

1888P

AG 445

SECRET

REGISTERED NO. 5

SUPPLEMENT

TO

THE HARBOR DEFENSE PROJECT

HARBOR DEFENSES

OF

BOSTON

1. This is a REGISTERED DOCUMENT, and consists of eight Annexes.
2. The SHORT TITLE of this document is HDB-AN-45.
3. This document will be accounted for on June 30 and December 31 of each year to the Commanding General, Harbor Defenses of Boston in accordance with paragraph 37, AR 380-5, dated 15 March 1944.
4. Prompt report will be submitted when this document is transferred from one person to another.
5. This document supersedes the document with SHORT TITLE as follows: CE-SUP-B-43

Revised as of 31 January 1945

SECRET

DECLASSIFIED
Authority NND 760162
BY WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

DISTRIBUTION LIST

<u>Reg. No.</u>	
1	.....Chief of Engineers
2	.....Commanding General Army Ground Forces (Attn: Ground Requirements Section)
3	.....Commanding General, Army Service Forces (Attn: Planning Div.)
4	.....Commanding General, Harbor Defenses of Boston (Extra Copy)
✓ 5	.....The Adjutant General (For Ass't Chief of Staff, Operations Division).
6	.....Chief of Ordnance.
7	.....Chief Signal Officer
8	.....Chief of Chemical Warfare Services.
9	.....Commanding General, Army Ground Forces (Attn: Coast Artillery Board)
10	.....Commanding General, Eastern Defense Command.
11,12	.....Commanding General, First Service Command.
13	.....(Omitted)
14	.....District Engineer, Boston, Mass.
15	.....New England Division Engineer, Boston, Mass.
16	.....Chief of Ordnance, for Commanding Officer, Submarine Mine Depot, Fort Monroe, Va.
17,18,19	.....Commanding General, Harbor Defense of Boston.

SECRET

TABLE OF CONTENTS

ANNEXES

Annex "A" - ARMAMENT

- Exhibit 1-A - Tactical Organization.
- Exhibit 2-A - Current Tactical Organization.
- Exhibit 3-A - Location of Army Controlled Land.
- Exhibit 4-A - Location of Elements.
- Exhibit 5-A - Fields of Fire, Batteries 8" and larger.
- Exhibit 6-A - Fields of Fire, Batteries less than 8", except AMTB batteries.
- Exhibit 7-A - Fields of Fire, AMTB Batteries.

Annex "B" - FIRE CONTROL

- Exhibit 1-B - Local plane coordinate system grid.
- Exhibit 2-B - Radio Net.
- Exhibit 3-B - Datum Points.
- Exhibit 4-B - Arc of Detection - Radars.
- Exhibit 5-B - Fields of Fire, Individual Batteries.
- Exhibit 6-B - Circuit Diagram.
- Exhibit 7-B - Cable Routings.
- Exhibit 8-B - Schematic Cable Diagram.
- Exhibit 9-B - Fire Control Installations.

Annex "C" - SEACOAST SEARCHLIGHTS

- Exhibit 1-C - Illumination Plan.

Annex "D" - UNDERWATER DEFENSE

- Exhibit 1-D - Underwater Facilities.
- Exhibit 2-D - Shore Facilities.

Annex "E" - HARBOR DEFENSE ANTIAIRCRAFT ARTILLERY

- Exhibit 1-E - AA Tactical Organization.
- Exhibit 2-E - AA Fields of Fire and Illumination.
- Exhibit 3-E - AAIS
- Exhibit 4-E - AA Fire Control Telephone Net.
- Exhibit 5-E - AA Radio Net.
- Exhibit 6-E - Automatic Weapons Defense, 40mm, Guns.

SECRET

Annex "F" - GAS DEFENSE

No Exhibits.

Annex "G" - EQUIPMENT

Exhibit 1-G - Consolidated Summary of Harbor Defense Elements.

Exhibit 2-G - Consolidated Summary of Battery Installations.

Exhibit 3-G - Consolidated Summary of Major Items of Equipment.

Annex "H" - REAL ESTATE REQUIREMENTS

No Exhibits.

SECRET

DECLASSIFIED	Authority NND 760162	BY WDP NARA Date 7/15/00
--------------	----------------------	--------------------------

SECRET

SUPPLEMENT

TO

HARBOR DEFENSE PROJECT

HARBOR DEFENSES OF BOSTON

1945

AUTHORITIES

1. a. This document is a supplement to the document entitled "Harbor Defense Projects for Harbor Defenses Included in the Portland, Cape Cod Area, Parts I, II, III, and IV," (Short Title CCA-P-PCC). The latter document was approved by the Secretary of War in 1st Indorsement, AG 680.2 (5-17-32) (Misc. E, December 27, 1932, OCCA, dated August 11, 1932).

b. Modifications to the basic project which have not been incorporated in the above document are contained in the following correspondence.

- (1) Letter, War Department AGO, AG 660.2 (9-11-40)
M-WPD, 25 September 1940, subject: "Modernization of Harbor Defense Projects, Continental United States."
- (2) Letter, War Department, AGO, AG 660.2 (11-12-42)
OB-S-E, 13 November 1942, subject: "Seacoast Modernization Program."
- (3) Letter War Department AGO, AG 660.2 (4-12-43)
OB-S-SPDDO-M, 17 April 1943, subject: "Defense of Harbors Against Motor Torpedo Boats."
- (4) 2nd Indorsement, War Department, AGO, AG 476
(12-21-42) OB-S-E, 1 April 1943 on letter,
Headquarters, New England Sector, 381, 21 December 1943, subject: "Proceedings Local Joint Planning Committee, Ground Mine Defense of Boston Harbor."
- (5) Letter, War Department, AGO, AG 660.2 (10-23-40)
M-OCCA, 1 November 1940, subject: "Revision of Antiaircraft Annex, Harbor Defense Projects."

SECRET

2. The original Annexes to Harbor Defense Project, Harbor Defenses of Boston were prepared by a Board of Officers appointed by paragraph 2, S.O. No. 26, Headquarters First Corps Area, February 1, 1933, pursuant to letter the Adjutant General's Office, dated January 18, 1933, subject: "Harbor Defense Project, Portland-Cape Cod Area," AG 660.2 (1-17-33) (Misc OCCA). The original Annexes were approved by the Secretary of War in 14th Indorsement, The Adjutant General's Office, dated August 13, 1934, on letter, Headquarters First Corps Area, subject: "Annexes Harbor Defense Project, First Corps Area," dated August 11, 1932, AG 660.2 (5-6-32), (Misc E, OCCA). Short Title of the Approved Annexes was "CCA-AN-B-38."

3. a. The Modernization Program for the HD of Boston was prepared by a Board of Officers appointed in conformity with instructions contained in paragraph 10, Secret Letter, AGO September 25, 1940, file AG 660.2 (9-11-40) M-WPD-M subject: "Modernization of Harbor Defenses, Continental United States."

