCY LEAVES OR FURLOUGHS IN CASE OF REAL PERSONAL EMERGENCY NOT TO EXCEED ONE WEEK MAY BE GRANTED BY YOU PROVIDED SUCH ACTION WILL PERMIT EFFICIENT PERFORMANCE OF ALL TASKS ASSIGNED YOU"

RICHARDSON 307 PM EST

"IN REPLY CITE HDAG FIRST ARMY DIRECTS THAT ALL UNEXECUTED TRANSPORTATION AUTHORIZED FOR DEPENDENTS OF MILITARY PERSONNEL AND CIVILIAN EMPLOYEES FROM CONTINENTAL UNITED STATES TO OVERSEAS DEPARTMENTS AND BASES COMMAS INCLUDING ALASKA COMMA IS CANCELLED PERIOD UNTIL FURTHER NOTICE COMMA TRANSPORTATION OF DEPENDENTS OF MILITARY PERSONNEL AND CIVILIAN EMPLOYEES AND SHIPMENT OF HOUSE-GOODS TO OVERSEAS DEPARTMENTS AND BASES COMMA INCLUDING ALASKA COMMA IS CANCELLED PERIOD UNTIL FURTHER NOTICE COMMA TRANSPORTATION OF DEPENDENTS OF MILITARY PERSONNEL AND CIVILIAN EMPLOYEES AND SHIPMENT OF HOUSEHOLD GOODS TO OVERSEAS DEPARTMENTS AND BASES COMMA INCLUDING ALASKA COMMA BY ARMY TRANSPORT OR OTHER WISE COMMA IS PROHIBITED SIGNED ADAMS ADJT GEN UNQUOTE END"

3. FIRE EXTINGUISHERS FOR TEMPORARY QUARTERS: Every Battery or similar unit Commander who now has men quartered in tents should immediately draw fire-fighting equipment in order to provide the necessary fire protection. Attention is invited to the fact that fire extinguishers in the present buildings should not be removed. Additional fire-fighting equipment is available at the #1 Fire Station.

4. HEATING SYSTEMS: The recent large demand for replacement of parts and grates for furnaces and heaters indicates that Battery and Unit Commanders are not exercising sufficient control over firing furnaces. Replacement of grates and supply parts is practically impossible to obtain, and many parts now destroyed through neglect cannot be replaced. It is requested that all possible care be exercised in the operation of heating equipemnt, particularly since replacement parts are exceedingly difficult to obtain.

Attention is invited to memorandum dated October 7, 1941, headquarters Fort Story, Virginia.

5. ATTACHMENT OF ENLISTED MEN -CASUALS: The following named enlisted men (casuals) are attached to the 1327th Service Unit for administration and supply, effective on the dates as shown opposite their names:

Pvt. GRAMLEY W. BUEHLER, 33003186, Hq. Btry., 1st Bn., 71st CA
December 12, 1941.

Pvt. THOMAS F. SWAIN, 20342439, Co. M, 176th Infantry, Ft. George G. Mead, Maryland, December 11, 1941.

Pvt. RALPH R. PERKINSON, 33042982, Co. K, 176th Infantry, Ft. George G. Meade, Maryland, December 11, 1941.

Pvt. FRANK ROSPARSKI, 33031988, Battery G, 71st CA, December 10, 1941.

6. RELIEF AND ATTACHMENT OF ENLISTED MEN FOR RATIONS: The following named enlisted men of 2nd Bn. 71st CA (AA) are relieved from attached to the 159th Station Hospital for rations, effective with the noon meal, December 14, 1941:

Sgt. ALBERT W. WATKINS, 6449346, Battery E
Cpl. THADDENS S. GRABINSKI, 33032088, Battery E
Cpl. MATCZAK, Battery E
Pvt. lcl JOSEPH A. KREMP, 33026598, Battery E

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---M-O-N-D-A-Y--- December 15, 1941
NO. 292)

1. DETAILS FOR TUESDAY, DECEMBER 16, 1941:
Officer of the Day ---------- 1st Lt. John P. Leary, 1327th S.U.
Medical Officer of the Day ---------- 1st Lt. James T. O'Neal, MC 1327th
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th CA

2. PARKING OF CARS: No civilian cars will be permitted to park in gun areas, or in the vicinity of Harbor Defense Control Post, west of route 60.

3. EXEMPTIONS FROM PURSUIT OF EXTENSION COURSES: The attention of all interested is called to the provisions of letter, AG 352.6 (8-23-41) WD Subject: "Announcements of Exemptions from the Pursuit of Army Extension Courses", which contains an announcement of policy on this subject and which has been given organizational distribution at Fort Story.

4. OFFICERS TRANSFERRED TO HAWAII, PHILIPPINES & ALASKA: The War Department directs all officers now under individual orders to proceed to ports of embarkation on west coast, enroute to Hawaii, Philippines and Alaska who have not started to comply, will remain at present station pending further instructions.

5. ATTACHMENT FOR RATIONS: Three (3) men of 110th Infantry, and two (2) men of Camp Lee, are attached to the 1327th Service Unit for rations, for two (2) meals, effective with supper December 13, 1941.

6. CORRECTION - RELIEF AND ATTACHMENT OF ENLISTED MEN FOR RATIONS: So much of Par. 6, D.B. No. 291, this Hq. dated December 14, 1941, as reads "are relieved from attached to the 159th Station Hospital" is amended to read "are relieved from attached to the Det. Med. Dept. 1327th Service Unit."

7. POST EXCHANGE INVENTORY: So much of Par. 7, D.B. No. 291, dated Dec. 14, 1941, as pertains to Post Exchange Inventory, is amended to delete the name of 1st Lt. Paul F. Landis, 1327th S.U. and to substitute the name of 1st Lt. WILLIAM A. NUSSER, V.C. 1327th S.U.

8. POST EXCHANGE NOTICE: For the purpose of taking the regular monthly inventory, the Post Exchange Main Store will close today at 1:00 P.M. and remain closed until such time Tuesday as the inventory is completed. Post Exchange Branch Stores will close today at 5:00 P.M. and remain closed until such time Tuesday as the inventory is completed. The Post Exchange Service Station will close from 8:00 A.M. until 10:00 A.M. tomorrow.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 21)

T U E S D A Y December 16, 1941

1. MOVIES: Tonight. "YOU BELONG TO ME" w/ Henry Fonda and Barbara Stanwyck.

WEDNESDAY, Dec. 17th. "HONKY TONK" w/ Clark Gable, Lana Turner and Frank Morgan.

2. OFFICERS CLUB MEMBERS: The regular STAG party at the Officers Club tonight at 7:30 P.M. Several guests from off the post are expected. Let's show them a crowd.

LOST - One black velvet evening wrap with Peter Pan collar and puff sleeves. Please check your wrap if it is similar. If found, please phone Officers Club 35-R-1 or Lt. Tinsley, 35-R-2.

3. SOCIAL PARTIES: Reception by the Commanding Officer, Fort Story, Va., for New Years noon at the Fort Story Officers Club, is cancelled.

The regular Saturday night dance at the Fort Story Officer's Club will be continued until further orders.

Other large parties or gatherings of a social nature are discouraged. This does not prevent small gathering of friends.

The noncommissioned officers club will conform.

4. LADIES: Slimming classes every Tuesday and Friday at 11:15 A.M., at the Officers Club. Its great fun. Don't miss it.

5. CHRISTMAS CHOIR: The Post Children's Choir will meet for the Christmas rehearsal this afternoon at 4:00 P.M.

6. TROUPERS SHOW: The Navy Y.M.C.A. will put on another one of its fine vaudeville shows at the Service Club at 8;00 P.M., today. Everyone most cordially welcome.

7. BILLIARD SHOW - ENLISTED MEN'S SERVICE CLUB: Willie Hoppe, greatest billiard player of all time, will give an exihibition at the Service Club Wednesday, December 17th, at 7:30 P.M. The entire personnel of the post is invited to attend. There will be no admission charge. Mr. Hoppe will give a lecture, demonstration of all phases of Billiards, exhibit of skill that has made him champion, perform a number of tricks, and give personal instructions to enlisted men invited from the audience. The whole performance will indeed be an exhibition worth seeing.

8. U. S. O. CAMP SHOW - POST THEATER: "HAPPY GO LUCKY", second of a series of stage shows to be presented by U.S.O. -- Camp Shows, Inc., will be at the Post Theater, Thursday night, December 18th, instead of the usual "MOVIES A "Streamlined Fun Frolic" with a big "Rip-roaring Cast" will be presented at 7:30 P.M., with only one performance. Price of admission will be 20¢ in Cash or Post Exchange Coupons. DON'T MISS IT!

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE:- POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 293)

---T-U-E-S-D-A-Y---

December 16, 1941

1. DETAILS FOR WEDNESDAY, DECEMBER 17, 1941:
Officer of the Day ---------- Capt. Arthur T. Innes, 1327th S
Medical Officer of the Day ---------- Capt. Joseph E. Cox, MC 1327th S
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th C

2. ALL OFFICERS CONCERNED: All officers assigned and attached to the following organizations will report to the Station Hospital not later than December 20, 1941, for the purpose of Typhoid Innoculation and Vaccination. Appropriate documentary evidence as to previous innoculations and vaccinations may be presented at this time. Immunization Record, Form 81, will be furnished each officer upon completion of innoculation and vaccination:

1327th Service Unit - all sections
Company A, 80th QM
159th Station Hospital
160th Station Hospital.

3. ATTACHMENT FOR RATIONS: The following named enlisted men of Hq. Btry., 2nd Bn. 2nd C.A. are attached to the 1327th Service Unit for rations, effective with breakfast today:

M/ Sgt. JAMES A. BENNETT, R-340463 S/Sgt. FREDERICK L. JACOBS, 6920298
Tech Sgt. HEWIT POOLE, 6883753 Corp. GROVER C. EVERETT, 6752500

4. EFFICIENCY REPORTS: The attention of all concerned with reporting the efficiency of officers is called to the provisions of War Department Circular 247 (12-2-41) Section I.

5. OFFICIAL PAPERS: Effective immediately all papers prepared under the heading, Headquarters 3rd C.A. District and H.D. of C.B., Fort Monroe, Virginia, will be prepared: Headquarters Chesapeake Bay Sector, Fort Monroe, Virginia.

6. CHAMBERLIN HOTEL: The Chamerlin Hotel will be operated for transient officers service personnel of the Army, Navy, Marine Corps and Coast Guard. Occupancy will be limited to a period of 2 months. Army personnel now at the Chamberlin will be permitted to remain for a two months period starting December 21, 1941.

7. CHESAPEAKE BAY SECTOR: Pursuant to instructions of the First Army and in accordance approved defense plans, the Chesapeake Bay Sector was established at Noon, December 12, 1941, superceding the Third Coast Artillery District which ceased to exist.

Brigadier General Claude M. Thiele, U.S. Army, having reported for duty was designated as Sector Antiaircraft Commander and order to assume command of all antiaircraft troops in the Sector. These troops consist of the 70th at the Glenn Martin Plant, Baltimore, Maryland, the 212th at Washington, D.C. and the 71st, 74th and 94th C.A. in the Norfolk-Newport News area. General Thiele is the Commanding General of the 34th Coast Artillery Brigade which will have these five regiments attached to it.

Colonel Malcolm W. Force, 244th Coast Artillery was designated as Commanding Officer, Harbor Defense of Chesapeake Bay and Seaward Defense Commander, and directed to assume command of all seacoast artillery troops in the Sector.

8. RELIEF AND ATTACHMENT FOR RATIONS: Effective with the morning meal Dec. 17, 1941, thirteen (13) enlisted men from organizations as indicated, on special duty at the Harbor Entrance Control Post, are relieved from attached for rations only with the 159th Station Hospital, and are attached to Hq. Btry., 246th CA for rations only:

7 men of Hq. Btry., 246th CA
2 men of Hq. Btry., 3rd Bn. 246th CA
1 man of Hq. Btry., 1st Bn. 246th
3 men of Btry., E, 2nd C.A.

By order of Col HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE:- POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 294)

---W-E-D-N-E-S-D-A-Y---

December 17, 1941

1. DETAILS FOR THURSDAY, DECEMBER 18, 1941:
Officer of the Day ---------- 2nd Lt. Wm. T. Tilden, 1327th S
Medical Officer of the Day ---------- 1st Lt. Thomas A. Morgan, MC 132
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th C

2. CREDIT AT FORT STORY SALES COMMISSARY: Under the provisions of paragrap 2-b, (2) e, A.R. 30-2290, all enlisted men desiring credit at the Sales Commissary, Fort Story, Virginia, for the month of January, 1942, submit letters for same so as to reach this headquarters on or before December 24, 1941.

3. TELEPHONE INSTALLED: A telephone was installed this date at the Little Creek Mine Base. The number is NORFOLK 49459.

The Short Wave Radio is KJ5 and operates on 2240 KC, and is on 24 hours per day.

This organization may also be contacted by the Coast Guard telephone free from Fort Story by calling Virginia Beach 1F2 then the Coast Guard at Little Creek.

The mail address is still Fort Story, Virginia.

4. INOCULATIONS AGAINST TYPHOID: The attention of all regimental and separate unit commanders is directed to the provisions of paragraph 1-b, (4) A.R. 40-215, reference the inoculations required against typhoid fever and smallpox.

Regimental dispensaries are responsible for the inoculation of members of their regiments. Members of Company A, 80th Quartermaster Battalion (LH) will report to the Regimental Dispensary 246th Coast Artillery for inoculation.

Members of the 1327th Service Unit, Station Complement, will be inoculated at the Station Hospital. Unit commanders will furnish the surgeon concerned with a roster of troops who will require inoculation. Arrangements will be made for the immediate accomplishment of inoculations for all men who have not been inoculated within the past year. When inoculations have been accomplished unit commanders will furnish their personnel officers with a roster of names of members of their organizations who have received vaccines so that proper entry in the service records may be accomplished.

5. ATTACHMENT FOR ADMINISTRATION AND SUPPLY: The following armed enlisted men (casuals) are attached to the 1327th Service Unit for administration and supply:

Pvt. FRANCIS E. JANDRO, 11013116, Btry. G, 96th C.A. Camp Davis, N.C.
Pvt. HOWARD B. LAYTON, Jr., 13018035, Troop G, 6th Cavalry, Fort Oglethrope, Ga.

Fourteen (14) men of the 96th Ordnance Company are attached to the 1327th Service Unit for administration and supply, effective December 16, 1941.

6. ATTACHMENT FOR RATIONS: One (1) man of the 96th Ordnance Company is attached to Btry., G, 246th C.A. for rations, effective with the noon meal, December 16, 1941, through Saturday noon December 20, 1941.

7. MESSAGE TO THE ARMY FROM THE SECRETARY OF WAR: The following letter Hq. 3rd Corps Area, file 335.15 (12-13-41), subject as above, dated December 13, 1941, is republished for the information of all concerned:

"To the Army:

The emergency for which our Army has been preparing is now a stern reality. In the present crisis the people of the nation look to the men of the armed forces for inspiration and a continuing example of fortitude. In the trials which we shall undoubtedly be called upon to face, the fine traditions of our military service, and the devotion to duty which I know all of you feel, assure our final victory. I send you my Christmas greetings with confidence that the respect and affection which all Americans feel for you will be enchanced during the year which lies before us.

/s/ HENRY L. STIMSON
Secretary of War."

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
: T H U R S D A Y December 18, 1941
BULLETIN NO. 22)

1. ATTENTION LADIES: There will be no Monday bridge tea or exercise class for the next two weeks.

The next ladies bridge tea will be held at the Officers Club Monday, January 5, 1942.

The slimming exercise class will start again on Tuesday, January 6, 1942, at the Officers Club, 11:15 A.M.

2. BOWLING: Bowling will be started in Januray at the Virginia Beach alley.

3. U. S. O. CAMP SHOW - POST THEATER: "HAPPY GO LUCKY", second of a series of stage shows to be presented by U.S.O. -- Camp Shows, Inc., will be at the Post Theater, tonight instead of the usual "MOVIES" A "Stream-lined Fun Frolic" with a big "Rip-roaring Cast" will be presented at 7:30 P.M., with only one performance Price of admission will be 20¢ Cash or Post Exchange Coupons. DON'T MISS IT!

4. MOVIES: FRIDAY - "UNEXPECTED UNCLE" w/ Anne Shirley, James Craig and Charles Coburn.

5. OFFICERS CLUB MEMBERS: Regular dance at the Officer Club Saturday night, beginning at 9:00 P.M.

6. FORT STORY DANCE - ENLISTED MEN'S SERVICE CLUB: An extra dance for the Fort Story men will be held at the Service Club on Friday evening from 8:00 to 11:00 P.M. No passes will be required, and field uniform will be permitted. It is requested, however, that men appear neat when coming into the Club.

7. CHRISTMAS CHOIR: The Post Children's choir will meet for rehearsal at the Post Chapel Friday adternoon, at 4:00 P.M.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

SECTION VII
POST THEATER

1. POST THEATER.

a. The Post Theater will be operated under the immediate supervision of a commissioned officer who will be designated as the Theater Officer. The duties of this officer will be the normal duties of a theater manager. The Theater Officer will be responsible that A.R. 210-390 (Motion Picture Service) are complied with.

b. The ticket office will open one half ($\frac{1}{2}$) hour before each performance for the sale of tickets. The time for the shows will normally be: Evenings 6:30 PM and 8:20 PM, matinees (Saturdays, Sundays, and Holidays) at 2:00 PM. Time of shows subject to change to meet varying conditions.

c. The uniform as prescribed by the Post Commander will be worn during attendance at the Post Theater.

d. The admission fees as approved by the Post Commander will be as follows:

(1) Officers, enlisted personnel, civilians working on the Post, and their families:

Adults $.20 Children $.10 (under 14 years)

(2) Post Exchange Checks may, when not detached, be accepted as cash for admission.

(3) Coupon books in the amount of $1.40 or $2.10 will be sold for cash or credit at the box office. Credit sales will not be allowed unless approved by organization commanders.

e. Dogs, Cats, or animals of any form are not allowed within the Theater or the Theater Lobby.

f. Claims, Losses, or complaints will be placed with the Post Theater Officer who will act accordingly.

g. There will be no smoking in the Theater at any time.

h. Organization commanders will submit an alphabetical list, in duplicate of enlisted men authorized credit at the Theater on form as prescribed by the Theater Officer not later than the 18th of each month for the following month.

i. Credit authorization will run from the 21st of each month until the 20th of the following month.

j. Under no circumstances will Officers or Enlisted Men, who are not authorized by the Post Commander or the Theater Officer, enter or attempt to enter the projection booth.

k. Patrons will refrain from leaving their seats during final fade out at the conclusion of each show, but will remain seated until the final fade out is concluded.

l. The Post Theater will not be used for any other purpose unless authorized by the Post Commander or the Theater Officer.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 295)

---T-H-U-R-S-D-A-Y--- December 18, 1941

1. DETAILS FOR FRIDAY, DECEMBER 19, 1941:
Officer of the Day ---------- 1st Lt. Wm. E. Dickerson, 1327th SU
Medical Officer of the Day ---------- 1st Lt. Wm. C. Edwards, MC 1327th SU
Bugler of the Guard ---------- Pvt. Wood, Battery B, 246th CA

2. CHANGE IN DESIGNATION OF THE CONSTRUCTING Q.M. OFFICE: Pursuant to the provisions of Construction Division Letter No. 556, O.Q.M.G., December 9, 1941, effective 12:01 A.M., December 16, 1941, this office will be transferred from the Quartermaster Corps to the jurisdiction of the Corps of Engineers. Until further orders are received, this office will operate under the supervision of the District Engineer, U.S. Engineer Office, 8th Floor, Standard Oil Building, Baltimor Maryland.

This office has been redesignated as:

Office of the Area Engineer
Fort Monroe and Vicinity
Fort Monroe, Virginia.

3. STORM WARNING DISPLAYMEN: All wind and weather forecasts for ocean, coastal and marine areas have been discontinued during the Emergency except small craft, storm or hurricane warnings or advisories thereof.

The warning and advisories will contain information as to the wind velocities expected and the same time of hoist and duration of the display, but no information will be given regarding the direction of the wind or the location or movement of the storm.

One red pennant will be continued as a warning to small craft. Two red pennants will be used for a storm warning without direction. Two square red flags with black centers will be continued as hurricane warning. STORM WARNING LIGHTS WILL NOT BE DISPLAYED. Flags for small craft, storm and hurricane warnings will remain hoisted during the period of darkness.

4. RELIEF FROM SPECIAL DUTY AND ATTACHMENT: The following named enlisted men from Company A, 80th Q.M. are relieved from special duty with the Military police and are relieved from attached to the 1327th Service Unit for rations and quarters, effective 7:30 A.M., this date:

Pvt. DONATO GERVASIO, 6944620
Pvt. FRANCIS J. HINNEGAN, 13006029
Pvt. LAWRENCE H. BOWMAN, 7023811
Pvt. MARTIN GREENBURG, 33027477
Pvt. JOSEPH E. BROWN, 33015887
Pvt. FRANK C. HAHN, 33021845
Pvt. JOSEPH JACOBS, 33033258
Pvt. JOHN E. MALLOY, 33032973
Pvt. MAURICE P. PROCOPIO, 33022094
Pvt. MORRIS A. MOSKOW, 33022083

5. SPECIAL DUTY AND ATTACHMENT: The following named enlisted men of the 246th CA are relieved from special duty with the Post Motor Pool and are detailed on special duty with the Military Police and are attached to the 1327th Service Unit for rations and quarters, effective 7:30 A.M., this date:

Pvt. NELSON H. STEADMAN, 33040229, Battery A
Pvt. ERVIN H. PRICE, 33040144, Battery B
Pvt. ALFRED B. SLAUGHTER, 33045221, Battery B
Pvt. LUTHER W. WHITTAKER, 33045199, Battery B
Pfc. CLARENCE L. WHITTEN, 20368119, Battery B
Pvt. ANDREW E. DAVES, 33040062, Battery C
Pfc. JOHN H. MILLER, 20368610, Battery E
Pfc. CLEVELAND B. JORDAN, 20367749, Battery K
Pvt. VIRGIL W. SPURLOCK, 33040326, Battery E
Pvt. PERCY W. BURTON, 33040271, Battery C → Pennington, Bat K 246

6. CORRECTION - PAR. 4, D.B. No. 294: So much of Par. 4, D.B. No. 294, dated December 17, 1941, as pertains to each unit commander furnishing the Personnel Officer with a roster of names of enlisted men who receive vaccines is DELETED and the following substituted therefor: "Each unit commander will furnish the names of enlisted men who receive vaccines, to the Personnel Officer on WD Form 81, (Immunization Register)."

(OVER)

Daily Bulletin No. 295, Hq. Ft. Story, Va., dated December 18, 1941, cont'd.

16. TRANSPORTATION OF DEPENDENTS TO OVERSEAS DEPARTMENTS AND BASES: The following War Department Immediate Action Letter, AG 541.1 (12-10-41) MO-D-M, subject as above, dated December 11, 1941, is republished for information and compliance:

"1. All unexecuted transportation authorized for dependents of military personnel and civilian employees from the continental United States to overseas departments and bases, including Alaska, is cancelled.

"2. Until further notice, transportation of dependents of military personnel and civilian employees and the shipment of household goods to overseas departments and bases, including Alaska, by Army transport or otherwise, is prohibited.

"3. During the suspension of the shipment of household goods to overseas stations, an allowance of baggage is authorized in amounts as prescribed for temporary change of station in Circular No. 43, War Department, 1941."

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE:- POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
BULLETIN NO. 23)

F R I D A Y — December 19, 1941

1. CHRISTMAS DANCE - OFFICERS CLUB: Mrs. THOMAS and Mrs. JOHNSON are sponsoring a Christmas Dance for the younger set at the Officers Club on Monday evening, December 22, 1941, at 8:00 P.M. Invitation is extended to all teen-age children of officers. There will be a small admission charge at the door.

2. OFFICERS CLUB MEMBERS: Regular dance at the Officers Club Saturday night beginning at 9:00 P.M.

3. MOVIES: Tonight. "UNEXPECTED UNCLE" w/ Anne Shirley, James Craig and Charles Coburn.

SATURDAY - Double feature program. "SPOOKS RUN WILD" w/ Bela Lugosi - The East Side Kids. Also "SING ANOTHER CHORUS" w/ Johnny Downs, Jane Frazee, Mischa Auer and Walter Catlett.

SUNDAY and MONDAY - "IT STARTED WITH EVE" w/ Deanna Durbin, Charles Laughton and Robert Cummings.

4. FORT STORY DANCE - ENLISTED MEN'S SERVICE CLUB: An extra dance for the Fort Story men will be held at the Service Club tonight from 8:00 P.M. to 11:00 P.M. No passes will be required, and field uniform will be permitted. It is requested however, that men appear neat when coming into the Club.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)

NO. 296)

---F-R-I-D-A-Y---

December 19, 1941

1. DETAILS FOR SATURDAY, DECEMBER 20, 1941:
Officer of the Day ---------- 2nd Lt. H.E. Mecredy, 1327th S.U.
Medical Officer of the Day ---------- 1st Lt. H.P. MacNeal, MC 1327th SU
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. OFFICERS: All officers desiring credit at the Sales Commissary, opening January 2, 1942, contact Lieut. WEBBER at the office of the Field Commissary between 3:00 P.M. and 5:00 P.M., December 19th, 22nd or 23rd.

3. ATTACHMENT FOR RATIONS: The following named enlisted men of the 96th Ordnance Company are attached to the 1327th Service Unit for rations and quarters, effective 6:00 A.M., December 20, 1941:

S/Sgt. JOHN M. MANCE, 33032941
Pvt. EDMOUND J. JASINSKI, 32035655
Pvt. 1cl HERMAN R. BUNSICK, 33024928
Sgt. CHARLES A. SIEBEL, 33034010
Pvt. 1cl ROWAN W. PETERSON, 33028736
Pvt. ALBERT F. AGOSTINILLI, Jr., 33051561
M/Sgt. ROY A. HIGGINS, 6366140
Corp. CLINTON S. PURCELL, 33043320
Pvt. JOHN M. WILSON, JR., 33029769
Pvt. JOHN M. DELLAS, 33051619
Pvt. WILLIAM R. ROSS, 33006844
Pvt. 1cl PHILIP C. HUMPHRIES, 33060409
Pvt. DANIEL D. GOLDBERG, 32115027
Pvt. DOMINIC D. CIRILLO, 33051594

4. MEDICAL CONFERENCE - STATION HOSPITAL: There will be a Staff Meeting at the Station Hospital, Fort Story, Virginia, Ward B-6, Saturday, December 20, 1941, at 11:00 A.M. All Medical Officers are invited.

5. SPECIAL DUTY: The following named enlisted men of the 160th Station Hospital are detailed on special duty at the Officers Mess, Fort Story, Va., effective this date:

Pvt. EDWARD CROWE, 33006926 Pvt. JOSEPH HAUER, 35020256

6. CHANGE OF DUTY - 1327th Service Unit: The following named enlisted men of the 1327th Service Unit are relieved from their present duties and are detailed to duty with the activities as shown opposite their names, effective Saturday, December 20, 1941:

Cpl. JAMES H. McNAMEE, 6893728-RAR DEML Sec. Military Police
Pvt. THOMAS R. SUSSMAN, Q.M. Sec. Q.M. Gas Station

7. CORRECTION - PAR. No. 5, D.B. 295: So much of Par. 5, D.B. No. 295, dated December 18, 1941, as reads "Pvt. PERCY W. BURTON, 33040271, Battery C" is corrected to read "Pvt. FRED L. PENNINGTON, 33046014, Battery K."

8. FURNACE FIREMAN: It is imperative that the firing of warm air furnaces, low pressure boilers and hot water heaters be placed in competent hands. Organizational commanders will detail enlisted men as firemen for a period of not less than 30 days and longer if possible. It shall be the organizational commander's responsibility to have the men who are so assigned report to the Utilities Officer for instructions and duties. In cases where civilians perform comparable services, the responsible officer or civilian will follow the procedure as outlined above.

9. CREDIT AT FORT STORY SALES COMMISSARY: Under the provisions of paragraph 2-b (2) e, A.R. 30-2290, all enlisted men desiring credit at the Sales Commissary, Fort Story, Virginia, for the month of January 1942, submit letters for same so as to reach this headquarters on or before December 24, 1941.

(OVER)

Pvt. Sisney - M. to Pool

1327TH SERVICE UNIT, STATION COMPLEMENT
FORT STORY, VIRGINIA.

SPECIAL ORDER)
NUMBER 27)

December 20, 1941.

1. Under the authority contained in paragraph 5c, AR 615-5 Private RUSSELL E. GARRETT, 33002145, DEML Section, 1327th Service Unit (SC), is appointed Corporal, vice Flannagan, relieved from active duty.

2. Under the authority contained in paragraph 4, AR 615-10, Private THOMAS R. SUSSMAN, 33050567, QM Section, 1327th Service Unit (SC), is appointed Private First Class, vice Bauer, relieved from active duty.

3. Under the authority contained in paragraph 4, AR 615-10, Private JOHN G. BUCK, 33050589, QM Section, 1327th Service Unit (SC), is appointed Private First Class, vice Grindlay, relieved from active duty.

4. Under the authority contained in paragraph 7b, AR 615-10, Private First Class SALVATORE SARDO, 6874156, QM Section, 1327th Service Unit (SC), is disrated Specialist Third Class, and rerated Specialist Fourth Class.

5. Under the authority contained in paragraph 7b, AR 615-10, Private ANTHONY DIGUGLIELMO, 6853887, QM Section, is disrated Specialist Fourth Class.

6. Under the authority contained in paragraph 7b, AR 615-10, Private JAMES T. SINEY, 13001548, QM Section, 1327th Service Unit (SC), is distated Specialist Fourth Class.

By order of Colonel HENDON:

ARTHUR T. INNES,
Captain, F. A.,
Executive.

O F F I C I A L

ARTHUR T. INNES,
Captain, F. A.,
Executive.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY ACTIVITIES)
:
BULLETIN NO. 24)

S A T U R D A Y — December 20, 1941

1. OFFICERS DANCES: Officers on such duty as requires the wearing of the Field Uniform, may attend the dances held at the Officers Club, in that uniform.

2. MOVIES: Tonight. Double feature program. "SPOOKS RUN WILD" w/ Bela Lugosi - The Last Side Kids. Also "SING ANOTHER CHORUS" w/ Johnny Downs - Jane Frazee - Mischa Auer and Walter Catlett.

3. CHRISTMAS DANCE - OFFICERS CLUB: Mrs. THOMAS and Mrs. JOHNSON are sponsering a Christmas Dance for the younger set at the Officers Club on Monday evening, December 22, 1941, at 8:00 P.M. Invitation is extended to all teen-age children of officers. There will be a small admission charge at the door.

4. OFFICERS CLUB MEMBERS: Regular dance at the Officers Club tonight beginning at 9:00 P.M.

5. MOVIES: SUNDAY and MONDAY - "IT STARTED WITH EVE" w/ Deanna Durbin, Charles Laughton and Robert Cummings.

6. SOCIAL PARTIES: Reception by the Commanding Officer, Fort Story, Va., for New Years noon at the Fort Story Officers Club, is cancelled.

The regular Saturday night dance at the Fort Story Officers Club will be continued until further orders.

Other large parties or gatherings of a social nature are discouraged. This does not prevent small gatherings of friends.

The noncommissioned officers club will conform.

7. RELIGIOUS SERVICES - SUNDAY, DECEMBER 21, 1941:

8:00 A.M. -- Catholic Mass - Chaplain MIDURA.
9:00 A.M. -- Protestant Worship - Chaplain SUTTENFIELD.
9:00 A.M. -- General Worship - Red Cross Building, Hospital Area - Chaplain ROBERTS.
10:00 A.M. -- Post Sunday School and Bible Class.
11:00 A.M. -- Post Protestant Worship - Chaplain POCH. Special music by Post Children's Choir.

Everyone most cordially welcome to attend the pre-Christmas services as scheduled above.

8. CAROLARS - ENLISTED MENS' SERVICE CLUB: On Monday, December 22, 1941, the Virginia Beach Carolars, a group composed of the all the Choirs and Glee Clubs of Virginia Beach, will give a Christmas program at the Service Club beginning at 9:00 P.M. Everyone most cordially welcome.

9. CHILDREN'S CHRISTMAS PARTY: All parents are reminded to be sure and bring their children to the Post Christmas Party on Wednesday, December 24, at 4:00 P.M. There will be gifts for all children.

By order of Col. HENDON:

E. G. MULLING,
Captain, A.G.D.,
Adjutant.

NOTE:- POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 297)

---S-A-T-U-R-D-A-Y---

December 20, 1941

1. DETAILS FOR SUNDAY, DECEMBER 21, 1941:
Officer of the Day ---------- 2nd Lt. Edw. J. Lawler, 1327th S.U.
Medical Officer of the Day ---------- Capt. Victor Sherman, MC 1327th SU
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th CA

2. DETAILS FOR MONDAY, DECEMBER 22, 1941:
Officer of the Day ---------- Capt. Otis D. Smith, 1327th S.U.
Medical Officer of the Day ---------- 1st Lt. Wylie M. Faw, Jr. MC 1327th
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

3. TRANSPORTATION OF DEPENDENTS AND SHIPMENT OF HOUSEHOLD GOODS OVERSEAS: The following letter Hq. 3rd Corps Area, dated December 15, 1941, is republished for the information and compliance of all concerned:

"DISREGARD ANY AUTHORITY GRANTED REPEAT DISREGARD ANY AUTHORITY GRANTED BY THIS OFFICE FOR UNEXECUTED TRANSPORTATION OF OFFICERS COMMA ENLISTED MEN AND CIVILLAN EMPLOYEES PERMANENT CHANGE OF STATION BAGGAGE ALLOWANCE OVERSEAS SEE WAR DEPARTMENT DIRECTIVE TO ALL MILITARY ACTIVITIES DATED DECEMBER ELEVEN NINETEEN FORTY ONE STOP"

4. SUSPENSION OF TRANSFERS BETWEEN THE SECTIONS OF THE OFFICERS' RESERVE CORPS: The following War Department letter, file AG 210.31 ORC (12-11-41)RT-A dated December 13, 1941, subject as above, is republished for the information of all concerned:

"1. All transfers between sections of the Officers' Reserve Corps are suspended, except that:

a. Current graduates of pilot and non-pilot flying courses of the Army Air Corps who are qualified and recommended for ratings or assignments which would involve increased pay, may be transferred to the Air Corps Reserve.

b. Officers selected for appointment in the Regular Army may be transferred to such sections as may be required to qualify them legally for such appointment.

c. Officers may be transferred to the Inactive Reserve.

"2. Reserve officers may continue to be assigned to duty with branches other than that in which commissioned, under current War Department instructions.

5. CHANGE OF DUTY - 1327th Service Unit: The following named enlisted men of the 1327th Service Unit are relieved from their present duties and are detailed to duty with the activities as shown opposite their names, effective 4:00 P.M., this date:

Pvt. 1cl GEORGE W. HOCKADAY, 6900473	Military Police
Pvt. RALPH C. MAXIMOVICZ, 6897953-RAR	Military Police
Pvt. JAMES DAVIS, 6894754	Military Police
Pvt. DAVID F. JEWELL, 6899006	Military Police
Pvt. RUSSELL E. WINKLER, 13011732, Med. Det.	Fire Department
Pvt. RALPH L. GAITHER, 13000222, Med. Det.	Fire Department
Pvt. JOHN W. PAYNE, 33048601, Med. Det.	Fire Department
Pvt. PAUL WHEELER, 33017099, Med. Det.	Fire Department

6. TO ALL CONCERNED: Effective immediately, the procurement delivery and sale of coal and wood is under the jurisdiction of the Post Utilities Officer, telephone 109. No further request will be made on the Post Quartermaster for delivery and the sale of coal.

7. CREDIT AT FORT STORY SALES COMMISSARY: Under the provisions of paragraph 2-b (2) e, A.R. 30-2290, all enlisted men desiring credit at the Sales Commissary, Fort Story, Virginia, for the month of Januray 1942, submit letters for same so as to reach this headquarters on or before December 24, 1941.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 298)

---M-O-N-D-A-Y---

December 22, 1941

1. DETAILS FOR TUESDAY, DECEMBER 23, 1941:
Officer of the Day ---------- 1st Lt. L.R. Harkness, 1327th S.U.
Medical Officer of the Day ---------- Capt. H.S. Raines, MC 160th S.H.
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

2. LOSS OF RIGHTS OF CITIZENSHIP FOR DESERTERS IN TIME OF WAR: The following War Department letter, subject as above, dated December 10, 1941, is republished for the information of all concerned:

"A state of War now existing, it is directed that you immediately bring to the attention of all members of your command the fact that under the provisions of Federal Law (R.S. 1996 and 1998; sec. 1, act of Aug. 22, 1912 (37 Stat. 356) 8 U.S.C. 11; 34 U.S.C. 1200), all persons who desert the service in time of war are deemed to have voluntarily relinquished and forfeited their rights of citizenship, as well as their right to become citizens; and such deserters are forever incapable of holding any office of trust or profit under the United States, or of exercising any rights of citizens thereof."

3. REPORTS OF PHYSICAL EXAMINATION FOR PILOT AND SPECIALIZED NON-PILOT TRAINING IN OFFICER GRADE: The following War Department letter, subject as above dated December 16, 1941, is republished for information and compliance:

"1. Reports of physical examinations for pilot and specialized non-pilot training in officer grade are required to be rendered in triplicate in case of disqualified applicants, as provided by paragraph III (2) d. of Medical Circular Letter No. 1, Office Chief of Air Corps, Medical Division, September 30, 1941.

"2. This refers to reports of physical examination AGO Form 64 required for applicants for training in officer grade."

4. CHRISTMAS DECORATION - AIR RAID PRECAUTIONS: Due to the necessity for operation of Air Raid Precautions no outside illuminated Christmas decorations will be permitted at Fort Story, this year. Suitable precautions will be taken to insure that illuminated window decorations may be "Blacked Out" in case of necessity.

5. LEAVE OF ABSENCE - OFFICERS: The attention of all officers, of this command, is invited to paragraph 13a, AR 605-120 as amended by section IV, War Department Circular No. 176, dated August 20, 1941. An officer to whom a leave of absence is granted, but who does not avail himself of such leave, will, not later than the date of expiration of the leave granted, prepare a report of such fact on WD, AGO Form No. 303 (Report of Change).

6. RELIEF FROM SPECIAL DUTY: The following named enlisted men of 159th Station Hospital are relieved from special duty with the Post Motor Pool, effective this date:

Pvt. lcl LOUIS W. RODMAN, 32037813 Pvt. PETE VERBA, 35030996
Pvt. CHARLES BLITZ, 36024704

7. SPECIAL DUTY: The following named enlisted men of 159th Station Hospital are detailed on special duty with the Post Motor Pool, effective this date:

Pvt. lcl GEORGE W. RUNSER, 35030998 Pvt. BERNARD L. NOWICKI, 36122059
Pvt. EGBERT E. PECKENPAUGH, 34141702

8. CREDIT AT FORT STORY SALES COMMISSARY: Under the provisions of paragraph 2-b (2) e, A.R. 30-2290, all enlisted men desiring credit at the Sales Commissary Fort Story, Virginia, for the month of January 1942, submit letters for same so as to reach this headquarters on or before December 24, 1941.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 298)

---M-O-N-D-A-Y---

December 22, 1941

1. DETAILS FOR TUESDAY, DECEMBER 23, 1941:
Officer of the Day ---------- 1st Lt. L.R. Harkness, 1327th S.U.
Medical Officer of the Day ---------- Capt. H.S. Raines, MC 160th S.H.
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

2. LOSS OF RIGHTS OF CITIZENSHIP FOR DESERTERS IN TIME OF WAR: The following War Department letter, subject as above, dated December 10, 1941, is republished for the information of all concerned:

"A state of War now existing, it is directed that you immediately bring to the attention of all members of your command the fact that under the provisions of Federal Law (R.S. 1996 and 1998; sec. 1, act of Aug. 22, 1912 (37 Stat. 356) 8 U.S.C. 11; 34 U.S.C. 1200), all persons who desert the service in time of war are deemed to have voluntarily relinquished and forfeited their rights of citizenship, as well as their right to become citizens; and such deserters are forever incapable of holding any office of trust or profit under the United States, or of exercising any rights of citizens thereof."

3. REPORTS OF PHYSICAL EXAMINATION FOR PILOT AND SPECIALIZED NON-PILOT TRAINING IN OFFICER GRADE: The following War Department letter, subject as above dated December 16, 1941, is republished for information and compliance:

"1. Reports of physical examinations for pilot and specialized non-pilot training in officer grade are required to be rendered in triplicate in case of disqualified applicants, as provided by paragraph III (2) d. of Medical Circular Letter No. 1, Office Chief of Air Corps, Medical Division, September 30, 1941.

"2. This refers to reports of physical examination AGO Form 64 required for applicants for training in officer grade."

4. CHRISTMAS DECORATION - AIR RAID PRECAUTIONS: Due to the necessity for operation of Air Raid Precautions no outside illuminated Christmas decorations will be permitted at Fort Story, this year. Suitable precautions will be taken to insure that illuminated window decorations may be "Blacked Out" in case of necessity.

5. LEAVE OF ABSENCE - OFFICERS: The attention of all officers, of this command, is invited to paragraph 13a, AR 605-120 as amended by section IV, War Department Circular No. 176, dated August 20, 1941. An officer to whom a leave of absence is granted, but who does not avail himself of such leave, will, not later than the date of expiration of the leave granted, prepare a report of such fact on WD, AGO Form No. 303 (Report of Change).

6. RELIEF FROM SPECIAL DUTY: The following named enlisted men of 159th Station Hospital are relieved from special duty with the Post Motor Pool, effective this date:

Pvt. lcl LOUIS W. RODMAN, 32037813 Pvt. PETE VERBA, 35030996
Pvt. CHARLES BLITZ, 36024704

7. SPECIAL DUTY: The following named enlisted men of 159th Station Hospital are detailed on special duty with the Post Motor Pool, effective this date:

Pvt. lcl GEORGE W. RUNSER, 35030998 Pvt. BERNARD L. NOWICKI, 36122059
Pvt. EGBERT E. PECKENPAUGH, 34141702

8. CREDIT AT FORT STORY SALES COMMISSARY: Under the provisions of paragraph 2-b (2) e, A.R. 30-2290, all enlisted men desiring credit at the Sales Commissary Fort Story, Virginia, for the month of January 1942, submit letters for same so as to reach this headquarters on or before December 24, 1941.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 298)

---M-O-N-D-A-Y--- December 22, 1941

1. DETAILS FOR TUESDAY, DECEMBER 23, 1941:
Officer of the Day ---------- 1st Lt. L.R. Harkness, 1327th S.U.
Medical Officer of the Day ---------- Capt. H.S. Raines, MC 160th S.H.
Bugler of the Guard ---------- Pvt. Brauer, Battery K, 246th CA

2. LOSS OF RIGHTS OF CITIZENSHIP FOR DESERTERS IN TIME OF WAR: The following War Department letter, subject as above, dated December 10, 1941, is republished for the information of all concerned:

"A state of War now existing, it is directed that you immediately bring to the attention of all members of your command the fact that under the provisions of Federal Law (R.S. 1996 and 1998; sec. 1, act of Aug. 22, 1912 (37 Stat. 356) 8 U.S.C. 11; 34 U.S.C. 1200), all persons who desert the service in time of war are deemed to have voluntarily relinquished and forfeited their rights of citizenship, as well as their right to become citizens; and such deserters are forever incapable of holding any office of trust or profit under the United States, or of exercising any rights of citizens thereof."

3. REPORTS OF PHYSICAL EXAMINATION FOR PILOT AND SPECIALIZED NON-PILOT TRAINING IN OFFICER GRADE: The following War Department letter, subject as above dated December 16, 1941, is republished for information and compliance:

"1. Reports of physical examinations for pilot and specialized non-pilot training in officer grade are required to be rendered in triplicate in case of disqualified applicants, as provided by paragraph III (2) d. of Medical Circular Letter No. 1, Office Chief of Air Corps, Medical Division, September 30, 1941.

"2. This refers to reports of physical examination AGO Form 64 required for applicants for training in officer grade."

4. CHRISTMAS DECORATION - AIR RAID PRECAUTIONS: Due to the necessity for operation of Air Raid Precautions no outside illuminated Christmas decorations will be permitted at Fort Story, this year. Suitable precautions will be taken to insure that illuminated window decorations may be "Blacked Out" in case of necessity.

5. LEAVE OF ABSENCE - OFFICERS: The attention of all officers, of this command, is invited to paragraph 13a, AR 605-120 as amended by section IV, War Department Circular No. 176, dated August 20, 1941. An officer to whom a leave of absence is granted, but who does not avail himself of such leave, will, not later than the date of expiration of the leave granted, prepare a report of such fact on WD, AGO Form No. 303 (Report of Change).

6. RELIEF FROM SPECIAL DUTY: The following named enlisted men of 159th Station Hospital are relieved from special duty with the Post Motor Pool, effective this date:

Pvt. lcl LOUIS W. RODMAN, 32037813 Pvt. PETE VERBA, 35030996
Pvt. CHARLES BLITZ, 36024704

7. SPECIAL DUTY: The following named enlisted men of 159th Station Hospital are detailed on special duty with the Post Motor Pool, effective this date:

Pvt. lcl GEORGE W. RUNSER, 35030998 Pvt. BERNARD L. NOWICKI, 36122059
Pvt. EGBERT E. PECKENPAUGH, 34141702

8. CREDIT AT FORT STORY SALES COMMISSARY: Under the provisions of paragraph 2-b (2) e, A.R. 30-2290, all enlisted men desiring credit at the Sales Commissary Fort Story, Virginia, for the month of January 1942, submit letters for same so as to reach this headquarters on or before December 24, 1941.

(OVER)

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
NO. 299)

---T-U-E-S-D-A-Y--- December 23, 1941

1. DETAILS FOR WEDNESDAY, DECEMBER 24, 1941:
Officer of the Day ---------- 1st Lt. John P. Leary, 1327th SU
Medical Officer of the Day ---------- 1st Lt. J. C. Risher, MC 246th CA
Bugler of the Guard ---------- Pvt. Wood, Battery B, 246th CA

2. INOCULATION OF CHILDREN OF MILITARY PERSONNEL: The Post Surgeon recomends that all children of the military personnel be given diphtheria and tetanus vaccinations.

For those between 6 months and 6 years, it is recommended that the combined diphtheria and tetanus toxoid, which must be purchased by the parents, be given. Two doses only are required. For children who have already been immunized against diphtheria, the tetanus toxoid, alum precipitated, is recommended, and this also may be obtained at the Post Exchange.

All interested parents are requested to make appointment with Captain Cox, M.C. or the Attending Surgeon. Children receiving these inoculations will be seen at the Children's Clinic Tuesday and Friday afternoons, between 1:00 and 3:00 P.M. All material will be furnished by the parent. The Post Exchange will 'special order' this toxoid for authorized persons on the following basis:

(1) On individual orders totalling fifteen dollars or more a 'service charge' of five percent of the cost price of the order to the Exchange.

(2) On individual orders totalling less than fifteen dollars a 'service charge' of ten percent of the cost price of the order to the Exchange.

Parents interested should contact Captain Smith, Exchange Officer, Extension 63.

3. VACCINATION: In accordance with paragraph 1 b (4), AR 40-215, all military personnel of this command who have not been vaccinated against smallpox and typhoid fever during the calendar year 1941 will be so vaccinated not later than January 15, 1942.

Vaccinations will be accomplished by medical detachments of organizations and the Post medical personnel where available for organizations without medical detachments.

It will be the responsibility of organization commanders to issue instructions for the necessary action at this station.

4. ARRIVAL OF TRAINS AT FORT STORY: Freight shipments of gun ammunition arriving at Fort Story will be promptly spotted and unloaded. The Ordnance Officer will call upon the consignee for sufficient detail to accomplish unloading.

5. CHANGE OF STATION: The following radiogram, Hq. First Army, dated Dec. 17, 1941, subject as above, is quoted for information and compliance:

"IN REPLY CITE AGHR REFERENCE MACHINE RECORDS UNIT PERIOD ON TEMPORARY OR PERMANENT CHANGES OF STATION OF ORGANIZATIONS THE STATUS CARDS OF ALL ACCOMPANYING PERSONNEL WILL BE IMMEDIATELY REPRODUCED AND FORWARDED TO THE MACHINE RECORDS UNIT SERVICING THE STATION OF DESTINATION PERIOD INSTRUCT ORGANIZATION COMMANDERS TO FORWARD REPORTS OF CHANGE TO THE NEW MACHINE RECORDS UNIT ON ARRIVAL PERIOD WHEN IT IS CONTEMPLATED THAT THE ORGANIZATION WILL RETURN TO ITS PERMANENT STATION WITHIN A PERIOD OF THIRTY DAYS A SET OF STATUS CARDS WILL BE RETAINED IN THE HOLDING FILE BY THE MACHINE RECORDS UNIT OF ORIGIN"

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
:
NO. 303) ---M-O-N-D-A-Y--- December 29, 1941

1. DETAILS FOR TUESDAY, DECEMBER 30, 1941:
Officer of the Day ---------- Capt. Otis D. Smith, 1327th S.U.
Medical Officer of the Day ---------- Capt. L.F. Rogel, MC 246th CA
Bugler of the Guard ---------- Pvt. Foote, Battery E, 246th CA

2. ALL OFFICERS: Due to the emergency which requires that the Post be alerted at all times, all officers will be quartered on the post. This will be accomplished by all officers by noon, December 31, 1941.

3. CHANGE IN LOCATION OF ADJUTANT 246th CA: The Regimental Adjutant of the 246th CA is now located at Regimental Headquarters, 246th CA 'phone 285 instead of Harbor Defense Command Post, 'phone 219.

4. SIGNATURE: All papers for the signature of the Commanding General will be prepared as follows:

DAVID P. HARDY,
Brigadier General, U.S. Army,
Commanding.

All requisitions for the signature of the Executive Officer will be prepared as follows:

For the Commanding General:

ROBERT R. HENDON,
Colonel, C. A. C.,
Executive.

All requisitions for the signature of the Adjutant will be prepared as follows:

By command of Brigadier General HARDY:

E. G. MULLING,
Captain, A. G. D.,
Adjutant.

5. PERMISSION GRANTED ENLISTED MEN TO LIVE OFF THE POST: Permission heretofore granted enlisted men of this command to live off the post is revoked. For this purpose Thomas Nelson Circle will be considered as being a part of Fort Story.

6. PERMISSION GRANTED ENLISTED MEN TO RATION SEPARATELY: Permission heretofore granted enlisted men of this command to ration separately is, with exception of those enlisted men living at Fort Story and Thomas Nelson Circle, revoked effective at noon December 31, 1941. Enlisted men on duty at the Officers Club and mess excepted.

By command of Brigadier General HARDY:

E. G. MULLING,
Captain, A. G. D.,
Adjutant.

NOTE: - POST ON ALL BULLETIN BOARDS.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---T-U-E-S-D-A-Y--- December 30, 1941
NO. 304)

1. DETAILS FOR WEDNESDAY, DECEMBER 31, 1941:
Officer of the Day ---------- 1st Lt. L.R. Harkness, 1327th
Medical Officer of the Day ---------- Capt. G.R. Gallagher, MC 160th
Bugler of the Guard ---------- Pvt. Hight, Battery C, 246th C

2. LOSS OF RIGHTS OF CITIZENSHIP FOR DESERTERS IN TIME OF WAR: Under the provisions of Federal Law (R.S. 1996 and 1998; sec 1, act of Aug. 22, 1912 (37 Stat. 356); U.S.C. 1200; M.L. 1939, sec 154), all persons who desert the service in time of war are deemed to have voluntarily relinquished and forfeited their rights of citizenship, as well as their right to become citizens; and such deserters are forever incapable of holding any office of trust or profit under the United States, or of exercising any rights of citizens thereof.
(A.G. 251.2 (12-10-41(.)

3. WEARING OF THE UNIFORM: Chevrons denoting grade will be worn on the field jacket.

Officers will wear the rank insigna on field jackets and raincoats.

The white shirt is not an article of uniform and will not be worn as such. Pars. 15 b and 2 c A.R. 600-35, dated November 10, 1941.

4. RATIONS, FIELD, TYPE "C": The following letter Hq. 3rd Corps Area, dated December 19, 1941, file 430.2 (General), 41 S-SF, subject as above, is quoted for information and compliance:

"1. Information has been received from the office of the Quartermaster General that Type "C" Field Rations are not available for general use to all stations requesting same. All present stock of Type "C" Field Rations with certain exceptions, are held in reserve for probable overseas use and for emergencies.

"2. In lieu of Type "C" Field Rations, it is suggested that Field Ration "B" as outlined in Paragraph 4d (b) AR 30-2210 be substituted."

5. INVENTORY OF COMMISSARY: 2nd Lt. ROY R. WILSON, M.A.C., 1327th Service Unit is detailed to inventory the Commissary. He will report to the Commissary Officer 8:00 A.M., December 30, 1941.

6. RELIEF FROM SPECIAL DUTY: The following named enlisted men are relieved from special duty with the Military Police Detachment, effective date:

Pvt. RALPH C. MAXIMOVICZ, 6897953, 1327th Service Unit.
Pvt. HERMAN C. McCULLOUGH, 33045175, Battery C, 246th CA.

The following named enlisted men of the Det. Med. Dept., 1327th Service Unit are relieved from special duty with the Post Fire Department, effective this date:

Pfc. ROBERT SHERIDAN, 13006236	Sgt. JESSE L. YOUNG, 6944263
Pvt. EDWARD L. KESSLER, 6995964	Pvt. PAUL WHEELER, 13017099
Pvt. GEORGE M. ANDERSON, 33006951	Pvt. RALPH L. GAITHER, 13000222
Pvt. BERNARD F. FORNEY, 33064597	Pvt. ALBERT SULLO, 13002625
Pvt. RUSSELL E. WINKLER, 13011732	Pvt. VICTOR SWANLEK, 13003524

Private FREDERICK C. MOTT, 33040265, Battery K, 246th CA is relieved special duty with the Post Fire Department, effective this date.

Pvt. ANDREW L. MORRIS, 6996855, 1327th Service Unit is relieved from the Post Fire Department and is detailed to duty with the Post Officer, effective this date.

HEADQUARTERS FORT STORY
FORT STORY, VIRGINIA

DAILY BULLETIN)
: ---W-E-D-N-E-S-D-A-Y--- December 31, 1941
NO. 305)

1. DETAILS FOR THURSDAY, JANUARY 1, 1942:
Officer of the Day ---------- 1st Lt. John P. Leary, 1327th SU
Medical Officer of the Day ---------- 1st Lt. J.C. Risher, MC 246th CA
Bugler of the Guard ---------- Pvt. Bateman, Battery A, 246th CA

2. LAUNDRY OF BLANKETS AND COMFORTERS: All Unit Supply Officers are authorized to take blankets and comforters requiring cleaning to the Quartermaster Laundry, Fort Monroe, Virginia, on Friday of each week beginning January 9, 1942. This laundry will be done at public expense.

3. SPECIAL DUTY: Private GEORGE V. DOURH, 35027995, Battery E, 246th CA is detailed on special duty with the Post Motor Pool vice Pvt. 1cl ROBERT R. CRAFT, 20368605, Battery E, 246th CA relieved, effective this date.

Private 1cl RAPHAEL DURBIN, 35031018, 160th Station Hospital is detailed on special duty with the Officer Mess, Fort Story, Va., vice Private Edward L. Crowe, 33006936, 160th Station Hospital relieved, effective this date.

The following named enlisted men of the 159th Sta. Hospital are detailed on special duty with Post Headquarters effective this date:
Pvt. 1cl GEORGE W. RUNSER, 35030998 Pvt. RICHARD S. DOYLE, 35014782
Pvt. GEORGE E. BRADY, JR., 34141885 Pvt. WILLIAM F. McMILLEN, 35121519

4. GROUNDING OF VEHICLE: The following automobile is grounded for a period of three (3) days effective 7:30 A.M., December 31st to 7:30 A.M., January 3, 1942.
The owner will park his car in a properly designated parking space and turn the keys over to the Provost Marshal:
Corp. EDMOND HUGHES, 1327th Service Unit - Penna. Lic. No. 6EV86

5. SALVAGE OFFICER: Captain WALTER A. GARBEE, C.A.C. is detailed as salvage officer to inspect salvage clothing for the Compsite Anticraft Warning Service Company.

6. DESTRUCTIONS OF PAVED ROADS: In order to avoid destruction of paved roads on this reservation no tractor of the catapillar type will operate on any paved surface within the Fort Story reservation unless completely and properly equiped with street plates.

7. CHANGE OF DUTY; 1327th Service Unit: Corp. ANDREW L. MORRIS, 6996855, 1327th Service Unit is relieved from duty with the Post Utilities and is detailed to duty with the 1327th Service Unit, effective today.

8. SPECIAL DUTY: The following named enlisted men of the 1327th Service Unit are detailed on special duty with the Commissary, effective this date:
Pvt. ALBERT M. BROWN, 7000871 Pvt. FRANK S. TRAPANOTTO, 33016771
Pfc. WILLIAM E. SWEARINGER, 6941188

8. OFFICER CANDIDATE SCHOOL: Applications for the next officers candidate schools will be accomplished and forwarded so as to reach this Headquarters not later than noon, January 5, 1942. All instructions previously issued on this subject will be complied with. Incomplete applications or those received after the above limiting date will be returned without consideration.

By command of Brigadier General HARDY:

E. G. MULLING,
Captain, A. G. D.,
Adjutant.

NOTE: - POST ON ALL BULLETIN BOARDS.

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 19[illegible]

SHIPPING TICKET

CONSIGNOR: Sales Commissary, Fort Story, Virginia.

DATE SHIPPED OR DELIVERED September 1-30, 1943

SHIP TO—
1327th Motor Pool
Fort Story, Virginia.

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $ ..... CHARGEABLE TO P/A No. .....

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	1-13/40 tons		Ice.	ton	3.72	$ 4.93

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. R. Basye
(NAME)

CAPTAIN QMC
(RANK)

O.T.C. P.M.P.
(ORGANIZATION)

CONSIGNOR'S VOU. No. Sept- 205
CONSIGNEE'S VOU. No. .....
NUMBER OF SHEETS .....

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 28 September 1943 Period: 29 September 1943 Rations 84
30 September 1943 Rations 82

SHIP TO—

1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	12		Butter, 90 Score	lb.	.46	5.52
	17		Eggs, Procurement #2	doz.	.55	9.35
	8		Lard Subs.	lb.	.17	1.36
	30		Sausage, Franks	lb.	.29	8.70
	1		Yeast, 1#	cake	.11	.11
	50		Sausage, Pork Link	lb.	.31	15.50
	17½		Beans, Snap, Frozen	lb.	.17	2.98
	1		Grapes	lug	3.50	3.50
	1		Potatoes	bag	3.60	3.60
	1		Tomatoes	lug	3.25	3.25
	1		Pears	box	5.00	5.00
	42		Milk, Qt.	btl.	.14	5.88
	7		Beans, dry, kidney	lb.	.06	.42
	75		Bread, Loaf	lb.	.06	4.50
	1		Cereal, dry, assorted	case	3.32	3.32
	12		Coffee, Issue	lb.	.17	2.04
	24		Corn, Cr. #2	can	.09	2.16
	1		Dessert Pwdr, Butterscotch 5#	can	.41	.41
	39		Flour Wheat Hard	lb.	.03	1.17
	3		Milk, Evap. 8#	can	.68	2.04
	16		Peas, #2 Green	can	.09	1.44
	8		Fruit Cocktail, #2½	can	.23	1.84
	1		Pepper, Black, 1#	co.	.15	.15
	2		Sirup, #10	can	.31	.62
	30		Sugar, Gran.	lb.	.05	1.50
	1		Tea, 5#	lb.	.47	.47
	1		Sugar, Brown, 1#	ctn.	.06	.06
						86.89

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. H. BAKER, Capt. C.M.P.
(NAME) (RANK) (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-246
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 484
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 24 September 1943 Period: 25 Septembef 1943 Rations

SHIP TO—
1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	20		Bread, Loaf	lb.	.06	1.20
	1/4		Cereal, dry, assorted	case	3.32	.83
	5		Coffee, Roasted, Whole	lb.	.17	.85
	13		Corn, #2 Cr.	can	.09	1.17
	3		Milk, Evap. 8#	can	.68	2.04
	10		Prunes, #2 1/2	can	.10	1.00
	24		Catsup, Tomato, 14 oz.	btl.	.11	2.64
	2		Baking Powder, 5#	can	.29	.58
	6		Sirup, #10	can	.31	1.86
	13		Tomatoes, #2	can	.09	1.17
	3		Sugar, Brown, 1#	otn.	.06	.18
	22		Milk, Qt.	btl.	.14	3.08
	13		Bacon, Slab.	lb.	.25	3.25
	6		Butter, 90 Score	lb.	.46	2.76
	15		Eggs, Procurement #2	doz.	.55	8.25
	4		Lard Subs.	lb.	.17	.68
	30		Sausage, Franks	lb.	.29	8.70
	17 1/2		Beans, Snap, Frozen	lb.	.17	2.98
						43.22

Sign and return to Sales Officer
Fort Story Virginia

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN SHIPPED UNLESS OTHERWISE NOTED IN REMARKS COLUMN

C. B. BASYE
CAPTAIN QMC
(RANK)
(ORGANIZATION)

CONSIGNOR'S VOU. No. Field-218
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

DEPARTMENT
M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

26 September 1943 Rations 86

DATE SHIPPED OR DELIVERED 25 September 1943 Period: 27 September 1943 Rations 87

SHIP TO—

1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	12		Bacon, Slab.	lb.	.25	3.00
	12		Butter, 90 Score	lb.	.46	5.52
	15		Eggs, Procurement #2	doz.	.55	8.25
	45		Ham, Pork, Fresh	lb.	.26	11.70
	8		Lard Subs.	lb.	.17	1.36
	30		Sausage, Franks	lb.	.29	8.70
	15		Spinach, Frozen	lb.	.15	2.25
	1/5		Lettuce	crt	5.60	1.12
	¼		Peppers, Green	bu.	2.00	.50
	1		Potatoes	bag	3.60	3.60
	1		Tomatoes	lug	3.25	3.25
	22		Milk, Qt.	btl.	.14	3.08
	16		Beans, White, dry	lb.	.05	.80
	70		Bread, Loaf	lb.	.06	4.20
	¼		Cereal, dry, assorted	case	3.32	.83
	13		Coffee, Roasted, Whole	lb.	.17	2.21
	1		Gelatin, 10# Dessert Pwdr. Orange	can	1.46	1.46
	22		Flour, Wheat Hard	lb.	.03	.66
	4		Peanut Butter, 25 oz.	jar	.35	1.40
	3		Milk, Evap. 8#	can	.68	2.04
	37		Peas, #2	can	.09	3.33
	17		Salmon, 1#	can	.19	3.23
	1		Sirup, #10	can	.31	.31
	29		Sugar, Gran.	lb.	.05	1.45
	1		Tea, 5# Co.	lb.	.47	.47
	5		Sugar, Brown, 1#	ctn.	.06	.30
	7		Fruit Cocktail, #2½	can	.23	1.61
						76.63

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. B. BASYE (NAME)
CAPTAIN QMC (RANK)
O.I.C. PMP (ORGANIZATION)

Field-227

CONSIGNOR'S VOU. No. _____

CONSIGNEE'S VOU. No. _____

NUMBER OF SHEETS -1-

U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 24 September 1943 Period: 25 Septembef 1943 Rations 86

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	20		Bread, Loaf	lb.	.06	1.20
	¼		Cereal, dry, assorted	case	3.32	.83
	5		Coffee, Roasted, Whole	lb.	.17	.85
	13		Corn, #2 Cr.	can	.09	1.17
	3		Milk, Evap. 8#	can	.68	2.04
	10		Prunes, #2½	can	.10	1.00
	24		Catsup, Tomato, 14 oz.	btl.	.11	2.64
	2		Baking Powder, 5#	can	.29	.58
	6		Sirup, #10	can	.31	1.86
	13		Tomatoes, #2	can	.09	1.17
	3		Sugar, Brown, 1#	ctn.	.06	.18
	22		Milk, Qt.	btl.	.14	3.08
	13		Bacon, Slab.	lb.	.25	3.25
	6		Butter, 90 Score	lb.	.46	2.76
	15		Eggs, Procurement #2	doz.	.55	8.25
	4		Lard Subs.	lb.	.17	.68
	30		Sausage, Franks	lb.	.29	8.70
	17½		Beans, Snap, Frozen	lb.	.17	2.98
						43.22

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

Consignor's Vou. No. Field-218

Consignee's Vou. No. _____

Number of Sheets -1-

Signature illegible
(NAME) CAPTAIN QM (RANK) (ORGANIZATION)

U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
O. M. C. Form No. 484
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, SalesCommissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 23 September 1943 Period; 24 September 1943 Rations 86

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	35		Bread, Loaf	lb.	.06	2.10
	8		Coffee, Roasted, Whole	lb.	.17	1.36
	3		Jam, 2# Plum	jar	.31	.93
	2		Milk, Evap. 8#	can	.68	1.36
	3		Peaches, #2½	can	.22	.66
	1		Pickles, Sour	gal.	.72	.72
	13		Sugar, Gran.	lb.	.05	.65
	24		Sugar, Powdered, 1#	ctn.	.07	1.68
	11		Bacon, Slab.	lb.	.25	2.75
	6		Butter, 90 Score	lb.	.46	2.76
	3		Eggs, Procurement #2	doz.	.55	1.65
	58		Veal, Carcass, Fresh	lb.	.22	12.76
	17½		Beans, Frozen, Lima	lb.	.22	3.85
	¼		Celery	crt	4.75	1.19
	1		Tomatoes	lug	3.25	3.25
	1		Pears	box	5.00	5.00
	6		Cheese, American Cheddar	lb.	.30	1.80
	22		Milk, Qt.	btl.	.14	3.08
						47.55

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. B. Burke — CAPT — QMC
(NAME) (RANK) (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-208
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 22 September 1943 Period: 23 September 1943 Rations 86

SHIP TO—

1327th Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	86		Beef, Carcass, Equal H & F	lb.	.22	18.92
	6		Butter, 90 Score	lb.	.46	2.76
	4		Eggs, Procurement #2	doz.	.55	2.20
	4		Lard, Subs.	lb.	.17	.68
	1		Carrots	bu.	2.50	2.50
	2/5		Lettuce	crt.	5.60	2.24
	1		Onions, dry	bag	2.70	2.70
	1		Potatoes, Irish	bag	3.60	3.60
	22		Milk, qt.	btl.	.14	3.08
	35		Bread, loaf	lb.	.06	2.10
	1/4		Cereal, dry, assorted	case	3.32	.83
	5		Coffee, Roasted whole	lb.	.17	.85
	31		Corn,Cr. #2	can	.09	2.79
	3		Jam, 2#, Grape	jar	.27	.81
	24		Peas, Green #2	can	.09	2.16
	1		Milk, Evaporated 8#	can	.68	.68
	2		Salad Oil, veg.	qt.	.34	.68
	9		Spaghetti	lb.	.07	.63
	34		Sugar Granulated	lb.	.05	1.70
	1		Tea, 5# co.	lb.	.47	.47
	2		Tomato Puree #10	can	.40	.80
						53.18

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. BASYL
CAPTAIN QMC
(NAME) (RANK) O.I.C. P.M.P. (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-199
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS 1

☆ U. S. GOVERNMENT PRINTING OFFICE: 1942 16—29529-1

DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 20 September 1943 Period: 21 September 1943 Rations 86

SHIP TO—

1327th Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	164		Beef, Carcass, Equal H & F	lb.	.22	36.08
	6		Butter, 90 Score	lb.	.46	2.76
	2		Eggs, Procurement #2	doz.	.55	1.10
	50		Ham, S.C.	lb.	.30	15.00
	1/4		Cabbage	bag	1.80	.45
	1/4		Celery	crt.	4.75	1.19
	1		Potatoes	bag	3.60	3.60
	44		Milk, qt.	btl.	.14	6.16
	3		Coffee, Roasted whole	lb.	.17	.51
	15		Flour, Wheat Hard	lb.	.03	.45
	3		Milk, Evaporated 8#	can	.68	2.04
	11		Peas, Green #2	can	.09	.99
	1		Pickles, sweet	gal.	1.04	1.04
	1		Sirup, Corn Ref. #10	can	.31	.31
	16		Sugar, Gran.	lb.	.05	.80
	1		Tea, 5# co.	lb.	.47	.47
						72.95

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. B. BASTE
(NAME)

CAPTAIN QMC
(RANK)

8.1.C. P.M.P.
(ORGANIZATION)

CONSIGNOR'S VOU. No. Field-180

CONSIGNEE'S VOU. No. _____

NUMBER OF SHEETS 1

U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 484
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 21 September 1943 Period: 22 September 1943 Rations 85

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	21		Beans, kidney, dry	lb.	.06	1.26
	35		Bread, Loaf	lb.	.06	2.10
	¼		Cereal, dry, assorted	case	3.32	.83
	1		Gelatin, 10# Dessert Pwdr. Strawberry	con.	1.39	1.39
	28		Flour, Wheat, Hard	lb.	.03	.84
	6		Milk, Evap. 8#	can	.68	4.08
	29		Sugar, Gran.	lb.	.05	1.45
	9		Tomatoes #2	can	.09	.81
	11		Fruit Cocktail, #2½	can	.23	2.53
	6		Butter, 90 Score	lb.	.46	2.76
	13		Eggs, Procurement #2	doz.	.55	7.15
	4		Lard Subs.	lb.	.17	.68
	53		Pork Loins	lb.	.25	13.25
	3		Ice Cream	gal.	1.10	3.30
	1		Cabbage	bag	1.80	1.80
	¼		Peppers, Green	bu.	2.00	.50
	1		Tomatoes	lug	3.25	3.25
	1		Potatoes, Sweet	hpr.	3.50	3.50
	22		Milk, Qt.	btl.	.14	3.08
						55.75

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. B. BASYE
(NAME) CAPTAIN (RANK) Q.M.C. P.M.P. (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-190
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 18 September 1943 Period: 19 September 1943 Rations 87
20 September 1943 Rations 87

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	12		Butter, 90 Score	lb.	.46	5.52
	98		Chicken, Fryers	lb.	.37	36.26
	21		Eggs, Procurement #2	doz.	.46	9.66
	7		Fatback, Salt-cured	lb.	.14	.98
	20		Beans, Lima, Frozen	lb.	.22	4.40
	8		Lard Subs.	lb.	.17	1.36
	1		Yeast, 1#	cake	.11	.11
	17 1/8		Beans, Frozen, Snap	lb.	.17	2.98
	1/4		Carrots	bu.	2.50	.63
	22		Milk, Qt.	btl.	.14	3.08
	1		Grapes	lug	3.50	3.50
	3/5		Lettuce	crt	5.60	3.36
	1/4		Onions, dry	bag	2.70	.68
	1		Tomatoes	lug	3.25	3.25
	1		Pears	box	5.00	5.00
	16		Beans, White, dry	lb.	.05	.80
	70		Bread, Loaf	lb.	.06	4.20
	1/2		Cereal, dry	case	3.32	1.66
	13		Coffee, Roasted, Whole	lb.	.17	2.21
	13		Corn, #2 W/K	can	.10	1.30
	34		Flour, Wheat, Hard	lb.	.03	1.02
	3		Milk, Evap. 8#	can	.68	2.04
	9		Noodles, dry	lb.	.11	.99
	10		Pumpkin, #2 1/2	can	.08	.80
	1		Pickles, Sweet	gal.	1.04	1.04
	1		Two Shakes Punch, qt.	btl.	.82	.82
	12		Cranberry Sauce, 28 oz.	can	.19	2.28
	6		Tomato Puree #10	can	.40	2.40
	20		Spaghetti	lb.	.07	1.40
	32		Sugar, Gran.	lb.	.05	1.60
	17		Tomatoes #2	can	.09	1.53
						106.86

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. K. Rawls (NAME) [redacted] (RANK) CAPTAIN QMC (ORGANIZATION) O.I.C. P.M.P.

CONSIGNOR'S VOU. No. Field-171

CONSIGNEE'S VOU. No. _____

NUMBER OF SHEETS -1-

U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 17 September 1943 Period: 18 September 1943 Rations 87

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	10		Beans, Dry, Kidney	lb.	.06	.60
	15		Bread, Loaf	lb.	.06	.90
	5		Coffee, Roasted, Whole	lb.	.17	.85
	23		Flour, Wheat, Hard	lb.	.03	.69
	3		Jam, 2# Peac	jar	.31	.93
	3		Macaroni, dry	lb.	.06	.18
	3		Milk, Evap. 8#	can	.68	2.04
	24		Peas, Green, #2	can	.09	2.16
	18		Sugar, Gran.	lb.	.05	.90
	4		Tomatoes, #2	can	.09	.36
	6		Butter, 90 Score	lb.	.46	2.76
	4		Eggs, Procurement #2	doz.	.55	2.20
	32½		Lamb Carcass	lb.	.26	8.45
	8		Lard Subs.	lb.	.17	1.36
	3		Yeast, 1#	cake	.11	.33
	3		Ice Cream	gal.	1.10	3.30
	1		Cabbage	bag	1.80	1.80
	1		Celery	crt	4.75	1.19
	¼		Lettuce	crt	5.60	1.40
	1		Potatoes	bag	3.60	3.60
	22		Milk, Qt.	btl.	.14	3.08
						39.08

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. B. [illegible]
CAPTAIN [illegible]
O.I.C. [illegible]

(NAME) (RANK) (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-162

CONSIGNEE'S VOU. No. _____

NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 16 September 1943 Period: 17 September 1943 Rations 84

SHIP TO—
1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	50		Bread, Loaf	lb.	.06	3.00
	¼		Cereal, dry, assorted	Case	3.32	.83
	5		Coffee, Roasted, Whole	lb.	.17	.85
	21		Flour, Wheat, Hard	lb.	.03	.63
	2		Milk, Evap. 8#	can	.68	1.36
	16		Sugar, Gran.	lb	.05	.80
	1		Tea, 5# Co.	~~can~~	.47	.47
	163		Beef, Carcass, Equal R & F	lb.	.22	35.86
	6		Butter, 90 Score	lb.	.46	2.76
	18		Eggs, Procurement #2	doz.	.55	9.90
	8		Lard Subs.	lb.	.17	1.36
	17½		Beans, Snap, Frozen	lb.	.17	2.98
	½		Lettuce	crt	5.60	1.40
	½		Pears	box	5.00	2.50
	21		Milk, Qt.	btl.	.14	2.94
						67.64

Field-162

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C. B. Barry, CAPTAIN, C.A.C.
(NAME) (RANK) (ORGANIZATION)

CONSIGNOR'S VOU. No. _____
CONSIGNEE'S VOU. No. -1-
NUMBER OF SHEETS _____

U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
A. G. O. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 15 September 1943 Period; 16 September 1943 Rations 84

SHIP TO—
1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK NO.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	34		Bread, Loaf	lb.	.06	2.04
	3		Coffee,Roasted,Whole	lb.	.17	.51
	13		Flour, Wheat, Hard	lb.	.03	.39
	13		Peas, Green, #2	can	.09	1.17
	1		Sirup, 10# Corn	jar	.41	.41
	14		Sugar, Gran.	lb.	.05	.70
	1		Tea, 5# Co.	lb.	.47	.47
	3		Cranberry Sauce, 28 oz.	jar	.19	.57
	6		Butter, 90 Score	lb.	.46	2.76
	61		Chicken, Fryers	lb.	.37	22.57
	2		Eggs, Procurement #2	doz.	.55	1.10
	1		Potatoes, Sweet	bpr.	3.50	3.50
	1		Potatoes, Irish	bag	3.60	3.60
	21		Milk, Qt.	btl.	.14	2.94
						42.73

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

O B Bowles — C. B. BA[illegible] — CAPTAIN — O[illegible] C.
(NAME) (RANK) (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-143
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE: 1942 16—20629-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 10 September 1943 Period; 11 September 1943 Rations 85

SHIP TO—
1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	30		Bread, Loaf	lb.	.06	1.80
	¼		Cereal, dry, Assorted	case	3.32	.83
	5		Coffee, Roasted, Whole	lb.	.17	.85
	24		Corn, #2 Cr.	can	.09	2.16
	21		Flour, Wheat, Hard	lb.	.03	.63
	1		Cereal, dry, Assorted	case	3.32	3.32
	2		Milk, Evap. 8#	can	.68	1.36
	12		Cranberry Sauce, 28 oz.	jar	.19	2.28
	1		Sirup, Corn, 10#	jar	.41	.41
	26		Sugar, Gran.	lb.	.05	1.30
	11¼		Bacon, Slab.	lb.	.25	2.81
	6		Butter, 90 Score	lb.	.46	2.76
	5		Eggs, Procurement #2	doz.	.55	2.75
	4		Lard Subs.	lb.	.17	.68
	17½		Beans, Snap, Frozen	lb.	.17	2.98
	¼		Celery	crt	4.75	1.19
	¼		Lettuce	crt	5.60	1.40
	1		Potatoes	bag	3.60	3.60
	22		Milk, Qt.	btl.	.14	3.08
						36.19

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED (UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

[signature] CAPTAIN [illegible] O.T.C.
(NAME) (RANK) (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-104
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 1a—20529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 11 September 1943 Period: 12 September 1943 Rations 83 13 September 1943 Rations 85

SHIP TO—

1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO P/A No._____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	75		Bread, Loaf	lb.	.06	4.50
	¼		Cereal, Assorted, dry	case	3.32	.83
	8		Coffee, Roasted, Whole	lb.	.17	1.36
	8		Corn, #2 Cr.	can	.09	.72
	24		Flour, Wheat, Hard	lb.	.03	.72
	3		Jam, 2# Grape	jar	.27	.81
	2		Vanilla Imitation, 8 oz.	btl.	.08	.16
	4		Milk, Evap. 8#	can	.68	2.72
	8		Noodles,	lb.	.13	1.04
	2		Black Pepper, 8 Oz.	can	.06	.12
	1		Pickles, Sweet	gal.	1.04	1.04
	6		Tomato Puree, #10	can	.40	2.40
	1		Sirup, Corn, 10#	jar	.41	.41
	36		Sugar, Gran.	lb.	.05	1.80
	11		Bacon, Slab.	lb.	.25	2.75
	152		Beef, Carcass, Equal H & F	lb.	.22	33.44
	12		Butter, 90 Score	lb.	.46	5.52
	15		Eggs, Procurement #2	doz.	.55	8.25
	49		Ham, S.C.	lb.	.30	14.70
	4		Lard Subs.	lb.	.17	.68
	17½		Beans, Lima Frozen	lb.	.22	3.85
	1		Yeast, 1#	cake	.11	.11
	¼		Celery	crt	4.75	1.19
	¼		Lettuce	crt	5.60	1.40
	1		Potatoes	bag	3.60	3.60
	9		Cheese, American, Cheddar	lb.	.30	2.70
	22		Milk, Qt.	btl.	.14	3.08
						99.90

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED"

(NAME) (RANK) O.I.C. (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-115

CONSIGNEE'S VOU. No. _____

NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: SalesOfficer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 13 September 1943 Period: 14 September 1943 Rations 86

SHIP TO—
1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO P/A No._____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	15		Beans, White, dry	lb.	.05	.75
	¼		Cereal, dry, Assorted	case	3.32	.83
	5		Coffee, Roasted, Whole	lb.	.17	.85
	13		Flour, Wheat, Hard	lb.	.03	.39
	3		Beans, String, #10	can	.46	1.38
	24		Sugar, Gran.	lb.	.05	1.20
	6		Butter, 90 Score	lb.	.46	2.76
	18		Eggs, Procurament, #2	doz.	.55	9.90
	4		Lard Subs.	lb.	.17	.68
	¼		Onions, dry	bag	2.70	.68
	44		Milk, Qt.	btl.	.14	6.16
						25.58

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED"

C. B. [illegible]
(NAME)

CAPTAIN
(RANK)

QM
(ORGANIZATION)

CONSIGNOR'S VOU. No. Field-124
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 14 September 1943 Period: 15 September 1943 Rations 85

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	25		Bread, Loaf	lb.	.06	1.50
	8		Coffee, Roasted, Whole	lb.	.17	1.36
	4		Corn, #2 Cr.	can	.09	.36
	9		Macaroni, dry	lb.	.06	.54
	13		Peas, #2 Green	can	.09	1.17
	19		Sugar, Gran.	lb.	.05	.95
	145		Beef, Carcass, Equal H & F	lb.	.22	31.90
	6		Butter, 90 Score	lb.	.46	2.76
	20		Beans, Lima, Frozen	lb.	.22	4.40
	1/2		Lettuce	crt	5.60	2.80
	1		Potatoes	bag	3.60	3.60
	1		Tomatoes	lug	3.25	3.25
	1		Pears,	box	5.00	5.00
	22		Milk, Qt.	btl.	.14	3.08
						62.67

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

Field-134

CONSIGNOR'S VOU. No. _____

CONSIGNEE'S VOU. No. _____

NUMBER OF SHEETS -1-

(NAME) (RANK) (ORGANIZATION)

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 9 September 1943 Period: 10 September 1943 Rations 86

SHIP TO—
1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	25		Bread, Loaf	lb.	.06	1.50
	¼		Cereal, dry, Assorted	case	3.32	.83
	5		Coffee, Roasted, Whole	lb.	.17	.85
	31		Flour, Wheat, Hard	lb.	.03	.93
	3		Milk, Evap.8#	can	.68	2.04
	13		Peas, #2 Green	can	.09	1.17
	1		Pickles, Sour	gal.	.72	.72
	1		Corn, Sirup, 10#	jar	.41	.41
	26		Sugar, Gran.	lb.	.05	1.30
	6		Butter, 90 Score	lb.	.46	2.76
	17		Eggs, Procurement #2	doz.	.55	9.35
	4		Lard Subs.	lb.	.17	.68
	1		Yeast, 1#	cake	.11	.11
	30		Sausage, Frankfurter Style	lb.	.29	8.70
	2 3/4		Ice Cream	gal.	1.10	3.03
	5		Cheese, American Cheddar	lb.	.30	1.50
	1		Potatoes	bag	3.60	3.60
	22		Milk, Qt.	btl.	.14	3.08
						42.56

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED"

C. B. BASYE
(NAME)
CAPTAIN QMC
(RANK) O.T.C. D.M.P. (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-93
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS 1

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
A. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 8 September 1943 Period: 9 September 1943 Rations 85

SHIP TO—
1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	22		Milk, Qt.	btl.	.14	3.08
	34		Bread, Loaf	lb.	.06	2.04
	5		Coffee, Roasted, Whole	lb.	.17	.85
	1		Two Shakes Punch, Assorted, qt.	btl.	.82	.82
	2		Milk, Evap. 8#	can	.68	1.36
	9		Spaghetti, dry	lb.	.07	.63
	14		Sugar, Gran.	lb.	.05	.70
	68		Beef, Carcass, Equal H & F	lb.	.22	14.96
	6		Butter, 90 Score	lb.	.46	2.76
	12		Eggs, Procurement #2	doz.	.55	6.60
	1/2		Grapes	lug	3.50	1.75
	1/4		Pears	box	5.00	1.25
						36.80

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED"

C. B. Baker — (NAME)
CAPTAIN QMC — (RANK)
O.R.C. T.M.B. — (ORGANIZATION)

U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

CONSIGNOR'S VOU. No. Field-83

CONSIGNEE'S VOU. No. _____

NUMBER OF SHEETS -1-

WAR DEPARTMENT
Q. M. C. Form No. 484
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 6 September 1943 Period: 7 September 1943 Rations 85

SHIP TO—

1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	10		Bread, Loaf	lb.	.06	.60
	5		Coffee, Roasted, Whole	lb.	.17	.85
	14		Flour, Wheat, Hard	lb.	.03	.42
	6		Cranberry Sauce, 28 oz.	can	.19	1.14
	2		Milk, Evap. 8#	can	.68	1.36
	1		Pickles, Sweet	gal	1.04	1.04
	13		Sugar, Cran.	lb.	.05	.65
	24		Sugar, Powdered, 1#	ctn.	.07	1.68
	6		Butter, 90 Score	lb.	.46	2.76
	61 1/2		Chicken, Fryers	lb.	.37	22.76
	4		Lard Subs.	lb.	.17	.68
	1/4		Lettuce,	crt	5.60	1.40
	43		Milk, Qt.	btl.	.14	6.02
						41.36

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

[signature] C. E. [illegible]
(NAME) CAPT (RANK) Q. M. (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-61
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 7 September 1943 Period: 8 September 1943 Rations 83

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	3		Apples, #10	can	.48	1.44
	3		Coffee, Roasted, Whole	lb.	.17	.51
	1		Dessert Pwdr. Gelatin, 10# Raspberry	con.	1.46	1.46
	3		Milk, Evap. 8#	can	.68	2.04
	1		Pickles, Sour	gal	.72	.72
	24		Olives, Stuff. #20	jar	.53	12.72
	12		Sugar, Gran.	lb.	.05	.60
	7		Fruit Cocktail, #2½	can	.23	1.61
	10 3/4		Bacon, Slab.	lb.	.25	2.69
	6		Butter, 90 Score	lb.	.46	2.76
	4		Lard Subs.	lb.	.17	.68
	46		Pork Loins, Reg.	lb.	.25	11.50
	2		Yeast, 1#	cake	.11	.22
	1		Potatoes	bag	3.60	3.60
	1		Potatoes, Sweet	hpr.	3.50	3.50
	1		Tomates	lug	3.25	3.25
	21		Milk, Qt.	btl.	.14	2.94
						52.24

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

O. K. Clapp — (NAME) — (RANK) — (ORGANIZATION)

J. D. BASYE
CAPTAIN QMC
O.I.C. T.M.P.

CONSIGNOR'S VOU. No. Field-73
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 484
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, SalesCommissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 4 September 1943 Period: 5 September 1943 Rations 85
~~6 September 1943 Rations 82~~

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	1/4		Cereal, dry, assorted	case	3.32	.83
	10		Coffee, Roasted, Whole	lb.	.17	1.70
	7		Corn, #2 Cr.	can	.09	.63
	61		Flour, Wheat, Hard	lb.	.03	1.83
	1		Pickles, Sweet	gal.	1.04	1.04
	3		Milk, Evap. 8#	can	.68	2.04
	13		Peas, #2 Green	can	.09	1.17
	1		Pickles, Sour	gal.	.72	.72
	10		Prunes, Fresh, #2 1/2	can	.10	1.00
	70		Bread, Loaf	lb.	.06	4.20
	1		Sirup, #10 Corn Ref.	can	.31	.31
	50		Sugar, Gran.	lb.	.05	2.50
	1		Tea, 5# Co.	lb.	.47	.47
	149		Beef, Carcass, Equal H & F	lb.	.22	32.78
	12		Butter, 90 Score	lb.	.46	5.52
	35		Chicken, Fryers	lb.	.37	12.95
	25		Eggs, Procurement #3	doz.	.52	13.00
	16		Lard Subs.	lb.	.17	2.72
	~~2 3/4~~		Ice Cream	gal	1.10	3.03
	1 7/8		Beans, Snap, Frozen	lb.	.17	2.98
	1/4		Carrots	bag	2.50	.63
	1		Potatoes	bag	3.60	3.60
	1		Tomatoes	lug	3.25	3.25
	1		Pears	box	5.00	5.00
	22		Milk, Qt.	btl.	.14	3.08
						106.98

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED"

[signature] (NAME) (RANK) (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-51

CONSIGNEE'S VOU. No. _____

NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 3 September 1943, Period: 4 September 1943 Rations 81

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $..... CHARGEABLE TO

P/A No. .....

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	35		Bread, Loaf	lb.	.06	2.10
	7		Coffee, Roasted, Whole	lb.	.17	1.19
	12		Corn, #2 Cr.	can	.09	1.08
	23		Flour, Wheat, Hard	lb.	.03	.69
	8		Macaroni	lb.	.06	.48
	2		Milk, Evap. 8#	can	.68	1.36
	13		Sugar, Gran.	lb.	.05	.65
	4		Peanut Butter, 25 oz.	btl.	.35	1.40
	6		Butter, 90 Score	lb.	.46	2.76
	11		Eggs, Procurement, #3	doz.	.52	5.72
	4		Lard Subs.	lb.	.17	.68
	45		Pork Loins Reg.	lb.	.25	11.25
	15		Beans, Snap, Frozen	lb.	.17	2.55
	1		Potatoes,	bag	3.60	3.60
	1		Tomatoes	lug	3.25	3.25
	21		Milk , qt.	btl.	.14	2.94
	1		Allspice, ground, 4 oz.	can	.10	.10
	1		Baking Powder, 5#	can	.29	.29
	44		Catsup, Tomato, 14 oz.	btl.	.11	4.84
	2		Cinnamon, Ground, 4 oz.	can	.28	.56
	2		Crackers, Premium, 2#	pkg.	.27	.54
	1		Extract, Lemon, 3 oz.	btl.	.51	.51
	2		Extract, Vanilla, Imit, 8 oz.	btl.	.08	.16
	1		Mustard, Prep.	gal	.32	.32
	1		Nutmeg, Ground, 4 oz.	pkg.	.15	.15
	3		Oil, Vegetable Salad, qt.	can	.34	1.02
	3		Pepper, Black, 8 oz.	can	.06	.18
	1		Sauce, Wor/shire, 10 oz.	btl.	.16	.16
	2		Vinegar	gal	.29	.58
	1		Baking Soda, 1#	pkg.	.04	.04
	4		Mayonnaise	gal	1.43	5.72
	1		Sage, 4 oz.	can	.13	.13
						57.00

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

[signature] 30 Aug 43
(NAME) (RANK) C. P. M. P. (ORGANIZATION)

CAPTAIN QMC

CONSIGNOR'S VOU. No. Field-41
CONSIGNEE'S VOU. No. .....
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 484
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 2 September 1943 Period: 3 September 1943 Rations 86

SHIP TO— 1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK NO.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	25		Bread, Loaf	lb.	.06	1.50
	3		Coffee, Roasted, Whole	lb.	.17	.51
	24		Corn, #2 Cr.	can	.09	2.16
	8		Flour, Wheat, Hard	lb.	.03	.24
	12		Macaroni	lb.	.06	.72
	3		Milk, Evap. 8#	can	.68	2.04
	7		Peaches, #2½	can	.22	1.54
	6		Sirup, Corn, Ref.. #10	can	.31	1.86
	30		Sugar, Gran.	lb.	.05	1.50
	1		Tea, 5# Co.	lb.	.47	.47
	1		Baking Powder, 5#	can	.29	.29
	1		Vinegar	gal	.29	.29
	11 3/4		Bacon, Slab. Smoked	lb.	.25	2.94
	6		Butter, 90 Score	lb.	.46	2.76
	3		Eggs, Procurement #3	doz.	.52	1.56
	4		Lars Subs.	lb.	.17	.68
	47		Pork Butts, Fresh	lb.	.26	12.22
	17½		Lima Beans, Frozen	lb.	.22	3.85
	1		Oranges	box	6.45	6.45
	1		Potatoes, Irish	bag	3.60	3.60
	1		Pears,	box	5.00	5.00
	22		Milk, Qt.	btl.	.14	3.08
						55.26

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED"

C. B. Basye — (NAME)
C. B. BASYE — (RANK)
CAPTAIN OMC — (ORGANIZATION)
O I C — (TITLE)

CONSIGNOR'S VOU. No. Field-28
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—28529-1

WAR DEPARTMENT
M. C. Form No. 434
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, Sales Commissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 1 September 1943 Period; 2 September 1943 Rations 85

SHIP TO—
1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	17		Bread, Loaf	lb.	.06	1.02
	15		Beans, White, Dry	lb.	.05	.75
	5		Bread, Loaf	lb.	.06	.30
	5		Coffee, Roasted, Whole	lb.	.17	.85
	3		Milk, Evap. 8#	can	.68	2.04
	3		Peas, Green, #2	can	.09	.27
	26		Sugar, Gran.	lb.	.05	1.30
	1		Tea, 5# Co.	lb.	.47	.47
	3		Spinach, #10	can	.41	1.23
	6		Butter, 90 Score	lb.	.46	2.76
	60		Chicken, Fryers	lb.	.37	22.20
	20		Eggs, Procurement #3	doz.	.52	10.40
	4		Lard Subs.	lb.	.17	.68
	1		Onions, Dry	bag	2.70	2.70
	1		Oranges	box	6.45	6.45
	9/25		Peppers, Green	bu.	2.00	.72
	1		Potatoes	bag	3.60	3.60
	1		Tomatoes	lug	3.25	3.25
	21		Milk, qt.	btl.	.14	2.94
						63.93

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED".

C. B. Black
(NAME) (RANK) (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-17
CONSIGNEE'S VOU. No. _____
NUMBER OF SHEETS -1-

☆ U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29529-1

WAR DEPARTMENT
Q. M. C. Form No. 484
Revised June 30, 1942

SHIPPING TICKET

CONSIGNOR: Sales Officer, SalesCommissary, Fort Story, Virginia

DATE SHIPPED OR DELIVERED 31 August 1943 Period; 1 September 1943 Rations 85

SHIP TO—
1327th. Motor Pool
Fort Story, Virginia

AUTHORITY OR REQ. No.

TRANSPORTATION COST OF $_____ CHARGEABLE TO

P/A No. _____

QUANTITY ORDERED	QUANTITY SHIPPED	STOCK No.	ARTICLE	UNIT	UNIT COST	TOTAL COST
	25		Beans, Dry, White	lb.	.05	1.25
	20		Bread, Loaf	lb.	.06	1.20
	5		Coffee, Roasted Whole	lb.	.17	.85
	23		Flour, Wheat Hard	lb.	.03	.69
	2		Milk, Evap. 8#	can	.68	1.36
	1		Sirup, Corn, Reg. #10	can	.31	.31
	17		Sugar, Gran.-	lb.	.05	.85
	7		Fruit Cocktail, #2½	can	.23	1.61
	177		Beef, Carcass Equal F & H	lb.	.22	38.94
	6		Butter, 90 Score	lb.	.46	2.76
	2		Eggs, Procurement #2	doz.	.55	1.10
	23		Milk, (R) qt.	btl.	.14	3.22
	4		Lard Subs.	lb.	.17	.68
	1		Yeast 1#	cake	.11	.11
	¼		Cabbage	bag	1.80	.45
	2/25		Onions, Dry	bag	2.70	.22
	1		Potatoes,	bag	3.60	3.60
	10		Radishes	bnch	.05	.50
						59.70

For your file.

ARTICLES LISTED IN COLUMN "ORDERED" HAVE BEEN RECEIVED UNLESS OTHERWISE NOTED IN COLUMN "SHIPPED."

C K Bangs (NAME) CAPT (RANK) O.C.S.P.M.P. (ORGANIZATION)

CONSIGNOR'S VOU. No. Field-5

CONSIGNEE'S VOU. No. _____

NUMBER OF SHEETS -1-

U. S. GOVERNMENT PRINTING OFFICE : 1942 16—29520-1

DELIVERY ORDER AND RECEIPT

Delivery Order No. _____

Work Order No. _____

Fort Stony (Post, camp, or station) 11. 16 (Date), 19 43

Deliver to P. M. P. (Name of individual organization) the following supplies.

17586 For 3217742 (Building number, shop, plant, or system)

Ordered	Delivered	Stock No.	ARTICLES	Unit	Space for Accounting: Unit Cost	Space for Accounting: Total Cost
6	6		gasoline gals.			
			3:48 P.M. hauling			

Articles listed in column "Delivered" have been received. 19____

John Galuchowsky Pvt P.M.P.
(Name) (Rank) (Organization)

ORDER TAKEN BY	ISSUED BY	POSTED BY
DATE	DATE Mac Kinnon	DATE

DUPLICATE

o16—12095

DELIVERY ORDER AND RECEIPT

Delivery Order No. _____

Work Order No. _____

Camp Lee Va. (Post, camp, or station) 11-18-43 (Date), 19____

Deliver to 1336 S.O. (Name of individual organization) the following supplies.

For Fort Story VA. (Building number, shop, plant, or system)

Ordered	Delivered	Stock No.	ARTICLES	Unit	Space for Accounting: Unit Cost	Space for Accounting: Total Cost
	11		gas			
		W-3217742				

Articles listed in column "Delivered" have been received. 19____

(Name) (Rank) (Organization)

Order Taken By	Issued By	Posted By
Date 11-18-43	Date	Date

ORIGINAL

o16—12995

DELIVERY ORDER AND RECEIPT

Delivery Order No. _____

Work Order No. _____

FORT STORY VA (Post, camp, or station) 11 29 (Date), 19 43

Deliver to QMP 126 (Name of individual organization) the following supplies.

18144 For 32772 (Building number, shop, plant, or system)

Ordered	Delivered	Stock No.	ARTICLES	Unit	Space for Accounting: Unit Cost	Space for Accounting: Total Cost
200	200		GASOLINE GAL			
			10-0 AM			
			Requisition			

Articles listed in column "Delivered" have been received, 19____

M. Christine Pvt. [signature]
(Name) (Rank) (Organization)

ORDER TAKEN BY	ISSUED BY	POSTED BY
DATE	DATE Nov 29	DATE

DUPLICATE

e16—12995

DELIVERY ORDER AND RECEIPT

Delivery Order No. ____________

...t Story Va. ____ Work Order No. ____________

(Post, camp, or station) 26 - 11 - , 19 43 (Date)

Deliver to VMP the following supplies.
(Name of individual organization)

18739 For 327742
(Building number, shop, plant, or system)

Ordered	Delivered	Stock No.	ARTICLES	Unit	Unit Cost	Total Cost
10	10		Gasoline Gals			

11:50 A.M.
Supplies

Articles listed in column "Delivered" have been received. 19__

(Name) (Rank) C-246 (Organization)

ORDER TAKEN BY	ISSUED BY Winkler	POSTED BY
DATE	DATE	DATE

DUPLICATE

016—12995

DELIVERY ORDER AND RECEIPT

Delivery Order No. _____

Work Order No. _____

FORT STORY VA. (Post, camp, or station) 11/11 (Date), 19 43

Deliver to P.M.P (Name of individual or organization) the following supplies.

17676 For 321774 (Building number, shop, plant, or system)

Ordered	Delivered	Stock No.	ARTICLES	Unit	Space for Accounting: Unit Cost	Space for Accounting: Total Cost
7	7		GALLONS GAS, 4-F supplies			

Articles listed in column "Delivered" have been received. 19____

Richard Cpl P.M.P.

(Name) (Rank) (Organization)

ORDER TAKEN BY	ISSUED BY	POSTED BY
DATE	DATE	DATE

DUPLICATE

o16—12995

DELIVERY ORDER AND RECEIPT

Delivery Order No. _____

Work Order No. _____

Ft. Stony Ke (Post, camp, or station) 11-15-43 (Date), 19____

Deliver to PMP (Name of individual organization) the following supplies.

For 3217742 (Building number, shop, plant, or system)

17491

Ordered	Delivered	Stock No.	ARTICLES	Unit	Space for Accounting: Unit Cost	Space for Accounting: Total Cost
21	21		Gasoline Cans			

3.15 Pm

Jcw

Articles listed in column "Delivered" have been received. 19____

Ryle (Name) (Rank) BM. 2 (Organization)

ORDER TAKEN BY	ISSUED BY	POSTED BY
DATE	DATE Dunning	DATE

DUPLICATE

o16—1299F

DELIVERY ORDER AND RECEIPT

Delivery Order No. ....

Work Order No. ....

Ft. Story Va (Post, camp, or station) 11-18 43 (Date) 19

Deliver to F.M.B. (Name of individual organization) the following supplies

17180 For 321774 (Building number, shop, plant, or system)

Ordered	Delivered	Stock No.	ARTICLES	Unit	Unit Cost	Total Cost
10	10		gasoline gals			
			8:00 AM			
			Laundry			

Articles listed in column "Delivered" have been received. 19

Pyle Pvt. (Name) (Rank) C.M.G. (Organization)

Order Taken By	Issued By	Posted By
Date	Date Draman	Date

DUPLICATE

DELIVERY ORDER AND RECEIPT

Delivery Order No. _____

Work Order No. _____

Camp Lee VA (Post, camp, or station) 11/25/43 (Date), 19____

Deliver to PM P (Name of individual or organization) the following supplies.

For Dent Story VA (Building number, shop, plant, or system)

Ordered	Delivered	Stock No.	ARTICLES	Unit	Space for Accounting: Unit Cost	Space for Accounting: Total Cost
11		702				
		W 32177 42				

Articles listed in column "Delivered" have been received. 19____

Newton (Name) (Rank) (Organization)

Order Taken By	Issued By	Posted By
Date 11/25/43	Date	Date

TRIPLICATE

c16—12995

DELIVERY ORDER AND RECEIPT

Delivery Order No. _____

Work Order No. _____

Camp Atterbury, Ind. (Post, camp, or station) 25-11-, 1943 (Date)

Deliver to P.M.P. (Name of individual organization) the following supplies.

For 18271 3217742 (Building number, shop, plant, or system)

Ordered	Delivered	Stock No.	ARTICLES	Unit	Space for Accounting: Unit Cost	Space for Accounting: Total Cost
10	10		Gasoline Gals			
			939 Am			
			Supplies			

Articles listed in column "Delivered" have been received. 19____

Newton (Name) PFC (Rank) PMP (Organization)

Order Taken By	Issued By	Posted By
Date	Date 5 Jan 43	Date

DUPLICATE

o16—12995

War Department Form 48
Approved April 12, 1943

U. S. A. No. 3217742

Driver's name Newlon Date 11/18/43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Sgt. Bielecki Time out 730 A.M.

Organization 2 M C Time in 700 P.M.

Department or address 2 M whse.

Kind of work (or route) Supplies to Camp Lee

Requested by major Evans
(Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.) 11	In	17998	18358
Oil added (qts.) ✓	Out	17679	26177
	Total: Miles—Hour	319	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) Newlon

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Sgt. Bielecki

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From QMD		17679
To 2 M Whse		17682
To Camp Lee		17833
To QMD		17998
To		
To		
To		
To		
To		

Vehicle released at _____ (Speedometer—Hour meter) _____ (Date) _____ (Hour)

Official user _____ (Signature) _____ (Grade)

16—85560-1

(SEE REVERSE SIDE)

War Department Form 48
Approved April 12, 1943

U. S. A. No. 34777[illegible]

Driver's name Smith Date 11-14-43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Capt Suttenfield Time out 930 Am

Organization Post Chapel Time in 1100 AM

Department or address Post Chapel

Kind of work (or route) Mess to Hospital

Requested by Capt Suttenfield
(Organization or individual)

Cpl Stoltz
(Dispatcher's signature)

	SPEEDOMETER	HOUR METER
Fuel added (gals.) In	17437	
Oil added (qts.) Out	17389	
Total: Miles—Hour	48	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) J J Smith

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) J J Stoltz

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From Motor Pool		17389
To		
To Mess Hall		
To Camp Shanklin		
To		
To		
To		
To		
To PMP		17437

Vehicle released at _____ _____ _____
(Speedometer—Hour meter) (Date) (Hour)

Official user J Stein _____
(Signature) (Grade)

16—35560-1

(SEE REVERSE SIDE)

War Department Form 48
Approved April 12, 1943

U. S. A. No. 3217742

Driver's name Galubinsky Date 11/16/43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Capt. Basye Time out 8:30 AM

Organization 2nd PMD Time in 4:0 P.M

Department or address 2nd M.T. Shops

Kind of work (or route) Oil from Portlock

Requested by Capt. Basye
(Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

	SPEEDOMETER	HOUR METER
Fuel added (gals.) 6 gal. In	17588	
Oil added (qts.) Out	17493	
Total: Miles—Hour	95	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) Pvt. John Galubinsky

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Sgt. Alvino

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From		
To Standard Oil Co		17530
To Texas Co.		17557
To P.M.P.		17588
To		
To		
To		
To		
To		
To		

Vehicle released at 17588 (Speedometer—Hour meter) 11-16-43 (Date) 4:00 PM (Hour)

Official user _____ (Signature) _____ (Grade)

16—35560-1

(SEE REVERSE SIDE)

War Department Form 48
·Approved April 12, 1943

U. S. A. No. 321774

Driver's name Pyle Date 11-15-43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Lt. Benton Time out 7:45 AM

Organization 1327th S.U. Time in 3:45 P.M.

Department or address Service Unit

Kind of work (or route) Laundry - Va Beach

Requested by Lt. Benton
(Organization or individual)

Lt. Belotti
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.) 21	In	17493	18358
Oil added (qts.)	Out	17437	26177
	Total: Miles—Hour	56	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) Pyle

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Sgt. Alvino

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From P. M. P.		17437
To Va Beach		17451
To P. M. P.		17493
To		
To		
To		
To		
To		
To		

Vehicle released at 17493 (Speedometer—Hour meter) 11/15/43 (Date) (Hour)

Official user J. Berkautz (Signature) (Grade)

16—35560-1

(SEE REVERSE SIDE)

War Department Form AS
Approved April 12, 1943

U. S. A. No. 3 2 [illegible] 2

Driver's name [illegible] Date 11-17-43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Sgt Stanley Time out 8:00 AM

Organization [illegible] Time in 4:05 PM

Department or address [illegible]

Kind of work (or route) [illegible]

Requested by [illegible]
(Organization or individual)

[illegible]
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.) 7 Gals	In	17679	
Oil added (qts.)	Out	17588	
	Total: Miles—Hour	91	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) [signature]

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) [signature]

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From P.M.P	1 Supplies	17588
To N.C.O.	11	17592
To NORFOLK	11	17602
To N.C.O	11	17679
To P.M.P	11	17679
To		
To		
To		
To		

Vehicle released at _____ _____ _____
(Speedometer—Hour meter) (Date) (Hour)

Official user [signature] [illegible]
(Signature) (Grade)

16—85560-1

(SEE REVERSE SIDE)

War Department Form 48
Approved April 12, 1943

U. S. A. No. 3247742

Driver's name Smith Date 11/13/43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Mr. Kimber Time out 4:45 P.M.

Organization 246 C A Time in 5:30 P.M.

Department or address Camp Pendleton

Kind of work (or route) Mess to Motor Stores

Requested by Mr. Kimber
(Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

	SPEEDOMETER	HOUR METER
Fuel added (gals.) In	17356	18388
Oil added (qts.) Out	17324	26177
Total: Miles—Hour	32	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) J. J. Smith

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Sgt. Alvino

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From P.M.P.		17324
To		
To Camp Pendleton		17337
To		
To Hauling Mess		
To		
To		
To		
To P.M.P.		17356

Vehicle released at [illegible]
(Speedometer—Hour meter) (Date) (Hour)

Official user
(Signature) (Grade)

16—35560-1

(SEE REVERSE SIDE)

War Department Form 48
Approved April 12, 1943

U. S. A. No. 3217742

Driver's name Shipley & Skivint Date 11/12/43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Mrs. Wallin Time out 5:30 P.M.

Organization Service Club Time in 1:40 A.M.

Department or address 122-1st. View St. Ocean View

Kind of work (or route) Women to Fort Story Dance

Requested by Miss Horton (Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

	SPEEDOMETER	HOUR METER
Fuel added (gals.) None In	17324 Mi	
Oil added (qts.) None Out	17209 Mi	
Total: Miles—Hour	115 Mi	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) John [illegible]

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Cpl. Vauben

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From PMP		
To [illegible]		
To [illegible]		
To Ocean View		
To PMP		
To		
To		
To		
To		

Vehicle released at ______ (Speedometer—Hour meter) ______ (Date) ______ (Hour)

Official user Julia Y. Horton (Signature) ______ (Grade)

16—35560-1

(SEE REVERSE SIDE)

War Department Form 48
Approved April 12, 1943

U. S. A. No. 32177 42

Driver's name Rush Date 11-13-43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Sgt. Crank Time out 7:45 PM

Organization 246th Band Time in 1:10 AM

Department or address Band Barracks

Kind of work (or route) Band to N.C.O Club & Officers Club

Requested by Sgt. Crank
(Organization or individual)

Cpl Vanben
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.)	In	17389	
Oil added (qts.)	Out	17369	
Total: Miles—Hour		20	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) Rush

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature)

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From P M O		
To Camp Ruma		
To		
To		
To		
To		
To		
To		
To		

Vehicle released at _____ _____ _____
(Speedometer—Hour meter) (Date) (Hour)

Official user E C Crank Tech 5
(Signature) (Grade)

16—35560-1

(SEE REVERSE SIDE)

Band Leader

War Department Form 48
Approved April 12, 1943

U. S. A. No. 3217746

Driver's name Pyle. Date 11-12-43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to S/Sgt. Barton Time out 2:30 P.M.

Organization Service Sqdt. Time in 9:45 A.M.

Department or address 8th Hqrs.

Kind of work (or route) Laundry - VA Beach

Requested by Sgt. Barton
(Organization or individual)

Sgt. Belott
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.) 18	In	17209	18358
Oil added (qts.)	Out	17178	18177
	Total: Miles—Hour	31	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature)

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Sgt Belott

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From 8th Hqrs		17178
To VA Beach		17209
To		
To		
To		
To		
To		
To		
To		

Vehicle released at 17209 (Speedometer) Hour meter) 11/12/43 (Date) (Hour)

Official user J. Blankenship (Signature) (Grade)

16—85590-1

SEE REVERSE SIDE

War Department Form 48
Approved April 12, 1943

U. S. A. No. 3217742

Driver's name Newlon Date 11/21/43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Sgt. Crank Time out 1:30 P.M.

Organization 246 Band Time in 3:45 P.M.

Department or address Band Barks.

Kind of work (or route) Mend instruments

Requested by Sgt. Crank
(Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.) ✓	In	18226	18368
Oil added (qts.)	Out	18214	26177
Total: Miles—Hour		12	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) Newlon

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Sgt Alvino

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From BMP		18214
To Band Room		18216
To Hospital		18220
To Band Clerk		18224
To BMP		18226
To		
To		
To		
To		

Vehicle released at _____ _____ _____
(Speedometer—Hour meter) (Date) (Hour)

Official user A. C. Crank Tech Sgt
(Signature) (Grade)

16—35560-1

(SEE REVERSE SIDE)

War Department Form 48
Approved April 12, 1943

U. S. A. No. 3217742

Driver's name Rusk Date 11/20/43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Sgt. Crank Time out 8:00 P.M.

Organization 246 Band Time in 1415

Department or address 246 Band Co. Ks.

Kind of work (or route) Mend instruments

Requested by Sgt. Crank
(Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.)	In	18168	
Oil added (qts.)	Out	18191	
	Total: Miles—Hour	23	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature)

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Carl Sloan

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From		
To		
To		
To		
To		
To		
To		
To		
To		

Vehicle released at _____ _____ _____
(Speedometer—Hour meter) (Date) (Hour)

Official user A. Albrecht Tech Sgt
(Signature) (Grade)

16—35580-1

(SEE REVERSE SIDE)

Returned 2:15 P.M.

Department Form 48
April 12, 1943

Driver's name Newlon   Date 11/25/43

U. S. A. No. 3217742

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Sgt. Bileckí   Time out 730 AM

Organization Q M C   Time in 400 P.M.

Department or address Q.M.Whse.

Kind of work (or route) Supplies to Camp Lee, Va.

Requested by Major Frantz (Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.) 21	In	18587	18358
Oil added (qts.) ✓	Out	18269	26177
	Total: Miles—Hour	318	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) Newlon

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Sgt. Alvino

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From M P		18269
To Q M Whse		18272
To Camp Lee		18426
To M P		18587
To		
To		
To		
To		
To		

Vehicle released at ______ (Speedometer—Hour meter) ______ (Date) ______ (Hour)

Official user Pasquetto (Signature) ______ (Grade)

16—35560-1

(SEE REVERSE SIDE)

War Department Form 48
Approved April 12, 1943

U. S. A. No. 3217742

Driver's name Grant Date 11/24/43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Mt. Adamantgrube Time out 1200 Hours

Organization 246 C.E. Time in 1401 P.M.

Department or address Regt. H.Q.

Kind of work (or route) Transferred to Little Creek

Requested by Mt. Adamantgrube
(Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

	SPEEDOMETER	HOUR METER
Fuel added (gals.) In	18269	26177
Oil added (qts.) Out	18226	18358
Total: Miles—Hour	43	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) Grant mo

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Sgt Alvino

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From DMP		18226
To Reg Hdq 246		18229
To Little Creek		18247
To Reg Hdq 246		18264
To DMP		18269
To		
To		
To		
To		

Vehicle released at 1325 (Speedometer or hour meter) 24 Nov 43 (Date) 1 (Hour)

Official user Walter B. Ridgon (Signature) Sgt (Grade)

16—35560-1

(SEE REVERSE SIDE)

War Department Form 48
Approved April 12, 1943

U. S. A. No. 32 7742

Driver's name Newlon Date 11/20/43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Lt. Jay Time out 230 P.M.

Organization 2d Engr C.A. Time in 335 P.M.

Department or address Filtration Course

Kind of work (or route) men to Little Creek

Requested by Lt. Jay
(Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.) 1	In	18181	18358
Oil added (qts.)	Out	18146	26177
	Total: Miles—Hour	35	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature)

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) Newlon

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From [illegible]		18146
To Filtration Course		18149
To Little Creek		18166
To [illegible]		18181
To		
To		
To		
To		
To		

Vehicle released at _____ (Speedometer—Hour meter) _____ (Date) _____ (Hour)

Official user Lt. Jay (Signature) _____ (Grade)

16—35560-1

(SEE REVERSE SIDE)

War Department Form 48
Approved April 12, 1943

U. S. A. No. 32177[illegible]2

Driver's name Mc Intire Helen Date 11/19/43

DRIVER'S TRIP TICKET AND P. M. SERVICE RECORD

Report to Mrs. Mallin Time out 5:30 P.M.

Organization Service Club Time in 1:40 A.M.

Department or address 122-1st View St. Ocean View

Kind of work (or route) Moments to Art Story dance

Requested by Miss Horton
(Organization or individual)

Sgt. Alvino
(Dispatcher's signature)

		SPEEDOMETER	HOUR METER
Fuel added (gals.)	In	15142	
Oil added (qts.)	Out	18002	
Total: Miles—Hour		140	

I have performed the "Preventive Maintenance Services" of this form and recorded all deficiencies and any accident.

(Driver's signature) Mc Intire

I have noted all entries on this form and taken the necessary action.

(Dispatcher's, etc., signature) [illegible]

TRIP OR LOAD RECORD	PASSENGERS OR WEIGHT	SPEEDOMETER OR HOUR METER
From P.M.P.		18002
To Ocean View, Service Club		
To Ocean View		
To P.M.P.		15142
To		
To		
To		
To		
To		

Vehicle released at 15142 (Speedometer—Hour meter) 11/20/43 (Date) 1:47 A.M. (Hour)

Official user _____ _____
(Signature) (Grade)

16—35500-1

(SEE REVERSE SIDE)

DRIVER'S DAILY PREVENTIVE MAINTENANCE SERVICES

Perform these services according to the instructions in TM 9–2810, or vehicle operator's manual.

BEFORE OPERATION SERVICE

1. Tampering and damage.
2. Fire extinguishers.
3. Fuel, oil, and water.
4. Accessories and drives.
5. Air brake tanks.
6. Leaks—general.
7. Engine warm-up.
8. Choke or primer.
9. Instruments.
10. Horn and WS wipers.
11. Glass and RV mirrors.
12. Lamps and reflectors.
13. Wheel and flange nuts.
14. Tires and/or tracks.
15. Springs and suspensions.
16. Steering linkage.
17. Fenders and bumpers.
18. Towing connections.
19. Body, load, and tarps.
20. Decontaminator.
21. Tools and equipment.
22. Engine operation.
23. Driv. permit and Form 26A.
24. Amphibian services.
25. During operation check.

DURING OPERATION SERVICE

26. Steering brakes.
27. Foot and hand brakes.
28. Clutch.
29. Transmission.
30. Transfer.
31. Engine and controls.
32. Instruments.
33. Steering gear.
34. Running gear.
35. Body and trailer.
36. Guns—mountings and elevating, traversing, gyro, and firing controls.
37. Amphibian services.

AT HALT SERVICE

38. Fuel, oil, and water.
39. Temperatures—hubs, brake drums, transfer, transmission, and axles.
40. Axle and transfer vents.
41. Propeller shafts.
42. Springs and suspensions.
43. Steering linkage.
44. Wheel and flange nuts.
45. Tires and/or tracks.
46. Leaks—general.
47. Accessories and belts.
48. Air cleaners.
49. Fenders and bumpers.
50. Towing connections.
51. Body, load, and tarps.
52. Appearance and glass.
53. Amphibian services.

AFTER OPERATION SERVICE

54. Fuel, oil, and water.
55. Engine operation.
56. Instruments.
57. Horn and WS wipers.
58. Glass and RV mirrors.
59. Lamps and reflectors.
60. Fire extinguishers.
61. Decontaminator.
62. *Battery and voltmeter.
63. *Accessories and belts.
64. *Electrical wiring.
65. *Air cleaners and breather caps.
66. *Fuel filters.
67. Engine controls.
68. *Tires and/or tracks.
69. *Springs and suspensions.
70. Steering linkage.
71. Propeller shafts, center bearing, and vent.
72. *Axle and transfer vents.
73. Leaks—general.
74. Gear oil levels.
75. *Air brake tanks.
76. Fenders and bumpers.
77. *Towing connections.
78. Body, load, and tarps.
79. Armor and front roller.
80. Vision devices.
81. Turret and gun—mountings and elevating, gyro, traversing, and firing controls.
82. *Tighten—wheel, rim, axle drive flange, and spring U-bolt nuts.
83. *Lubricate as needed.
84. *Clean engine and vehicle.
85. *Tools and equipment.
86. *Amphibian services.

***Those items marked by an asterisk (*) require additional weekly services.**

Record any accident and all deficiencies, indicating if corrected:

1327 th Motor Pool Vou-5 Total
Should Be:
Sirup, Corn, 10# jar .41 .41 59.80

Sept 11

.10

1327 th Motor Pool
Charge Sirup to:
Sirup, Corn 10# jar .41 .41
Total 107.08

Vou- 51

.10

VEHICLE LOG SHEET

ORGANIZATION 4 — U.S.A.NO. 345162 — MONTH OF Aug 1942

TACTICAL ( ) ADMINISTRATIVE ( )

DATE	MILEAGE OUT	MILEAGE IN	TOTAL MILES	CYL. OIL QTS. ADDED	CYL. OIL QTS. CHANGED	GASOLINE GALS	IN SHOP FOR REPAIRS.
1.							
2.							
3.							
4.	34982	35091	44			10	
5.							
6.							
7.							
8.	35097	35150	23				
9.	35050	35083	33				X
10.							X
11.							X
12.							X
13.							X
14.							X
15.							X
16.							X
17.							X
18.							X
19.	35083	35145	62			15	
20.							
21.	35145	35183	38				
22.	35183	35222	39	1		11	
23.	35222	35246	24				
24.	35246	35282	36				
25.	35282	35317	35				
26.	35317	35363	46	1			
27.							
28.	35363	35380	17				
29.	35380	35436	56				
30.	35436	35494	58			11	
31.	35494	35521	27			10	

INSPECTED _____ date LUBRICATED _____ date OIL CHANGE _____ date

BATTERY CHECKED _____ date ANTI FREEZE CHECKED _____ date

15 DAY MILEAGE _____ miles 15 DAY GAS CONSUMPTION _____ gls.

MONTHLY MILEAGE 538 miles MONTHLY GAS CONSUMPTION 59 gls.

DEADLINE-------FROM _____ date TO _____ date DAYS _____

REMARKS due 35610 oil changed & greased 35439 7/31/42

ORGANIZATION 4811 F U.S. — 17 M H OF July

TACTICAL ( ) ADMINISTRATIVE ( )

DATE	MILEAGE OUT	MILEAGE IN	TOTAL MILES	CYL. ADDED	OIL QTS. CHANGED	GASOLINE GALS	IN SHOP FOR REPAIRS.
1.	30656	30687	31	1			
2.	30687	30736	49			12	
3.	30736	30773	37	4			
4.	30773	30819	46			11	
5.	30819	30858	39				
6.						6	
7.	30858	30902	44				
8.	30902	30940	38	2			
9.	30940	30964	24	2		12	
10.	31964	31032	68				
11.	31032	31066	34				
12.	31066	31096	30			10	
13.							
14.	31096	31140	44	1		8	
15.	31140	31180	40	1			
16.	31180	31220	40				
17.	31220	31250	30			12	
18.							
19.	31250	31316	66				
20.							
21.	31316	31363	47	2		12	
22.	31363	31398	35		5		
23.	31398	31432	34				
24.	31432	31502	70				
25.	31502	31555	53				
26.	31555	31585	30				
27.	31585	31622	37	2		10	
28.				2			
29.	31622	31695	73			13	
30.	31695	31742	27			11	
31.	31742	31766	24	2			

INSPECTED _____ date LUBRICATED _____ date OIL CHANGE _____ date

BATTERY CHECKED _____ date ANTI FREEZE CHECKED _____ date

15 DAY MILEAGE _____ miles 15 DAY GAS CONSUMPTION _____ gls.

MONTHLY MILEAGE 1110 miles MONTHLY GAS CONSUMPTION 117 gls.

DEADLINE------FROM _____ date TO _____ date DAYS _____

REMARKS oil changed & greased 30382 - 7/15/44 due 31382 - 8/15/44

oil changed & greased 31362 - 8/17 due 32362 - 9/17/44

OCS5006

DEPARTMENT OF THE ARMY
Office of The Adjutant General
Washington 25, D. C.

AGAO-S 600.2 (11 May 48)CSGSP/C2 14 May 1948

SUBJECT: Harbor Defense Installations

TO: Commanding Generals
First Army
Second Army
Sixth Army

REGRADED UNCLASSIFIED
ORDER SEC ARMY BY TAG PER 810714

1. Reference is made to Memorandum No. 700-25-7, Department of the Army, 1948.

2. Effective 5 May 1948, the permanently emplaced seacoast artillery batteries including appurtenances and seacoast artillery materiel listed in Inclosure No. 1 hereto (List of Surplus Seacoast Batteries and Seacoast Artillery Materiel, including Spare Guns Stored in Harbor Defenses), are placed in category of surplus and will be disposed of in accordance with applicable laws and regulations.

3. The Chiefs of the several Technical Services concerned have been directed to forward, direct to you, instructions for the disposition of the materiel peculiar to the permanently emplaced seacoast batteries and armament approved for disposal.

4. The action directed in paragraphs 2 and 3, above, is being taken at this time in view of paragraph 1, reference 1, above. Further instructions regarding the revision of the Harbor Defense Projects will be furnished at an early date.

MAY 48 PM

5. Real property not required for or in connection with the following will be processed for surplus in accordance with the provisions of Circular 2, WD, 1947:

a. The currently approved Underwater Defense Projects (controlled submarine mines).

b. Existing permanently emplaced, completed, 6" gun batteries.

c. Harbor Entrance Control and Harbor Defense Command Posts, and fire control systems of the completed 6" gun batteries and Underwater Defense Project, except the fire control stations which are located on leased land and are not absolutely essential to the conduct

of fire of the 6" gun batteries in supplementing the controlled submarine mines and other harbor defense measures. It is desired that as far as possible all leased land in harbor defense, especially that held on so called "duration leases", be disposed of as expeditiously as possible. In this connection there is a limited number of radar sets AN/MPG-1 in central storage available for issue in an emergency.

d. Mobile minor caliber weapons required to supplement the underwater defenses and other harbor defense measures.

e. Army needs other than indicated in paragraphs 5a, b, c, & d, above. Complete justification for the retention of installations and/or facilities in this category will be furnished the Director of Logistics, General Staff, U. S. Army.

6. It is desired that:

a. The disposal of metal scrap resulting from the action directed in paragraphs 2 and 3 be expedited and the Director of Logistics, General Staff, U. S. Army be informed as soon as the contracts are accomplished.

b. The local representatives of the federal agencies listed below be communicated with to determine whether or not they desire to acquire by transfer under applicable laws, any of the real property to be recommended for category of surplus:

The National Guard (Adjutant General of the State)
Department of the Navy
Department of the Air Force
U. S. Coast Guard
Veterans Administration
Department of Commerce (Civil Aeronautics Administration)

c. Agencies listed in paragraph 6b, above, indicating a requirement for the property surplus to Army needs be advised to submit their request through the Chief of National Guard Bureau or their respective Department Secretaries, as may be applicable, within 15 days of the date of your advice to them.

d. Copies of the communication with the agencies listed in paragraph 6b, above, with your comments and recommendations be forwarded with the papers required by paragraph 5, above.

7. Declassification of correspondence pertaining only to the

disposal of surplus seacoast artillery to the extent necessary to accomplish the disposition thereof is authorized.

BY ORDER OF THE SECRETARY OF THE ARMY:

H. D. LEWIS
Major General
Acting The Adjutant General

1 Incl
List of Surplus Seacoast Batteries & Artillery Materiel

COPIES FURNISHED:
Director of Plans & Operations, GSUSA (1)
Director of Logistics, GSUSA
Attn: Service Group (2)
Attn: Supply Group (2)
Chief, Army Field Forces
Chief of Engineers
Chief Signal Officer
Chief, Chemical Corps
Chief of Ordnance

LIST OF
SURPLUS SEACOAST BATTERIES AND SEACOAST ARTILLERY MATERIEL
(Including Spare Guns Stored at the Emplacements)

ZONE OF INTERIOR

Army	Harbor Defense	Battery	Caliber	Remarks
First	Portland	Foote	12"	
		Steele	16"	
		Construction No. 201	6"	Incomplete
	Portsmouth	Seaman	16"	
		Construction No. 205	6"	Incomplete
	Boston	Long	16"	
		Construction No. 105	16"	Armament stored in emplacement
		Murphy	16"	
	Narragansett Bay	Construction No. 109	16"	Armament stored in emplacement
		Hamilton	16"	
		Gray	16"	
	Long Island Sound	Construction No. 112	16"	
		Dunn	16"	
		Construction No. 217	6"	Incomplete
		Construction No. 111	16"	Armament stored in emplacement
	New York	Lewis	16"	
		Construction No. 220	6"	Incomplete
		Harris	16"	
	Delaware	Smith	16"	
		Construction No. 519	12"	
Second	Chesapeake Bay	Ketcham	16"	
		Construction No. 121	16"	
		Winslow	16"	
		Gates (Construction No. 229)	6"	Incomplete

Incl #1

Army	Harbor Defense	Battery	Caliber	Remarks
Sixth	San Diego	Ashburn	16"	
	Los Angeles	Bunker (Construction 127)	16"	
		Construction No. 242	6"	Incomplete
	San Francisco	Construction No. 129	16"	Gun only stored at emplacement
		Townsley	16"	
		Davis	16"	
	Puget Sound	Construction No. 131	16"	

OVERSEAS

Command	Department	Harbor Defense	Battery	Caliber	Remarks
Caribbean	Antilles	San Juan	Reed	12"	Incl. spare guns
		Roosevelt Roads	Construction No 406	8"	" " "
		St. Thomas	Construction No. 401	8"	" " "
	Panama Canal	Balboa	Murray	16"	" " "
			Haan	16"	" " "
		Cristobal		14"Ry	" " "
			Pratt	12"	" " "
			McKinsey	12"	" " "
North Pacific	Hawaiian	Pearl Harbor	Hatch	16"	" " "
			Williston	16"	" " "
			Arizona	14"	" " "
			Clorason	12"	" " "
			Salt Lake	8"	" " "
		Honolulu	Wilridge	8"	" " "
		Kaneohe Bay	Pennsylvania	14"	" " "
			Construction No. 405	8"	" " "
		North Shore	Brodie	8"	" " "
			Opasula	8"	" " "
Alaskan		Kodiak		8"	" " "

SEACOAST ARTILLERY MATERIEL IN STORAGE

ZONE OF INTERIOR AND OVERSEAS, INCLUDING SPARE GUNS STORED IN HARBOR DEFENSES

All seacoast guns, carriages, ammunition, fire control, and spare parts peculiar thereto, of calibers larger than 90MM M1 gun and Mount M3 rendered surplus by this action and no longer required for other purposes be disposed of as surplus.

[above paragraph retyped verbatim to fit newsletter page]

SEACOAST BATTERY SUMMARY

ITEM: ( ) GUN IN STORAGE

T - Gun Btry Turret
H - Howitzer Btry

	Modern Armament							Obsolescent Arm.		
HARBOR DEFENSE	16"G	16"H	12"T	12"G	8"G	8"T	6"G	6"G	3"G	3"AA
PORTLAND	1			1			3	2	3	3
PORTSMOUTH	1						2		3	
BOSTON	2(1)			1			4	2	5	4
NEW BEDFORD				1			1			
NARRAGANSETT BAY	2 (1)				1		3	2	2	1 1
LONG ISLAND SOUND	2(1)						4	2	3	2
NEW YORK	2			2			3	3	8	6
DELAWARE	1			1 1			3		2	
CHESAPEAKE BAY	3	2					5	2	4	3
CHARLESTON				1			1		1	
KEY WEST							2		2	
PENSACOLA				1			2		2	1
GALVESTON				1			2		2	
SAN DIEGO	1 (1)				1		3		1	
LOS ANGELES	1 (1)						3		2	1
SAN FRANCISCO	2 (1)			1			2	5	4	3
COLUMBIA							3			
PUGET SOUND	1						2	1	5	3
~~CAPE FLATTERY~~										
TOTAL U.S.	19 (6)	2		10 (1)	2		48	19	49	26
KODIAK					2		1			
DUTCH HARBOR					1		1			
~~DE LAROE~~										
SITKA							1			
MISC. ALASKA TOTAL ALASKA										
PEARL HARBOR	2		1	1		1	1			
HONOLULU					1	1	1			
KANEOHE BAY			1		1		2			
NORTH SHORE						2				
TOTAL HAWAII										
BALBOA	2									
CRISTOBAL				2				1		
BERMUDA							2			
SAN JUAN				1			4		1	
ROOSEVELT ROADS					2		3			
TRINIDAD										
TOTAL CARRIBEAN										
ARGENTIA							2		1	
ICELAND										
~~GREENLAND~~ Reserve					1		(3)	(1)	(1)	
TOTAL OVERSEAS										
TOTAL U.S. & OVERSEAS	23	2	2	14	7	4	66	20	51	26
IN STORAGE	6			1	5		2	1		2

ABCD FOR REFERENCE: SEE REVERSE SIDE

11 OCT 45

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OCO5007

HEADQUARTERS
HARBOR DEFENSES OF CHESAPEAKE BAY
Fort Story, Virginia

AICTG 660.2

24 May 1949

SUBJECT: Harbor Defense Installations

TO: Commanding General
Second Army
Fort George G. Meade, Md.

1. References: (a) Letter, Headquarters, 2d Army, File AIABD-G 660.2, subject: "Harbor Defense Installations," 26 Apr 49, to Commanding Officer, Harbor Defenses of Chesapeake Bay, Fort Story, Va.

(b) Letter, this Headquarters, AICTG, 660.2, 5 May 1949, same subject as above, to Commanding General, 2d Army, Fort George G. Meade, Md.

2. In compliance with Reference (a) all tactical structures of the Harbor Defenses of Chesapeake Bay have been declared surplus except those pertaining to the current underwater defense project (controlled submarine mines), Harbor Entrance Control Post, Harbor Defense Command Post and certain fire control switchboards and necessary subterranean and submarine communications cables serving the remaining installations.

3. Attention is invited to Reference (a), which recommended that the mobile 90 millimeter AAA guns and the mobile 60-inch AAA search lights be shipped to storage depots. In anticipation of approval of the referenced letter, it will be noted that all search light towers and power plant generators presently in the Harbor Defenses have been listed herewith as surplus.

4. Inclosed herewith is correspondence informing representatives of other Federal Agencies listed in Reference (a) of the structures and equipment now being declared surplus.

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

DECLASSIFIED
E. O. 12958, Sec. 3.3
NSC Memo, 11/24/98
By NARA, Date 20NOV01

1. DOD Structures (dup)
2. ~~List of Sites~~ (dup)
3. Post Engr. Installed Prop. (dup)
4. Inactive List SC [illegible]
5. Ltr, Hq, Ft Story [illegible] 19 May 49 (dup)

WALTER P. HUGHES, JR.
Captain, Armor
ACofS, G2

~~SECRET~~

FILE COPY

~~SECRET~~

LIST OF STRUCTURES:

Battery #5 (Cramer) Emplacement and
BC tower, steel, located at Site #1, Fort Story, Virginia
* FC tower, steel, "C" located at Site #5, Rifle Range, Virginia
* FC tower, steel, "A" located at Site #2, Emerson, Virginia
FC tower, steel, "A" located at Site #1, Granite, Fort Story, Va.

Battery #10 (Const. 226) Emplacement and
BC tower, steel, located at Site #1, Fort Story, Virginia
* FC tower, steel, "B" located at Site #4, Hollies, Virginia

Battery #11 (Const. 227) Emplacement and
BC tower, steel, located at Site #28, Fisherman Island, Virginia
* FC tower, steel, located at Site #32, Cheapside, Virginia

Battery #21, AMTB, Gun Emplacement and
BC Station located at Site #1, Fort Story, Virginia

Battery #22, AMTB, Gun Emplacement and
BC Station located at Site #1, Fort Story, Virginia

Battery #23, AMTB, Gun Emplacement and
BC tower, located at Site #19, Fort Monroe, Virginia

Battery #24, AMTB, Gun Emplacement and
BC Station, located at Site #28, Fisherman Island, Virginia

* Fire control Switchboard, located at Site #5, Rifle Range, Virginia

Fire Control Switchboard, located at Site #27, Wise Point,
Fort John Custis, Virginia

G-1 Command Post Tower, Site #1, Structure 1A (East End Tower)
Fort Story, Virginia

G-3 Command Post Tower, Site #1, Structure 3D, Fort Story, Virginia

G-5 Command Post Structure 10A Site #19, Fort Monroe, Virginia

20 NOV 61

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DOD DIR 5200.9

WALTER P. HUGHES, JR.
Captain, Armor
ACofS, G2

~~SECRET~~

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SECRET

LIST OF STRUCTURES

Searchlights, #7 and #8, located at Site No. 1, Fort Story, Virginia (Permanent Steel Towers).

2-each Power Plant Shelters for Searchlights #7 and #8, 12' x 20' corrugated asbestos siding and roof, on concrete foundation, 528 sq. ft.

1-each, Controller Station, 9' x 9' frame construction intrical part of Post Headquarters Building.

Searchlights #9 and #10, located at Site #1, Fort Story, Virginia (Permanent Steel Towers).

2-each, Power Plant Shelters for Searchlights #9 and #10, 12' x 20', corrugated asbestos siding and roof, on concrete foundation, 528 sq. ft.

Searchlights #13 and #14 located at Site #1, Fort Story, Virginia, Demountable Steel Towers).

1-each Power Plant Shelter, 13'6" x 14'6", frame construction, concrete foundation, 268 sq. ft.

Searchlights #17 and #18, located at Site #28, Fisherman Island, Virginia (Demountable Steel Towers).

1-each Power Plant Shelter, corrugated iron, mounted on creosoted block foundation, located at Site #28, Fisherman Island, Virginia, 760 sq. ft.

Searchlights #19 and #20, located at Site #27, Fort John Custis, Virginia, (Demountable Steel Towers).

1-each, Power Plant Shelter, 14'6" x 8'6", frame construction on concrete foundation, 264 sq. ft.

Searchlights #24 and #25, located at Site #20, Fort Wool, Virginia. (Permanent Steel Towers).

Searchlights #26 and #27, located at Site #19, Fort Monroe, Virginia. (Permanent Steel Towers).

20 NOV 61

Walter P. Hughes, Jr.
WALTER P. HUGHES, JR.
Captain, Armor
ACofS, G2

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LIST OF STRUCTURES

Items marked with an asterisk (*) are located on land, more fully described in Inclosure No. 2, which also is surplus to requirements of Harbor Defenses of Chesapeake Bay.

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LIST OF SITES (LAND)

In the interest of clarity items listed in Inclosure #1, with the (4) parcels of land becoming coincidently surplus to Harbor Defenses of Chesapeake Bay requirements, are re-grouped by location, as follows:

Fort Story, Virginia, Site No. 1: (No land Involved).
Battery #5, (Cramer) Emplacement: (~~to be retained~~).
BC tower (for Battery #5 at Fort Story, Virginia)
FC tower "A" Granite (for Battery #5, at Fort Story, Virginia)
Battery #10, Emplacement (~~to be retained~~).
BC tower (for Battery 10, at Fort Story, Virginia)
Battery #21, Emplacement and BC Station (~~to be retained~~).
Battery #22, Emplacement and BC Station.

* Emerson, Virginia, (Parcel "B") Site No. 2:
4.83 acres of land surplus
FC tower "A" (for Battery #5 at Fort Story, Virginia,)

* Hollies, Virginia, Site No. 4:
0.287 acres of land surplus
FC tower "B" (for Battery 10, at Fort Story, Virginia)

* Rifle Range, Camp Pendleton, Virginia, Site #5:
1 acre of land surplus
FC tower "C" (for Battery #5 at Fort Story, Virginia)
FC Switchboard

Fort Monroe, Virginia, Site No. 19:
(no land involved)
Battery #23 Emplacement
BC tower (for Battery #23 at Fort Monroe, Virginia)
For Command Post Station No. 21.

Fort Wool, Virginia, Site No. 20:
(no land involved)
Searchlight towers No. 24 and No. 25

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Captain, Armor
ACofS, G2

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Incl 3

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LIST OF SITES (LAND)

Fort John Custis, Virginia, Site #27:
(no land involved)
Searchlight Towers No. 19 and No. 20
Fire Control Switchboard, Wise Point

Fisherman Island, Virginia, Site No. 28:
(no land involved)
Battery 11 Emplacement (~~to be retained~~)
BC tower (for Battery 11 at Fisherman Island Virginia)
Battery No. 24 Emplacement and BC Station

* Cheapside, Virginia, Site No. 52:
0.98 acres of land surplus
FC tower (for Battery 11 at Fisherman Island, Virginia)

Items marked with asterisk (*) indicate locations where both land and structures are surplus; other involve structures only.

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20 NOV 61
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Captain, Armor
ACofS, G2

~~SECRET~~

[redacted]

POST ENGINEER INSTALLED PROPERTY

Location:	Item:	Quantity:	Unit:	Unit Value
Searchlights #7 and #8	Cable, 9 wire #16 and 2 cond. #12	1855	Lin ft	
	Tank stg. 570 gal	2	each	
Searchlights #9 and #10	Cable, power #4/0 (212,000 C. M.) single cond.	898	Lin ft	
	Tank, stg. 570 gal	2	each	
Searchlights #24 and #25	Tank, stg. 570 gal	2	each	
Searchlights #26 and #27	Tank, stg, 570 gal.	2	each	

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Captain, Armor
ACofS, G2

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DOD DIR 5200.9

[redacted]

Incl 3

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INACTIVE LIST OF SIGNAL CORPS CABLE TO BE DROPPED AT FORT STORY AND VICINITY (SEE MAP FORT STORY FC CABLE SYSTEMS 617.8 SCDL (10-7-43)

Location:	Item:	Quantity:	Unit	Unit Value
Rifle Range Switchboard to Sandbridge	Cable, FC, 1 x 9 51 pr 19 ga, WC - 367	32,250	Lin ft	
Sandbridge to Little Island	Cable, FC 1 x 9, 26 pr 19 ga, WC - 366	22,629	Lin ft	
	Branch Cable, FC, 1 x 9 11 pr, 19 ga, WC - 364	601	Lin ft	
Rifle Range, to 21st Street Virginia Beach, Virginia	Cable, FC, 1 x 9, 51 pr 19 ga, (Part of #1)	20,600	Lin ft	
Atlantic Avenue to Emerson Cable Hut	Cable, FC, 101 pr, 19 ga, WC - 368 (Part of #1)	730	Lin ft	
Atlantic Avenue to E-W Towers, Battery #21	Cable, FC, 11 pr, 19 ga (Part of #1)	636	Lin ft	
Atlantic Avenue to SCR-296 #3 position	Cable, FC, 26 pr, 19 ga (Part of #1)	647	Lin ft	
Emerson Cable Hut to Emerson Tower "A"	Cable, FC, 1 x 1, 26 pr 19 ga	430	Lin ft	
Emerson Cable Hut to Emerson Tower "B"	Cable FC, 1 x 2, 11 pr 19 ga	240	Lin ft	
Emerson Cable Hut to SCR-296 #4 Position	Cable, FC, 1 x 3, 11 pr 19 ga	257	Lin ft	
Hollies Tower "A" to Hollies Tower "B"	Cable, FC 1 x 4, 26 pr 19 ga	140	Lin ft	
Hollies Tower "A" to Searchlights 5 and 6 position	Cable, FC, 1 x 5, 11 pr 19 ga	1,070	Lin ft	

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DECLASSIFIED DOD DIR 5200.9

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WALTER P. HUGHES, JR.
Captain, Armor
ACofS, G2

~~SECRET~~

Incl #

~~SECRET~~

INACTIVE LIST OF SIGNAL CORPS CABLE AND EQUIPMENT TO BE TURNED IN FROM SURPLUS SITES AT FORT JOHN CUSTIS, VIRGINIA

Locations:	Item:	Quantity:	Unit:	Unit Value
Kiptopeke for Smith Island Searchlights (actually from Smith Island Cable Hut to Searchlight Position 13 and 14	Cable, WD - 554	5,500	Lin ft	
SCD-32 Mockhorn Road Junction south of Townsend, Cable Telephone (Mockhorn)	Cable, 8 quads, #16 21 pr, #19 subterrean	6,000	Lin ft	
	Cable, tel. quadded, 8 quads, #16, 21 pr #19 submarine	15,851	Lin ft	
Fort Custis Boundary Line to road junction south of Townsend	Cable, subterrean, tel #16, AWG, quadded, 7 quads, 16, 16 quads 19, 60 pr 19	17,000	Lin ft	
Cheapside Tower to Road Junction south of Townsend	Cable, 8 quads 16, 21 pr 19 LOA	14,800	Lin ft	

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DECLASSIFIED
DOD DIR 5200.9

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OCG5008

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT CORPS OF ENGINEERS
803 FRONT STREET
NORFOLK, VIRGINIA 23510

REPLY TO
ATTENTION OF

NAORE

8 April 1983

SUBJECT: Fort Story Jurisdiction

Commander
U.S. Army Transportation Center & Fort Eustis
ATTN: ATZF-DOF-EM
Fort Eustis, Virginia 23604

Pursuant to conversation between Mr. Price and Mr. Boul, this date, inclosed is the most recent Jurisdictional Statement for Fort Story, Virginia.

FOR THE COMMANDER:

L. E. RICE, JR.
Chief, Real Estate Division

1 Incl
as

JURISDICTIONAL STATEMENT

INSTALLATION: Fort Story
LOCATION: City of Virginia Beach, Virginia

This installation currently consists of 1450.95 acres.Of this total 1433.65 acres are owned by the Government in fee simple, 4.95 acres are easements, and 12.35 acres are held under use permits.

Prior to 1 February 1940, the United States acquired fee simple title to 342.87 acres and acquired easements over 11.19 acres. Exclusive jurisdiction over the fee owned land was ceded to the Government pursuant to a special act of the Virginia General Assembly, Chapter 66, Acts of Assembly of 1914, approved 10 March 1914. The acquisition of less than a fee simple interest is insufficient for the acquisition of exclusion jurisdiction. Hence, no jurisdiction was acquired over the 11.19 acres of easements.

On 1 February 1940, 40 U.S.C. 255 was adopted. That statute provides that the United States accepts no jurisdiction over land unless and until the state in which such land is located either consents to the Government acquiring or cedes some measure of jurisdiction and such jurisdiction is accepted on behalf of the United States. Acceptance can be made either by filing notice of acceptance with the Governor or as may be provided by state law. Since that date the United States acquired an additional 1,096.94 acres in fee simple. Included in that acquisition were 6.24 acres in which the Government had previously held an easement interest. The resulting merger of estates reduced the easement acreage to 4.95 acres.

On 22 August 1955, 4.80 acres of the original 342.87 acres of fee were disposed of to a private citizen. Jurisdiction over this acreage reverted to the state with the transfer pursuant to statute.

On 30 Decmeber 1957, 1.70 acres of the original 342.87 acres were transferred to the Department of the Navy. Jurisdiction was not effected by this transfer.

By transfer letter dated 16 March 1973, accepted 2 April 1973, 0.34 acre of fee was transferred from the Department of Commerce to the Department of the Army and thus added to the installation. The exclusive jurisdiction over this property remained the same after this transfer.

Effective 26 May 1976, the Government relinquished and retroceded, and the state accepted, such jurisdiction as required to permit both sovereigns to exercise concurrent jurisdiction over 20.05 acres of fee owned land. This acreage was part of the original 342.87 acres.

By deed of cession dated 11 May 1978, the Commonwealth of Virginia, acting by and through its Governor and Attorney General pursuant to Section 7.1-21, Code of Virginia, 1950, as amended, ceded concurrent jurisdiction over the 1,096.94 acres of fee simple acquired subsequent to 1 February 1940. The Secretary of the Army accepted the cession on 7 September 1978 and caused the deed to be properly recorded on 21 September 1978, according to law.

The 1914 cession statute attempted to ~~reverse~~ reserve to the state jurisdiction in all matters relating to the violation of its laws. This reservation was inconsistent with the cession of exclusive jurisdiction.

The statute also reserved the right to serve civil and criminal process in all areas over which jurisdiction had been ceded. By operation of general law jurisdiction ends when the Government no longer owns the land.

Both Section 7.1-21 and the 1978 deed of cession provided that the Commonwealth retained concurrent jurisdiction with the United States so that civil and criminal process can be served in the area covered by the cession and further provided:

> in the event that the said lands or any part thereof shall be sold or leased to any private individual, or any association or corporation, under the terms of which sale or lease the vendee or leasee shall have the right to conduct thereon any private industry or business, than the jurisdiction ceded to the United States over such land so sold or leased shall cease and determine and thereafter the Commonwealth of Virginia shall have all jurisdiction and power she would have had if no jurisdiction or power had been ceded to the United States. This provision however, shall not apply to post exchanges, officers' clubs, and similar activities on said lands.

Summary

Exclusive Jurisdiction - 316.66 acres - fee
Concurrent Jurisdiciton- 1116.99 acres - fee
Proprietorial Jurisdiction - 4.95 acres - easements
12.35 acres use permit
Total 1450.95

DATED 12 March 1982

Robert T. Boal, III
ROBERT T. BOAL, III
Attorney Advisor

Attachments
1. Ch. 66 Acts of Assembly of 1914
2. 40 U.S.C. 255
3. Statement of U.S. Atty. Gen.
4. Section 7.1-21 Code of Virginia
5. Deed of Cession
6. Map

Chapter 66, Acts of Assembly 1914, approved 10 March 1914), p. 95

An Act, to authorize the United States government to acquire title to and jurisdiction over certain lands situate at Cape Henry in the county of Princess Anne.

Whereas, it has been represented to the General Assembly of Virginia that it may be desirable for the United States to acquire, by purchase or condemnation, certain lands at Cape Henry in the county of Princess Anne, on or near the Atlantic Ocean and Chesapeake Bay, to low water mark, for the purpose of erecting fortifications and other military purposes therefore;

1. Be it enacted by the General Assembly of Virginia, That the consent of the Commonwealth be, and is hereby given to the said purchase or condemnation, and when the same shall be made or had, jurisdiction is hereby ceded to the United States government over said tract or tracts of land, so that Congress and the authorities of the Federal government shall have the lawful power and control over and in the same, as specified in the seventeenth clause of the eighth section of the first article of the constitution of the United States: Provided, however, that the consent herein given shall not extend to the purchase, condemnation, or acquisition of more than one thousand acres of land for the purpose aforesaid; and provided further, that the State retains jurisdiction over the same in all matters relating to the violation of the laws of the State, and the execution and service of all processes issued by or from its courts, in pursuance of law, and in all matters not incompatible with the consent herein given, and the rightful authority of the United States acquired, or to be acquired, under this act.

2. The said land and the privileges hereby ceded, the buildings, fortifications, magazines, storehouses, wharves, docks, residences and appurtenances thereto, which may be erected thereon, by the United States government are hereby exempted from taxation, State or county, so long as the same shall be held and used by the United States for the purpose hereinbefore mentioned, and no longer.

It being represented that the United States may desire to acquire the property herein referred to at once, an emergency is declared to exist and this act shall be in force from its passage.

JAGR 1964/2039 5th Ind 8 JUL 1964
(25 Mar 64)
SUBJECT: Federal Juriediction, Fort Story, Virginia

Hq, Dept/Army, Judge Advocate General's Office, Washington, D.C. 20310

TO: The Chief of Engineers, Bldg T-7, Gravelly Point, Virginia

1. The records of this office disclose that the United States has exclusive jurisdiction over the land acquired by condemnation for the Fort Story Military Reservation, Virginia, in 1914, stated to contain about 343.1 acres. They also indicate the same jurisdiction as to the 0.287 acres and 0.50 acres mentioned in preceding indorsement. If these latter two areas are not a part of Fort Story their jurisdictional status is not involved in the present inquiry.

2. The United States has a proprietorial interest only over the 9.10 acre tract transferred from the National Housing Agency on 21 April 1942. As to the 1.50 acre tract and the 1.00 acre tract, formerly Treasury Department (Coast Guard) property, referred to in your letter, the files of this office contain no transfer documents or other information with respect thereto. It does appear, however, that the Department of the Army has taken no action to acquire jurisdiction over such tracts since their transfer from the Treasury Department (Coast Guard). Whether jurisdiction had been acquired prior to such transfer would be a question for consideration by the Treasury Department (Coast Guard). An affirmative answer to this question would require additional consideration by this office as to whether jurisdiction was affected by the transfer. The map accompanying the file (Drawing No. 18-02-33, File No. FS 266-1.3, Sheet 3 of 10) does not disclose whether any of the affected 200 individuals at Fort Story reside on either of these two tracts. In the event they do not reside thereon the jurisdictional status need not be resolved.

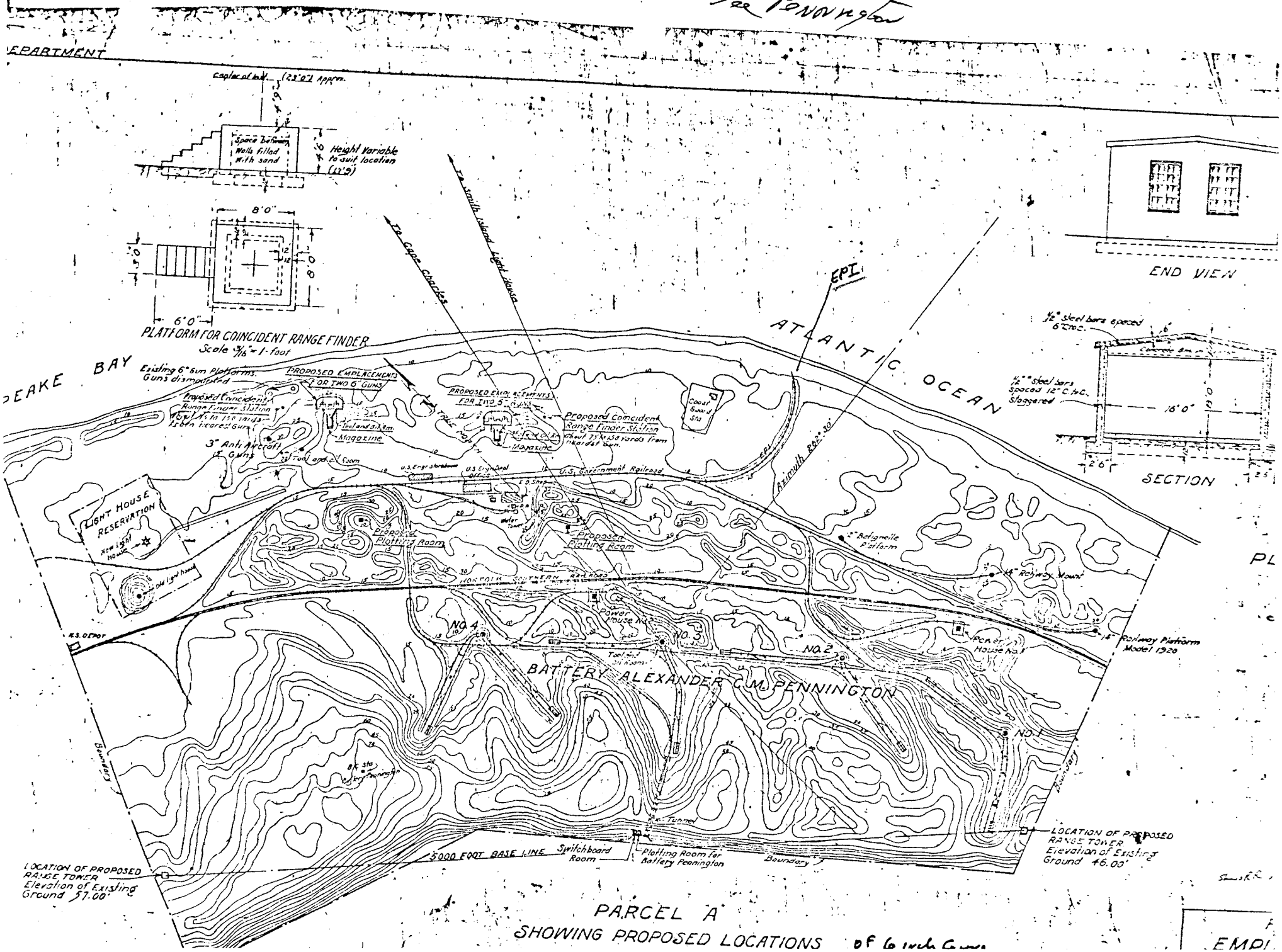
3. The records of this office disclose that the United States has a proprietorial interest only over the remaining

beginning at a point, said point being located on the north right-of-way line of Virginia Route 60 and also being S 19°14'W, 1320.00 feet from a stone corner marking the original reservation of Fort Story; thence, along the said northern right-of-way line of Route 60 in a northwesterly direction 13,863 feet, more or less, to a point; thence, N 46° 32'E, 400 feet to a point; thence, N 46°32'E, 300 feet to a point; thence, N 43°28'W, 1040 feet, more or less to the low waterline of the Chesapeake Bay; thence, along that low water as it meanders in a northeasterly direction 11,360 feet, more or less, to a point; thence, leaving said line S 23°37'W, 1900 feet, more or less, to a point; thence, S 23°37'W, 1424.00 feet to a point; said point being a stone marked U.S.; thence, S 71°53'E, 1886.30 feet to a point, said point being a stone marked U.S.; thence, S 39°46'E, 846.43 feet to a point; thence, S 39°46'E, 2294.07 feet to a point, said point being a stone; thence, S 19°14'W, 1320.00 feet to the point of beginning, containing 1096.94 acres, more or less.

Excepting a tract (Parcel D) containing 1.60 acres at the northern end of 159th Street described as follows: beginning at a point being the southeasternmost corner of the herein described parcel; thence, N 77°53'E, 280 feet to a point; thence, S 12°07'E, 250 feet to a point; thence, S 77°53'W, 280 feet to a point; thence, S 12°07'W, 250 feet to the point of beginning, which tract is under exclusive jurisdiction of the United States.

PROVIDED, that the Commonwealth of Virginia shall retain jurisdiction concurrent with the United States, so far that all process, civil and criminal, issuing under the authority of the Commonwealth may be executed by the proper officers thereof upon any person amenable to the same within the limits of the above described lands, and PROVIDED further in the event that the said lands or any part thereof shall be sold or leased to any private individual, or any association or corporation, under the terms of which sale or lease of the vendee or lessee shall have the right to conduct thereon any private industry or business, then the jurisdiction ceded to the United States over such land so sold or leased shall cease and determine, and thereafter the Commonwealth [illegible] and power she would have

See Pennington



PARCEL "A"
SHOWING PROPOSED LOCATIONS OF 6 inch Guns

CUT-OFF AS OF 31 DECEMBER 1943

EDITION OF JAN. 14, 1915.
REVISIONS: NOV. 8, 1916.
MAR. 21, 1919; JAN. 1, 1921.
FEB. 8, 1926. OCT. 24, 1928.
OCT. 3, 1934

SERIAL NUMBER [redacted]

UNS = UNSERVICEABLE

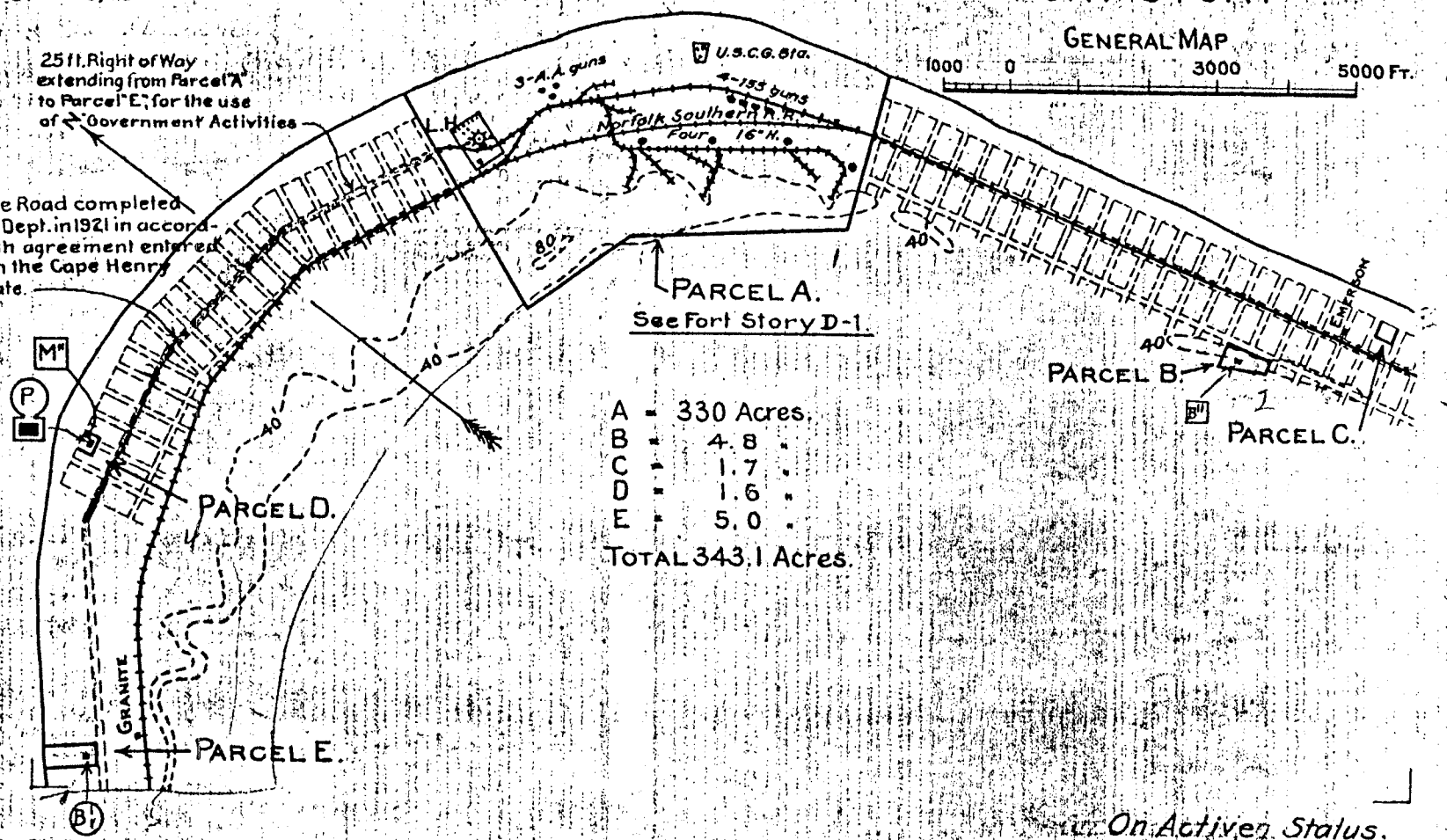
CONFIDENTIAL

ENTRANCE TO CHESAPEAKE BAY

FORT STORY

GENERAL MAP

1000 0 3000 5000 FT.



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

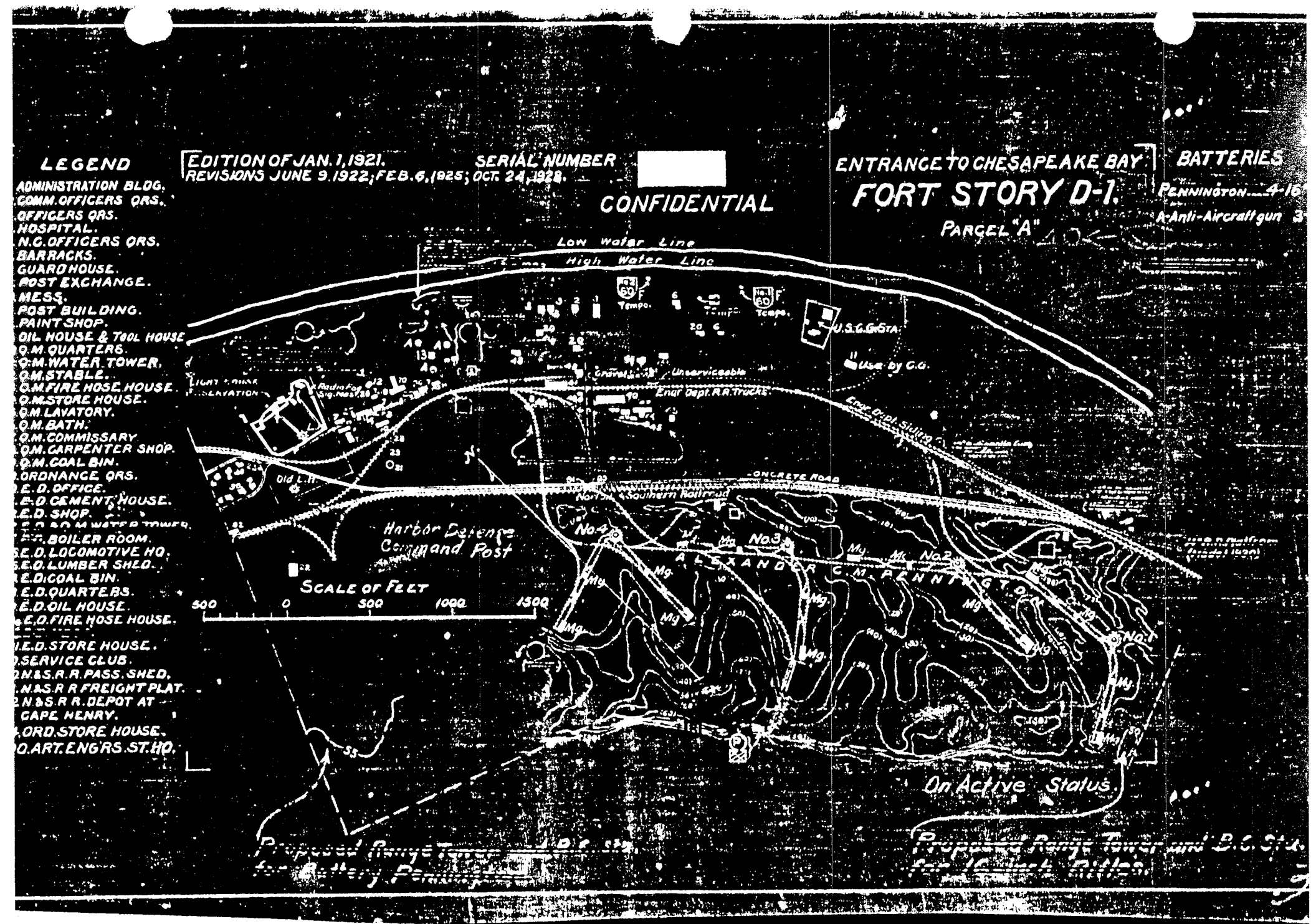
TOTAL 343.1 Acres.

On Active Status.

Note - F.C. Designations and Tactical Numbers subject to change when H.D. Annex is approved.

See also C. of E. Map 54-32-24

662 (New York, N.Y.)


LEGEND
ADMINISTRATION BLDG.
COMM. OFFICERS QRS.
OFFICERS QRS.
HOSPITAL.
N.C. OFFICERS QRS.
BARRACKS.
GUARD HOUSE.
POST EXCHANGE.
MESS.
POST BUILDING.
PAINT SHOP.
OIL HOUSE & TOOL HOUSE
Q.M. QUARTERS.
Q.M. WATER TOWER.
Q.M. STABLE.
Q.M. FIRE HOSE HOUSE.
Q.M. STORE HOUSE.
Q.M. LAVATORY.
Q.M. BATH.
Q.M. COMMISSARY
Q.M. CARPENTER SHOP.
Q.M. COAL BIN.
ORDNANCE QRS.
E.D. OFFICE.
E.D. CEMENT HOUSE.
E.D. SHOP.
E.D. & O.M. WATER TOWER.
E.D. BOILER ROOM.
E.D. LOCOMOTIVE HO.
E.D. LUMBER SHED.
E.D. COAL BIN.
E.D. QUARTERS.
E.D. OIL HOUSE.
E.D. FIRE HOSE HOUSE.
E.D. STORE HOUSE.
SERVICE CLUB.
N.&S.R.R. PASS. SHED.
N.&S.R.R. FREIGHT PLAT.
N.&S.R.R. DEPOT AT CAPE HENRY.
ORD. STORE HOUSE.
O. ART. ENG'RS. ST. HO.
EDITION OF JAN. 1, 1921.
REVISIONS JUNE 9, 1922; FEB. 6, 1925; OCT. 24, 1928.
SERIAL NUMBER [redacted]
CONFIDENTIAL
ENTRANCE TO CHESAPEAKE BAY
FORT STORY D-1.
PARCEL "A"
BATTERIES
PENNINGTON—4-16
A-Anti-Aircraft gun 3
Low Water Line
High Water Line
U.S.C.G. Sta.
Use by C.G.
Unserviceable
Engr Dept. R.R. TRACKS
Engr. Depot Siding
CONCRETE ROAD
Norfolk & Southern Railroad
Old L.H.
Harbor Defense Command Post
SCALE OF FEET
500 0 500 1000 1500
No.4
No.3
No.2
No.1
ALEXANDER C.M. PENNINGTON
Mg.
Mk.
On Active Status.
Proposed Range Tower and B.C. St. for Battery Pennington
Proposed Range Tower and B.C. St. for Battery Pennington

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

SERIAL NUMBER [redacted]

ENTRANCE TO CHESAPEAKE BAY

FORT STORY D-1.

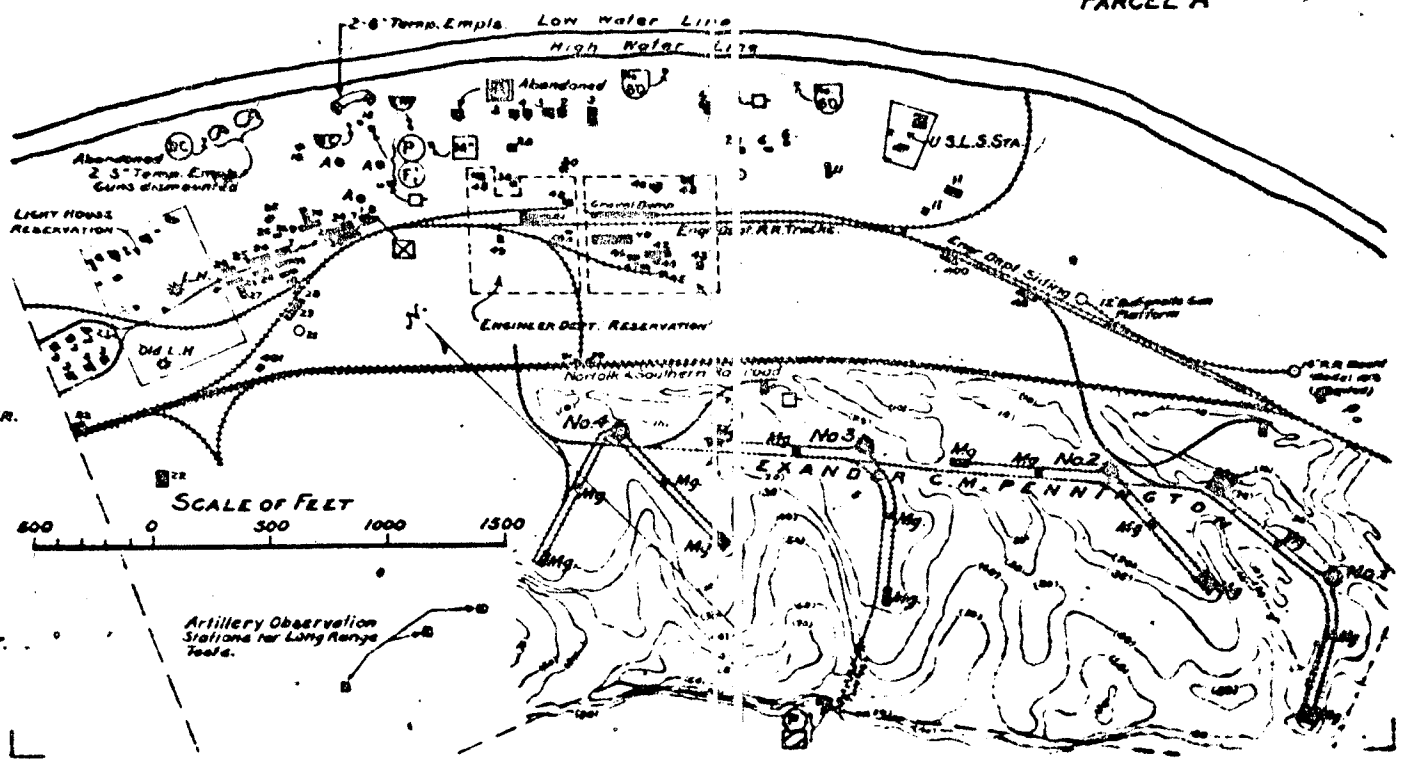
PARCEL "A"

BATTERIES

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

LEGEND

1 ADMINISTRATION BLDG.
2 COMM OFFICERS QRS.
3 OFFICERS QRS.
4 HOSPITAL.
5 N.G. OFFICERS QRS.
6 BARRACKS.
7 GUARD HOUSE.
8 POST EXCHANGE.
9 MESS.
10 POST BUILDING.
11
12
13 OIL HOUSE.
20 Q.M. QUARTERS
21 Q.M. WATER TOWER.
22 Q.M. STABLE.
23 Q.M. FIRE HOSE HOUSE.
24 Q.M. STORE HOUSE.
25 Q.M. LAVATORY.
26 Q.M. BATH.
27 Q.M. COMMISSARY
28 Q.M. CARPENTER SHOP.
29 Q.M. COAL BIN.
30 ORDNANCE QRS.
10 E.D. OFFICE.
11 E.D. CEMENT HOUSE.
12 E.D. SHOP.
13 E.D. & Q.M. WATER TOWER.
14 E.D. BOILER ROOM.
15 E.D. LOCOMOTIVE HO.
16 E.D. LUMBER SHED.
17 E.D. COAL BIN.
18 E.D. QUARTERS.
19 E.D. OIL HOUSE.
19a E.D. FIRE HOSE HOUSE.
00 E.D. MESS.
101 E.D. STORE HOUSE.
70 SERVICE CLUB.
90 N. & S. R.R. PASS. SHED.
91 N. & S. R.R. FREIGHT PLAT.
92 N. & S. R.R. DEPOT AT CAPE HENRY.



EDITION OF JAN. 1, 1921.
REVISIONS JUNE 9, 1922; FEB. 6, 1925; OCT. 24, 1928.
OCT. 3, 1934

SERIAL NUMBER [redacted]

CONFIDENTIAL

ENTRANCE TO CHESAPEAKE BAY | BATTERIES

FORT STORY D-1. * PENNINGTON 4-I

PARCEL "A"

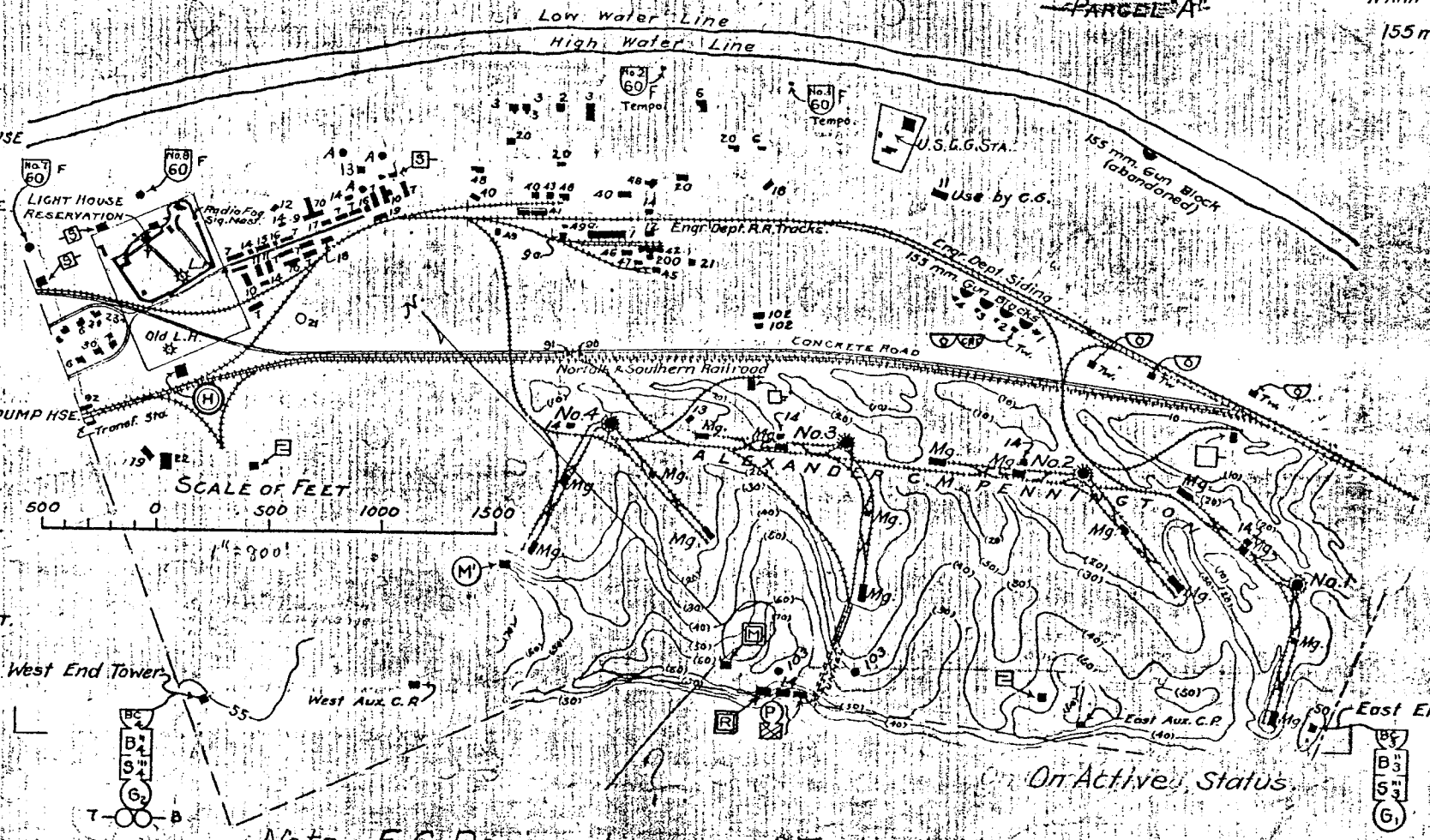
A-Anti-Aircraft gun

155 mm. Gun Block

LEGEND

1. ADMINISTRATION BLDG.
2. COMM. OFFICERS QRS.
3. OFFICERS QRS.
4. HOSPITAL.
6. N.C. OFFICERS QRS.
7. BARRACKS.
8 GUARD HOUSE.
9. POST EXCHANGE.
10. MESS.
11. POST BUILDING.
12. PAINT SHOP.
13 OIL HOUSE & TOOL HOUSE
20 Q.M. QUARTERS.
21. Q.M. WATER TOWER.
22. Q.M. STABLE.
23. Q.M. FIRE HOSE HOUSE
24 Q.M. STORE HOUSE.
25 Q.M. LAVATORY.
26. Q.M. BATH.
27. Q.M. COMMISSARY.
29a. FILLING STA.
30. ORDNANCE QRS.
31. ORD. STORE HOUSE
40. GARAGE.
41. E.D. CEMENT HOUSE.
42. E.D. SHOP.
43. WOOD SHED
44. BOILER ROOM & PUMP HSE.
45. E.D. LOCOMOTIVE HO.
46. E.D. LUMBER SHED.
47. E.D. COAL BIN.
48. E.D. QUARTERS.
49. E.D. OIL HOUSE.
49a. E.D. FIRE HOSE HOUSE.
51. E.D. STORE HOUSE.
52. SERVICE CLUB.
53. N. & S. R.R. PASS. SHED.
54. N. & S. R.R. FREIGHT PLAT.
55. N. & S. R.R. DEPOT AT CAPE HENRY.

1. LATRINE.
2. DISPENSARY.
3. HOSE HOUSE.
4. OFFICE.
5. GARAGE.
6. STOREROOM.
12 PUMP HOUSE.
13 RADIO MAST.



Note - F.C. Designations and Tactical Numbers subject to change when H.D. Annex is approved

CUT-OUT AS OF 31 DECEMBER 1924

EDITION OF JAN. 14, 1915.
REVISIONS: NOV. 8, 1916, MAR. 21, 1919; JAN. 1, 1921, FEB. 8, 1925, OCT. 24, 1928, OCT. 3, 1934 -

SERIAL NUMBER [redacted]

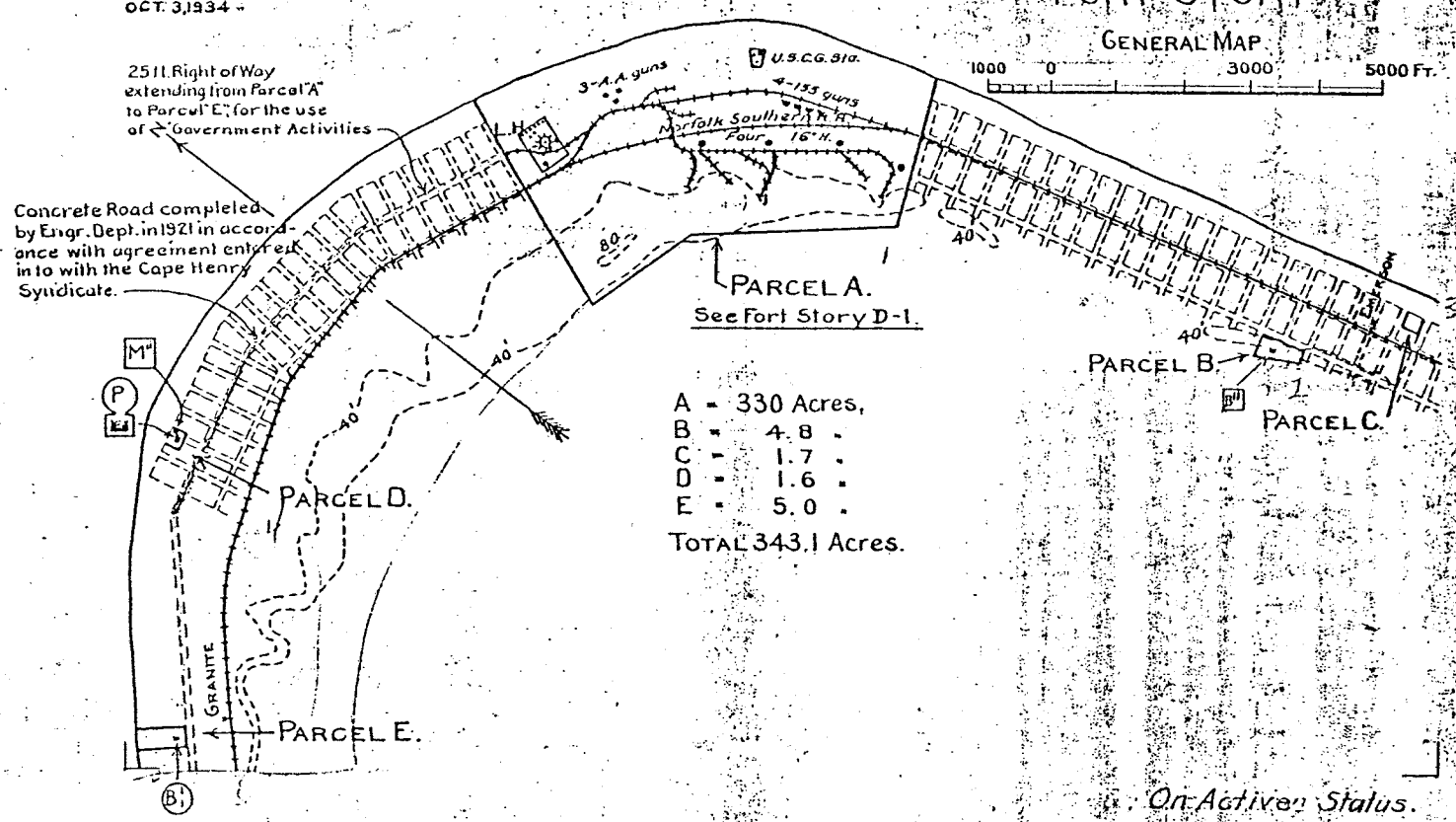
UNS = UNSERVICEABLE

ENTRANCE TO CHESAPEAKE BAY

FORT STORY

GENERAL MAP

1000 0 3000 5000 Ft.



A - 330 Acres,
B - 4.8 .
C - 1.7 .
D - 1.6 .
E - 5.0 .
TOTAL 343.1 Acres.

* On Active Status.

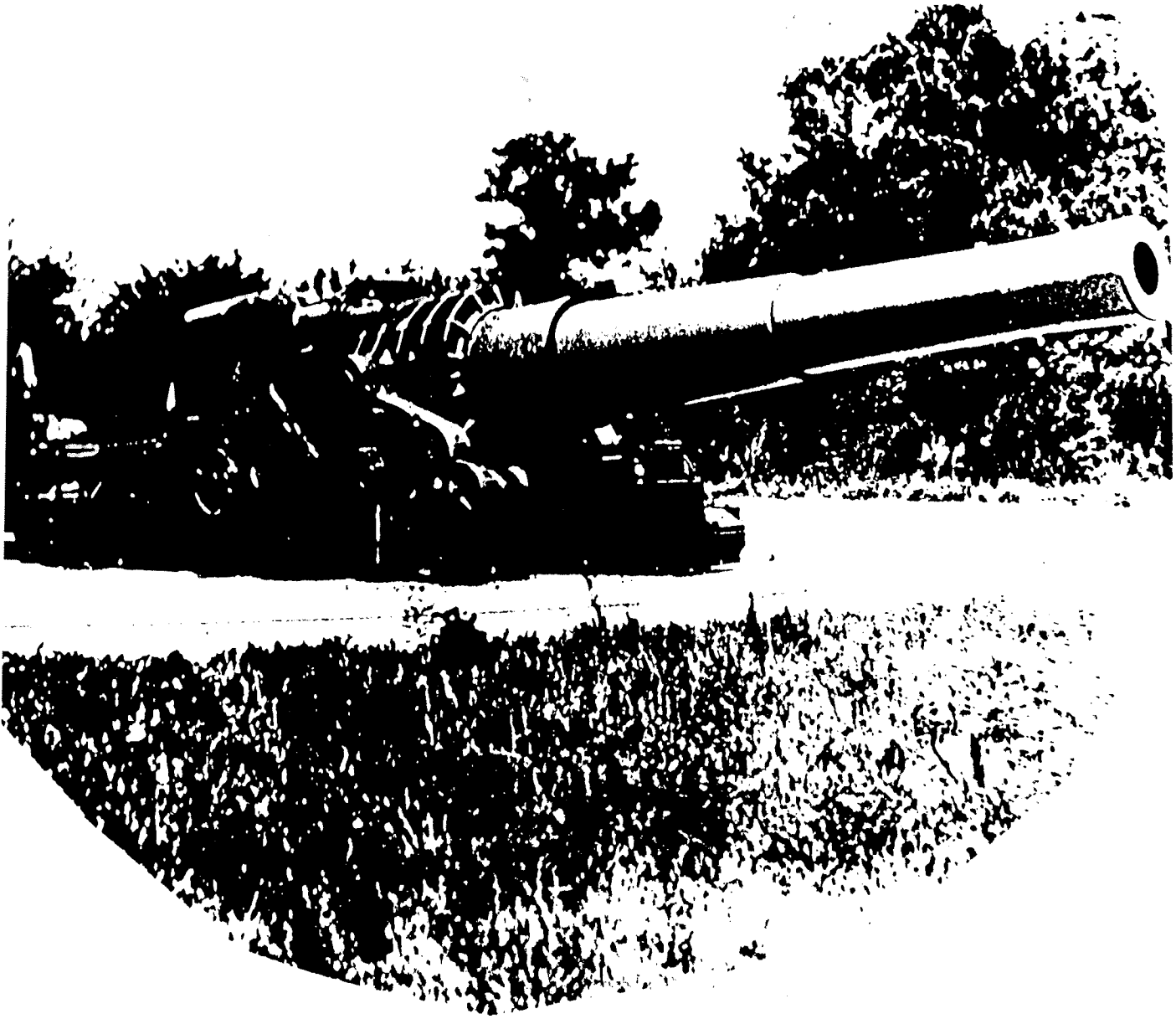
Note - F.C. Designations and Tactical Numbers subject to change when H.D. Annex is approved.

See also C.O. Map 54-32-

662 (New York, N.Y.)

OCGS009

guns at the capes: the artillery batteries at the entrance to the chesapeake bay 1917-1948.

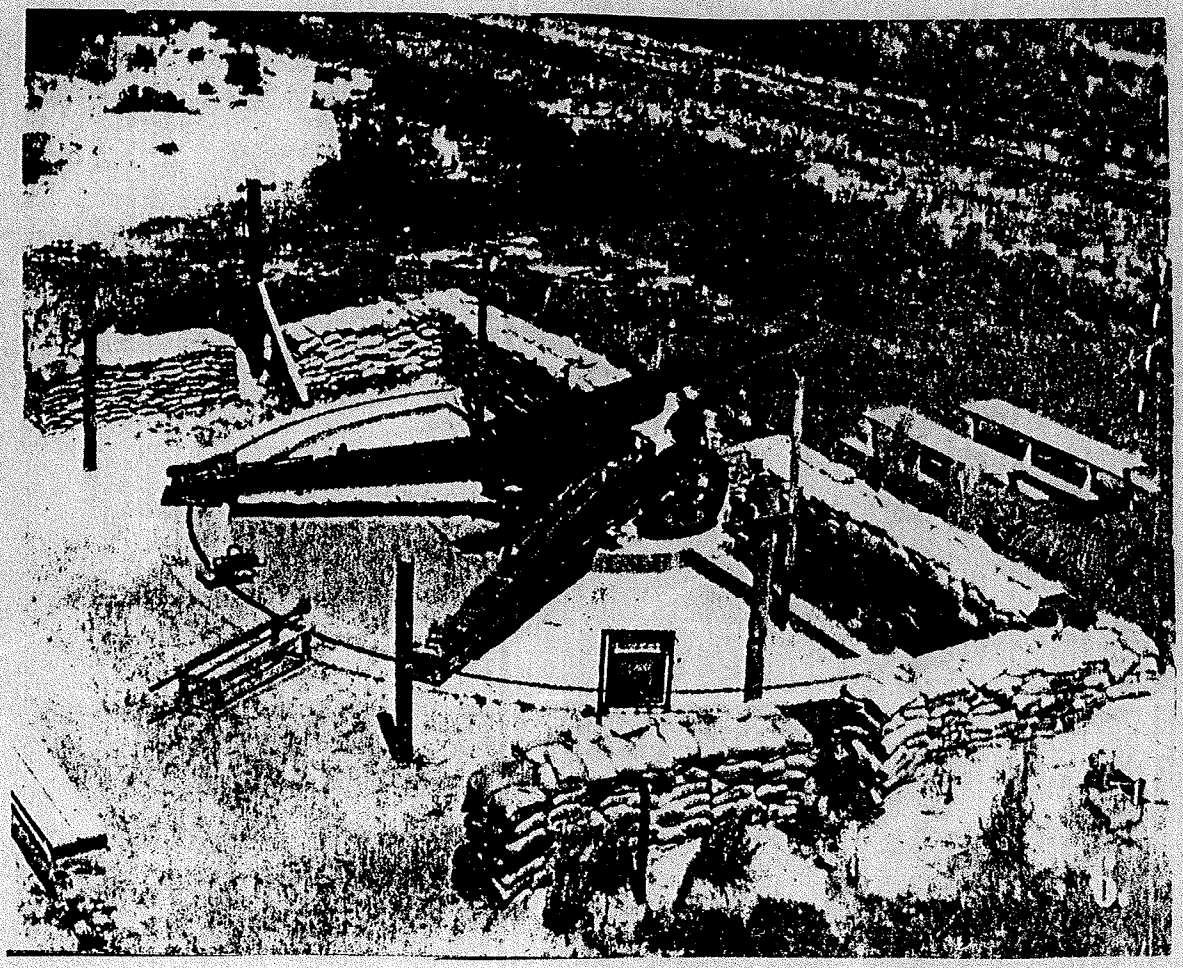


compiled by: Fielding L. Tyler

Source documents

BATTERY	DATE OF ORDER																	
	12/23 1940	4/8 1941	1/16 1942	6/18 1942	9/8 1942	10/22 1942	2/8 1943	4/20 1943	5/25 1943	5/28 1943	7/14 1943	9/20 1943	10/27 1943	1/6 1944	10/1 1944	5/10 1945	7/28 1945
Ketcham (1) 2 16-in BC				1	1	1	1	1	1	1	1	1	1	1	2	2	2
Pennington (2) 2 16-in Howitzers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2
Walke (3) 2 16-in Howitzers	1	1	1	1	1	1	1	1	1	1	2	2	1	3	2	2	2
Cramer (5) 2-6-in BC					1	1	1	1	1	1	1	1	1	1	1	1	1
Battery No. 121 (4) 2 16-in BC												3[d]	3[d]	3[d]	3[d]	3[d]	3[d]
Battery No. 226 (10) 2 6-in BC												1	1	1	2	2	2
Examination (19) 2 75-mm			1														
Examination (19) 2 3-in BC				1	1	1	1	1	1	1	1	1	1	3	3	3	3
AMTB No. 21 2 90-mm								1	1	1	1	1	1	1	1	1	1
AMTB No. 22 2 90-mm											1	1	1	1	2	2	2
Battery No. 5 2 155-mm	1	1	1[a]	1[a]													
Battery U 4 155-mm					1	1	1	1	1[c]	1	1						
Battery V 2 155-mm		1															
Battery W 2 8-in Ry Guns	1	1	3	3	3	3	3	3	3	3	3	3	3	3			
Battery X 2 75-mm				1	1	1	1	1	1	1	1	1	1				
AA No. 1 2 3-in	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3
AA No. 2 2 3-in	1																
Railway Mortar 2 12-in Ry Mortars	3	3	3														
Mines (7)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Railway Mortars 2 12-in Ry Mortars	3	3	3	3	3[b]												
Worcester (6) 2 6-in BC			1	1	1	1	1	1	1	1	1	1	1	1	2	2	2

The Guns of Fort Story: the 155mm guns of Batteries U, V and 5.



the guns of fort story: the 155 mm guns in Batteries U,V and 5.

Today the seacoast fortification concept is nothing but a memory. But from colonial times through World War II Army fortifications, in conjunction with the US Navy,provided the bulk of the security for the vast coastline of the United States. The guns of Fort Story on Cape Henry, Virginia were an integral part of those defenses during both World Wars.

Fort Story, which was initially constructed in 1917, provided for limited defense of the Chesapeake Bay during World War I and during the period of peace following that conflict. During that period however the armament became out ranged and obsolete and inadequate for defense purposes

To supplement the fixed artillery in the coastal defenses of the United States, the Army adopted the modified 155 mm gun as a mobile artillery weapon. During World War I the French tractor drawn 155 mm gun was modified in the United States as the Model 1918. In the United States it was sometimes referred to as the G.P.F. (*Grande Puissance Filloux*). *Grande Puissance Filloux* translated means a gun and carriage of great power and the name of the inventor. The 155 mm had a maximum range of 17,700 yards.

Following World War I, a simple platform was developed to maximize lateral fire. The platform was a a circular rail laid in a curved concrete base. The trail ends of the gun could then follow the rail. This type of firing emplacement was developed and tested in the Panama Canal Zone and became commonly known as a "Panama mount." The advantage of this type of mount is that the gun can retain is mobility, the emplacement is stable and the gun can engage a moving naval target in its assigned field of fire. The Panama mounts were emplaced to provide either a 180 or 360 degree traverse, depending on the surrounding terrain or mission assignment.

The first emplacements for the 155 mm GPF guns were built at Fort Story in 1931. The initial 4-gun battery was completed in December of that year at a cost of $4,000. The reinforced concrete gun platforms had a 180 degree traverse. These emplacements were armed with four French manufactured 155 mm GPF Model 1917 A1 weapons. It appears that this battery was sited on the dune line south of the Cape Henry Lifeboat Station. There are indications that this battery was abandoned by 1934.

At the end of 1933 an additional 155 mm battery was built on the southern end of the reservation. This 4-gun battery was completed in

October 1934 at a cost of $11,500. These reinforced concrete gun platforms also had a 180 degree traverse. Initially no weapons were permanently assigned to this battery. On 23 October 1934 four timber towers were erected east of the main road leading into the post. Towers A ,B and C were 25 feet tall and served as an observation stations for both the 155 mm and railway gun batteries. Tower D was a 35 foot timber tower and was sited between gun emplacements Number 1 and 2 of the 155 mm battery. This open structure served as the Battery Commanders Station as well as a safety station and a platform for a range finder for the battery. The final tower erected was a steel tower with a timber platform sited to the north of the 155 mm battery. It was completed in April 1938 and designated as Tower E. This battery was located in the vicinity of the former 6-inch battery designated as Battery 10. Records indicate this battery was declared obsolete and replaced by Battery U.

Records indicated a third 155 mm battery was completed in October 1942 and transferred to the Army in August 1943. The emplacement consisted of 4 concrete 180 degree traverse Panama mounts with no armament initiated. mounted. It was initially designated as Battery 5 with two guns and was placed on active status in December 1940. This battery was redesignated as Battery U and placed in active status in October 1942 with 4 guns mounted. It remained in active status until July 1943. Battery V had 2-155 mm guns and was only in active status in early 1941. (I/246 provided crew)

NOTES:
Battery 5 (Temporary)(4 guns emplaced near #226 & then relocated to north side. No 1 status from Dec 1940 until June 1942 when redesig as Btry U)
Tilton. p44. the guns at 5T were moved to the north side of post near
□/0 to cover the anchorage. I/246 provided crew which switched from Battery V. Then switched to Battery U. Photo of 155 mm in position in 246 history.

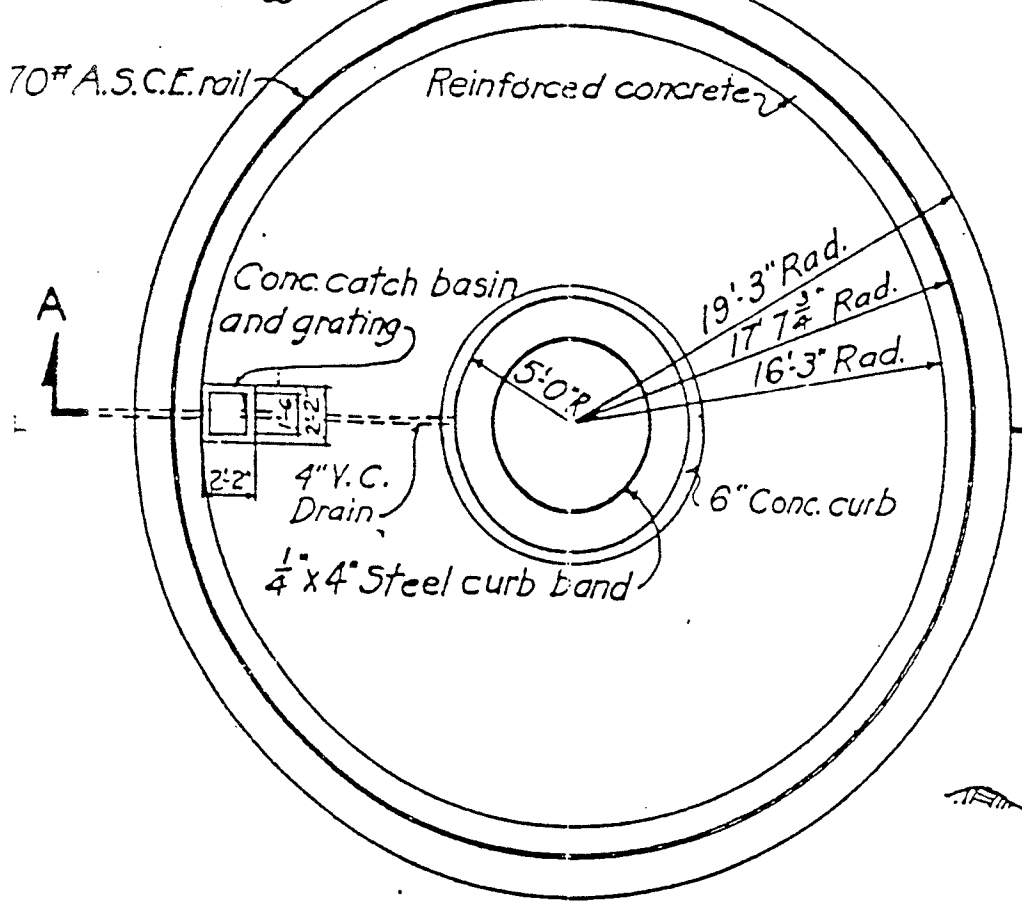
By January 1944 no 155 mm guns were listed in active or maintenance status at either Fort Story or Fort John Custis, The only remaining guns in the Harbor Defenses were 4 guns at Fort Monroe in maintenance status.

Hurricane in the late summer of 1999 uncovered emplacements 2, 3 and 4 of a 155 mm mobile battery with a 180 degree traverse. We will have to research to determine if it is the 1931 or 1934 battery. Think 1931 battery

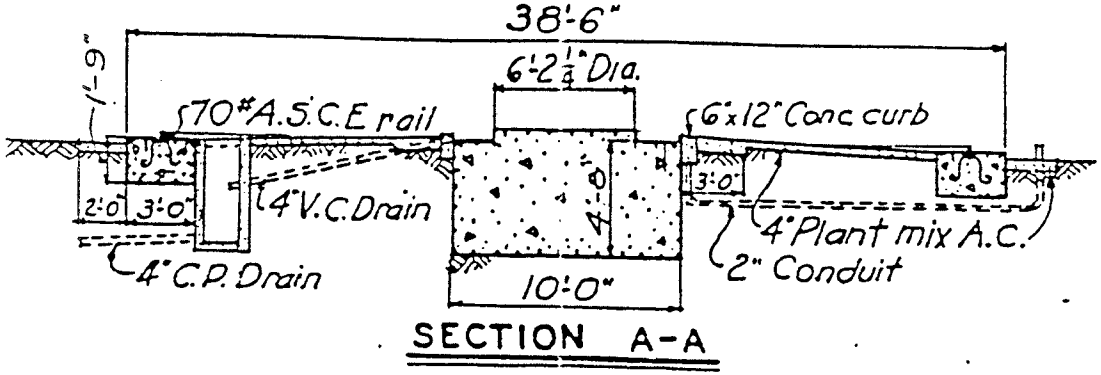
May 2002 last update

PANAMA MOUNTS

U.S. ENGINEER OFFICE, LOS ANGELES, CALIF



PLAN OF PLATFORM

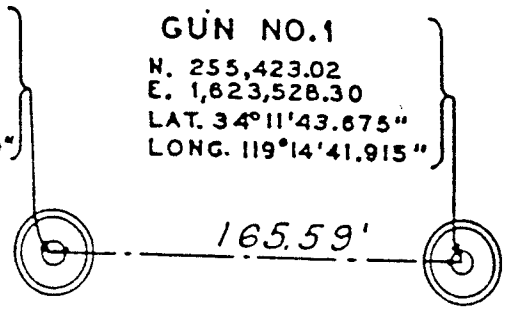


SECTION A-A

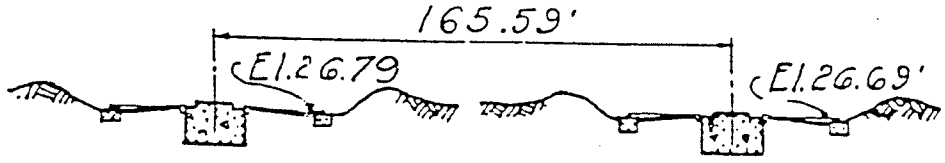
SCALE: ⅛" = 1'-0"

GUN NO. 2
N. 255,277.83
E. 1,623,607.92
LAT. 34°11'42.248"
LONG. 119°14'40.945"

GUN NO. 1
N. 255,423.02
E. 1,623,528.30
LAT. 34°11'43.675"
LONG. 119°14'41.915"



PLAN



GUN NO. 2 GUN NO. 1

(W.D.C. Proj. No 132-54)

Btry S-T 2 155MM GPF guns I/246

MCSU [illegible]

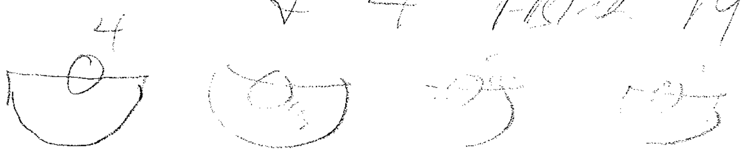
Btry [illegible] 4 155MM GPF I/246

Btry: [illegible]

Btry V 4 M155 GPF I/246

think these between Btrys [illegible]

1) July 1931 - 4 gun psn built - [illegible]
+ 4 French 1917 guns [illegible]



180° traverse

(2) Dec 1933 - 4 gun psn built
No perm regn weapons
(obsolete - see Btry U)

(3) Sep 1942 4 gun psn built for Btry U
No armament emplaced

By 1944 only 4 155 on post.
Not numbered battery.

12/40	4/41	1/42	4/43	7/43	1/44
#5 2 guns	#5 2 guns E/246	#5 4 guns E/246	D/246 @ [illegible]		E/246 @ [illegible]
	"V" 2 guns I/246 → brought over (?)		"U" 4 "90MM" or 155MM. I think "155" I/246	Btry U closed out.	I/246 @ Btry 22

DC 5103

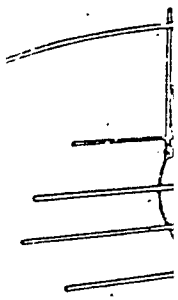
ATLANTIC OCEAN
PARADE
MOTOR PARK
WALKE
PENNINGTON
ATHLETIC FIELD
SMALL ARMS RANGE
DIRECTRIX AZ 255°
DIRECTRIX AZ 225°
DIRECTRIX AZ 270°
6" GUNS
3" GUNS
SCALE OF YARDS

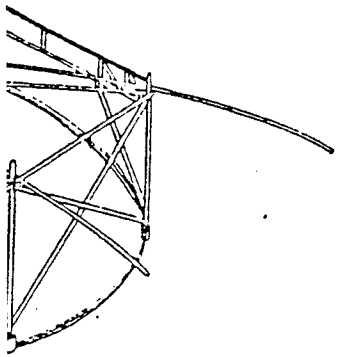
Battery Groups, HDCB, Ft. Story, VA

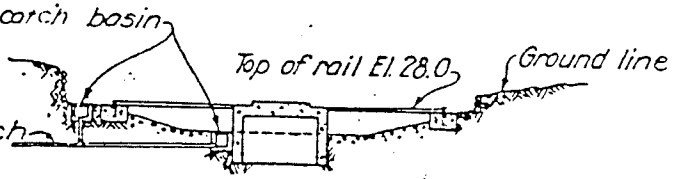
date	Control HQ	G- 1	G-2	G-6	Maint Status
4/41	Capes Groupment 246 CA	Btry 2 Btry 3 Btry Y	Btry 5-T Btry V Btry 7	AA Btry 1 SL Btry	12-in mortar btry
1/42	Capes Groupment 246 CA	Btry 2 Btry 3 Btry 19	Btry 5-T Btry 6 Btry 7	AA Btry 1 SL Btry	12-in mortar btry 8-in railway guns
4/43	Capes Groupment 246 CA	Btry 1 Btry 2 Btry 3	Btry 19 Btry 5 Btry 6 Btry 21 Btry U Btry X	AA Btry 1 SL Btry	8-in railway guns
1/44	Cape Henry G'ment 246 CA	Btry 1 Btry 2	Btry 5 Btry 6 Btry 10	New G-9 Btry 21 Btry 22	Btry 3 8-in railway guns Btry 4(under con) Btry 19
	use of term group and groupment discontinued				
10/44	Ft Story Battalion 175 CA Bn		Btry 5 Btry 21 Btry 7-A(what?)		Btry 1; Btry 2 Btry 3; Btry 4 Btry 6; Btry 10 Btry 19: Btry 22 AA Btry 1 Gp Sta 1, 2 & 9
7/45	HHB, HDCB Btrys C,D & E		Btry 5 Btry 21		Btry 1, Btry 2 Btry 3, Btry 4 Btry 6, Btry 10 Btry 19, Btry 22 AA Btry 1

Note: G=Group, C= Groupment

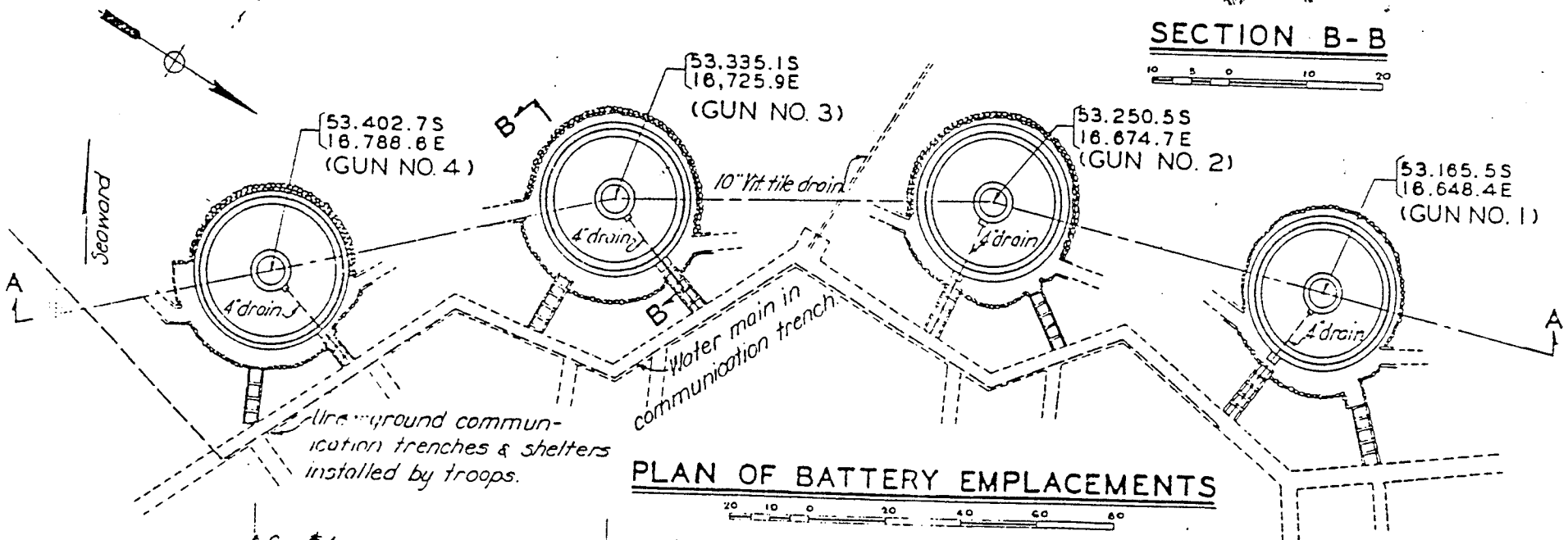
Source: selected orders, HDCB
compiled by F.L. Tyler March 1976



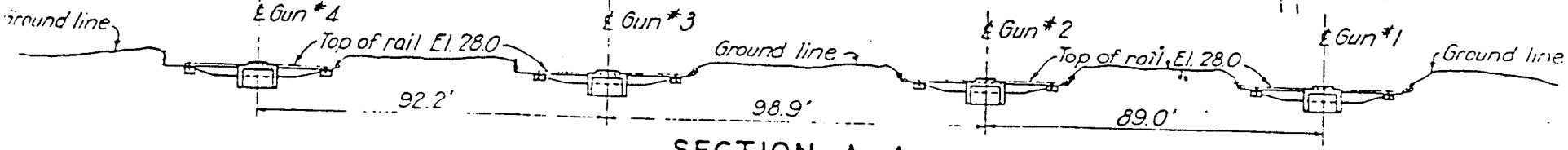




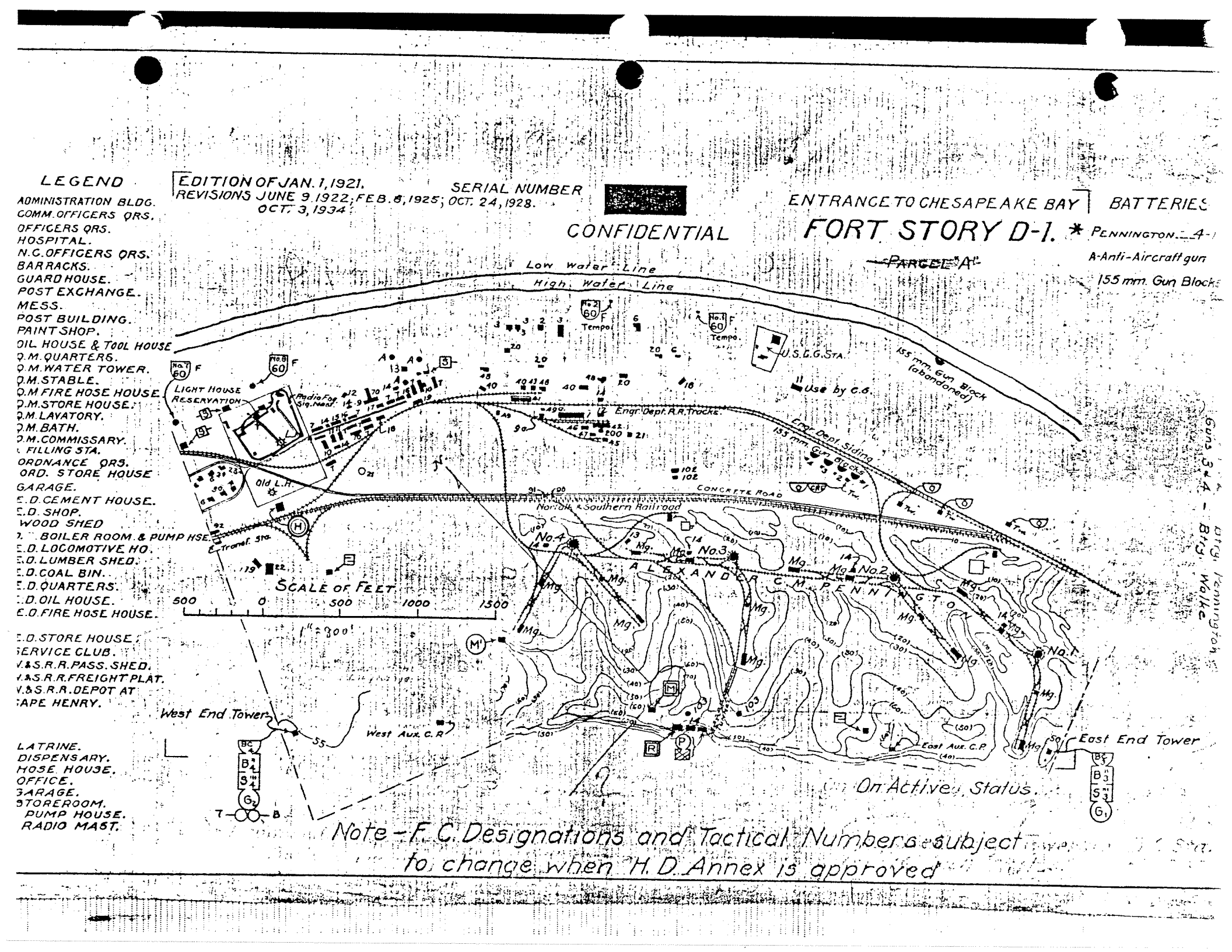
SECTION B-B



PLAN OF BATTERY EMPLACEMENTS



SECTION A-A


LEGEND
ADMINISTRATION BLDG.
COMM. OFFICERS QRS.
OFFICERS QRS.
HOSPITAL.
N.C. OFFICERS QRS.
BARRACKS.
GUARD HOUSE.
POST EXCHANGE.
MESS.
POST BUILDING.
PAINT SHOP.
OIL HOUSE & TOOL HOUSE
Q.M. QUARTERS.
Q.M. WATER TOWER.
Q.M. STABLE.
Q.M FIRE HOSE HOUSE
Q.M. STORE HOUSE.
Q.M. LAVATORY.
Q.M. BATH.
Q.M. COMMISSARY.
FILLING STA.
ORDNANCE QRS.
ORD. STORE HOUSE
GARAGE.
E.D. CEMENT HOUSE.
E.D. SHOP.
WOOD SHED
BOILER ROOM & PUMP HSE.
E.D. LOCOMOTIVE HO.
E.D. LUMBER SHED.
E.D. COAL BIN.
E.D. QUARTERS.
E.D. OIL HOUSE.
E.D. FIRE HOSE HOUSE.
E.D. STORE HOUSE.
SERVICE CLUB.
V.&S.R.R. PASS. SHED.
V.&S.R.R. FREIGHT PLAT.
V.&S.R.R. DEPOT AT
CAPE HENRY.
LATRINE.
DISPENSARY.
HOSE HOUSE.
OFFICE.
GARAGE.
STOREROOM.
PUMP HOUSE.
RADIO MAST.
EDITION OF JAN. 1, 1921.
REVISIONS JUNE 9, 1922; FEB. 8, 1925; OCT. 24, 1928.
OCT. 3, 1934
SERIAL NUMBER
[redacted]
CONFIDENTIAL
ENTRANCE TO CHESAPEAKE BAY
BATTERIES
FORT STORY D-1.
* PENNINGTON. A-1
PARCEL "A"
A-Anti-Aircraft gun
155 mm. Gun Blocks
Low water Line
High water Line
No. 3 60 F Tempo.
No. 1 60 F Tempo.
U.S.C.G. STA.
155 mm. Gun Block (abandoned)
No. 7 60 F
No. 8 60 F
LIGHT HOUSE RESERVATION
Radio For Sig. Neut.
Use by C.G.
Engr. Dept. R.R. Tracks.
Engr. Dept. Siding
155 mm. Gun Blocks
Old L.H.
CONCRETE ROAD
Norfolk & Southern Railroad
No. 4
No. 3
No. 2
No. 1
ALEXANDER C. PENNINGTON
Transf. Sta.
SCALE OF FEET
500 0 500 1000 1500
1" = 800'
West End Tower
West Aux. C.R.
East Aux. C.P.
East End Tower
Guns 3 & 4 - Btry. Pennington
Btry. Wolke
On Active Status.
Note - F.C. Designations and Tactical Numbers subject to change when "H.D. Annex" is approved

Redundant

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

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VA.
BATTERY - 1 155-MM MOBILE BATTERY
No. of guns - 4. Caliber - 155 MM. Carriage - Mobile

Form 1 Corrected to October 7, 1931.

Battery commenced	July, 1931
Battery completed	September 4, 1931.
Date of Transfer	December 7, 1931.
Material of Construction	Reinforced concrete
Portland or Rosendale cement	Portland
Cost to date of transfer	$3,898.00
Connected to water supply	No
Connected to sewer	No
Type of latrine	None
Type of data transmission	Telephone (Field wire)
Trunnion elevation in battery	19.67-feet
Datum plane	M. L. W.

Source of electric current	None
Max. KW required for lights	No lights
Max. KW required for motors	No motors
Present condition of battery	Good
Rooms wet or dry	No rooms
How ventilated	- -
Remarks	This battery consists of four (4) mobile 155 MM guns mounted on reinforced concrete emplacements, 180° traverse.

ARMAMENT

Emplacement No.	GUNS					CARRIAGES				
	Cal.	Length	Model	Serial No.	Manufacturer	Mounted	Type	Model	Serial No.	Manufacturer	Motor
1	155MM	232.87"	1917-A1	103	French	Mobile	Mobile	1917	103	French	No motor
2	155MM	232.87"	1917-A1	147	French	Mobile	Mobile	1917	147	French	No motor
3	155MM	232.87"	1917-A1	1122	French	Mobile	Mobile	1917	1122	French	No motor
4	155MM	232.87"	1917-A1	139	French	Mobile	Mobile	1917	139	French	No motor

NOTE: These emplacements to be used for any 155 MM Guns

NO HOISTS

660B(Chesapeake)12
Nov-11-1931

Superseded

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

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY , VA.
BATTERY - 1 155-MM MOBILE BATTERY
No. of guns - 4. Caliber - 155 MM. Carriage - Mobile

Form 1 Corrected to October 7, 1931.

Battery commenced	July, 1931	Source of electric current	None
Battery completed	September 4, 1931.	Max. KW required for lights	No lights
Date of Transfer	December 7, 1931.	Max. KW required for motors	No motors
Material of Construction	Reinforced concrete	Present condition of battery	Good
Portland or Rosendale cement	Portland	Rooms wet or dry	No rooms
Cost to date of transfer	$3,898.00	How ventilated	- -
Connected to water supply	No	Remarks	This battery consists of four (4) mobile 155 MM guns mounted on reinforced concrete emplacements, 180° traverse.
Connected to sewer	No		
Type of latrine	None		
Type of data transmission	Telephone (Field wire)		
Trunnion elevation in battery	19.67-feet		
Datum plane	M. L. W.		

ARMAMENT

Emplacement No.	GUNS					CARRIAGES				
	Cal.	Length	Model	Serial No.	Manufacturer	Mounted	Type	Model	Serial No.	Manufacturer	Motor
1	155MM	232.87"	1917-Al	103	French	Mobile	Mobile	1917	103	French	No motor
2	155MM	232.87"	1917-Al	147	French	Mobile	Mobile	1917	147	French	No motor
3	155MM	232.87"	1917-Al	1122	French	Mobile	Mobile	1917	1122	French	No motor
4	155MM	232.87"	1917-Al	139	French	Mobile	Mobile	1917	139	French	No motor

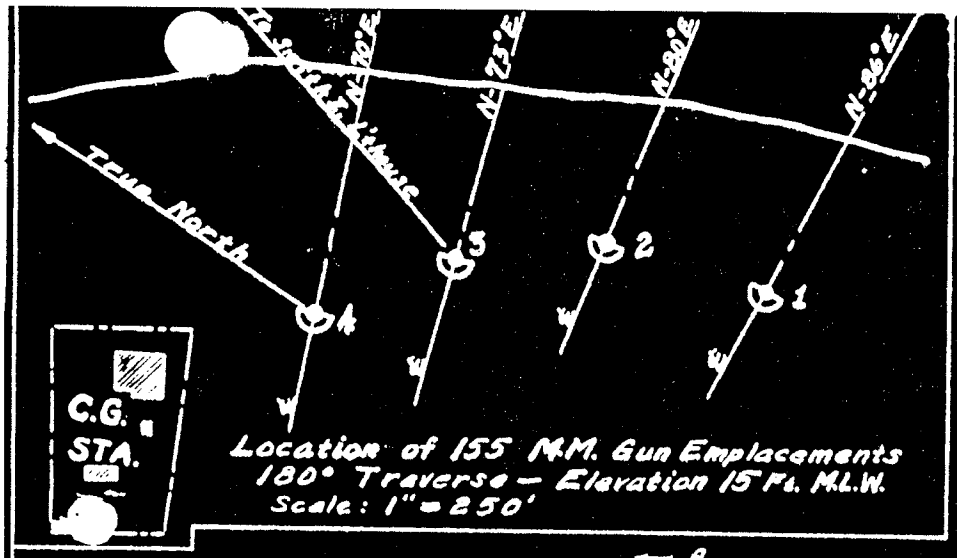
NOTE: These emplacements to be used for any 155 MM Guns

NO HOISTS

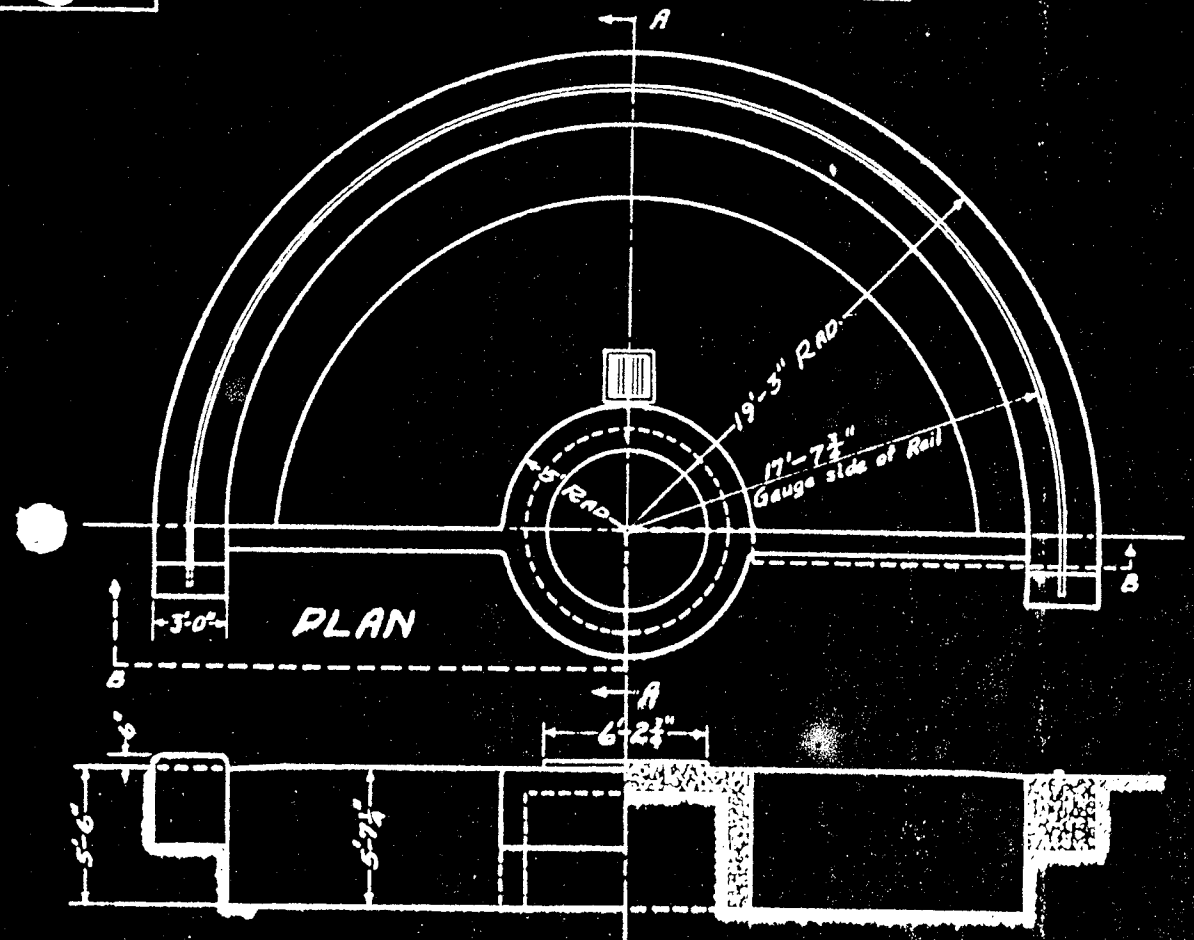
660 B (Chesapeake) 12
Nov 4 - 1931

FORT STORY, VA.
155 M.M. GUN EMPLACEMENTS

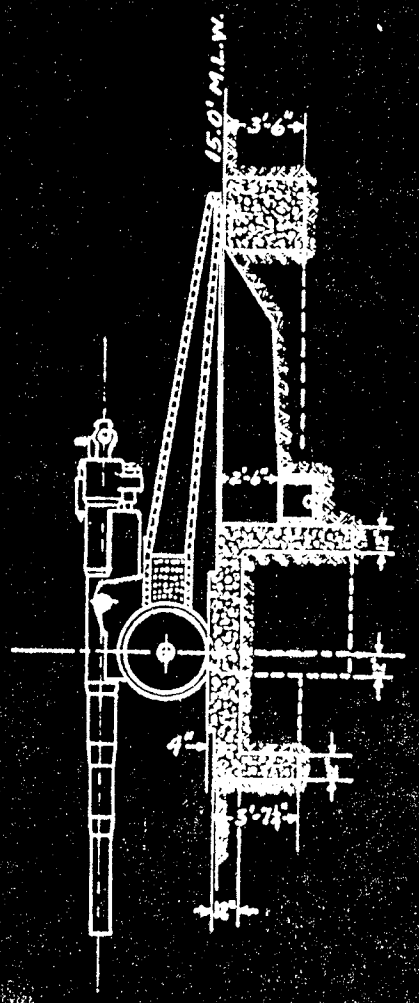
SCALE: 1"=1'-0"



Location of 155 M.M. Gun Emplacements
180° Traverse — Elevation 15 Ft. M.L.W.
Scale: 1"=250'

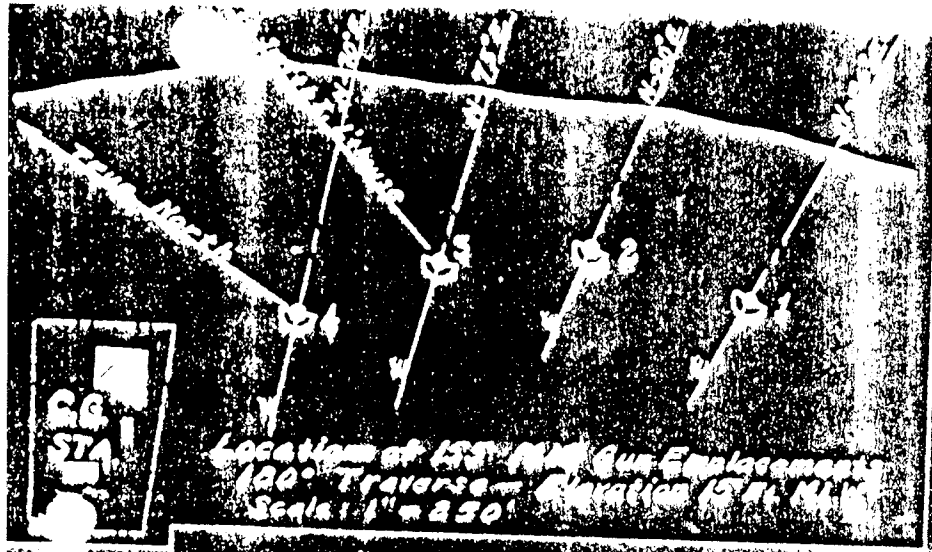


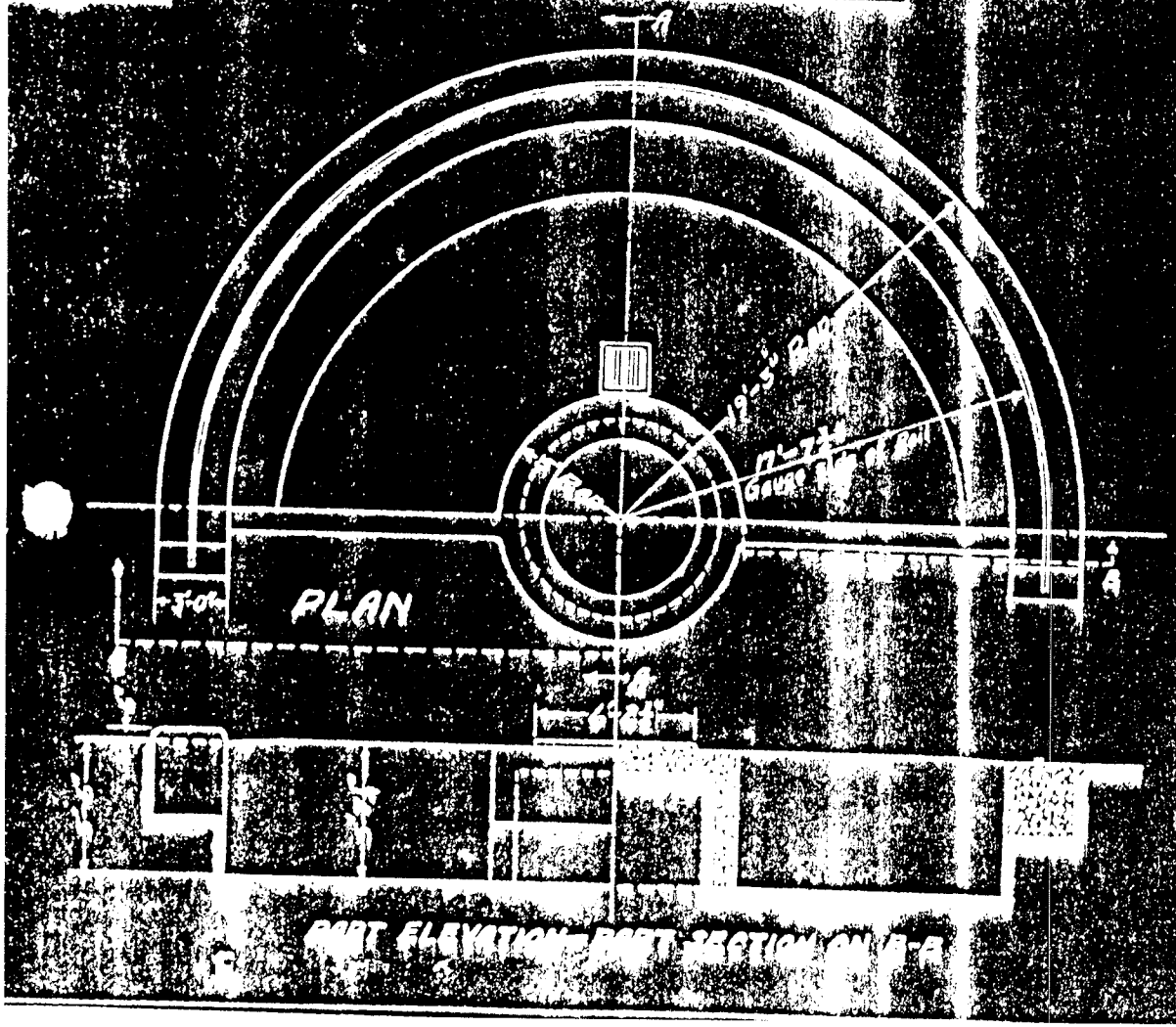
PART ELEVATION — PART SECTION ON B-B

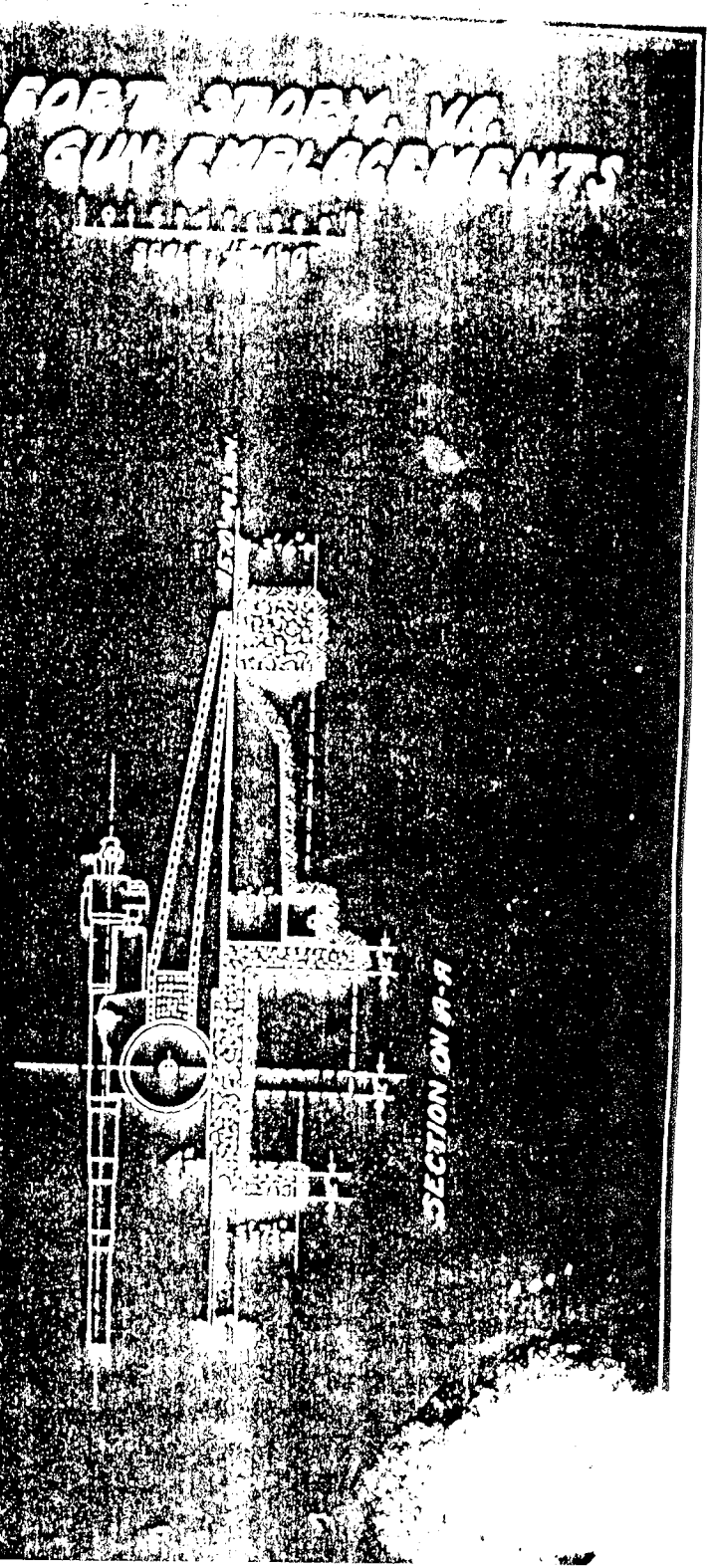


SECTION ON A-A

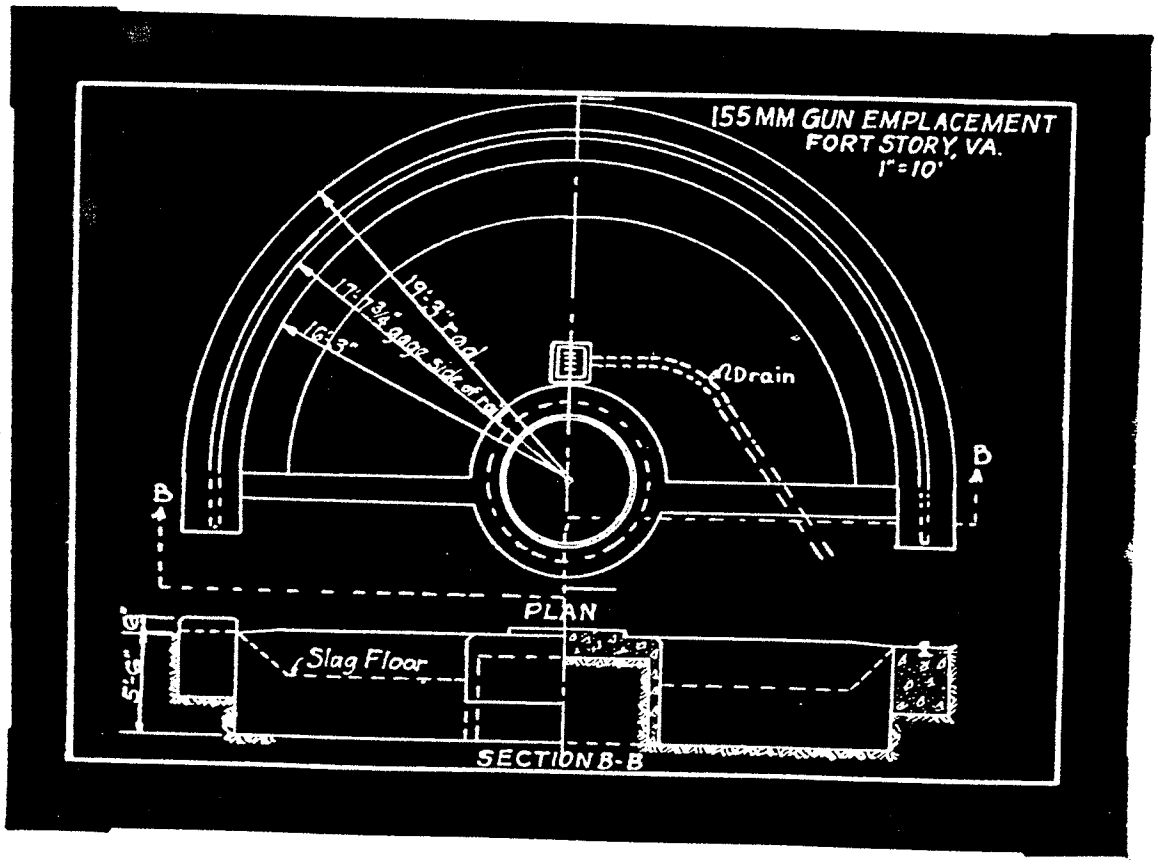
FORT STORY, VA.
155 M.M. GUN EMPLACEMENTS







DECLASSFIED PER EXECUTIVE ORDER 12356, Section 3.3, 235636.
By NND NARA, Date 11/3/82



6602(...)16

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

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA.
BATTERY 155 MM MOBILE BATTERY
No. of Guns -4 Caliber-155 MM Carriage-

Form 1 Corrected to September 25, 1934

Battery commenced	December 31, 1933	Source of electric current	None
Battery completed	April 19, 1934	Maximum KW required for light	No lights
Date of transfer	October 23, 1934	Maximum KW required for motors	No motors
Material of construction	Reinforced concrete	Present condition of Battery	Good
Portland or Rosendale cement	Portland	Rooms wet or dry	No rooms
Cost to date of transfer	$11,474.90	How ventilated	- -
Connected to water supply	No	Remarks	This battery consists of four (4) Mobile 155 MM guns mounted on reinforced concrete emplacements, 180 degree traverse.
Connected to sewer	No		
Type of Latrine	None		
Type of data transmission	Telephone (Field Wire)		
Trunnion elevation in Battery	29.67		
Datum plane	M. L. W.		

ARMAMENT

These emplacements to be used by any 155 MM Guns assigned to this battery.
There are no guns permanently assigned at this date.

HOISTS

No hoists

Should be Battery C

NTT 660L (Chesapeake) 16

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

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA.
BATTERY 155 MM MOBILE BATTERY

Form 1 Corrected to September 25, 1934

No. of Guns -4 Caliber-155 MM Carriage-

Battery commenced	December 31, 1933	Source of electric current	None
Battery completed	April 19, 1934	Maximum KW required for light	No lights
Date of transfer	October 23, 1934	Maximum KW required for motors	No motors
Material of construction	Reinforced concrete	Present condition of Battery	Good
Portland or Rosendale cement	Portland	Rooms wet or dry	No rooms
Cost to date of transfer	$11,474.90	How ventilated	- -
Connected to water supply	No	Remarks	This battery consists of four (4) Mobile 155 MM guns mounted on reinforced concrete emplacements, 180 degree traverse.
Connected to sewer	No		
Type of Latrine	None		
Type of data transmission	Telephone (Field Wire)		
Trunnion elevation in Battery	29.67		
Datum plane	M. L. W.		

ARMAMENT

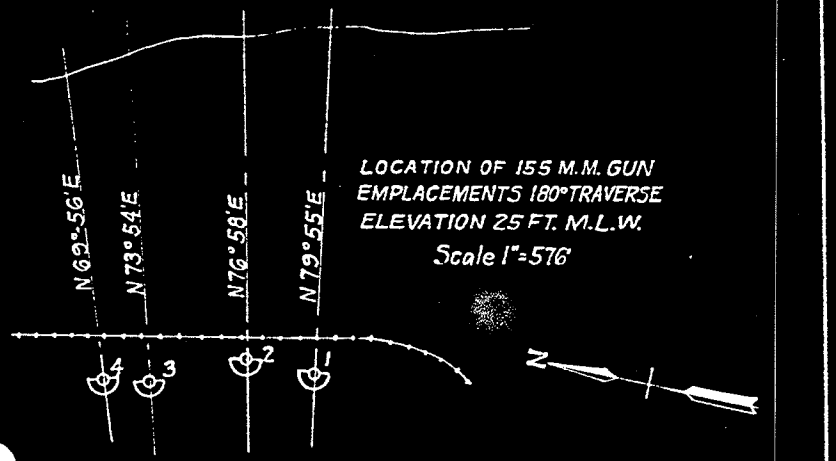
These emplacements to be used by any 155 MM Guns assigned to this battery.
There are no guns permanently assigned at this date.

HOISTS

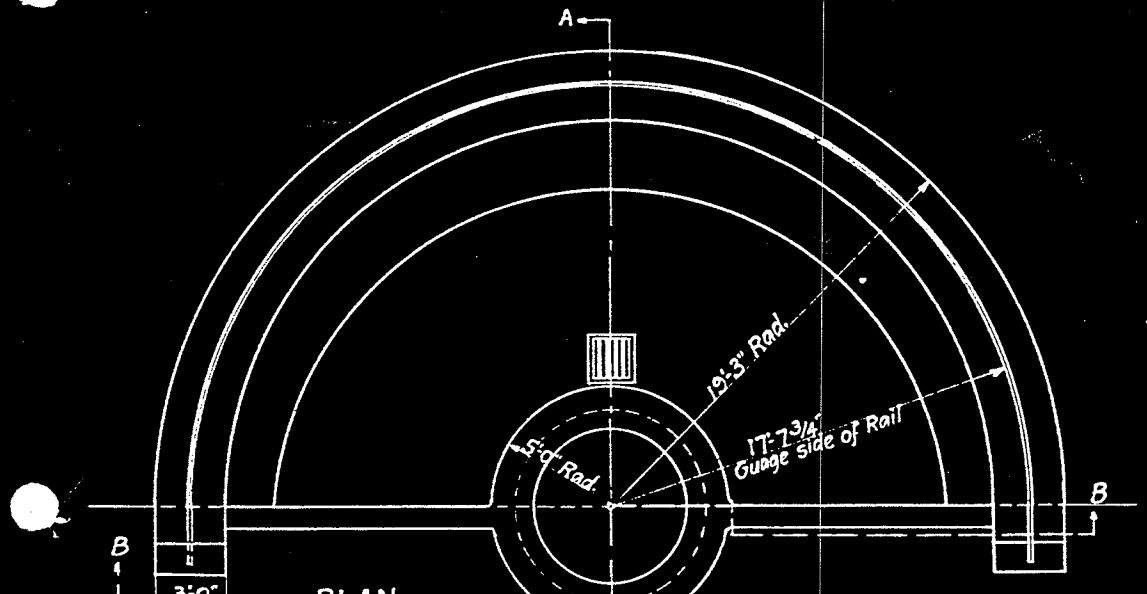
No hoists

Obsolete as Battery O

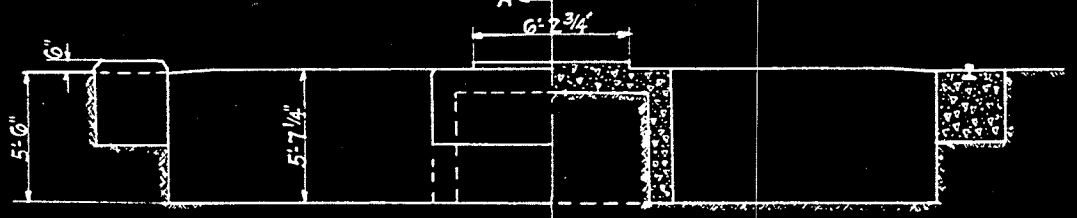
155 M.M. GUN EMPLACEMENTS
FORT STORY, VA.
Scale 1/8" = 1'-0"



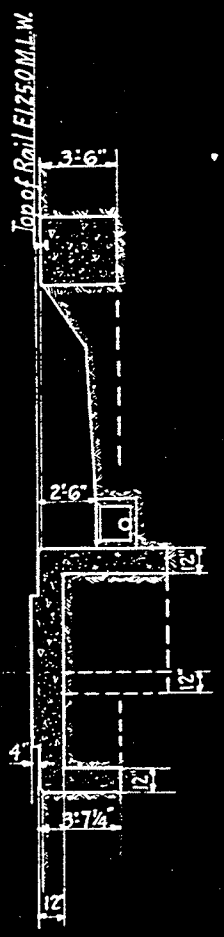
LOCATION OF 155 M.M. GUN EMPLACEMENTS 180° TRAVERSE ELEVATION 25 FT. M.L.W.
Scale 1" = 576'



PLAN



PART ELEVATION – PART SECTION ON B-B



SECTION ON A-A

600.914 (Ches Bay) 83505

CONTROL APPROVAL SYMBOL SPEKM-1

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Batteries)

~~SECRET~~

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY "U" - NO. OF GUNS - 4 EMPLACEMENTS
CALIBER: 155mm - CARRIAGE: MOBILE

Part I Corrected to 1 November 1943

GENERAL:

Battery commenced: 7 September 1942
Battery completed: 15 October 1942
Date of transfer: 2 August 1943
Cost to date of transfer: $6,308.02
Materials of construction: Reinforced concrete
Battery new or modernized: New
Trunnion elevation in btry:
Datum plane: MLW

UTILITIES:

Water supply
Source of - None
Sewer
Connected to sewer - No
Type of latrine - None

UTILITIES (Cont'd)

Electric Power
Source of - None
Rooms wet or dry - No rooms

DATA TRANSMISSION:

Type - Telephone (field wire)

REMARKS:

This construction consists of four (4) concrete Panama-type emplacements on which Mobile 155mm guns can be placed. No guns emplaced at this time.

NOTE: Formerly designated as Battery No. 5

ARMAMENT

No armament emplaced at this time

83505

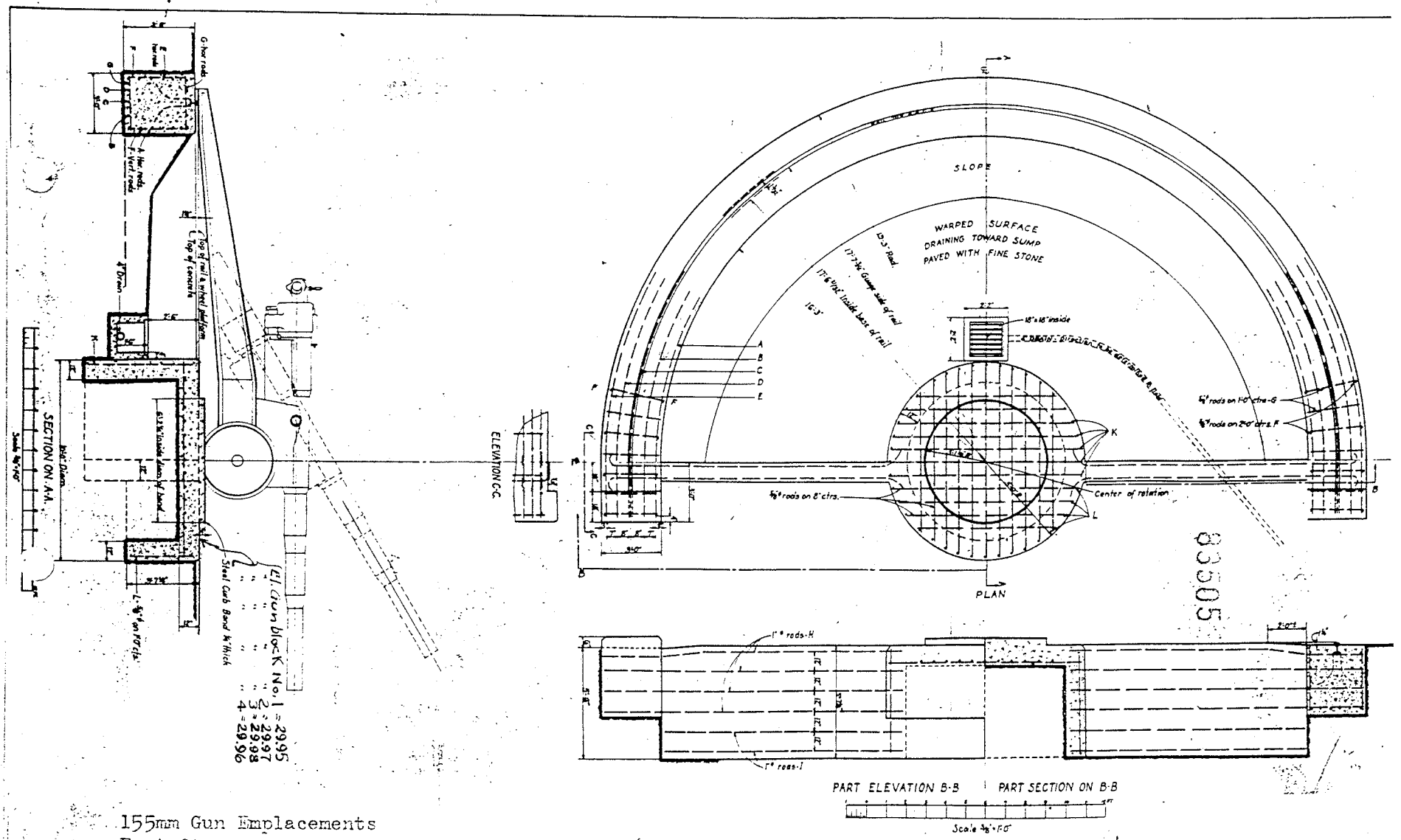
FS-396 Pmg Card Set

~~SECRET~~

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Batteries)

Part I Corrected to 1 November 1943

CONTROL APPROVAL SYMBOL SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY "U" - NO. OF GUNS - 4 EMPLACEMENTS
CALIBER: 155mm - CARRIAGE: MOBILE



155mm Gun Emplacements
Fort Story, Virginia

83505

600.914 (Ches Bay) 83505

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Batteries)

SECRET

CONTROL APPROVAL SYMBOL SPE. —

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY "U" - NO. OF GUNS - 4 EMPLACEMENTS
CALIBER: 155mm - CARRIAGE: MOBILE

Part I Corrected to 1 November 1943

GENERAL:

Battery commenced: 7 September 1942
Battery completed: 15 October 1942
Date of transfer: 2 August 1943
Cost to date of transfer: $6,308.02
Materials of construction: Reinforced concrete
Battery new or modernized: New
Trunnion elevation in btry:
Datum plane: MLW

UTILITIES:

Water supply
Source of - None
Sewer
Connected to sewer - No
Type of latrine - None

UTILITIES (Cont'd)

Electric Power
Source of - None
Rooms wet or dry - No rooms

DATA TRANSMISSION:

Type - Telephone (field wire)

REMARKS:

This construction consists of four (4) concrete Panama-type emplacements on which Mobile 155mm guns can be placed. No guns emplaced at this time.

NOTE: Formerly designated as Battery No. 5

ARMAMENT

No armament emplaced at this time

83505

F. 92 Hist Ch of St

SECRET

the guns of fort story: battery 19

today the coastal fortification concept is nothing but a memory. But from colonial times through World War II Army fortifications, in conjunction with the US Navy provided the bulk of the security for the vast coastline of the United States. The guns of Fort Story on Cape Henry, Virginia were an integral part of those defenses during both World wars.

In 1917 the United States Army came to Cape Henry to stay. The reservation which was designated as Fort Story consisted of five noncontiguous tracts of land. They had been acquired in 1914 by the Federal Government thru condemnation. The early Fort Story reservation was designated as Parcel A and the other parcels were obtained as possible locations for fire control elements to support the seacoast artillery which would soon come to Cape Henry.

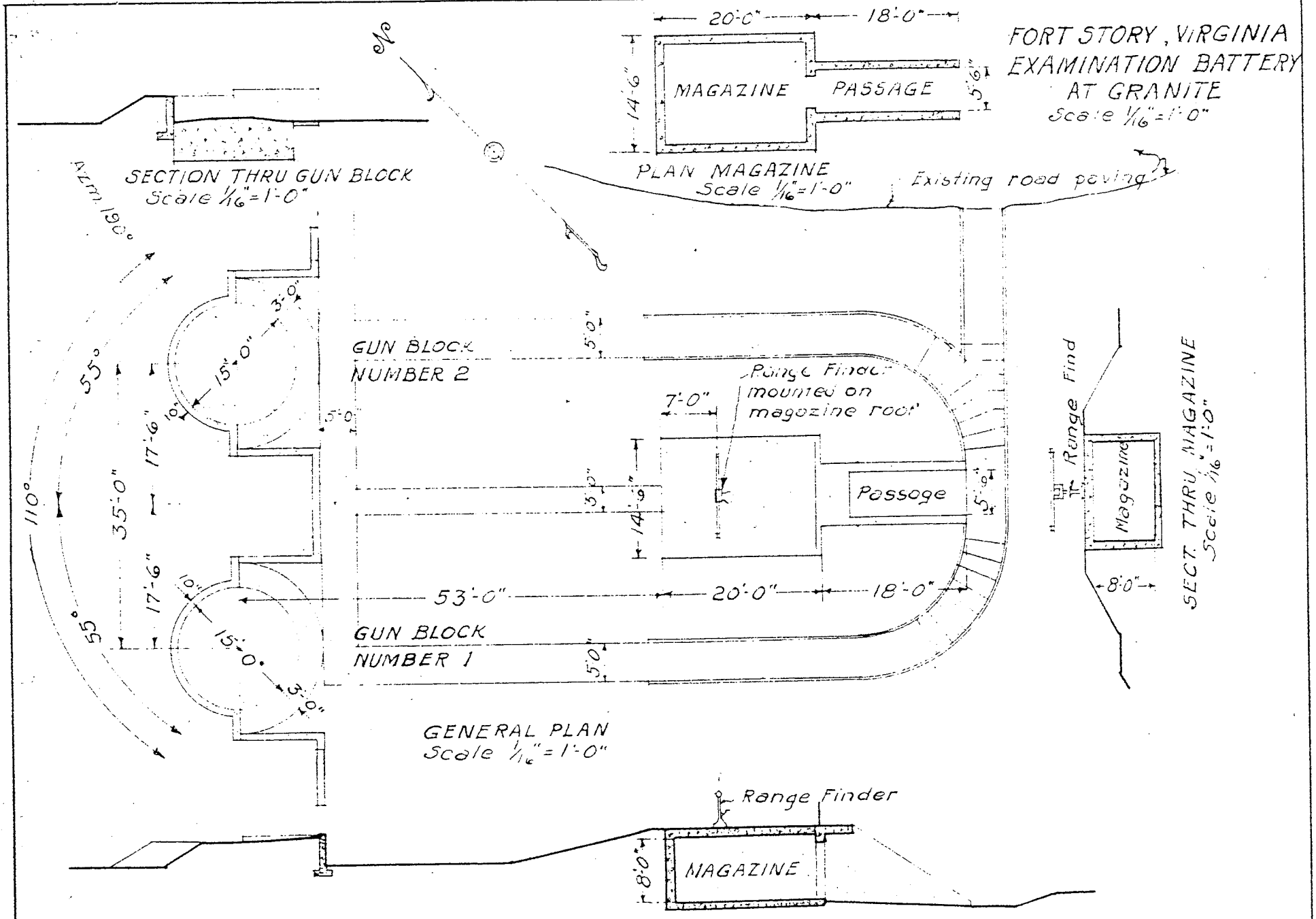
Parcel E was comprised of five acres of property and was located inside the capes and faced the Chesapeake Bay. It was the westernmost parcel of land acquired. By the deed dated August 25, 1916 a perpetual right of way was acquired from the Cape Henry Syndicate. This 25 foot wide strip of land was along Atlantic Avenue and connected Parcel E with the main post at Parcel A. The purpose of the acquisition was for roadway and railway purposes and for laying pipe and duct lines and for erecting poles and stringing wire. At this time the rail line was in place but Atlantic Avenue was only a sand road.

Fort Story, which was initially constructed in 1917 provided for limited defense of the Chesapeake Bay during World War I and during the period of peace following that conflict. During that period however the armament was static and grew obsolete over time. The Army did not make use of Parcel E during this period of conflict. In the early 1920s concrete was laid to build Atlantic Avenue from Fort Story to Parcel C. Also during this period the Granite Brick was located adjacent to the railway. A spur track extended into the area south of Atlantic Avenue. From the sand pits the company took the fine beach sand and made bricks. The area soon took the name "Granite" for the local company.

An examination vessel was one of the first measures instituted for the protection of Hampton Road and Chesapeake bay ports. This function was initiated on 10 January 1942 when the US Coast Guard Cutter *Jackson* took up station 3,100 yards off Cape Henry Lighthouse. The examination vessel was responsible for the examination of all merchant vessels and small craft entering or departing the Virginia capes. A shore battery and an examination anchorage were established to collaborate with the vessel. If an approaching vessels disregarded the signal from the examination vessel, the Harbor Entrance Control Post at Fort Story was notified. The gunners at the Examination battery were directed to fire a shot across the bow of the errant vessel.

Following cessation of hostilities in Europe, the examination vessel was discontinued on 9 June 1945

FORT STORY, VIRGINIA
EXAMINATION BATTERY AT GRANITE
Scale 1/16"=1'-0"



660B (Chesapeake) CM 1-517

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY: Examination Battery
No. of guns 2 Caliber 3" Carri. Ped.

Form 1. Corrected to October 1, 1942

GENERAL:		ELECTRIC CURRENT:	
Battery Commenced	Feb. 6, 1942	Sources of	None
Battery Completed	July 15, 1942	Max. kw. required for lights	None
Date of transfer	Aug. 1, 1942	Max. kw. required for motors	None
Cost to date of transfer	$5,096.22	Present condition of battery	Good
Materials of construction	Reinforced Concrete	Rooms wet or dry	Dry
Type of cement	Portland	How ventilated	2 - 2" G.I. Pipe
WATER & SEWER:		Type of data transmission	EE-01 Telephone and field telephones
Connected to water supply	Yes		
Connected to sewer	No	Remarks -	These 2-guns removed from Btry. Lee, Ft. Wool B.C. Station constructed on top of magazine. Parapet wall of concrete around emplacements, concrete walks and steps to magazine. Elev. of gun blocks 15.25. Elev. of parapet wall 18.21 - Front elev. 18.63 - Side elev. Elev. of roof of magazine B.C. Station 19.12
Type of latrine	None		
Trunnion elevation in btry.	19.38		
Datum plane	M.L.W.		

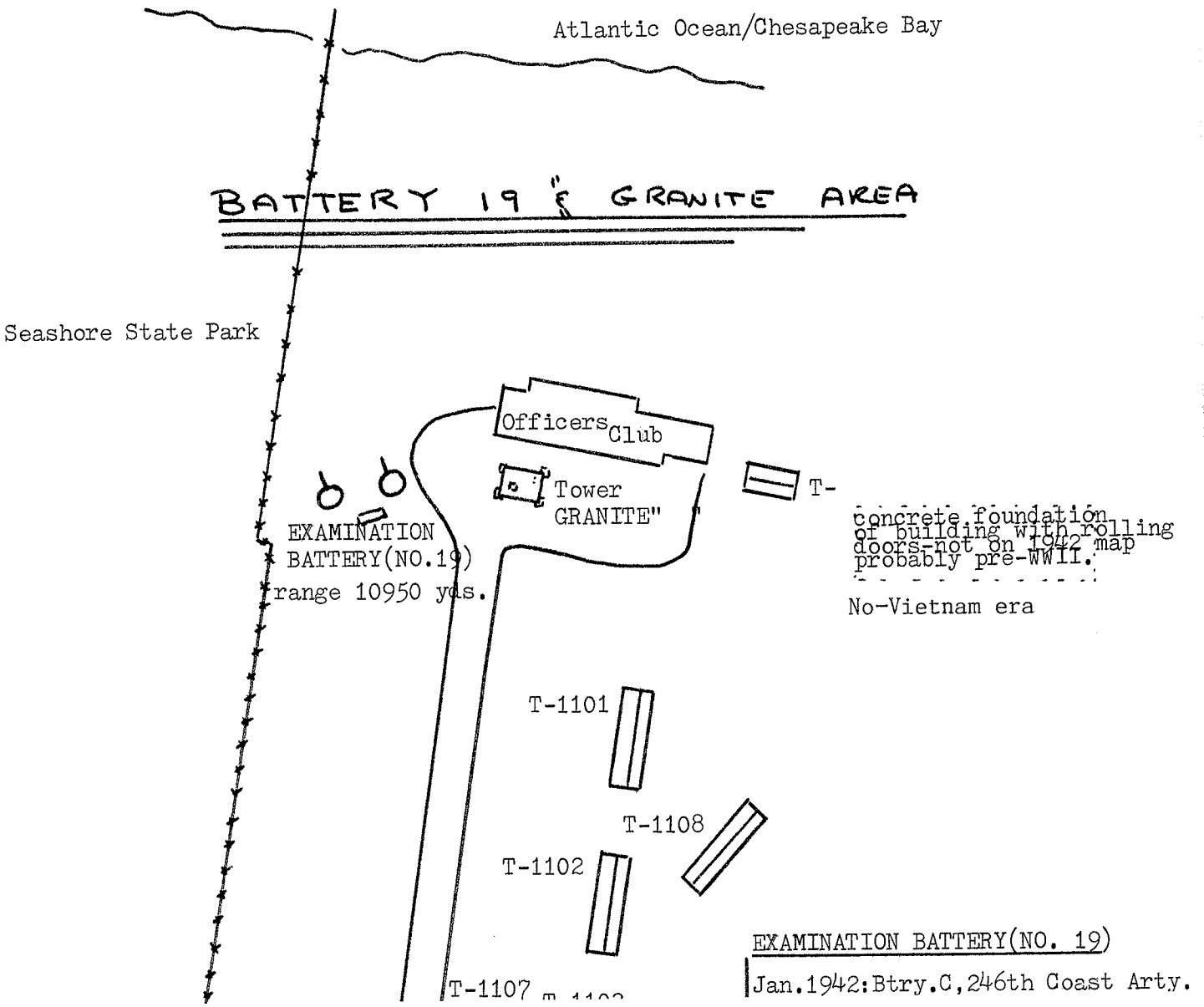
From storage 9

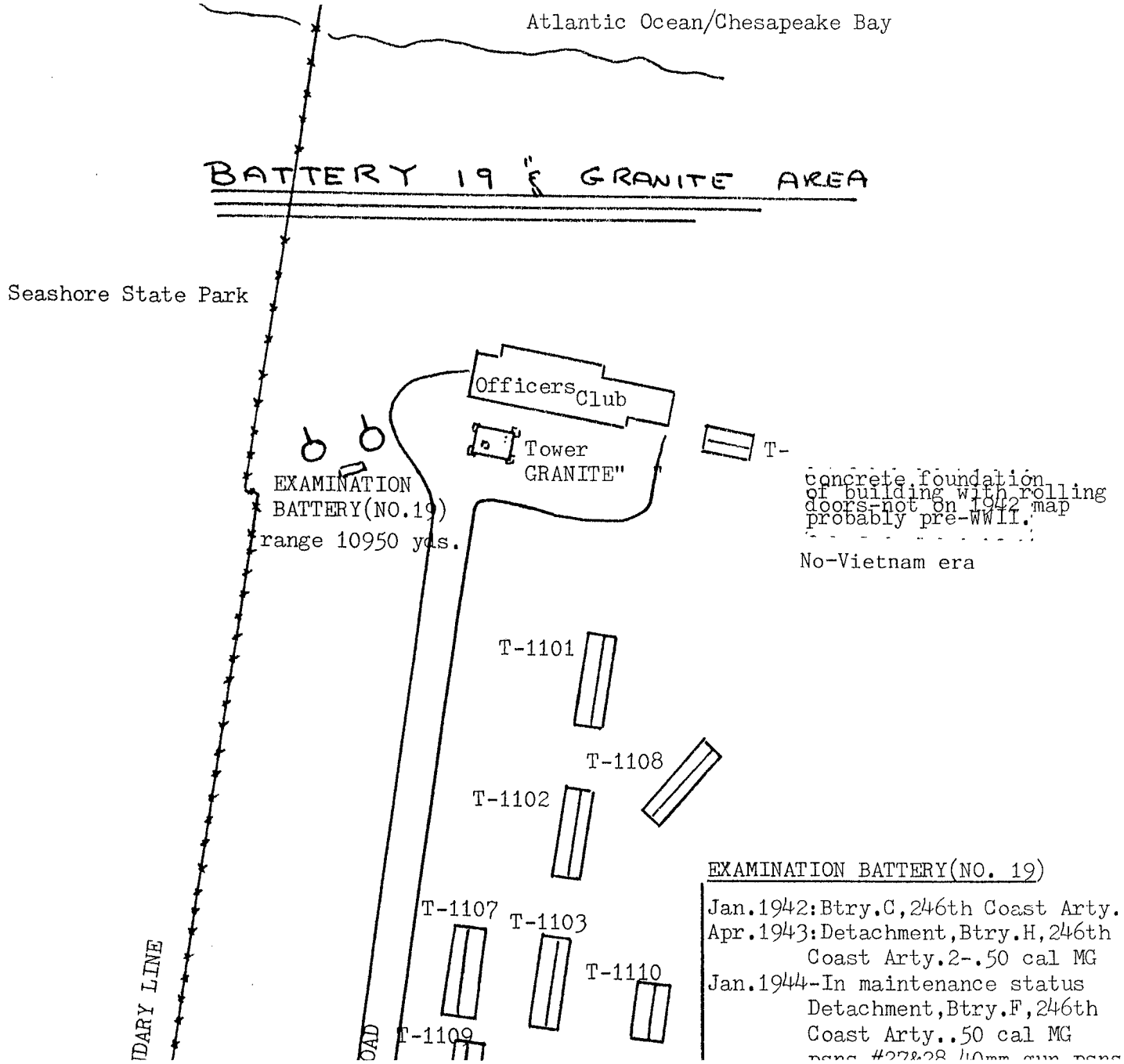
ARMAMENT

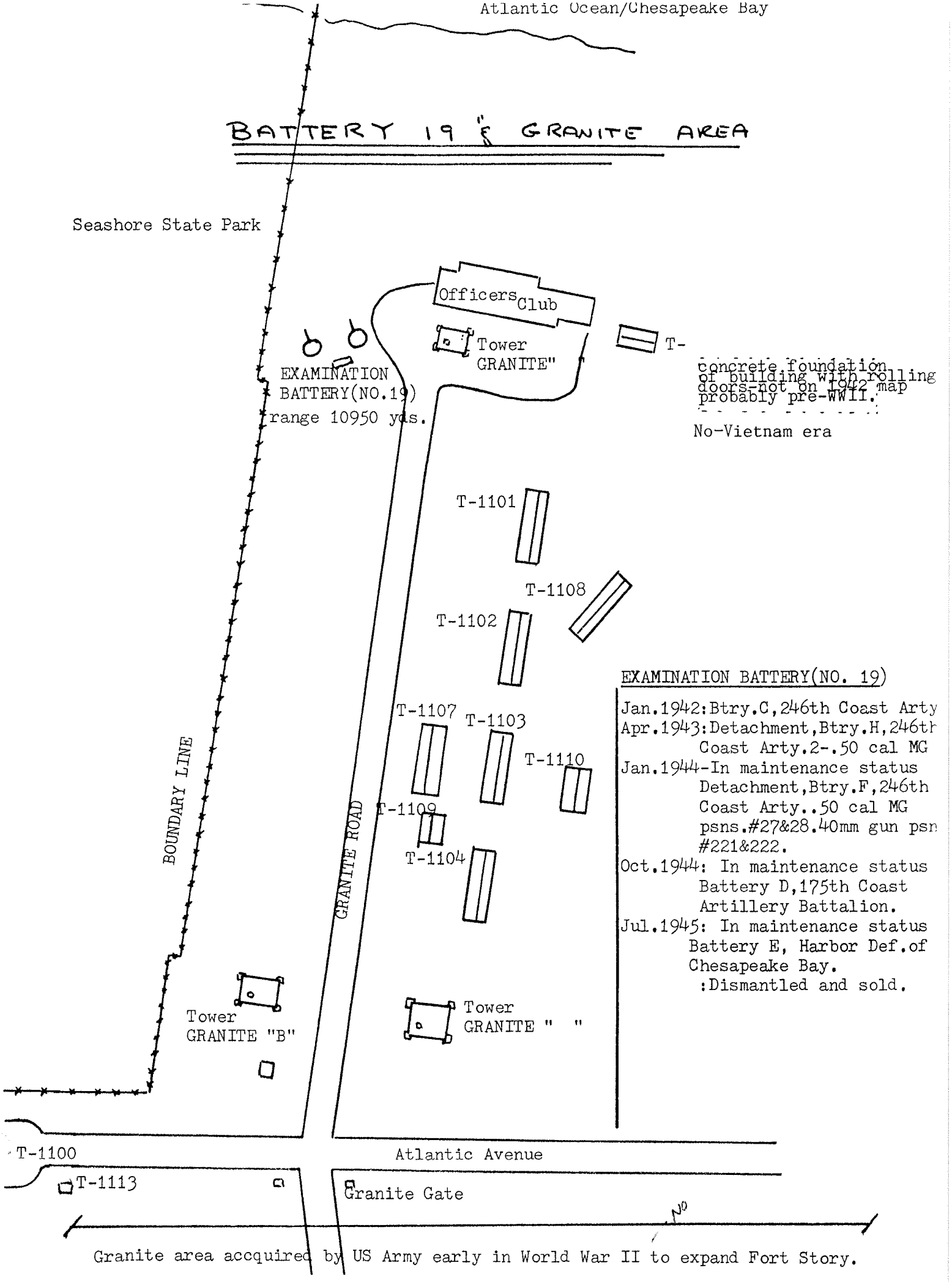
Emplacement or mortar No.	Guns or Mortars: Cal.	Length	Model	Serial No.	Manufacturer	mounted	Type	Model	Serial No.	Manufacturer	Motor
1.	3"	13'-3"	1905	28	Bethlehem Steel Co.	Yes	Ped.	1902	28	Bethlehem Steel Co.	Hand Controlled
2.	3"	13'-3"	1905	29	"	Yes	Ped.	1902	29	"	"

NO HOISTS

NO MOTOR


Atlantic Ocean/Chesapeake Bay
BATTERY 19" GRANITE AREA
Seashore State Park
Officers Club
Tower
GRANITE"
T-
concrete foundation of building with rolling doors-not on 1942 map probably pre-WWII.
No-Vietnam era
EXAMINATION BATTERY(NO.19)
range 10950 yds.
T-1101
T-1108
T-1102
T-1107
EXAMINATION BATTERY(NO. 19)
Jan.1942:Btry.C,246th Coast Arty.


Atlantic Ocean/Chesapeake Bay
BATTERY 19 "GRANITE AREA
Seashore State Park
Officers Club
Tower
GRANITE"
T-
concrete foundation of building with rolling doors-not on 1942 map probably pre-WWII.
No-Vietnam era
EXAMINATION BATTERY(NO.19)
range 10950 yds.
T-1101
T-1108
T-1102
T-1107
T-1103
T-1110
T-1109
DARY LINE
OAD
EXAMINATION BATTERY(NO. 19)
Jan.1942:Btry.C,246th Coast Arty.
Apr.1943:Detachment,Btry.H,246th Coast Arty.2-.50 cal MG
Jan.1944-In maintenance status Detachment,Btry.F,246th Coast Arty..50 cal MG


Atlantic Ocean/Chesapeake Bay
BATTERY 19 & GRANITE AREA
Seashore State Park
Officers Club
Tower GRANITE"
T-
concrete foundation of building with rolling doors-not on 1942 map probably pre-WWII.
No-Vietnam era
EXAMINATION BATTERY(NO.19)
range 10950 yds.
T-1101
T-1108
T-1102
T-1107
T-1103
T-1110
T-1109
T-1104
BOUNDARY LINE
GRANITE ROAD
Tower GRANITE "B"
Tower GRANITE " "
EXAMINATION BATTERY(NO. 19)
Jan.1942:Btry.C,246th Coast Arty
Apr.1943:Detachment,Btry.H,246th Coast Arty.2-.50 cal MG
Jan.1944-In maintenance status Detachment,Btry.F,246th Coast Arty..50 cal MG psns.#27&28.40mm gun psn #221&222.
Oct.1944: In maintenance status Battery D,175th Coast Artillery Battalion.
Jul.1945: In maintenance status Battery E, Harbor Def.of Chesapeake Bay.
:Dismantled and sold.
T-1100
Atlantic Avenue
T-1113
Granite Gate
Granite area accquired by US Army early in World War II to expand Fort Story.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY: Examination Battery
No. of guns 2 Caliber 3" Carri. Ped.

Form 1. Corrected to October 1, 1942

GENERAL:		ELECTRIC CURRENT:	
Battery Commenced	Feb. 6, 1942	Sources of	None
Battery Completed	July 15, 1942	Max. kw. required for lights	None
Date of transfer	Aug. 1, 1942	Max. kw. required for motors	None
Cost to date of transfer	$5,096.22	Present condition of battery	Good
Materials of construction	Reinforced Concrete	Rooms wet or dry	Dry
Type of cement	Portland	How ventilated	2 - 2" G.I. Pipe
WATER & SEWER:		Type of data transmission	EE-01 Telephone and field telephones
Connected to water supply	Yes		
Connected to sewer	No	Remarks -	These 2-guns removed from Btry. Lee, ? Ft. Wool B.C. Station constructed on top of magazine. Parapet wall of concrete around emplacements, concrete walks and steps to magazine. Elev. of gun blocks 15.25. Elev. of parapet wall 18.21 - Front elev. 18.63 - Side elev. Elev. of roof of magazine B.C. Station 19.12
Type of latrine	None		
Trunnion elevation in Btry.	19.38		
Datum plane	M.L.W.		

From storage ?

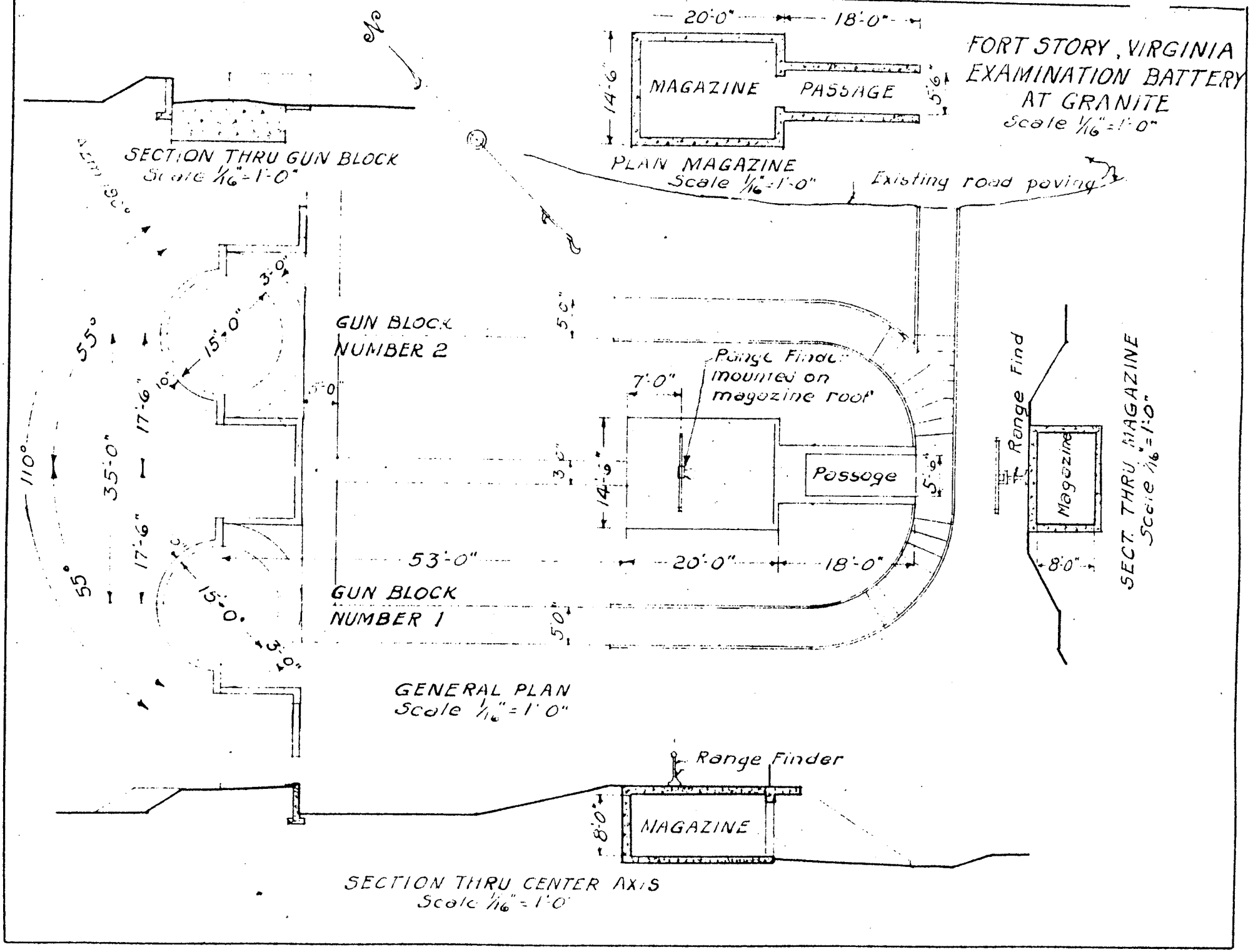
ARMAMENT

Emplacement or Mortar No.	Guns or Mortars: Cal.	Length	Model	Serial No.	Manufacturer	Mounted	Type	Model	Serial No.	Manufacturer	Motor
1.	3"	13'-3"	1905	28	Bethlehem Steel Co.	Yes	Ped.	1902	28	Bethlehem Steel Co.	Hand Controlled
2.	3"	13'-3"	1905	29	"	Yes	Ped.	1902	29	"	"

1902

NO HOISTS

NO MOTOR


FORT STORY, VIRGINIA
EXAMINATION BATTERY
AT GRANITE
Scale 1/16"=1'-0"
20'-0"
18'-0"
14'-6"
MAGAZINE
PASSAGE
5'-6"
PLAN MAGAZINE
Scale 1/16"=1'-0"
SECTION THRU GUN BLOCK
Scale 1/16"=1'-0"
Existing road paving
GUN BLOCK
NUMBER 2
GUN BLOCK
NUMBER 1
55°
110°
35'-0"
17'-6"
3'-0"
15'-0"
10°
53'-0"
5'-0"
Range Finder
mounted on
magazine roof
7'-0"
Passage
20'-0"
18'-0"
GENERAL PLAN
Scale 1/16"=1'-0"
Range Find
Magazine
8'-0"
SECT. THRU MAGAZINE
Scale 1/16"=1'-0"
Range Finder
MAGAZINE
SECTION THRU CENTER AXIS
Scale 1/16"=1'-0"

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

CONTROL APPROVAL SYMBOL SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
STRUCTURE: PLOTTING ROOM, BC STATION, MAGAZINE & SHELL ROOM FOR BATTERY NO. 21

PART II Corrected to 2 August 1943

CONFIDENTIAL

STRUCTURE:

Location (by coordinates) x 98,402.86 yds.
y 112,888.88 yds.
Location (by site description) - 130' south of Gun Block No. 2, Battery No. 21
Date of transfer - 2 August 1943
Cost to that date - $33,622.37
Type - Dug-in
Type of construction - Reinforced concrete
(a) Roof - Reinforced concrete
(b) Remainder of bldg. - Reinforced concrete
How concealed - Sand covered and planting
How protected - Sand covered
Height above concealment - 0
Height above protection - 7.08' (B.C. Station)
Conspicuous at 500 yards

UTILITIES:

Electric Power - Yes
Source of - Post system and auxiliary M-7 generating unit
Characteristics - Voltage 110/220, AC, 3 Phase
Kilowatts required - 24
Type of lighting fixtures - Fluorescent, commercial incandescent and dimouts
Heat
How heated - Not heated
Water Sewer
Connected to water mains - Yes
Connected to sewer - Yes
Type latrine - Flush

REFERENCE:

Reference of site - 15' MLW
Reference of instrument axis - 30.83' MLW

INSTRUMENTS & EQUIPMENT:

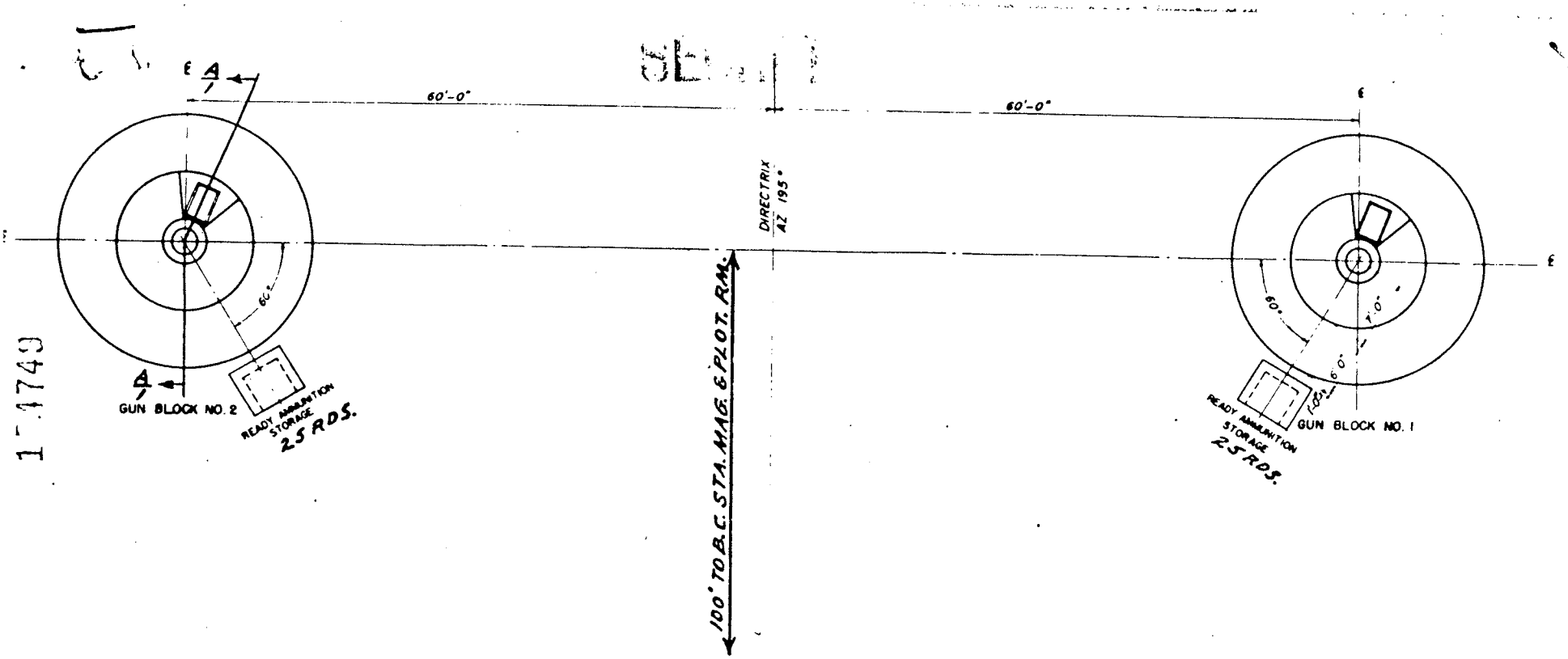
Type of observing inst. - Azimuth
Type of plotting board - M-4

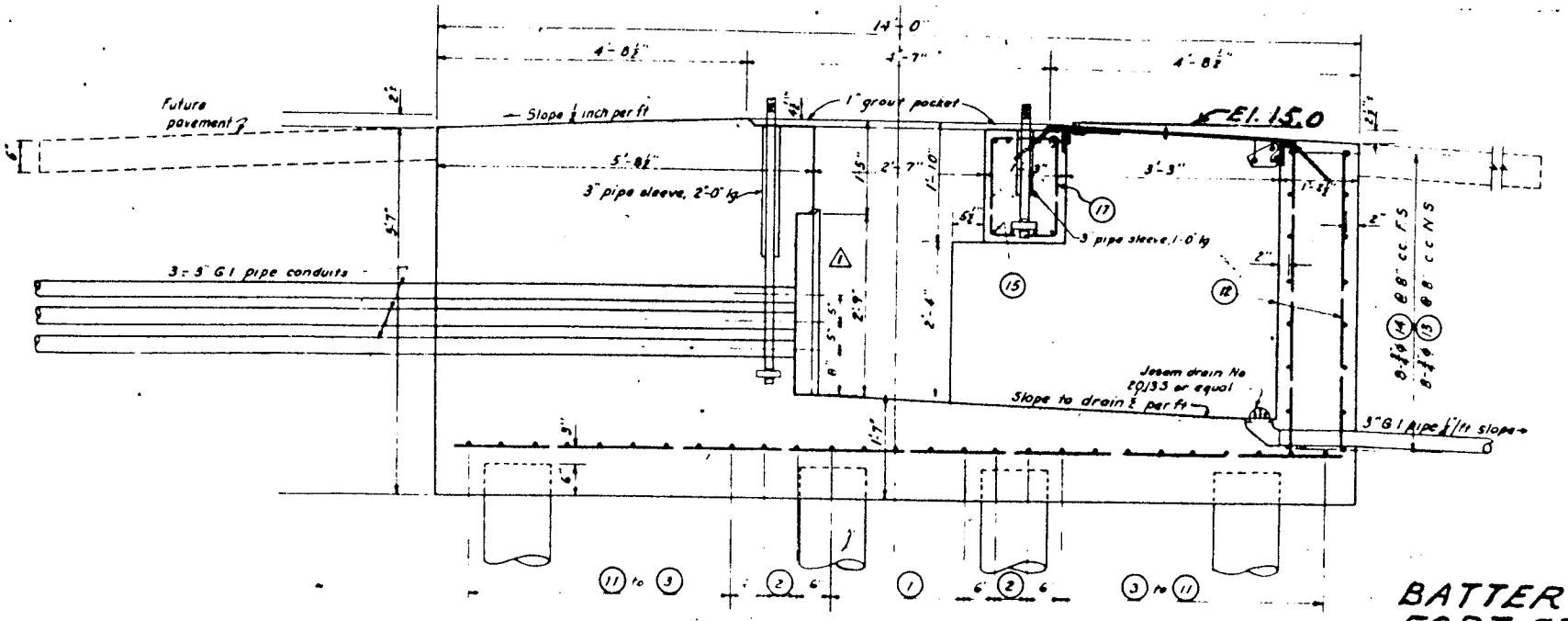
DATUM POINTS:

Give Forts from which visible - Fort Story

SEE ATTACHED SHEET

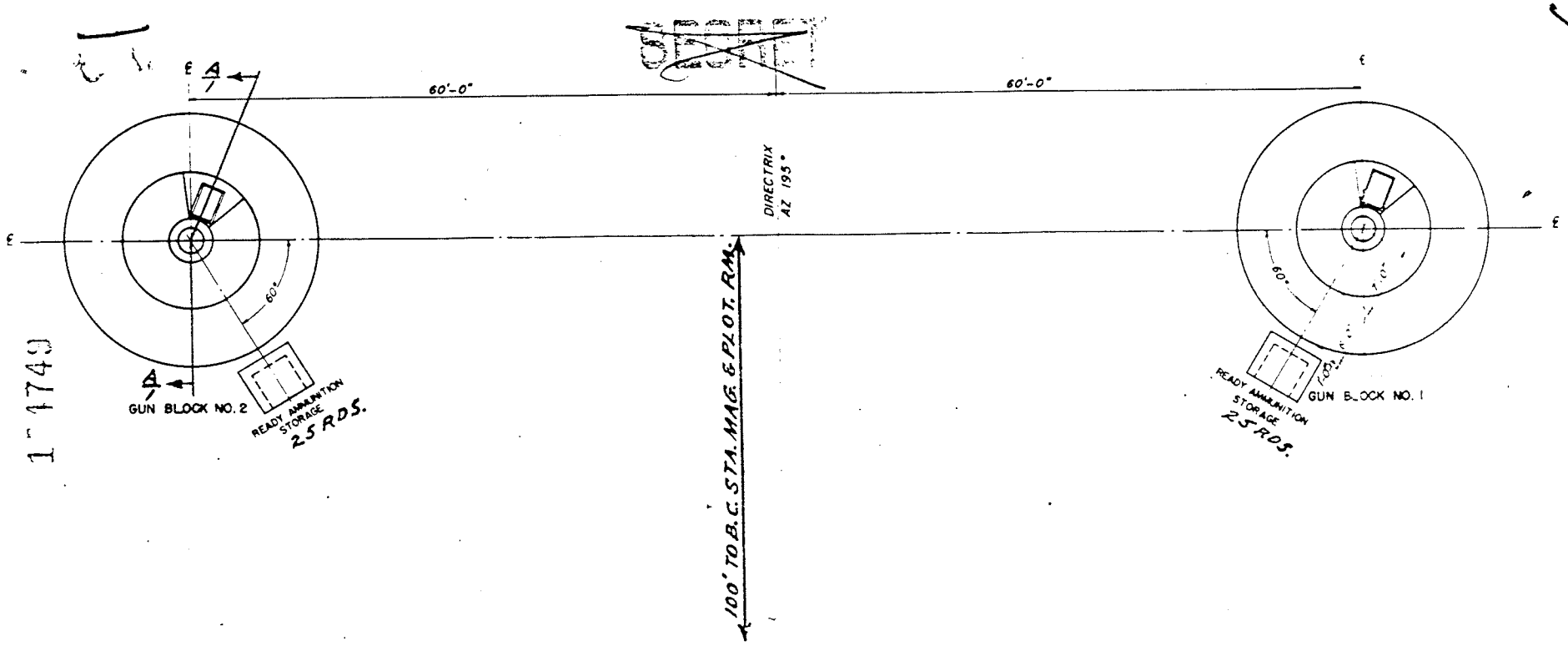
CONFIDENTIAL



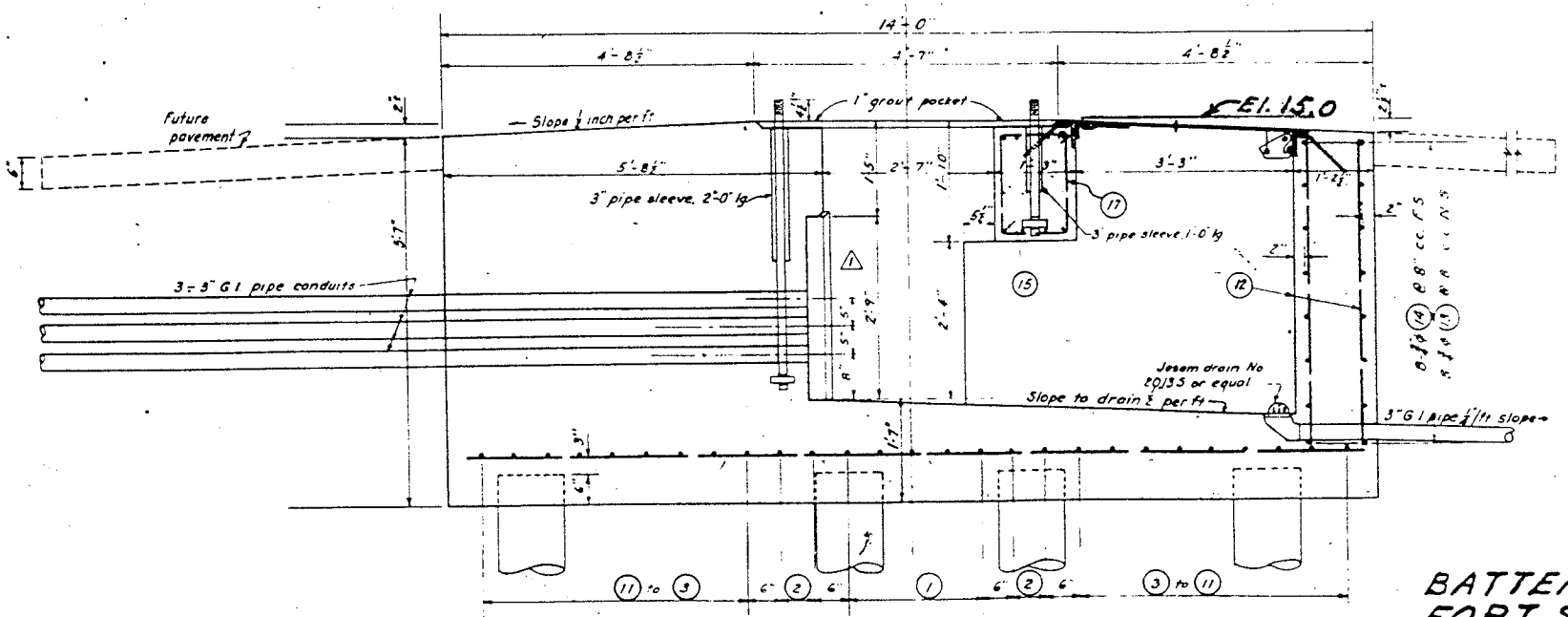


SECTION A/1

BATTERY NO. 21
FORT STORY VA



1" = 1749



SECTION A/1

BATTERY NO. 21
FORT STORY VA

600.914 (Ches) 104749

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Batteries)

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY NO. 21 No. of Guns: 2
Caliber: 90mm Carriage: T 3

SECRET

Part I Corrected to 15 May 1944

104749

GENERAL:

Battery commenced: 25 September 1942
Battery completed: 31 October 1942
Date of transfer: 2 August 1943
Cost to date of transfer: $5,844.80
Materials of construction: Wood piles and reinforced concrete
Battery new or modernized: New
Trunnion elevation in btry.: 19.0'
Datum plane: MLW

UTILITIES:

Water Supply: None
Sewer: None
Electric Power:
Sources of: Post System and M-7 generating unit

Electric Power: (Cont'd)
Procured & installed by Ordnance
Characteristics: Voltage, 115, AC, Phase 3
No. of units and capacity: One M-7 35 KVA in BC Station
Max. KW required for utilities: None
Max. KW required for non-battle conditions: 6 KVA
Commercial power provided: Yes, 35 KVA in BC Station
Auxiliary power unit provided: Yes, 35 KVA in BC Station
Type of lighting fixtures: None

DATA TRANSMISSION:
Type: M-6

ARMAMENT

Emplacement No.	GUNS Cal.	Length"	Model	Serial No.	Manufacturer	Mounted	CARRIAGES Type	Model	Serial No.	Manufacturer	Motor
1	90mm	186.15"	M1	1423	Wheland Co.	Fixed	AMTB	T3	56	Fisher Body Co.	
2	90mm	186.15"	M1	6848	Chevrolet Motor Co.	Fixed	AMTB	T3	69	Fisher Body Co.	

Ches 1-5

FS 510, 11, 1120

SECRET

600.914(Ch.)104749

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Batteries)

~~SECRET~~

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY NO. 21 No. of Guns: 2
Caliber: 90mm Carriage: T 3

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Materials of construction: Wood piles and reinforced concrete
Battery new or modernized: New
Trunnion elevation in btry.: 19.0'
Datum plane: MLW

UTILITIES:
Water Supply: None
Sewer: None
Electric Power:
Sources of: Post System and M-7 generating unit

Electric Power: (Cont'd)
Procured & installed by Ordnance
Characteristics: Voltage, 115, AC, Phase 3
No. of units and capacity: One M-7 35 KVA in BC Station
Max. KW required for utilities: None
Max. KW required for non-battle conditions: 6 KVA
Commercial power provided: Yes, 35 KVA in BC Station
Auxiliary power unit provided: Yes, 35 KVA in BC Station
Type of lighting fixtures: None

DATA TRANSMISSION:
Type: M-6

ARMAMENT

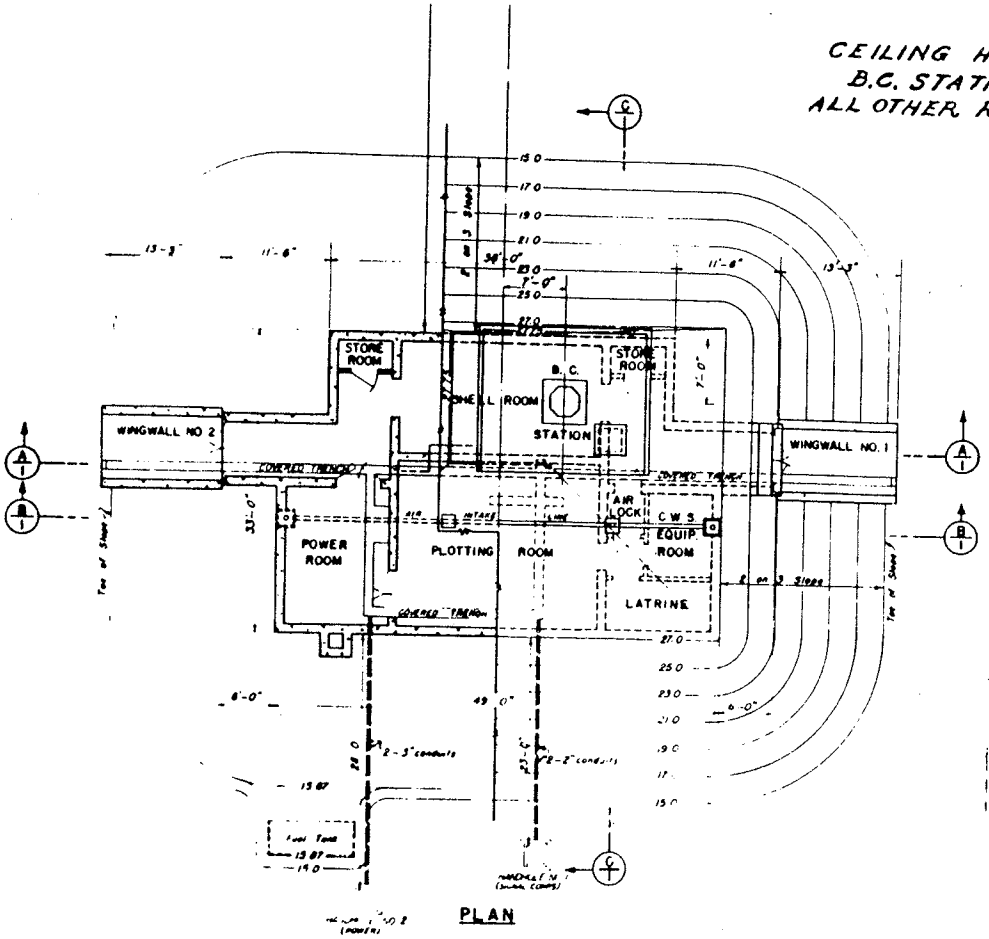
Emplacement No.	GUNS Cal.	Length	Model	Serial No.	Manufacturer	Mounted	CARRIAGES Type	Model	Serial No.	Manufacturer	Motor
1	90mm	186.15"	M1	1423	Wheland Co.	Fixed	AMTB	T3	56	Fisher Body Co.	
2	90mm	186.15"	M1	6848	Chevrolet Motor Co.	Fixed	AMTB	T3	69	Fisher Body Co.	

Ch. FS-5

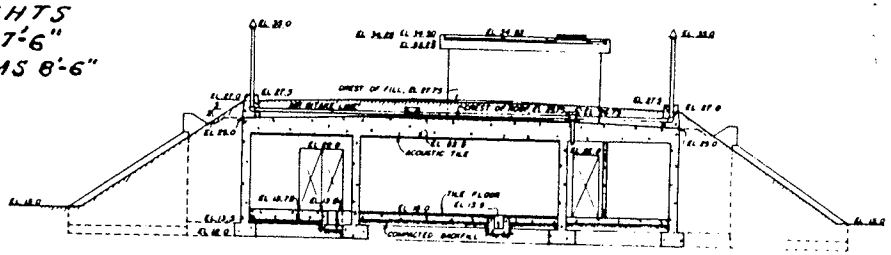
FS-510, 772 & 1020

~~SECRET~~

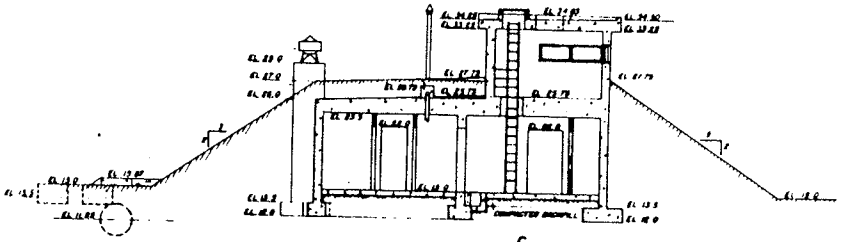
CEILING HEIGHTS
B.C. STATION 7'-6"
ALL OTHER ROOMS 8'-6"



PLAN



SECTION B



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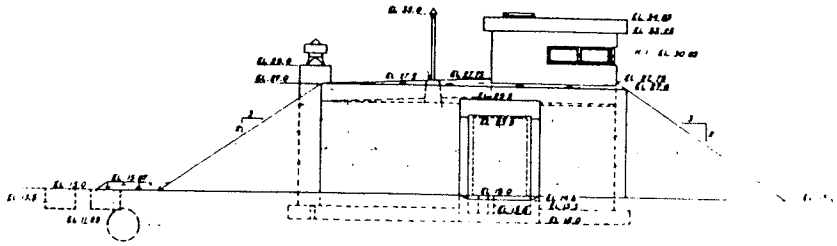


SIDE ELEVATION

PLOTTING ROOM, B. C. STATION, MAGAZINE & SHELL ROOM
FOR BATTERY NO. 21
FORT STORY, VIRGINIA

600.914 (Ches) 101873

Encl 1

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Batteries)

SECRET

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY NO. 22 NO. OF GUNS: 2
CALIBER: 90mm CARRIAGE: T 3

Part I Corrected to 30 December 1943

GENERAL:
Battery commenced: 16 February 1943
Battery completed: 13 April 1943
Date of transfer: 30 December 1943
Cost to date of transfer: $5,085.76
Materials of construction: Wood piles, reinforced concrete and timber
Battery new or modernized: New
Trunnion elevation in btry.: 24.0'
Datum Plane: MLW

UTILITIES:
Water Supply: None
Sewer:
Connected to sewer: No
Type of latrine: No latrine
Electric Power:
Sources of: Post system and M-7 generating unit in BC Station
Procured and installed by OCE and Ordnance

UTILITIES (Cont'd)
Characteristics: 115 V, AC, 3 phase
No. units and capacity: 1 - 35 KVA M-7 generating unit in BC Station
Max. KW required for utilities: 0
Max. KW required for non-battle conditions: 2
Commercial power provided: Yes, 30 KVA in BC Station
Auxiliary power unit provided: None
Type of lighting fixtures: None
Dehumidifying unit: None
Rooms wet or dry: Magazine dry
How ventilated: Not ventilated
How heated: Not heated
Data transmission:
Type: M-6

REMARKS: Battery 22 designated by local Coast Artillery authorities; constructed as Battery 24

ARMAMENT

Emplacement No.	GUNS Cal.	Length	Model	Serial No.	Manufacturer	Mounted	CARRIAGES Type	Model	Serial No.	Manufacturer	Motor
1	90mm	186.15"	M1	5113	Chevrolet Motor Co.	Yes Fixed	AMTB	T3	58	Fisher Body Co.	
2	90mm	186.15"	M1	6865	Chevrolet Motor Co.	Yes Fixed	AMTB	T3	138	Fisher Body Co.	

101873

SECRET

FS 1030

6 914(2Kee) 101873

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Batteries)

SECRET

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY NO. 22 NO. OF GUNS: 2
CALIBER: 90mm CARRIAGE: T 3

Part I Corrected to 30 December 1943

GENERAL:

Battery commenced: 16 February 1943
Battery completed: 13 April 1943
Date of transfer: 30 December 1943
Cost to date of transfer: $5,085.76
Materials of construction: Wood piles, reinforced concrete and timber
Battery new or modernized: New
Trunnion elevation in btry.: 24.0'
Datum Plane: MLW

UTILITIES:

Water Supply: None
Sewer:
Connected to sewer: No
Type of latrine: No latrine
Electric Power:
Sources of: Post system and M-7 generating unit in BC Station
Procured and installed by OCE and Ordnance

UTILITIES (Cont'd)

Characteristics: 115 V, AC, 3 phase
No. units and capacity: 1 - 35 KVA M-7 generating unit in BC Station
Max. KW required for utilities: 0
Max. KW required for non-battle conditions: 2
Commercial power provided: Yes, 30 KVA in BC Station
Auxiliary power unit provided: None
Type of lighting fixtures: None
Dehumidifying unit: None
Rooms wet or dry: Magazine dry
How ventilated: Not ventilated
How heated: Not heated
Data transmission:
Type: M-6

REMARKS: Battery 22 designated by local Coast Artillery authorities; constructed as Battery 24

ARMAMENT

Emplacement No.	GUNS Cal.	Length	Model	Serial No.	Manufacturer	Mounted	CARRIAGES Type	Model	Serial No.	Manufacturer	Motor
1	90mm	186.15"	M1	5113	Chevrolet Motor Co.	Yes Fixed	AMTB	T3	58	Fisher Body Co.	
2	90mm	186.15"	M1	6865	Chevrolet Motor Co.	Yes Fixed	AMTB	T3	138	Fisher Body Co.	

101873

SECRET

60831(Ltr 15 Jan) 70831

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

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
STRUCTURE: PLOTTING ROOM AND BC STATION FOR BATTERY NO. 22 (FORMERLY BATTERY NO. 24)

PART II Corrected to 30 December 1943 **CONFIDENTIAL**

STRUCTURE:
Location (by coordinates) - x 98,073.64 yds.
y 112,947.67 yds.
Location (by site description) - 33.29 yds. on Azimuth 47.843° from Gun Block No. 1, Battery No. 22
Date of transfer - 30 December 1943
Cost to that date $14,262.57
Type - Cottage
Type of construction - Frame with concrete foundation
(a) Roof - 4-ply built-up roof with galvanized iron flashings
(b) Remainder of bldg. - Wood studs and siding with insulation board interior
How concealed - Not concealed
How protected - Not protected
Height above concealment - Not concealed
Height above protection - Not protected
Conspicuous at 2000 yards

UTILITIES:
Electric Power - Yes
Source of - Post system and auxiliary M-7 generating unit
Characteristics - Voltage 115, AC, 3 Phase
Kilowatts required - 24
Type of lighting fixtures - Fluorescent, CS, and dimouts
Heat
How heated - Not heated
Water Sewer
Connected to water mains - No
Connected to sewer - No
Type latrine - No latrine

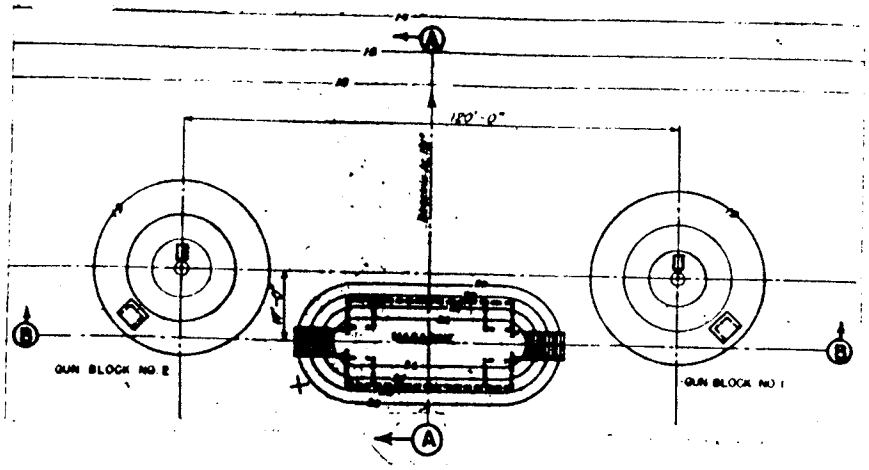
REFERENCE:
Reference of site - 18.0' MLW
Reference of instrument axis - Center line of azimuth instrument, 39.08' MLW

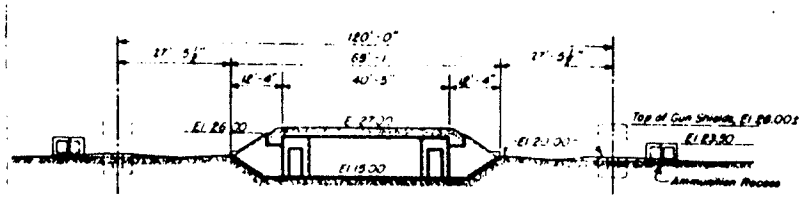
INSTRUMENTS & EQUIPMENT:
Type of observing inst. - Azimuth
Type of plotting board - M-4

DATUM POINTS:
Give Forts from which visible - Fort Story

SEE ATTACHED SHEET

60831

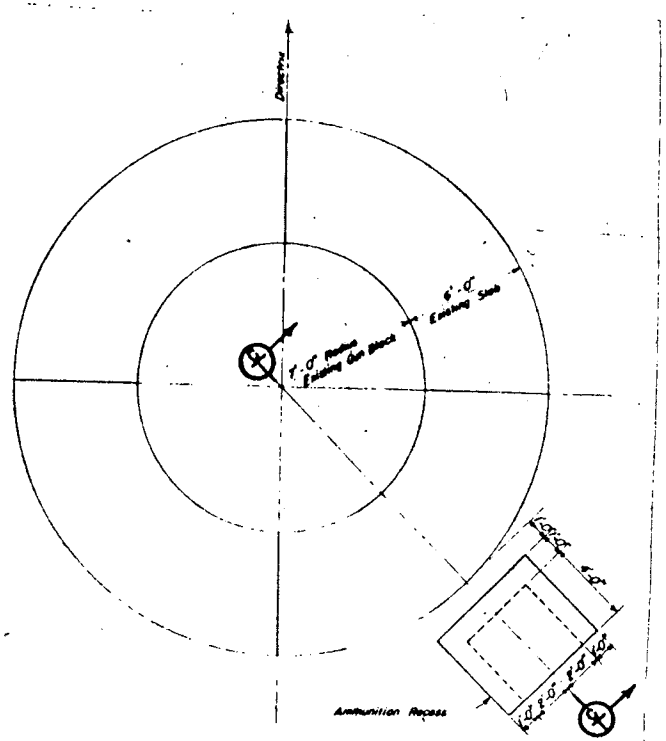




GUN BLOCK NO. 2 MAGAZINE GUN BLOCK NO. 1

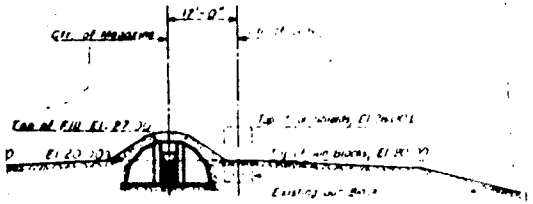
CEILING HEIGHT 9'-8"

SECTION B-B



PLAN - GUN BLOCK NO. 1

GUN BLOCK NO. 2 OPPOSITE HAND

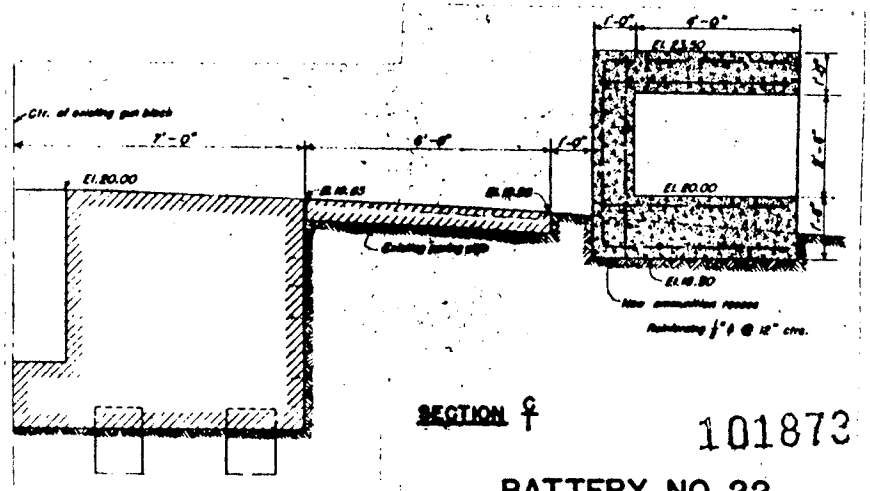


MAGAZINE

TYPE MAG-K-Q

FLOOR AREA 40'-1¼"X20'-5"

SECTION A-A



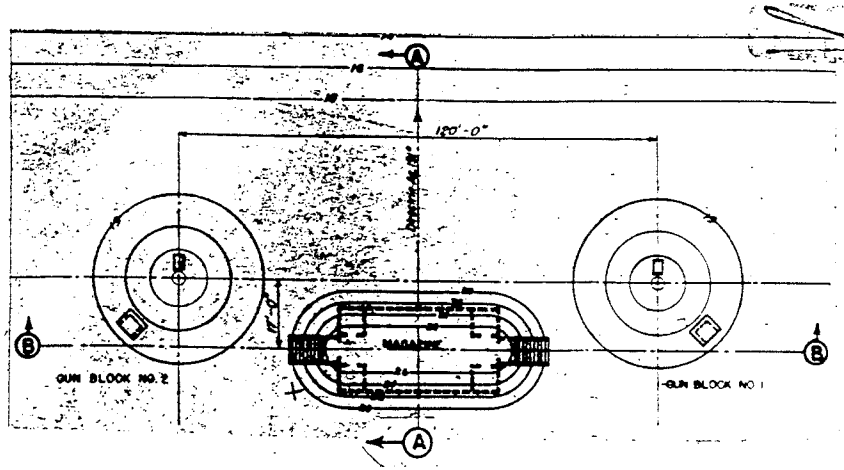
SECTION f

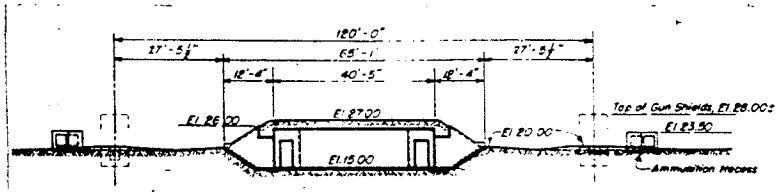
101873

BATTERY NO. 22

FORT STORY, VA.

FORMERLY DESIGNATED AS BATTERY NO. 24

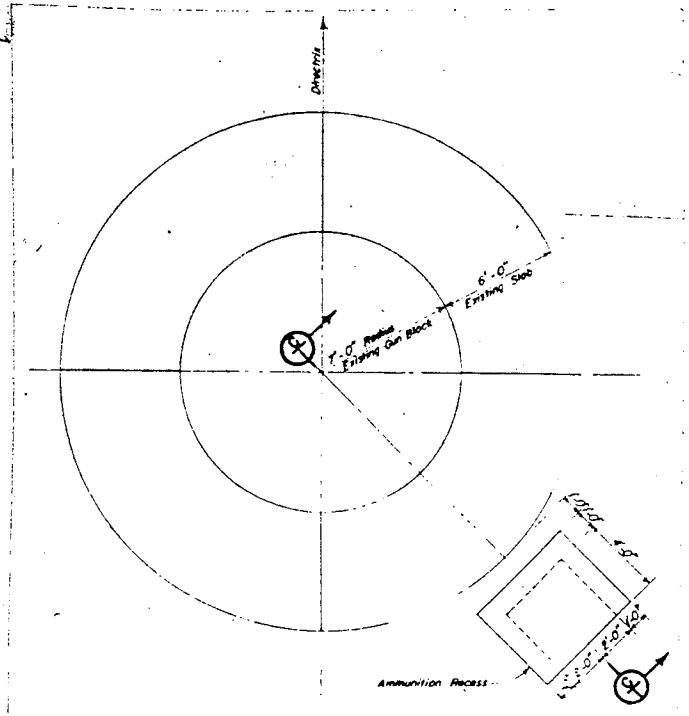




GUN BLOCK NO. 2 — MAGAZINE — GUN BLOCK NO. 1

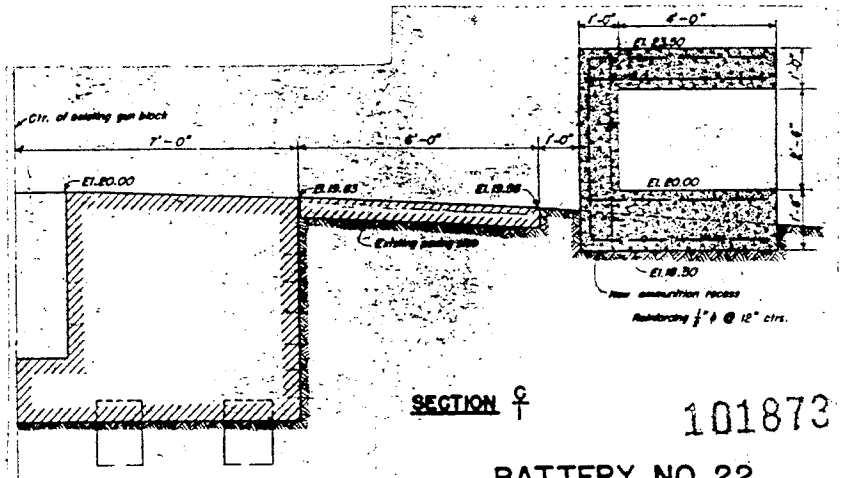
CEILING HEIGHT 9'-8"

SECTION B-B

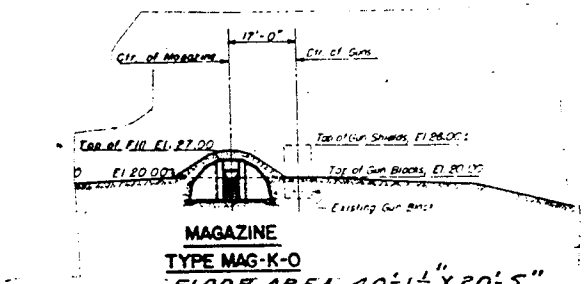


PLAN - GUN BLOCK NO. 1

GUN BLOCK NO. 2 OPPOSITE HAND



SECTION ℄



MAGAZINE

TYPE MAG-K-O

FLOOR AREA 40'-1¼"X20'-5"

SECTION A-A

101873

BATTERY NO. 22

FORT STORY, VA.

FORMERLY DESIGNATED AS BATTERY NO. 24

the guns of fort story: battery 22

Today the coastal fortification concept is nothing but a memory. But from colonial times through World War II Army fortifications, in conjunction with the US Navy provided the bulk of the security for the vast coastline of the United States. The guns of Fort Story on Cape Henry, Virginia were an integral part of those defenses during both World wars.

Fort Story, which was initially constructed in 1917 provided for limited defense of the Chesapeake Bay during World War I and during the period of peace following that conflict. During that period however the armament was static and grew obsolete over time.The major armament of 16-inch guns could cover the entrance to the Chesapeake Bay and presumably destroy enemy vessels at great ranges. But a defenses against a possible motor torpedo boat raid were limited. Also smaller caliber and a rapid fire weapons system was needed to cover the mine field at the entrance to the bay.

In February 1943 construction was commenced on a two-gun battery of the new 90 mm guns. A first 90 mm gun battery had been completed to the east of this position a few months earlier. This battery would be different from the self contained emplacement with all of the elements in a single small structure. It was also half the cost. The battery was sited in the dune line inside of the Chesapeake bay. Wood piles were first driven into the sand to support the two concrete gun blocks. A concrete earth covered magazine was sited between the two gun positions. To the rear of the guns, a wood building housed the plotting room and battery commanders station. It was built to resemble similar cottage type buildings on post. Unlike the majority of other artillery batteries at Fort Story this frame structure offered no protection for the soldiers. A compound, which was located at the end of 21st Street, consisting of 10 temporary buildings which were quickly built for the company manning the battery .

Battery 22 was designated as a anti-motor torpedo boat (AMTB) battery consisting on two 90 mm M1 guns on T3 mounts. It had initially been designated as battery 24 within the harbor defense system. The 90 mm guns were designed primarily for employment against enemy motor torpedo boats, but could also engage submarines or landing craft. The weapons had a maximum range of 19,000 yards and each gun section was manned by 13 soldiers. Gun number one was serially numbered 5113 and emplacement number two was serially numbered 6685. Both the guns had been manufactured by the Chevrolet Motor Company and the T3 carriages were built by Fisher Body Company. The rate of fire under normal conditions was

25 rounds per minute. The guns were provided with a protective cover and were capable of a 360 degree traverse.

The contractor completed the battery in April 1943 at a cost of $5,000 for the gun blocks and $14,000 for the plotting room and battery commanders station. It was not transferred to the Army until the end of 1943. In August however, the battery was placed in tactical status with soldiers from Battery I, 246th Coast Artillery Regiment . Battery I was a former Virginia Army National Guard unit from Roanoke. The company was first organized in 1915 and had seen action in World war I with the 42d Infantry Division.

Company I was called to active duty again with the 246th Coast Artillery in September 1940. It first was assigned to the 155 mm GPF guns of Battery V at Fort Story. They traded in the old mobile artillery for the more modern 90 mm gun. At this time the battery was designated as the Examination Battery for the convoy deployment area in Lynnhaven Roads. In addition to the fixed armament the battery had two other mobile 90 mm guns assigned. These weapons were kept in the vicinity of the 16 inch howitzer battery.. For close in protection the battery had a pair of 37 mm guns and two .50 caliber machine guns. Battery I was also responsible for a 24 inch searchlight and a 60 inch spread beam searchlight. As the battery was designated as the Examination Battery which could be put on alert in short notice, temporary buildings for the troops had been constructed to the rear of the guns.

By 1944, the threat to the Atlantic coast had been diminished and in October Battery 22 was downgraded from alert to maintenance status. and the searchlights turned in to storage. The 246th Coast Artillery departed the area and the Regular Army soldiers from Battery E of the 2d Coast Artillery Regiment took over operational control of the position.

By the summer of 1945, seacoast defense manning levels again had been greatly reduced and the 2d Coast Artillery had been also reorganized. A series of numbered batteries of the Harbor Defenses of Chesapeake Bay were responsible for both the active and maintenance status weapons. Battery 22 was maintained by Battery E and not assigned for regular drill. By the end of the year that battery was under the command of First Lieutenant Harold Heischober, who would later serve on the City Council of Virginia Beach for many years.

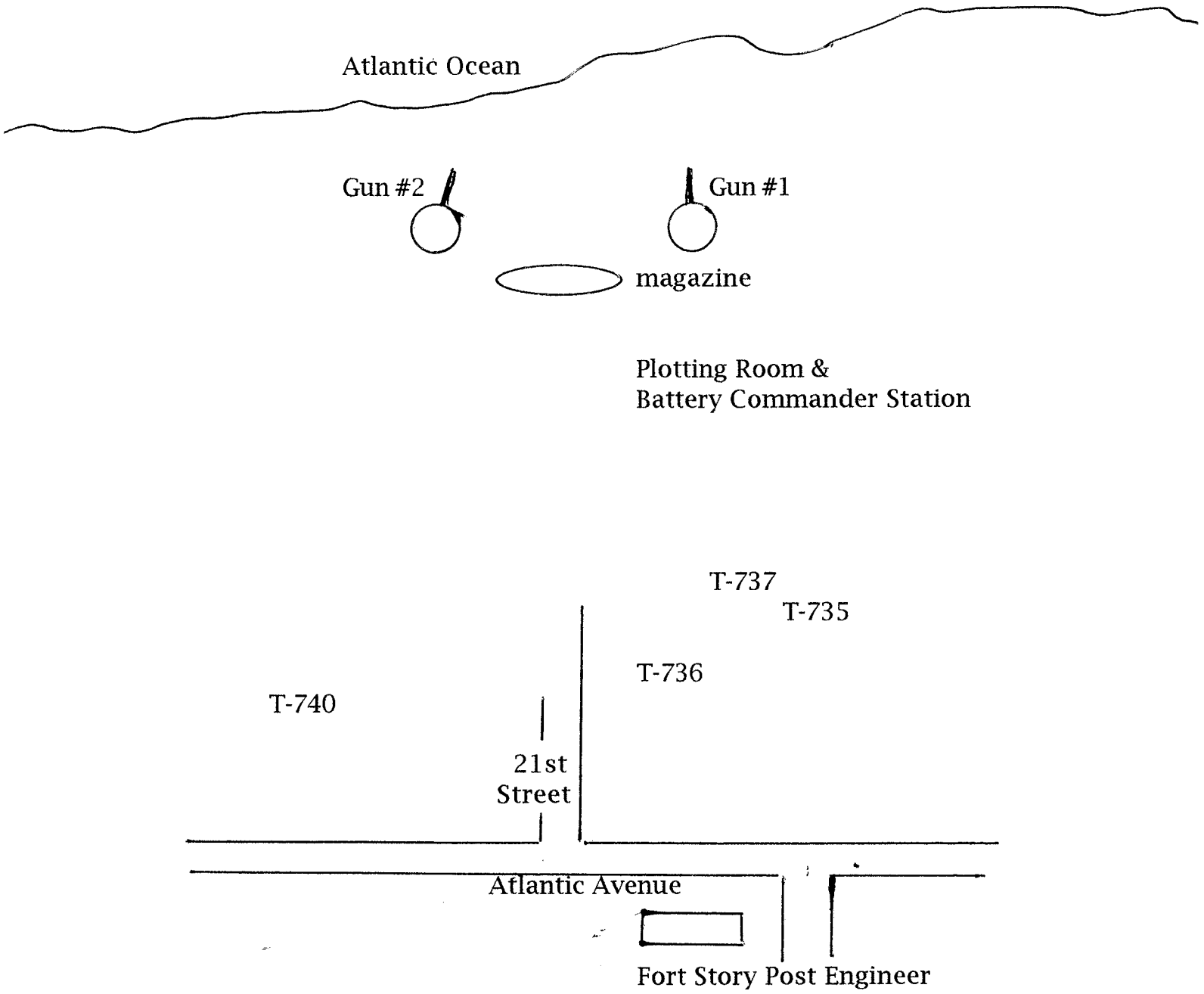
In July 1946, the Harbor Defenses of Chesapeake Bay was inactivated but many of the guns remained. In fact, in the following month, a battery of the new 16-inch guns fired a service practice and the sounds resounded down the North End of Virginia Beach. In the following year the Army caretaker detachment was still responsible for the maintenance of the guns still in the inventory.

By the Spring of 1948, Second U.S. Army finally issued orders to dismantle the remaining armament at Fort Story. This included the 6-inch and 90 mm batteries. Finally in May 1949, the 90 mm gun batteries were declared

surplus. The batteries were dismantled at some time afterwards, but the final disposition is not known. The temporary battery commanders station and wood battery buildings were removed also leaving only the circular gun blocks on the site.

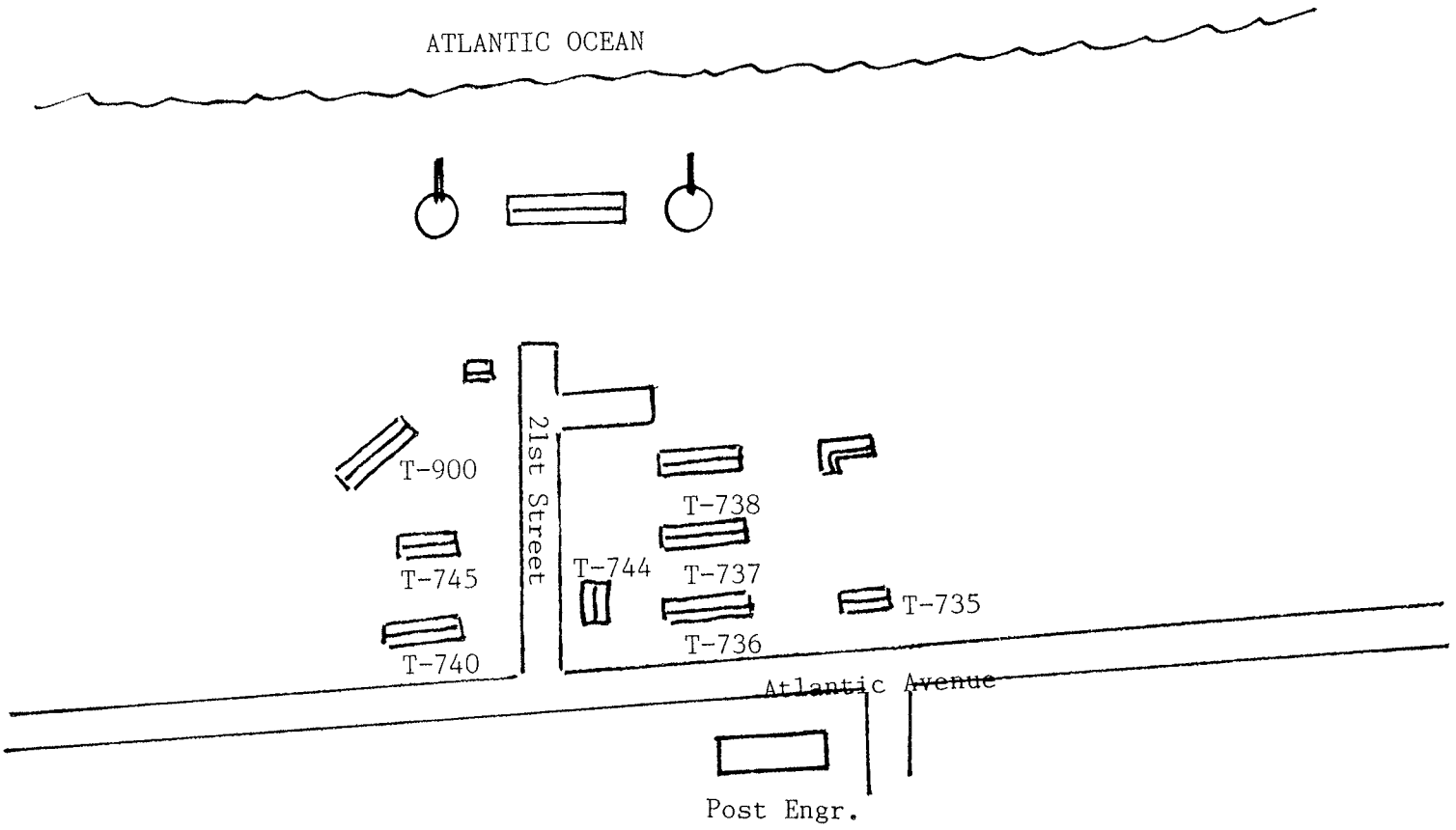
Over the years erosion crept over the area adjacent to the 90 mm gun batteries. The Army attempted to stem the tide by placing wrecked landing craft on the beach to the seaward, but it was not fruitful. The water swept under the gun blocks and filled in the magazine. For the next 25 years the gun blocks remained high atop their wood pilings and were the subject of much conjecture as to their origins.

By April 2001, both gun blocks had collapsed of their own weight and rested on the beach. It was only a matter of months before they were covered with the shifting sands. Today nothing remains of the proud modern battery which defended the shores at Cape Henry.



SITE MAP, BATTERY 22, FORT STORY, VIRGINIA

original drawn 1991. updated 2002



Battery 22 Harbor Defenses of Chesapeake Bay

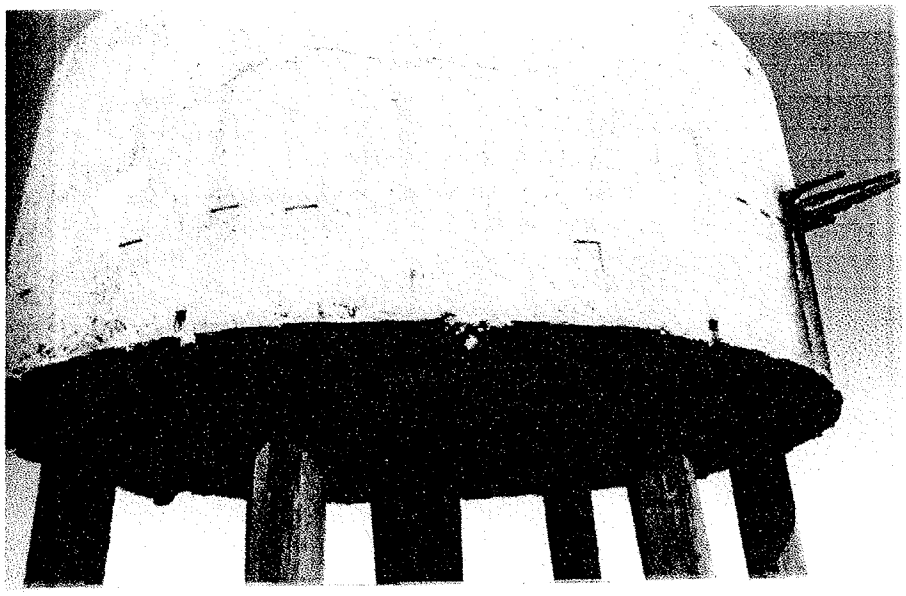
All that remains of the battery today are a pair of circular concrete blocks on wooden pilings. Silent sentinels of a battery which briefly defended the Chesapeake Bay.

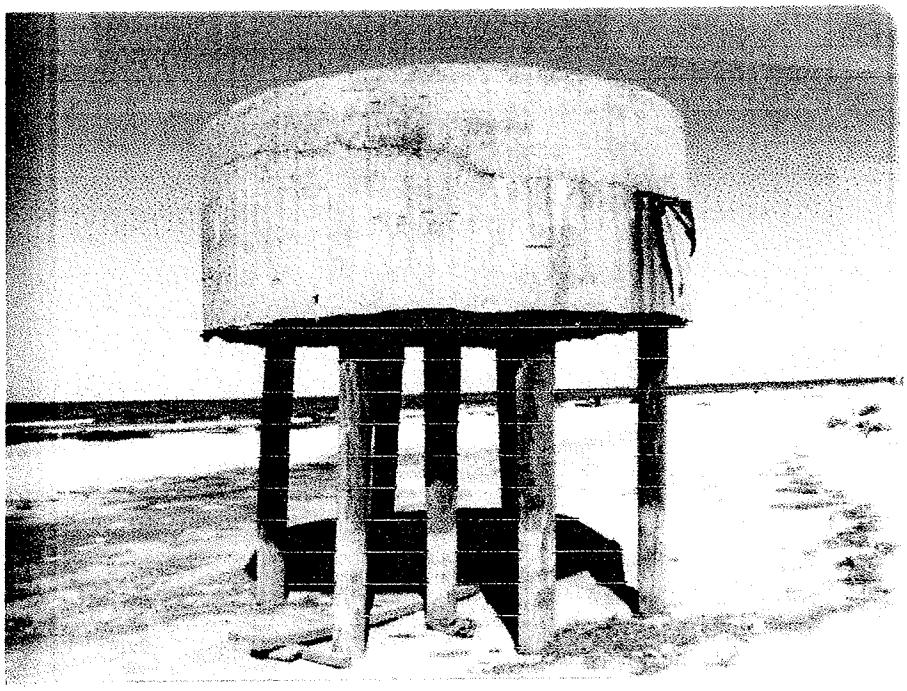
Battery 22 consisted of two 90mm M1 guns on M3 mounts. They were designed primarily for employment against motor torpedo boats, but could engage submarines or landing craft. The weapons had a maximum range of 19,000 yards and each gun section was manned by 13 soldiers.

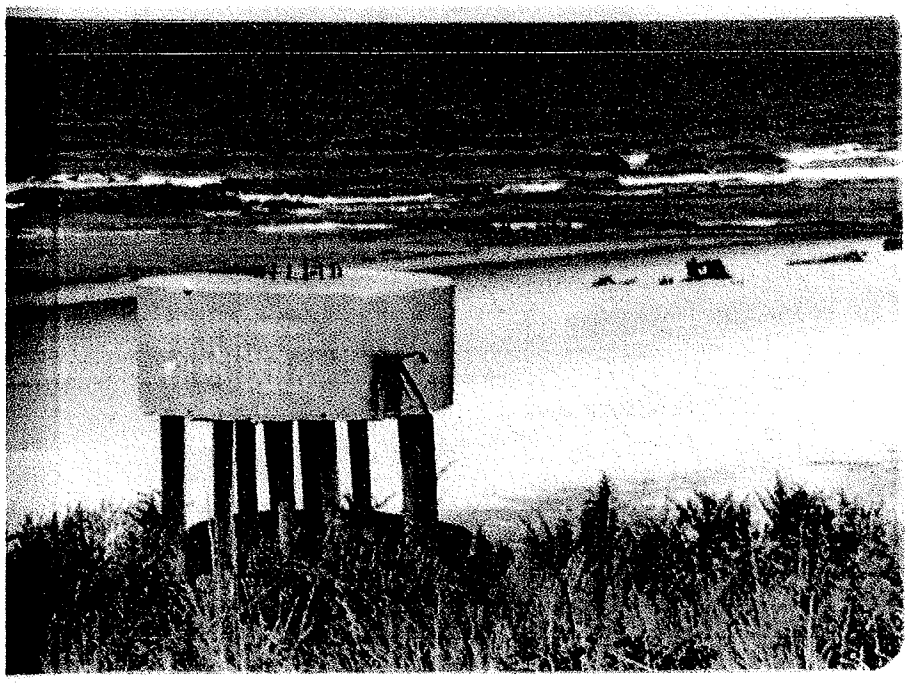
The battery was placed in Tactical Status in August 1943 and manned by Battery I, 236th Coast Artillery Regiment. For local protection the battery had 3 .50 cal machine guns and 2 37mm guns. Completing the armament were 1 24" and 1 60" searchlight.

In October 1944 the battery was reduced to Training Status and the searchlights turned in. Battery E, 2nd Coast Artillery Battalion took over operational control of the battery.

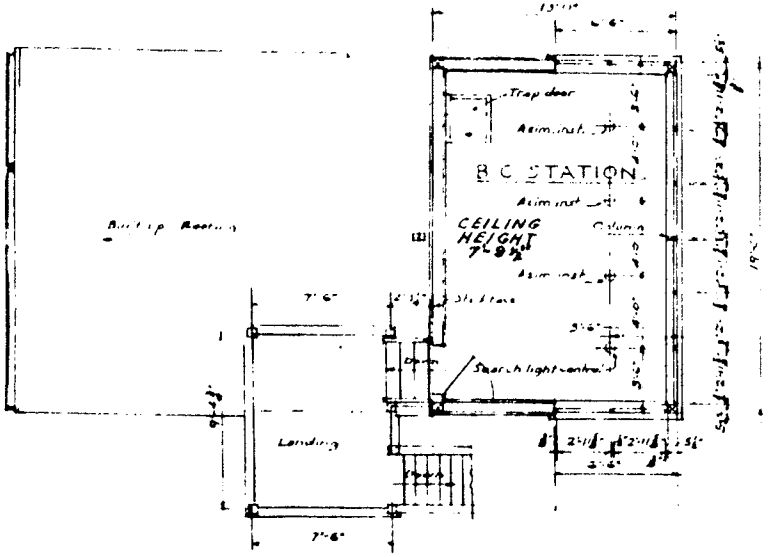
In July 1945 the armament was placed in Maintenance Status and finally the weapons were scrapped on 1 March 1950.



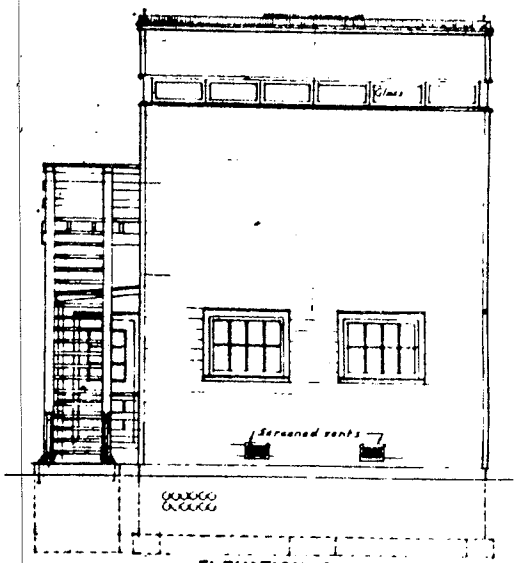




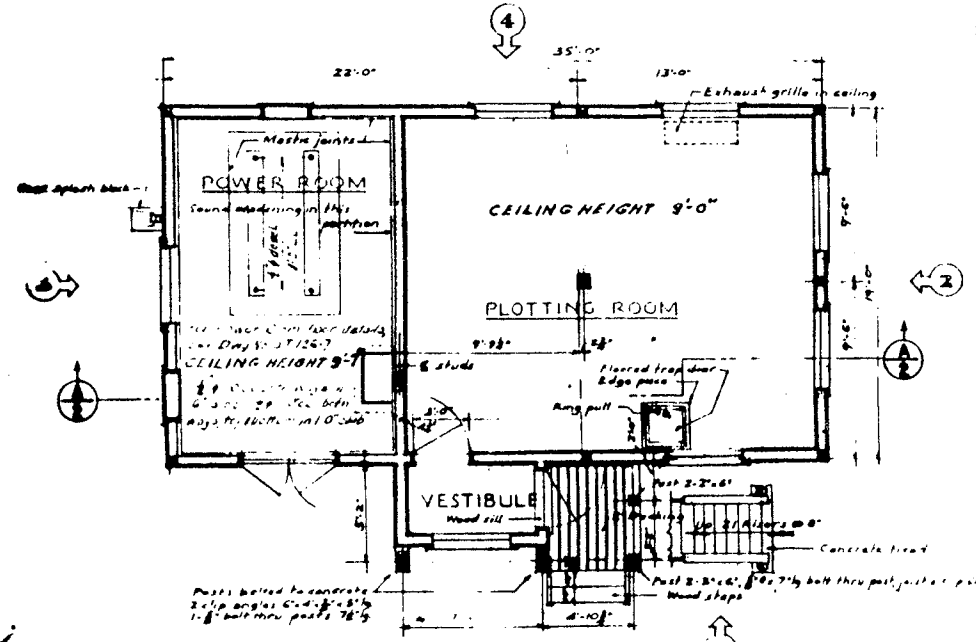
PLOTTING ROOM & B. C. STATION
BATTERY NO. 22 (FORMERLY BAT. NO. 21)
FORT STORY, VIRGINIA



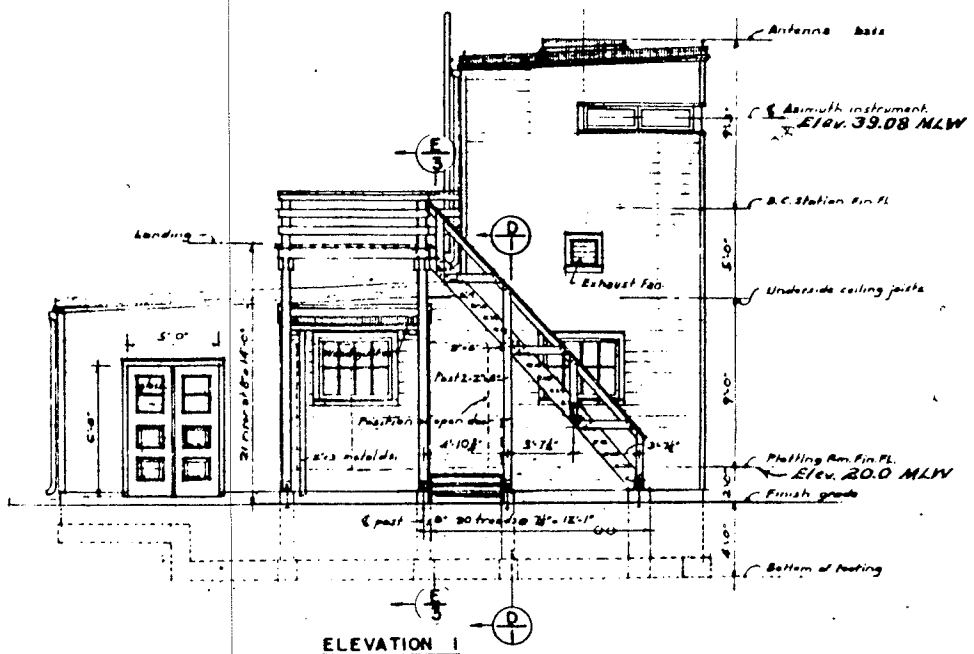
B. C. STATION PLAN



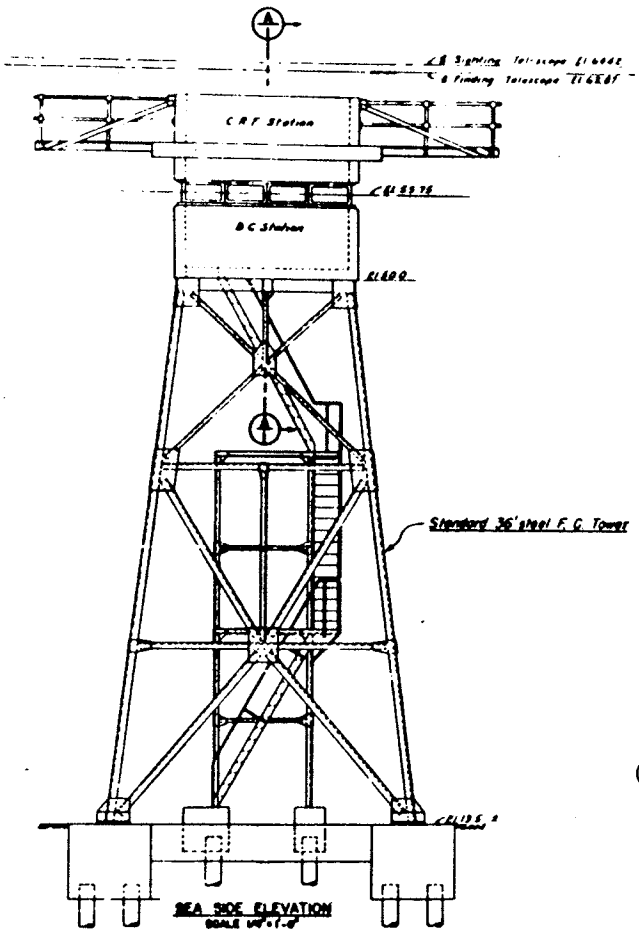
ELEVATION 2



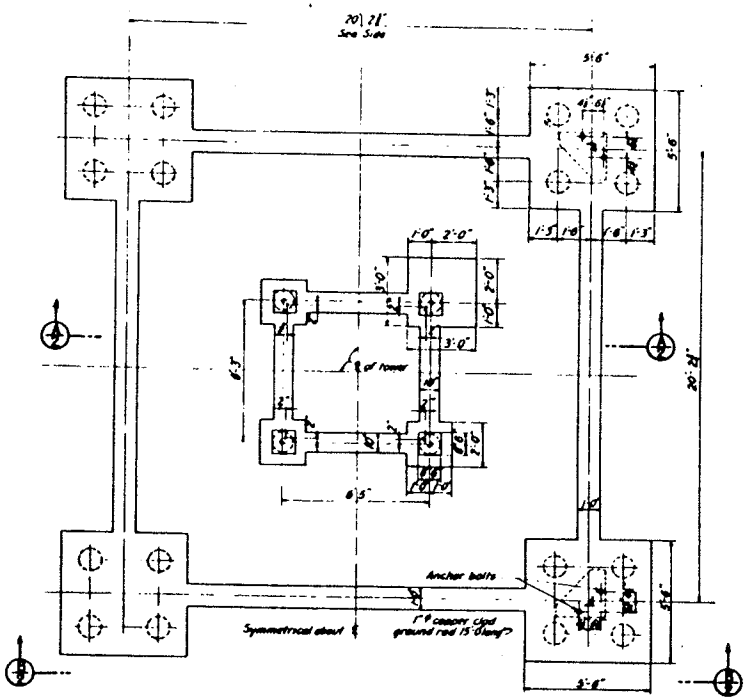
FIRST FLOOR PLAN



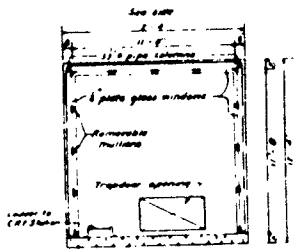
ELEVATION 1



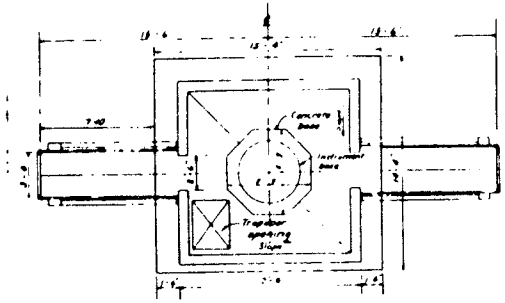
SEA SIDE ELEVATION



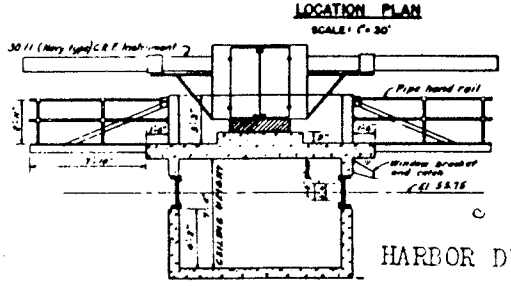
FOUNDATION PLAN



FLOOR PLAN



ROOF PLAN



LOCATION PLAN

SECTION

HARBOR DEFENSES OF CHESAPEAKE BAY
ARMY MINE BASE
LITTLE CREEK, VIRGINIA
ROADS, RAILROADS AND FENCE
Sheet 1 of 5

the guns of fort story: battery 7 (mines)

Today the seacoast fortification concept is nothing but a memory. But from colonial times through World War II Army fortifications, in conjunction with the US Navy provided the bulk of the security for the vast coastline of the United States. The guns of Fort Story on Cape Henry, Virginia were an integral part of those defenses during both World wars.

Fort Story, which was initially constructed in 1917 provided for limited defense of the Chesapeake Bay during World War I and during the period of peace following that conflict. During that period however the armament became obsolete and inadequate for the mission.

Following the First World War, the armament was supplemented with the addition of a battery of 16-inch howitzers. This upgrade extended the range of the guns, but did not completely cover the entrance to the Chesapeake Bay. An additional defensive measure was needed.

As part of the land acquisition at Cape Henry in 1914, the War Department purchased a separate parcel of land designated as Parcel D. The 1.6 acre tract was on the beach northwest of the post proper and remained unused until 1921. The Coast Defenses of Chesapeake Bay at Fort Monroe determined that an outer minefield was necessary and directed that a mining casemate be constructed to control the mines at the entrance to the Chesapeake Bay.

The U.S. Army operated controlled mine fields from as early as 1875 through 1945. Army mines, until about 1943, were almost always buoyant, with the depth adjusted by setting cable and line lengths so the mine would float 20 to 40 feet below the surface. By World War II, the Army was employing the M1 mine which was a spherical case with hemispherical ends. In 1941, the standard mine case was the M2 and in the following year a new ground mine was developed. In 1943, the new mine system came into use. It was similar to the older systems, but included a new mine. The M4 ground mine was ninety inches in diameter, about six feet tall, and shaped like a cylinder with a conical top.

The mine casemate directly controlled the mines. The mine control structures were generally unlike any other structure in a coast defense system. Between 1908 and 1917, the mine casemates were in buildings protected by thick walls, but not protected from the air. After 1917, many casemates were given overhead cover, and the last generation of mine casemates were deeply buried, heavily protected, and often behind a hill,

invisible from the sea and air. Typically, a mine casemate controlled many mine groups in a number of lines.

On 9 June 1922, the Mining Casemate at Parcel D was completed and transferred to the Coast Artillery. The reinforced concrete structure with a wooden roof was completed at a cost of $84,537.94. The structure was concealed by a large sand dune on the Chesapeake Bay side and protected by an 8 foot reinforced concrete bombproof cover. Basically we have a concrete building within a separate protective reinforced structure. The mine casemate at Fort Story contained four main rooms initially. An operating room for the operators, control panels and a power panel. In the power room was the engine-driven generators and the storage battery room contained the 80 volt batteries. The remaining room was designated as a dormitory for the assigned soldiers. An underground cable was laid in a concrete box conduit from the mining casemate to the cable huts on the shoreline. At the same time a concrete observing room was built on top of the dune . This enabled soldiers to observe the minefield. In 1929, the room originally intended for a dormitory was made into a plotting room for the battery.

Following World War I, the numbers of troops was greatly reduced and the post was placed in caretaker status. In 1922, the numbered Coast Artillery companies were assigned designations that the held prior to a 1916 reorganization. At this time is unknown what Army unit was located at Fort Story. In 1924, the 12th Coast Artillery Regiment was activated at Fort Monroe using troops from the lettered separate companies. By this time a company from that regiment served as the caretaking force serving both the mine casemate and the 16-inch howitzer batteries.

In 1932, it was determined that a underground structure was needed to serve as a forward Command Post for the Harbor Defenses of Chesapeake Bay. The site selected was on the western edge of the sand dune supporting the old Cape Henry Lighthouse. At that time the lighthouse was owned by _____. An area was dug away and a reinforced concrete structure with 12 inch walls and measuring 21 feet by 36 feet was built and covered with 10 feet of sand. An entrance tunnel with two steel doors was also installed. The structure was completed and transferred to the Coast Artillery on 1 June 1933 at a cost of $6,789.00. At some later date, the mission of the structure was changed from a Command Post to a casemate. It was designated as Mine Casemate Number ?. The redesignated structure contained a generator room and an operating room. Cable trenches led from the operating room to the cable boxes on the beach. In 1932, the 12th Coast Artillery was inactivated and the lettered batteries were redesignated as elements of the 2d Coast Artillery Regiment. The soldiers of the Regular Army would continue to provide caretaker duties for the mines and armament . At Fort Story the caretaker duties fell to Battery E.

In 1940, Mine Casemate Number 1 under the lighthouse was redesignated as Mine Casemate Number 2. The telephone booths at the casemate were removed and the interior walls and ceiling were painted. In early 1941 two 5 KVA diesel generator sets were installed by local troops. At about that time the former Mine Casemate Number 2 on Atlantic Avenue and 159th Street was redesignated as Number 1. In September 1940, a steel fire control tower was completed on the sand dune adjacent to Mine Casemate Number 1. The tower had a concrete foundation with three observing rooms. This tower greatly increased the ability of the troops to observe the mine field.

As the threat of war came closer to America the Army federalized a number of Army National Guard units in 1940. The 246th Coast Artillery Regiment of the Virginia National Guard was stationed at the harbor defense posts in Hampton Roads. The 2d Coast Artillery Regiment was increased in strength and expanded to man some artillery batteries. The regiment continued to be the sole unit controlling the mine defenses within the Harbor Defenses of Chesapeake Bay. At Fort Story, Battery E was in command of Battery 7 (Mines). The battery was under the control of Gun Group 2 which was commanded by the 3rd Battalion, 246th Coast Artillery. A 155 mm coastal battery was designated to provide covering fire for the mine field.

Following the attack on Pearl Harbor in December 1941, the underwater defenses were rapidly expanded. The Navy mine field consisted of 365 Navy Mark 6 mines which were laid on 17 January 1942. The poor weather conditions at the time slowed the Army efforts in laying the Army field. Also ships traversing the capes running over the mines made maintenance difficult. The planting and maintenance of the mine fields was accomplished by Army Mine Planter vessels. These vessels were located at Fort Monroe and later at the new Little Creek Mine Base.

On the night of 16 February the tanker *E.H. Blum* approached the capes in a dense fog. The vessel was known to be friendly, but failed to answer radio calls. She was tracked by radar as she approached the Army mine fields. Her hull touched several mines and turned seaward. She entered the Navy minefield where she struck a mine and sank. The Coast Guard Cutter *Woodbury* was dispatched to the scene and rescued the crew. The *E.H. Blum* was later salvaged.

On 16 March 1942, the outer mine field at the Virginia Capes was completed. The Capes field had 22 mine groups in four lines. The outer and third line were 50 feet deep and the second and fourth were at 15 feet depth. A thousand foot channel opening was located between certain groups.

The mines were placed on "contact fire" only when the tactical situation dictated. With an increase in traffic, maintenance became a severe problem. Later a joint operating procedure was developed to place the mines on contact fire when visibility conditions prevented visual surveillance of the field.

The supporting inner defenses were controlled from Fort Monroe. An anti-motor torpedo boat net and gate was in operation on 1 March and a week later a net was installed at the entrance to the York River. The inner mine field to Hampton Roads was in operation in April.

In June 1942, the German Navy brought their own mine warfare to the Virginia Capes. The U-701, on the surface and at night, moved close to the Army minefield and laid her own mines in the shipping channel. Set with delay fuses, the mines found their targets as Allied shipping moved to enter the Chesapeake Bay. The result was the sinking and damaging of a number of vessels in a convoy coming up from the south.

By the end of 1942, Battery E had been relocated to the Little Creek Mine Base to operate that facility. Detachments from the battery remained at Fort Story to man the two mine casemates.

In the following year the existing Army and Navy mine fields in the Chesapeake Bay were removed. They were replaced entirely by the new Army ground controlled mine. The existing mine field did not cover all navigable channels and the mines at the 15 foot level were frequently damaged by shipping. It was decided to drop the contact mine field and substitute the Army controlled mine for the entire entrance. Also a new casemate was installed on Fisherman Island on the Eastern Shore of Virginia.

The planting of the new mine fields started in February. The new M4 mine was more powerful and was not molested by shipping. Openings for vessels were not necessary and maintenance was reduced. In addition to the mines Navy detection devices and Army hydrophones were installed on the outer side of the field. The operation of the mine field continued to be a major responsibility of the Joint Operations Center. Most mines were normally kept on contact status. This meant that if a vessel strayed from its course, it could enter the mine field and suffer the consequences.

The mine defense was reorganized in 1943. The Mine Command was established at Little Creek Mine Base. The mine planters and mine casemates on shore were placed under the operational control of the Mine Command. The command was the administrative and tactical unit that planted and maintained the mine fields of the Harbor Defenses of Chesapeake Bay The commander of the Mine Command was the Executive Officer, 2d Coast Artillery. Battery 7 (Mines) was reorganized into Battery 7-A at Casemate Number 2 under the command of Battery E, 2d Coast Artillery. Battery 7-B was located on Fisherman Island under the operational control of Battery I, 2d Coast Artillery.

Reductions in continental coastal defenses began in 1944. The regiments were broken up into battalions and troop strength was reduced. At Fort Story, the 175th Coast Artillery Battalion was organized to man the harbor defense armament. The 2d Coast Artillery was reduced to a battalion

and continued to operate the mine casemates at Fort Story and Fisherman Island. The mine fields continued to be maintained in an alert status into 1945.

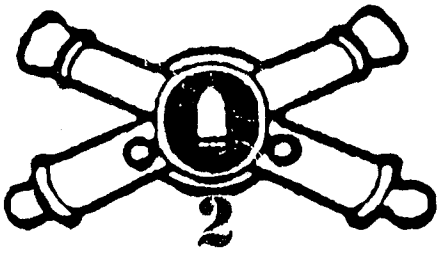
To be added.

removal of minefields and disestablishment of Mine Command
later use of mine casemates and casemate tower
current use of mine facilities
future use.

Information on mine control and mines in general was provided by Robert D. Zink in his article on controlled submarine mining which appeared in The Coast Defense Study Group Journal issue of November 1995. Information on casemates at Fort Story provided by an oral interview with former Lieutenant Lloyd Burton in August 2000.

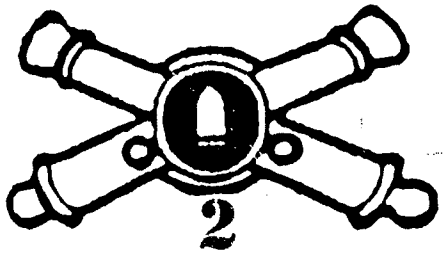
MINE CASEMATE NUMBER 1

- LAND PURCHASED IN 1914 AS PARCEL D
- MINING CASEMATE COMPLETED ON SITE IN 1922
- MINE CASEMATE DIRECTLY CONTROLLED MINEFIELD
- MAINTAINED BY DETACHMENT OF 12TH COAST ARTILLERY
- FROM 1932, 2D COAST ARTILLERY MAINTAINED MINES
- ACTIVE ONLY DURING PEACETIME MANEUVERS
- BY 31 DECEMBER 1941 NINE MINE GROUPS IN PLACE
- IN 1941 MAINTAINED BY BATTERY E, 2D COAST ARTILLERY
- BY 1943 OPERATED UNDER MINE COMMAND AT LITTLE CREEK
- CASEMATE ALTERED FOR GAS PROOFING IN 1944
- MAINTAINED IN ALERT STATUS UNTIL 1945
- MINEFIELDS TAKEN UP FOLLOWING WAR
- FOLLOWING WAR USED BY VARIOUS ARMY ACTIVITIES



MINE CASEMATE NUMBER 2.

- BUILT UNDER OLD CAPE HENRY LIGHTHOUSE
- BUILT IN 1933 AS A FORWARD HARBOR DEFENSE C. P.
- REDESIGNATED AS MINE CASEMATE NO. 1
- MINE CASEMATE DIRECTLY CONTROLLED MINEFIELD
- MAINTAINED BY BATTERY E, 2D COAST ARTILLERY
- ONLY USED DURING MANEUVERS IN PEACETIME
- IN 1940 REDESIGNATED AS MINE CASEMATE NO.2
- BY 31 DECEMBER 1941 NINE MINE GROUPS IN PLACE
- IN 1941 MAINTAINED BY BATTERY E, 2D COAST ARTILLERY
- CASEMATE ALTERED FOR GAS PROOFING
- USE IN WORLD WAR II UNKNOWN AT THIS TIME
- MINEFIELDS TAKEN UP FOLLOWING WAR
- FOLLOWING WAR USED BY ARMY AS STORAGE SITE



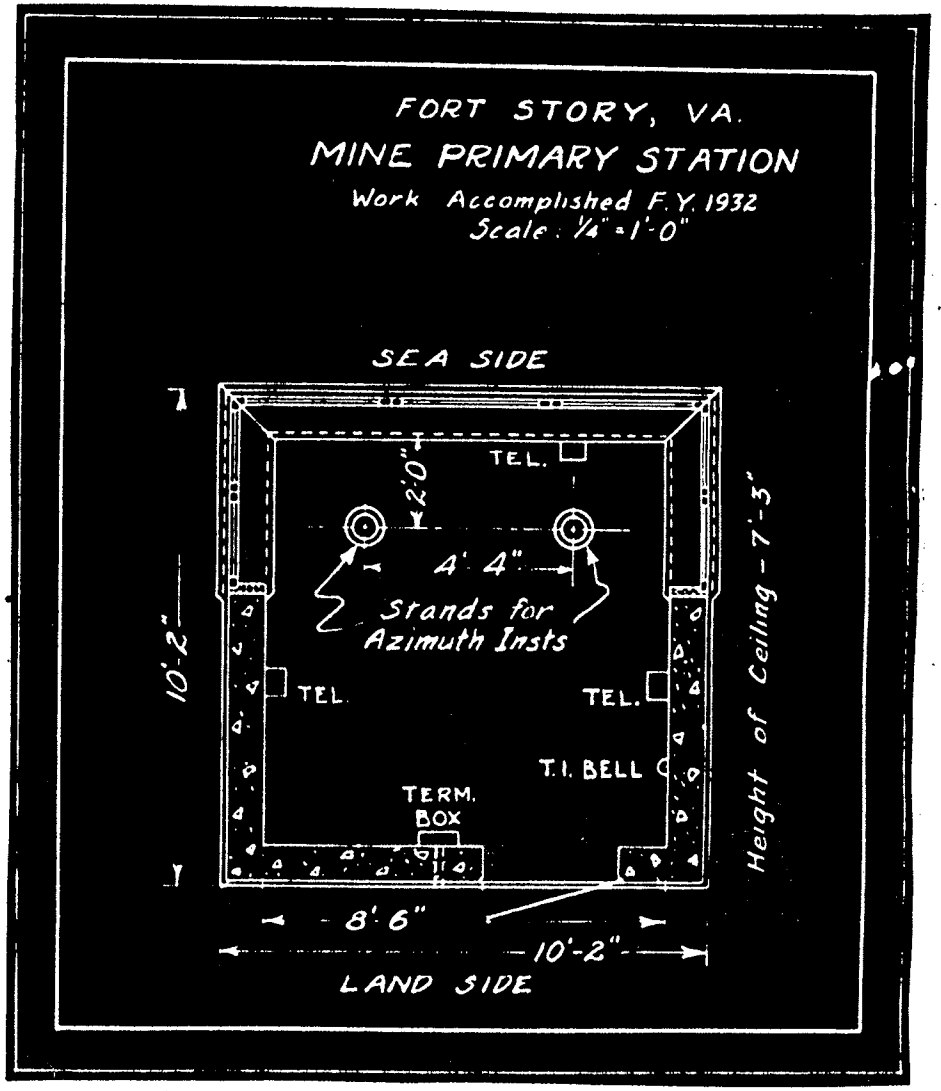
Obsolete ?

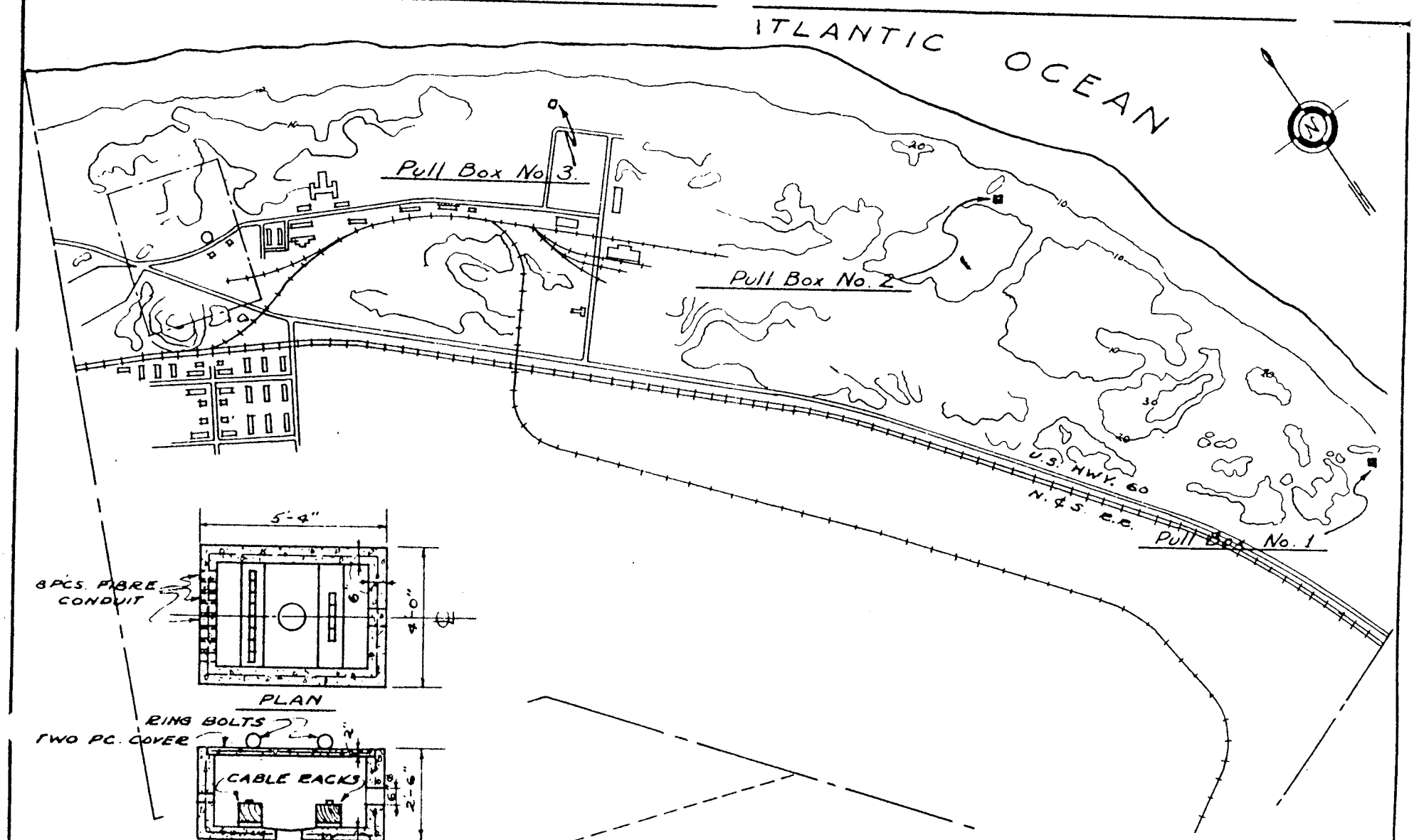
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo structures)

Form 2. Submitted October 28, 1932.