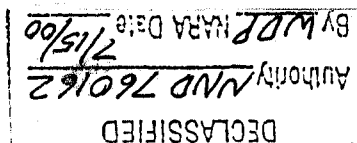
b. The Modernization Program for the HD of Boston was approved by the Chief of Engineers in 7th Indorsement, dated September 17, 1942 to Secret Letter, subject: "Local Board Proceeding Modernization Harbor Defenses of Boston," Headquarters First Coast Artillery District, dated September 2, 1942, file AG 660.2.

4. a. This revision of Annexes to Harbor Defense Project, Harbor Defenses of Boston was directed in paragraph 2 of letter, "Preparation of Supplements to Harbor Defense Projects," Eastern Defense Command, July 10, 1943, CA 660.2/992.

b. This revision of Annexes to Harbor Defenses Project, Harbor Defenses of Boston, is approved as modified by inclosure to letter, Army Service Forces, SPOPS 660, dated 18 December 1944, subject: "Supplement to the Harbor Defense Project, Harbor Defenses of Boston."

- 6 -

SECRET



SECRET

ANNEX A

ARMAMENT

SECRET

DECLASSIFIED
Authority NND 760162
By WDP/HARA Date 7/15/00

ANNEX "A", INDEX

SECTION I - GENERAL

- Par. 1 Basic Project
- Par. 2 Purpose of Supplement
- Par. 3 Mission: Harbor Defenses of Boston
- Par. 4 Tactical Organization

SECTION II - SEACOAST ARTILLERY

- Par. 5 Armament
 - a. Retained Project Batteries of the Modernization Program
 - b. Batteries authorized for Exclusion from the Basic Project
- Par. 6 a. War Reserve and Battle Allowances of Ammunition
 - b. Ammunition Shipment and Safety Regulations

SECTION III - MISCELLANEOUS

- Par. 7 Defense Against Motor Torpedo Boats
- Par. 8 Protective Concealment
- Par. 9 Government owned and leased land
- Par. 10 Land Acquisition

EXHIBITS

- 1-A - Tactical Organization
- 2-A - Current Tactical Organization
- 3-A - Location of Army Controlled Land
- 4-A - Location of Elements
- 5-A - Fields of Fire, Batteries 8" and Larger
- 6-A - Fields of Fire, Batteries Less than 8" except AMTB Batteries
- 7-A - Fields of Fire, AMTB Batteries

SECRET

SECTION I - GENERAL

2

SECRET

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

1. Basic Project: The basic project for the Harbor Defenses of Boston as authorized by the War Department together with modifying actions are cited in paragraph 1, under "Authorities." (Page 5)

2. Purpose of Supplement:

This supplement amplifies the Basic Project and is intended to furnish a concise record of the status both of existing harbor defense fortification construction and equipment, and of new or modified construction which has been approved by the War Department for future accomplishment. One of the principal purposes is to provide the basis for advance procurement of funds and materials necessary to complete approved items. A second important purpose is to make available, to those concerned, information of a technical and tactical nature which is not otherwise available in usable form.

3. Mission: Harbor Defenses of Boston:

- a. To prevent bombardment of harbor facilities and shipping by naval gunfire.
- b. To insure free ingress and egress for our ships.
- c. To deny access to or use of the harbor by enemy vessels.
- d. To support the defense against landing attack within range of the harbor defense weapons.

4. Tactical Organization:

a. The tactical organization for the Harbor Defenses of Boston is shown on exhibit 1-A. Under the Harbor Defense Commander, a north group and a south group control all armament except AMTB and AA guns and the mine batteries. Each of these two groups (C1 and C2) is composed of two battalions, a primary gun battalion (G1 and G7) and a six-inch gun battalion (G2 and G6). The 90mm and 3-inch sea-coast batteries are assigned a primary mission of defense against motor torpedo boats and are controlled from a battalion command post (G4) which maintains liaison with the AACCP (G3) and disseminates intelligence of air and sea activity. The mine battalion command post (G5), functioning directly under the HDCP, control thirty (30) mine groups assigned to two (2) mine batteries. No guns are assigned this battalion. Protection of the mine fields will be effected by the coordinated fire of the gun battalions. The HECPP has liaison facilities to the mine, AA, and AMTB battalion command posts. Since all project batteries are not complete and personnel is not available to man them when complete, a current tactical organization is in effect in this harbor: this organization adheres to the ultimate organization as closely as possible. The current tactical organization is shown on exhibit 2-A.

b. Cooperative arrangements with the Navy are secured through higher Army command echelons and through the HECPP. Adequate communications exist to these facilities. Cooperative arrangements with the Air Corps are secured through higher Army command echelons and through the AACCP to each of which there are adequate communication. Radio sets capable of working Air Corps frequency ranges are provided for each of the primary armament batteries for use in aerial ranging and spotting.

- 3 -

SECRET

DECLASSIFIED
Authority NND 760162
BY WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

c. All project armament of this harbor defense is completed or under construction. A list of armament in order of tactical importance follows:

- | | | | |
|-----|---------|-----|----------|
| 1. | Murphy | 13. | McCook |
| 2. | Long | 14. | Basinger |
| 3. | Gardner | 15. | Bumpus |
| 4. | Jewell | 16. | Williams |
| 5. | 206 | 17. | Stevens |
| 6. | 208 | 18. | AA #4 |
| 7. | 942 | 19. | AA #1 |
| 8. | 944 | 20. | AA #2 |
| 9. | 941 | 21. | AA #3 |
| 10. | 945 | | |
| 11. | 943 | | |
| 12. | Whipple | | |

- 4 -

SECRET

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

SECTION II - SEACOAST ARTILLERY

5

SECRET

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

5. Armament.

5. a.

RETAINED PROJECT BATTERIES OF THE MODERNIZATION PROGRAM								
TAC. NO.	LOC NO.	NAME OR CONST. NO.	LOCATION	NO. & CAL. OF GUNS	MODEL		COMPLE- TION DATE	EXHIBIT NO. OF FIELD OF FIRE
					GUNS	MOU T		
2	114	208	4th Cliff	2-6"	M1	M4	Complete	5B1
3	117	Bumpus	Ft Andrews	2-3"	1902M1	1902	Complete	5B2
4	117	McCook	Ft Andrews	2-6"	1900	1900	Complete	5B3
5	118	Long	Ft Duvall	2-16"	1919M3	1919	Complete	5B4
6	122	Stevens	Ft Strong	2-3"	1902M1	1902	Complete	5B5
7	122	Basinger	Ft Strong	2-3"	1902M1	1902	Complete	5B6
		Taylor		2-3"	1902M1	1902	See Note 1	
9	123	Williams	Ft Standish	3-3"	1903	1903	Complete	5B7
10	123	Whipple	Ft Standish	2-6"	1900	1900	Complete	5B8
11	126	Jewell	Outer Brewster	2-6"	M1	M3	Complete	5B9
12	127	105	Ft Dawes	2-16"				5B10 (See Note 2)
13	127	207	Ft Dawes	2-6"		M3		5B11 (See Note 3)
14	130	Gardner	Ft Ruckman	2-12"	1917	1917	Complete	5B12
15	131	206	East Point	2-6"	1903A2	M1	Complete	5B13
16	131	Murphy	East Point	2-16"	MKII M1	M4	Complete	5B14

AMTB SEE ANNEX A, SECTION 3

Note 1. Battery Taylor has been removed to local central storage pursuant to 9th Indorsement, War Department, AGO, AG 660.2 (20 May 43) OB-S-E, 26 October 1943, on letter, Headquarters, Harbor Defenses of Boston, 660.2, 20 May 1943, subject: "Reclassification of Battery", and is retained as a project battery for (1) spare parts and (2) resiting.