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VA.
STRUCTURE - MINE PRIMARY STATION

Location	On sand dune, about 200 Ft. West of Shell Room # 8
Date of Transfer	October 21, 1932.
Cost to that Date	$920.50
Type of Construction	Concrete
How concealed	Not concealed
How protected	Not protected
Height of concealment	- - -
Height of protection	- - -
Conspicuous at ... yards	5,000 yards
Source of electric current	None
Kilowatts required	- - -
Type of Lighting fixtures	None
How Heated	Not heated
Connected to water mains	No
Connected to sewer mains	No
Type of Latrine	None
Permanent or temporary installation	Permanent
Present Condition	Good
Reference of Site	72.11 M.L.W.
Reference of Instrument Axis	77.00 M.L.W.
Type of observing instrument	Azimuth Instrument, Mod. (1910.
Type of Plotting Board	None
Type of Data Transmission	Telephones
Cost of data transmission equipment	$ 175.90





CONCRETE, CABLE PULL BOXES FOR MINE INSTALLATION FT. STORY, VA.

SCALE: AS SHOWN DATE: FEB. 1941

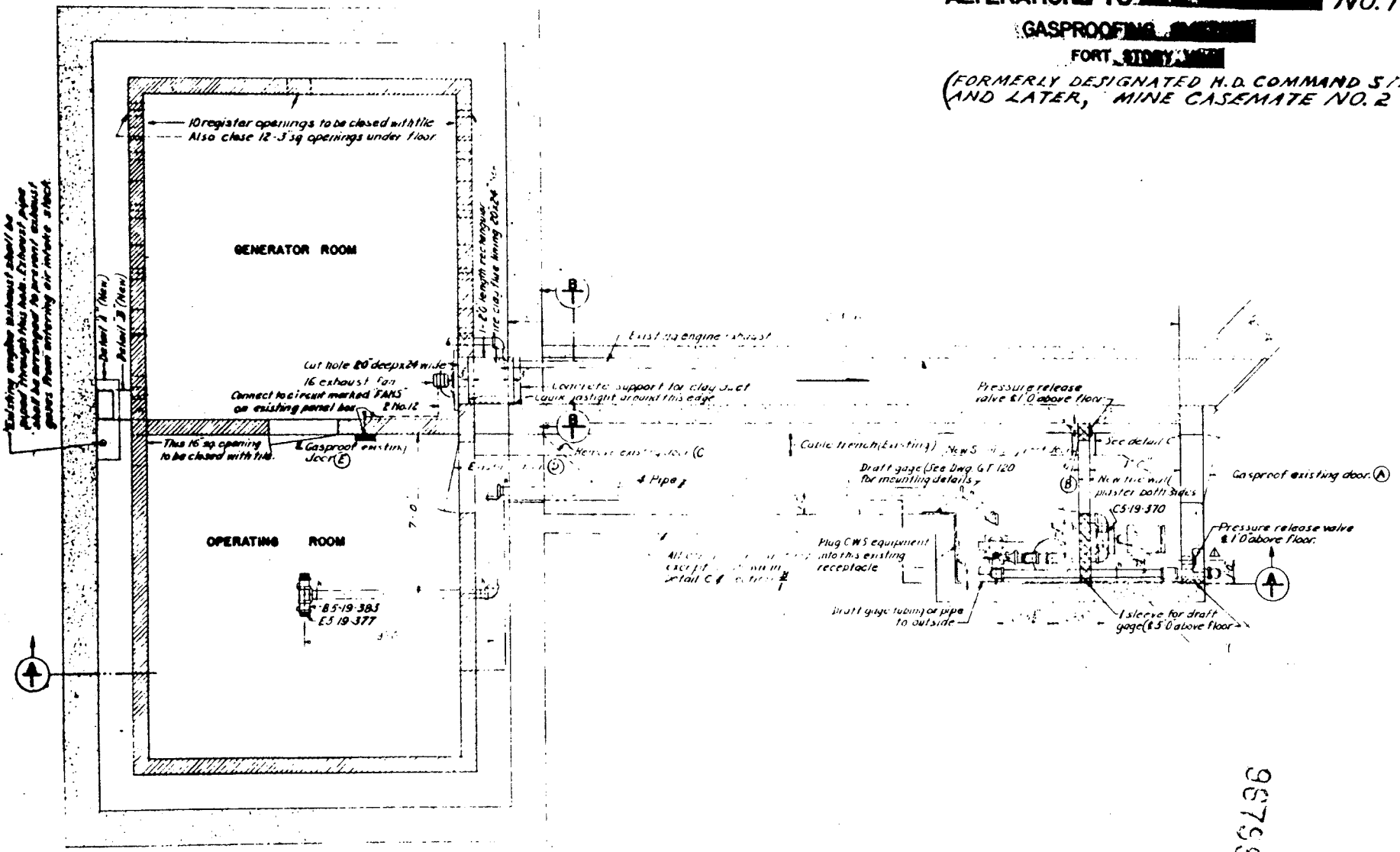
U.S. ENGINEER OFFICE
NORFOLK, VA.

ALTERATIONS TO [redacted] NO. 1

GASPROOFING [redacted]

FORT [redacted]

(FORMERLY DESIGNATED H.D. COMMAND 5/A. AND LATER, MINE CASEMATE NO. 2)



PLAN

66736

20. 10 (Sec.) 96799

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

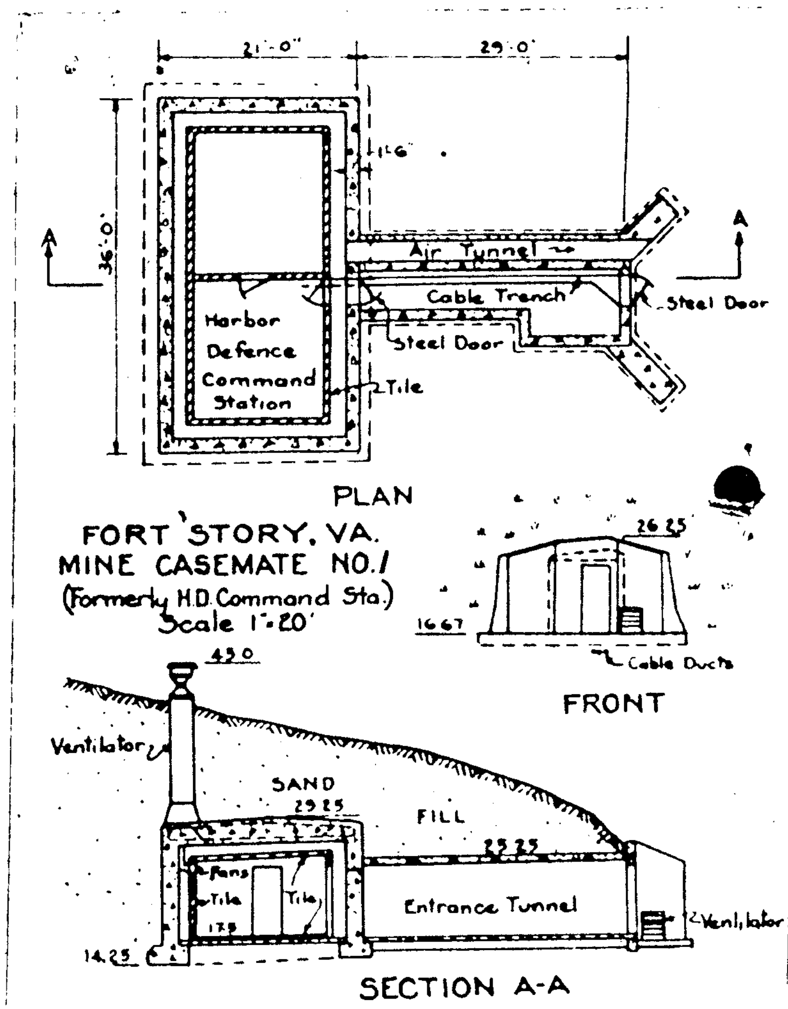
96799

CONFIDENTIAL

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
STRUCTURE: MINE CASEMATE NO. 1,
(FORMERLY HARBOR DEFENSE COMMAND STATION
AND LATER MINE CASEMATE NO. 2)

Form 2 Corrected to 29 February 1944

Location	South of old lighthouse - Parcel A, Fort Story, Va.	Type of data transmission equipment	Telephones when installed
Date of transfer	June 1, 1933		
Cost to date	Contract . . . . $6,789.00 Power Cable & Engineer Labor . . . . 141.75 Total $6,930.75	Cost of data transmission equipment	$1,936.60
		Cost of installing data transmission equipment	To be installed by C.A.C.
Type of construction	Reinforced concrete		
Walls around rooms	12" x 12" x 8" T. C. Tile		
Ceiling over rooms	3" x 12" x 18" Book Tile		
How concealed	By sand hill		
How protected	By splinter proof reinforced concrete cover and 10' of sand		
Height above concealment	Entirely concealed from sea		
Height above protection	Protected from fire at sea		
Conspicuous at .... yards	Not conspicuous		
Source of electric current	A-C commercial power		
Kilowatts required	About 5 KW		
Type of lighting fixtures	Wheeler-Vapolux Semi-Indirect		
How heated	Receptacles provided for Electric Heaters		
Connected to water mains	No		
Connected to sewer mains	No		
Type of latrine	None		
Permanent or temporary installation	Permanent		
Present condition	Good		
Reference of site	(15'-0)		



FS-1204

CONFIDENTIAL

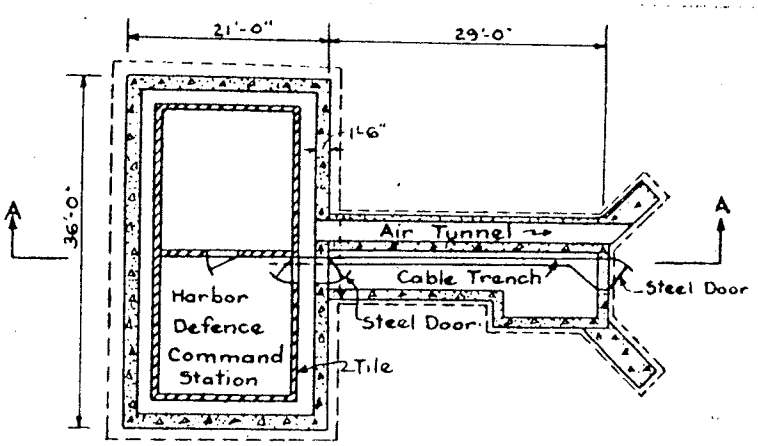
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire Control or Torpedo Structures)

Form 2. Corrected to January 16, 1941.

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
STRUCTURE - HARBOR DEFENSE COMMAND STATION

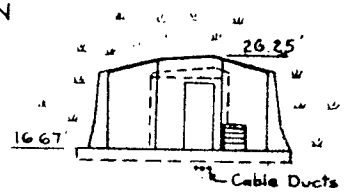
Location	South of old lighthouse - Parcel A, Fort Story, Va.
Date of transfer	June 1, 1933
Cost to date	Contract . . . . . $6,789.00 Power Cable & Engineer Labor . . . . . 141.75 Total $6,930.75
Type of Construction	Reinforced Concrete
Walls around Rooms	12" x 12" x 8" T. C. Tile
Ceiling over Rooms	3" x 12" x 18" Book Tile
How concealed	By sand hill
How protected	By splinter proof reinforced concrete cover and 10' of sand
Height above concealment	Entirely concealed from sea
Height above protection	Protected from fire at sea
Conspicuous at ..... yards	Not conspicuous
Source of electric current	A-C commercial power
Kilowatts required	About 5 KW
Type of lighting fixtures	Wheeler-Vapolux Semi-Indirect
How heated	Receptacles provided for Electric Heaters
Connected to water mains	No
Connected to sewer mains	No
Type of latrine	None
Permanent or temporary installation	Permanent
Present Condition	Good
Reference of Site	(15'-0)

Type of date transmission equipment	Telephones when installed
Cost of data transmission equipment	$1,936.60
Cost of installing data transmission equipment	To be installed by C.A.C.

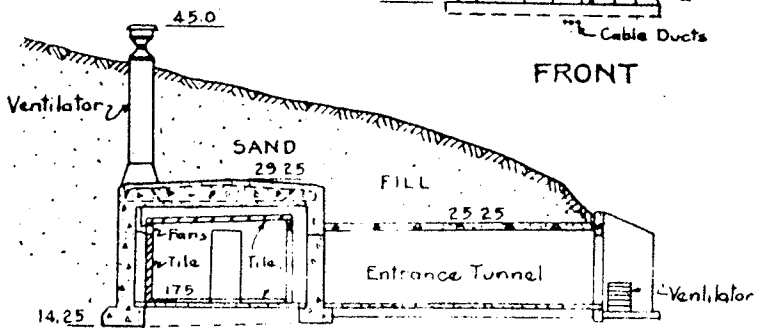


PLAN

FORT STORY, VA.
MINE CASEMATE NO.2
(Formerly H.D. Command Sta.)
Scale 1"=20'



FRONT



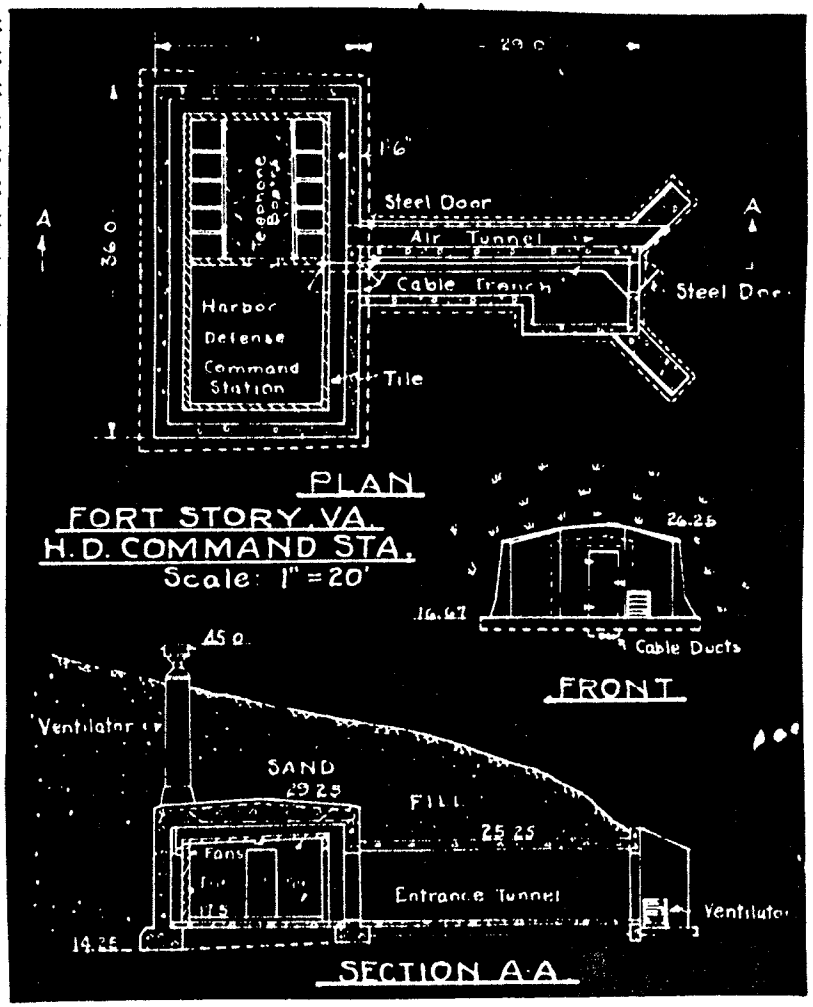
SECTION A-A

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

Form 2. Submitted June 2, 1933.

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA.
STRUCTURE - HARBOR DEFENSE COMMAND STATION

Location	South of old lighthouse - Parcel A, Fort Story, Va.
Date of Transfer	June 1, 1933. (See C.E. 665 (E.,H. Ches.) 149)
Cost to date	Contract ..... $6,789.00 Power Cable & Engineer Labor ..... 141.75 Total $6,930.75
Type of Construction	Reinforced Concrete
Walls Around Rooms	12" x 12" x 8" T. C. Tile
Ceiling Over Rooms	3" x 12" x 18" Book Tile
How Concealed	By sand hill
How protected	By splinter proof reinforced concrete cover and 10' of sand
Height above concealment	Entirely concealed from sea
Height above protection	Protected from fire at sea
Conspicuous at ..... yards	Not conspicuous
Source of electric current	A-C commercial power
Kilowatts required	About 5 KW
Type of lighting fixtures	Wheeler-Vapolux Semi-Indirect
How heated	Receptacles provided for Electric Heaters
Connected to water mains	No
Connected to sewer mains	No
Type of latrine	None
Permanent or temporary installation	Permanent
Present Condition	Good
Reference of Site	(15-0)
Type of data transmission equipment	Telephones when installed
Cost of data transmission equipment	$1,936.60
Cost of installing data transmission equipment	To be installed by C. A. C.



Superseded; See Form 2 corrected to Jan. 10, 1941

Lands & Plant - See Ltr. 66-359-49

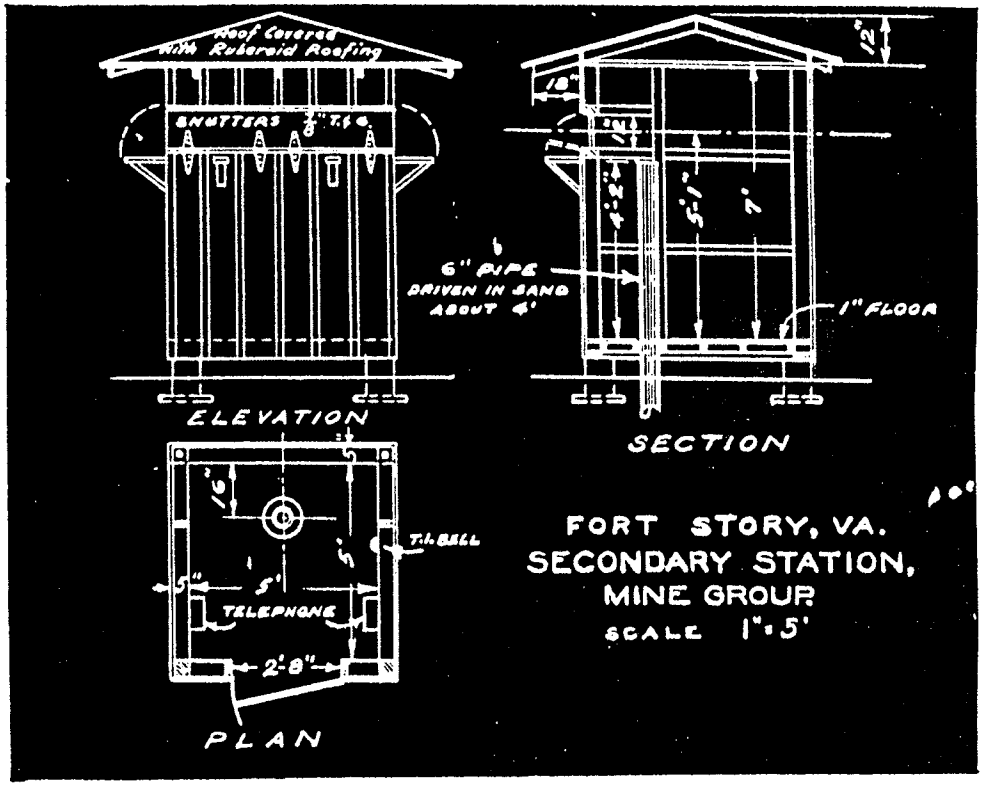
REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures)

COAST DEFENSES OF CHESAPEAKE BAY.
FORT STORY, VIRGINIA.
STRUCTURE: SECONDARY STATION, MINE GROUP.

Parcel "A"

Form 2. Corrected to April 2, 1928.

Location	Parcel A.Fort Story,Va., 375' E.of A.A.Battery	Connected to sewer	No
Date of transfer.	July 26, 1922.	Type of latrines	None
Cost to date.	$750.00	Permanent or temporary installation.	Temporary
Type of construction:		Present condition.	Fair
(a) Roof	Rubberoid covering.	Reference of site	(30') approx.
(b) Remainder of bldg	Wood frame,	Type of data transmission.	Telephones,
How concealed	No concealment.	Cost of data transmission equipment.	Unknown.
How protected.	No protection.		
Height above concealment.	9 feet.		
Height above protection	9 feet		
Conspicuous.	500 yards.		
Source of electric current.	None.		
Kilowatts required.	None.		
Type of lighting fixtures	No fixtures.		
How heated.	No heat.		
Connected to water main.	No.		



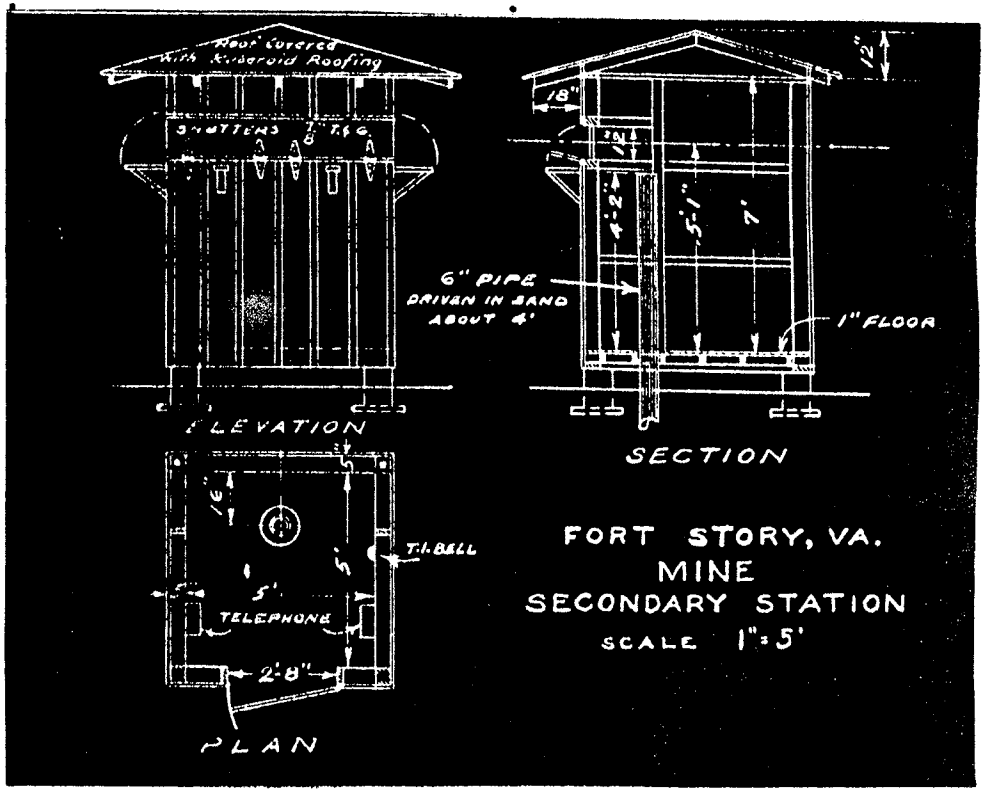
Removed :- See Index Plat revision
Sept. 21, 1934

REPORT COMPLETED WORKS - SEACOAST FORTIFICATIONS

COAST DEFENSES OF CHESAPEAKE BAY,
FORT STORY, VIRGINIA.
STRUCTURE:
TEMPORARY BASE STATION FOR FORT STORY MINE COMMAND.

Form 2. Submitted Superseded

Location	Parcel A. Fort Story, Va.
Date of transfer.	July 26, 1922.
Cost to date.	$750.00
Type of construction:	Wood frame
(a) Roof	Ruberoid covering.
(b) Remainder of bldg.	Wood frame.
How concealed	No concealment.
How protected.	No protection.
Height above concealment.	9 feet.
Height above protection.	9 feet
Conspicuous.	500 yards.
Source of electric current.	None.
Kilowatts required.	None.
Type of lighting fixtures.	No fixtures.
How heated.	No heat.
Connected to water main.	No.
Connected to sewer	No
Type of latrines	None
Permanent or temporary installation.	Temporary
Present condition.	Fair
Reference of site	(30') approx.
Type of data transmission.	Telephones.
Cost of data transmission equipment.	Unknown.



SHEET

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Fire Control or Torpedo Structures)
Form 2 Submitted May 8, 1930

COAST DEFENSES OF CHESAPEAKE BAY,
FORT STORY, VIRGINIA,
ADDITION TO FIRE CONTROL SYSTEM

Location	As shown on accompanying blue-print 1-C
Date of transfor	May 6, 1930
Cost to date of trenching and laying all cables, installing F.C. equipment in buildings	$1,847.31
Type of cables	
(a) Main cables	50 and 30 pair plas
(b) Aux. cables	10 pair plas
How protected	Cable trenched at a minimum depth of 2 Ft.
Permanent or temporary Installation	Permanent
Condition	Good
Type of data transmission	Telephone
Date of transfer	May 6, 1930
Cost of data transmission equipment	Unknown

Print marked 1 - C shows additions to Fire Control System as installed in F.Y. 1929 and 1930.

Note: This sheet accompanies Sheet submitted June 19, 1925, covering - Installation of Phones, Routing of Cables, etc.

Composite replica report by F.L. Tyler Feb. 1999

REPORT OF COMPLETED WORKS-SEACOAST FORT
(Fire Control or torpedo Structures)

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY,VIRGINIA
STRUCTURE: MINE CASEMATE NO. 1

Form 2

CONFIDENTIAL

corrected to 1944

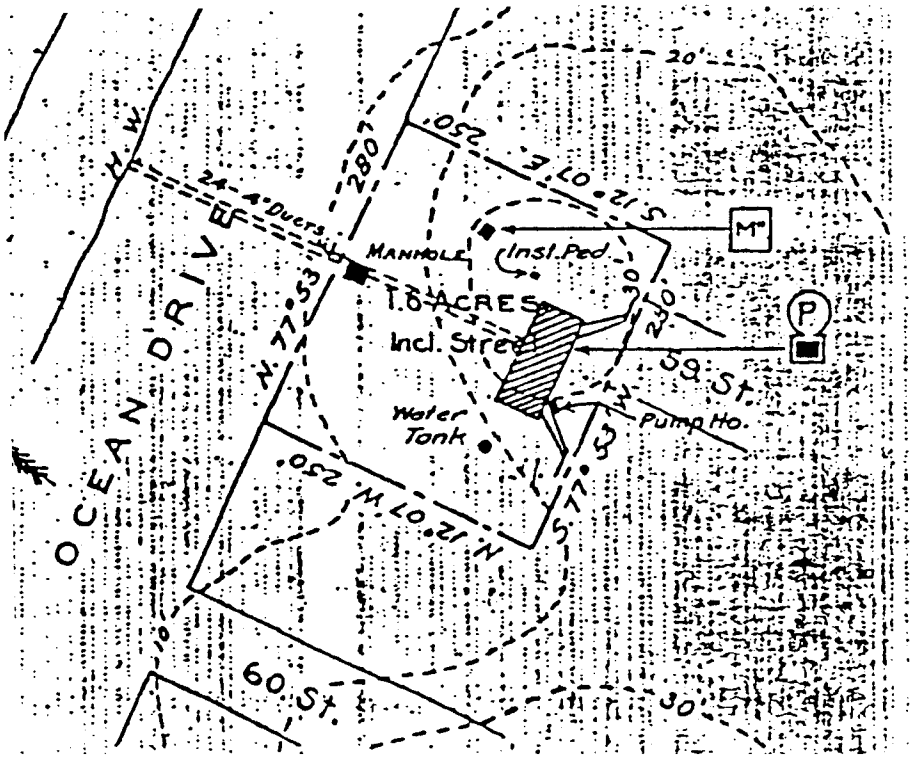
Location : Parcel D-4
Date of transfer: possible 1930s
Type of Construction: Reinf con
Walls around rooms
Ceiling over rooms
How concealed: By sand hill
How protected: By reinf concrete and sand

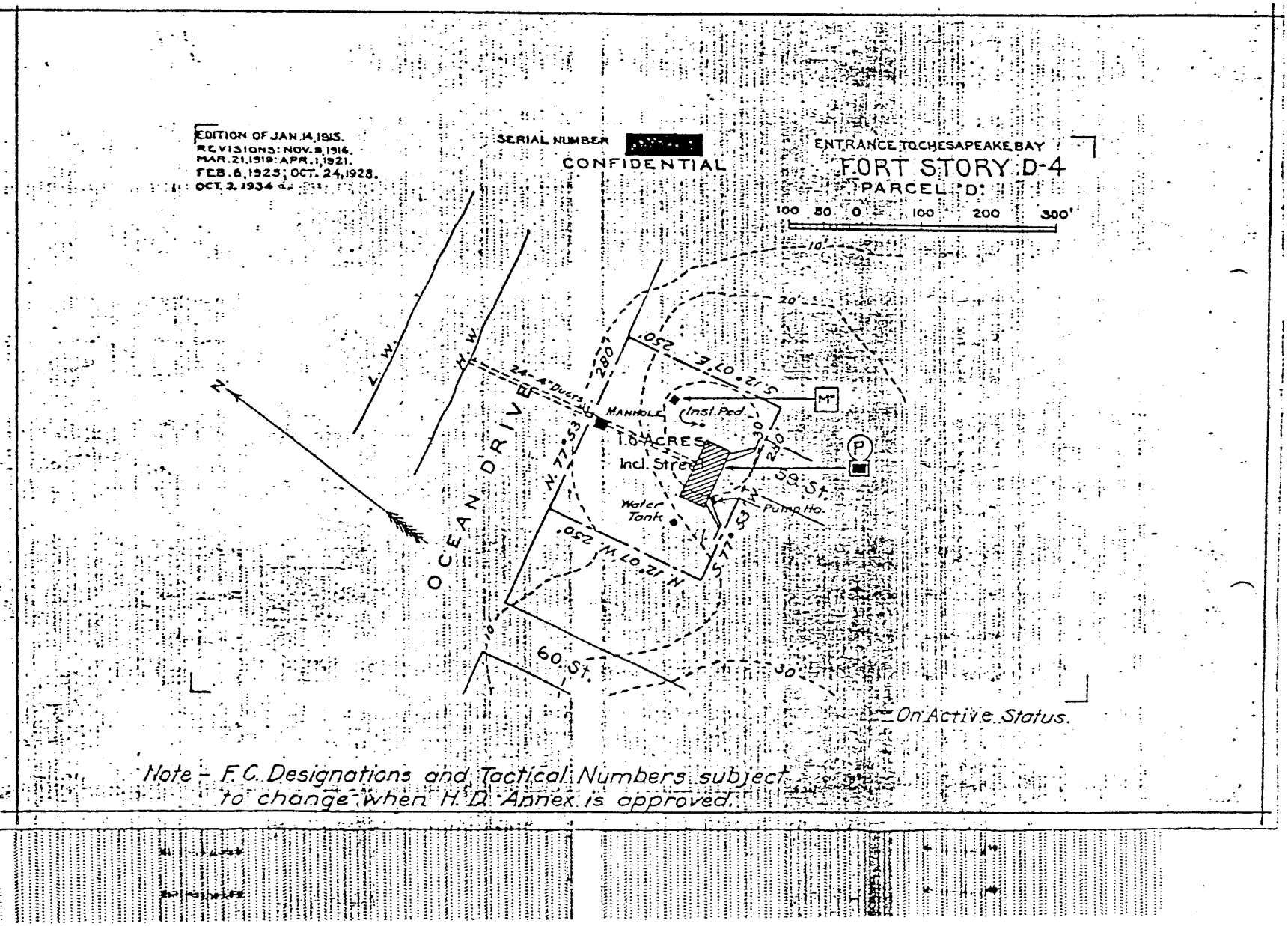
Type of data transmission: telephones
Cost of data transmission equipment
Cost of installing data transmission equipment

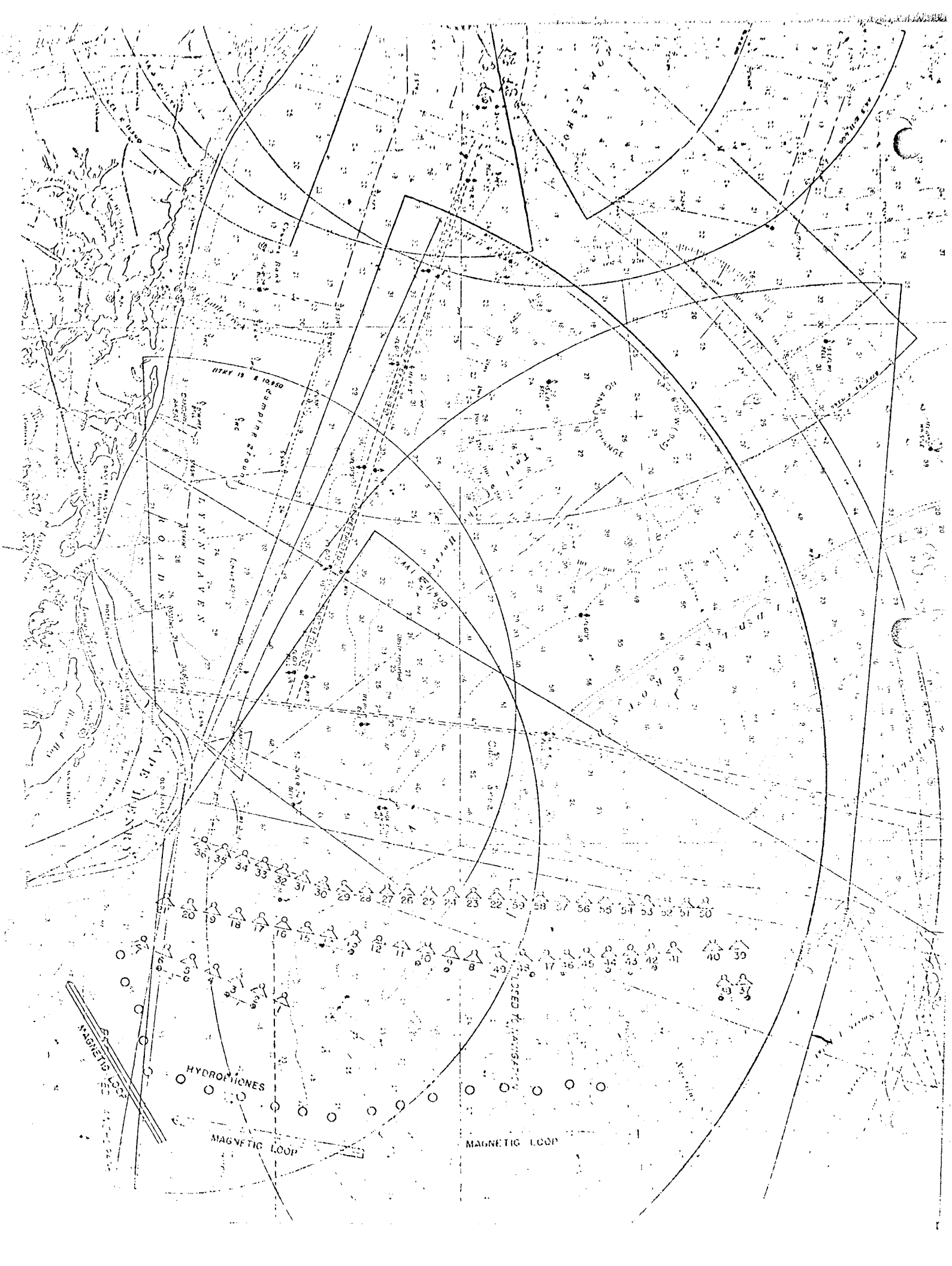
Height above concealment: Entirely concealed from sea
Height above protection : Protected from fire at sea
Conspicous at .... yards : Not conspicous
Source of electric current A-C commercial power
Killowatts required
Type of lighting fixture
How heated

connected to water mains
connected to sewer mains
Type of latrine
Permanent or temporary installation : Permanent
Present condition : Good
Reference of site:

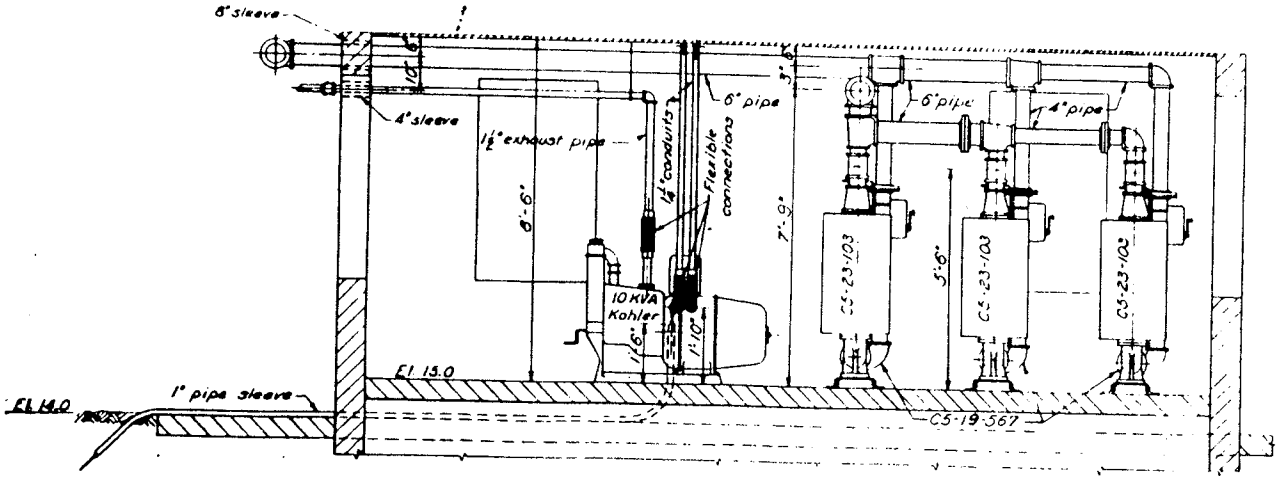
CONFIDENTIAL



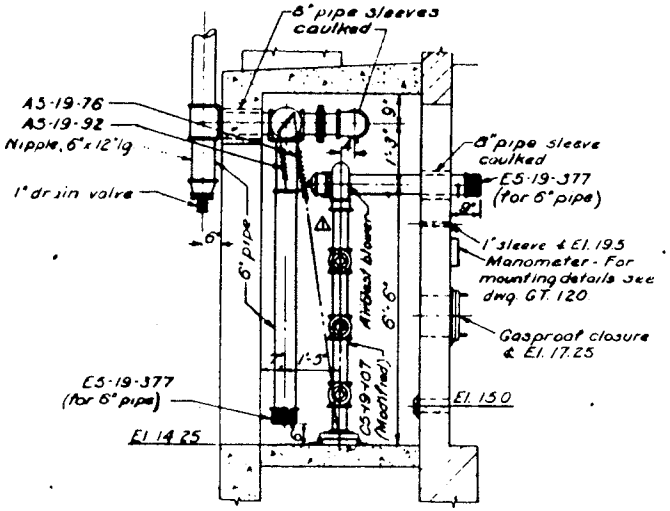

EDITION OF JAN. 14, 1915.
REVISIONS: NOV. 8, 1916.
MAR. 21, 1919: APR. 1, 1921.
FEB. 6, 1925; OCT. 24, 1928.
OCT. 3, 1934
SERIAL NUMBER [redacted]
CONFIDENTIAL
ENTRANCE TO CHESAPEAKE BAY
FORT STORY D-4
PARCEL "D"
100 80 0 100 200 300'
L. W.
H. W.
OCEAN DRIVE
Ducts
MANHOLE
Insl. Pad
1.8 ACRES
Incl. Street
Water Tank
Pump Ho.
59 St.
60 St.
N 77° 53' W 280'
S 12° 07' E 250'
N 12° 07' W 250'
S 77° 53' E 280'
10'
20'
30'
On Active Status.
Note - F.C. Designations and Tactical Numbers subject to change when H.D. Annex is approved.


HYDROPHONES
MAGNETIC LOOP
MAGNETIC LOOP

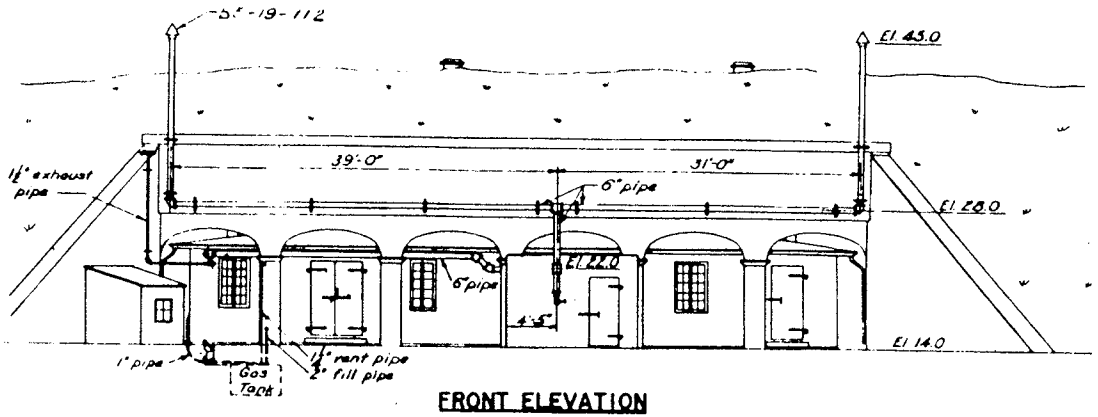
GASPROOFING
MINE CASEMATE NO.2
FORT STORY, VA.
SHEET 2 OF 2



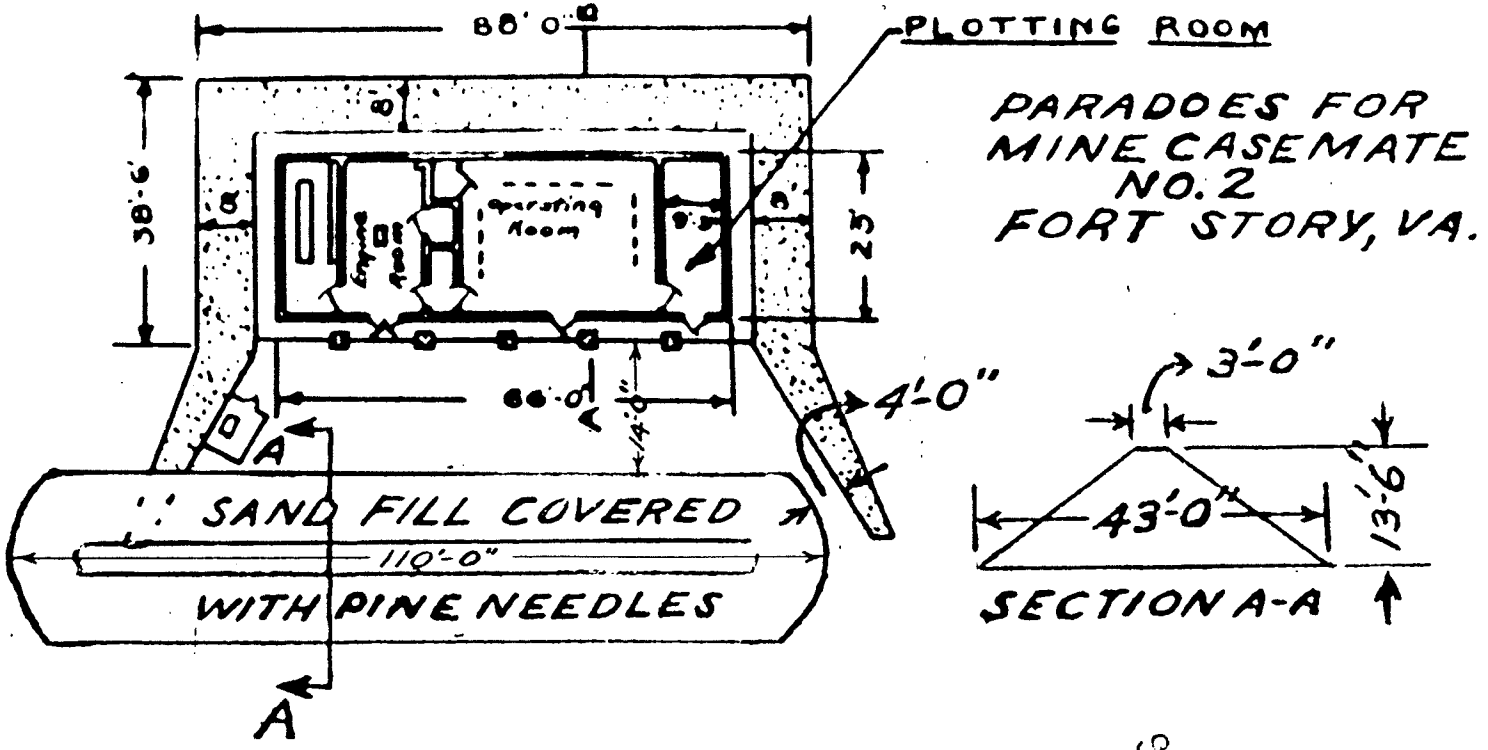
SECTION A/5



SECTION B/5



FRONT ELEVATION


88'-0"
38'-6"
25'
PLOTTING ROOM
Operating Room
66'-0"
14'-0"
4'-0"
A
SAND FILL COVERED
110'-0"
WITH PINE NEEDLES
A
PARADOES FOR
MINE CASEMATE
NO. 2
FORT STORY, VA.
3'-0"
43'-0"
13'-6"
SECTION A-A

953

EDITION OF JAN. 14, 1915.
REVISIONS: NOV. 8, 1916.
MAR. 21, 1919: APR. 1, 1921.
FEB. 6, 1925; OCT. 24, 1928.
OCT. 2, 1934

SERIAL NUMBER [redacted]

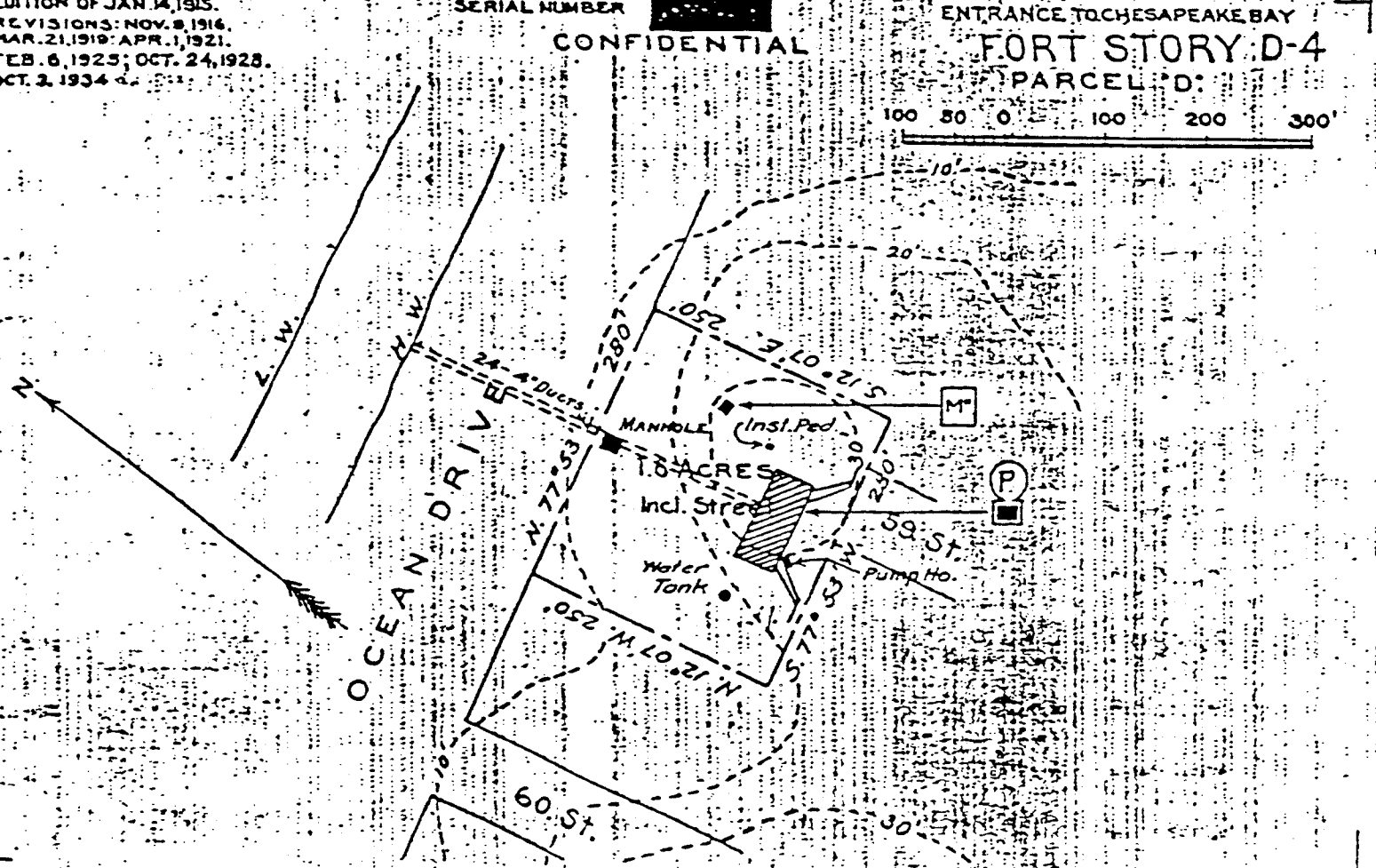
CONFIDENTIAL

ENTRANCE TO CHESAPEAKE BAY

FORT STORY D-4

PARCEL "D"

100 50 0 100 200 300'



On Active Status.

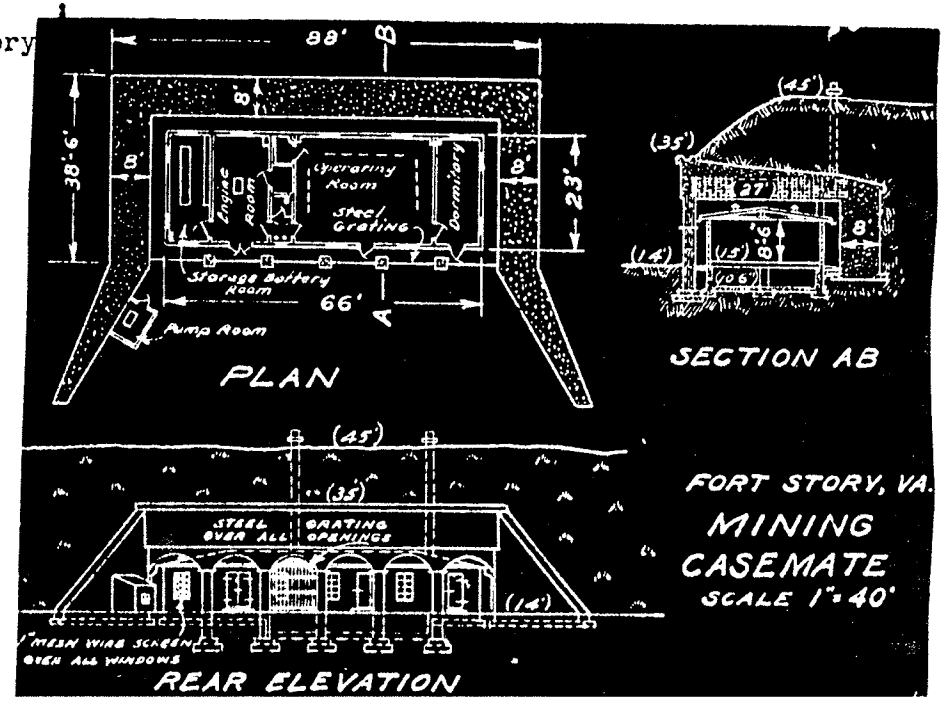
Note - F.C. Designations and Tactical Numbers subject to change when H.D. Annex is approved.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.

COAST DEFENSES OF CHESAPEAKE BAY
FORT STORY, VA. MC-2
STRUCTURE MINING CASEMATE. PARCEL "D"

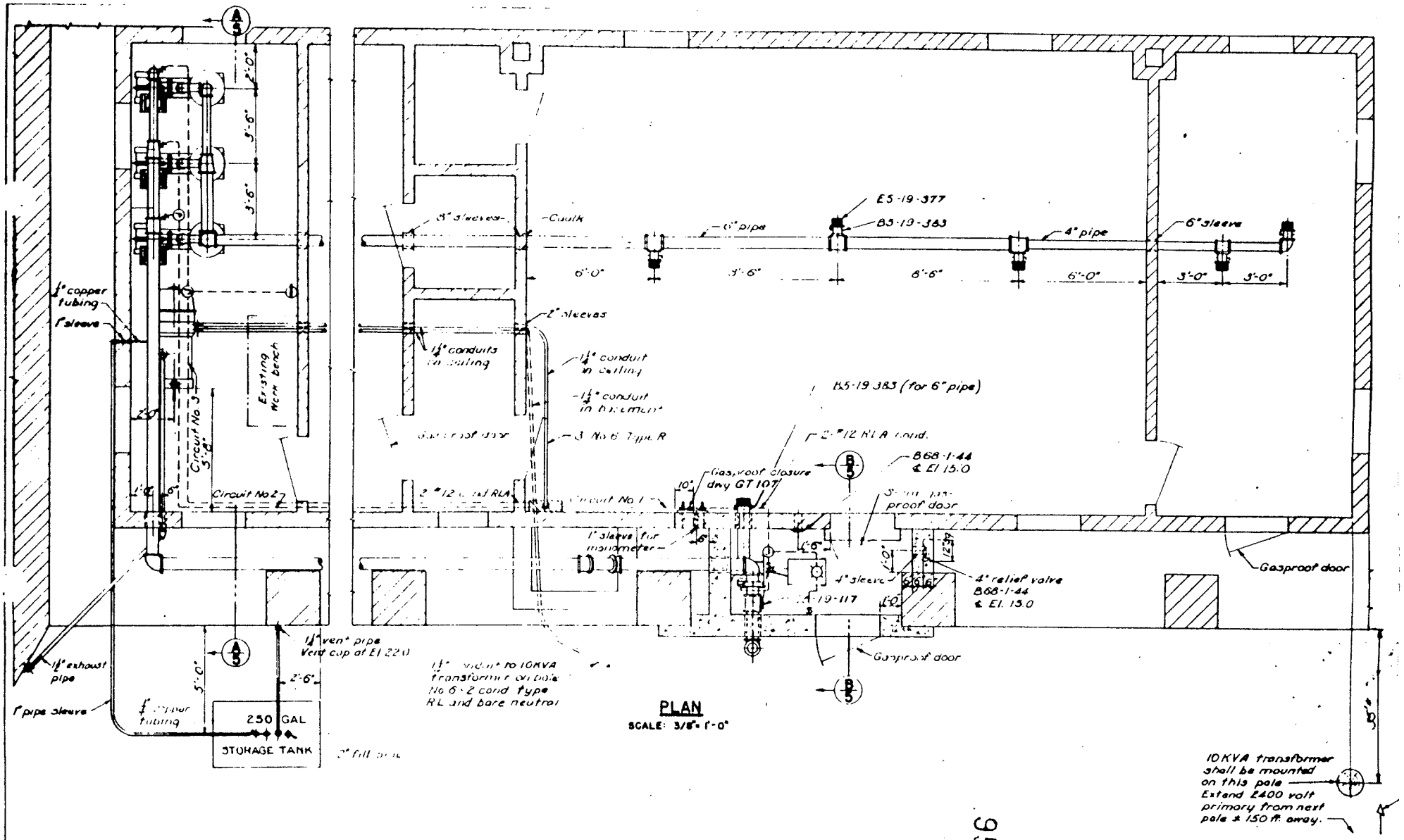
Form 2. Corrected to April 2, 1928.

Location	On Parcel "D" 290' from Atlantic Ave., and across 159th St.	Permanent or temporary installation	Permanent
Date of transfer	June 9, 1922		
Cost to date	$84,537.94	Present condition	Good
Type of construction	Reinforced concrete	Reference of site	(14')
(a) Roof	Wooden roof	Type of data transmission	Telephone
(b) Remainder of bldg.	Concrete		
How concealed	By sand hill	Date of transfer	
How protected	By 8' reinforced concrete bomb-proof cover and sand	Cost of data transmission equipment	Unknown
Height above concealment	Entirely concealed		
Height above protection	Entirely protected		
Conspicuous at_____yards	Not conspicuous		
Source of electric current	5 KW set in engine room		
Kilowatts required	5 KW		
Type of lighting fixtures	Semi-indirect		
How heated	Flues provided for stoves		
Connected to water mains	Water supplied by pumps		
Connected to sewer	Sewer connected to cesspool		
Type of latrines	Syphon jet closet with lavatory		



3 - 2

GASPROOFING
MINE CASEMATE NO. 2
FORT STORY, VA.
SHEET 1 OF 2



PLAN
SCALE: 3/8" = 1'-0"

95376

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

Form 2. Submitted March 22, 1929.

COAST DEFENSES OF CHESAPEAKE BAY.
FORT STORY, VA.
PLOTTING ROOM IN MINING CASE MATE.
(continued).

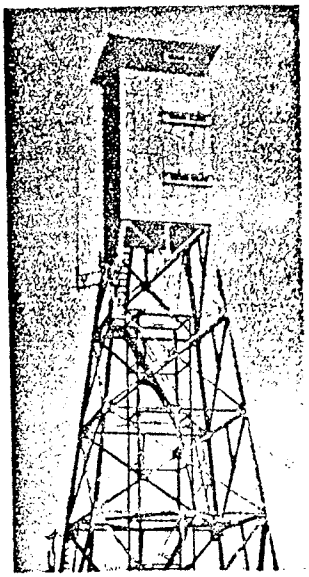
Type of data transmission.	:Common Battery, Artillery type Signal: Corps Wall Telephones.	:
Cost of data transmission equipment	:Unknown.	:

NOTE: Constructed as part of Mining Casemate and Cost not kept separately.

"3. Room in mining casemate, Ft. Story, now used as a plotting room, was originally intended for a dormitory, and was transferred as such to the Coast Artillery under date of June 9, 1922. It has since been made into a plotting room by the Coast Artillery."
2nd ind. from Dist. Engr. Mar. 23, 1929, file C. of E. 660 B (Ches.) 9.

Fort Story Range

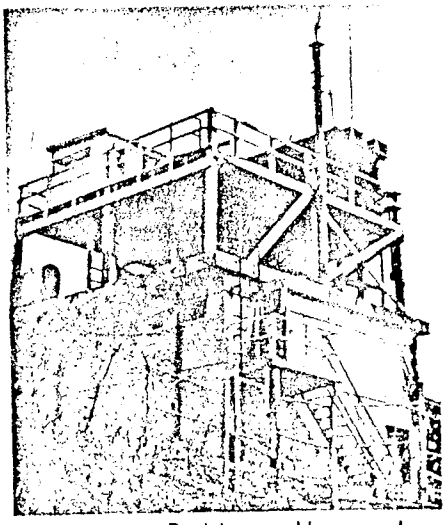
The range at Fort Story provides an ocean environment with water depths up to 85 feet. The plotting is accomplished by using optical charts prepared especially for the location with azimuth readings from each of the three tracking locations. The ship is conned over the units and the plot of the vessel is put on the chart manually.



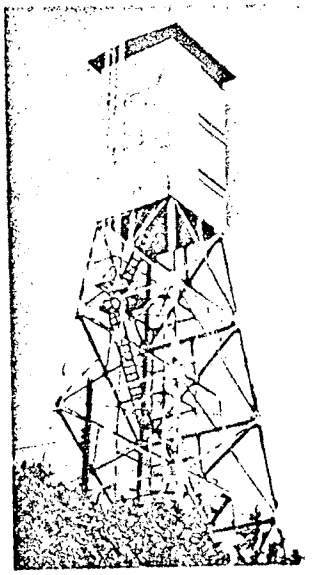
Tower M-2

Ranging Facilities

The facilities at Fort Story include the range building (Battery Worcester) with a plotting station on the platform topside and two 85-ft plotting towers. Tower A is located at 68th Street in Virginia Beach and is 11,673 feet from Battery Worcester. Tower M2 is located at 30th Street on Fort Story and is 9,150 feet from Battery Worcester. This wide separation of the tracking tower provides a good angle of intersection which is necessary for optical plotting. The range building is utilized as a plotting room, monitoring and recording room, and as a communications center. There are at present four submarine cables laid from the range building to points from 2,500 feet to 10,000 feet offshore. Three of these cables are 10,000 feet and terminate in 60 feet of water. Three cables have 26 conductors and one cable has 21 conductors, all of which are available for use for project work by personnel who are interested in an open ocean environment with water depths from 10 to 85 feet. Most of the area has a hard sand bottom, while at the deeper water depths there is a mud buttom as this is the entrance to the Chesapeake Bay Channel. Planting and recovery of underwater ordnance is accomplished by the boats stationed at Fort Monroe. These cables provide a means for readily obtaining recordings of the data on units planted in the area. Accurate plotting is accomplished by the use of specially prepared optical plotting charts.



Battery Worcester



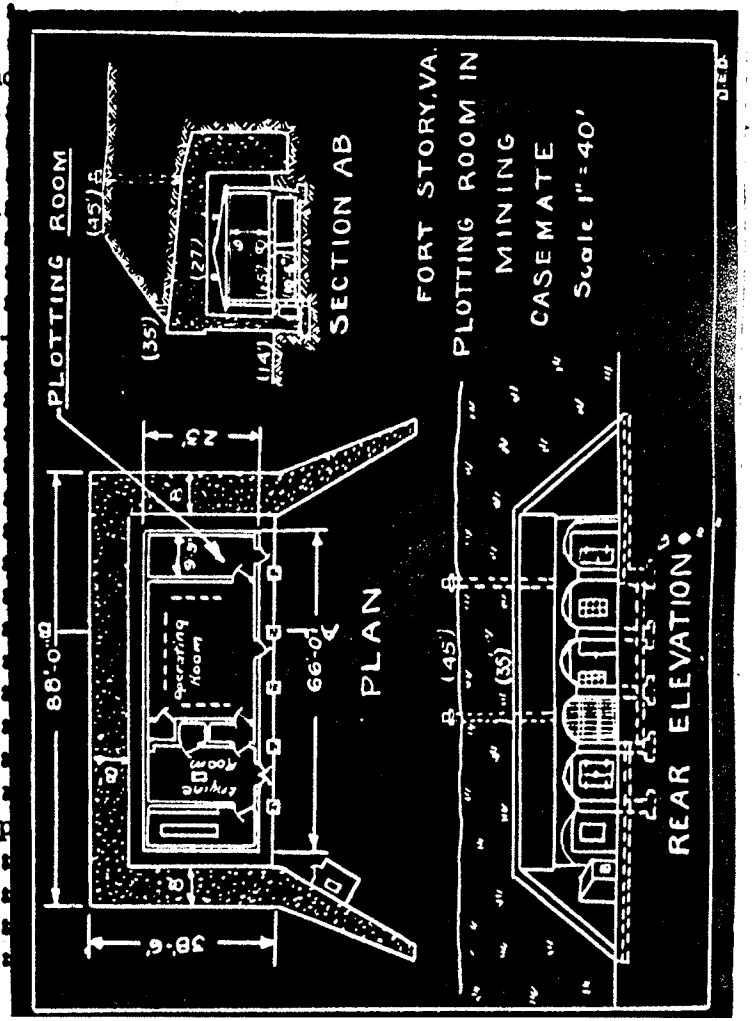
Tower A

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

COAST DEFENSES OF CHESAPEAKE BAY.
FORT STORY, VA.
PLOTTING ROOM IN MINING CASE MATE.

Form 2. Submitted March 22, 1929.

Location	Parcel "D" approx. 1-1/4 miles west of Parcel "A".
Date of transfer	June 9,1922 along with M.C.
Cost to date	(See note.)
Type of construction	Bomb proof type
(a) Roof	Outer roof, reinforced concrete - inner roof of wood frame.
(b) Remainder of structure,	Reinforced concrete.
How concealed..	15' of sand on top and surrounded by sand hill on three sides
How protected	Protected by sand hill on three sides and rear facing concrete highway not protected
Height above concealment	Entirely concealed.
Height above protection	Entirely protected.
Conspicuous at.....yards	Not conspicuous.
Source of electric current	Current furnished by a Sturtevant Type 4-N gasoline driven motor, 4-cyl. furnishing D.C. current, in casemate.
Kilowatts required	.5 K.W. marked on motor generator.
Type of lighting fixtures	Indirect lighting fixtures.
How heated	Stove, household
Connected to water main	Water supplied by pumps
Connected to sewer	Sewer connected to cess pool
Type of latrine	Syphon jet closet with lavatory in M.C.
Permanent or temporary	Permanent.
Present condition..	Good.
Reference to site	14' above M.L.W.
Reference of instrument	Approx. 45' above M.L.W. on top of casemate.
Type of observing instrument	Azimuth Instrument.
Type of plotting board	Whistler-Hearn plotting board, Mod. 1906.

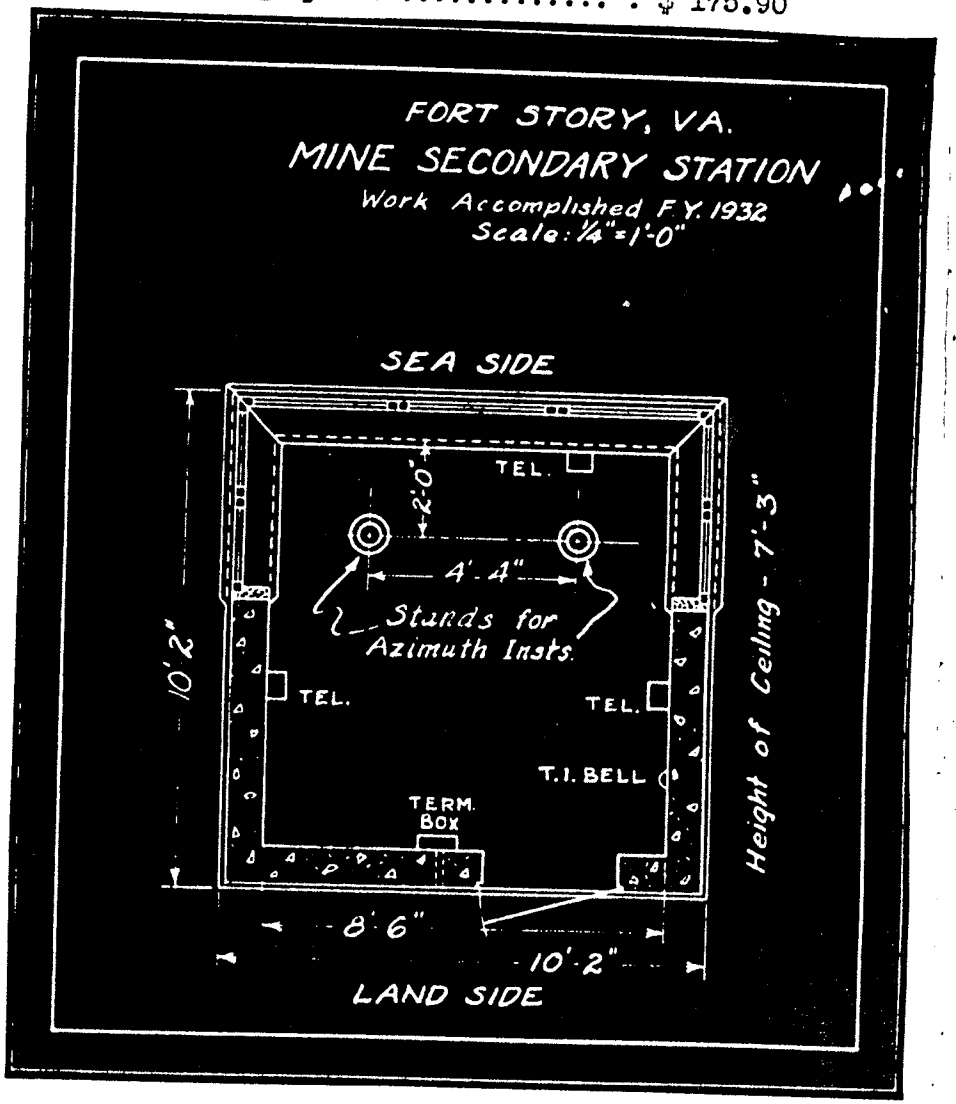


REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo structures)

Form 2. Submitted October 28, 1932.

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VA.
STRUCTURE - MINE SECONDARY STATION

Location	On Sand Dune about 100 Ft. North of Mine Casemate. Parcel "D"
Date of Transfer	October 21, 1932.
Cost to that Date	$920.50
Type of Construction	Concrete
How concealed	Not concealed
Nod protected	Not protected
Height of concealment	- - -
Height of protection	- - -
Conspicuous at ... yards	5,000 yards
Source of electric current	None
Kilowatts required	- - -
Type of lighting fixtures	None
How heated	Not heated
Connected to water mains	No
Connected to sewer mains	No
Type of latrine	None
Permanent or temporary installation	Permanent
Present Condition	Good
Reference of Site	43.04 M.L.W.
Reference of Instrument Axis	47.93 M.L.W.
Type of observing instrument	Azimuth Instrument, Mod. 1910
Type of plotting board	None
Type of Data Transmission	Telephones
Cost of Data Transmission equipment	$ 175.90



640.914 (Che.) 96799

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

96799

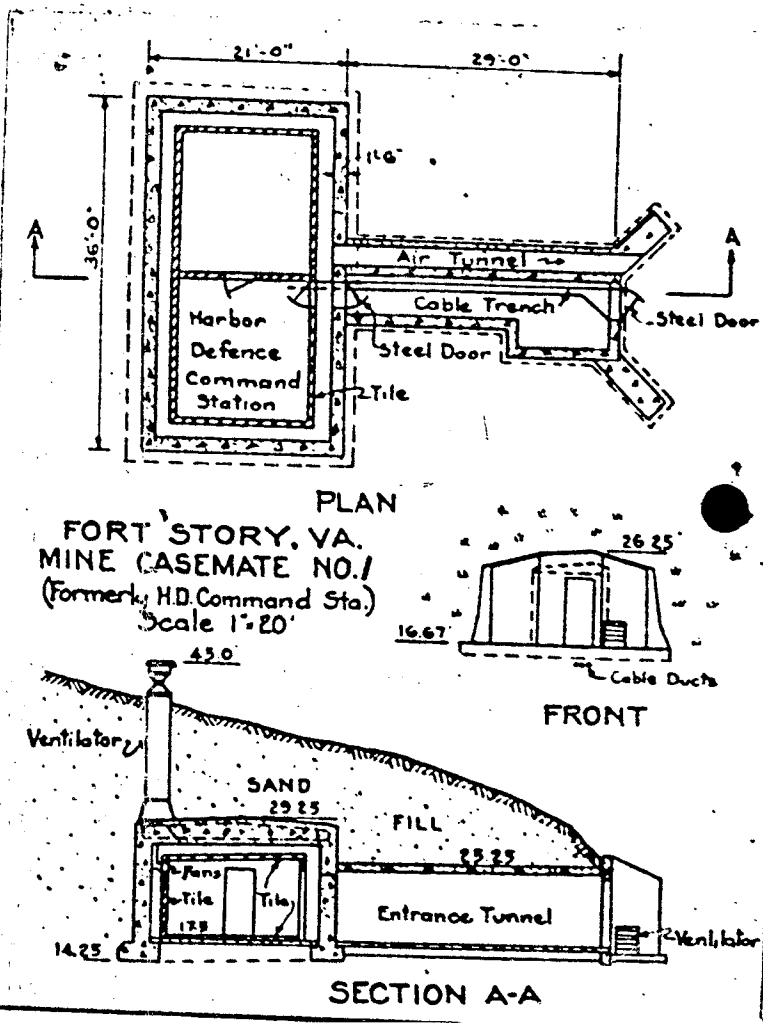
CONFIDENTIAL

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
STRUCTURE: MINE CASEMATE NO. 1,
(FORMERLY HARBOR DEFENSE COMMAND STATION
AND LATER MINE CASEMATE NO. 2)

Form 2 — Corrected to 29 February 1944

Location	South of old lighthouse - Parcel A, Fort Story, Va.
Date of transfer	June 1, 1933
Cost to date	Contract . . . . . $6,789.00 Power Cable & Engineer Labor . . . . . 141.75 Total $6,930.75
Type of construction	Reinforced concrete
Walls around rooms	12" x 12" x 8" T. C. Tile
Ceiling over rooms	3" x 12" x 18" Book Tile
How concealed	By sand hill
How protected	By splinter proof reinforced concrete cover and 10' of sand
Height above concealment	Entirely concealed from sea
Height above protection	Protected from fire at sea
Conspicuous at ..... yards	Not conspicuous
Source of electric current	A-C commercial power
Kilowatts required	About 5 KW
Type of lighting fixtures	Wheeler-Vapolux Semi-Indirect
How heated	Receptacles provided for Electric Heaters
Connected to water mains	No
Connected to sewer mains	No
Type of latrine	None
Permanent or temporary installation	Permanent
Present condition	Good
Reference of site	(15'-0)
Type of data transmission equipment	
Cost of data transmission equipment	
Cost of installing data transmission equipment	
Telephones when installed	$1,936.60
	To be installed by C.A.C.

Corresponding F5-120d



CONFIDENTIAL

Revision:

The designation of this structure has been changed. Formerly designated as Harbor Defense Command Station. New designation, Mine Casemate No. 2.
Telephone booths removed 16 November 1940 and interior walls and ceiling painted:

Labor	$69.80
Material	10.00
	$79.80

Revision:

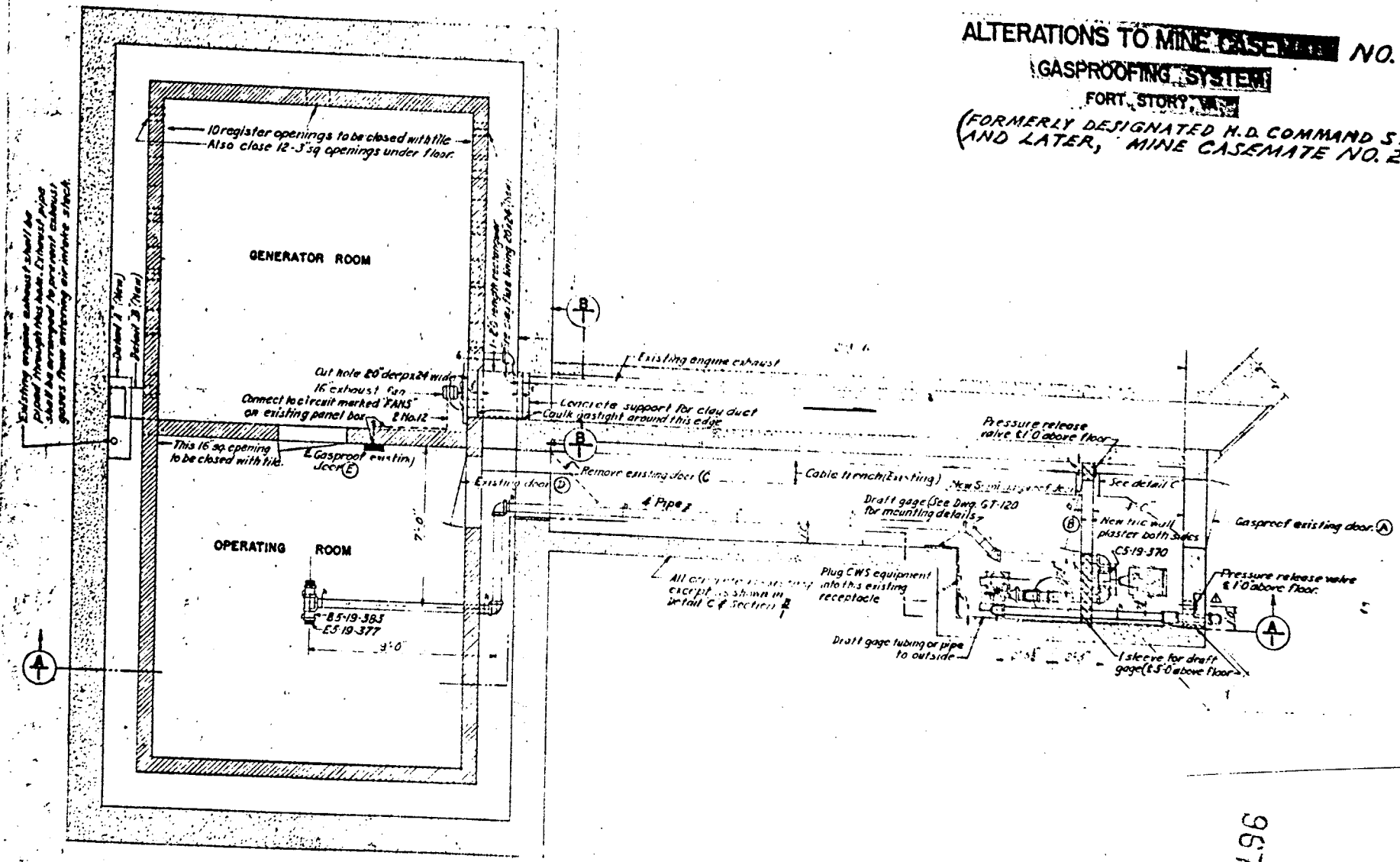
Installation of two 5 KVA Diesel Generating sets by C.A., in March 1941. Cost unknown.

Revision:

Formerly designated as Mine Casemate No. 2. New designation, Mine Casemate No. 1.
Gasproofing of this structure and installation of one CWS unit completed 17 January 1944. See attached sheet "Alterations to Mine Casemate No. 1, Gasproofing System". Cost of this work, $4,238.24

CONFIDENTIAL

ALTERATIONS TO MINE CASEMATE NO. 1
GASPROOFING SYSTEM
FORT STORY, VA.
(FORMERLY DESIGNATED H.D. COMMAND STA. AND LATER, MINE CASEMATE NO. 2)



PLAN

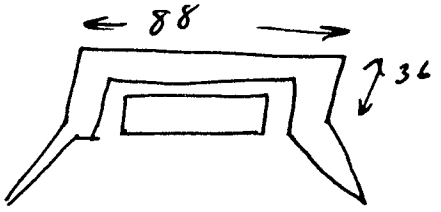
95759

RG 77 A52-87 Box 34 FORT STORY

Chesapeake
17 Aug 44 — [illegible]
3 — 12" guns on DF, MC 895, B de Passy

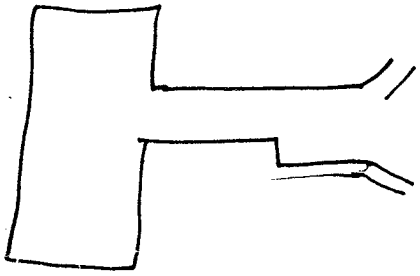
Box 35 471.88 600.05
600.914 = RCW
Ft Wood SCR 296 #7 for Gate
Right next to Bee/CRF

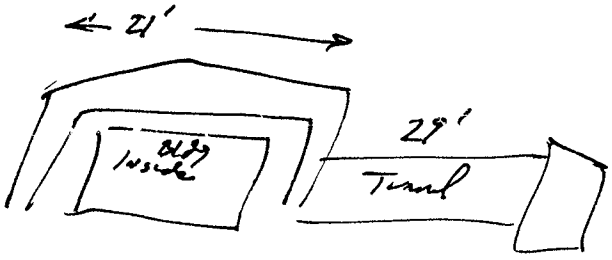
Story MC 2 ex MC only?
159 st + Atlantic ~~Canal~~ Avenue 1944



Bldg made is
8'6 high, 23' x 66'

MC 1 ex HDC Station — by rail lightlines





Mud in Little Creek Naval Base

3 locomotives, Type II, 8 Ton, 56½" gauge
for Pennington & Walker
gasoline Powered, sled to haul ties 18' long

121 km to Bunker. Command 6 Jun 42 Complete 12 Nov 43

G&O.914 (Chas.) 96799

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

96799

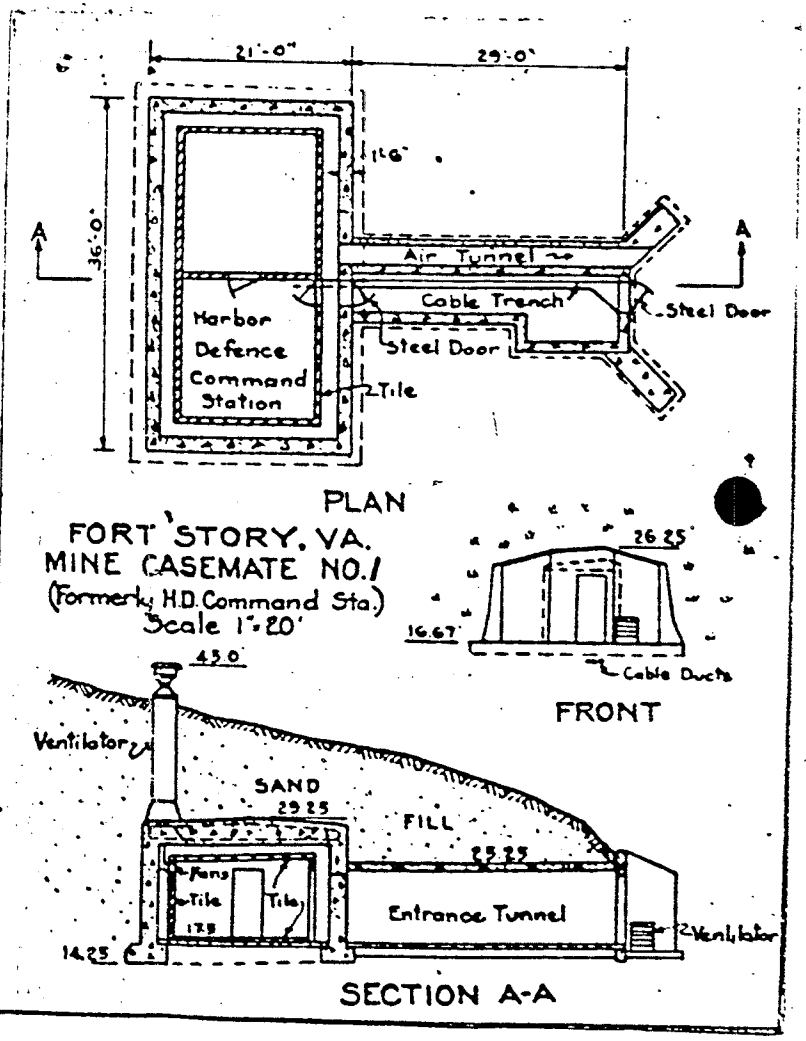
CONFIDENTIAL

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
STRUCTURE: MINE CASEMATE NO. 1,
(FORMERLY HARBOR DEFENSE COMMAND STATION
AND LATER MINE CASEMATE NO. 2)

Form 2 — Corrected to 29 February 1944

Location	South of old lighthouse - Parcel A, Fort Story, Va.
Date of transfer	June 1, 1933
Cost to date	Contract . . . . . $6,789.00 Power Cable & Engineer Labor . . . . . 141.75 Total $6,930.75
Type of construction	Reinforced concrete
Walls around rooms	12" x 12" x 8" T. C. Tile
Ceiling over rooms	3" x 12" x 18" Book Tile
How concealed	By sand hill
How protected	By splinter proof reinforced concrete cover and 10' of sand
Height above concealment	Entirely concealed from sea
Height above protection	Protected from fire at sea
Conspicuous at ..... yards	Not conspicuous
Source of electric current	A-C commercial power
Kilowatts required	About 5 KW
Type of lighting fixtures	Wheeler-Vapolux Semi-Indirect
How heated	Receptacles provided for Electric Heaters
Connected to water mains	No
Connected to sewer mains	No
Type of latrine	None
Permanent or temporary installation	Permanent
Present condition	Good
Reference of site	(15'-0)
Type of data transmission equipment	
Cost of data transmission equipment	
Cost of installing data transmission equipment	
Telephones when installed	$1,936.60
	To be installed by C.A.C.

Changed to FS-120L



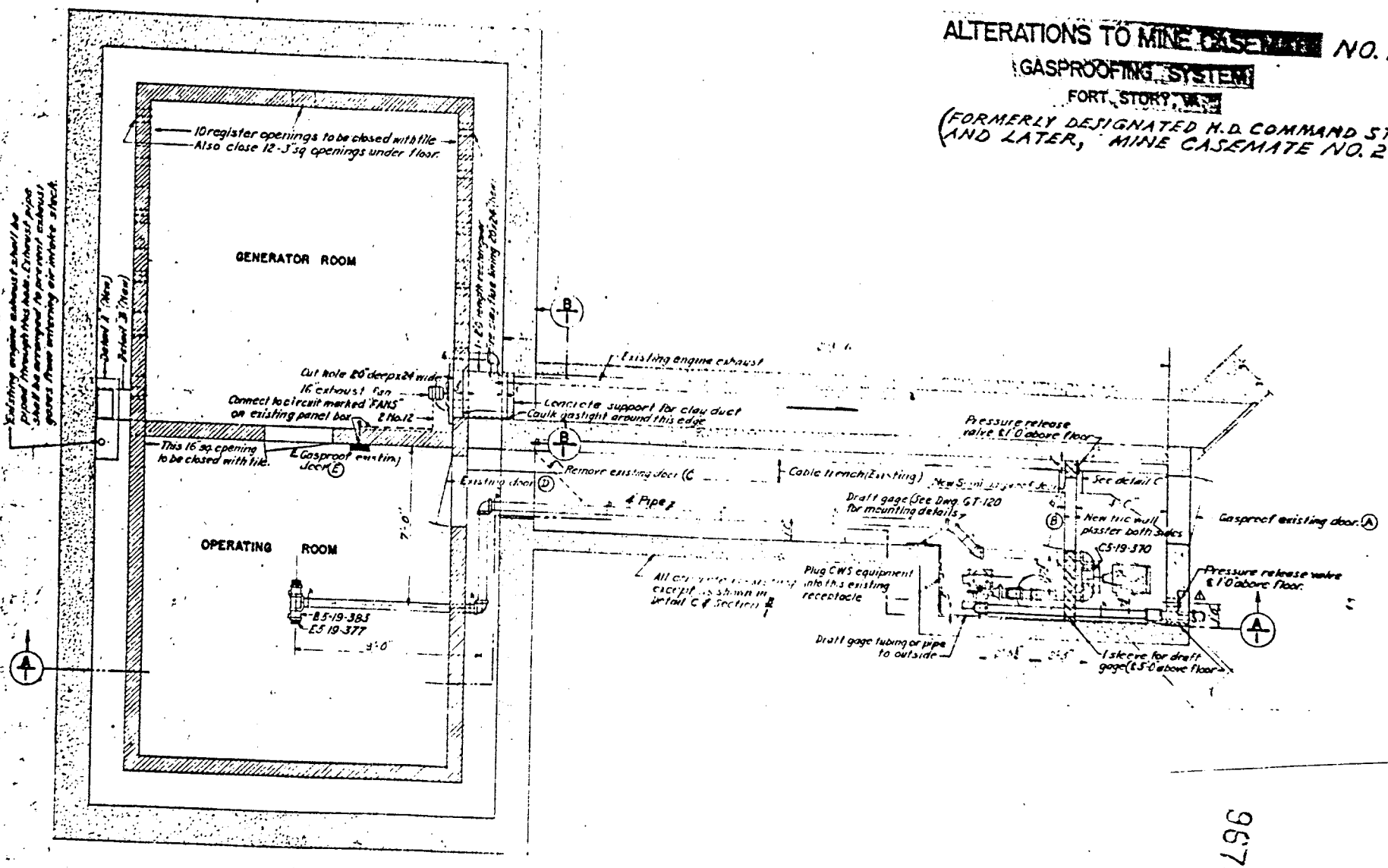
CONFIDENTIAL

ALTERATIONS TO MINE CASEMATE NO. 1

GASPROOFING SYSTEM

FORT STORY, VA.

(FORMERLY DESIGNATED H.D. COMMAND STA. AND LATER, MINE CASEMATE NO. 2)



PLAN

96799

Revision:

The designation of this structure has been changed. Formerly designated as Harbor Defense Command Station. New designation, Mine Casemate No. 2.
Telephone booths removed 16 November 1940 and interior walls and ceiling painted:

Labor	$69.80
Material	10.00
	$79.80

Revision:

Installation of two 5 KVA Diesel Generating sets by C.A., in March 1941. Cost unknown.

Revision:

Formerly designated as Mine Casemate No. 2. New designation, Mine Casemate No. 1.
Gasproofing of this structure and installation of one CWS unit completed 17 January 1944. See attached sheet "Alterations to Mine Casemate No. 1, Gasproofing System". Cost of this work, $4,238.24

Subj: MINE CASEMATES
Date: Tuesday, February 2, 1999 1:30:20 PM
From: zink@Oswego.EDU
To: FTylerVB2@aol.com

Beneath the old Lighthouse:MC=Mine Casemate
Apparently this was MC#1, then HD Command Station, then MC#2
I have RCW (structural drawings) dated 29 February 1944 and alterations to
gas proofing system, both copyable.

Bldg.900 is .8 miles from GRANITE. Labelled MC#2 on some maps. I have no drawings.
Why two stations called MC#2, I do not know.

Also a note that rooms on Coast Artillery Road, back of Battery Pennington, served as temporary MC. No dates given and none of the drawings show that MC.

I have more mine info -- not aimed at Fort Story by generic.

Bob Zink

---------- Headers ----------
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by air-zb05.mail.aol.com (v56.24) with SMTP; Tue, 02 Feb 1999 13:30:20 -0500
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by rly-zb01.mx.aol.com (8.8.8/8.8.5/AOL-4.0.0)
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Subj: ADD ON
Date: Tuesday, February 2, 1999 1:36:26 PM
From: zink@Oswego.EDU
To: FTylerVB2@aol.com

HD map of 2-1-43 shows Bldg. 900 as MC in service; lighthouse as part of HD command.

Bob

---------- Headers ----------

Return-Path: <zink@Oswego.EDU>
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Subj: AND MORE
Date: Tuesday, February 2, 1999 2:13:34 PM
From: zink@Oswego.EDU
To: FTylerVB2@aol.com

1941 report shows Granite and Lighthouse MCs in use.

1945 Brig.Gen Tilton HISTORICAL SUMMARY says Lighthouse MC built 1933; Granite in 1944.

Drawings were in post engineer office about 1975. I wish I had picked up a full set then.

Bob

Charlie Robbins was stationed at Damn Neck when I was looking and put me
onto post engineer's office. I think he can be, currently, reached at
ROBBINS@COMPTEK.COM

Do you want me to send what I have by snail mail?

---------- Headers ----------

Return-Path: <zink@Oswego.EDU>
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940.914 (Cha.) 96799

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

96799

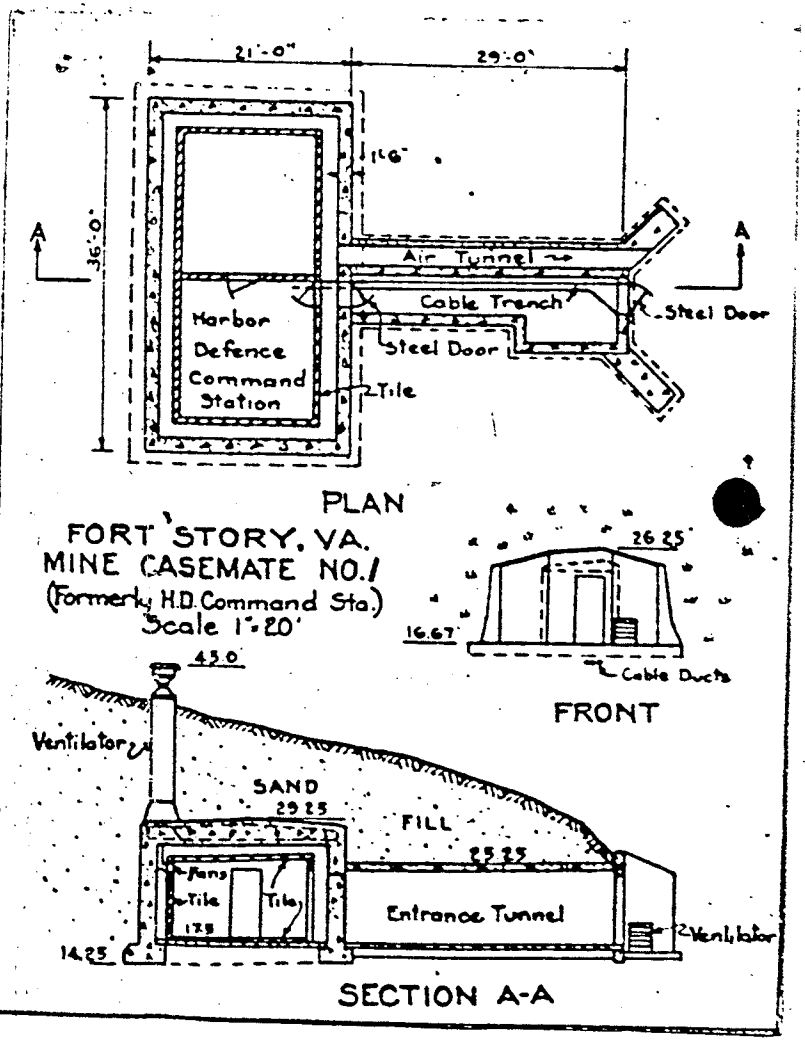
CONFIDENTIAL

CONTROL APPROVAL SYMBOL NO. SPECH-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
STRUCTURE: MINE CASEMATE NO. 1,
(FORMERLY HARBOR DEFENSE COMMAND STATION
AND LATER MINE CASEMATE NO. 2)

Form 2 — Corrected to 29 February 1944

Location	South of old lighthouse - Parcel A, Fort Story, Va.
Date of transfer	June 1, 1933
Cost to date	Contract . . . . . $6,789.00 Power Cable & Engineer Labor . . . . . 141.75 Total $6,930.75
Type of construction	Reinforced concrete
Walls around rooms	12" x 12" x 8" T. C. Tile
Ceiling over rooms	3" x 12" x 18" Book Tile
How concealed	By sand hill
How protected	By splinter proof reinforced concrete cover and 10' of sand
Height above concealment	Entirely concealed from sea
Height above protection	Protected from fire at sea
Conspicuous at ..... yards	Not conspicuous
Source of electric current	A-C commercial power
Kilowatts required	About 5 KW
Type of lighting fixtures	Wheeler-Vapolux Semi-Indirect
How heated	Receptacles provided for Electric Heaters
Connected to water mains	No
Connected to sewer mains	No
Type of latrine	None
Permanent or temporary installation	Permanent
Present condition	Good
Reference of site	(15'-0)

Type of data transmission equipment	Telephones when installed
Cost of data transmission equipment	$1,936.60
Cost of installing data transmission equipment	To be installed by C.A.C.



Transferring FS-1204

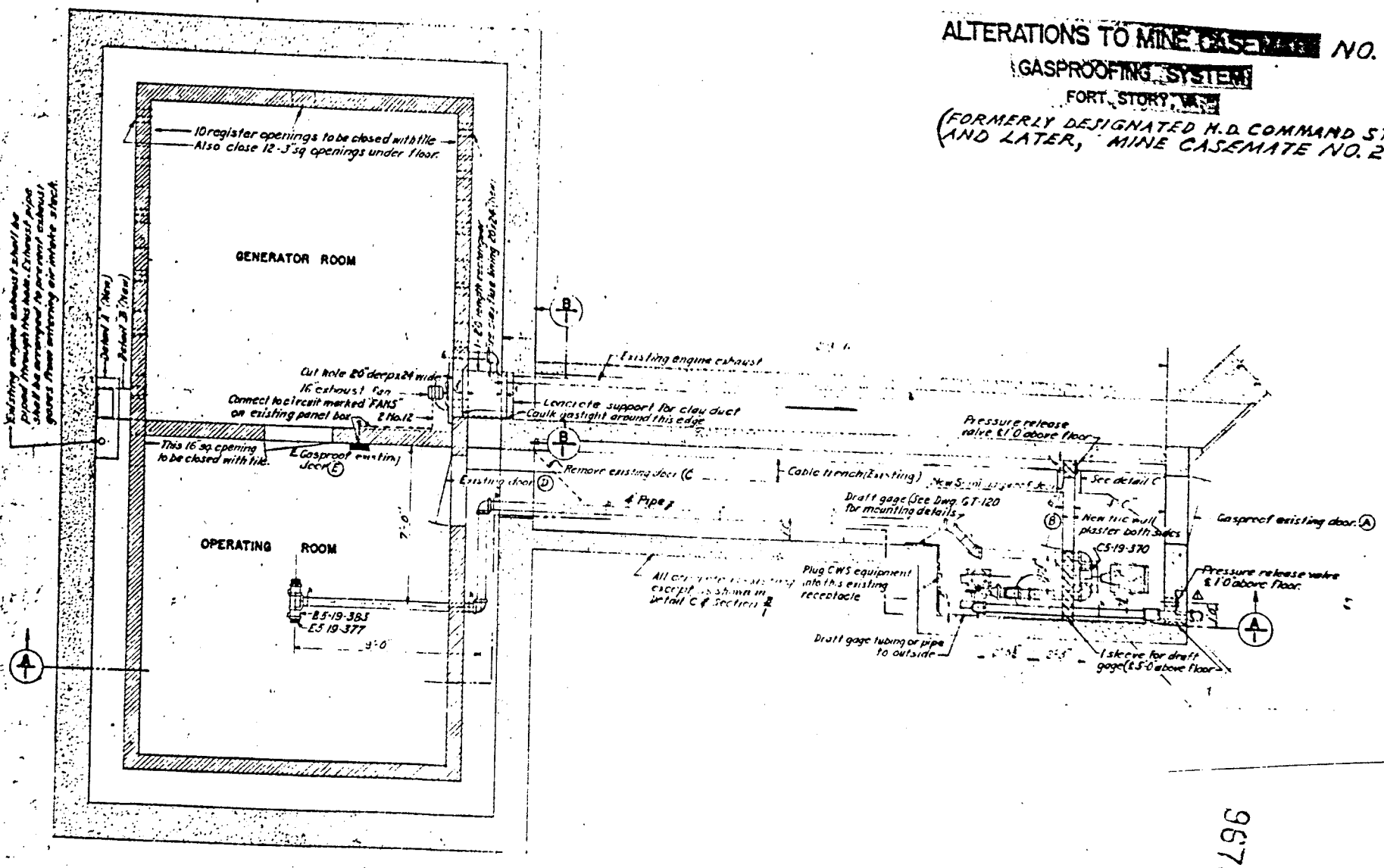
CONFIDENTIAL

ALTERATIONS TO MINE CASE[redacted] NO. 1

GASPROOFING SYSTEM

FORT STORY, VA.

(FORMERLY DESIGNATED H.D. COMMAND STA. AND LATER, MINE CASEMATE NO. 2)



PLAN

96759

Revision:

The designation of this structure has been changed. Formerly designated as Harbor Defense Command Station. New designation, Mine Casemate No. 2.

Telephone booths removed 16 November 1940 and interior walls and ceiling painted:

Labor	$69.80
Material	10.00
	$79.80

Revision:

Installation of two 5 KVA Diesel Generating sets by C.A., in March 1941. Cost unknown.

Revision:

Formerly designated as Mine Casemate No. 2. New designation, Mine Casemate No. 1.

Gasproofing of this structure and installation of one CWS unit completed 17 January 1944. See attached sheet "Alterations to Mine Casemate No. 1, Gasproofing System". Cost of this work, $4,238.24

the guns of fort story: battery X

In June 1942 a pair of 75 mm guns were designated as battery X. The battery remained online until November 1943 when the battery designation was discontinued

c/246

LOCATION UNKNOWN.

11/3/99

OCG5010

R[illegible]way artillery at Fort Story: 8-inch guns and 12-inch mortars

65.-FIRING BIG GUNS AT FORT STORY, CAPE HENRY, NEAR NORFOLK, VA.

46236

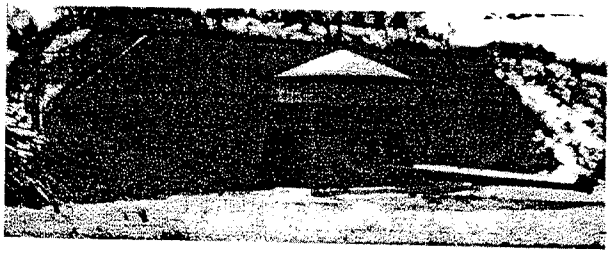
Fort Story Big during WWII

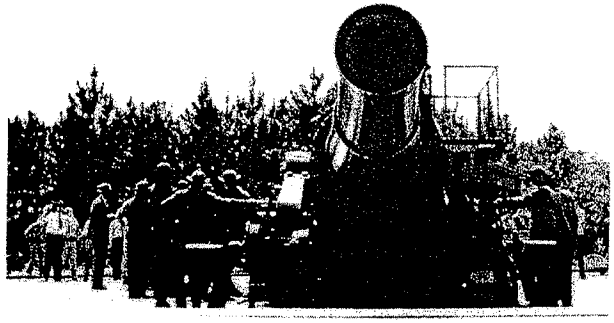
As WWII approached, temporary batteries were added to Btry Pennington: 4 12" railway mortars, four 8" Ry & 4 155mm guns. Btry Pennington "B" with its 2 16" howitzers, became Battery Walke in 1940. The theater, chapel, fire station, officer & NCO clubs were built at this time. In 1942, permanent batteries were being finished. Btry #5 with 2 6" guns. Btry #21 (2 90mm guns). Railway batteries were phased out in late 42. In 43, Btry #1 (Ketcham) & Btry #4, each with 2 16" Navy rifles. Btry #10 had 2 6" guns. Btry #19, 2 3" guns. The underground plotting room at Btry #1 was completed in 43. Btry #31 with 3 3" AA guns was in 1944. By the end of 44, Story had a total of 35 guns, a mine btry #7 and 19 seacoast searchlights.

In Dec 41, headquarters of the Harbor Defense Comd was moved from Monroe to Story once again. Custis and Wool were added to the network of gun forts. (see p. 1) About 10,000 sq ft was acquired from the Pennsylvania RR adjacent to the RR ferry on Little Creek to berth mine planters attached to Harbor Defense for mine field operations. The unit that commanded Story was the 246th Coast Artillery (Harbor Defense) called up from the Virginia Natl Guard, Sep 16 1940, while they were completing 3 wks (instead of 2) of training at Story. Most of the Regiment was at Story including the band. The three battalions had a total of 11 task batteries (A-K, K being searchlights).

Another unit coming to Ft Story was the 71st CA (Anti-Aircraft) Regt, with an automatic weapons battalion and a gun battalion. They used the 3" AA guns. Hq was in today's post hq.

Perhaps an interesting sidelight to Cape Henry history, was the sinking of several American ships by German-planted mines off-shore.



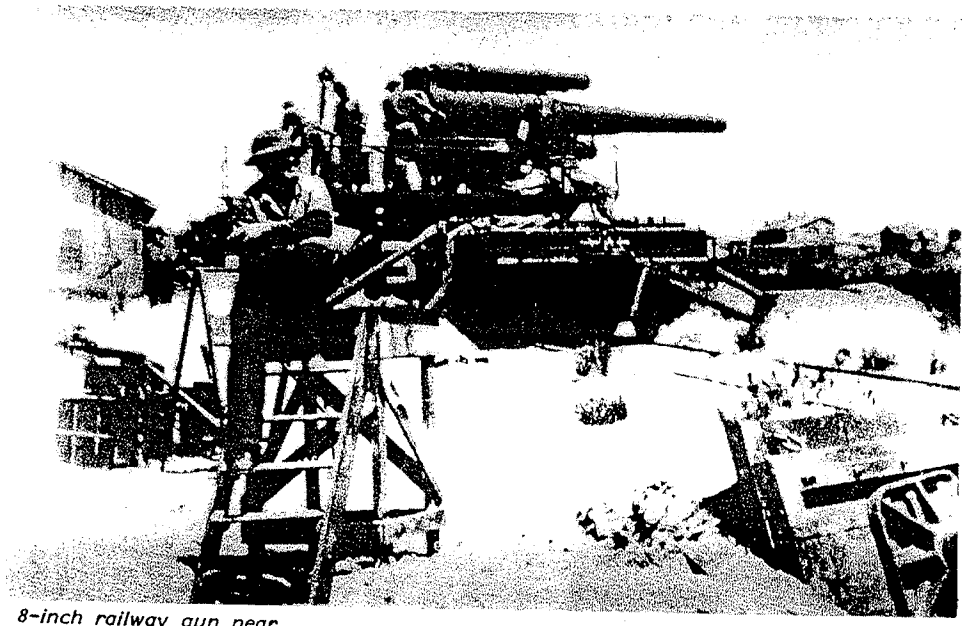


Top: Casemate #1 being constructed, Dec 17,1941; center, the long barrel of a 16-inch Navy rifle at Battery #1; bottom: gun crew of the big 16" coast defense howitzer receives visitors (left) Jun 10, 1941.

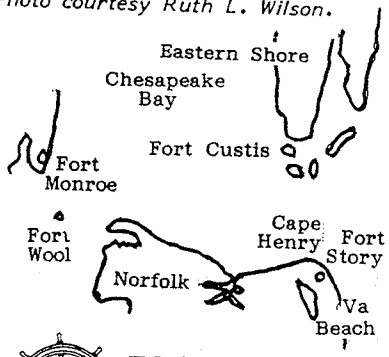
On Mar 1, 1944, the Chesapeake Bay sector of the Harbor Defenses was inactivated. By September. Fort Story was a giant convalescent hospital. When it closed on Mar 15, 1946, the hospital had accommodated more than 13,472 patients. The capacity was 1,800 beds, but at one time there were 2,700 patients on the roll, some 900 on convalescent furloughs. The assignment of the 458th Amphibious Truck Company (DUKW) in 1946 and the designation as a TC training post in 1948 ushered in a new era.

2349-89

Fort Story- Chesapeake Outer Defense



8-inch railway gun near South gate in 1939 or 1940. Photo courtesy Ruth L. Wilson.



FACT SHEET
HIST 3B March 89
USATCFE
PUBLIC AFFAIRS
OFFICE 878-4920
FORT EUSTIS, VIRGINIA 23604

Published under authority of AR 360-81
OVER 125 TOPICS, AT BLDG 214

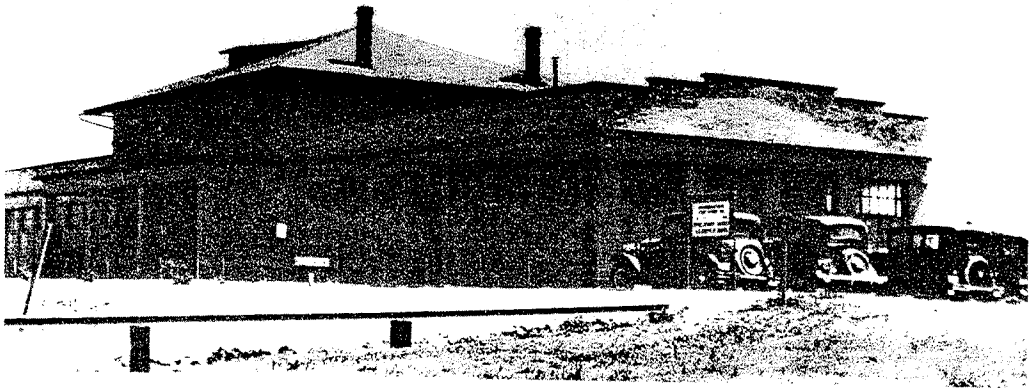
For more on Ft Story's modern mission and civilian history, see POST 10.

On February 26, 1917, the 2nd and 5th Coast Artillery Companies, led by 1st Lts G A Wildrick and A. Horton, came ashore at Cape Henry to bivouac among its barren dunes and establish Fort Story. The post would become one of the most heavily armed forts on the East Coast and an important part of the Chesapeake Bay defenses in two world wars.

The Virginia General Assembly ceded 343.1 acres located at Cape Henry in Princess Ann County to the U.S. Government on March 10, 1914 "to erect fortifications and for other military purposes."

It was named for Maj Gen John Patten Story on War Department General Order No 31 dtd July 1916. Story, former Chief of Artillery and Artillery School commandant, had died March 25, 1915.

The Civilian Conservation Corps worked here, and late in World War II, it was a convalescent hospital for returning vets. Then the amphibian DUKW arrived and guns were replaced by silo-borne missiles. Today it is the home of the Army Transportation Center's over-the-beach training in logistical resupply.



Maj Gen John P Story was commander of Fort Monroe (as a colonel) from Mar 1902 and 24 Jan 1904. He became the Chief of Artillery (29 Jan 1904 to Jun 1905. He contributed a lot to the science of gunnery and the development of range finding equipment. He died 25 Mar 1915.

The District Court acquired the title for the land by condemnation procedures on Jun 14, 1914.

Construction of powder magazines and projectile rooms began in late 1916. By Feb 1917, construction of the 16" howitzer fortifications was started. The 2nd & 5th established the garrison, commanded by Col Daniel W Ketcham. There were only four 16" howitzers, model 1920, for firing if an attack should come.

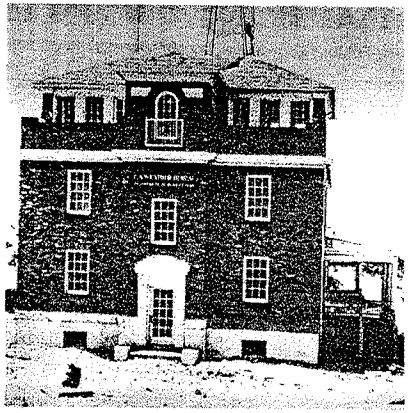
The post headquarters and the post commander's quarters, have both been remodeled but are still in use today. A commissary, warehouses, troop barracks, mess halls and the post switchboard and battery plotting rooms were built.

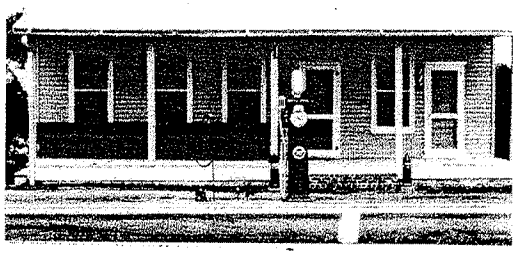
The Norfolk & Southern Railway Co gave the post another 9.38 acres in Mar 1917.

As the war built in Europe, the fort was integrated into the coast defenses of the Chesapeake Bay and included headquarters at Fort Monroe and Fort Wool (today at the entrance to the Hampton Roads tunnel). Story's fortifications were Batteries Pennington "A" and "B"--- each battery had two tubes and firing capability of 160 projectiles and 300 powder charges. On Jun 9, 1925, Fort Story became the Harbor Defense Command headquarters by WD Gen Order No. 13. An observation tower, a mine casemate and an engineer admin bldg and warehouses were completed in the 30s. It was a time that thousands of trees were planted to control the sand dunes.

Above, the post headquarters built in the 1920s, still in use today as the post headquarters, Bldg 300.

Post commander's house in the 1920s. Renovated, it is an officer's quarters today.



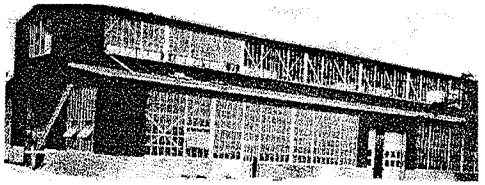


Photos, clockwise, top, The Weather Bureau, constructed in 1918. Today, it is the post CO's qtrs. The BOQ and the Hospital as they looked in the 1920s. Both are now gone. A mess hall built during WWI. The 1st post exchange at Fort Story with gas pump. Rail engine used during the 20s to pull freight cars from the warehouse. The new locomotive building built in the 20s. Photos in this column by A. Ware, Official Army photos. Weather station photo courtesy L. J. Harris, Navy PWC, Ft. Story.

FT STORY COMMANDERS

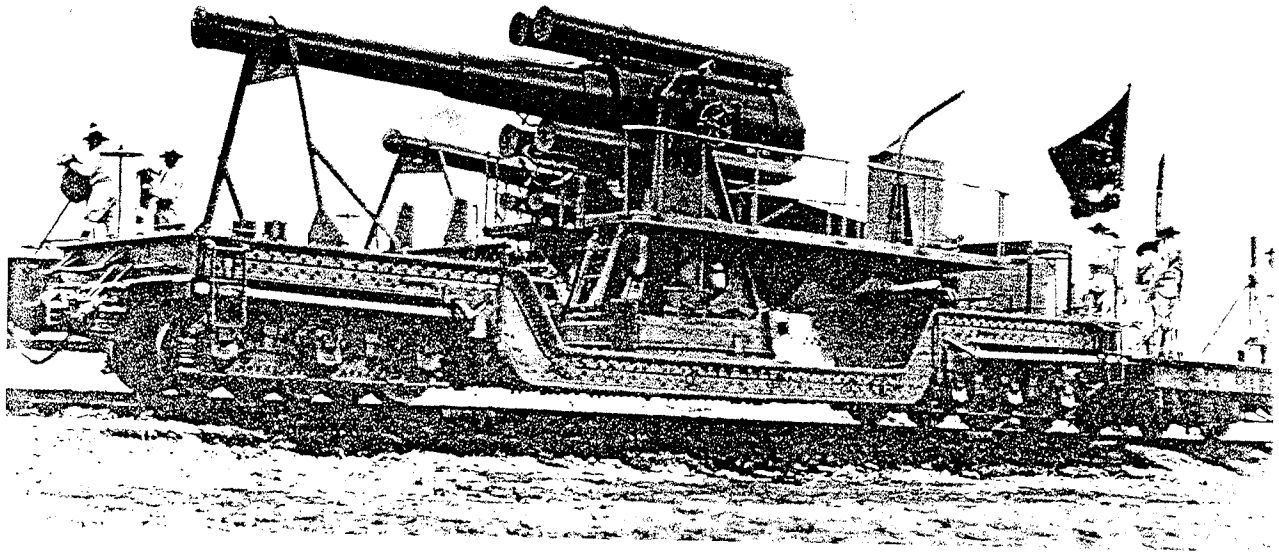
LtCol D W Ketcham 26 Feb-3 Apr 1917
To 1919, there were 10 commanders, some for just a week.
Maj M K Kimmel 11 Dec 18 - 7 Oct 19
LtCol T O Humphreys 8 Oct 19 - 31 Aug 21 (except Jun-4 Aug 21)
To 23 , three other COs.
LtCol J Prentice 8 Jul 23 - 11 Feb 26
To 41, there were 18 commanders from Lts to LtCol.
LtCol D D Hinman 25 Aug 40 - 8 May 41
Col R B Cocroft 9 May 41 - 22 Sept 41
Col R R Hendon 23 Sept 41 - 17 Dec 41
BG D P Hardy 18 Dec 41 - 10 Jun 42
Col L E Schoonmaker 11 Jun-16 Aug 42
Col P H Herman 17 Aug 42 - 20 Feb 44
Col W S Phillips 20 Feb 44 - 25 Jul 45
Col A E Potts 26 Jul 45 - 28 Feb 46
Col K McCatty 1 Mar 46 - 31 May 48
LtCol E P Hempstead 1 Jun 48-3 Feb 50
BG W J Muller 3 Feb 50 - 7 Jun 51

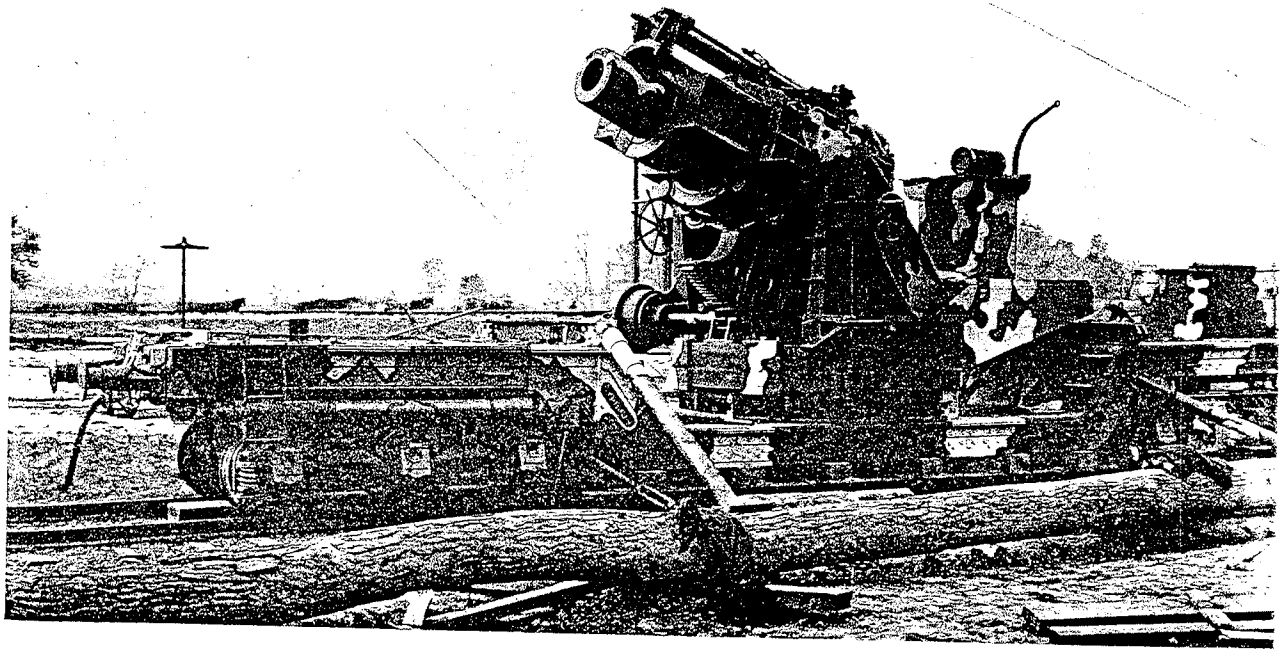
Col Alonzo E Wood, CO 246th CA (HD) LtCol Edw W Timberlake Jul 6-Sep 23, 1940.



WWII FORTIFICATIONS AT FT STORY

Batteries Ketcham and 121 (2 ea 16" guns), Batteries Pennington and Walke (2 ea 16" howitzers), Batteries 226, Cramer & Worcester (2 ea 6" guns), Examination Battery (2 3" guns), Batteries AMTB #21 & #22 (2 ea 90mm guns), and Mines: 46 groups.





CAJ, Vol. 71 (1928) No. pp 152 159

Movement of the 52nd Coast Artillery (Ry.) from Fort Eustis to Fort Story, Va. and Return May, 1929

By MAJOR O. C. WARNER, C. A. C.

THE 52nd Coast Artillery (Ry.) moved to Fort Story, Virginia, from Fort Eustis, Va., during May, 1929, for its annual target practice. A similar move was made in 1928. The training of a mobile unit is incomplete unless a part of its training is in movements. The 52d Coast Artillery is now the only Regular Army railway regiment in the United States. In order that officers of Coast Artillery generally may get a definite idea of such a movement, the writer kept a diary from April 22 to May 31, 1929.

April 22.—Rejoined for duty. The regiment began outdoor artillery drills on March 1, and some units have completed subcaliber practice. All triple valves have been tested this month in Chesapeake and Ohio shops and so stenciled, and all air brake cylinders have been cleaned by the Ordnance Department and so marked. Also, all car journals have been repacked by the Ordnance Department recently. Artillery Drill this a. m.

April 23.—Visited Fort Story with party of officers for reconnaissance, particularly to determine necessary repairs to track.

April 24.—Make-up of train issued by Railroad Transportation Officer.

April 25.—Memorandum for advance party of one officer and thirty-five enlisted men and for rear echelon of one officer and forty-two enlisted men issued.

April 26.—Battery "C" subcaliber practice completed (Mortars).

April 27.—Battery "D" subcaliber practice (Mortars).

April 29.—Battery "D" subcaliber practice. One 8-inch gun, Battery "F," transferred to another car and carriage.

April 30.—Field Order No. 1 issued. (Appendix I. Annexes omitted.) Battery "D" completed subcaliber practice. Night emplacing drill for 2nd Battalion (Mortars). Both batteries emplaced without lights: Time one hour ten minutes.

May 1.—Mortars taken out of drill positions. Advance party left (one officer, thirty-five men). Tug and targets from Fort Monroe arranged.

May 2.—Battery "F" subcaliber practice completed. Began making up train at 1:00 p. m. Ration cars and powder car loaded this p. m.

May 3.—Finished railway train make-up at noon. Ordnance Officer began his inspection and repair of air-brake system, car journals, and car trucks.

May 4.—Ordnance Officer finished at 9:30 a. m. C. & O. inspectors finished their inspection of train in one hour. Everything O. K. Train moved at 11:00 a. m. to Regimental Park for completion of loading.

May 6.—Train completely loaded today. Three cars already put in train cut out so as to expedite movement on ferry. Entire train will now go on one car float.

May 7.—Train of one locomotive, four mortars, four 8-inch guns, seven fire-control cars, two battalion power cars, three ration cars, one powder car, three projectile cars, two kitchen cars, one track materiel gondola, three empty cars, total thirty-one, with six officers and three hundred and fourteen enlisted men, left Fort Eustis at 5:30 a. m. and arrived at Fort Story at 1:50 p. m., by way of C. & O. to Newport News, C. & O. car float to Sewall's Point, Norfolk Belt Line R. R. to Tidewater Junction, and Norfolk and Southern R. R. to Cape Henry, Virginia. Total time eight hours and twenty minutes. Of this only four hours were used in actual running, the remaining time being spent on the car ferry at the three junction points and getting on and off the ferry. The personnel did not ride the train on the car float but went aboard an Army Mine Planter for the trip from Newport News to Sewall's Point (eight miles). Total distance of movement, sixty miles.

At Fort Story, our locomotive was off track for two hours' delay and one ammunition car was off track for one-half hour delay. All guns and mortars were spotted by 7:45 p. m. and emplaced by 9:00 p. m. Communications were already laid by advance party. Field Order No. 2, Occupation of Positions, issued at 2:15 (Appendix II). Battle practice mortar ammunition shifted to unit cars after arrival at Fort Story. Motor element left at 5:00 a. m. for Fort Story. Now at Fort Story: seventeen officers and four hundred and eight men. Strength of regiment is twenty-three officers and five hundred and eighteen men, or twenty per cent of regiment not present for various reasons.

May 8.—Telephone communications tested and faults corrected. Shelters for B′ stations begun.

The advance party of one officer and thirty-five men, between May 1 and May 6—

(a) Completed platform at B″ tower.
(b) Laid eleven miles of telephone twisted pair.
(c) Put in 18 cross ties on old track.
(d) Established B′ stations for four batteries.
(e) Moved seven tent floors.
(f) Prepared electric light lines for fifty-six tents, and all drop cords; attached to Post power system.
(g) Prepared officers' quarters.
(h) Moved ninety 200-lb. projectiles and forty-eight 700-lb. projectiles from storage points to firing position.

May 9.—Wind and rain. No drill. Firing schedule issued for 51st C. A. and 52d C. A. and schedule for towing tug.

May 10.—Drill, all batteries. No tug for tracking; ocean too rough. C-41 airship flew over at 3:00 p. m. No radio communication with C-41

May 11.—Drill in a. m. Preliminary practice all four batteries in p. m. Both mortar batteries required two courses, for various reasons.

Battery "D" began at 1:40 and finished at 2:23 p. m. Fourteen shots.
Battery "C" began at 3:18 and finished at 4:23 p. m. Fourteen shots.
Battery "F" began at 5:15 and finished at 5:26 p. m. Eight shots.
Battery "E" began at 5:29 and finished at 5:39 p. m. Eight shots.
Radio communication with spotting airship unsatisfactory.

May 13.—Analysis. Plans for battle practice received.

May 14.—Analysis finished. Band arrived today: one W. O., twenty-six men.

May 15.—All batteries simulated target practice on service course. Mortar course towed twice from 1:42 to 3:55. Mortar batteries ready to fire.

Air service officer here for conference re spotting.

May 16.—Simulated target practice 8:30 to 9:00 with tug on service course. All batteries ready for service practice tomorrow.

May 17.—Ocean too rough for tug *Peace* in a. m. All batteries fired in p. m. Delay in meteorological message and bad course.

Battery "E" began at 3:06 and finished at 3:18. Sixteen shots.
Battery "F" began at 4:08 and finished at 4:22. Sixteen shots.
Battery "C" began at 4:40 and finished at 5:31. Twenty-two shots.
Battery "D" began at 6:12 and finished at 6:54. Twenty-two shots.

May 18.—Analysis.

May 20.—Analysis. Rain, windy and cold.

May 21—Analysis. Scores: Battery "C," one hundred and sixteen; Battery "D," one hundred and nineteen; Battery "E" seventy-nine; Battery "F," ninety.

May 22.—Command Post Drill. Average time for group commander to put a battery on a target and fire one salvo is three minutes and twenty-five seconds at drill.

51st C. A. (155-mm. G. P. F.) fired three practices today.

May 23.—Simulated battle practice with three tugs towing targets.

May 24.—Artillery inspection; camp police. Field order for minor joint exercise issued by Lieut. Col. Taylor.

May 25.—Inspection of camp, tents, and grounds.

May 27.—Minor joint exercise and tactical inspection of regiment in a. m. by General Callan. Advanced class, C. A. S., in actual command of groups. Battle practice in p. m. Very thick fog. Visibility limited to eight thousand yards. General Hero, Chief of Coast Artillery present. Practice postponed until 5:00 p. m. and held at about eight thousand five hundred-yard range. Mortars did not fire. Ranges too short for powder furnished.

May 28.—Analysis of battle practice. Guns and mortars prepared for movement. F. O. No. 3 for return issued (Appendix III). Visibility excellent. Rainy in p. m.

May 29.—Train made up in p. m. for homeward movement. Kitchen and dining cars respotted for use until last minute. Train air tested and two air-line breaks repaired. Rainy in a. m.

May 30.—Memorial Day. All target practice and battle practice reports and all indorsements finished and mailed. Tactical inspection report finished. Twenty per cent hits obtained in battle practice with 8-inch guns.

May 31.—Policed camp site. Left Fort Story at 10:30 a. m. and arrived at Fort Eustis at 5:00 p. m. Total time, seven hours. Running time from Newport News to Lee Hall (nineteen miles) was thirty-five minutes.

"FIRE"
NO. 2 GUN, BATTERY "E" 52D C. A. (RY.) AT FORT STORY, VIRGINIA, 1929

Going and return movements by rail developed no difficulties and no faults in materiel. District Engineer has appropriation now for replacement of rotten ties in main line track at Fort Story. The cost of the rail movement of the 52nd C. A. (Ry.) from Fort Eustis, Virginia, to Fort Story, Virginia, and return was: for equipment, going $4,113.60, returning $3,258.43; for personnel, three hundred and fourteen men, going $301.44, three hundred and seventeen men, returning $304.32; a total cost of $7,977.79. Freight charges on one locomotive eighty-eight and one-half tons dead on own wheels were $68.26, whereas freight charges on one 12-inch mortar eighty-eight and one-half tons were $353.12, or five times as much. Effort is being made to obtain a freight reclassification of railway artillery materiel. With a cheaper rate, the appropriation would permit longer movements, which would give better training and varied tactical problems to the regiment.

APPENDIX I

FIELD ORDER
NO. 1.

52nd C. A. (RY.)
FORT EUSTIS, VA.,
30 April. 29, 6:00 A. M.

MAPS: Geological Survey, 1: 62,500: YORKTOWN, HAMPTON, NEWPORT NEWS, and CAPE HENRY Sheets.

1. *a.* * * * * *

b. The 51st C. A. (TD) arrives at FORT STORY 4 May 29.

2. *a.* The 52nd C. A. RY. (less 1st Bn.) will, under the provisions of S. O. 30 and 31, HEADQUARTERS, THIRD COAST ARTILLERY DISTRICT, c. s., and S. O. 67, HEADQUARTERS, FORT EUSTIS, VA., c. s., conduct service target practice and battle practices at FORT STORY, VA., during May, 1929.

b. This regiment will move at 5:15 A. M., 7 May 29, by rail transportation to FORT STORY, VA., via NEWPORT NEWS—SEWALL POINT—VIRGINIA BEACH.

3. *a.* ADVANCE PARTY—1ST LT. JOE D. MOSS, Commanding.

(1) A detail of 35 men will go to FORT STORY, VA., by motor transportion, via the 7:45 A. M. Ferry, NEWPORT NEWS—PINE BEACH, 1 May 29. See Annex No. 1.

(2) The Advance Party will install communications, repair railroad track, and prepare observing stations.

(3) The Advance Party will be rationed with the FORT STORY Detachment.

b. ARMAMENT TRAIN—MAJOR O. C. WARNER, Commanding.

(1) The makeup of the train will be as listed in Annex No. 2.

(2) All cars will be loaded, except personal equipment, before 12:00 Noon, 6 May 29, by the organization to which they are assigned. LT. GREGORY will supervise loading of cars not assigned to batteries.

(3) The personnel accompanying the train will be loaded as indicated in makeup of train. One gun commander and mechanic will accompany each gun and mortar. One ordnance machinist will accompany train.

(4) Officers who accompany the train will ride in the Regimental Fire Control Car, Car No. 10.

(5) Personnel will travel by Quartermaster boat, C. & O. railroad car float slip, NEWPORT NEWS—SEWELL POINT.

(6) The proposed train schedule on 7 May 29 is:—

Leave FORT EUSTIS	5:15 a. m.
Leave LEE HALL	6:15 a. m.
Leave NEWPORT NEWS	7:57 a. m.
Leave SEWALL POINT	9:13 a. m.
Leave TIDEWATER JUNCTION	11:28 a. m.
Arrive CAPE HENRY	1:39 p. m.

(7) Camp will be made immediately upon arrival. Guns will not be spotted until after 7:00 p. m.

c. MOTOR ELEMENT—1ST. LT. E. M. GREGORY, Commanding.

(1) 6 G. M. C. trucks, 1 motorcycle with sidecar, 1 light repair truck with battery cooks, rations, and equipment, will move, FORT EUSTIS to FORT STORY, via NEWPORT NEWS—PINE BEACH FERRY, 4:30 A. M., 7 May 29.

(2) Officers, who so desire, may travel in privately owned automobiles. Soldiers of first four grades and those of fifth grade specially authorized, who may so desire, are authorized to take their own automobiles to FORT STORY. Ferry tickets cannot be furnished.

d. REAR ECHELON—1ST LT. J. M. MOORE, Commanding.

(1) A rear echelon, as shown in Annex No. 3, will be left at FORT EUSTIS, VA.

(2) The mess operated by this detachment will be Service Battery Mess.

x. (1) Each man will carry pack, with web belt and holster, service hat, and a barrack bag containing mosquito bar, extra blankets, and clothing.

(2) Each battery will take cots and bedsacks or mattress covers.

(3) Uniform en route: Woolen OD, with cap and leather belt.

(4) Six pistols, in locked chests, will be taken by each firing battery.

(5) Mail will be obtained from the Post Office each day by the Personnel Office, Rear Echelon, and sorted. Mail for officers' families will be delivered to their quarters. Mail for organizations and personnel at FORT STORY will be securely bundled and returned to the Post Office at 3:30 P. M. each day.

4. *a.* Each member of the command will carry a canteen of water; each battery will arrange to carry lunch for each man.

b. Attached Medical Personnel, consisting of 1 officer and 3 enlisted men, will travel in the Regimental Fire Control Car, Car No. 10.

5. REGIMENTAL COMMAND POST closes at FORT EUSTIS at 8:00 A. M., 7 May 29, and opens at FORT STORY the same hour.

ANNEXES:

Annex No. 1.—Memo. No. 8, Hq., 52d C. A. c. s. [not reproduced].
Annex No. 2.—Makeup of train, 52d C. A. [not reproduced].
Annex No. 3.—Memo. No. 7, Hq., 52d C. A. c. s. [not reproduced].

TAYLOR.
Lt. Col.

DISTRIBUTION:

52D C. A. (Ry.)

Each Battery	(6)		
Bn. Comdr.	(2)		
Regt. Comdr.	(1)		
Executive	(1)		
P. & T. Officer	(1)		
Adjt.	(1)		
Sup. Off.	(1)	FORT EUSTIS	
Comm. Off.	(1)	C. O.	(1)
Pers. Adjt.	(1)	Adjt.	(1)
1 each Officer	(20)	Q. M.	(1)
C. G., Third C. A.	(1)	Surgeon	(1)
C. G., Third C. A. D.	(1)	Ord. Off.	(1)
Q. M., Ft. Monroe	(1)	Comdt., C. A. S.	(4)
C. O., C. D. of C. B.	(1)	C. O., Ft. Story	(1)
C. O., 51st C. A.	(1)		

APPENDIX II

FIELD ORDER
NO. 2.

52nd C. A. (Ry.),
FORT STORY, VA.,
7 May 29, 3:00 P. M.

MAPS: U. S. Geological Survey, CAPE HENRY quadrangle.
U. S. Coast & Geod. Sur., Sheet 1227, CAPE HENRY—CURRITUCK. FORT STORY, VA., Lay out of Trackage (*Blue Print*)

1. *a.* * * * * *

b. The 51st C. A. (TD) is in position east of the railway, near the south edge of the reservation.

2. The 52nd C. A. (Ry.) will occupy positions today, *beginning* the spotting of guns at the points selected by Battery Commanders at 7:30 P. M.

3. *a.* (1) The 2nd Bn., 12-inch Mortars, will be emplaced on the main line of the U. S. Engineer Railroad, *between the spur* leading to NO. 2 HOWITZER and the switch west of the COAST GUARD STATION.

(2) The Fire Control Cars of the 2nd Bn. will be spotted on the second spur S. W. of the U. S. ENGINEER OFFICE.

b. (1) The 3rd Bn., 8-inch guns, will be emplaced on the main line of the U. S. Engineer Railroad between the spur leading to NO. 2 HOWITZER and the spur leading to emplacement for 14-INCH MODEL E.

(2) The Fire Control Cars of the 3rd Bn. and the Power Car will be spotted on the spur which leads past NO. 2 HOWITZER to POWER HOUSE NO. 1.

c. All firing batteries will establish base-end observing stations at HOLLY TOWER, about 6,000 yards S. of the battery positions, and near B. C. STATION, about 300 yards W. of NO. 4 HOWITZER.

4. Ammunition, which has been delivered at FORT STORY for use of the 52nd C. A. (Ry.), will be available to the batteries to which allotted on the spur about 100 yards N. of the spur leading to NO. 2 HOWITZER.

5. *a.* The Regimental Fire Control Car and the Radio and Power Car will be spotted on the same spur as the 2nd Bn. Fire Control Cars.

b. Headquarters Battery will establish and maintain telephonic communication between Fire Control Cars and Observing Stations and between Fire Control Cars and Guns.

c. Headquarters Battery will maintain radio communication with the tug which will tow targets, with the airship, which may be used for observation of fire, and with FORTS MONROE and EUSTIS.

d. COMMAND POSTS:

52nd C. A. (Ry.) — On Sand Dune
2nd Bn., 52nd C. A. (Ry.) — in Vicinity
3rd Bn., 52nd C. A. (Ry.) — of BC STATION.

DISTRIBUTION:

Same as Field Order No. 1.

TAYLOR
Lt. Col.

APPENDIX IV

FIELD ORDER
NO. 3.

52nd C. A. (Ry.),
FORT STORY, VA.,
28 MAY 29, 11:00 A. M.

MAPS: GS, 1:62,500, CAPE HENRY, NEWPORT NEWS, HAMPTON, YORKTOWN Sheets.

1. *a.* * * * * *

b. The 51st C. A. (TD) moves to FORT EUSTIS, VA., 31 May 29.

2. This regiment will move at 10:00 A. M., 31 May, to FORT EUSTIS, VA.

3. *a.* ARMAMENT TRAIN—MAJOR O. C. WARNER, Commanding.

(1) The makeup of the train will be as directed by Major Warner and will be completed by 6:00 A. M., 30 May, and air brakes tested.

(2) All cars will be loaded except personal and mess equipment before 12 noon, 30 May. Ammunition cars 359, 512, 372, 361, 343, 507 and 522 will return empty except for personnel. Lt. Gregory will supervise loading of Cars No. 116 and 503 and other cars not assigned to batteries.

(3) All personnel who accompany the train will be assigned to cars by Major Warner for the trip STORY *to* EUSTIS and will travel by QM boat from SEWALL POINT to C. & O. WHARF at NEWPORT NEWS.

(4) Tentative train schedule on 31 May is—

Leave FORT STORY	10:00 A. M.
Arrive SEWELL POINT	12:00 Noon
Arrive FORT EUSTIS	5:00 P. M.

(5) On arrival at FORT EUSTIS the train will be spotted in the 52nd Regimental Park so that cars 503 and 116 are near the Service Club.

b. MOTOR ELEMENT—1ST LT. E. M. GREGORY, Commanding.

(1) 18 vehicles (1 Ford Sedan, 8 GMC trucks, 5 FWD trucks, 1 tank truck, FWD, 2 motorcycles with sidecars, 1 light repair truck) will leave FT. STORY via NORFOLK—FREE BRIDGE (east of BERKLEY BRIDGE—S. NORFOLK—PORTSMOUTH—JAMES RIVER BRIDGE ROUTE FOR FT. EUSTIS at 8:00 A. M., 31 May.

(2) Travel by privately owned vehicles by those who desire is permitted.

4. *a.* Each member of the command will carry a canteen of water. Each battery will arrange to carry lunch for each man.

b. Attached Medical personnel will travel in Car No. 10.

5. Regimental CP closes at FT. STORY at 10:00 A. M., 31 May, and opens at FT. EUSTIS same hour

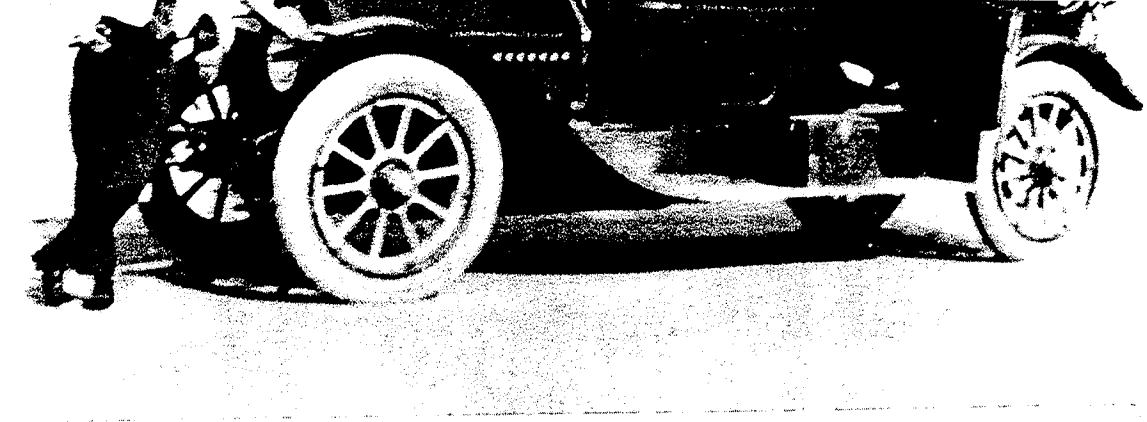
DISTRIBUTION:

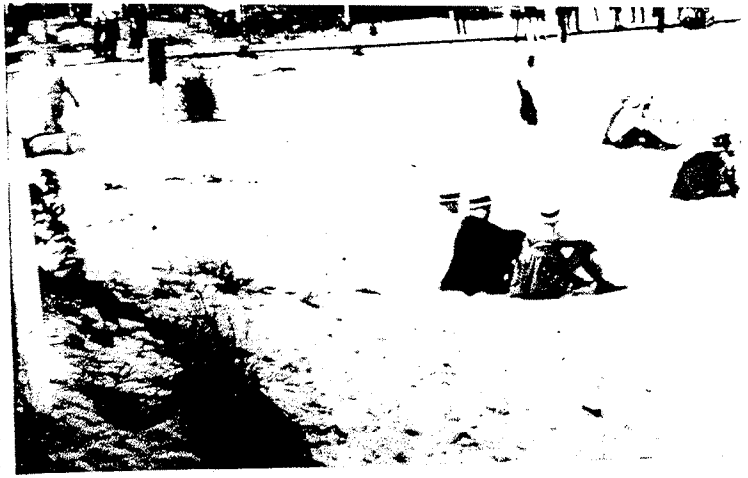
Lt. Col.
TAYLOR

Each Officer	(1)—20	C. G., THIRD C. A. D.	1
Each unit	(1)— 7	C. O., C. A. S.	1
C. G., FT. EUSTIS	1	C. O., H. D. of C. B.	1
Q. M., FT. EUSTIS	1	C. O., 51st C. A.	1
O. O., FT. EUSTIS	1	File	3
C. G., THIRD C. A.	1		

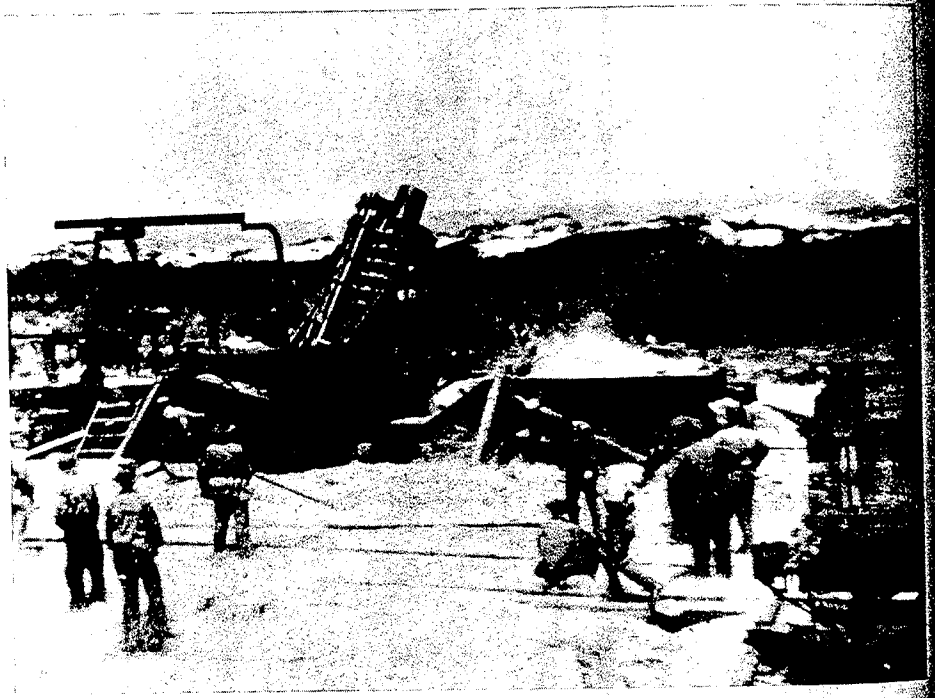
DC 5103

ATLANTIC OCEAN
PARADE
MOTOR PARK
WALKE
ATHLETIC FIELD
PENNINGTON
SCALE OF YARDS



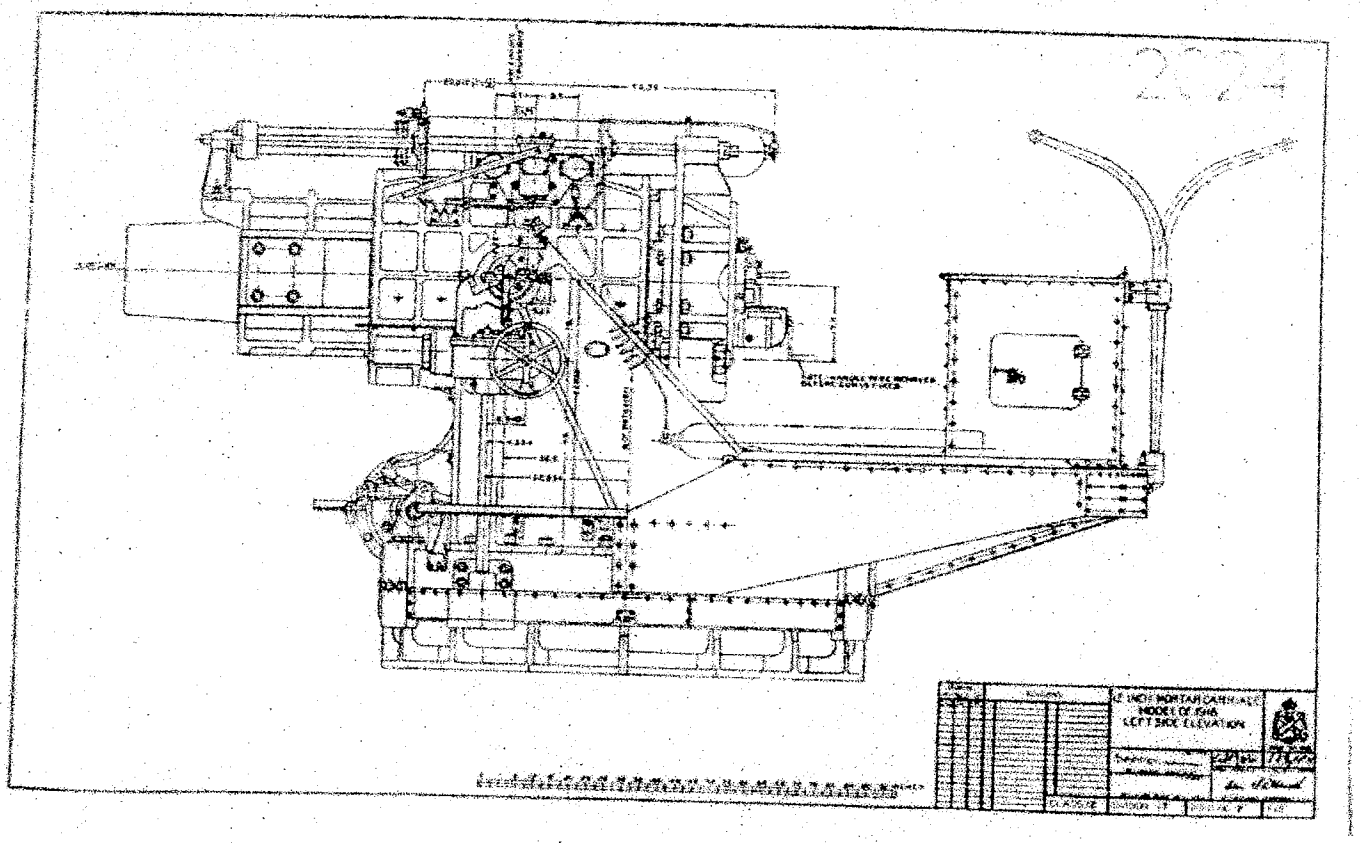


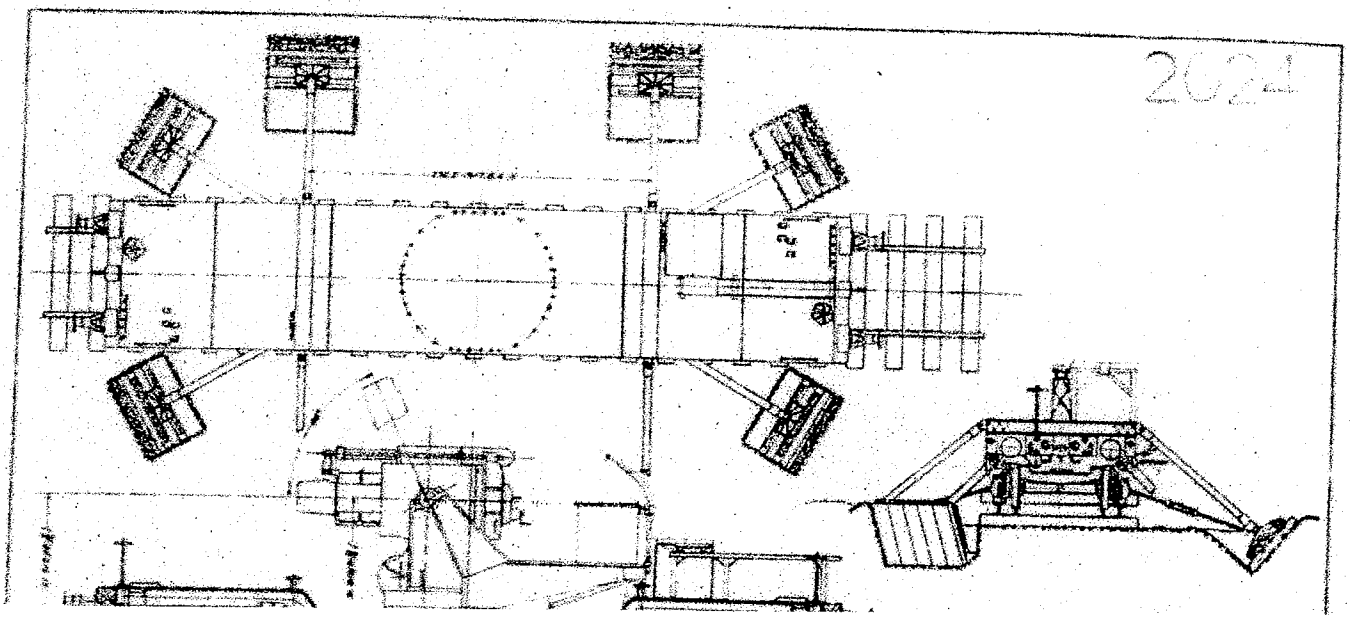
et and Mary Hogan, and
se with the Hogans' car at
is 1920s photograph. The
for automobiles had intri-
rly as 1904, and in August
Hotel inaugurated what
hort-lived form of entertain-
hing to see historic and scenic
ore between the Cavalier and
orth Carolina. The sixty-
in a specially equipped
to be offered on a daily
what was advertised as the
ssible to be traveled on an
United States. In the 1960s,
North Carolina Turnpike
lly investigated the possibility
s Turnpike which would have
a toll road between Virginia
North Carolina, but the
undertaken.
Hogan Baldwin

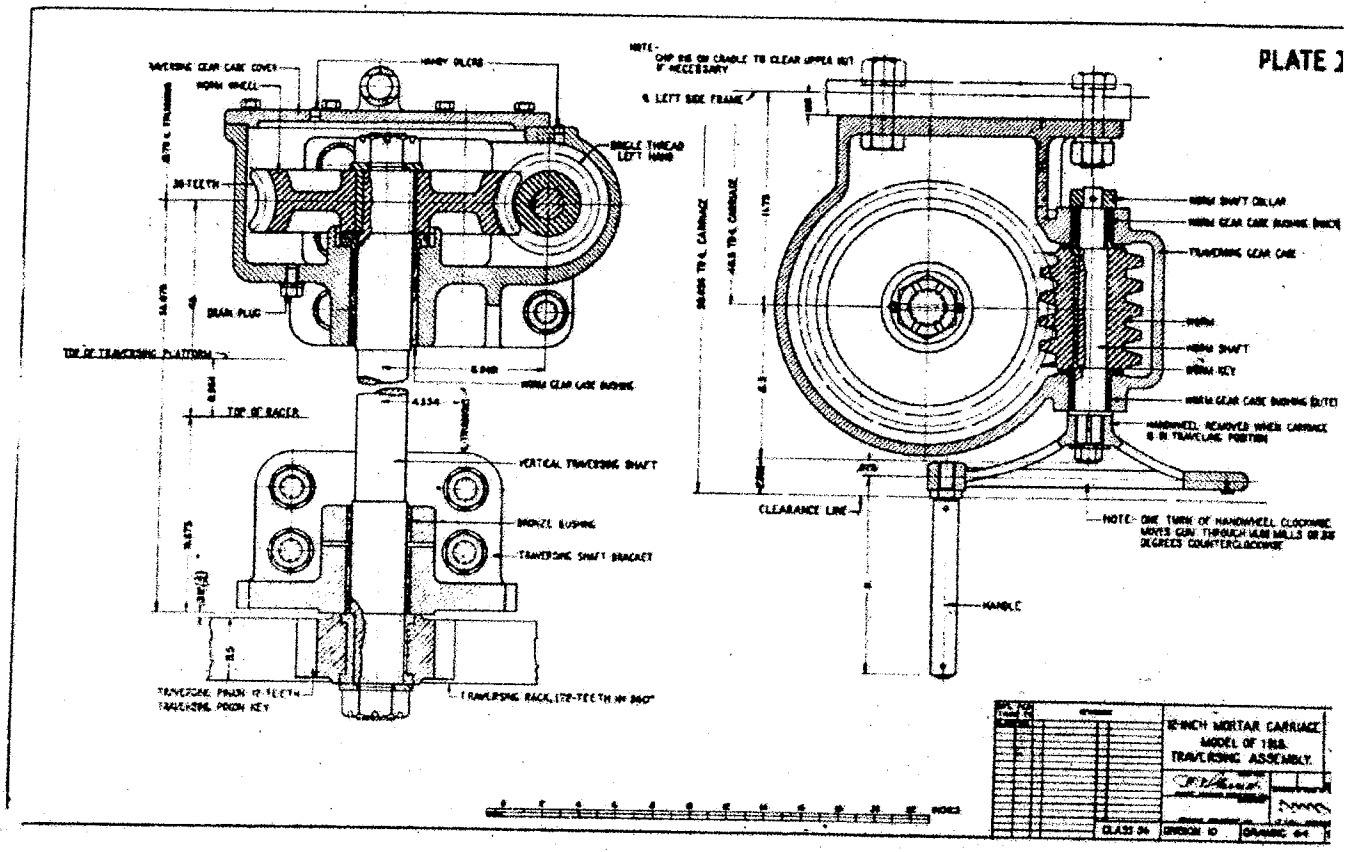


Although the period between the two world wars was one of relative inactivity at Fort Story, the firing of this twelve-inch railway mortar by men of the Fifty-second Coast Artillery on May 17, 1928, would have announced their presence to residents of the Cape Henry area.
Courtesy of the U.S. Army Transportation Museum

12" Mortar







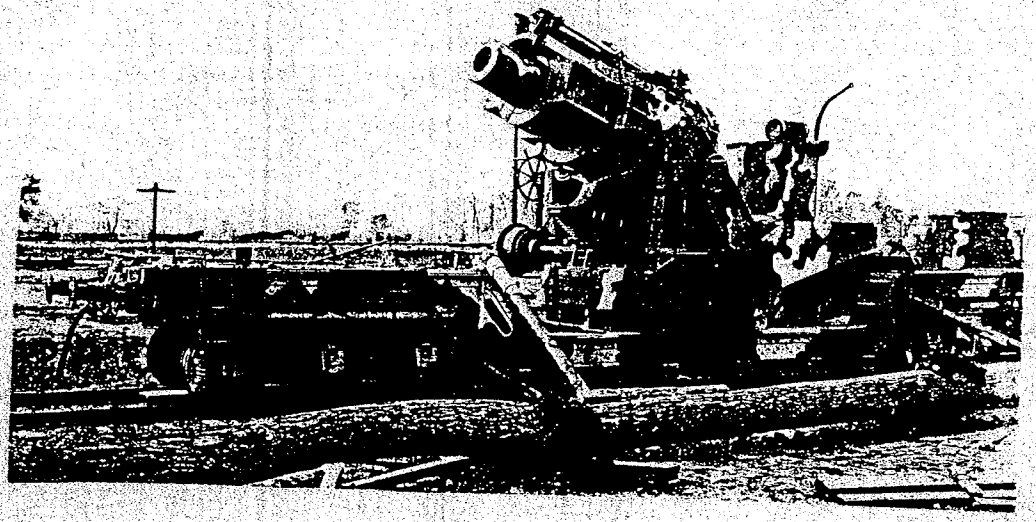
PART VI.—*List of total equipment, 12-inch mortar railway project.*

Organization.—One battery, 4 guns; one battalion, 2 batteries, 8 guns; one regiment, 3 battalions, 6 batteries, 24 guns.]

Item.	Drawing. Class.	Division.	No.	Specification No.	Number per battery, active.	Number per battery, spare.	At battalion headquarters.	Number per battalion.	At regimental headquarters.	Total with one regiment.	War reserve per regiment at depot.
12-inch mortar, Model 1890 MI	62	6	1	445	4			8		24	12
Spare parts for mortar, Model 1890 MI	62	6	101	445	Sets for 24 mortars for 6 months.						
Tools and accessories for mortar, Model 1890 MI	62	6	105		Sets for 24 mortars for 1 year.						
12-inch mortar carriage, Model 1918	12	17	1	3095	4			8		24	
Spare parts for mortar carriage, Model 1918	27	47	3 and 4	3095	Sets for 24 carriages for 1 year.						
Tools and accessories for mortar carriage, Model 1918	27	59	2	3095	Except chests and trays—sets for 24 carriages.						
Railway car, Model 1918 MI, for 12-inch mortar	24	6	1	3034	4			8		24	
Spare parts for railway car, Model 1918 MI	27	46	11 and 12	3034	Sets for 24 cars for 1 year.						
Tools and accessories for railway car, Model 1918 MI	27	45	1		Except chests and trays—sets for 24 cars.						
Ammunition car, Model 1918, for 12-inch mortar	34	7	1	3038	12			24		72	
Spare parts for ammunition car for 12-inch mortar	27	46	10	3038	Sets for 72 cars for 1 year.						
60-cm. gauge mortar transport car, Model 1918, loading and unloading rig	34	19	1	3101	4			8		24	12
60-cm. gauge shell car, Model 1918, for 12-inch mortar shells	34	11	1	3078	4			8		24	12
60-cm. gauge 12-wheel trucks for railway car, Model 1918 MI (pairs)	15	22N1	1	3067	4			8		24	12
Spare parts for 60-cm. gauge train for 12-inch mortar				3078 and 3067	Sets for 24 guns for 1 year.						
Antiaircraft machine gun	1	32 and 35	1		2			4		12	
Artillery repair truck, tools, accessories, supplies, and spare parts	31	18	1								
Artillery supply truck, accessories, and spare parts	31	16	1								
Bore sights for 12-inch mortar, Model 1890 MI	15	2A	11		4			8		24	2
Sight, type "D," exclusive of panoramic telescope	15	2A33	1	3030	4	1		10		30	2
Elevation quadrant, Model 1917, with bracket "EF15A"	15	12F	1	3029	4	1		10		30	2
Panoramic telescope, 4 and 10 power, Model 1917	15	2A28	1	3025	4	1		10		30	2
Electric head lantern with storage battery (commercial material)					9		8	26		78	7
Extra storage batteries for electric lantern (commercial material)					9		8	26		78	7
Battery-charging outfit					1			2		8	
Fire-control equipment—sets for one regiment	14	10	1								
Miscellaneous tools and stores (except chests and trays)	27	43	2								
Armament chests No. 1	27	48	12		Sets for 24 mortars.						
Trays, type "FF" (for armament chests No. 1)	76	15	21	3081	4	1		10		30	
Trays, type "GG" (for armament chests No. 1)	76	0A	5	3081	4	1		10		30	
Armament chests No. 2	76	0A	6	3081	4	1		10		30	
Trays, type "HH" (for armament chests No. 2)	76	15	21	3081	4	1		10		30	
Trays, type "KK" (for armament chests No. 2)	76	0A	7	3081	4	1		10		30	
Spare-parts chests, size "Z"	76	0A	8	3081	4	1		10		30	
Trays, type "AA" (for spare-parts chests)	76	15	19	3081	12			24		72	
Trays, type "CC" (for spare-parts chests)	76	0A	1	3081	8			16		48	
	76	0A	4	3081	4			8		24	

and spares are for 1 year.

the guns of fort story:
12-inch railway mortar



the guns of fort story: 12 inch railway mortar

Today the seacoast fortification concept is nothing but a memory. But from colonial times through World War II Army fortifications, in conjunction with the US Navy,provided the bulk of the security for the vast coastline of the United States. The guns of Fort Story on Cape Henry, Virginia were an integral part of those defenses during both World Wars.

Fort Story, which was initially constructed in 1917 provided for limited defense of the Chesapeake Bay during World War I and during the period of peace following that conflict. During that period however the armament became out ranged and obsolete and inadequate for defense purposes

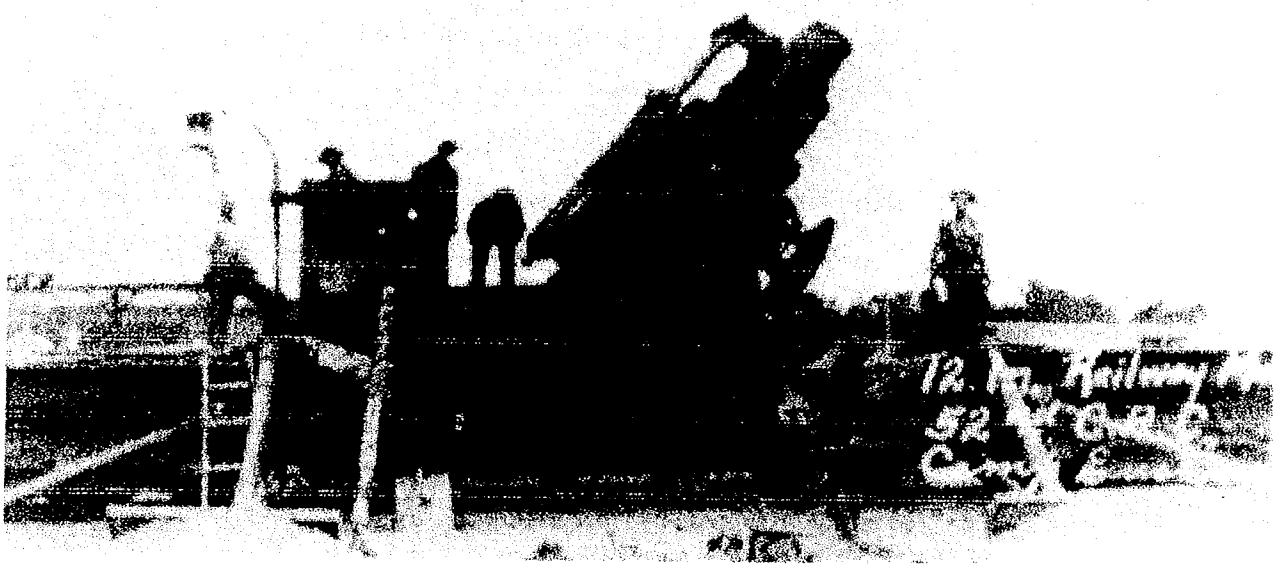
The 12-inch railway mortar was initially built for World War I and had a range of 11,000 yards. It was produced in large numbers and was one of the principal railway artillery weapons developed for the US Army. It was never intended to be a seacoast gun and the Army employed this mobile artillery at fixed fortifications because it was readily available and permanent batteries were not funded.

The mobile mortars at Fort Story were left over from World War I and were stored at Fort Eustis following that conflict. At some time after 1919 they were brought by rail to their positions at Fort Story. They joined the 8-inch railway guns on post which were used for training between the wars. The Army engineers had extended railway trackage from the existing Norfolk Southern Railway main line to serve the fixed batteries as well as the mobile artillery. The firing positions for the railway armament were located on the southern end of the post adjacent to the East Gate. The trackage for the 12-inch railway mortars was curved to expand the limited field of fire. These guns were only capable of moving a few degrees from its own centerline. That deficiency decreased the accuracy of engaging moving surface ships.

An engineer drawing of Fort Story dated 7 January 1921 shows the location of the permanent armament . The rendering also locates Engineer Department railway siding as well to a "12-inch Batignolle platform". To the northwest of the platform is an additional single-track section of railway which curves to the south of the former Cape Henry Coast Guard Station. This trackage is referred to as "EPI" and would have been used by the railway artillery. The trackage extends to an end near the shoreline. From 1927 until 1932, the armament at Fort Story was maintained in caretaker status by soldiers from Battery D, 12th Coast Artillery which had it's headquarters at Fort Monroe. In that year the 2d Coast Artillery Regiment assumed those

duties and Battery E was assigned to Fort Story.

It appears there were two M1890M1 railway mortars located at Fort Story and serially numbered 63 and 142. Both of these weapons were mounted on M1918 carriages and were positioned on six wheel M1918M1 railway cars. The railway car/ carriage was a flat car with a well in the center to accommodate the mortar. By 1928 two additional railway mortars had been shipped by rail from Fort Monroe to Fort Story. These were also M1890M1 mortars with serial numbers 50 and 91. The battery train included an ammunition and shell car with each mortar as well as a plotting room. Also in the train was a loading and unloading rig and spare parts, tools and accessories for all the components.



12-inch railway mortar of 52d Coast Artillery at Camp (Fort) Eustis

The 12-inch railway mortars never served as active status armament in the Harbor Defenses of Chesapeake Bay at Fort Story. They were fired by soldiers from the 52d Coast Artillery (Railway) who traveled from from Fort Eustis as needed or with the Army National Guard during Summer encampments. One example occurred on May 17, 1928 when troops from the 52d Coast Artillery came to Fort Story and fired service practice with the mortars. The 2d Battalion also returned in May 1929 with batteries C and D to fire their annual service practice. The battalion armament train left Fort Eustis

by rail on 7 May and arrived at Newport News. The train was then placed on a railway float vessel to Sewells Point on the Norfolk side. The cars then traveled by rail to Cape Henry. The entire trip took 8 hours and the guns were spotted at firing points. When the mortars were fired, outriggers were laid out to provide a firm foundation during recoil. In 1931 Fort Eustis was closed as an active installation and the 52d Coast Artillery and one battalion were relocated to Fort Hancock, New Jersey with the 3rd Battalion moving to Fort Monroe. In February 1940 Battery F, 52d Coast Artillery was redesignated as Battery F, 2d Coast Artillery with the mission of manning the railway guns of the harbor defenses.

The mortar fell into disuse as a high angle of fire weapon when the targets changed. The ideal target for the mortar (fixed or railway mounted) was a slow-moving vessel with little or no deck armor. Over the years warships began to develop better fire control and thicker deck armor. High angle of fire mortars were no match for a high speed surface vessel and its long range naval fire.

In a letter dated 27 July 1940, the Chief of Coast Artillery recommended elimination of the remaining 12-inch mortar batteries in harbor defenses. In December 1940, the armament list at Fort Story included two 12-inch batteries comprised of two mortars each. At that time the four weapons were listed in "maintenance and caretaker" status. They were most likely emplaced on the Army railway trackage on the southern portion of the reservation. By April 1941 one battery of two mortars was in caretaker status and was maintained by Battery A, 246th Coast Artillery Regiment. Battery A also formed the primary crew for the 16-inch howitzers of Battery Alexander C. M. Pennington. The second battery of 12-inch railway mortars was in caretaker status and maintained by Battery B (Danville Grays), 246th Coast Artillery which was principally assigned to another howitzer battery designated as Battery Walke. The 246th Coast Artillery was a federalized Virginia National Guard Regiment which was called to active duty prior to hostilities and comprised the majority of soldiers manning the guns at Fort Story.

In June 1941 , the first major weapons service practice since May 1929 was conducted at Fort Story. With the exception of the assigned 12-inch mortars ,all of the weapons from the 16-inch howitzers to .30 caliber machine guns were fired, In January 1942, the 12-inch mortars were still listed in maintenance and caretaker status. In September 1942 the two batteries were consolidated into one four mortar battery still in caretaker status by soldiers of the 246th Coast Artillery. Following that entry the mortars were removed from the armament list at Fort Story. In a document provided by Brigadier General Rollin L. Tilton, former commander of the Chesapeake Bay Sector, he lists the railway mortars as "older armament" at Fort Story. They were never

assigned tactical numbers or temporary letter designations. They were simply the 12-inch mortars.

As the more modern armament came on line, the older armament was dismantled.. Records indicate that the four 12-inch railway mortars from Fort Story were removed from the installation at some time in late 1942 and were scrapped by Bethlehem Steel Company. The last of the government railroad tracks were dismantled when the last of the permanent armament was removed in 1948-1949. The main line of the Norfolk Southern Railroad on post fell into disuse and was removed at a later date. The only evidence that railway artillery was at Cape Henry are two sections of track in the roadbed of Cape Henry Road where it meets Atlantic Avenue. In 1999 after a severe hurricane which uncovered three 155 mm gun platforms, a short section of curved "EPI" railway track was found protruding from the dune line.

The U.S. Army is currently identifying the former coastal artillery positions on post in accordance with the National Historic Preservation Act of 1966. An engineering study was completed in early 2000 which noted a large number of historic properties at Cape Henry. A number of the structures are associated with the seacoast artillery and research continues today comparing photographs, maps and text to provide a clearer picture of the activity of all the armament at Cape Henry including the railway artillery.

Today Fort Story remains on Active Duty as a Transportation Corps installation and is a vital link to joint over-the-beach logistical operations. With continuous meaningful use of the property by the Department of Defense and implementation of the engineer survey and other research Fort Story will be an important active military installation and historic asset for many years to come.

Fort Story, Virginia

o originally established and fortified in 1917 to protect the southern portion of the entrance to the Chesapeake Bay during World War I.
o reduced to caretaker status between conflicts
o expanded greatly in land area and troop strength with the approach of World War II.
o served as principal coast defense installation for the Harbor Defenses of Chesapeake Bay.
o heavily fortified with armament consisting of modern 6-inch and 16-inch weapons in addition to guns of smaller caliber, mines, searchlights and seacoast radars.
o following the conflict, mission transferred to the US Army Transportation Corps.
o served as home station for a variety of amphibious units involved in over the beach operations.
o trained and deployed transportation units during the conflict in Vietnam.
o involved in evolution and upgrade of amphibious vehicles from the DUKW to the LARC and eventually the LACV.
o continues to support joint logistics over-the-shore and special operations into the 21st Century.

Fort Story units participated in the Gulf War as well as military actions in Somalia, Haiti and other worldwide deployments requiring specific transportation needs. The beaches at Cape Henry continue to provide training areas for joint exercises and watercraft testing. The post is presently the home station for the 11th Transportation Battalion as well as tenant activities of the US Navy, US Marine Corps, US Coast Guard and the US Army Reserve.

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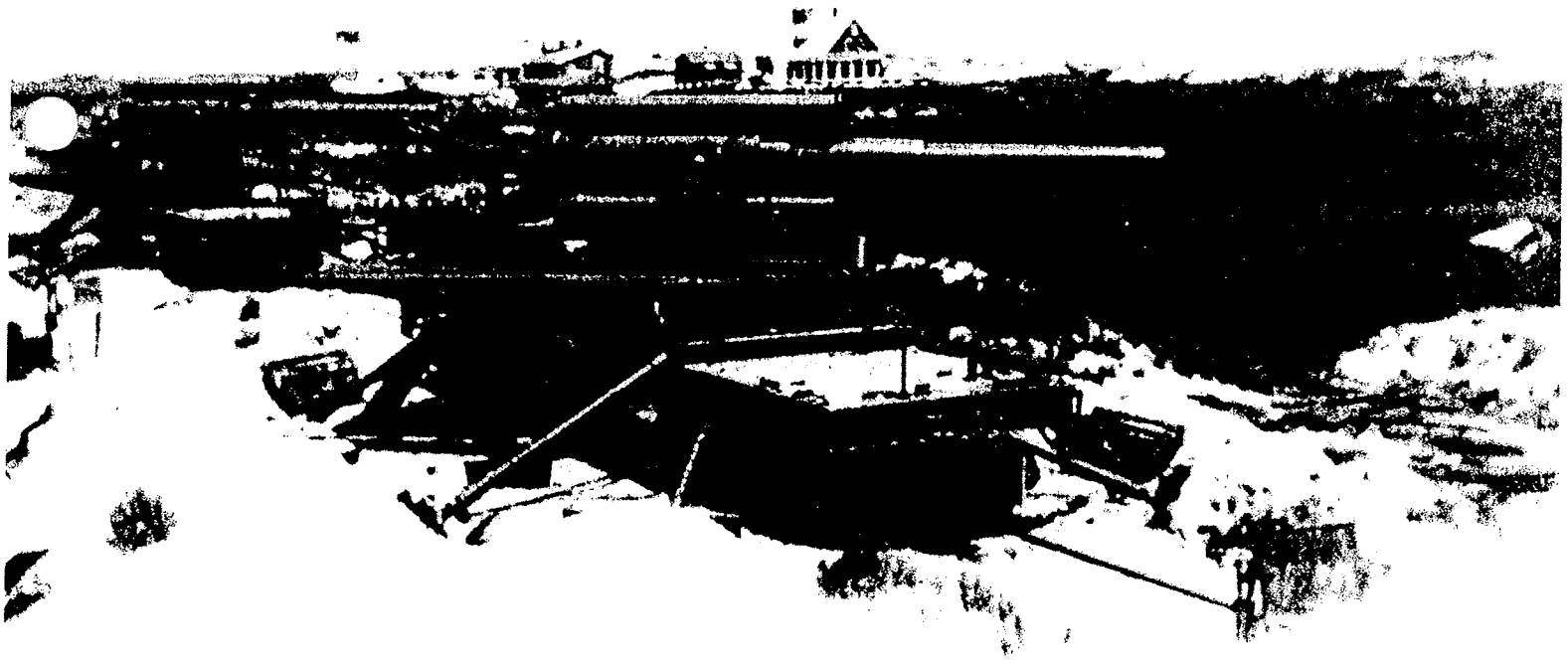
updated: April 2001

The Guns of Fort Story:
Battery Y (8-inch Railway)



the guns of fort story: battery Y

Today the seacoast fortification concept is nothing but a memory. But from colonial times through World War II Army fortifications, in conjunction with the US Navy,provided the bulk of the security for the vast coastline of the United States. The guns of Fort Story on Cape Henry, Virginia were an integral part of those defenses during both World Wars.

Fort Story, which was initially constructed in 1917 provided for limited defense of the Chesapeake Bay during World War I and during the period of peace following that conflict. During that period however the armament became out ranged and obsolete and inadequate for defense purposes

The 8-inch railway gun was developed as a mobile artillery and was used in a limited manner during World War I. It was not originally designed for use in seacoast positions, but following the war a number were relocated to coastal forts and placed into storage. .

The 8-inch railway gun was introduced to Fort Story in the period of the World War. On 21 December 1917 a Model 1888 M1 8-inch gun was dismounted from a battery at Fort Totten, New York. The weapon , numbered No. 30, was shipped upstate to the US Army Watervliet Arsenal. It was later remounted on a railway carriage and shipped by rail to Fort Story. An Ordnance Department directive in March 1918 ordered a number of 8-inch tubes shipped to the arsenal for remount . Some tubes also were shipped to Aberdeen Proving Ground and placed into storage. By the late 1920s it has been determined that an number of these guns were located at Fort Story. At some time around 1924 there was a project to replace some minor gun batteries with mobile railway artillery. Possibly the assignment of the 8-inch railway guns were part of this project. By 1933, this entire replacement project was canceled and a number of the gun mounts were scrapped .

In the 1920s the 52d Coast Artillery Regiment (Railway) was the only railway artillery unit in the US Army. The regiment was stationed at Fort Eustis with the 3d Battalion comprised of Batteries E and F were equipped with the 8-inch railway gun. Records indicate that in May of 1928 and 1929, the battalion traveled by rail and ferry to Fort Story for annual service practice. It appears that the battalion brought their own 8-inch guns from Fort Eustis.

In the summer of 1939, elements of the 246th Coast Artillery trained at Fort Story. In July Battery D of the Virginia National Guard regiment conducted their Annual Training on post. The battery conducted service target practice practice on the 8-inch railway gun and received a rating of "excellent."

DC 5133
ATLANTIC OCEAN
PARADE
MOTOR PARK
WALKE
REMINGTON
ATHLETIC FIELD
SMALL ARMS RANGE
SCALE OF YARDS

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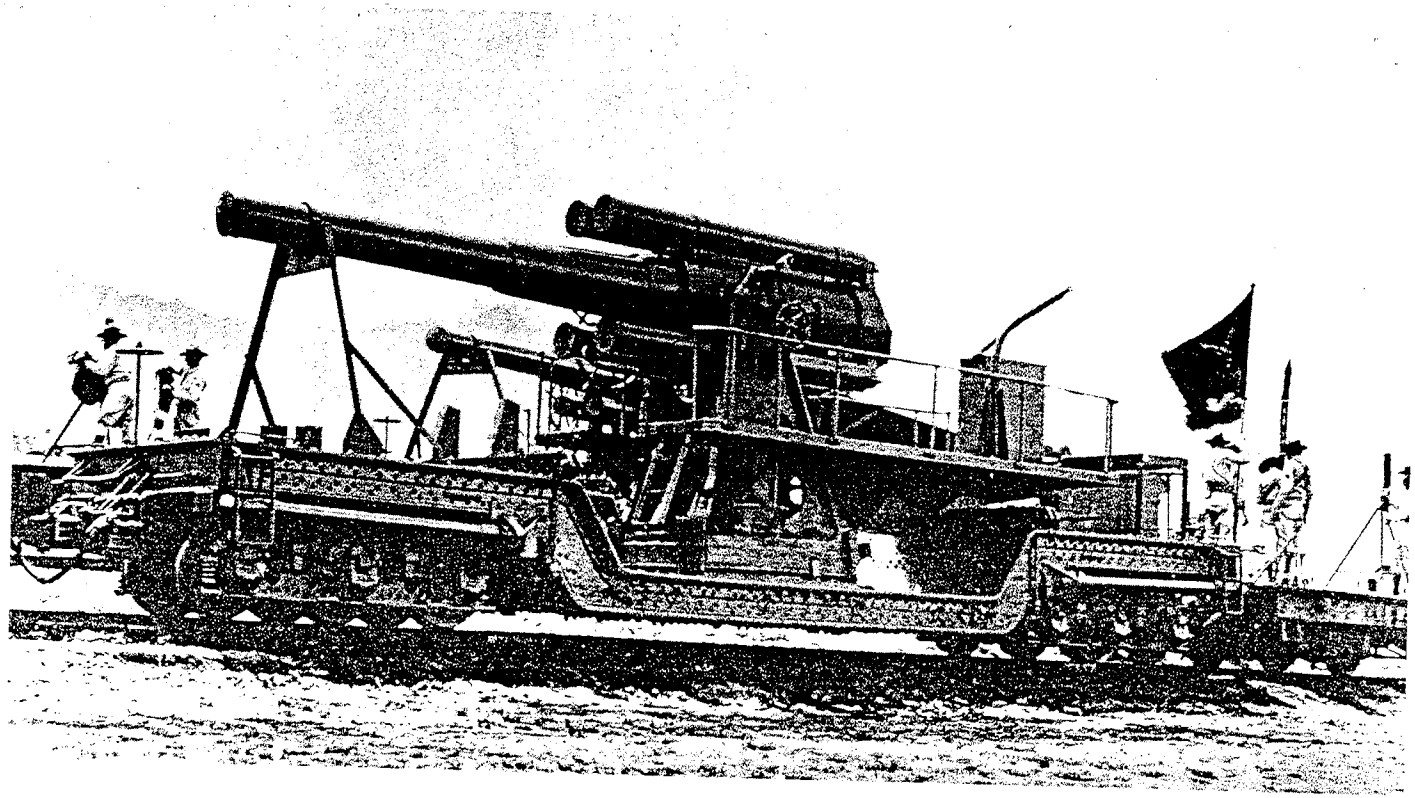

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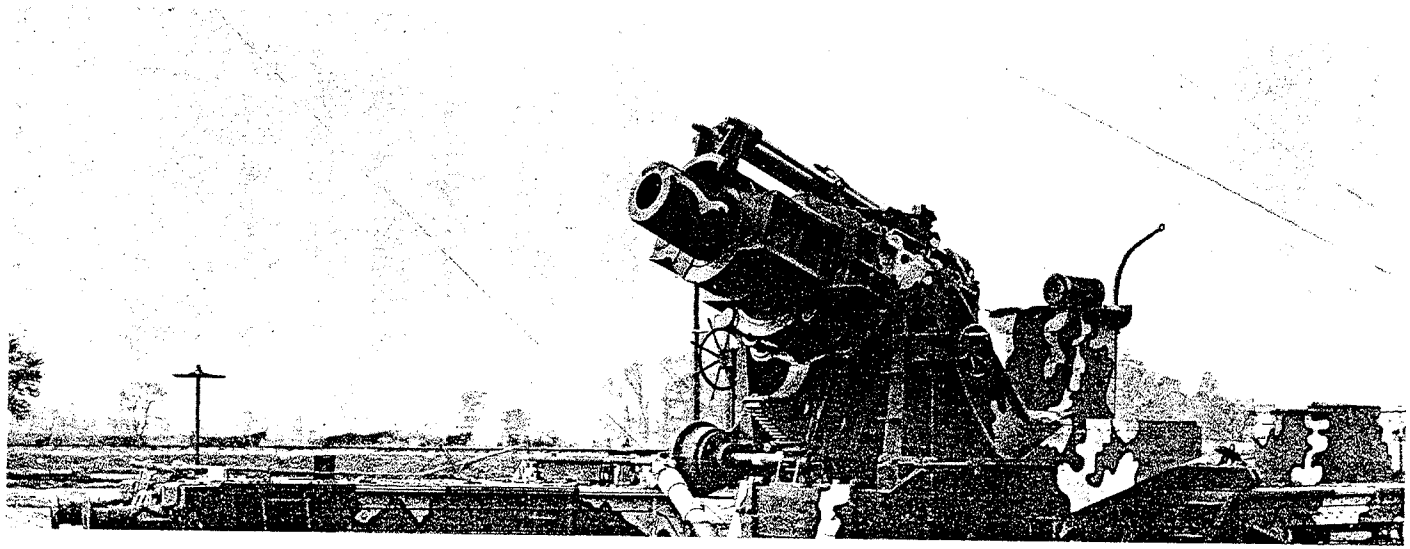

FM 4-50

COAST ARTILLERY FIELD MANUAL

SEACOAST ARTILLERY

SERVICE OF THE PIECE

8-INCH GUN, RAILWAY ARTILLERY

Prepared under direction of the
Chief of Coast Artillery

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON: 1940

For sale by the Superintendent of Documents, Washington, D. C.
Price, 15 cents

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FM 4–50

COAST ARTILLERY FIELD MANUAL

SEACOAST ARTILLERY

SERVICE OF THE PIECE

8-INCH GUN, RAILWAY ARTILLERY

(The matter contained herein supersedes TR 435–235, March 1, 1928.)

SECTION I

GENERAL

■ 1. SCOPE.—*a*. This manual prescribes the service of the piece for the 8-inch gun, railway artillery. It is applicable to the M1888, M1888MI, M1888MII, and Mk. V guns, mounted on M1918 or M1918MI barbette carriage and M1918MI railway car. The duties of the members of the gun section in the service of the piece are contained in section III and in the drill table, section XI.

b. The emplacing and the service of the piece as described herein are intended as a guide for the battery commander. Changes in the details of the emplacing and the service of the piece may be made to meet local conditions.

■ 2. REFERENCES.—The references listed in the Appendix should be consulted, especially those pertaining to ammunition and to the operation, care, and maintenance of matériel.

SECTION II

ORGANIZATION

■ 3. GUN SECTION.—Each emplacement of one gun is manned by a gun section consisting of a gun squad and an ammunition squad. The war strength of the gun section is 26 enlisted men; the peace strength is 24 enlisted men (T/O 4–47).

■ 4. GUN SQUAD.—At war strength the gun squad (18 enlisted men) consists of the gun commander (chief of section), gun

pointer, elevation setter, battery commander telephone operator, azimuth (deflection) display board operator, elevation display board operator, aiming rule operator, chief of breech,

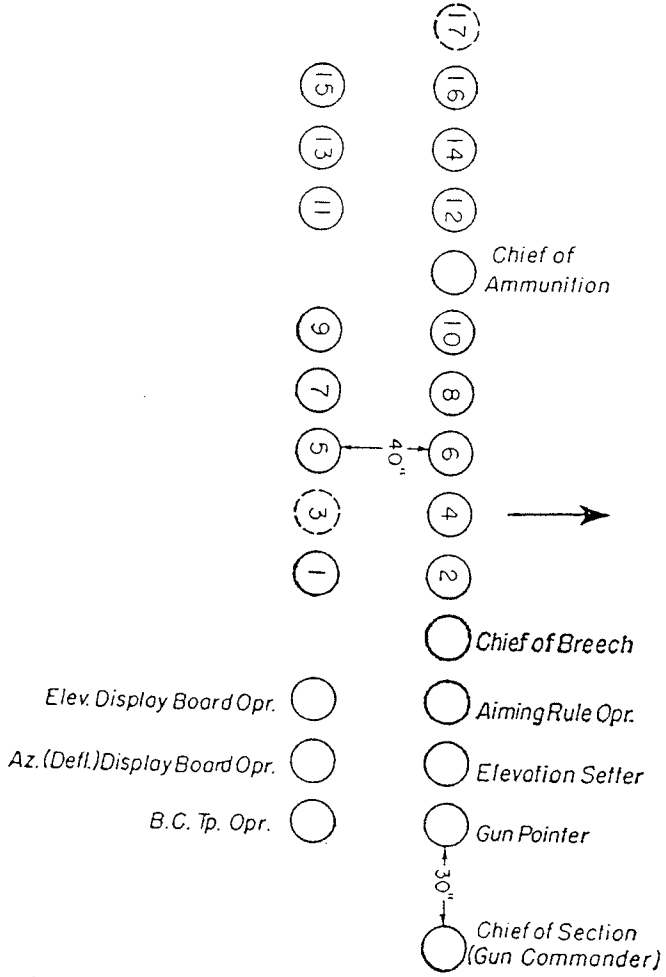

FIGURE 1.—Formation of gun section, war strength.

NOTE.—At peace strength Nos. 3 and 17 are eliminated.

and 10 cannoneers numbered from 1 to 10, inclusive. At peace strength the gun squad consists of 17 enlisted men,

No. 3 (traversing detail) being eliminated. Men are assigned to permanent positions according to their aptitude but will be interchanged frequently in drill positions to develop flexibility and facilitate replacement.

■ 5. AMMUNITION SQUAD.—At war strength the ammunition squad (8 enlisted men) consists of the chief of ammunition and 7 ammunition handlers numbered from 11 to 17, inclusive. This squad is divided by its chief into details for the service of powder and projectiles and miscellaneous duties required by local conditions. At peace strength the ammunition squad consists of 7 enlisted men, No. 17 being eliminated.

■ 6. FORMATION.—Each section assembles in two ranks with 4 inches between files and 40 inches between ranks. Unnumbered cannoneers form on the right of their squads in both front and rear ranks. Numbered cannoneers form in the order of their numbers from the right, even numbers in the front rank and odd numbers in the rear rank. The chief of ammunition forms in the front rank on the right of his squad and is not covered off. After forming the section, the chief of section takes post in the front rank 30 inches to the right of the gun pointer. (See fig. 1.)

SECTION III

DUTIES OF PERSONNEL

■ 7. BATTERY EXECUTIVE.—*a.* The battery executive commands the firing section of the battery and is in charge of the gun emplacements and accessories. He is responsible to the battery commander for the—

(1) Training and efficiency of the personnel of the firing section.

(2) Condition of the matériel under his charge.

(3) Observance of all safety precautions pertaining to the service of the piece.

(4) Police of all emplacements.

(5) Emplacement of the guns when they are moved into position, and their preparation for railroad travel when they are taken out of position.

b. He inspects the matériel under his charge and personally verifies the adjustment of all pointing devices as frequently as necessary to insure accuracy. He or an assistant battery executive tests all firing devices before each drill or firing, paying special attention to the safety features.

c. He receives the reports of the assistant battery executives or chiefs of sections and reports to the battery commander, "Sir, firing section in order," or reports defects which he is unable to remedy without delay.

d. He exercises general supervision over the loading and pointing. If for any reason he desires to hold fire for one firing interval, he commands: RE-LAY, and reports his action to the battery commander.

e. At the conclusion of drill or firing the battery executive commands: REPLACE EQUIPMENT, inspects the emplacements, and reports to the battery commander.

f. He selects the positions for and supervises the emplacement and employment of the machine guns of the firing section.

g. As battery railway officer he is responsible for the condition and maintenance of the railway matériel assigned to the battery.

■ 8. ASSISTANT BATTERY EXECUTIVE.—Each assistant battery executive will perform the duties of the battery executive insofar as they pertain to the emplacement or emplacements to which he is assigned.

■ 9. CHIEF OF SECTION.—*a.* The chief of section (gun commander), a noncommissioned officer, is in command of the gun section and is also chief of the gun squad. He is responsible to the officer in charge of the emplacement for the—

(1) Training and efficiency of the personnel of his section.

(2) Condition of the matériel under his charge.

(3) Emplacement of the piece and its preparation for firing, including camouflage discipline and gas discipline when necessary.

(4) Firing of the piece.

(5) Observance of all safety precautions pertaining to the service of the piece.

(6) Police of the emplacement.

b. He supervises the preparation of the firing position, the emplacement of the mount, the removing of it from position, the unloading and loading of equipment, the service of the piece, and the service of ammunition, giving the necessary commands and instructions for carrying out these operations. He personally directs the work of care and preservation of the matériel.

c. The gun being emplaced for firing, he commands: 1. DETAILS, 2. POSTS, and supervises the procuring of equipment.

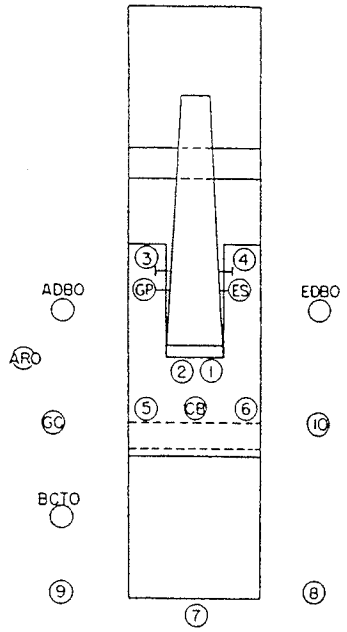

FIGURE 2.—Positions at DETAILS, POSTS

After all details have reached their posts (fig. 2), he commands: EXAMINE GUN. He then makes an inspection of the gun, carriage, and other matériel, paying special attention to the recoil and recuperator systems, clearance of the trunnions (see par. 48*b*), firing mechanism, safety devices, oiling of the various bearings, and the condition of the track, H-beams, cross ties, outriggers, and floats. He receives the reports of the chief of ammunition and of the various details

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of the gun squad, and reports to the officer in charge of the emplacement, "Sir, No. ——— in order," or any defects which he is unable to remedy without delay.

d. When necessary to verify the section, he commands: CALL OFF. At this command the cannoneers in each squad call off their titles or numbers in succession, beginning with unnumbered members of the section, followed by the numbered members in order.

e. He informs the chief of ammunition as to the projectile, fuze, and powder charge to be used.

f. At the command TARGET, he repeats the command and the target designation. As soon as the gun pointer is on the target (or aiming point), the gun commander reports or signals to the officer in charge of the emplacement, "Sir, No. ——— on target."

g. At the command LOAD, he repeats the command and supervises the loading. After the piece is loaded and laid, he calls, "No. ——— ready." He also commands: LOAD, before each shot of a series. The piece is not fired, however, until the command COMMENCE FIRING is given and the proper firing signal received.

h. At the command COMMENCE FIRING, if the piece is unloaded he commands: LOAD, and supervises the work of his section. After the piece is loaded and laid he sees that all personnel are clear.

i. He commands: CEASE FIRING, when the number of shots specified has been fired. He repeats the command CEASE FIRING when it is received. At the conclusion of a series of shots he reports, "Sir, No. ——— (so many) rounds fired." When dummy ammunition is used, he commands: UNLOAD, and supervises the unloading.

j. During the firing he stations himself in such a position as best to observe the functioning of the gun squad and the gun. He pays particular attention to the action of the gun in recoil and counterrecoil in order that a loss of recoil oil by leakage may be corrected.

k. In case of a misfire, he calls, "No. ——— misfire." He sees that the precautions described in paragraph 39 are observed.

l. When firing on a time interval signal, he commands: RE-LAY in case the time interval signal fails to sound at the gun, or in case his gun is not ready to fire when the time interval signal sounds. He repeats the command RE-LAY when it is received.

m. At the command REPLACE EQUIPMENT, he supervises the replacing of all equipment, sees that all matériel is properly secured and the emplacement policed, and then unless otherwise directed forms his section.

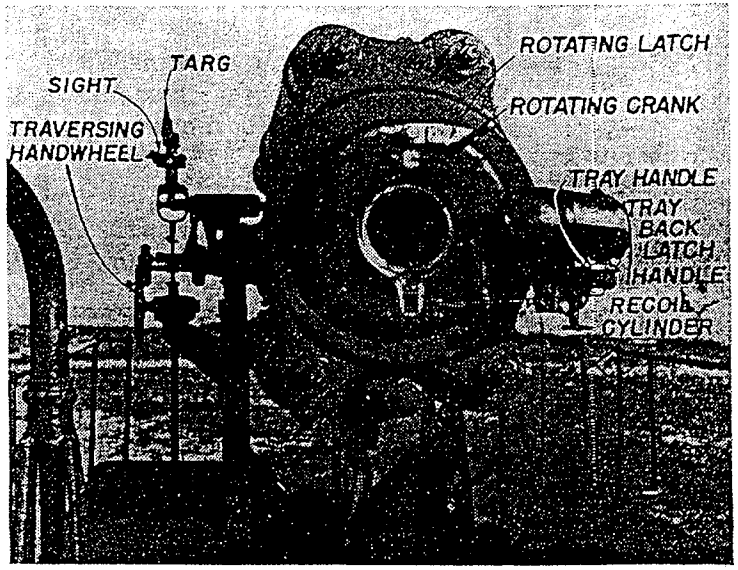


FIGURE 3.—Rear view of 8-inch gun.

■ 10. GUN POINTER.—The gun pointer (noncommissioned officer) is charged with the duty of pointing the piece in direction. He is responsible to the gun commander for the proper operation, care, and adjustment of the sight, azimuth circle, traversing mechanism, and for the supervision of the aiming rule operator. (See fig. 3.) For detailed duties of the gun pointer see drill table, section XI.

■ 11. ELEVATION SETTER.—The elevation setter is charged with the duty of laying the piece in elevation. He is responsible

to the gun commander for the proper operation, care, and adjustment of the quadrant and the elevating mechanism. For detailed duties of the elevation setter see drill table, section XI.

■ 12. CHIEF OF BREECH.—The chief of breech (noncommissioned officer) is responsible to the gun commander for the efficiency of the personnel of the breech detail; for the condition and serviceability of the breech mechanism, breechblock, breech recess, firing mechanism, chamber, and bore (see fig. 3); for the observance of safety precautions insofar as they pertain to his detail; and for the proper loading of the piece. He pays particular attention to the seating of the projectile and sees that the igniter is on the rear end of the powder charge. He attaches the lanyard. For detailed duties of the chief of breech see drill table, section XI.

■ 13. BATTERY COMMANDER TELEPHONE OPERATOR.—*a.* The battery commander telephone operator is charged with the duty of receiving and transmitting all messages passing between the battery commander and the officer in charge of the emplacement and the keeping of such records as may be directed.

b. At the command DETAILS, POSTS, he procures a telephone with head set and hand set and takes post as directed. He reserves the hand set for the use of any person to whom the battery commander may wish to speak personally.

c. At the command EXAMINE GUN, he connects his telephone and establishes communication with the battery commander's station, reporting to the gun commander in case of failure to obtain satisfactory communication.

d. At the command LOAD or COMMENCE FIRING, he transmits the command and continues to transmit all messages until properly relieved from his duties.

■ 14. DISPLAY BOARD OPERATORS.—*a.* The azimuth (deflection) and elevation display board operators are responsible to the gun commander for the proper operation of the display boards and recording of all data received from the fire control car.

b. At the command DETAILS, POSTS, they procure chalk, blackboard erasers, forms for recording data, and telephones, and take post at their display boards.

c. At the command EXAMINE GUN, they clear the display boards if necessary, put on the telephone head sets, test the telephones to the fire control car, and report to the gun commander "Azimuth (deflection) display board or elevation display board in order," or report any defects they are unable to remedy without delay.

d. At the command TARGET, as soon as they receive azimuths (deflections) and elevations from the fire control car, they post them on the display boards and record them on a record sheet. They place a check mark on the record sheet opposite the data at which the gun is fired.

e. At the command CEASE FIRING, they continue posting and recording data received from the fire control car until the command CEASE TRACKING is received.

■ 15. AIMING RULE OPERATOR.—*a.* The aiming rule operator is responsible to the gun commander for the proper operation, care, and adjustment of the aiming rule.

b. At the command DETAILS, POSTS, the aiming rule operator assisted by No. 7 procures the aiming rule sight and crossbar, places them near the aiming rule stakes, and takes post behind the aiming rule stakes facing the piece.

c. At the command EXAMINE GUN, the aiming rule operator places the aiming rule crossbar in position on the stakes and places his sight in its bracket on the crossbar. He sets the data determined during orientation of the aiming rule on his sight, moves the sight along the bar until the vertical cross wire is exactly on the center line of a targ placed on top of and centered on the gun sight (see fig. 3) and reports, "Aiming rule in order," or reports any defects which he is unable to remedy without delay.

d. At the command TARGET, he keeps the vertical cross wire on his sight exactly on the center of the targ of the gun panoramic sight by sliding his sight along the crossbar without changing the deflection set on his sight.

e. At the command RE-LAY or CEASE FIRING, he continues to perform the duties prescribed under the command TARGET unless otherwise directed.

■ 16. CHIEF OF AMMUNITION.—*a.* The chief of ammunition (noncommissioned officer) is responsible to the chief of section for the—

■ 41. RECOIL MECHANISM.—The recoil mechanism is contained in one recoil cylinder located below the gun and four recuperator cylinders located above and below the gun. (See figs. 3 and 4.) The length of recoil (48 inches) is uniform for all elevations. The recoil cylinder should be kept full of oil at all times. It should be drained and refilled once every 3 months. Once every 3 years it should be disassembled, cleaned thoroughly, and inspected.

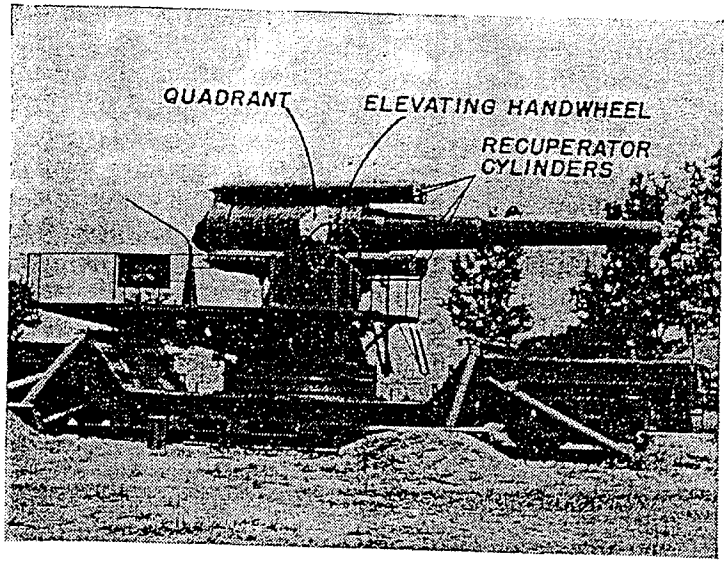


FIGURE 4.—8-inch gun in firing position.

■ 42. TO FILL RECOIL CYLINDER.—The recoil cylinder is filled with recoil oil, light, as follows:

a. Elevate the gun to maximum elevation (42°).

b. Attach the filling device to the filling valve at rear end of cylinder.

c. Open the filling valve plug until oil can pass from the filling device to the cylinder.

d. Open vent at forward end of cylinder.

e. Pour oil into cylinder until it reaches level of vent, close vent, close filling valve plug.

f. Drain the oil from the filling device through the petcock at the lower end of the vertical pipe and collect it in an oil can.

g. Remove the filling device.

■ 43. OBTURATOR, GUNS M1888, M1888MI, AND M1888MII.—*a.* With the breechblock in open position, the obturator spindle with split rings, gas check pad, and filling-in disk upon it is inserted into the block. Special care must be taken that the front and rear split rings are not interchanged. The four obturator spindle washers and the dust cover are put in place upon the rear end of the spindle projecting through the block, bronze and steel washers alternately, with a bronze washer first and the dust cover last. The spindle is secured by screwing up the spindle nut by hand. Then the breechblock is translated and rotated halfway into the firing position. The split nut is then screwed up as tightly as possible by one man with the wrenches provided for that purpose and locked in place by the clamping screw. The spindle is properly adjusted if, while it has no play longitudinally, it can be turned around freely by taking hold of the mushroom head with both hands.

b. If after firing a few rounds the spindle is found to have longitudinal play, the adjusting operation described above is repeated.

c. The proper adjustment of the obturator is of great importance. It will not be made with the breechblock in open position as to do so will cause injury to the gas check pad.

■ 44. OBTURATOR, GUN MK. V.—This paragraph applies to the 8-inch gun, Mk. V, equipped with breech mechanism, Mk. V.

a. With the breechblock in open position, the obturator spindle with split rings and gas check pad upon it is inserted into the block. The obturator spring is placed on the spindle and the obturator nut screwed on until the rear end of the nut is flush with the shoulder in rear of its thread. With the rear end of the nut flush with the shoulder, the keyway in the nut is lined with the keyway in the obturator spindle and the nut is given one more complete turn. The obturator nut key is then driven home. This is the correct position for the nut as it gives the proper amount of compression to

The cleaning solution is made by dissolving ½ pound of soda ash in each gallon of boiling water. The bore is washed with this solution, using a bore sponge wrapped with burlap. Then the bore is wiped thoroughly dry with new burlap. Finally, the bore is coated with medium or heavy rust preventive compound, depending on local conditions.

b. Care must be exercised to prevent the staves of the sponges and slush and cleaning brushes from rubbing against the lower portion of the bore, as excessive wear of the lands will result from such practice.

SECTION VII

RAILWAY OPERATING EQUIPMENT

■ 51. GENERAL.—This section is intended to serve as a guide to battery commanders for the care and maintenance of the railway operating equipment of the battery, its preparation for movement, and for emergencies which may arise during movement. In time of peace, Interstate Commerce Commission Regulations and those of the local railroad companies will govern. Equipment which is accepted by one railroad may not be acceptable to another. Therefore, the battery commander must familiarize himself with the regulations of the railroad companies over which his equipment will be moved.

■ 52. ASSOCIATION OF AMERICAN RAILROADS CODE OF RULES.—*a.* Railroad companies will not accept railway equipment for movement which does not conform with the Association of American Railroads Code of Rules. Instructions concerning the care and upkeep of the running gear, air brake equipment, and other strictly railway operating features contained in these rules will govern the maintenance operations on all railway matériel.

b. Copies of these rules should be in the files of all ordnance officers charged with the maintenance of railway matériel. They can be obtained by application through channels to the Commanding Officer, Raritan Arsenal, Metuchen, N. J.

■ 53. BRAKES.—Each truck is equipped with both hand and air brakes, the hand brakes being so arranged that they operate through the same lever system as the air brakes. The air brakes are standard equipment. Local railway officials are usually very willing to cooperate by instructing a limited number of men in the care and maintenance of air-brake equipment in the railway repair shops. This instruction should be utilized whenever practicable. Association of American Railroads Code of Rules requires air brakes to be cleaned and tested annually and certain data stenciled on the equipment.

■ 54. JOURNAL BOXES AND BEARINGS.—*a. Care.*—The journal box bearing is a babbitt-lined bronze casting. Before being installed it must be thoroughly clean, have a smooth bearing surface free from irregularities, and must have a proper bearing on the journal. Sandpaper, emery paper, or emery cloth should never be used for the purpose of removing irregularities from the bearing surface. A half-round file or scraper should be used. Care must be taken that the wedge has a good contact on the crown of the journal bearing. The surface of the journal should be smooth and thoroughly clean before the bearing is installed. When installing a bearing, a coat of lubricating oil must be applied to the bearing surface. The bearing surface of a journal bearing should never be wiped with waste or any other material which may leave grit on the surface.

b. Packing.—(1) *General.*—Colored wool waste is used for packing the journal boxes. New waste must be soaked in car journal oil for at least 48 hours at a temperature of not less than 70° F. and then drained for 24 hours before being packed into journal boxes.

(2) *Application*—(*a*) *Inner.*—In packing a journal box, twist a rope of packing somewhat tightly and place it in the extreme back part of the box. It should be placed well up against the journal so as to lubricate properly the fillet on the journal and keep out the dust.

(*b*) *Main.*—Apply sufficient packing (preferably in one piece) to fill the space between the inner packing and the journal collar. Care must be taken to have this packing bear evenly along the full length of the lower half of the journal. The packing should not be too tight but should be tight enough to overcome any tendency to settle away from the

firm. If the base is wet or muddy it lacks resistance and must be drained or the track will not retain its profile.

■ 58. MOVEMENT OF EXPLOSIVES.—The movement of explosives by rail is covered by regulations of the Interstate Commerce Commission and also by the municipal ordinances of various cities. Local railway officials should be consulted in reference to those regulations.

■ 59. MISCELLANEOUS PREPARATIONS.—The following suggestions are given to assist the battery commander in training his organization and preparing his matériel for railway movements:

a. Instruct the individual in charge of a rail movement in the procedure to be followed if repair work on the road becomes necessary, such as the supply department to which bills are to be sent, limitations on the cost of repairs he may authorize, and necessary forms and reports to be accomplished.

b. Have personnel trained and equipment available for packing journal boxes and replacing bearings. At each stop, all journals should be inspected for overheating.

c. Arrange for a preliminary inspection of running gear by the receiving railway officials.

d. Exercise the running gear whenever possible. Equipment should be moved a sufficient distance so that the journals will become "warmed up."

e. Have spare air hoses available.

f. Whenever possible move the gun with the muzzle trailing.

g. Be sure "explosive" labels are placed on ammunition cars.

h. Have sandbags and marlin available for revetments in case heavy rains threaten wash-outs on a firing spur.

SECTION VIII

EMPLACEMENT FOR FIRING

■ 60. GENERAL.—*a.* The method of emplacing described in this section permits firing through 360° traverse and from 0° to 42° elevation. Further detailed instructions on emplacing the piece may be found in Ordnance Pamphlet No. 1816. Figure 4 shows the mount emplaced for firing.

b. For purposes of explanation, duties in emplacing have been assigned to men by their numbers in the gun section. In actual practice the chief of section may find it necessary to reassign duties in accordance with the physical qualifications of the men.

■ 61. SITE.—The site selected should be on straight, level track with the level of the ground not much below the level of the ties. Deep ditches and swampy or extremely rocky soil should be avoided. (See FM 4–5.)

■ 62. PREPARATION OF POSITION.—*a.* Defective ties or any that do not give a good bearing surface outside the rails should be replaced. The track should be leveled both longitudinally and laterally. The ballast should be well tamped under the ties and the rails spiked to the ties if necessary.

b. The car is moved to the firing position.

■ 63. ASSEMBLY OF GROUND PLATFORM.—*a.* The beam lashing is unfastened from the side clip angle by unbolting the end from the wire clamps. (The clamps should be kept attached to the lashing for safekeeping and the latter swung out of the way but still attached to the loading box.) The jack blocks are removed from the top of the H-beams and placed to one side on the car platform.

b. The odd-numbered cannoneers under the direction of the elevation setter throw off two H-beams. These they place on the right side of the position, end to end, and parallel with and outside the rails, with the junction of the two opposite the center of the firing position, and connect them with two fish or connection plates and twelve 0.75- by 2.75-inch bolts. The even-numbered cannoneers under the direction of the gun pointer place the remaining two H-beams in a similar manner on the left side of the position.

c. The H-beams are lined up so that they are parallel to the track, an equal distance from the center line of the track, and so that their center lines are 6 feet 10 inches apart. The beams are also placed so that the ends of the two lines of beams are directly opposite each other.

d. Under the direction of the elevation setter, Nos. 9, 10, 11, and 12 unload and place a jack block under the two forward screw jacks. Under the direction of the gun pointer, Nos.

13, 14, 15, and 16 place a jack block under the two rear screw jacks. Nos. 5, 6, 7, and 8 throw off the six crossties.

e. Nos. 1 and 2 take post at the right front jack, the elevation setter (or No. 3) and No. 4 at the right rear, display board operators at the left front, and the aiming rule operator and battery commander telephone operator at the left rear jack, with ratchet levers and cranks. The gun commander personally directs the jacking up of the car. He coordinates the work of the four details so that the jacks are operated together.

f. Nos. 9 to 16 (or 17), inclusive, place the crossties under the car.

g. The jack details lower the car until the car sills rest on the ties. The gun commander coordinates the operation in the same manner as he does in raising the car.

h. All cannoneers working in reliefs dig the holes for the floats, assist in unloading the floats and shoes, and place them in position. Then they set the outriggers.

■ 64. JACKS.—*a.* Four screw jacks are provided so placed that they are directly above the rails when the car is used on standard gage track. The jacks are usually operated by crank handles which are fastened with split pins to the square ends of the shaft projecting through the side sills. When not in use, these handles are taken off and fastened to the sloping part of the floor plates by means of crank hooks provided. The jacks can be operated also by ratchet wrenches. When operating the jacks, no more than two threads should be exposed below the transom as further extension of the jack may damage it.

b. In order to oil the jacks conveniently, four holes with caps are provided in the floor plates over each jack. The hole nearest the center of the car is directly over the jack screw, and oil poured into it will lubricate both the jack screw and the worm wheel. The center hole of the other three holes on each jack comes directly over the worm and is used to oil the teeth of the worm and wheel. The remaining oil holes are used to oil the worm bushings.

c. There are two jack blocks 8 inches wide, 6 inches high, and 5 feet 8 inches long provided with each car. These blocks

have bearings for the jacks. In order to raise the car, the jack blocks are placed across the rails so that the two jack screws of each shaft will rest upon the bearing plates.

d. Two 20-inch, 25-ton auxiliary jacks having a total rise of 9 inches are carried on each railway car. They can be used for emergency purposes or in case the regular car jacks are out of order. Seats are provided on the end outrigger socket castings for these jacks when they are used to raise the car.

■ 65. OUTRIGGERS.—*a.* There are eight outriggers furnished with each car. These are used to prevent the car from tipping over or sliding on the ground platform when the gun is fired. When emplacing the gun for firing at naval targets all outriggers should be used.

(1) When the gun is emplaced the four *end* outriggers, which are permanently fastened in sockets on the side of the car, are swung out so that they make an angle of 30° with the side of the car body. They have a fixed ball fitted to one end and an adjusting screw and ball fitted to the other end. The adjusting screw is operated with a steel rod (tommy bar) which fits into holes provided next to the ball.

(2) When the gun is emplaced the four *side* outriggers are placed perpendicular to the side of the car body. They are made similar to the end outriggers except that they have tie rods extending from the adjusting screw nut to the lower part of the outrigger beam. The upper end of these outriggers has an eye instead of a ball and is fastened by means of 2.5-inch pins to the upper part of the outrigger beams.

b. Outrigger float pits are dug so that the ball end of each outrigger is on a level with the bottom of the track crossties. These pits should be close enough to the car so that they will fit the outriggers when adjusted to minimum length. The bearing surfaces of the pits should be perpendicular to the outriggers and should be smooth in order to give uniform bearing for the floats. A mound of earth is built behind the exposed part of the float. All loose earth is well tamped. (See fig. 4.)

permit of the use of a gear ratio approximately three times as great as the original.

126. A by-pass pipe is provided from the rear end of the recoil cylinder to the forward end of the recoil buffer. A check valve in this pipe is exposed to severe and sudden pressures on the counter-recoil, and on one occasion during proof it failed to function properly. On investigation, it appeared that this failure to function was due to unsatisfactory machine work, and on paying more attention to the fine machine work of these valves no such difficulty has been experienced on any other mounts.

127. It is difficult to swing the shell away from the breech when carrying it to loading position on the second jib crane. The operation is entirely possible, however.

128. The speed test of this mount made by a trained Coast Artillery crew gave a record of four shots in 10 minutes. This is rather slow for the caliber. Since this time, an improved elevating mechanism has been installed, so that it is felt that this record could be bettered.

129. MERITS.—The one feature which makes this mount conspicuous among railway carriages of all armies and which likely would have made it of very great value in the present war is its system of anchorage. There is no other mount in any of the allied armies which has an anchorage system that compares with this in effectiveness, nor which can be prepared for action in so short a time. The system is self-contained, if this term may be used to state the fact that the anchorage system is a traveling part of the carriage and it is of such a type as to permit the gun to be fired without any difficulty in any direction. To realize the full effectiveness of the efficiency of this anchorage system it should be compared with the anchorage used with the several types of 9.2-inch British guns on railway mounts, the 19 and 24-G French howitzers on improvised all-round traverse platforms, and the 240-millimeter French gun on the railway carriage known as the Colonies type, plate 27.

130. DEMERITS.—The characteristics of the carriage which appear to those who have observed the operation of allied railway artillery as demerits, are as follows: The elevating system includes a rack bolted to the bottom of the carriage meshing with a Hindley worm. It seems certain that under the working conditions that prevailed in the present war considerable difficulty would have been experienced in maintaining this rack and worm in proper working order. Second, a worm of the type of the Hindley worm can not easily be secured in the field, and inasmuch as such a worm must be worn in with the rack, it is possible that some difficulty might have been experienced in the maintenance.

131. A second point which applies perhaps entirely to the mount as originally designed is the lack of rigidity of the underframe. The whip of the car body was so great as to make it impossible for the personnel to remain upon it when the gun was fired. The car body as at present designed, however, has proved satisfactorily sturdy and rigid, and it is probable that there is not sufficient vibration either to injure the barbette carriage, even after long service, or to injure the personnel if they desire to remain on the mount while it is in action.

PLATE 87

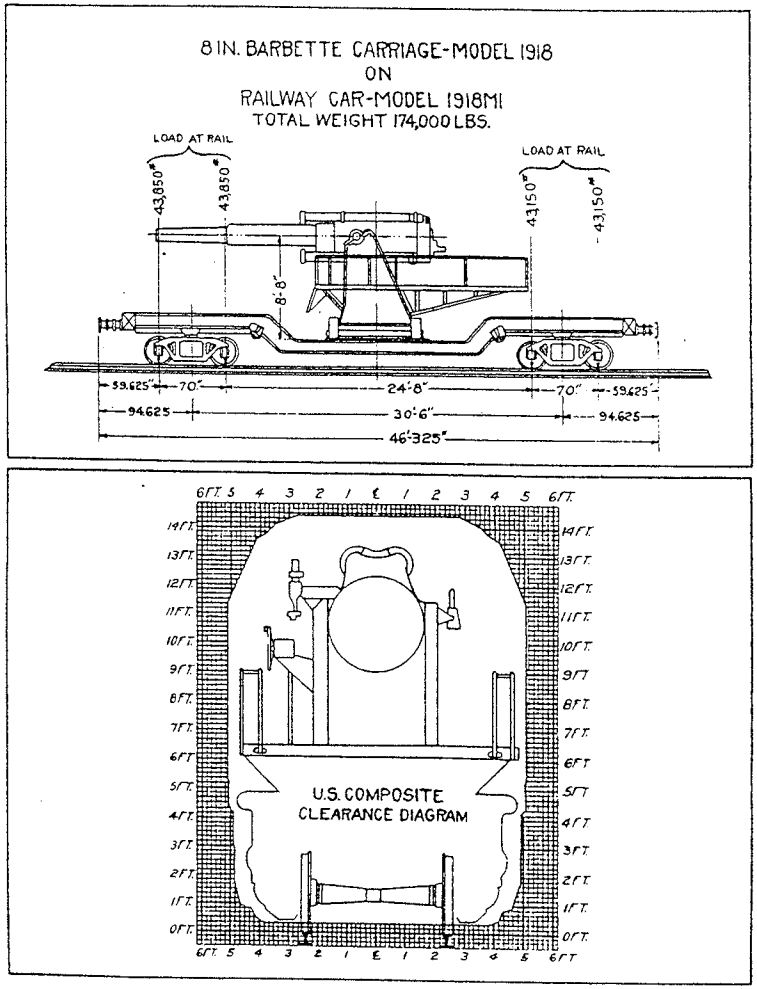
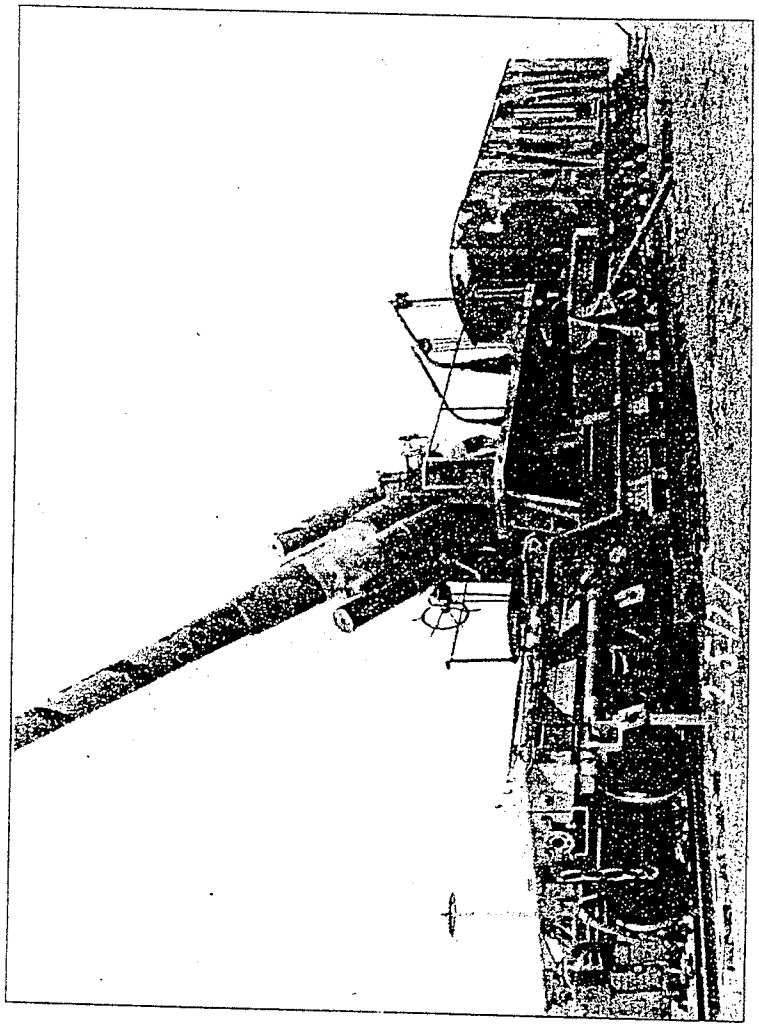
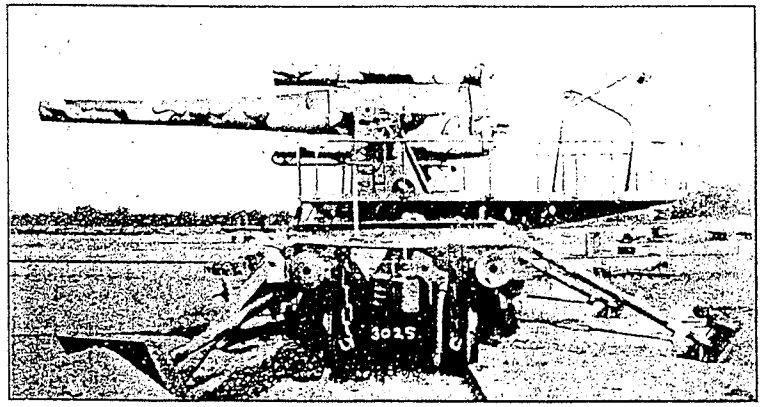


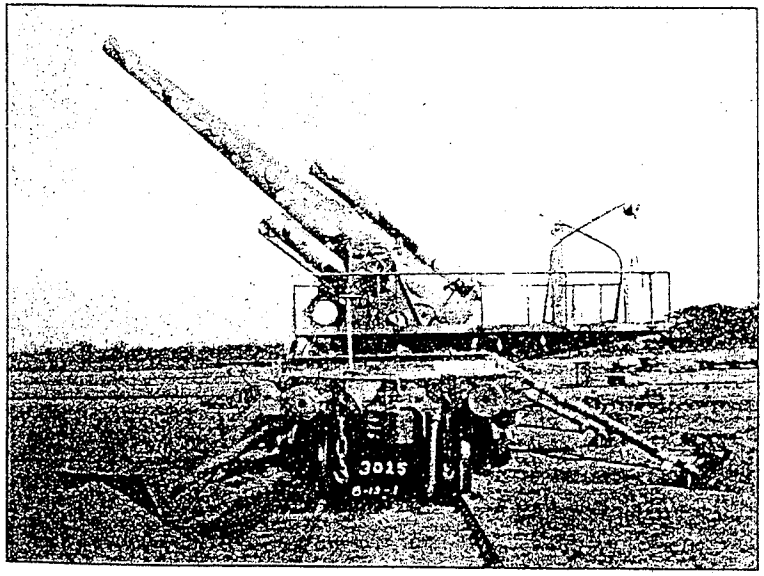
PLATE 88



8-INCH AMERICAN GUN ON RAILWAY MOUNT AND STANDARD AMMUNITION CAR.

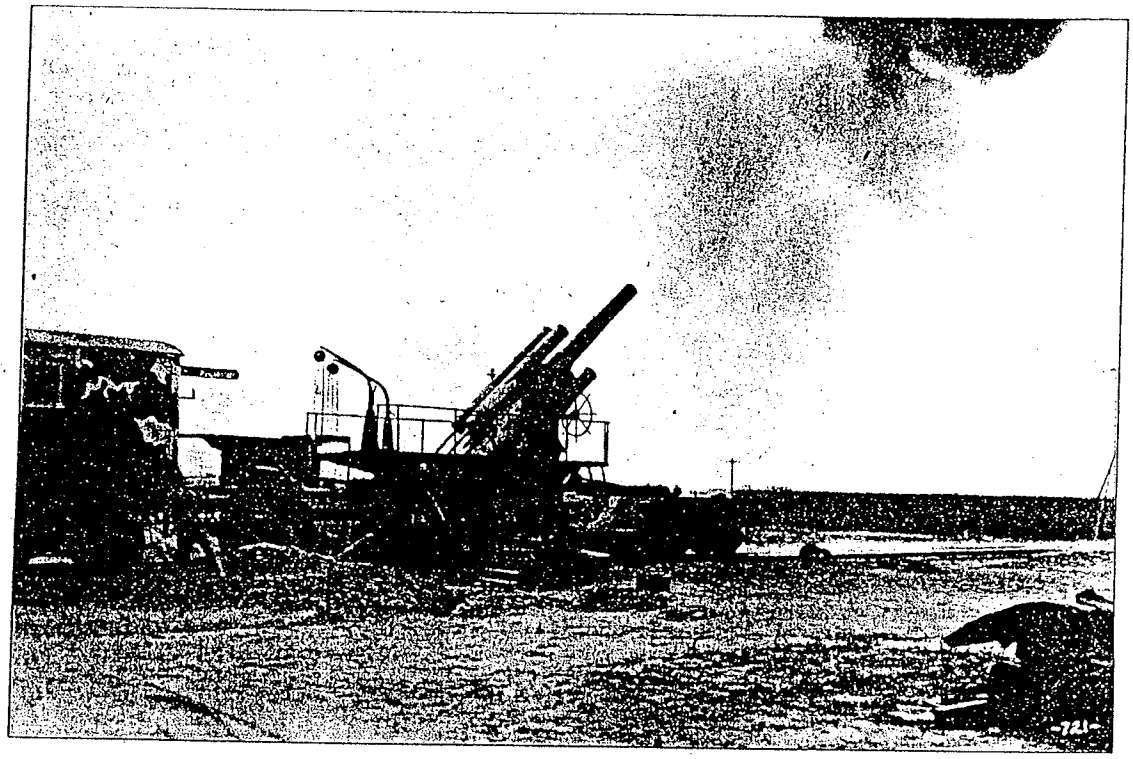
PLATE 89





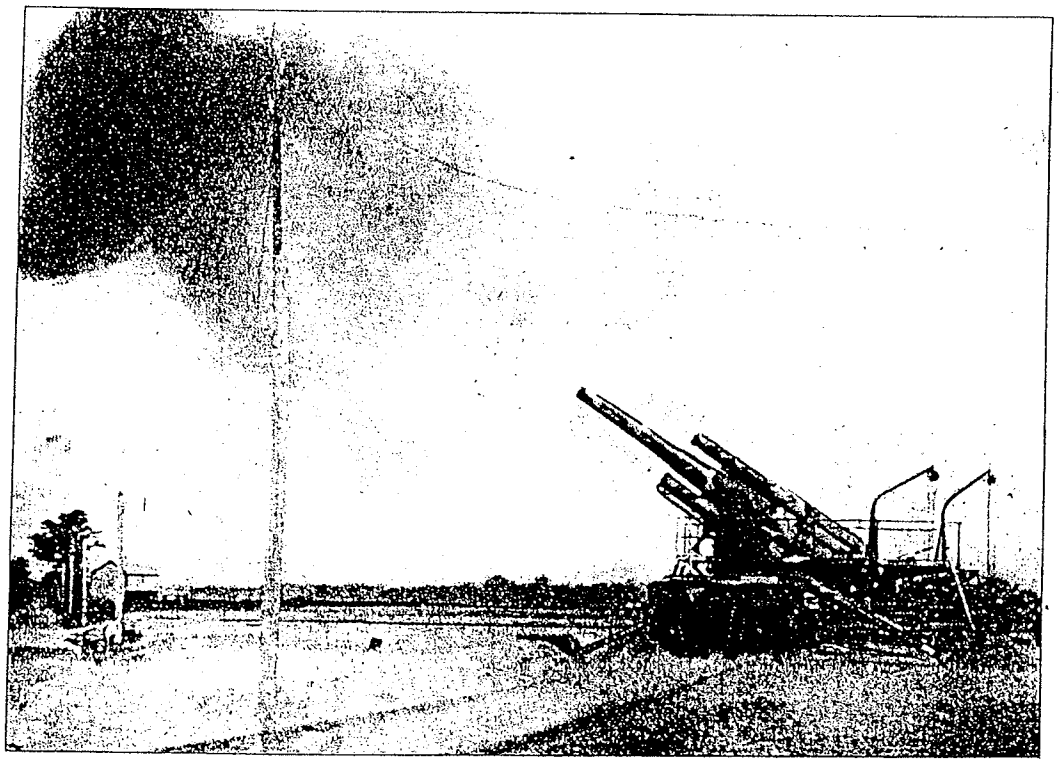
8-INCH AMERICAN GUN ON RAILWAY MOUNT.

PLATE 90



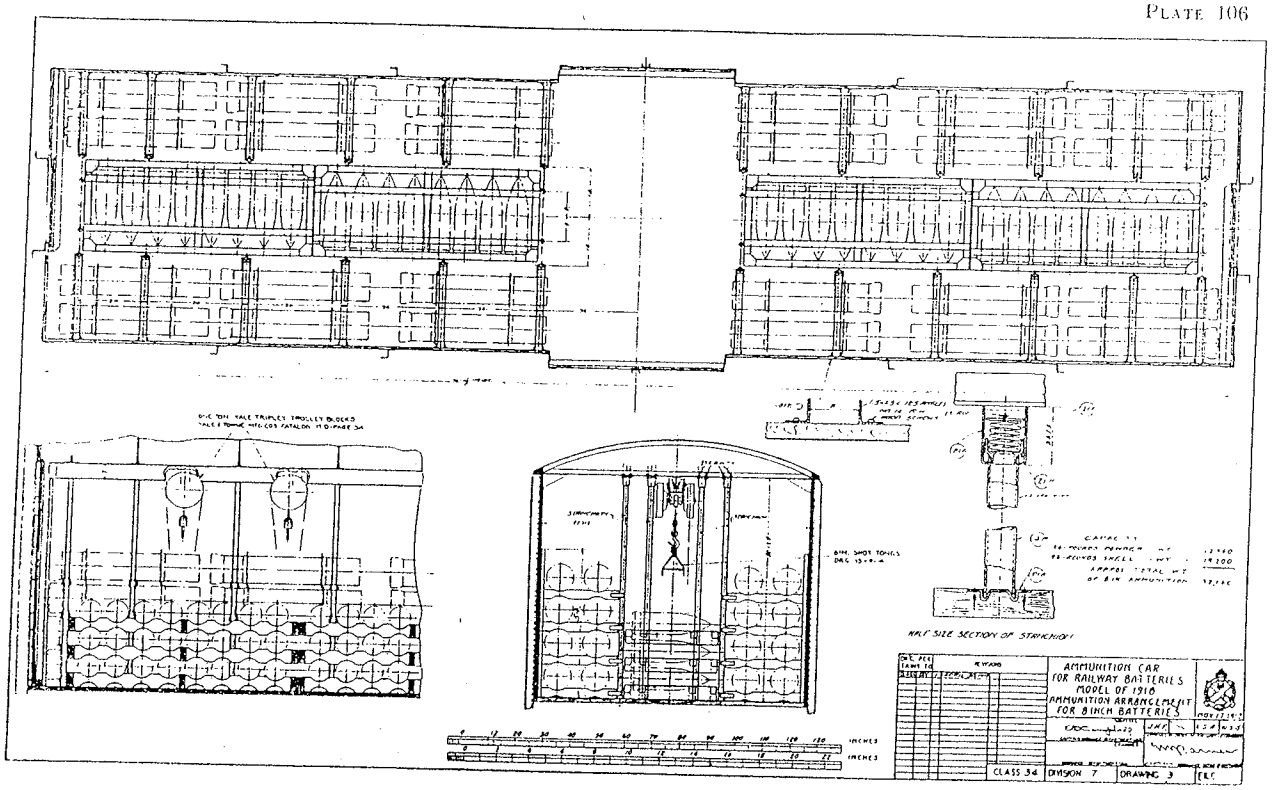
8-INCH AMERICAN GUN ON RAILWAY MOUNT.

PLATE 91



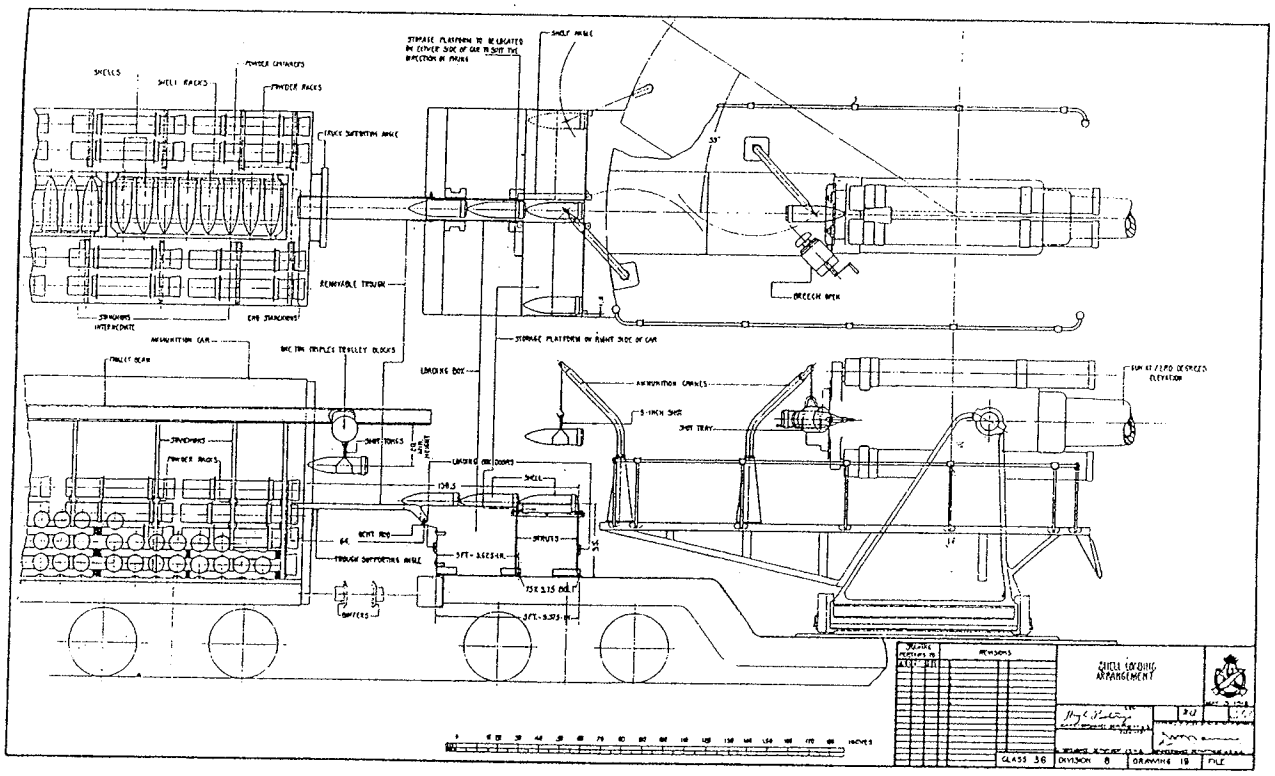
8-INCH AMERICAN GUN ON RAILWAY MOUNT.

PLATE 106



154

PLATE 107

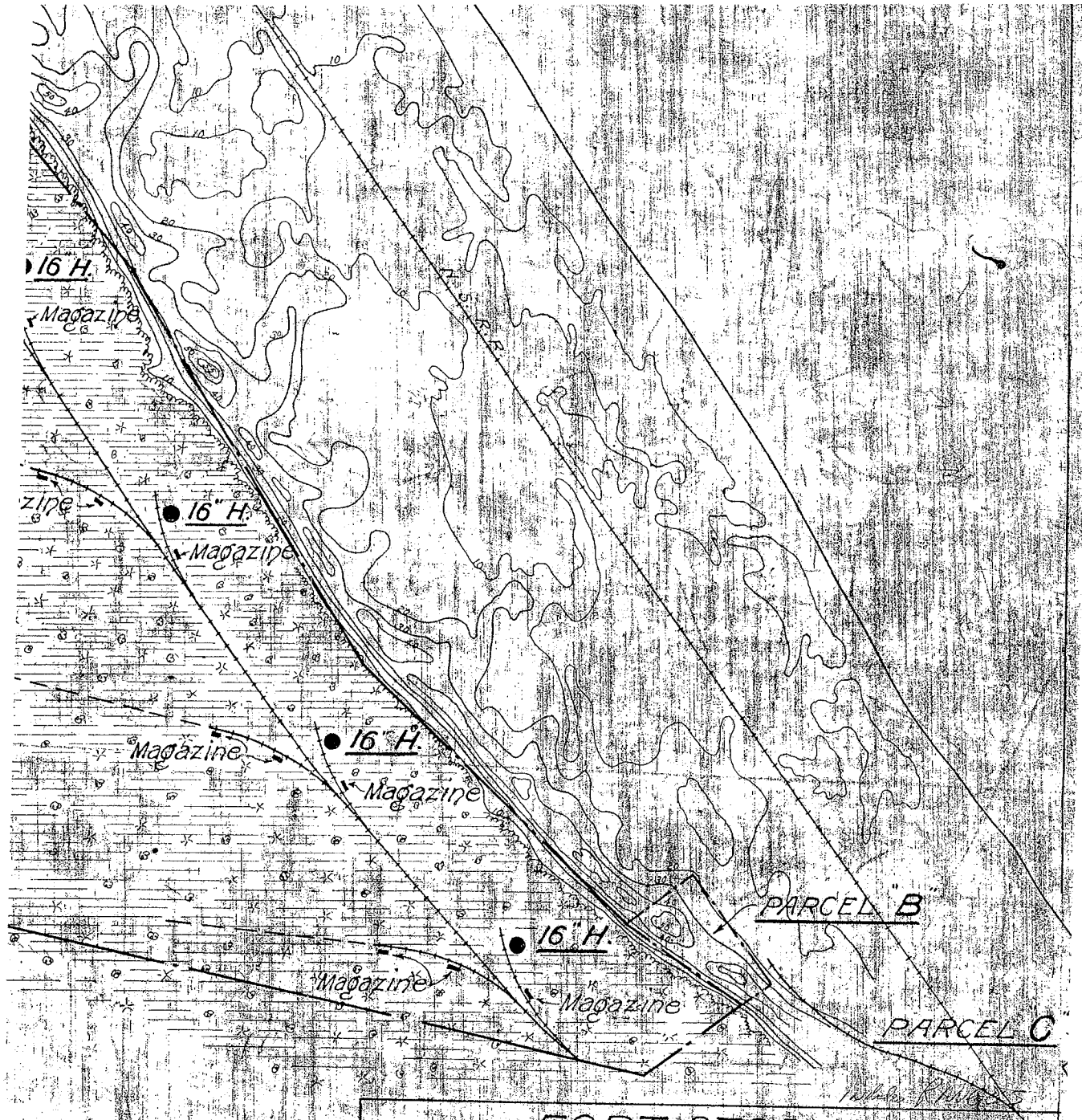


155

DCG5011

The guns of fort story: pennington and walke

compliled by fielding lewis tyler



FORT STORY, VA.
STUDY OF LOCATIONS FOR FOUR 16 IN. HOWITZERS AND FOUR 16 IN. RIFLES

In one Sheet

Scale 1:6000

300' 0 300' 600' 1500' 3000' 4500' 6000'

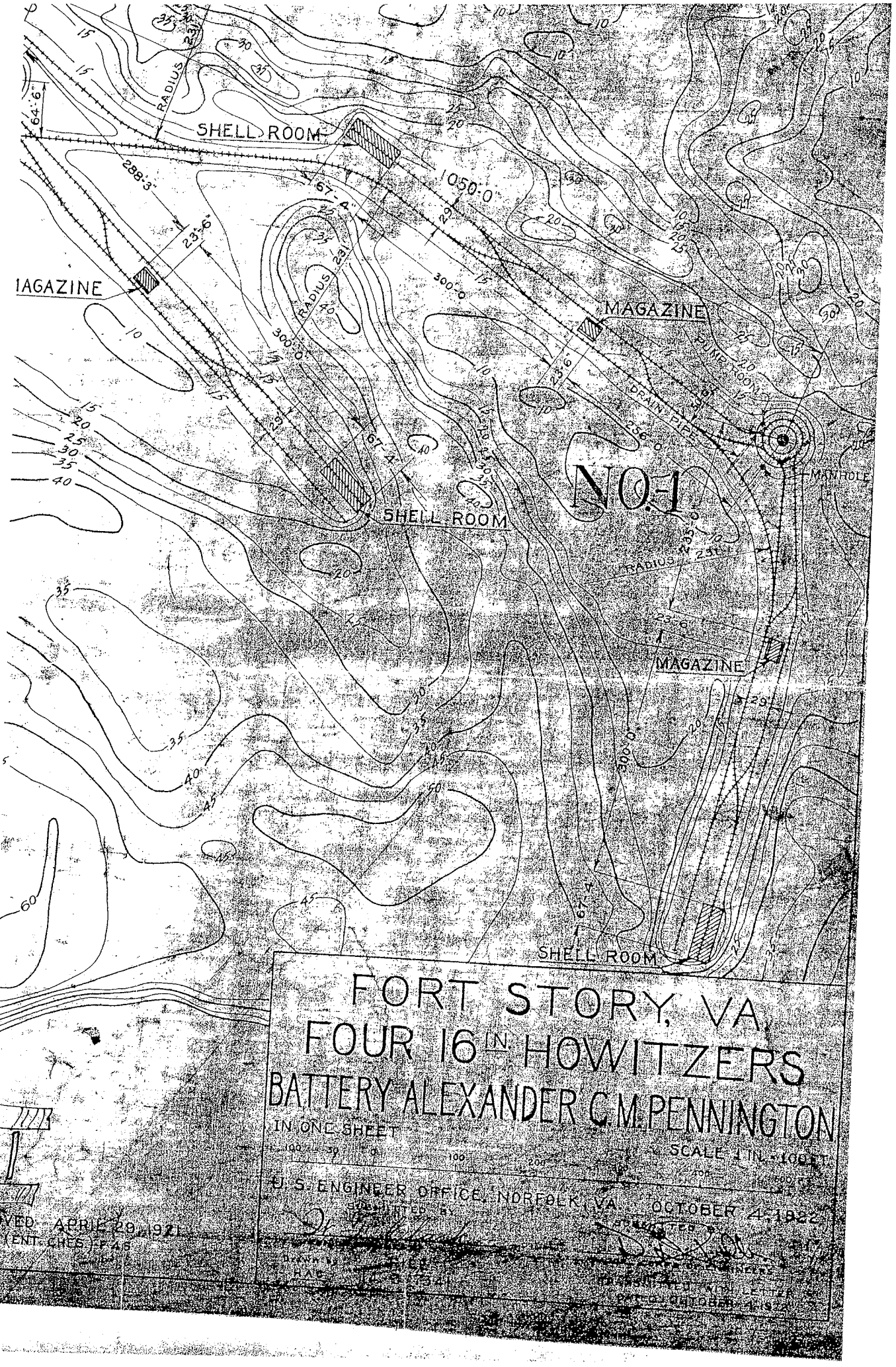
U.S. ENGINEER OFFICE, NORFOLK, VA. AUG 17, 1920

Submitted
L. C. Oakes
Col. Corps of Engineers

Transmitted with letter dated August 25, 1920

drawn by C.

File 14-3-7291


SHELL ROOM
MAGAZINE
MAGAZINE
SHELL ROOM
SHELL ROOM
MAGAZINE
PUMP ROOM
DRAIN PIPE
MANHOLE
NO. 1
RADIUS 231'-0"
RADIUS 231'-0"
RADIUS 231'-0"
1050'-0"
300'-0"
300'-0"
288'-3"
64'-6"
23'-6"
23'-6"
23'-6"
67'-4"
67'-4"
67'-4"
236'-0"
FORT STORY, VA.
FOUR 16 IN HOWITZERS
BATTERY ALEXANDER C.M. PENNINGTON
IN ONE SHEET
SCALE 1 IN. = 100 FT.
U.S. ENGINEER OFFICE, NORFOLK, VA. OCTOBER 4, 1922.
APPROVED APRIL 29, 1921
(ENT. CHES.) F.46

the first major armament; Batteries Pennington and Walke

In the months immediately following World War I, many of the coast artillery soldiers of the National Army departed Fort Story and were demobilized. The Virginia National Guard company was also demobilized in March and April of 1919. The 5-inch guns were scrapped and the 6-inch guns and three anti-aircraft guns remained as the only armament at Cape Henry.

In the years following the war Fort Story continued to function as a company-size garrison in the Coast Defenses of Chesapeake Bay which had its headquarters at Fort Monroe. The 2d Company served as the garrison and utilized a number of buildings which had been built for the conflict including the present-day post headquarters.

. During this period, the tour of duty for the post commander was of short duration. For a time, the senior officer was Second Lieutenant R. H. Kreuter, Coast Artillery Corps who served for an eight month period. In late 1920, the 2d Company had a troop strength of 32 soldiers.

In the summer of 1921, the 2d Company was transferred back to Fort Monroe and their place was taken by a small caretaking detachment.During the following year the 6-inch guns were dismounted and placed in storage. Fort Story was without any seacoast armament.

The construction of permanent armament began in the Summer of 1921 with the building of emplacements for four 16-inch howitzers, M1920. The new howitzer finished firing trials at Sandy Hook Proving Ground, New Jersey in 1920 and therefore the M1920 designation. The weapons were on an M1920 barbette carriage. Only five M1920 howitzers were produced, with four being mounted and the fifth barrel serving as a spare. The guns were manufactured at Watervliet Arsenal in New York and were serially numbered 1 through 5.

The gun positions were sited on the barren dunes at the south end of the reservation. It is interesting to note that an earlier study of locations of the guns had them located in the swamp area behind the secondary dune line. The projected positions were located from about the present-day 73rd Street northward to about __th Street. At Fort Story the circular concrete gun blocks were constructed enabling the guns to be fired in any direction. Each of the four howitzer positions had two reinforced concrete shell rooms and two powder magazines. Two power houses to house generators were sited along Atlantic Avenue. A standard gauge railway system with switches connected the gun positions with both the magazines ,shell rooms and power houses.

Additional trackage connected all four positions and to the main Norfolk and Southern rail line which ran through the post. In the secondary dune line a reinforced concrete tunnel was built to connect the battery plotting room to the gun positions forward of the dunes. The tunnel was 280 feet long with an additional 225 foot retaining wall. The railway was extended into the tunnel. The battery plotting and switchboard room was built into the back of the dune line. The entire battery was tied in with underground power cable and telephone system. An exterior lighting system was also provided

In March, the still uncompleted battery with no guns was named Battery A.C.M. Pennington

1926 water lines

On 5 November 1927 the caretaking detachment was replaced by Battery d, 12th Coast Artillery. The regiment had its headquarters at Fort Monroe.

In April 1932, the 12th Coast Artillery was inactivated and replaced by the 2d Coast Artillery. Battery E assumed duties at Fort Story.

working document located in museum database. 26 May 2001

VISIT: S. Walter George, Jr. 101 Hanover Avenue, Colonial Heights,VA 23834. Interview with Fielding L. Tyler. Old Coast Guard Station. early-May 1997.

Walter George is in charge of the reunion for the 176th Field Artillery Battalion, a WW II artillery battalion in Louisville this year. He was in town visiting in Kempsville. The 176th FA served for a period at Ft. Story, Camp Thalia & Cp. Pendleton. He came to the museum looking for pictures of the facilities where his unit served. He found me through Ft. Eustis and Ft. Story. I showed him everything we had to include photographs. I gave him a bunch of the booklets on Camp Pendleton. There was nothing else that interested him and he departed. I told him to hold his next reunion in Virginia Beach and we would host him and arrange a tour. He appeared mildly interested.

I inquired about the 176th Field Artillery and its time in the area and later assignments. Mr. George has a lot of papers on the unit at his home and said he will send them on to me. The battalion has been having reunions since 1967. Held twice a year now annually.

From what he understands the 176th Field Artillery was formed from the 2d Battalion, 111 Field Artillery Regiment, a unit of the 29th Infantry Division. It was formed when Field Artillery Regiments were broken up into more manageable battalions. Colonel Emerson was the battalion commander.

Mr. George is originally from Petersburg and after high school went to Randolph-Macon on a football scholarship. In 1943, he left school and volunteered for the Army. He joined the battalion at Ashland, Virginia and traveled to Camp White, North Carolina for unit training. Camp White was near Wilmington. His first assignment was as a wire communications specialist with Battery C. Battery C was a 105mm gun battery comprised of federalized National Guardsmen from the Fredericksburg area.

From Wilmington the battalion was transferred to the Tidewater, Virginia area. Battery C lived in barracks at Fort Story near the lighthouse. They conducted no live fire while at Ft. Story, but used 37mm sub-caliber devices mounted on the barrels of the weaponsfiring at towed targets in the ocean. During a baseball game he had his jaw broken. He was treated at the Convelascent Hospital on post. The battalion departed Fort Story for firing at Camp A. P. Hill. They they moved to New Jersey for "field tests" and then to the Port Of Embarkation in Boston. The battalion boarded the *USS Wakefield* (formerly *SS Manhattan*) and sailed to Liverpool, England. They then landed on the continent at Utah Beach . The battalion served in Europe as corps artillery with Third Army. They participated in combat in the Ardennes, Northern France and ended up in Germany. Walter ended the war as a T-5 and served his enrire career in Battery C.

Notes from Harbor Defense records: By August 1942 the battalion and Battery A were headquartered at Camp Thalia in Sector Reserve. One battery in the Cape Charles Defense Force and a battery in New Bern. On 18 Oct.1943, 176th FA Bn was relieved from Sector Reserve and passed to control of XIII Army Corps.

Visit.2 January 1997, Mr. Raymond D. Pearce, 1423 Pleasant Valley Dr.Baltimore, MD 21228.

Mr. Pierce used to live in Virginia Beach a number of years ago and stayed on 87th Street. He had a friend who served in a "howitzer battery" at Fort Story and served with with A Battery, 246th Coast Artillery during January, February and March of 1942. He wanted to know the former location of the battery. Mr. Pierce checked with Libby Alfriend who refered him to me. He asked me if he could bring his friend, Robert McKeever, by to look at pictures and possibly go to Fort Story in the spring. OK sez I.

VISIT. 7 May 1997. Robert L. McKeever Jr. 200 Brighton Dam Road. Box 135. Brookevelle, MD 20833-0135. and Mr. Raymond D. Pearce, Catonville, MD.

The pair showed up at the museum for a visit. They were staying at the Thunderbird and brought their wives to the beach just to see me and tour Fort Story. The wives went someplace else so I just had the guys. I showed them papers, photographs and gave them a tour of Fort Story- total 3 hours time. They said thanks and walked away into the hotel parking lot. Did offer me lunch which I had to decline because it was 2 PM.

All of my conversation was with Mr. McKeever, Pierce had served in the US Navy. McKeever had a tremendous power of recall for a guy 77 and kept pace with the tour. Pierce was a bit older and slower, but both were nice chaps. I got quite a bit of info on the howitzer battery from McKeever.

Robert McKeever was born in 1919 and originally was from Silver Spring, MD. On 2 July 1940 he joined the 260th Coast Artillery (Antiaircraft) in the District of Columbia National Guard. They were on maneuvers at Fort Ontario, New York. His job was as a motorcycle driver. On 6 January 1941, the regiment was federalized and loaded on a troop train to Fort Bliss, Texas. He was assigned to Headquarters Battery, 2d Battalion . The train went through New Orleans and Fort Worth until finally reaching Fort Bliss where the unit went into training.

He left the regiment in 1941 and entered Coast Artillery OCS Class Number 2 at Fort Monroe. OCS Class No. 1 went to the Phillipines. He graduated on 24 December 1941 and he was branched as Seacoast Artillery. instead of a 90-day course they graduated in 84 days due to the attack on Pearl harbor. He took a ten day leave and reported to his initial assignment as an officer at Fort Story as an Emplacement Officer with Battery A, 246th Coast Artillery Regiment (Harbor Defense). He was assigned to the left hand gun (1) of the two-gun Battery Pennington. The battery command post was located in the new lighthouse. The post was on the level beheath the light room and was manned 24 hours a day. The CP was equipped with a telescope and field telephones. The base end station was "down the line." The company commander was Captain Veazey and McKeever was not sure whether he was the original National Guard commander or later assigned to Battery A. Battery A was originally from Lynchburg and most of the men had worked in the Cradock Shoe Factory (2).

McKeever said that the howitzers were made in the Washington Navy Yard for

"pocket battleships." **[I don't know 'bout that]** They had a M-4 mechanical direction finder , then an M-7 and then an M-584.. I am not sure he was talking about the howitzers or 3-inch guns. As I took him around post I asked him to ID the cart in the RV compound. He said that was the bottom portion of a powder cart. The shell /shot carts had an iron device to hold the shells and transfer to the table and then loading pan at the gun position. He also said that each shell was weighed and stamped with that weight. The "Plymouth" locomotive would pull the shot carts. Each shot cart would hold 2 or 3 shells. They would be rolled onto a pan at the gun position and a chain would ram the shell into position. During practice firing a Springfield rifle was mounted as a "Spotting rifle". The battery would have a met message before firing in addition to the weight of the projectile and temperature of the powder. They would allow for rotation of the earth and used base end stations for triangulation to the target. Then they rammed in the projectile, then loaded powder, closed the breech, put primer in the breech. The gun would be cleaned from the muzzle.

He said he did not get around post much and never went to Virginia Beach during his time at Fort Story. He was "stuck" at his battery position or in the OP in the lighthouse. The soldiers assigned to A Battery initially slept in conical tents at the battery position. They were heated with a conical stove in the center of the tent. The uniform was blue denim fatigues. McKeever said he had a room in a barracks near the lighthouse. He thinks in the BOQs next to the old post commanders quarters and Battery Worcester. [I don't know construction dates, maybe he lived in the old WW I barracks]. The "shot houses" were usually guarded. They would clean the rotating bands in the shot houses. The powder was kept in a separate building. They had a .30 caliber machine gun for local AAA defense. It was mounted on three railroad ties. One night it "just went off". The guard when questioned said he had been guarding the gun for a long time and pulled the trigger to find out if it worked. I love it!! Another battery soldier was on guard duty on the beach. He killed a seagull with his Springfield rifle. He was to be courtmartialled and the dead seagull was kept in the battery refrigerator as evidence. McKeever never found out what happened. He said that he never saw any railway guns while he was on post.

After 3 months (January, February, March 1942) he was transfered to the 605th Coast Artillery Regiment (Antiaircraft) (Semi-mobile) at Camp Stewart, Georgia. The 605th was then assigned to the Boston area and he was battery commander of the searchlight battery. Then he was sent to school at Camp Davis and then returned to Boston. He then went back to Camp Davis for AW school. Then to Camp Hann, California to the 441st Coast Artillery where he was a battery commander. He said he was then transfered to the "Louisiana Maneuver Area" and further sent to Headquarters, Third Army at Fort Sam Houston. The Fourth Army took over and he remained. He served on the AAA range in Texas. Fourth Army was designated to go overseas and they boarded trains for New York. While on the train they were redesignated as Headquarters, Eighth Army. When they arrived at Camp Shanks, they were further redesignated as Headquarters, Ninth Army. McKeever went overseas on the Queen Elisabeth and landed in Scotland. He was in the AAA Section of Army headquarters. The unit later moved to Bristol, England. He flew to

Cherbourg, France by C-47 and the rest of Army headquarters crossed by ship. He then moved to Rennes and then was scheduled for Belgium, but the unit went to Holland. He went with Army headquarters as it moved into Germany as an AAA officer in the S-3 Section. When the war ended he left through the port of La Harve. He was discharged at Fort Bragg in 1945. He enrolled at the University of Maryland where he completed college. He remained in the Army Reserve for a period.

NOTES: (1). The left hand gun would have been gun number 4 in the Travel Park.
(2) Cradock active in 1997 as Cradock-Trent making Navy brogans.

14 May. 1997. Raymond Pearce sent me a thank-you note.
21 May 1997. Bob McKeever returned the photo of the howitzer and enclosed a page from his 200 file showing his dates and places of service. He called in the PM to confirm receipt. The howitzer in the photo has a practice shell on the tray. The gunner would load the dummy projo and simulate firing by pulling the lanyard. The caps were kept in a leather box by a member of the crew.

History of Battery # 2- (See notes in [illigible]) (200 area)

Name: Battery Pennington by GO 13, War Department dated Mar 27, 1922

Armament: 2-16 " Howitzers M1920

Construction: Started- July 1921
Completed- July 5, 1922
Accepted- Oct 21, 1922

Dimension Shell Room 2 per gun Powder magazine-2 per gun
capacity of ea-12,800 cu ft capacity of ea- 1,575 cu ft
80 projectiles 150 powder charges
Battery total-320 projectiles Total 600 powder charges

Location of Plotting Room Bunker 401

Location of Power Plant Bldg 224

The only remnants of Pennington remaining at Fort Story can be found by turning west off Atlantic Ave onto Igloo Road and left off Igloo Rd vic Bldg 214. turn left on unimproved road.

Remnants of Pennington Battery

Bldg Number
214 Powder Magazine for #2 Howitzer located NW of gun position
215 Powder Magazine for #2 Howitzer located SE of gun position
216 Powder Magazine for #1 Howitzer located NW of gun position
217 Powder Magazine for #1 Howitzer located E of gun position
219 Shell House for #2 Howitzer located SE of gun position
220 Shell House for #1 Howitzer located NW of gun position
221 Shell House for #1 Howitzer located E of gun position
409 Shell House for #2 Howitzer located NW of gun position
No remnanents of #2 gun, portions of ring base Gun # 1 Between Bldgs 216 and 217 off road

NOTE: From handwritten Historical Record cards at Fort Story. date & source unknown
transcribed from photocopy. F.L. Tyler, January 1999

History of Battery #3 (Formerly Pennington "B") 400 area

Name: Battery Walke by Ltr. APO War Dept dated June 26 1940

Armament- 2- 16 " Howitzers M 1920

Construction: Started July 1921
Completed July 5, 1922
Accepted Oct. 22, 1922

Dimensions: Shell Rooms 2 per gun Powder magazines 2 per gun
capacity ea 12,800 cu ft 1,575 cu ft
80 projectiles 150 powder charges
Battery Total 320 projectiles Total 600 powder charges

Location of Plotting Room: Bunker 401 (see notes reverse side)

Remnants of Walke Battery

Bldg 405	Powder Mag. tube #2
Bldg 406	Powder Mag tube #2
Bldg 410	Shell House tube #2
Bldg 412	Shell House tube #1
Bldg 674	Shell House tube #2

Note: from handwritten "Historical Record cards" at Fort Story. date and source unknown.
transcribed from photocopy. F.L. Tyler, January 1999

GENERAL ORDERS, NO. 13.

WAR DEPARTMENT,
WASHINGTON, *March 27, 1922.*

I__[sections I and II not related to eponyms]...

III__Naming of military reservations and seacoast batteries.-1. Under the provisions of paragraph 201, Army Regulations, names of military reservations are announced as follows:

a. The Puuloa Military Reservation, Oahu, Hawaii, is named *Fort Weaver*, in honor of Maj Gen. *Erasmus M. Weaver*, United States Army, who died November 13, 1920.

b. The military reservation on Little Hog Island, Boston Harbor, Mass., is named *Fort Duvall*, in honor of Maj. Gen. *William P. Duvall*, United States Army, who died March 1, 1920.

c. The military reservation at Nahant, Mass., is named *Fort Ruckman*, in honor of Brig. Gen. *John W. Ruckman*, United States Army (major general, National Army), who died June 7, 1921.

2. Names of seacoast batteries are announced as follows:

a. ON THE FORT DUVALL, MASS., MILITARY RESERVATION.

Battery Frank S. Long, in honor of First Lieut. *Frank S. Long*, Infantry, who was killed in action in France, October 5, 1918.

b. ON THE FORT MICHIE, N. Y., MILITARY RESERVATION.

Battery John M. K. Davis, in honor of Brig. Gen. *John M. K. Davis*, United States Army, who died May 20, 1920.

c. ON THE FORT TILDEN, N. Y., MILITARY RESERVATION.

Battery Henry L. Harris, in honor of Col. *Henry L. Harris*, United States Army, who died March 8, 1920.

d. ON THE FORT STORY, VA., MILITARY RESERVATION.

Battery Alexander C. M. Pennington, in honor of Maj. Gen. *Alexander C. M. Pennington*, United States Army, who died November 30, 1917.

e. ON THE FORT PICKENS, FLA., MILITARY RESERVATION.

Battery Loomis L. Langdon, in honor of Brig. Gen. *Loomis L. Langdon*, United States Army, who died January 7, 1910.

f. ON THE FORT TRAVIS, TEX., MILITARY RESERVATION.

Battery Edwin R. Kimble, in honor of Maj. *Edwin R. Kimble*, Corps of Engineers, who died April 9, 1918.

g. ON THE FORT BARRY, CALIF., MILITARY RESERVATION.

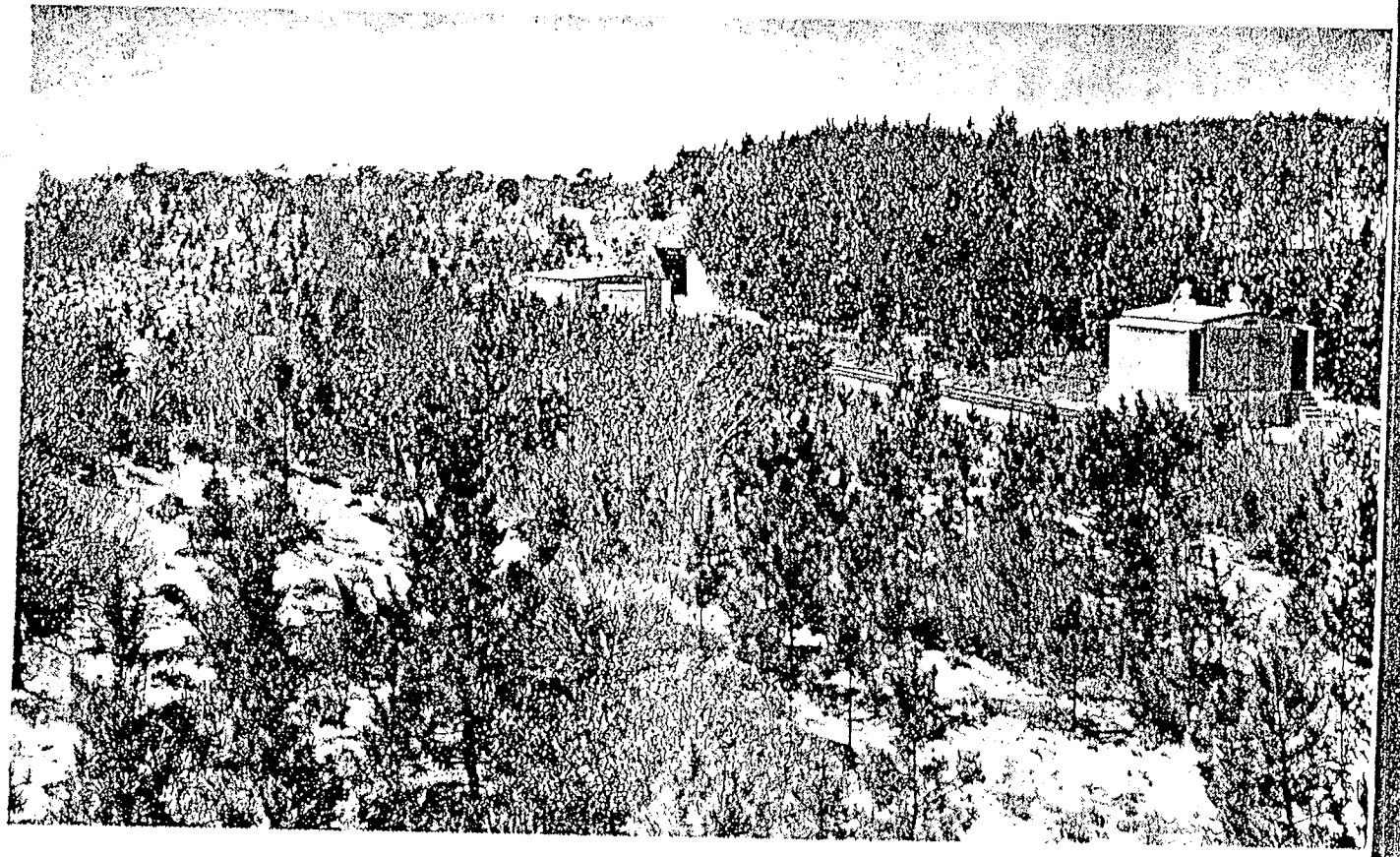
Battery Hamilton A. Smith, in honor of Col. *Hamilton A. Smith*, National Army (lieutenant colonel, 26th Infantry), who was killed in action in France, July 22, 1918.

Battery James F. McIndoe, in honor of Brig. Gen. *James F. McIndoe*, United States Army (lieutenant colonel, Corps of Engineers), who died February 5, 1919.

BY ORDER OF THE SECRETARY OF WAR:

JOHN J. PERSHING,
General of the Armies,
Chief of Staff.

OFFICIAL:
P. C. HARRIS,
The Adjutant General.



Dunes at Fort Story after sand fixation. (Photo taken in 1941)

A SAGA OF SAND

(By Anne Douglas)

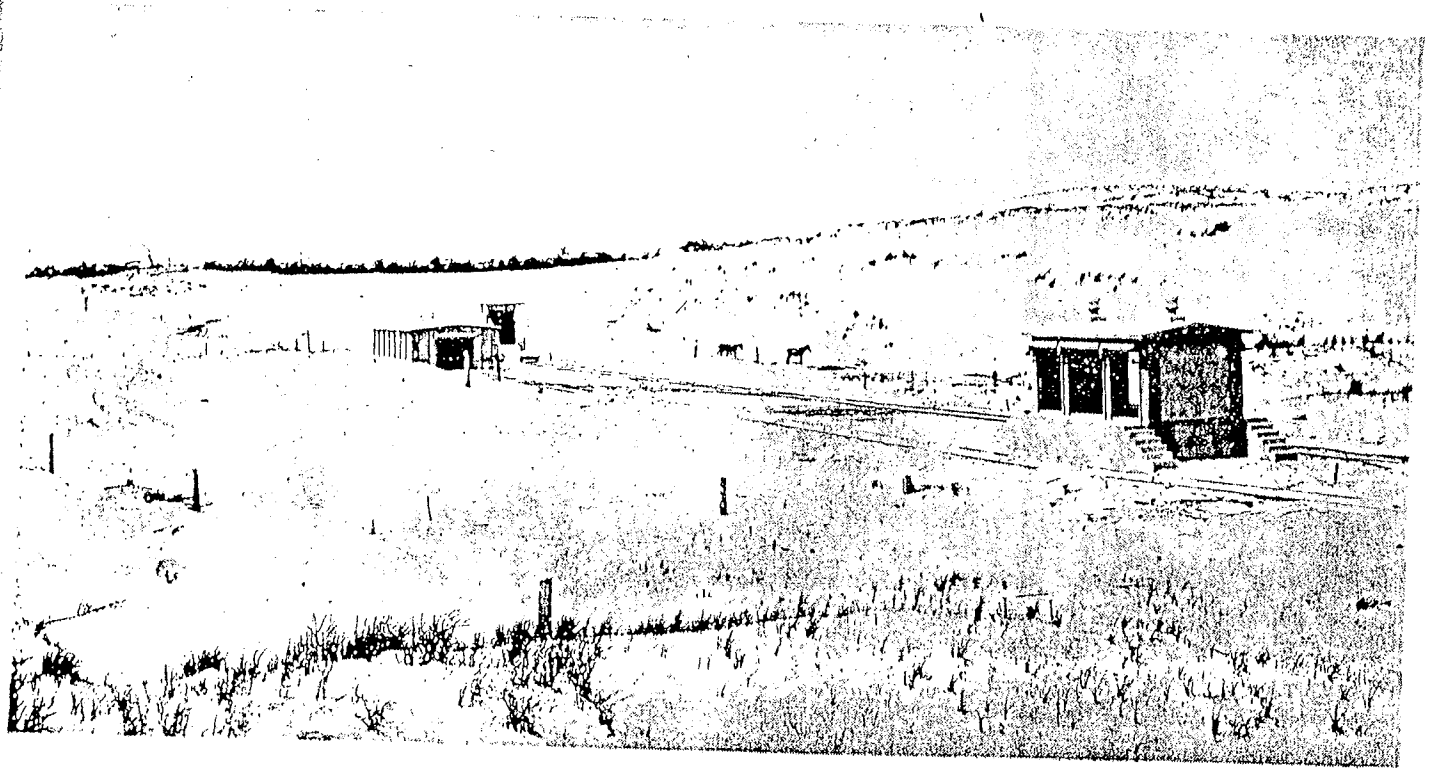
The bogs along the Alaska Highway, the mud of Italy, the swamps of tropic islands, or the shifting sands right here at our own front door present no terra—spell it with an "a" or "or"—which the U. S. Engineers can not lick. The feat of anchoring the traveling sand dunes and stabilizing the flying sand on Cape Henry, Virginia, formidable guardian of the entrance to the Chesapeake Bay, was an accomplishment worthy of approbative acclaim. Cape Henry, jutting out into the Atlantic Ocean at the mouth of the Chesapeake, presents a problem with its coast line peregrinations that may well cause many an engineer to agree with the poet Byron that man's control stops at the shore. But back of the fore dunes, the homeless sands have been brought to a permanent stand so that not only have they ceased to menace the millions of dollars worth of defense structures and mechanisms at Fort Story, but have been made to produce a heavy verdant growth that effectively conceals their man made might.

In 1921, when a site was selected among the sand dunes at Cape Henry for the construction of fortifications, it was thought that Mother Nature had finished weaving her pattern of dunes. These dunes range in elevation from 15 to 90 feet and were considered to be an asset to the site because of the natural protection afforded. However, after about $350,000 had been spent on defense structures, it was noted that the drifting sand was taking new courses. It began to cover up the defense structures, to get into the mechanisms of the guns, into instruments, and even into buildings. It had to be dug away from the structures before entrance could be made, and every spring, huge quantities of sand that had drifted in during the winter had to be cleared away. In one place at the entrance to a tunnel, from twelve to fifteen hundred cubic yards had to be removed and disposed of periodically. The situation became critical. Somebody had to do something about it.

ARTHUR P. WARE

The engineers did. And the man who originated the method and carried out the job was Arthur P. Ware. Mr. Ware has been working for the U. S. Engineer Department for

(Continued on page 125)



Dunes at Fort Story prior to sand fixation. (Photo taken in 1924)

(*Continued from page 124*)

years; his father worked a lifetime for the Engineers; and his grandfather, ...o took charge of the U. S. Engineer Office at Fort Monroe, Virginia, in 1863, worked an extra long life-time for the Engineers—such a long life-time that when he reached the age of 91 the Government decided to take unequivocal action in making him retire. And did Grandpa Ware raise hell about that!

Mr. Ware knows Cape Henry, its winds, its tides, every contour of its surface, with an intimacy that comes only from long years of living and working daily on a particular bit of terrain. After studying the course of these sands, experimenting and trying out plans with beach grass, bay bushes and other native growth, he decided that the most effective results could be obtained by the use of pine needles, brush fences, black locust and loblolly pine seedlings in the following manner. An area to be fixed was laid out in blocks approximately 200 ft. x 100 ft, varying with the topography. Brush fences from three to four feet high were constructed around these blocks, then the blocks were covered with pine needles. Directly behind the fences, a row of black locust seedlings ...as planted about four feet apart; ...n starting five feet back of the locust, loblolly pine seedlings were planted all across the blocks in rows five feet apart, in a checkerboard design.

The brush fences acted as the first echelon of defense in breaking the force of the wind. The pine needles, the second echelon, prevented the sand from drifting and blowing away from the roots of the seedlings and at the same time helped to hold the moisture in the sand. Thus the seedlings were given a chance to dig in and establish a permanent base. The black locust trees, being fast growing, were planted behind the brush fences for the purpose of protecting the little pines after the brush fence had decayed.

At a few particularly difficult sites, the use of Kudzu vines in conjunction with brush fences proved especially effective. These vines take root very easily and after the first six or eight months grow quite rapidly, sending deep roots into the soil and long runners over the top.

Mr. Ware's chance to direct large scale operations for stabilizing the bulk of all the high dunes within the Fort Story boundary lines came in 1933, the year that the government changed into Roosevelt and trigrouped letter of the alphabet. On an abrupt notice, men began streaming into his two small office rooms, reporting for work—about three hundred the first day, and at that time, activities in the Fort Story Engineer Office were geared to the regular maintenance crew which did not exceed fifteen in number. Mr. Ware called the District Engineer Office in Norfolk and was told that he was on his own. That first day he put them to work making rakes out of two-by-fours and six-penny nails, converting a storeroom space into an office, building necessary desks and furniture, and getting organized. Thus was launched Civil Works Administration Project No. 1, Sand Fixation at Fort Story, under the direction of the District Engineer, Norfolk, Va. In addition to CWA employees, CCC and soldier labor swelled the crew to approximately five hundred.

The cost to the Government was held to a minimum. The project was begun with the usual preliminary expenses of planning, surveying and drafting being skipped entirely. Thru Mr. Ware's efforts and success in obtaining permission from farmers in Princess Anne County to rake pine needles, cut brush and poles from their property, these materials were obtained for no cost except labor and hauling. Teams and trucks were hired at very reasonable rates from private

(*Continued on page 150*)

Harbor Defenses
of
Chesapeake Bay
BATTERY ALEXANDER C. M. PENNINGTON

Compiled by:
Mark Henkiel, CDSG

Information from:
Glen Williford, CDSG
Terence Gander, CDSG
Ian Hogg

Corrected to:
1 October 2000

CDSG 2000 HDCB Tour

Battery Alexander C. M. Pennington

Battery Pennington was the primary heavy caliber battery of the Harbor Defenses of Chesapeake Bay, from its transfer in 1924 until 1943 when Batteries Ketcham (120), 121 and Winslow (122) were completed. This battery was unique in all of the U.S. Army Harbor Defenses because it was the only battery ever armed with 16-inch/25 M1920 Howitzers; mounted on M1920 Barbette Carriages.

The 16-inch/25 Howitzer was originally intended to be the mortar counterpart to the 16-inch/50 Disappearing Gun. The 16-inch/25 Mortar was intended to provide the plunging fire that the 16-inch/50 Gun on its disappearing carriage would be unable to produce. During their development period the new weapons were referred to as 16-inch mortars and, in 1915, it was proposed to procure no fewer than sixty of them, but by 1919, they had been reclassified as howitzers in view of their 25 caliber barrel length. The new howitzer finished its firing trials at the Sandy Hook Proving Grounds in 1920 and the design was given the designation M1920. In appearance, the general construction was very similar to that of the 16-inch M1919MII Gun, except for the 25 caliber length. The barbette carriage, also the M1920 followed the same general lines as its M1919 Barbette Carriage counterpart.

Only five M1920 Howitzers were produced, with four being mounted and the fifth barrel used as a spare. By 1920, with the introduction of the 16-inch Barbette Carriage with its greatly increased elevation over the 16-inch Disappearing Carriage, it meant that the barbette mounted guns themselves could provide all the plunging fire that would be needed and the howitzer became redundant. By the time that decision was made, the production of the five barrels was advanced to the stage where cancellation would have been uneconomic and once completed four were installed at Fort Story on Cape Henry, Virginia to add to the Harbor Defenses of Chesapeake Bay.

Originally the four howitzers formed Battery Pennington, later subdivided into Battery Pennington A and Battery Pennington B. In 1941, Battery Pennington B with Emplacements 3 and 4 (Howitzers 2 and 5, Carriages 4 and 1), became Battery Walke, and Battery Pennington A with Emplacements 1 and 2 (Howitzers 3 and 4, Carriages 2 and 3) retained the title of Battery Pennington. Although the two batteries were not casemated, the howitzers received armored shields during WW II. The shields resembled a "rounded box". By 1943, the howitzers had been reduced to caretaker and maintenance status and remained so until they were scrapped in 1947.

Howitzers

Emplacement	Caliber	Model	Serial No.	Manufacturer
Spare	16-inch/25	M1920	1	Watervliet Arsenal
No. 1	16-inch/25	M1920	3	Watervliet Arsenal
No. 2	16-inch/25	M1920	4	Watervliet Arsenal
No. 3*	16-inch/25	M1920	2	Watervliet Arsenal
No. 4*	16-inch/25	M1920	5	Watervliet Arsenal

*Emplacements 3 and 4 became Battery Walke in 1941, with Emplacements 1 and 2 retaining the name of Battery Pennington.

Carriages

Emplacement	Type	Model	Serial No.	Manufacturer
No. 1	Barbette	M1920	2	Watertown Arsenal
No. 2	Barbette	M1920	3	Watertown Arsenal
No. 3*	Barbette	M1920	4	Watertown Arsenal
No. 4*	Barbette	M1920	1	Watertown Arsenal

*Emplacements 3 and 4 became Battery Walke in 1941, with Emplacements 1 and 2 retaining the name of Battery Pennington.

Data

Weight of gun and breech mechanism: 195,300lb.
Total length: 432in. (36ft.)
Length of bore: 400in. (25 cal.)
Rifling: Uniform RH 1/25.
Breech mechanism: Interrupted screw, drop block, hand opening, pneumatic closing, Navy E & P Firing Lock Mk 1.
Recoil system: Hydropneumatic, 36.5in.
Elevation: -7° $+65^{o}$.
Traverse: 360°.
Weight in action: 900,000lb. (401.8 tons).
Rate of fire: 1rpm.

Performance firing standard 2,100lb. APHE shell

Muzzle velocity: 1,950ft/sec.
Maximum range: 24,500 yards.

Ammunition separate loading, bagged charge.

Charge Propelling 16in Howitzer: A 296lb charge of smokeless powder divided into six sections for convenience in handling.

Projectile, Armor-Piercing, 16in Howitzer Mk HM2: Weight 2,100lb., Armor-Piercing, capped projectile of the usual type, carrying a charge of approximately 35lb of Explosive D, and fitted with Base Fuze Mk X.

O.O.472.28/84 1st Ind.

HQ THIRD CORPS AREA, O of OO, Baltimore, Maryland, June 23, 1925. To: Ordnance Office, Field Service, Washington, D.C.

1. The proof firing of the four (4) 16" Howitzers, Model 1920, at Fort Story, Virginia, was conducted on May 14 and 15 in accordance with the following program and with results as shown on the attached reports.

2. Each Howitzer was thoroughly cleaned and star gauged before and after firing, using a Pratt & Whitney 3 point gauge. Graphs showing the relative dimensions are attached. As no Standard check rings were on hand for setting the points of the gauge to measure the grooves, the lands only were gauged. No Gutta-percha impressions were taken.

3. The bore of each Howitzer was inspected after each round fired and found that all powder was completely burned. There were no flare backs or misfires. The primer case burst in the 4th round of Howitzer No. 5. As this was the last round fired no further observations could be made on the primers. This condition is believed due to the excessive pressure on this round which figured to give 115% pressure.

4. Chamber pressures were taken on all rounds fired using various initial compressed coppers. The compression of each copper and the resultant corresponding pressure of each round is attached hereto.

5. All recoil mechanisms were properly filled, and Taber indicators were attached to each cylinder and the pressures were computed by Mr. Poughkeepsie of Aberdeen Proving Ground. The indicator records were sent to the Ordnance Office through Mr. Hambleton of that office, who was present and assisted in the proof firing. Resultant pressures are shown in table attached. The recoil mechanisms functioned satisfactorily.

6. Elevating and traversing mechanisms were examined and it was noted that in firing Howitzer No. 2, at 45^0 there was a change in elevation of 6^0 + and again at + 5^0 there was a change of 7^0 +. This change was caused by the brake band slipping. The next round fired, which was at 65^0 showed no change in elevation. On 9 of the 15 rounds fired, a change in azimuth was noted ranging from a .01° to $.05^0$, both right and left as shown on tables herewith.

7. It was noted that the breech block on Howitzer No. 5. was both, hard to close and to open. When the block rotated enough to open it, it took the combined weight of one man standing on the lever and throwing his weight downward and two men pulling on the lever at the same time to open it. This condition was noted before the howitzer was fired, and remained the same throughout the firing.

8. The bronze screws in the traversing Motor housing were broken in firing on all Carriages. One air gauge glass was also broken. The aluminum elevating disc on Carriage No. 5, was scraped in firing. This was caused by the pointer making contact with the disc when the Howitzer changed a minus 12 minutes in elevation. It is believed that this condition will occur only when the howitzer moves in elevation when fired.

or copy

400.472 28/84 1st Ind

Proof firing 16" Howitzers, Cont'd.

5. The following is a list of visitors present at the firings:

Colonel Edward Carpenter, C.O., Coast Defenses of Chesapeake Bay
Colonel R. S. Abernethy, C.A.C., President Coast Artillery Board
Lt. Colonel A. H. Sunderland, CAC., C.O., 12th Coast Artillery
Major K.T. Blood, C.A.C., Member Coast Artillery Board
Major C.A. Waldmann, O.D., Office of the Chief of Ordnance
Captain C.C. Terry, O.D., Office of the Chief of Ordnance
Lieut. Philip Schwartz, O.D., Secretary Coast Artillery Board
Lieut. John R. Burnett, C.A.C., O.O., Ft. Story, Va.
Mr. W.E. Yocum, Office of the Chief of Ordnance.

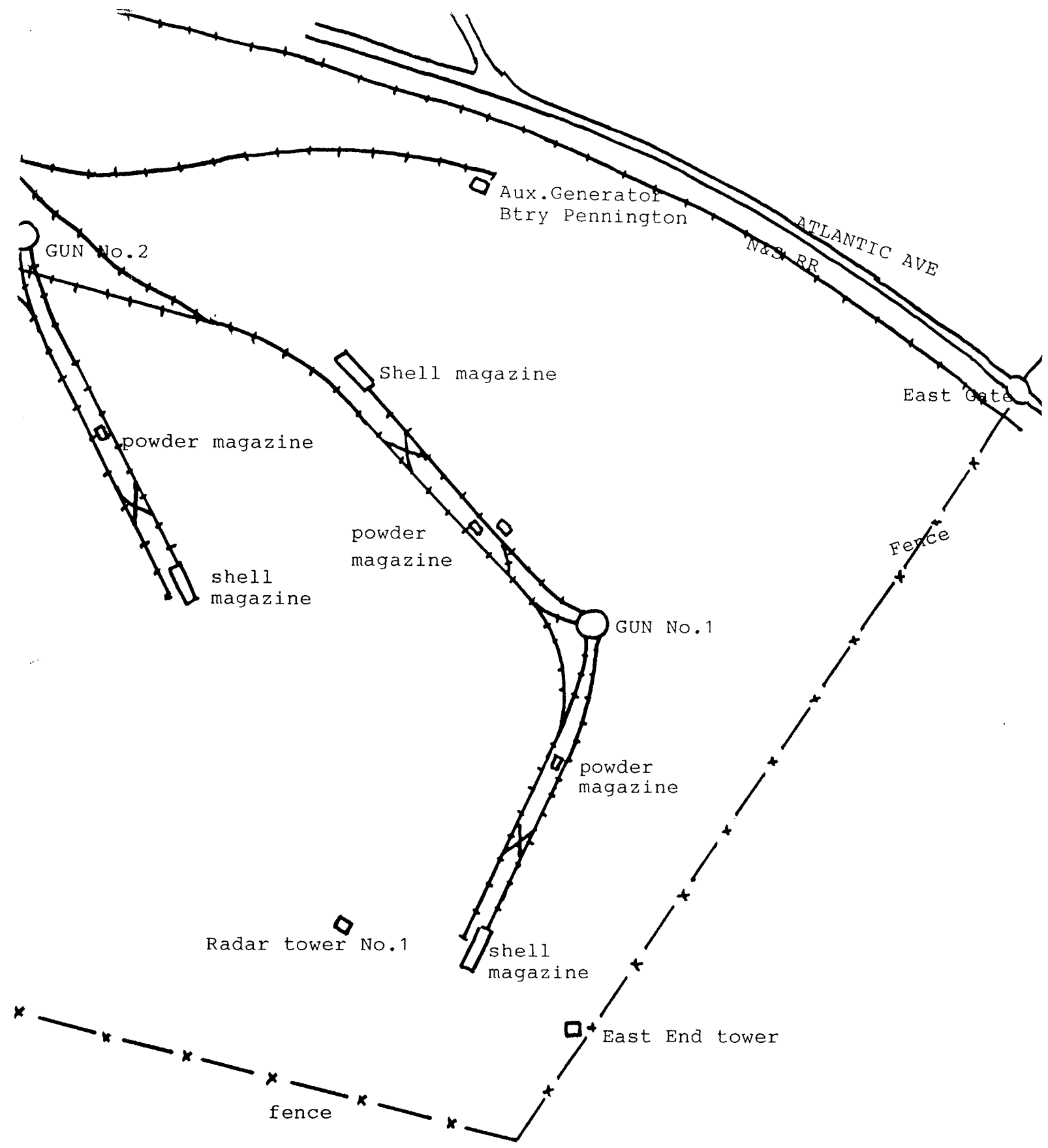
5 Incls.
by Ltr 157

John H. Read Jr

JOHN H. READ, Jr.,
Lt. Colonel, Ordnance Department,
Ordnance Officer.

Orig Comm Out 6-26-25

To files Feb 4 1929 E.E.W.



BATTERY PENNINGTON, Fort Story, Virginia

Constructed 1920-1922. two 16-inch howitzers

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
GUN AND MORTAR BATTERIES.

COAST DEFENSES OF CHESAPEAKE BAY,
FORT STORY, VIRGINIA.
BATTERY [illegible] PENNINGTON, and WALKE

Form 1. Corrected to November 7, 1924. NO. OF GUNS 4 - Caliber 16" Howitzers.

Battery commenced.	July 1921	Mounting Armament commenced	September 1922
Battery completed.	July 5, 1922	Mounting Armament completed	October 20, 1924
Gun Platforms, Magazines, Shell Rooms and Railroad Tracks transferred to Artillery	October 21, 1922	Date of transfer to Artillery	October 20, 1924
		Cost to date of transfer	$ 8,093.00
Material of Construction.		Source of electric current (Lights and power for guns and lights for magazines and shell rooms).	Two 90 K.W. Diesel Engines in Power House No. 1, One 90 K.W. Diesel Engine and 25 K.W. set in Power House No. 2
Gun Blocks	Reinforced concrete with wood piles for foundation		
Magazines and Shell Rooms	Reinforced concrete and hollow tile	Max. K.W. required for lights	14- K.W.
Net cost to date of transfer	$332,174.23	Max. K.W. required for power	216- K.W.
Connected to water supply	No	Trunnion elevation	20'8"
Connected to sewer	No	Datum plane	M.L.W.
Type of latrine	None	Type of data transmission	Telephones
Present condition of battery	Good	Total cost of batter, including Mounting Armament	$340,867.23
Magazines and Shell Rooms	Good		

REMARKS:- Shell rooms and magazines are protected and concealed by adjacent sand hills and connected by a standard gage railroad track to the gun platforms they serve.
A reinforced concrete tunnel 280' long with retaining walls 225' long connects the reservation with the land in rear of the sand hills, which provides a concealed location for railroad artillery in time of war.

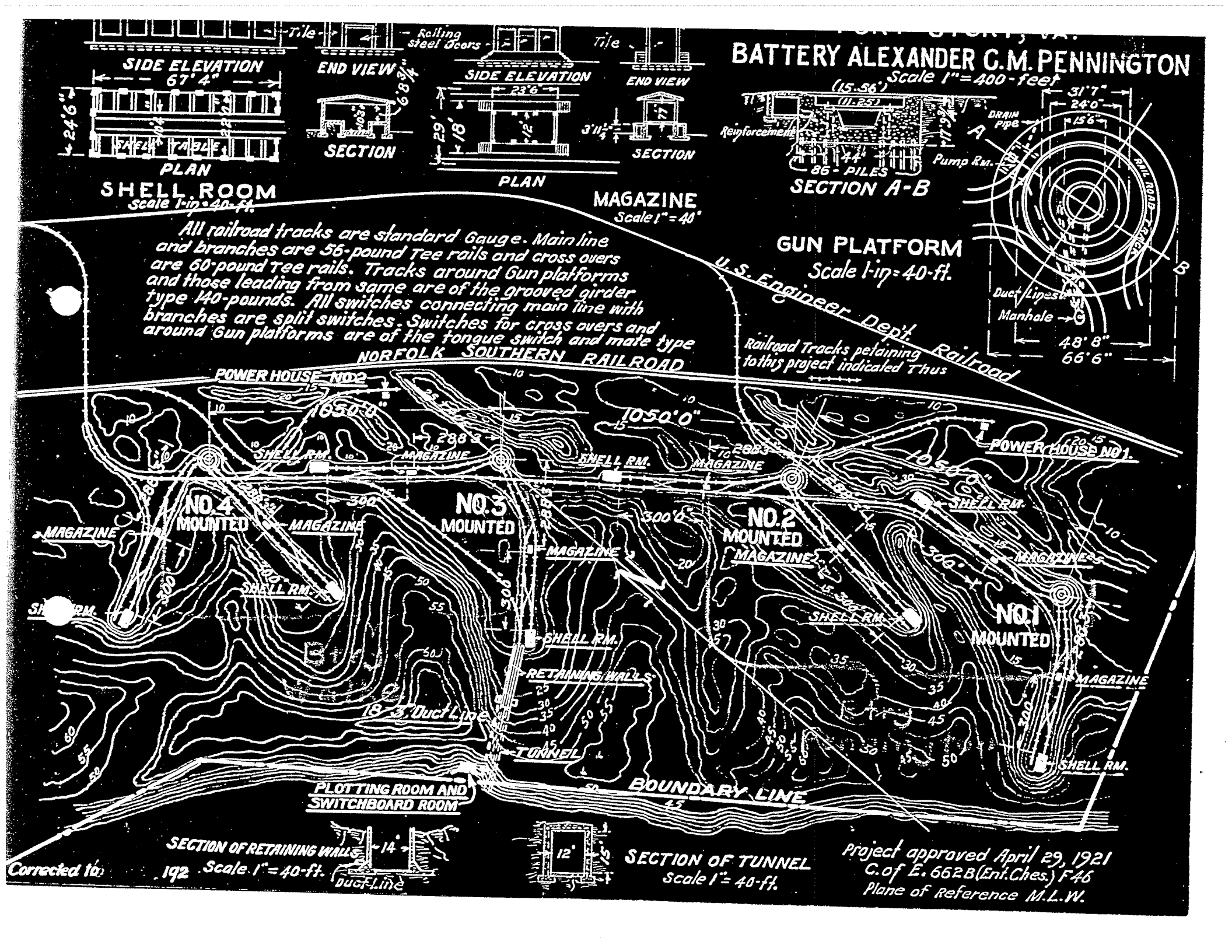
ARMAMENT.

Emplacement No.	GUNS Cal.	Length	Model	Ser. No.	Manufacturer	M't'd.	Type	CARRIAGES Model	Ser. No.	Manufacturer	MOTORS Elevating	Traversing	Air Compressors
Btry. Pennington No. 1	16"	35'7"	1920	No.3	Watervliet Arsenal	Yes	Howitzer	1920	No2.	Watertown Ars.	Diehl Co.	G.E.	Ingersol-Rand
No. 2	16"	35'7"	1920	No.4	"	"	"						
Btry. Walke No. 3	16"	35'7"	1920	No.2	"	"	"	1920	No3	"	"	"	Worthington
No. 4	16"	35'7"	1920	No.5	"	"	"	1920	No1	"	"	"	Worthington
													Ingersol-Rand

6/26/30 - 320 propelling charges to be stored at Norfolk Naval Ordnance Depot. C of E 471.88 (Ent. Ches) 2 Confidential

See 662 B (Ent. Ches) 177, 4/22/38 - Check of all base rings show they are perfectly level.

(1) See other side of this sheet for [illegible]


BATTERY ALEXANDER C.M. PENNINGTON
Scale 1"=400-feet
SIDE ELEVATION
67'4"
END VIEW
PLAN
SHELL ROOM
Scale 1-in=40-ft.
SECTION
Tile
Railing
steel Doors
SIDE ELEVATION
23'6"
END VIEW
PLAN
SECTION
MAGAZINE
Scale 1"=40'
SECTION A-B
86-PILES
Reinforcement
Pump Rm.
DRAIN Pipe
RAIL ROAD TRACK
GUN PLATFORM
Scale 1-in=40-ft.
Duct Lines
Manhole
All railroad tracks are standard Gauge. Main line and branches are 56-pound Tee rails and cross overs are 60-pound Tee rails. Tracks around Gun platforms and those leading from same are of the grooved girder type 140-pounds. All switches connecting main line with branches are split switches. Switches for cross overs and around Gun platforms are of the tongue switch and mate type
U.S. Engineer Dept.
Railroad Tracks pertaining to this project indicated Thus
NORFOLK SOUTHERN RAILROAD
POWER HOUSE NO2
POWER HOUSE NO1
SHELL RM.
MAGAZINE
NO.4 MOUNTED
NO.3 MOUNTED
NO.2 MOUNTED
NO.1 MOUNTED
RETAINING WALLS
TUNNEL
18"3" Duct Line
PLOTTING ROOM AND SWITCHBOARD ROOM
BOUNDARY LINE
SECTION OF RETAINING WALLS
Scale 1"=40-ft.
SECTION OF TUNNEL
Scale 1"=40-ft.
Project approved April 29, 1921
C. of E. 662B (Enf. Ches.) F46
Plane of Reference M.L.W.
Corrected to 192

(1) See 600.05 (Chesapeake) 2

Recommends the following;

Pennington A, . . 2-16" howitzers on right facing seaward, retain name of Btry. Pennington

Pennington B, . . 2-16" howitzers on left facing seaward, be renamed Btry. Willoughby Walke

AG in 15th Ind. approves the following

2 guns on right, tactical numbers 1 and 2, retain designation of Pennington.

2 guns on left, . . tactical numbers 3 and 4, will be designated Btry. Walke.

REPRODUCED AT THE NATIONAL ARCHIVES

660 B (Chesapeake) 57 (unmkd. incl.)

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VA. BATTERY ALEXANDER C.M.PENNINGTON. NO. OF GUNS 4 - Caliber 16" Howitzers
Lightning Protection of Eight Powder Magazines and Eight Shell Rooms, Battery Pennington and Battery Walke, as now designated.

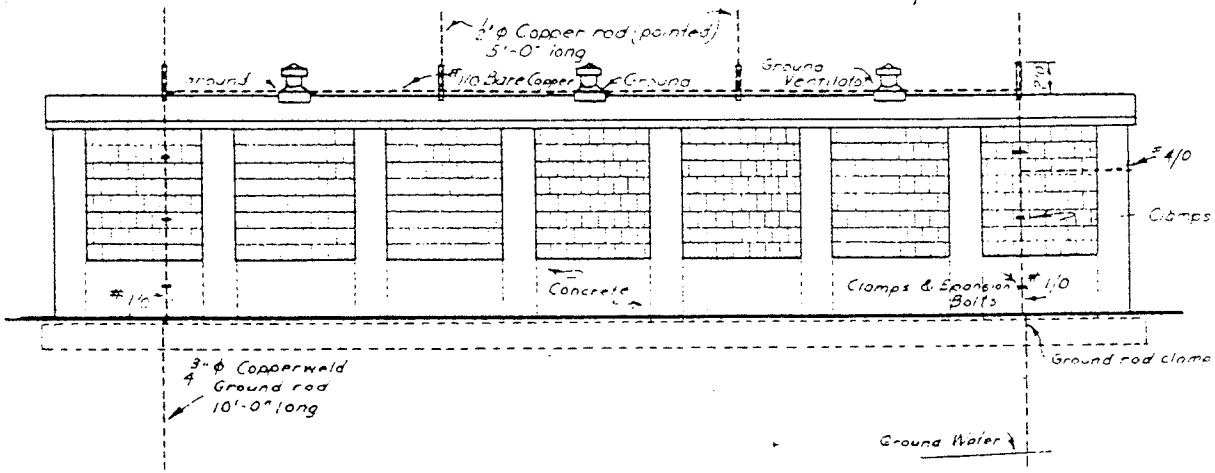
Form 1 Corrected to November 1, 1940
Supplement to Form 1 - Same Battery,
Submitted and corrected to November 15, 1922

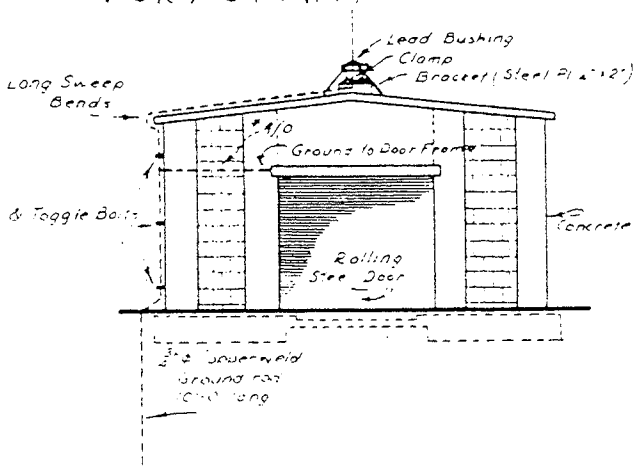
GENERAL:	
Lightning protection has been installed on eight shell rooms and eight powder magazines, Battery Alexander C.M.Pennington, now designated as Battery Pennington and Battery Walke	As shown on Form 7 dated November 1, 1940
Kind of lightning protection	1/2" ϕ copper rods connected to 3/4"ϕ copper and ground rods 10'-0" long with # 1/0 bare copper wire grounded to ventilator and rolling steel doors.
Date of completion	October 20, 1940.
Cost:	
Materials	$ 375.00
Labor	713.21
	$ 1088.21

REPORT OF COMPLETED WORKS – SEACOAST FORTIFICATIONS

FORM 7 CORRECTED TO NOVEMBER 1, 1940

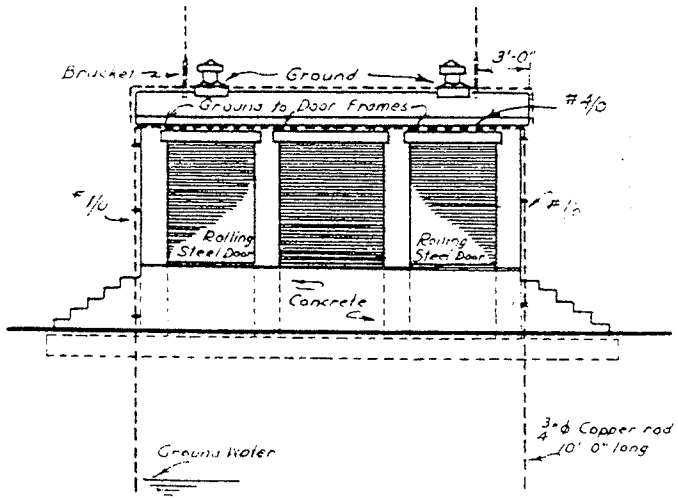
HARBOR DEFENSES OF CHESAPEAKE BAY FORT STORY, VIRGINIA

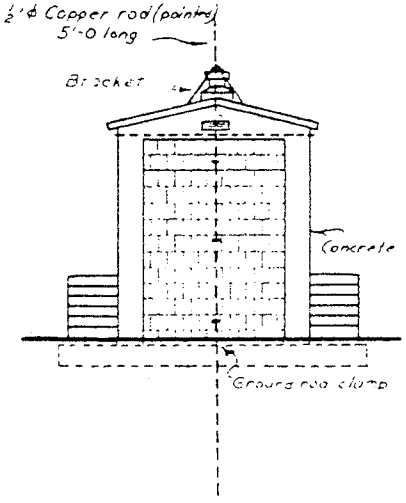




8 – SHELL ROOMS

1" = 12'-0"



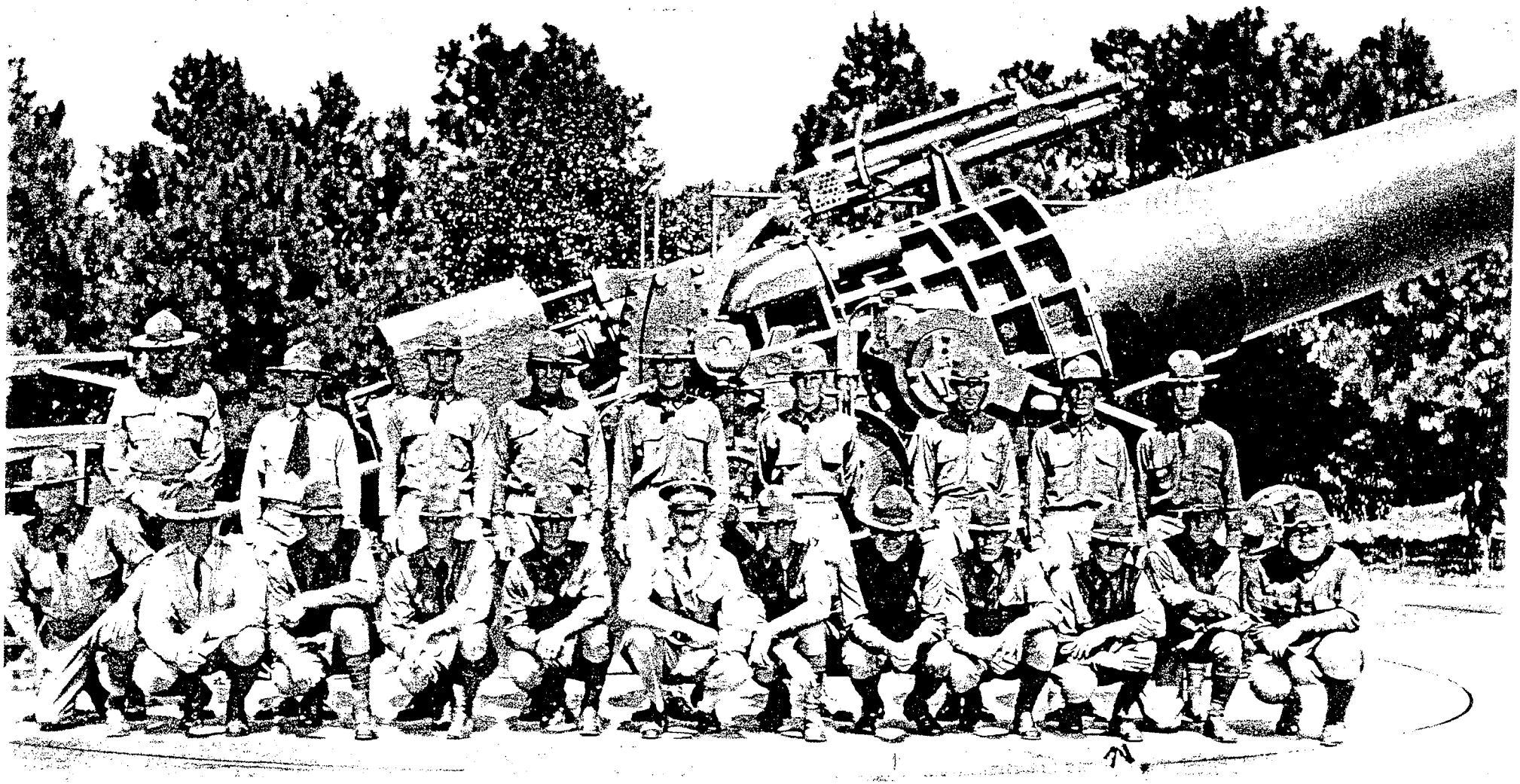


8 – MAGAZINES

1" = 12'-0"

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VA.
BATTERY PENNINGTON & WALKE

LIGHTNING PROTECTION OF MAGAZINE & SHELL ROOMS



REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Water Systems)

Submitted April 9, 1926.

COAST DEFENSES OF CHESAPEAKE BAY.
FORT STORY, VIRGINIA.

EXTENSION OF WATER SYSTEM TO
BATTERY PENNINGTON.

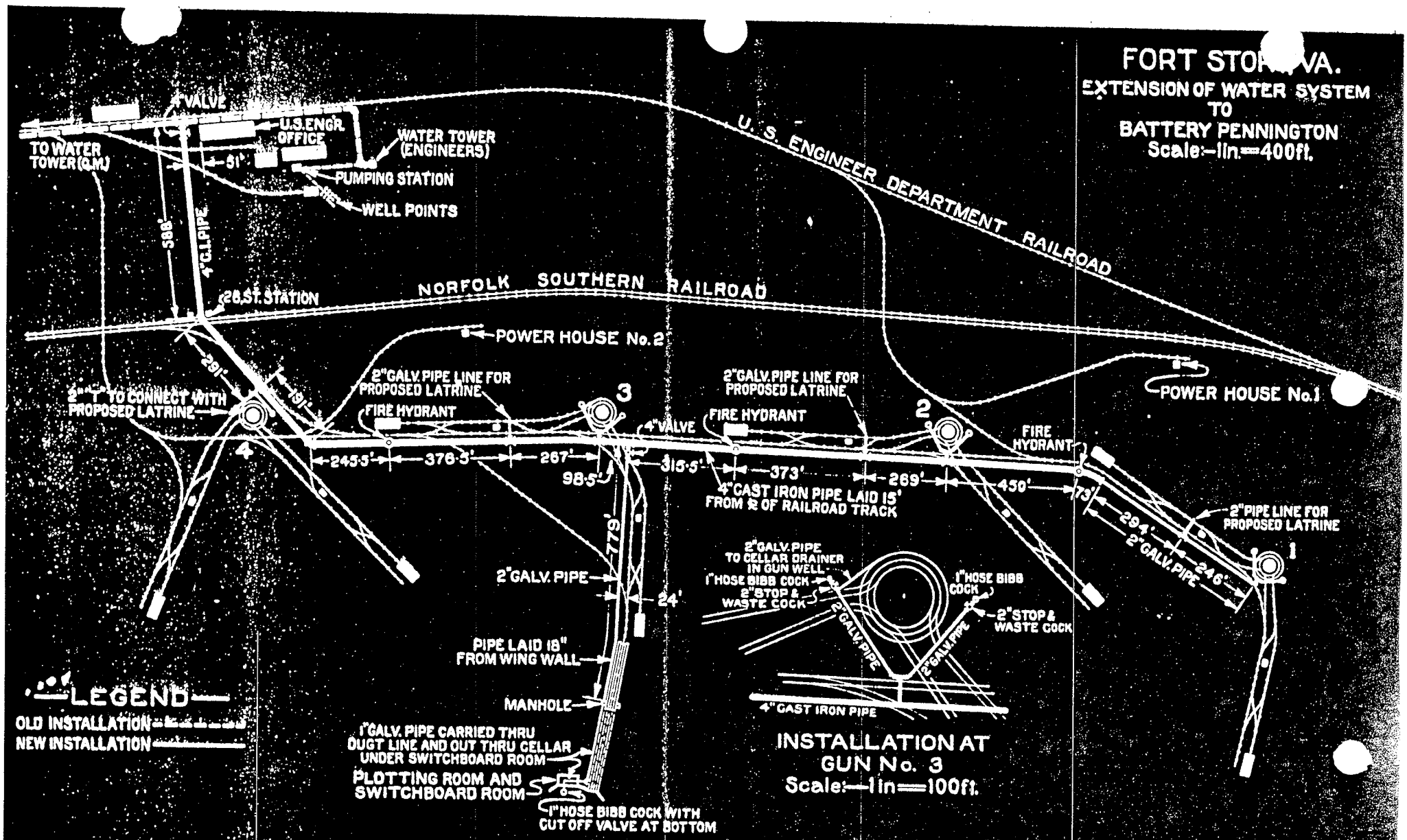
Location,	Battery Pennington, Fort Story, Va.
Date of transfer,	March 12, 1926.
COST TO DATE:	
Material,	$3,081.59
Labor,	4,538.41
Total,	$7,620.00
Supply,	Post water supply.
Material,	4" cast-iron pipe, with 2" galvanized iron branches.
How protected,	Pipe trenched to a depth of 3 feet.
Hydrants,	Three hydrants designed for 2-1/2-inch fire hose.
Valves,	Two 4" valves, one located at the junction of the old and new installation, and one on the branch leading to the rear of the tunnel.
	Two 1-inch hose bibb cocks, with 2-inch stop and waste cocks, located at each gun platform, and a 1-inch hose bibb cock, with cut-off in rear of plotting room.
Permanent, or temporary,	Permanent.
Present condition,	Good.

Blue-print attached,
marked -
FORT STORY, VA.
Extension of Water System
To
Battery Pennington.

FORT STOR[illegible]VA.

EXTENSION OF WATER SYSTEM TO BATTERY PENNINGTON

Scale:—1 in.=400 ft.



LEGEND

OLD INSTALLATION

NEW INSTALLATION

INSTALLATION AT GUN No. 3

Scale:—1 in.=100 ft.

NOTES AND INSTRUCTIONS

WATER SUPPLY Water is supplied from twelve pipe wells, with 2 inch points, driven to a depth of 15 feet.

PUMPING STATION The pumping station is equipped with an 80 H.P. return tubular boiler and a steam pump of the duplex piston pattern with a rated capacity of 105 gallons per minute.

STORAGE FACILITIES Four wood tanks of about 9,000 gallon capacity each on wood tower about 66 feet above M.L.W. and one wood tank of about 100,000 gallon capacity on steel tower about 90 ft above M.L.W.

PIPE SYSTEM This system consists of a 4 inch cast iron main connected to the main leading from the pumping station, and brought to the rear of the gun platforms as shown. Connection to each gun platform is made by means of 2 inch galvanized pipe. Two 1 inch hose bibb cocks are provided at each gun platform and a 1 inch hose bibb cock is also located in the rear of the plotting room. All hose bibb cocks are equipped with a stop and waste cock at the foot of riser, and these should be cut off in freezing weather. Three fire hydrants are installed on the main line as shown and are designed to take 2½ inch fire hose. The water system is connected to the cellar drainer at gun platform No. 3 and outlets are provided for the latrines when constructed, and for the installation of the cellar drainers at gun platforms Nos. 1, 2 and 3.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

Form 6. Corrected to August 14, 1940.

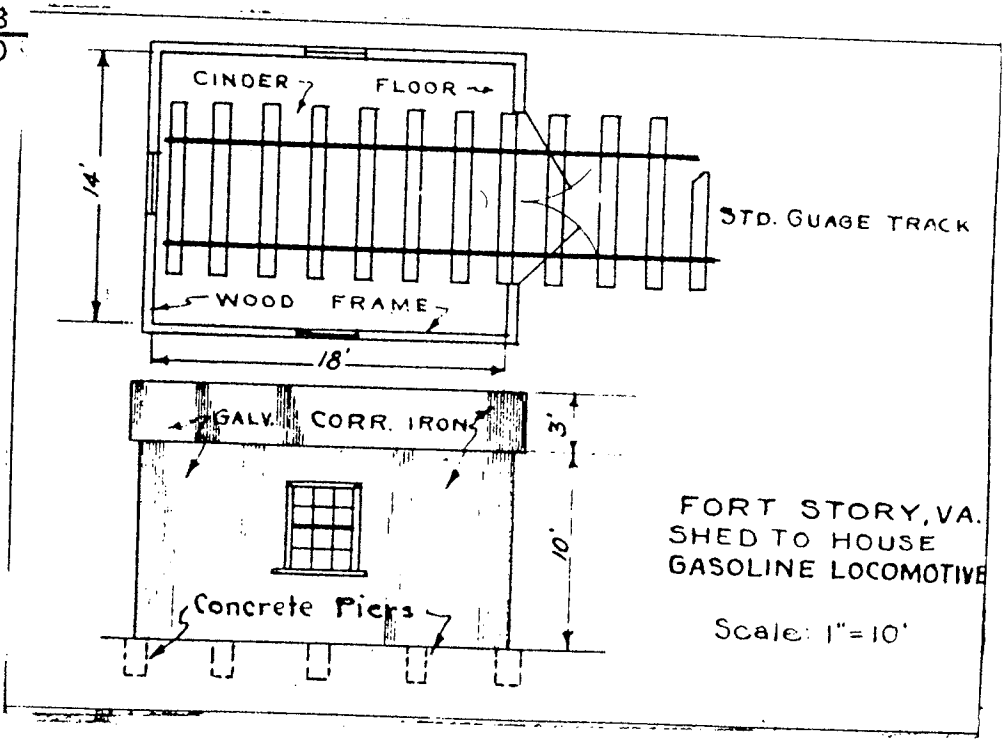
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA

ENGINEER DEPARTMENT STRUCTURES

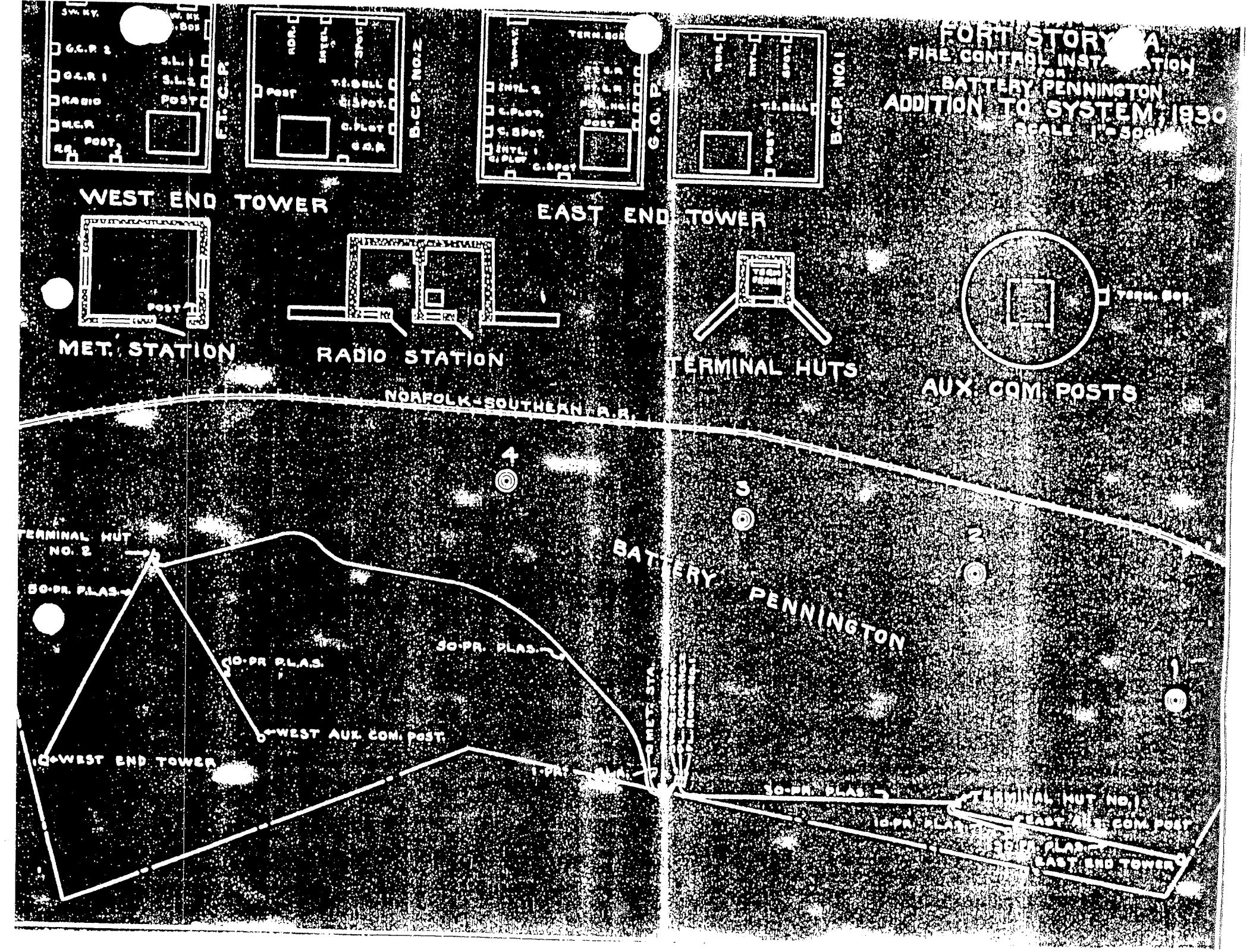
On this sheet list any existing structures of a permanent or semipermanent nature used wholly or in part by the Engineer Department, such as wharves, storehouses, quarters, office buildings, railroads and railroad equipment, giving for each a short description, dimensions, materials of construction,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

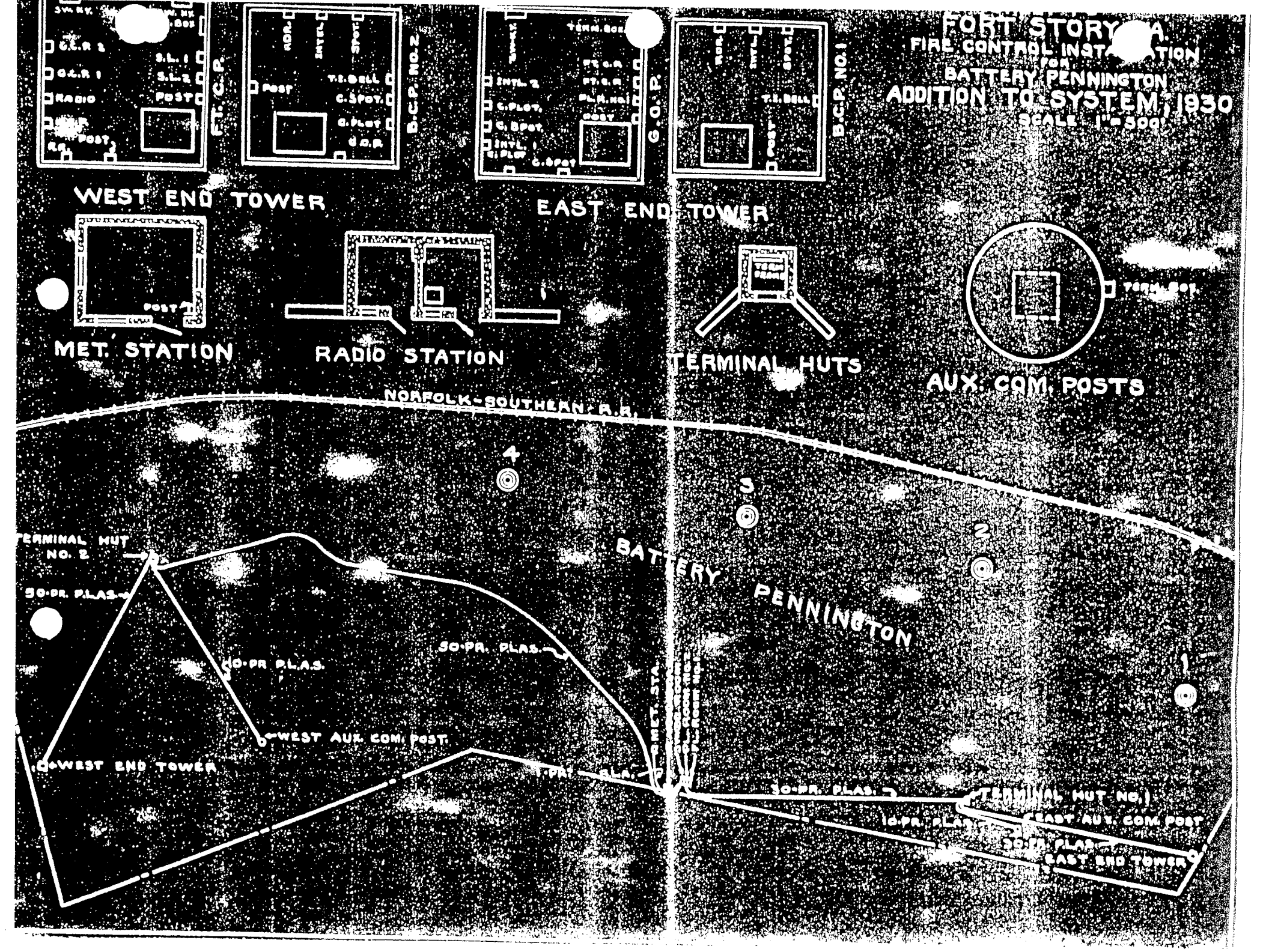
SHED TO HOUSE GASOLINE LOCOMOTIVE, BATTERY PENNINGTON, FORT STORY, VA.

Permanent or semipermanent	Permanent
Materials of Construction	Frame structure, corrugated siding and roof.
Dimensions	18' x 14' x 10' high.
Location	Adjacent to Shell Room No. 7
Present use	To house gasoline locomotive purchased by Engineer Dep't.
Date of Construction	April, 1940.
Date of transfer	July 6, 1940.
Cost:	
Materials	$ 200.82
Labor	$ 362.38
Total cost	$ 563.20



See O.C.E. Dwg #66-35C-17 for sketch of shed


FORT STORY, VA.
FIRE CONTROL INSTALLATION
FOR
BATTERY PENNINGTON
ADDITION TO SYSTEM, 1930
SCALE 1"=500'
WEST END TOWER
EAST END TOWER
F.T. C.P.
B.C.P. NO. 2
G.O.P.
B.C.P. NO. 1
MET. STATION
RADIO STATION
TERMINAL HUTS
AUX. COM. POSTS
NORFOLK-SOUTHERN R.R.
BATTERY PENNINGTON
TERMINAL HUT NO. 2
50-PR. P.L.A.S.
WEST AUX. COM. POST
WEST END TOWER
TERMINAL HUT NO. 1
EAST AUX. COM. POST
EAST END TOWER


FORT STORY, VA.
FIRE CONTROL INSTALLATION
FOR
BATTERY PENNINGTON
ADDITION TO SYSTEM, 1930
SCALE 1"=500'
F.C.P.
B.C.P. NO. 2
G.O.P.
B.C.P. NO. 1
WEST END TOWER
EAST END TOWER
MET. STATION
RADIO STATION
TERMINAL HUTS
AUX. COM. POSTS
NORFOLK-SOUTHERN R.R.
TERMINAL HUT NO. 2
50-PR. PLAS.
40-PR. PLAS.
WEST AUX. COM. POST
WEST END TOWER
BATTERY PENNINGTON
MET. STA.
TERMINAL HUT NO. 1
EAST AUX. COM. POST
EAST END TOWER

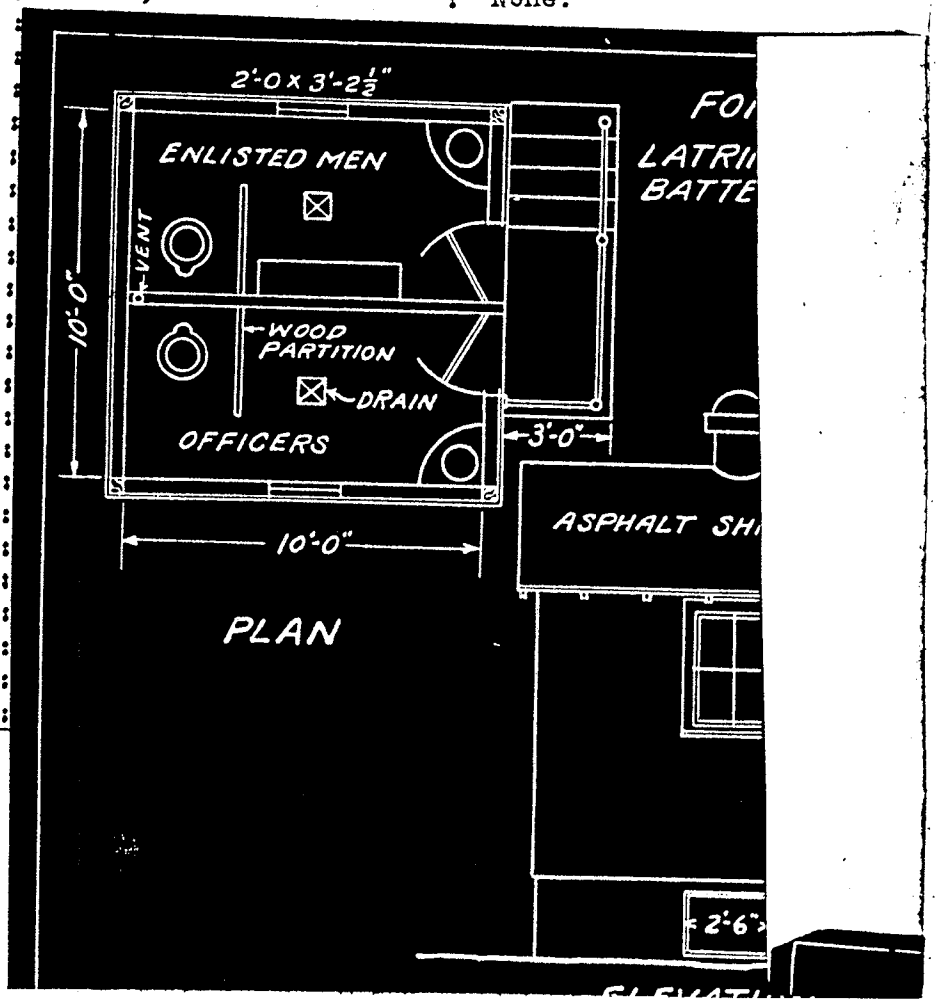
REPORT OF COMPLETED WORKS. - SEACOAST FORTIFICATIONS.

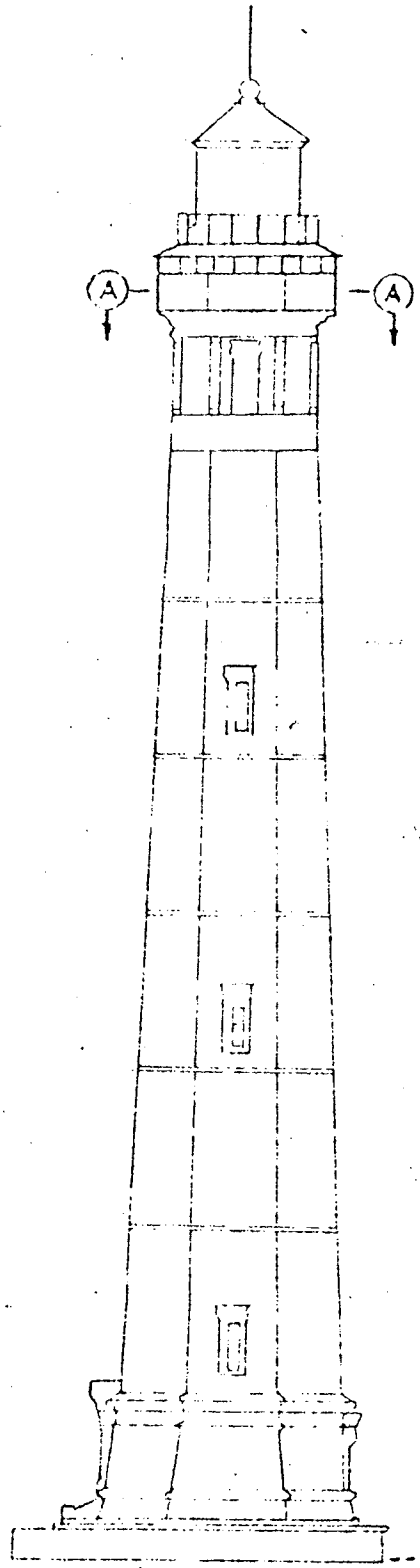
(Latrine)

Submitted July 30, 1929.

COAST DEFENSES OF CHESAPEAKE BAY,
FORT STORY, VIRGINIA.
Latrine and Walk at Switchboard Room and Plotting Rooms, Battery Pennington.

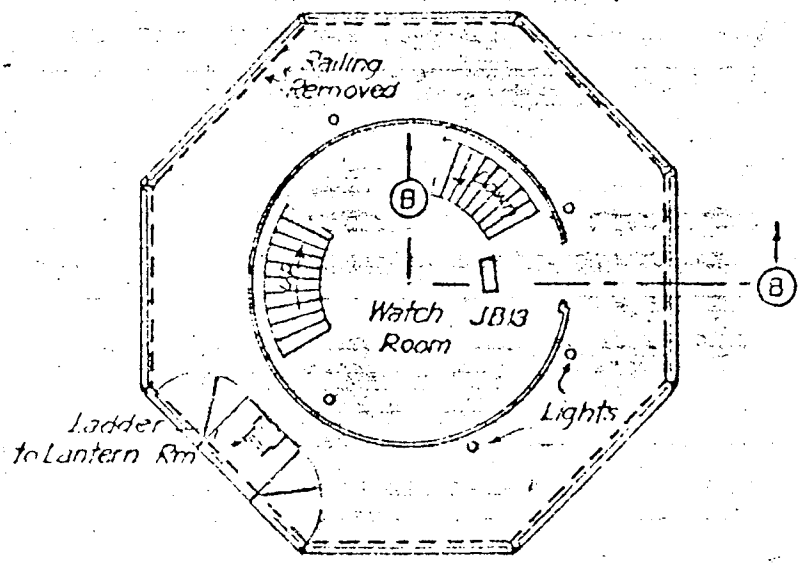
Location,	About 10 feet in rear of Switchboard Room, Battery Pennington.
Date of transfer,	July 26, 1929.
Cost to that date,	$1,422.93.
Type of construction:	
(a) Roof,	Asphalt Shingles.
(b) Remainder of building,	Cement plaster and high-rib metal lath on wood frame.
How concealed,	Sand dune in front.
How protected,	By sand dune and switchboard room.
Height above concealment,	Concealed.
Height above protection,	Protected.
Conspicuous at --- yards,	Not conspicuous.
Source of electric current,	None.
Kilowatts required,	None.
Type of lighting fixture,	None.
How heated,	No heat.
Connected to water main,	Yes.
Connected to sewer,	Separate cess-pool and drains.
Type of latrine,	Vogel frostproof toilets.
Permanent or temporary,	Permanent.
Present condition,	Good.
Reference of site,	16.0'.
Type of data transmission,	None.





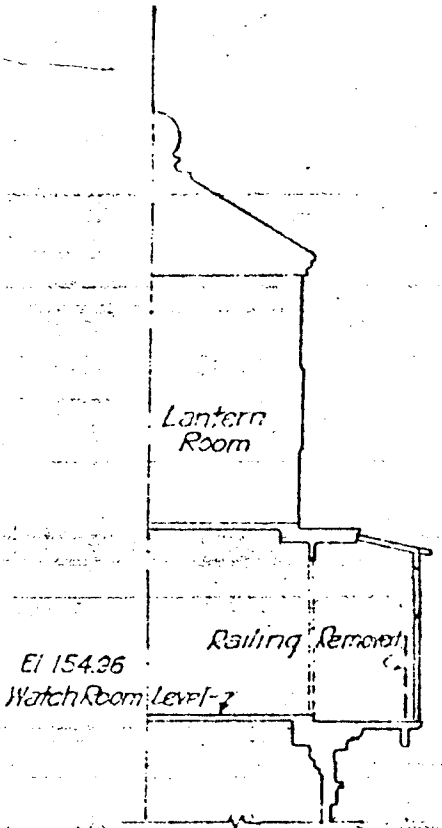
ELEVATION

$\frac{3}{64}$" = 1'-0"



PLAN AT A-A

$\frac{1}{8}$" = 1'-0"



SECTION AT B-B

$\frac{1}{8}$" = 1'-0"

FORT STORY, VA.

B.C.STATION
BATTERY WALKE

SCALES AS SHOWN AUG. 1941

U. S. ENGINEER OFFICE

NORFOLK, VA.

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

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
STRUCTURE: B. C. STATION BATTERY WALKE

Form 2

Corrected to November 1, 1941

STRUCTURE:	
Location	Enclosed gallery on new lighthouse, Ft. Story, Cape Henry light
Date of transfer	October 28, 1941
Cost to that date	$ 2,626.47
Type of construction	
(a) Roof	Steel and copper
(b) Remainder of bldg.	Sides enclosed with 1/8" steel plates, steel sash
How concealed	No concealment
How protected	No protection
Height above concealment	No concealment
Height above protection	No protection
Conspicuous at ..... yeard	22,000
ELECTRIC CURRENT:	
Source of	Post power, commercial
Killowatts required	Lights
Type of lighting fixtures	Engr. S. F. Fixtures
HEAT:	
How heated	Stove
WATER & SEWER:	
Connected to water mains	No
Connected to sewer	No
Type of latrine	None
Permanent or temporary inst'ln	Permanent
Present condition	Good
REFERENCE	
Reference of site	13.00 M.L.W.
Reference of instrument axis	160.00 M.L.W.

INSTRUMENTS AND EQUIPMENT:	
Type of observing instrument	Azimuth
Type of plotting board	None
DATA TRANSMISSION:	
Type of	BD-95 Switchboard, EE-91 Telephones, T.I.Bell and JB-13 Terminal, 25 pair cable
Date of transfer	October 28, 1941
Cost of data transmission equip:	$ 750.00

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
GUN AND MORTAR BATTERIES.

COAST DEFENSES OF CHESAPEAKE BAY,
FORT STORY, VIRGINIA.
BATTERY HUMPHREYS (Pennington), and WALKE (1)
NO. OF GUNS 4 - Caliber 16" Howitzers.

Form 1. Corrected to November 7, 1924.

Battery commenced.	July 1921	Mounting Armament commenced	September 1922
Battery completed.	July 5, 1922	Mounting Armament completed	October 20, 1924
Gun Platforms, Magazines, Shell Rooms and Railroad Tracks transferred to Artillery	October 21, 1922	Date of transfer to Artillery	October 20, 1924
		Cost to date of transfer	$ 8,693.00
Material of Construction.		Source of electric current (Lights and power for guns and lights for magazines and shell rooms).	Two 90 K.W. Diesel Engines in Power House No. 1, One 90 K.W. Diesel Engine and 25 K.W. Set in Power House No. 2
Gun Blocks	Reinforced concrete with wood piles for foundation		
Magazines and Shell Rooms	Reinforced concrete and hollow tile		
Net cost to date of transfer	$382,174.25	Max. K.W. required for lights	14- K.W.
Connected to water supply	No	Max. K.W. required for power	216- K.W.
Connected to sewer	No	Trunnion elevation	20°9"
Type of latrine	None	Datum plane	M.L.W.
Present condition of battery	Good	Type of data transmission	Telephones
Magazines and Shell Rooms	Good	Total cost of batter, including Mounting Armament	$340,867.23

REMARKS:- Shell rooms and magazines are protected and concealed by adjacent sand hills and connected by a standard gage railroad track to the gun platforms they serve.
A reinforced concrete tunnel 280' long with retaining walls 225' long connects the reservation with the land in rear of the sand hills, which provides a concealed location for railroad artillery in time of war.

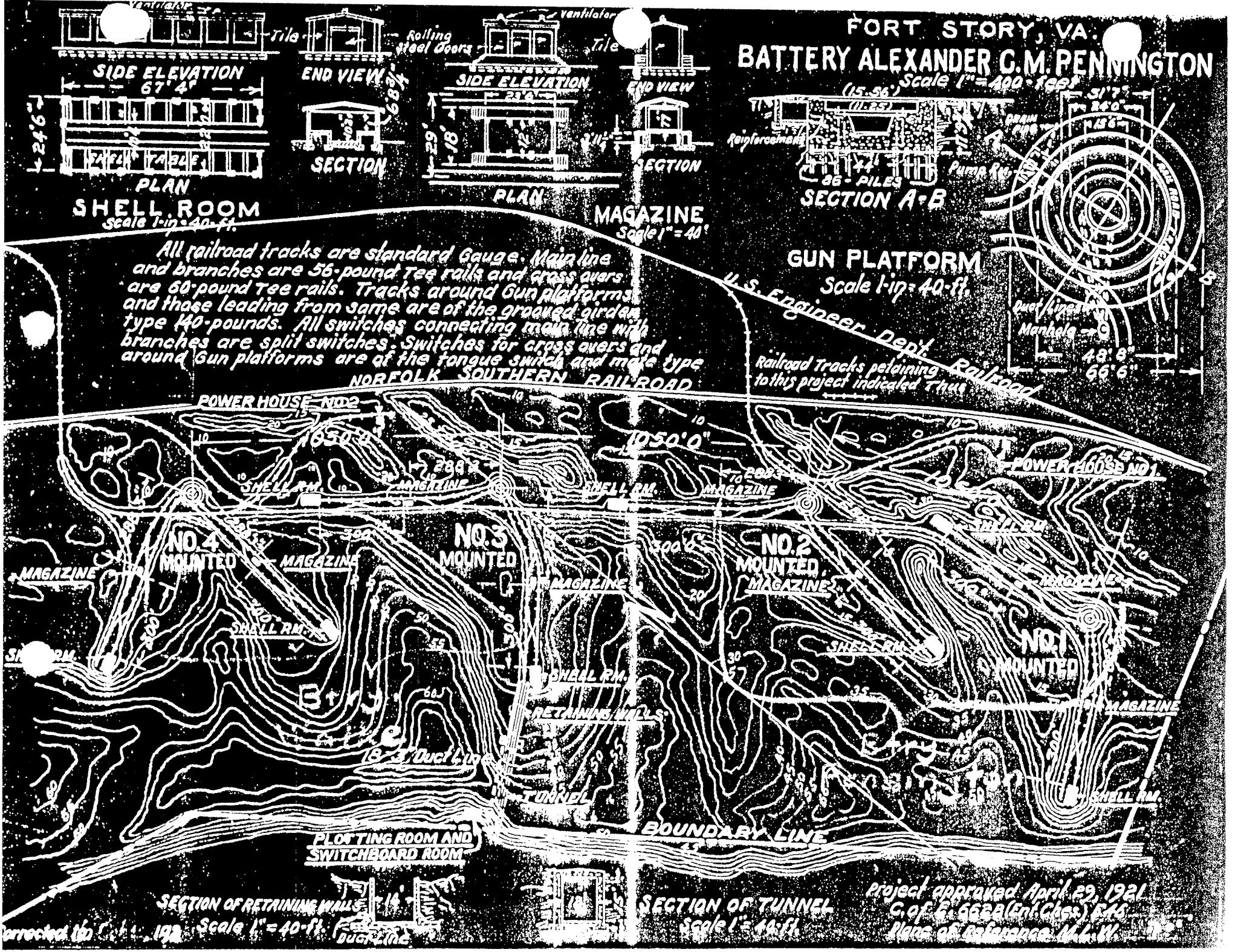
ARMAMENT.

Emplacement No.	GUNS Cal.	Length	Model	Ser. No.	Manufacturer	M't'd.	CARRIAGES Type	Model	Ser. No.	Manufacturer	MOTORS Elevating	Traversing	Air Compressors
Btry. Pennington No. 1	16"	35'7"	1920	No.3	Watervliet Arsenal	Yes	Howitzer	1920	No2.	Watertown Ars.	Diehl	Co. G.E.	Ingersol-Rand
No. 2	16"	35'7"	1920	No.4	"	"	"						
Btry. Walke No. 3	16"	35'7"	1920	No.2	"	"	"	1920	No3	"	"	"	Worthington
No. 4	16"	35'7"	1920	No.5	"	"	"	1920	No4	"	"	"	Worthington
								1920	No1	"	"	"	Ingersol-Rand

6/26/30 - 320 propelling charges to be stored at Nansemond Ordnance Depot. C of E 471.88 (Ent. Ches) 2 Confidential

See 662 B (Ent. Ches) 177, 4/22/38 - Check of all base rings show they are perfectly level.

(1) See other side of this sheet for Change in Name


FORT STORY, VA.
BATTERY ALEXANDER G.M. PENNINGTON
Scale 1"=400 feet
SIDE ELEVATION
67'4"
END VIEW
SECTION
PLAN
SHELL ROOM
Scale 1-in=40-ft.
SIDE ELEVATION
END VIEW
SECTION
PLAN
MAGAZINE
Scale 1"=40'
SECTION A-B
GUN PLATFORM
Scale 1-in=40-ft.
All railroad tracks are standard Gauge. Main line and branches are 56-pound Tee rails and cross overs are 60-pound Tee rails. Tracks around Gun platforms and those leading from same are of the grooved girder type 140-pounds. All switches connecting main line with branches are split switches. Switches for cross overs and around Gun platforms are of the tongue switch and mate type
NORFOLK SOUTHERN RAILROAD
U.S. Engineer Dept. Railroad
Railroad Tracks pertaining to this project indicated Thus
POWER HOUSE NO.2
POWER HOUSE NO.1
SHELL RM.
MAGAZINE
NO.4 MOUNTED
NO.3 MOUNTED
NO.2 MOUNTED
NO.1 MOUNTED
RETAINING WALLS
TUNNEL
Duct Line
PLOTTING ROOM AND SWITCHBOARD ROOM
BOUNDARY LINE
1050'0"
SECTION OF RETAINING WALLS
Scale 1"=40-ft.
SECTION OF TUNNEL
Scale 1"=40-ft.
Project approved April 29, 1921
C. of E. 668 (Ent. Chas.) 545
Plane of Reference M.L.L.W.

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Electric Systems)

Submitted April 9, 1926.

COAST DEFENSES OF CHESAPEAKE BAY.
FORT STORY, VIRGINIA.

EXTERIOR LIGHTING SYSTEM,
BATTERY PENNINGTON.

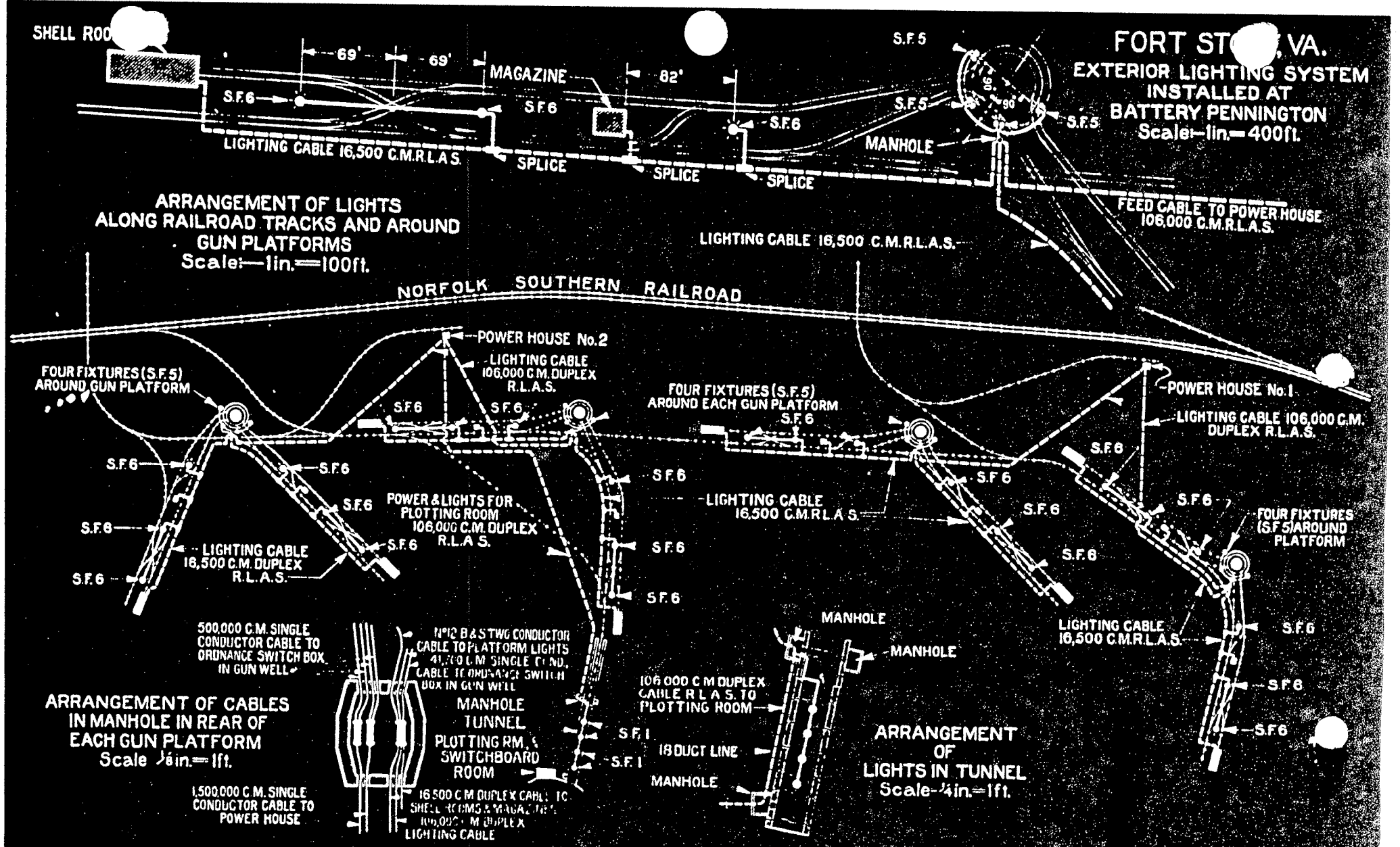
Location,	Battery Pennington, Fort Story, Va.
Date of transfer,	March 12, 1926.
COST TO DATE:	
Material,	$1,957.70
Labor,	3,538.30
Total,	$5,496.00
Type of cable,	No. 12, B. & S., two-conductor, lead armored.
Type of fixtures,	Standard fixtures, S.F.1 in tunnel; S.F.5 around gun platforms; and S.F.6 at switches.
Electric current,	110 volts, A. C.
Source of electric current,	Power houses, Nos. 1 and 2.
Permanent, or temporary,	Permanent.
Condition,	Good.

Blue-print attached,
marked -
FORT STORY, VA.
Exterior Lighting System
Installed At
Battery Pennington.

FORT ST[illegible], VA.

EXTERIOR LIGHTING SYSTEM INSTALLED AT BATTERY PENNINGTON

Scale—1in.=400ft.



ARRANGEMENT OF LIGHTS ALONG RAILROAD TRACKS AND AROUND GUN PLATFORMS
Scale—1in.=100ft.

ARRANGEMENT OF CABLES IN MANHOLE IN REAR OF EACH GUN PLATFORM
Scale ½in.=1ft.

ARRANGEMENT OF LIGHTS IN TUNNEL
Scale-¼in.=1ft.

NOTES AND INSTRUCTIONS

POWER:—Current is furnished to lights around gun platforms and switches on railroad tracks over a 110 volt A.C. line from power houses located as shown.

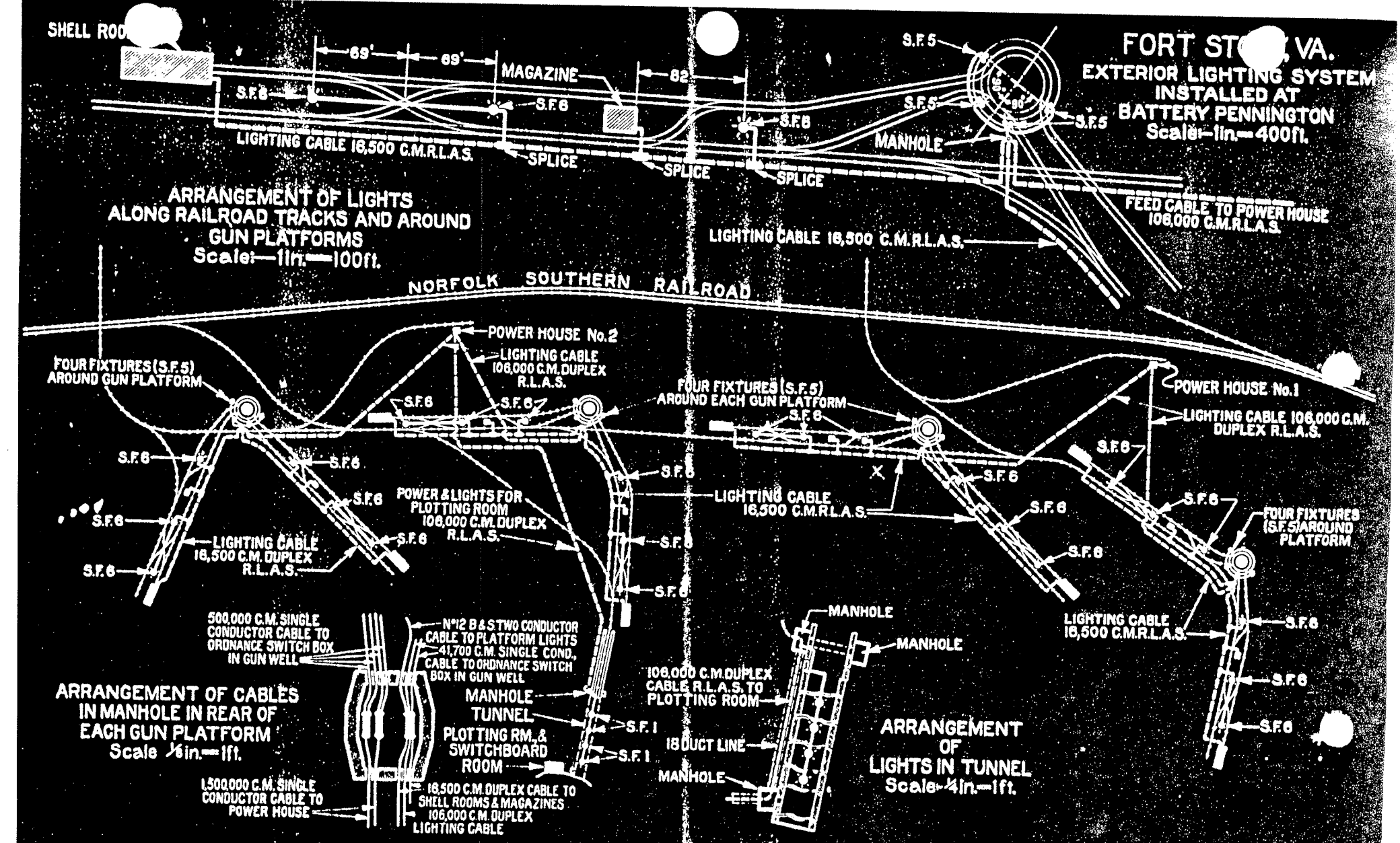
LIGHTING:—Each gun platform is illuminated by four standard fixtures type S.F.5, supported upon pipe frames of an approved design. A snap switch is provided for each fixture and is located on frame supporting same. Illumination is provided for all switches and crossings of ammunition tracks by means of standard fixtures type S.F.6 with switch complete secured to 3" pipe posts 5' high. The tunnel is illuminated by four standard fixtures S.F.1, secured to the ceiling in the location shown. These fixtures are controlled by a snap switch located at the north end of tunnel.

CABLES:—All cable to the above mentioned fixtures is N°12 B.&S. two conductor L.A. Cable for the platform lights is spliced to the 106,000 C.M. duplex lighting cable in the manhole in the rear of each gun, it is trenched around the platform, and brought up through the handhole under each pipe frame. Cable for the type S.F.6 fixtures is spliced to the 16,500 C.M. cable and trenched to each lamp-post. The cable for the tunnel lights is spliced to the 106,000 C.M. duplex cable R.L.A.S., leading to the plotting room.

FORT ST[illegible], VA.

EXTERIOR LIGHTING SYSTEM INSTALLED AT BATTERY PENNINGTON

Scale—1in.—400ft.



ARRANGEMENT OF LIGHTS ALONG RAILROAD TRACKS AND AROUND GUN PLATFORMS

Scale—1in.—100ft.

ARRANGEMENT OF CABLES IN MANHOLE IN REAR OF EACH GUN PLATFORM

Scale ½in.—1ft.

ARRANGEMENT OF LIGHTS IN TUNNEL

Scale—¼in.—1ft.

NOTES AND INSTRUCTIONS

POWER—Current is furnished to lights around gun platforms and switches on railroad tracks over a 110 volt A.C. line from power houses located as shown.

LIGHTING—Each gun platform is illuminated by four standard fixtures type S.F.5, supported upon pipe frames of an approved design. A snap switch is provided for each fixture and is located on frame supporting same. Illumination is provided for all switches and crossings of ammunition tracks by means of standard fixtures type S.F.6 with switch complete secured to 3" pipe posts 5' high. The tunnel is illuminated by four standard fixtures S.F.1, secured to the ceiling in the location shown. These fixtures are controlled by a snap switch located at the north end of tunnel.

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

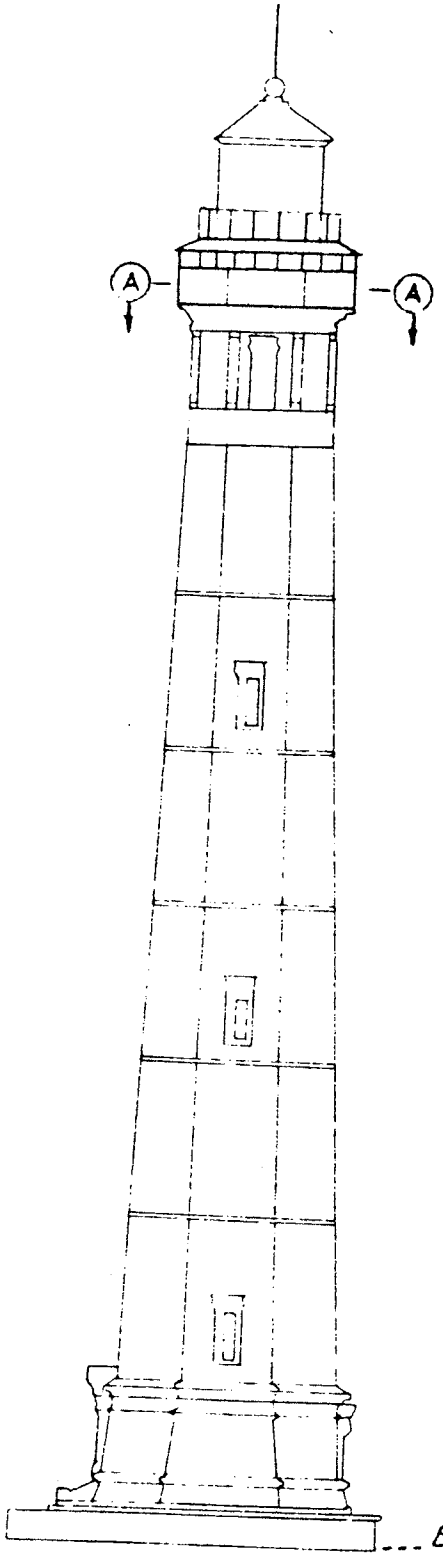
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
STRUCTURE: B. C. STATION BATTERY WALKE

Form 2

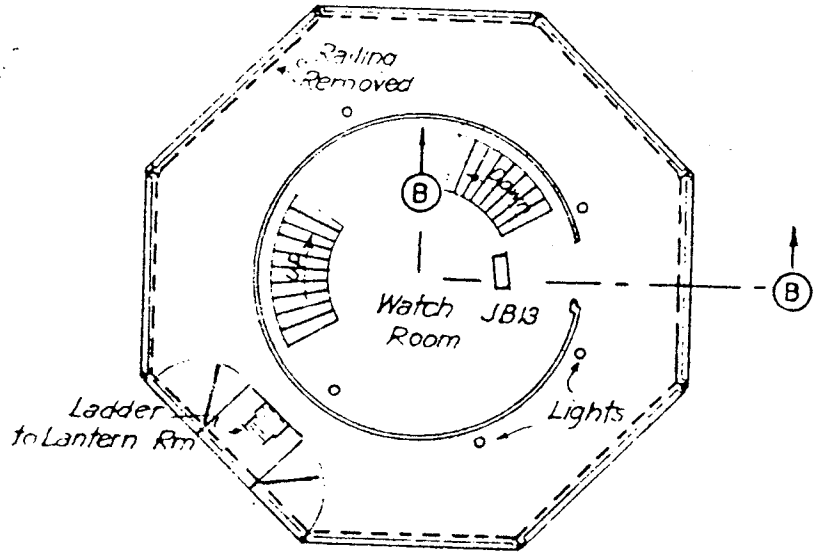
Corrected to November 1, 1941

STRUCTURE:	
Location	Enclosed gallery on new lighthouse, Ft. Story, Cape Henry light
Date of transfer	October 28, 1941
Cost to that date	$ 2,626.47
Type of construction	
(a) Roof	Steel and copper
(b) Remainder of bldg.	Sides enclosed with 1/8" steel plates, steel sash
How concealed	No concealment
How protected	No protection
Height above concealment	No concealment
Height above protection	No protection
Conspicuous at ..... yeard	22,000
ELECTRIC CURRENT:	
Source of	Post power, commercial
Killowatts required	Lights
Type of lighting fixtures	Engr. S. F. Fixtures
HEAT:	
How heated	Stove
WATER & SEWER:	
Connected to water mains	No
Connected to sewer	No
Type of latrine	None
.Permanent or temporary inst'ln	Permanent
Present condition	Good
REFERENCE	
Reference of site	13.00 M.L.W.
Reference of instrument axis	160.00 M.L.W.

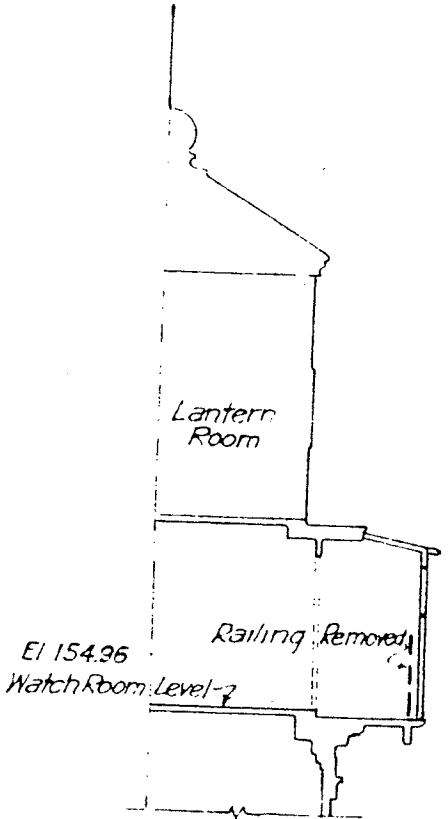
INSTRUMENTS AND EQUIPMENT:	
Type of observing instrument	Azimuth
Type of plotting board	None
DATA TRANSMISSION:	
Type of	BD-95 Switchboard, EE-91 Telephones, T.I.Bell and JB-13 Terminal, 25 pair cable
Date of transfer	October 28, 1941
Cost of data transmission equip	$ 750.00



ELEVATION
$\frac{3}{64}$" = 1'-0"



PLAN AT A-A
$\frac{1}{8}$" = 1'-0"



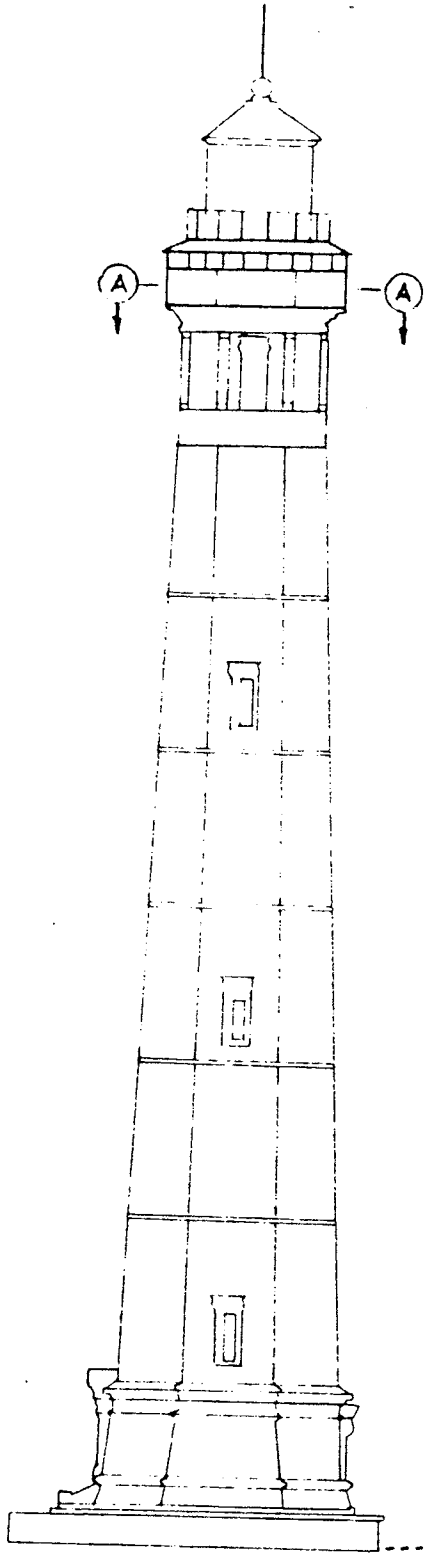
SECTION AT B-B
$\frac{1}{8}$" = 1'-0"

FORT STORY, VA.

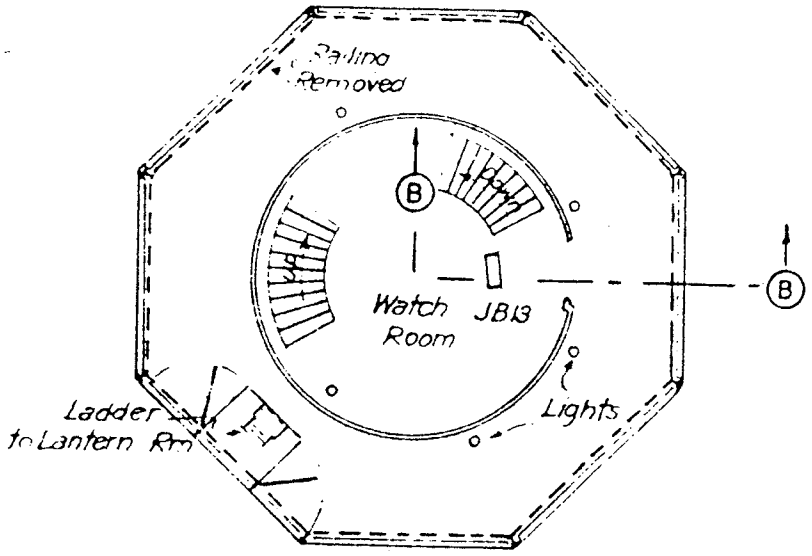
B.C. STATION BATTERY WALKE

SCALES AS SHOWN AUG. 1941

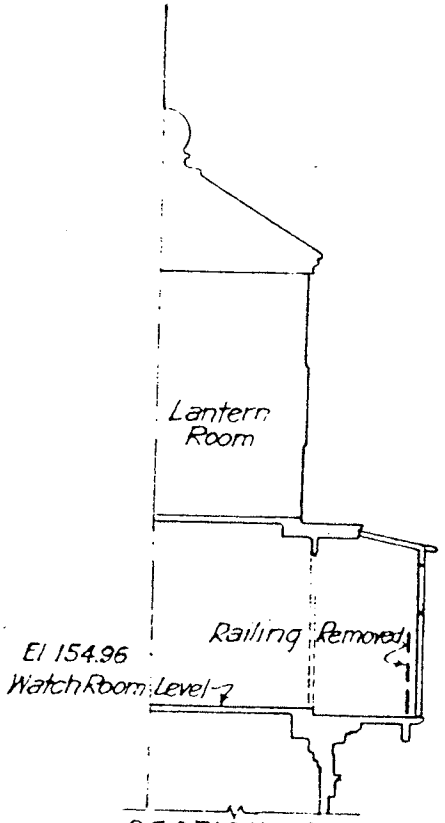
U. S. ENGINEER OFFICE
NORFOLK, VA.



ELEVATION
$\frac{3}{64}$" = 1'-0"



PLAN AT A-A
$\frac{1}{8}$" = 1'-0"



SECTION AT B-B
$\frac{1}{8}$" = 1'-0"

FORT STORY, VA.

B.C.STATION
BATTERY WALKE

SCALES AS SHOWN AUG. 194

U. S. ENGINEER OFFICE
NORFOLK, VA.

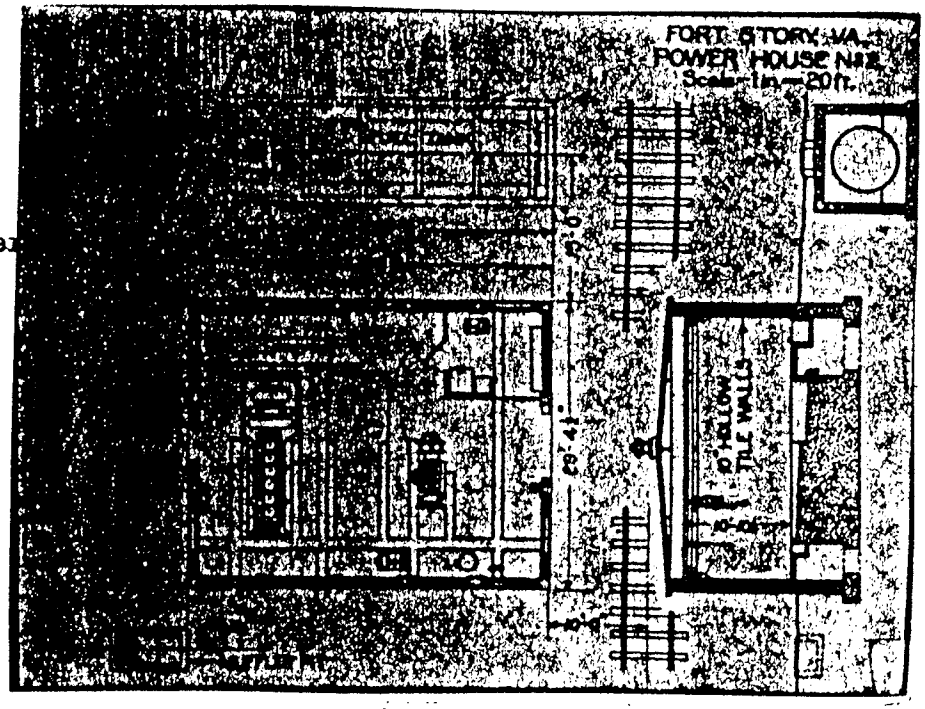
REP 01 COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Electric Plants)
Form 2 Corrected to June 30, 1937

With 660 B (Enclosure)

HARBOR DEFENSES OF CHESAPEAKE B.
FORT STORY, VIRGINIA
STRUCTURE - POWER HOUSE NO. 2

STRUCTURE	
Location	Parcel "A", Ft. Story, Va., about 480 ft. north of gun #3 & 80 ft. south of Norfolk-Southern R.R. tracks
Date of transfer	October 20, 1924
Cost to that date	1200 ft. R.R. track leading to Power House 5,400.00 Trenching & laying cable 1,370.00 Construction of Power House 12,464.00 Purchasing material & installing equipment 4,280.00 Total Cost to date - - $23,514.00
Type of Construction:	
(a) Roof	Reinforced concrete
(b) Remainder of building	Reinforced concrete and tile with steel sash
How concealed	No concealment, except shrubs and trees in rear.
How protected	No protection
Height above concealment	- - -
Height above protection	- - -
Conspicuous at .....yards	About 3000 to 5000 yards
ELECTRIC CURRENT:	
Source of	Units in power house or from Power House #1; also commercial 220V AC power for lights supplied by aerial line; cut down to 110V by auto transformer installed in power house.
Kilowatts required	About 1.5 KW
Type of lighting fixtures	U.S.Engr. Dept. standard
HEAT:	
How heated	Flue provided for stove
WATER AND SEWER:	
Connected to water mains	Yes
Connected to sewer mains	Units in power house connected to waste pipe leading to low ground.
Type of latrine	No latrine

Permanent or temporary Install	Permanent
Present condition	Good
REFERENCE:	
Reference of site	13.33'
Reference of Inst. Axis	No instruments
Type and capacity of crane	1-ton hand operated overhead traveling crane.
INSTRUMENTS AND EQUIPMENT:	
Type of observing instrument	None
Type of plotting board	None
DATA TRANSMISSION:	
Type of	Telephone
Date of transfer	June 11, 1925
Cost of data transmission equipment	Unknown



With 660 B (Chesapeake) 3

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Electric Plants)

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA.
POWER FOR BATTERY PENNINGTON
POWER HOUSE NO. 2.

Form 5. Corrected to June 30, 1937.