Note 2. Construction and installation on Battery (Constr) No. 105 suspended pursuant to memorandum, WD General Staff, WDGS 8074 20 Nov. 1943, subject: "Curtailement of Seacoast Battery Program (transmitted by letter, Hq. Army Service Forces, SPREMS 660.2, 24 November 1943, same subject).

Note 3. On Battery No. 207, the mounts are installed but the tubes have not yet been furnished.

FORM #1

5. b.

BATTERIES AUTHORIZED FOR EXCLUSION FROM THE BASIC PROJECT						
LOC NO.	NAME	LOCATION	NO. & CAL. OF GUNS	MODEL	STATUS OF MAGAZINES & REF EMPLOYMENT NO.	PG. NO.
				GUNS MOUNT		
117	Cushing-Whitman	Ft Andrews	Emplacement and magazines empty			
119	Sanders	Ft Revere	Emplacement and Magazines empty			
119	Ripley	Ft Revere	Emplacement and magazines empty			
120	Stevenson	Ft Warren	Emplacement empty			
121	Bartlett	Ft Warren	Mine explosives storage			
123	Morris	Ft Standish	Emplacement and magazine empty			
124	Terrill	Ft Standish	Emplacement empty Btry 943 uses magazine			
128	Lincoln	Ft Banks	Emplacement empty HDCP uses magazines			
128	Kellogg	Ft Banks	Emplacement empty Ord Storage in magazine			
129	Winthrop	Ft Heath	Emplacement empty Ord Storage in magazines			

Letter, WD AG 660.2 (9-11-40) M-WPD-M, dated September 25, 1940, Subject: "Modernization of Harbor Defense Projects, Continental United States," authorizes the above listed batteries to be excluded from the project upon completion of the Modernization Program.

Guns and carriages of Cushing-Whitman, Kellogg, Lincoln, Morris, and No. 1 and 2 of Bartlett have been salvaged under authority of letter, Hq. New England Sector, subject: "Disposal of Batteries," dated 11-6-42, approved by WD in 2nd Indorsement dated 12-15-42, file AG 662 (11-6-42) OB-S-SPDDO.

Guns and carriages 3 and 4 of Bartlett have been salvaged under authority of letter, Hq. New England Sector, dated 7-27-42, Subject: "Salvage of Obsolete or Damaged Equipment" as approved by WD in memorandum to Chief of Ordnance, dated 11-4-42.

Authority for salvage of the carriages and return of the tubes to Ordnance of Battery Terrill is contained in letter, Hq. Harbor Defenses of Boston, dated 3-3-43, Subject: "Salvage of Armament, Battery Terrill, Fort Standish," as approved by WD in 3rd Indorsement dated 4-7-43, file AG 400.7 (3-3-43) OB-S-E.

Letter, Hq. HD of Boston, Subject: "Salvage of Armament of Battery Ripley, Fort Revere" dated April 21, 1943 as approved in 3rd Indorsement by WD AG 400.7(4-21-43) OB-S-SPDDO, dated May 27, 1943 authorizes the removal for salvage of the guns and carriages of Battery Ripley.

Letter from WD, Subject: "Seacoast Guns, 6-inch, M1903-05, dated May 25, 1943, file No. AG 472.3 (5-10-43) OB-S-E authorized the removal of the guns and carriages of Battery Sanders.

FORM #2

7

SECRET

DECLASSIFIED
 Authority NND 76012
 BY WDP NARA Date 7/15/00

SECRET

5. b. (Cont'd)

BATTERIES AUTHORIZED FOR EXCLUSION FROM THE BASIC PROJECT						
LOG NO.	NAME	LOCATION	NO & CAL OF GUNS	MODEL GUNS MOUNT	STATUS OF MAGAZINES & REF EMPLOYMENT NO.	PG. NO.
113	Cons 106	Flowers Hill	2-16"	Never constructed		

Letter, subject: "Seacoast Modernization Program", file AG 660.2 (11-12-42) OB-S-E dated November 13, 1942 eliminates this battery from the basic project.

Abandonment, salvage and elimination from the harbor defense project of Battery Winthrop authorized by 3rd Indorsement, Hq. ASF, SPMS, 660.2 (18 Nov. 43) 7 Dec. 1943, subject: "Salvage of Armament of Battery Winthrop Fort Heath, Massachusetts."

Battery Stevenson, Fort Warren was authorized for salvage on 18 March 1944 by Disposition Form OPD, WDGS, OPD 660.2, HD of Boston, (28 Feb 44) 18 Mar 1944, Subject: "Disposal of the Armament of Battery Stevenson, Harbor Defenses of Boston."

FORM #2

SECRET

DECLASSIFIED
Authority NND 760162
7/15/00
By WDP/KARA Date

SECRET

6. a.

WAR RESERVE AND BATTLE ALLOWANCE OF AMMUNITION					
BATTERY OR CONSTRUCTION NO.	NO. OF GUNS	CALIBER AND TYPE	TYPE PROJ.	WAR RESERVE	BATTLE ALLOWANCE
Cons. 208	2	6" BC	HE 90	300	200
			AP 105	400	300
McCook	2	6" BC	HE 90	300	200
			AP 108	900	600
Long	2	16" BC	AP 2100	300	200
Whipple	2	6" BC	HE 90	300	200
			AP 108	900	600
Jewell	2	6" BC	HE 90	300	200
			AP 105	400	300
Cons. 207	2	6" BC	HE 90	300	200
			AP 105	400	300
Cons. 105	2	16" BC	AP 2240	300	200
Gardner	2	12" BC	AP 1070	350	233
			AP 975	100	67
			HE 700	---	90
Cons. 206	2	6" BC	HE 90	300	200
			AP 105	400	300
Murphy	2	16" BC	AP 2240	300	200
Bumpus	2	3" 1902	15# HE	600	400
Stevens	2	3" 1902	15# HE	600	400
Basinger	2	3" 1902	15# HE	600	400
Williams	3	3" 1903	15# HE	900	600
Taylor	2	3" 1902	15# HE	600	400
<p><u>Authority:</u> Letter, 11 February 1944, WD, AG 471 (28 Jan 44) OB-S-</p> <p><u>Subject:</u> "War Reserve Ammunition, Seacoast Artillery.</p>					

FORM #3

SECRET

DECLASSIFIED
Authority AND 76012
BY WDP/NARA Date 7/15/00

SECRET

6 a.

WAR RESERVE AND BATTLE ALLOWANCE OF AMMUNITION					
BATTERY OR CONSTRUCTION NO.	NO. OF GUNS	CALIBER AND TYPE	TYPE PROJ	WAR RESERVE	BATTLE ALLOWANCE

AMTB AMMUNITION ALLOWANCES

1. Allowances of ammunition for AMTB guns is currently contained in letter, EDC, 10 August 1944, file ORD 471/711, subject: "Combat Levels of Ammunition for Ground Units of the Eastern Defense Command in the Continental United States."

2. All magazines for storage of AMTB ammunition are suitable and adequate and satisfactorily comply with provisions of TM 9-1900 in all cases.

FORM # 3

10

SECRET

DECLASSIFIED
Authority NND 760162
BY WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

6. b. Ammunition Shipment and Safety Regulations

(1) All Battle Allowance ammunition will be stored in battery magazines. War Reserve, less Battle Allowance, will be held in storage under control of the Chief of Ordnance at such place as he may designate.

(2) Except as listed below, all ammunition for the Harbor Defenses of Boston should be shipped to the terminus of the Boston and Albany RR at Porter Street Yard, East Boston, Mass.

(a) Ammunition for Battery Long, and the 6" battery at Fourth Cliff should be shipped to Hingham, Mass. via the New York, New Haven, and Hartford railroad.

(b) Ammunition for batteries Gardner, Murphy and the 6" battery at East Point should be shipped to Lynn, Mass. via the Boston and Maine Railroad.

(3) Current storage regulations, as set forth in TM 9-1900, are being complied with in this Harbor Defense without exception.

7.

DEFENSE AGAINST MOTOR TORPEDO BOATS									
TACTICAL NO.	LOC NO.	SITE NO.	NAME OR CONS. NO.	NO. OF GUNS	CAL OF GUNS	TYPE OF MOUNT	COMPLETION DATE	MISSION EXHIBIT	
								PRI	SEC BITS
	119	1-D	941	2	90mm	MLA1	Complete	MTB	AA 7-A-1
				2	90mm	M3			
				2	37mm	M3			
	124	1-A	942	2	90mm	MLA1	Complete	MTB	AA 7-A-1
				2	90mm	M3			
				2	37mm	M3			
	123	1-F	943	2	90mm	MLA1	Complete	MTB	AA 7-A-1
				2	90mm	M3			
				2	37mm	M3			
	127	1-A	944	2	90mm	MLA1	Complete	MTB	AA 7-A-1
				2	90mm	M3			
				2	37mm	M3			
	129	1-A	945	2	90mm	MLA1	Complete	MTB	AA 7-A-1
				2	90mm	M3			
				2	37mm	M3			
3	117	1-B	Bumpus	2	3"	Ped	Complete	MTB	Other 5-B-2
6	122	1-A	Stevens	2	3"	Ped	Complete	MTB	Sea- 5-B-5
7	122	1-E	Basinger	2	3"	Ped	Complete	MTB	borne 5-B-6
9	123	1-A	Williams	3	3"	Ped	Complete	MTB	tar- 5-B-7 gets
The following fixed 3" AA batteries have been designated to defend against motor torpedo boats as a secondary mission:									
	119	1-A	AA #1	3	3"	AA	Complete	AA	MTB 2-E
	123	1-D	AA #2	3	3"	AA	Complete	AA	MTB 2-E
	122	1-B	AA #3	3	3"	AA	Complete	AA	MTB 2-E
Authority: Letter, WD AGO 660.2, April 17, 1943, Subject: "Defense of Harbors Against Motor Torpedo Boats."									

FORM #4

13

SECRET

DECLASSIFIED
 Authority NND 760162
 BY WDR/NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

8. Protective Concealment: Authority for protective work within the Harbor Defenses is set forth in the references listed below. A description of the project and of the elements covered follows the list of authorities.

a. Authorities.

- (1) Circular Letter No. 1086: "Disperson, Concealment and Camouflage of All Camps and Stations." File No CE 467 COF. January 17, 1942.
- (2) War Department Directive: "Passive Protection Measures." File No. AG 381 (2-25-42) OB-S-SPAMC-M. March 5, 1943.
- (3) Supplemental Letter to (2) (same title). File No AG 381 (4-2-43) OB-S-SPAMC-M.

b. Description and elements covered.

- (1) The plan for protective concealment of the Harbor Defenses of Boston has been a development of the emergency camouflage project set up by this command based on the recommendations of a survey conducted under the Chief of Engineers. Most of the work specified has been accomplished. In general, the camouflage plan approved by these authorities consists of treating the fixed seacoast installations in the Harbor Defenses with approved protective concealment measures so that identity would be concealed from aerial observation or so blended into the adjacent terrain that true significance would not be apparent. Tone-down painting, garnished nets, and various types of camouflage deception have been utilized in accomplishing these objectives, depending on the nature of each position and its surroundings.
- (2) Outdated and even abandoned batteries cannot be omitted from treatment in this project, in a majority of cases, because of their close proximity to new armament positions. It is vital that camouflage of seacoast artillery not be limited to new installations and modern armament, according to the present understanding of this subject, unless older elements are considerably removed from modern ones. The probability that enemy intelligence has complete files on the location and nature of previously constructed positions does not obviate the need for reasonably effective camouflage in such cases. Failure to quickly recognize and identify the target may defeat the bombing mission.
- (3) The general policy of the Corps of Engineers for this type of armament is that camouflage be effective at altitudes greater than 20,000 feet and lateral distances in excess of 4½ miles. However, nearly all the installations are reasonably effective at one-half these distances. Furthermore, installations visible from the sea are being camouflaged from lateral detection. Automatic weapons and mobile armament are camouflaged to avoid detection by direct observation below 5,000 feet.

SECRET

- (4) It is not feasible to attempt concealment of sea-coast defenses against indirect observation and detection on aerial photographs. The size and permanence of the positions, most of which long antedate the present war, preclude such an objective. The first objective is concealment from identification at high elevations, the normal operating altitude of bombardment aircraft. Color value in camouflage has been considered less important than securing adequate tone-down and texture qualities. Color is not a significant factor in direct observation or in photography at elevations greater than 10,000 feet.
- (5) The camouflage of new installations is treated as an integral part of construction and is planned and executed under the direction of the Chief of Engineers. Maintenance and improvement of these installations is accomplished by the using troops as each new project comes under Harbor Defense control.
- (6) Existing installations have been camouflaged by troop labor and camouflage maintenance is a responsibility of the using troops. All protective concealment construction which has been or will be accomplished under War Department authorization will be maintained by using troops to assure effectiveness.