	Serial No.	Type	Size	Mfgr.	Date of Transfer	Cost	Condition	R.P.M.	Type of Drive	Radiator for Engine No.	Fuel	Switchboard Material	Switchboard No. of Panels
Engine No. 1	726	Diesel	136 H.P.	Winton Engine Works, Cleveland, O.	Oct. 20, 1924	Unknown	Good	450	D.D.		Fuel oil containing 1/2 of 1-% Sulphur & less than 1-% of water.	Ebony Asbestos	4
Generator	4244922	DC-Q	90 K.W. 720 Amp.	Westinghouse	"	"	"	"	"		Electric Current		
Fuel Pump	302982	Viking	1"Suction 1"Disch.	Viking Pump Co. Cedar Falls, Ia.	"	"	"	700	"		"		
Fuel Pump Motor	3402437	C.D.	1.5 H.P.	Westinghouse	"	"	"	"	"		"		
Water Pump	42	-----	2" Suction 2"Disch.	Northern Apparatus Fire Co. Minneapolis, Minn.	"	"	"	1200	"		"		
Water Pump Motor	1361537	R.C.	1.75 H.P.	G.E.Co.	"	"	"	"	"		"		
25 KW GASOLINE ELECTRIC GENERATOR SET													
Engine	14413	G.M.	-----	G. E. Co	"	"	"	560	D.D.		Gasoline		
Generator	679116	M.P.C.	25 K.W.	G. E. Co	"	"	"	"	"				
Auto-Transformer	3266022	M Form B 60 cycle 220-110V	1 KVA	G.E.Co.	5/8/36	16.00	"		---		---		

DISTRIBUTION OF KW: Two Guns, each 54 KW (Max.) Power House 3 KW (Max.)
Four Shell Rooms and Four Magazines 2.8 KW

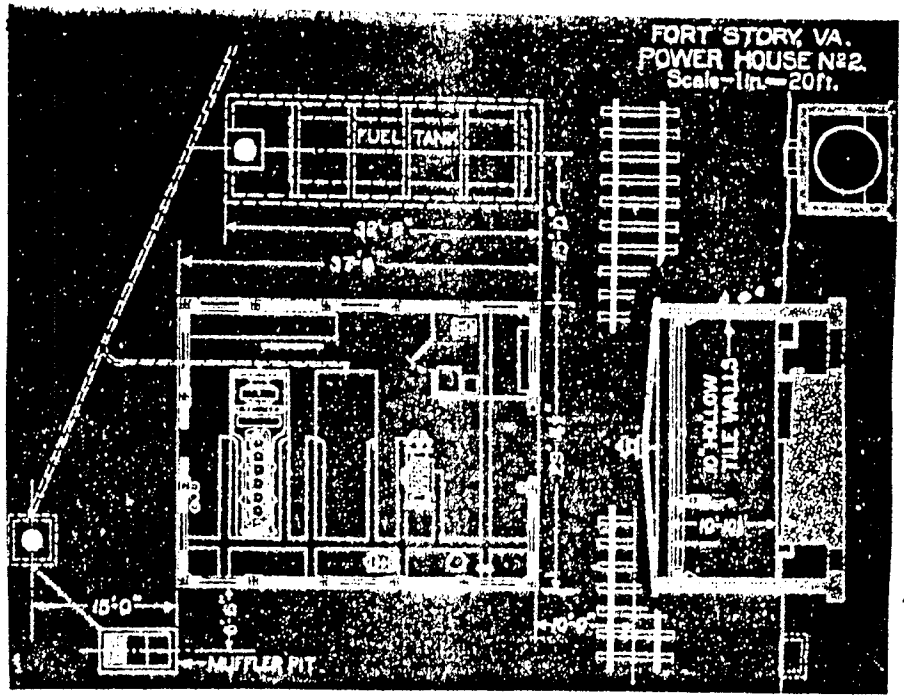
— - OVER - —

...F CONTROLLED MINES - SEACOAST FORTIFICATIONS
(Electric Plants)

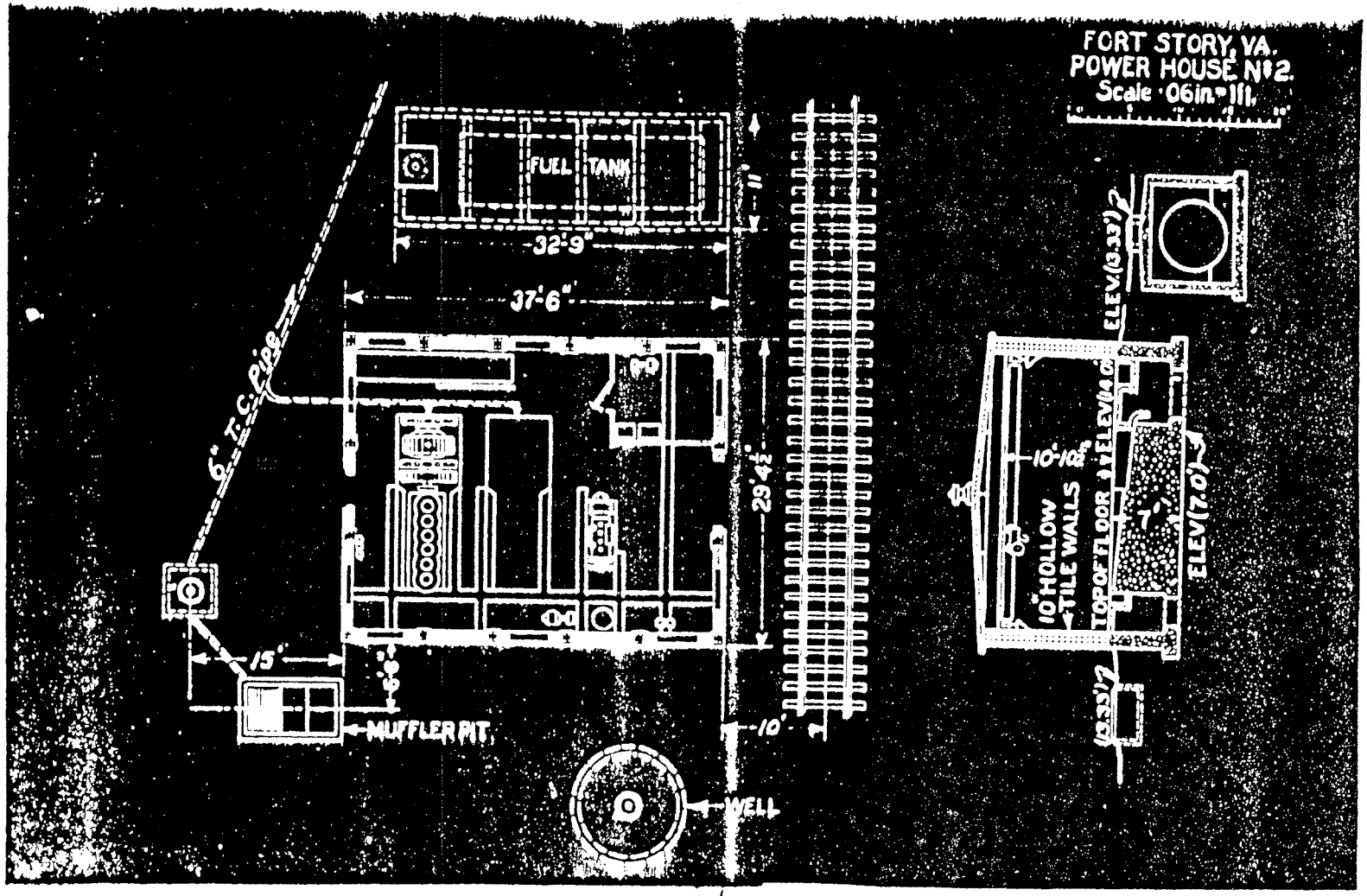
Form 1. Corrected to April 1, 1926.

COAST DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA.
STRUCTURE - POWER HOUSE NO. 2.

Location	Parcel "A" Fort Story, Va., about 400 ft. North of Gun No.3 and 50 ft. south of Norfolk-Southern R.R. tracks	Permanent or temporary installation	Permanent
		Present condition	Good
Date of Transfer	October 20, 1917	Reference of site	(13'4")
COST TO DATE:		Type of data transmission	Telephone
1200 ft. R.R. track leading to Power house	$5,400.00	Date of transfer	June 11, 1925.
Trenching and laying cables	1,370.00		
Construction of Power House #2	12,464.00		
Purchasing material and installing equipment	4,280.00	Cost of data transmission equipment	Unknown
Total cost to Date	$23,514.00		
TYPE OF CONSTRUCTION:			
(a) Roof	Reinforced concrete		
(b) Remainder of building	Reinforced concrete and tile with steel sash		
How concealed	No concealment, except shrubs and trees in rear		
How protected	No protection		
Height above concealment	No concealment, except shrubs and trees in rear		
Height above protection	No protection		
Conspicuous at_____yards	About 3,000 to 5,000 yards		
Source of electric current for lights and fans	Units in Power House or from Power House No. 1		
Kilowatts required for lights and fans	About 1.5 K.W.		
Type of lighting fixtures	U.S. Engineer Dept. Standard fixtures with open reflectors		
How heated	Flue provided for stove		
Connected to water main	Yes		
Connected to sewer	Units in power house connected to waste pipe leading to low ground		
Type of latrines	No latrines.		



Superseded — See Form 2, corrected to June 30, 1937

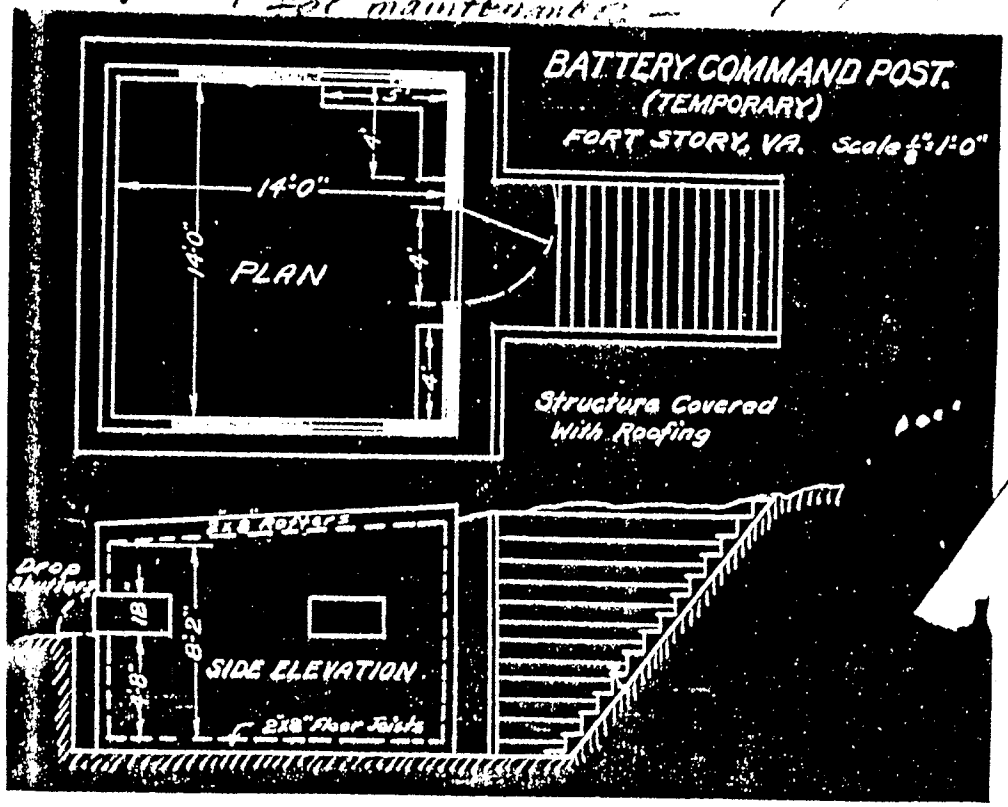

FORT STORY, VA.
POWER HOUSE N°2.
Scale · 06in.=1ft.
FUEL TANK
32'-9"
37'-6"
6" T.C. Pipe
29'-4"
15'
MUFFLER PIT
10'
WELL
ELEV.(13.33')
10'-10"
10" HOLLOW TILE WALLS
TOP OF FLOOR
ELEV.(7.0')

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS.
(Fire control or Torpedo Structures.)
Form 2. Corrected to April 2, 1928.

COAST DEFENSE OF CHESAPEAKE BAY.
FORT STORY, VIRGINIA.
STRUCTURE - B.C.POST (Temp.)

Location	Parcel "A",1000' W.of Gun No.4 Fort Story, Va.
Date of transfer	Sept. 8, 1921.
Cost to date	Unknown. See statement dated May 29,1928, on attached form 2, corrected to Sept. 1,1921.
Type of construction	
(a) Roof	Rubberoid covering
(b) Remainder of structure	Wood frame
How concealed	Partially concealed by sand
How protected	Partially protected by sand
Height above concealment	4'
Height above protection	4'
Conspicuous at.....yards	3,000 yards
Source of electriciturrent	None
Kilowatts required	None
Type of lighting fixtures	None
How heated	None
Connected to water mains	No
Connected to sewer	No
Type of latrine	None
Permanent or temporary installation	Temporary
Present condition	Fair
Reference of site	75' approx.
Reference of instrumental axis	80' approx.
Type of observing instrument	Unknown
Type of plotting board	Unknown
Type of data transmission	Telephone
Date of transfer	June 11, 1925
Cost of data transmission equipment	Unknown

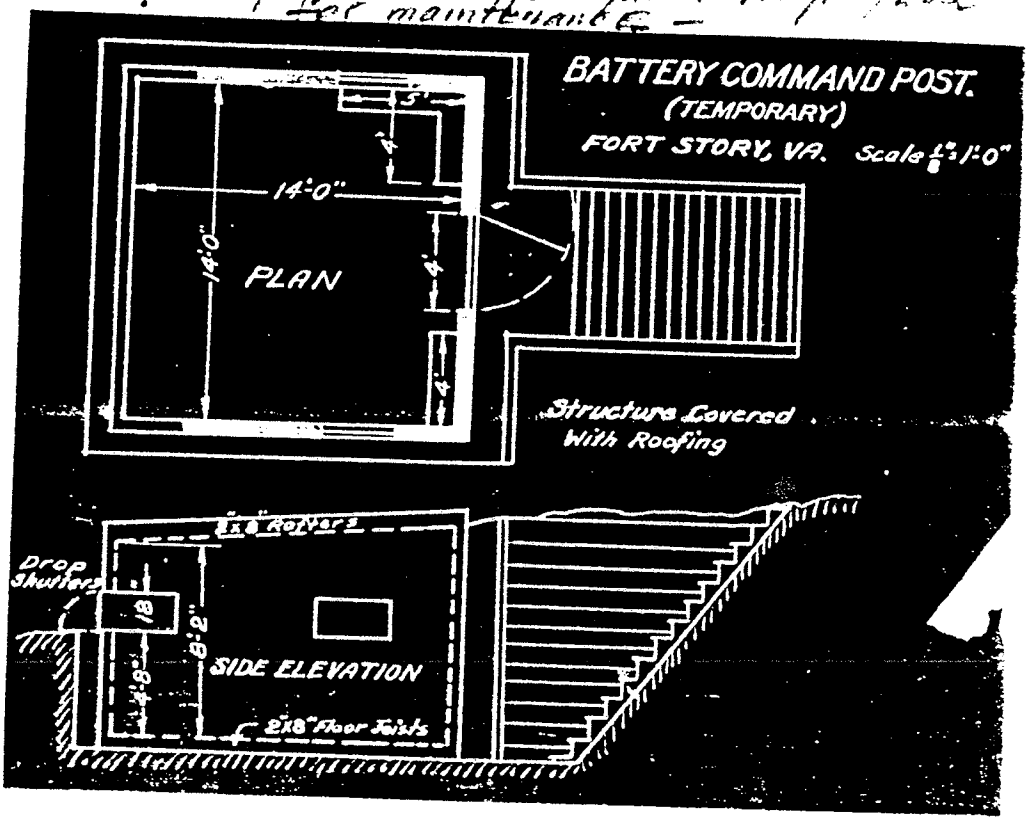
665 (Entelecu) 117 - ... dated Mar-6-1930
Salvage Recommended ... New Station in 500 foot Base Line Tower -
No further charge against Engr funds for maintenance -



S - SEACOAST FORTIFICATIONS. COAST DEFENSE OF CHESAPEAKE BAY.
pedo Structures.) FORT STORY, VIRGINIA.
Corrected to April 2, 1926. STRUCTURE - B.C.POST (Temp.)

	:Parcel "A",1000' W.of Gun:
	:No.4 Fort Story, Va. :
	:Sept. 8, 1921. :
	:Unknown. See statement dated May 29,1928, on attached form 2, corrected to Sept. 1,1921.
	:
ture	:Rubberoid covering
	:Wood frame
	:Partially concealed by sand
	:Partially protected by sand
	:4'
	:4'
ds	:3,000 yards
it	:None
	:None
	:None
	:None
	:No
	:No
	:None
lla-	:
	:Temporary
	:Fair
	:75' approx.
axis	:80' approx.
ent	:Unknown
	:Unknown
	:Telephone
	:June 11, 1925
equipment	:Unknown

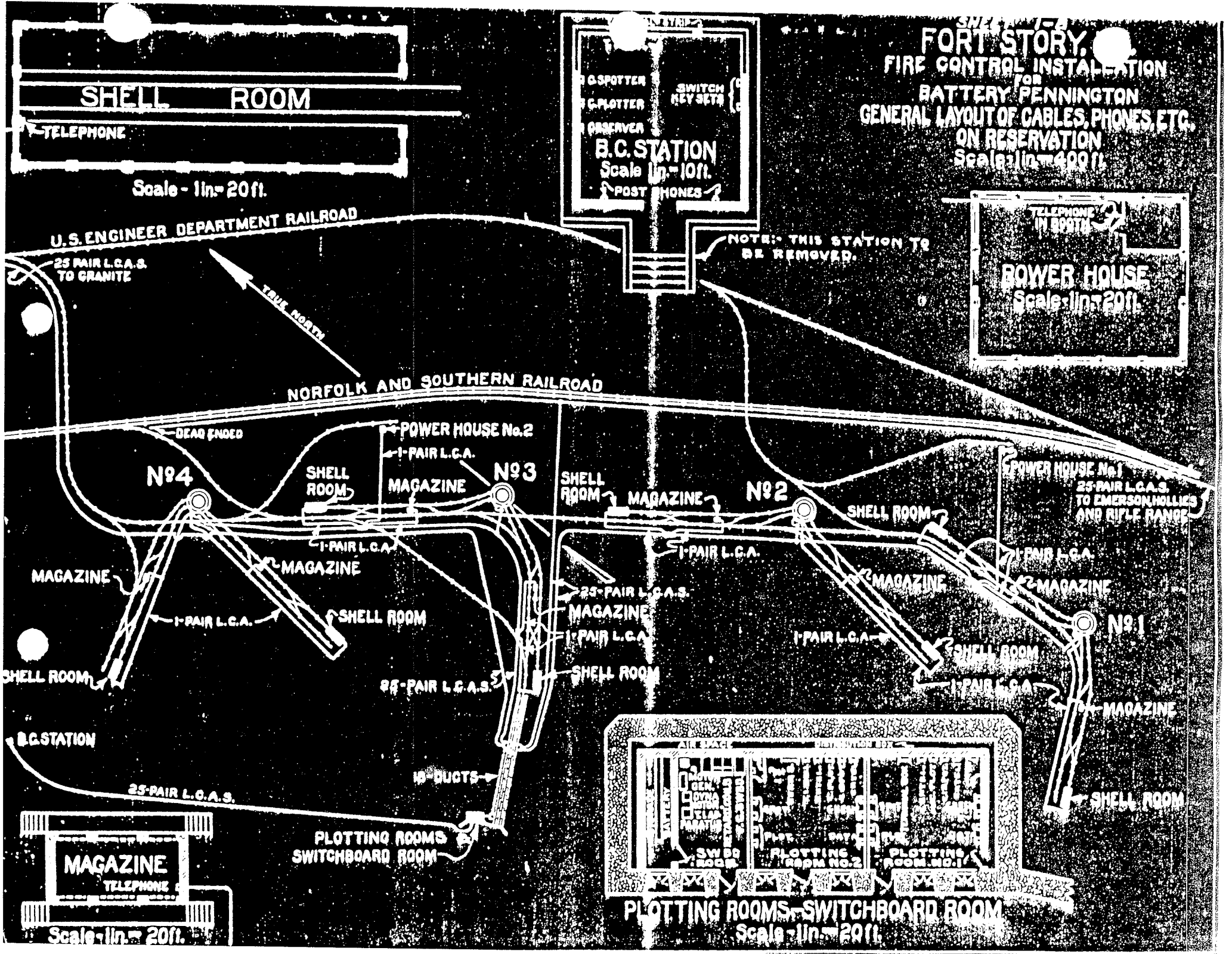
665 (Ent Chev) 117 - - - dated Mar-6-1930
Salvage Recommended - - - New Station in 5000 foot Base Line Tower -
No further charge against Engr. funds for maintenance -



(Copy)

"Examination of this temporary station shows it to be in poor condition and so nearly surrounded by sand banks that it will soon become useless. The temporary location of the station and the cheap construction of the present structure make it impractical to expend any additional funds for the repair of this structure."

061.2 B(Chev)9 - 2nd Ind. Dec. 17, 1928.


FORT STORY
FIRE CONTROL INSTALLATION
FOR
BATTERY PENNINGTON
GENERAL LAYOUT OF CABLES, PHONES, ETC.
ON RESERVATION
Scale: 1 in. = 400 ft.
SHELL ROOM
TELEPHONE
Scale - 1 in. = 20 ft.
B.C. STATION
Scale 1 in. = 10 ft.
POST PHONES
SWITCH KEY SETS
NOTE: THIS STATION TO BE REMOVED.
TELEPHONE IN BOOTH
POWER HOUSE
Scale - 1 in. = 20 ft.
U.S. ENGINEER DEPARTMENT RAILROAD
25 PAIR L.C.A.S. TO GRANITE
TRUE NORTH
NORFOLK AND SOUTHERN RAILROAD
DEAD ENDED
POWER HOUSE No. 2
1-PAIR L.C.A.
Nº4
SHELL ROOM
MAGAZINE
Nº3
SHELL ROOM
MAGAZINE
Nº2
SHELL ROOM
POWER HOUSE No. 1
25-PAIR L.C.A.S. TO EMERSON, HOLLIES AND RIFLE RANGE
1-PAIR L.C.A.
MAGAZINE
MAGAZINE
1-PAIR L.C.A.
MAGAZINE
1-PAIR L.C.A.
SHELL ROOM
25-PAIR L.C.A.S.
MAGAZINE
1-PAIR L.C.A.
SHELL ROOM
1-PAIR L.C.A.
SHELL ROOM
25-PAIR L.C.A.S.
SHELL ROOM
1-PAIR L.C.A.
MAGAZINE
Nº1
SHELL ROOM
B.C. STATION
18-DUCTS
25-PAIR L.C.A.S.
PLOTTING ROOMS SWITCHBOARD ROOM
MAGAZINE
TELEPHONE
Scale - 1 in. = 20 ft.
AIR DUCT
BATTERY
SWITCH BOARD ROOM
PLOTTING ROOM NO. 2
PLOTTING ROOM NO. 1
PLOTTING ROOMS-SWITCHBOARD ROOM
Scale - 1 in. = 20 ft.

REPORT OF COMPLETION WORKS- SEACOAST FORTIFICATIONS.
(Fire control Stations for Long Range Tests)

Form 2. Corrected to Sept. 1, 1921.

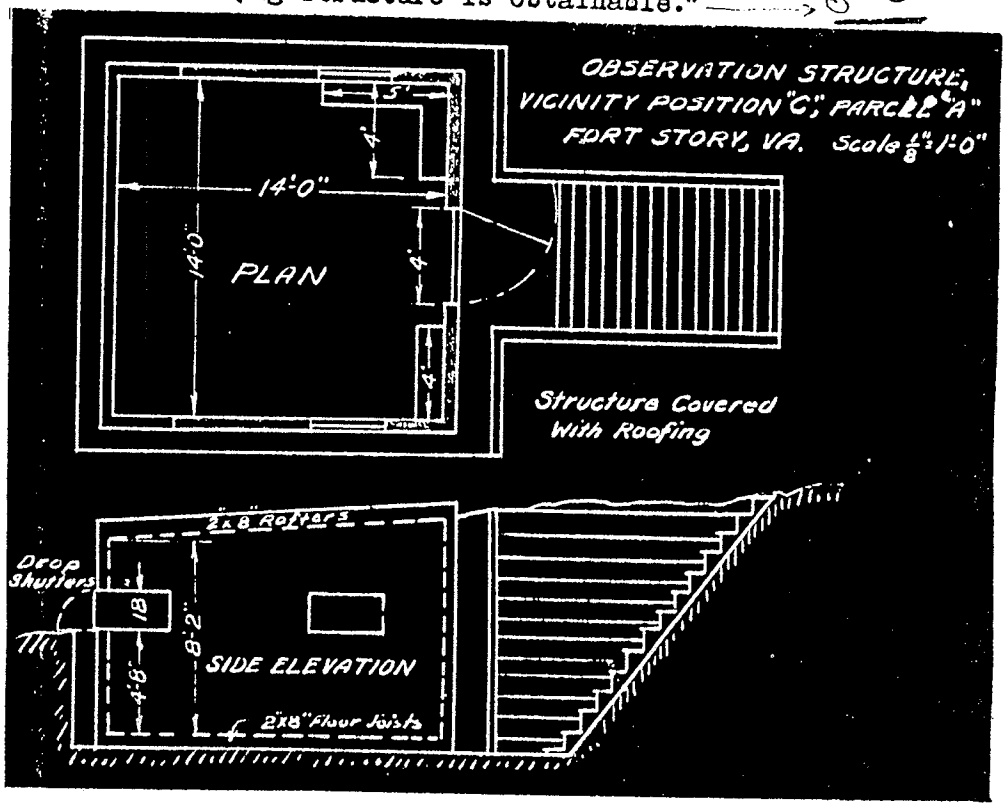
COAST DEFENSE OF CHESPEAKE BAY.
FORT STORY, VIRGINIA.
3-STRUCTURES, TEMPORARY OBSERVATION STATIONS, PARCEL "A"

Location	Parcel "A" vicinity of Position "C" Fort Story, Va.
Date of transfer	Sept. 8, 1921.
Cost to date	$4,460.00
Type of construction	
(a) Roof	Rubberoid covering
(b) Remainder of structure	Wood frame
How concealed	Partially concealed by sand
How protected	Partially protected by sand
Height above concealment	4'
Height above protection	4'
Conspicuous at.....yards	3,000 yards
Source of electric current	None
Kilowatts required	None
Type of lighting fixtures	None
How heated	None
Connected to water mains	No
Connected to sewer	No
Type of latrine	None
Permanent or temporary installation	Temporary
Present condition	Fair
Reference of site	75' approx.
Reference of instrumental axis	60' approx.
Type of observing instrument	Unknown
Type of plotting board	Unknown
Type of data transmission	None
Date of transfer	----
Cost of data transmission equipment.	----

Statement from letter

"(b) Attention is invited to the fact that Form No.2 corrected to September 1, 1921 for B.C.Post (Tempo.) on Parcel "A" at Fort Story was for three Temporary Structures and the cost as given on that form covered all three. Two of these structures, the temporary observation Sta.and tower at Virginia Beach Coast Guard Station and temporary observation sta. and tower at Dam Neck Mills Coast Guard Station, have since been removed and no correct division of the cost for the remaining structure is obtainable."

Copied from 3rd Ind. May 29, 1928, C.of E.660B(Ches)7.



REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VA. BATTERY ALEXANDER C.M.PENNINGTON. NO. OF GUNS 4 - Caliber 16" Howitzers
Lightning Protection of Eight Powder Magazines and Eight Shell Rooms, Battery Pennington and Battery Walke, as now designated.

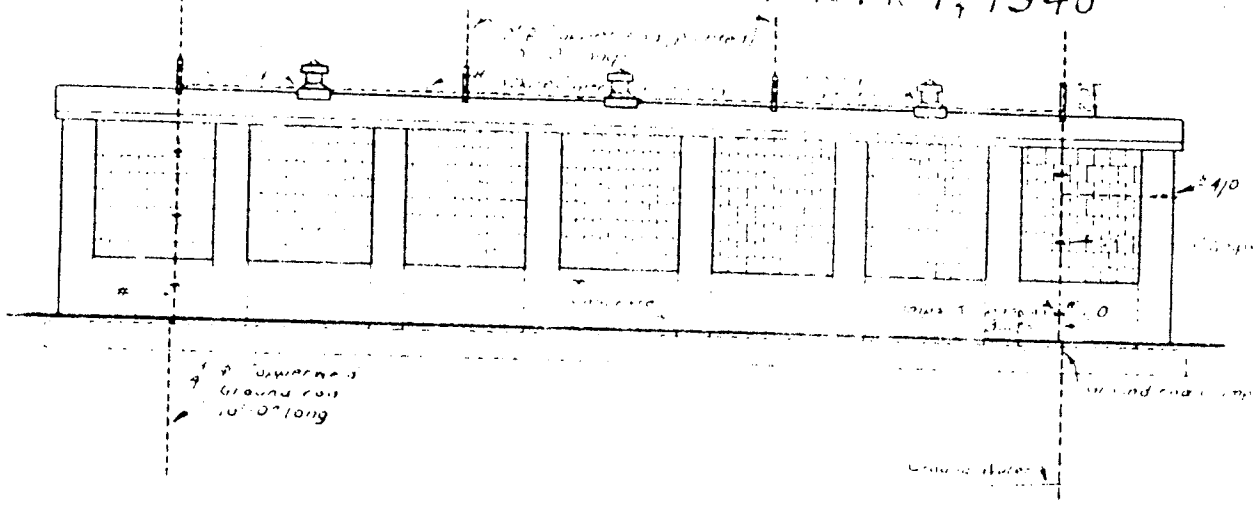
Form 1 Corrected to November 1, 1940
Supplement to Form 1 - Same Battery,
Submitted and corrected to November 15, 1942

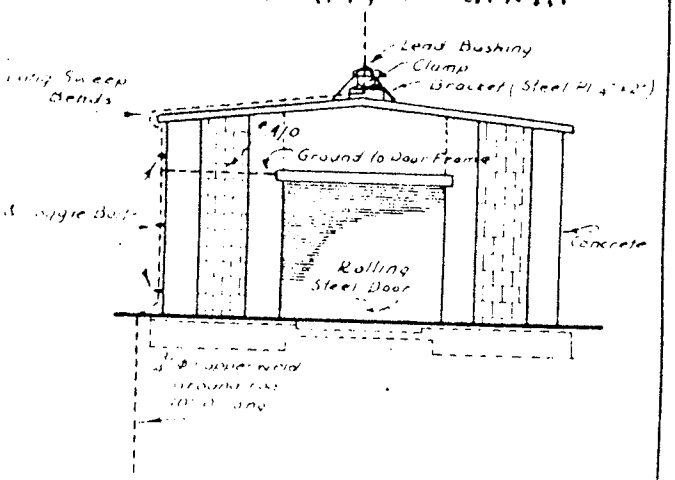
GENERAL:	
Lightning protection has been installed on eight shell rooms and eight powder magazines, Battery Alexander C.M.Pennington, now designated as Battery Pennington and Battery Walke	As shown on Form 7 dated November 1, 1940
Kind of lightning protection	1/2" ø copper rods connected to 3/4"ø copper and ground rods 10'-0" long with # 1/0 bare copper wire grounded to ventilator and rolling steel doors.
Date of completion	October 20, 1940.
Cost:	
Materials	$ 375.00
Labor	713.21
	$ 1088.21

REPORT OF COMPLETED WORK - SEACOAST FORTIFICATIONS

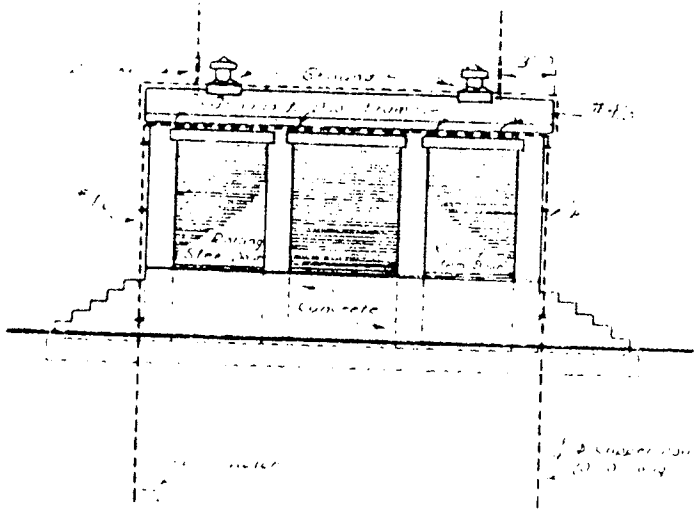
FORM 7 CORRECTED TO NOVEMBER 1, 1940

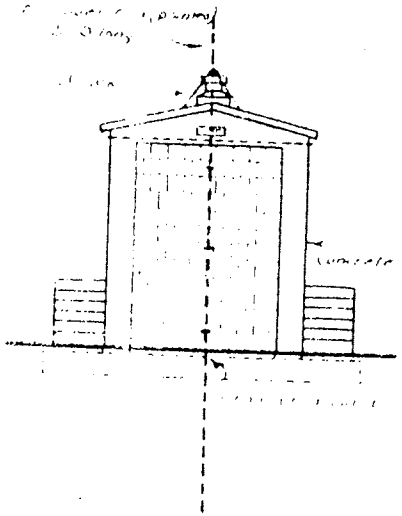
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA





8 - SHELL ROOMS





8 - MAGAZINES

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VA.
BATTERY PENNINGTON & WALKE

LIGHTNING PROTECTION OF
MAGAZINE & SHELL ROOMS

Report of Completed Work- Coastal Fortifications.

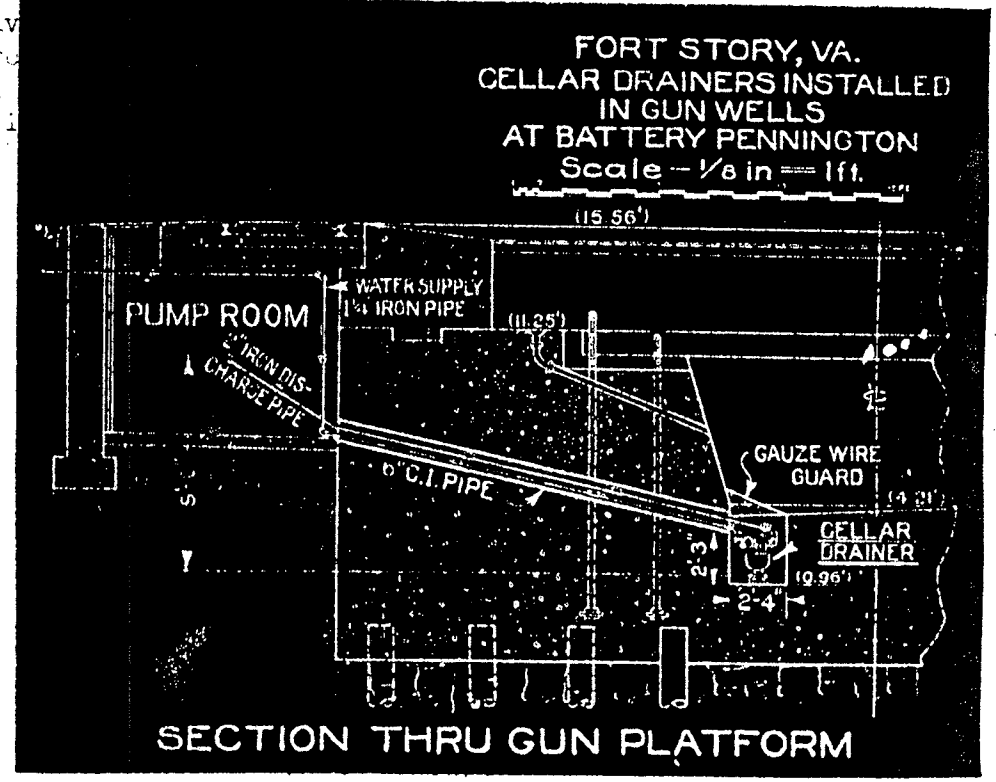
(Cellar drainers installed in gun wells at Bty. Pennington)

Submitted September 3, 1926

Coast Defenses of Chesapeake Bay
Fort Story, Va.

Cellar Drainers Installed in Gun Wells at Battery Pennington.

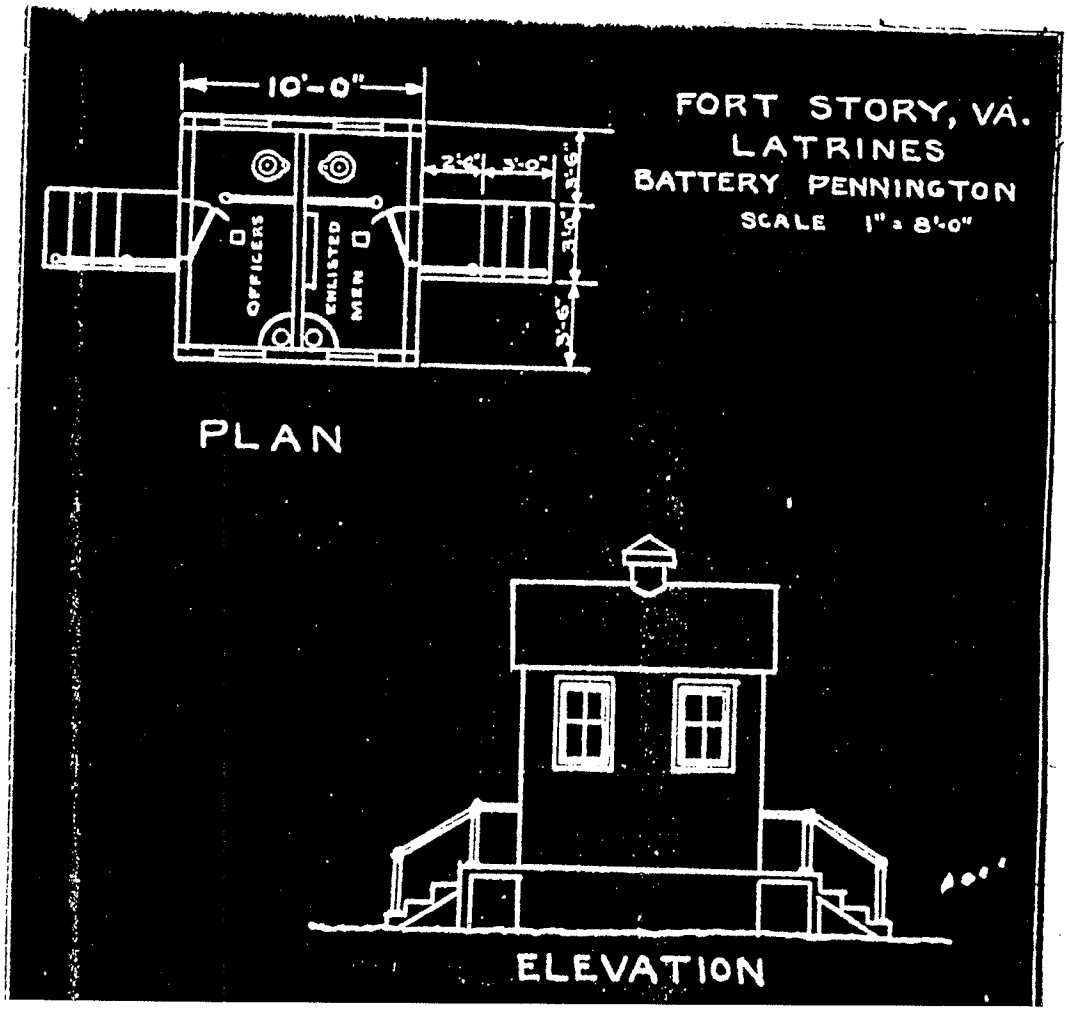
Location,	One cellar drainer in each of the four gun wells at Battery Pennington.
Date of transfer,	July 15, 1926
Cost to transfer:	
Gun No. 3,	$545.00
Guns Nos. 1, 2 & 4 each,	$470.00 1,410.00
Total cost for four guns	$1,955.00
Type of construction,	Cast iron and bronze connected with galv iron pipe and valve
How protected,	In sump in gun well covered by [illegible] guard.
Connected to water main,	Yes
Connected to sewer,	No.-Discharges into sump
Permanent or temporary installation	Permanent
Present condition,	Good



(Latrines)

SCALE DRAWINGS OF TOILET UNIT IN
FORT STORY, VIRGINIA,
TOILET FACILITIES AT BATTERY PENNINGTON
(SEE LAYOUT)

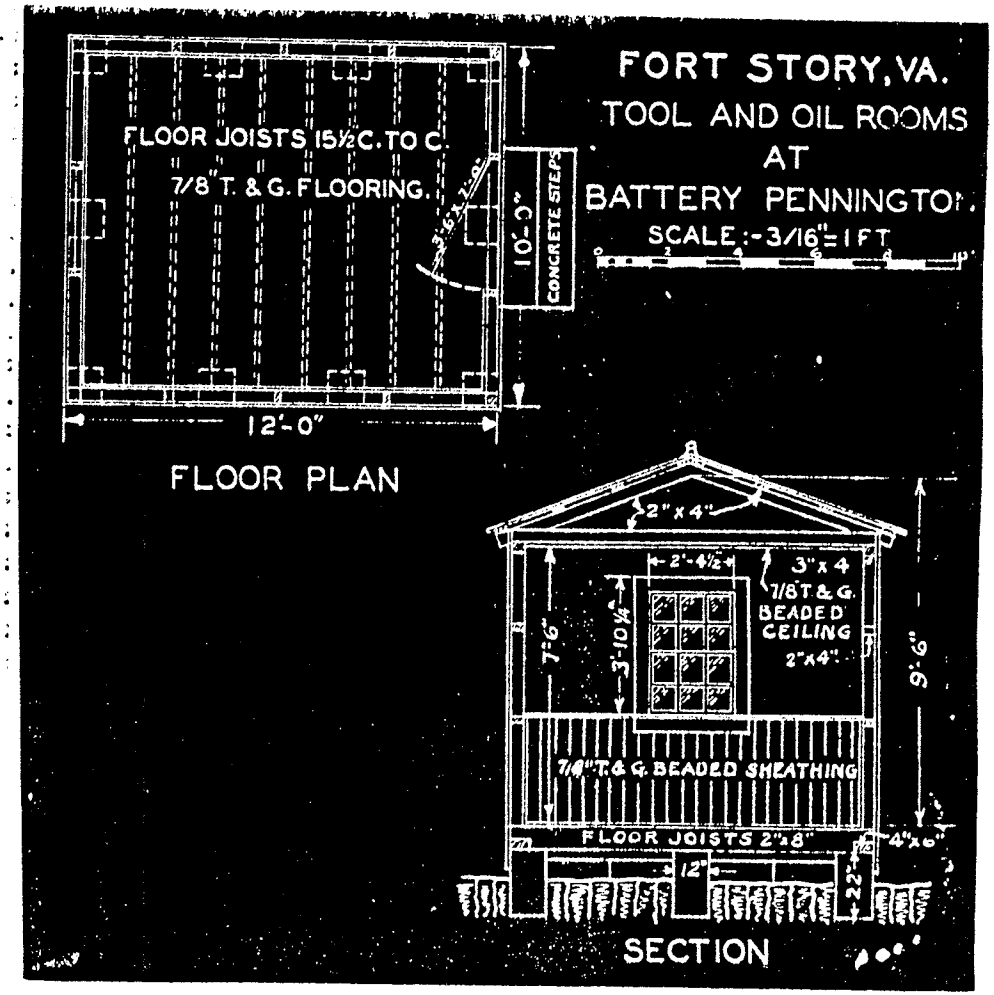
Location	:Each latrine about 250' N.W. of :each Magazine, Battery Pennington
Date of transfer	:May 6, 1930
Cost to that date	:$5,304.40
Type of construction	:
(a) Roof	:Asphalt built-up
(b) Remainder of building	:Cement plaster and hydrolith :metal lath on wood frame
How concealed	:Trees in front
How protected	:Trees in front
Height above concealment	:Concealed
Height above protection	:Protected
Completeness at____yards	:Not completed
Source of electric current	:None
Kilowatts required	:None
Type of lighting fixtures	:None
How heated	:No heat
Connected to water main	:Yes
Connected to sewer	:Separate cesspool :with drains
Type of latrine	:Vogel frost-proof : toilets
Permanent or temporary	:Permanent
Present condition	:Good
Reference of site	:16.0'
Type of data transmission	:None



(Post No. 11 Coast)

Submitted [illegible], 1920.

Location,	[illegible] buildings in rear of each of the four howitzers, Battery Pennington.
Date of transfer,	March 12, 1920.
Cost of last alteration,	$1,564.00 - (cost of 4 buildings)-(cost of each,- $391.00).
Type of construction:	
(a) Roof,	Galvanized iron.
(b) Remainder of building,	Galvanized iron, wood floor.
No. occupied,	Three enlisted men.
How protected,	No protection.
Height above concealment,	None.
Height above protection,	None.
Casemates at ----- yards,	Not casemated.
Source of electric current,	None.
Kilowatts required,	None.
Type of lighting fixtures,	None.
How heated,	No heat.
Connected to water mains,	No.
Connected to sewer,	No.
Type of latrine,	None.
Permanent, or temporary,	Temporary
Present condition,	Good.
Estimated life,	15.0
Type of electric transmission,	None.

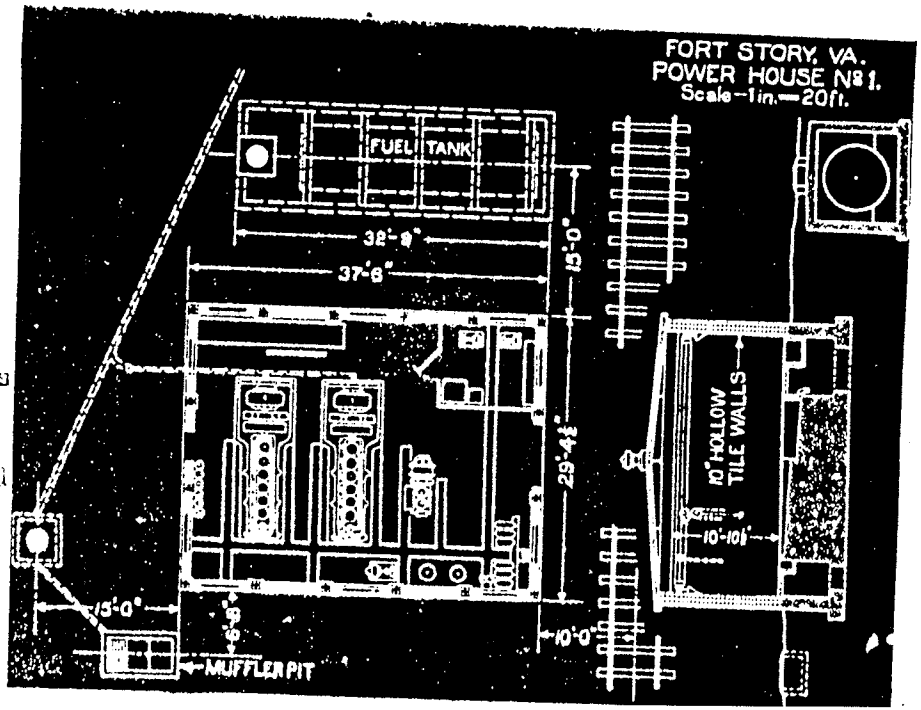


REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Electric Plants)

Form 2. Corrected to April 2, 1928.

COAST DEFENSES OF CHESAPEAKE BAY,
FORT STORY, VIRGINIA.
STRUCTURE - POWER HOUSE NO. 1.

Location	Parcel "A", Fort Story, Va., about 700 ft. north of Gun No. 1 and 80 ft. south of Norfolk-Southern R. R. tracks.	Permanent or temporary installation	Permanent
Date of transfer	October 20, 1924	Present condition	Good
Cost to Date:		Reference of site	(13'4")
1200 ft. R.R. track leading to power house	$ 5,400.00	Type of data transmission	Telephone
Trenching and laying cables	1,370.00	Date of transfer	June 11, 1925
Constructing Power House No. 1	12,464.00		
Purchasing material and installing equipment	4,200.00	Cost of data transmission equipment	Unknown
Total cost to date - - -	$23,514.00		
TYPE OF CONSTRUCTION:			
(a) Roof	Reinforced concrete		
(b) Remainder of building	Reinforced concrete and tile with steel sash.		
How concealed	No concealment, except shrubs and trees in rear		
How protected	No protection		
Height above concealment	No concealment, except shrubs and trees in rear		
Height above protection	No protection		
Conspicuous at - yards	About 3,000 to 5,000 yards.		
Source of electric current for lights and fans	Units in power house or from Power House No. 2		
Kilowatts required for lights and fans	About 1.5 K.W.		
Type of lighting fixtures	U.S. Engineer Dept. Standard fixtures with open reflectors		
How heated	Flue provided for stove		
Connected to water main	Yes		
Connected to sewer	Units in power house connected to waste pipe leading to low ground		
Type of latrines	No latrines.		



REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS
(Electric Plants)

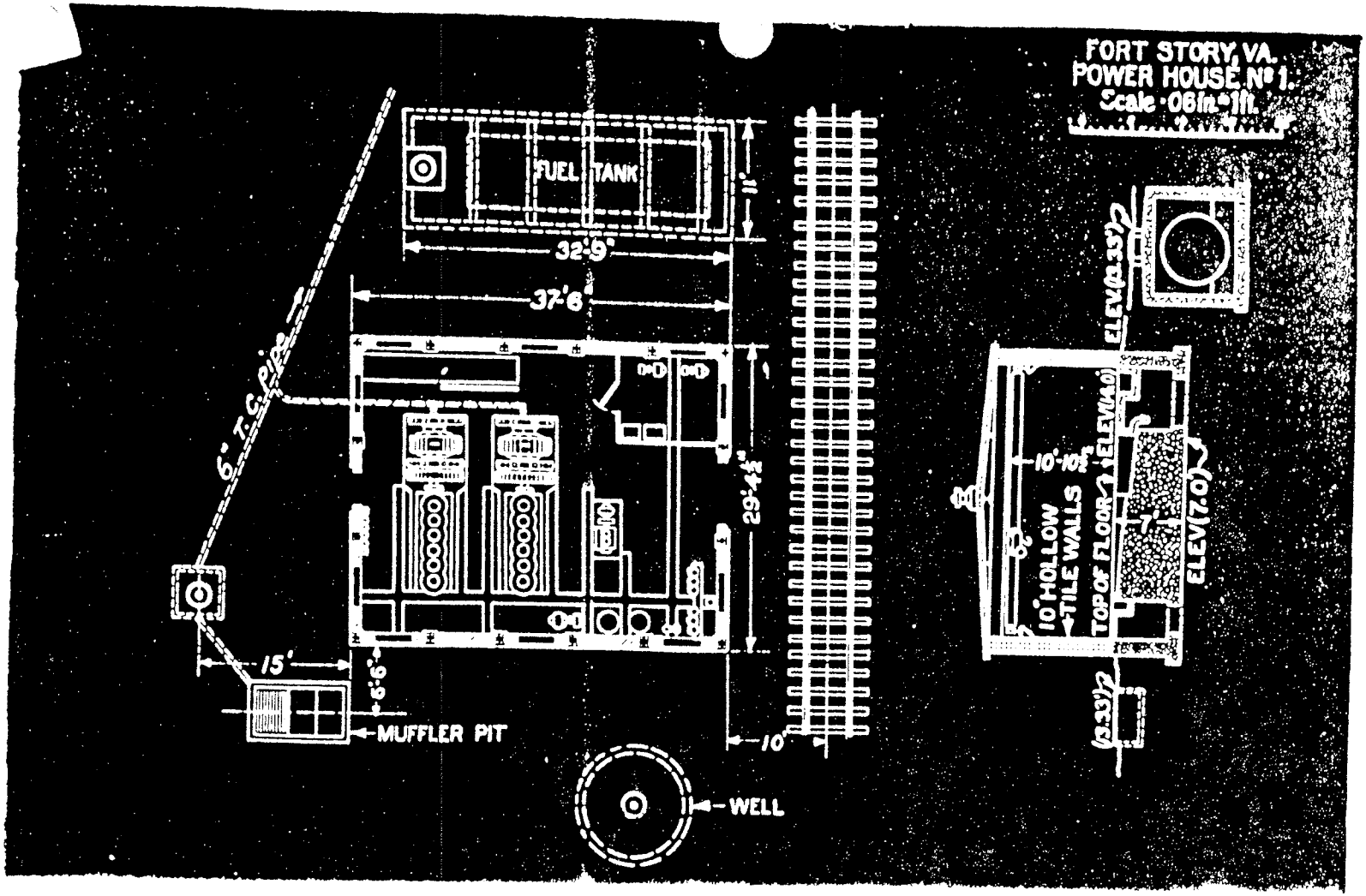
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA.
POWER FOR BATTERY PENNINGTON
POWER HOUSE NO. 1

Form 5. Corrected to June 30, 1937.

	Serial No.	Type	Size	Mfgr.	Date of Transfer	Cost	Condition	R.P.M.	Type of Drive	Radiator for Engine No.	Fuel	Switchboard Material	Switchboard No. of Panels
Engine No.1	725	Diesel	136 H.P.	Winton Engine Works, Cleveland, Ohio	Oct. 20, 1924	Unknown	Good	450	D.D.		Fuel oil cont-aining 1/2 of 1-% Sulphur & Less than 1% of water. Electric Current	Ebony Asbestos	3
Engine No.2	727	"	"	"	"	"	"	"	"				
Generator No.1	4244916	DC-Q	90 KW 720 Amps	Westinghouse	"	"	"	"	"				
Generator No.2	4244917	"	"	"	"	"	"	"	"				
Air Compressor	3220	Vertical 4 stage	5-1/4 x 6	Norwalk Iron Wks. Norwalk, Conn.	"	"	"	250	"				
Air Compressor Motor	4261013	SKDC	20 H.P.	Westinghouse	"	"	"	"	"		"		
Fuel Pump No. 1	303022	Viking	1"Suction 1"Disch.	Viking Pump Co. Cedar Falls, Ia.	"	"	"	700	"		"		
Fuel Pump No.2	302992	"	"	"	"	"	"	"	"		"		
Fuel Pump Motor No. 1	3402438	C.D.	1.5 H.P.	Westinghouse	"	"	"	"	"		"		
Fuel Pump Motor#2	340433	"	"	"	"	"	"	"	"		"		
Water Pump	41	-----	2"Suction 2"Disch.	Northern Fire Apparatus Minneapolis, Minn.	"	"	"	1200	"		"		
Water Pump Motor	1360735	R.C.	1.75 HP	G.E.Co.	"	"	"	"	"		"		

DISTRIBUTION OF KW: Two guns, each 54 KW (Max.), Power House No. 1 19 KW (Max.)
Four Shell Rooms and Four Magazines, 2.8 KW

- OVER -


FORT STORY, VA.
POWER HOUSE No 1.
Scale - 06 in. = 1 ft.
FUEL TANK
11'
32'-9"
37'-6"
29'-4½"
6" T. C. pipe
15'
6'-6"
MUFFLER PIT
10'
WELL
ELEV(8.33')
ELEV(4.0)
10'-1½"
10" HOLLOW TILE WALLS
TOP OF FLOOR
ELEV(7.0)
(8.33')

REPORT OF COMPLETED WORKS- SEACOAST FORTIFICATIONS
(Electric Plants).

Form 5.- Submitted November 7, 1924.

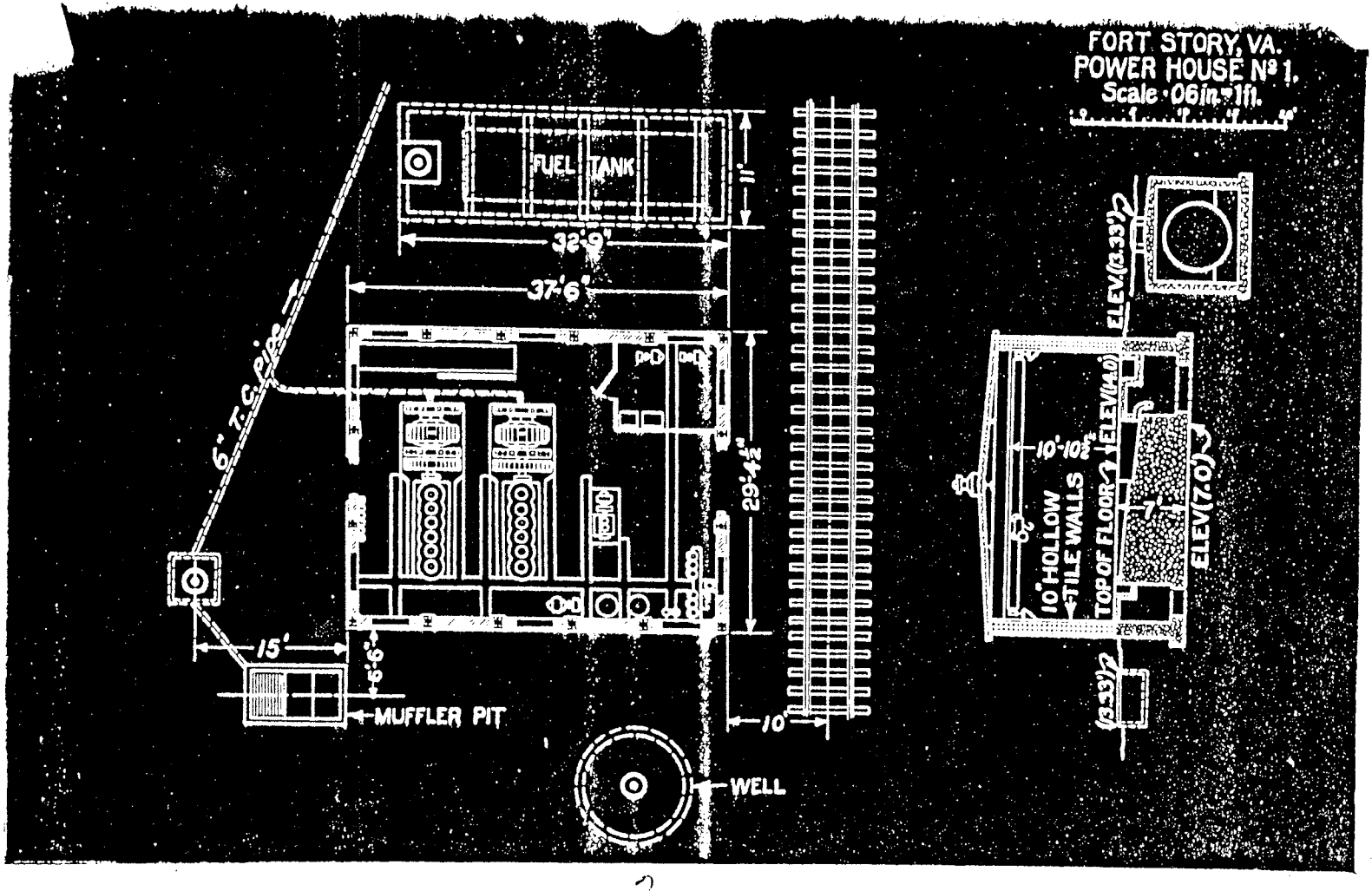
COAST DEFENSES OF CHESAPEAKE BAY
FORT STORY, VA.
POWER FOR BATTERY PENNINGTON
POWER HOUSE NO. 1

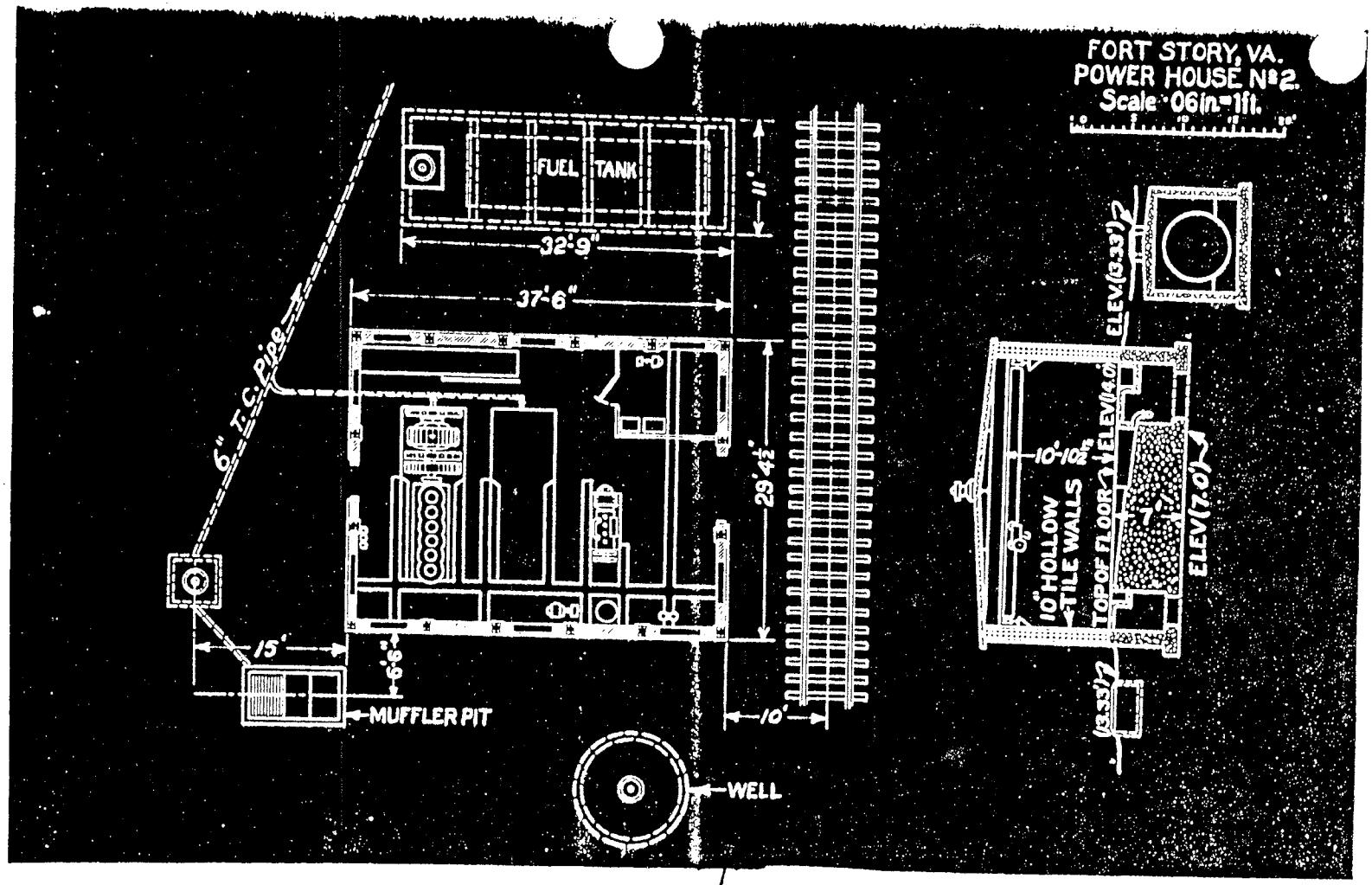
	Serial No.	Type	Size	Mfgr.	Date of transfer	Cost	Condition	R.P.M.	Belt or direct drive	Fuel	Switchboard Material	Switchboard No. of Panels
Engine No. 1	725	Diesel	136 HP	Wiaton Engine Works, Cleveland, O.	10/20/24	Unknown	Good	450	D.D.	Fuel oil containing ½ of 1% Sulphur and less than 1% of water	Ebony Asbestos	3
Engine No. 2	727	"	" "	"	"	"	"	"	"	"		
Generator No. 1	4244916	DC-Q	90 K.W. 720 Amps.	Westinghouse	"	"	"	"	"	"		
Generator No. 2	4244917	" "	" "	"	"	"	"	"	"	"		
Air compressor	3220	Vertical 4-Stage	5½ x 6	Norwalk Iron Wks. Norwalk, Conn.	"	"	"	250	"	Electric Current		
Air Compressor Motor	4261013	SKDC	20 H.P.	Westinghouse	"	"	"	"	"	"		
Fuel Pump No. 1	303022	Viking	1" Suction 1" Dischg	Viking Pump Co. Cedar Falls, Ia.	"	"	"	700	"	"		
Fuel Pump Motor	3402438	C.D.	1.5 H.P.	Westinghouse	"	"	"	"	"	"		
Fuel Pump No. 2	302992	Viking	1" Suction 1" Dischg	Viking Pump Co.	"	"	"	"	"	"		
Fuel Pump Motor	340433	C.D.	1.5 H.P.	Westinghouse	"	"	"	"	"	"		
Water Pump	41	-----	2" Suction 2" Dischg.	Northern Fire Apparatus Minneapolis, Minn.	"	"	"	1200	"	"		
Water Pump Motor	1360735	R.C.	1.75 H.P.	G.E. Co.	"	"	"	"	"	"		

DISTRIBUTION OF K.W.- Two Guns,-each, 54-K.W.(Max.) Power House No. 1, 19 K.W. (Max).
Four Shell room and four magazines, 2.8 -K.W.

Superseded - See Form 5 corrected to June 30, 1927

OVER


FORT STORY, VA.
POWER HOUSE Nº 1.
Scale · 06 in. = 1 ft.
FUEL TANK
11'
32'-9"
37'-6"
29'-4½"
6" T.C. pipe
15'
5'-6"
MUFFLER PIT
10'
WELL
ELEV.(8.33')
10'-10½"
10" HOLLOW TILE WALLS
TOP OF FLOOR ELEV(4.0)
ELEV(7.0)
(8.33')


FORT STORY, VA.
POWER HOUSE No 2.
Scale .06in.=1ft.
FUEL TANK
11'
32'-9"
37'-6"
29'-4½"
6" T.C. Pipe
15'
6'-6"
MUFFLER PIT
10'
WELL
ELEV.(3.33')
10'-10½"
10" HOLLOW TILE WALLS
TOP OF FLOOR ELEV(14.0')
ELEV(7.0')
(3.33')

CONFIDENTIAL

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

Form 2 Corrected to: May 18, 1936

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA.
ELECTRICAL INSTALLATION
COMMERCIAL AC POWER TO BATTERY PENNINGTON

STRUCTURE		
Location	As shown on accompanying map	220 volt AC single phase, 60 cycle current is supplied aerial line to Power Plant No. 2 and to Switchboard and Plotting Room and to Radio Station. An Auto-transformer, 1 KVA capacity is installed in Power Plant No. 2 to reduce voltage to 110 V. Another auto-transformer is installed in the basement of the Switchboard and Plotting Room to reduce the voltage for the lights and to the AC power required in that structure. 220 volts is supplied to the motor generator in the Radio Station to operate the set.
Date of transfer	May 18, 1936	
Cost to that date	$ 701.44	
Type of Construction		
(a) Aerial	2 Conductor R.B. cable, 106,000 c.m. supported by messenger wire on creosoted poles	
(b) Underground	Single conductor R.L. cable, 106,000 c.m., in trench or in duct lines.	
ELECTRIC CURRENT:		
Source of:	Commercial power; transformer located in rear of Engineer Shops.	
Permanent or temporary installation	Permanent	

SECRET

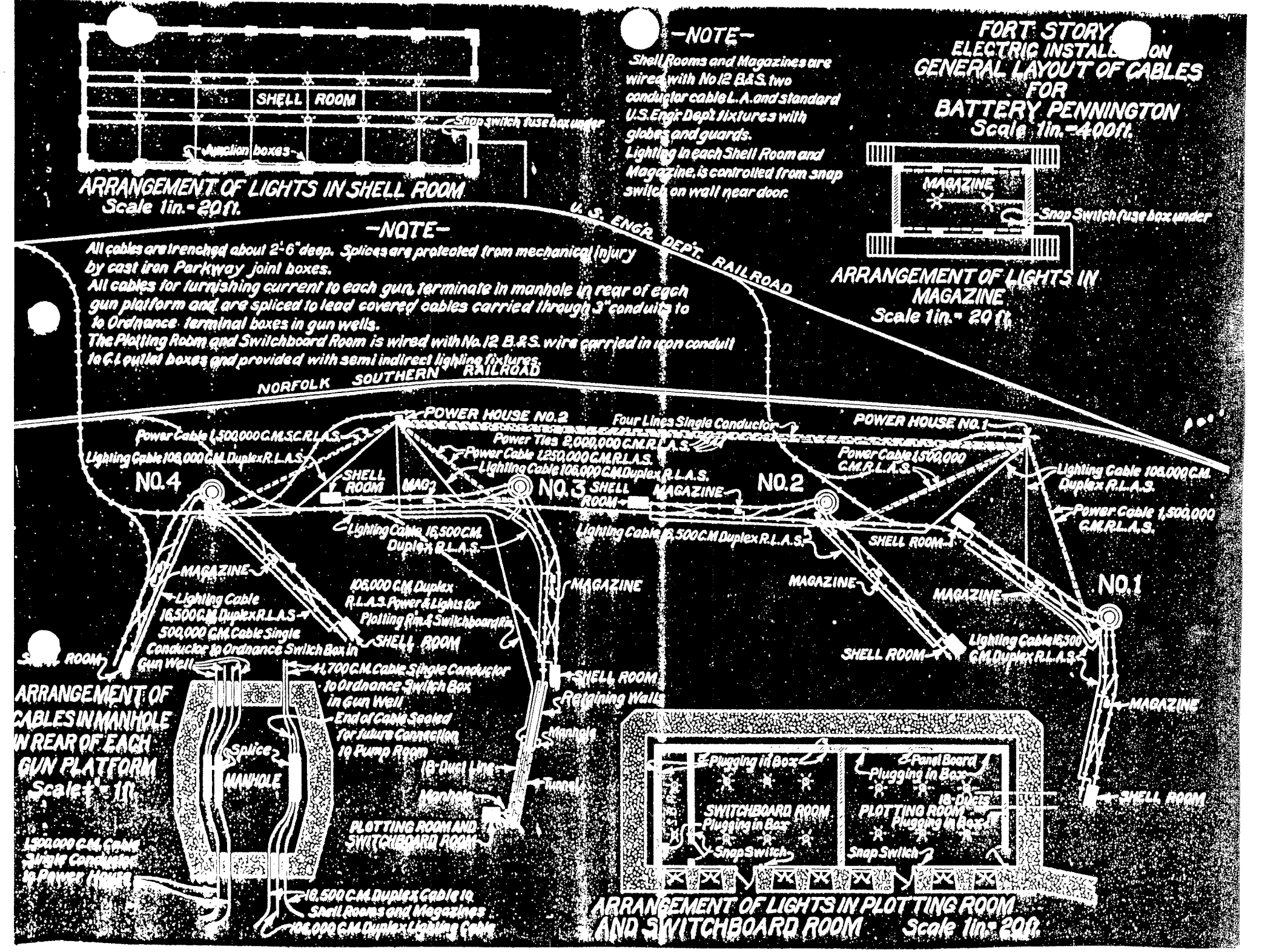
[illegible] of Outlying Areas - [illegible]
(Fire Control or Torpedo Structures)

Form 2 Corrected to: May 15, 1933

MINOR [illegible] OF [illegible]
FORT STORY, VIRGINIA.
ELECTRICAL INSTALLATION.
COMMERCIAL AC POWER TO BATTERY PENNINGTON

STRUCTURE:		
Location	: As shown on accompanying map	: 220 volt AC single phase, 60 cycle current is
Date of transfer	: May 15, 1933	: supplied aerial line to Power Plant No. 2 and to
Cost to that date	: $ 761.83	: Switchboard and Plotting Room and to Radio Station.
Type of Construction	:	: 1 KVA auto-transformer, 1 KVA capacity is installed in
(a) Aerial	: 2 conductor R.U. cable, 106,000 c.m.,	: Power Plant No. 2 to reduce voltage to 110 V.
	: supported by messenger wire on	: Another auto-transformer is installed in the base-
	: creosoted poles	: ment of the Switchboard and Plotting Room to reduce
(b) Underground	: Single conductor R.U. cable,	: the voltage for the lights and to the AC power re-
	: 106,000 c.m., in trench or in duct	: quired in that structure. 220 volts is supplied to
	: lines.	: the motor generator in the Radio Station to operate
AUXILIARY EQUIPMENT:	:	: the set.
Owned by:	: Commercial power; transformers loca-	:
	: ted in rear of Battery Pennington.	:
Permanent or temporary	:	:
in relation	: Permanent	:
	:	:

SECRET


FORT STORY
ELECTRIC INSTALLATION
GENERAL LAYOUT OF CABLES
FOR
BATTERY PENNINGTON
Scale 1in.=400ft.
-NOTE-
Shell Rooms and Magazines are wired with No 12 B&S. two conductor cable L.A. and standard U.S. Engr Dept fixtures with globes and guards.
Lighting in each Shell Room and Magazine, is controlled from snap switch on wall near door.
SHELL ROOM
Snap switch fuse box under
Junction boxes
ARRANGEMENT OF LIGHTS IN SHELL ROOM
Scale 1in.=20ft.
MAGAZINE
Snap Switch fuse box under
ARRANGEMENT OF LIGHTS IN MAGAZINE
Scale 1in.=20ft.
-NOTE-
All cables are trenched about 2'-6" deep. Splices are protected from mechanical injury by cast iron Parkway joint boxes.
All cables for furnishing current to each gun, terminate in manhole in rear of each gun platform and are spliced to lead covered cables carried through 3" conduits to to Ordnance terminal boxes in gun wells.
The Plotting Room and Switchboard Room is wired with No. 12 B.R.S. wire carried in iron conduit to G.I. outlet boxes and provided with semi indirect lighting fixtures.
U. S. ENG'R. DEPT. RAILROAD
NORFOLK SOUTHERN RAILROAD
POWER HOUSE NO.2
Power Cable 1,500,000 C.M.S.C.R.L.A.S.
Lighting Cable 106,000 C.M. Duplex R.L.A.S.
Four Lines Single Conductor
Power Ties 2,000,000 C.M.R.L.A.S.
Power Cable 1,250,000 C.M.R.L.A.S.
Lighting Cable 106,000 C.M. Duplex R.L.A.S.
POWER HOUSE NO.1
Power Cable 1,500,000 C.M.R.L.A.S.
Lighting Cable 106,000 C.M. Duplex R.L.A.S.
Power Cable 1,500,000 C.M.R.L.A.S.
NO.4
SHELL ROOM
MAG
NO.3
SHELL ROOM
MAGAZINE
NO.2
Lighting Cable 16,500 C.M. Duplex R.L.A.S.
Lighting Cable 16,500 C.M Duplex R.L.A.S.
SHELL ROOM
MAGAZINE
MAGAZINE
Lighting Cable 16,500 C.M. Duplex R.L.A.S.
106,000 C.M. Duplex R.L.A.S. Power & Lights for Plotting Rm & Switchboard Rm.
SHELL ROOM
MAGAZINE
MAGAZINE
MAGAZINE
NO.1
SHELL ROOM
Lighting Cable 16,500 C.M. Duplex R.L.A.S.
500,000 C.M. Cable Single Conductor to Ordnance Switch Box in Gun Well
SHELL ROOM
41,700 C.M. Cable Single Conductor to Ordnance Switch Box in Gun Well
End of Cable Sealed for future Connection to Pump Room
SHELL ROOM
Retaining Wall
Manhole
Splice
MANHOLE
18-Duct Line
Tunnel
Manhole
PLOTTING ROOM AND SWITCHBOARD ROOM
MAGAZINE
SHELL ROOM
ARRANGEMENT OF CABLES IN MANHOLE IN REAR OF EACH GUN PLATFORM
Scale 1"=1ft.
1,500,000 C.M. Cable Single Conductor to Power House
16,500 C.M. Duplex Cable to Shell Rooms and Magazines
106,000 C.M. Duplex Lighting Cable
Plugging in Box
Panel Board Plugging in Box
SWITCHBOARD ROOM
Plugging in Box
Snap Switch
PLOTTING ROOM
Plugging in Box
Snap Switch
18-Ducts
SHELL ROOM
ARRANGEMENT OF LIGHTS IN PLOTTING ROOM AND SWITCHBOARD ROOM
Scale 1in.=20ft.

CONFIDENTIAL

REPORT OF COMPLETED WORKS - [illegible]
(Fire Control or Torpedo Structures)

Form 2 Corrected to: April 30, 1933.

HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA.
ELECTRICAL INSTALLATION
COMMERCIAL AC POWER TO BATTERY PENNINGTON

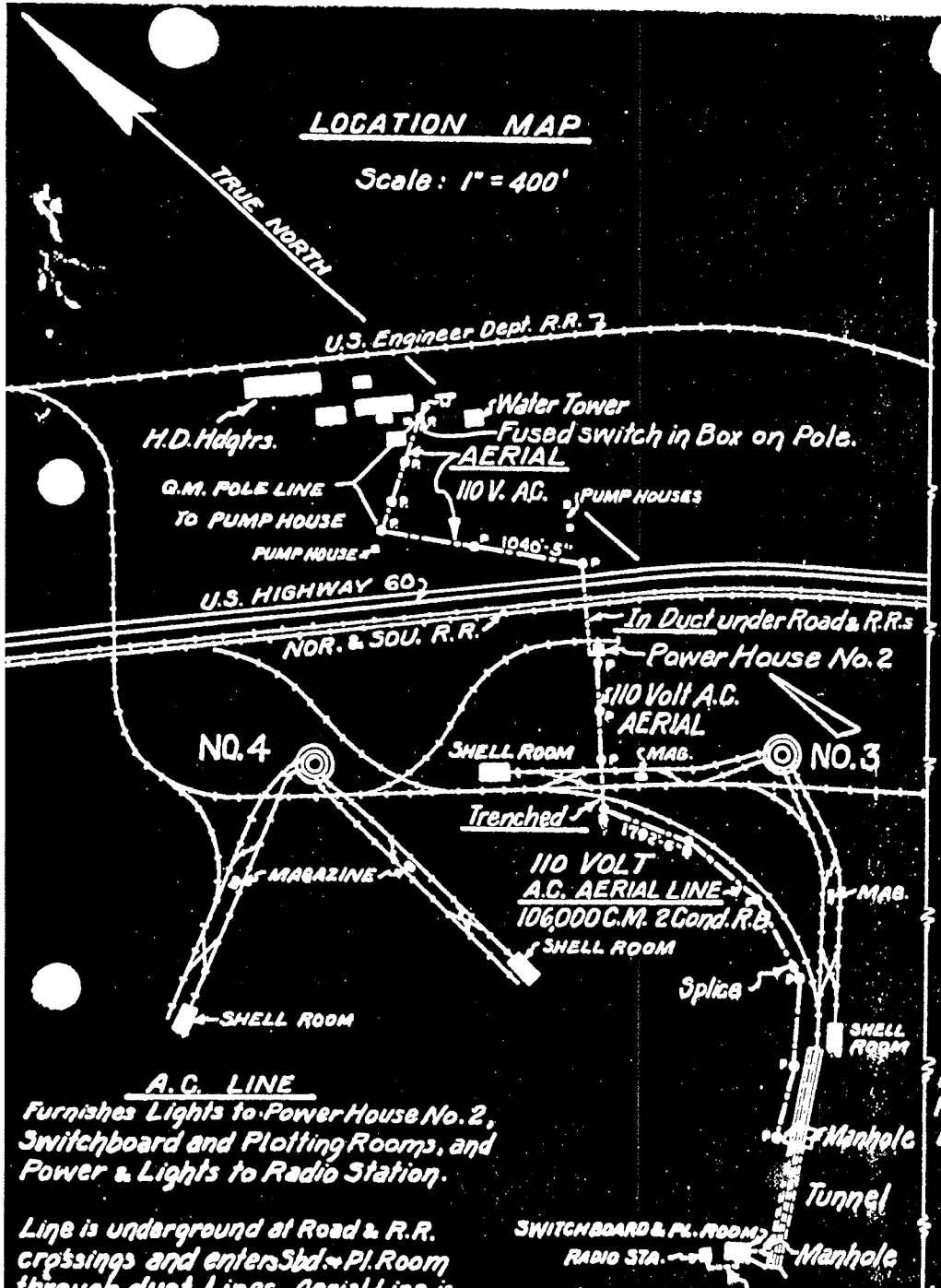
STRUCTURE	:	:
Location	: As shown on accompanying map	: 110 volt, A.C. single phase, 60 cycle current is
Date of transfer	: April 18, 1933	: furnished Power House No. 2 for lights only; Switch-
Cost to that date	: $697.42	: board and Plotting Rooms for lights only; and Radio
Type of Construction	:	: Station for lights and power.
(a) Aerial	: 2 Conductor R.B. cable, 106,000 c...	:
	: supported by messenger wire on	:
	: creosoted poles.	:
(b) Underground	: Single conductor R.I. cable,	:
	: 106,000 c.m., in trench or in	:
	: duct lines	:
ELECTRIC CURRENT:	:	:
Source of:	: Commercial power; transformer	:
	: located in rear of Engineer Shops	:
Permanent or temporary:		:
installation	: Permanent	:
	:	:
	:	:

FORT STORY, VA.
ELECTRICAL INSTALLATION
COMMERCIAL A.C. POWER TO BATTERY
PENNINGTON

Scale: As shown.

LOCATION MAP

Scale: 1" = 400'

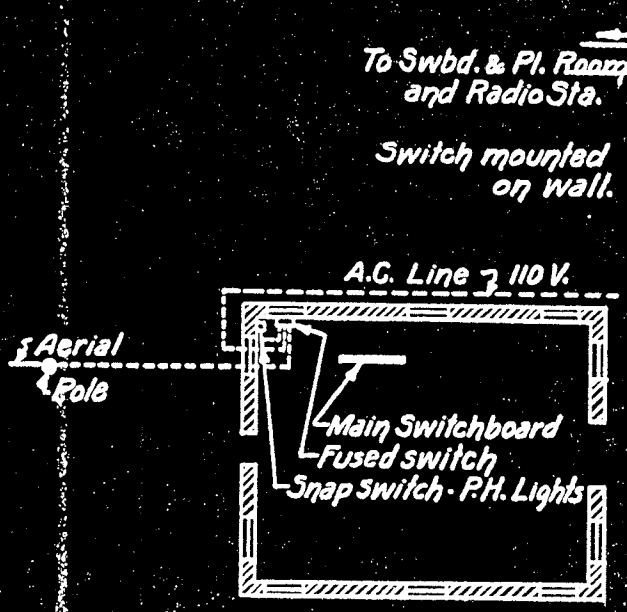


A.C. LINE

Furnishes Lights to Power House No. 2, Switchboard and Plotting Rooms, and Power & Lights to Radio Station.

Line is underground at Road & R.R. crossings and enters Sbd. & Pl. Room through duct Lines. Aerial Line is supported by messinger wire on Creosoted Poles.

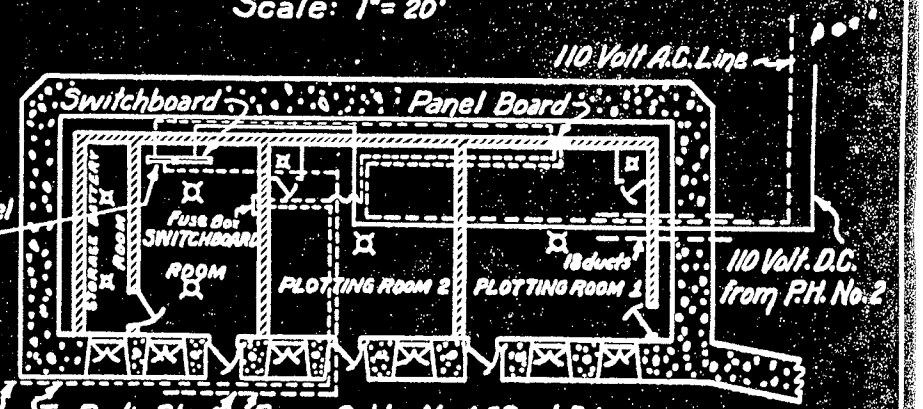
Aerial Cable - 106,000 C.M. 2 Cond. R.B.
Underground Cable - 106,000 C.M. Single Cond. R.L.



WIRING DIAGRAM POWER HOUSE NO. 2

POWER HOUSE NO. 2

Scale: 1" = 20'



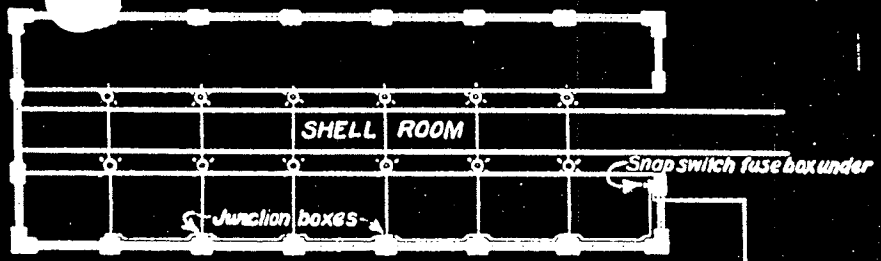
SWITCHBOARD AND PLOTTING ROOMS

Scale: 1" = 20'

Installation - April 1936

D.P.D.

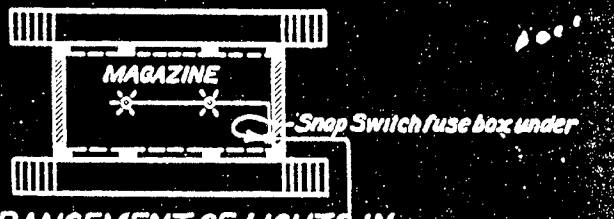
FORT STORY ELECTRIC INSTALLATION
GENERAL LAYOUT OF CABLES FOR BATTERY PENNINGTON
Scale 1in.=400ft.



ARRANGEMENT OF LIGHTS IN SHELL ROOM
Scale 1in.= 20ft.

-NOTE-

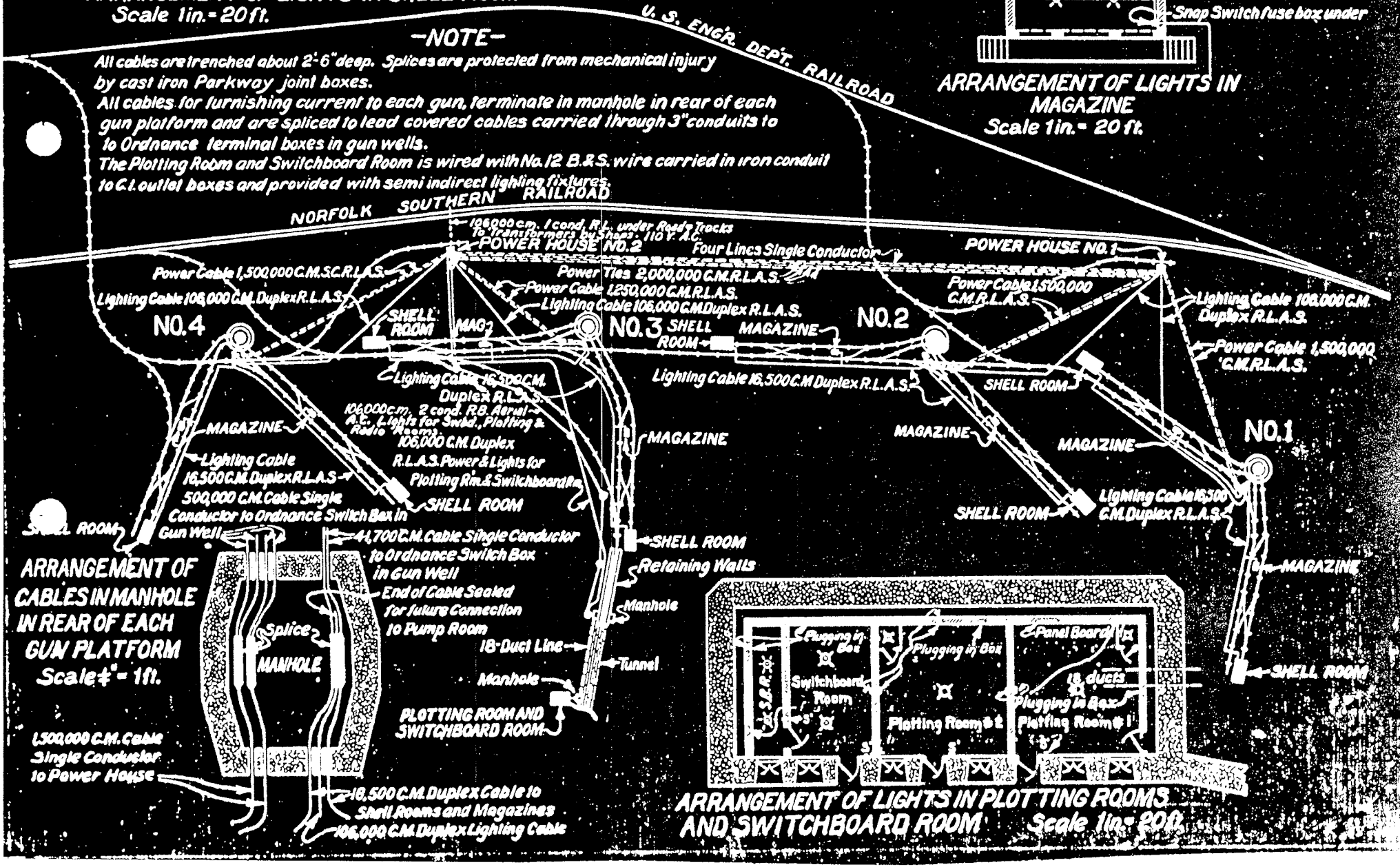
Shell Rooms and Magazines are wired with No 12 B.&S. two conductor cable L.A. and standard U.S. Engr. Dept. fixtures with globes and guards.
Lighting in each Shell Room and Magazine, is controlled from snap switch on wall near door.



ARRANGEMENT OF LIGHTS IN MAGAZINE
Scale 1in.= 20 ft.

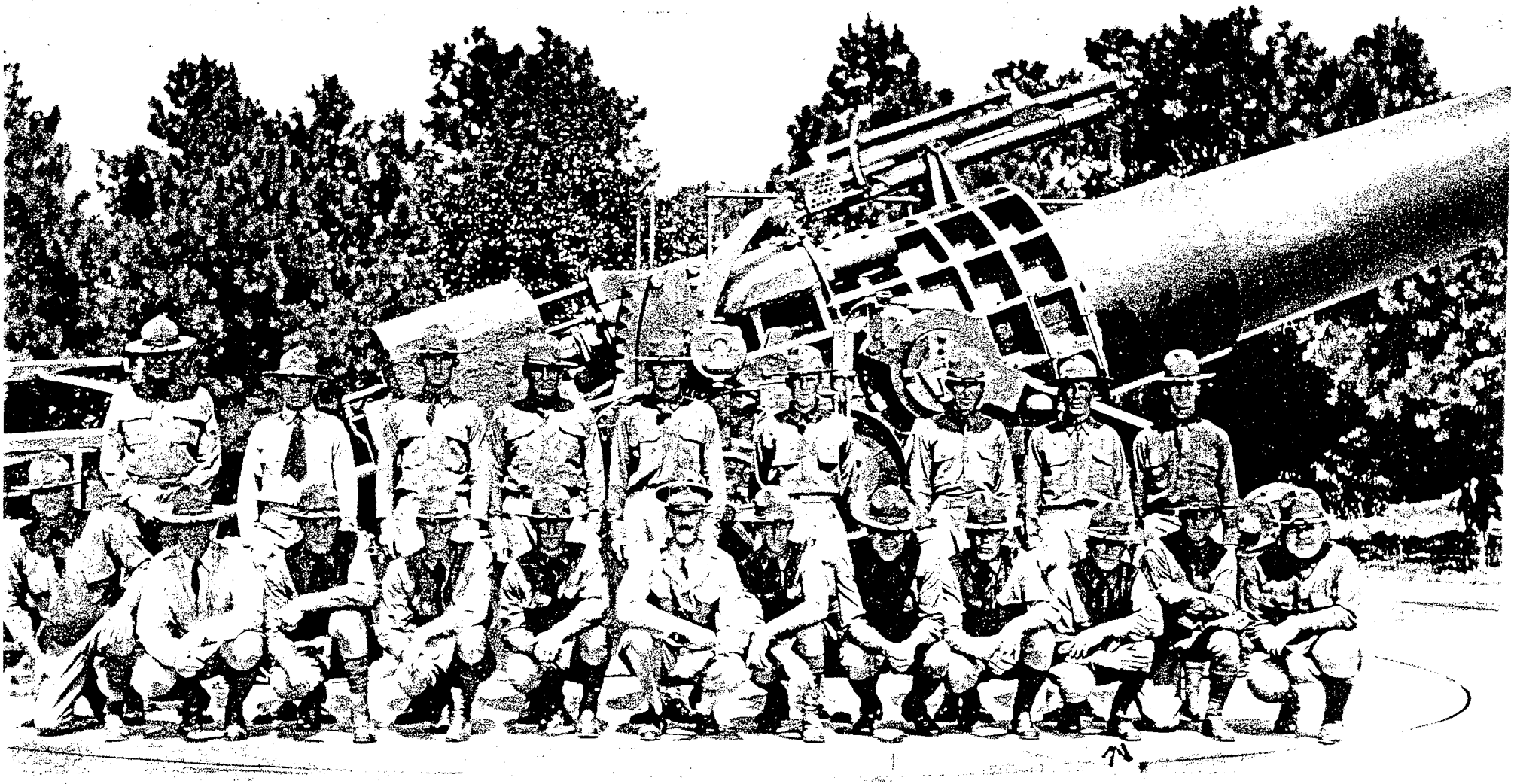
-NOTE-

All cables are trenched about 2'-6" deep. Splices are protected from mechanical injury by cast iron Parkway joint boxes.
All cables for furnishing current to each gun, terminate in manhole in rear of each gun platform and are spliced to lead covered cables carried through 3" conduits to to Ordnance terminal boxes in gun wells.
The Plotting Room and Switchboard Room is wired with No. 12 B.&S. wire carried in iron conduit to C.I. outlet boxes and provided with semi indirect lighting fixtures.



ARRANGEMENT OF CABLES IN MANHOLE IN REAR OF EACH GUN PLATFORM
Scale ¼"= 1ft.

ARRANGEMENT OF LIGHTS IN PLOTTING ROOMS AND SWITCHBOARD ROOM Scale 1in.= 20ft



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RESTRICTED

FM 4–85
C 3

COAST ARTILLERY FIELD MANUAL

SEACOAST ARTILLERY SERVICE OF THE PIECE

16-INCH GUN AND HOWITZER

CHANGES No. 3

WAR DEPARTMENT,
WASHINGTON 25, D. C., 14 July 1944.

FM 4–85, 20 June 1940, is changed as follows:

1. SCOPE.—*a.* The service of the piece prescribed in this manual is for 16-inch guns, mounted on 16-inch barbette carriages (not casemated) and 16-inch howitzers, M1920, mounted on 16-inch howitzer barbette carriage, M1920, (not casemated).

b. The duties of the members of the gun section in the service of the piece, which are not covered in the body of the text, are shown in the drill table in section VII. It is intended that these be used as a general guide only. Changes in procedure and in duties of individuals necessitated by modernization of individual batteries have not been added to this manual. Battery commanders should study the procedures and recommendations embodied in newer manuals, particularly FM 4–20 and 4–86 and apply them wherever practicable.

3. COMPOSITION (Superseded.).—T/O & E 4–67 provides for a basic gun section consisting of 37 enlisted men; however, depending upon the wartime status of the battery, an additional four cannoneers and a chief of section may be authorized. Furthermore, if the battery is not equipped with a data transmission system or data telephones for the gun pointer and range setter, two additional telephone operators may be provided to man azimuth and elevation display boards.

4. GUN SQUAD.—The gun squad consists of the gun commander, the gun pointer, the range setter, the telephone oper-

WDGS PUB DIV 22 NOV 1944

OCG.

FM 4-85

COAST ARTILLERY FIELD MANUAL

SEACOAST ARTILLERY SERVICE OF THE PIECE 16-INCH GUN AND HOWITZER

Prepared under direction of the Chief of Coast Artillery

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON: 1940

For sale by the Superintendent of Documents, Washington, D. C. - Price 15 cents

OCG

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FM 4-35

COAST ARTILLERY FIELD MANUAL

SEACOAST ARTILLERY

SERVICE OF THE PIECE

16-INCH GUN AND HOWITZER

(The matter contained herein supersedes TR 435-275, March 20, 1933)

SECTION I

GENERAL

C-3 1. SCOPE.—*a.* The service of the piece prescribed in this manual is for 16-inch guns, M1919MII and M1919MIII, mounted on 16-inch barbette carriage, M1919; 16-inch gun, Mk. II Mod. 1, Navy, mounted on 16-inch barbette carriage, M1919MI; and 16-inch howitzer, M1920, mounted on 16-inch howitzer barbette carriage, M1920. It is intended as a guide only. Minor changes to meet local conditions and matériel may be made by the battery commander.

C-3 *b.* The duties of the members of the gun section in the service of the piece, which are not covered in the body of the text, are shown in the drill table in section VII.

2. REFERENCES.—The references listed in the Appendix should be consulted, especially those pertaining to ammunition, and to the operation, care, and maintenance of matériel.

SECTION II

ORGANIZATION OF THE GUN SECTION

C-3 3. COMPOSITION.—*a.* Each emplacement of one gun is manned by a gun section consisting of a chief of section, a gun squad, and an ammunition squad.

trical operating circuits, firing circuits, and firing devices, paying special attention to the safety features. Before firing, he verifies that the recoil parts lock has been removed, and checks that it has been replaced immediately upon completion of firing.

d. He receives the reports of the assistant battery executive or chiefs of sections and reports to the battery commander, "Sir, firing section in order," or reports defects which he is unable to remedy without delay.

e. When firing on time interval signal, he is responsible that the guns are fired immediately upon receipt of the proper firing signal, safety precautions permitting. If it becomes necessary to suspend fire for a time interval, he commands: RE-LAY, and reports his action to the battery commander.

f. At the conclusion of drill or firing, the battery executive commands: REPLACE EQUIPMENT, inspects the emplacements, and reports to the battery commander.

8. ASSISTANT BATTERY EXECUTIVE.—The assistant battery executive performs the duties of the battery executive insofar as they pertain to the emplacement to which he is assigned.

9. CHIEF OF SECTION.—*a.* The chief of section (noncommissioned officer) is in command of the gun section. He supervises the service of the piece and the service of ammunition, and personally directs the work of care and preservation at the emplacement to which his section is assigned. He is responsible to the officer in charge of the emplacement for the training and efficiency of the personnel of his section, for the condition of the matériel under his charge, for the observance of all safety precautions at the emplacement, and for the police of the emplacement.

b. When his section arrives at the emplacement he commands: 1. DETAILS, 2. POSTS, and supervises the procurement of equipment. After all details have reached their posts (fig. 2), he commands: EXAMINE GUN. He then makes an inspection of the gun, carriage, and other matériel.

c. He receives the reports of the gun commander and the chief of ammunition and reports to the officer in charge of

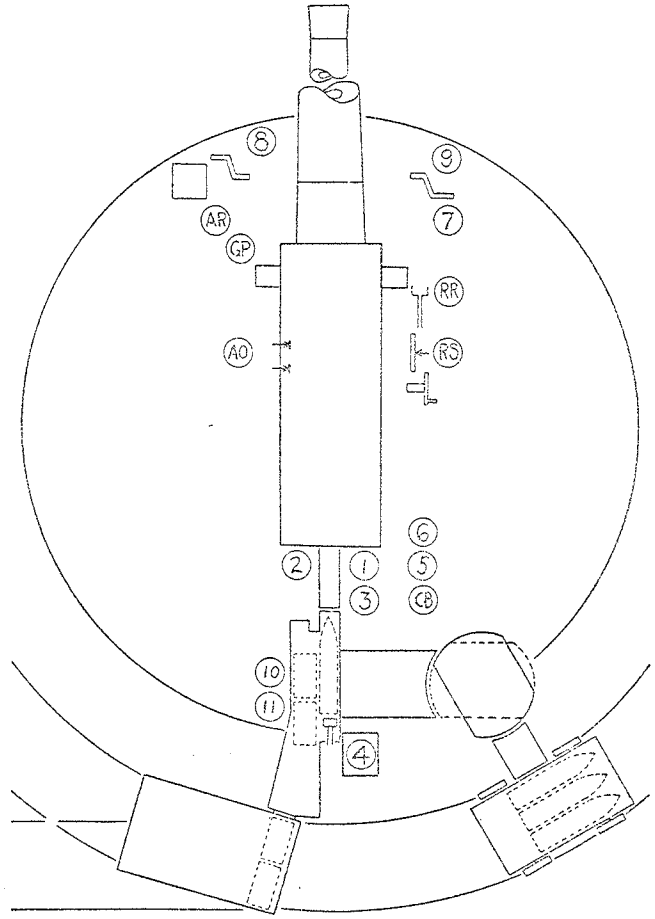

FIGURE 2.—Details, posts.

234712°—40——2

the emplacement, "Sir, No. ——— in order," or any defects he is unable to remedy without delay.

d. When necessary to verify the section, he commands: CALL OFF. The cannoneers of the section call off their titles or numbers in succession, beginning with the unnumbered members of the section, followed by the numbered members in order.

e. At the command TARGET, he repeats the command and target designation. As soon as the gun pointer is on target, the chief of section reports or signals to the officer in charge of the emplacement, "Sir, No. ——— on target."

f. He informs the chief of ammunition what projectiles and powder to serve.

g. At the command LOAD, the chief of section repeats the command and supervises the loading. Under no circumstances will he permit his gun to be fired prior to the receipt of the command COMMENCE FIRING from the battery commander

h. At the command COMMENCE FIRING, if the piece is unloaded, the chief of section commands: LOAD. He also commands: LOAD before each shot.

i. He commands: CEASE FIRING when the number of shots specified has been fired. When the number of shots has not been specified, the chief of section repeats the command CEASE FIRING when it is received from the battery commander.

j. When firing on time interval signal, he is responsible to the officer in charge of the emplacement that the piece is fired immediately upon the proper signal, safety precautions permitting. He repeats the command RE-LAY when it is received.

k. In case of a *misfire*, he reports to the officer in charge of the emplacement, "No. ——— misfire," and requires the observance of the precautions described in paragraph 37.

l. He keeps a record of the number of rounds fired by his gun, showing the date and approximate time, in order that the emplacement book may be kept posted accurately and up to date.

m. At the command REPLACE EQUIPMENT, the chief of section supervises the replacing of equipment, the securing of

all matériel, and the policing of the emplacement, and then, unless otherwise directed, forms his section, and reports to the officer in charge of the emplacement.

10. GUN COMMANDER.—*a.* The gun commander (noncommissioned officer) is in command of the gun squad. He is responsible to the chief of section for the efficiency of the personnel of his squad, for the condition of the matériel under his charge, for the observance of all safety precautions pertaining to his gun, and for the police of the emplacement.

b. At the command EXAMINE GUN given by the chief of section, he personally makes an inspection of the gun, carriage, and other matériel, paying special attention to the recoil and recuperator cylinders, the air system for operating the breechblock, the firing mechanism, safety devices, and the lubrication of all moving parts. He is responsible that the recoil parts lock is removed before firing and that it is replaced immediately upon completion of firing.

c. He receives the reports of the various details of the gun squad and reports to the chief of section, "No. ——— in order," or any defects he is unable to remedy without delay.

d. At the command LOAD, he supervises the work of his squad.

e. In case II firing, after receiving the report, "Elevation set" from the range setter, the gun commander calls and signals, "Ready," indicating to the gun pointer that the piece is ready to fire.

f. In case III firing, after receiving the reports, "Elevation set" and "Azimuth set" from the range setter and gun pointer, respectively, he calls and signals, "No. ——— ready," indicating that the piece is ready to fire. At the sounding of the proper time interval signal, he commands and signals: FIRE.

g. When firing on time interval signal, he is responsible to the chief of section that the piece is fired immediately upon the proper signal, safety precautions permitting. He commands: RE-LAY, in case his gun is not ready to fire when the time interval signal sounds. He repeats the command RE-LAY when it is given by the chief of section.

h. In case of a *misfire,* he calls, "No. ——— misfire," and requires the observance of the precautions described in paragraph 37.

i. At the command CEASE FIRING, when dummy ammunition is used, he supervises the unloading.

j. At the command REPLACE EQUIPMENT, the gun commander supervises the replacing of equipment and the securing of all matériel, and then, unless otherwise directed, forms his squad and reports to the chief of section.

11. GUN POINTER.—The gun pointer (noncommissioned officer) is charged with the duty of pointing the piece in direction. He is responsible to the gun commander for the proper operation, care, and adjustment of the sight, sighting apparatus, azimuth index, azimuth indicator of the electrical data transmission system (if so equipped), traversing mechanism, and electric firing circuit. For detailed duties, see drill table, section VII.

12. RANGE SETTER.—The range setter is charged with the laying of the piece in range (elevation). He is responsible to the gun commander for the proper operation, care, and adjustment of the quadrant, range disk, elevation indicator of the electrical data transmission system (if so equipped), and elevating mechanism. For detailed duties, see drill table, section VII.

13. CHIEF OF BREECH.—The chief of breech (noncommissioned officer) is responsible to the gun commander for the efficiency of the personnel of the breech detail, and for the condition and serviceability of the breech mechanism, breech recess, firing mechanism, chamber, and bore. He is specially charged with the observance of safety precautions insofar as they pertain to his detail. In firing, he listens for the explosion of the primer which may be audible if the powder charge fails to explode. For detailed duties, see drill table, section VII.

14. AIR-PRESSURE OPERATOR.—The air-pressure operator is responsible to the gun commander for the condition and serviceability of the air-pressure mechanism, the breech operating air system, and the recuperator system. He should

be carefully selected as the safety of the personnel and matériel depends upon his attention to duty. For detailed duties, see drill table, section VII.

15. DISPLAY BOARD OPERATORS.—*a.* The azimuth (deflection) and range (elevation) display board operators are responsible to the gun commander for the proper operation of the display boards and for the recording of all data received from the plotting room.

b. At the command DETAILS, POSTS, they procure chalk, blackboard erasers, pencils, forms for recording data, and telephones, and take post at the display boards.

c. At the command EXAMINE GUN, they clean the display boards, if necessary, put on the telephone headsets, test the telephones to the plotting room, and report to the gun commander, "Azimuth (deflection) display board in order" and "Range (elevation) display board in order," or report any defects they are unable to remedy without delay.

d. At the command TARGET, they receive azimuths (deflections) and ranges (elevations) from the plotting room, post them on the display boards, and record them on the data forms.

e. At the command CEASE FIRING, they continue posting and recording data as long as data are being received from the plotting room.

16. AZIMUTH (DEFLECTION) RECORDER.—*a.* The azimuth (deflection) recorder is responsible for the checking and recording of all azimuths (deflections) set on the gun.

b. At the command DETAILS, POSTS, he procures a pencil and form for recording data. When traversing is by power, he takes post convenient to the gun pointer; when traversing is by hand, he takes post at the left traversing crank, facing the muzzle, and assists in the traversing.

c. At the command EXAMINE GUN, he assists the gun pointer in examining, cleaning, and adjusting the azimuth index and sight.

d. At the command TARGET, he keeps a continuous record of the data at which the piece is set, being especially careful to record, check, and identify the data at which the piece is actually fired. In case II firing, he receives the deflections

from the gun pointer. In case III firing, as soon as the gun pointer has completed the laying of the piece, the azimuth recorder checks and records the setting; if firing electrically, he fires the gun on the firing signal. However, the gun pointer fires the howitzer when firing electrically.

e. At the command CEASE FIRING, he continues to record data as long as data are being set on the piece.

17. RANGE RECORDER.—*a.* The range recorder is responsible for the checking and recording of all ranges (elevations) set on the piece, and for the operation of the elevation brake levers.

b. At the command DETAILS, POSTS, he procures a pencil and form for recording data and takes post at the elevation brake levers, facing the range setter.

c. At the command EXAMINE GUN, he operates the elevation brake levers when necessary, and assists the range setter in examining and adjusting the quadrant and range disk.

d. At the command TARGET, he keeps a continuous record of the data at which the piece is set, being especially careful to record, check, and identify the data at which the piece is actually fired. He raises the elevation brake levers to their full extent whenever the piece is elevated or depressed.

e. At the command CEASE FIRING, he continues to record data as long as data are being set on the piece, and operates the elevation brake levers as required.

18. CHIEF OF AMMUNITION.—*a.* The chief of ammunition (noncommissioned officer) is responsible to the chief of section for the efficiency of the personnel of his squad, for the care of the ammunition and ammunition-handling apparatus, for the observance of all safety precautions in the care and handling of ammunition, for the recording of data pertaining to the storage of ammunition, and for the police of the magazines and galleries under his charge. He sees that all projectile cars are loaded and powder charges ready for firing, and that the service of ammunition is uninterrupted during firing. He keeps the chief of section informed regarding the amount and condition of ammunition on hand and reports any defects found.

b. At the command DETAILS, POSTS, he opens the projectile and powder magazines and posts the members of the ammunition squad.

c. At the command EXAMINE GUN, he inspects the matériel under his charge, gives instructions for preparing ammunition for firing or drill, and reports to the gun commander, "Ammunition service in order," or reports any defects he is unable to remedy without delay.

d. At the command TARGET, he directs and supervises the delivery of ammunition to the gun squad.

e. At the command CEASE FIRING, when dummy ammunition is used, he causes the dummy projectiles and powder charges to be put in their proper places.

f. At the command REPLACE EQUIPMENT, he supervises the replacing of the ammunition-handling equipment and the securing of all ammunition, forms his squad, and reports to the chief of section.

19. AMMUNITION SQUAD.—*a. Rail tractor operators (Nos. 12 and 14).*—(1) These men are responsible to the chief of ammunition for the condition and serviceability of the rail tractors employed in ammunition delivery, for the care of switches and tracks, and for the continuous supply of projectiles and powder to the gun.

(2) At the command DETAILS, POSTS, they proceed to the rail tractors and run them to the designated positions.

(3) At the command EXAMINE GUN, they examine, clean, and oil the rail tractors. No. 12 reports to the chief of ammunition, "Rail tractors in order," or reports any defects he is unable to remedy without delay.

(4) They alternate in the delivery of ammunition trains to the gun in such manner as to assure a continuous supply of powder and projectiles at the breech.

b. Projectile detail (Nos. 16, 18, 20, and 22).—(1) The detail, No. 16 in charge, is responsible to the chief of ammunition for the condition, serviceability, and operation of the projectile cars.

(2) At the command DETAILS, POSTS, the detail proceeds to the projectile cars and places them in readiness for service at the designated positions.

(3) At the command EXAMINE GUN, the detail examines, cleans, and oils the projectile cars. No. 16 reports to the chief of ammunition, "Projectile cars in order," or reports any defects he is unable to remedy without delay.

(4) Nos. 16 and 18 on one train and Nos. 20 and 22 on the other assist in loading the projectiles onto the cars at the projectile room and deliver them from the cars to the revolving projectile table.

c. Powder detail (Nos. 13, 15, 17, and 19).—(1) The detail, No. 13 in charge, is responsible to the chief of ammunition for the condition, serviceability, and operation of the powder cars.

(2) At the command DETAILS, POSTS, the detail proceeds to the powder cars and places them in readiness for service at the designated positions.

(3) At the command EXAMINE GUN, the detail examines, cleans, and oils the powder cars. No. 13 reports to the chief of ammunition, "Powder cars in order," or reports any defects he is unable to remedy without delay.

(4) Nos. 13 and 15 on one train and Nos. 17 and 19 on the other assist in loading the powder charges onto the cars at the magazine and deliver the charges as required to the powder tray at the gun. Nos. 13 and 17 are responsible that the powder section containing the igniter is properly placed on the tray for each charge.

(5) At the command CEASE FIRING when dummy ammunition is used, Nos. 13 and 15, or Nos. 17 and 19, receive the dummy powder charges and put them in their proper place.

d. Projectile room detail (Nos. 24, 26, 28, and 30).—(1) The detail, No. 24 in charge, is stationed in the projectile room to receive, care for, store, and deliver projectiles. It is responsible to the chief of ammunition for the projectile room record books, and for the uncrating and proper storage of the projectiles.

(2) At the command DETAILS, POSTS, the detail proceeds to the designated projectile room.

(3) At the command EXAMINE GUN, the detail inspects the projectile room and prepares projectiles for delivery, as directed. No. 24 reports to the chief of ammunition, "Projectile room in order," or reports any defects he is unable to remedy without delay.

(4) The detail uncrates and prepares projectiles for firing as required, assists in loading projectiles on the projectile cars, and assures a continuous delivery of projectiles to the ammunition trains.

e. Powder magazine detail (Nos. 21, 23, 25, 27, 29, and 31).—(1) The detail, No. 21 in charge, is stationed in the powder magazine to receive, care for, store, and deliver powder charges. It is responsible to the chief of ammunition for the condition of the powder magazines, for the care of the powder charges, for the proper keeping of the powder magazine record books, and for the uncrating and opening of powder charge containers.

(2) At the command DETAILS, POSTS, the detail proceeds to the designated powder magazine.

(3) At the command EXAMINE GUN, the detail inspects the powder magazine and prepares powder charges as directed. No. 21 reports to the chief of ammunition, "powder magazine in order," or reports any defects he is unable to remedy without delay.

(4) The detail uncrates and opens powder containers as required, loads the powder charges onto the powder cars, and assures a continuous delivery of powder to the ammunition trains.

20. ARTILLERY MECHANICS.—The artillery mechanics, assisted by members of the gun sections, make such minor repairs and adjustments as can be made with the means available. The chief artillery mechanic is the custodian of the supplies pertaining to the gun emplacements to which his battery is assigned. He is responsible for the condition of the storerooms pertaining to the gun emplacements and the supplies contained therein. The chief mechanic or his assistant issues such equipment, tools, oil, paints, and cleaning materials to the members of the gun sections as are necessary for the service and care of the guns and accessories.

234712°—40——3

SECTION IV

NOTES ON SERVICE OF THE PIECE

21. GENERAL.—The service of the piece should be conducted with dispatch and precision, and with as few orders as possible. Loading with dummy ammunition and pointing the piece as for firing are normal practices at drill. Drill should be conducted without power during part of every drill period. Cannoneers change position at a run. Except for the necessary orders, reports, and instructions, no talking should be permitted. Commands should be given in the prescribed forms. Signals may be substituted for commands whenever desirable. (See FM 4–5 and FM 4–20.)

22. THE COMMAND STAND FAST.—If it is desired to halt all movements of matériel and personnel, the officer in charge of the emplacement, the chief of section, or the gun commander commands: STAND FAST.

23. THE COMMAND RE-LAY.—At the command RE-LAY, the display board operators post the new data on the display boards, the gun pointer and range setter continue to point the gun in direction and elevation according to the new data, and No. 3 slacks the lanyard (if used).

24. FIRING LOCK.—*a.* No. 3 attaches the assembled firing lock to the obturator spindle by pushing it over the end of the spindle and giving it a quarter turn to the locked position.

b. The piece may be fired by lanyard or electrically as the ring lock is designed to be used with combination percus- electric primers.

yard firing, No. 3 attaches the lanyard to the
of the firing lock, and walks to the rear
ce between the powder tray and the
e, uncoiling the lanyard as he goes
r edge of the gun platform in
umand FIRE, he fires the piece
erk) on the lanyard.
of the fired primer to fully
ned, the firing lock may be

o.
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(3)
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directed,

damaged by closing the lock on the partly extracted primer. To prevent this, one of the following precautions should be adopted:

(1) After the breechblock is open, and while loading is taking place, No. 3 reaches under the breechblock and makes sure the old primer has been extracted.

(2) Before the breech is opened, No. 3 opens the firing lock by hand and removes the fired primer.

25. OPERATION OF BREECH.—*a. To open the breech,* No. 2 pushes the salvo latch in the upper cam until it is retained by the salvo latch catch. He raises the operating lever latch disengaging it from the operating lever latch catch, and pulls the operating lever down until the breechblock is disengaged from the threads in the breech recess. Nos. 1 and 2 grasp the breechblock handle and pull the breechblock downward to the full open position where it is brought to rest on the carrier buffers. On the Mk. II, Mod. 1, Navy gun, the breechblock is held down by the holding down latch.

b. To close the breech by hand, Nos. 1 and 2 grasp the breechblock handle and raise the breechblock into the breech recess. No. 2 pushes the operating lever upward until the operating lever catch locks the lever in position. On the Mk. II, Mod. 1, Navy gun, No. 1 releases the holding down latch before raising the breechblock.

c. To close the breech by air pressure, No. 1 or 2, depending on the position of the closing valve, pulls outward on the closing valve handle. The air pressure acting on the pistons of the closing mechanism forces the spring rods to the rear, raising the breechblock into the breech recess. The rotating cam rollers attached to the breechblock sharply strike the paths in the upper and lower rotating cams located on the breech face, giving the breechblock its initial rotation and guiding it to the point of engaging the threads in the breech recess. The momentum of the breechblock acting through a rotating link whips the operating lever upward, rotating and completely closing the breechblock. *No. 2 keeps clear of the operating lever* as it is driven upward with terrific force into its closed position. The shock of the blow is absorbed by the operating lever plunger housed in the upper

COAST ARTILLERY FIELD MANUAL

SERVICE OF THE PIECE

155-MM GUN (G. P. F.)

CHANGES No. 1

WAR DEPARTMENT
WASHINGTON 25, D. C., 21 March 1945

FM 4–25, 28 February 1944, is changed as follows:

8. BATTERY EXECUTIVE.

* * * * *

g. (Added.) He is responsible to the battery commander that the gun book (QQ Form 5825) for each gun in the battery is posted promptly and accurately.

10. GUN COMMANDER.

* * * * *

h. At the command COMMENCE FIRING, the gun commander receives the calls, "Lanyard," from No. 1 and, "Set," from the elevation setter. If firing by * * * or commanding: FIRE.

* * * * *

p. He keeps a record of the number of rounds fired by his gun during a practice or action, showing the date and approximate time, and gives this information to the officer who is responsible for keeping the gun book.

17.1. FLASH REDUCER M1 (Added.)—*a. Preparing powder charges.*—When the flash reducer M1 is to be employed, the command SUPERCHARGE (NORMAL CHARGE) WITH FLASH REDUCER is given when designating the ammunition. At this command, Nos. 10 and 12, assisted by the chief of ammunition when necessary, perform the following duties in addition to their normal duties, as listed in the service of the piece (sec. XI):

(1) *When using supercharge.*—Remove a flash reducer from its container. Spread the two strips out flat with all strings fully extended (fig. 5.1). Lay the propelling charge (supercharge) in the center of and parallel to the two strips so that it is even with both ends of the strips (fig. 5.2). Tie the strips along the propelling charge by means of the strings (fig. 5.3), making certain that the strips are bound tightly to the charge.

AGO 3481 Mar. 622804°—45 ——1

FM 4–25

COAST ARTILLERY FIELD MANUAL

SERVICE OF THE PIECE

155-MM GUN (G.P.F.)

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CC6013

c. Firing position.—The piece is said to be in firing position when it is ready to be fired; that is, when the carriage is unlimbered, the gun is in battery and secured to the recoil and counterrecoil piston rods, the trails are spread and attached to the spades (fig. 2) or the circular rail of a Panama mount (fig. 18), and the trail locking bolt nuts are screwed down. In the case of the M1917, M1918, M1917A1, and M1918A1 carriages, the axle springs must be unshackled and the axle pivot pin inserted.

d. In battery.—The term "in battery" is used to designate the position of the gun when it is as far forward in the cradle as the recoil mechanism will allow it to go.

e. Limbered.—The gun carriage is said to be limbered when the trails are attached to the limber.

f. Unlimbered.—The gun carriage is said to be unlimbered when the trails have been detached from the limber.

g. Coupled.—The carriage is said to be coupled when it is limbered and the limber drawbar is attached to the pintle of the prime mover.

h. Uncoupled.—The carriage is said to be uncoupled when it is limbered and the limber drawbar is not attached to the pintle of the prime mover.

SECTION II

ORGANIZATION OF GUN SECTION

4. COMPOSITION.—*a.* Each gun emplacement is manned by a gun section consisting of a gun squad and an ammunition squad. The strength is 18 enlisted men.

b. Two tractor drivers are assigned for the four gun sections.

5. GUN SQUAD.—The gun squad (12 enlisted men) consists of the gun commander, gun pointer, elevation setter, telephone operator, and 8 cannoneers numbered from 1 to 8, inclusive. Men are assigned to permanent positions according to their aptitude but will be interchanged frequently during drill to develop flexibility and to facilitate replacement.

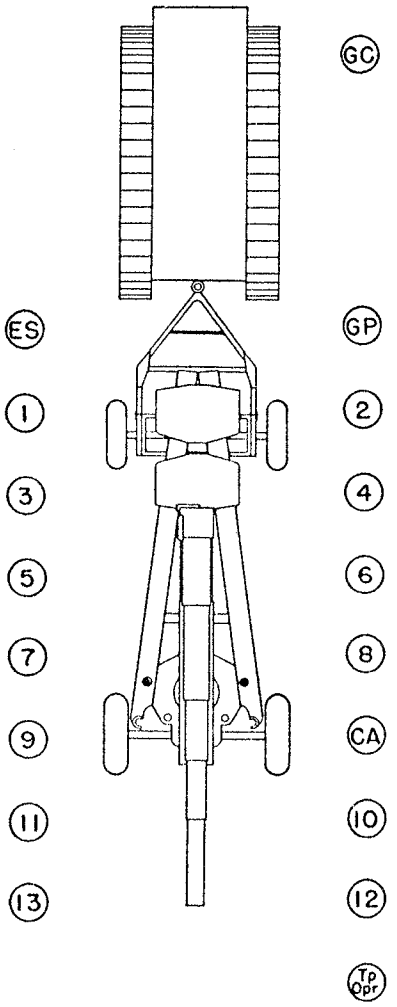

FIGURE 3.—Formation in traveling position.

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metal surfaces. ...he breechblock, ...sits, clean with ...re oiling. ...k pad with a ...solvent, bore ...ck pad.

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...3d (1); ...; SVC ...cept 4 ... & E: ...tribu- ...ution

AGO 2724D

U. S. GOVERNMENT PRINTING OFFICE: 1944

WAR DEPARTMENT FIELD MANUAL

FM 4-91

COAST ARTILLERY
SERVICE OF THE PIECE
90-MM GUN M1 ON
90-MM MOUNT M3

WAR DEPARTMENT • 26 SEPTEMBER 1944

RESTRICTED. *DISSEMINATION OF RESTRICTED MATTER.*—The information contained in restricted documents and the essential characteristics of restricted material may be given to any person known to be in the service of the United States and to persons of undoubted loyalty and discretion who are cooperating in Government work, but will not be communicated to the public or to the press except by authorized military public relations agencies. (See also par. 23b, AR 380-5, 15 Mar 1944.)

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OCS014

Section I

GENERAL

1. Scope

The 90-mm gun M1 on 90-mm mount M3 is designed primarily for employment against motor torpedo boat targets; however, it is also suitable for placing fire on other types of targets, such as submarines, minesweepers, landing craft, airplanes, tanks, and personnel. The duties of the members of the gun section in the service of the piece are contained in sections III and IV and in the drill table, appendix III. The procedure prescribed is based on employment of the weapon against its primary target. Except for changes in the duties of certain individuals, the same procedure is applicable in firing on other types of targets. Where such changes are necessary, they are covered briefly in the text. Minor changes in the details of operations in firing may be made to meet local conditions.

2. References

The references listed in appendix I should be consulted, especially those pertaining to ammunition and to the operation, care, and maintenance of matèriel.

For military terms not defined in this manual, see TM 20–205.

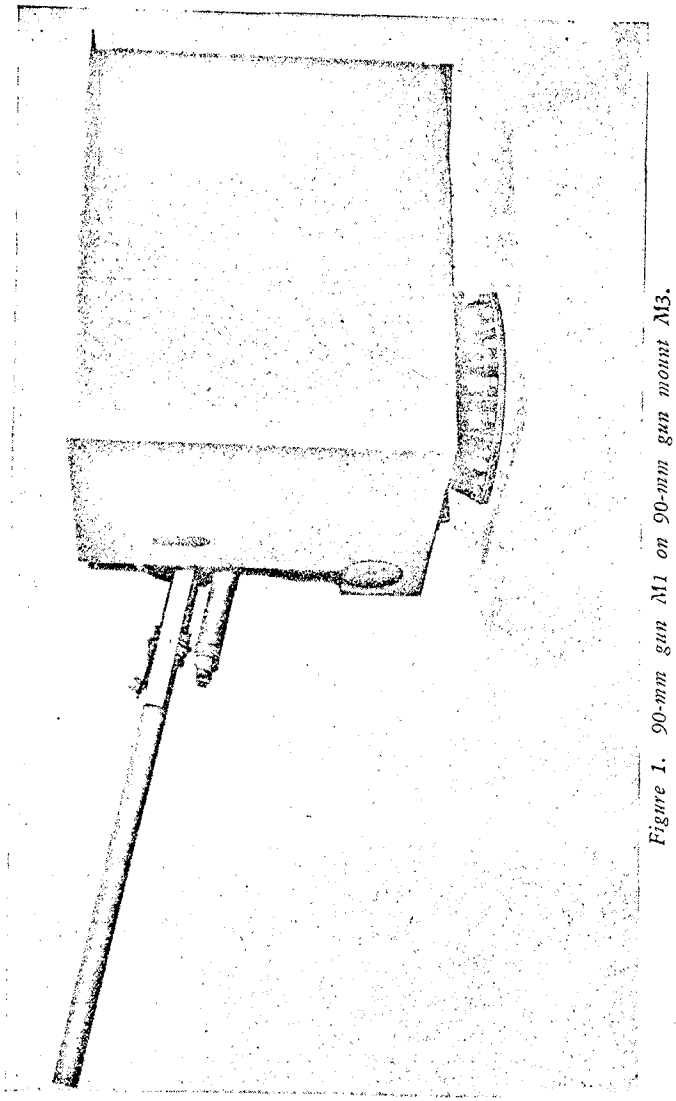

Figure 1. 90-mm gun M1 on 90-mm gun mount M3.

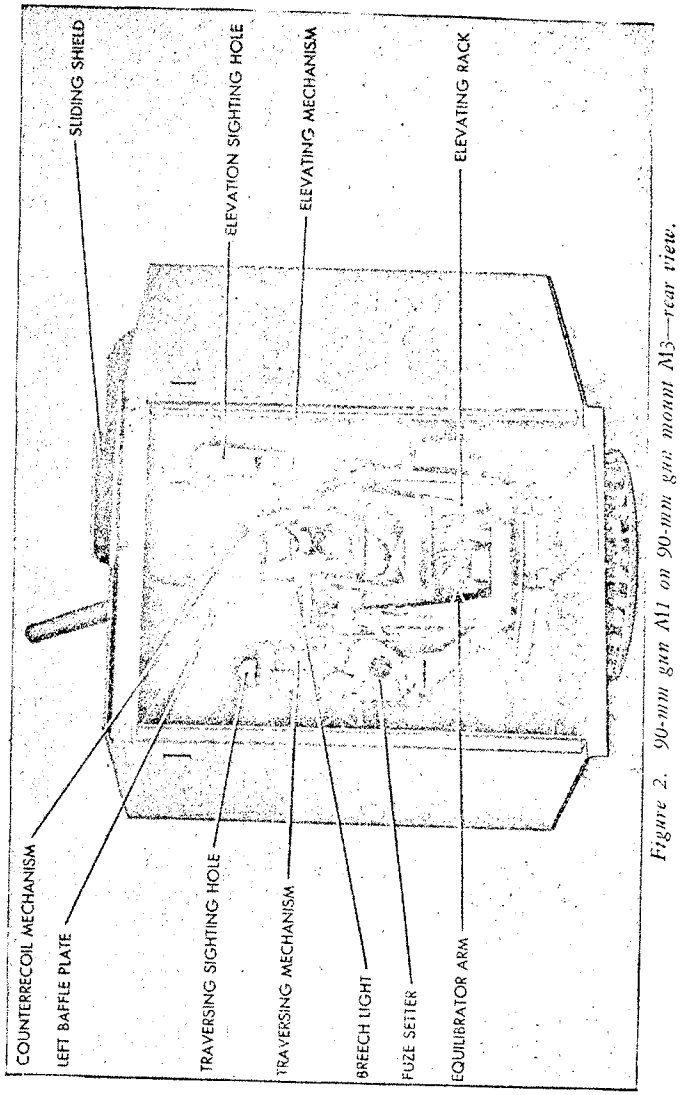

Figure 2. 90-mm gun M1 on 90-mm gun mount M3—rear view.

Section II

ORGANIGATION OF GUN SECTION

3. Composition

Each gun emplacement is manned by a gun section consisting of a gun squad and an ammunition squad. The strength of the gun section is 13 enlisted men.

4. Gun Squad

The gun squad (9 enlisted men) consists of the gun commander; chief of breech; No. 1 (elevation setter); No. 2 (gun pointer); No. 3 (loader); Nos. 4, 5, and 6 (ammunition relayers); and No. 7 (empty cartridge case handler). Men are assigned to permanent positions according to their aptitude but will be interchanged frequently during drill to develop flexibility and to facilitate replacement.

5. Ammunition Squad

The ammunition squad (4 enlisted men) consists of the chief of ammunition and the members of the magazine detail (3 enlisted men) numbered 8 to 10, inclusive.

6. Formation

The personnel of the gun section form at the command GUN SECTION, FALL IN, the gun commander taking post 3 paces in front of and facing where the center of his section is to rest. The section assembles in two ranks at close interval facing the gun commander. Members of the section take positions as shown in figure 3. The artillery mechanic, when present,

forms on the extreme left of the front rank. The command FALL IN is followed by the command CALL OFF, at which the cannoneers call off their titles or numbers, starting with the chief of breech, No. 1, No. 2, and so on in numerical order. After forming the section, and if the section is not to be posted immediately, the gun commander takes post in the front rank, 1 pace to the right of his section.

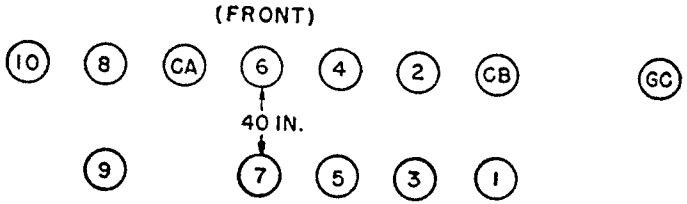

Figure 3. Formation of the gun section.

Section III

DUTIES OF PERSONNEL

7. Battery Executive

a. The battery executive commands the firing unit of the battery and is in charge of the gun emplacements and accessories.

b. He is responsible for the prepartion of the guns of the battery for action.

c. He is responsible to the battery commander for the training and efficiency of the gun sections, for the technical handling of the guns, for the condition of the matèriel and ammunition under his charge and its camouflage, for camouflage discipline, for the police of the emplacements and for the observance of all safety precautions pertaining to the operations in firing. As a means of expediting action, commands for firing are transmitted directly from the battery commander to the gun commanders and are repeated by the gun commanders to the gun sections. The battery executive must be alert to note these commands (as repeated by the gun commanders) to insure prompt compliance by all concerned.

d. He inspects the matèriel under his charge and personally verifies the adjustment of all control devices as frequently as necessary to insure accuracy. When required, he directs and supervises the orientation and synchronization of the remote control system as prescribed in TM 9–373.

e. Before a firing and each time after parts have been reassembled, he tests the firing mechanism and checks the operation of the breech, paying special attention to the proper clear-

ance between the sear and sear lug on the firing pin guide (see par. 31) and the seating of the detent in the breech mechanism operating crank and spline shaft (see par. 32).

f. He receives twice daily the reports of the gun commanders on the readiness of sections for action, and reports to the battery commander, "Sir, firing battery in order," or reports defects which he is unable to remedy without delay.

g. During action, he exercises general supervision over the loading and pointing of the gun and the handling of ammunition. Should circumstances arise after a gun section has been reported ready which, in his opinion, would make it unsafe to fire, he commands: CEASE FIRING, and reports his action to the battery commander.

h. After a firing he is responsible for the cleaning of the guns and their preparation for the next action.

i. At the conclusion of drill or firing, the battery executive commands: REPLACE EQUIPMENT, inspects the gun positions, directs the disposal of empty cartridge cases, and reports to the battery commander stating the deficiencies, if any, affecting the readiness of the battery for subsequent action.

8. Gun Commander

a. The gun commander is in charge of the gun section and is also chief of the gun squad. He directs and supervises the—

(1) Training of the personnel of the gun section.
(2) Preparation of the piece for action.
(3) Maintenance and care of matèriel and ammunition.
(4) Maintenance of camouflage and gas discipline.
(5) Firing of the piece.
(6) Police of the emplacement.

b. He is responsible for the observance of all safety precautions.

c. Twice daily, morning and night, he turns out the gun section at the gun emplacement, commands: DETAILS, POSTS, and supervises the procurement of equipment. After all details have reached their posts (fig. 4), he commands: EXAMINE GUN. He inspects all parts of the gun for proper cleaning, lubrication, adjustment, and operation in accordance with section VII and with instructions contained in TM 9–373. He then commands: REPORT, receives the reports of the chief of ammunition and the various details of the gun squad as called for in the drill table (app. III), and reports to the battery executive, "Sir, No. ——— in order," or reports any defects he is unable to remedy without delay.

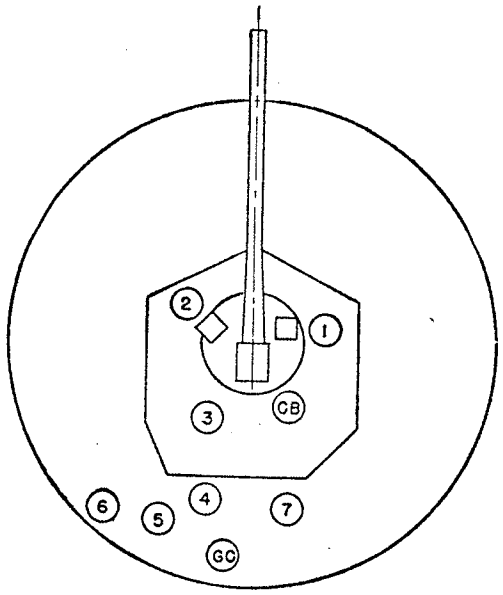

Figure 4. Positions of the gun squad at the command DETAILS, POSTS.

d. In going into combat, it is not necessay to go through the commands of DETAILS, POSTS or EXAMINE GUN. The sounding of the alert signal is sufficient to post the details. In addition, the servicing equipment is kept convenient to the individual posts, and the members of the gun section need only check the items for presence and place them for use. The commands EXAMINE GUN and REPORT are unnecessary since guns and servicing equipment will be maintained constantly in a state of readiness for use and inspected twice daily. The gun commander will report to the executive as soon as the gun is manned.

e. In action, the gun commander mans the command telephone at the emplacement and receives and transmits such commands and reports as may be given or required by the battery commander.

Note: For purposes of explanation, a sequence of commands and reports that may be followed are listed in *f*, *g*, and *h* below. These are applicable when the battery is alerted before the target comes within range. When the target is already within range, the battery commander may give all commands necessary to order firing directly to the gun commander who brings fire to bear on the target as quickly as possible without further reporting. For details of commands used by the battery commander, see paragraph 13.

f. At the command TARGET, he repeats the command and target designation. As soon as Nos. 1 and 2 have reported elevation and azimuth in order, the gun commander reports to the battery commander, "Sir, No. ——— ready." If case II pointing is being used, he assists the gun pointer in locating the target by sighting along the gun or shield and directing the traversing of the piece and reports, "Sir, No. ——— on target," when the gun pointer is on the target.

g. As soon as the ammunition is designated he informs the chief of ammunition. At the command LOAD, he repeats the command to the chief of breech. He receives the report

APPENDIX II

STATISTICAL DATA

1. Gun Tube

Weight, pounds	1,465
Length of gun tube, inches	186.15
Length of bore, calibers	50
Rifling, number of grooves	32
Rifling	Uniform, one turn in 32 calibers
Muzzle velocity, maximum, f/s	2,700
Range, maximum, yards:	
Shell, HE, M71 (with M48 fuze)	19,560
Life of gun, rounds	900
Rate of fire, rounds per minute:	
Normal	25
Maximum	30

2. Recoil Mechanism

Type of recoil mechanism	Hydropneumatic
Type of counterrecoil mechanism	Hydropneumatic
Initial pressure (nitrogen), pounds per square inch	830
Oil required to fill recoil mechanism, quarts	7
Oil required to fill counterrecoil buffer, pints	3¼
Normal recoil at 0°, inches	40–46
Normal recoil at 80°, inches	24–25½
Maximum time for recoil, seconds	2

3. Mount

Maximum elevation, degrees	+80
Minimum elevation, degrees	—8
Change in elevation per handwheel turn, degrees	1.875
Traverse, continuous, degrees	360
Traverse per handwheel turn, degrees	2.812

4. Service Ammunition

Unarmored or lightly armored targets	M71 (fuze M48)[1]
Armored targets	M82[2] or M77[3]
Air targets	M71 (fuze M43)[4]

[1] Shell, fixed, HE, M71; fuze, PD, M48A1 and M48A2, delay (.15 sec.) or superquick, boresafe; projectile weight, 23.40 pounds; propelling charge, NH; weight of round, 42.04 pounds.

[2] Projectile, APC, M82; fuze, BD, M68; with tracer; projectile weight, 24.11 pounds; propelling charge, NH; weight of round (data not available).

[3] Shot, fixed, AP, M77, tracer; projectile weight, 23.70 pounds; propelling charge, NH; weight of round, 42.04 pounds.

[4] Shell, fixed, HE, M71; fuze, time, mechanical, M43 (all modifications), boresafe; projectile weight, 23.40 pounds; weight of round, 42.04 pounds.

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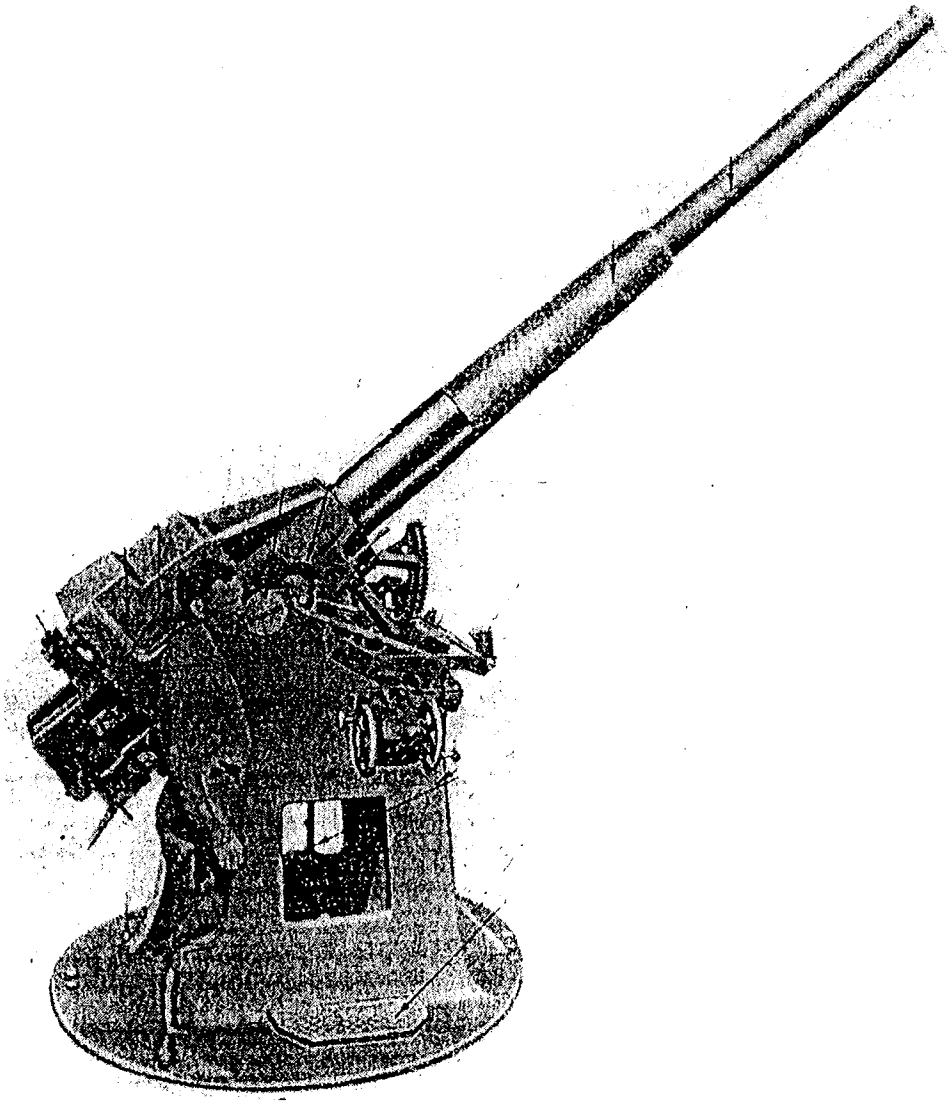
OCGS015

THE GUNS OF FORT STORY:

ANTIAIRCRAFT BATTERY NO. 1



the guns of fort story: antiaircraft battery no.1

Today the seacoast fortification concept is nothing but a memory. But from colonial times through World War II Army fortifications, in conjunction with the US Navy, provided the bulk of the security for the vast coastline of the United States. The guns of Fort Story on Cape Henry, Virginia were an integral part of those defenses during both World Wars.

Fort Story, which was initially constructed in 1917 provided for limited defense of the Chesapeake Bay during World War I and during the period of peace following that conflict. During that period however the armament became outranked and grew obsolete and inadequate for the mission.

The first antiaircraft guns were installed in the local defenses as a result of World War I. Antiaircraft Battery Number 1 consisted of three fixed M1917 AA guns and was located in the primary dune line to the east of the post headquarters. In February 1920 work commenced on the three concrete gun blocks to mount the guns. The Portland concrete platforms were installed on timber piles dug 14 feet into the sand dunes at Cape Henry. The gun blocks were circular and measured 12 feet in diameter and were 4 and a half feet thick. The guns were open and no protection was offered to either the weapons or their crews. The battery was finally completed in February 1921 at a cost of #2,150.00 and later transferred to the garrison. Three fixed Model 1917 3 inch guns were mounted on revolving pedestal carriages. The weapons had been manufactured by Watervliet Arsenal, New York and were serially numbered 72, 89 and 90. The location for the ammunition shelters is not known at this time. Normally, the ammunition would have been housed in a wood 20 foot by 10 foot building with corrugated iron siding and concrete floor. Additionally, the locations of the gun director, height finder and other fire control equipment has not been determined as of this time.

By the time the antiaircraft guns were installed the hostilities were over and Fort Story was reduced to a care taking status. The status of the battery was also reduced to care taking and it can be assumed that as there was no aerial threat, that the weapons were removed and stored at some time after 1928. It would also make sense as the positions were open to the harsh elements at Cape Henry. NOTE: **Not true Ed Amburn said they were there in 1931.**

In the summer of 1926 a storehouse was constructed near the battery for oil and tool storage. This 8 foot by 10 foot building had walls built of hollow tiles and a reinforced concrete roof. The building was transferred to the garrison on 15 July 1926 at a cost of $770.00. Additional similar storage buildings were constructed at a later date.

With the upgrade of seacoast defenses following the entry of the United States into World War II, the antiaircraft battery emplacements were modernized.

Subj: AAA
Date: Thursday, March 30, 2000 8:40:18 AM
From: zink@Oswego.EDU
To: FTylerVB2@aol.com

the 3" Mount, M1917 would handle guns M1917, M1917MI, M1917MII and M1917A2
M1917MI differs from M1917 only in having the breech ring being a separate
piece (In 1917, it is integral with jacket). M1917MII is similar to M1917 and 1917MI but latch plate is secured by a lug rather than screws. One book says M1917 gun was modified from M1903 Seacoast guns (photos sure
look like it). No sure what "A2" modification was - except I beieve it had to be changed at Arsenal (machine shop job).
Length overall is 174.65" for all 3.
NOTE ref PP AAA pic - I should have thought of this before - AAA fixed mount concrete gunblocks MUST have access plate just outside the bolt circle so signal & electrical connections under gun can be connected. Hence, not only 16 bolts (for all mounts I found so far) BUT also steel cover plate, regardless of number of bolts. Which I think says PP gadget could not rotate 360 degrees - which would be embarrassing to AAA gunner.
As far as "identical serial numbers" - could be coincidence, could be the guy forgot to read number, or it was hard to read, and he just looked up the old number. RCWs are not perfect - the worst easily noticeable error I know of was two batteries of 2- 10" on DC at Fort Standish, Boston, same serials of guns & carriages on both - ON THE SAME DAY. It Ain't easy!
Can you rent the TERRAGATOR from False CAPE STATE PARK FOR THE TOURS? Give TM an attack of some sort. Bob

---------- Headers ----------
Return-Path: <zink@Oswego.EDU>
Received: from rly-yg05.mx.aol.com (rly-yg05.mail.aol.com

Subj: AAAAAAA
Date: Wednesday, March 29, 2000 6:55:58 PM
From: zink@Oswego.EDU
To: FTylerVB2@aol.com

I have the same RCWs you do. At least, those 2.
I will need to do some studying (maybe a\day or so) to answer your Q. I have studiously avoided AAA - CD was enough work. But I picked up some info.
One thing I am pretty sure of - When you start out with a M1917 gun, you can modify it till the cows come home and all that does to nomenclature is
make it M1917A1 or A2 or A3. If you dismantle it, add new parts (not just breechblock parts but a new type breechblock, I think then it could become M1917M1. I KNOW the new breeckblock and different for 3" seacoast
gun M1902 made it a M1902A1 -- so i THINK (99%) that you mjust hav new guns.
Worst of all - a 1 April 43 RCW that stell shows Feb 1928 Feb 1921.
Add an RCW for Exam battery - M1905 3" guns, on M1902 pedestal mounts.
I wonder - TOO MUCH time in the O Club Bar?

ALSO - I found on www The old Coast Guard Station. With 804 phone numbers. BUT 757 numbers for your Research Library!!
Cross fingers & hope I find your answers!
Bob

---------- Headers ----------
Return-Path: <zink@Oswego.EDU>
Received: from rly-za02.mx.aol.com (rly-za02.mail.aol.com [172.31.36.98]) by air-za05.mail.aol.com (v70.20) with ESMTP; Wed, 29 Mar 2000 18:55:57 -0500
Received: from rocky.oswego.edu (rocky-gw.oswego.edu [129.3.17.36]) by

OCGS 0116

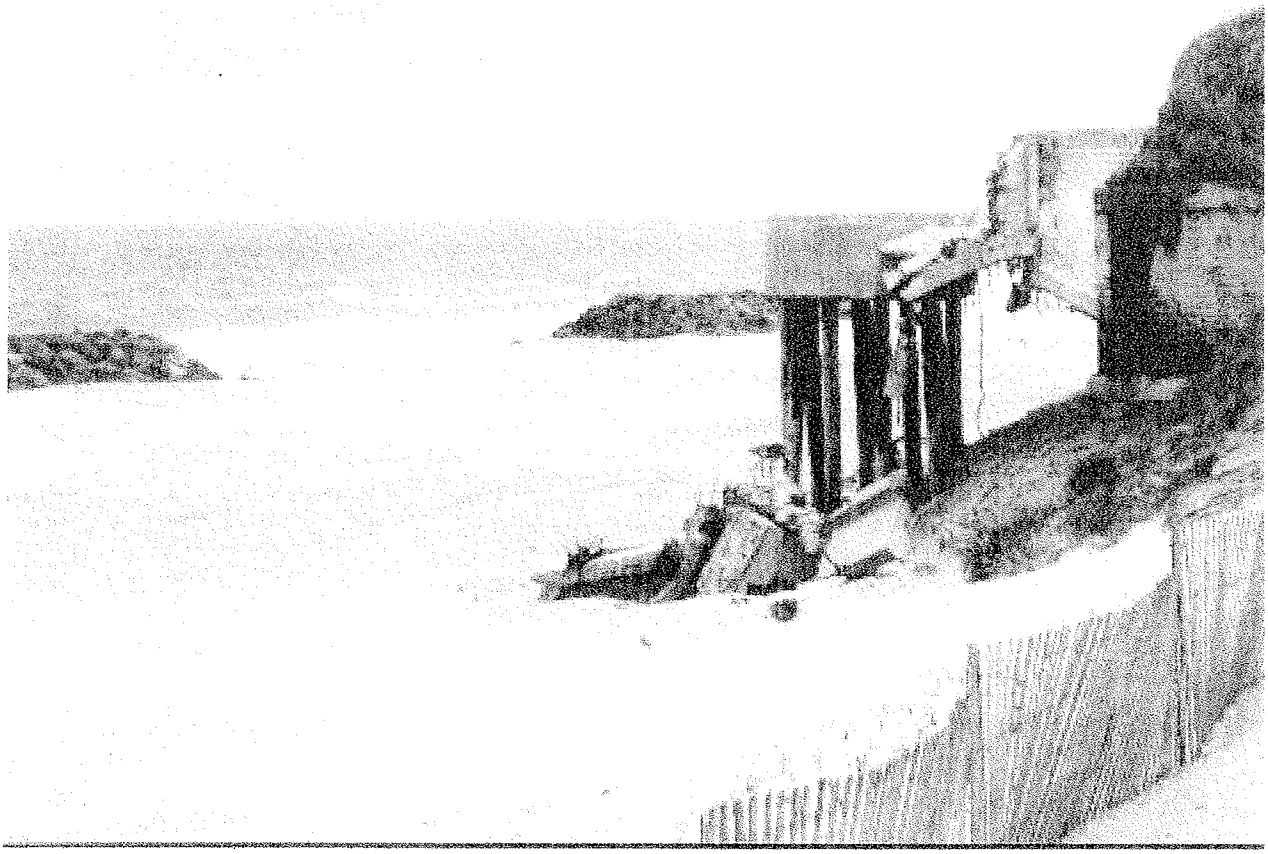
ANTI-AIRCRAFT ARTILLERY

COAST/HARBOR DEFENSES OF CHESAPEAKE BAY

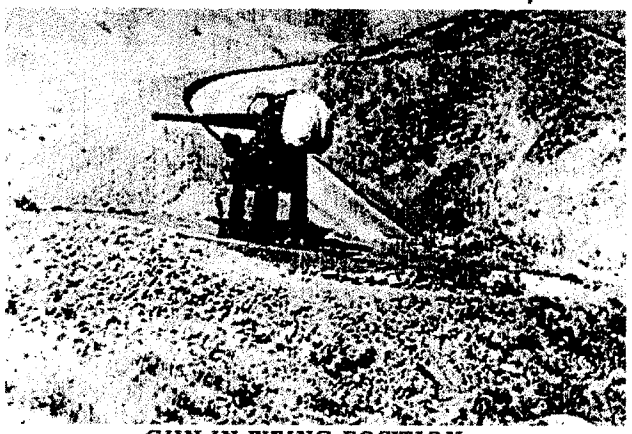
Subj: FtStory
Date: Saturday, June 1, 2002 9:20:35 AM
From: Payette237
To: FTylerVB2

This is the picture I took two weeks ago of the anti-aircraft gun emplacement which shows the breakwater. I actually climbed on top of it (from the other side), which I know was unsafe and perhaps illegal. The entrance is buried as you know, but I was curious and wanted to look inside from the other end. The corridor is completely filled with sand, but you can go down a few steps from the gun mount. Someone else has been in there, as they left their mark in the form of graffitti. Strangely, it said something about erosion.

Tiger

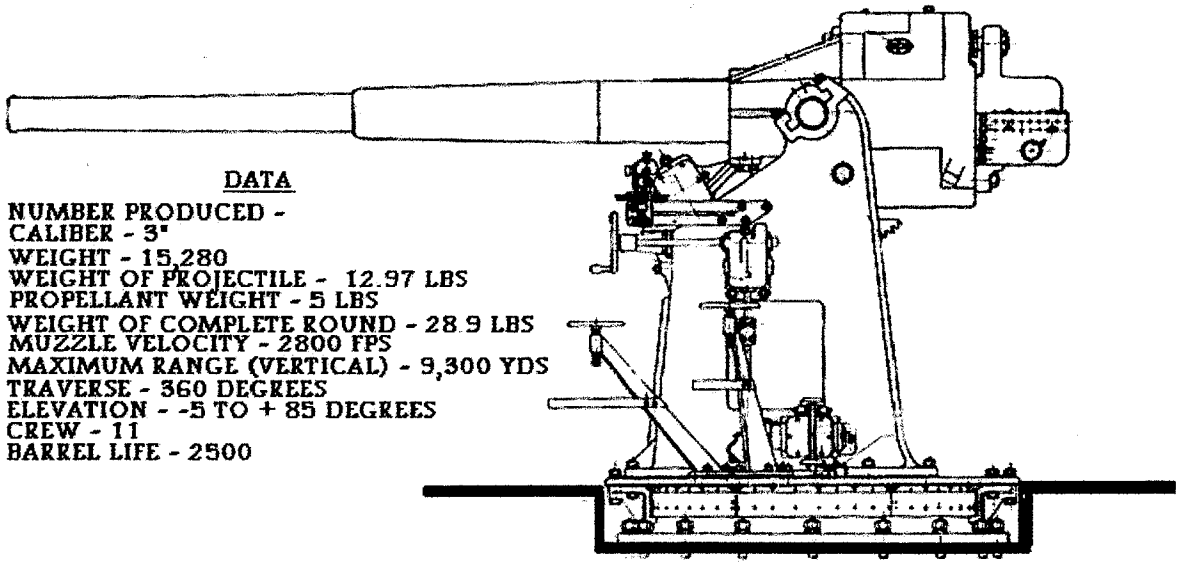


3-INCH GUN M1917; ANTIAIRCRAFT CARRIAGE M1917



GUN IN FIRING POSITION

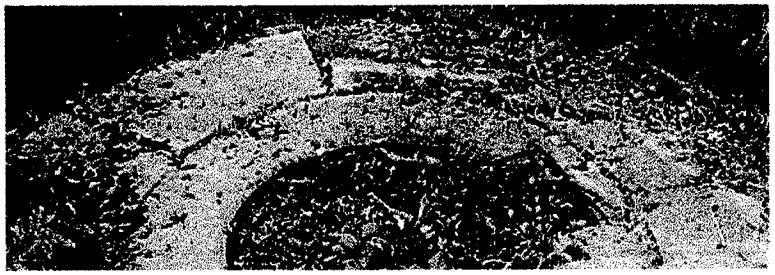
EMPLACEMENT MOUNTING PIT



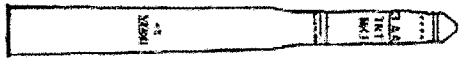
GENERAL VIEW

DATA

NUMBER PRODUCED -
CALIBER - 3"
WEIGHT - 15,280
WEIGHT OF PROJECTILE - 12.97 LBS
PROPELLANT WEIGHT - 5 LBS
WEIGHT OF COMPLETE ROUND - 28.9 LBS
MUZZLE VELOCITY - 2800 FPS
MAXIMUM RANGE (VERTICAL) - 9,300 YDS
TRAVERSE - 360 DEGREES
ELEVATION - -5 TO + 85 DEGREES
CREW - 11
BARREL LIFE - 2500



COMPLETE ROUND OF AMMUNITION

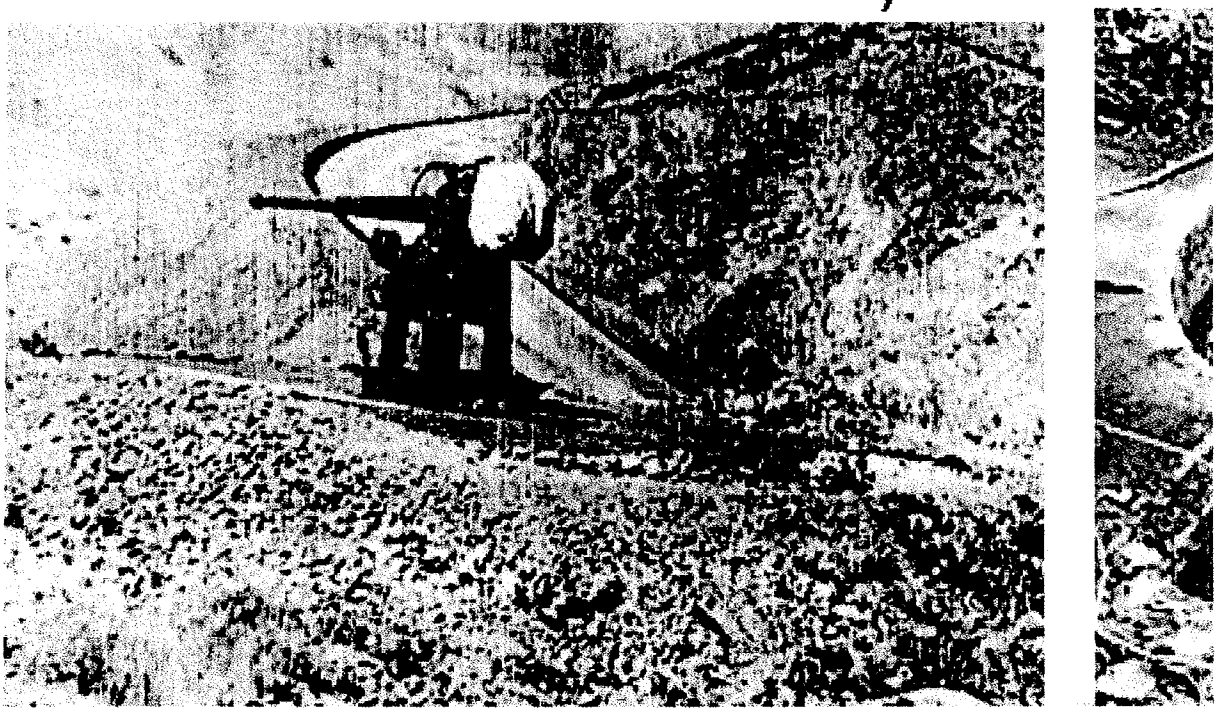


LENGTH - 38.46 "

EMPLACEMENT

1/13/00

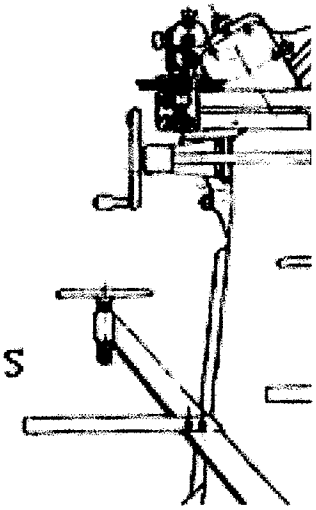
3-INCH GUN M1917; ANTIAIRCR



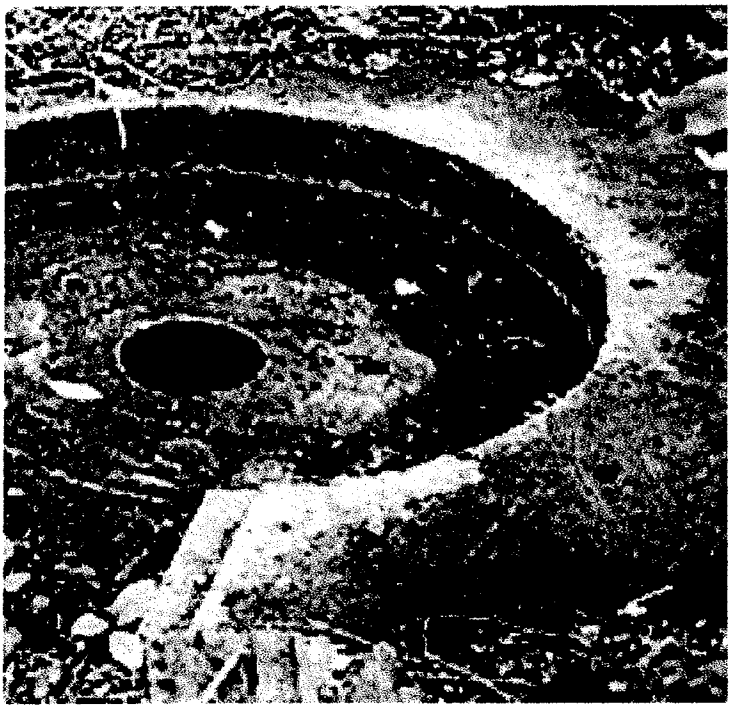
GUN IN FIRING POSITION

DATA

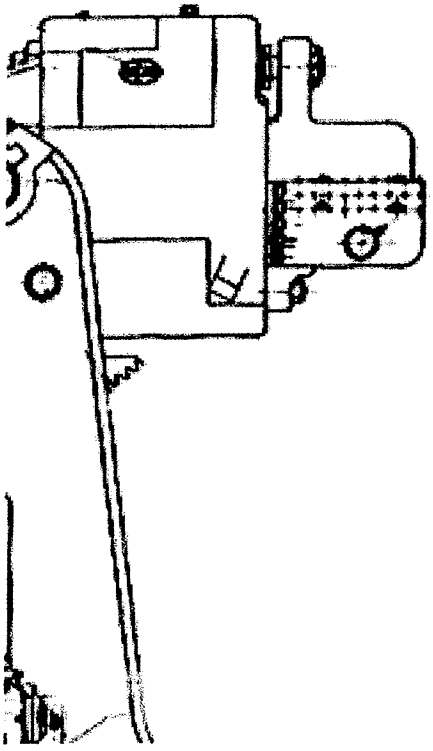
NUMBER PRODUCED -
CALIBER - 3"
WEIGHT - 15,280
WEIGHT OF PROJECTILE - 12.97 LBS
PROPELLANT WEIGHT - 5 LBS
WEIGHT OF COMPLETE ROUND - 28.9 LBS
MUZZLE VELOCITY - 2800 FPS
MAXIMUM RANGE (VERTICAL) - 9,300 YDS
TRAVERSE - 360 DEGREES
ELEVATION - -5 TO + 85 DEGREES
CREW - 11
BARREL LIFE - 2500



RRIAGE M1917



PLACEMENT MOUNTING PIT



COM

EMPLACEMENT

ROUND OF AMMUNITION

GTH - 38.46 "

1/19/00

170 Fifth Avenue
Oswego, NY 13126-1808
21 April 2000
315-342-2840

Dear Moose:

I decided I better write something on this machine before I forget how to do it. So unpanic over "handwriting".
I think both lists really come out of RG77 (which is tons of paper, I think - The Records of the Office of the Chief of Engineers, U.S. Army, 1920 thru 1950 (or some such thing). The real answers are in the Records of the Chief of Ordnance.

Battery MONTGOMERY Weinert booklet GUNS of Ft MONROE
M1900 6" guns 15 & 42
RCB 1910 15 & 42 on carriages 33,34
RCW 7/1/1919 guns 39,41 on carr 39,38
RCW Sept 1941 Receives guns 39,41 (from shop?
CAPE HENRY A (6") a listing, source unknown
Guns 15, 42 on carrs 33,34
a later llist guns 1,5
CAPE HENRY B (5") Allegedly from James Rice WW I
WORCESTER Guns 1 & 5 on carriages 33,34 from Montgomery
(well-known from several sources)
Fort Hunt B Porter, M1897 gun 1 on BP M1896 16 (see note GW)
Fort Hunt B Robinson, M1897 gun on BP M1896 17 ditto
FORT SLOCUM, B FRASER 5" gun M1900 8,9 (see GW)
on Pedestal Mt M1903 11,10
Fort Caswell, B Shipp 5" M1897 gun 20 on BP 15 (see GW)
later 16 1 Ditto
FORT DuPONT B RI "Two 5" M1900 guns on Pedestal Mounts, to Fisherman Island" "Never Returned" Serials not shown on RCW
FORT ST PHILIP, B MERRILL 2-6" M1900 guns, 6 & 39 on carrs 32,37
per RCW 3-26-1919. A handwritten note, from before May 1918:
Guns 6,35,39,41 on carrs 32,35,39,41
Guns & Carrs from emplacements 3 & 4 removed May 1918 to Lewes and Cape May. (I have maps of locations but no serials)
FORT ANDREWS: B RICE 5" M1900 guns 1 & 2 on M1903 Carr 3 & 5
per 12-29-1910 letter fron District Engineer. Tabular list says still armed March 5, 1918
CAPE MAY: 1-6" M1900, mounted July 1918, removed by June 1919 RCW
CAPE HENLOPEN ditto mounted June 1918, " June 1919 RCW
Ft STORY EXAM Btry: 28 & 29 on 28 & 29 allegedly from Lee- 1920s
FORT WOOL, HENRY LEE: 3" M1902 guns, 8,9,10,11 on mounts
M1902 8,9,10,11 (lists Nov 15,1915 and December 1,1918)
pencilled in "2 of these guns being relocated to Fisherman Island (written 5-28-42)
FORT JOHN CUSTIS M1902 guns 8&9 on mounts 8&9, Removed and being installed on Fisherman Island (5-28-42 note)

I would think source A was pretty good - Dave Cameron was Major in USAF Security, lived near WDC,spent a lot of time in NARS
NOTE GW: Someone, I think Glen Williford, found a letter that all 4 F.I. guns would have to be same model (logistics & training), and M1900/1903 was chosen.
BP - Balanced Pillar Mount - a small gun disappearing carriage, obseleted about 1910?, few existed after 1920.

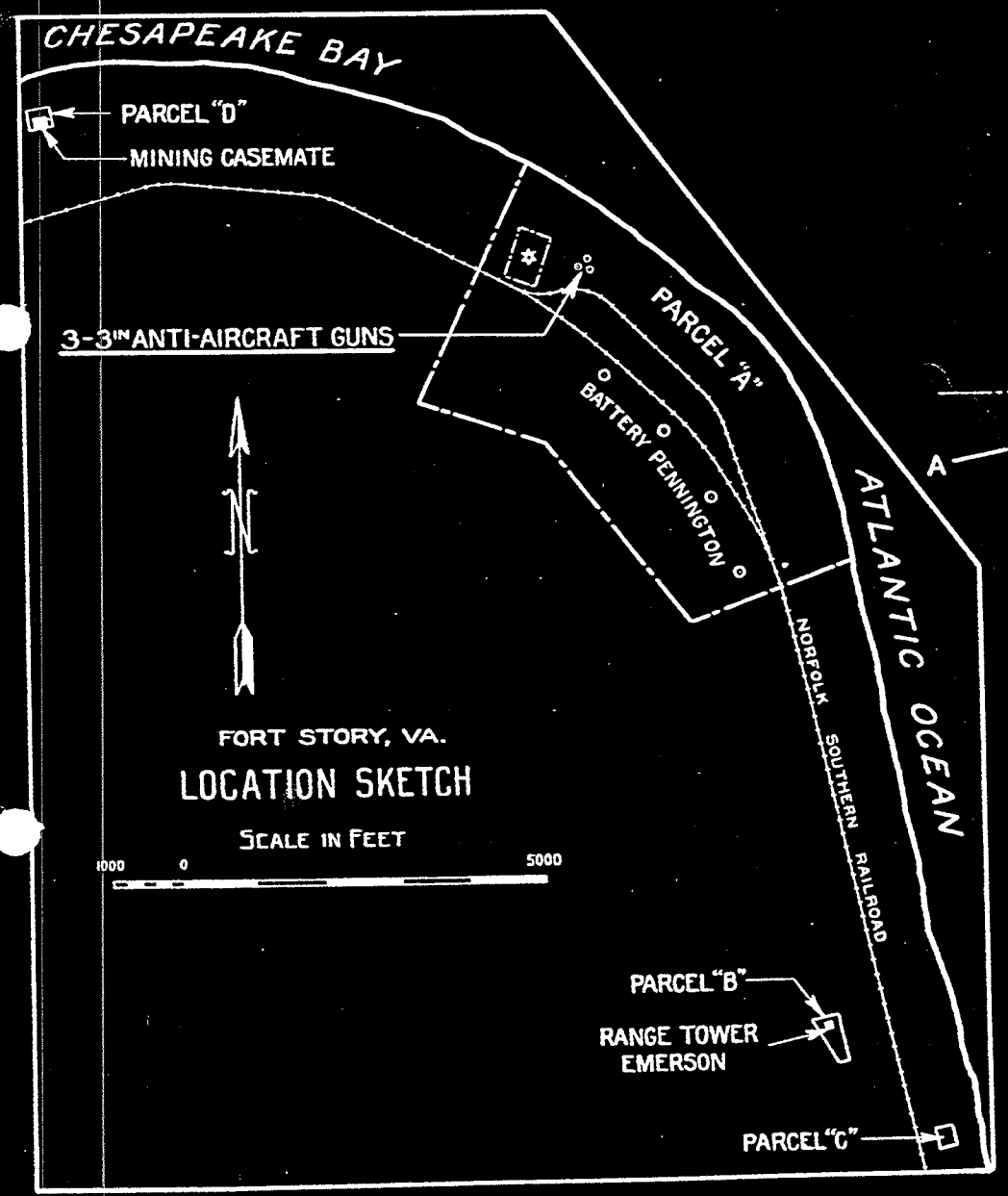
RDJ

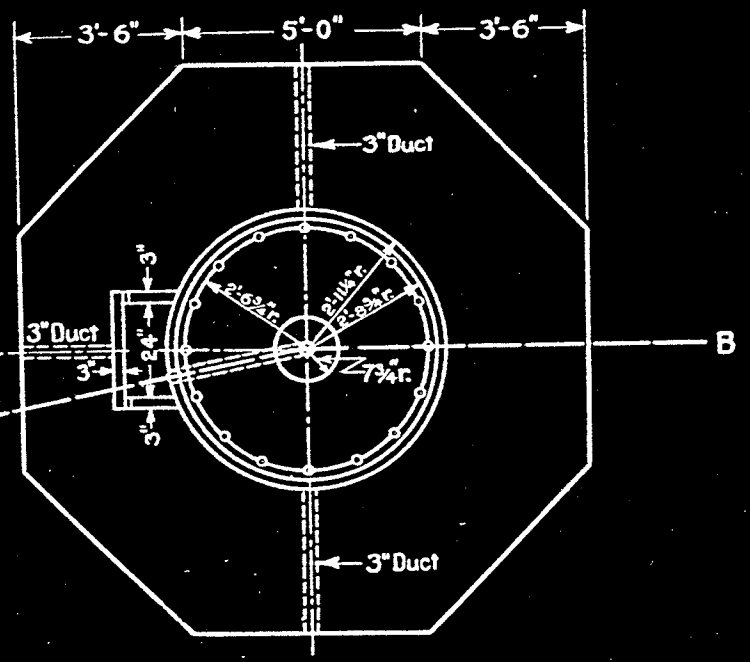
REPORT OF COMPLETED WORKS SEACOAST FORTIFICATIONS
BATTERY PLAN

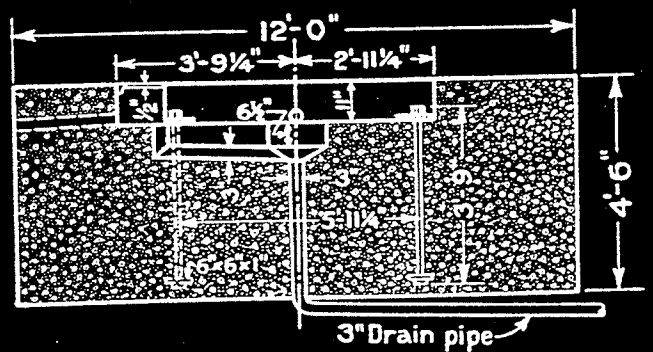
FORM 7

CORRECTED TO APRIL 2, 1928.

COAST DEFENSES OF CHESAPEAKE BAY.
FORT STORY, VIRGINIA.
BATTERY ANTI-AIRCRAFT
NO. OF GUNS THREE CAL. 3" CAR. PED.
Scale :- 1/4" = 1 ft.







SECTION A-B

REPRODUCED AT THE NATIONAL ARCHIVES

600.914(Ches)104750

104750

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

~~SECRET~~

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY AA NO. 1 NO. OF GUNS: 3
CALIBER: 3" CARRIAGE: M2

Part I Corrected to 15 May 1943

GENERAL:
Battery commenced: 2 April 1942
Battery completed: 31 August 1943
Date of transfer: 24 November 1943
Cost to date of transfer: $14,673.08
Materials of construction: Reinforced concrete
Battery new or modernized: Modernized
Trunnion elevation in btry.: Guns 1 and 3: 35.86'
Gun 2: 35.26'
Datum plane: MLW

UTILITIES:
Water Supply
Source of: None
Sewer
Connected to sewer: No
Type of disposal: No disposal
Type of latrine: No latrine

UTILITIES: (Cont'd)
Electric Power
Sources of: Post power; 2 - M4 Generator units
Procured and installed by Ordnance
Characteristics: Voltage 110, AC, Phase 1
No. of units and capacity: Two 2-1/2 KVA each
Max. KW required for utilities: 2 KW
Max. KW required for non-battle conditions: 2 KW
Commercial power provided: Yes - 2-1/2 KVA
Auxiliary power unit provided: No
Type of lighting fixtures: Incandescent
Dehumidifying Unit: None
Rooms wet or dry: Dry
How ventilated: Roof vent
How heated: Not heated

DATA TRANSMISSION:
Type: M-4

REMARKS: None

ARMAMENT

Emplacement No.	GUNS Cal.	Length	Model	Serial No.	Manufacturer	Mounted	CARRIAGES Type	Model	Serial No.	Manufacturer	Motor
1	3"	158.225"	1917 M1A2	90	Watervliet Arsenal	Fixed	AA	1917 M2	65	Watertown Arsenal	
2	3"	158.225"	1917 M1A2	89	Watervliet Arsenal	Fixed	AA	1917 M2	62	Watertown Arsenal	
3	3"	158.225"	1917 M1A2	128	Watervliet Arsenal	Fixed	AA	1917 M2	2	Watertown Arsenal	

FS.910
983

~~SECRET~~

600.914(Che)104750

104750

SECRET

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

CONTROL APPROVAL SYMBOL NO. SPEKM-1
COAST DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY: ANTI-AIRCRAFT
NO. GUNS: 3; CALIBER: 3"; CARRIAGE: PED.

Form 1 Corrected to 1 April 1943

Battery commenced	:Feb. 1928 (March 1918)	:Source of elec. current	:None
Battery completed	:Feb. 1921	:	:
Date of transfer	:Unknown	:	:
Material of construction	:Concrete	:	:
Portland or Rosendale	:	:	:
cement	:Portland	:	:
Cost to date of transfer	:$2,150.00	:Present condition	:Good
Connected to water supply	:No	:Rooms wet or dry	:No rooms
Connected to sewer	:No	:	:
Type of latrine	:None	:	:
Type of data transmission	:None	:	:
Trunnion elevation	:	:	:
Datum plane	:Mean low water	:	:
	:	:	:

A R M A M E N T

See report corrected to 15 May 1943

Revised

SECRET

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

COAST DEFENSES OF CHESAPEAKE BAY
Fort Story, Virginia
BATTERY-ANTI-AIRCRAFT
NO. GUNS. 3, CALIBER 3" CARRIAGE-PED. AA #1

Form 1. Corrected to April 2, 1928.

Battery commenced	Feb. 1928	Source of elec. current	None
Battery completed	Feb. 1921		
Date of transfer	Unknown		
Material of construction	Concrete		
Portland or Rosendale cement	Portland		
Cost to date of transfer	$2,150.00	Present condition	Good
Connected to water supply	No	Rooms wet or dry.	No rooms
Connected to sewer	No		
Type of latrine	None		
Type of data transmission	None		
Trunnion elevation			
Datum plane	Mean low water		

Armament

Emplacement Number	Guns						Carriage	Carriage Ser.No.
	Cal.	Length	Model	Ser. No.	Manufacturer	Mounted		
1	3"	15'-6	1917	72	Watervliet Arsenal	Yes		62
2	3"	15'-6"	1917	89	Watervliet Arsenal	Yes	Revolving pedestal carriage.	63
3	3"	15'-6"	1917	90	Watervliet Arsenal	Yes		65

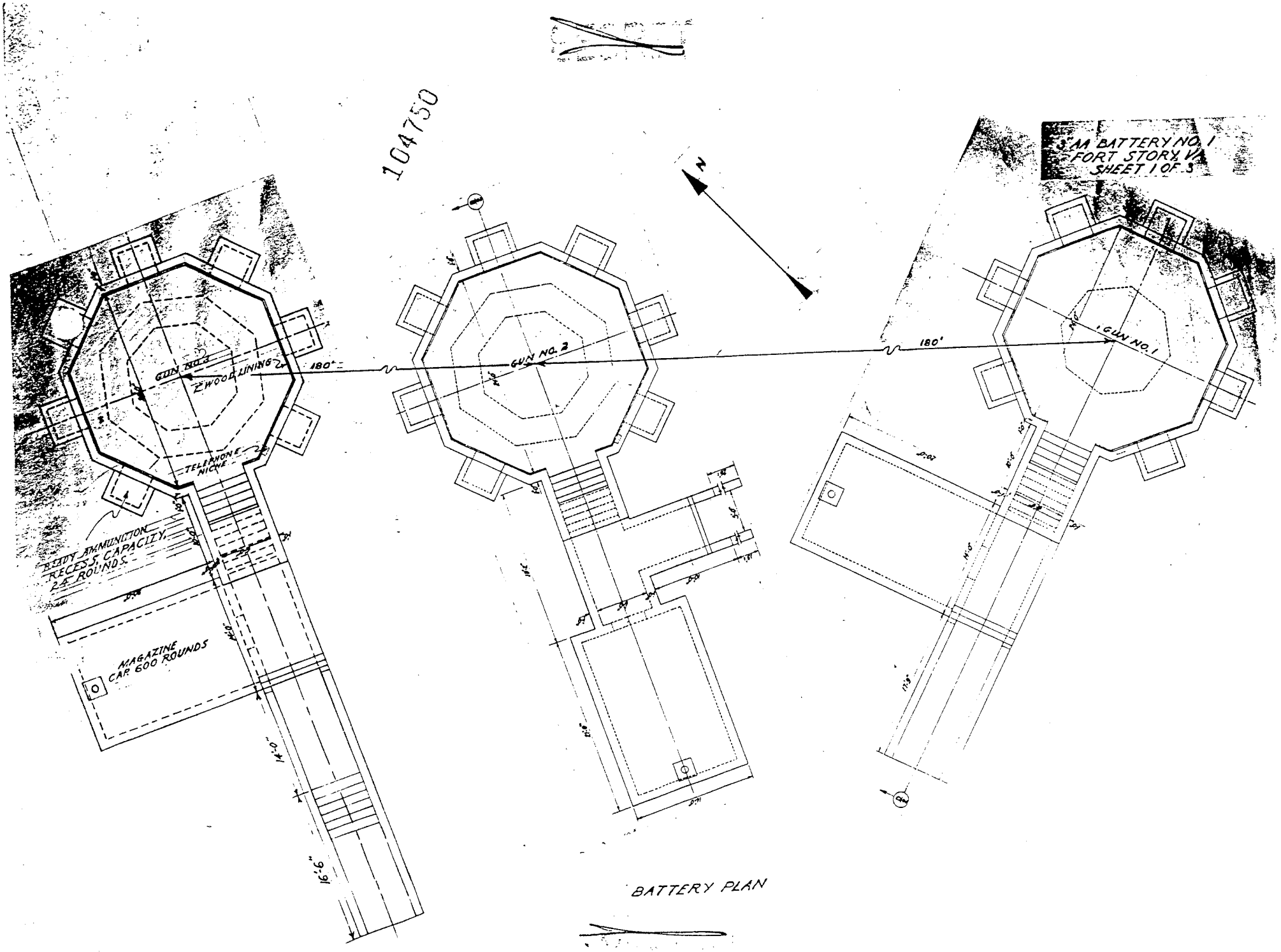
Battery Modernization:

1. Construction of reinforced addition to gun blocks 1 and 2 begun 2 April 1942 and completed 15 April 1942. Transferred 15 April 1942. Cost: $1,547.13

2. Construction of parapets and magazines begun 21 April 1943 and completed 31 August 1943. Transferred 24 November 1943. Cost: $11,443.08

3. Resiting of gun No. 3 begun 12 April 1943 and completed 17 June 1943. Transferred 24 November 1943. Cost: $1,682.87

Modernization cost:	$14,673.08
Original construction cost	$ 2,150.00
Total cost	$16,823.08


104750
3"AA BATTERY NO. 1
FORT STORY, VA.
SHEET 1 OF 3
N
GUN NO. 3
GUN NO. 2
GUN NO. 1
180'
180'
2" WOOD LINING
TELEPHONE NICHE
READY AMMUNITION RECESS, CAPACITY 25 ROUNDS
MAGAZINE CAP 600 ROUNDS
14'-0"
16'-6"
BATTERY PLAN

[illegible] 104750

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

SECRET

CONTROL APPROVAL SYMBOL NO. S. M-1
COAST DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY: ANTI-AIRCRAFT
NO. GUNS: 3; CALIBER: 3"; CARRIAGE: PED.

Form 1 Corrected to 1 April 1943

Battery commenced	Feb. 1928	Source of elec. current	None
Battery completed	Feb. 1921		
Date of transfer	Unknown		
Material of construction	Concrete		
Portland or Rosendale cement	Portland		
Cost to date of transfer	$2,150.00	Present condition	Good
Connected to water supply	No	Rooms wet or dry	No rooms
Connected to sewer	No		
Type of latrine	None		
Type of data transmission	None		
Trunnion elevation			
Datum plane	Mean low water		

ARMAMENT

See report corrected to 15 May 1943

SECRET

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

COAST DEFENSES OF CHESAPEAKE BAY
Fort Story, Virginia
BATTERY-ANTI-AIRCRAFT
NO. GUNS. 3, CALIBER 3" CARRIAGE-PED. AA #1

Form 1. Corrected to April 2, 1928.

Battery commenced	Feb. 1928	Source of elec. current	None
Battery completed	Feb. 1921		
Date of transfer	Unknown		
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Cost to date of transfer	$2,150.00	Present condition	Good
Connected to water supply	No	Rooms wet or dry.	No rooms
Connected to sewer	No		
Type of latrine	None		
Type of data transmission	None		
Trunnion elevation			
Datum plane	Mean low water		

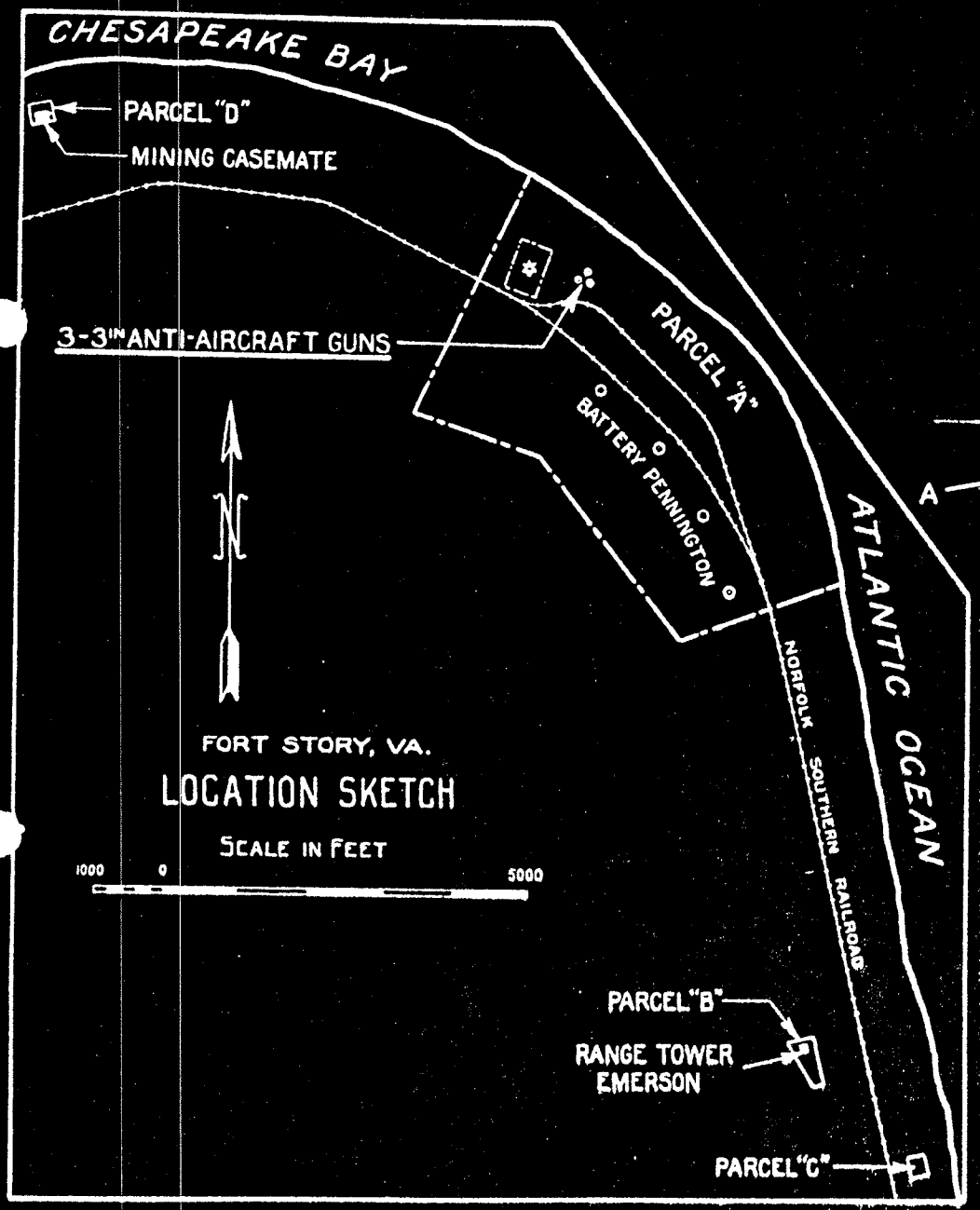
Armament

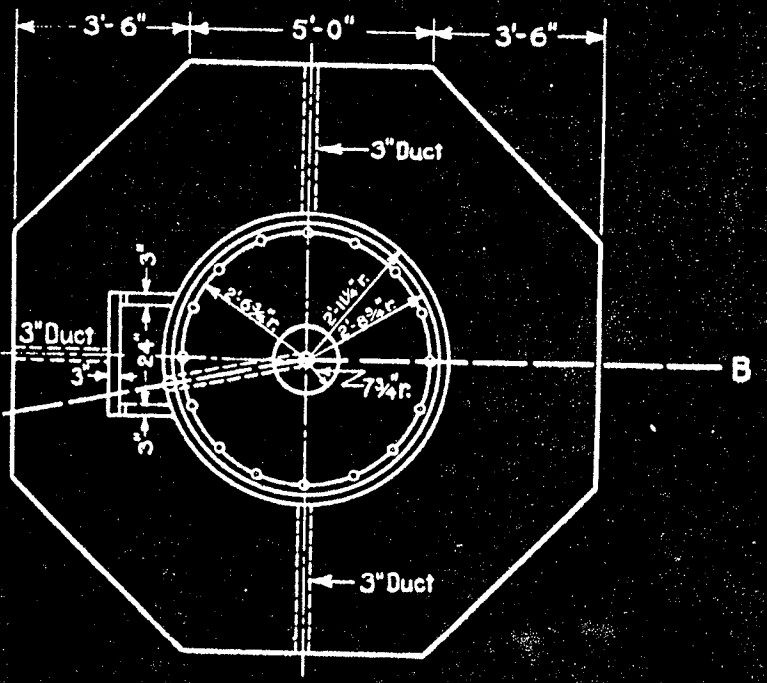
Emplacement Number	Guns					Carriage		Carriage Ser. No.
	Cal.	Length	Model	Ser. No.	Manufacturer	Mounted		
1	3"	15'-6	1917	72	Watervliet Arsenal	Yes		62
2	3"	15'-6"	1917	89	Watervliet Arsenal	Yes	Revolving pedestal carriage.	63
3	3"	15'-6"	1917	90	Watervliet Arsenal	Yes		65

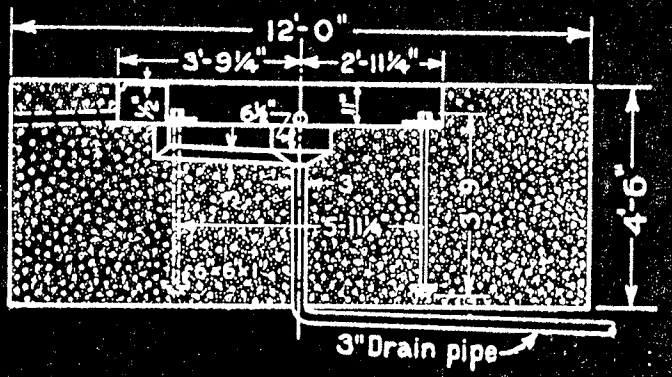
REPORT OF COMPLETED WORKS SEACOAST FORTIFICATIONS
BATTERY PLAN
CORRECTED TO APRIL 2, 1928.

FORM 7

COAST DEFENSES OF CHESAPEAKE BAY.
FORT STORY, VIRGINIA.
BATTERY ANTI-AIRCRAFT
NO. OF GUNS THREE, CAL. 3" CAR. PED.
Scale :- 1/4" = 1 ft.

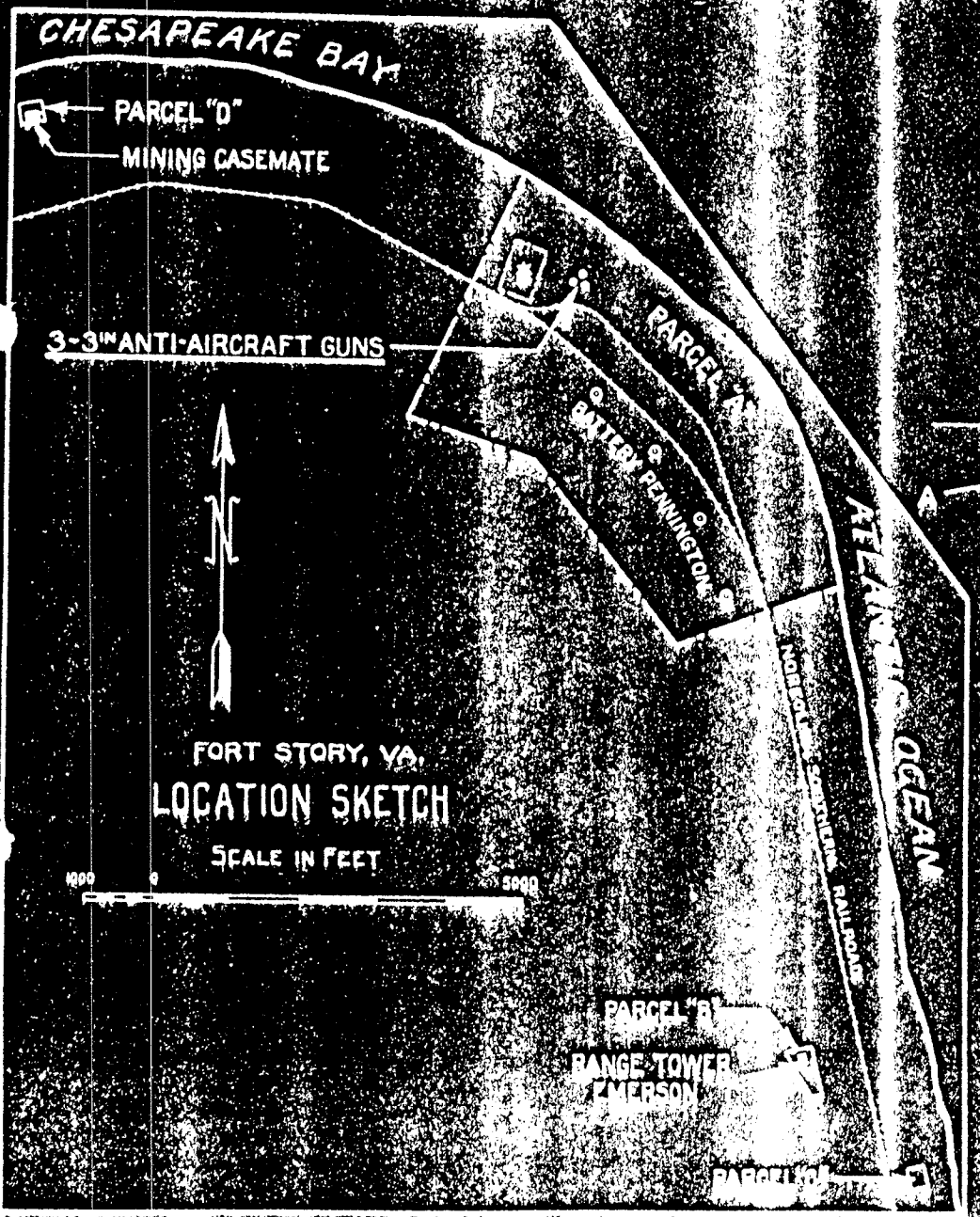




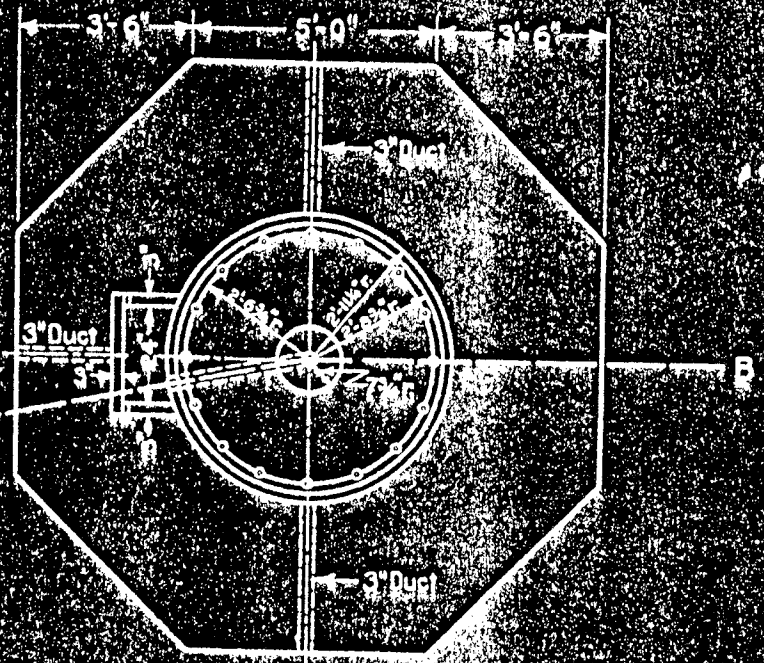


SECTION A-B

REPORT OF COMPLETED WORKS SEACOAST FORTIFICATIONS
BATTERY PLAN
FORM 7
CORRECTED TO APRIL 2, 1928.



COAST DEFENSES OF CHESAPEAKE BAY.
FORT STORY, VIRGINIA.
BATTERY ANTI-AIRCRAFT
NO. OF GUNS THREE CAL. 3" CAR. RED.
Scale :- 1/4" = 1 ft.



SECTION A-B

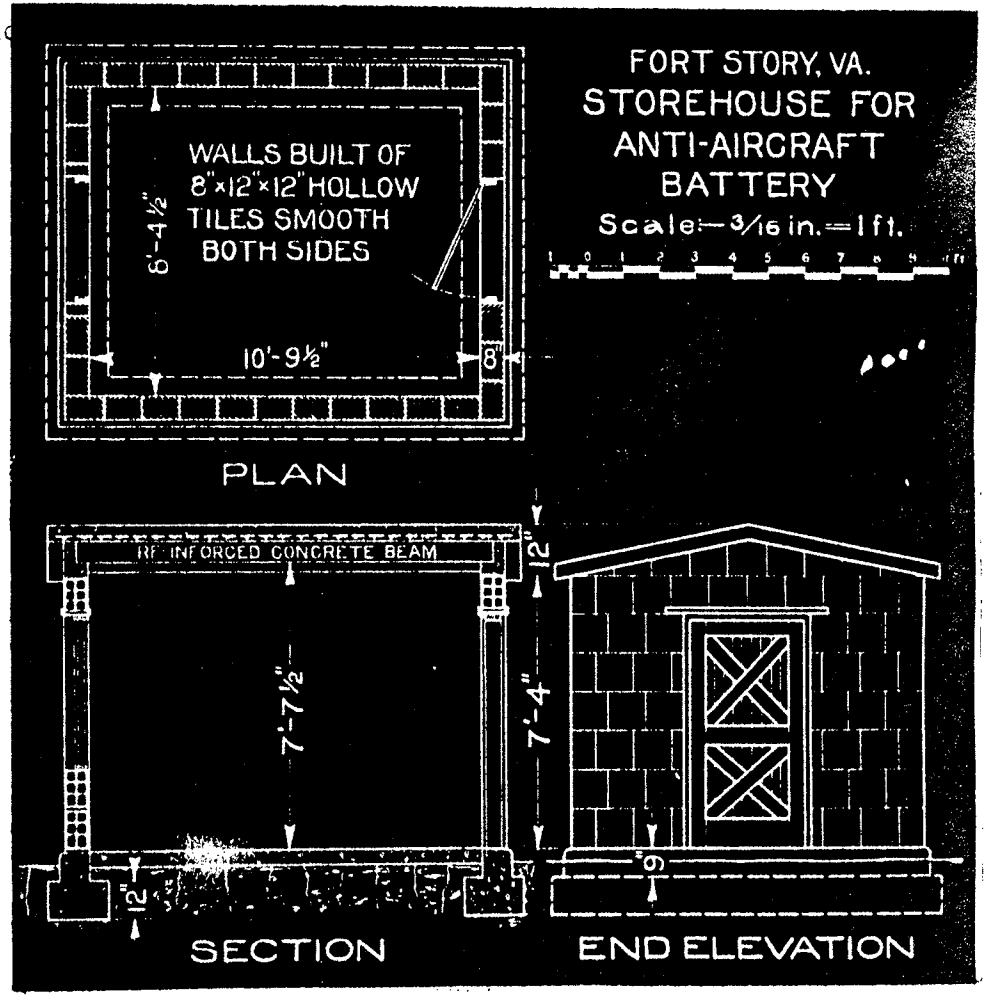
Report of Completed Works -Seacoast Fortifications.
(Storehouse for Anti-Aircraft Battery)

Submitted September 6, 1926.

Coast Defenses of Chesapeake Bay,
Fort Story, Virginia.

Storehouse for
Anti-Aircraft Battery.
Oil & Test House (?) - See Index Plat - Parcel "A"

Location	Anti-Aircraft Battery : Parcel "A", Fort Story
Date of transfer	July 15, 1926
Cost to that date	$ 770.00
Type of construction:	
(a) Roof,	Reinforced concrete
(b) Remainder of building	Hollow T.C. tile walls, Concrete floor and foundatio
How concealed	Trees and shrubs
How protected	No protection
Height above concealment	None
Height above protection	None
Conspicuous at yards	Not conspicuous
Source of electric current	None
Type of lighting fixtures	None
How heated	No heat
Connected to water main	No
Connected to sewer	No
Type of latrine	None
Permanent or temporary	Permanent
Present condition	Good
Reference of site	25.0'
Type of data transmission	None



600.91(Ches)104150

10475

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

CONTROL APPROVAL SYMBOL NO. SPEKM-1
HARBOR DEFENSES OF CHESAPEAKE BAY
FORT STORY, VIRGINIA
BATTERY AA NO. 1 NO. OF GUNS: 3
CALIBER: 3" CARRIAGE: M2

Part I Corrected to 15 May 1943

SECRET

GENERAL:
Battery commenced: 2 April 1942
Battery completed: 31 August 1943
Date of transfer: 24 November 1943
Cost to date of transfer: $14,673.08
Materials of construction: Reinforced concrete
Battery new or modernized: Modernized
Trunnion elevation in btry.: Guns 1 and 3: 35.86'
Gun 2: 35.26'
Datum plane: MLW

UTILITIES:
Water Supply
Source of: None
Sewer
Connected to sewer: No
Type of disposal: No disposal
Type of latrine: No latrine

UTILITIES: (Cont'd)
Electric Power
Sources of: Post power; 2 - M4 Generator units
Procured and installed by Ordnance
Characteristics: Voltage 110, AC, Phase 1
No. of units and capacity: Two 2-1/2 KVA each
Max. KW required for utilities: 2 KW
Max. KW required for non-battle conditions: 2 KW
Commercial power provided: Yes - 2-1/2 KVA
Auxiliary power unit provided: No
Type of lighting fixtures: Incandescent
Dehumidifying Unit: None
Rooms wet or dry: Dry
How ventilated: Roof vent
How heated: Not heated

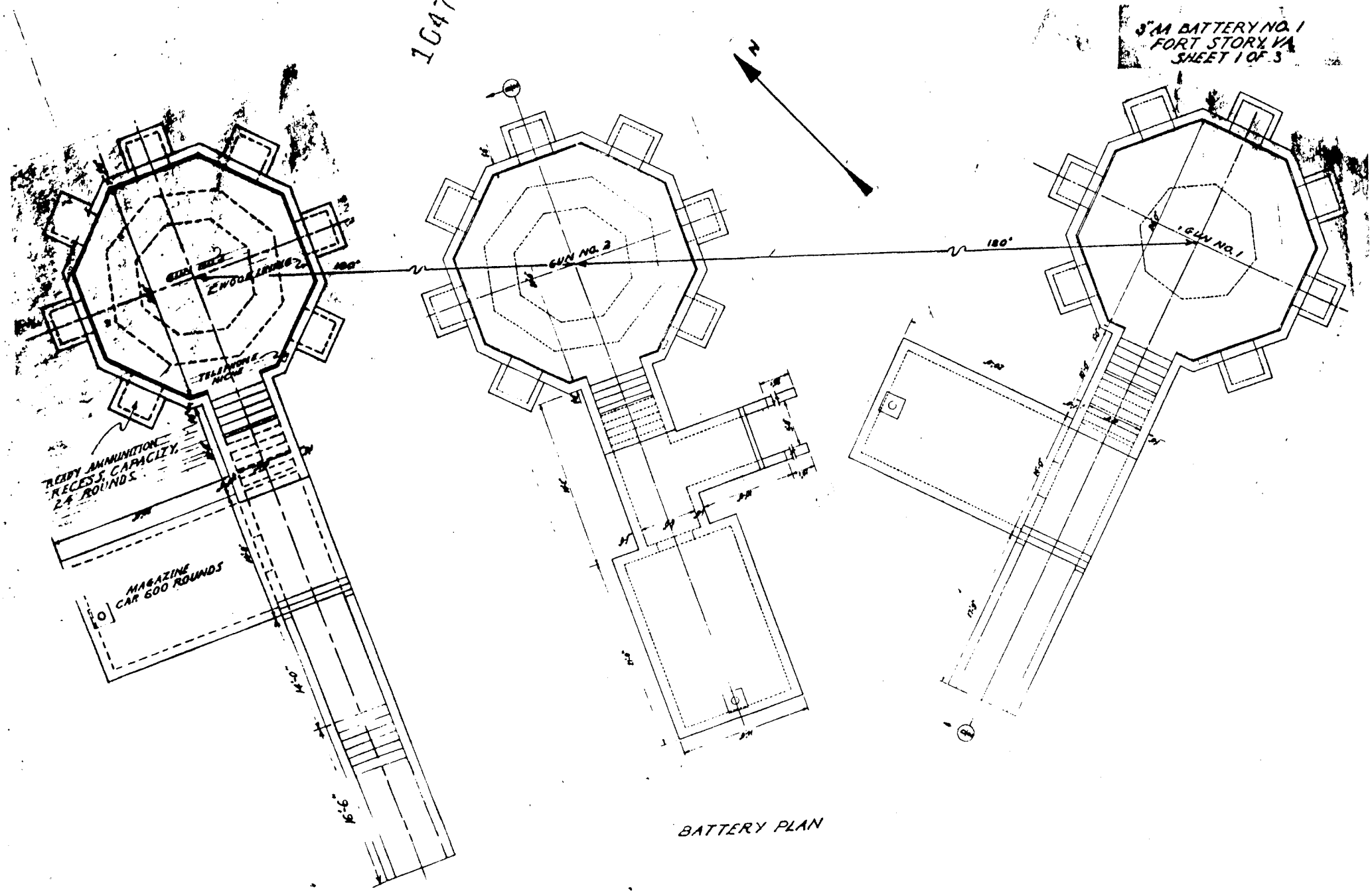
DATA TRANSMISSION:
Type: M-4

REMARKS: None

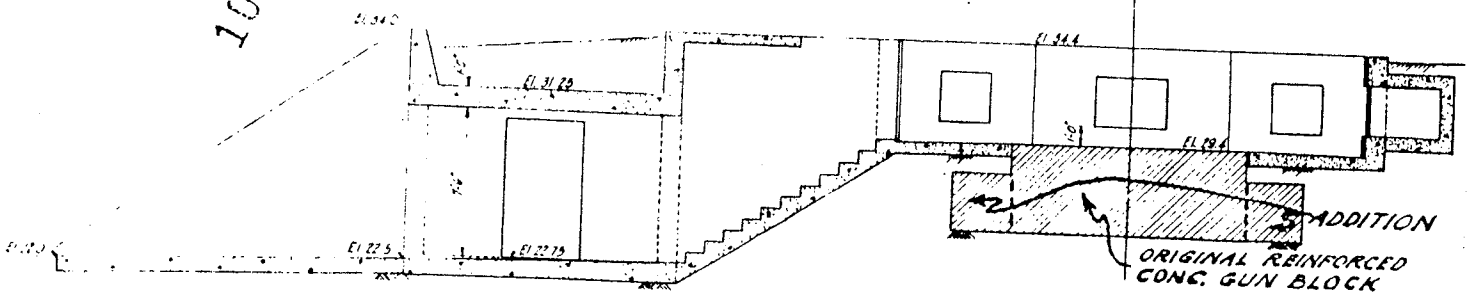
ARMAMENT

Emplacement No.	GUNS Cal.	Length	Model	Serial No.	Manufacturer	Mounted	CARRIAGES Type	Model	Serial No.	Manufacturer	Motor
1	3"	158.225"	1917 M1A2	90	Watervliet Arsenal	Fixed	AA	1917 M2	65	Watertown Arsenal	
2	3"	158.225"	1917 M1A2	89	Watervliet Arsenal	Fixed	AA	1917 M2	62	Watertown Arsenal	
3	3"	158.225"	1917 M1A2	128	Watervliet Arsenal	Fixed	AA	1917 M2	2	Watertown Arsenal	

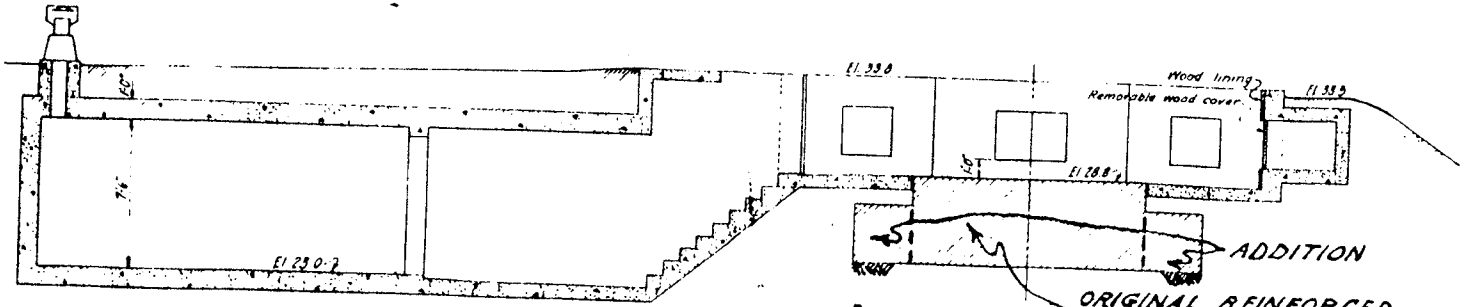
SECRET


3"M BATTERY NO. 1
FORT STORY, VA
SHEET 1 OF 3
N
GUN NO. 3
GUN NO. 2
GUN NO. 1
180°
180°
GUN BASE
ENDO LINING
TELEPHONE NICHE
MAGAZINE
CAP 600 ROUNDS
BATTERY PLAN

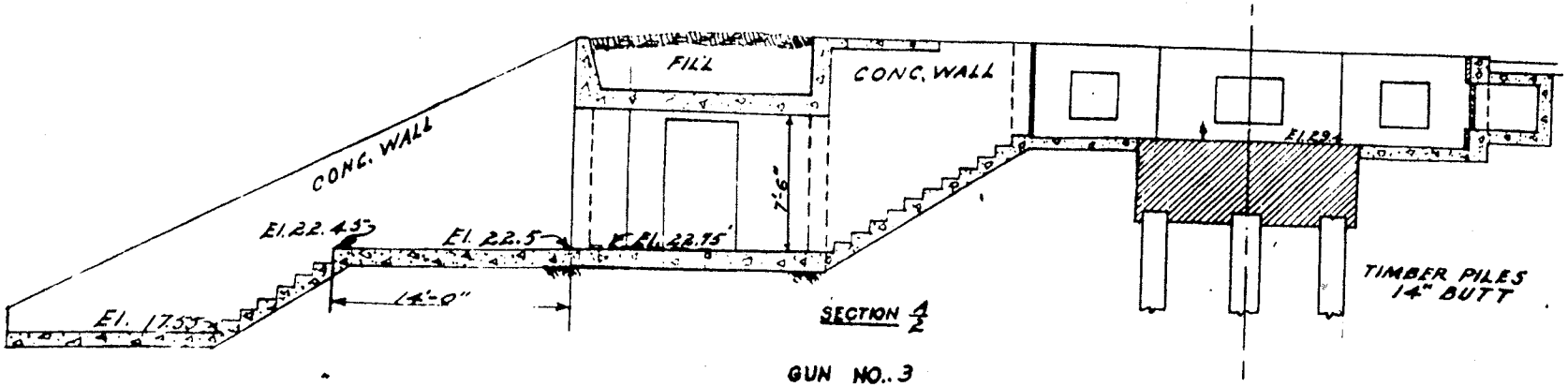
3" AA BATTERY NO. 1
FORT STORY, VA.
SHEET 2 OF 3



SECTION B/2
GUN NO. 1

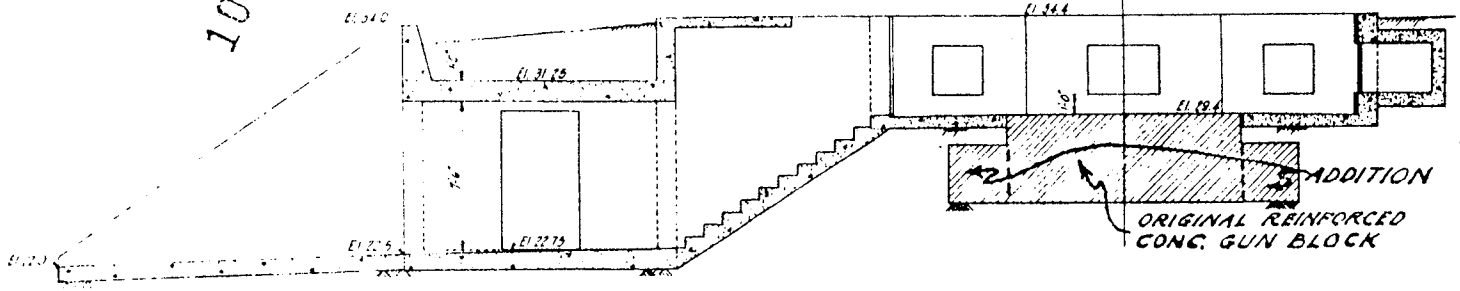


SECTION B/2
GUN NO. 2

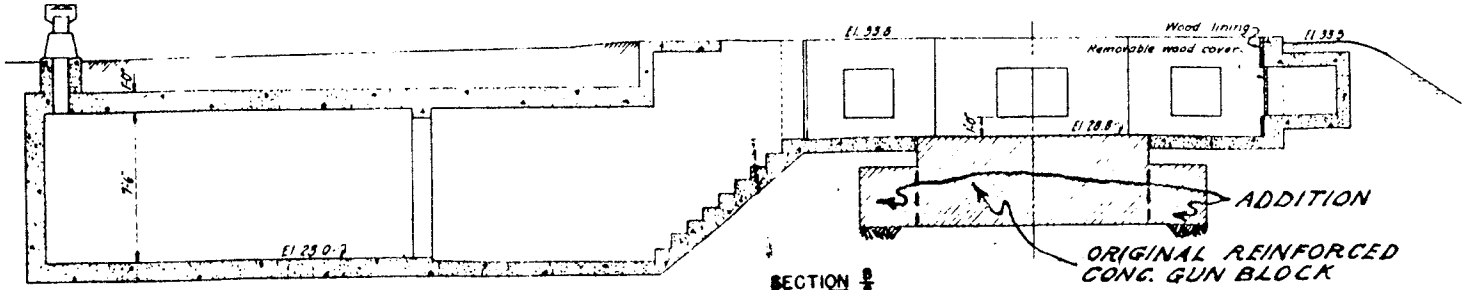


SECTION A/2
GUN NO. 3

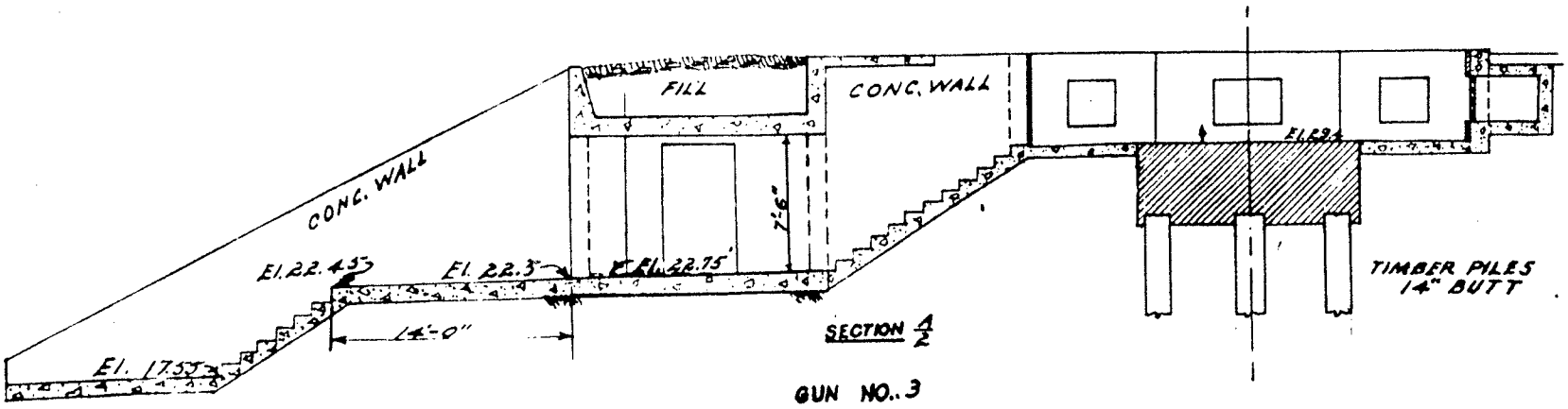
3" AA BATTERY NO. 1
FORT STORY, VA.
SHEET 2 OF 3



SECTION ℄
GUN NO. 1

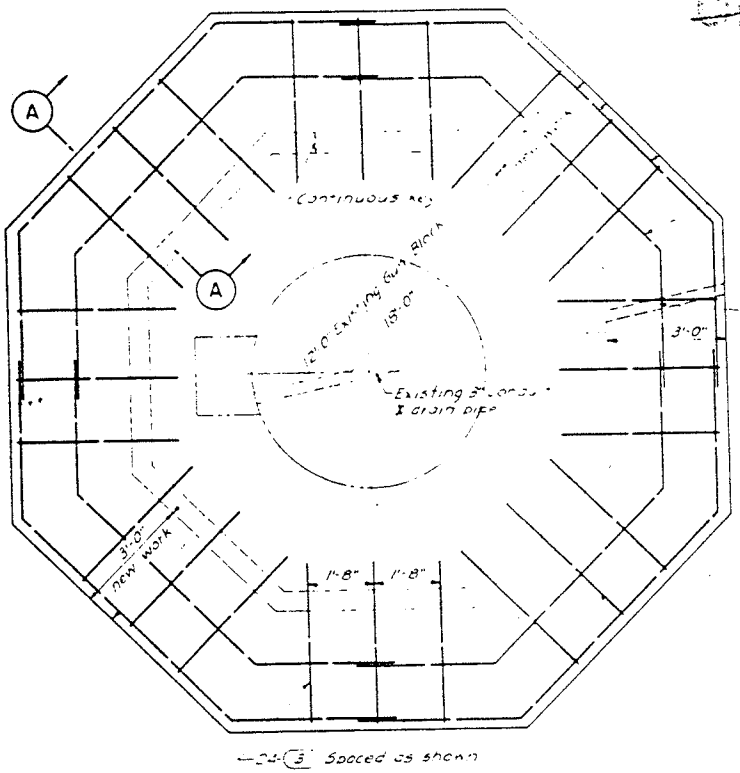


SECTION ℄
GUN NO.2



SECTION ℄
GUN NO. 3

3" AA BATTERY NO. 1
FORT STORY, VA.
SHEET 3 OF 3

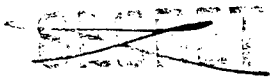


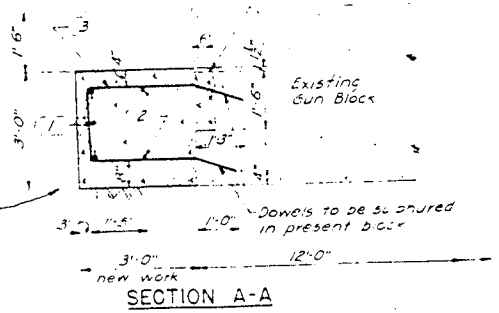
3'-0" (1) 1 Top, 1 center & 1 bottom

2'-0" (2) 1 Top & 1 bottom

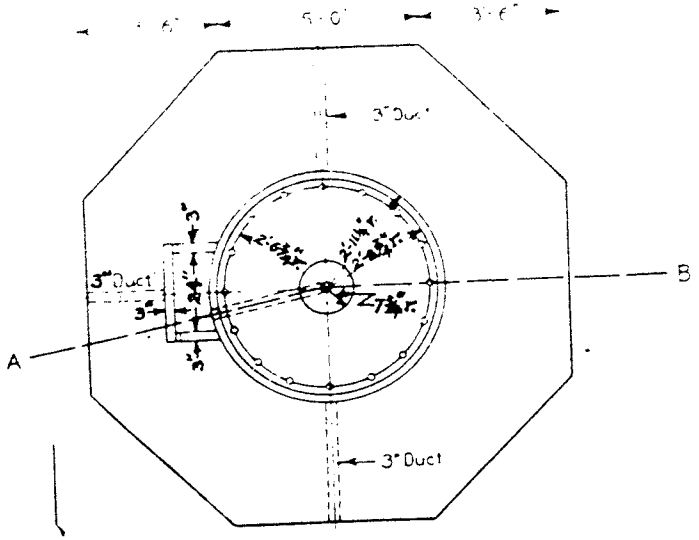
24-(3) Spaced as shown

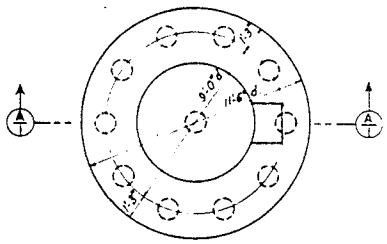
ADDITION TO GUN BLOCKS
NOS. 1 & 2



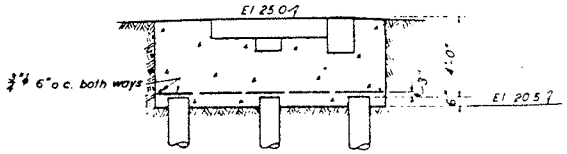


SECTION A-A



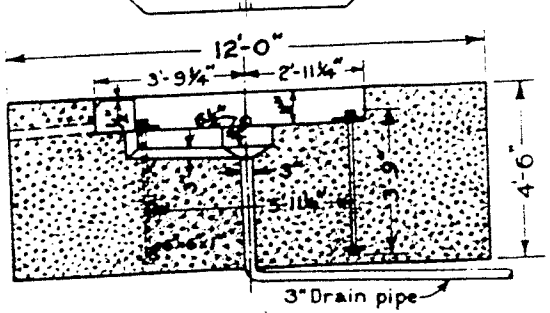


PLAN



SECTION A

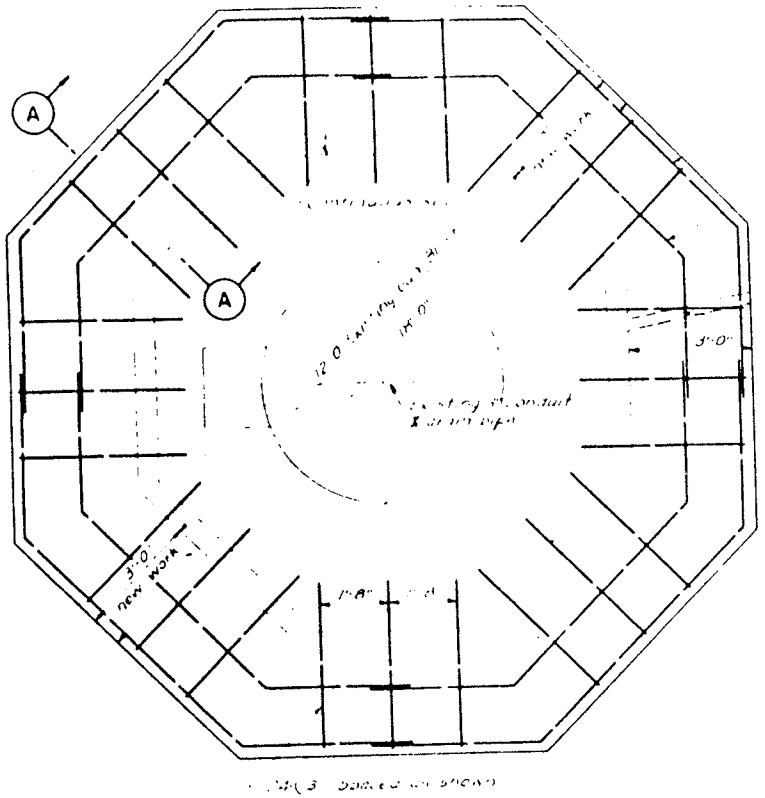
FOUNDATION FOR GUNBLOCK NO. 3



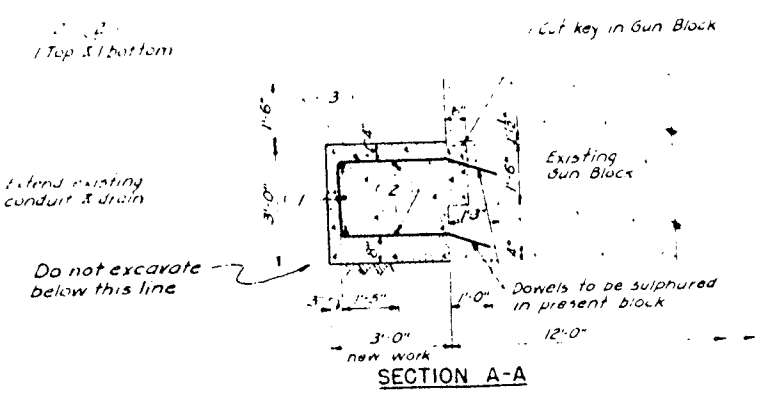
SECTION A-B

ORIGINAL GUN BLOCKS
NOS. 1, 2 & 3

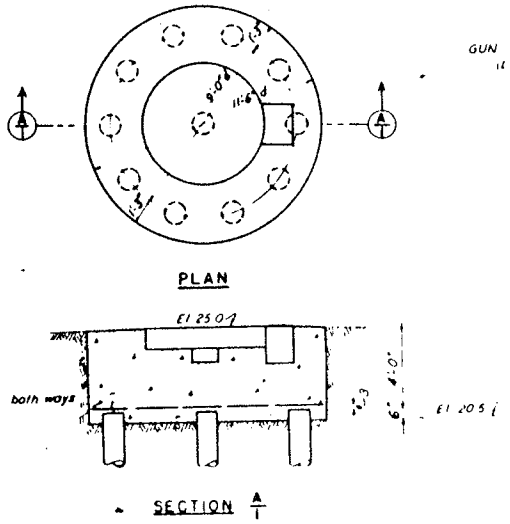
3"AA BATTERY NO. 1
FORT STORY, VA.
SHEET 3 OF 3



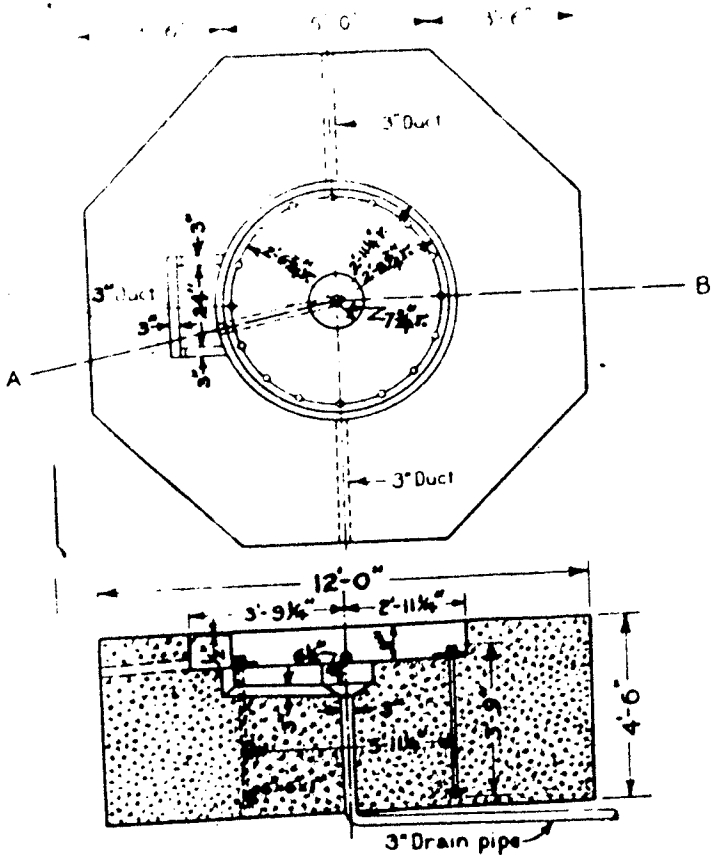
ADDITION TO GUN BLOCKS
NOS. 1 & 2



SECTION A-A



FOUNDATION FOR GUNBLOCK NO. 3



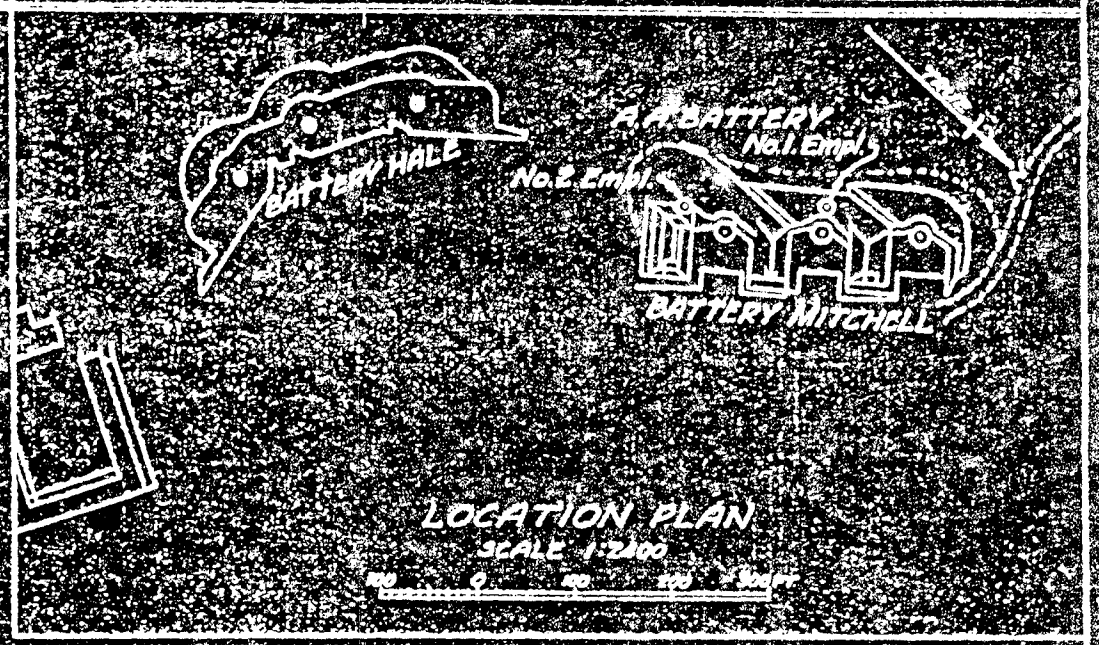
SECTION A-B
ORIGINAL GUN BLOCKS
NOS. 1, 2 & 3

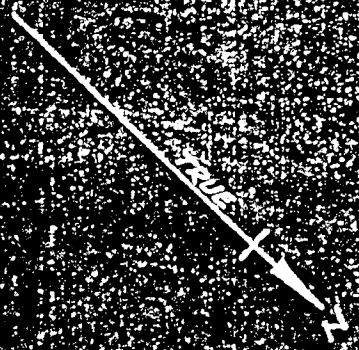
REPORT OF COMPLETED WORKS
(BATTERY PLAN)

FORM NO. 7

Corrected to Dec. 1, 1915

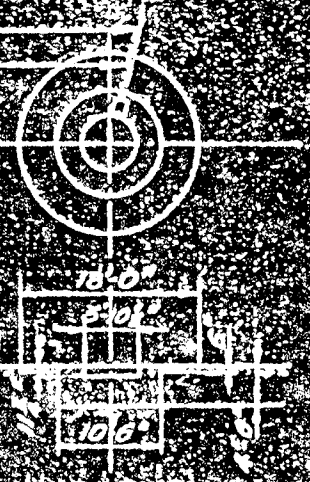
HARBOR DEFENSES OF NARRAGANSETT BAY.
FORT GREBLE, R. I.
A.A. BATTERY
No. of Guns 2, Caliber 3", Carriage A.A.



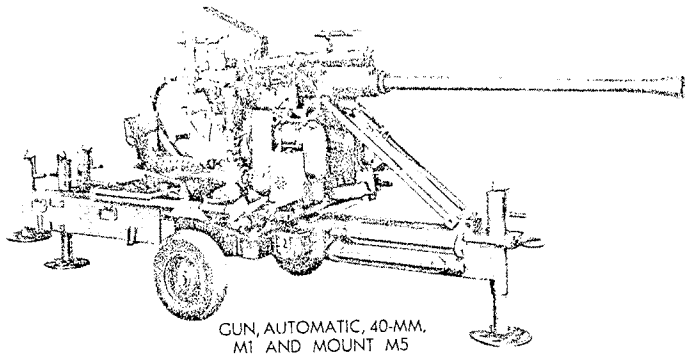


3" Conduit for Electric Wires
3" Drain to Stone Sump

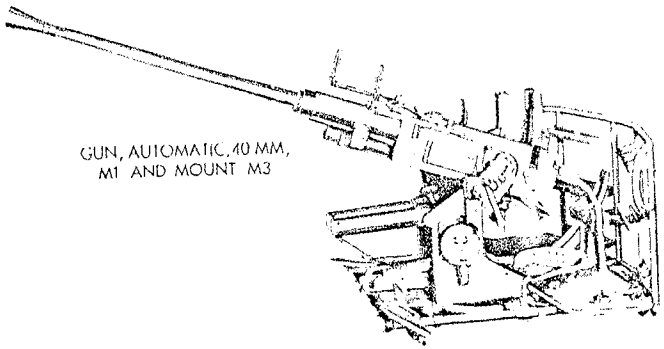
Dist. 150.19', Az. 316°-19'-56" No.1 to No.2



GUN, AUTOMATIC, 40-MM, M1; MOUNT, GUN, 40-MM, M3 AND M5



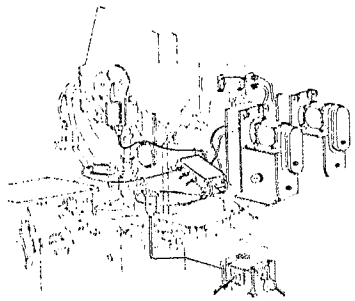
GUN, AUTOMATIC, 40-MM, M1 AND MOUNT M5



GUN, AUTOMATIC, 40 MM, M1 AND MOUNT M3

RELATED SIGHTING AND FIRE CONTROL MATERIEL

(ADDITIONAL MATERIEL LISTED ON FOLLOWING PAGE)



SYSTEM, REMOTE CONTROL, M15 (ON CARRIAGE PARTS)

DIRECTOR M5A3

SYSTEM, CABLE, M8

RA PD 107940B

GENERAL

The 40-mm gun M1 on the mount M5 is designed for transportation by air, but not for parachute delivery. The mount M5 is a two-wheel trailer type and the top carriage resembles the top carriage of the carriage M2A1 modified to reduce the over-all width.

The mount M5 has a narrow rear platform, detachable outer foot rests, pivotable seats, leveling jacks, and is equipped with oil gears for pointing by remote control. In firing position the wheels and their stub axles are removed and replaced with the three outriggers. The mount can be leveled from a slope of 10°. The mount can be towed over good roads at 20 to 25 miles per hour.

The mount M3 is bolted to the deck of submarine chasers. This mount is also installed on Transportation Corps vessels. The mount is substantially the upper structure of the carriage M2A1, but without the oil gears and the rear foot firing pedal, and with several minor modifications to eliminate the power drive. The same traversing gear ratio is provided on the mount M3 as used on the carriage M2A1. The direction of rotation of the mount M3 in traverse was reversed as used on the army carriage to conform with standard navy mounts in service.

GUN

Caliber	40-mm
Length	8 ft 8 in.
Length of rifling	6 ft 4 in.
Muzzle velocity	2,870 fps
Range (max):	
HE -Ver. (ltd. by SD tracer)	5,100 yd
Hor. (ltd. by SD tracer)	5,200 yd
AP-T	9,475 yd
Rate of fire	120 rounds per minute
Type of breechblock	Vertical sliding wedge
Method of loading	4-round clip, automatic or single shot
Type of firing mechanism	Spring-loaded pin (automatic)
Weight (tube and breech mechanism)	1,051 lb

AMMUNITION

Types	Fixed—HE-T; AP-T
Weights:	
Complete round	4.75 lb HE T
	4.58 lb AP-T
Projectile	2.06 lb HE T
	1.95 lb AP-T
Powder charge	0.72 lb HE T
	0.65 lb AP-T

RECOIL MECHANISM

Type	Hydrospring
Normal recoil at 0° elev.	7 1/16 in.
Maximum recoil at 0° elev.	9 7/16 in.
Normal recoil at 80° elev.	8 13/16 in.
Capacity	1 pt 5 oz

EQUILIBRATOR

Spring puller type

MOUNT

M5 only

Two-wheel, w/detachable wheels and three removable outriggers and one permanent outrigger

Maximum slope on which can be leveled	10°
Maximum elevation	90°
Maximum depression	—5°
Continuous traverse	360°
Tire size and type	22 x 7:25–11.50, airplane type
Tire pressure	55 lb
Type of brakes	Hand mechanical

OVER-ALL DIMENSIONS (traveling position)

Length	9 ft 9 3/4 in.
Height	6 ft 3 3/4 in.
Width	4 ft 9 3/4 in.
Road clearance	8 1/2 in.
Weight, for air transport:	
Mount	2,286 lb
Three outriggers	645 lb
Tube	295 lb

SHIPPING DATA

Gun M1 only

Number per box (double-end style)	1
Length	10 ft 7 3/4 in.
Width	1 ft 10 5/8 in.
Height	2 ft 7 3/4 in.
Volume	53.3 cu ft
Ship tons	1.33
Gun w/mount M3 or M5, K.D., w/equipment	
Number per crate (fully sheathed skid-type crate)	1
Length	14 ft
Width	5 ft 9 in.
Height	6 ft 7 in.
Volume	529.7 cu ft
Gross weight	7,620 lb
Ship tons	13.2

PRIME MOVER

½-ton, 4 x 4 truck

TIME TO EMPLACE

Gun alone	2 min
Gun w/F.C. equipment	12 min

REFERENCES

TM 9-252; SNL A-50; FM 44-61

RELATED SIGHTING AND FIRE CONTROL MATÉRIEL NOT ILLUSTRATED ON OPPOSITE PAGE

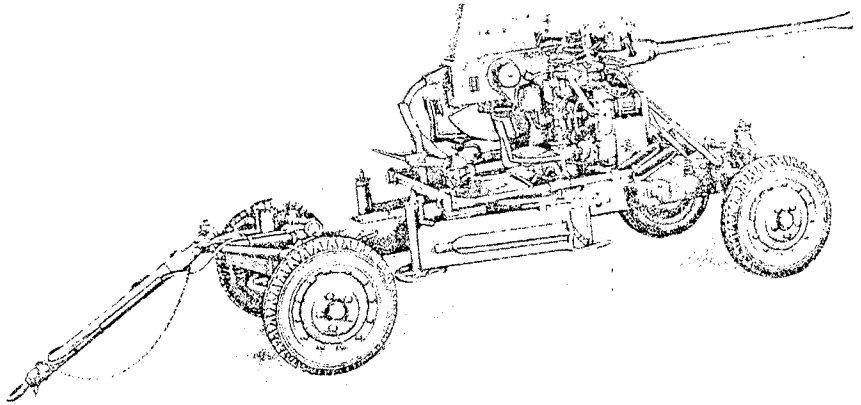
Binocular, 7 x 50 type
Director, M5 series (M5A3 illustrated)
Sight, computing, M7A1 or M19
System, remote control, M10 or M15 (M15 illustrated)
System, sighting, M3 (M3 mount only)
Unit, generating, M5 or M17
Watch, stop
Watch, wrist

Note. The only sighting and fire control equipment issued for the gun when mounted on the mount M3 is System, sighting, M3.

All other equipment listed here is for the gun when mounted on the mount M5.

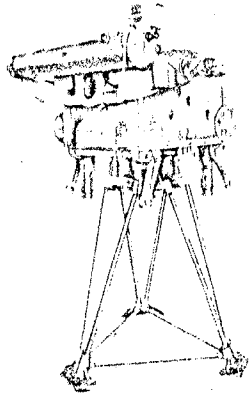
830949O—49—2

GUN, AUTOMATIC, 40-MM, M1; CARRIAGE, GUN, 40-MM, M2A1



RELATED SIGHTING AND FIRE CONTROL MATERIEL

(ADDITIONAL MATERIEL LISTED ON FOLLOWING PAGE)



DIRECTOR, M5A3

SYSTEM, REMOTE CONTROL, M15 (ON CARRIAGE PARTS)

SYSTEM, CABLE, M8

RA PD 107939A

GENERAL

The 40-mm automatic gun M1 is an antiaircraft weapon which fires fixed ammunition. It is air-cooled and capable of either automatic or semiautomatic fire. Firing may be controlled manually or automatically. Automatic control is by means of a director which controls one gun.

The carriage M2A1 has four wheels to permit towing by a prime mover. It is equipped with outrigger and leveling jacks. The weapon is normally fired with the carriage lowered to the ground and the outrigger spread. In this position the wheels are raised off the ground.

GUN

Caliber	40-mm
Length	8 ft 8 in.
Muzzle velocity	2,870 fps
Range (max):	
HE—Ver. (ltd. by SD tracer)	5,100 yd
Hor. (ltd. by SD tracer)	5,200 yd
AP–T	9,475 yd
Rate of fire	120 rounds per minute
Type of breechblock	Vertical sliding wedge
Method of loading	4-round clip, automatic or single shot
Type of firing mechanism	Spring-loaded pin (automatic)
Weight (tube and breech mechanism)	1,051 lb

AMMUNITION

Types	Fixed—HE–T; AP–T
Weights:	
Complete round	4.75 lb HE–T
	4.58 lb AP–T
Projectile	2.06 lb HE–T
	1.95 lb AP–T
Powder charge	0.72 lb HE–T
	0.65 lb AP–T

RECOIL MECHANISM

Type	Hydrospring
Normal recoil at 0° elevation	7 1/16 in.
Maximum recoil at 0° elevation	9 7/16 in.
Normal recoil at 80° elevation	8 13/16 in.
Capacity	1 pt 5 oz

EQUILIBRATOR

Spring puller type

CARRIAGE

Two-axle, with chassis of longitudinal girders and two transverse outriggers equipped with four adjustable leveling jacks.

Maximum elevation	90°
Maximum depression:	
Carriage level	—6°
With jacks	—11°
Traverse, continuous	360°
Tire size and type	6.00 x 20 standard
Tire pressure	45 lb
Type of brakes	Electric service brakes Hand parking brakes

OVER-ALL DIMENSIONS (traveling position)

Length	18 ft 9 1/2 in.
Height	6 ft 7 1/2 in.
Width	6 ft
Road clearance	1 ft 2 1/8 in.
Weight, complete	5,850 lb

SHIPPING DATA

Gun and carriage, K.D., w/equipment

Number per crate (fully sheathed skid-type crate)	1
Length	14 ft 5 in.
Width	6 ft 1 1/2 in.
Height	5 ft 11 5/8 in.
Volume	525.9 cu ft
Gross Weight	12,303 lb
Ship tons	13.15

Gun and carriage also shipped uncrated in traveling position.

PRIME MOVER

2 1/2-ton, 6 x 6, cargo truck

TIME TO EMPLACE

Gun alone	2 min
Gun w/F.C. equipment	12 min

NOTE

Barrel may be replaced in approximately 2 minutes.

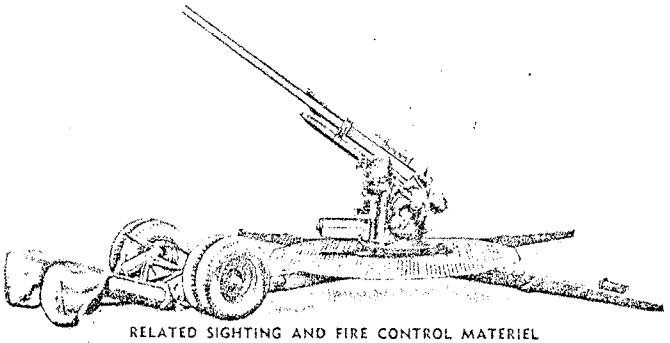
REFERENCES

TM 9–252, TM 9–1252, TM 9–1253; SNL A–50; FM 44–60

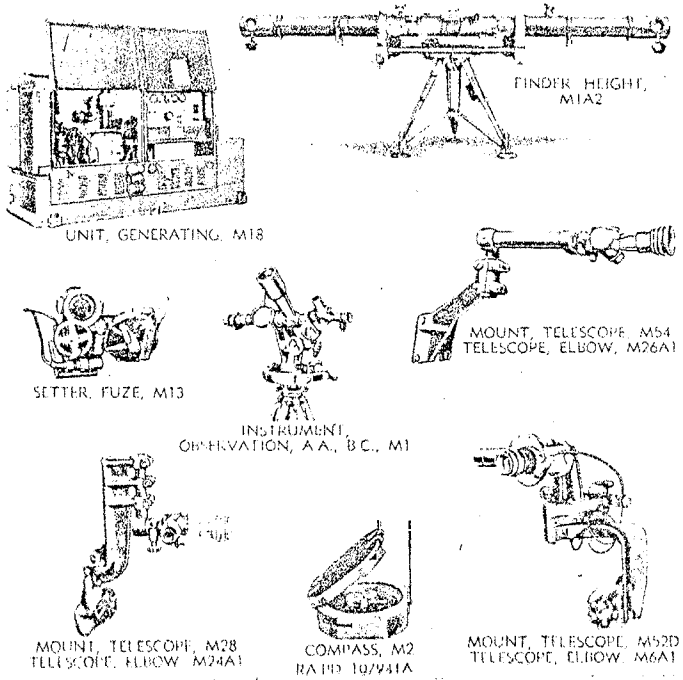
RELATED SIGHTING AND FIRE CONTROL MATÉRIEL NOT ILLUSTRATED ON OPPOSITE PAGE

Binocular, 7 x 50 type
Director, M5 series (M5A3 illustrated)
Sight, computing M7A1 or M19
System, remote control, M10 or M15 (M15 illustrated)
Unit, generating, M6 or M17
Watch, stop
Watch, wrist

G..., 90-MM, M1 AND M1A1; MOUNT, GUN, ANTIAIRCRAFT, 90-MM, M1 AND M1A1



RELATED SIGHTING AND FIRE CONTROL MATERIEL



GENERAL

This matériel is normally emplaced in batteries of four guns, each battery controlled by a remotely located director and associated equipment against aircraft at medium heights. It may also be used against ground and waterborne targets. Each gun may be manually controlled. On its single bogie the gun and mount may be towed at moderate speeds on good roads.

GUN

Caliber 90-mm
Length .....15 ft 6 in.
Muzzle velocity:
- HE, SMOKE .....2,700 fps
- APC-T .....2,800 fps
- HVAP-T .....3,350 fps

Maximum range:
- HE (ltd. by 30-sec MT fuze) ..12,000 yd
- HE (w/PD fuze), SMOKE....19,560 yd
- APC-T .....21,400 yd
- HVAP-T .....15,700 yd

Rate of fire .....22 rounds per minute
Type of breechblock...Vertical sliding wedge
Method of loading .....Hand
Type of firing mechanism.....Percussion, manual
Weight (tube and breech mechanism) .....2,505 lb

DIFFERENCES BETWEEN MODELS

The guns M1 and M1A1 are similar except for the tube support and cocking lever.

AMMUNITION

Types .....Fixed—HE; APC-T; HVAP-T; SMOKE
Weights:
- Complete round .....41.93 lb HE
  37.13 lb HVAP-T
  42.04 lb SMOKE
  43.87 lb APC-T
- Projectile .....23.40 lb HE, SMOKE
  16.80 lb HVAP-T
  24.11 lb APC-T
- Powder charge .....7.31 lb HE, SMOKE
  8.06 lb APC-T
  8.40 lb HVAP-T

RECOIL MECHANISM

Type and model.....Hydropneumatic (variable); M1 or M1A1
Normal recoil at 0° elevation .....40 to 46 in.
Maximum recoil at 0° elevation .....51½ in.
Normal recoil at 80° elevation .....23½ to 24½ in.
Maximum recoil at 80° elevation .....27¼ in.
Initial gas pressure at 70° F. .....830 to 1,000 psi
Counterrecoil buffer capacity.....3 pt 8 oz
Capacity .....3 qt 1 pt

EQUILIBRATOR

Spring puller type (adjustable)

MOUNT

Self-contained, mobile. Supported in traveling position by single-axle, dual-wheeled bogie. In firing position, rests on pedestal, steadied by outriggers, bogie being removed.
Maximum elevation .....80°
Maximum depression .....0°
Continuous traverse 360
Tire size and type.....10.00 x 22, bus balloon or combat
Tire pressure .....70 lb
Type of brakes.....Electric service brake
Hand parking brake

OVER-ALL DIMENSIONS (traveling position)

Length .....20 ft 10 in.
Height .....9 ft 4 in.
Width .....8 ft 4⅞ in.
Road clearance .....1 ft
Complete weight .....19,000 lb

SHIPPING DATA

Gun M1 or M1A1 w/mount M1A1, K.D., w/equipment
Number per crate (fully sheathed skid-type crate) 1
Length .....20 ft 10½ in.
Width .....8 ft 7½ in.
Height .....7 ft ⅝ in.
Volume .....1,270.3 cu ft
Gross weight .....23,429 lb
Ship tons 31.78

PRIME MOVER

7½-ton, 6 x 6, truck or 18-ton high-speed tractor M4

TIME TO EMPLACE

Gun alone .....7 min
Gun w/F.C. equipment .....30 min

NOTES

Two jacks, 90° apart, are used to level the mount (up to 4 deg slope).

Spring rammer M8A1 is being removed, entailing rebalancing of tipping parts of mount.

For antiaircraft fire, HE shells are fitted with mechanical time or VT fuzes; for ground fire PD or VT fuzes are used. In addition, the 75-sec mechanical time fuze M67A3 and CP fuze M78 are authorized.

This gun fires the same ammunition as the 90-mm guns M2, M3, and T8.

REFERENCES

TM 9-370, TM 9-1370 series; SNL D-28; FM 4-126

RELATED SIGHTING AND FIRE CONTROL MATÉRIEL NOT ILLUSTRATED ON OPPOSITE PAGE

Binocular, 7 x 50 type
Circle, aiming, M1
Director, M7A1B1 or M9 series
Finder, height, M1 or M1A2 (M1A2 illustrated)
Indicator, powder temperature, M13
Quadrant, gunner's, M1 or M1918
Rule, slide, M1
Setter, fuze, M23
Sight, bore
System, cable, M1
System, remote control, M2
Table, firing, 90AA-B-3
Table, firing, 90-C-3
Table, firing, 90-F-1
Table, graphical firing, M26, M26A1, or M42
Unit, generating, M7, M7A1, M15A1, or M18 (M18 illustrated)
Watch, stop
Watch, wrist

3 INCH GUN UNIT, MODEL OF 1917 A.A.

Number manufactured	161
Serial number	
Weight including breech mechanism	3105.
Length, total overall	174.65
Length, muzzle to breech face	174.65
Length of bore in calibers	66.
Area of cross section through rifling	7.265
Diameter over powder chamber, outside	12.2
Diameter at muzzle on bell	5.5
Trunnion diameter	
Trunnion length	
Distance between trunnion rim base	
Distance from muzzle to trunnion axis	
Distance from muzzle to c.of g. with S.A.	
Number of grooves	24
Groove length	137.28
Groove width	.2927
Groove depth	.03
Land width	.10
Twist, type	Increasing
Twist, direction	Right Hand
Twist, slope	1-60 to 1-25
Powder chamber form	Conical
Maximum diameter of chamber	4.31
Distance from breech face to rifling	37.37
Diameter of breech opening	
Type of breech block	Drop Sliding
Type of firing mechanism	Pers. Tasker
Tangential strength through chamber	66816.
Maximum pressure, powder specifications	38000.
Factor of safety, maximum pressure	1.775
Length, breech closed to shell base	25.67
Chamber capacity	296.
Bore capacity	1308.
Bore capacity/chamber capacity	4.42
Chamber capacity/bore section	40.7

— MOUNT —

Carriage, type	Barbette
Model	1917
Elevation, maximum	90°
Elevation, minimum	0°
Loading angle	
Traverse	360°
Weight of recoiling parts	
Weight of tipping parts	
Weight of rotating parts	
Weight of unit in firing position	16880.
Weight of unit in traveling position	
Length of normal recoil	
Total piston rod pull	21766.
Number of piston rods	1
Initial pressure in air recuperator	
Liquid pressure in recuperator	
Method of loading	Hand
Type of shot truck	
Counterweight, disappearing carriage	
Models of guns mounted on this carriage	1917, '17 MI, 1917 MII
Model of sight	A. A. Carriages Mod. 1917
Model of quadrant	1918

— ELECTRICAL DATA —

Electric lamp voltage	110 V
Electric traversing	
Electric elevating	
Electric retracing	
Electric ramming	
Power voltage	

— SPECIAL DATA —

Trucks, number per mount	
Maximum weight per axle	
Diameter of wheels	
Journals, type	
Journals, size	
Distance between axles	
Power of generator	
Traverse of top carriage	
Traverse on platform	
Total weight on front truck	
Total weight on rear truck	

— PROJECTILES VELOCITIES & RANGES — 3 INCH GUN Mod. of 1917 A.A.

Kind	C. S. Shell	C. S. Shell	Shrapnel
Designation	M K. I	Mod. 1915	M K. I

3 INCH GUN UNIT, MODEL OF 1918 A.A.

Number manufactured	
Serial number	
Weight including breech mechanism	1966.
Length, total overall	129.69
Length, muzzle to breech face	129.59
Length of bore in calibers	40
Area of cross section through rifling	7.293
Diameter over powder chamber, outside	10.197
Diameter at muzzle on bell	4.6
Trunnion diameter	
Trunnion length	
Distance between trunnion rim base	
Distance from muzzle to trunnion axis	
Distance from muzzle to c.of g. with B.M.	
Number of grooves	24
Groove length	
Groove width	.2927
Groove depth	.03
Land width	.10
Twist, type	Increasing
Twist, direction	Right Hand
Twist, slope	1-50 to 1-25
Powder chamber form	Conical
Maximum diameter of chamber	3.41
Distance from breech face to rifling	33.82
Diameter of breech opening	3.41
Type of breech block	Drop Sliding
Type of firing mechanism	Perc.Tasker
Tangential strength through chamber	53046.
Maximum pressure, powder specifications	34000.
Factor of safety, maximum pressure	1.56
Length, breech closed to shell base	25.67
Chamber capacity	296.
Bore capacity	910.
Bore capacity/chamber capacity	4.42
Chamber capacity/bore section	40.7

— MOUNT —

Carriage, type	Auto-trailer
Model	1917
Elevation, maximum	85°
Elevation, minimum	10°
Loading angle	
Traverse	360°
Weight of recoiling parts	
Weight of tipping parts	
Weight of rotating parts	
Weight of unit in firing position	13200.
Weight of unit in traveling position	14085.
Length of normal recoil	16.-10
Total piston rod pull	
Number of piston rods	1
Initial pressure in air recuperator	
Liquid pressure in recuperator	
Method of loading	Hand
Type of shot truck	
Counterweight, disappearing carriage	
Models of guns mounted on this carriage	1918
Model of sight	1918
Model of quadrant	1919

— ELECTRICAL DATA —

Electric lamp voltage	6
Electric traversing	

— PROJECTILES VELOCITIES & RANGES — 3 INCH GUN MOD. 191

Kind	C. S. Shell	C. S. Shell	Shrapnel
Designation	MK I	Mod.1918	MK I
Material	Forged Steel	Forged Steel	Forged Steel
Weight, range table	16.	15.71	16.
Length without fuze	10.82	10.49	11.547
Diameter of band maximum	3.38	3.38	3.38
Diameter of bourrelet	3.32	3.32	3.34
Diameter forward of band	2.96	2.96	2.96
Volume of powder space	30.16	7.37	
Sectional density	1.600	1.14	
Weight of bursting charge	1.72	.35	
Kind of bursting charge	T.N.T.	Ex. "D"	
Booster, kind and mark			
Adapter, kind and mark			
Travel of projectile	169.33	169.33	169.33
Muzzle velocity, maximum charge	2420.	2420.	2420.
Muzzle velocity, minimum charge			
Muzzle energy, minimum charge			
Muzzle energy, maximum charge	699.	699.	699.
Muzzle energy per pound of gun	.305	.305	.305
Muzzle energy per pound of powder	147.5	147.5	147.5
Weight of shell/weight of gun	1/121	1/125	1/121
Velocity of rotation, maximum charge	23040. R.P.M.	23040. R.P.M.	23040. R.P.M.
Range table W.D. form number			
Range, max. range elev. max. charge			
Range, max. range elev. min. charge			
Nominal vel. max. charge, max. range elev.			
Range at 15° elev. max. charge			
Range at 15° elev. min. charge			

— POWDER & IGNITOR —

Zones	1		
Charge weight exclusive of ignitor	4.64		
Density of loading	.434		
Kind of powder	Nitro-cell		
Form of grain	Multi-perf.		
Powder web size	.028		
Method of loading	Fixed		
Form of charge	Cart.Case		
Number of sections			
Ignitor type & distribution	Primer Cap.		
Ignitor weight			

— FUZE —

Kind	Time Fuze 21 sec.	Delay (Base)
Designation	MK II (Type B.)	MK II
Weights	.66	1.21
Length of delay		
Used with shell	MK I Shell & MK I Shrap.	Mod. 1918

— PRIMER —

Kind	Percussion	
Designation		
Size	110 Gr.	

C. S. Shell Mod. 1918 not to be used in anti-aircraft fire.

— PROJECTILES VELOCITIES & RANGES — 3 INCH GUN MOD. 1918 A.A.

Kind	C. S. Shell	C. S. Shell	Shrapnel
Designation	MK I	Mod.1918	MK I
Material	Forged Steel	Forged Steel	Forged Steel

— PROJECTILES VELOCITIES & RANGES — 3 INCH GUN Mod. of 1917 A.A.

Kind	C. S. Shell	C. S. Shell	Shrapnel			
Designation	M.K. I	Mod. 1915	M.K. I			
Material	Forged Steel	Forged Steel	Forged Steel			
Weight, range table	15.	15.71	15.			
Length without fuze	10.82	12.85	11.547			
Diameter of band maximum	3.08	3.09	3.08			
Diameter of bourrelet	2.99	2.99	2.99			
Diameter forward of band	2.98	2.98	2.96			
Volume of cavity, fused	30.42	7.37				
Sectional density	1.168	1.71				
Weight of bursting charge	1.72	.35				
Kind of bursting charge	T.N.T.	Expl."D"				
Locater, kind and mark						
Adapter, kind and mark						
Travel of projectile	139.33	139.33	139.33			
Muzzle velocity, maximum charge	2600.	2600.	2600.			
Muzzle velocity, minimum charge						
Muzzle energy, minimum charge						
Muzzle energy, maximum charge	703.	738.	703.			
Muzzle energy per pound of gun	.226	.238	.226			
Muzzle energy per pound of powder	132.5	132.5	132.5			
Weight of shell/weight of gun	1/207	1/197	1/207			
Velocity of rotation, maximum charge	24960. R.P.M.	24960. R.P.M.	24960. R.P.M.			
Range table W.D. form number						
Range, max. range elev. max. charge						
Range, max. range elev. min. charge						
Terminal vel. max. charge, max. range elev.						
Range at 15° Elev. max. charge						
Range at 15° Elev. min. charge						

— POWDER & IGNITOR —

Charge No.						
Charge weight exclusive of Igniter	6.312					
Density of loading	.426					
Kind of powder	Nitro-cell					
Form of grain	Multi-perf.					
Powder web size	.045					
Method of loading	Fixed					
Form of charge	Cartridge					
Number of sections						
Igniter type & distribution	Primer Cap					
Igniter weight						

— FUZE —

Kind	Time Fuze	Delay				
Designation	M.K. II (Type "S")	M.L.X.				
Elements	.66 lbs.	1.21 lbs.				
Length of delay						
Fuze with shell	M.K. I Shell & M.K. I Shrapnel Mod. 1917					

— PRIMER —

Kind	Percussion					
Designation						
Size	210 Gr.					

— PROJECTILES VELOCITIES & RANGES — 3 INCH GUN MOD. 1918 A.A.

Kind	C. S. Shell	C. S. Shell	Shrapnel			
Designation	MK I	Mod. 1915	MK I			
Material	Forged Steel	Forged Steel	Forged Steel			
Weight, range table	15.	15.71	15.			
Length without fuze	10.82	12.26	11.547			
Diameter of band maximum	3.08	3.08	3.08			
Diameter of bourrelet	2.99	2.99	2.99			
Diameter forward of band	2.98	2.98	2.98			
Volume of cavity, fuzed	30.48	7.37				
Gravitional density	1.666	1.74				
Weight of bursting charge	1.72	.35				
Kind of bursting charge	T.N.T.	Ex. "D"				
Booster, kind and mark						
Adapter, kind and mark						
Travel of projectile	139.33	139.33	139.33			
Muzzle velocity, maximum charge	2400.	2400.	2400.			
Muzzle velocity, minimum charge						
Muzzle energy, minimum charge						
Muzzle energy, maximum charge	599.	599.	599.			
Muzzle energy per pound of gun	.305	.305	.305			
Muzzle energy per pound of powder	143.5	134.5	134.6			
Weight of shell/weight of gun	1/131	1/125	1/131			
Velocity of rotation, maximum charge	23040. R.P.M.	23040. R.P.M.	23040. R.P.M.			
Range table W.D. form number						
Range, max. range Elev. max. charge						
Range, max. range Elev. min. charge						
Terminal vel. max. charge, max. range elev.						
Range at 16° Elev. max. charge						
Range at 16° Elev. min. charge						

— POWDER & IGNITOR —

Rounds	1					
Charge weight exclusive of igniter	4.64					
Density of loading	.434					
Kind of powder	Nitro-cell					
Form of grain	Multi-perf.					
Powder web size	.046					
Method of loading	Fixed					
Form of charge	Cart. Case					
Number of sections						
Igniter type & distribution	Primer Cap.					
Igniter weight						

— FUZE —

Kind	Time Fuze 21 sec.	Delay (Base)				
Designation	MK II (Type B.)	MK IX				
Weights	.66	2.21				
Length of delay						
Used with shell	MK I Shell & MK I Shrap.	Mod. 1915				

— PRIMER —

Kind	Percussion					
Designation						
Size	110 Gr.					

NOTE: C. S. Shell Mod. 1918 not to be used in anti-aircraft fire.

ANTI-AIRCRAFT ARTILLERY.

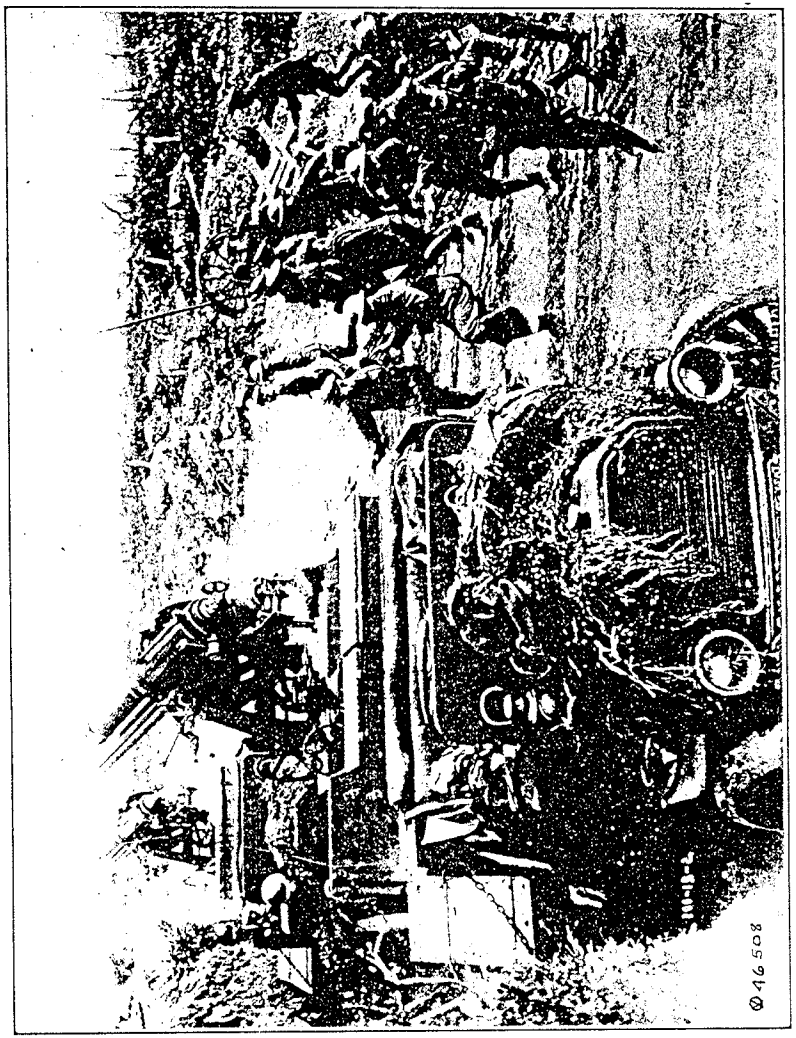
In considering the question of antiaircraft matériel it is to be remembered that the science of anti-aircraft gunnery has changed probably to a greater extent than that of any other branch of the service. It was unheard of at the beginning of the war, and in consequence has grown from nothing at all to an important phase of operations. As a result, matériel is constantly changing and can not be said to have reached a definite basis even at this time. The matériel was greatly affected also by the change from "position warfare" to warfare of motion; portability changing from a somewhat neglected factor to one of paramount importance.

In field artillery practice range problems are presented in connection with mortars, howitzers, and guns, but the results to be accomplished and the problems in connection with each of these weapons are quite different. The provided elevation of the guns of some calibers is small, while the muzzle velocity of some of the howitzers and all of the mortars is comparatively low; also the traverse of all three different types of weapons is limited. The field target is usually stationary, maps being available for establishing its position, and ample time is available in which to figure its range. Observation of the point of fall of one shot serves as a guide in correcting the range for the next shot. Frequently it is possible to choose atmospheric conditions under which the weapon would be employed, and assisting or opposing longitudinal windage, or driftage due to side windage, is calculated with the aid of wind gauges.

For anti-aircraft service the problem is entirely different. The single weapon must be able to cover the elevations of all three types of the field artillery weapons and preferably have a traverse of 360°. These wide variations in elevation introduce serious recoil problems, and the difference in the traverse problem may be to some extent illustrated by reference to the fact that the total traverse of the 75-millimeter French, model 1897 M1, field gun is only 6°.

Instead of a stationary target there may be presented one whose speed is one-sixth of the speed of the projectile itself and whose course can in no wise be forecast by road direction or terrain formation and whose position may be at any vertical or horizontal angle. The possible altitude and speed of airplanes increased from time to time, making useless the earlier and present basic data to be employed in the design of protective matériel. Under certain conditions of airplane approach the range must be calculated on the instant and there is no choice as to atmospheric conditions. As the target is not stationary, range corrections are difficult to estimate by observation.

While gauges may indicate the direction and force of the wind at the altitude at which they are set, they furnish no indication of air currents existing at other altitudes through which it might be necessary for the anti-aircraft projectile to pass. With the flat trajectory of a fieldpiece at but a few degrees elevation, the density of atmosphere through which the projectile must pass is largely uniform, while at



CANADIAN ANTIAIRCRAFT GUN MOUNTED ON AUTOTRUCK IN ACTION.

high angles of fire with anti-aircraft guns the projectile passes through atmospheres of different rarefactions, and hence different resistances to the passage of the projectile. These influences affect the trajectory of the projectile, the rate of travel of the projectile, and the time element of the burning of the fuze.

With field artillery, shrapnel is employed with both a time fuze and an impact fuze, and high-explosive shell with impact fuze only, but

anti-aircraft disrupting projectiles are fitted only with time fuzes, as otherwise a projectile which has missed its aerial mark would be apt to cause damage within friendly lines through impact explosion on reaching the ground.

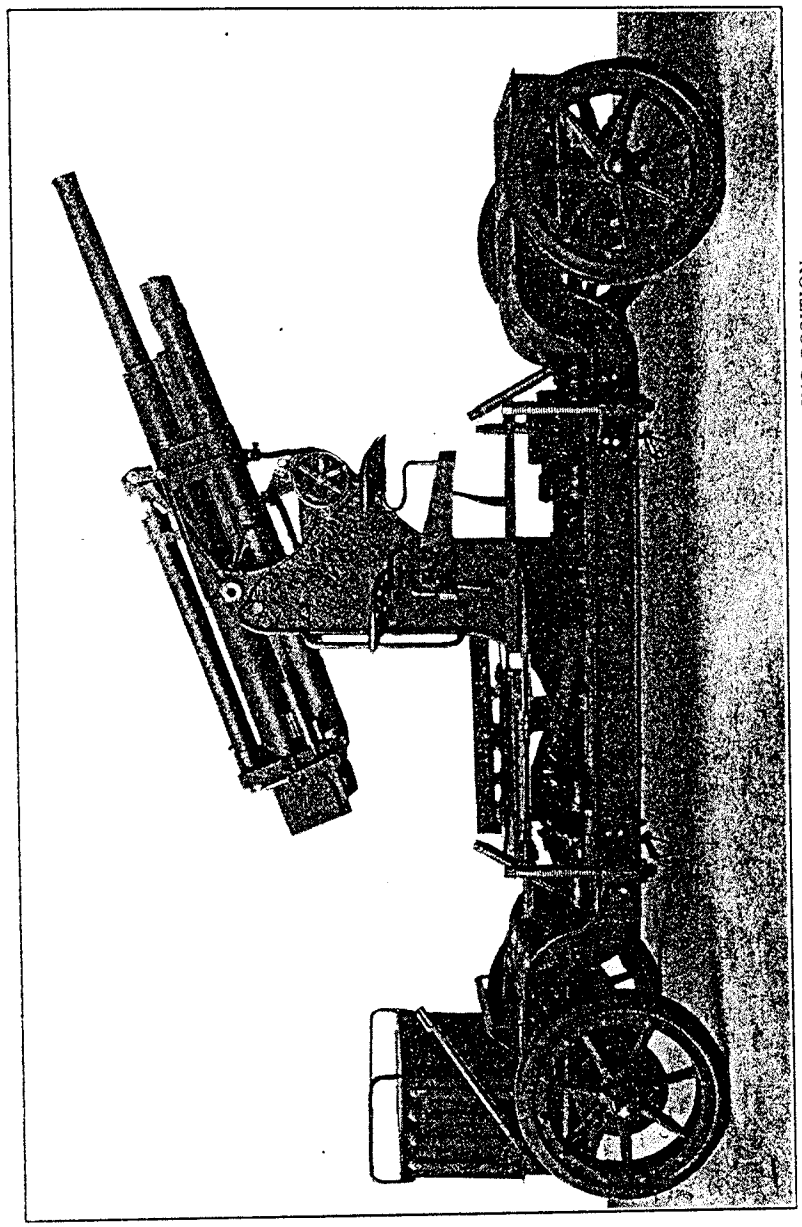
As there is practically no position which is entirely free from the possibility of aircraft attack, and as there is no means of determining the direction from which such attack may come, ready mobility of anti-aircraft guns is most desirable, and as opportunity to reach the target is frequently only momentary, rapidity of sighting and of firing is essential. In the case of indirect fire from a camouflaged position, the gunner has not even had a view of the approaching plane, but must lay his gun on the basis of telephone data, or data otherwise transmitted from the battery commander's station.

The anti-aircraft target may be a balloon—either stationary or towed—a dirigible, or an airplane, but is most frequently the latter. Location of the position of balloons or dirigibles is comparatively simple, as compared with airplane location, owing to the size of the target and the stationary position or low speed of motion. For night fire, searchlights or other illuminating means are required, and for night fire or protective fire in thick weather, sound-locating devices are employed.

The earlier fire from anti-aircraft artillery was directed solely from the burst; that is, by firing a shot, and judging of the direction of the next shot solely by observation of the nearness to which the burst of the first shot had approximated the position of the target. In the meantime, however, the position of the target had changed. This system has given way to the use of an elaborate system of instruments for the determination of fire in accordance with certain established principles.

In the attack upon aircraft the desired end may be accomplished either by the destruction of the aircraft itself or by the disabling of its occupants, in which latter case the destruction of the aircraft would follow. The methods adopted include destruction by incendiarism, by direct hits, by flying particles from exploding shell or shrapnel, and by shell shock. Methods of fire may involve explosive projectiles from a single gun, salvos or barrage fire from a number of guns, rapid firing from pom-poms (small caliber guns, firing explosive projectiles), or from machine guns firing small arm ammunition.

Because of the important field played by aerial sound-detecting apparatus, searchlights, and telephony, including wireless, future progress in the design of anti-aircraft artillery will consider these subjects. With the perfection of airplane motors and their interconnected functioning apparatus, the design of aircraft, and the art of flying, other factors upon which the design of artillery equipment should likewise be based, enter into this problem.



RIGHT SIDE OF AUTO-TRAILER CARRIAGE IN TRAVELING POSITION.

3-INCH ANTI-AIRCRAFT GUN MATÉRIEL, MODEL 1918.

It is hardly possible to estimate how great will be the future importance of the perfection of the country's aerial defense from a strategic point of view. Aviation as an offensive arm will remain a principal arm, and anti-aircraft artillery, as a defense branch, will play the part that coast artillery plays to the naval squadrons.

Anti-aircraft gunnery differs from other forms of gunnery, such as field-artillery problems. It is a new subject, one more complicated than any other artillery problem, and consequently one which essentially demands new methods and modes of measurement. Development, however, has led to the design of the 3-inch auto-trailer carriage.

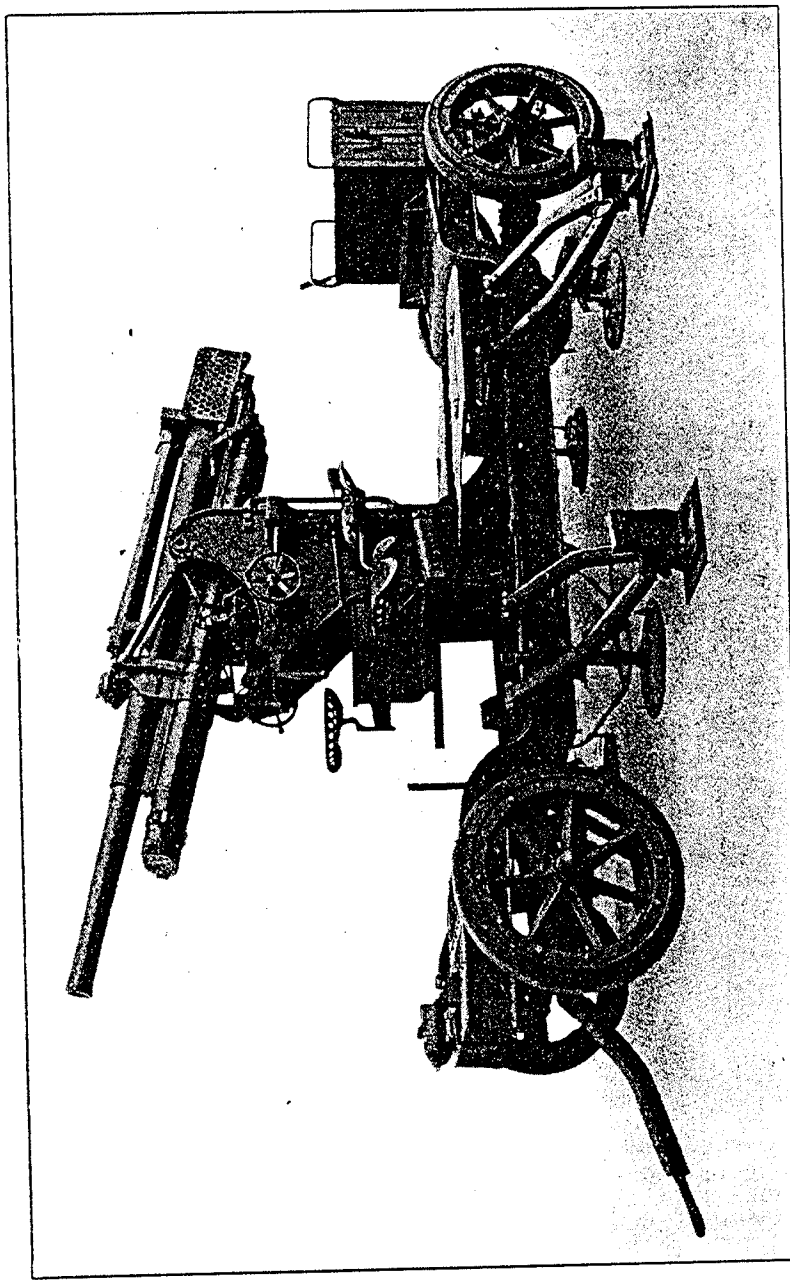
The 3-inch auto-trailer carriage unit consists of a 3-inch gun, model 1918, anti-aircraft, and a 3-inch auto-trailer carriage, model of 1917, mounted on a four-wheel trailer truck, having springs and solid rubber tired wheels. The gun and the mount remain fixed on the trailer, both in traveling and in battery positions.

The muzzle velocity of the gun is 2,400 foot-seconds. Both shrapnel and high-explosive shells, each weighing about 15 pounds, are employed. At a maximum elevation of 85° the maximum vertical ordinate, limited by the time fuze, is 7,940 meters. At minimum elevation of 10° the projectile strikes the ground at approximately 6,100 meters. At 23° elevation the bursting vertical ordinate is 1,176 meters, and the horizontal ordinate approximately 7,025 meters.

The recoil mechanism is similar to that employed with the American 75 millimeter, model 1916, field gun, but with the use of a spear-head counter-recoil buffer. This recoil mechanism is of the hydro-spring type and the variable adjustment of the stroke is governed by a rotating valve, the movement of which moves port holes behind the edges of three lands permitting the passage of oil to the by-passing recesses.

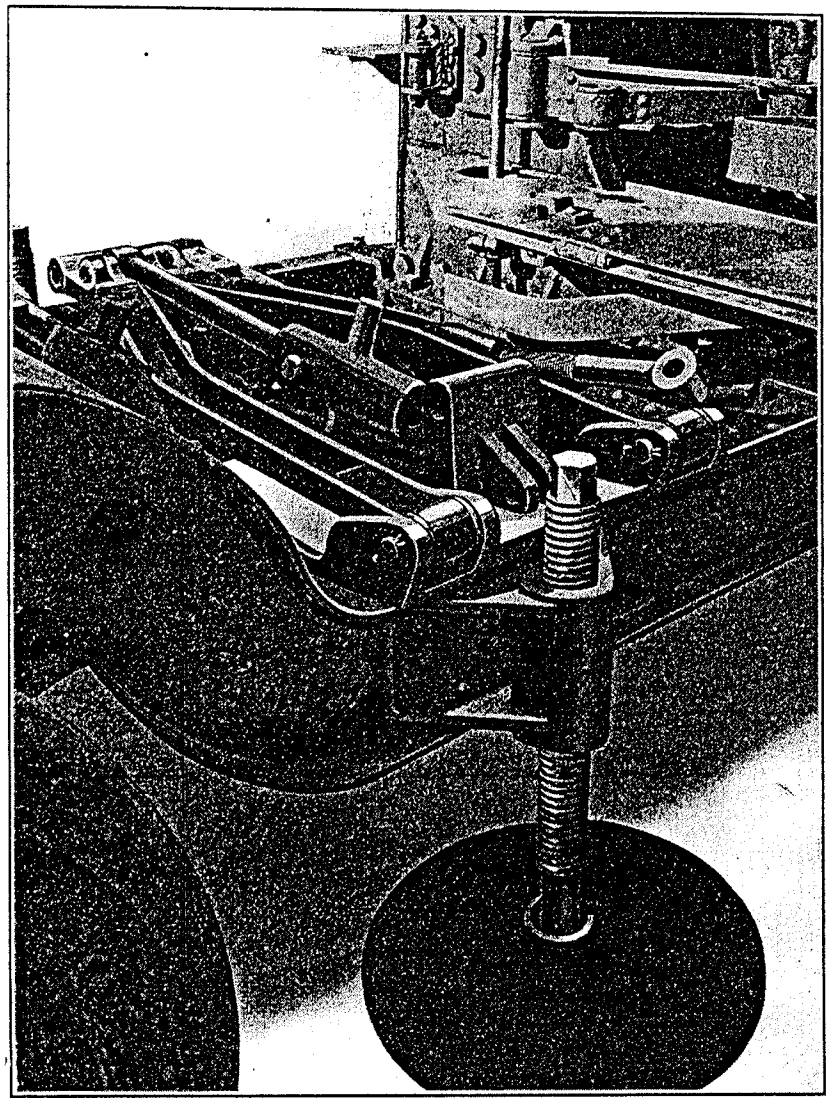
The anti-aircraft gun, together with the recoil mechanism, is held by the cradle and swings from 10° to 85° elevation in the trunnion bearings of the top carriages. A base plate rigidly bolted to the trailer chassis supports the top carriage on traversing rollers on which the top carriage rotates 360° in azimuth around a pintle on the base plate.

The trailer carriage is equipped with outriggers. Stability and lifting jacks which, when in firing position, rest on detachable floats



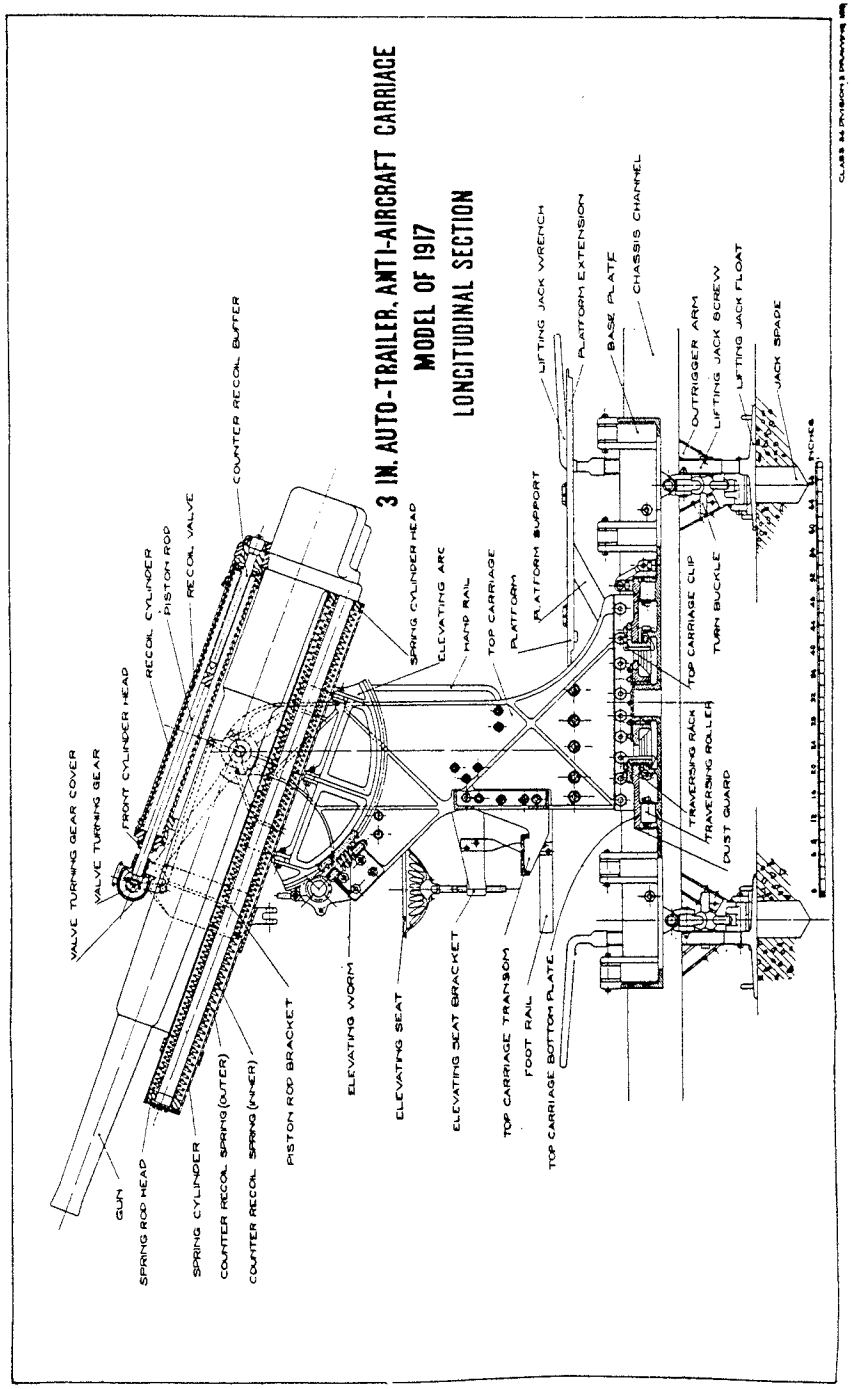
FRONT VIEW OF CARRIAGE IN BATTERY.

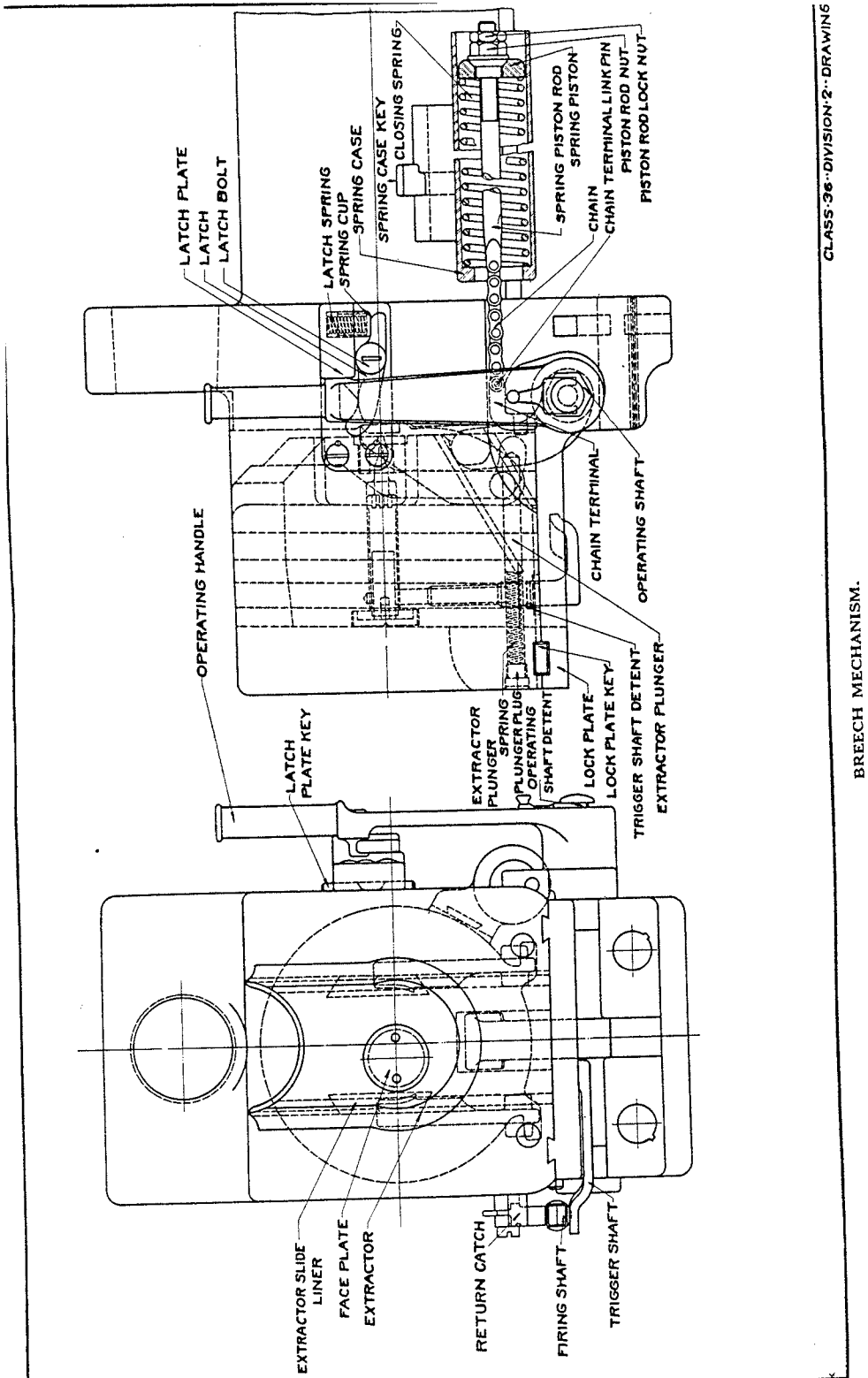
on the ground and support the entire weight of carriage and trailer. These outriggers and jacks are employed to stabilize this unit when in action and to prevent the mount from overturning when the gun is fired at low angles of elevation.



VIEW OF REAR OUTRIGGERS FOLDED; OUTSIDE END OF RIGHT OUTRIGGER BRACE READY TO BE PLACED IN RECEPTACLE; SCREW JACK WITH OUTRIGGERS FOLDED.

In traveling position the outriggers are folded up, the jack screws raised, the floats and spades being carried in another vehicle, with the exception of the stability jack floats which are attached to the jack screws. Traveling locks are provided to lock the gun at about





CLASS 36 DIVISION 2 DRAWING 6

BREECH MECHANISM.

20° elevation to protect the elevating mechanism. In azimuth the carriage is locked lengthwise of the trailer to remove unnecessary strains from the traversing mechanism when the unit is traveling.

Adjustable seats and foot rests for the gunners and platforms that fold up when traveling are fastened to the top carriage. This unit is considered able to negotiate any roads suitable for field artillery. Weight of complete unit is approximately 14,000 pounds.

Fixed ammunition is used with these guns, consisting of time-fuzed high-explosive, illuminating shell, tracer shell, and shrapnel. All the shell and shrapnel are issued fuzed.

3-INCH AUTO-TRAILER CARRIAGE.

The 3-inch auto-trailer carriage consists of a 3-inch gun, model of 1918, anti-aircraft, and a 3-inch auto-trailer carriage, model of 1917, mounted on an autotrailer.

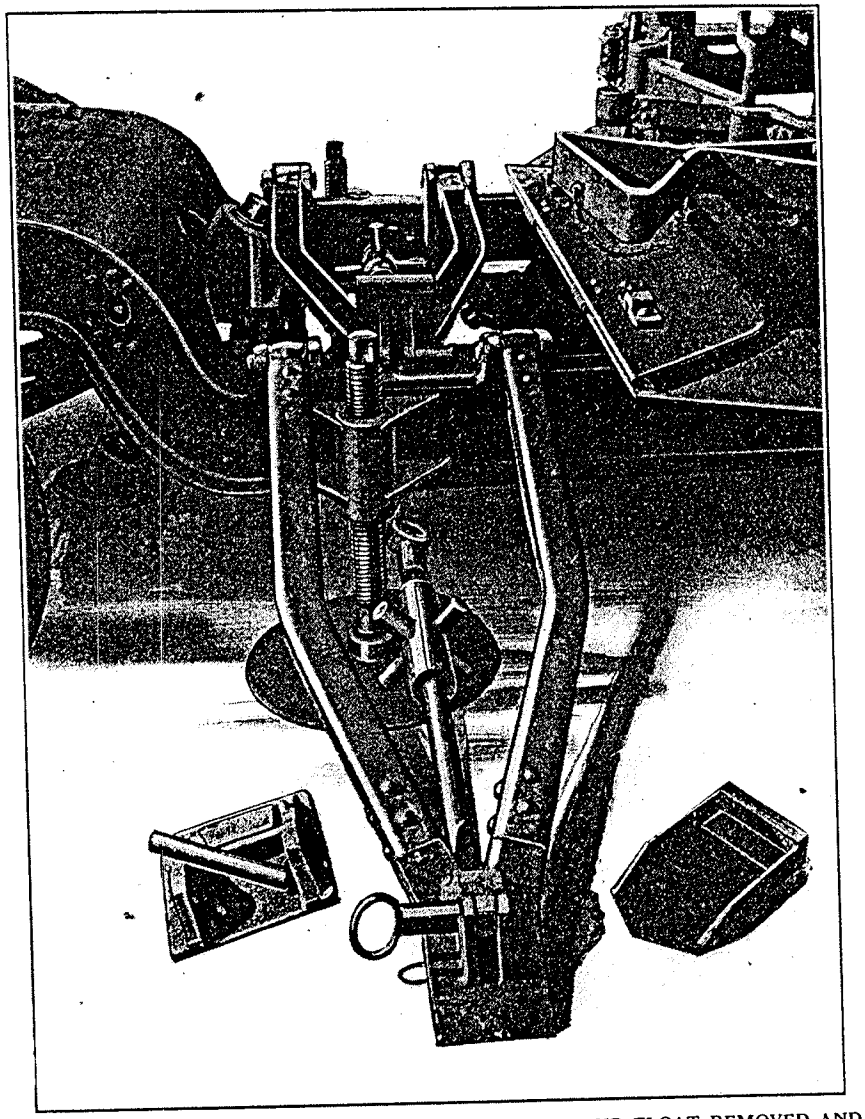
The gun, of which there are two models, 1918 and 1918MI, is built up of nickel-steel forgings and consists of a tube, a jacket, and a breech ring, the latter being screwed to the rear end of the jacket forming a housing for the breech mechanism. Lugs are provided at the top and bottom of the breech ring to which are secured, respectively, the recoil cylinder and counter-recoil spring rods. The 1918MI model differs from the 1918 model only in the jacket which is 1.6 inches longer at the threaded part allowing a greater thickness of metal in rear of the jacket, thereby strengthening the gun around the chamber.

The breech mechanism is practically the same as that used on the 75-millimeter field gun, model of 1916 (American) (see p. 73), being of the drop block type, semiautomatic, and operated by a handle on the right side of the breech which is pulled backwards and down to open the breech.

Weights, dimensions, and ballistics of gun.

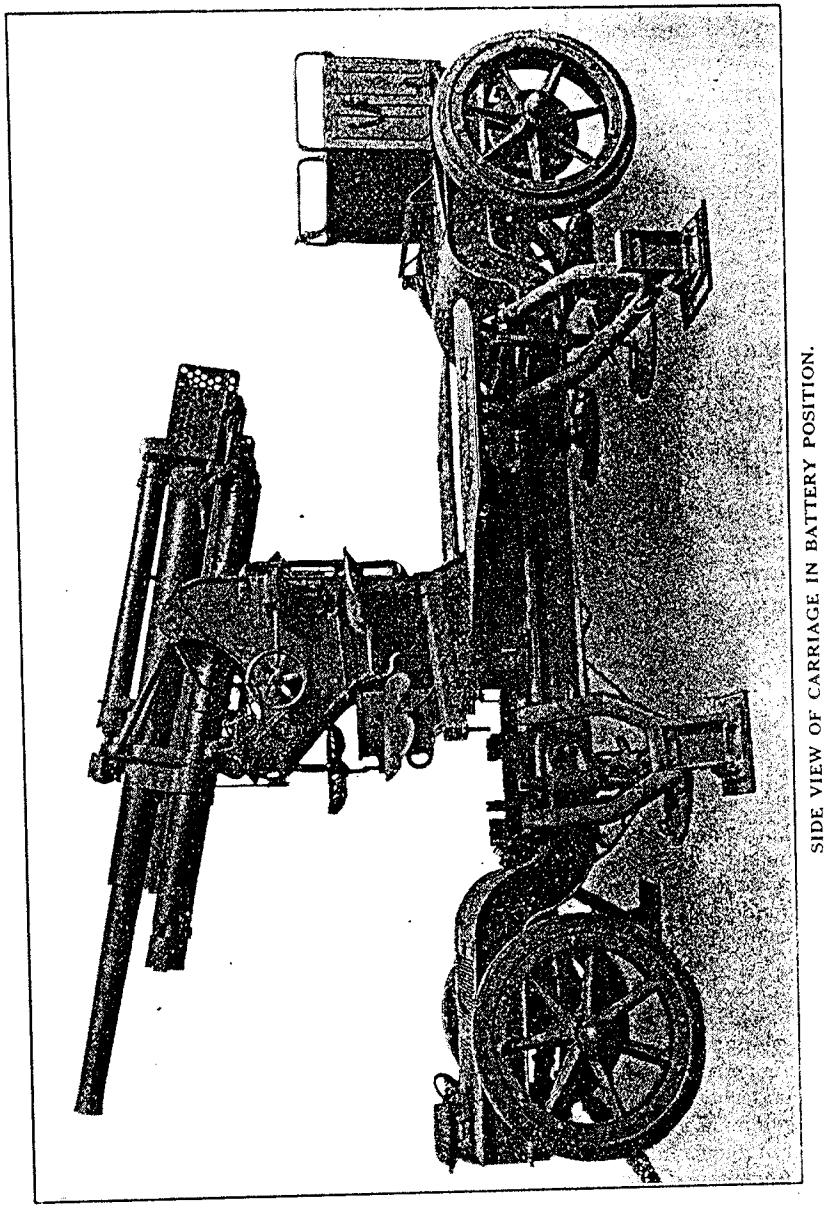
Weight of gun (including breech mechanism)	pounds	1,966
Caliber	inches	3
Total length of gun	do	129.69
Length of bore	do	120
Volume of chamber	cu. in.	200
Length of rifled portion of bore	inches	95.87
Number of grooves		24
Width of grooves	inches	0.2927
Depth of grooves	do	0.03
Width of lands	do	0.10
Muzzle velocity	ft. per sec.	2,400
Twist, right hand increasing from one turn to 50 calibers at the origin to one turn in 25 calibers at a point 8.87 inches from the muzzle and uniform from that point to the muzzle.		

The carriage comprises the top carriage and cradle. The top carriage consists of two side frames bolted to a bottom plate which in turn rests on a circular roller frame and rotates about a pintle on



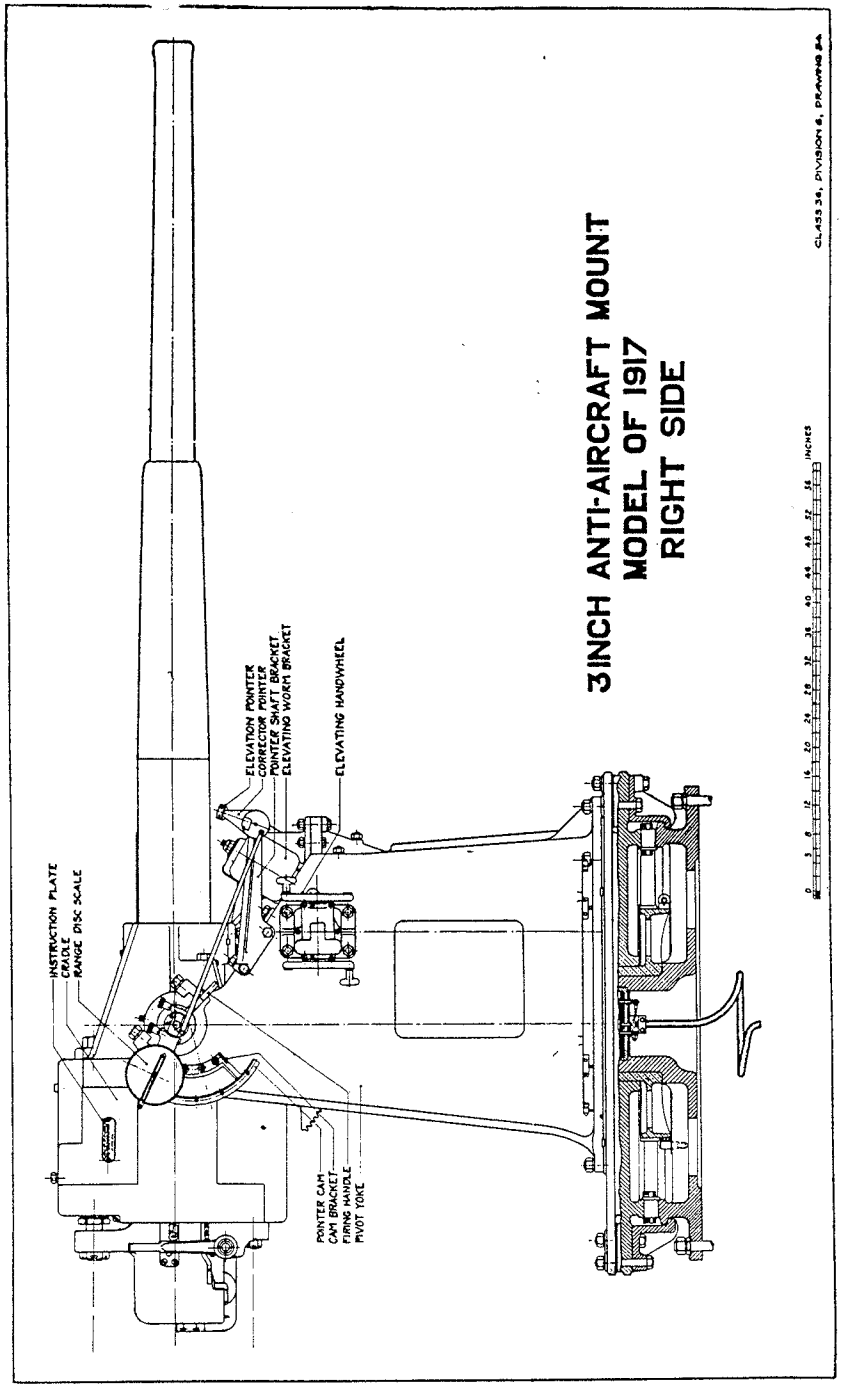
VIEW OF RIGHT REAR OUTRIGGER WITH JACKSPADE AND FLOAT REMOVED AND BRACE DROPPED FROM SHACKLE AT INSIDE END; LEFT REAR OUTRIGGER IN POSITION, WITH FLOAT CONNECTION FOLDED.

the base plate. The base plate is rigidly bolted to the trailer chassis and is equipped with outriggers and stability and lifting jacks which when in firing position, rest on detachable floats on the ground and support the entire weight of the carriage trailer. The top carriage is prevented from tipping or lifting from the traversing [illegible]rs by a front and rear clip which are fastened to the bottom plate [illegible]d which engage an annular flange on the base plate.



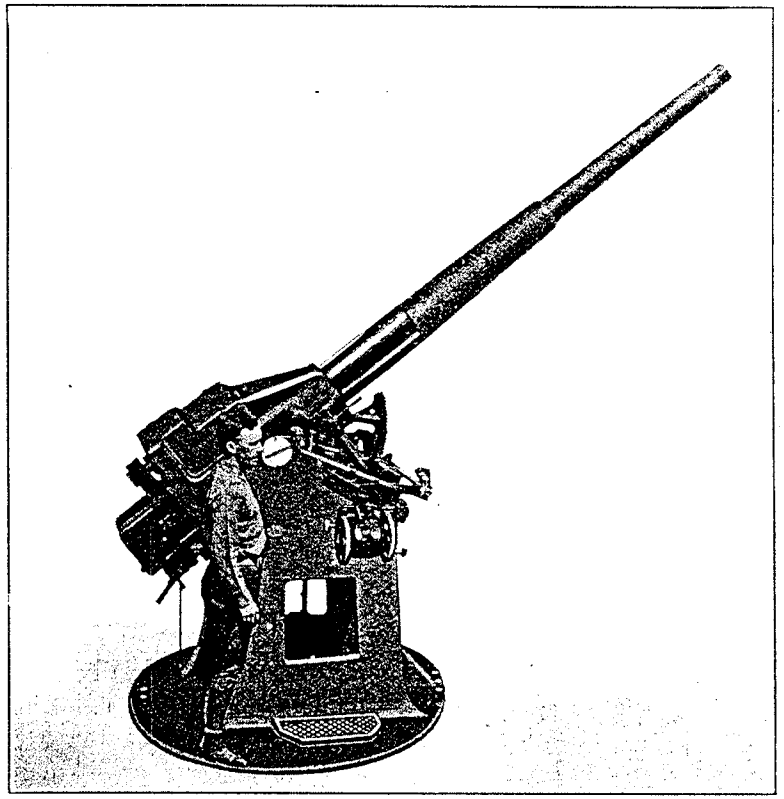
SIDE VIEW OF CARRIAGE IN BATTERY POSITION.

The recoil mechanism is of the variable recoil hydro-spring type and operates the same as that of the 75-millimeter field gun, model of 1916. The only noticeable difference between the two is that a



design a standard gun and top carriage having a wide range of action and by means of interchangeability enabling this mount to be used on either a truck mount, a two or four wheel trailer, a caterpillar tread trailer, or as a semifixed mount, as each of these types of vehicles has its own sphere of action. However, the problem of seacoast defense and for the defense of depots, etc., led to the design of the 3-inch anti-aircraft gun mount, model of 1917.

The 3-inch anti-aircraft mount is of the barbette type, with constant recoil, designed to be mounted on a solid concrete base about



VIEW SHOWING RIGHT SIDE OF MOUNT.

30 inches thick and 18 feet in diameter. The gun mount is designed to mount the 3-inch anti-aircraft gun, model 1917, 1917, MI, or 1917 MII, commonly known as the 15-pounder gun.

The gun has a 12-inch recoil and a muzzle velocity of 2,600 foot-seconds. Both high explosive shell and shrapnel may be employed, the weight of the projectile being 15 pounds, and of the complete round of fixed ammunition being 28.38 pounds.

The gun is mounted on a cradle of the sleeve type, which also serves as a housing for the spring and recoil systems. The cradle is

suspended by the trunnions from the top of the pivot yoke. The pivot yoke is bolted to the racer, which rests and revolves on 30 rollers on the roller path of the base plate. The base plate is held in position in the emplacement by 16 anchor bolts set in the concrete.

The field of fire is 360°, 0° to 90° elevation. Removable stops are provided, however, to limit the elevation of 85°, due to possible injury to the personnel when the piece is fired at a higher angle.

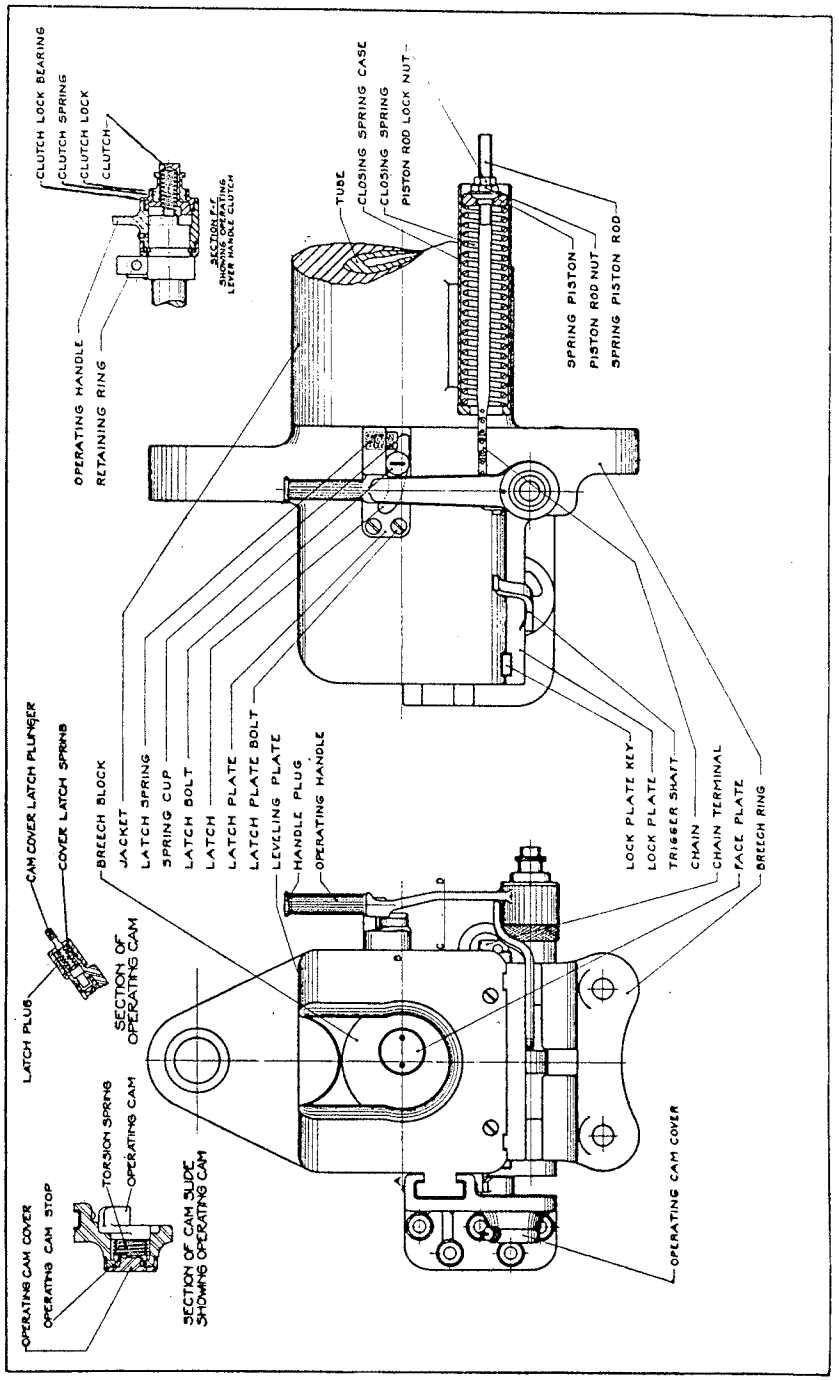
Fixed ammunition is used in these guns, consisting of a time-fuzed high-explosive shell, illuminating shell, tracer shell, and shrapnel. Each round consists of the cartridge case with its primer and powder charge; also the filled and fuzed projectile.

Weights, dimensions, and ballistics.

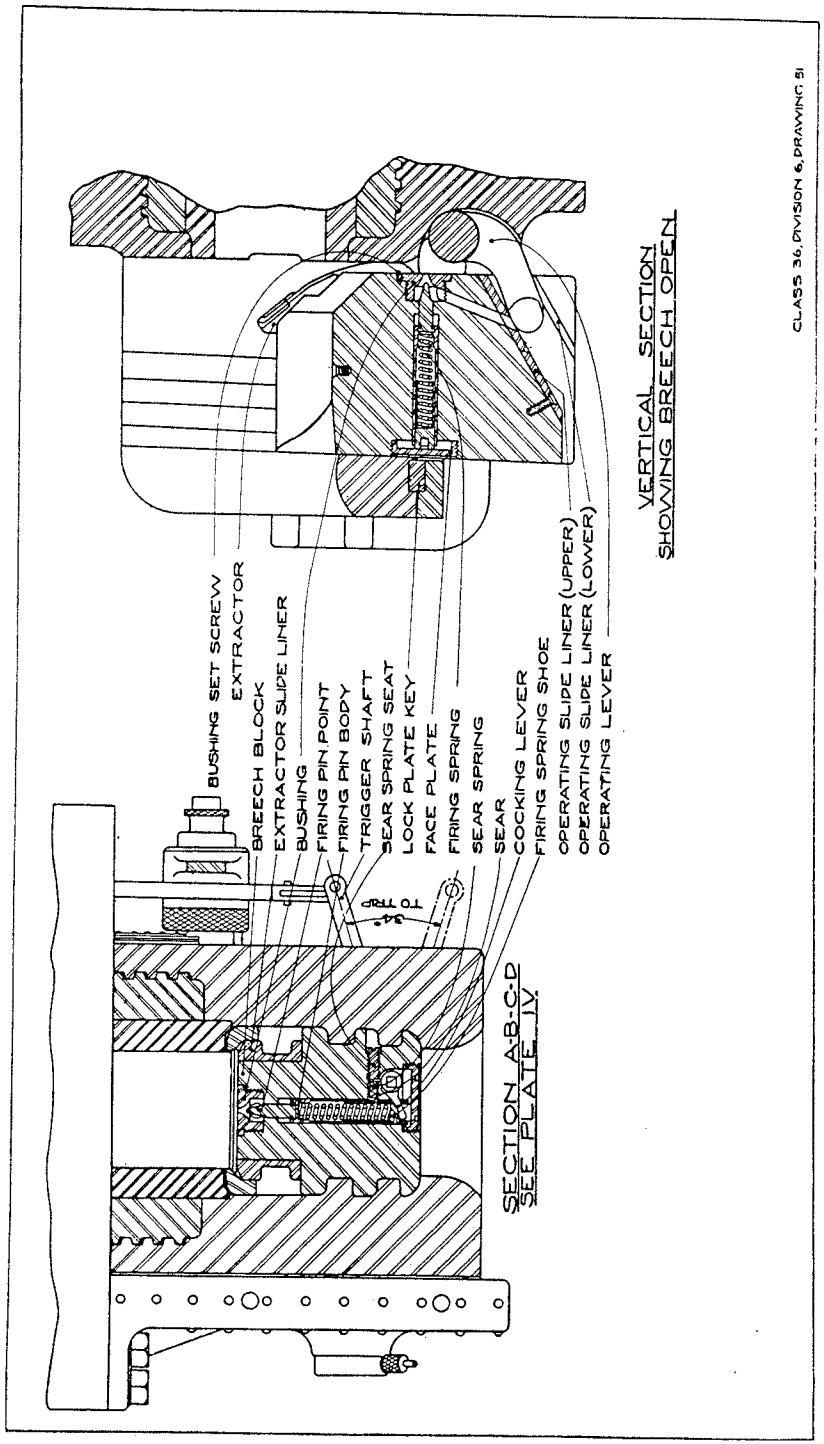
Weight	pounds..	3,105
Caliber	inches..	3
Total length	do....	174.65
Length of bore in calibers		55
Length of rifled portion of bore	inches..	137.28
Rifling:		
Number of grooves		24
Width of grooves	inch..	0.2927
Depth	do....	0.03
Twist, right hand, 1 turn in 50 calibers at origin to 1 turn in 25 calibers at 9.28 inches from muzzle; thence uniform.		
Weight of projectile, filled and fuzed	pounds..	15
Weight of charge	do....	5.32
Weight of fixed ammunition (1 round)	do....	28.375
Travel of projectile	inches..	139.33
Volume of chamber	cu. in..	296
Muzzle velocity	ft. per sec..	2,600
Maximum pressure per square inch	pounds..	32,000
Maximum horizontal range	yards..	12,755
Maximum vertical range	do....	9,000

The model of 1917 gun is built up of alloy steel, consisting of tube, jacket, and locking hoop. The jacket envelops the rear portion of the tube and forms the recess or seat for the breech mechanism. A recoil lug projects from the upper surface of the jacket near its extreme end and affords a point of attachment for the piston rod of the recoil cylinder. A lug also projects from the under surface, to which are attached the counterrecoil spring rods. The locking hoop is forced on the tube and forward end of the jacket, securing the latter against any rearward movement of the tube under firing stresses.

The model of 1917 MI gun is similar in general construction to the model of 1917 gun, except that instead of the breech ring being integral with jacket, it is a separate piece. The breech end of jacket is threaded to receive the breech ring, which is screwed and shrunk on the jacket and held by a lock screw. The locking hoop is omitted.



BREECH MECHANISM ASSEMBLY.



The model of 1917 MII is similar in general construction to the model of 1917 MI, except in the method of securing the latch plate to the gun. On the models of 1917 and 1917 M1, the latch plate is secured to gun by screws, while on the 1917 M1 the latch plate is secured to gun by means of a lug.

The breech recess is rectangular in shape. Two extractor trunnion seats, one in each side, are cut to the proper radius for the extractor to rotate and slide. Two holes are drilled from the rear face of the breech, one on each side, to accommodate a spring and plunger which press against the hub of the extractor, keeping it in place and also aids the extractor in ejecting the cartridge case.

The breech mechanism consists of the following parts: Breech block, operating lever, operating handle, operating cam, operating cam cover, trigger shaft, extractors, firing mechanism, latch, and closing spring case.

The breechblock is of the drop-block type and is rectangular in shape. Two grooves run lengthwise on the block, giving a wedging effect against the end of the cartridge case when the block is closed, and when opened insuring a clearance between the cartridge case and the block thus eliminating any chance of the cartridge case jamming. A venthole permits the escape of gas from a ruptured primer.

Two extractor grooves, one on each side of the block, are cut parallel to the guide grooves and curve to a certain cam development which permits the proper action of the extractors. At the top of the block a radius is cut to permit of clearance when inserting the projectile. The toe of each extractor is cut to a radius which will just slide along the body of the cartridge when in place and engage the rim of the cartridge case.

The firing mechanism belongs to that type known as the continuous-pull mechanism; that is, no cocking of the firing pin is required other than a pull on the lanyard or trigger shaft. This arrangement permits of repetition of the blow from the firing pin in case of a misfire, as often as desired without the opening of the mechanism.

Weights, mount, etc.

Weight of mount only	pounds	12,175
Weight of gun and mount	do	15,280
Weight of gun and cradle	do	7,105
Weight of cradle and recoil systems	do	4,000
Weight of yoke with elevating and traversing mechanisms	do	5,100
Weight of traversing rack, friction band, roller cage, and base plate	do	3,000
Weight of sight and supports	do	75

The mount is emplaced in a concrete emplacement, in which 16 anchor bolts are set, and depressions provided for 8 leveling screw thrust plates. A niche for an outlet box, through which electrical connections are made to the main base, or for a storage battery when

generated ‹ ent is not available, is constructed in the concrete to meet the requirements of the mount.

This emplacement is constructed by the Engineer Corps, which also furnishes and installs the necessary outlet or storage battery and furnishes the plug box portable lamp, cable, and plug.

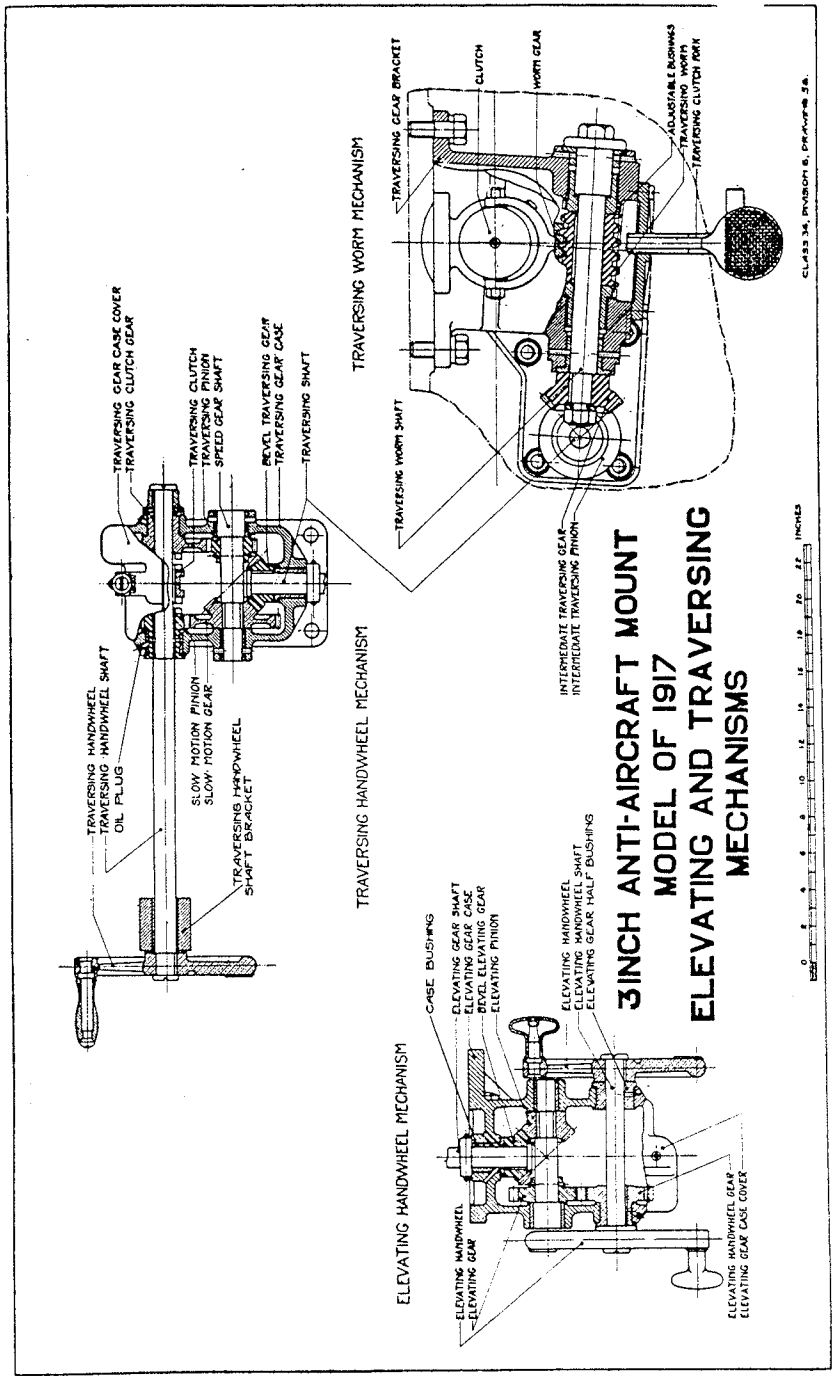
The principal parts of the mount are the base plate; racer; pivot yoke; cradle (containing recoil cylinder and counterrecoil mechanism); traversing mechanism, including traversing rollers and distance ring; elevating mechanism; firing mechanism; illuminating circuit and sight.

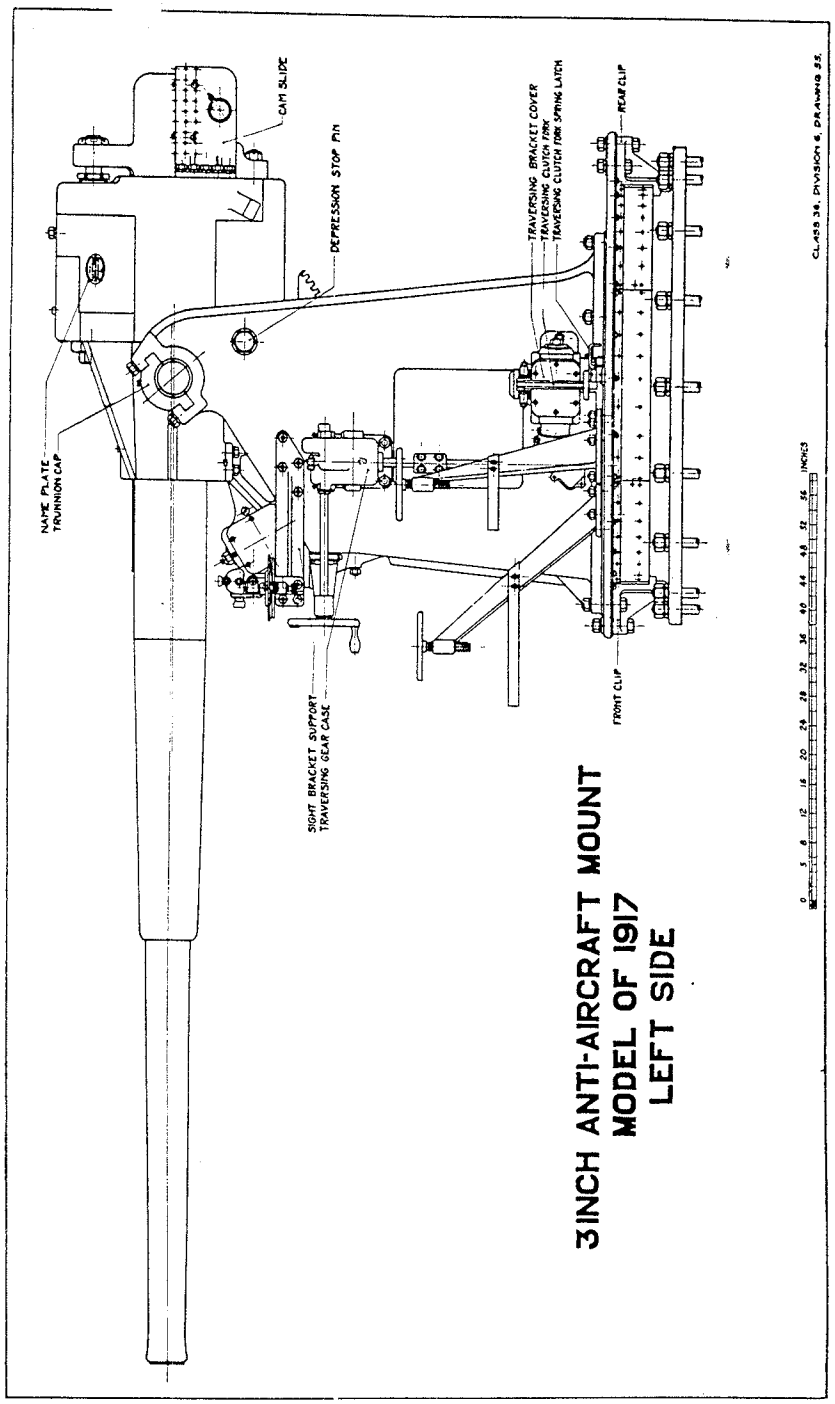
The base plate is a circular steel casting which rests on the concrete emplacement with its upper surface machined to form the lower roller path. Sixteen holes, equally spaced around the circumference of the flange, are provided to receive the foundation bolts which retain the base plate in its proper position in the emplacement. A cylindrical projection in the center forms on its interior the housing for the 360° electrical contact, and on its exterior receives the traversing rack.

The racer is a circular steel plate, upon which the pivot yoke is bolted. The under surface is machined to form the upper roller path, and the upper surface to fit the yoke. The racer rests on the rollers and rotates freely about the hub on the traversing rack. Two clips, front and rear, are bolted to the under side of the racer, and engage with a lug on the base plate to prevent the racer from leaving the rollers, and overturning the mount, when the gun is fired.

The pivot yoke is a steel casting, consisting of two vertical side frames joined in front by a transom. At the top of each frame is a trunnion bearing and trunnion cap lined with bronze bushings. Tapped holes are provided in the left frame for the depression and elevation stop. The distance ring is a circular bronze ring provided with spaces and bearings for the traversing rollers. The traversing rollers, 30 in number, are interposed between the roller paths of the base plate and racer, bearing the weight of the mount. The rollers, roller paths, traversing rack, and pinion are protected from the entrance of dust, sand or grit, by dust guards. The oil grooves on the circumference of the distance ring serve to distribute oil from the holes in the flange forming the base of the yoke to the axles of the rollers. A friction band, resting on the base plate, is made to grip the traversing rack. To adjust this band, which allows slipping of the traversing rack to protect the teeth of the traversing pinion from too heavy a stress, a cover in the base of the yoke is removed, giving access to the parts beneath.

Motion of the mount in azimuth is obtained by a traversing pinion and shaft, the pinion meshing with the teeth of the traversing rack. Power is transmitted from the traversing handwheel to the traversing





worm, thence to the mount through a set of gears and clutch mounted in the traversing gear case. Two speeds of traverse are possible upon throwing the clutch in by means of a handle, so that high or low speed gears are connected to the upper traversing shaft.

The elevating mechanism consists of an elevating rack keyed to the underside of the cradle, having on its face teeth which mesh with the elevating worm. The rack is of sufficient length to provide for elevations from 0° to 90°.

The cradle is bored and bushed to receive the gun. Front and rear liners are provided through which the gun slides in recoil. In addition the cradle forms the housing for the recoil and counterrecoil systems. The interior of the cradle has a cored recess to suit the firing mechanism.

Recoil mechanism is of the hydro-spring type. The recoil cylinder is screwed from the front into a seat provided in the top of the cradle. The piston rod is attached to the gun lug at one end and provided at the other end with a piston, slightly smaller than the bore of the cylinder. Three longitudinal throttling grooves are cut in the interior surface of the recoil cylinder, each groove subtending an arc of 30°. With the cylinder in assembled position one groove is located at the bottom. The recoil cylinder has a capacity of $6\frac{1}{4}$ pints of hydroline oil.

Two cylindrical holes bored in the cradle form the housing for the counterrecoil springs. Spring rods are attached at one end to the gun lug and at the other end to the spring-rod piston. When the spring compressor is first assembled it is secured against rotation by a retaining screw. The counterrecoil plunger, designed to check the recoiling parts as they return to battery, passes through the front end of the recoil cylinder and enters the recess in the forward end of the piston rod.

When the gun is fired it recoils to the rear about 12 inches in the cradle, carrying with it the recoil piston and spring rods, thereby compressing the counterrecoil springs. A portion of the energy of recoil is taken up by the resistance the liquid offers to being forced through the variable slots formed by the throttling grooves and the constant clearances between the piston head and the interior surface of the cylindrical bore, the remainder of the energy being absorbed by the springs. The width of the grooves is uniform, but their depth is proportioned so that the areas of the orifices, varying with the position of the piston during recoil, will be such as to give, with the aid of the counterrecoil springs, a constant resistance throughout the length of recoil. The pressure in the cylinder is therefore a uniformly decreasing one.

The counterrecoil buffer is tapered so that the escape of oil during counterrecoil, through the varying diametrical clearances between

the plunger and the hole in the piston, will offer such resistance as will control the motion of the gun during its return to battery position after firing.

The firing mechanism consists of a firing handle whose shaft passes through the center of the right trunnion and carries on its inner end a lever which operates the firing shaft. Previous to the firing the gunner pulls the firing handle which compresses the cocking spring solid and moves the lever on the breech to the tripping position; the gunner will know when the mechanism has reached this position by feeling the increased pressure exerted by the firing spring. To fire the gun, the gunner pulls the firing handle, compressing the firing spring, thus tripping the firing pin. The two-stage movement of the firing handle is intended to permit a shorter movement at the moment of firing.

The illuminating circuit has a 360° contact mounted in the base plate. Direct-current mains of either 110 or 220 volts are connected with an outlet box located in the concrete emplacement.

Two circuits are led from the 360° contact, one leading to the plug box for use as a portable lamp of line voltage, and the other circuit leads to the switch box; from here it is led to the rheostat from which two branch feeders are taken to the two receptacle boxes and bolted to the yoke. A circuit is taken from the right receptacle box with a spliced branch feeder to a candelabra receptacle for the reticule lamp and deflection pointer lamp. Another circuit is run from the left receptacle box with two spliced branch feeders to a candelabra receptacle for the elevation pointer, range disk pointer, and elevation correction lamps. These lamps are supported by lamp brackets fastened to the trunnion and sight mechanism.

The rheostat used cuts down the voltage and makes the use of low-voltage lamps and batteries practicable in case the line voltage fails through accident.

The cable leading from the 360° contact with the plug, switch, and rheostat is of the twin conductor, leaded, and armored type. The two branch feeders leading from the rheostat to the receptacle boxes and thence to the lamp brackets are of the portable conductor type. The various cables are fastened to the mount by means of cable straps and twisted hooks.

Sight for antiaircraft mount, model of 1917.—This instrument includes all parts used to direct the elevating and traversing of mount so that the gun may be pointed properly in elevation and direction. The parts consist of a sight proper (telescope), the sight mount, range disk, correction scale, and pointer. For any visible target the data necessary to properly lay the gun consists of fuse-setter range, travel in elevation and deflection, and the required arbitrary correction.

The target is brought into the field of view by turning azimuth and the angle-of-site knobs, imparting to the sight a movement in azimuth and elevation, respectively.

A scale is provided whereby the sight proper may be set in elevation at any desired angle, whence the gun by means of the elevating mechanism is also elevated to the same angle (corrections being zero).

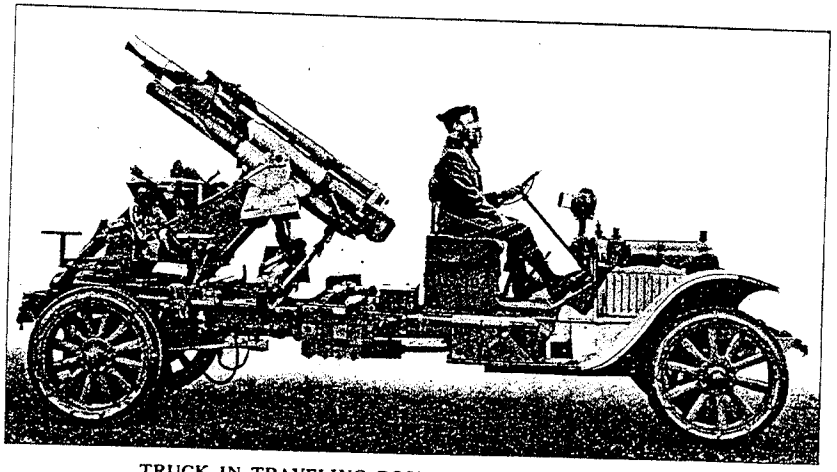
An azimuth scale is also provided between the fixed and rotating parts of the carriage so that the gun by means of the traversing mechanism may be set at any desired angle in azimuth.

75-MILLIMETER ANTI-AIRCRAFT TRUCK MOUNT.

(MODEL OF 1917.)

To appreciate the difficulty of anti-aircraft fire it suffices to consider that one is firing practically at a bird whose velocity is about 50 meters per second, i. e., one-sixth the average velocity of the projectile itself in the case of the 75-millimeter field gun. The principal result hoped for by the anti-aircraft artillery fire is to prevent airplanes from accomplishing their mission by obliging them to fly at increasing altitudes, to continually change their direction, and also to prevent their crossing certain regions.

At the present time the anti-aircraft artillery aims to keep airplanes beyond the limit of their range. Observation airplanes are obliged to fly out of range, reconnoitering airplanes continually increase the



TRUCK IN TRAVELING POSITION (RIGHT SIDE VIEW).

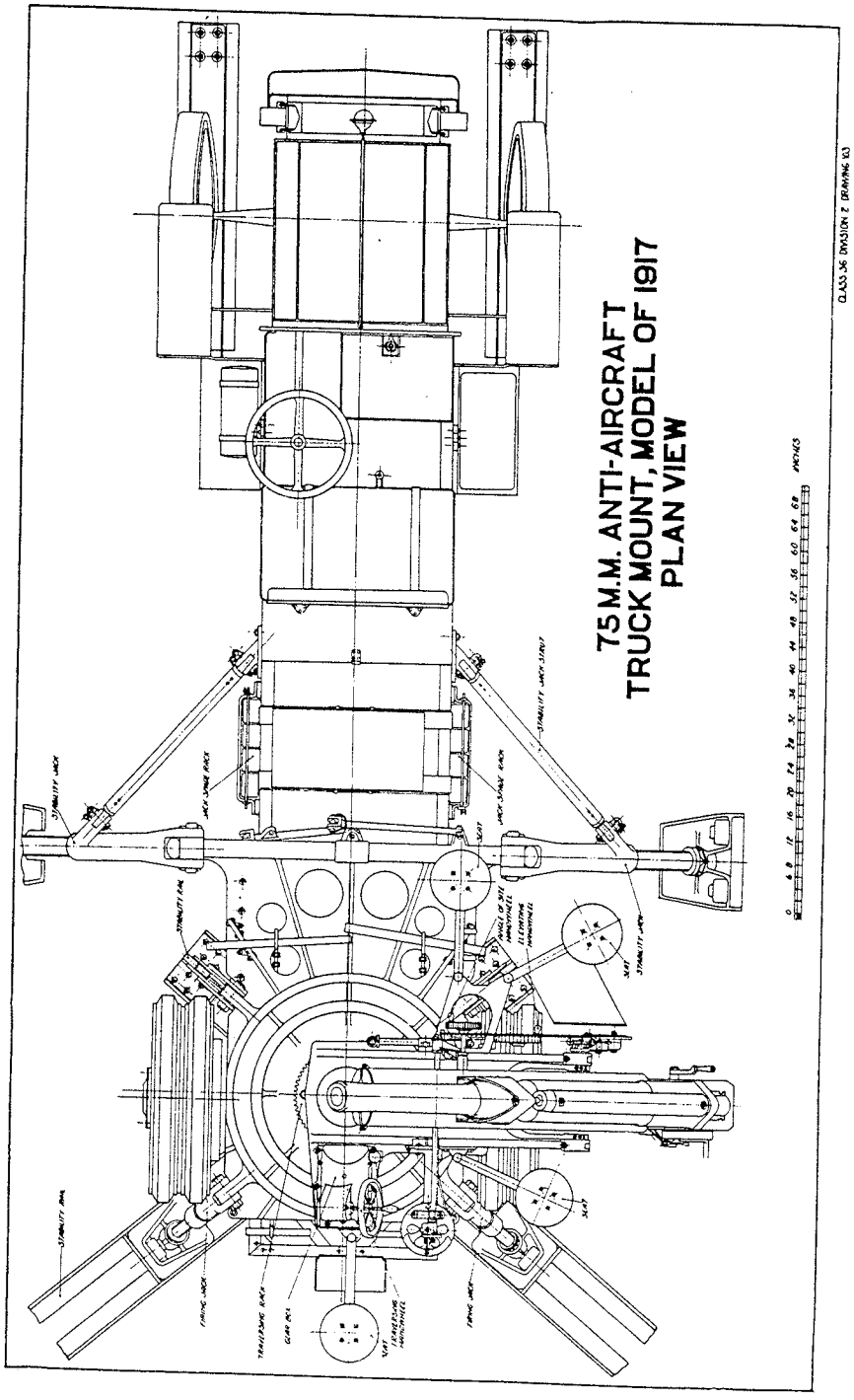
height at which they cross the lines, and battle planes must also fly very high, except when they wish to attack trenches or batteries with machine guns. Raids of this kind are almost exclusively carried on at night. The result is that three kinds of fire have become particularly important:

Fire against airplanes at a great range and a great height.

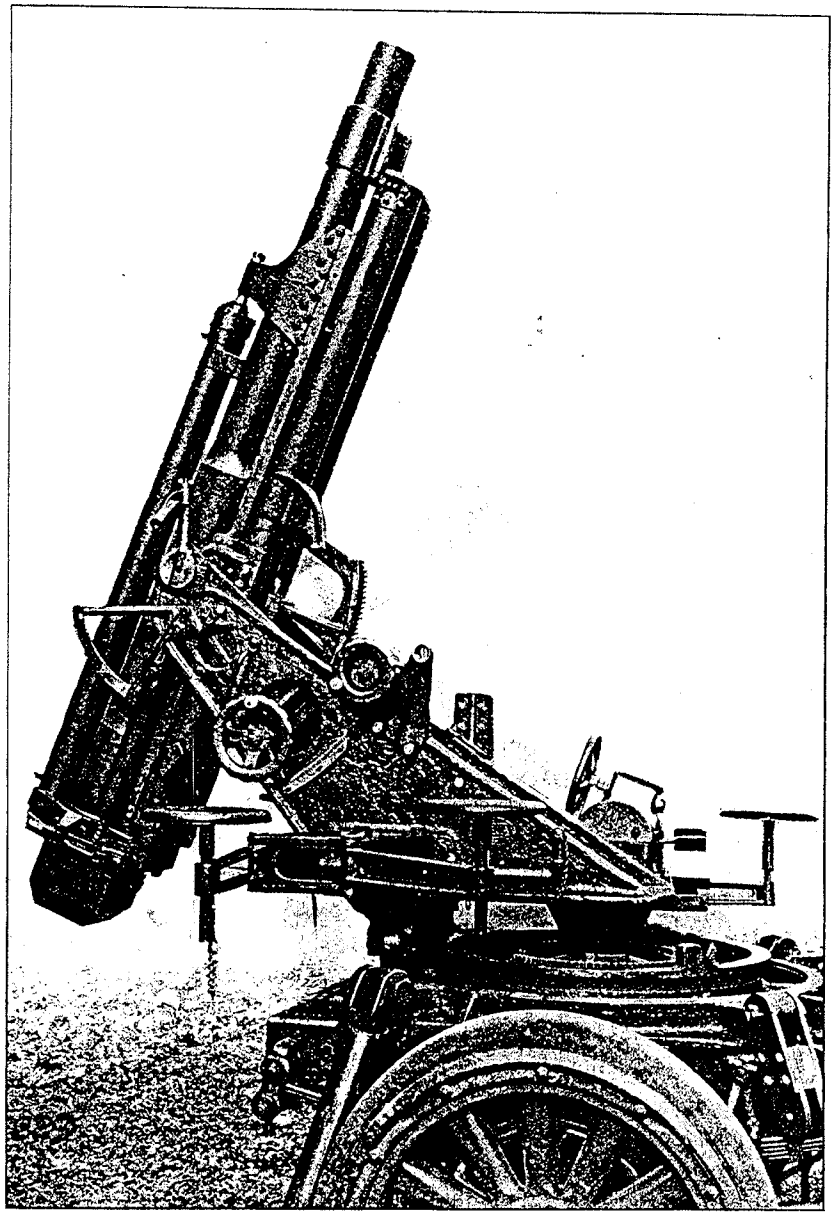
Fire against very speedy airplanes attacking positions.

Fire at night against bombarding airplanes.

The need of an anti-aircraft weapon to meet the above requirements led to the design of the 75-millimeter anti-aircraft truck mount. This development involved the use of an American model 1916 field gun, equipped with a hydro-spring recoil mechanism having throttling



The traveli- lock is located under the rear end of the spring cylinder. This device . ctions to lock the cradle at an angle of approximately 32° in elevation when preparing for travel, thus the elevating angle of

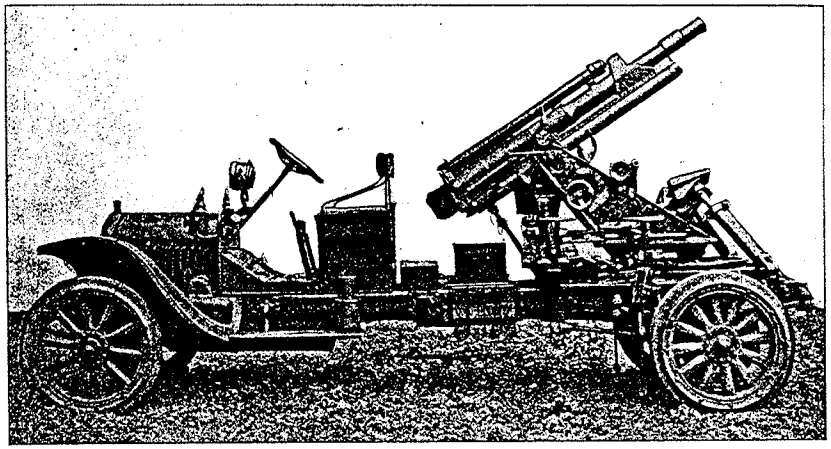


GUN MOUNT SHOWING GUN AT MAXIMUM ELEVATION.

site and traversing mechanisms are relieved of all unnecessary vibrations when the vehicle is en route. At the front end of the base plate is hinged a lock bar and brace, which engage a lug provided on the rear end of the cradle. In order to bring this lug in proper po-ition to receive the lock bar, the cradle must be traversed to its trav g position, that is, to bring the axis of the gun into a vertical plane with the center line of the truck chassis.

The elevating mechanism consists of an elevating worm, an elevating arc or rack, and a train of miter gears mounted on the right side of the rocker. The shaft on which the elevating handwheel is mounted extends through the side frame of the top carriage.

The worm is operated through gears and a shaft by means of a handwheel, and rotates the cradle about the trunnions. Any movement imparted to the worm by the handwheel will cause the cradle to move with relation to the top carriage. One turn of the handwheel will cause the gun to be elevated or depressed approximately



TRUCK IN TRAVELING POSITION (LEFT SIDE VIEW).

1.7°. The elevating arc permits a change of elevation from 31° minimum to 82° maximum.

The traversing mechanism located on the left side of the top carriage, consists mainly of a traversing handwheel and shaft, worm, worm wheel, clutch, bevel pinion, traversing pinion, and rack. The worm engages the worm wheel and can be either engaged with or disengaged from the shaft by means of a clutch operated by a foot lever. If the clutch be disengaged, the worm and worm wheel are released from the gear train, and the top carriage may be traversed about the pintle bolt by hand. The traversing pinion engages the traversing rack which is secured to the base plate. One turn of the handwheel will cause the gun to be traversed approximately 2°.

The angle of site mechanism consists of a handwheel, handwheel shaft, and angle of site worm. The angle of site worm is secured to the top carriage and engages in a rack cut in the face of the yoke of the rocker. To one end of the shaft which extends out to the right

Air Defense Artillery. Hampton Roads

Tracking air defense from Willoughby to Ft. Story

o July 1,1950 Army Antiaircraft Command activated without gun batteries. Later AAA gun battalions in CONUS armed with 90 and 120 mm guns and 40mm automatic weapons. This date marked formal demise of Coast Artillery Corps.

o 1951-52 AAA gun battalions activated. .Possibly gun battery established at Willoughby Spit during this period, but probably later.

o from 1953 to summer 1956 the AAA 90 mm gun batteries converted to AAA missile batteries(Nike)(Continental)

o 1957 last gun battalions converted to missiles.

o From January 1955 until 1957, Battery D was on Ocean View Avenue at the tip of Willoughby. Site N-20. A battery of the 38th AAA Artillery Battalion headquartered at Ballentine School in Norfolk. At some time in the mid-1950s it converted from 90 mm guns to missiles

o 1957.Battery D moves to Fort Story possibly at that time converted to AJAX missile unit.

o. from 1957 until September 1958 Battery D, 38th AAA Missile Battalion at Ft. Story. Site N- 25.
o May 1958. battery converted from AJAX to HERCULES.
HHB, 38th AAA Missile Battalion. Ballentine School, Norfolk
Btry A. Nansemond/ Suffolk
Btry B. Deep Creek
Btry C. Kempsville
Btry. D Fort Story

o. On 1 Sept. 1958,under Combat Arms Regimental System (CARS) , 38th AAA Missile Battalion redesignated in place as the 4th Battalion, 59th Artillery. Battery D, 38th was redesignated as D/4-59
HHB,4th Bn,59th Artillery, Ballentine School, Norfolk
Btry A. Nansemond (redesig as B/4-111)

Btry B. Deep Creek
Btry C. Patrick Henry, Newport News
Btry D. Fort Story

0 1963 peak for Air Defense with 134 Hercules,77 Ajax (National Guard) and 8 Hawk batteries

0 Sept. 1968. 23 low priority missile sites close down in cost saving move.

0. June 1971. local ADA (4-1 ADA and 4-111 ADA under Washington-Baltimore-Norfolk Defense (35th Brigade)

o In June 1971 ,to retain historic units, the 4th Bn,59th Artillery redesignated as 4th Battalion, 1st Air Defense Artillery. Battery D at Fort Story becomes Battery B.

HHB, 4th Bn, 1st Air Defense Artillery.Edgewood Arsenal,MD
Btry A. Baltimore, Md
Btry B. Fort Story
Btry C. Edgewood Arsenal,MD
Btry D. Chestertown,MD

o On Nov 8, 1973 Army directed all remaining batteries inactivated. Washington-Baltimore-Norfolk Defense to be shut down by end of May 1974.

o By April 1974 Battery B and the other firing batteries have been declared inoperational and inactivated , HHB inactivated 1 August 1974.

0 September 1974 Battery B,4-111 ADA inactivated in Deep Creek.

o On 30 June 1975 Army Defense Command headquarters inactivated

Major Headquarters units/ command structure @ HRAT

3rd Artillery Group
to Hampton Roads Army Terminal (HRAT) March 1958
inactivated 15 December 1961

35th Artillery Brigade, HRAT
on board in early 1960s under 100th Group.
by summer 1971 brigade in Washington-Baltimore-Norfolk Defense

107th Artillery Brigade, Virginia Army National Guard

activated in 1959
inactivated 1963

100th Artillery Group
activated 25 March 1966 at Hampton Roads Army Terminal(HRAT)
inactivated 15 November 1968 at HRAT

17th Artillery Group
reactivated 15 November 1968
inactivated 23 May 1971 (command & control reverted to Washington-Baltimore defense)

Note: Brigades controlled a major city defense area. Multiple groups assigned to brigades. Multiple activations and inactivations.

Sources: Rings of Supersonic Steel,Morgan, 1996.
local newspapers.

prepared Jan. 2002. F. Tyler

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SECRET

HISTORY OF THE CHESAPEAKE BAY SECTOR

BY

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U.S. ARMY

S E C R E T

HISTORY

of the

CHESAPEAKE BAY SECTOR

by

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FORT MONROE, VIRGINIA

1945.

SECRET
Hq. HD of Ches. Bay
Date: 7 April 1945
Authority: C. G. R.L.T.

Fort Monroe, Virginia,
1 March 1945.

FOREWORD

I prepared the following history of the Chesapeake Bay Sector from the Operations reports, the Journals and files of the Sector, from the records of the Harbor Defenses of Chesapeake Bay, from my own notes and from my own knowledge of the events. Unlike the other Sectors on the Eastern Seaboard, I organized it, commanded it throughout its life, and inactivated it.

The Sector covered one of the most vital areas on the Atlantic Coast and differed from its sister sectors in that it alone had no subsector organization. This made for a simplicity of organization and a flexibility not enjoyed by the others. Its inception, organization and development was based entirely on the principles of Joint Action of the Army and Navy and on mutual cooperation with the Navy. While no effort has been made in this narrative to draw conclusions or to discuss the lessons learned, I think we may draw one : namely, that the doctrines set forth in our Joint Action of the Army and Navy are sound; that our joint organization for coast defense worked and that our plans based on this joint organization went into effect and operated without a serious hitch.

This history is necessarily secret as much of the information contained in it pertains to the harbor defenses and cannot be released, some of it pertains to Naval operations which are still secret, and because of the general restrictions on all operations of the Eastern Defense Command. It is sincerely to be hoped that at not too distant a date some of the story may be told generally and some recognition given the officers and men of the Sectors who stood the alert at the batteries and on the beaches through something over two hard years. Their mission was accomplished just as surely as any mission in any defense command or in any theater. Had they not been present and ready, our operations overseas would not have gone forward. The sinkings of shipping off the Virginia Capes alone are evidence of what would have resulted had Chesapeake Bay been open to hostile submarines.

Lastly, in addition to the officers and men of the Sector, the successful operation of the Chesapeake Bay Sector could not have been accomplished without the unstinting support of the Commanding General and Staff of the Eastern Defense Command, and its predecessors, and the cooperation and outstanding help of the Commandants and Staff of the Fifth Naval District.

Rollin L. Tilton.

ROLLIN L. TILTON,
Brigadier General, U. S. Army.

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CHAPTER I

BACKGROUND

Commands

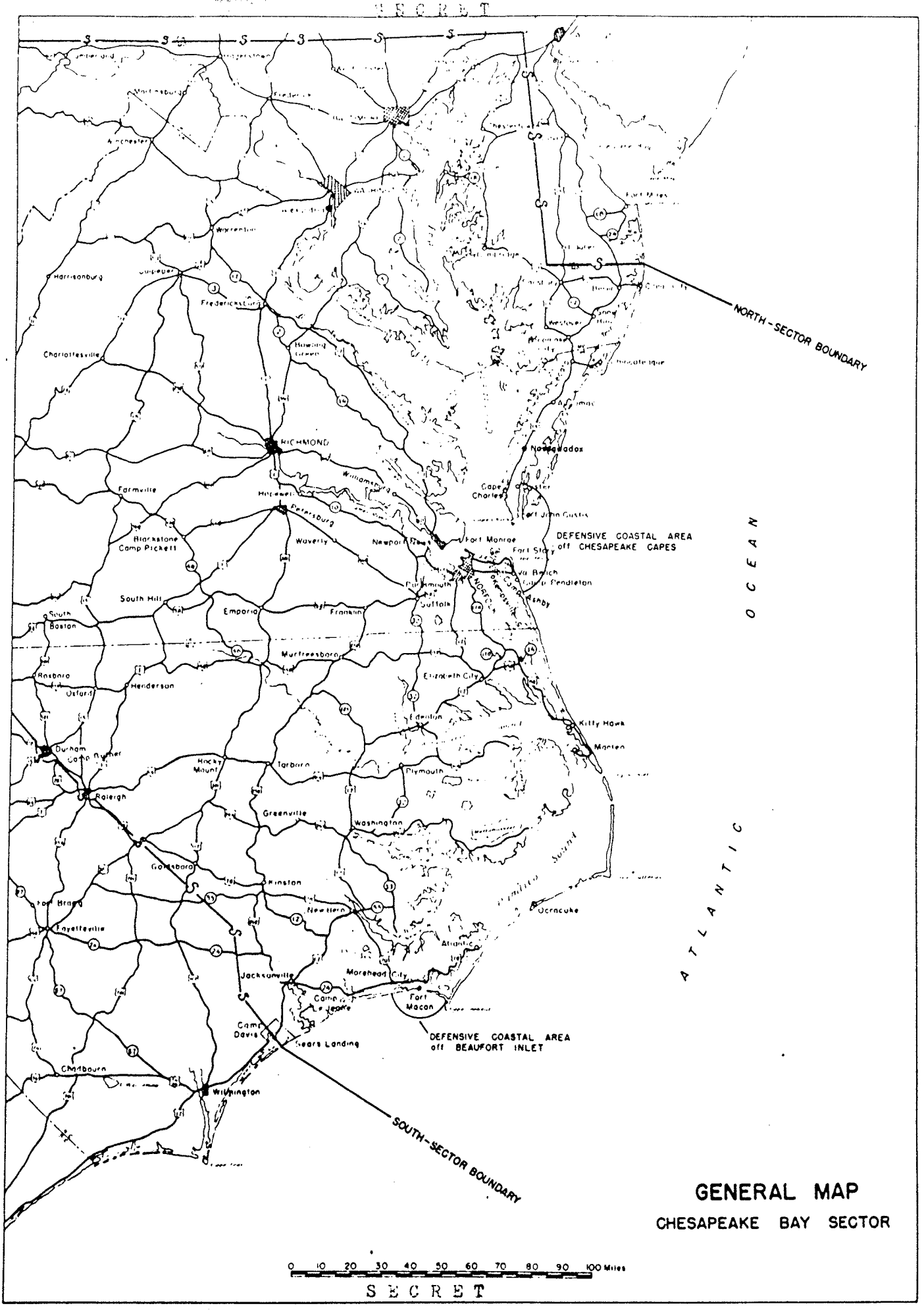
The Chesapeake Bay Sector organized under the principles set forth in Chapter V, Joint Action of the Army and the Navy and with its seaward boundaries coterminous with the Fifth Naval District was responsible for the defense of the coast from the Maryland-Delaware boundary to the southern boundary of Onslow County, North Carolina. (about thirty miles northeast of Wilmington, North Carolina).

The Chesapeake Bay Sector was organized as a Sector on 12 December 1941. Its history actually starts, however, with the limited peacetime mobilization of the Army in the fall of 1940 when its parent organization, the Third Coast Artillery District, undertook the mobilization and training of the Coast Artillery troops assigned to it and the necessary planning for defense indicated by the growing seriousness of the international situation.

The District had originally operated under the Third Corps Area, with limited control by the First Army which was responsible for the planning functions of the North Atlantic Coastal Frontier. In November 1940, the District passed to the command of the First Army, Lieutenant General Hugh A. Drum, USA, who was also commanding the Northeast Defense Command. General Drum's command became successively the Eastern Theater of Operations and First Army, the Eastern Defense Command and First Army and finally, the Eastern Defense Command.

The Third Corps Area which, after the reorganization of the Army, 9 March 1942, became the Third Service Command of the Army Service Forces, retained responsibility for the supply, service, and administration of the various posts and installations of the Sector. It also had varying responsibilities for civil protection, for civil defense with its various ramifications, and for many other factors. This dual command, on the one hand the primary tactical control of the Defense Commander and on the other the supply and administrative control of the Service Command over many of the Sector Commander's responsibilities, made for complications often difficult to control.

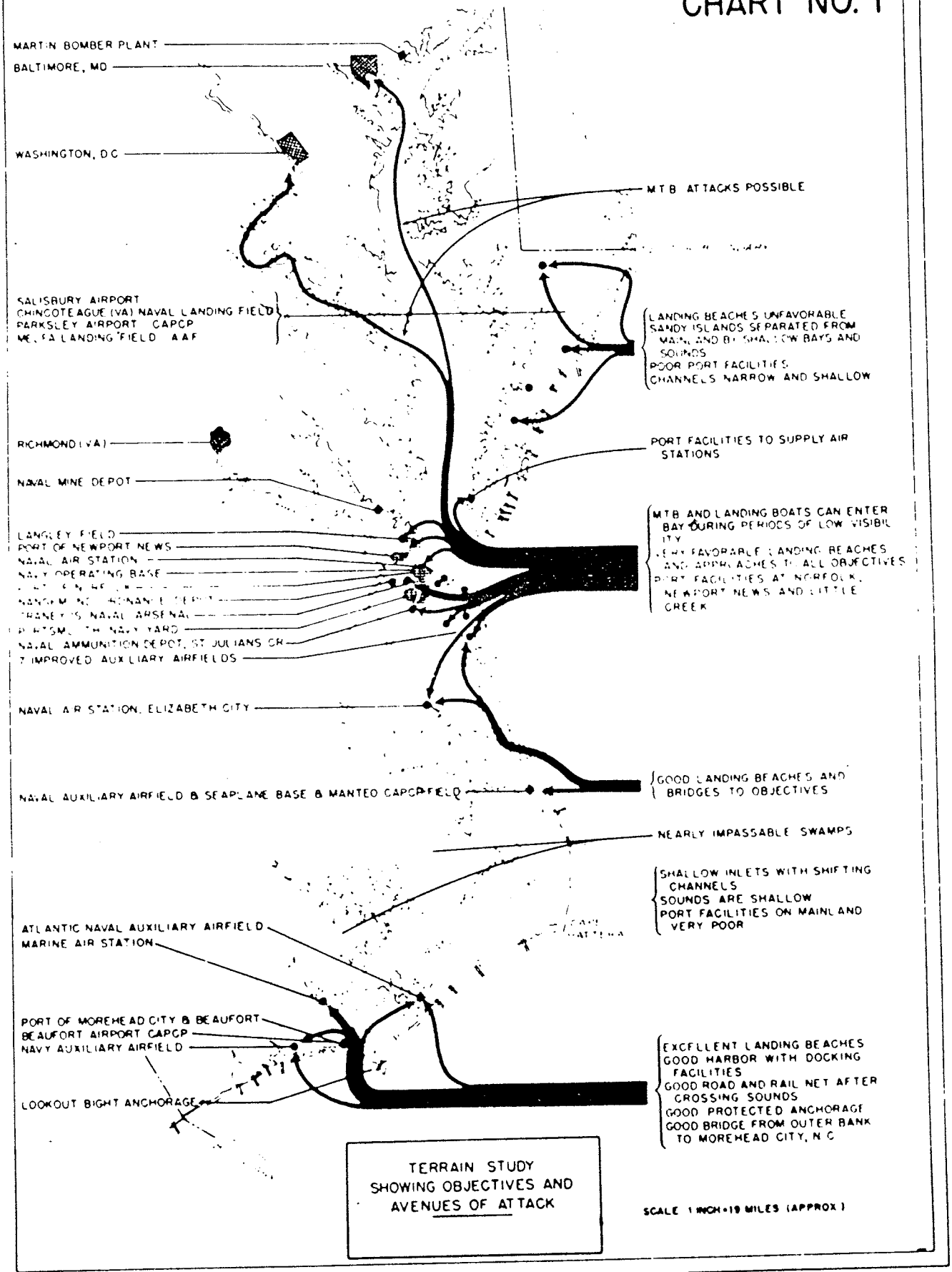
The Fifth Naval District, of which the Commandant was the opposite member to the Sector Commander, was the Naval command responsible for the operations of naval forces in the coastal zones, the control of shipping, and the coordination of all naval activities in the area. It had also many administrative, training and logistic responsibilities. The relationship between the Commandant, the Sector Commander and the staff was, from the beginning, particularly close. Never during the life of the Sector was there any vestige of a misunderstanding or lack of a close and cordial cooperation. It was an outstanding example of joint operation under the principle



GENERAL MAP

CHESAPEAKE BAY SECTOR

CHART NO. 1



TERRAIN STUDY
SHOWING OBJECTIVES AND
AVENUES OF ATTACK

SCALE 1 INCH = 10 MILES (APPROX.)

of mutual cooperation.

Operating Area

The operating area of the Chesapeake Bay Sector originally included the coastal zone from the Delaware-Maryland border to a line through Diamond Shoals Lightship - Hatteras Inlet-Chowan River-Virginia-North Carolina boundary. In July 1941 this southern boundary was extended to the southern boundary of Onslow County, North Carolina - Raleigh-Durham, thence to the state boundary. This was done as the Fifth Naval District was charged with the operation of the Morehead City Section Base. The Naval District operating areas included the coastal waters and the coastal shipping lanes.

The coastal area is flat, broken by bays, rivers and sounds, much swamp and much heavily wooded. Toward the interior of the sector the land rises somewhat but is largely wooded and broken by streams and swampy areas. The road and rail net is excellent except that, due to the many water areas and waterways, lateral communication is difficult often requiring detours or ferry. In rear of the beach positions, defense is limited to river lines and swamps. Fields of fire, except over the water areas, are almost non-existent. The various inlets, the beaches, vital objectives, and sensitive points are shown on chart 1.

The Capes of the Chesapeake with the very favorable landing beaches from Cape Henry south form the vital spot in the Sector. This locality, its seaward approaches protected by the Harbor Defenses of Chesapeake Bay, covers and defends an area second only to New York in its importance to the national defense and the war effort. It covered Chesapeake Bay, the water approaches to Washington and Baltimore and an important protected coastal water route and naval training area, the great ports of Hampton Roads, Norfolk and Newport News, the Naval Operating Base, Norfolk, the Norfolk Navy Yard, the Newport News shipyard, the Hampton Roads Port of Embarkation, as well as many other essential activities. Aside from its value to ourselves, it presented a favorable landing point in the event of invasion with easy access to the vital port facilities of Norfolk. An excellent invasion base, its recapture due to its geographical characteristics would have been difficult.

A second sensitive locality is in the area between the Neuse River and the coast to the south including the small cities of Morehead City and Beaufort, North Carolina. Excellent landing beaches and a good but small harbor with easy access to the Marine Air Station at Cherry Point makes a possible enemy objective from which air operations could have been conducted against the Norfolk and Washington-Baltimore areas.

Other coastal areas are not so vital and are so protected by the barrier reef and swamp land as to make access inland almost impossible and lead to no vital objectives. The Delmarva Peninsula is the most important of these areas in that its defense, in addition to the defense of Cape

Charles, supported the rearward areas of the Harbor Defenses of the Delaware and the southern flank of the New York-Philadelphia Sector.

The interior of the Sector, except for the initial antiaircraft defense of Washington and Baltimore, did not figure largely in the defense plans. The rear boundary of the Sector was generally taken as Route 1 from the northern boundary, including Baltimore and Washington, to Richmond, thence Route 301 to the southern boundary.

War Plans

A considerable amount of war planning had been done by the District staff jointly with the Fifth Naval District in the years prior to 1940 and various plans prepared both for mobilization and defense. The first War Plan, based on the increasingly serious international situation, was the Northeastern Theater Plan of 1941 received in April 1941 and based on directives contained in the Joint Army and Navy Basic War Plan, Rainbow No. 1 and the provisions of Joint Action of the Army and Navy. This plan which provided generally for meeting attack against an enemy if England were successfully invaded and the British fleet captured or destroyed contemplated a general defense to repel any attack by sea, land, or air and, employing all means, approached the requirements of a Category D defense rather than the Category B defense previously assigned.

Based on this plan, a Joint Sector Defense Plan was prepared and approved by the Commandant, Fifth Naval District, Rear Admiral J. K. Taussig, USN, and the District (Sector) Commander, Brigadier General Rollin L. Tilton, 9 June 1941. An Army operating plan based thereon was approved by the Commanding General First Army (Northeastern Theater) 8 July 1941 for operation in emergencies pending the preparation of revised plans as the situation developed.

This Army Operating Defense Plan, Chesapeake Bay Frontier Defense Sector, 1941, charged the Sector Commander with the mission of defense of the Sector against sea, land, and air attack and specifically for: -

a. The preparation and execution of the harbor defense plan for the Harbor Defenses of Chesapeake Bay including cooperation with and support of the Navy in the defensive coastal area.

b. The execution of the Air Defense Plan insofar as it related to the Sector.

c. The preparation and execution of plans for the defense of the Sector against enemy landings including plans for the operation of the 29th Division then in support.

d. The furnishing of timely information to higher headquarters.

e. The furnishing of certain troops in case of civil disturbances

within the Sector in accordance with the directive of higher authority.

The plan was revised as various directives were received thereafter and the Sector area was expanded by the inclusion of the Beaufort Inlet area in the sector; however, it remained the basic plan and was, in its essentials, the plan on which the Sector entered operations on 7 December 1941.

Under the plan the Commanding General, Harbor Defenses of Chesapeake Bay was charged with responsibility for the accomplishment of Sector missions within the defensive coastal area, for the manning of the existing installations of the harbor defense, the establishment of such portions of the underwater defense as might be directed and for continuous observation over his water areas. Air support was to be provided on call through the Sector.

Plans for operating with the Navy included the establishment of the Harbor Entrance Control Post at Cape Henry, the operations of the harbor defense with the inshore patrol and the linking up of the harbor defense observation stations with the Coast Guard life boat, lighthouse and light ship stations on the coast. The Coast Guard stations were already linked up with their own telephone and radio communication system and connection with the Naval District and Harbor Defenses was simple.

The plan of Antiaircraft Defense of the Sector required the establishment and maintenance of the antiaircraft defense of the sector in accordance with the Air Defense Plan of the Commanding General, 1st Air Force. The principal objectives requiring defense were:

Washington (DC) area:

(1) Navy Yard (Gun factory)

(2) Federal Buildings.

Norfolk (Va) area:

(1) Langley Field.

(2) Naval Base, Norfolk

(3) Newport News Shipyard.

(4) Norfolk Navy Yard, Portsmouth, Va. and adjacent wharves.

(5) Ammunition and fuel depots, Nansemond, Norfolk and Yorktown.

To these was later added the Glenn Martin Aircraft factory in Baltimore.

One brigade of three regiments of antiaircraft artillery at Camp

Stewart, Georgia was designated for the defense. The establishment and operation of the Aircraft Warning Service as well as the air defense of the area was a responsibility of the Air Defense Commander, Commanding General First Air Force which included operational control over the antiaircraft firing units with respect to periods when fire would be withheld so as not to interfere with air operations.

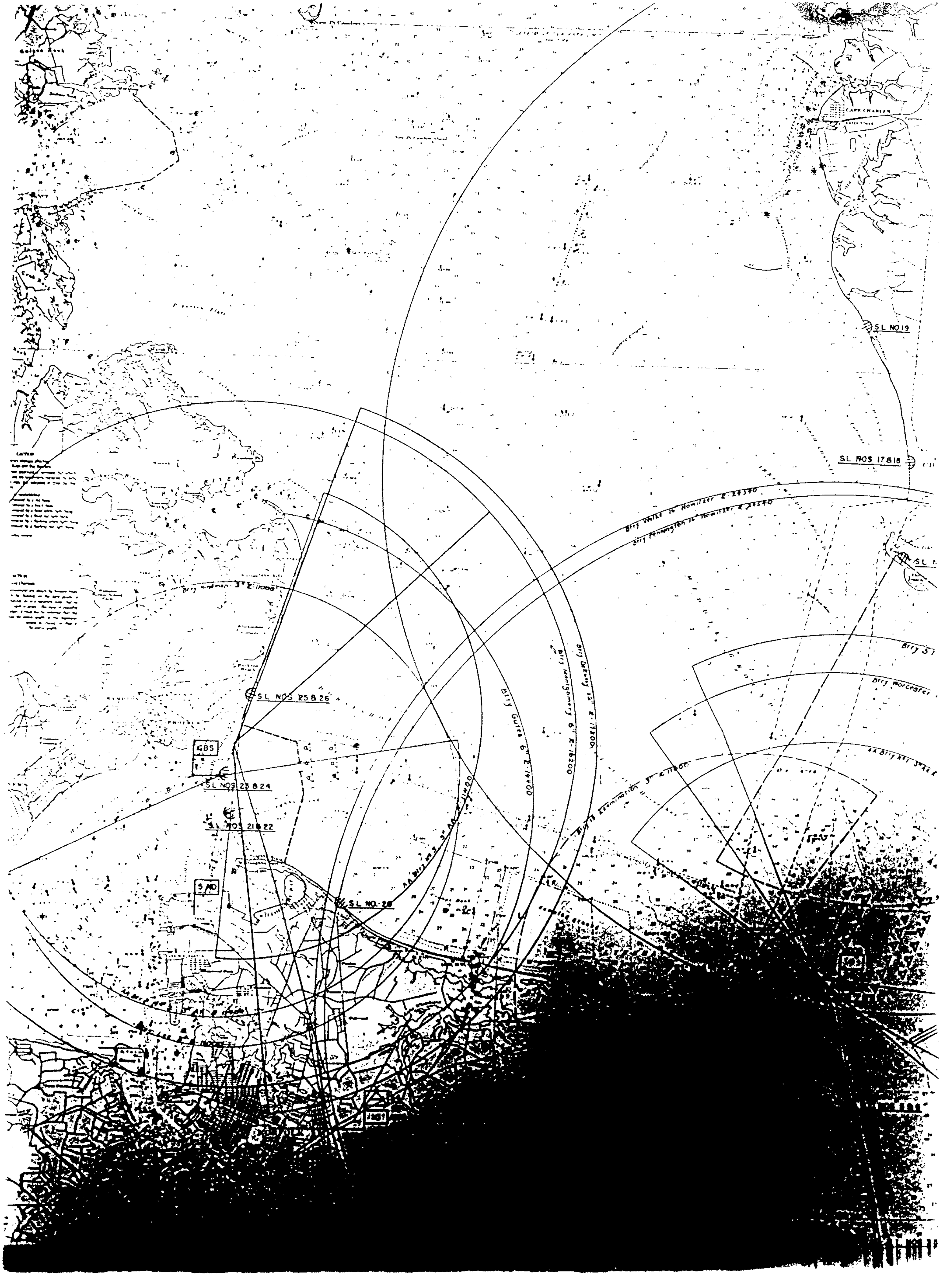
The 29th Division then at Fort George G. Meade, Maryland, had been designated for the support of the Sector and for operations against landings. The Sector plans called for the employment of this, or any other designated division with generally a battalion combat team on the Delmarva peninsula, an infantry brigade, reinforced, less one regiment, in the sensitive Cape Henry area, the other regiment of the brigade in the Williamsburg area and the division, less detachments, in the Richmond area. With the addition of the Beaufort area to the sector the plan was modified by placing a battalion combat team in that area. While the division was never employed in the Sector, the framework of the plan was used in the initial assignments of the Sector Mobile Force.

The plans provided for all supply and evacuation through the Third Corps Area and existing installations until otherwise directed by the First Army.

Harbor Defenses of Chesapeake Bay

The key and only permanent defense of the Sector lay in the Harbor Defenses of Chesapeake Bay. These defenses are divided into the outer defenses at Cape Henry (Fort Story) and Cape Charles (now Fort John Custis) and the inner defenses at Fort Monroe and Fort Wool. The outer defenses are designed to insure freedom of movement in and out of Chesapeake Bay by our Navy as well as to deny enemy access to the bay and to protect shipping and harbor facilities. The inner defenses protect Hampton Roads and the inner harbor. The outer and inner defenses due to their distance apart are not mutually supporting and are in fact practically separate harbor defenses.