SECRET

GOVERNMENT OWNED AND LEASED LAND							
LOC NO.	SITE NO.	NAME	ACRES	ACQUIRED	PURPOSE	REF NO.	PAGE NO.
111	all	Gurnet Point (O)	1.42	5-15-43	Fire Control Stations	1	18
112	all	Brant Rock (O)	.47	1-19-42	Fire control Stations	2	18
112A	all	Holly Hill (L)	1.88		SCR-296	3	18
114	all	Fourth Cliff (O)	48.56	12-5-42	6" Gun Btry	4,5	18
115	1C	Strawberry Pt (O)	.74	1940	SCR and Fire control stations	6	18
	all except 1C	Strawberry Pt (L)	15.42	1943	SCR-296 and Fire control stations	7	18
116	all	Strawberry Hill	.44	7-25-06	SCR-296 and fire control stations	8	18
117	all	Ft Andrews (O)	88	1898 1904	Military Post	9	18
118	all	Ft Duval (O)	8.55	1917	16" Gun Btry	10	18
119	all	Ft Revere (O)	75.07	1897 1898 1901 1906 1924	Military Post	11	18
120	1A	Pt Allerton (O)	.44	6-1-43	SCR-296	12	18
	1B & 1C	Pt Allerton (O)	1.96	1906 1920	SCR-582 and fire control stations	13	18
	1D	Pt Allerton (O)	.85	4-20-43	Fire control stations	14	18
	1E	Pt Allerton (O)	.14	1906	Cable terminal	15	18
121	all	Ft Warren (O)	28	1825	Military Post	16	18
122	all	Ft Strong (O)	65.94	1869 1870 1900	Military Post	17	18
123	all	Ft Standish (O)	62	1825	Military Post	18	19
124	all	Great Brewster (O)	21.7	1917	MTB Battery	19	19
125	all	Calf Island (O)	18.05	1918	SCR-268	20	19
126	all	Outer Brewster (O)	17.5	1913	6" Gun Btry	21	19
127	all	Ft Dawes (O)	100	1906	Military Post	22	19
128	all	Ft Banks (O)	42.89	1890 1942	Military Post	23	19
129	all	Ft Heath (O)	17.2	1890 1894	Military Post	24	19
130	1A	Ft Ruckman (O)	.38	4-20-42	Fire control station	25	19

FORM # 5

SECRET

9

GOVERNMENT OWNED AND LEASED LAND							
LOC NO.	SITE NO.	NAME	ACRES	ACQUIRED	PURPOSE	REF NO.	PAGE NO.
130	2A & all except 1A	Ft Ruckman (O)	45.12	1904 1907	Military Post	26	19
131	all except 1A, 2A and 5A	East Point (O)	29.91	1941 1943	16" and 6" gun Batteries	27	19
	1A & 2A	East Point (O)	1.29	1943	Fire control stations	28	19
	5A	East Point (L)	.51	1943	Fire control stations	29	19
132	1A	Marblehead Neck (O)	.21		Fire control stations	30	19
	2A	Marblehead Neck (O)	.32	5-27-41	Fire control stations	31	19
	3A	Marblehead Neck (O)	1.88	6-18-43	SCR 296 and fire control station	32	19
133	all	Gales Point (O)	.37	9-6-43	SCR 296 and fire control stations	33	20
134	all	Coolidge Pt (O)	.28	12-26-41	Fire Control stations	34	20
134A	all	Eastern Pt	.55		Fire Control stations	35	20
135	all	Emerson Pt	.59	1-7-43	Fire Control stations	36	20
136	all	Halibut Pt	2.22		Fire control stations	37	20
137	all	Castle Hill (O)	17.8		Fire control stations	38	20
		O - owned L - leased					

FORM # 5

17

SECRET

DECLASSIFIED
Authority AND 760162
BY WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

REF NO.	WAR DEPARTMENT AUTHORIZATION
1	GURNET POINT Letter from Sec. of Navy to Sec. of War, dated May 15, 1943, grants Army the right to occupy and use.
2	BRAINT ROCK Letter CE 601.1, Subject: "Acquisition of Land, Marshfield, Mass." approved by W.D. in 2nd Indorsement dated 1-13-42.
3	HOLLY HILL In process of acquisition.
4	FOURTH CLIFF Letter CE 601.1, Subject: "Acquisition of Land at Fourth Cliff, Scituate, Mass." approved by W.D. in 2nd Indorsement dated 1-15-42.
5	FOURTH CLIFF Letter CE 601.4, Subject: "Transfer of 2.56 acres of Land to W.D. by Navy Dept." dated Jan. 18, 1943 which inclosed letter from Sec. of the Navy to Sec. of War, in which title to the land is transferred to the War Department.
6	STRAWBERRY POINT Acquired 1940 by condemnation.
7	STRAWBERRY POINT Lease obtained under authority of AR 100-61, Paragraph 12.
8	STRAWBERRY HILL W.D. G.O. No. 6, 1937.
9	FORT ANDREWS Acquired by purchase in 1898 and 1904. Named Ft Andrews by G.O. No. 43, Hq of the Army, A.G.O. 1900
10	FORT DUVALL Acquired under authority of the Act of Congress dated 2-14-1917. Named Ft Duvall in G.O. No. 13, W.D. 1922.
11	FORT REVERE Acquired by purchase and condemnation. Description in W.D. G.O. No. 69, 5-6-1905. Named Ft Revere in G.O. No. 43, Hq. of the Army, A.G.O. 1900.
12	POINT ALLERTON Letter, C.E. 601.1, Subject: "Acquisition of Land at Pt Allerton, Hull, Mass.", approved by W.D. in 2nd Indorsement dated Oct. 19, 1942.
13	POINT ALLERTON W. D. G.O. No. 6, 1937.
14	POINT ALLERTON Letter CE 601.1, Subject: "Acquisition of Land at Point Allerton, Hull, Mass." approved by W.D. in 2nd Indorsement dated 11-12-42.
15	POINT ALLERTON W.D. G.O. No. 6, 1937