The harbor defenses date from the original garrisoning of Fort Monroe in 1823 built for the protection of Hampton Roads. Modernized from time to time Fort Monroe with its sub-post of Fort Wool remained the only defenses in lower Chesapeake Bay until temporary batteries were installed at Cape Henry, and on Fisherman Island off the tip of Cape Charles during World War I. The great width of the entrance to the Capes, some 20,000 yards, had in early times made Chesapeake Bay an inland sea and although an artificial island in the center of the entrance as well as fortifications at Cape Henry had been recommended in 1905, no action had been taken. After World War I, the existing armament at the Capes had been removed but Cape Henry had been permanently acquired as a military reservation in 1917 and two sixteen howitzer batteries, the first of the post World War I batteries, were built there in 1920-1922. War plans contemplated the installation of certain railway and 155mm armament at Fort Story and Cape Charles in the event of emergency but no permanent construction was undertaken until the


SL NO 19
SL NOS 17 & 18
SL NOS 25 & 26
GBS
SL NOS 23 & 24
SL NOS 21 & 22
SL NO 20
Btry Gates 6" R 14400
Btry Montgomery 6" R 16200
CAPE CHARLES

modernization program of the harbor defenses initiated in September 1940. The permanent post at Cape Charles first established and named Fort Winslow in October 1941 was renamed Fort John Custis in 1942.

The armament of the harbor defenses as it existed just prior to and at the outbreak of war included the following:

Fort Story

Battery Pennington	- 2 -	16 inch Howitzers.
Battery Walke	- 2 -	16 inch Howitzers.
Battery Y	- 2 -	8 inch Railway guns. This was a temporary battery.
Battery 5T	- 4 -	155mm guns. This was a temporary battery pending construction of permanent No. 5 - a 6 inch barbette.
Battery 6	- 2 -	6 inch guns - Barbette.
AA Battery 1	- 3 -	3 inch AA Guns (fixed).

Fort Monroe and Fort Wool

Battery DeRussy	- 3 -	12 inch - Disappearing Guns.
Battery Gates	- 2 -	6 inch - Disappearing Guns.
Battery Montgomery	- 2 -	6 inch - Barbette Guns.
Battery Hindman	- 2 -	3 inch - Barbette Guns.
Battery Lee	- 4 -	3 inch - Barbette Guns.
Battery W	- 4 -	155mm Guns.
Battery Z	- 2 -	8 inch Railway Guns.
AA Battery 2	- 3 -	3 inch AA Guns (fixed).
AA Battery 3	- 3 -	3 inch AA Guns (fixed).

The fields of fire and range of the batteries are shown on Chart 2. Batteries W and Z at Fort Monroe were earmarked for assignment to Cape Charles. The required number of seacoast and antiaircraft searchlights were on hand as well as the battle allowances of ammunition but no automatic weapons for antiaircraft defense for the harbor defense as such.

The modernization program, on which work was actually started early in 1941, included in it:

At Fort Story:

2 - 16 inch casemated barbette batteries.
2 - 6 inch long range barbette batteries.

At Cape Charles:

1 - 16 inch casemated barbette battery.
2 - 6 inch long range barbette batteries.

At Fort Wool:

1 - 6 inch long range barbette battery replacing the old guns in Battery Cates.

There was also originally included a new 16 inch casemated battery at Fort Monroe and a second one at Cape Charles but they were dropped from the program on account of shortages in critical materials in November 1943.

The underwater defense project, approved by the Joint Board in January 1941, provided for an outer defense of 22 groups of controlled mines in two fields of two lines each in the main channel northeast of Cape Henry; and in the inner defenses, for 6 groups in two lines in Chesapeake Bay near Thimble Shoals Light. Also included in this project was a Navy mine field of contact mines to be laid between the northern tip of Cape Charles and the north edge of the main channel linking up with the controlled mine field and a net project including an antimotor boat boom and fixed obstructions across the main channel southwest of Thimble Shoals and from Fort Monroe on the north to Willoughby Spit on the south. There was also included a net project for York River.

The controlled mine fields were laid, maintained and operated by the mine batteries at Fort Story operating from a new mine base constructed at Little Creek and from Fort Monroe.

The harbor defense was tactically organized into a Capes Groupment controlling the armament at the Capes and a Hampton Roads Groupment for the inner defenses. The Harbor Defense Command Post was at Fort Story and in practice absorbed the Capes Groupment which was an unnecessary echelon.

No provisions had been made in the harbor defense project at the first of the war for antimotor torpedo boat defense and it was developed later. Due to the wide entrance between the Capes, the defense was weak against any attempt an enemy might make to work through the center of the entrance during period of poor visibility or at night. While partially corrected, this deficiency in the defense was never fully met. Otherwise with the completion of the new armament, the installation of the antimotor torpedo boat defense and the modification of the mine fields the harbor defense eventually became the most powerful on the eastern coast.

CHAPTER II

OPERATIONS PRIOR TO 7 DECEMBER 1941

Third Coast Artillery District

The partial mobilization of the Army in the fall of 1940 found the following troops in the Third Coast Artillery District, Major General Frederick K. Smith, USA, commanding the District, and Colonel F. P. Hardaway, C.A.C., the Harbor Defenses of Chesapeake Bay.

Harbor Defenses of Chesapeake Bay.

2d Coast Artillery (HD) - The original harbor defense regiment responsible for Coast Artillery School and Coast Artillery Board missions as well as the harbor defense. At Forts Monroe, Story, and Wool.

57th Coast Artillery (155mm Gun TD) - One battalion activated one gun 1940, at Fort Monroe.

246th Coast Artillery (HD) - Virginia National Guard. Inducted into Federal Service 16 September 1940, at Fort Monroe and Fort Story.

District Troops:

71st Coast Artillery (AA) - One battalion activated 1 July 1940. At Fort Story.

74th Coast Artillery (AA) - One battalion activated 1 July 1940. At Fort Monroe.

213th Coast Artillery (AA) - Pennsylvania National Guard. Inducted into Federal Service, 16 September 1940. At Camp Pendleton, Virginia.

244th Coast Artillery (155 Gun TD) - New York National Guard. Inducted into Federal Service, 16 September 1940. At Camp Pendleton, Virginia.

Brigadier General Rollin L. Tilton, U.S.A., arrived and assumed command of the Harbor Defenses of Chesapeake Bay on 9 November 1940. During the previous years the Coast Artillery District Commander at Fort Monroe had been also the Commandant of the Coast Artillery School. Just prior to General Tilton's arrival, Brigadier General F. S. Clark, U.S.A., had assumed command of the School relieving General Smith. The separation of the commands as well as the presence at Fort Monroe of the District, consisting of the harbor defense and troops under training within the Harbor Defense Commander's jurisdiction, and the Coast Artillery Board

and Submarine Mine Depot, as well as its Coast Artillery School, separate units reporting to the Chief of Coast Artillery, brought in various administrative complications, never fully solved except on the principle of mutual cooperation. General Smith retained command of the District and assigned the command of the post of Fort Monroe to General Tilton, as Harbor Defense Commander. This was confirmed by War Department orders on 19 December 1940 and remained so. On 4 January 1941 General Smith was transferred to the command of the VII Army Corps and General Tilton assumed command of the District, in addition to his other duties. In May 1941 District and Harbor Defense headquarters were combined into one headquarters as the tactical command and the headquarters of the Post of Fort Monroe established as a separate administrative unit, under Colonel W.W. West, Cavalry, as Post Executive.

The Harbor Defense project was developing slowly during the spring of 1941 and on April 18, 1941, the District-Harbor Defense Commander, after a conference with the Army Commander, recommended the immediate movement of the 8-inch railway battery and 155mm battery then at Fort Monroe to Cape Charles, Virginia, for emplacement in previously recommended positions there pending the completion of the new project armament. This was done in view of the increasingly serious situation and the fact that without some armament at Cape Charles the bay was open to raiders or other hostile craft should they choose to attempt the entrance at night, during periods of poor visibility. The project was unfortunately disapproved by the War Department on account of cost and because "training is considered to be paramount to defense at Cape Charles at this time". As a result of this decision there was no armament at Cape Charles when war came. However, employing troops, the firing spurs for the railway guns were installed during the fall of 1941 using rail collected at Fort Monroe, Fort Story and the assistance of the Pennsylvania Railroad Company, whose lines ran into the area.

First Measure of Alert

On 24 March 1941, in addition to the Fort signal station at Fort Monroe, already in operation, and pursuant to Army instructions, one permanently manned harbor defense observation post was established at Fort Story for training and for use in eventualities. These stations had the mission of reporting the arrival of any foreign naval vessel as well as general observation. District liaison was established from the Fort Monroe station, the then command post, with the Naval District, Norfolk. This was the genesis of the coastal observation system.

On 22 May 1941, as a result of a CPX conducted in the harbor defense and on the Army Commander's instructions, the permanent harbor defense alert was first established. In addition to the surveillance system already in effect, a duty officer at harbor defense headquarters, a 155mm gun battery and an anti-aircraft battery at Fort Story and a 6 inch battery and an anti-aircraft battery at Fort Monroe with their searchlights, went on a permanent alert basis. (Appendix 1)

The more and more serious international situation manifested itself in the various war plans and modifications thereof received from May 1941 onward. The first real plan, based on the general concept that entrance into the Western hemisphere by naval vessels or aircraft of the belligerent powers would be viewed as actuated by possibly unfriendly intent, was broadened by further plans to insure the safety of our communications between the homeland and our outposts recently acquired, to protect shipping and to destroy German and Italian forces found within certain areas. The Army mission in all these plans was in support of the Navy which for the harbor defense meant direct cooperation and support within the defensive coastal area. The harbor defense alert requirements were gradually stiffened and finally on 4 November 1941, secret orders were issued all commanders to cooperate with the Naval District, maintain observation over the defensive sea and harbor areas and to attack and destroy German and Italian forces within the areas.

Harbor Entrance Control Posts

The question of Harbor Entrance Control Posts came up originally late in 1940 and joint plans for the establishment and operation of such stations were completed by the Local Joint Planning Committee April 22, 1941. The project had been initiated by the Navy and some confusion existed at first as to its mission and place in the chain of command. The Army and Navy chains of command were clearly defined and their joint operation in harbor defense clearly defined in Joint Action of the Army and Navy. The control post was clearly not a link interposed in the chain of command, but a combined intelligence, observation and communication center. In fact, it was the harbor defense command post with the local force commander of the inshore patrol present with the naval elements of harbor defense, the local inshore patrol force, the naval underwater listening devices, the naval signal station elements and necessary personnel. This concept of the HECP was adopted by the Commandant and District and Harbor Defense Commander from the start and plans laid accordingly. The permanent harbor defense command post not being complete, the HECP was established in the U.S. Weather Bureau building at Fort Story and operated separately from the command post. The station was first placed in operation on 3 July 1941 under the charge of Captain E.F. Clement, USN, who remained attached until May 1944. The first Navy loops were laid at this time and the Army watch established with the Navy. In addition to its normal duties it was from the start employed by the Navy as a school for HECP personnel. The Approach and Entrance Patrol Chesapeake Bay, of which the HECP was an element, was organized as a separate unit of the Inshore Patrol on 8 December 1941 and after the protected Command Post was completed at Fort Story in December 1941 and the new fort signal station in July 1942, the HECP was by degrees moved to the command post which became the command post of the Approach and Entrance Patrol and also the emergency command post of the Commandant, Fifth Naval District. Complete joint command over the approaches to the bay thus became an accomplished fact in July 1942 and remained so thereafter.

The weather bureau station because of its convenient location was retained as the administrative headquarters by the Approach and Entrance Force, as an inside signal station for employment with the inner guard ship and control of the Lynnhaven anchorage. The old signal station at Fort Monroe was continued as a second HECP for the control of shipping entering Hampton Roads in conjunction with the gate vessels and as an adjunct of the HECP at Fort Story.

Training and Troops

Training of the District and Harbor Defense troops progressed steadily from the induction of the National Guard Regiments and the receipt of the first drafts in January 1941. Camp Pendleton, the Virginia State Rifle Range at Virginia Beach, Virginia, had developed into a training center for mobile coast artillery and, except for the 71st CA (AA), which was attached to the II Army Corps and which was retained at Fort Story as its home station, all mobile regiments were assembled at Camp Pendleton as facilities permitted, the 57th CA (TD) moving from Fort Monroe in the departure of the 213 CA (AA) for Camp Stewart, Georgia in February 1941, and the 74th CA (AA) in July 1941. October 1, 1941, concentrations started for the First Army maneuvers in the Carolinas. The 71st CA (AA) and the 244th CA (TD) were attached to and participated as complete regiments with the II Army Corps; the 57th CA participated with the Army, two battalions as provisional tank destroyer units and one as service troops at headquarters, while the 74th CA (AA) sent two machine gun batteries as provisional truck companies. The harbor defense troops remaining with the 74th CA (AA) less two batteries continued in their harbor defense assignments and in addition took over the Emergency Plan White responsibilities for emergencies in the Third Corps Area. During this period the 74th CA and the harbor defense antiaircraft batteries participated in the First Interceptor Command exercises on the eastern seaboard to test out the Air Warning Service. From the anti-aircraft viewpoint these exercises were not satisfactory, the Air Corps directives were vague and so much information was withheld that little doctrine was spread, the place of the antiaircraft in the team was not clear and the antiaircraft batteries were not given pertinent information in time to act.

On 29 November there was received from the Third Corps Area a paraphrased radio message repeated from the War Department:

> "THE SITUATION AT PRESENT REQUIRES THAT ALL PRECAUTIONS WITHIN THE SCOPE OF YOUR RESPONSIBILITIES BE TAKEN IMMEDIATELY AGAINST SUBVERSIVE ACTIVITIES. THE MEASURES TAKEN SHOULD PROVIDE FOR THE PROTECTION AGAINST SABOTAGE OF ALL OF THE FOLLOWING UNDER YOUR CONTROL - EQUIPMENT, PROPERTY AND ESTABLISHMENTS, AS WELL AS THE PROTECTION OF ACTIVITIES AGAINST SABOTAGE AND PERSONNEL AGAINST SUBVERSIVE PROPOGANDA. ONLY LEGAL MEASURES SHOULD BE

INCLUDED AND THESE CONFINED TO THOSE NECESSARY AND ESSENTIAL TO SECURITY. PUBLICITY AND ALARM SHOULD BE AVOIDED."

Orders were issued to all posts increasing the interior guard, guards were placed at outlying stations not fully manned, and fifty per cent of the garrison was held in each post.

The troops returned from the Army maneuvers on 4 December 1941 and on that date the Third Coast Artillery District-Harbor Defenses of Chesapeake Bay troops were disposed as follows:

Third Coast Artillery District
and
Harbor Defenses of Chesapeake Bay

Headquarters - Joint Sector - Harbor Defense

Forward Echelon - Fort Story
Rear Echelon - Fort Monroe
Headquarters Battery Third Coast Artillery District
Headquarters Battery Harbor Defenses of Chesapeake Bay

Fort Monroe, Virginia

2nd Coast Artillery (HD) less Battery E.
Headquarters Battery, 2d Battalion, 246th Coast Artillery
Batteries D, F, and H - 246th Coast Artillery
U.S.A.M.P. - "Schofield"
96th Ordnance Company

Fort Story, Virginia

246th Coast Artillery (HD) less Monroe detachments
Battery E, 2d Coast Artillery
71st Coast Artillery (AA)

Camp Pendleton, Virginia

57th Coast Artillery (155 gun)
244th Coast Artillery (155 gun)
74th Coast Artillery (AA)

The strength of the command was as follows:

Unit	Officers	W.O.	A.N.C.	EM	Total
Fort Monroe					
Hq & Hq Btry, 3 CAD & HDCB	15	1		23	39
Service Units & Casuals	76	2	10	512	600
96th Ord Co (MM)	4			78	82
2d Coast Artillery	57	2		1012	1071
USAMP "SCHOFIELD"	2	7		56	65
246th Coast Artillery	18			409	427
Coast Artillery School	(1025)	(13)		(1670)	(2708)
	172	12	10	2090	2284
Fort Story					
Service Units & Casuals	63		26	423	512
Co "A", 80th QM Bn	3			166	169
2d Coast Artillery	3			115	118
71st Coast Artillery	86			1633	1719
246th Coast Artillery	63	1		1285	1349
	218	1	26	3622	3867
Camp Pendleton					
Service Units and Casuals	22			110	132
57th Coast Artillery	94			1549	1643
74th Coast Artillery	85			1456	1541
244th Coast Artillery	83			1713	1796
	284			4828	5112
AGGREGATE	674	13	36	10540	11263

NOTE: Coast Artillery School personnel was attached to Fort Monroe for administration and was not a part of the command. Not included in totals.

CHAPTER III

INITIAL OPERATIONS AND THE ORGANIZATION OF THE SECTOR

Initial Operation

The first reports of the attack on Pearl Harbor, 7 December 1941, were received by radio at Fort Monroe about 1515. At 1600, the situation being obviously serious, the HECP at Fort Story and the alert batteries were warned to take all precautions and the staff and troops directed to stand by.

At 1755 the Chief of Staff, First Army, called the Commanding General, and gave the following:

"The hangar lines and fields at Honolulu were attacked at 0800- about fifty Jap dive bombers - one battleship has been damaged - our planes in the air - enemy machine gunning fields."

"Alert the harbor defenses - hemisphere plan #5 on twenty-four hour basis. Cooperate with and support the Navy."

The necessary orders were given and at 1915 the entire command was on alert status. The harbor defenses occupied battle stations under their standing operating procedure and the mobile regiments of the District awaited orders prepared for movement at their respective stations.

The Harbor Defenses were, at the time, in the status shown as of 4 December. Their efficiency was satisfactory but Group 3, the armament at Cape Charles was at Fort Monroe; there was thus no defense on the north side of the Capes.

The Harbor Defense Command Post at Fort Story opened on the morning of 8 December in the new protected command post just nearing completion. As the District-Harbor Defense had been operating under a combined headquarters it was at once necessary to establish a Seaward Command to take on the direct responsibility for the seaward defense leaving the District-Harbor Defense Commander free for the over-all problem. The Seaward Command was formed from the harbor defense and Capes Groupment staffs and with the establishment of the Sector became the Harbor Defense Command, initially under the command of Colonel Malcolm W. Force, 244th Coast Artillery. He was relieved by Brigadier General David P. Hardy, who assumed command on his arrival in December.

Orders for the execution of the underwater defense were received on 8 December. The initiation of this project presented some complications. The new mine base at Little Creek was nearing completion and had not yet been turned over by the Engineers. The materiel was partly in storage at the Army Base, Norfolk, partly at Fort Monroe and part of the explosives at Fort Wool. Batteries A and E, Second Coast Artillery, occupied Little

Creek the same day orders were received, commenced assembling the equipment, and completed planting the first line of mines in the main channel 16 December. By 31 December nine groups were down, in spite of most adverse conditions of wind and sea and some effective underwater defense existed.

To remedy the weakness in the defense at Cape Charles, Battery D, 246th Coast Artillery with Battery "Z", two 8-inch railway guns were sent to Fort Winslow arriving 20 December. The battery did not have its battle allowance of ammunition however, and was not fully effective until 28 December.

The previous measures of partial alert taken by the Harbor Defense, the experiences gained in six months of operation of the HECP, as well as the training of the troops in close cooperation with the local naval elements made the transition from normal peacetime routine to full alert a simple problem. Except for the weakness of the defense toward the north and the non-existence on 7 December of the underwater defense, the harbor defenses were prepared.

Orders for the initiation of the Antiaircraft Defense of the vital installations of the Sector were issued by the Army 8 December. The 71st Coast Artillery (AA) was at once ordered into positions protecting the Naval Operating Base, Norfolk, and its operations coordinated with the harbor defense batteries at Fort Monroe, The 74th Coast Artillery (AA) had one of its four machine gun batteries absent at Fort George G. Meade, Maryland, on a special mission and no armament for two others: it was however, ordered into positions to protect the Norfolk Navy Yard, Portsmouth, Virginia, and coordinated with the 71st. On 9 December the 34th Coast Artillery Brigade (AA) headquarters, Brigadier General C. M. Thiele, USA, was ordered into the Sector from Fort Bragg, North Carolina, and the 94th Coast Artillery (AA Semi-mobile, 90mm gun) ordered in from Camp Stewart, Georgia. The 94th arrived 13 December and occupied positions covering Newport News (shipyard) and Langley Field with one battery in the James River Bridge-Norfolk area thus supporting the 74th and completing as far as possible the defense of the area. Brigade Headquarters was established at the Naval Operating Base, Norfolk, 13 December.

At the same time the Army ordered the initiation of the antiaircraft defense the 70th Coast Artillery (AA) and the 212 Coast Artillery (AA) from Camp Stewart, Georgia, were ordered to the Sector for the defense of the Glenn Martin Aircraft Corporation plant at Baltimore and Washington, D. C. respectively. An officer was sent to reconnoiter for and arrange for the accomodations and supply of these regiments and they went into positions on arrival, the 70th on 13 December and the 212th on 14 December. In the meanwhile, to protect the White House, Battery E, 71st Coast Artillery (machine gun) was taken from positions in Norfolk and sent to Washington on the night of 10 December, going into positions on the morning of the 11th. On 10 December the Army issued orders organizing the Provisional First Army Antiaircraft Command and at 0800 - 14 December this command took over all antiaircraft defenses except the harbor defense batteries which came under its operational control.

The initiation and operation of the antiaircraft defense worked smoothly and according to plan. The movement of the regiments, other than the local regiments, into the Sector prior to the establishment of a brigade command threw a heavy load on the Sector at a critical time which was of necessity largely absorbed by Lt. Col. S. P. Mickelsen, CAC, the commanding officer of the 74th Coast Artillery, who acted for the Sector Commander in the placing of the units in Baltimore and Washington. The shortage of equipment in the regiments and urgent orders for the movement of the three inch armament to the West coast and its replacement by the new 90mm armament often left organization with none, and only by collecting all available armament from the harbor defense and Coast Artillery School could a reasonable amount be found.

The District, at the time of Pearl Harbor, had not been released from its responsibilities for the Third Corps Area under the EPW plan, and early in the evening of 7 December the District Commander was called by Major General Henry C. Pratt, USA, commanding the Third Corps Area, Baltimore, and directed to guard our own establishments, important utilities in the vicinity, and especially the James River Bridge. The next day further orders were received to guard the Seaboard Airline Railway terminals in Norfolk and Portsmouth, Virginia. A detachment of the 74th CA (AA) was placed on the James River Bridge, a guard was placed over the power plants in Hampton, Virginia, and a guard was established by the Commanding General, AATC, Fort Eustis, Virginia, over the Newport News water supply on the night of 7 December. On 8 December after a conference with the Commandant, Fifth Naval District and the City Manager of Norfolk, Colonel Borland, it was decided that local measures were sufficient in Norfolk: one battery of the 57th CA (TD) was however, sent into Portsmouth to care for the Seaboard Airline Terminals and to give a small force should other emergency arise. As the demands for the troops on their normal missions increased these troops were gradually withdrawn and 23 December, on the arrival of a battalion of the 111th Infantry in Norfolk for civil defense, all responsibility passed to the Corps Area.

The two 155 Regiments at Camp Pendleton moved out almost at once except for the 244th CA, less two batteries, which the Sector retained for the new harbor defenses of Beaufort Inlet.

The 57th Coast Artillery had returned its second battalion from maneuvers on 6 November, alerted for shipment to "Copper" via San Francisco. This battalion was completing its organization on 7 December and left 10 December. The regiment, less the 2d Battalion, was alerted for overseas via San Francisco on 13 December and left on 18 December.

The 244th Coast Artillery was initially called on for local guard purposes and it was contemplated employing it to augment the harbor defense. However, on 18 December, the 1st Battalion was alerted for movement to Beaufort Inlet and on 21 December the 2d Battalion was alerted for movement to Alaska, leaving on 23 December. The regimental headquarters remained for the time being at Camp Pendleton with the 3d Battalion, which having

been depleted to fill up the 57th and 244th battalions leaving and having received all the physically unfit from these units was unfit for service. This battalion was rebuilt and finally left on 17 January for San Francisco. Regimental headquarters eventually moved to the Harbor Defenses of Beaufort Inlet.

Activation of the Sector

On 11 December, the following radio orders were received from the First Army:

"December 10, 1941.
6:30 P. M.

Commanding General,
Third Coast Artillery District.

Confirming telephone and wire instructions previously sent you will carry out tasks assigned in Joint Rainbow Number 5, insofar as they pertain to Japan, Germany and Italy. Until you receive Northeast Defense Command Operations Plan based on Rainbow Number 5, you will carry out the following:

1. Supported by the Navy and First Air Force Defend the North Atlantic Coastal Frontier against attacks by land, sea and air, in category B.

2. Support the Navy in the protection of friendly sea communications and in the destruction of enemy forces within your radius of action.

3. Establish and place in operation Section and Sub-sectors as prescribed in DP Net 41. Report when accomplished.

4. Command all mobile antiaircraft units ordered to defense of your Sector except that operational control of all antiaircraft artillery will be exercised by First Air Force. When antiaircraft units are in battle positions and ready to operate, report to this headquarters by phone and wire.

5. In cooperation with Navy execute underwater harbor defense measures. Report progress by wire daily until further orders.

6. Continue in effect all cooperative measures with Navy in carrying out their Western Hemisphere Defense Plan Number 5.

7. Place in operation such features of your plans under DP Net 41 as are applicable to above task with the forces now under your command. Army Corps and Division commanders have been informed that plan is in effect but no movement of troops will be made without authority of this headquarters.

DRUM"

This was the basic directive on which the Chesapeake Bay Sector was established and organized and on which it took up its task. The formal order, General Order No. 1, placing the Sector in operation, was issued 12 December 1941. (Appendix 2)

The Sector was initially organized into the Sector headquarters, the Sector antiaircraft command, and the Harbor Defenses of Chesapeake Bay. As has been noted, the Antiaircraft command passed from the Sector almost at once but its place was taken by the Sector Mobile Force, and the Harbor Defenses of Beaufort Inlet, soon to be established.

The increasing gravity of the situation was reflected in telephone instructions from the Army on the morning of 15 December changing the category of defense from B to C, and asking what coast artillery units, infantry and other arms were desired to put in effect our war plans under the changed category and when and where they were wanted.

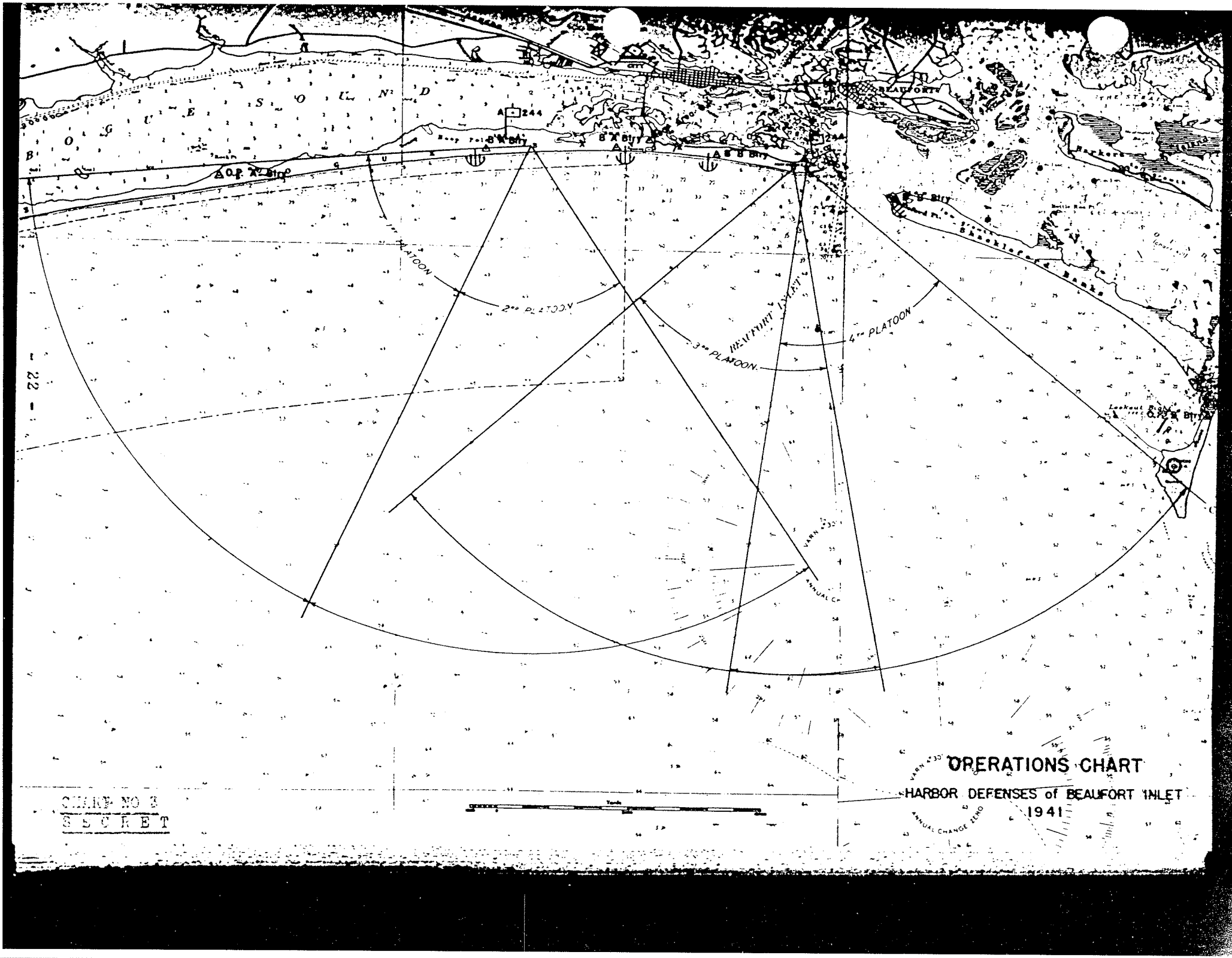
The changed Category of Defense contemplated the coastal frontier as in all probability subject to minor attack. In addition to attacks on the sea and against our shipping this included minor attack against land areas. The means of defense then in addition to full harbor defense required outposts outside our harbor defenses and sufficient forces at sensitive points to meet minor landings.

Outline plans were submitted 17 December and full plans 18 December. These plans contemplated the augmentation of Harbor Defenses of Chesapeake Bay to full strength for all armament, the establishment of the Harbor Defenses of Beaufort Inlet, the employment of a Mobile Defense Force for the observation of critical areas to consist of three battalion combat teams, and certain service and maintenance troops.

The plan was approved by the Army in its essentials on 18 December and the II Army Corps directed to furnish from the 29th Division at Fort George G. Meade one regimental combat team (less engineers) completely motorized. At the same time the establishment of the Harbor Defenses of Beaufort Inlet was authorized. Engineer troops were not available at the time and certain increases in harbor defense personnel for new armament were not approved.

Harbor Defenses of Beaufort Inlet

The necessity for harbor defenses protecting Beaufort Inlet and the Morehead City Section Base had been foreseen when the Sector boundary was extended to the south and in November 1941, a detailed reconnaissance of the area had been made by the District Commander and his aide, Captain Walter F. Ellis, CAC. Various plans for the establishment of this harbor defense were considered but it was finally decided that one battalion of 155mm guns with one battery at old Fort Macon at the harbor entrance and one to the westward protecting the new Section Base was sufficient. Accordingly, when authority was granted for the move, Fort Macon, A North Carolina State Park, was secured from the Governor of North Carolina, other


1ST PLATOON
2ND PLATOON
3RD PLATOON
4TH PLATOON
LIEUTENANT UNIT
OPERATIONS CHART
HARBOR DEFENSES of BEAUFORT INLET
1941
CHART NO 3
SECRET

necessary land leased and the 1st Battalion, 244th Coast Artillery moved down. The reconnaissance and occupation of the positions commenced on 18 December, the guns went into position on the 24th, and on 27 December the ammunition having been hauled from Charleston, SC, the batteries were proof fired and ready for service. This small harbor defense, originally intended for the defense of the harbor and Section Base, was later to become one of the key defenses in the anti-submarine campaign and a vital element in the defense. (See Field Orders No. 2, CBS 20 December 1941, Appendix 2) (Chart 3).

Sector Mobile Force

The troops assigned the Sector by the 29th Division consisted of the 116th Infantry, Colonel Ewarts Opie, 116th Infantry, with the 1st Battalion, 111th Field Artillery attached. One liaison officer from the Division staff was attached to Sector Headquarters at the same time. The movement to Sector positions started 19 December, the first troops being in position on 20 December and initial dispositions, including outposts, completed 23 December.

The force mission was to observe and patrol the coastline, repel enemy raids or landing attempts, be prepared to protect the interior against attack by airborne troops and to support the harbor defenses in local defense.

The Mobile Defense Force was initially broken into three elements: the Cape Charles Defense Force, 1st Battalion, 116th Infantry with Battery A, 111th Field Artillery attached, at Westover, Maryland, with outposts at Ocean City, Maryland, Chincoteague, and Exmore (Nassawadox) Va, covering the Delmarva Peninsula; the Cape Henry Defense Force, the 116th Infantry with 1st Battalion, 111th Field Artillery attached, less detachments (a reinforced battalion combat team in fact) covering the sensitive Cape Henry-Norfolk area and the coastline as far south as Oregon Inlet; and lastly, the Beaufort Inlet Defense Force, Third Battalion, 116th Infantry with Battery C, 111th Field Artillery attached, at new Bern, North Carolina, covering the southern part of the Sector, with an outpost at Morehead City, North Carolina. Liaison was established with the Coast Guard Stations, Marine forces at Jacksonville, North Carolina, and adjacent sectors. Motor and foot patrols were established over the entire coastal area. Initially, the exposed barrier reef from Oregon Inlet to Cape Lookout was left unpatrolled in view of its isolation and as it was partially covered by the Coast Guard. Supply was established through the nearest permanent establishments and estimates and plans submitted for the semi-permanent camps of the force. Except for minor changes as the tactical situtation changed, the basic organization and allotment of the Mobile Force remained unchanged.

The troops assigned had just returned from the Carolina maneuvers, had over twenty-five percent of their officer and enlisted strength on leave or furlough, and were tired. When they first moved in they lived in school buildings, fire stations, National Guard armories and old CCC camps

in difficult winter weather and operated under most trying conditions. Under the circumstances, their spirit and conduct of duty was most excellent and reflected great credit on their regimental commander.

Joint Operations Center

As has been stated, the relations between the District-Harbor Defense and the Fifth Naval District had always been particularly close. The Harbor Defense-Inshore Patrol joint operations had been established in the HECP and it was contemplated in the war plans that liaison officers would be exchanged between the Sector and District. On 19 December instructions were received from the War Department directing that joint operations center be established in all coastal frontiers, sectors, or sub sectors in which joint operations were likely. At a conference with the Commandant, Rear Admiral Manly H. Simons, U.S.N., it was decided that the Naval Operating Base, Norfolk, with its facilities, and the Naval operations being close to the Antiaircraft Command and the First Interceptor Command-Air Warning Service in Norfolk, was the most desirable location. Communications were available through the harbor defense fire control cables. The joint operations center was accordingly established there and Lt. Col. Randolph McG. Cabell, 246th Coast Artillery, and 1st Lt. John F. Splain, 2d Coast Artillery, ordered to duty there. These two officers, later assisted by three watch officers, remained on duty at the Naval Operating Base throughout the life of the Sector. Their ability, tact and diplomacy carried through many a difficult day and demonstrated the value of good liaison officers at their best. While primarily Sector staff officers representing the Sector Commander, their work included any phase of operation involving the Army and their mission to the Commandant was to serve him in any way they could. As the Army commands in the area multiplied their duties and problems became more and more complex; however, by representing the Army as a whole they established a place for themselves and a prestige which made them of inestimably greater value than had they confined themselves to their strictly sector duties. At the height of operations the Army had some ten separate or semi-separate commands in the area and the Navy as many; the Sector Commander being the senior Army officer present it was incumbent on him that his staff officers with the Navy represented the Army as well as himself.

Air Defense

The air defense of the Sector was under the First Air Force, a part of the Defense Command. The Air Warning Service had been tried out during the air maneuver exercise in October and on the outbreak of war was permanently established by the First Interceptor Command, an element of the First Air Force, with Regional headquarters and the information center in Norfolk. Blackout and air raid instructions were issued at all stations of the Sector but coordination between the Interceptor Commands and the Sector was never satisfactorily established. The regional boundaries of the interceptor command did not coincide with the Sector boundaries which meant that Sector troops dealt, according to their location, with three regions. Sole responsibility rested with the interceptor command for blackouts, air-

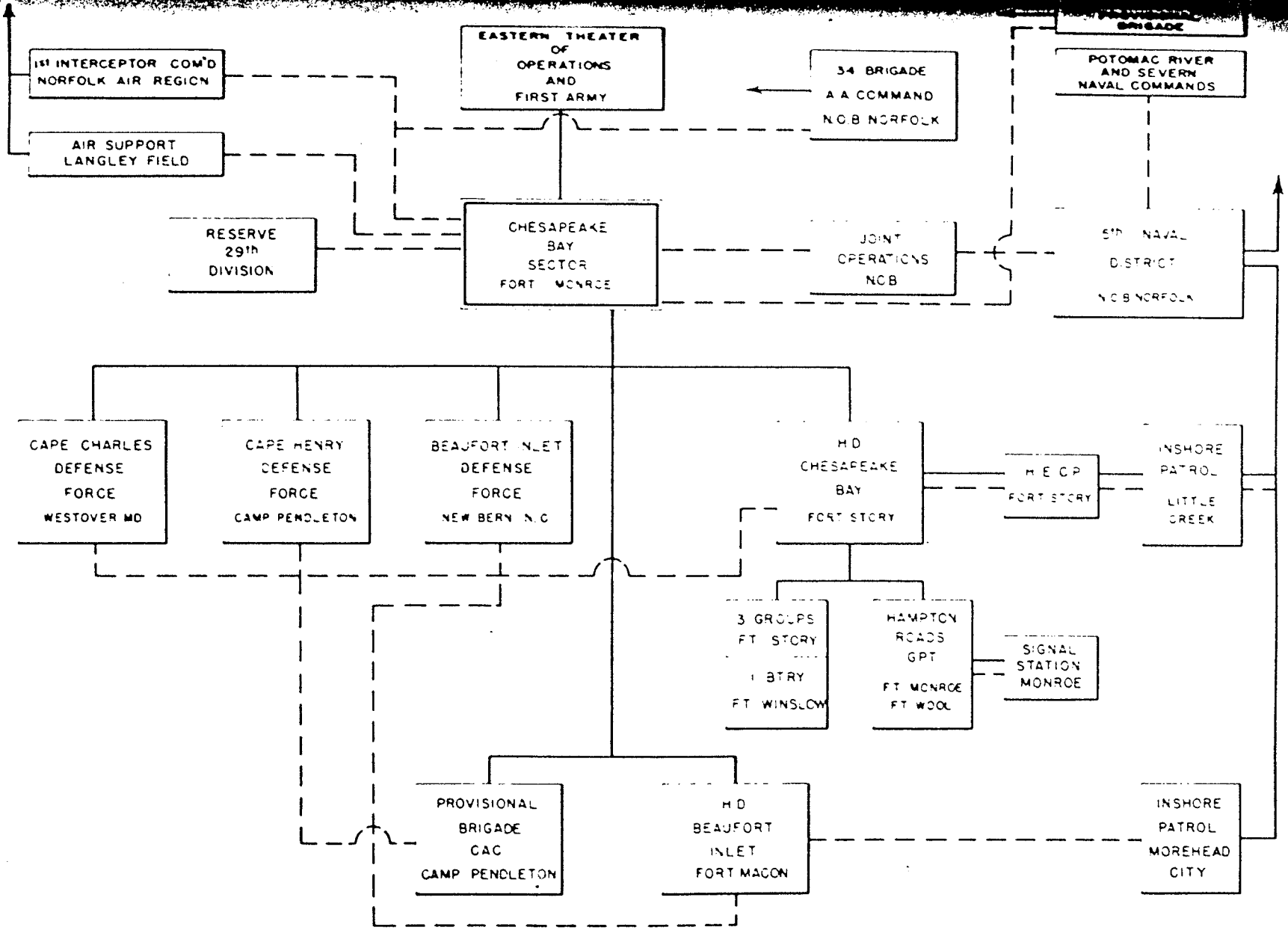


CHART NO 4

ORGANIZATION CHESAPEAKE BAY SECTOR

31 DECEMBER 1941

SECRET

raid warnings and alerts and these warnings went to the District Warning centers operated by the Civilian Defense in the various communities, post commanders being responsible for getting their warnings from the nearest District center. This worked after a fashion with the outlying elements of the mobile forces but was entirely unsatisfactory for the harbor defense and the vital naval installations around the Hampton Roads area. It was at first corrected by placing Sector officers on watch in the Norfolk Warning center with orders to transmit all information to Sector and the Navy and finally corrected by taking the information from the AA Command center in Norfolk direct to Joint Operations and thence to the various commands. This worked well and air raid warnings were taken in and acted on by the harbor defense and naval installations before the corresponding warning was acted on locally. There were various air raid alarms during December, all found false, but all of which served as good training.

Air support was furnished the Sector on 18 December by the 65th Observation Group of the First Air Support Command which reconnoitered from the shore line to a line forty miles off shore for the purpose of locating hostile vessels and supplying missions for the seacoast artillery. This support was very satisfactory and continued until a general readjustment of the Air Force and Naval Air Force missions was made in the Spring of 1942.

Organization at the end of 1941

Certain other changes in organization occurred during the last of December. By Navy Department orders the Severn River (Annapolis) and Potomac River Naval Commands were established removing these areas from the control of the Fifth Naval District. On 20 December, based on recommendations made by the Sector, the Washington Provisional Brigade was excluded from the Sector although the responsibility for sending reinforcements to Washington in emergency remained. Lastly, on 21 December, the Northeastern Defense Command was absorbed into the Eastern Theater of Operations and First Army which was organized that date embracing the U. S. Base in Newfoundland and the entire eastern seaboard.

By end of the year the basic organization of the Sector was completed, the Harbor Defenses of Chesapeake Bay progressing well with the underwater defense, The Harbor Defenses of Beaufort Inlet established, and the Mobile Forces in place. The organization of the Sector at this time was as shown in Chart 4.

same day. Under the expanded service four warning centers were set up: Cape Charles, centered at the Mobile Force Command Post at Westover, Maryland, covering the Eastern Shore; Cape Henry, centered at the Harbor Defense Command Post (HECP) at Fort Story, covering the Cape Henry area and the coast to Hatteras; the Hampton Roads, at Fort Monroe, covering the entrances to the Roads and the York River; and lastly the Beaufort Inlet, centered at the Mobile Force Command Post at New Bern, North Carolina, and covering the coast from Hatteras to the southern boundary. The service was based on the Inshore Patrol, the Coast Artillery stations, the Coast Guard stations and beach patrols, and the Mobile Force patrols: civilian assistance was secured by the Mobile Force commanders selecting and listing key personnel in the localities not well covered by military personnel. The Mobile Force commanders also established liaison with the local civil authorities, civilian defense personnel and F.B.I. personnel. Information from all sources filtered into the warning centers and thence to Sector Headquarters, Joint Operations and the Coast Guard. Information received at the HECP-Fort Story was passed direct to the Cape Henry Defense Force as well as Sector. Local commanders acted on the information received as the situation required.

Underwater Defense, Chesapeake Bay

The underwater defenses in Chesapeake Bay were pushed forward as rapidly as possible under the difficult condition of wind and weather existing under winter conditions in the bay.

The Navy mine field consisting of 365 Navy, Mark 6 mines was laid 17 January. The Navy loops had been planted before war and were in operation.

Work on the Army mine field at the entrance proceeded slowly. Sea conditions often made work on the water impossible and the constant damage caused by ships entering port running over the mines made the maintenance problem exceedingly difficult and necessitated constant relaying. The outer field, at the Capes, was finally completed 16 March at which time, on orders from the Eastern Theater of Operations, it was necessary to send the one mine planter the USAMP "Schofield" to Delaware Bay to plant, difficulties having been encountered under the improvised planter there and the mine defense being imperative. When the "Schofield" left the outer field was 85% efficient: effort was made to maintain the field with a harbor tug and the "L" Boats but when the "Schofield" returned on 15 April efficiency had fallen to 63%.

As planned and finally completed the outer or Capes field had 22 groups in four lines, the outer and third line being at 50 foot submergence and the second and fourth lines at 15 foot submergence with 1000 foot channel openings between certain groups.

When the outer line was completed in January the active operation of the field commenced. It was originally intended to place all mines on

contact during periods of low visibility or when surveillance of the field was not practicable. The Commandant, Fifth Naval District objected to this procedure however on the grounds that time had not permitted all shipping being warned as to dangers in defensive sea and coastal areas and that he was required to keep the port open day and night unless enemy action demanded closed port. It was accordingly agreed that the mines would be placed on contact only if the tactical situation in the opinion of the Sector or Harbor Defense commander required it, or on the request of the Commandant. It soon developed that this was a wise decision: shipping averaged about 60 ships a day past the Capes; control, for lack of patrol craft and the lack of indoctrination of personnel in entering mined waters, was difficult and violations of the field so numerous as to make an almost impossible maintenance problem. There being no usable range marks on shore to aid shipping it was finally decided to buoy the openings in the field. With the buoys, the development of the Approach and Entrance Force, and energetic action by the Harbor Defense in firing warning shots toward any vessel violating instructions the situation was finally corrected and, after developing a joint operating procedure, mines were placed on contact, on and after 26 March, whenever visibility conditions prevented surveillance. Employed carefully at first, with experience and confidence the procedure became standard and was regularly employed without incident.

The anti-motor torpedo boat net and gate outside Hampton Roads was completed and placed in operation 1 March and the York River net on 8 March. The inner mine field at the entrance to Hampton Roads was completed and in operation early in April.

Mobile Forces

During the period 12 - 14 January the Sector troops in the Cape Henry area conducted maneuvers with the Amphibious Force, Atlantic Fleet, under the direction of Major General H. H. Smith, Marine Corps, the Commanding General of the Amphibious Force. The maneuver plan included a full scale landing by the 1st Division, U. S. Army, reinforced from transports on Cape Henry and opposed by the Cape Henry Defense Force, Colonel Ewarts Opie, 116th Infantry, consisting of the 116th Infantry (less two battalions) reinforced by two batteries of field artillery, two batteries of coast artillery, and one battalion of 155mm howitzer Marines. The Sector personnel participated under an agreement that the exercises would not be allowed to interfere with or interrupt necessary operations and worked out most successfully, the Mobile Force securing much benefit and experience therefrom.

On 21 January the 116th Infantry, with the 1st Battalion 111th Field Artillery attached, was relieved by the 111th Infantry with the 1st Battalion 109th Field Artillery, one company of the 103d Quartermaster Regiment and one company of the 103d Medical Regiment attached. These units occupied positions as had the 116th Infantry and took up the development of the defense mission of the mobile force.

The Mobile Force mission in the Sector presented many difficult problems. The original plans had contemplated the employment of a full division. The 29th Division had been assigned the mission, had supplied the initial mobile force, and prepared plans for reenforcing the Sector at full strength. With the relief of the 116th Infantry the 29th Division was also relieved of its mission.

The 111th Infantry and its attached troops were initially GHQ Reserve units attached to the VI Corps at Providence, Rhode Island and some confusion existed as to their status: masses of training directives were received from Corps Headquarters impossible of execution under their combat mission. This was corrected on 12 March 1942 when the 111th Infantry was assigned the mobile force becoming thereafter an organic part of the Sector and under the control of the Sector Commander alone.

The mobile forces were originally assigned the Sectors under category of defense "C" for the purpose of defense against landing operations, outpost and patrol of the beaches. At the same time the Sector Commander had a distinct responsibility for the defense of rear areas in his Sector, for the defense of airdromes, for defense against airborne or parachute troops or raids and a further responsibility for assisting Corps Area Commanders in civil protection in emergency. In the Chesapeake Bay Sector, with the vital Baltimore-Washington area and with peculiar configuration of the northern half of the Sector cut by the James, York, Rappahannock and Potomac rivers this problem became peculiarly difficult. The mobile forces available were only sufficient for the coast and were all faced seaward on the coast. To move any force to the Washington area would have taken at the best at least ten hours. Reconnaissances were made and plans prepared to move if necessary but by agreement with the Eastern Theater of Operations and First Army it was understood Army troops would be made available if necessary.

For the immediate support of the Sector after the relief of the 29th Division, the Army directed the I Corps at Columbia, South Carolina to make one division available and prepare plans for it. The 9th Division at Fort Bragg was designated and after a conference between the Sector, the Corps Chief of Staff and the Division, a plan for the employment of the 9th Division prepared. The plan had been no sooner prepared however than the 9th Division left and thereafter the Sector plan for support was based simply on the employment of the equivalent of a triangular division the troops to be supplied from those available on the eastern seaboard at the time.

On 20 March 1942 the Eastern Theater of Operations and First Army became the Eastern Defense Command and First Army. This followed the major reorganization of the War Department which had occurred 9 March.

Submarine Campaign, First Phase

The submarine campaign in the Chesapeake Bay Sector-Fifth Naval

District area was initiated on 17 January 1942 with the sinking of the SS "Allan Jackson" an American tanker bound from Cartagena Columbia to New York with crude oil. The ship was sunk by two torpedoes about 0755Q and 13 survivors of a crew of 35 picked up. Air patrols were sent out by the Fifth Naval District but without result.

For some days previous to this incident Naval Intelligence reports had indicated considerable German submarine activity in the Atlantic, submarines moving in a westerly direction with the probable intention of operating off our eastern coast. This proved correct as the first incident was quickly followed by four more sinkings on the coastal route off Cape Hatteras on the 19th. Thereafter the campaign was steadily and aggressively pushed by the Germans.

The Cape Hatteras area proved the focal spot in this phase of the submarine campaign. The enemy was fully aware of the geographic characteristics of the coast line in this area and the convergence of the coastwise shipping lanes off the Cape. Shipping was not convoyed, and the lack of destroyers and other vessels capable of operating against enemy submarines made an adequate surface patrol of the area impossible. In all during this phase of the campaign, from 17 January to the end of April, the enemy sank or seriously damaged some 60 ships in the waters of the Fifth Naval District. While this was the direct result of enemy action and our own lack of means, much of the loss was due to poor seamanship, failure of merchant skippers to follow orders, failure to run without lights and carelessness.

With its limited forces, the Coast Guard craft available and the Coast Guard Life Saving Stations, the Naval District pushed the anti-submarine operations to the limit, operating against the submarines, patrolling the sea lanes, saving life and salvaging the ships damaged but not sunk.

The principal force available to the Navy at the time lays in its patrol planes, but due to shortage of planes and pilots it was impossible to patrol the coastal sea lanes and have available a striking force to meet all demands. In support of the Navy the Army First Air Force was employing the First Bomber Command, Mitchell Field, New York, in patrol of the sea lanes and in the anti-submarine campaign. The 2d Bombardment Group of this force was at Langley Field and assisting in the waters of the Fifth Naval District; however since the Commandant controlled only the local naval planes and the Bomber Command at Mitchell Field would never permit the Admiral to call Langley Field direct for help from army planes; coordination and mutual support was never satisfactory in spite of repeated efforts by the Sector in attempting to assist the Commandant in smoothing out the difficulties.

The 65th Observation Group on the other hand attached to the Sector for support did most excellent work in patrolling the shoreline, the coastal waters along shore and in assisting the Navy and the Harbor Defenses. It was a great loss to the Sector when this unit was relieved for other duty on 26 August. Thereafter the Sector had no Army Air Force in support.

Air support was secured entirely from the Fifth Naval District through Joint Operations; it was always available, always promptly furnished and most cooperative.

The Sector employed its forces in supporting the Navy to the limit of its ability.

The Harbor Defenses of Chesapeake Bay covered the approaches and entrance to the bay and formed a secure harbor of refuge. Shipping control was improving and with the development of the Approach and Entrance Patrol shipping in and out of the bay was moved rapidly. At no time did any enemy submarine approach within gun range. As soon as weather conditions permitted the completion of necessary construction, the battery of 155mm guns at Fort Monroe was moved to Fisherman Island and was placed in service on 20 April materially increasing the limited gun defense at the north of the Capes.

The Harbor Defenses of Beaufort Inlet had been established primarily to protect the Section Base at Morehead City and the harbor. Some seven miles to the eastward of the harbor entrance was Lookout Bight a natural harbor formed by Cape Lookout. This, with an old stone breakwater, formed an ideal harbor of refuge for coastal shipping and rapidly came into use. While not coming within effective gun range enemy submarines were frequently in close proximity. On 10 April the Eastern Sea Frontier established a patrolled anchorage at Cape Lookout. Battery A, 193d Field Artillery was attached to the harbor defense and emplaced at Cape Lookout to cover the anchorage, pending the emplacement of seacoast armament.

The Sector mobile forces were employed in direct support of the Coast Guard stations, on the beaches and in patrolling the coastal areas. Probably the most important work during the early stages of the anti-submarine campaign next to the harbor defenses was that performed by the mobile force in running down the many many reports of subvervise activities. These consisted of reports, many from reliable civilian and service sources, of radio intercepts of short wave transmission usually concentrating in the area of Beaufort, Cedar Island and Swansboro, North Carolina, reports of lights and signals from the beaches, investigation of flares, investigation of suspicious characters and investigations of reported landings and unidentified vessels along shore. In this work the Sector forces worked directly with the Officer of Naval Intelligence and their personnel, the FBI, and the local authorities. While no clear and positive evidence has ever been developed of enemy landings on the Sector shore nor of agents on shore many of the reports were reliable and based on good information and it is more than probable that the aggressiveness of the Mobile Force personnel broke up and drove from the sector agents who might otherwise have accomplished much.

On the night of 16 February the American tanker "E. H. Blum" approached the Chesapeake Capes about 2000Q in a thick fog. The ship was known as friendly but failed to answer radio calls. Tracked by radar she approached the Army mine fields touched several of the mines and turned seaward toward

the Navy mine field where she struck and sank. The Coast Guard cutter "Woodbury" picked up all the crew and the vessel was later salvaged. The incident was interesting as it was the first case where the harbor defense radar picked up and tracked a vessel in, in the fog, and the fire control sections not only predicted exactly when she would touch the army mine field but exactly where she would strike the Navy contact mines. Had the ship used her radio she could have been brought in safely and easily.

On 2 April an Army bomber attacked and probably destroyed a submarine in Latitude 36.33 N - Longitude 74.48 W - (50 miles east of False Cape) and on 9 April two patrol vessels attacked and probably destroyed a submarine in Latitude 35.32 N - Longitude 75.16 W just off Wimble Shoal.

On 14 April the USS "Roper" engaged a German submarine which she spotted through the aid of plane radar and sighted on the surface at 2700 yards in position 35.55N - 37.13W (about 15 miles off Oregon Inlet) at 0140Q. On closer approach and illumination the submarine crew on deck ran toward their guns but were machine gunned by the destroyer. The "Roper" then opened fire and made a hit on the conning tower near its base. The submarine either submerged or sank but fired one torpedo which missed. A pattern of depth charges was laid and the "Roper" stood by until daylight and began picking up bodies as they came to the surface. The 65th Observation Group aided in the recovery of bodies by indicating them to the destroyer. Twenty-nine bodies were recovered and brought in to the Naval Operating Base, Norfolk. An examination of the bodies revealed that all had broken backs, presumably from the concussion of the depth charges, except one which had been hit by machine gun fire, and it must be presumed that all were on deck when the submarine submerged. An examination of the papers found on the German sailors showed that the submarine was the "U85", Oberleutenant Creger, which had sailed from St. Nazair, France, 21 March. In accordance with Joint Agreements the Sector arranged for the burial of the Germans in the National Cemetery in Hampton where they were buried with military honors. It was given out locally that the burial was that of merchant seamen killed in recent sinkings and picked up on the beaches or at sea: for a long time the actual facts remained secret. The "U85" sank in about 96 feet of water and while some equipment was recovered from her other demands prevented salvage.

At the end of April there was a definite lull in the number of enemy submarines sighted and attacks made on shipping in the water adjacent to the Sector. In all there had been some seventy attacks on shipping, thirty-three attacks on submarines and two likely and one sure kill.

Coastal Dimout

Early in March the sinkings of coastwise shipping by enemy submarines made it imperative that action be taken to eliminate all illumination of communities and facilities along the Atlantic and Gulf shorelines which served to silhouette passing vessels to enemy submarine observation. This

coastal dimout was a development of the submarine campaign and was entirely apart from the blackout: the sky glow along the coastline particularly off the larger communities was marked and the lights of communities, automobiles on coastal highways, and beach resorts, made a background against which our shipping was easily illuminated for attack.

The campaign for the coastal dimout was initiated by the Navy and the Army simultaneously. It was in fact a responsibility of the local communities, and was properly changed by the Eastern Theater of Operations to the Governors of the States, municipal authorities and the Civilian Defense. The result sought was clear - no lights showing on the coast and no sky glow - but the steps to reach the objective was not clear. At first there was much confusion: some activities such as shipyards, railroad yards and docks had to operate, some individuals and facilities failed to cooperate, and some literally blacked out. This confusion and lack of understanding was natural and could only be adjusted as it became clear what was necessary. In the Chesapeake Bay Sector steps were necessary at Ocean City, Maryland, in the Hampton Roads area including Virginia Beach, and at Nags Head, and in the Morehead City area, North Carolina. Action was initiated locally by the Commandant and the Sector Commander and by the end of March considerable progress had been made. Coordination and progress was, however, difficult. The Commandant through his patrol craft and from reports from shipping was the agency through which the necessary information as to dangerous lights was received. The Corps Area Commanders, being charged with civil defense measures, were the agencies through which the Eastern Theater of Operations issued the necessary instructions to the civilian defense and civilian authorities. In the Chesapeake Bay Sector the two Corps Area Commanders were far removed from the coast: the Sector Commander was the liaison between the Naval District and the Corps Area Commanders; he was also, being the Army representative in the area, the agent to whom all the local authorities looked for instructions. After much trial and error, many conflicting instructions and some feeling on the part of the local communities that the Army and Navy did not know what they wanted, the coastal dimout became generally effective by the end of April. It was not until the issuance of Public Proclamation No. 1 by the Eastern Defense Command and First Army on 16 May 1942 declaring the seaboard a military area and the issuance of detailed instructions as to coastal dimouts by the Corps Area Commanders in November 1942 that the dimout was placed on a firm and effective footing.

CHAPTER V

OPERATIONS - MAY-DECEMBER 1942

Development - Harbor Defenses of Beaufort Inlet

The submarine campaign had brought on the development of the coastal convoy of shipping and the use of protected harbors of refuge. The convoy of shipping became effective 14 May 1942. Under the convoy system all coastwise shipping moved under escort with air coverage from harbor to harbor as nearly as possible during daylight hours. In Fifth Naval District waters, in addition to Chesapeake Bay, the Lookout Bight anchorage had been developed and the Navy, early in May, also established a mine protected anchorage south of Cape Hatteras.

In the Harbor Defenses of Beaufort Inlet the mission had now materially increased. In addition to covering the harbor and its approaches, the protection of shipping in Lookout Bight was added. This not only included protection from submarine attack but protection from gunfire from the southwest of Cape Lookout Shoals and from gunfire into the anchorage from the eastward where deep water closely approached the cape.

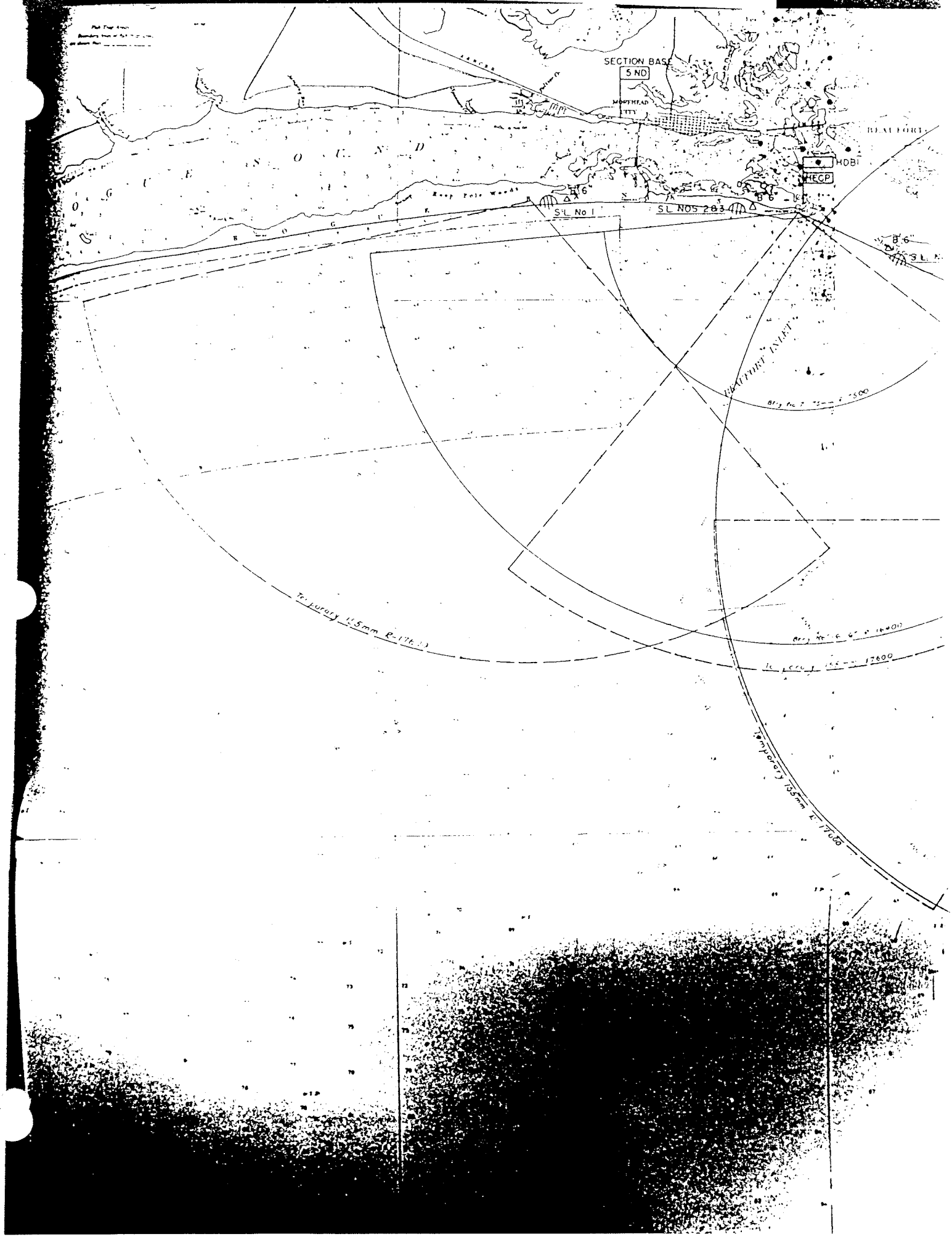
Cape Lookout which forms Lookout Bight, is a barren, wind and storm swept sand spit, sparsely covered with some grass and sand dunes. Much of it went under water in storms and the only tenable positions were on some sand dunes near the Coast Guard station. Access was entirely by boat and barge.

The original defense at Beaufort Inlet had been planned on the protention of Beaufort harbor, the intercoastal canal, and the section base alone. While the 155 battery at Fort Macon gave some protection to Lookout Bight and its approaches, it was at extreme range and totally inadequate. The battery on Bogue Bank to the west of Fort Macon was of value in protecting the section base alone and not of much use. It was apparent at once that, with the wide fields of fire required, 155 guns with their limited traverse could not accomplish the mission except in prohibitive numbers. At Cape Lookout one all round traverse, rapid fire battery was necessary. At Fort Macon a wide traverse rapid fire battery, more flexible than a 155 battery, was required.

Furthermore the 155's at Beaufort Inlet belonged to a mobile unit, likely to be required elsewhere and permanent fixed guns manned by harbor defense troops were required if adequate support was to be given the Navy and proper defense given the two widely separated harbors.

The Commandant took a great interest in the development and offered naval armament in storage at the Norfolk Navy Yard for the harbor defense. The Sector Commander decided to accept this offer and one battery of 2 - 5" barbette Naval guns was made available for Cape Lookout and one battery of 2 - 6" barbette Naval guns for Fort Macon. The initial request for authority to emplace these batteries and for the first construction was made on

By RB/MB NARA, Date 11-18-94



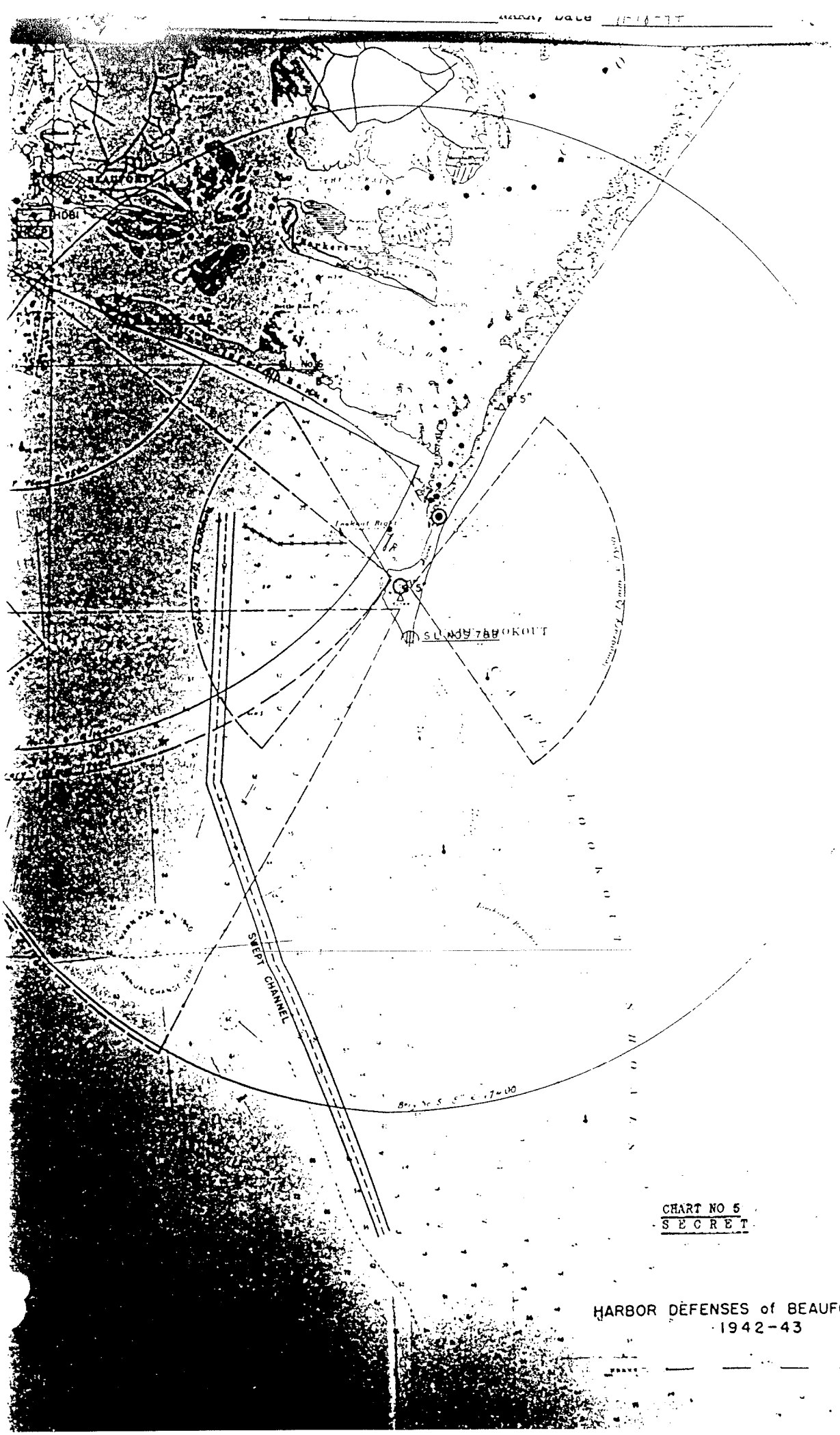
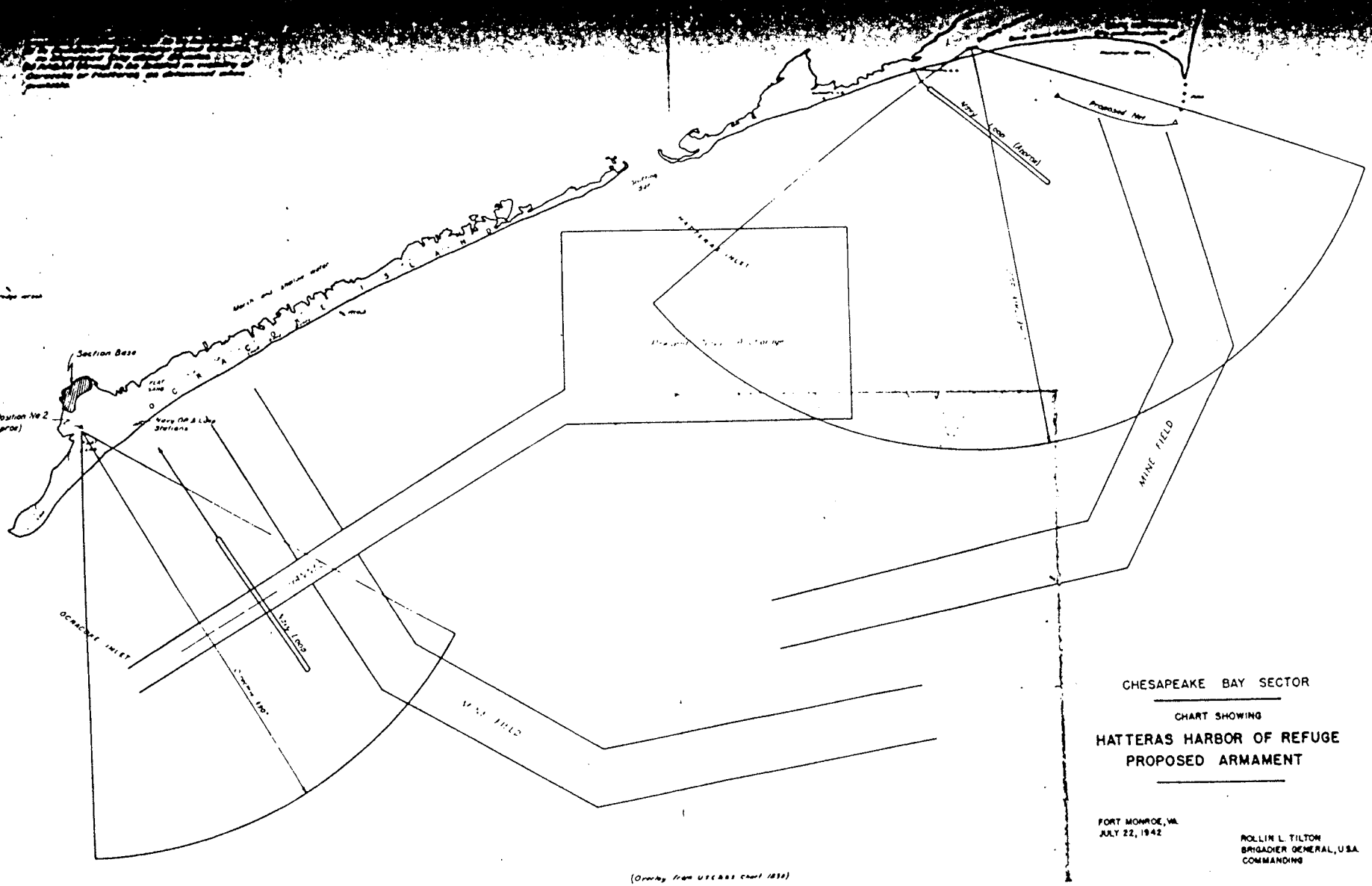


CHART NO 5
SECRET

HARBOR DEFENSES of BEAUFORT INLET
1942-43



(Drawing from USC&GS chart 1232)

CHESAPEAKE BAY SECTOR

CHART SHOWING

HATTERAS HARBOR OF REFUGE
PROPOSED ARMAMENT

FORT MONROE, VA.
JULY 22, 1942

ROLLIN L. TILTON
BRIGADIER GENERAL, U.S.A.
COMMANDING

SECRET

21 April 1941. In spite of the urgency of the submarine campaign many delays, first in authorization by the War Department, and then in construction, ensued but the Lookout Battery finally went into service in September and the Macon Battery in November 1941. Coincident with the armament, the position finding system, communications and searchlights were installed.

As has been stated when the patrolled anchorage was first established at Cape Lookout on 12 April, one field artillery battery of 4 - 75mm guns was sent there to give some support. This was replaced on 28 May by one platoon of Battery A, 244th CA with two 155 guns which remained in position until they were withdrawn on the completion of the 5-inch battery on 5 September although Battery A, 244th CA had been replaced by Battery H, 2d CA which was sent from Fort Monroe to Cape Lookout on 18 July as the permanent garrison.

The First Battalion of the 244th CA had formed the original garrison in the Harbor Defenses of Beaufort Inlet. This was augmented by the Regimental Headquarters and Headquarters Battery of the 244th on 2 April 1941. On 15 August the First Battalion of the 244th CA left for overseas being replaced by the 2d Battalion, 54th CA (colored) which arrived from the west coast on 3 August. There was considerable local opposition to the employment of colored troops in the Beaufort Inlet area and the 54th CA was relieved and left on 6 September for overseas.

The constant shifting of personnel had demonstrated the need for a permanent garrison if the harbor defenses were to perform efficiently. In spite of determined efforts by the Eastern Defense Command, the War Department had refused suitable Service Command elements for the harbor defense and the entire load of service and supply had to be borne by the troops themselves. This had been solved initially by the employment of the Headquarters and Headquarters Battery of the 244th CA but this unit was inactivated after the departure of the First Battalion. On 18 July, Battery H, 2d CA had been sent from Fort Monroe and on 31 August, Battery K, 2d CA was authorized, activated in the Harbor Defenses of Charleston and arrived on 11 September. Finally on 15 October, a suitable Harbor Defense Headquarters Battery was authorized and formed from available Sector personnel, finally solving the problem of a permanent garrison.

A Harbor Entrance Control Post was established 1 October in cooperation with the Section Base at Morehead City.

The final development of the Harbor Defenses of Beaufort Inlet and the temporary battery positions employed was as shown on Chart No. 5.

The Hatteras Project

The Hatteras Harbor of refuge had been ordered by the Navy Department and formed as shown on Chart 6. The basic idea behind this project had been the establishment of a harbor in the vital Hatteras area which could be used by shipping moving between Charleston and the Chesapeake, conven-

iently located, and saving the detour necessary into Lookout Bight. It was supposed to take the place of Lookout Bight to a great extent and its partial development to some extent delayed the development of the Harbor Defenses of Beaufort Inlet.

When the mine field was planted the Commandant requested gun defense and radar and a careful reconnaissance of the area was made by the Sector Commander. Ocracoke Island is typical of the coast, flat sandy and due to the shallow waters of Pamlico Sound impossible to approach except in small craft at Ocracoke or at Hatteras Inlets. At Cape Hatteras the sand dunes are high, but access difficult. At Ocracoke there was a coast guard station and the Navy developed a small section base. Battery positions at Ocracoke simply did not exist due to the flat terrain and covered with water during storms. A position was found near Ocracoke which probably would have been tenable if well revetted, but it would have been difficult to maintain and supply would have been a constant problem. At Cape Hatteras good positions existed but supply again would have been a problem. One battalion of 155 guns was proposed for the armament and garrison but on 25 May the Commandant and Sector Commander decided to suspend action in view of the manifest difficulties to see how the harbor of refuge worked. Evidence was not long in developing for on 11 June the American Tanker "Abaliam" struck a mine and sank in attempting to enter. The harbor was temporarily closed to shipping on 17 June and sweeping operations conducted in the channel but on 15 July two more vessels damaged by submarine attack struck mines in entering the harbor and sank. As the Commandant had feared, the laying of a mine field at Cape Hatteras was impractical. Due to the prevailing high seas in this graveyard of the coast, the mines "walked" and in spite of every effort were more dangerous than German submarines. In September the project was finally abandoned and the mine field swept up. A large percentage of the mines were never found.

Submarine Campaign - Second Phase

The submarine campaign continued during May, June and July but diminished in its intensity rapidly thereafter as our counter measures became effective.

Submarines were active in District waters during May but no merchant shipping was sunk and the weight of the campaign appeared to have moved to more southerly waters. On 9 May at about 1640Q, the Coast Guard Cutter "Icarus" sighted a submarine at 3412N-7635W - some 25 miles south of Cape Lookout which fired a torpedo at her. The torpedo missed, exploding in her wake, and she opened fire with her 3-inch guns firing 14 rounds, 6 or 7 taking effect. The submarine crew abandoned ship, 32 being captured, one of whom died. This was the famous case in which the cutter reported: "Sighted sub - sank same". On 10 May the HMS "St Loman", a British trawler, operating in the area, had a contact at 3411N-7627W - again off Cape Lookout and dropped depth charges probably damaging the submarine. On 15 May, a coast Guard plane sighted a submarine at 3610N-7455W - 35 miles off Oregon Inlet at 0053Q. The submarine was on the surface with 12 men on deck. On the approach of the plane, it dived leaving 2 men on deck and was probably

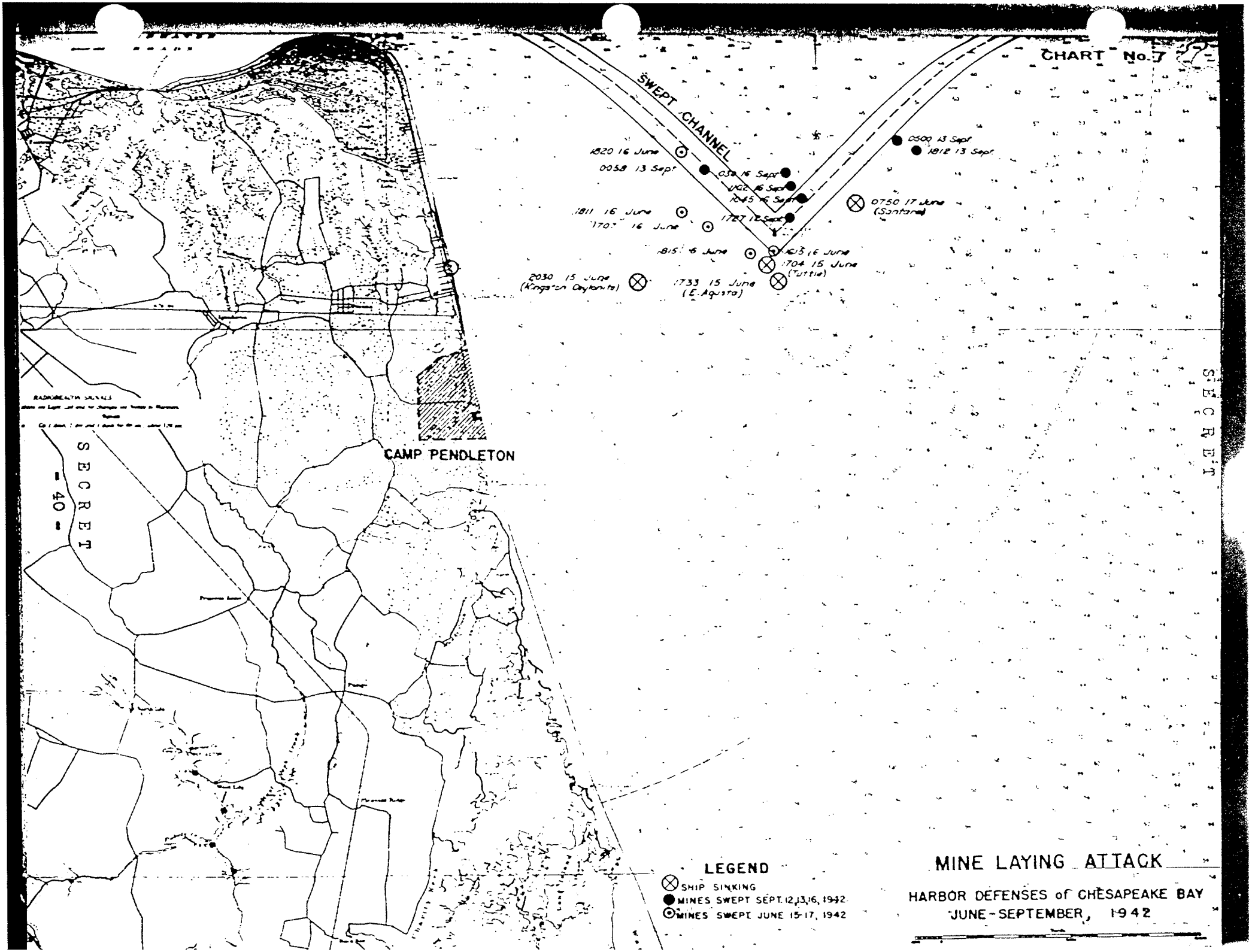


CHART No. 7
SWEPT CHANNEL
1820 16 June
0058 13 Sept
0030 16 Sept
1811 16 June
1707 16 June
1045 16 Sept
1727 12 Sept
0500 13 Sept
1812 13 Sept
0750 17 June
(Santore)
1815 16 June
1613 16 June
1704 15 June
(Tuttle)
2030 15 June
(Kingston Carbonita)
1733 15 June
(E. Agusta)
CAMP PENDLETON
SECRET
- 40 -
SECRET
LEGEND
SHIP SINKING
MINES SWEPT SEPT. 12, 13, 16, 1942
MINES SWEPT JUNE 15-17, 1942
MINE LAYING ATTACK
HARBOR DEFENSES of CHESAPEAKE BAY
JUNE - SEPTEMBER, 1942

sunk from the appearance of the oil slick which followed the attack. Many other submarine contacts were reported and constant reports of flares, explosions, enemy agents on shore, signals from shore, and strange ships along shore, kept the District forces, the Sector beach patrols and the Coast Defense Warning service busy.

Early in June submarine activity increased - three and possibly four submarines were believed to be operating in District waters and the Germans delivered one mine laying attack on the harbor entrance.

At 1700Q, 15 June, a northbound convoy of thirteen ships was standing into Chesapeake Bay following the swept channel. At 1705Q just as the convoy was turning, south of "2 CB" buoy, an observer at one of the Virginia Beach base end stations reported that one ship exploded and caught fire - this proved to be the American tanker "R. C. Tuttle" which burned and sank. The report was immediately transmitted to the combined command and harbor entrance control post, the batteries at Fort Story alerted, and the Fifth Naval District informed. At 1721Q, the Harbor Defense Commander called for a plane from the 65th Observation Group at Langley to observe the area. At 1733Q, a second ship in the convoy, the American Tanker "Esso Augusta" was reported as struck. Neither the plane, then over the convoy, nor the harbor defense stations could find any evidence of a submarine. The harbor defense group at Fort Story remained on alert but the plane was released at 1915Q. At 2013Q, the British corvette "Kingston Ceylonite" which had been a part of the convoy escort and was standing in was seen to explode and sink just to the west of the vicinity of the other explosions. There were no further developments. The "R. C. Tuttle" burned and sank - the "Esso Augusta" was seriously damaged but was kept afloat and salvaged and the "Kingston Ceylonite" exploded and sank in four minutes with all hands - three men were reported missing from the "Esso Augusta" but all others and those on the "Tuttle" were saved. The Fort Story group remained on alert until 2340Q when the alert was reduced to one battery. The deep mines were placed on contact at various periods during the night when shipping was not in the channel and searchlights were used at times to search the water areas for survivors.

Two days later at 0745Q, the American collier "Santore" was sunk at 3652N-7547W in the same area as the previous sinkings.

Sweeping operations in the channel had been conducted regularly by the Navy in the swept channel. The morning after the first sinking a special sweep was made and five mines exploded. In later sweeps, eight more were finally exploded.

The incident took place as shown on the Chart (Chart 7) within range of the heavy armament at Fort Story and of a 155mm battery then in position at Camp Pendleton, Virginia Beach. There had been no report of submarine contacts in the mined area and the conclusion is inevitable that a mine laying submarine had come to the vicinity under cover of darkness or poor visibility and laid the mines some time before. As it was known the German magnetic and acoustic mine could be set for varying delay after planting

and before becoming active and could be set to "click" by several targets before arming. It is not known at what time the mine laying occurred or how many mines were planted.

A second mine incident occurred during routine sweeping operations on the 12th, 13th, and 16th of September when seven more mines were exploded by mine sweepers. Fortunately no shipping was sunk and it was never known how or when the mines were laid, probably they were laid by a submarine under cover of darkness. As may be seen from the chart, all were in and around the swept channel. As there was much shipping in the bay at the time and many valuable combat units, the incident caused considerable concern.

The three sinkings on 15 June caused considerable excitement among the summer crowds at Virginia Beach and necessitated the employment of troops of the Cape Henry Defense Force to keep the main roads open in case of further eventualities.

On 19 June at 0244Q, the "YP389" on patrol was machine gunned and shelled by an enemy submarine near Diamond Shoals Lightship Buoy off Cape Hatteras and sunk, nineteen survivors being rescued by Coast Guard cutters coming to her assistance.

On 24 June three ships were sunk by an enemy submarine at 3430N-7540W - some 50 miles south of Cape Hatteras, one in the early morning hours and two ships of an eleven ship convoy that evening. Most of the crews were saved and a Navy tug got one of the ships in tow but she sank later. On the 27th and again on the 28th of June a ship was sunk in the general area south and east of Hatteras and on the 30th one some 270 miles east of Hatteras. From the great number of contact reports and other unsuccessful attacks on shipping, it became apparent that a submarine pack of probably five to seven ships was operating in the area. Energetic measures were taken by the Navy to combat the enemy operations. Surface and air patrols both Army and Navy, followed up on contact reports, attacked whenever possible and while in most cases no positive evaluation of damage was possible, certainly operations were made increasingly difficult for the enemy. On 24 June the "PC465" attacked and probably sank a submarine very near the site of the sinking of the three merchant men. On 3 July some 45 miles east of Hatteras, a coast guard cutter and the USS "Lansdowne" attacked and sank a submarine. On 7 July at approximately 1522Q, at a point about 40 miles southeast of Hatteras, an army plane bombed and sank a submarine. Survivors appeared on the surface, life rafts were dropped by the plane and seven survivors including the captain, Captain Horst Degen, were picked up by a Navy plane. Again on 14 July a navy plane and three coast guard cutters attacked and probably destroyed a submarine off Hatteras.

In spite of the intensity of the submarine operations off the Lookout Hatteras area, no merchant men were sunk in the area during the first two weeks in July. However, on 15 July, the enemy scored again when a submarine attack was made on a convoy 15 miles south southeast of Hatteras -

three torpedoes were fired, one striking the steamer "Bluefield", a Honduran freighter, which sank in three minutes, one damaged the American ship "Chilore" and one damaged the Panamanian ship "J. A. Mowinckel". The damaged vessels were taken into the Hatteras anchorage but struck mines and sank. The "Chilore" was later salvaged. Two Navy planes coming over the convoy just after the attack dropped four bombs in a submarine which surfaced in the convoy. Two apparently struck as the submarine disappeared and a quantity of oil appeared on the surface.

There were no further sinkings of friendly vessels in the area until the following year. Submarine contacts continued during August and September and to a lesser extent thereafter. The active operations of the Navy in its patrols, air coverage and convoys, had pretty well driven enemy submarine activity to other areas.

Harbor Defenses of Chesapeake Bay

During the submarine campaign, the Harbor Defenses of Chesapeake Bay operated in close support of the Naval District forces. The operation of the joint Command Post and the Harbor Entrance Control Post had become well standardized by the end of June and the control of the mine fields, the firing of warning shots and control of shipping entering and leaving port settled into an established routine. The Harbor Defenses carried out their routine training and service practices but had great difficulty with any tactical exercises, any searchlight drills which were much needed, or any joint exercises with the Approach and Entrance Force. The requirements of constant operations, the steady movement of shipping and the demand for blackout at night except for specific purposes simply made advanced joint training impossible.

On 20 June, at the request of the Commandant, a pigeon loft was brought in from Fort Monmouth, New Jersey, and the detachment attached to the harbor defenses. After the necessary training, the pigeons were given certain small patrol craft and fishing vessels designated by the Inshore Patrol and used for the transmission of intelligence or emergency messages. For small craft having no radio, or when it was dangerous to break radio silence because of the submarine menace, these pigeons brought back considerable information concerning the sighting of submarine and similar activities and their value was definitely demonstrated on 15 December 1942 when Pigeon Number 1169 which had been placed on a small coast guard schooner brought in a message giving her position after she had lost contact with the base, was long over due, and feared lost.

The operations in connection with the mine laying attack on 15 June have been referred to. On 19 June all units at Fort Story were alerted at 0535Q on a report of a submarine in the vicinity of the outer mine field and at 1825Q that day all elements at Fort Monroe were alerted and the gate closed on a submarine report in the bay. Mines were maintained on contact in the outer field much of the night and the gate of the Hampton Roads net kept closed all night. Again on 21 September at 1950Q on the report of an unidentified signature on the loop and an explosion in the Navy mine field, all

elements were alerted and continued on alert throughout the 22d, 23d and part of the 24th, mines being placed on contact fire and closed port procedures being employed intermittently. Due to much valuable shipping in the bay and many combat elements, the senior officer present afloat, Vice Admiral Alexander R. Sharp, USN, Commander, Service Force, Atlantic Fleet, ordered two destroyers to take station near the Middle Ground, one at Lynnhaven, one at York Spit, and one in quarantine in Hampton Roads to assist in the protection of shipping.

A large element of our African expedition had been secretly assembling in Chesapeake Bay during September and October. The Amphibious Force, Atlantic Fleet, had established a training base in the Little Creek area early in 1942 and most of the troops were given their training in beach landings by the Amphibious Force and then assembled on their transports up the bay. The secrecy of the expedition was well kept. On 22 October, the Sector was informed the expedition would move in two units, the first clearing the Capes on the morning of 23 October and the second on the 24th. All elements of the harbor defenses were alerted for these movements each of which took about four hours in debouching. The operations were carried out without incident.

Various changes in the armament were made as operations indicated their necessity. The armament at Fort Story did not adequately cover the examination anchorage in Lynnhaven Roads. This need was met by the construction of a new two gun, three inch rapid fire battery at the westerly end of the Fort Story reservation. The battery was completed in June 1942, becoming Battery 19 of the Harbor Defenses, generally known as "Examination Battery". To cover the north flank of the Navy Mine Field southeast of Fisherman Island and to give some antimotor torpedo boat defense to the north of the entrance to the Capes, two three inch, rapid fire guns were removed from Battery Lee at Fort Wool and emplaced at Fisherman Island. This battery was completed in October 1942 and became Battery 20. Early in June construction on the second new six inch battery at Fort Story necessitated the removal of Battery 5T - 155mm guns. To meet this situation and to augment the gun defenses to the south, off Virginia Beach, which had been indicated by the mine laying operations off Virginia Beach, one battery of 155mm guns was emplaced at Camp Pendleton, manned by troops in training there, and attached to the harbor defenses. The 155mm guns removed from Battery 5T at Fort Story were emplaced on the north side of Fort Story covering more effectively the Lynnhaven anchorage and the inside of the entrance to the Capes - this was a temporary battery pending the installation of the permanent antimotor torpedo boat batteries. On 28 August the First Battalion, 52nd Coast Artillery (Ry), two eight inch railway batteries, arrived at Fort John Custis and took over the positions of the old eight inch railway guns there which were returned to Fort Monroe, in harbor defense reserve, and the personnel reassigned at Fort Story.

While the changes in the armament had augmented and strengthened the defense, they had not overcome or solved the great weakness of the antimotor torpedo boat defense - except for one three inch antiaircraft fixed battery at Fort Story, two at Monroe and the three inch seacoast guns which had been

installed, there was none. All navies had been developing the motor torpedo boat, a highly maneuverable fast target and a dangerous threat. Studies had been initiated in February 1942 to solve the problem but the usual delays in finding suitable armament, developing fire control, and in production, had occurred. After much correspondence, it was finally decided in November 1942 that four, four gun, 90mm batteries would be supplied - two at Fort Story, one at Fisherman Island and one at Fort Monroe. Antiaircraft fire control equipment was supplied and certain automatic weapons to augment the defense. The four gun batteries were to have two fixed seacoast and two antiaircraft guns. The solution was a makeshift and poor. It solved a part of the problem but not all. The wide entrance to Chesapeake Bay, some 20,000 yards, with visibility usually around 10,000 yards, could not be covered by antimotor torpedo batteries on either side. The entire entrance was navigable by motor torpedo boats or midget submarines, and except for the mines, which were of limited value against small targets, ~~and the heavy shipping in the bay~~. The convoys assembled in Lynnhaven Roads, the naval craft training in the bay, and the Harbors of Hampton Roads and Baltimore offered rich return to any attack. The Commandant and the Senior Officer present afloat were gravely concerned over the threat, particularly during September and October when the concentration of vital shipping was heaviest and, when available, placed destroyers to cover the important channels inside. Finally, on 27 September, Senior Officer present afloat, attached a destroyer to the Approach and Entrance Force which took station near the center of the entrance and operated in direct support of the harbor defense. A destroyer remained on this duty until 24 October when the last of the African expedition cleared the Capes. The Navy was forced by circumstances to assist in a harbor defense duty.

This problem of the defense of the wide entrances to the Capes had appeared in various forms as far back as 1907 but no action had ever been taken. After engineering studies, the Sector Commander on 23 November 1942 recommended either the construction of an artificial island on the tail of the Middle Ground in the center of the entrance, the construction of a structure similar to the British Maunsell Tower, or an anchored hulk for a battery platform. The first two suggestions were discarded on account of cost, time of construction and engineering difficulties, but the War Department, with the concurrance of the Navy Department, finally proposed the acquisition of the old gunboat Annapolis to be reconditioned, manned by coast artillery personnel and stationed in the center to augment the defense. The authorized antimotor torpedo boat batteries were finally completed in 1943 but the Annapolis project was withdrawn by the Navy Department in August 1943, before she was ready, on account of the improved strategical situation. The Annapolis project was an interesting solution to a difficult problem and while she would have presented some difficulty of maintenance would have probably served her purpose. Eventually, for adequate defense, the island is necessary.

On 4 May 1942, the first experimental fire control radar was installed by the Coast Artillery Board and placed in operation by the Harbor Defenses at Fort Story. It proved a great success from the start and was used by one of the six inch batteries for all purposes. In July 1942 the first 582 -

Surveillance - Radar was installed in the command post, Fort Story, and in November the second one installed at Fort Monroe - thereafter surveillance of all the water areas was complete regardless of weather conditions and unidentified or doubtful shipping was quickly run down by the patrol vessels acting under radar control from the HSCP.

Mobile Force

By August 1942 the Mobile Force, through study of the problem, detailed reconnaissance, exercises and experience had pretty well established its standing operating procedure.

The Sector Mobile Force at this time consisted of the following organizations under the command of Colonel J. R. Carvelth, 111th Infantry:

111th Infantry
176th Field Artillery Battalion (105 How)
2d Battalion, 132d Engineers (Combat)
672d Collecting Company
Company L, 47th Quartermaster Regiment (Colored)
131st Separate Quartermaster Company
1 Platoon, 77th Quartermaster Battalion (Light maintenance) (Attached)

Originally, the Sector mobile forces had been designed and organized as three distinct tactical units operating directly under Sector headquarters. One battalion combat team had been in the Cape Charles area, one in the Beaufort Inlet areas, and the regimental combat team, less two battalion teams, in the Cape Henry area, under the regimental commander. While in a strictly local tactical sense this organization had advantages, it was not correct. The regimental commander was responsible for the over-all training of the mobile force, had many problems of supply and administration affecting all his units, and lastly was responsible to the Sector Commander for planning and execution of missions requiring the use of the mobile forces in areas away from the coast, or in the use of the whole force in one area. Accordingly late in April, a detachment of Regimental Headquarters Company, 111th Infantry took station at Fort Monroe, the Battalion Commander of the battalion at Cape Henry took over the command of the Cape Henry Defense Force and the Regimental Commander assumed command of the Sector Mobile Force as a unit. This organization in the Chesapeake Bay Sector continued thereafter with most satisfactory results.

On 1 August 1942 the Mobile Force dispositions were as shown in Annex No. 3, F.O. 7, CBS (Appendix 2). The force mission was to observe and patrol the coastline; to attack and destroy any enemy landing raids or attempts to land enemy agents and to be prepared to operate in the rear areas of the Sector in protecting vital installations in support of the Service Commands.

The observation and patrol of the coastline presented a most difficult mission. The Sector coastline was roughly two hundred and sixty miles long,

much of it a strip of sandy barrier reefs backed by almost impassable swamps, some of it as in the vicinity of Ocean City, Maryland, Cape Henry and Beaufort Inlet good landing beach. The shoreline was well covered by the permanent Coast Guard Life Saving Stations and patrolled by the Coast Guard at fairly frequent intervals at night and lightly patrolled and observed in the day time. In view of the known attempts by the Germans to land agents on our beaches, the impact of the submarine campaign, and the probability of enemy raids, a heavy and constant combat patrol with strong outposts at vital points was essential. Initially, foot patrols at the vital beaches and motor patrols over the other areas with dependence on the Coast Guard for observation of the other beaches had been tried, but after the Amagansett affair on Long Island and after frequent failures in information of incidents on the beaches coming through, a full patrol was developed. This patrol established in close cooperation with the Coast Guard was based on:

a. The employment of existing Coast Guard Patrols particularly in the vicinity of their stations.

b. The patrol of the harbor defense beach areas by the harbor defenses.

c. The patrol of the Naval and Marine reservations by their own forces.

d. The patrol of all other beaches, the linking up of the whole, and coordination, by the Mobile Force.

The beaches were lightly patrolled in the day time and heavily patrolled at night so that generally every part of the beach was covered at least once every two hours. Motor patrols, army and coast guard, supported the foot patrols where possible and reconnoitered the vital beaches daily for evidences of landings. In the Oregon Inlet - Hatteras - Ocracoke area, dependence was placed largely on the Coast Guard life saving and motor patrols - this area was so isolated that even had a landing been made no enemy agents could have gone anywhere before being picked up. On the Eastern shore great difficulty was encountered in placing patrols on the isolated islands - this was met by the assignment of boats to the mobile force and the use of coast guard boats whose assistance and cooperation made possible the maintenance of patrols on many otherwise inaccessible beaches. The beach patrol was a heavy drain on the Mobile Force and on some of the isolated beaches often exceedingly dangerous during storms. Communication was maintained through the Coast Guard stations and their lines to key stations, that is the main coast guard station in an area, directly connected with the Mobile Force.

In addition to the patrol of the beaches the Defense Forces, of the Mobile Force, after careful reconnaissance of their respective areas prepared detailed plans for defense and plan for movement and employment in rear areas. Exercises to test the various phases of their plans were conducted regularly.

The training of the Mobile Force due to its necessary dispersion and

duties was extremely difficult. Many of the units had but limited training and the 111th Infantry, after completing the Army maneuvers in December 1941, had a bad period when it was broken into small units on guard duty in various cities. By rotating the units on outpost and intensifying training in the base camps and in exercises, effort was made to improve the small combat training of the units. However, except for the Field Artillery which was rotated in a firing center at Morehead City, the results were not entirely satisfactory until a later date.

The Mobile Force when first in the Sector had camped where they could and occupied local armories, fire stations, schools and other available buildings. As the force shook down and locations became stabilized, temporary camps were built. Some were good and some were never satisfactory, due to labor shortages and difficulties of supply through the Service Commands, all added immeasureably to the demands on the troops for labor and housekeeping. Supply was entirely through Service Command installations and was generally satisfactory.

On 7 September 1942 the Eastern Defense Command issued Public Proclamation No. 2 designating certain Prohibited and Restricted Zones in the Eastern Military Area which had been promulgated in Public Proclamation No. 1, 16 May 1942. The Prohibited Zones in the Sector included the forts of the Harbor Defenses of Chesapeake Bay and Camp Pendleton while the Restricted Zones included all the beaches of the Sector, except Virginia Beach and Ocean City, Maryland, which, being densely populated beach resorts, were left off the general restricted list. The Proclamation in effect, legalized and prescribed the limitations on persons moving in the prescribed areas and assisted the Mobile Forces and Coast Guard in beach patrol. In the Virginia Beach and Ocean City areas, patrol was maintained and people kept off the beaches after dark. No difficulties were had in carrying out the provisions of the Proclamation but Virginia Beach and Ocean City were later included in the Restricted areas by Proclamation No. 5, 9 August 1943 to more effectively exercise control.

Provisional Coast Artillery Brigade

Camp Pendleton continued as a training center for mobile seacoast artillery units after the departure to battle stations of its original garrison early in 1942. The facilities at this post were generally excellent for the basic training of all coast artillery units and for seaward firing. It had the objection that the roads, bridges and habitated areas in the vicinity restricted maneuver space and did not permit landward firing.

The training of the many coast artillery units which passed through Camp Pendleton presented a major problem to the Sector Commander and his staff as no personnel was authorized for this important function. In June 1942 however, with the authority of the Eastern Defense Command, a Provisional Coast Artillery Brigade, Chesapeake Bay Sector, under the command of Brigadier General David P. Hardy, USA, was permanently organized at Camp Pendleton and a small staff provided by detailing personnel from the Sector, Harbor Defense, and the units under training. This command materially improved the training

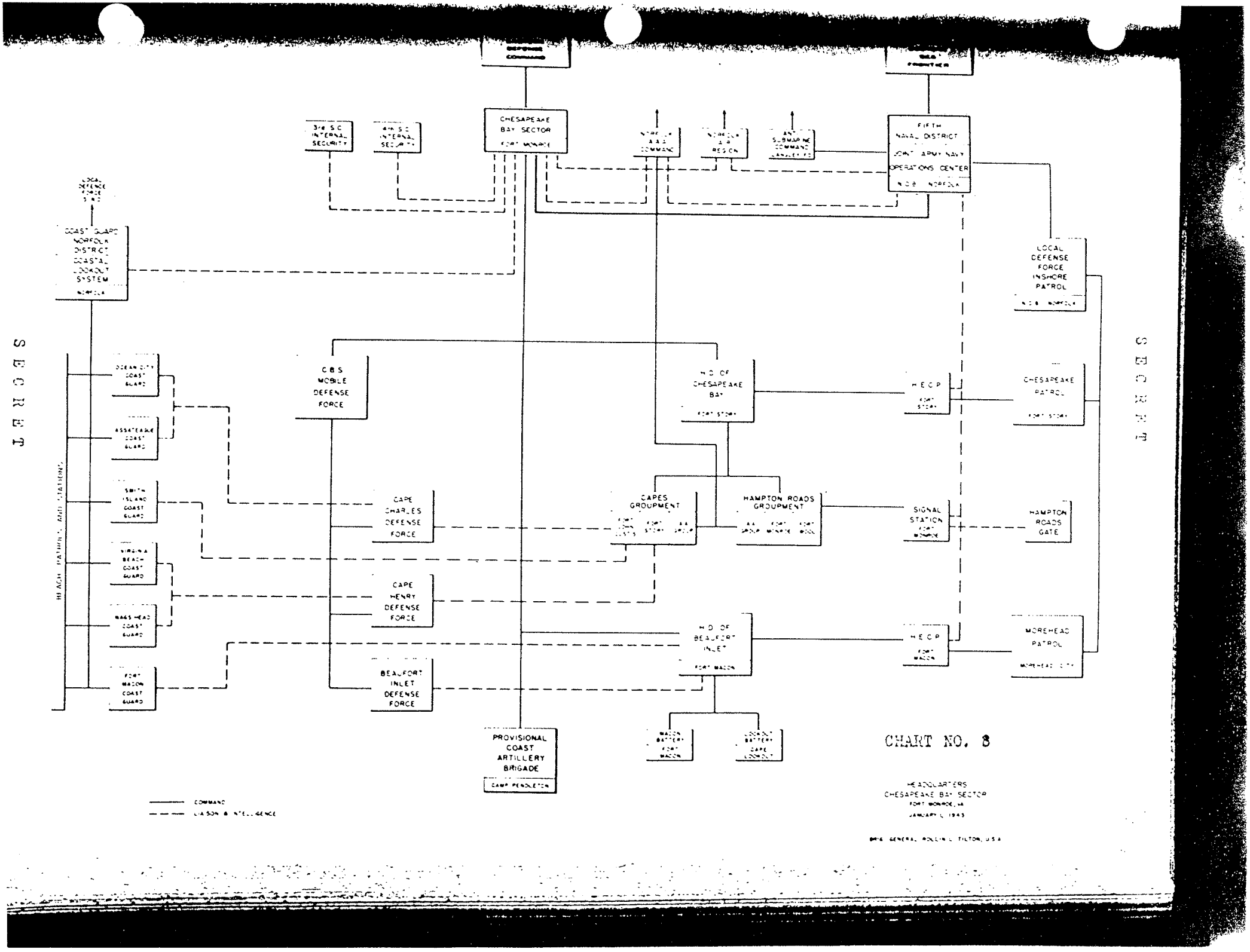


CHART NO. 8

HEADQUARTERS
CHESAPEAKE BAY SECTOR
FORT MONROE, VA
JANUARY 1, 1943

BRIG. GENERAL ROLLIN C. TILTON, U.S.A.

problem, facilitated the coordination of training activities and relieved the Sector of many annoying details. In addition to its training duties, the Brigade also assumed certain alert functions in support of the Harbor Defenses of Chesapeake Bay and in the patrol of the local beach area.

The 50th Coast Artillery (155) was activated at Camp Pendleton on 1 February 1942. Various units were withdrawn and rebuilt in April and the regiment finally moved to the Southern Sector on 11 December 1942.

The 53d Coast Artillery (155) was activated on 20 July 1942 and transferred to the Southern Sector on 6 October 1942.

In addition five separate numbered battery units with searchlight sections were activated and shipped out between February and July.

Late in December 1942 facilities at Camp Pendleton were made available for a battalion of antiaircraft troops of the 48th Coast Artillery Brigade Norfolk AAA Region and the Antiaircraft Brigade Commander by a system of rotation was able to carry out his routine service practices for the antiaircraft troops in the area.

Organization at the End of 1942

The organization of the Chesapeake Bay Sector on 31 December 1942 was as shown in Chart 8. This was the final organization of the Sector and it remained unchanged thereafter.

On 31 December 1942 troops of Chesapeake Bay Sector were disposed as follows:

Hq and Hq Co, Chesapeake Bay Sector - Fort Monroe, (VA)

Hq and Hq Btry, Harbor Defenses of Chesapeake Bay - Fort Story, (VA)

Hq and Hq Btry, 2d Coast Artillery (HD)(Type C) - Fort Monroe, (VA)
Band and Medical Detachment - Fort Monroe, (VA)

Hq and Hq Btry, 1st Battalion - Fort Monroe, (VA)
Batteries A and B - Fort Monroe, (VA)
Battery D - Fort Wool, (VA)
Battery E (less detachment) - Little Creek, (VA)
Detachment, Battery E - Fort Story, (VA)
Battery I (less detachment) - Fort Story, (VA)
Detachment, Battery I - Little Creek, (VA)

Hq and Hq Btry, 2d Battalion - Fort Monroe, (VA)
Battery C - Fort Monroe, (VA)

Hq and Hq Btry, 3d Battalion - Fort Monroe, (VA)
Batteries F and G - Fort Monroe, (VA)

6th CA Mine Planter Battery (USAMP "Schofield")	- Little Creek, (VA)
8th CA Mine Planter Battery (USAMP "Knox")	- Ft Monroe, (VA)
Hq and Hq Btry, 246th CA (HD) (Type A)	- Ft Story, (VA)
Band and Medical Detachment	- Ft Story, (VA)
Hq and Hq Btry, 1st Battalion	- Ft Story, (VA)
Batteries A, B, C and E.	- Ft Story, (VA)
Hq and Hq Btry, 2nd Battalion	- Ft Story, (VA)
Battery D	- Ft Story, (VA)
Battery F	- Fisherman Island, (VA)
Battery H (less Det at Ft Story, Va)	- Fort Monroe, (VA)
Hq and Hq Btry, 3rd Battalion	- Ft Story, (VA)
Batteries G and I	- Ft Story, (VA)
Battery K (less 1 Platoon)	- Ft Story, (VA)
1 Platoon, Battery K	- Ft John Custis, (VA)
1st Bn, 52nd CA (RY)	- Ft John Custis, (VA)
Hq and Hq Btry, Harbor Defenses of Beaufort Inlet	- Ft Macon (NC)
Band, Harbor Defenses of Chesapeake Bay	- Ft Macon (NC)
Battery H, 2nd CA	- Cape Lookout (NC)
Battery K, 2nd CA	- Ft Macon (NC)
Mobile Defense Force	
Hq and Hq Co, 111th Infantry	- Fort Monroe, (VA)
Band	- Camp Pendleton (VA)
Medical Detachment (less two Sections)	- Camp Pendleton (VA)
Service Company (less two Sections)	- Camp Pendleton (VA)
Antitank Company	- Camp Pendleton (VA)
Tank Company (Provisional)	- Camp Pendleton (VA)
Hq and Hq Btry, 176th FA Bn (less Detachments)	- Camp Pendleton (VA)
Medical Section	- Camp Pendleton (VA)
Service Battery (less 3 service sections)	- Camp Pendleton (VA)
Cape Charles Defense Force	
Hq and Hq Co, 1st Bn, 111th Inf. (less Detachments)	- Westover, (MD)
Company A (less 1 platoon)	- Berlin, (MD)
1 Platoon, Company A	- Chincoteague Island, (VA)

Company C	- Oyster (VA)
1 Section, Service Co and 1 Section, Med Det.	- Westover (MD)
Battery B, 176th FA Bn (plus 1 liaison & 1 Service Sec)	- Westover (MD)
One platoon, Company F, 132d Engr. Regt (C)	- Westover (MD)
One Section, 131st Quartermaster Co (Trk)	- Westover (MD)

Beaufort Inlet Defense Force

Hq and Hq Co, 2d Bn, 111th Inf. (less Detachments)	- New Bern (NC)
Company E	- Atlantic (NC)
Company G (less 1 platoon)	- Morehead City (NC)
1 Platoon, Company G	- Salterpath (NC)
1 Platoon, Company H	- Sears Landing (NC)
1 Section, Service Co and 1 Sec. Med. Det	- New Bern (NC)
Battery A, 176th FA Bn (Plus 1 liaison section, AA and AT Platoon, survey and instrument section, Service Section)	- Morehead City (NC)
1 Platoon, Co F, 132d Engr Regt(C)	- New Bern (NC)
1 Section, 131st Quartermaster Co (Trk)	- New Bern (NC)

Cape Henry Defense Force

Hq and Hq Co, 3d Bn, 111th Inf. (less Detachments)	- Camp Pendleton (VA)
Company I	- Manteo (NC)
Battery C, 176th FA Bn (Plus 1 liaison section, 1 service section)	- Camp Pendleton (VA)
Company F, 132d Engr Regt (C) (less two platoons)	- Camp Thalia (VA)
131st Quartermaster Co (Trk) (less two sections)	- Camp Pendleton (VA)
Company L, 47th Quartermaster Regt (Trk)	- Camp Pendleton (VA)
672d Collecting Company (Sep)	- Camp Pendleton (VA)
Provisional Coast Artillery Brigade (155mm gun) (No troops)	- Camp Pendleton (VA)
Provisional Training Bn (Inf.)	

The strength of the command on 31 December 1942 was as follows:

Unit	OFF	WO	ANC	EM	TOTAL
Fort Monroe:					
Hq & Hq Co - CBS	25	1		67	93
Hq & Hq Dets - 111 Inf plus 176 FA	18	5		144	167
Service Units and Casuals	75	6	13	698	792
2d Coast Artillery (HD)	61	11		1949	2021
Btry H - 246th CA	3			121	124
6th & 8th CAMP Btries	3	13		207	223
96th Ordnance Company	4			90	94
Coast Artillery School and allied units	(327)	(28)		(2345)	(2700)
	189	36	13	3276	3514
Fort Story:					
Hq & Hq Btry HDCB	8			73	81
246th Coast Artillery (HD)	56	11			69
Service Units	85	3	39	780	907
609 Signal Reporting Company	7			63	70
16th Ordnance Company	8			172	180
	166	14	39	1088	1307
Little Creek Mine Base:					
Btries E & I, 2d CA	9			255	264
Fort John Custis:					
1st Bn, 52d CA (Ry)	16			455	473
Btry F, 246th CA (HD)	4			161	165
Service Units	3			47	50
	25			663	688
Camp Pendleton, Virginia:					
Hq Prov CA Brigade	3				3
111th Infantry (dets)	57	2		1237	1296
Btry B - 176th FA	4			93	97
1 Plat Co F - 132d Engrs	6			87	93
131st QM Co. (det)	3			45	48
Co L, 47th QM Regt	4			122	126
672 Collecting Co	5			158	163
Service Units	36	2		362	400
	118	4		2104	2226
Harbor Defenses of Beaufort Inlet:					
Hq & Hq Btry, HDBI	11	1		58	70
Band, HDCB		1		26	27
Btries H & K, 2d CA	8			343	351
	19	2		427	448

Unit	OFF	WO	ANC	EM	TOTAL
Westover, Md:					
1st Bn - 111th Inf.	30			798	828
Btry C - 176th FA	4			92	96
Det - 131 QM Co.	1			47	48
1 Plat Co F, 132d Engrs	1			44	45
	36			981	1017
New Bern, NC:					
2d Bn - 111th Inf.	31			809	840
1 Plat Co F, 132 Engr	1			43	44
Det -131 QM Co	1			39	40
	33			891	924
Morehead City, NC:					
Hq Dets - 176th FA	17			196	213
Btry A - 176th FA	4			89	93
	21			285	306
AGGREGATE	616	56	52	9970	10694

NOTE: Coast Artillery School Personnel was attached to Fort Monroe for certain administration and supply - not included in totals.

CHAPTER VI.

OPERATIONS - 1943

Submarine Campaign

The year 1943 saw the continuation, waning and end of the aggressive German submarine campaign and operations off our coast. The Navy through its patrols, convoys, air coverage and operations at sea had definitely secured control of sea but minor enemy operations and raids continued thereafter and protection of our shipping could not be relaxed. With the operations the development of the harbor defenses continued, and the taking over of most of the beach patrol by the Coast Guard permitted the concentration and development of the Mobile Force as a valuable striking force capable of any operations. Finally, the improved strategic situation lead to the first steps in the reduction of the defense and the release of some troops for other work.

During the first months of the year, submarine contact reports were constant in Sector waters but without positive result. It was not until 4 May that a successful enemy attack was made in the sinking of the Panamarian tanker "Panam" by two torpedoes at 3410N - 7605W - some 25 miles south-southeast of Cape Lookout. The ship was in convoy when attacked and sank with the loss of 2 men, 50 of the crew being rescued. Submarine reports continued but without further result until 5 August when the USS "Plymouth" (PG) was sunk while acting as a convoy escort at 3715N - 7425W about 90 miles east of Cape Charles. The ship had just started a 180° turn as a result of a sound contact when she exploded and sank in a few minutes evidently from a torpedo. Four men were killed and 84 rescued. Two days later on 7 August a Navy PV plane was shot down by a submarine, presumably the same one, some 100 miles further east, 3 men of the crew of 5 being lost. As time went on submarine contacts became less and no further successful submarine attacks occurred until 4 December when the Cuban motorship "Libertad" was torpedoed and sunk at 3430N - 7432W about 75 miles southeast of Cape Hatteras with a loss of 7 men drowned and 18 missing. This was the last sinking in Sector waters until late in 1944.

Submarine contacts were made directly off the harbor defenses at various times but in no case was a submarine definitely found within range nor was there evidence of further mine laying.

Incidents along the beaches were frequent and continued until the fall. Flares, flashing lights, supposed signals, small boats and strange and unauthorized persons were seen by patrols and noted along the beaches. The persons found were usually fishermen or other people wandering about. In no case was evidence secured of positive landing attempt or communication from shore with the enemy - it is not likely such an event occurred although it is possible.

On 4 February 1943 - Eastern Defense Command issued its Field Order

No. 1 - 1943 - covering the defense of the coast. On 25 February 1943, the Sector issued its Field Order No. 14 - superceding previous orders and restating its mission of defense and despositions. The Eastern Defense Command was at this time in Category "C" of defense, except for fixed harbor defense armament larger than 6 inch which was in Category "B". On 26 May 1943, by Changes No. 1 to Field Orders No. 1, 1943, the Eastern Defense Command changed to Category "B" for the United States.

Harbor Defenses of Chesapeake Bay

The Harbor Defenses of Chesapeake Bay carried on their operations in support of the Navy and in the protection of the harbor and shipping. During the year 1943, 31,944 ships of one kind or another passed in or out of the Capes and were entered or cleared by the joint HECP. This was an average of 87 ships a day. By the end of the year, some 100 ships a day were entering or leaving and included one overseas convoy of some 60 to 70 ships every 10 days which was assembled in Lynnhaven Roads and then passed out to sea under escort.

The new armament of the modernization program was coming along slowly but due to the demands of other theaters, delay in manufacture and priorities, and in labor, it was not completed as rapidly as it should have been. In November 1942, one gun of the first new six inch battery, Battery 5, was proof-fired and the battery was placed in service soon thereafter. On 15 February 1943, the first gun in Battery Ketcham 16 inch gun, was proof-fired although the battery was not complete in all respects and was not placed in service until later in the year. The anti-motor torpedo boat armament was received early in the year and work on the emplacements started. Battery 21 at Fort Story was completed first, for experimental work by the Coast Artillery Board, and went into service on 6 April. This was followed by a temporary 90mm battery of four mobile guns, replacing the 155 gun known as Battery "U" at Fort Story on 10 April, and finally on 22 September, Battery 22, the second permanent 90mm battery at Fort Story was placed in service and Battery "U" abandoned, the guns being distributed between Batteries 21 and 22. At Fort John Custis, Fisherman Island, Battery 24 was completed on 9 November and replaced old Battery "9T" 155 gun and Battery 20, two 3 inch guns. At Fort Monroe, Battery 23, in the old 12 inch emplacements of Battery Parrott was completed and placed in service 15 September 1943. The automatic weapons armament with the AMTB batteries were received and placed in service at the same time.

Late in 1942 letter instructions had been received changing the category of defense from "C" to "B" for harbor defense batteries in excess of 6 inch and 155mm and directing that the older heavier type batteries of less efficiency be laid up where necessary to make the personnel available for newer armament particularly the AMTB and automatic weapons. This necessitated in the Harbor Defense of Chesapeake Bay certain reassignments of personnel and resulted eventually in placing on a maintenance status the two older 16 inch howitzer batteries at Fort Story and the one remaining old 12 inch disappearing battery at Fort Monroe. It is worthy of note in this connection

that at no time in the history of the Sector was the harbor defenses at full strength, considering all batteries available, the demands for outpost, base end stations, searchlights, beach patrols and local defense requirements. Under the circumstances, it was at sufficient strength to execute its mission under Category "C" which was required. It would have required a considerable reinforcement had the category been raised.

During 1943 the existing Army and Navy mine fields in Chesapeake Bay were entirely replaced by the new Army ground type controlled mine.

Instructions had been received in October 1942 for a revision of the entire underwater defense project with a view to employing the new mines. Furthermore the existing underwater defense had never been considered entirely adequate and had been the subject of much discussion. The existing mine fields did not entirely cover all navigable channels; the Army controlled mine fields at fifteen foot submergence covering the main ship channel were frequently damaged by shipping, rendering mines inoperative and maintenance unduly heavy. The Navy contact mine field was not considered reliable; it had been down almost a year, mines had broken adrift and damage by storm was heavy. The wide entrance to the bay, which was the cause of great concern in the anti-motor torpedo boat defense, again entered the problem; observation was usually impossible at night, patrol craft could not cover the entire entrance, and the heavy shipping in the bay and in Lynnhaven Roads were not fully protected. Fixed obstructions due to tide, sea and the nature of the bottom were not practicable.

It was initially planned by the Joint Board to replace the Army mines with the new type extending the outer field to the north; to replace and extend the Navy field and to extend the Navy underwater detection devices. On further consideration, it was decided to substitute Army controlled mines for the entire entrance and to drop the contact field entirely due to its danger and unreliability in this area. The resulting project called for a very large mine project, by far the largest on the east coast; considerable new facilities at Little Creek, and new installations at Fort John Custis.

The planting of the new mines started in February and was completed in August. On the completion of the new field by joint agreement with the Commandant Fifth Naval District certain groups in the northerly part of the outer field were placed permanently on "automatic" or "contact fire" and the old Navy field swept up. The new mines, after a short period when sea conditions and their natural settling movement caused some of those, on "automatic" to explode, proved most reliable and satisfactory. The new mine was much more powerful, being a ground mine it was not molested by shipping, openings for shipping were not necessary, and maintenance was less. With the installation of additional Navy detection devices and the Army hydrophones, the underwater defenses were satisfactory to all. The maintenance of the north field on contact, while requiring close surveillance and patrol, effectively closed the major part of the entrance. In sweeping up the Navy mine field, which was completed in November, few were found effective. The life expectancy on this field had been estimated at about a year

and this proved more than correct. The Navy contact mine is an effective weapon for a time, is more easily and quickly laid than the controlled mine, but is not suitable for permanent defenses.

Harbor Defenses of Beaufort Inlet

The Harbor Defenses of Beaufort Inlet continued its operations in the protection of Beaufort Inlet and the harbor of refuge at Lookout Bight. While heavily used by convoys moving along the coast and while submarine contacts were frequent in the waters adjacent, no submarine came within range nor was any ship ever molested while in the harbor.

The naval armament had proven satisfactory for the mission and with the construction of the temporary barracks and quarters as well as the necessary utilities, this little harbor defense was developing well although the isolated Lookout position was difficult and hard on morale. A 296 Radar unit was installed at Cape Lookout in April.

An effort had been made by the Sector and the Eastern Defense Command to secure a suitable Service Command complement for the harbor defense but it had been disapproved by the War Department. This had militated against the full efficiency of the command and thrown on the troops themselves the responsibility for their own supply and maintenance. As the garrison authorized was never sufficient and had no service elements, this was a mistake and a distinct failure on the part of the Army Service Force.

The harbor defenses had suffered through the fortunes of war in having a series of commanders and at first an inadequate staff. In February 1943, Colonel Malcolm W. Force, CAC, the then commander was ordered to other duty and Lieutenant Colonel Eugene H. Walter, 2d CA, ordered to command. Through his initiative, energy and leadership, the harbor defense had by the late part of 1943 reached a high standard of efficiency.

Joint Operations

Joint Operation with the Fifth Naval District continued during 1943 as in 1942 and before. On 31 May, Rear Admiral Manley H. Simons, USN, retired and was relieved by Rear Admiral Herbert F. Leary, USN, who remained until 1 November 1943, when he was, in turn, relieved by Rear Admiral David McD. LeBreton, USN.

In connection with the mine fields, the mass of submarine cables at the entrance to the Capes had become a major problem. These included beside the mine cables, the harbor defense fire control cables, the Coast Guard communications cables, and the Navy underwater detection device cables. In order to maintain more efficient coordination between the service in the maintenance and installation of all, a joint operations agreement was entered into on 31 March 1943 whereby the Army assumed responsibility for the task.

The Mine Commander, Harbor Defenses of Chesapeake Bay, was made

responsible for maintaining complete up-to-date records of the location of all cables, both Army and Navy (including Coast Guard), and exercised direct supervision of the installation and repair of all submarine cables in the waters between Cape Henry and Cape Charles.

Mine cables were laid and maintained by the mine flotilla. In so far as ~~is~~ possible all other cable work was accomplished with available mine flotilla equipment and personnel. Where additional barges, cable ships, and personnel were required for maintenance or installation of telephone or Navy installations, request was made for assistance of the Navy. All work was under the direct supervision of the Mine Commander.

The Commander, Approach and Entrance Patrol - Chesapeake Harbor Entrance Control Post, Fort Story, Virginia, was kept informed of the location of all cables in the Capes area and any necessary coordination effected through him.

The agreement was most satisfactory and was continued in force thereafter.

The Harbor Entrance Control Post at Fort Story reached its highest development late in 1943. This control post, known locally as HECP No. 1 to distinguish it from the control post at Fort Monroe, was the joint command post of the Harbor Defense Commander and the Commander, Approach and Entrance Force. It was also the alternate command post of the Commandant Fifth Naval District in case of damage to the Naval Operating Base. As this HECP was an outstanding example of joint command and operation and was used by the Navy for the instruction and indoctrination of its harbor entrance control personnel sent to distant stations, a brief picture of the organization and operation follows.

H. E. C. P. OPERATIONS
FORT STORY, VIRGINIA

Personnel of both Army and Navy Operations operated around the 24-hour clock. Both were located side by side in the same installation with the Harbor Defense Command Post. This location gave Army units an opportunity to coordinate control of the Harbor Defenses with the joint control of the port entrance. The Senior Army Watch Officer, on duty during daylight hours, was in charge of this coordination and of the four Army Watch Officers who worked on shifts in the Navy Operations Room. In addition, night watches were maintained during the hours the Senior Army Watch Officer was absent by officers of the Harbor Defense and Group staffs stationed at Fort Story. In the adjoining Navy Operations Room, another large watch was maintained. A Senior Navy Watch Officer aided by one and often two assistants was also on duty twenty-four hours a day. On tours likewise were the intelligence officers who served as Field Intelligence agents to Fifth Naval District. Both Army and Navy details were completed with enlisted personnel totaling nearly 100 men each, which included observers, radar operators and maintenance men, signalmen, radiomen, and teletype and telephone operators, with necessary assisting and supervising personnel.

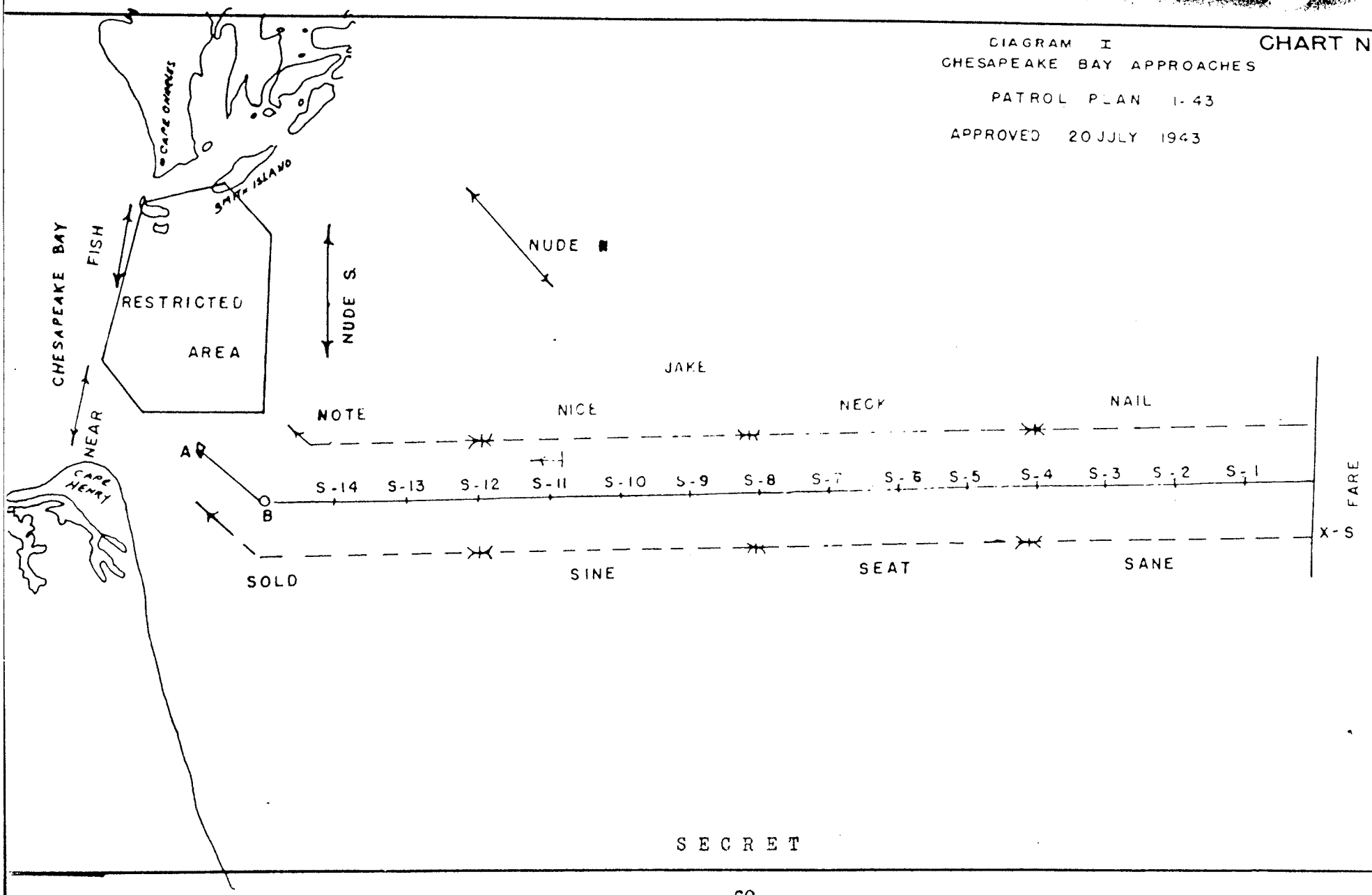
CHART No. 9

DIAGRAM I

CHESAPEAKE BAY APPROACHES

PATROL PLAN 1-43

APPROVED 20 JULY 1943



Special equipment controlled by the personnel listed above included the following:

a. Army Mines. A tremendous mine project which was composed of 59 groups of Ground-Controlled Mines stretched from Cape Henry to Cape Charles, and ~~included~~ four groups in Thimble Shoals Channel at the gateway to Hampton Roads.

b. Army and Navy Hydrophones. The former included seven Army type units almost equally spaced from Cape to Cape immediately in front of the Outer Mine Field; the latter contained fourteen Navy hydrophones about five thousand yards East (seaward) of the mine field and the Army hydrophones. The Navy sets were controlled and signals evaluated at the Navy Operations Room; the Army units from the respective Mine Casemates which controlled the adjoining mines.

c. Three Navy magnetic loops immediately to the East of the Navy hydrophones. Until near the end of 1943, there were two loops, the mid-loop and the south loop. A Navy Contact mine field to the North was replaced during this period by the North loop.

d. Radars, both Surveillance and Fire Control Types. Navy Patrols and the Command Posts at Fort Story and Fort Monroe had surveillance units that covered the fields of fire of all Harbor Defense Guns, as well as a considerable area beyond. A special repeater scope of the surveillance set at Fort Story was installed in the Navy Operations Room. In addition, Fire Control Radars were provided for each 6-inch and 16-inch battery at Forts Monroe, Custis, and Story, and in emergency, each set could be used directly from the Army Operations Room.

e. Patrols controlled by the Navy Watch Officer operated from Little Creek. The attached diagram, Chart 9, shows all patrol routes which were manned according to the nature of the situation. Normally, the Examination Vessel, the Inner and Outer Guards, Nude North and South, Sold, Jake and Fair Patrols were maintained on stations indicated. Additional patrols were sent out depending usually on submarine estimates. Convoys standing out were given maximum protection.

f. Navy planes on call to the station were used for additional patrols, to investigate unusual incidents and to assist the Harbor Defense Commander.

Operations - The types of activity centering at the Command Post were numerous and nearly all were very interesting. However, the scope of this paper permits discussion of only the few principal types listed below.

a. Intelligence - Information was obtained almost entirely from observers and radars. All Battery and Fort Observers and radars reported all movements of vessels and unusual activities to a Fort Command Post. Observers in the large net at Fort Story reported to the Warrant Officer

Chief Observer, located beside the surveillance radar in the Command Post Tower, who filtered the information before sending it down to the plotter. The filtered information from each Fort, locating all vessels in the area, then was placed on a plotter's loop, which included the Harbor Defense Plotter in the Army Operations Room as well as a Navy Operator. Other activities were not placed on the loop but were sent in directly over intelligence lines to the Senior Army Watch Officer. Similarly, Navy Patrols reported via radio to the Navy Watch Officer. Where necessary, messages between Army and Navy Rooms were interchanged through the Junior Army Watch Officers.

b. Communication Channels - Normal Army operations were conducted through the Command and Intelligence lines from Chesapeake Bay Sector and to the eight numbered Groups under which the batteries were collected. Batteries could be contacted directly through Group switchboards. Dual-purpose AA batteries were collected under Groups which also had command and intelligence lines to Norfolk AA Region. Likewise, liaison lines of particular importance to operations were the three lines to Naval Operating Base, one to the Joint Operations, Army Liaison Officer, and the other two to the Information Center. The former took care of special joint missions, and the latter two, of pertinent reports and evaluations.

c. Mine Control and Closed Port Procedure - The operation of the Controlled Army Mine Field was probably the most ticklish responsibility in the hands of the Senior Army Watch Officer. All mines except those in the channel were normally kept on a contact or "automatic" status. This meant that a stray vessel allowed to wander into the field would be blown up. In addition, the reported presence of nearby enemy submarines or unidentified signatures on the special underwater equipment required placing the remaining channel mines on contact and closing the port to ocean traffic. Since closing the port, identifying vessels, giving special permission for vessels in distress to enter were Navy responsibilities, while operating the mines and tracking the vessel were Army responsibilities, and since each was responsible for evaluations of signals on its own equipment, the utmost caution in procedure and in cooperation were required.

d. Warning or Heave-to Shots - Since no vessel could be permitted to enter the Bay without clearance furnished by the Navy, frequent firing of heave-to shots was necessary. Here again the Navy would coordinate by sending a patrol vessel to investigate the halted ship. The rule that no neutral shipping was permitted to enter Chesapeake Bay should have prevented need for most of this firing, but many small craft and occasional larger vessels were guilty of violating proper procedure and had to be stopped. Invariably they were cleared and allowed to proceed.

e. Convoy Protection - A special service furnished by joint agreement to protect all convoys standing out was the alerting of a six-inch or 90mm gun battery. During this special alert, the gun crews and plotting details of the battery stood by at their equipment alert to any indication that the convoy was threatened. During this period all move-

ments were during the hours of darkness, and searchlights were frequently used. Unusual success attended test uses of searchlights to "point" on radar data to suspicious targets even beyond normal searchlight range for airplane pickups. Frequently illumination by the lights made use of flares unnecessary.

f. General - Problems causing most difficulty at the Control Post usually were caused by poor visibility and by fishing boats. Heavy fog or mist often cut visibility to below one thousand yards. Many fishing boats, on the other hand, showed particular unconcern about the restricted area shown in Chart 9. This area, shown on all contemporary C & GS Charts, included the contact mine field. A combination of the two usually strained facilities of the Control Post. Other interesting problems are discussed below.

The journal for the latter part of 1943 contains many incidents of an unusual nature which at the time of their occurrence caused considerable consternation at the Control Post but actually resulted in a higher peak of efficiency for all concerned.

None the least of these "rat races" was the case of the USS "Perseverance", a 110-foot craft, loaded with dynamite and flying a red flag, which ran aground during a heavy sea near Lynnhaven Bridge on 24 September 1943. Early reports indicated that no trouble was expected, but due to its close proximity to the Lynnhaven Bridge and the raging condition of the surf, Colonel Lucas E. Schoonmaker, the Harbor Defense Executive, made an investigation. Upon completion, he ordered a searchlight from Battery 6 and a Fort Story wrecker to the scene to assist in salvaging and securing the vessel. A truck and men were also dispatched to assist in unloading the dynamite and taking it to Little Creek. The stricken vessel through constant pounding by the surf soon broke up and at present the ghost of this former craft still lies in the original position on the beach.

Numerous contacts by naval sea and air patrols brought forth such sub evaluations as "probable", "positive", "doubtful", and "non sub", all of which served as a means of reminding the personnel of the proximity of the enemy and of their responsibilities in that connection. With such contacts being received, other incidents such as reports of flares, lights, explosions, etc., meant that careful investigation and correct evaluations were of prime importance.

During this period the mine field, as described in paragraph c above, was maintained on contact at all times. Malfunctioning of these mines and extremely rough sea caused them to "blow" several times and excitement was usually high on such occasions. The watch officer of both the Army and Navy had to evaluate such explosions and with the reports of submarine acitvity on the Atlantic seaboard, it was always important to determine whether one had entered our mine filed or whether our own friendly shipping had wandered off course. All means of detection would be focused at this point and after further search and careful thought the incident would be closed.

Every problem usually has a lighter side, and such was often the case at the Control Post. Odd reports were often received, which although forwarded with all good intentions by the sender, did in many cases carry a humorous strain. Messages found in bottles on the beach supposedly from a shipwrecked crew, stating their location and trouble, would often carry the signature of some familiar character in the funny papers, like "Mutt and Jeff". Other humorous incidents included the landing on the beach in front of Battery 21 of a C.A.P. plane. The pilot very calmly advised the guards that he was here for a mission and thought he would land to get all the details before starting on course. Investigation by the Control Post revealed the pilot had become confused and was supposed to have landed at Langley Field and had no mission with anyone.

The description of the Control and Command Post recorded above presents the result of a gradual growth prompted by necessity. Some of the stories may reveal weaknesses which were not corrected until later. However, as it was organized and operated during this period, it left a record of accomplishment that proved it to be more than a satisfactory solution to the problems presented. It is hoped that future Harbor Entrance Control Posts may benefit from this record and from the experiences it contains.

HECP No. 2 in the Groupment Command Post at Fort Monroe operated in the control of shipping entering Hampton Roads and with the gate vessels on the Hampton Roads gate. While, in close liaison with the HECP at Fort Story, it was in fact an independent station under the Groupment Commander and in direct contact with Joint Operations in the Naval Operating Base, Norfolk, which controlled the net, gate and inner harbor.

It was listed officially as a Coastal Signal Station and aside from its tactical function had an even larger mission as a Signal Station. These signal functions included communications, largely visual, for Fifth Naval District Operations, the Port Captain's Office, the Public Health Service, the Port Director Routing Officer, the Hampton Roads Port of Embarkation and the Harbor Defense. It also had many functions in connection with the work of the Coast Artillery School, Board and Submarine Mine Depot at Fort Monroe. During 1943 it handled 22,014 routine messages, 90% by blinker, and logged 35,282 ships challenged and identified.

Coast Guard Beach Patrol

In the general problem of coast defense, the defense and surveillance of the beaches, the operations of the Coastal Warning Service and the rapid transmission of intelligence to interested commanders, and the coordination of the employment of the Sector troops, the Coast Guard, and other forces on the beach, had presented many complications.

Under our concept of coastal frontier defense as laid down in Joint Action of the Army and Navy, the Army was responsible for the defense of the coast, including among its functions, a communications and intelligence

system, to include an aircraft warning service, among the elements of the land defense, with provision for prompt exchange of information or instructions with the Navy and for beach defense. The Navy, on the other hand, in addition to its function of controlling and protecting shipping, conducting naval operations in the vicinity of the coast and supporting the Army, was required to provide and operate a communications and intelligence system among elements of the sea defense, with provisions for prompt exchange with the Army, and an information system through the Coast Guard Stations when turned over to the Navy and through lighthouse and light vessels.

A "state of non invasion" existing, unity of command was exercised through mutual cooperation.

In the initial organization of the Coast Defense Warning Service in the Sector, the system had been closely integrated with Coast Guard coastal lookout system and intelligence interchanged at the Joint Operations Center, Norfolk, at the Harbor Entrance Control Post, Fort Story, and at the three defense force command posts.

Beach patrols and outposts had, as has been pointed out, been done jointly by the Mobile Force and the Coast Guard through mutual agreement. After the Amagansett affair and after many reports of attempted landings, the Army patrol had been slowly increased until at the end of 1942 almost one third of the rifle strength of the Sector Mobile Force was on the beach. At the same time the Coast Guard, under instructions from its own headquarters, had been increasing its patrols and establishing additional temporary stations.

In spite of the utmost good feeling and "mutual cooperation", various complications in the operation of the warning services, in the employment of patrols, in dual patrols, and in dual responsibilities had developed. Vital intelligence picked up by one service often stopped it its own headquarters, when it should have been passed on. At this time, up to November 1942, the Coast Guard, while under the Navy for operation as a whole, was not locally under the Naval District Commander but operated under its own District Commander in Norfolk. This introduced a third command in the coast defense organization. The problems arising had been common in the Eastern Defense Command and the Eastern Sea Frontier and had been the cause of much correspondence in the high command and some confusion.

Under the basic concept of coast defense, the full responsibility for the defense of the coast lay on the Army - in the Sector Commander. At the same time the Coast Guard through its permanent stations on the beach and its communication system was better set up and better organized for the beach patrol and Naval Coastal Lookout system than the Army and the constant employment of small army units on beach patrol so drained the strength of the Mobile Forces that as combat units, or as a striking force, their value was small. In the interest of over all efficiency and combined effort, it was most necessary that operations on the beaches be conducted largely by the

Coast Guard as the outpost force of the Sector and the Mobile Force largely concentrated as a striking force.

Finally, in November 1942, the complications of command in the higher echelons was cleared up: the local Coast Guard Forces passed to the control of the Naval District becoming a part of the Naval Local Defense Force and the Sector Commander authorized, when he thought that the Coast Guard patrol was adequate and that reports would come in promptly, to omit Army patrols as he saw fit, at the same time retaining his full responsibility for defense. Command remained by mutual cooperation but by a system of joint inspection and joint training exercises both commanders were assured of efficient operation.

In spite of the little complications, the Sector joint beach patrols had functioned well and there had been no known incident on the beaches which had not been properly handled by one service or the other. Captain, later Commodore, G. T. Finlay, USCG, the Coast Guard commander of the Norfolk District, had been energetic and helpful and all the Sector troops as well as the Commandant had the utmost confidence in the work of the Coast Guard which had been repeatedly demonstrated in their alertness and rescue work in the submarine campaign as well as in their patrols.

Based on the existing organization, the directives received, and the experiences of the first year of the war, a revised Joint Army - Navy Plan for the Defense and Surveillance of the Beaches of the Chesapeake Bay Sector was published on 23 March 1943 (Appendix 3) which with minor modifications remained in effect until the inactivation of the Sector.

The plan, in brief, divided the Sector into three operating zones; the Cape Charles, from the north boundary of the Sector to the entrance to Chesapeake Bay; the Cape Henry, from the entrance to the Bay to Ocracoke Inlet; and the Beaufort Inlet, from Ocracoke Inlet to the southern boundary. Within each operating zone, the beaches were patrolled by the Coast Guard except at Ocean City, Maryland; Virginia Beach, Virginia; Atlantic Beach (Morehead City), North Carolina, which were patrolled by the Mobile Force. The harbor defenses were patrolled by the harbor defense troops, and the Naval and Marine Reservations on the beach patrolled by their own forces. The Coast Defense Warning Service and Naval Coastal Lookout Systems were operated as practically one system. Intelligence flowed from all agencies to the Joint Operation Center, Norfolk; Coast Guard Headquarters, Norfolk; Sector Headquarters, Fort Monroe, and the Defense Force Headquarters in each operating zone. Intelligence collected on the beaches flowed from the beach patrols to certain principal Coast Guard stations known as key stations from where it was transmitted to higher headquarters. In order to make certain information would be transmitted promptly to Mobile Forces, non-commissioned officers were stationed in each Coast Guard key station with the mission of collecting information for the Mobile Forces. This system completely eliminated the former occasional failures of information. The Coast Guard station commanders with many problems of patrol, incidents or rescue operations on the beach could not in emergency always remember

to send up information: by placing the Army personnel in the key stations as intelligence agents the commander was relieved of a difficult responsibility and the intelligence was sure. Command remained for the Army, the Navy and Marines, in its unit commanders: for the Coast Guard it was centralized in the Coast Guard Beach Patrol Officer, in Norfolk, operating through a sub-district commander in each operating zone.

Mobile Force

On 6 January 1943, Colonel Winfred G. Skelton, Infantry, assumed command of the 111th Infantry and the Sector Mobile Force, replacing Colonel J. R. Carvolth, the previous commander, who had been ordered to other duty.

The 2d Battalion, 348th Engineer General Service Regiment, arrived at Fort Story on 11 January, was redesignated as the 233d Engineer Combat Battalion and took over the Engineer mission of the mobile force. This battalion replaced the 2d Battalion 132d Engineers which had been relieved in September 1942.

Early in January pursuant to Eastern Defense Command instructions provisional tank organizations were created. After some experimentation a permanent organization was established on 1 May with the organization of four tank platoons from personnel of the mobile force, one platoon of 5 tanks being assigned the Cape Charles Defense Force, two platoons of 6 tanks each assigned the Cape Henry Defense Force and one platoon of 7 tanks assigned the Beaufort Inlet Defense Force.

The expansion of the Coast Guard and the joint agreement whereby they assumed patrol of most of the beaches permitted a consentration of the defense forces and, as the Coast Guard elements took over patrol, the mobile force on the beaches was reduced and returned to their base camps. To cover the vital beaches and to give immediate support to the Coast Guard the outpost forces were reduced to the following infantry units:

Berlin, Maryland	- 1 Platoon and 1 Section - machine guns to cover Ocean City, Maryland.
Chincoteague, Virginia	- 1 Platoon - to protect Naval Air Station and support coast guard.
Oyster, Virginia	- 1 Company, less two platoons - to cover lower peninsula.
Kitty Hawk and Manteo, NC	- 1 Company less two platoons - to cover beaches in Nags Head area.
Atlantic, NC	- 1 Platoon - to cover beaches - later removed.

Morehead City, NC	- Company less 1 platoon - to cover Atlantic Beach.
Sears Landing, NC	- 1 Platoon - to cover beaches and maintain contact with Southern Sector.

Virginia Beach was patrolled from Camp Ashby the main camp in the Norfolk area.

The Sector Mobile Force, particularly the 111th Infantry, had a difficult year in 1942. Dispersed as it was on the beaches any coordinated training particularly of companies or battalions had been next to impossible and most unsatisfactory. While the personnel was generally fine, there had been some unsatisfactory officers which it had taken time to weed out. Combat efficiency as a regiment was consequently low.

With the relief from much of the beach patrol, a thorough system of inspections was initiated, a complete overhaul and recheck of equipment made and a carefully planned training program, including at least one overnight exercise per week, put in effect - results were soon apparent. Between 25 April and 3 May, a provisional battalion of the 111th Infantry, made up from all units, to receive the benefit of the training, was sent to Solomons Island, Maryland, to act as a defense force in exercises of the Amphibious Force Atlantic Fleet. The battalion did excellent work and was commended by the commander Amphibious Force accordingly.

Finally with the permission of the Commanding General, Eastern Defense Command, the Sector Commander concentrated his entire mobile force in the Croatan Forest, south of New Bern, NC, from the 14th to the 30th July for combined maneuvers. The Croatan Forest and adjacent available terrain gave an area about twenty miles square which while partly swamp gave much good maneuver space and varying terrain. All troops concentrated by marching and operated under field conditions for the entire period. In addition to demonstrations and firings, three complete tactical exercises of three days duration each and employing all troops were carried out. A railhead was established at Morehead City and all supply was from the railhead at night. The entire mobile force and the sector staff learned much and completed the maneuvers with a well organized, mobile and aggressive force. So far as is known the Chesapeake Bay Sector was the only sector in the Eastern Defense Command which was ever able to concentrate and train its mobile elements as a complete unit.

To replace the defense forces covering the beaches during the maneuvers the 46th Coast Artillery (155 gun), acting as infantry, sent one battalion to Snow Hill, Maryland to replace the Cape Charles Defense Force and the regiment, less one battalion, took over the mission of the Cape Henry Defense Force going into bivouac in the vicinity of London Bridge, Virginia. The maneuvers thus operated to assist in the field training of the Coast Artillery as well.

On the completion of the maneuvers troops returned to their stations

except the 176th Field Artillery which went to Camp Pickett, Virginia, for firing until 15 August.

On 13 September the 233d Engineer Combat Battalion left for Camp Pickett, Virginia being relieved from the Chesapeake Bay Sector and assigned to the XIII Corps.

The strength of the command on 22 September 1943 was as follows, this was the high point in the strength of the Sector.

Unit	Off	WO	ANC	EM	TOTAL
Fort Monroe:					
Hq & Hq Co - CBS	36	1		114	151
Hq & Hq Dets - 111th Inf	24	4		124	152
Service Units and Casuals	71	6	13	499	589
2d Coast Artillery (HD)	68	10		1421	1499
22d CAMP Btry	1	6		51	58
23d CAMP Btry (DS NY-PHILA Sector)	2	8		50	60
96th Ordnance Company	6			92	98
Coast Artillery School and allied units	(462)	(27)		(1971)	(2460)
	208	35	13	2351	2607
Fort Story:					
Hq & Hq Btry HDCB	12			62	74
Hq & Hq Btry, 3d Bn, 2d CA	4	2		32	38
Service Units	93	4	56	948	1101
246th Coast Artillery (HD)	80	11		1765	1856
176th FA Bn	29	2		354	385
16th Ordnance Company	7	1		188	196
	225	20	56	3349	3650
Little Creek Mine Base:					
Btries E & I, 2d CA	13	2		314	329
6th, 8th & 17th CAMP Btries	6	18		136	160
	19	20		450	489
Fort John Custis:					
286th CA Bn (Ry)	25	3		570	598
Btry A, 246th CA (HD)	5			162	167
Service Units	9			70	79
	39	3		802	844

Unit	Off	WO	ANC	EM	TOTAL
Camp Pendleton:					
Hq Prov CA Brigade	9	3		25	37
46th Coast Artillery	57	5		1124	1186
47th Coast Artillery	79	10		1653	1742
34th Sep CA Bn (Comp)	30	2		735	767
Service Units	42	3		258	303
	217	23		3795	4035
Harbor Defenses of Beaufort Inlet:					
Hq & Hq Btry, HDBI	12	1		59	72
Band HDCB		1		29	30
Btries H, K, &1 Plat Btry N, 2d CA	14			395	409
	26	2		483	511
Camp Ashby, Va:					
3d Bn, 111th Inf & Dets	66	2		1347	1415
Co L, 47th QM Regt (Trk)	5			119	124
672d Coll Co	5			105	110
	76	2		1571	1649
Camp Somerset, Md:					
1st Bn - 111th Inf	38			863	901
Btry B - 176th FA Bn	4			108	112
1 Sec, 131st QM Co (Trk)	2			53	55
	44			1024	1068
Camp Battle, NC:					
2d Bn - 111th Inf	36			869	905
2 Secs, 131st QM Co (Trk)	3			82	85
	39			951	990
Camp Branch, NC:					
Btry A & Med Det - 176th FA Bn	5			117	122
Aggregate	898	105	69	14893	15965

Note: Coast Artillery School Personnel was attached to Fort Monroe for certain administration and supply - not included in totals.

Provisional Coast Artillery Brigade

Camp Pendleton and the Provisional Coast Artillery Brigade carried forward their training activities during 1943 with the activation of the 31st Coast Artillery (HD) on 15 January, which was sent to the Southern Sector for the Harbor Defenses of Key West on 7 April 1943; the activation of the 46th Coast Artillery on 10 February 1943, the activation of the 47th Coast Artillery on 15 April 1943, and the activation of the 34th Coast Artillery Battalion on 10 June 1943. The Norfolk AAA Region continued training and firings at Camp Pendleton. By a joint agreement all batteries of the AA Command at Camp Pendleton came under the Harbor Defense Commander for operational control in the event of emergency.

Antiaircraft Command, Norfolk AAA Region

The Antiaircraft Command, Norfolk AAA Region, EDC, had operated in close coordination with the Sector since its establishment late in 194. Their defense mission had generally remained the same as initially established by the Sector but the means had been largely augmented as personnel and materiel became available.

The antiaircraft troops were located at their battery and other installations throughout the Hampton Roads area with headquarters in Norfolk. While the command was entirely independent of the Sector, all their supply, much maintenance, and all evacuation was through the permanent Sector installations in the area. While these in turn were theoretically Service Command installations the various posts were actually under Sector Command, which made a considerable coordination and supply problem for the Sector staff. This was another example of our peculiar organization and many interlocking commands.

From the first the two commands operated in close harmony. Under the initial instructions the harbor defense antiaircraft batteries operated under the operational control of the Antiaircraft Command. The antiaircraft command in so far as possible with the forces at its disposal was prepared to assist the Sector particularly with batteries which from their positions could support the harbor defenses by fire on seacoast targets. The Sector troops in turn were prepared to support the Antiaircraft Command in local defense. The details of coordination were set forth from time to time in joint Standing Operating Procedures prepared by the two headquarters. (Appendix 3)

General

General Drum had been relieved from the Eastern Defense Command and First Army on 1 September and Major General, later Lieutenant General, George Grunert assumed command. On 10 September the First Army was separated from the Eastern Defense Command.

The improved strategic situation had indicated for some time that

measures for the defense of the coast might be reduced and on 18 September orders were received from the Eastern Defense Command warning all units to be prepared for service overseas. On 6 October, telephone instructions were received that the 101st Cavalry (Mechanized), then in Defense Command reserve at Fort George G. Meade, Maryland, would relieve the 111th Infantry on 15 October which was to concentrate at Camp Pendleton preparatory to movement to a western port of embarkation.

The 101st Cavalry relieved the combat elements of the Sector Mobile Force at 1600Q 17 October, the 111th Infantry and 176th Field Artillery passing to Sector reserve. While the force mission remained the same, to observe, patrol and defend the sector coastline and to support other elements in defense, the Cavalry regiment was not large enough, nor so organized as to lend itself to the task. Furthermore, instructions required that the tactical integrity of the units be preserved as far as possible in order that the training of the regiment as a whole might be continued.

In order to meet the requirements of the situation it was necessary to greatly reduce the Cape Charles and Beaufort Inlet Defense Forces, eliminate all regular beach patrols, except at Virginia Beach which was retained, and concentrate the main strength of the regiment in the Virginia Beach - Norfolk area. By agreement with the Navy, the Coast Guard took over all beach patrols, less Virginia Beach: one squadron headquarters, one reconnaissance troop and certain service elements were assigned to the Cape Charles Defense Force and stationed at Westover; one squadron headquarters, one reconnaissance troop and service elements were assigned to the Beaufort Inlet Defense Force and stationed at Morehead City, N. C., and the regiment, less detachments, was stationed at Camp Ashby, Va., to form the Cape Henry Defense Force. Due to reduced personnel the Commanding Officer, Sector Mobile Force, was also the commander of the Cape Henry Defense Force. To take over the mobile force functions in the coast defense warning service, a Signal Operation Detachment (Signal Corps) was authorized and organized from personnel available. The Cavalry regiment performed well as a mobile force. The Coast Guard Beach Patrol was well organized and functioning and the Cavalry units confined themselves largely to heavy motorized patrols or periodic sweeps through their areas, maintaining contact with the Coast Guard, other Army and Navy and Marine Corps units, civil authorities and making a show of force. With their patrol duties they combined their training exercises and carried on their required garrison training and firings.

The 176th Field Artillery was relieved from further duty with the Sector on 19 October and passed to the Army Ground Forces at Camp A. P. Hill, Virginia.

The 111th Infantry concentrating at Camp Pendleton on 17 - 18 October prepared for overseas movement. Preliminary orders were received on 22 October for movement to San Francisco and the regiment left on 28 October, going to the Pacific theater direct.

The service elements of the mobile force, the 672d Collecting Co., the

131st Separate Quartermaster Company (Truck) and the 3511th Quartermaster Truck Company (formerly Company L, 47th Quartermaster Truck Regiment) remained with the Cavalry in the reorganized mobile force.

Letter instructions were issued by the Eastern Defense Command, 1 November 1943, pursuant to War Department instructions changing the Category of Defense for the command from "B" to "A" and defining Category "A" as a coastal frontier that probably will be free from attack but for which a nominal defense must be provided for political reasons in sufficient strength to repel raids by submarines, by surface vessels operating by stealth or stratagen, or isolated raids by aircraft operating chiefly for moral effect.

Based on the revised category of defense the Sector plans contemplated:

Sector headquarters as organized, buth with the Signal Operations Detachment for the coastal warning service attached.

Harbor Defenses of Chesapeake Bay - as organized but less three batteries to be made surplus.

Harbor Defenses of Beaufort Inlet - no change.

Sector Mobile Force - as organized with the Cavalry - reduction already completed.

The Naval District planned to somewhat reduce its inshore patrol but otherwise contemplated no change. The Coast Guard Beach patrols continued but certain isolated stations were to be dropped and the patrols made at less frequent intervals from the permanent stations.

The reduction as planned was never carried into effect as on 24 December, the Sector Commander was informed by the Chief of Staff, Eastern Defense Command, that the Defense Commander had been ordered by the War Department to drastically reduce and reorganize his command. Under the proposed further reduction the Sectors, as organized and set up in Joint Action of the Army and Navy, were to be inactivated and in their place two larger sectors established. The Chesapeake Bay Sector was to be inactivated and absorbed in a new Southeastern Sector which was to include the coast from New York to Key West, both inclusive. Within the sectors the harbor defenses were to be reduced to a minimum manning detail under the category of defense.

Manpower and Army Ground Force demands had caused the War Department to reduce the Defense Commands. The defense mission remained unchanged.

The strength of the command on 22 December 1943 was as follows:

Unit	Off	WO	ANC	EM	TOTAL
Fort Monroe:					
Hq & Hq Co - CBS	35	1		110	146
Service Units and Casuals	69	6	13	528	616
2d Coast Artillery (HD)	65	9		1463	1537
23d CAMP Btry	2	8		54	64
Sig Opn Det CBS	1			71	72
96th Ordnance Company	6			83	89
Coast Artillery School and allied units	(406)	(30)		(1875)	(2311)
	178	24	13	2309	2524
Fort Story:					
Hq & Hq Btry - HDCB	12			62	74
Hq & Hq Btry - 3d Bn, 2d CA	3	2		31	36
Service Units	98	4	54	835	991
246th Coast Artillery (HD)	70	10		1889	1969
16th Ordnance Company	6	1		163	170
	189	17	54	2980	3240
Little Creek Mine Base:					
Btries E & I, 2d CA	10	2		305	317
6th, 8th & 17th CAMP Btries	6	21		151	178
	16	23		456	495
Fort John Custis:					
286th CA Bn (Ry)	20	3		589	612
Btry A, 246th CA (HD)	4			154	158
Service Units	10			71	81
276th Army Band		1		30	31
	34	4		844	882
Camp Pendleton:					
Hq Prov CA Brigade	10	4		59	73
46th Coast Artillery	53	7		778	838
47th Coast Artillery	83	9		1606	1698
34th Sep CA Bn (Comp)	31	2		731	764
Service Units	37	3		254	294
	214	25		3428	3667
Harbor Defenses of Beaufort Inlet:					
Hq & Hq Btry - HDBI	11	1		60	72
Band - HDCB		1		28	29
Btries H, K & 1 Plat Btry N 2d CA:	10			367	377
	21	2		455	478

Unit	Off	WO	ANC	EM	TOTAL
Camp Ashby, Va:					
Hq & Hq Troop, 101st Cav GP Mecz	14			62	76
Band, 101st Cav (atchd)		1		32	33
101st Cav Rcn Sq, Mecz	22			589	611
116th Cav Rcn Sq, Mecz	21			588	609
672d Coll Co	4			100	104
3511th QM Co (Trk)	5			110	115
	66	1		1481	1548
Camp Somerset, Md:					
Hq 101st Cav Rcn Sq Mecz	9	2			11
Med Det, 101st Cav Rcn Sq Mecz	2			13	15
Tp A, 101st Cav Rcn Sq Mecz	5			142	147
131st QM Co (Trk) 1 Plat	1			27	28
	17	2		182	201
Camp Branch, NC:					
Hq 116th Cav Rcn Sq Mecz	9	2			11
Med Det, 116th Cav Rcn Sq Mecz	2			13	15
Tp C, 116th Cav Rcn Sq Mecz	5			141	146
131st QM Co (Trk) 1 Plat	2			39	41
	18	2		193	213
Fort Macon, NC:					
131st QM Co (Trk) 1 Plat	2			43	45
Aggregate	755	100	67	12371	13293

Note: Coast Artillery School Personnel was attached to Fort Monroe for certain administration and supply - not included in totals.

CHAPTER VII

INACTIVATION

No special operational incidents occurred during the first two months of 1944.

Starting in January plans were made and the necessary readjustments carried out for the inactivation of the Sector and the operation of the new one. No written directives of any kind were issued by the Eastern Defense Command and the Sector Commander was not consulted as to the future requirements of the Harbor Defenses.

The Fifth Naval District contemplated no radical changes to meet the changed category of defense. The Army Liaison Officer in Joint Operations remained being absorbed by the new Sector. No changes were made in the Approach and Entrance Force nor in the operation of the HECP's and the Coast Guard beach patrols continued as usual.

The Harbor Defenses of Chesapeake Bay having been, in fact, the parent unit of the Sector absorbed all its local obligations as representing the Army in the Hampton Roads area, the Sector Commander taking over the Harbor Defenses. The personnel allotted the Harbor Defenses under the readjustment and reduced category of defense was less than 5% of that present at the time; while it theoretically fulfilled the minimum requirements, it completely lacked the necessary overhead and command echelons to operate the widely separated elements of the harbor defense, allowed insufficient personnel for operation and the efficient maintenance of the reserve armament and resulted in a makeshift organization.

The Harbor Defenses of Beaufort Inlet was continued unchanged with some minor reductions in personnel.

The Sector Mobile Force passed to the new Sector as it was except for the elimination of the Collecting Company and the Quartermaster truck companies which were turned over to the Army Ground Forces. The Mobile Force on 29 February then consisted of the 101st Cavalry Group (formerly the 101st Cavalry Regiment) consisting of the 101st, 116th and 34th Cavalry Squadrons. The 101st and 116th were the original squadrons of the old regiment, the 34th Cavalry Squadron arrived on 22 January being transferred from the Army Ground Forces.

In the readjustment of the Harbor Defenses it had been decided to retain the 2d Coast Artillery, the old regular regiment in the Harbor Defenses of Chesapeake Bay and put the 246th CA in the Harbor Defenses of Beaufort Inlet. The necessary personnel changes to get all the required key personnel in both harbor defenses in the remaining organizations were made during January and February and the surplus headquarters batteries and batteries of both regiments assembled at Fort Story and Fort Monroe. After the inactivation of the Sector these units together with the Sector

)eadquarters Company were transferred to the Ground Forces. Fine units .ith over two years completed training, excellent esprit and much experience in coast artillery work, they were broken up as replacements by the Ground Forces and their value as combat units lost.

The troops at Camp Pendleton passed eventually to the Army Ground Forces; and the 286th Coast Artillery (Ry) at Fort John Custis, and assigned to the Harbor Defenses of Chesapeake Bay, passed to the Army Ground Forces at that station.

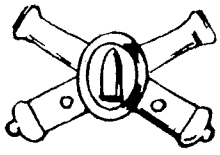
On 12 February 1944 the Eastern Defense Command issued General Orders No. 6, reorganizing the command, and based on that order, the Sector Commander issued General Orders No. 4, Chesapeake Bay Sector, following, inactivating the command effective 29 February 1944.

OGS018

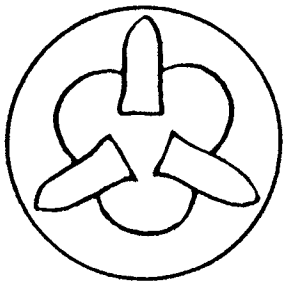
CDSG Conference Schedule
Saturday,21 October 2000

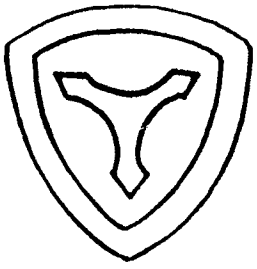
Fort Story, Virginia

StBabs2000



ChesBay





Hosted by: U.S. Army, Headquarters,Fort Story
The Old Coast Guard Station, Virginia Beach

FORT STORY, VIRGINIA:

A TOUR OF THE FORMER SEACOAST ARTILLERY POSITIONS

St.Babs2000

ChesBay

Fort Story, Virginia

o originally established and fortified in 1917 to protect the southern portion of the entrance to the Chesapeake Bay during World War I.
o reduced to caretaker status between conflicts
o expanded greatly in land area and troop strength with the approach of World War II.
o served as principal coast defense installation for the Harbor Defenses of Chesapeake Bay.
o heavily fortified with armament consisting of modern 6-inch and 16-inch weapons in addition to guns of smaller caliber, mines, searchlights and seacoast radars.
o following the conflict, mission transferred to the US Army Transportation Corps.
o served as home station for a variety of amphibious units involved in over the beach operations.
o trained and deployed transportation units during the conflict in Vietnam.
o involved in evolution and upgrade of amphibious vehicles from the DUKW to the LARC and eventually the LACV.
o continues to support joint logistics over-the-shore operations into the 21st Century.

Fort Story units participated in the Gulf War as well as military actions in Somalia, Haiti and other worldwide deployments requiring specific transportation needs. The beaches at Cape Henry continue to provide training areas for joint exercises and watercraft testing. The post is presently the home station for the 11th Transportation Battalion as well as tenant activities of the US Navy, US Marine Corps, US Coast Guard and the US Army Reserve.

Compiled by: Fielding Lewis Tyler
Old Coast Guard Station, Virginia Beach, Virginia
FTylerVB2@aol.com

updated: September 2000

driving armament tour, Fort Story, Virginia

START IN PARKING LOT.FORT STORY CLUB:

1. **Fort Story Club**. Site of Battery 19, commonly called Examination Battery. Completed July 1942 and manned by soldiers from Battery H, 246th Coast Artillery Regiment. Armament consisted of two 3-inch guns to cover the convoy marshaling area in Lynnhaven Roads. Battery dismounted in July 1945. The site was designated as Granite and three fire control towers and a combined switchboard and cable hut were located here. Inside West Gate at Kwajlein Road on bay front. **Only battery magazine and switchboard building remain.**

2. **Mine Casemate**. Designated as Battery 7-A . This tract of land acquired by US Army in 1914. Casemate constructed in 1922 and operated a portion of the controlled mine field at the entrance to the Chesapeake Bay. Manned by soldiers from Battery E, 2d Coast Artillery Regiment. The mine field removed following WW II and control site abandoned. Later used by US Army Harbormaster and currently not in use. Off Atlantic Avenue at Eniwetok Road. **Present site consists of mine casemate (Building 900), a concrete observation post and steel frame observation tower.**

3.**Integrated Fire Control (IFC) Area, Hercules Missile Battery**. Former site of Nike-Hercules radar control system operational in 1958 . Initially manned by soldiers from Battery D, 4th Battalion, 59th Artillery. Battery inactivated and the missile site closed down by April 1974. Radar domes removed at a later date. Remaining buildings currently occupied by Amphibious Reconnaissance School, U.S. Marine Corps. **Buildings intact and in use.**

4.**Battery 21**. Modern-type 90mm gun position with battery commanders station completed October 1942. Armament consisted of a pair of fixed 90mm Anti-Motor Torpedo Boat (AMTB) guns with shields. Armament removed following WW II. Building 704 formerly served as Military Police Station. Nearby **Battery 22** also mounted a pair of 90mm AMTB guns. Battery came online in August 1943 with crew from Battery I, 246th Coast Artillery. Placed in maintenance status in July 1945 and scrapped in 1950. Off Atlantic

Avenue. Battery 21 and battery commanders station currently used by the 396th Harbormaster Detachment, U.S. Army Battery 22 only concrete platforms remain on beach.

5.**Post Commanders Quarters** Originally constructed in 1918 as US Weather Station. Served for many years in that capacity. During WW II used as Joint-Service Harbor Entrance Control Point for the Army harbor defense commander and the Navy Approach and Entrance Force. Building 734 currently serves as quarters for the post commander and his family. Off Atlantic Avenue at Leyte Road on beachfront. **Private quarters. access restricted.**

6.**Mine Casemate**. Constructed in 1933 initially as a Harbor Defense Command Station. Later served as Mine Casemate Number 1 to control a portion of the underwater mines at the entrance to the Chesapeake Bay. Later redesignated as Number 2. In use by US Army. Off Cebu Island Road under the old Cape Henry Lighthouse. **Access restricted.**

7.**Battery AA No.1**. Three concrete open antiaircraft (AA) gun emplacements with covered magazines completed in August 1943. Replaced 3 3-inch AA gun positions emplaced on the sites around 1918. Armament consisted of three 3-inch Model 1917 M1A2 fixed guns originally on site. Armament removed following WW II. In primary dune line east of Cape Henry Road at end of Algiers Road. **Currently not used, partially sand-filled and overgrown with oak trees and brush.**
In 1917 5-inch M1903 designated Battery B and 6-inch M1900 guns of Battery A mounted to east of AA guns Removed following WW I. **Only concrete mounts remain Can be viewed at extreme low tide.**

8.**Battery Worcester**. An early prewar protoype battery completed in May 1941. Armament consisted of a pair of 6-inch M-1900 guns on barbette carriages with battery commanders station on top. Manned by soldiers from Battery E, 246th Coast Artillery Regiment during WW II. Following conflict armament removed and scrapped. Casemate and battery commanders station both currently in use. On Sansapor Road behind Post Headquarters. **Access restricted**

9.**Battery Cramer**. Modern-type 6-inch gun position completed May 1942 . Armament consisted of a pair of 6-inch M1903 guns with a cast steel shield. Armament removed in 1949. Adjacent to US Navy Shipboard Electronic System Evaluation Facility(SESEF) Off Atlantic Avenue on Cape Henry Road near East Gate. **Building 101 used as storage by SESEF.**

9A. **Battery U.** A pre-World War II (1931) supplemental 155 mm battery with 4 guns. Mounted on 180 degree traverse reinforced concrete emplacements termed "Panama mounts." Battery replaced by modern 6-inch guns. **Panama Mount for Gun No. 1 partially covered in dune line.Three other Panama Mounts on beach, uncovered by storm in summer 1999.**

10.**Battery 10** Modern-type 6-inch gun position completed in October 1943. Armament consisted of a pair of 6-inch Model T2 guns with a 4 to 6 inch cast steel shield. Manned by soldiers from Battery H, 246th Coast Artillery Regiment during WW II. Armament removed following the war. Building 317 off Atlantic Avenue on Vera Cruz Road. **Used as fire training facility on occasion. Restricted access.**

11.**Batteries Pennington and Walke**. Originally a four -gun 16-inch M1920 howitzer battery designated Battery Alexander C.M. Pennington. Construction on gun platforms, magazines, shell rooms and interconnecting railroad tracks completed and transferred to the Coast Artillery in October 1922. Mounting of armament completed in October 1924. In 1940 two left guns designated Battery Walke. Gun positions covered with steel shields late in 1944. Guns cut up and sold for scrap about 1949. West of Atlantic Avenue off Coast Artillery Road on south end of installation . **A number of magazines and shell rooms used as storage by US Army. One gun platform remains, covered with brush. Other gun platforms were located in present-day enlisted housing area and Army Travel Camp. The Battery Commanders Station for Battery Walke was located in the Cape Henry Lighthouse on the level below the lantern room.**

12.**Plotting Rooms, Batteries Pennington and Walke** Concrete casemate built in 1923 in reverse of secondary dune. Provided rooms for plotting targets and adjusting gunfire. Instruments required to be some distance from the concussion of weapons firing. Building 401 also provided room for the post switchboard. Later received upgrade. Adjacent to **Reinforced Concrete Tunnel** 280 feet in length with 225 foot retaining wall connecting the gun positions with the reverse of the secondary dune. Constructed 1922-1923, it provided a concealed and protected location for the ammunition and shell railway cars. On Coast Artillery Road. **Plotting room currently used on occasion as Army classroom.**

13.**Harbor Defense Command Post.** Concrete multi-room casemate built into the reverse of the secondary dune. During WW II, Headquarters, Harbor Defenses of Chesapeake Bay (HDCB) moved from Fort Monroe to Fort Story. Permanent complex to house the HDCB headquarters completed on 1 November 1943. This facility closed following the war and the HDCB inactivated by 1 January 1950. Complex utilized by transportation battalions

and Post personnel offices following World War II. On Coast Artillery Road. **Presently not in use**

14.**Plotting,Spotting and Radio (PSR) Room, Battery Ketcham** Concrete casemate built into reverse of secondary dune. Provided room for plotting targets and adjusting gunfire. Instruments required to be away from the concussion of weapons firing. On Coast Artillery Road. **Building 403 in use by Directorate of Information Management, Ft. Story.**

15.**Battery Ketcham** Modern-type 16-inch casemated gun position completed in November 1943. Armament consisted of a pair of Mark II, Mod.1 Navy guns. Manned by soldiers from Battery C, 246th Coast Artillery Regiment during WW II. Armament removed and scrapped around 1949. From about 1978 until 1995 Building 605 was occupied by Explosive Ordnance Demolition Training and Evaluation Unit 2(EOD TEU 2), US Navy and the interior was modified for their use. Later occupied by units of the U.S. Army Reserve. On First Landing Road. **Currently not in use.**

16. **Plotting, Spotting and Radio(PSR) Room, Battery 4** . Concrete casemate built into reverse of secondary dune. Provided room for plotting targets and adjusting fire for 16-inch guns. Instruments required to be away from the concussion caused by the firing of the main armament. On Al Jubayl Road. **Building 809 in use by the EOD Shipboard Training facility.**

17. **Battery Number 4.** Modern-type 16-inch casemated gun position completed in November 1943. Armament consisted of two Mark II, Mod.1 Navy guns separated by 500-foot gallery. Assigned battery Fire Control Tower still standing at 68th Street at the North End in Virginia Beach. Armament removed and scrapped around 1949. Later used as maintenance facility for adjacent U.S. Army Nike-Hercules surface-to-air missile battery. In 1995 Navy Explosive Ordnance Disposal Training & Evaluation Unit 2 (EOD TEU2) moved into new building sited on southern side of battery. **Sections of battery in use by EOD TEU 2 with the major portion in use by other US Navy units.**

18. **NIKE missile launch area.** former launcher site for NIKE-Hercules Air Defense Artillery missile battery which was built in 1958 and dismantled in 1974. Contained underground magazines and elevator for raising missiles to surface for firing. Other buildings for assembly, testing, storage , repair and liquid filling. On Al Jubayl Road off Hospital Road. **Underground entry restricted. Some buildings in use by US Army.**

END TOUR. Return To Fort Story Club via Hospital Road.

Fort Story elements. Harbor Defenses of Chesapeake Bay. WW II

The Harbor Defenses of Chesapeake Bay (HDCB) also had other major armament in the form of mobile railway guns and 155mm GPF weapons . These were gradually replaced by modern weapons. Smaller caliber weapons and machine guns were in place for close-in protection of the batteries. Searchlight platforms, seacoast radar towers, command post towers in addition to fire control towers completed the armament package for the HDCB. A number of the towers were located off the installation along the oceanfront to the south of Fort Story. As of this writing only two of these fire control remain. The Casemate tower is on dune above the Mine Casemate and is not in use. The other is located on the beach at 68th Street and is excess to the need of the Navy and will be dismantled in 2001. Of the other support facilities, in many cases only pieces of concrete remain of the once powerful seacoast defense system.

Sources

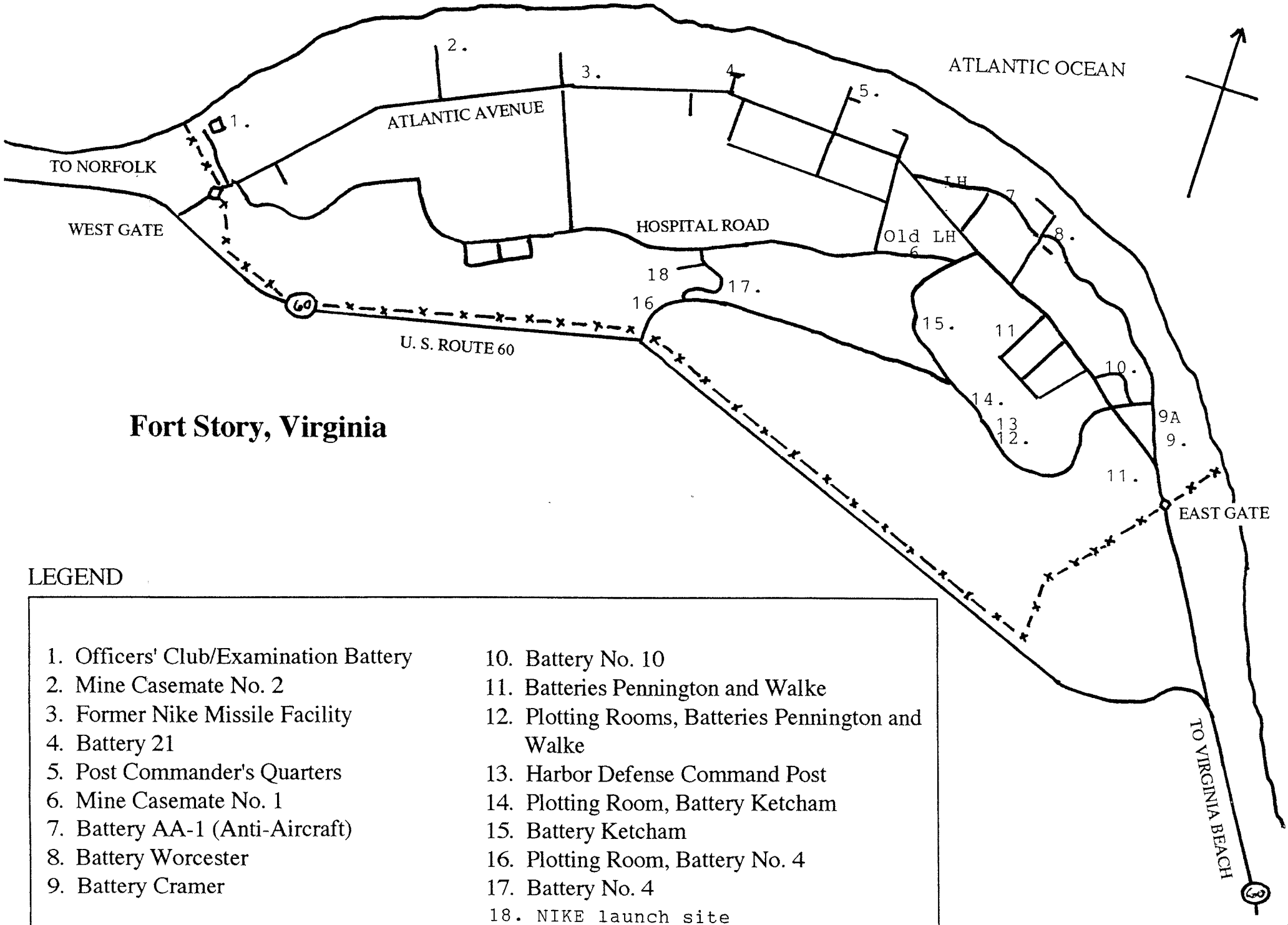
This tour and armament list is intended solely for the occasional visitor and is by no means comprehensive. The serious student of seacoast artillery should consult other available information on the subject. The Coast Defense Study Group at www.cdsg.org offers additional information on seacoast artillery.

For additional information please contact the Public Affairs Officer, Olivia "Libby" Alfriend at Fort Story, Virginia (757) 422-7101, extension 230 or the author of this paper, Fielding L. Tyler at The Old Coast Guard Station on 24th Street in Virginia Beach. Station phone is (757) 422-1587, FAX at (757)491-8606 or e-mail at FTylerVB2@aol.com.

Recommended reading:

Weinert, Richard P.Jr., Defender of the Chesapeake. Shippensburg, PA. White Mane Publishing Company, Inc.,1989.

Lewis,E.Raymond, Seacoast Fortifications of the United States. Annapolis, MD, Originally published by Smithsonian Institution Press,1970 Republished by U.S. Naval Institute Press. 1979,1985,1988,1990, 1992,1993.



Fort Story, Virginia

LEGEND

1. Officers' Club/Examination Battery
2. Mine Casemate No. 2
3. Former Nike Missile Facility
4. Battery 21
5. Post Commander's Quarters
6. Mine Casemate No. 1
7. Battery AA-1 (Anti-Aircraft)
8. Battery Worcester
9. Battery Cramer
10. Battery No. 10
11. Batteries Pennington and Walke
12. Plotting Rooms, Batteries Pennington and Walke
13. Harbor Defense Command Post
14. Plotting Room, Battery Ketcham
15. Battery Ketcham
16. Plotting Room, Battery No. 4
17. Battery No. 4
18. NIKE launch site

NOTE: NOT DRAWN TO SCALE

HARBOR DEFENSES OF THE CHESAPEAKE BAY
WORLD WAR II

FORT STORY (CAPE HENRY)

Battery Ketcham:	2-16" Guns
Battery 121:	2-16" Guns
Battery Pennington:	2-16" Howitzers
Battery Walke:	2-16" Howitzers
Battery Worcester:	2-6" Guns
Battery Cramer:	2-6" Guns
Battery 226:	2-6" Guns
Examination Battery:	2-3" Guns
Battery AMTB No. 21:	2-90mm Guns
Battery AMTB No. 22:	2-90mm Guns
Mines:	46 Groups

FORT JOHN CUSTIS (CAPE CHARLES)

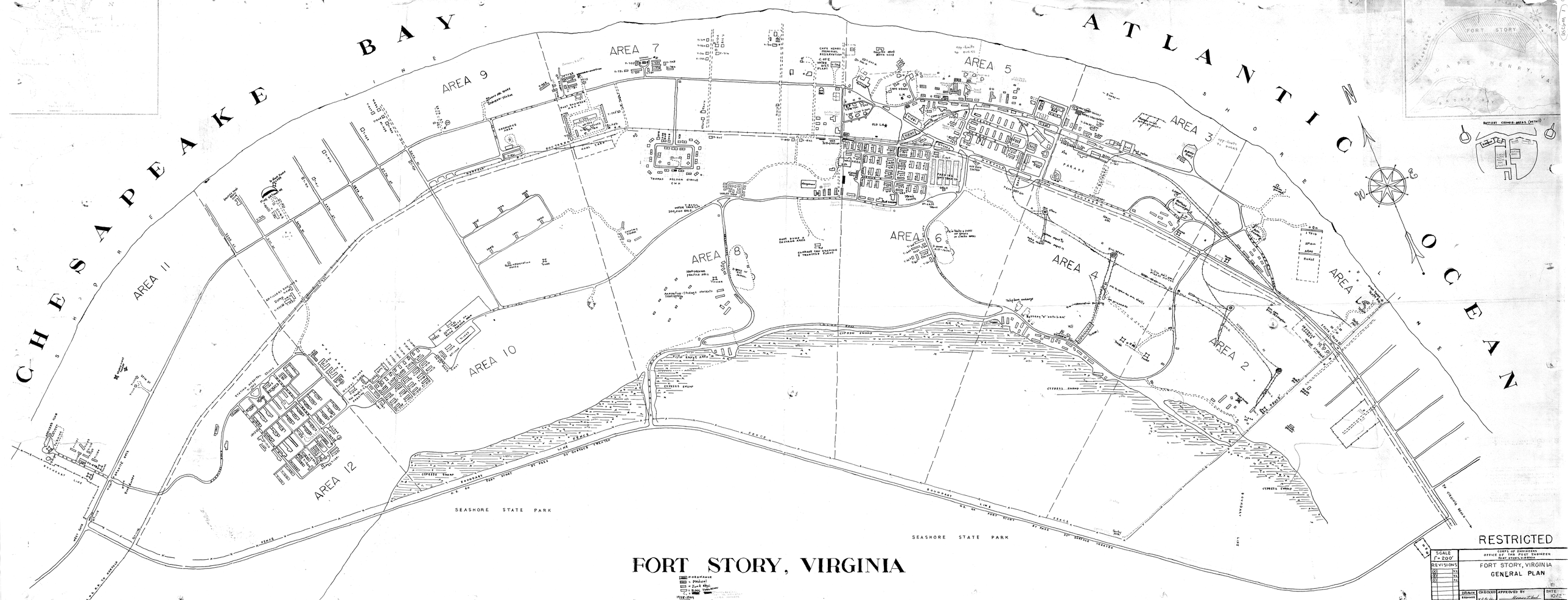
Battery Winslow:	2-16" Guns
Battery 123:	2-16" Guns (Cancelled)
Battery 227:	2-6" Guns
Battery 228:	2-6" Guns
Battery AMTB No. 24:	2-90mm Guns
Mines:	13 Groups

FORT WOOL (RIP RAPS)

Battery Gates:	2-6" Guns
Battery Hindman:	2-3" Guns
Battery Lee:	4-3" Guns

FORT MONROE (OLD POINT COMFORT)

Battery 124:	2-16" Guns (Cancelled)
Battery Parrott:	2-12" Dis. Guns (Disarmed)
Battery DeRussey:	3-12" Dis. Guns (Disarmed)
Battery Anderson:	4-12" Mortars (Disarmed)
Battery Ruggles:	4-12" Mortars (Disarmed)
Battery Church:	2-10" Dis. Guns (Disarmed)
Battery Montgomery:	2-6" Guns
Battery AMTB No. 23:	2-90mm Guns
Mines:	4 Groups



FORT STORY, VIRGINIA

ENTRANCE TO CHESAPEAKE BAY, VA.
STUDY SHOWING
WATER AREAS
AND RANGES OF FIRE

IN ONE SHEET

SCALE 1: 80,000

1000 0 6000 12000 YDS.