FORM # 2a

REF NO.	WAR DEPARTMENT AUTHORIZATION
16	FORT WARREN G.O. No. 32, Hq of the Army, Adjutant General's Office, 1833.
17	FORT STRONG Acquired under authority of Act of Congress, 28 Mar 1867 and by condemnation. G.O. No. 134, Hq of the Army, Adjutant General's Office, 1899.
18	FORT ST. DISH G.O. No. 43, Hq of the Army, Adjutant General's Office 1900.
19	GREAT BREWSTER G.O. No. 6, W.D. 1937
20	GOLF ISLAND Act of Congress dated August 18, 1890 and act of Congress dated February 14, 1917, G.O. No. 6, W.D. 1937.
21	OUTER BREWSTER W.D. AGO G.O. No. 6 1937.
22	FORT DAVES Act of Congress, June 25, 1906 and W.D. G.O. No. 1, 1941
23	FORT BANKS Act of Congress, August 18, 1890, Act of Congress, March 15, 1904. W.D. G.O. No. 12, January 15, 1908; W.D. G.O. No. 134, 1899.
24	FORT HEATH Act of Congress, August 18, 1890, W.D. G.O. No. 137, 1908 and W.D. G.O. No. 43, 1900
25	FORT RUCKMAN Letter C.E. 601.1, Subject: "Acquisition of Land, Nahant, Mass." approved by W.D. in 2nd Indorsement dated April 8, 1942.
26	FORT RUCKMAN W.D. G.O. No. 13, 1922.
27	EAST POINT Act of Congress, July 2, 1917 and Act of Congress, June 13, 1940.
28	EAST POINT Letter C.E. 601.1, Subject: "Acquisition of Land, East Point, Nahant, Mass." approved by W.D. in 2nd Indorsement dated 2-2-43. Letter, C.E. 601.1, Subject: "Acquisition of Land, East Point, Nahant, Mass." approved by W.D. in 2nd Indorsement dated 12-5-42.
29	EAST POINT Lease under authority of AR 100-61 paragraph 12.
30	MARBLEHEAD NECK Letter, C.E. 601.1, Subject: "Acquisition of Land, Marble- head Neck, Mass." approved by W.D. in 2nd Indorsement dated 2-2-43.

FORM # 2a

SECRET

REF NO.	WAR DEPARTMENT AUTHORIZATION
31	<p>MARBLEHEAD NECK Letter, C.E. 601.1, Subject: "Acquisition of Land, Marblehead Neck, Mass." approved by W.D. in 2nd Indorsement dated 2-6-41.</p>
32	<p>MARBLEHEAD NECK Letter, C.E. 601.1, Subject: "Acquisition of Land, Marblehead Neck, Mass." approved by W.D. in 2nd Indorsement dated 2-2-43.</p>
33	<p>GALES POINT Letter, C.E. 601.1, Subject: "Acquisition of Land, Gales Point, Beverly, Mass." approved by W.D. in 2nd Indorsement dated 2-2-43.</p>
34	<p>COOLIDGE POINT Letter, C.E. 601.1, Subject: "Acquisition of Land, Coolidge Point, Manchester, Mass." approved by W.D. in 4th Indorsement dated 2-12-41</p>
35	<p>EASTERN POINT Letter C.E. 601.1, Subject: "Acquisition of Land, Eastern Point, Gloucester, Mass." approved by W.D. in 2nd Indorsement dated 2-2-43.</p>
36	<p>EMERSON POINT In process of acquisition</p>
37	<p>HALIBUT POINT Teletype from C.E., dated June 29, 1943, authorizes leasing under AR 101-61 paragraph 12.</p>
38	<p>CASTLE HILL In process of acquisition.</p>

FORM # 2a

SECRET

DECLASSIFIED
Authority NND 760162
BY WDP MAA Date 7/15/00

SECRET

10. Land Acquisition: No additional real estate is required for the armament of the basic project.

21

SECRET

DECLASSIFIED
Authority NND 760162
By WDP HARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

H D C P
FORT BANKS

H E C P
FORT DAWES

AWS

AAIS

G3
AACP
FT. BANKS

AA NO. 1
FT. REVERE

AA NO. 2
FT. STANDISH

AA NO. 3
FT. STRONG

AA NO. 4
FT. RUCKMAN

BTRY. NO. 941
FT. REVERE

BTRY. NO. 942
GREAT BREWSTER

BTRY. NO. 943
FT. STANDISH

BTRY. NO. 944
FT. DAWES

BTRY. NO. 945
FT. HEATH

BUMPUS 2-3" PM.
FT. ANDREWS

WILLIAMS 3-3" PM.
FT. STANDISH

STEVENS 2-3" PM.
FT. STRONG

BASINGER 2-3" PM.
FT. STRONG

G4
AMTB
FT. DAWES

G5
MINES
FT. WARREN

SOUTH MINE FIELD
FT. WARREN

NORTH MINE FIELD
FT. STRONG

NORTH
C-2
FT. RUCKMAN

G6
EAST
POINT

CONST. NO. 206 2-6" B.C.
EAST POINT

CONST. NO. 207 2-6" B.C.
FT. DAWES

(DELIVERY OF TUBES DEFERRED)