U.S. ENGINEER OFFICE, NORFOLK, VA. OCTOBER 14, 1926

SUBMITTED J. Walker SURVEYMAN

SUBMITTED [signature] LT. COL. CORPS OF ENGINEERS

DRAWN BY L.D.P & J.W.

FILE 14-10-74-16

TO ACCOMPANY REPORT DATED OCTOBER 13, 1926, BOARD CONVENED BY SPECIAL ORDERS NOS. 23 & 44 HDQTRS., THIRD COAST ARTILLERY DISTRICT 1926

EXHIBIT "C"

10/14/26

USGM 2

CHESAPEAKE BAY

ATLANTIC OCEAN

CASEMATE

U. S. NO. 60

180 FT.

U. S. WEATHER BUREAU STA.

145 FT. ST

A ST.

247TH C.A.

1ST C.A.

246TH C.A.

GRANITE

TO NORFOLK

2ND BN 1ST C.A.

STATION HOSPITAL

FORT STORY BOUNDARY

OLD FORT STORY BOUNDARY

SEASHORE STATE PARK

TRAIL TO 102 ND ST

BEACH CH

TO VIRGINIA BEACH

WOODEN STORAGE TANKS

126 TH ST

36°55'

N

USGM13

REVISED 10-4-41
10-1-41

OFFICE OF THE CONSTRUCTING QUARTERMASTER
FORT STORY, VA.

MASTER PLAN
FORT STORY AND VICINITY

DRAWN BY | APPROVED | FEB. 13, 1941

WAR DEPARTMENT

CORPS OF ENGINEERS, U. S. ARMY

TO SMITH ISLAND LIGHTHOUSE (NEW)
AZIMUTH 202° 18' 26"

TRUE NORTH

TO FISHERMAN ISLAND & CAPE CHARLES

TO SMITH ISLAND LIGHTHOUSE (NEW)

CENTER OF FIELD OF FIRE

AZIMUTH 262° 30'

60 IN. SEARCHLIGHT

C.G. STA.

EPI

PROPOSED NEW LOCATION FOR 6" BATTERY NO.2 (RECOMMENDED)

PROPOSED EMPLACEMENT FOR TWO 6" GUNS NO.2 (APPROVED)

PROPOSED EMPLACEMENT FOR TWO 6" GUNS NO.1 (APPROVED)

3" ANTI-AIRCRAFT BATTERY

PROPOSED SHELL ROOM

PROPOSED 16 IN. RIFLE

PROPOSED FIXED SEARCHLIGHTS

LIGHTHOUSE RESERVATION

PROPOSED MAGAZINE

PROPOSED MAGAZINE

PROPOSED SHELL ROOM

PROPOSED 16 IN. RIFLE

PROPOSED SHELL ROOM

12" BATIGNOLLE PLATFORM

14" RAILWAY MOUNT MODEL E

14" RAILWAY PLATFORM MODEL 1920

NORFOLK SOUTHERN RAILROAD

POWER HOUSE NO.2

POWER HOUSE NO.1

4 16"H

3 16"H

2 16"H

1 16"H

PROPOSED POWER HOUSE

PROPOSED PLOTTING ROOM

B.C. STATION

BATTERY

RETAINING WALLS

PENNINGTON

TUNNEL

PROPOSED RANGE TOWER & B.C.STA. FOR BATTERY PENNINGTON

PLOTTING ROOM & SWITCHBOARD ROOM

PROPOSED RANGE TOWER & B.C.STA. FOR 16 IN. RIFLES

NOTE.

EXISTING TRACKS INDICATED THUS ——————

PROPOSED TRACKS INDICATED THUS ——————

FORT STORY, VA.
STUDY OF LOCATIONS FOR 16 INCH GUN BATTERY & ACCESSORIES

IN TWO SHEETS — SHEET NO. 1 — SCALE- 1 IN. = 250 FT.

100 0 500 1000 1500 FT.

U.S. ENGINEER OFFICE, NORFOLK, VA. — OCTOBER 14, 1926

SUBMITTED — SUBMITTED

SURVEYMAN — LT. COL. CORPS OF ENGINEERS

DRAWN BY J.W. — FILE 14-10-7414

TO ACCOMPANY REPORT DATED OCTOBER 13, 1926, BOARD CONVENED BY SPECIAL ORDERS NOS. 23 & 44 HDQTRS., THIRD COAST ARTILLERY DISTRICT 1926

EXHIBIT "A" 10/14/26

WAR DEPARTMENT

CORPS OF ENGINEERS, U.S. ARMY

TO SMITH ISLAND LIGHTHOUSE (NEW)

TO FISHERMAN ISLAND & CAPE CHARLES

TRUE NORTH

TO SMITH ISLAND LIGHTHOUSE (NEW)
AZIMUTH 202°18'26"

AZIMUTH 262°30'

60 IN. SEARCHLIGHT

C.G. STA.

EPI

14" RAILWAY MOUNT MODEL E

12" BATIGNOLLE PLATFORM

POWER HOUSE NO.1

POWER HOUSE NO.2

NORFOLK SOUTHERN RAILROAD

2 16H

1 16H

3 16H

4 16H

PENNINGTON

RETAINING WALLS

TUNNEL

BATTERY

PLOTTING ROOM & SWITCHBOARD ROOM

LIGHTHOUSE RESERVATION

CASINO

U.S. WEATHER BUREAU

B.C. STATION

USGCMS

Sept 6 1929.

MAP NO 1-C. 27

9/5/29

CHESAPEAKE

OCEAN

Var. 5°08' West in 1913.

True North

Magnetic North

Cape Henry Light (new)

(True) S 47°-35' E.

Parcel "B"

Parcel "C"

Parcel "A"

CAPE HENRY

The northwest end of Station is 111' east of Q

Stone Marked U.S.

Stone Marked U.S.

Stone Marked U.S.

Stone Marked U.S.

Stone Marked U.S.

Stone Marked U.S.

Approximate Line of Foot of Sand Hill

Boundary line of Government Fortification Site

Center Line of Track

Station Lot at Cape Henry Va. Scale 1in:50ft.

Map revised June 9, 1916. All Bearings were oriented to true bearings from Gort bearing S47°35'E. All parcels tied in with U.S Gort monuments. Courses and distances of Parcels figured to close.

C- 5- 5- 15- 1

FORT STORY, VA.

LOCATION OF TRACKS & RIGHT OF WAY

GRANTED TO

NORFOLK SOUTHERN RAILROAD COMPANY

UNDER PROVISION OF

ACT OF CONGRESS APPROVED MARCH 3, 1915.

In One Sheet Scale 1:2400

U.S. Engineer Office, Norfolk Va. February 22, 1917.
Submitted

Lt. Col. Corps of Engineers, U.S. Army

Drawn by HWH. File No. 7095 Transmitted with letter dated

F3 79

ATLANTIC OCEAN

Mean Low Water Line as of 1934

LOCAL PLANE

707,600 50,800 708,000 1,570,400 49,600 51,200

Searchlight Tower
Dwelling 25 24 22 19
Dwelling 21
Dwelling 14
Shed
Searchlight Tower
Hose House 6
Dwelling 18
Tennis Court
Garage
Wood Shed
Dwelling 17
Dwelling 16
Garage
Dwelling 15
Chicken Coop
12 Dwelling
Dwelling 11
Garage
Coast Guard Station No. 161
Oil House
Pump & Water Cistern
Garage
Garage
Mess Hall
Stable
37 Warehouse
Hose House 6
Q.M. Filling Sta.
57th St.
Flag Pole
36 Headquarters
Latrine
Paint Shop
35 Lumber Shed
34 Machine Shop
33 Tool House
Pumping Sta.
32 Locomotive Shed
65 66 Water Tank
NORTH BASE MON.
3 Dwelling
10 Pump House 63
64 Pump Houses
155MM. No.4
155MM. No.3
155MM. No.2
Con. Foundation
155MM. No.1
Observation Tower
R.R. STATION
U.S. HIGHWAY NO. 60
Norfolk & Southern R.R.
Power House No. 2
Exhaust Pit
16" H No.4
Tool House
Latrine
Tool Shed
M.3S Magazine
Latrine
K.3P Magazine
16" H No.3
Tool House
P.4P Magazine
N.4P Magazine
MON. NO.3
H.2S Magazine
Latrine
F.2P Magazine
16" H No.2
Tool House
Q.4S Magazine
J.3P Magazine
L.3S Magazine
RETAINING WALL
TUNNEL
RADIO MAST
RADIO MAST
Plotting Room
RETAINING WALL
LATRINE
Meteorological Sta.
Cable Hut
AUXILARY COMM POST
BOUNDARY LINE
THE DESERT

50,000 1,569,600 48,800 107,200 50,400

Note:- For Vicinity Map, Coördinate Table, and Legend see Sheet No. 3.

Contour interval:- 5 feet, referred to M.L.W

HARBOR DEFENSES OF CHESAPEAKE BAY, VA.

FORT STORY RESERVATION, VA. (PARCEL A)

SURVEY OF JAN.~ APRIL, 1934.

In 3 Sheets Sheet No.2 Scale:- 1"= 100'

0 100 200 300 400 500 FT.

U. S. ENGINEER OFFICE, NORFOLK, VA. AUGUST 3, 1934.

Submitted:- Approved:-

Wilson T. Howe
Engineer,
Chief, General Engineering Division

Capt., Corps of Engineers, U. S. Army,
District Engineer

Surveyed: C.W.A. Proj. II F30 Drawn by F. W.

File No. C~1(23)~8391(2)

USCGM7

FINAL
PROJECT OWNERSHIP MAP
(TYPE OF MAP)

STATE	VIRGINIA
COUNTY	PRINCESS ANNE
DIVISION	NORTH ATLANTIC
DISTRICT	NORFOLK
ARMY AREA	FIRST
USING AGENCY	THE DEPT OF THE ARMY
16 MILES	N.E. OF NORFOLK
MILES	OF

TRANSPORTATION FACILITIES

NORFOLK SOUTHERN R.R.	RAILROAD
	STATE ROAD
U.S.60	FEDERAL ROAD
NATIONAL, CAPITAL	AIRLINE

LAND AREA

TOTAL ACRES ACQUIRED	(PRIOR 347.82 / SUBSEQ 1,110.50)	1,458.32
ACRES FEE	(PRIOR 342.87 / SUBSEQ 1,096.94)	1,439.81
ACRES LEASED	(1)	NO AREA
ACRES TRANSFERRED	PERMIT (2) 12.69	12.69
ACRES DONATED		
ACRES LESSER INTEREST	PRIOR (EASM'T) 4.95 AC (2 PERM) No Area (1 LIC.) 0.87 ac.	* 5.82

DISPOSALS

TOTAL ACRES DISPOSED OF	7.37
ACRES TRANSFERRED	1.70
ACRES SOLD	
ACRES OTHERWISE ACRES TO G.S.A.	4.80
LESSER INTEREST TERM. (1 LIC.: 0.87 AC. / 1 PER.: NO AREA)	0.87

LEGEND

RESERVATION LINE

STATE OR PROVINCE LINE

COUNTY LINE

CIVIL DISTRICT PRECINCT

LAND-GRANT LINE

CITY, VILLAGE, OR BOROUGH

CEMETERY, SMALL PARK, ETC.

TOWNSHIP LINE

SECTION LINE

Scale
1"= 300'
300' 0 300' 600' 900'

CORPS OF ENGINEERS, U.S. ARMY
NORTH ATLANTIC DIVISION, NORFOLK DISTRICT
NORFOLK, VIRGINIA

REAL ESTATE
FORT STORY
MILITARY RESERVATION

RECOMMENDED: John W. Powell, ASSOCIATE ENGINEER DATE 19 Oct 62
APPROVED: [signature], MAJOR, CORPS OF ENGINEERS DATE 19 Oct 62

COMPILED: J.D.P. TRACED: J.D.P. CHECKED: J.W.P.

DATE	BY	REVISIONS	APPROVED
16 May 55	W.T.C.	Due to Final Audit	
18 July 56	W.T.C.	Added Tract No. C	W.C. Jones Col. Corps of Engrs.
4 Dec 56	W.T.C.	Add'l Remarks - Tract 'C' of Tract Register	
10 Mar 60	W.T.C.	Added Tr. 477, Authorizations & corrected Statistics	
29 Mar 60	W.T.C.	Due to Final Audit	

SHEETS: 1 OF 4 DRAWING NO. NAD

TRACT REGISTER OF ACQUISITION AFTER 1 JULY 1940

TRACT NO	LAND OWNER	ACREAGE FEE	ACREAGE TRANS	ACREAGE LEASE	ACREAGE EASEMT	REMARKS
B	GENERAL SERVICES ADMINISTRATION	1.50				TRANS. LETTER DTD 3 FEB 1954, EFF 5 FEB 1954
C	TREASURY DEPARTMENT (Coast Guard)	1.00				TRANS. LETTER DTD 27 NOV 1956, EFF 29 NOV 1956
	ACREAGE	342.87			* 4.95	SEE AREA DEPICTED WITHIN FEATHERED PERIMETER

(10) (11)

NOTE: TRACT B — FORMERLY ACQUIRED BY USE PERMIT, DTD 3 NOV. 1939
TRACT C — FORMERLY ACQUIRED BY USE PERMIT, DTD 29 MAR. 1940

* EASEMENT AREA OF ORIGINAL RESERVATION WAS 11.19 AC; 6.24 AC. WAS LATER ACQUIRED IN FEE (1.82 AC. IN Y-213, 4.28 AC. IN Y-2-4, 0.14 AC. IN X-470)

STATE INDEX

SHEET INDEX
NOT TO SCALE

PROJECT SITE MAP
SCALE: 1"= 6666'
3000' 0 3000' 6000' 9000' 12000'

** DELEGATED AUTHORITY

ACQUISITION AUTHORIZATION

** (2)	LICENSE	dated	15 October 1940
** (3)	LEASE	dated	1 June 1942
** (4)	PERMIT	dated	3 March 1942
(5)	LETTER OF TRANSFER	from	U.S.A. dated 21 April 1942
(6)	RE-D 745	dated	2 April 1942
(7)	RE-D 4660	dated	25 February 1947
** (8)	PERMIT	dated	1 July 1952
** (9)	LICENSE	dated	8 September 1953
(10)	RE-D 5784	dated	23 December 1953
(11)	RE-D 6624	dated	28 June 1956
(12)	USE PERMIT	dated	31 July 1959
** (13)	LICENSE	dated	11 June 1947
** (14)	LICENSE	dated	15 Oct 1948
(15)	LETTER, OCE to NAD	DATED	2 JULY 1958

ORIGINAL RESERVATION
PARCEL "A" 329.77 AC.
PARCEL "B" 4.80 AC.
PARCEL "C" 1.70 AC.
PARCEL "D" 1.60 AC.
PARCEL "E" 5.00 AC.

4.80 acres reported excess (Standard Form 118) to G.S.A. 14 September 1954 who conveyed 4.80 acres to Howard E. Gibbs by quitclaim deed dated 22 August 1955

1.70 acres transferred to Department of the Navy on 30 December 1957

Note:
The boundary of this installation was compiled from deed descriptions and plats.

DATE	REVISIONS	BY
22 Aug 66	Supplemental Audit - Added Tr. 477, 4 Licenses Merged, and Termination of Tr. 475 P shown	Y. P. P.
7 Mar 63	Due to Revised Audit, added trs. 477L & 478L, termination of 478L shown	W.T.C.
12 Feb 63	Corrections due to O.C.E. 10th ind. dtd. 12 Feb 1963	W.T.C.
13 Sept 61	Corrections due to O.C.E. 6th Ind. dtd. 7 Sept 1961	W.T.C.

AUDITED
NO. 619

USCGM-9

C O C E A N

T H E D E S E R T

Mean Low Water Line

Note:- Reduced by 2nd. Photo Section, Langley Field, Va., from the original survey, File No. C-1(23)-8391(1-3).

Grid North is 1°48'22.916" west of True North at Cape Henry Lighthouse.

Contour interval - 5 feet, referred to M.L.W.

Sand fence - +---+

F. Mauro.

QM Utilities

HARBOR DEFENSES OF CHESAPEAKE BAY, VA.

FORT STORY RESERVATION, VA. (PARCEL A)

SURVEY OF JAN. - APRIL, 1934.

In One Sheet

Scale- 1" = 200'

U. S. ENGINEER OFFICE, NORFOLK, VA. SEPT. 10, 1934.

Submitted-

Approved-

Engineer,
Chief, General Engineering Division.

Capt. Corps of Engineers, U.S. Army,
District Engineer.

Surveyed: C.W.A. Proj. II F30

Drawn by F.W.

File No. C-1(23)-8403

USCGM 10

HOLLIES
RANGE TOWER
(HOLLIES TRACT)
Scale:- 1"=20'

EMERSON
RANGE TOWER
(PARCEL "B")
Scale:- 1"=100'

PARCEL "C"
Scale:- 1"=100'

RUDEE HEIGHTS
(LEO JUDSON)

RUDEE BLVD.

GROVE ESTATE

SUNRISE DEVELOPEMENT COMPANY

SUNRISE DEVELOPEMENT CO.

RIFLE RANGE
RANGE TOWER
(STATE RIFLE RANGE)
Scale:- 1"=20'

MINING CASEMATE
PARCEL-D
Scale:- 1"=100'

GRANITE
RANGE TOWER
(PARCEL "E")
Scale:- 1"=100'

VICINITY MAP
Scale: 80,000
Traced from U.S.C.&G.S.
Chart No.1222

COORDINATES-HOLLIES TRACT

STATION	LOCAL PLANE X	LOCAL PLANE Y	PROGRESSIVE GRID X	PROGRESSIVE GRID Y
Tower	52,157.95	43,652.86	708,947.3	1,564.3
S.W.Corner	52,140.97	43,613.46		
S.E.Corner	52,173.37	43,621.46		
N.W.Corner	52,131.04	43,653.83		
N.E.Corner	52,163.40	43,661.83		

COORDINATES-EMERSON (PARCEL B)

STATION	LOCAL PLANE X	LOCAL PLANE Y	PROGRESSIVE GRID X	PROGRESSIVE GRID Y
Tower	51,321.06	46,457.95	708,199.0	1,567.1
S.W.Corner	51,372.20	46,327.96		
S.E.Corner	51,430.70	46,341.27		
N.W.Corner	51,237.72	46,329.82		
N.E.Corner	51,380.41	46,362.28		

COORDINATES-PARCEL C

STATION	LOCAL PLANE X	LOCAL PLANE Y	PROGRESSIVE GRID X	PROGRESSIVE GRID Y
S.W.Corner	51,917.65	45,917.65	708,712.58	1,566.6
S.E.Corner	51,932.99	45,935.92		
N.W.Corner	51,829.77	46,015.22		
N.E.Corner	51,911.07	46,033.49		

COORDINATES-STATE RIFLE RANGE

STATION	LOCAL PLANE X	LOCAL PLANE Y	PROGRESSIVE GRID X	PROGRESSIVE GRID Y
Tower	52,942.13	37,588.47	709,340.0	1,558.2
S.W.Corner	52,891.77	37,545.81		
S.E.Corner	52,940.18	37,545.75		
N.W.Corner	52,912.27	37,593.83		
N.E.Corner	52,960.68	37,595.77		

COORDINATES-MINING CASEMATE (PARCEL D)

STATION	LOCAL PLANE X	LOCAL PLANE Y	PROGRESSIVE GRID X	PROGRESSIVE GRID Y
OBSERVATION POST	47,672.75	50,330.19	704,681.10	1,571.3
S.W.Corner	47,692.90	50,468.66		
S.E.Corner	47,694.15	50,488.25		
N.W.Corner	47,585.41	50,550.14		
N.E.Corner	47,676.67	50,569.73		

COORDINATES-GRANITE (PARCEL E)

STATION	LOCAL PLANE X	LOCAL PLANE Y	PROGRESSIVE GRID X	PROGRESSIVE GRID Y
Tower	46,637.57	49,746.30	703,421.68	1,570.
S.W.Corner	46,600.18	49,664.66		
S.E.Corner	46,672.76	49,733.45		
E.L.Mon.	46,558.10	49,854.41		
W.L.Mon.	46,483.53	49,785.62		
U.S.M.C.Mon.	46,658.38	49,739.84		

ORIGIN OF COORDINATES

STATION	GEOGRAPHIC POSITION	LOCAL PLANE	PROGRESSIVE
CAPE HENRY LIGHTHOUSE	Lat.36°-55'-34.335" Long.76°-00'-27.216"	X-50,000.00 Yards Y-50,000.00 "	X-706,990.4 Y-1,570,764.2

NOTES:-

Grid North is 1°-48'-22.916" west of True North at Cape Henry Lighthouse.

Correction for magnification of scale equals 0.000874 Yds per Yard.

All coordinates expressed in yards

Elevations are in feet and tenths referred to B.M. at Cape Henry Lighthouse, elevation 15.01 feet above Mean Low Water.

HARBOR DEFENSES OF CHESAPEAKE BAY

GOVERNMENT OWNED PARCELS OF L

BETWEEN

LYNNHAVEN INLET AND VA. STATE RIFLE RAN

SURVEY OF FEBRUARY-MARCH, 1934.

In One Sheet — Scales as Ir

U.S. ENGINEER OFFICE, NORFOLK, VA. — JUNE 30, 1934

Submitted:- Approved:-

Capt. Corps of Engineers, U.S.Army
Chief of Operations Division

Major Corps of Engineers, U
District Engineer

Surveyed by C.W.A. Proj. II F30 — Drawn by E.C.H.

File No. C-1(23)-8383

USCGM 10

HOLLIES
RANGE TOWER
(HOLLIES TRACT)
Scale:- 1"=20'

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RANGE TOWER
(PARCEL "B")
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PARCEL "C"
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RANGE TOWER
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OBSERVATION POST	47,672.75	50,330.19	704,681.10	1,571.3
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S.E.Corner	47,694.15	50,488.25		
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S.E.Corner	46,672.76	49,733.45		
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SURVEY OF FEBRUARY-MARCH, 1934.

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U.S. ENGINEER OFFICE, NORFOLK, VA. — JUNE 30, 1934

Submitted:- Approved:-

Capt. Corps of Engineers, U.S.Army
Chief of Operations Division

Major Corps of Engineers, U
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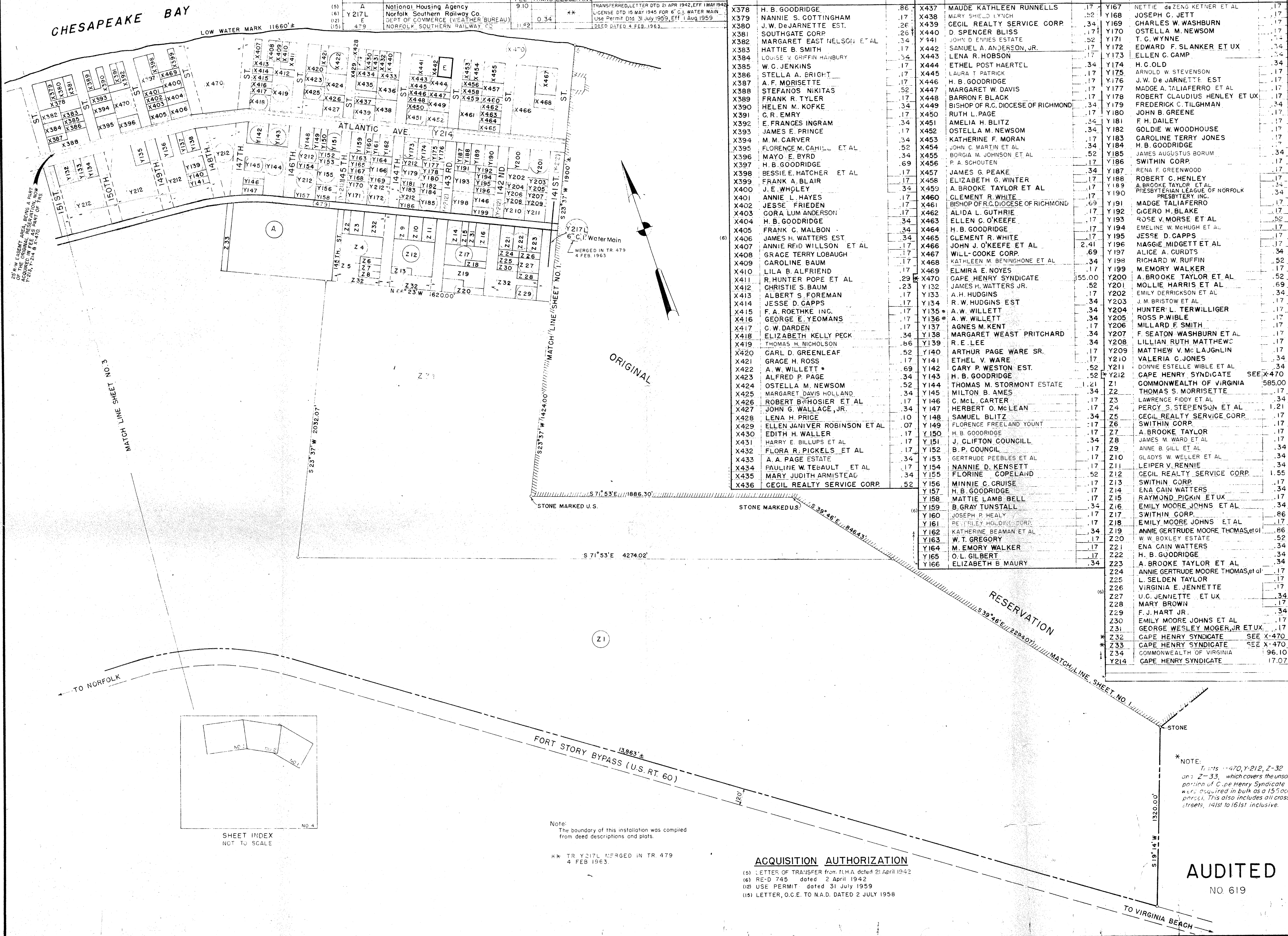
Surveyed by C.W.A. Proj. II F30 — Drawn by E.C.H.

File No. C-1(23)-8383



Note: The boundary of this installation was compiled from deed descriptions and plots.

** TR. Y217L MERGED IN TR 479 4 FEB 1963.

TRACT REGISTER OF ACQUISITION

	TRACT NO	LAND OWNER	ACREAGE FEE	ACREAGE TRANS.	ACREAGE LESSER INT	REMARKS
(5)	A	National Housing Agency	9.10			TRANSFERRED, LETTER DTD. 21 APR 1942, EFF 1 MAY 1942
(6)	Y 217L	Norfolk Southern Railway Co.			**	LICENSE DTD 15 MAY 1945 FOR 6" C.I. WATER MAIN
(12)	E	DEPT OF COMMERCE (WEATHER BUREAU)		0.34		Use Permit Dtd 31 July 1959, Eff 1 Aug 1959
(15)	479	NORFOLK SOUTHERN RAILWAY CO	11.82			DEED DATED 4 FEB. 1963.

TRACT NO.	VENDOR	ACRES FEE
X378	H. B. GOODRIDGE	.86
X379	NANNIE S. COTTINGHAM	.17
X380	J. W. DeJARNETTE EST.	.26
X381	SOUTHGATE CORP.	.26
X382	MARGARET EAST NELSON ET AL	.34
X383	HATTIE B. SMITH	.17
X384	LOUISE V. GRIFFIN HANBURY	.34
X385	W. C. JENKINS	.17
X386	STELLA A. BRIGHT	.17
X387	A. F. MORISETTE	.17
X388	STEFANOS NIKITAS	.52
X389	FRANK R. TYLER	.17
X390	HELEN M. KOFKE	.34
X391	C. R. EMRY	.17
X392	E. FRANCES INGRAM	.34
X393	JAMES E. PRINCE	.17
X394	M. M. CARVER	.34
X395	FLORENCE M. CAHILL ET AL	.52
X396	MAYO E. BYRD	.34
X397	H. B. GOODRIDGE	.69
X398	BESSIE E. HATCHER ET AL	.17
X399	FRANK A. BLAIR	.17
X400	J. E. WHOLEY	.34
X401	ANNIE L. HAYES	.17
X402	JESSE FRIEDEN	.17
X403	CORA LUM ANDERSON	.17
X404	H. B. GOODRIDGE	.34
X405	FRANK C. MALBON	.34
(6) X406	JAMES H. WATTERS EST.	.34
X407	ANNIE REID WILLSON ET AL	.17
X408	GRACE TERRY LOBAUGH	.17
X409	CAROLINE BAUM	.17
X410	LILA B. ALFRIEND	.17
X411	R. HUNTER POPE ET AL	.29
X412	CHRISTIE S. BAUM	.23
X413	ALBERT S. FOREMAN	.17
X414	JESSE D. CAPPS	.17
X415	F. A. ROETHKE INC.	.17
X416	GEORGE E. YEOMANS	.17
X417	C. W. DARDEN	.17
X418	ELIZABETH KELLY PECK	.34
X419	THOMAS H. NICHOLSON	.86
X420	CARL D. GREENLEAF	.52
X421	GRACE H. ROSS	.17
X422	A. W. WILLETT •	.69
X423	ALFRED P. PAGE	.34
X424	OSTELLA M. NEWSOM	.52
X425	MARGARET DAVIS HOLLAND	.34
X426	ROBERT B. HOSIER ET AL	.17
X427	JOHN G. WALLACE, JR.	.34
X428	LENA H. PRICE	.10
X429	ELLEN JANIVER ROBINSON ET AL	.07
X430	EDITH H. WALLER	.17
X431	HARRY E. BILLUPS ET AL	.17
X432	FLORA R. PICKELS ET AL	.17
X433	A. A. PAGE ESTATE	.34
X434	PAULINE W. TEBAULT ET AL	.17
X435	MARY JUDITH ARMISTEAD	.34
X436	CECIL REALTY SERVICE CORP.	.52

TRACT NO.	VENDOR	ACRES FEE
X437	MAUDE KATHLEEN RUNNELLS	.17
X438	MARY SHIELD LYNCH	.52
X439	CECIL REALTY SERVICE CORP.	.34
X440	D. SPENCER BLISS	.17
Y441	JOHN D. ENNES ESTATE	.52
X442	SAMUEL A. ANDERSON, JR.	.17
X443	LENA R. HOBSON	.17
X444	ETHEL POST HAERTEL	.34
X445	LAURA T. PATRICK	.17
X446	H. B. GOODRIDGE	.17
X447	MARGARET W. DAVIS	.17
X448	BARRON F. BLACK	.17
X449	BISHOP OF R.C. DIOCESE OF RICHMOND	.34
X450	RUTH L. PAGE	.17
X451	AMELIA H. BLITZ	.34
X452	OSTELLA M. NEWSOM	.34
X453	KATHERINE F. MORAN	.17
X454	JOHN C. MARTIN ET AL	.34
X455	BORGIA M. JOHNSON ET AL	.52
X456	P. A. SCHOUTEN	.17
X457	JAMES G. PEAKE	.34
X458	ELIZABETH G. WINTER	.17
X459	A. BROOKE TAYLOR ET AL	.17
X460	CLEMENT R. WHITE	.17
X461	BISHOP OF R.C. DIOCESE OF RICHMOND	.69
X462	ALIDA L. GUTHRIE	.17
X463	ELLEN C. O'KEEFE	.17
X464	H. B. GOODRIDGE	.17
X465	CLEMENT R. WHITE	.17
X466	JOHN J. O'KEEFE ET AL	2.41
X467	WILL-COOKE CORP.	.69
X468	KATHLEEN M. BENINGHONE ET AL	.34
X469	ELMIRA E. NOYES	.17
* X470	CAPE HENRY SYNDICATE	155.00
Y132	JAMES H. WATTERS JR.	.52
Y133	A. H. HUDGINS	.17
Y134	R. W. HUDGINS EST	.34
Y135 •	A. W. WILLETT	.34
Y136 •	A. W. WILLETT	.34
Y137	AGNES M. KENT	.17
Y138	MARGARET WEAST PRITCHARD	.34
Y139	R. E. LEE	.34
Y140	ARTHUR PAGE WARE SR.	.17
Y141	ETHEL V. WARE	.17
Y142	CARY P. WESTON EST.	.52
Y143	H. B. GOODRIDGE	.52
Y144	THOMAS M. STORMONT ESTATE	1.21
Y145	MILTON B. AMES	.34
Y146	C. McL. CARTER	.17
Y147	HERBERT O. McLEAN	.17
Y148	SAMUEL BLITZ	.34
Y149	FLORENCE FREELAND YOUNT	.17
Y150	H. B. GOODRIDGE	.17
Y151	J. CLIFTON COUNCILL	.34
Y152	B. P. COUNCIL	.17
Y153	GERTRUDE PEEBLES ET AL	.17
Y154	NANNIE D. KENSETT	.17
Y155	FLORINE COPELAND	.52
Y156	MINNIE C. CRUISE	.17
Y157	H. B. GOODRIDGE	.17
Y158	MATTIE LAMB BELL	.17
Y159	B. GRAY TUNSTALL	.34
(6) Y160	JOSEPH P. HEALY	.17
Y161	BEVERLEY HOLDING CORP.	.17
Y162	KATHERINE BEAMAN ET AL	.34
Y163	W. T. GREGORY	.17
Y164	M. EMORY WALKER	.17
Y165	O. L. GILBERT	.17
Y166	ELIZABETH B. MAURY	.34

TRACT NO.	VENDOR	ACRES FEE
Y167	NETTIE deZENG KETNER ET AL	.17
Y168	JOSEPH C. JETT	.17
Y169	CHARLES W. WASHBURN	.17
Y170	OSTELLA M. NEWSOM	.17
Y171	T. C. WYNNE	.34
Y172	EDWARD F. SLANKER ET UX	.34
Y173	ELLEN C. CAMP	.34
Y174	H. C. OLD	.34
Y175	ARNOLD W. STEVENSON	.17
Y176	J. W. De JARNETTE EST	.17
Y177	MADGE A. TALIAFERRO ET AL	.17
Y178	ROBERT CLAUDIUS HENLEY ET UX	.17
Y179	FREDERICK C. TILGHMAN	.34
Y180	JOHN B. GREENE	.17
Y181	F. H. DAILEY	.17
Y182	GOLDIE W. WOODHOUSE	.17
Y183	CAROLINE TERRY JONES	.17
Y184	H. B. GOODRIDGE	.17
Y185	JAMES AUGUSTUS BORUM	.34
Y186	SWITHIN CORP.	.17
Y187	RENA F. GREENWOOD	.17
Y188	ROBERT C. HENLEY	.17
Y189	A. BROOKE TAYLOR ET AL	.34
Y190	PRESBYTERIAN LEAGUE OF NORFOLK PRESBYTERY INC.	.34
Y191	MADGE TALIAFERRO	.17
Y192	CICERO H. BLAKE	.17
Y193	ROSE V. MORSE ET AL	.52
Y194	EMELINE W. McHUGH ET AL	.17
Y195	JESSE D. CAPPS	.17
Y196	MAGGIE MIDGETT ET AL	.17
Y197	ALICE A. CURDTS	.34
Y198	RICHARD W. RUFFIN	.52
Y199	M. EMORY WALKER	.17
Y200	A. BROOKE TAYLOR ET AL	.52
Y201	MOLLIE HARRIS ET AL	.69
Y202	EMILY DERRICKSON ET AL	.34
Y203	J. M. BRISTOW ET AL	.17
Y204	HUNTER L. TERWILLIGER	.17
Y205	ROSS P. WIBLE	.17
Y206	MILLARD F. SMITH	.17
Y207	F. SEATON WASHBURN ET AL	.17
Y208	LILLIAN RUTH MATTHEWS	.17
Y209	MATTHEW V. McLAUGHLIN	.17
Y210	VALERIA C. JONES	.34
Y211	DONNIE ESTELLE WIBLE ET AL	.34
* Y212	CAPE HENRY SYNDICATE	SEE X-470
Z1	COMMONWEALTH OF VIRGINIA	585.00
Z2	THOMAS S. MORRISETTE	.17
Z3	LAWRENCE FIDDY ET AL	.34
Z4	PERCY S. STEPENSON ET AL	1.21
Z5	CECIL REALTY SERVICE CORP.	.17
Z6	SWITHIN CORP.	.17
Z7	A. BROOKE TAYLOR	.17
Z8	JAMES M. WARD ET AL	.17
Z9	ANNE B. GILL ET AL	.34
Z10	GLADYS W. WELLER ET AL	.34
Z11	LEIPER V. RENNIE	.34
Z12	CECIL REALTY SERVICE CORP.	1.55
Z13	SWITHIN CORP.	.17
Z14	ENA CAIN WATTERS	.34
Z15	RAYMOND PICKIN ET UX	.17
Z16	EMILY MOORE JOHNS ET AL	.34
Z17	SWITHIN CORP.	.86
Z18	EMILY MOORE JOHNS ET AL	.17
Z19	ANNIE GERTRUDE MOORE THOMAS, et al	.86
Z20	W. W. BOXLEY ESTATE	.52
Z21	ENA CAIN WATTERS	.34
Z22	H. B. GOODRIDGE	.34
Z23	A. BROOKE TAYLOR ET AL	.34
Z24	ANNIE GERTRUDE MOORE THOMAS, et al	.17
Z25	L. SELDEN TAYLOR	.17
Z26	VIRGINIA E. JENNETTE	.17
(6) Z27	U.C. JENNETTE ET UX	.34
Z28	MARY BROWN	.17
Z29	F. J. HART JR.	.34
Z30	EMILY MOORE JOHNS ET AL	.17
Z31	GEORGE WESLEY MOGER, JR ET UX	.17
* Z32	CAPE HENRY SYNDICATE	SEE X-470
* Z33	CAPE HENRY SYNDICATE	SEE X-470
Z34	COMMONWEALTH OF VIRGINIA	96.10
Y214	CAPE HENRY SYNDICATE	17.07

*NOTE: Tracts X-470, Y-212, Z-32 and Z-33, which covers the unsold portion of Cape Henry Syndicate were acquired in bulk as a 155 acre parcel. This also includes all cross streets, 141st to 161st inclusive.

ACQUISITION AUTHORIZATION

(5) LETTER OF TRANSFER from N.H.A. dated 21 April 1942
(6) RE-D 745 dated 2 April 1942
(12) USE PERMIT dated 31 July 1959
(15) LETTER, O.C.E. TO N.A.D. DATED 2 JULY 1958

FINAL PROJECT OWNERSHIP MAP

(TYPE OF MAP)

STATE: VIRGINIA
COUNTY: PRINCESS ANNE
DIVISION: NORTH ATLANTIC
DISTRICT: NORFOLK
ARMY AREA: FIRST
USING AGENCY: DEPT. OF THE ARMY
18 MILES N.E. OF NORFOLK
MILES OF

TRANSPORTATION FACILITIES

NORFOLK SOUTHERN R.R.	RAILROAD
	STATE ROAD
U.S. 60	FEDERAL ROAD
NATIONAL, CAPITAL	AIRLINE

LAND AREA

TOTAL ACRES ACQUIRED
ACRES FEE
ACRES LEASED
ACRES TRANSFERRED
ACRES DONATED
ACRES LESSER INTEREST

SEE SHEET #1

DISPOSALS

ACRES SOLD
ACRES TRANSFERRED
ACRES EXCHANGED
ACRES OTHERWISE

SEE SHEET #1

LEGEND

RESERVATION LINE
STATE OR PROVINCE LINE
COUNTY LINE
CIVIL DISTRICT PRECINCT
LAND-GRANT LINE
CITY, VILLAGE, OR BOROUGH
CEMETERY, SMALL PARK, ETC.
TOWNSHIP LINE
SECTION LINE

Scale 1" = 300'
300' 0' 300' 600' 900'

CORPS OF ENGINEERS, U.S. ARMY
NORTH ATLANTIC DIVISION, NORFOLK DISTRICT
NORFOLK, VIRGINIA

REAL ESTATE

FORT STORY

MILITARY RESERVATION

RECOMMENDED: John W. Powell, ASSOCIATE ENGINEER — DATE 19 Oct. '44
APPROVED: [signature], MAJOR, CORPS OF ENGINEERS — DATE 19 Oct. '44

COMPILED: J.D.P. TRACED: J.D.P. CHECKED: J.W.R.

DATE	BY	REVISIONS	APPROVED
~~16 May '55~~	~~K.V.M.~~	~~Due to Final Audit~~	[signature]
10 Mar. '60	W.T.C.	Added Tr. E, Authorizations shown	[signature]
29 Mar. '60	W.T.C.	Due to Final Audit	[signature]
17 AUG. '65	Y.P.P.	SUPPLEMENTAL AUDIT, ADDED TR. 479, MERGED Y-217 L	[signature]

SHEETS: 2 OF 4 DRAWING NO. N.A.D. 47

CR-Form 177A

AUDITED
NO. 619

USCGM 11

CORPS OF ENGINEERS, U. S. ARMY

50,400 | 707,200 | 50,400 | 1,570,800 | 50,000

ATLANTIC OCEAN

Mean Low Water Line as of 1934

8" SEWER PIPE

Garage | Searchlight Tower No. 8 | Power House Sl. 7 | Department of Agriculture Garage | Dwelling | Cistern | Fog Signal | Power House | Storeroom | Searchlight | Shops | Power House for Sl. 8 | Cistern | Storage | Keeper's Dwelling | Assist. Keeper's Dwelling | Cistern | Assist. Keeper's Dwelling | B.M.- N.E. corner of first granite step. Elev.-15.01 above M.L.W. | CAPE HENRY LIGHTHOUSE (NEW)

Paint House T-47 | Day Room T-46 | Mess Hall | Latrine | Hose House | T-200 Barrack | T-199 Dispensary | T-45 Barrack | T-48 Office | T-201 Barrack | T-202 Barrack | Hose House | Barrack | Mess Hall | T-61 Power Houses | Barrack | T-38 Latrine | Latrine | Tool House | Dwelling T-21 | Dwelling T-26 | Garage | Tennis Court | Storeroom | Ware-house 37

T-44 Barrack | Headquarters | Headquarters | Barrack | Barrack | Garage | T-197 Mess Hall | Barrack | T-43 Mess Hall | T-203 Latrine | Barrack | Oil House

Storage | T-60 | Hose House | T-58 Cottages | T-56 | T-59 | Cottages T-57 | T-55 | (A-B-C-D-E) A.P.V.A. Boundary | Old Lighthouse | Restroom | Water Tank Cap.- 100,000 gal. | U.S. HIGHWAY NO. 60 | Norfolk & Southern R. R | N.& S.R.R Depot | Transformer Station | Harbor Defense Command Sta. | Cistern | BOUNDARY MON. | BOUNDARY LINE | Storage | Stable | Abandoned Spur | Cable Hut | WEST END TOWER | R-45 Masking | M2 | 1,570,400 | 49,200 | 706,800

THE DESERT

706,400 | 1,570,000 | 49,200 | 49,600

LOCAL PLANE

)ordinate Table, and Legend see

eet, referred to M.L.W.

HARBOR DEFENSES OF CHESAPEAKE BAY, VA.

FORT STORY RESERVATION, VA. (PARCEL .

SURVEY OF JAN.- APRIL, 1934.

In 3 Sheets | Sheet No.1 | Scale:- 1" = 100'

U. S. ENGINEER OFFICE, NORFOLK, VA. AUGUST 3, 1934.

Submitted:- Wilson P. Howe, Engineer, Chief, General Engineering Division

Approved:- Capt., Corps of Engineers, U.S. Army, District Engineer

Surveyed: C.W.A. Proj. II F30 | Drawn by F. W.

File No. C-1(23)-8391(1)

USCGM 12

WAR DEPARTMENT

CORPS OF ENGINEERS, U. S. ARMY

A T L A N T I C O C E A N

SEARCHLIGHTS 9 & 10.
1 - BARRACK & DAY ROOM - B-A-T 20'-32'
2 - LAVATORY " L-A-T 20'-20'

SEARCHLIGHTS 7 & 8.
3. BARRACK & DAYROOM B-A-T MOD. 20'-32'
4. LAVATORY L-A-T MOD. 20'-20'

BATTERY 6 (CONST. 224)
5. EXISTING 2 STORY BLDG. TO BE CONVERTED INTO 60 MAN BARRACK
6. BARRACK B-A-T 20' - 100'
7. BARRACK B-A-T MOD. 20' - 40'
8. ADM. & DAY ROOM OB-L-T 20' - 60'

CAPE HENRY MEMORIAL RESERVATION
SEARCHLIGHTS
SL 10
SL 9
SL 8
SL 7
A/A Battery
Construction 224
Cape Henry L.H. U.S.C.& G.S. STA.
OLD L.H.
WATER TANK (OLD)
Adm. Bldg.
"TOWER E"
Norfolk Southern R.R.
PARADE
Pump Houses
CONCRETE ROAD
"FROG" U.S.C.& G.S. STA.
Construction 225
BATTERY WALKE
BOUNDARY
Construction 120
WEST END TOWER
"FORT STORY" U.S.C.& G.S. Sta.
Plotting Room Const. 120
Met. Sta.
Radio Mast
H.D.C. Post
Radio Sta.
Sec. Bd. & Plotting Rooms
Radio Mast
Tower "A"
Tower "B"
BATTERY PENNINGTON
"BERTHA"
EAST END TOWER
Construction 121
Plotting Room Const. 121

EAST END TOWER
9. OFF. QTRS. OQ-A-T MOD. 20'-32'
10. LAVATORY L-B-T 20'-24'
11. MESS HALL & DAY ROOM M-B-T MOD 20'-100'
12. BARRACK B-A-T MOD 20'-60'

TOWERS A & B
13. BARRACK B-A-T 20'-100'

CONFIDENTIAL

EASTERN DEFENSE PROJECT
FORT STORY, VA.

TEMPORARY BUILDINGS
S.L. 7 & 8, S.L. 9 & 10, EAST END TOWERS
BATTERY 6 (CONST. 224), TOWERS A & B

IN 14 SHEETS — SHEET NO. 3

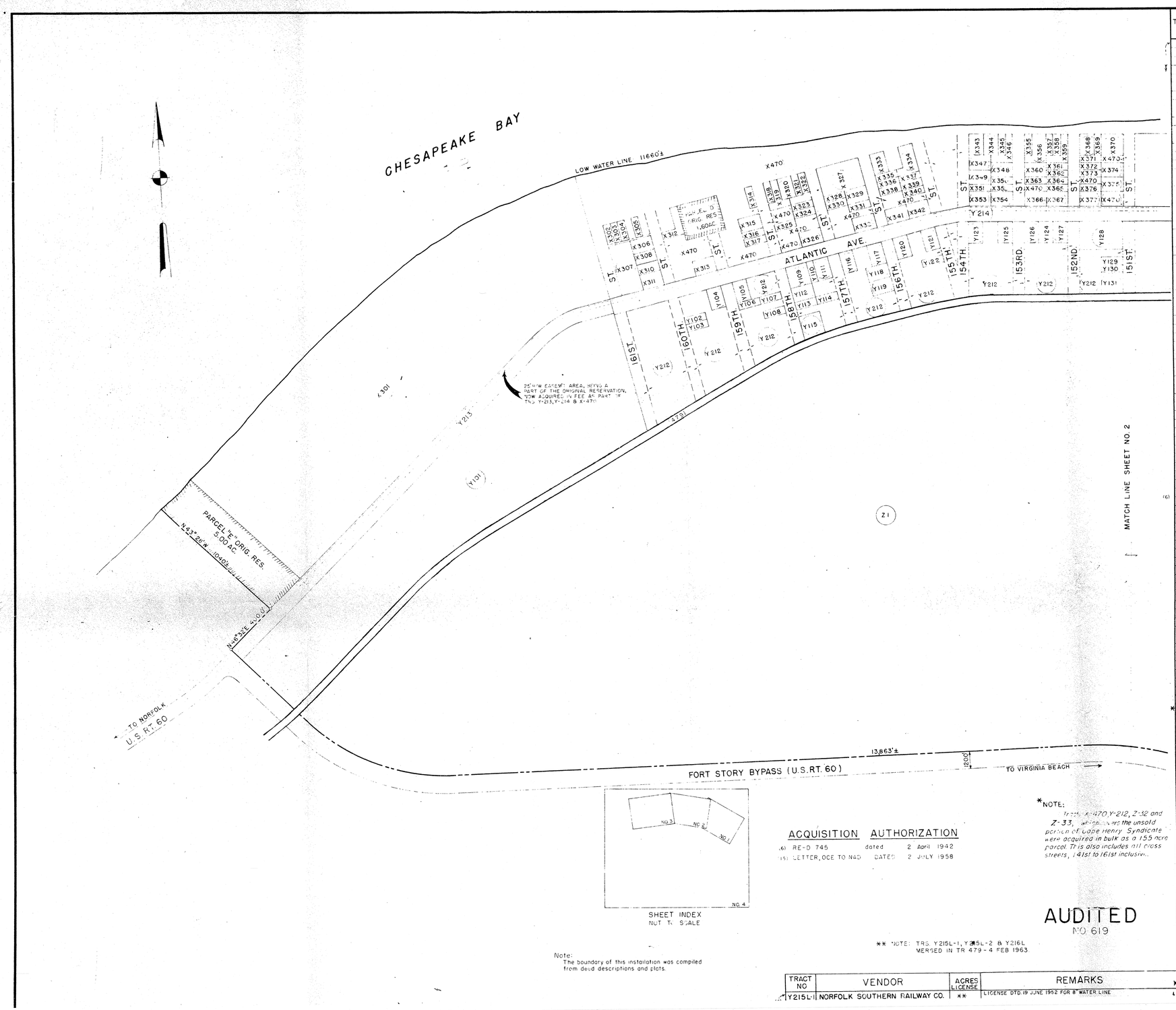
U.S. ENGINEER OFFICE, NORFOLK, VA. — JANUARY 1943
SUBMITTED — APPROVAL RECOMMENDED — APPROVED

CAPT., CORPS OF ENGINEERS, EXECUTIVE ASSISTANT
CAPT., CORPS OF ENGINEERS, EXECUTIVE ASSISTANT
LT. COL., CORPS OF ENGINEERS, DISTRICT ENGINEER

DESIGNED BY:
DRAWN BY:
CHECKED BY:
REVIEWED BY:

FILE NO. EDC-1-43.

A T L A N T I C O C E A N
T H E D E S E R T
USCG m 14
BOUNDARY LINE



TRACT NO.	VENDOR	ACRES FEE
X301	COMMONWEALTH OF VIRGINIA	71.00
X302	CARRIE P. CRONK	.16
X303	NINA W. WALKER ET AL	.16
X304	ADDIE F. LEONARD	.16
X305	GEORGE DOUGLAS HAPPER ET AL	.16
X306	H.B. GOODRIDGE	.34
X307	ETHEL GEROW	1.21
X308	LILLIAN M. WAIKART	.26
X310	MADELINE E. KEEVER	.26
X311	SAM. SUTTON	.34
X312	JAMES PRENTICE ESTATE	.34
X313	MARGARET CASHIN MORAN ET AL	.34
X314	E. FORESTALL ADAMS ET AL	.17
X315	MARY H. PEAKE	.34
X316	ANNIE L. EVANS	.17
X317	[illegible]	.17
X318	ALAN J. PROSELVER ET AL	.16
X319	EMMA FREEMAN COOK	.34
X320	C.T. OWENS	.34
X321	HERMAN GEORGE BOWERFIND ET UX	.17
X322	BERTRAM S. NUSBAUM	.17
X323	MAUDE KATHLEEN RUNNELLS	.17
X324	MARY D. PRETLOW	.17
X325	EDITH PARKS ET AL	.17
X326	JEWELL P. LAUGHRAM	.34
X327	FRANK C. MALBON	1.38
X328	MADORA K. TATEM	.17
X329	MARY D. THORNTON	.34
X330	GILMER C. WORMINGTON	.17
X331	ADDIE F. LEONARD	.17
X332	FREDERICK G. TILGHMAN	.34
X333	AMELIA H. BLITZ	.34
X334	DUDLEY COOPER ET AL	.52
X335	HARRY B. GOODRIDGE	.17
X336	M. LUCILLE DIXON	.17
X337	SHELBY T. COX ET AL	.17
X338	SHELBY T. COX ET AL	.17
X339	ELIZABETH A. SMITH	.17
X340	F. W. WARRINGTON	.17
X341	MAE MASON WOOD	.34
X342	IVOR A. PAGE	.34
X343	SARAH ELIZABETH SAWYER	.34
X344	EUGENE W. BRINKERHOFF	.34
X345	WM. L. DOBSON	.17
X346	BARON F. BLACK, ET AL	.34
X347	MARY E. STAPLETON	.34
X348	E.C. REA	.34
X349	FANNIE R. COOK	.34
X350	D.P. LASCARA ET AL	.17
X351	MARY P. OLD	.17
X352	LUCY CORBELL ELL	.17
X353	FREDERICK W. CURD	.34
X354	H.B. GOODRIDGE	.34
X355	HARRY T. JONES ET AL	.17
X356	MARY F. OLIVER	.52
X357	EDITH M. SMITH	.17
X358	CLARENCE J. SMITH	.17
X359	MARY M. SMITH ET AL	.34
X360	R.C. HOLLAND	.34
X361	JACK F. ADLER	.17
X362	ANTHONY PAUL CROONENBERGHS et al	.17
X363	JEAN S. W. WEST ET AL	.17
X364	ORA P. CHAPMAN	.17
X365	CATHERINE I. O'CONNER	.17
X366	ABRAHAM CAPLAN	.34
X367	HELEN S. PARTRIDGE	.34
X368	JAMES MANN	.34
X369	J.P. WOODHOUSE ET AL	.17
X370	W. W. STINEMATES ET AL	.52
X371	MARY F. OLIVER	.17
X372	GROVER L. WHITE	.17
X373	W.S. BRAITHWAITE	.17
X374	SARAH DAVIS WOOD ET AL	.34
X375	MARYE DEARBORN	.34
X376	MERCHANTS & FARMERS BANK OF PORTSMOUTH VA.	.17
X377	ANNA NEUWIRTH	.34
X470	CAPE HENRY SYNDICATE SEE SHEET 2	
Y101	COMMONWEALTH OF VIRGINIA	49.00
Y102	HERMAN GEORGE BOWERFIND, ET UX	.17
Y103	RUDOLPH KONIG ET UX	.17
Y104	CITIZENS MUTUAL BLDG. ASSN. INC.	.34
Y105	C.W. DARDEN JR.	.34
Y106	GUY C. EWING	.17
Y107	LILLIAN WOSERWOOD	.17
Y108	MARY WORLEY SLACK	.17
Y109	GLADYS A. AMERY ET AL	.52
Y110	GERTRUDE S. DAVIES	.17
Y111	LUCREZIA COVINGTON REED	.34
Y112	C. B. FORREST	.34
Y113	BISCAYNE HOLDING CORP.	.17
Y114	J.C. NELSON	.17
Y115	D.E. HOPKINS	.52
Y116	M. RAFOPORT ET AL	.34
Y117	SOUTHGATE CORP.	.34
Y118	CHARLES H. ANDREE ET AL	.34
Y119	OTTO L. HOLLOWELL	.34
Y120	SOUTHGATE CORP.	.34
Y121	ELLEN H. COLE	.34
Y122	LELIA K. PETTIT ET AL	.17
Y123	ELLEN H. COLE	.34
Y124	EDWARD B. NORMAN	.34
Y125	ABRAHAM CAPLAN	.34
Y126	FRED. C. ABBOTT	.34
Y127	H.B. GOODRIDGE	.34
Y128	CARL D. GREENLEAF	1.38
Y129	AVIS KEMP McDONOUGH	.17
Y130	DIZA A. KEMP	.17
Y131	BROOK-BOUSH CORP.	.52
Y212	CAPE HENRY SYNDICATE SEE X470 SEE SHEET 2	
Z1	COMMONWEALTH OF VIRGINIA	

*NOTE: Tracts X-470, Y-212, Z-32 and Z-33, which are the unsold portion of Cape Henry Syndicate were acquired in bulk as a 155 acre parcel. This also includes all cross streets, 141st to 161st inclusive.

ACQUISITION	AUTHORIZATION
(6) RE-D 745	dated 2 April 1942
(15) LETTER, OCE TO NAD	DATED 2 JULY 1958

AUDITED
NO 619

** NOTE: TRS Y215L-1, Y215L-2 & Y216L MERGED IN TR 479-4 FEB 1963

Note:
The boundary of this installation was compiled from deed descriptions and plats.

TRACT NO	VENDOR	ACRES LICENSE	REMARKS
Y215L-1	NORFOLK SOUTHERN RAILWAY CO.	**	LICENSE DTD 19 JUNE 1962 FOR 8" WATER LINE

FINAL PROJECT OWNERSHIP MAP

(TYPE OF MAP)

STATE VIRGINIA
COUNTY PRINCESS ANNE
DIVISION NORTH ATLANTIC
DISTRICT NORFOLK
ARMY AREA FIRST
USING AGENCY DEPT. OF THE ARMY
18 MILES NE OF NORFOLK
MILES OF

TRANSPORTATION FACILITIES

NORFOLK SOUTHERN R.R. — RAILROAD
STATE ROAD
U.S. 60 — FEDERAL ROAD
NATIONAL, CAPITAL — AIRLINE

LAND AREA

TOTAL ACRES ACQUIRED
ACRES FEE
ACRES LEASED
ACRES TRANSFERRED
ACRES DONATED
ACRES LESSER INTEREST

DISPOSALS

ACRES SOLD
ACRES TRANSFERRED
ACRES EXCHANGED
ACRES OTHERWISE

SEE SHEET #1

LEGEND

RESERVATION LINE
STATE OR PROVINCE LINE
COUNTY LINE
CIVIL DISTRICT PRECINCT
LAND-GRANT LINE
CITY, VILLAGE, OR BOROUGH
CEMETERY, SMALL PARK, ETC.
TOWNSHIP LINE
SECTION LINE

Scale
1" = 300'
300' 0 300' 600' 900'

CORPS OF ENGINEERS, U.S. ARMY
NORTH ATLANTIC DIVISION, NORFOLK DISTRICT
NORFOLK, VIRGINIA

REAL ESTATE

FORT STORY

MILITARY RESERVATION

RECOMMENDED: John W. Powell, ASSOCIATE ENGINEER — DATE 19 Oct 44
APPROVED: [signature], MAJOR, CORPS OF ENGINEERS — DATE 19 Oct 44

COMPILED: J.D.P. TRACED: J.D.P. CHECKED: W.F.P.

DATE	BY	REVISIONS
16 May 55	K.V.M.	Due to Final Audit
11 Mar 60	W.T.C.	Added Authorization
29 Mar 60	W.T.C.	Due to Final Audit

APPROVED
[signature]

USCGM 15

VICINITY MAP
SCALE IN MILES
MILITARY INSTALLATIONS
KEY NO. DESCRIPTION
1 CAMP PEARY (USN TNG. STA.)
2 CAMP WALLACE (U.S. ARMY)
3 CHEATHAM ANNEX (USN SUPPLY DEPOT)
4 NAVAL MINE WARFARE SCHOOL (USN RES.)
5 CAMP PATRICK HENRY (U.S. ARMY)
6 OYSTER POINT AMMUNITIONS STORAGE DEPOT (USAF)
7 LANGLEY AIR FORCE BASE — (NASA)
8 FORT MONROE (US ARMY-USCAC)
9 FORT WOOL (U.S. ARMY)
10 U.S. NAVAL BASE (5th. N. Dist.)
11 BREEZY POINT NAVAL AIR STATION
12 U.S. ARMY BASE (H.R.P.E.)
13 CRANEY ISLAND (U.S.N. RES.)
14 U.S. NAVAL HOSPITAL
15 NORFOLK NAVAL SHIPYARD
16 LITTLE CREEK NAVAL AMPHIBIOUS BASE
17 OCEANA NAVAL AIR STATION
18 CAMP PENDELTON (NATIONAL GUARD)
19 DAM NECK (U.S.N. RES.)
20 FENTRESS ALF (U.S.N. RES.)
21 FORT NORFOLK (U.S. CORPS. of ENGRS.)
ATLANTIC OCEAN
CHESAPEAKE BAY
MANEUVER AREA
U.S. NAVY
NIKE CONTROL AREA
TACTICAL MOTOR POOL
CYPRESS SWAMP
SEASHORE STATE PARK
ENTRANCE WEST GATE
ENTRANCE EAST GATE
LAND USE LEGEND
COLOR SYMBOL DESCRIPTION
TENANT ACTIVITIES
MANEUVER AREA (TRAINING)
TRAINING
RECREATION
ADMINISTRATION
COMMUNITY FACILITIES
SHOPS
SERVICE
OFFICER FAMILY HOUSING
N.C.O. FAMILY HOUSING
B.O.Q.
TROOP HOUSING
LEGEND
ITEM EXISTING PROPOSED
BUILDING, PERMANENT
BUILDING, TEMPORARY
ROADS AND PARKING
TRAILS OR EARTH ROAD
FENCE
RESERVATION BOUNDARY
OUTLINE OF AREA LIMITS
SHORE LINE
WATER
LAND
TOP OF STEEP SLOPE
DOWN HILL SIDE
CYPRESS SWAMP
400 0 400 800 1200
SCALE IN FEET
FORT STORY
VIRGINIA BEACH, VIRGINIA
MILLS, PETTICORD & MILLS
ARCHITECTS & ENGINEERS
WASHINGTON, D.C. NORFOLK, VA.
U.S. ARMY ENGINEER DISTRICT, NORFOLK
CORPS OF ENGINEERS
NORFOLK, VIRGINIA
MASTER PLAN
FUTURE DEVELOPMENT PLANS
GENERAL SITE PLAN
RECOMMENDED BY THE INSTALLATION PLANNING BOARD FOR APPROVAL
DATE:
REVIEWED & COMMENTED ON BY MAJOR COMMANDER & FORWARDED TO THE CHIEF OF ENGINEERS
DATE:
DATE MARCH 1961
DRAWING NO. 18-04-27
SHEET NO. 1 OF 1
FILE NO. FS 200-3.1

FORT STORY, VIRGINIA

CHESAPEAKE BAY

ATLANTIC OCEAN

AREA 1

AREA 2

AREA 3

AREA 4

AREA 5

AREA 6

AREA 7

AREA 8

AREA 9

AREA 10

AREA 11

AREA 12

5944 - SENTRY BOX
5943 - EM BARRACKS
5942 - LATRINE
5941 - INTERCONNECTING CORRIDOR
3940 - ENG GEN FIRE CHARGER BLDG.

DIFFICULT DRIVING RANGE (GRND)

NIKE

SANITARY FILL (NOT IN USE)

SKEET RANGE

HARBOR SMALL ARMS FIRING RANGE 2,000 INCH Ft.

CYPRESS SWAMP

FENCE

WEST GATE

LAND USE LEGEND

COLOR SYMBOL	DESCRIPTION
	TENANT ACTIVITIES
	MANEUVER AREA (TRAINING)
	TRAINING
	RECREATION
	ADMINISTRATION
	COMMUNITY FACILITIES
	SHOPS
	SERVICE
	OFFICER FAMILY HOUSING
	N.C.O. FAMILY HOUSING
	B.O.Q.
	TROOP HOUSING

EDR Historical Topographic Map Report

Fort Story
583 Atlantic Avenue
Fort Story, VA 23459

Inquiry Number: 1969899.5

July 03, 2007

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Information

440 Wheelers Farms Rd
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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Historical Topographic Map

N	TARGET QUAD NAME: NORFOLK MAP YEAR: 1907 SERIES: 30 SCALE: 1:125000	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

Historical Topographic Map

N	TARGET QUAD NAME: NORFOLK SPECIAL MAP YEAR: 1907 SERIES: 30 SCALE: 1:125000	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

Historical Topographic Map

N	TARGET QUAD NAME: CAPE HENRY MAP YEAR: 1919 SERIES: 15 SCALE: 1:62500	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

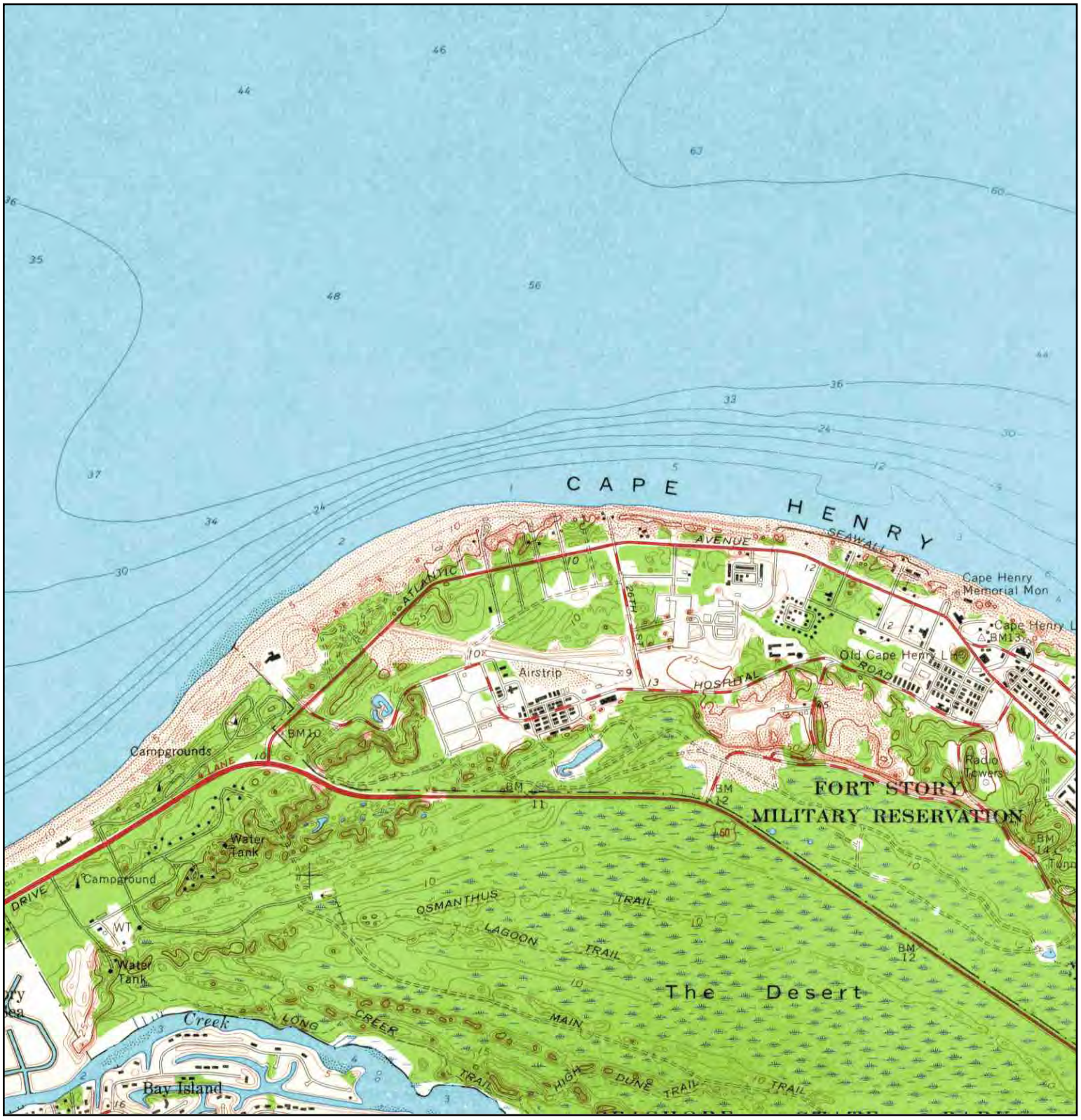
Historical Topographic Map

N	TARGET QUAD NAME: CAPE HENRY MAP YEAR: 1944 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

Historical Topographic Map

N	TARGET QUAD NAME: CAPE HENRY MAP YEAR: 1955 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

Historical Topographic Map



N	TARGET QUAD NAME: CAPE HENRY MAP YEAR: 1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

Historical Topographic Map

N			
	TARGET QUAD NAME: CAPE HENRY MAP YEAR: 1970 PHOTOREVISED FROM:1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

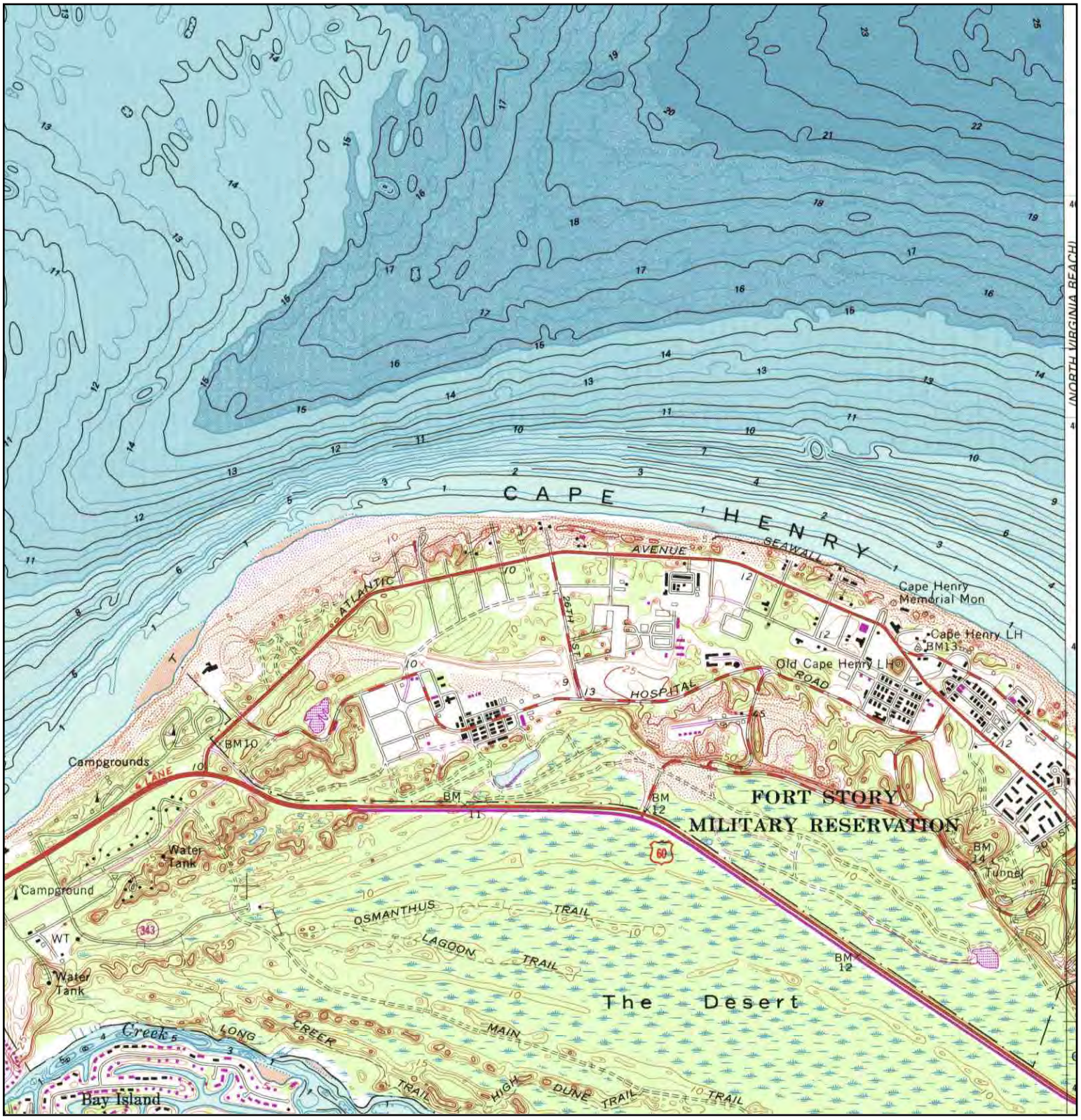
Historical Topographic Map

N			
	TARGET QUAD NAME: CAPE HENRY MAP YEAR: 1973 PHOTOREVISED FROM:1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

Historical Topographic Map

N	TARGET QUAD NAME: CAPE HENRY MAP YEAR: 1979 PHOTOREVISED FROM:1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

Historical Topographic Map



N	TARGET QUAD NAME: CAPE HENRY MAP YEAR: 1986 PHOTOREVISED FROM:1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Fort Story ADDRESS: 583 Atlantic Avenue Fort Story, VA 23459 LAT/LONG: 36.9297 / 76.0158	CLIENT: URS Corporation CONTACT: Rosa Gwinn INQUIRY#: 1969899.5 RESEARCH DATE: 07/03/2007

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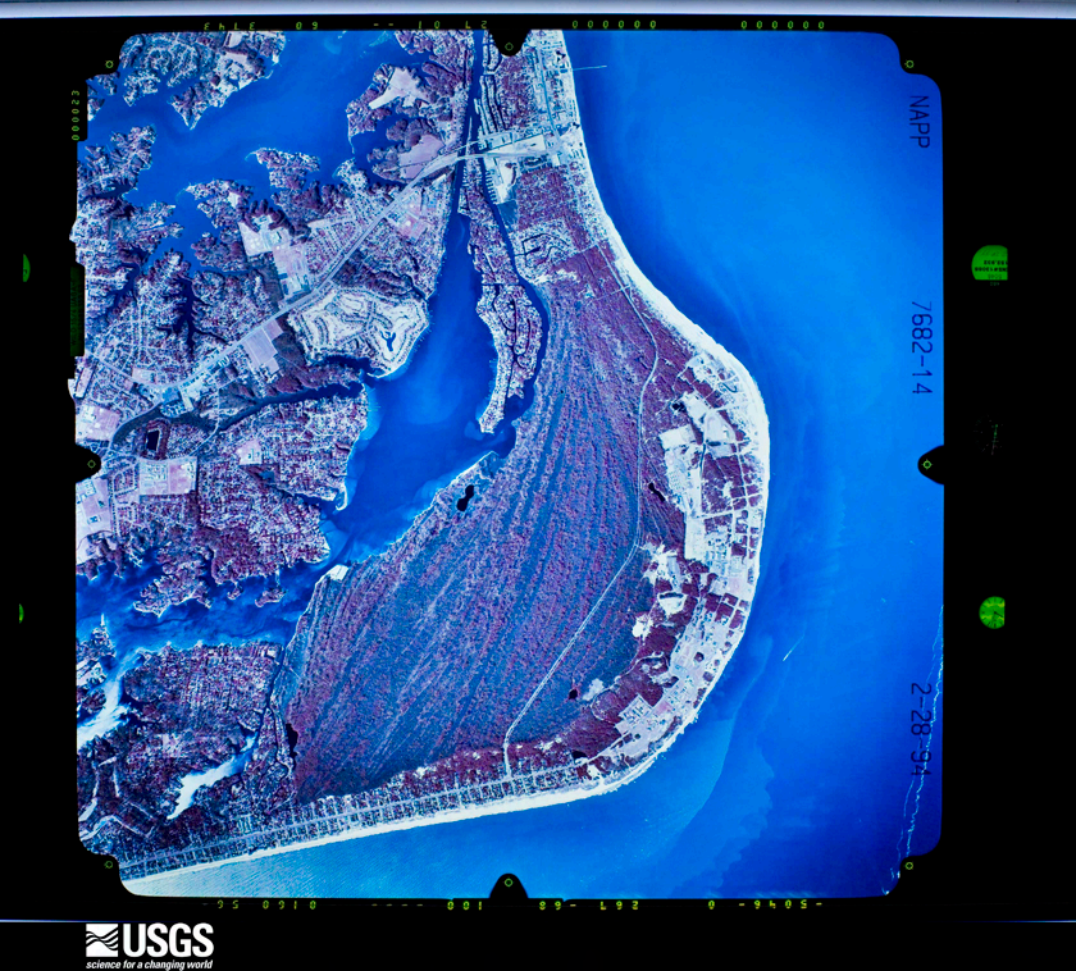

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APPENDIX C

Interview Records

URS

RECORD OF CONVERSATION/SITE VISIT

Project **Fort Story HRR** **Date: 6/12/07 and 6/13/07**

Contact: **Col. Fielding Tyler (Ret.), Executive Director, The Old Coast Guard Station**
(757.422.1587)

On June 12, 2007, Scott McClelland of URS met with Col. Tyler and Mr. Gary Longmire, DPW, Fort Story, at 1400 at Building 727. Mr. McClelland provided an overview of the MMRP program and the Site Inspection URS is tasked with performing.

Col. Tyler is the author of a book, *Images of America, Fort Story and Cape Henry, 2005*, and has conducted abundant research regarding Fort Story. His brief summary of Fort Story during the meeting included:

- Four 16-inch howitzers were present prior to WWII
- Three to four 6" batteries were present
- Fort Story also had 37mm and 50 caliber guns for use in defense of the batteries.
- He has documents that include information on firing fans, an old USATHAMA study, General Tilton oral history, and other maps that may be useful.

Following the initial discussion, Col. Tyler led a car tour of the installation that included the following discussion:

1. The Army originally purchased land starting at what is now New Guinea Road to the east/southeast during the WWI timeframe. Portions of Fort Story to the west were acquired in the build up to WWII. We then went on a tour of the installation and made the following stops.
2. Stop 1: Remnants (barely visible) of 90mm "Anti-motor torpedo boat" batteries of WWII era, located offshore between Buildings 727 and 999. The coast is eroded at this point, and the batteries are no longer visible, but remnants stick out of the surf.
3. Stop 2: Building 704. Another "Anti-motor torpedo boat" battery that contained two 90mm guns of WWII era. Battery is still present. These were direct fire batteries.
4. Stop 3: Building 734. Former weather station. No guns at this location. It was historically used as the installation Commander's residence. In this portion of Fort Story, prior to WWII, the area was referred to as the Cape Henry Community and was residential. Former rail lines present paralleled Atlantic Avenue.

5. Stop 4. Historic lighthouses. During WWI most of Fort Story development was in between the older lighthouse and the coast.
6. Stop 5: 5" and 6" guns located over sand dunes. Also three 3" Anti-aircraft guns were located along the dune line, and the buildings are still present. These buildings have concrete roofs, leading to the belief that the munitions contained high explosives.
7. Stop 6: Building 309, Battery Worchester. 2-6" guns on either side of battery. Also, Col. Tyler pointed out an area that he referred to as an ammo dump, but did not provide details regarding why he thought this.
8. Stop 7: Building 317, Battery 10. 2 -6" guns. Concrete circles where gun turrets were located are still present. New residential housing surrounds the area to the north, east, and southeast.
9. Stop 8: Along road running SE from Building 317, concrete foundations where 4, 155-mm guns were located.
10. Stop 9: Not visited, but road leading to beach where an additional 4, 155mm guns were located.
11. Stop 10: Building 101, Battery Cramer. 2-6" guns. Battery still present along with concrete pads where gun turrets were located.
12. Stop 11: Pointed out location of small arms range, but did not visit.
13. Stop 12: Building 224, Power plant for 16-inch guns. No guns present.
14. Stop 13. Building 214. Power bag magazine for 16" guns, and Building 409 bunker where projectiles for 16-inch guns were kept.
15. Stop 14: Traveled up Coast Artillery Road and observed bunkers (Bldgs, 203 – 207).
16. Stop 15: Building 418. Suspected meteorological station during WWI. Highest point at Fort Story.
17. Stop 16. Passed by sanitary landfill, now closed.
18. Stop 17. Buildings 401 and 419. Building 401 connected by tunnel to Building 412 and served as HQ for Harbor Defenses of Chesapeake Bay.
19. Stop 18. Building 403, plotting building for Battery Ketchum.
20. Stop 19. Building 605, Battery Ketchum. 2 16" guns. Gun 1 is to the north and Gun 2 to the south. Photograph of gun firing is Gun 1.
21. Stop 20. Along Al Jubayl Road, signs to the right state "Explosives, Keep Out." Traveled to Building 807, Battery 4, two 16" guns. Nearby Building 821 is an EOD school. Behind Battery 4 is former location of NIKE missile battery.
22. Stop 21. Building 1202. Col. Tyler referred to this as a possible indoor small arms range, but was not sure.
23. Stop 22. Recently constructed "Drop Zone" used by Navy, and location of former hospital.
24. Stop 23. Building 1102, Officer's Club. Col. Tyler stated that to the west of the club there were 3" guns.
25. Stop 24. Viewed former LACV (i.e., hovercraft) training area, as well as portions of former air landing strip that remnants appear coincident with "DZ Normandy" on Fort Story maps.

26. Stop 25. Building 920. Mine Casement building. No guns. Built in the 1920s. Used to control sea mines and another casement located beneath older lighthouse. Mines stored at Little Creek, not Fort Story.
27. Stop 26: Through fence, viewed Small Arms Testing Evaluation Command (?) Center (?) Appears newly constructed in northeast portion of Five Creek Training Area.
28. Stop 27. Buildings 1094 and 1095. These buildings along with Buildings 1096 and 1097 are bunkers and have blast walls located on opposite side of road from doors. Col. Tyler stated that these bunkers did not store the 16" projectiles, but it is possible they held 6" shells.
29. Stop 28. US Marine Corps area along Atlantic Avenue which served as a control center for the NIKE battery.
30. Stop 29: Building 727, Directorate of Public Works. At this location a meeting time for the 13th was scheduled, and Col. Tyler provided URS with the following documents from the collection at the Old Coast Guard Station for reproduction and return:

- Map, Fort Story, Street Names, General Site Map, dated October 1968, revised 8 Dec 1976; Road Names changed 5 Nov 1980
- Fort Story, Master Plan, General Site Map, dated 1 March 1963. Has hand drawn bivouac sites drawn and dated 24 July 1964 by LTC Karl E. Finger.
- Portions of Report No. CETHA-IR-CR-90159, Preliminary Assessment Report for Fort Story, November 1, 1990, with hand written comment from Leigh Blake regarding areas of concern, presumably associated with CTT Range Inventory.
- Response from Col. Tyler regarding USATHAMA Report sent 8 January 2002 to Ms. Leigh Blake
- Fax to Ms. Leigh Blake including 1943 map depicting small arms range on south end of the post.
- Hard copy of email RE: Ammunitions Magazines sent Friday 17 Sept 2004 from HArtmant@eustis.army.mil to Col. Tyler.
- Hard copy of Driving Armament Tour, Fort Story, VA, updated August 2002, compiled by Fielding Lewis Tyler.
- Declassified version of 1941 Revision of "Annexes to Harbor Defense Project, Harbor of Chesapeake Bay:"

On June 13, 2007, Mr. McClelland met with Col. Tyler at the Old Coast Guard Station. Mr. McClelland returned the documents provided on June 12, 2007. Col. Tyler provided access to numerous documents, maps and photographs archived at the Old Coast Guard Station, and during the course of the review of these materials the following items were discussed:

1. After installation, the 16" guns were "proof fired"

2. The 16" guns also conducted annual service practice.

3. Col. Tyler believed that the "Fort Record Book" for Fort Story that contains a historic account of daily activities at the installation is maintained at Fort Eustis.

4. An anti-aircraft "gun line," consisting of 3" anti-aircraft guns fired at aerial targets flying out over the ocean for practice. A January 1941 photograph also illustrates the firing of other guns along this "gun line."

5. Railway artillery, comprised of 12" and 8" guns were also fired along this gun line.

6. Photographs were found of the small arms range identified in the CTT Inventory appear to indicate the site being active through 1976.

7. The Examination Battery, located along the coast at the western edge of the installation near the Club was intended to protect ships that were moored in the harbor undergoing inspection prior to entering the harbor.

8. An October 1942 photograph of Battery Cramer being fired was found.

Following a review of the archives at the Old Coast Guard Station, Col. Tyler permitted URS to take several documents, photographs and maps from the Station for reproduction. These documents were reproduced and returned by hand to the Old Coast Guard Station on June 18, 2007.

URS

RECORD OF CONVERSATION

Project **Fort Story HRR** **Date: 6/26/07**

Contact: **Jonathan Sperka, Malcolm Pirnie (410.230.9962)**

On June 26 2007, Scott McClelland of URS called Mr. Sperka. Mr. McClelland was referred to Mr. Sperka by Mr. Gibson of Malcolm Pirnie as Mr. Sperka was listed as the Team Leader of the Closed, Transferring, Transferred (CTT) Range Inventory Report for Fort Story (Malcolm Pirnie, 2002) as the Task Leader. Mr. McClelland left a message with Mr. Sperka inquiring about the reason that the coastal artillery batteries present at Fort Story were not identified as ranges in the CTT Inventory Report.

Mr. Sperka returned Mr. McClelland's message, and staked that he did not work extensively on the project, did not know the answer to Mr. McClelland's question and referred Mr. McClelland to Ms. Shelly Kolb of Malcolm Pirnie.

URS

RECORD OF CONVERSATION

Project **Fort Story HRR** **Date: 6/26/07**

Contact: **Shelly Kolb, Malcolm Pirnie (410.230.9158)**

On June 26 2007, Scott McClelland of URS called Ms Kolb. Mr. McClelland was referred to Ms Kolb by Mr. Sperka of Malcolm Pirnie as Mr. Sperka believed Ms Kolb helped with the generation of the Closed, Transferring, Transferred (CTT) Range Inventory Report for Fort Story (Malcolm Pirnie, 2002) as the Task Leader. Mr. McClelland spoke to Ms Kolb and inquired about the reason that the coastal artillery batteries present at Fort Story were not identified as ranges in the CTT Inventory Report.

Ms Kolb stated that she had worked a little bit on the project, but she did not recall why the coastal artillery batteries were not included. She stated that this was one of the first CTT Inventory Reports to be prepared, and she speculated that it was possible that these batteries were not included either because the firing took place during a war or because the firing ranges extended beyond the installation boundary over water and such ranges were not considered eligible for inclusion by the Army at that time. She was not certain if either of these reasons was the rationale for not including these batteries as ranges during the CTT Range Inventory.

URS

RECORD OF CONVERSATION

Project **Fort Story HRR** **Date: 6/26/07**

Contact: **Steve Gibson, Malcolm Pirnie (703.465.4203)**

On June 26 2007, Scott McClelland of URS spoke to Mr. Gibson by phone. Mr. Gibson was identified in the Closed, Transferring, Transferred (CTT) Range Inventory Report for Fort Story (Malcolm Pirnie, 2002) as the Task Leader. Mr. McClelland inquired regarding the reason that the coastal artillery batteries present at Fort Story were not identified as ranges in the CTT Inventory Report.

Mr. Gibson responded that he did not work extensively on the project, did not know the answer to Mr. McClelland's question and referred Mr. McClelland to Mr. Jonathan Sperka who was the Team Leader of the project.

URS

RECORD OF CONVERSATION

Project **Fort Story HRR** **Date: 7/2/07**

Contact: **Dan Musel, Fort Monroe (757.788.5342)**

On July 2, 2007, Scott McClelland of URS spoke to Mr. Musel by phone. Mr. Musel was identified in the Closed, Transferring, Transferred (CTT) Range Inventory Report for Fort Story (Malcolm Pirnie, 2002) as the Army's Remediation Project Manager for Fort Story. Mr. McClelland inquired regarding the reason that the coastal artillery batteries present at Fort Story were not identified as ranges in the CTT Inventory Report.

Mr. Musel stated that when he was asked to identify ranges at Fort Story, he identified the entire installation as being a potential range due to the presence of the coastal artillery batteries. He also recalled the CTT inventory identified a small arms range that he was not familiar with at the time. Mr. Musel did not recall the reason why the artillery batteries or their firing fans were not identified as ranges in the CTT inventory.

URS

RECORD OF CONVERSATION

Project **Fort Story HRR** **Date: 7/27/07**

Contact: **Gary Longmire, DPW, Fort Story (757.422.7344 ext. 223)**

On July 27, 2007, Scott McClelland of URS met with Mr. Longmire at the Fort Story Directorate of Public Works, and discussed his understanding of the history of munitions and munition-related activities at Fort Story. Mr. Longmire has served as a DPW employee since the late 1980s.

Mr. Longmire was not aware of any UXO discoveries or responses at Fort Story during his tenure at the installation. Mr. McClelland inquired about the reason for signage observed during the site visit conducted on 6/12/07 along Al Jubayi road stating "Explosives Keep Out." Mr. Longmire stated that these signs were placed to provide the appropriate blast set back for EOD training that occurs inside Building 807, and does not indicate the presence of UXO in the area.

Mr. McClelland asked if Mr. Longmire had any knowledge of EOD activities identified in the 1990 Preliminary Assessment Report for Fort Story, specifically site 27 depicted on the map presented in the report. Mr. Longmire stated that EOD activities in this area were administrative in nature, and he had no knowledge of these areas being used for training.

Mr. Longmire provided various maps and drawings for Mr. McClelland to review, and one of the maps provided information pertaining to the Small Arms Range and designed upgrades to the range. Mr. McClelland took this map, made a copy, and returned it to Mr. Longmire. Other maps reviewed contained information already obtained by URS.

URS

RECORD OF CONVERSATION

Project **Fort Story HRR** **Date: 1/30/08**

Contact: **Andy Reid, USACE, Norfolk District (757.201.7053)**

On January 30, 2008, Scott McClelland of URS held a phone conversation with Mr. Reid of the Operations Office of the Norfolk District regarding dredging activities in the Chesapeake Channel and Thimble Shoal Channel located offshore from Fort Story.

Mr. Reid indicated that there were no known discoveries of MEC during dredging, but that several years ago, an explosion had occurred on one of the dredges working in this area, but the cause of the explosion was unknown. He also informed URS that the dredge materials were placed offshore in the Dam Neck Disposal Site. This area is within an operational range that is used by the US Navy operating out of the Dam Neck Annex.

URS

RECORD OF CONVERSATION

Project **Fort Story HRR** **Date: 4/29/08**

Contact: **Tom Friberg, USACE, Norfolk District (757.201.7645)**

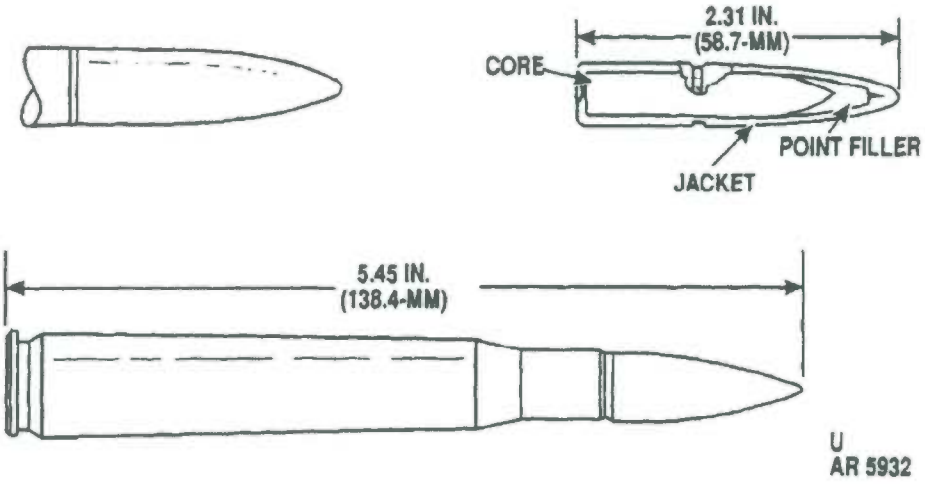
On April 29, 2008, Scott McClelland of URS held a phone conversation with Mr. Friberg of the Norfolk District regarding dredging activities in the vicinity of Fort Story. Mr. Reid referred Mr. McClelland to Mr. Friberg to obtain more information regarding the reported explosion during dredging operations.

Mr. Friberg confirmed that in late May – early April of 2006 an explosion occurred during the dredging of the Atlantic Ocean Channel. While the cause of the explosion was not definitively identified, based on the fact that it cracked a 2-inch thick cast iron dredge pipe, it was believed that it was a munition. Mr. Friberg also stated that MEC had been encountered during other dredge operations in the area, including dredging of the Cape Henry Channel.

APPENDIX D

Munitions Technical Data Sheets

CARTRIDGE, CALIBER .50, BALL, M2



Type Classification:

STD - OTCM 36841.

Use:

Machine Guns, Caliber .50, M2 and M85. The cartridge is intended for use against personnel or unarmored targets.

Description:

BALL Cartridge. The cartridge is identified by a plain bullet.

Tabulated Data:

DODAC	1305-A552
UNO serial number	0339
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	1813 gr
Length	5.45 in. (138.4 mm)
Tracer	NA
Primer	Percussion
Fuze	
Explosive:	
Type	NA
Weight	NA
Incendiary:	
Type	NA
Weight	NA
Propellant:	
Type	WC 860
Weight	235 gr

Performance:

Chamber pressure	55,000 psi
Velocity	2810 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/ SCG	1.4C
Storage code	Class V
DOT shipping class	C
DOT designation	SMALL ARMS AMMUNITION
Drawing number	5577960

References:

SB 700-20
TM 9-1005-213-10
TM 9-1005-231-10
TM 9-1300-206

Source: Technical Manual 43-0001-27, Army Ammunition Data Sheets for Small Caliber Ammunition, 1994

CARTRIDGE, 37-mm, HE, FIXED, M54
WITH SELF DESTRUCT TRACER

Cartridge case. The M17 Case is "standard", the M17B1 is "Substitute Standard".

Primer. The M23A2 is "Standard". Some rounds on hand may be primed with the M23A1.

Propelling charge. A muzzle velocity of 2,600 feet per second is imparted to the projectile by 6 ounces of FNH powder.

Projectile. The projectile M54, as fired, weighs 1.34 pounds and is about 5.9 inches long. It is the same projectile as the M54 fired from the M4 Anti-aircraft Gun. The projectile consists of three components: the body itself protrudes from the cartridge case. The base of the projectile is very thick (over 1 1/2 inches) and is tapered for streamlining purposes. The cavity for the shell-destroying tracer is machined into this heavy base. The bursting charge of 0.10 pound of tetryl is pressed into the body in two increments: a base pellet and a main charge. The shell destroying tracer assembly consists of a quantity of tracer composition, an ignited charge, a celluloid closing cup, a relay igniting charge and a relay pellet. When the tracer composition is almost completely burned, it initiates the relay pellet and in turn detonates the tetryl base pellet of the bursting charge, and finally the main bursting charge itself.

Fuze. Point Detonating, M56. Since the High-explosive Round M54 is required to function on impact with light materials such as those used in planes, a supersensitive fuze is needed. A super- sensitive fuze is one which will detonate on very slight impact such as with a double thickness of airplane fabric. The M56 is both supersensitive and superquick because the firing pin is protected only by a very thin aluminum closing cup and rests, at the time of impact, right on the detonator which initiates an almost uninterrupted train of detonating explosives. The body of the fuze is divided into three parts: the body loading assembly, the head assembly, and cap. The booster of tetryl is pressed into a cavity in the lower part of the body. The complete round of M54, HE Shell can be identified by the presence of the M56 Fuze.

Reference: TM 9-1904, *Ammunition Inspection Guide*, March 1944

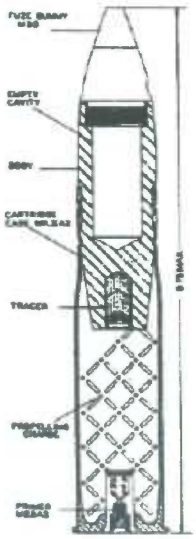
CARTRIDGE, 37-mm, PRACTICE, M55A1

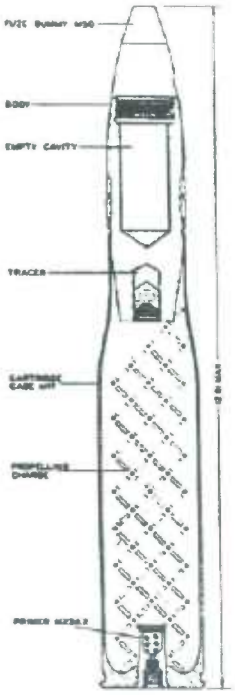
Complete round. This round was designed to simulate the M54, HE Shell for practice firing.

Cartridge cases. M1A1 gun, M17 is "Standard". M17B1 is "Substitute Standard". The Mk IIIA2 is "Standard" with the Mk IIIA2B1 being the "Substitute Standard"

Primer. M23A2, 20-grain. Percussion Primer is "Standard" for both rounds. Some rounds maybe found with M23A1 primer.

Projectile. The projectile is of the same length, weight, and contour as the HE Shell M54. It is made of three parts. The body has no filler, but is made to the same size and weight as the high-explosive M54. A tracer cavity is machined into the base. Of course, since no filler is used, the tracer does not have shell destroying qualities. The tracer consists of red tracer cavity composition and igniting compound closed into the tracer cavity. The Fuze, dummy, M50, is entirely inert and is made in one piece of cast aluminum. It is of the same size, shape, and weight as the M56 Fuze.





Identification. The complete rounds can be identified for the M1A2, 37-mm Anti-aircraft gun by its size and the extracting groove in the cartridge case. The complete round can be identified for he M4 (aircraft) gun by its shorter cartridge case (5.69 inches) with its extracting flange. Aside from the blue painting and white stenciling on the projectile, it may be distinguished as the Practice Round M55A1 by the Dummy Fuze M50. The complete round measures 12.81 inches in length and weighs 2.62 pounds

Length of complete round
- **M1A1 Gun** ..... 12.81 inch
- **M4 Gun** ..... 9.75 inch

Weight
- **M1A1 Gun** ..... 2.62 pound
- **M4 Gun** ..... 1.94 pound

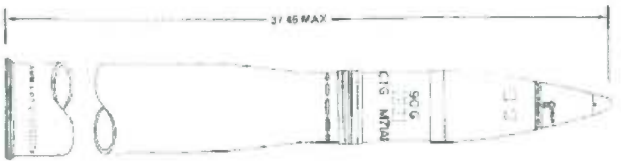
Propellant weight
- **M1A1 Gun** ..... 6.0 ounce FNH
- **M4 Gun** ..... 2.5 ounce FNH

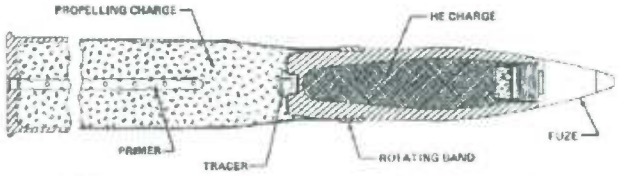
Fuze ..... M50 Dummy Fuze

Color Blue with white markings

Reference: TM 9-1904, *Ammunition Inspection Guide*, March 1944

CARTRIDGE, 90-mm, HE, M71; HE-T, M71A1





Projectile. The hollow steel forged projectile has a boat-tailed base and a streamlined ogive. The fuze continues the streamline of the projectile. Fuze cavity may be normal or deep cavity type.

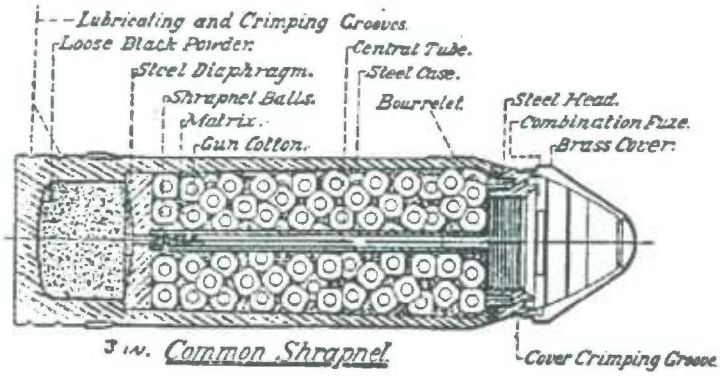
Components. The filler for this round is 2.15 pounds (1.86 pounds, deep cavity) of Composition B or TNT. A tracer is threaded into the projectile base (M71A1). A point-detonating fuze is assembled to the projectile. Loaded projectile weights fall into one of three weight zones. The loaded and fuzed projectile is assembled to an M19 or M19B1 Cartridge Case containing M1, M6, or M15 propellant.

Difference Between Models. M7A1 has a tracer; M7 does not. M7A1 has M1 propellant resulting in lower velocity; M71 has M6 or M15 propellant.

Length ..... 37.45 inches
Diameter ..... 3.62 inches
Weight ..... M7, 141.19 - 41.93 pound
M7A1, 38.80 - 39.54 pound
Filler ..... TNT or Composition B
Weight of filler
Normal Fuze well ..... 2.15 pound
Deep Cavity fuze well ..... 1.68 pounds
Fuze ..... PD M48, M48A1, M51A5, M557;
MT M43A3;
MTSQ M520 series, M564
Propelling Charge ..... M1, 5.33 pounds
M6 & M15, 7.31 pounds
Color ..... Olive Drab with yellow markings

Reference: TM 9-1300-203, *Artillery Ammunition*, April 1977

PROJECTILE, 3-INCH, SHRAPNEL, MK I



General. This projectile consists of a steel case, near the base of which a shoulder is formed on the interior surface. A base charge of 3 ounces of black powder is packed in the base of the projectile beneath a diaphragm of steel which rest on the shoulder. This diaphragm also supports a flash tube, the upper end of which is flared out into a smaller thin diaphragm. Between the two diaphragms is held a charge of melted resin which holds 253 lead balls (hardened with antimony) suspended within it. These balls average 42 to the pound, totaling 6.2 pounds. Above the lower diaphragm, the interior of the shrapnel case is gradually enlarged in diameter so that it tapers outward from base to head. The top of the case is closed by a steel head which fastens to the case with a fine thread, and which is adapted to the fuze with a coarse thread.

Components. The complete round consists of the Mk I projectile, fuzed with the 21-second M1907 Combination Fuze, and using the Mk IA1 or Mk IIA1 Cartridge Case with a propelling charge of N.H. smokeless powder, distance wad, and M28A2 Primer.

Function. The shrapnel projectile is actually a gun within a gun. The flame from the magazine charge of the fuze flashes down the central tube and ignites the black powder base charge. Explosion of the charge forces the lower diaphragm, matrix and balls, and flash tube upward, blowing off the fuze and head. The balls are ejected from the case with a velocity of 350 fps in addition to the velocity of the projectile.

Projectile Length	11.3 inches
Diameter	3 inches
Color	Red w/ white markings
Weight	15 Pounds
Explosive Filler	Black Powder
Weight of filler	3 ounces
Propellant	NH or FNH smokeless powder
Propellant Weight	5 pounds (approximately)
Fuze	M1907 Combination Fuze

References: TM 9-1904, *Ammunition Inspection Guide*, March 1944; No. 2036, *Service Markings of Ammunition and Ammunition Containers*, 1929

SHELL, 3-INCH, HE, MK IX

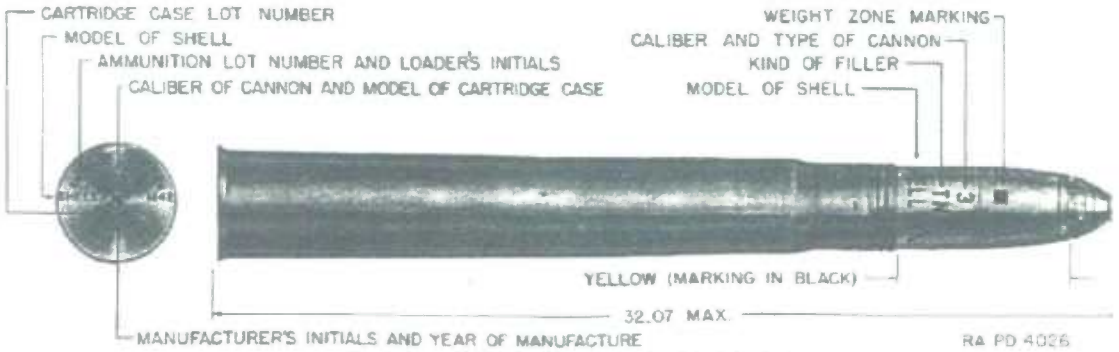


FIGURE 21.—Antiaircraft 3-inch high explosive projectile.

General. In order to increase the life of the 3-inch AA gun, the twist of the rifling in all late models and relined or retubed guns was reduced to one turn in forty calibers. This change in rifling, however, caused the Mk I High Explosive Shell to become unstable in flight, and it was therefore necessary to design a new HE shell. The shell designed to supersede the Mk I is known as the Mk IX.

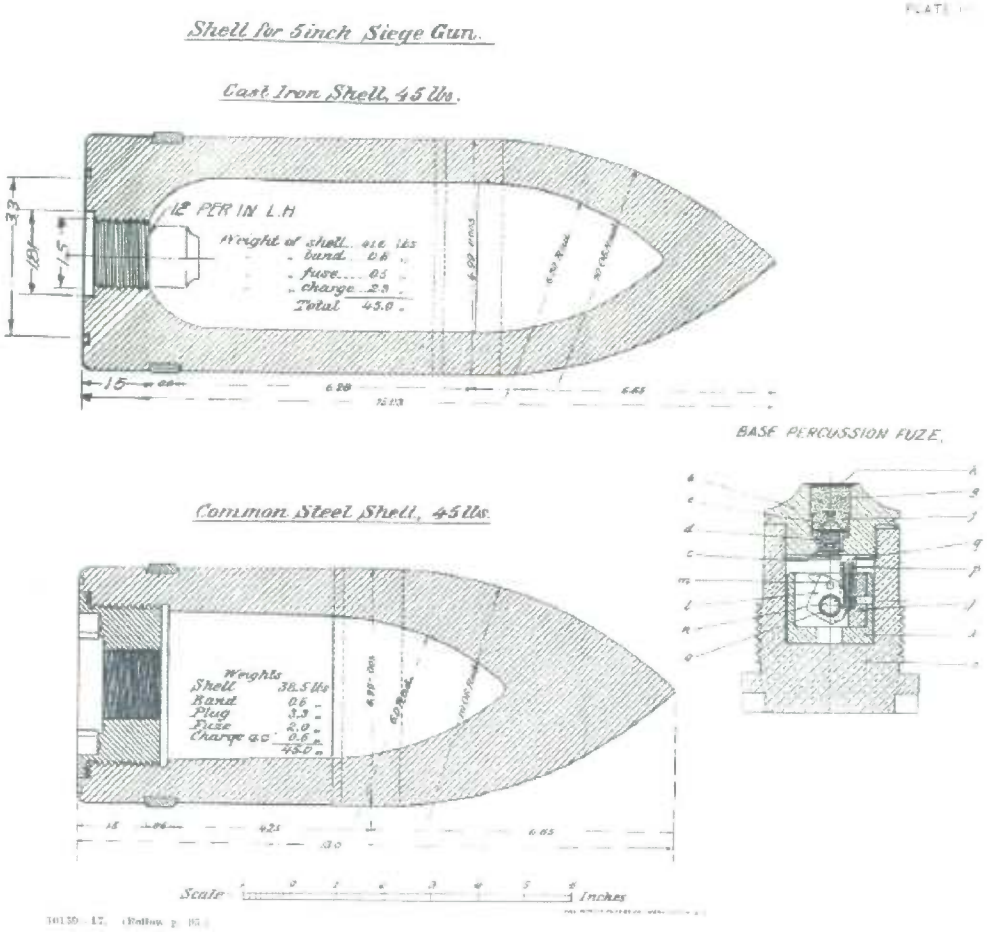
Projectile. The Projectile, Mk. IX is of steel construction, and is shorter and lighter in weight than the Mk I. It has a radius of ogive of 7 calibers, and it continues its cylindrical shape from the rotating band to the base. The rotating band is 1 inch wide. The filler is 0.91 pound of TNT. This shell has a steel base plate and an adapter.

Components. The complete round consists of the Mk IX Projectile with its adapter, fuzed with the MIIIA1 Time Fuze. (earlier Mk I Projectile used the M1907, 21-second, Combination Fuze). This loaded, boostered, and fuzed projectile is assembled to the Mk IM2 or the Mk IIM2 Cartridge Case with its propelling charge of NH smokeless powder, distance wad, and M28A2 Primer.

Overall Length	3.07 inches
Diameter	3 inches
Weight	12.7 pounds
Explosive Filler	TNT
Weight of filler	0.91 pounds
Propellant	NH or FNH smokeless powder
Propellant Weight	78 ounces
Fuze	Mk IIIA1 Time Fuze
Color	Yellow w/ black markings

References: TM 9-1904. *Ammunition Inspection Guide.* March 1944; No. 5891. *Complete Round Chart, Issued,* August 1924

SHELL, 5-INCH COMMON



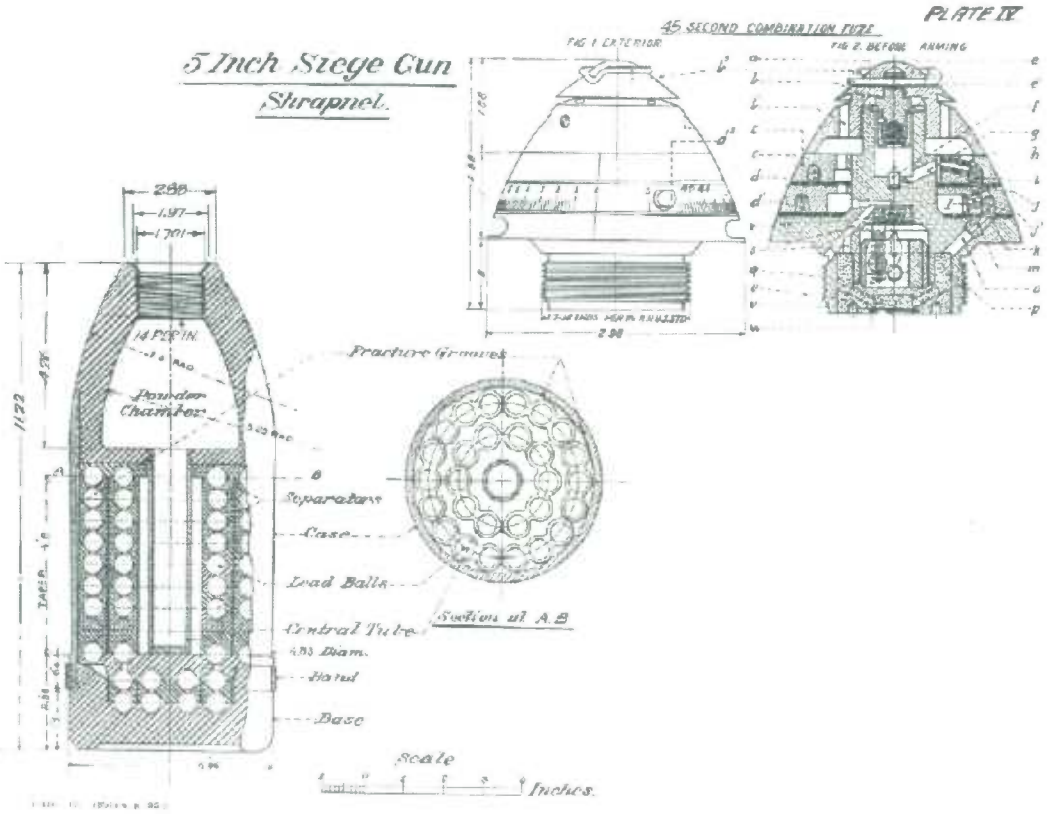
Use. The 5-inch gun had two versions of the common projectile.

Description. The common steel shell was filled with TNT. The shrapnel shell used black powder as a burster/ejection charge.

	Common Iron	Common Steel
Length	15.03 inches	13.0 inches
Weight, complete round	45 lb	45 lbs
Filler	2.3 lbs	0.6 lbs
Fuze	Base percussion fuze	Base percussion fuze

Reference: Ordnance Department Document No. 1661, Handbook of the 5-inch Siege Gun Battery, 9 June 1914

SHELL, 5-INCH SHRAPNEL



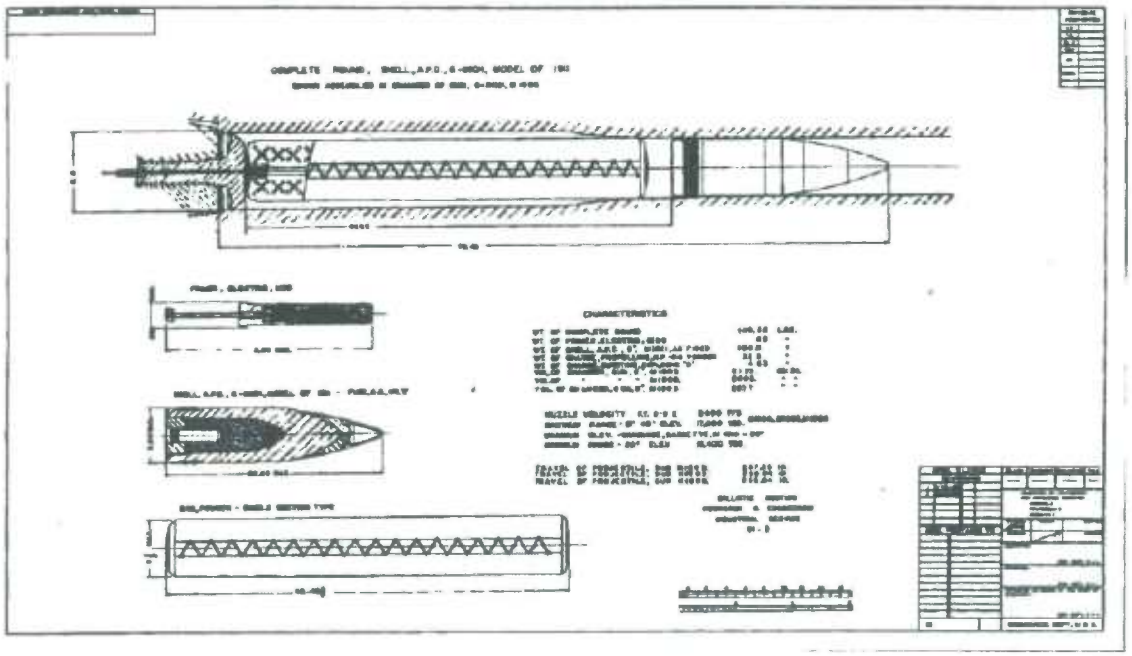
Use. This projectile is used with the 5-inch siege gun.

Description. The shrapnel round consisted of a matrix containing lead shrapnel balls and used a powder train time fuze and a black powder expelling charger to dispense the balls at the correct time.

Length w/o fuze	11.22 inches
Weight, complete round	45 lb
Filler	Black powder and 280 lead antimony balls
Fuze	Frankford Arsenal 45-second Combination Fuze

Reference: Ordnance Department Document No. 1661. Handbook of the 5-inch Siege Gun Battery. 9 June 1914

6-inch Seacoast, Armor Piercing (AP) Model 1911

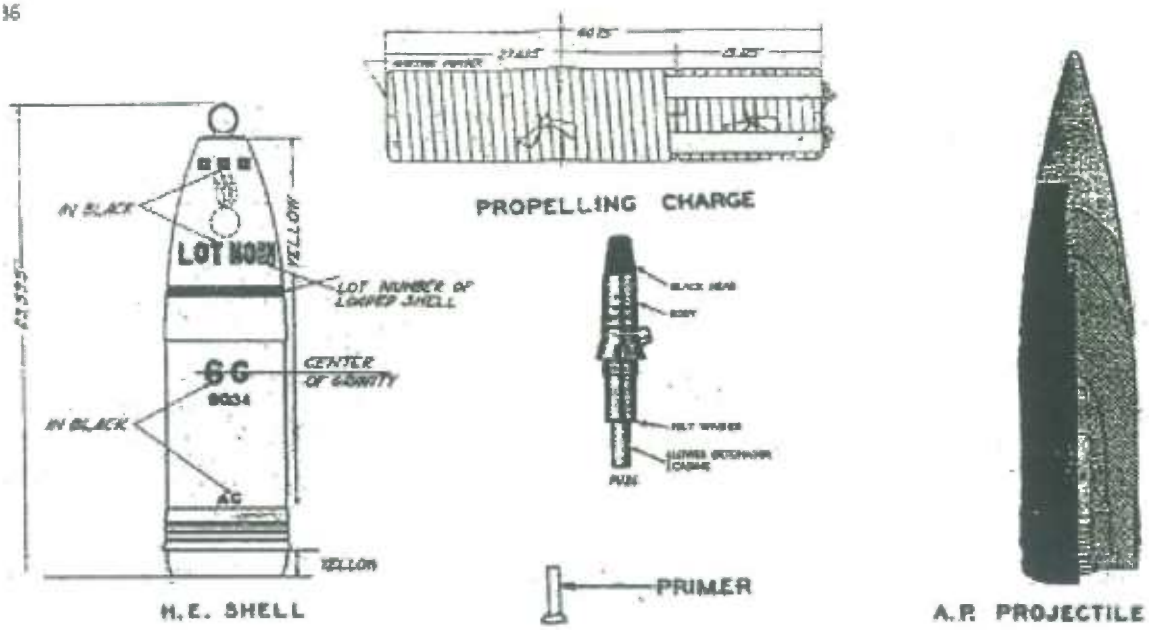


Use: This is the armor piercing round used with 6-inch coast artillery guns, models 1897MI, M1900, M1903, M1905 and M1908.

Description: The M1911 is a separate-loaded, armor-piercing munition, which is used by the Coast Artillery against ship targets. There are actually two versions of the M1911: shot and shell. The primary difference is in the weight of the explosive charge.

Weight of Projectile as fired.....108 pounds
Length of Projectile w/fuze .....22.65 inches
Filler and Weight .....1.54 lbs. Explosive D
Fuzes.....Base Detonating, Mark V
Propelling charges.....32.5 pounds Non-hydroscopic powder
Color .....Unknown

6 INCH, COMPLETE ROUND



Use: The 6 inch ammunition was used in the M1, M1900, M1903, M1905, and M1908 series of Seacoast Artillery Weapons.

Description: This was separate loading ammunition which was stored and issued in three or four components: projectile, propellant bag, fuze for High Explosive (HE) projectiles, and a primer. This ammunition came in the HE and Armor Piercing (AP) types. They all used an electric primer. The HE was fuzed with a M47 Point Detonating fuze. The AP had a thicker shell, a smaller amount of explosive fill, and an integral base detonating fuze.

Purpose: These weapons were used against sea and land targets for coastal defense. The following weights are approximate:

Weight HE projectile unfuzed	90.5 pounds
Weight AP projectile	108 pounds
Weight propellant charge . .	30 pounds
Fill for HE	14 pounds TNT
Fill for AP	4.5 pound Explosive D
Reference	Complete Round Charts, January 1940

UNDERWATER MINES MK1, MK2, MK3, MK4, and MK6

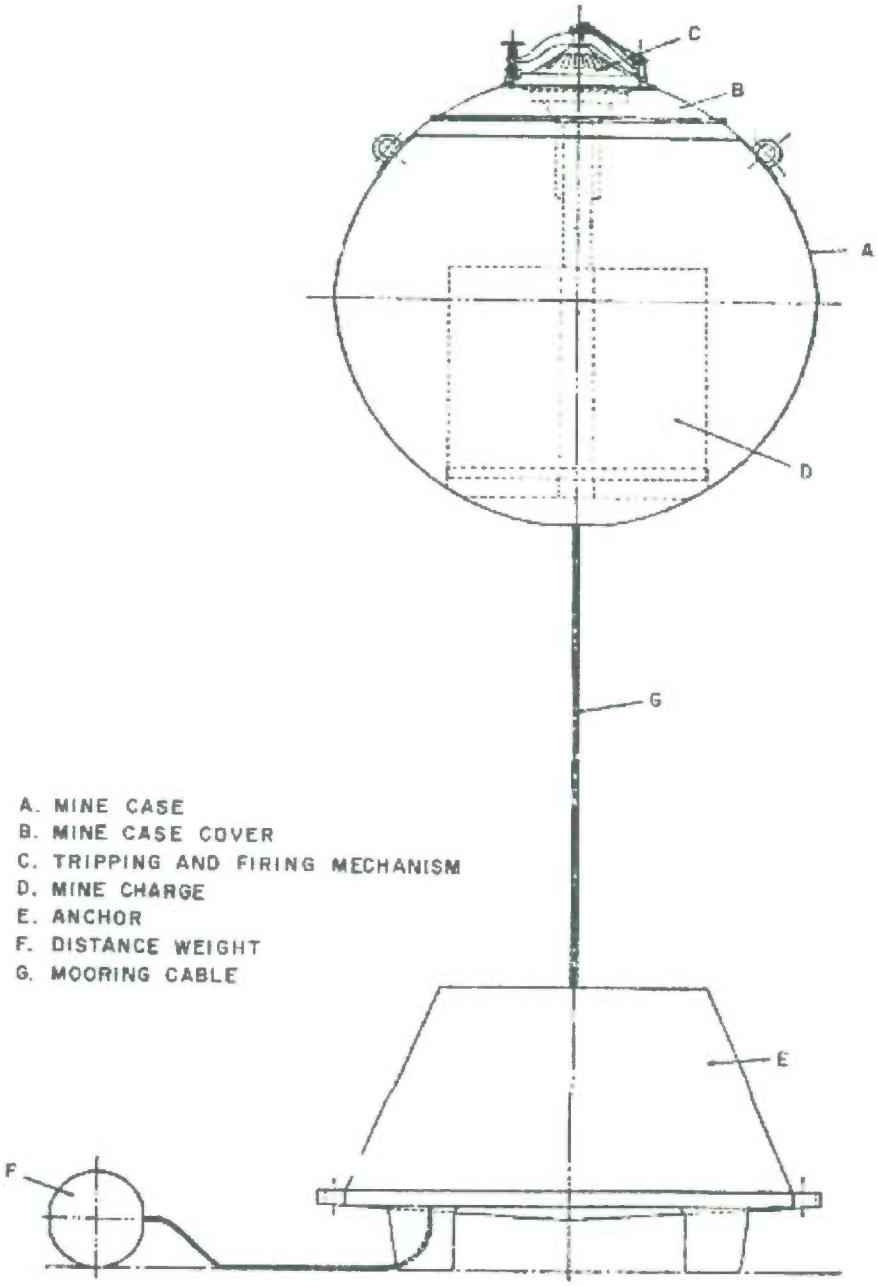


Figure 14.—Naval defense mine Mk 2.

Figure 15.—Naval defense mine Mk 3.

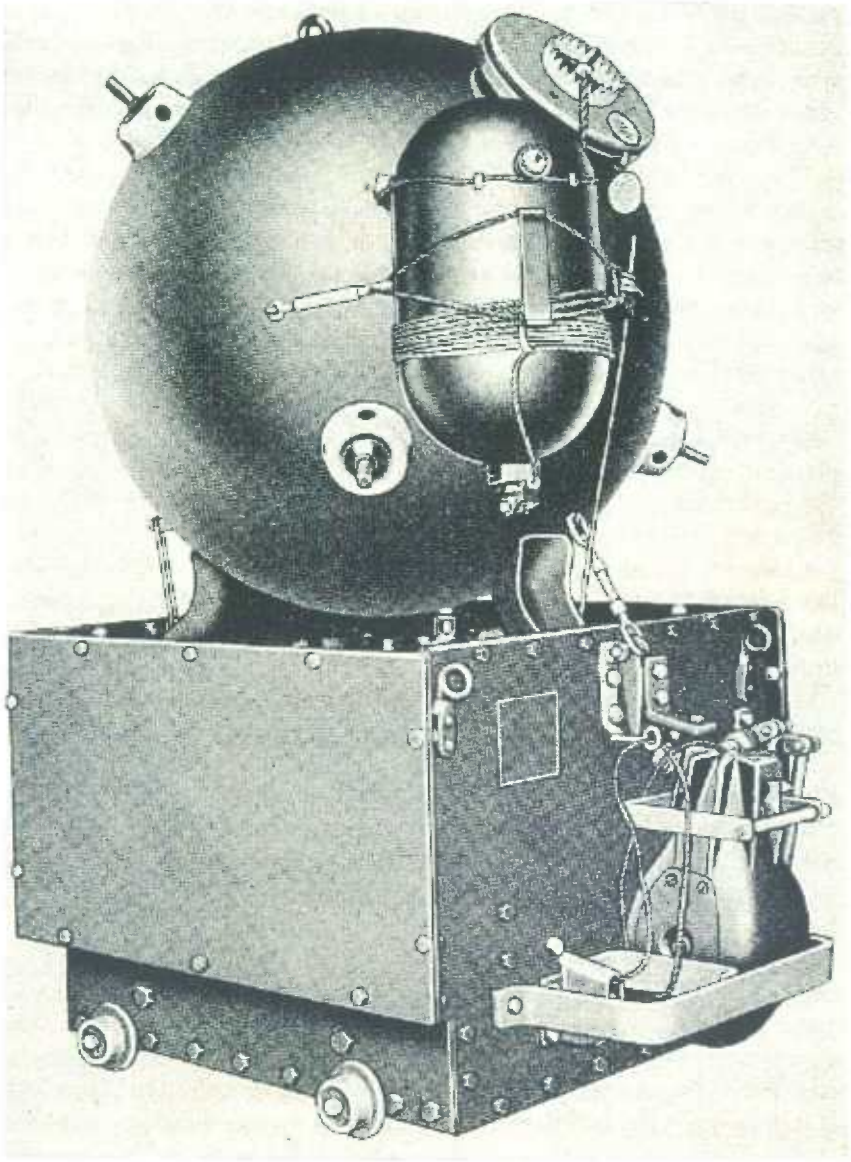


Figure 20.—Mine Mk 6.

Mark 1
Spherical mine 34 inches (86 cm) in diameter. Used an inertial pistol.

Mark 2
Designed by the French firm Sauter-Harle. Spherical mine with a charge of about 175 lbs. (79 kg) of wet guncotton. Used contact-inertial exploder. In service about 1909.

Mark 3
British Vickers design. Spherical mine about 30 inches (76 cm) in diameter with a 120 lbs. (54 kg) TNT burster. Used a protruding float made of cork, 3 feet (0.91 m) long, for inertia ignition - contact with a ship made the mine rotate relative to the float. Launched from trolley rails. .

Mark 4
Similar to the Mark 3 but larger, 33 inches (84 cm) in diameter with a 250 lbs. (113 kg) TNT burster.

Mark 6
Spherical antenna type using a K-type pistol, 34 inches (87 cm) in diameter. This mine was designed specifically for the North Sea Mine Barrage of World War I. However, it was still being used operationally as late as 1978. The Mark 6 was very successful and remained in US inventories until about 1985, making it the USA's longest-lived mine. 1,400 lbs. (635 kg) total, charge of 300 lbs. (136 kg) TNT. Could be moored in waters up to 3,000 feet (914 m) deep. Three safety devices were employed, one a time delay, one a hydrostatic which held a switch open until the mine had sunk several feet underwater and the third to keep the explosive steps open until the mine had reached a considerable depth. Mod 2 was a rising type, Mod 3 had a Mark 9 case with a 100 foot (30 m) lower antenna. Mod 4 had a Mark 6 case with a 50 foot (15 m) lower antenna. All of these had a few Hertz (acid) horns as a backup firing mechanism. Early units used in the North Sea Barrage had reliability problems, with 4 to 8 percent firing shortly after being planted.

Source: www.navweaps.com/Weapons/WAMUS_mines.htm

APPENDIX E

Technical Project Planning Meeting Minutes

URS

FINAL MEETING MINUTES

PURPOSE: Fort Story MMRP Site Inspection
Technical Project Planning (TPP) Session I

LOCATION: Fort Eustis, VA, Building 1407

DATE: 12 June 2007

TIME: 0900 - 1015

Attendees	Organization	Phone	email
Darren Renne	URS	804-677-0298	darren_renne@urscorp.com
Travis McCoun	USAEC/BAH	410-436-1529	travis.mccoun@us.army.mil
James Bynum	USACE, Baltimore District	410-962-6803	james.o.bynum@usace.army.mil
Scott McClelland	URS	301-258-5876	Scott_mcclelland@urscorp.com
Wade Smith	VDEQ	804-698-4125	wmsmith@deq.virginia.gov
Joanna Bateman	DPW-ENRD	757-878-4123 ext. 303	Joanna.Bateman@eustis.army.mil
Amber Michel	EEI/Fort Eustis	757-878-4123 ext. 296	Amber.michel@us.army.mil

These meeting minutes address items discussed at the 12 June 2007 TPP1 meeting. The purpose of the meeting was to present the programmatic and project specific details pertaining to the Military Munitions Response Program (MMRP) Site Inspection (SI) that is being started for Fort Story, VA.

Those present at the meeting included Joanna Bateman, Darren Renne, Amber Michel, Wade Smith, and Scott McClelland. Other attendees participated via teleconference.

The meeting started with introductions at 0900.

During introductions, James Bynum of USACE, Baltimore District was introduced as a USACE, Baltimore District representative sitting in for Mr. Christopher Evans of USACE, Baltimore District, who will serve as the project manager. Mr. Travis McCoun of USAEC was sitting in for Mr. Timothy Rodeffer of USAEC who will serve as the USAEC project manager. (Following the meeting, URS was informed that Mr. McCoun would serve as the USAEC project manager as opposed to Mr. Rodeffer).

A hard copy of a power point presentation was provided to all attendees and Scott McClelland, in conjunction with Travis McCoun led a discussion following the presentation handout. The following items were highlighted during the presentation:

1. Background information on the MMRP was provided.
2. An overview of how the MMRP was being implemented was provided.
3. Definitions of various terminology used in the MMRP were presented.

4. The goals of the MMRP SI were presented with an emphasis placed on the primary goal being to make a decision for each site as to whether additional investigation, no further action, or a removal action is appropriate.
5. A discussion was held regarding the eligibility of a site to be addressed as part of the MRRP.
6. The importance of obtaining stakeholder involvement through the Technical Project Planning (TPP) process was discussed.
7. The process that the MMRP SI will be implemented was discussed.
8. The various approaches to SI field work were discussed, with surface soil sampling for explosives and metals and a magnetometer assisted visual site survey being the most common field activities.
9. Based on the Phase 3 CTT Inventory Report, an overview of the other-than operational ranges present at Fort Story that are planned to be addressed during the MMRP SI at Fort Story was provided.
10. A preliminary schedule for the MMRP SI was provided.

During the course of the presentation, several discussions were held pertaining to specific elements of the MMRP at Fort Story. These items included:

1. Other potential stakeholders were discussed. Ms. Bateman noted that the Navy currently occupies the majority of the buildings at Fort Story, and in January of 2008, the Navy is scheduled to take over command of the installation. In October 2008, the Navy is scheduled to take over property. Since a point of contact does not yet exist for the Navy, it was decided that the Navy would be brought into the program in the appropriate time once a point of contact was established. Ms. Bateman said that she should brief the Garrison Commander, and as requested, Mr. McClelland said he can and will provide whatever support is needed.

2. In terms of communications between the project team, Fort Eustis is responsible for communicating with VDEQ and VDEQ will transmit correspondence to Fort Eustis.

3. A discussion was held regarding the notification requirements of the Munitions Response Site Prioritization Protocol (MRSPP). Mr. McCoun explained that USAEC has requested higher headquarters to task the installations to provide notifications to the regulators and local community that an MMRP investigation and MRSPP scoring will be completed at Fort Story. This request should be approved soon, and AEC will assist the installation in preparing the notifications, as needed. Mr. McCoun also noted that the MRSPP priority rankings will be considered draft, will be included as an appendix to the final SI Report, and can be updated with new information at any time after the SI.

4. Discussion was held regarding the Phase 3 Closed, Transferring, and Transferred Range Inventory for Fort Story that only identified one small arms range. Mr. McClelland noted that Fort Story was a coastal artillery installation, and it is likely that additional sites will be added during the SI process. The potential presence of water ranges was discussed.

5. Discussion was held regarding the length of time VDEQ would like to review documents. Mr. Smith responded that depending on whether the document is a primary or secondary document, they would like 30 to 60 days for their review.

6. The meeting concluded at 1015.

URS

FINAL MEETING MINUTES

PURPOSE: Fort Story MMRP Site Inspection
Technical Project Planning Meeting 2

LOCATION: Fort Eustis, VA Building 1407

DATE: 18 March 2008

TIME: 0900 - 1200

Attendees	Organization	Phone	email
Scott McClelland	URS	301-258-5876	Scott_mcclelland@urscorp.com
Travis McCoun	USAEC	410-436-1529	Travis.mccoun@us.army.mil
Amber Michel	DPW-ENRD Fort Eustis (ASIS)	757-878-4123	Amber.michel@us.army.mil
Wade Smith	VA DEQ	804-698-4125	wmsmith@deq.virginia.gov
Clyde Lichtenwalnar	USACE, Baltimore	410-779-0014	Clyde.h.lichtenwalnar@usace.army.mil
Joanna Bateman	DPW-ENRD Fort Eustis	757-878-4123	Joanna.g.bateman@us.army.mil
Francis Coulters*	USAEC	410-436-1527	francis.coulters@us.army.mil

*Attended via phone.

The meeting started off with introductions at 0930.

A hard copy of a power point presentation was provided to all attendees and Scott McClelland led an open discussion following the presentation handout. The following items were discussed:

1. The goals of the MMRP SI were reviewed as a reminder that the purpose of the SI was to make a decision regarding if any additional study (i.e., RI/FS), a removal action; or No Further Action was appropriate for each Munitions Response Site (MRS).

2. The purpose of the meeting was discussed, with the objective being to present the findings of the Historical Records Review, discuss the path forward, and reach consensus on this path.

3. An overview of the HRR was provided following the presentation with the following items discussed.
   a. The Small Arms Range, which was identified as the only MRS identified during the CTT Inventory, was discussed first. It was noted that since the time that the CTT Inventory was completed, the operational range area at

Fort Story has been changed. This change resulted in the Small Arms Range now being located within an operational range area, and no longer eligible for inclusion in the SI.

b. Wade Smith of VDEQ asked for additional information regarding the change in operational range areas which prompted the additional discussion regarding how the operational range areas are defined, and by whom. Travis McCoun and Fran Coulters of USAEC provided a summary of this process, and Travis McCoun pointed out that operational ranges are being assessed through the Army's Operational Range Assessment Program. It was pointed out that the Army G3 and installation range operators are responsible for defining operational range areas. Ms Joanna Bateman noted that an area along the western coast line of Fort Story is where there are a number of beach cottages which did not seem compatible with training. It was noted that the operational range areas were provided to URS by the Army G3 at the initiation of the SI, and that neither USAEC nor Fort Story/Eustis environmental personnel define the operational range areas. The discussion concluded with the fact that the Small Arms Range is located within an operational range area, and it is not eligible for inclusion as part of the Fort Story MMRP SI.

c. Discussion was held regarding the discovery of multiple gun batteries at Fort Story that was presented in the HRR, and how the historical firing fans (aka "fields of fire") were used to define a new Munitions Response Site (MRS) called the Inner Coastal Defense Range. Key components of this discussion included:
    i. The purpose of the batteries was to protect the entrance to the Chesapeake Bay during WWI and WWII, and gun size ranged from .50 caliber machine guns to 16" artillery guns.
    ii. Firing for training purposes was directed out into the Bay and Atlantic Ocean.
    iii. Coastal erosion has destroyed some of the former battery locations.
    iv. Historical documents were found that indicate the guns were fired for training, and additional documents detailed the type of munitions allotted for training and the typical range layout.
    v. The methodology used to create the limits of the Inner Coastal Defense Range was presented. The key factors used to develop the range boundary included: portions of multiple historical firing fans from guns/batteries that fired high explosive (HE)-filled munitions; safety zones for the standard range layout; and the locations of former underwater mine fields.

d. Discussion was held regarding the implications of firing fans from other coastal artillery installations that may overlap the Inner Coastal Defense Range site. These installations included Fort Monroe (BRAC); Fort Wool (FUDS); Fort Custis (FUDS); and Fishermans Island (FUDS). Based on the Fort Monroe HRR and the Fort Wool SI; munitions and training

associated with these installations does not overlap the Inner Coastal Defense Range. Historical documents indicate that historical firing fans from guns at Fort Custis and Fishermans Island overlap portions of the Inner Coastal Defense Range. It was presented that the portions of these historic firing fans that overlapped with the Inner Coastal Defense Range would be considered part of the site, but that portions of these historical firing fans that do not overlap with the Inner Coastal Defense Range can not be addressed under the Fort Story MMRP site and will fall under the FUDS program.

e. The conceptual site model of the Inner Coastal Defense Range was discussed, with the primary receptors being dredge workers. It was noted that nautical charts have annotations that restrict dredging and other activities that disturb the ocean floor due to the potential presence of mines. However, it was noted that portions of two dredged shipping channels are within the site, meaning that this pathway may be complete.

4. Information on dredging activities obtained from the Norfolk District was presented, and that the dredge spoils were placed offshore at the Dam Neck Disposal Site. Based on the nautical maps of the area, this location falls within an active firing fan operated by the Navy; therefore, it can not be included as an MMRP site. Wade Smith requested a copy of the map (NOAA Chart 12207) depicting this area, which was provided to him in a separate transmittal on 1 April 2008.

5. It was discussed that the typical next step in the MMRP SI process would be to collect field data to determine if an RI is warranted. However, with the documentation obtained during the HRR, there is sufficient evidence o conclude that an RI is needed. Therefore, it was decided that following receipt of VDEQ comments on the Stakeholder Draft HRR, these comments would be incorporated directly into an SI Report that includes all of the HRR information as well as the MRSPP scoring and a recommendation that the site move forward in the MMRP.

6. Wade Smith asked if there were any bodies of land that existed within the Inner Coastal Defense Range site. Based on a review of the maps presented in the HRR, there did not appear to be. A check of nautical maps following the TPP meeting confirmed this conclusion.

7. Other issues and discussion included:
    i. The Army has already advertised a public notice related to the MRSPP scoring.
    ii. The planned schedule for the remainder of the SI process was discussed.

iii. Wade Smith provided editorial comments on the Stakeholder Draft HRR directly to Scott McClelland, and stated that he will provide written comments in April.

8. The meeting concluded at approximately 1200.

URS

FINAL MEETING MINUTES

PURPOSE: Fort Story MMRP Site Inspection
Technical Project Planning Meeting 3

LOCATION: Teleconference

DATE: 25 August 2008

TIME: 1300 - 1400

Attendees	Organization	Phone	email
Scott McClelland	URS	301-258-5876	Scott_mcclelland@urscorp.com
Travis McCoun	USACE, Baltimore	410-436-1529	Travis.mccoun@us.army.mil
Amber Michel	DPW-ENRD Fort Eustis (ASIS)	757-878-4123	Amber.michel@us.army.mil
Wade Smith	VA DEQ	804-698-4125	wmsmith@deq.virginia.gov
Tim Rodeffer	USEC	410-436-1616	Timothy.rodeffer@us.army.mil
Joanna Bateman	DPW-ENRD Fort Eustis	757-878-4123	Joanna.g.bateman@us.army.mil
Francis Coulters	USAEC	410-436-1527	francis.coulters@us.army.mil

The meeting was held via teleconference, and started with introductions at 1300.

An electronic copy of a power point presentation was provided to all attendees prior to the start of the call. The call was initiated by Scott McClelland who led a discussion through the presentation materials followed by an open discussion of various issues. The following items were discussed:

1. The goals of the MMRP SI were reviewed as a reminder that the purpose of the SI was to make a decision regarding if any additional study (i.e., RI/FS), a removal action; or No Further Action was appropriate for each Munitions Response Site (MRS).

2. A brief overview of MMRP policies was presented.

3. The objectives of the TPP3 meeting were presented as follows: Provide a Summary of the SI findings; provide a summary of SI recommendations and reach consensus on the recommendations; and discuss and resolve any stakeholder comments.

4. The discussions held during the TPP2 meeting were reviewed to remind participants that during the TPP2 meeting it was decided that the HRR would

not be finalized, but that the one eligible MRS (Inner Coastal Defense Range) should be recommended to proceed to an RI. Also, comments provided by VDEQ on the Stakeholder Draft HRR should be incorporated into the Stakeholder Draft SI.

5. An overview of the SI was provided following the presentation with the following items presented.
   a. The Small Arms Range, which was the only MRS identified during the CTT Inventory, was discussed first. It was noted that since the time that the CTT Inventory was completed, the operational range area at Fort Story has been changed. This change resulted in the Small Arms Range now being located within an operational range area, and no longer eligible for inclusion in the SI. As per the request of VDEQ during the TPP2 meeting, additional information regarding the change in operational range areas, which prompted the additional discussion regarding how the operational range areas are defined, and by whom, was added to the Stakeholder Draft SI.
   b. Discussion was held regarding the discovery of multiple gun batteries at Fort Story, and the development of the Inner Coastal Defense Range MRS that was first presented during the Stakeholder Draft HRR and TPP2 was reviewed.
   c. The recommendation of the SI that the Inner Coastal Defense Range MRS should advance to an RI for MEC was reiterated, and that if MEC was encountered, sampling for MC may be appropriate.

6. Discussion was held regarding feedback USAEC received from the Army MRSPP QA Panel that reviewed the draft MRSPP scoring for the Inner Coastal Defense Range MRS at Fort Story. Based on this review, the QA Panel rejected the scoring based on Table 3 of the EHE module that they recommended being scored as a "5" rather than a "20" presented in the Stakeholder Draft SI. This change would result in the overall rating of the MRS being lowered from a 3 to a 4.
   a. Tim Rodeffer provided the rationale for the change being that the Panel wants to see written documentation (a UXO Incident Report) as opposed to interviews (i.e., second or third hand accounts) in order to support a Table 3 score of 25 or 20. Also there was some uncertainty as to whether or not the dredging incident happened within the MRS or in another channel located outside the MRS.
   b. Discussion was held regarding the rationale for providing a score of 20, including historical evidence being the basis for the rating, not just the dredging incident.
   c. VDEQ commented that they concur with the rating as it was presented in the Stakeholder Draft SI.

d. Mr. Rodeffer stated that he would approach the QA Panel again to seek clarification on the appropriate scoring and then get back to the group. (Note: On August 26, 2008, Tim Rodeffer provided guidance that the SI should be finalized with the MRSPP score that the group considers most appropriate. It was decided that the score presented in the Stakeholder Draft version would not be changed in the Final SI. Once the SI Report is finalized, the Army MRSPP QA Panel will again review the priority for the Inner Coastal Defense Range MRS and provide feedback if necessary.

7. The meeting then was opened to VDEQ for any questions or comments, and the following items were discussed based on questions raised by Wade Smith of VDEQ:

a. VDEQ acknowledged that additional information was provided about the process the Army undertakes to define operational ranges. Mr. Smith asked about the frequency of such updates, and Mr. Rodeffer responded that they are currently performed at least every 5 years, but that he believed this may be changing to a more frequent schedule. Mr. Rodeffer stated that he would provide Mr. Smith an update regarding this, which he did via email on 25 August 2008, with the following text provided to VDEQ in the email: "This is a followup to our TPP-3 Mtg this afternoon regarding operational range updates. I spoke with AEC's Range Sustainment Branch who has been managing and coordinating the 5-yr. operational range area inventory at installations. For near future, operational areas will continue to be revised at a minimum of every 5 years, however, in the next year or so, they anticipate this will change to once a year. At that point, installations (Range ops) will be responsible for reviewing and updating their operational ranges based on their missions and submitting the GIS files to the Army Training Support Center under Army operations."

b. VDEQ requested that MRSPP Tables 12 thru 19, which were intentionally omitted as per Army guidance in the Stakeholder Draft SI be included for completeness. This was agreed to by all parties.

c. VDEQ stated that pending the resolution of the issues discussed regarding the MRSPP scoring and additional information provided regarding the definition of the operational range areas, they would prepare a concurrence letter for the SI.

8. The meeting concluded at approximately 1400.

APPENDIX F

MRSPP Worksheets

Summary of MRSPP
Fort Story, Virginia

MRS Name (AEDB-R No.)	*Module Priority Scores*			Overall Priority
	Explosive Hazard Evaluation	*Chemical Hazard Evaluation*	*Human Hazard Evaluation*	
Inner Coastal Defense Range (STORY-002-R-01)	3	No Known or Suspected CWM Hazard	No Known or Suspected MC Hazard	3

Prepared by: Scott McClelland
Organization: URS Group, Inc.
Date Site Scored: June 26, 2008

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the **MRS Summary**, briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.

Munitions Response Site Name:	**Inner Coastal Defense Range (STORY-002-R-01) MRSPP Score = 3**
Component:	US Army
Installation/Property Name:	**Fort Story**
Location (City, County, State):	Fort Story, VA
Site Name/Project Name (Project No.):	Inner Coastal Denfense Range / Fort Story MMRP SI (W912DR-06-C-0028)
Date Information Entered/Updated:	28-Jun-2008
Point of Contact (Name/Phone):	Tim Rodeffer, USAEC (410.436.1616)

Project Phase ("X" only one):									
	PA	X	SI		RI		FS		RD
	RA-C		RIP		RA-O		RC		LTM

Media Evaluated ("X" all that apply):				
	Groundwater	X	Sediment (human receptor)
	Surface soil		Surface water (ecological receptor)
	Sediment (ecological receptor)		Surface water (human receptor)

MRS Summary:

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type:

The Inner Coastal Defense Range is an MRS that was developed by complexing the portions of historical firing fans from multiple gun batteries that fired high-explosive filled munitions into the Chesapeake Bay. The entire range is a water range located in the Atlantic Ocean/Chesapeake Bay, and there are no land masses within the range other than portions of the Chesapeake Bay tunnel which are man made. These batteries served as part of the Coastal Defenses of the Chesapeake Bay, and were first emplaced around 1917 and were used in varying degrees until 1949. Munitions suspected of being fired from these batteries included firing 5- and 6-inch mortars; 3-inch MK1 shrapnel and HE-filled munitions; 37-mm subcaliber; and 90-mm HE filled M71 rounds. In addition, Fort Story controlled an underwater mine field located within the site, and various mines including M1, M2, M4 and M6 mines may be present.

Description of Pathways for Human and Ecological Receptors:

The primary pathway for human health is contact with MEC during dredging operations which are conducted on a regular basis to maintain shipping channels that exist within the site. As discussed in Sections 3.2.3 and 5.2.9, there are accounts of dredging operations coming in contact with MEC in the area. There are restrictions in place regarding dredging, fishing, and other activities that may contact the bottom owing to the potential presence of MEC, and these are annotated on nautical charts.

Description of Receptors (Human and Ecological):

Potential human receptors include workers who operate the dredges and persons who violate the Federal restrictions that prohibit the anchoring, bottom fishing, or conduct other activities that come in contact with the ocean/bay bottom. Threatened or endangered species are not known to enhabit the range.

Table 1
EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Annotate the score(s) that correspond with **all** munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions*, *small arms ammunition*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
Sensitive	♦ UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorous [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). ♦ Hand grenades containing energetic filler. ♦ Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard.	30	
High explosive (used or damaged)	♦ UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." ♦ DMM containing a high-explosive filler that have: ■ Been damaged by burning or detonation ■ Deteriorated to the point of instability.	25	25
Pyrotechnic (used or damaged)	♦ UXO containing pyrotechnic fillers other than white phosphorous (e.g., flares, signals, simulators, smoke grenades). ♦ DMM containing pyrotechnic fillers other than white phosphorous (e.g., flares, signals, simulators, smoke grenades) that have: ■ Been damaged by burning or detonation ■ Deteriorated to the point of instability.	20	
High explosive (unused)	♦ DMM containing a high-explosive filler that have not been damaged by burning or detonation, or are not deteriorated to the point of instability.	15	15
Propellant	♦ UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ♦ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: ■ Damaged by burning or detonation ■ Dteriorated to the point of instability.	15	
Bulk secondary high explosives, pyrotechnics, or propellant	♦ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ♦ DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard.	10	
Pyrotechnic (not used or damaged)	♦ DMM containing a pyrotechnic filler (i.e. red phosphorous), other than white phosphorous filler, that have not been damaged by burning or detonation, or are not deteriorated to the point of instability.	10	
Practice	♦ UXO that are practice munitions that are not associated with a sensitive fuze. ♦ DMM that are practice munitions that are not associated with a sensitive fuze and that have not: ■ Been damaged by burning or detonation ■ Deteriorated to the point of instability.	5	5
Riot control	♦ UXO or DMM containing a riot control agent filler (e.g., tear gas).	3	
Small arms	♦ Used munitions or DMM that are categorized as small arms ammunition [Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.].	2	2
Evidence of no munitions	♦ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0	
MUNITIONS TYPE	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).		**25**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Munitions Type*** classifications in the space provided.

The Inner Coastal Defense Range involved firing 5- and 6-inch mortars, 3-inch MK1 shrapnel and HE-filled munitions; 37-mm subcaliber; 90-mm HE filled M71 rounds; .50 and .30 caliber rounds as discussed in report Sections 4.24. In addition, the presence of underwater mine fields within the area and annotations on NOAA charts that mines may be present on the ocean bottom is interpreted to mean that M1, M2, M4, and M6 underwater mines may be present as discussed in Sections 4.5 and 4.24. As discussed in Sections 3.2.3 and 5.2.9, documentation of MEC (unknown type) being encountered during dredging operations confirms the presence of MEC in this range. This range also encompasses portions of ranges from the Fort Custis and Fishermans Island Military Reservation FUDS, and similar munitions were fired from these installations that may be present. In addition, several batteries located at Fort Story fired practice munitions comprised of cast-iron or sand-filled munitions ranging in size from 75-mm sand filled projectiles to 16-inch Mk HM2, 2100# cast iron projectiles.

Table 2

EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Annotate the score(s) that correspond with **all** sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms *former range*, *practice munitions*, *small arms range*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
Former range	♦ The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include: impact or target areas and associated buffer and safety zones.	10	10
Former munitions treatment (i.e. OB/OD) unit	♦ The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8	
Former practice munitions range	♦ The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6	
Former maneuver area	♦ The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category.	5	
Former burial pit or other disposal area	♦ The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5	
Former industrial operating facilities	♦ The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4	
Former firing points	♦ The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4	
Former missile or air defense artillery emplacements	♦ The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2	
Former storage or transfer points	♦ The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2	
Former small arms range	♦ The MRS is a former military range where only small arms ammunition was used (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS iinto this category.)	1	
Evidence of no munitions	♦ Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0	
SOURCE OF HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).		**10**

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Historical records confirm use of the MRS as an impact area for 5- and 6-inch mortars; 3-inch MK1 shrapnel and HE-filled munitions; 37-mm subcaliber; and 90-mm HE filled M71 rounds as discussed in report Section 4.24. In addition, the presence of underwater mine fields within the area and annotations on NOAA charts that mines may be present on the ocean bottom is interpreted to mean that M1, M2, M4, and M6 underwater mines may be present as discussed in Sections 4.5 and 4.24. As discussed in Sections 3.2.3 and 5.2.9, documentation of MEC (unknown type) being encountered during dredging operations confirms the presence of MEC in this range.

Table 3
EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Annotate the score(s) that correspond with **all** locations where munitions are located or suspected of being found at the MRS.

Note: The terms *confirmed*, *surface*, *subsurface*, *small arms ammunition*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
Confirmed surface	♦ Physical evidence indicates that there are UXO or DMM on the surface of the MRS. ♦ Historical evidence (i.e., a confirmed incident report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that invovled UXO or DMM occured) indicates there are UXO or DMM on the surface of the MRS.	25	
Confirmed subsurface, active	♦ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS; and, the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. ♦ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS; and, the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM.	20	20
Confirmed subsurface, stable	♦ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS; and, the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. ♦ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS; and, the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed.	15	
Suspected (physical evidence)	♦ There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10	
Suspected (historical evidence)	♦ There is historical evidence indicating that UXO or DMM may be present at the MRS.	5	
Subsurface, physical constraint	♦ There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2	
Small arms (regardless of location)	♦ The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.)	1	
Evidence of no munitions	♦ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0	
LOCATION OF MUNITIONS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).		**20**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Location of Munitions*** classifications in the space provided.

The entire range is a water range and there are restrictions on activities that can be legally conducted in the area. However, as discussed in Section 4.22, historical evidence indicates the presence of UXO in the MRS from former firing of batteries that used high explosive (HE)-filled muntions. Also, based on information provided in Sections 3.2.3 and 5.2.9, MEC (unknown type) may have been encountered during dredging operations in this range. Based on the historical documentation that indicates HE-filled munitions were fired into the range, and that dredging operations are conducted to maintain the shipping channels within the range, a score of 20 was selected.

Table 4
EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The barrier type is directly related to the ease of public access to the MRS. Annotate the score that corresponds with the ease of access to the MRS.

Note: The term *barrier* is defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
No barrier	♦ There is no barrier preventing access to any part of the MRS (i.e. all parts of the MRS are accessible).	10	10
Barrier to MRS access is incomplete	♦ There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8	
Barrier to MRS access is complete but not monitored	♦ There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5	
Barrier to MRS access is complete and monitored	♦ There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	0	
EASE OF ACCESS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).		**10**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ease of Access*** classification in the space provided.

As the entire area is a water range and there are no phyisical barriers to access the site. There are administrative restrictions (legal restrictions that limit boating activities) in place. The water depth is less than 120 feet throughout the range.

Table 5
EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Annotate the score that corresponds with the status of property at the MRS.

Classification	Description	Possible Score	Score
Non-DoD control	♦ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and, land or water bodies managed by other federal agencies. ♦ The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day.	5	5
Scheduled for transfer from DoD control	♦ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3	
DoD control	♦ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0	
STATUS OF PROPERTY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Status of Property*** classification in the space provided.

The range is located within the Atlantic Ocean/Chesapeake Bay.

Table 6
EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications of population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Annotate the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the **highest** population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Possible Score	Score
> 500 persons per square mile	♦ There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5	5
100 - 500 persons per square mile	♦ There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3	
< 100 persons per square mile	♦ There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1	
POPULATION DENSITY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Density*** classification in the space provided.

Virginia Beach City 2006 census data: 1,714 people/square mile. Northhampton County 2006 census data: 63 people/square mile. Source: http://quickfacts.census.gov/qfd/states/51/51810.html.

Owing to the fact that the Inner Coastal Defense Range is a water range, and is located entirely offshore in the Atlantic Ocean/Chesapeake Bay, it is not located within a census tract. Population information for the two closest census tracts (Virginia Beach City located to the south of the range and North Hampton County located to the north of the range) are provided. Both of these tracts are located within two miles of the perimeter of the site. The purpose of this data element is to evaluate the number of people (both on- and off-site) who could be exposed to any explosive hazard potentially posed by MEC, and for this reason, the denser population of Virginia Beach City is used.

Table 7
EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the hazard. Determine the number of inhabited structures within two miles of the MRS boundary and annotate the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
26 or more inhabited structures	♦ There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5	5
16 to 25 inhabited structures	♦ There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4	
11 to 15 inhabited structures	♦ There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3	
6 to 10 inhabited structures	♦ There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2	
1 to 5 inhabited structures	♦ There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1	
0 inhabited structures	♦ There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0	
POPULATION NEAR HAZARI	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Near Hazard*** classification in the space provided.

Virigina Beach City 2000 census data: 698 housing units/square mile. Source: http://quickfacts.census.gov/qfd/states/51/51041.html. Also, topographic map and air photo review. Based on this review, there are more than 26 inhabited structures located within two miles of the southern and southeastern boundaries of the site, but none located within two miles of the remainder of the site boundary. In addition, there are structures that are staffed 24-hours a day in on the Chesapeake Bay Bridge-Tunnel, a portion of which is located within the site.

Table 8

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and annotate the score(s) that correspond with **all** the activities/structure classifications at the MRS.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
Residential, educational, commercial, or subsistence	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	5	5
Parks and recreational areas	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4	4
Agricultural, forestry	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3	
Industrial or warehousing	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2	
No known or recurring activities	♦ There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1	
TYPES OF ACTIVITIES/STRUCTURES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Types of Activities/Structures*** classifications in the space provided.

Virigina Beach City 2000 census data: 698 housing units/square mile. Source: http://quickfacts.census.gov/qfd/states/51/51041.html. Also, topographic map and air photo review. Based on this review, there are more than 26 inhabited structures located within two miles of the southern and southeastern boundaries of the site, but none located within two miles of the remainder of the site boundary. In addition, the Chesapeake Bay Bridge-Tunnel, located within the site is considered a critical asset, and recreational parks and historical parks are located within Fort Story itself.

Table 9

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and annotate the score that corresponds with the ecological and/or cultural resources present on the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5	5
Ecological resources present	There are ecological resources present on the MRS.	3	
Cultural resources present	There are cultural resources present on the MRS.	3	
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0	
ECOLOGICAL AND/OR CULTURAL RESOURCES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ecological and/or Cultural Resources*** classification in the space provided.

As discussed in Section 5.2.6 of the SI, endangered Right whales are known to migrate through this area and there are several ship wrecks that are considered potential cultural resources.

Table 10

Determining the EHE Module Rating

DIRECTIONS:

1. From Tables 01 - 09, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **EHE Module Total** box below.

	Source	Score	Value
Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	25	35
Source of Hazard	Table 2	10	
Accessibility Factor Data Elements			
Location of Munitions	Table 3	20	35
Ease of Access	Table 4	10	
Status of Property	Table 5	5	
Receptor Factor Data Elements			
Population Density	Table 6	5	20
Population Near Hazard	Table 7	5	
Types of Activities/Structures	Table 8	5	
Ecological and/or Cultural Resources	Table 9	5	
EHE MODULE TOTAL			**90**

4. Circle the appropriate range for the **EHE Module Total** below.
5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of this table.

NOTE: An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

EHE Module Total	EHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected Explosive Hazard
EHE MODULE RATING	**B**

Table 11

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Annotate the score(s) that correspond to **all** CWM configurations known or suspected to be present at the MRS.

Note: The terms *CWM/UXO*, *CWM/DMM*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
CWM, that are either UXO, or explosively configured, damaged DMM	The CWM known or suspected of being present at the MRS are: ♦ CWM that are UXO (i.e. CWM/UXO) ♦ Explosively configured CWM that are DMM (i.e. CWM/DMM) that have been damaged.	30	
CWM mixed with UXO	♦ The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25	
CWM, explosive configuration that are undamaged DMM	♦ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20	
CWM/DMM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS are: ♦ Nonexplosively configured CWM/DMM either damaged or undamaged ♦ Bulk CWM (e.g., ton container).	15	
CAIS K941 and CAIS K942	♦ The CWM/DMM known or suspected of being present at the MRS is CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12	
CAIS (chemical agent identification sets)	♦ CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10	
Evidence of no CWM	♦ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0	0
CWM CONFIGURATION	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).		**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***CWM Configuration*** classifications in the space provided.

No evidence of CWM.

Table 12

CHE Module: Sources of CWM Data Element Table

DIRECTIONS: Below are eleven sources of CWM hazards and their descriptions. Review these classifications and annotate the score(s) that correspond with **all** the sources of CWM hazards known or suspected to be present at the MRS.

Note: The terms *CWM/UXO*, *CWM/DMM*, *CAIS/DMM, surface*, *subsurface*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
Live-fire involving CWM	♦ The MRS is a former military range that supported live-fire of explosively configured CWM and the CWM/UXO are known or suspected of being present on the surface or in the subsurface. ♦ The MRS is a former military range that supported live-fire with conventional munitions, and CWM/DMM are on the surface or in the subsurface commingled with conventional munitions that are UXO.	10	
Damaged CWM/DMM surface or subsurface	♦ There are damaged CWM/DMM on the surface or in the subsurface at the MRS.	10	
Undamaged CWM/DMM surface	♦ There are undamaged CWM/DMM on the surface at the MRS.	10	
CAIS/DMM surface	♦ There are CAIS/DMM on the surface.	10	
Undamaged CWM/DMM subsurface	♦ There are undamaged CWM/DMM in the subsurface at the MRS.	5	
CAIS/DMM subsurface	♦ There are CAIS/DMM in the subsurface at the MRS.	5	
Former CA or CWM Production Facilities	♦ The MRS is a facility that formerly engaged in production of CA or CWM, and CWM/DMM is suspected of being present on the surface or in the subsurface.	3	
Former Research, Development, Testing, and Evaluation (RDT&E) facility using CWM	♦ The MRS is at a facility that formerly was involved in non-live-fire RDT&E activities (including static testing) involving CWM, and there are CWM/DMM suspected of being present on the surface or in the subsurface.	3	
Former Training Facility using CWM or CAIS	♦ The MRS is a location that formerly was involved in training activities involving CWM and/or CAIS (e.g., training in recognition of CWA, decontamination training) and CWM/DMM or CAIS/DMM are suspected of being present on the surface or in the subsurface.	2	
Former Storage or Transfer Points of CWM	♦ The MRS is a former storage facility or transfer point (e.g., intermodal transfer) for CWM.	1	
Evidence of no CWM	♦ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0	
SOURCES OF CWM	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).		**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Sources of CWM*** classifications in the space provided.

No evidence of CWM used at Fort Story.

Table 13

CHE Module: Location of CWM Data Element Table

DIRECTIONS: Below are seven classifications of CWM locations and their descriptions. Review these locations and annotate the score(s) that correspond with **all** locations where CWM are located or suspected of being found at the MRS.

Note: The terms *confirmed, surface*, *subsurface*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
Confirmed surface	♦ Physical evidence indicates that there are CWM on the surface of the MRS. ♦ Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report, that an incident or accident that involved CWM, regardless of configuration, occurred) indicates there are CWM on the surface of the MRS.	25	
Confirmed subsurface, active	♦ Physical evidence indicates the presence of CWM in the subsurface of the MRS; and, the geological conditions at the MRS are likely to cause CWM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose CWM. ♦ Historical evidence indicates that CWM are located in the subsurface of the MRS; and, the geological conditions at the MRS are likely to cause CWM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose CWM.	20	
Confirmed subsurface, stable	♦ Physical evidence indicates the presence of CWM in the subsurface of the MRS; and, the geological conditions at the MRS are not likely to cause CWM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause CWM to be exposed. ♦ Historical evidence indicates that CWM are located in the subsurface of the MRS; and, the geological conditions at the MRS are not likely to cause CWM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause CWM to be exposed.	15	
Suspected (physical evidence)	♦ There is physical evidence, other than the documented presence of CWM, indicating that CWM may be present at the MRS.	10	
Suspected (historical evidence)	♦ There is historical evidence indicating that CWM may be present at the MRS.	5	
Subsurface, physical constraint	♦ There is physical or historical evidence indicating that CWM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the CWM.	2	
Evidence of no CWM	♦ Following investigation of the MRS, there is physical evidence that there is no CWM present or there is historical evidence indicating that no CWM are present.	0	
LOCATION OF CWM	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).		**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Location of CWM*** classifications in the space provided.

No evidence of CWM used at Fort Story.

Table 14
CHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The barrier type is directly related to the ease of public access to the MRS. Annotate the score that corresponds with the ease of access to the MRS.

Note: The term *barrier* is defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
No barrier	♦ There is no barrier preventing access to any part of the MRS (i.e. all parts of the MRS are accessible).	10	10
Barrier to MRS access is incomplete	♦ There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8	
Barrier to MRS access is complete but not monitored	♦ There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5	
Barrier to MRS access is complete and monitored	♦ There is a barrier preventing access to all parts of the MRS, and there is active continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	0	
EASE OF ACCESS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).		**10**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ease of Access*** classification in the space provided.

As the entire area is a water range and there are no phyisical barriers to access the site. There are administrative restrictions (legal restrictions that limit boating activities) in place. The water depth is less than 120 feet throughout the range.

Table 15
CHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Annotate the score that corresponds with the status of property at the MRS.

Classification	Description	Possible Score	Score
Non-DoD control	♦ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies.	5	5
	♦ The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day.		
Scheduled for transfer from DoD control	♦ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the rule is applied.	3	
DoD control	♦ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD controls access to the MRS 24 hours per day, every day of the calendar year.	0	
STATUS OF PROPERTY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Status of Property*** classification in the space provided.

The range is located within the Atlantic Ocean/Chesapeake Bay.

Table 16

CHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications of population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Annotate the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the **highest** population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Possible Score	Score
> 500 persons per square mile	♦ There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5	5
100 - 500 persons per square mile	♦ There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3	
< 100 persons per square mile	♦ There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1	
POPULATION DENSITY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Density*** classification in the space provided.

Virginia Beach City 2006 census data: 1,714 people/square mile. Northhampton County 2006 census data: 63 people/square mile. Source: http://quickfacts.census.gov/qfd/states/51/51810.html.

Owing to the fact that the Inner Coastal Defense Range is a water range, and is located entirely offshore in the Atlantic Ocean/Chesapeake Bay, it is not located within a census tract. Population information for the two closest census tracts (Virginia Beach City located to the south of the range and North Hampton County located to the north of the range) are provided. Both of these tracts are located within two miles of the perimeter of the site. The purpose of this data element is to evaluate the number of people (both on- and off-site) who could be exposed to any explosive hazard potentially posed by MEC, and for this reason, the denser population of Virginia Beach City is used.

Table 17

CHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and annotate the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
26 or more inhabited structures	♦ There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5	5
16 to 25 inhabited structures	♦ There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4	
11 to 15 inhabited structures	♦ There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3	
6 to 10 inhabited structures	♦ There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2	
1 to 5 inhabited structures	♦ There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1	
0 inhabited structures	♦ There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0	
POPULATION NEAR HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Near Hazard*** classification in the space provided.

Virigina Beach City 2000 census data: 698 housing units/square mile. Source: http://quickfacts.census.gov/qfd/states/51/51041.html. Also, topographic map and air photo review. Based on this review, there are more than 26 inhabited structures located within two miles of the southern and southeastern boundaries of the site, but none located within two miles of the remainder of the site boundary. In addition, there are structures that are staffed 24-hours a day in on the Chesapeake Bay Bridge-Tunnel, a portion of which is located within the site.

Table 18

CHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures near the hazard and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and annotate the score(s) that correspond with **all** the activities/structure classifications at the MRS.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
Residential, educational, commercial, or subsistence	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	5	5
Parks and recreational areas	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4	4
Agricultural, forestry	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3	
Industrial or warehousing	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2	
No known or recurring activities	♦ There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1	
TYPES OF ACTIVITIES/STRUCTURES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Types of Activities/Structures*** classifications in the space provided.

Virigina Beach City 2000 census data: 698 housing units/square mile. Source: http://quickfacts.census.gov/qfd/states/51/51041.html. Also, topographic map and air photo review. Based on this review, there are more than 26 inhabited structures located within two miles of the southern and southeastern boundaries of the site, but none located within two miles of the remainder of the site boundary. In addition, the Chesapeake Bay Bridge-Tunnel, located within the site is considered a critical asset, and recreational parks and historical parks are located within Fort Story itself.

Table 19

CHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and annotate the score that corresponds with the ecological and/or cultural resources present on the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Possible Score	Score
Ecological and cultural resources present	♦ There are both ecological and cultural resources present on the MRS.	5	5
Ecological resources present	♦ There are ecological resources present on the MRS.	3	
Cultural resources present	♦ There are cultural resources present on the MRS.	3	
No ecological or cultural resources present	♦ There are no ecological resources or cultural resources present on the MRS.	0	
ECOLOGICAL AND/OR CULTURAL RESOURCES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).		**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ecological and/or Cultural Resources*** classification in the space provided.

As discussed in Section 5.2.6 of the SI, endangered Right whales are known to migrate through this area and there are several ship wrecks that are considered potential cultural resources.

Table 20

Determining the CHE Module Rating

DIRECTIONS:

1. From Tables 11 - 19, record the data element scores in the **Score** boxes to the right.

2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.

3. Add the three **Value** boxes and record this number in the **CHE Module Total** box below.

	Source	Score	Value
CWM Hazard Factor Data Elements			
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12	0	
Accessibility Factor Data Elements			
Location of CWM	Table 13	0	0
Ease of Access	Table 14	0	
Status of Property	Table 15	0	
Receptor Factor Data Elements			
Population Density	Table 16	0	0
Population Near Hazard	Table 17	0	
Types of Activities/Structures	Table 18	0	
Ecological and/or Cultural Resources	Table 19	0	
CHE MODULE TOTAL			**0**

4. Circle the appropriate range for the **CHE Module Total** below.

5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of this table.

NOTE: An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

CHE Module Total	CHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected CWM Hazard
CHE MODULE RATING	**No Known or Suspected CWM Hazard**

No evidence of CWM used at Fort Story.

Table 21

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional groundwater contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant [CAS No.]	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
		Total from Table 27	

CHF Scale	CHF Value	Sum the Ratios	
CHF > 100	H (High)		
100 > CHF >2	M (Medium)	CHF = ∑ ([Max Conc of Contaminant] / [Comparison Value for Contaminant])	
2 > CHF	L (Low)		

CONTAMINANT HAZARD FACTOR	Directions: Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Annotate the value that corresponds most closely to the groundwater migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Annotate the value that corresponds most closely to the groundwater receptors at the MRS.

Classification	Description	Value
Identified	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L
RECEPTOR FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Place an "X" in the box to the right if there is no known or suspected Groundwater MC Hazard	**X**

Table 22

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant [CAS No.]	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
		Total from Table 27	

CHF Scale	CHF Value	Sum the Ratios
CHF > 100	H (High)	
100 > CHF >2	M (Medium)	CHF = $\sum$ ([Max Conc of Contaminant] / [Comparison Value for Contaminant])
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	Directions: Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Annotate the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Annotate the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Place an "X" in the box to the right if there is no known or suspected Surface Water (Human Endpoint) MC Hazard	X

Table 23

HHE Module: Sediment - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard for human endpoints present in the sediment, select the box at the bottom of the table.

Contaminant [CAS No.]	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
		Total from Table 27	

CHF Scale	CHF Value	Sum the Ratios
CHF > 100	H (High)	CHF = $\sum$ ([Max Conc of Contaminant] / [Comparison Value for Contaminant])
100 > CHF >2	M (Medium)	
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	Directions: Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Annotate the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Annotate the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Place an "X" in the box to the right if there is no known or suspected Sediment (Human Endpoint) MC Hazard	**X**

Table 24

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard for ecological endpoints present in the surface water, select the box at the bottom of the table.

Note: Use either dissolved or total metals analyses.

Contaminant [CAS No.]	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
		Total from Table 27	

CHF Scale	CHF Value	Sum the Ratios
CHF > 100	H (High)	CHF = $\sum$ ([Max Conc of Contaminant] / [Comparison Value for Contaminant])
100 > CHF >2	M (Medium)	
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	Directions: Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Annotate the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Annotate the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Place an "X" in the box to the right if there is no known or suspected Surface Water (Ecological Endpoint) MC Hazard	**X**

Table 25

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard for ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant [CAS No.]	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
		Total from Table 27	
		Sum the Ratios	

CHF Scale	CHF Value	
CHF > 100	H (High)	CHF = ∑ ([Max Conc of Contaminant] / [Comparison Value for Contaminant])
100 > CHF >2	M (Medium)	
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	Directions: Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Annotate the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Annotate the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Place an "X" in the box to the right if there is no known or suspected Sediment (Ecological Endpoint) MC Hazard	**X**

Table 26

HHE Module: Surface Soil - Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface soil and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface soil contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

Contaminant [CAS No.]	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
		Total from Table 27	

CHF Scale	CHF Value	Sum the Ratios
CHF > 100	H (High)	
100 > CHF >2	M (Medium)	CHF = $\sum$ ([Max Conc of Contaminant] / [Comparison Value for Contaminant])
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	Directions: Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Annotate the value that corresponds most closely to the surface soil migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Annotate the value that corresponds most closely to the surface soil receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface soil to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.	L
RECEPTOR FACTOR	Directions: Record **the single highest value** from above in the box to the right (maximum value = H).	

Place an "X" in the box to the right if there is no known or suspected Surface Soil MC Hazard	**X**

Table 27

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the **media** in which these contaminants are present. Then record all **contaminants**, their **maximum concentrations** and their **comparison values** (from Appendix B of the Primer) in the table below. Calculate and record the **ratio** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** for each medium on the appropriate media-specific tables.

Note: Do not to add ratios from different media.

Media	Contaminant [CAS No.]	Maximum Concentration	Units	Comparison Value	Units	Ratios
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
Surface soil			mg/kg		mg/kg	
				SUBTOTAL FOR SURFACE SOIL		**0**
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
Sediment			mg/kg		mg/kg	
				SUBTOTAL FOR SEDIMENT		**0**
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
Surface water			µg/L		µg/L	
				SUBTOTAL FOR SURFACE WATER		**0**
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
Groundwater			µg/L		µg/L	
				SUBTOTAL FOR GROUNDWATER		**0**

Table 28

Determining the HHE Module Rating

DIRECTIONS:

1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21 - 26) in the corresponding boxes below.
2. Record the media's three-letter combinations in the **Three-Letter-Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
3. Using the HHE ratings provided below, determine each medium's rating (A - G) and record the letter in the corresponding **Media Rating** box below.

Medium (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A - G)
Table 21 - Groundwater					
Table 22 - Surface Water (Human Endpoint)					
Table 23 - Sediment (Human Endpoint)					
Table 24 - Surface Water (Ecological Endpoint)					
Table 25 - Sediment (Ecological Endpoint)					
Table 26 - Surface Soil					
			HHE MODULE RATING		**No Known or Suspected MC Hazard**

DIRECTIONS (Continued):

4. Select the single highest **Media Rating** (A is the highest; G is the lowest) and enter the letter in the **HHE Module Rating** box below.

HHE Ratings (for reference only)	
HHH	A
HHM	B
HHL	C
HMM	C
HML	D
MMM	D
HLL	E
MML	E
MLL	F
LLL	G

NOTE: An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

Alternative Module Ratings
Evaluation Pending
No Longer Required
No Known or Suspected MC Hazard

Table 29

MRS Priority

DIRECTIONS: In the chart below, enter the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Enter the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this relative priority in the **MRS Priority or Alternative MRS Rating** at the bottom of the table.

NOTE: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	

Reference Table 10:		Reference Table 20:		Reference Table 28:	
EHE Module Rating	Priority	CHE Module Rating	Priority	HHE Module Rating	Priority
B	3	No Known or Suspected CWM Hazard	No Known or Suspected CWM Hazard	No Known or Suspected MC Hazard	No Known or Suspected MC Hazard

MRS Priority or Alternative MRS Rating	3

APPENDIX G

MRSPP Notification and Public Announcements

AR: C.002.0049
Correspondence PA/SI

DEPARTMENT OF THE ARMY
US ARMY GARRISON
Directorate of Public Works
1407 Washington Boulevard
Fort Eustis, VA 23604-5306

REPLY TO ATTENTION OF:

01 August 2007

Directorate of Public Works

Mr. Wade Smith
VDEQ, Federal Facilities Program
Office of Remediation Programs
P.O. Box 1105
Richmond, VA 23218

Dear Mr. Smith:

As lead agency and in accordance with the 32 Code of Federal Regulations 179.5 requirements, Fort Story is providing this notification that a Military Munitions Response Program (MMRP) Site Inspection (SI) is being executed. MMRP sites (Sites) established during the SI process will be evaluated and scored by applying the Munitions Response Site Prioritization Protocol (MRSPP). The MRSPP evaluation criteria includes assessing types of munitions which may be potentially present, assessing land use, determining ease of access to sites, and quantifying the number of people with access to Sites.

Sites will be initially scored and presented in the Draft SI Report. If you, or any applicable stakeholder, are interested in participating in the initial scoring process, a meeting can be setup prior to publishing the Draft SI Report. Please let us know within 30-days, if you are interested in participating in the scoring process. However, you may elect to simply review and provide input on the initial scores within the Draft SI Report. If request for a scoring meeting and/or comments on the initial scores in the Draft SI Report are not received within 30-days of submittal of the Draft SI Report, the scores will be considered final for the SI phase. Scores can be modified or updated as additional information becomes available.

Should you have any questions regarding the SI and the application of MRSPP, please do not hesitate to contact Joanna Bateman at 757-878-4123 Ext. 303.

Susan P. Miller
Chief, Environmental Division

THE VIRGINIAN-PILOT
NORFOLK, VIRGINIA
AFFIDAVIT OF PUBLICATION

The Virginian-Pilot

US ARMY TRANSPORTATION CENTER
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IMNE-EUS-PW-E (GARRI
FORT EUSTIS VA 23604-5306

REFERENCE: 39050811
17436258 US ARMY GARRISONFORT

State of Virginia
City of Norfolk

This day,Dreama Johnson personally appeared before me and after being duly sworn, made oath that: 1) She is affidavit clerk of The Virginian-Pilot, a newspaper published by Landmark Communications Inc., in the cities of Norfolk, Portsmouth, Chesapeake, Suffolk, and Virginia Beach, Commonwealth of Virginia and in the state of North Carolina 2)That the advertisement hereto annexed has been published in said newspaper on the date stated.

PUBLISHED ON: 08/08 08/09

TOTAL COST: 450.12 AD SPACE: 114 LINE
FILED ON: 08/10/07

Legal Affiant Dreama C Johnson

Subscribed and sworn to before me in my city and state on the day and year aforesaid this 13th of August in the year of 2007. (NRN: 288124)

Notary: Sheila B [illegible] My commission expires January 31, 2008

US ARMY GARRISON FORT STORY PUBLIC ANNOUNCEMENT

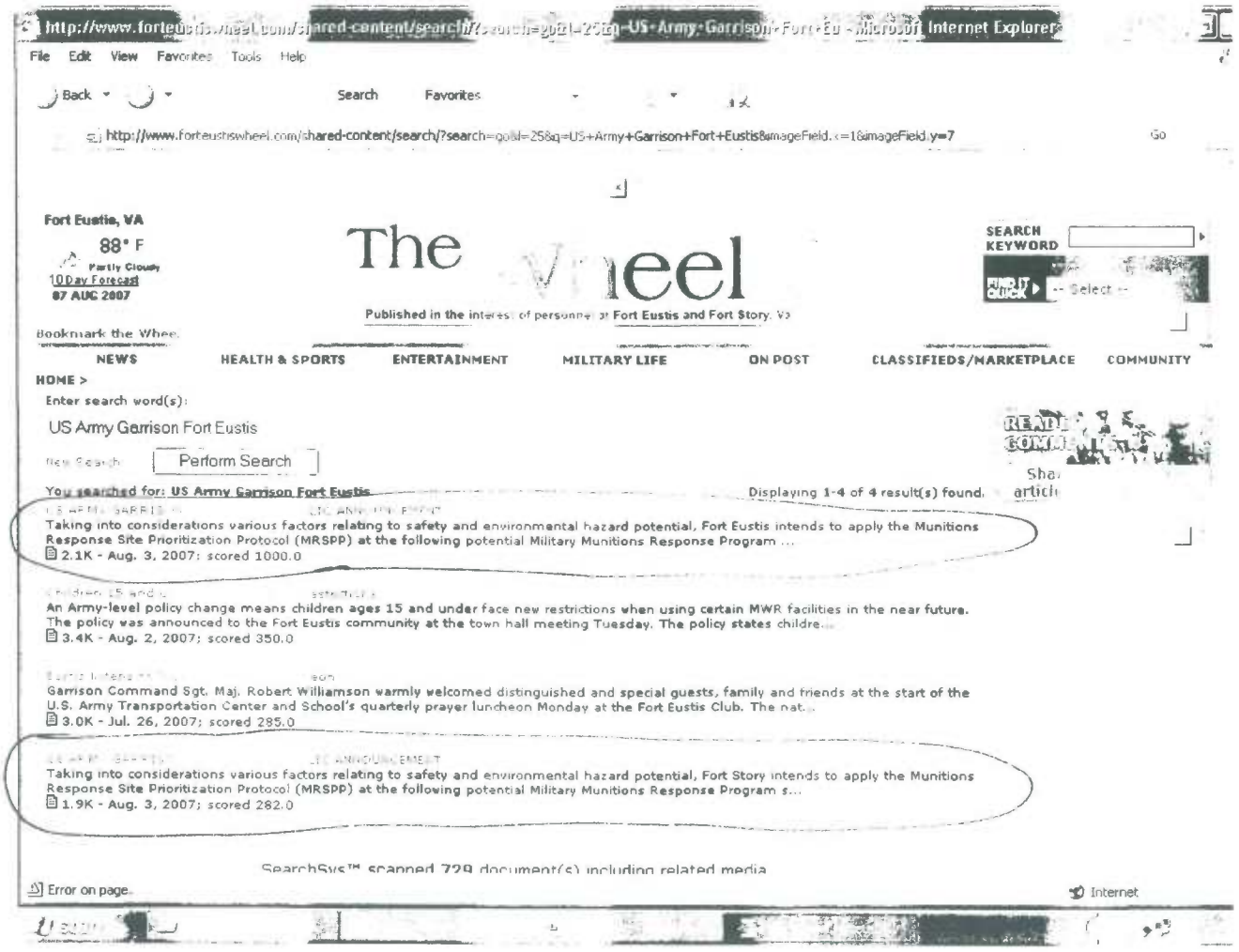
Taking into considerations various factors relating to safety and environmental hazard potential, Fort Story intends to apply the Munitions Response Site Prioritization Protocol (MRSPP) at the following potential Military Munitions Response Program site(s) (Sites): Small Arms Range. The Department of Defense (DoD) has conducted live-fire training and testing of weapons system at active and former military installations throughout the Unites States to ensure force readiness and defend our nation. While DoD has made great progress in addressing the potential hazards associated with former munitions-related activities, there remains work to be done. Through direction provided by Congress, the DoD has developed the MRSPP which assigns priorities to defense sites containing unexploded ordnance, discarded military munitions or munitions constituents.

The Army and Fort Story are in the process of completing a Site Inspection for the Sites listed above and shall evaluate Sites by applying the MRSPP. The MRSPP evaluation criteria includes assessing types of munitions that may be potentially present, assessing land uses, determining ease of access to sites, and quantifying the number of people with access to sites. Information collected will be used to apply the MRSPP and will be made available for public review at the Virginia Beach City Library and the On-post Library in accordance with the 32 CFR Part 179 requirements.

If you have or would like additional information about these Munitions Response Sites or other potential Munitions Response Sites associated with Fort Story, please contact:

Joanna Bateman
US Army Garrison
IMNE-EUS-PW-E
1407 Washington Blvd.
Fort Eustis, VA 23604
757-878-4123 Ext. 303
joanna.g.bateman@us.army.mil

VP August 8 & 9, 2007 17436258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2.1K - Aug. 3, 2007; scored 1000.0
An Army-level policy change means children ages 15 and under face new restrictions when using certain MWR facilities in the near future. The policy was announced to the Fort Eustis community at the town hall meeting Tuesday. The policy states childre...
3.4K - Aug. 2, 2007; scored 350.0
Garrison Command Sgt. Maj. Robert Williamson warmly welcomed distinguished and special guests, family and friends at the start of the U.S. Army Transportation Center and School's quarterly prayer luncheon Monday at the Fort Eustis Club. The nat...
3.0K - Jul. 26, 2007; scored 285.0
Taking into considerations various factors relating to safety and environmental hazard potential, Fort Story intends to apply the Munitions Response Site Prioritization Protocol (MRSPP) at the following potential Military Munitions Response Program s...
1.9K - Aug. 3, 2007; scored 282.0
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Ø CLOSE WINDOW Ø

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US ARMY GARRISON FORT STORY PUBLIC ANNOUNCEMENT

By Directorate of Public Works

Taking into considerations various factors relating to safety and environmental hazard potential, Fort Story intends to apply the Munitions Response Site Prioritization Protocol (MRSPP) at the following potential Military Munitions Response Program site(s) (Sites): Small Arms Range. The Department of Defense (DoD) has conducted live-fire training and testing of weapons system at active and former military installations throughout the Unites States to ensure force readiness and defend our nation. While DoD has made great progress in addressing the potential hazards associated with former munitions-related activities, there remains work to be done. Through direction provided by Congress, the DoD has developed the MRSPP which assigns priorities to defense sites containing unexploded ordnance, discarded military munitions or munitions constituents.

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