G7
EAST
POINT

GARDNER 2-12" B.C.
FT. RUCKMAN

MURPHY 2-16" B.C.
EAST POINT

SECRET

REVISED
DATE
31 JAN 45

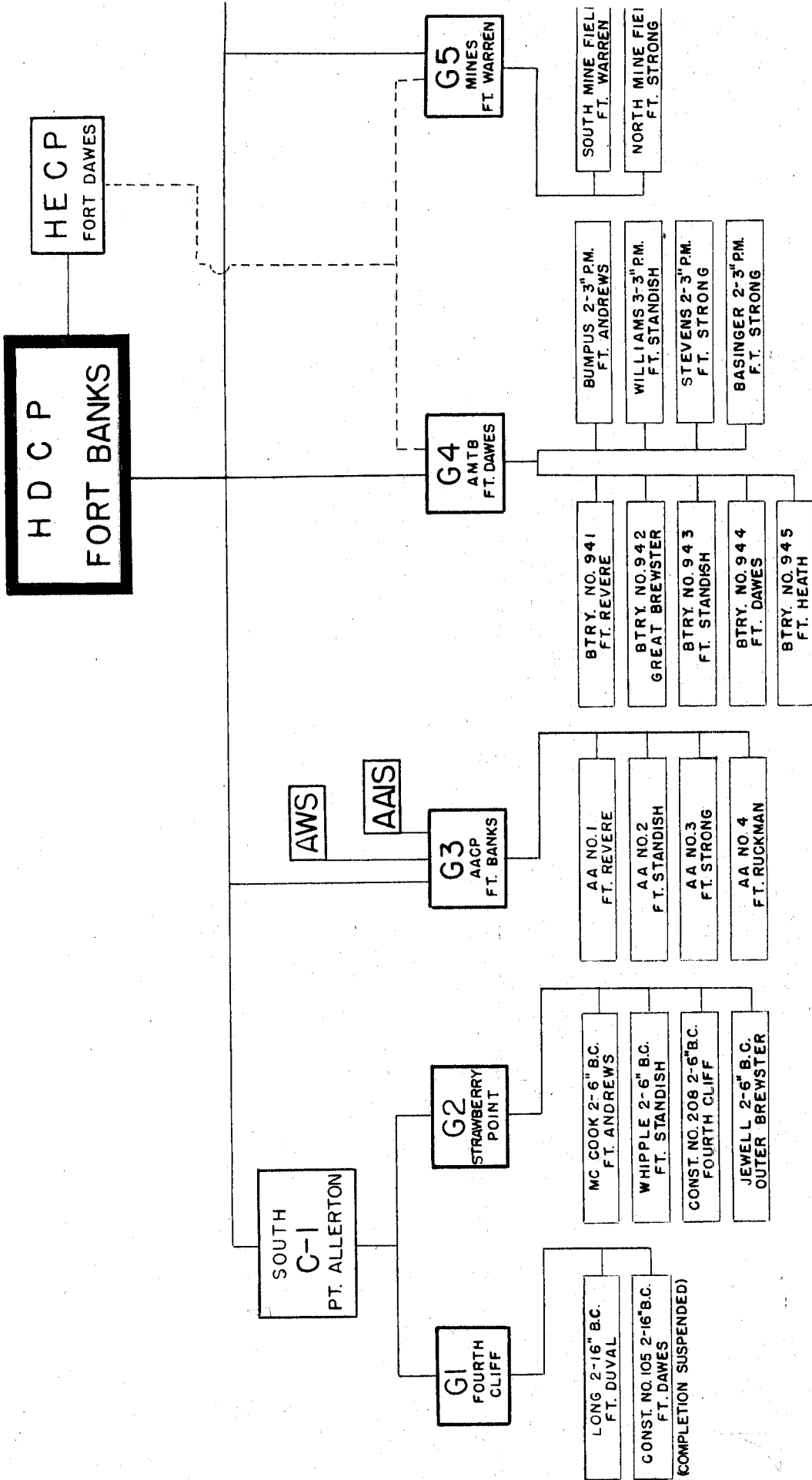
HARBOR DEFENSES OF
BOSTON

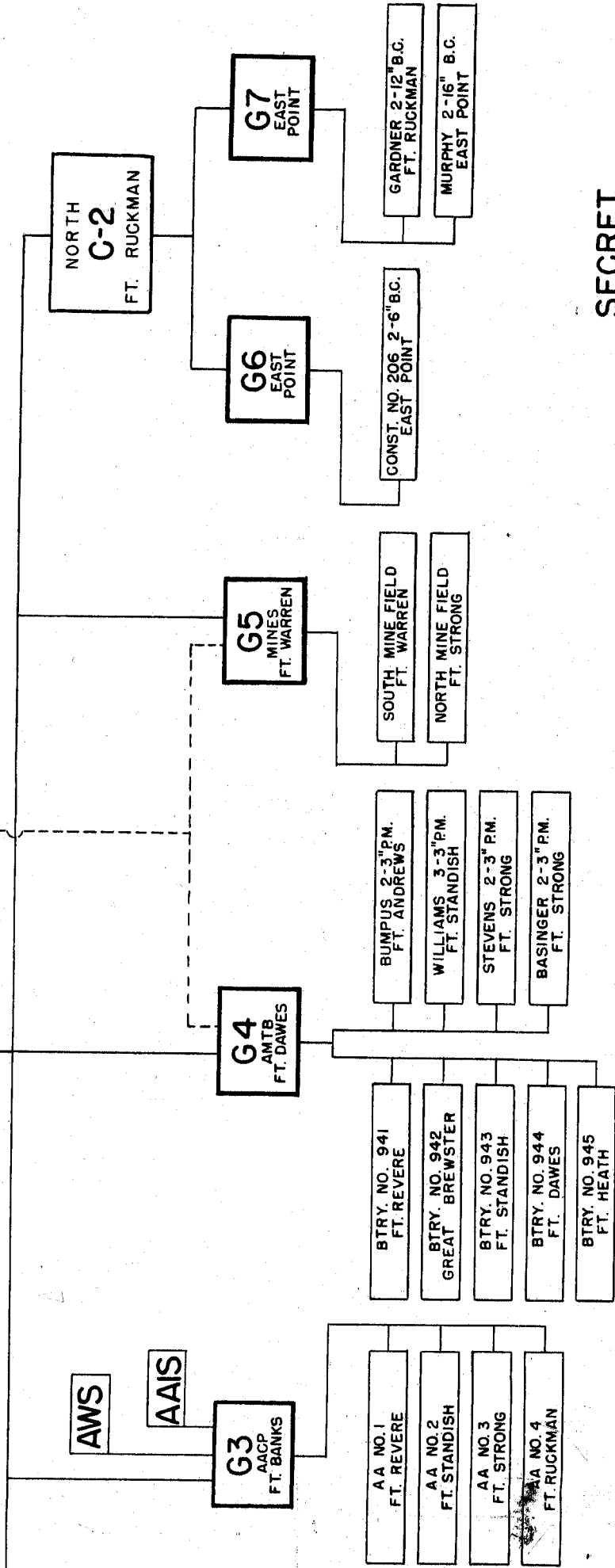
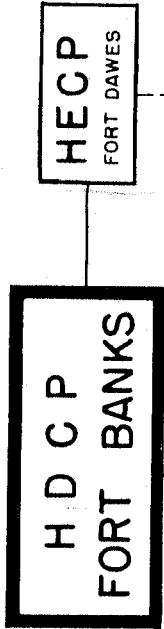
TACTICAL ORGANIZATION

PREPARED BY
H. D. OF BOSTON

DATE 7-1-43
EX. NO. 1A

DECLASSIFIED
Authority AND 760162
By WDP HARA D: 10
7/15/00

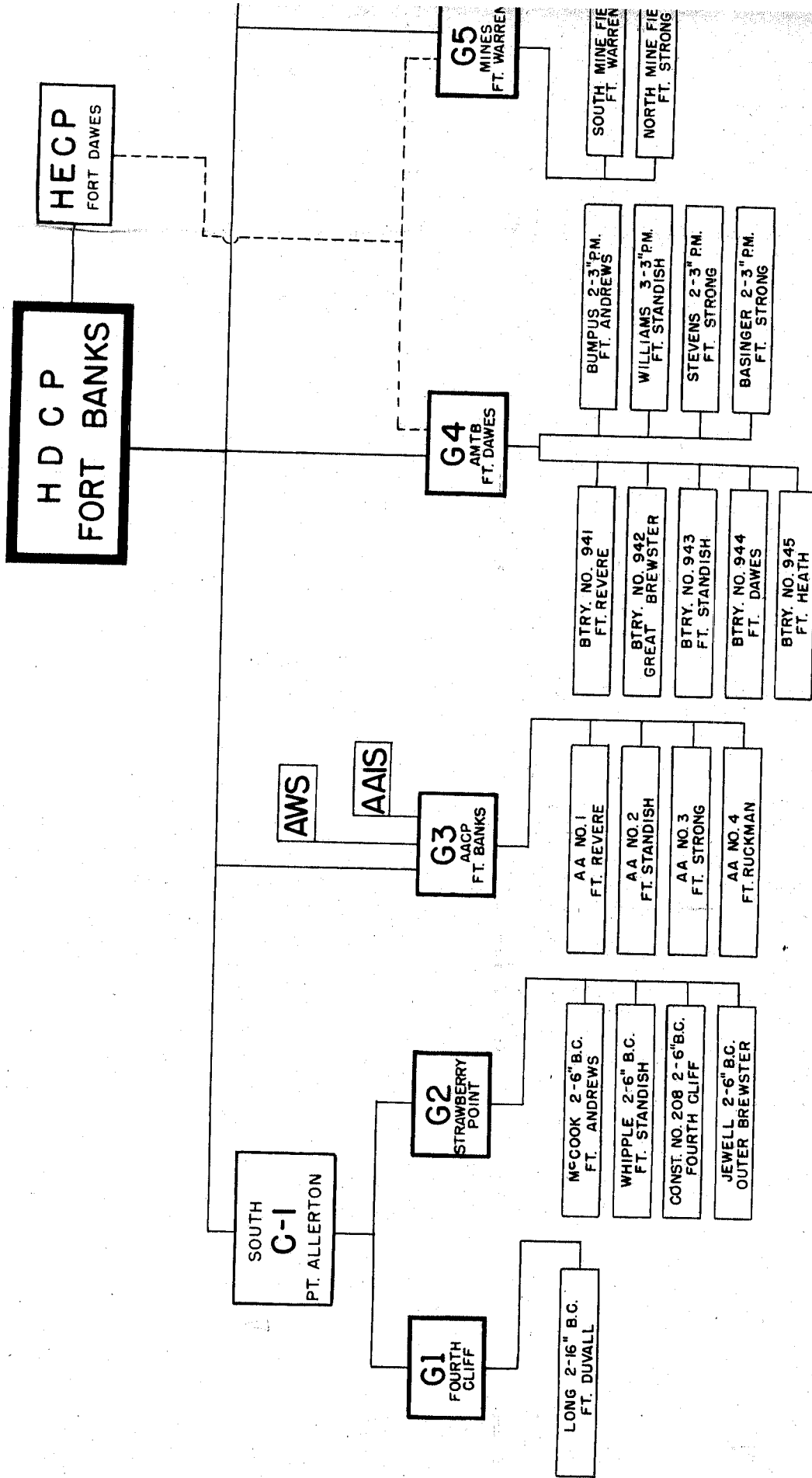


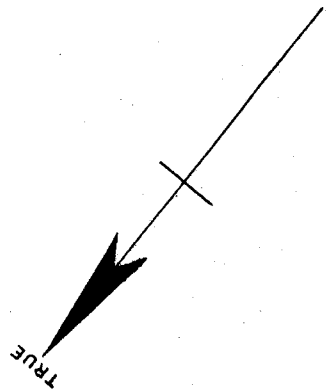


SECRET

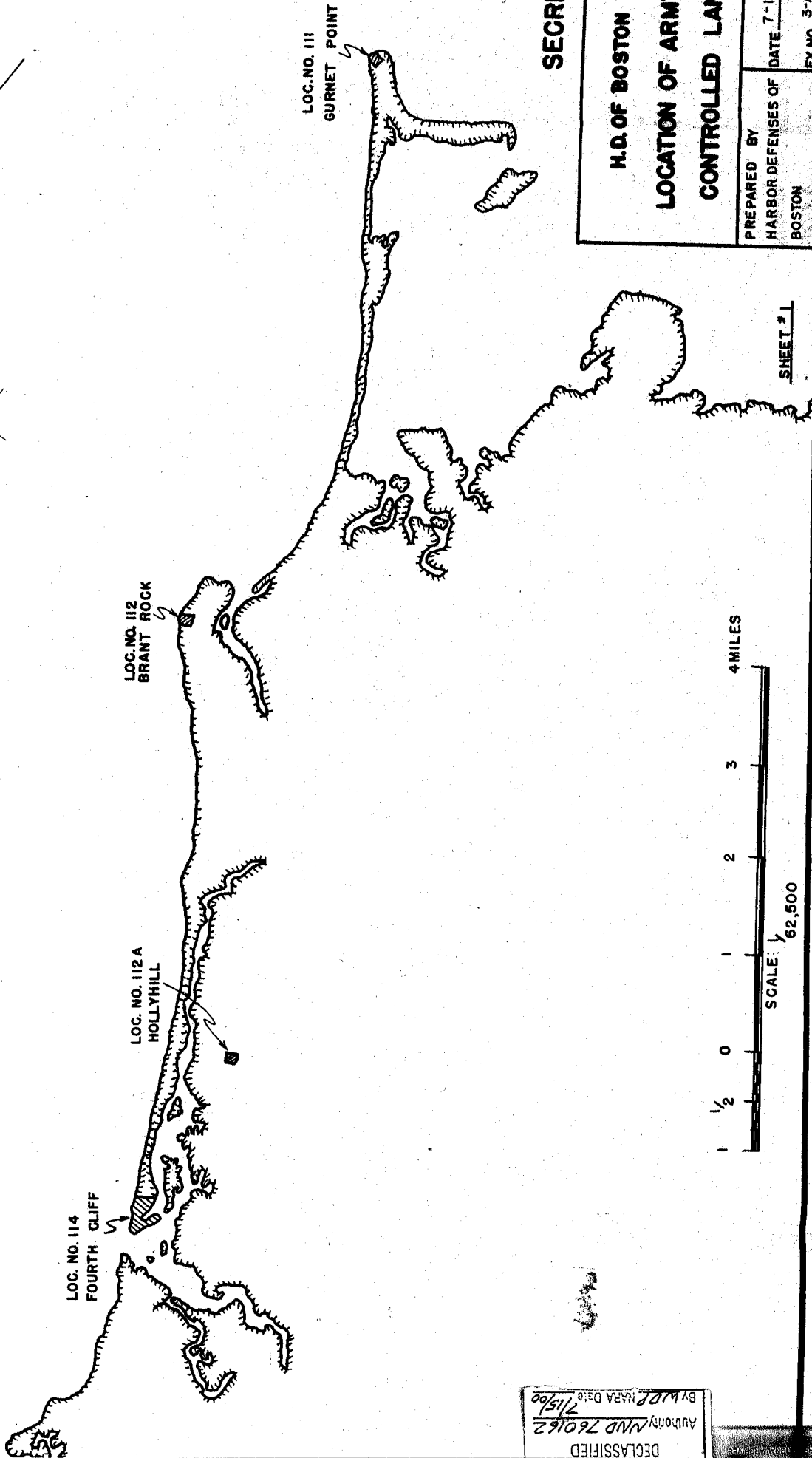
REVIS	31 JAN
DAT	
HARBOR DEFENSES OF BOSTON	
CURRENT TACTICAL ORGANIZATION	
PREPARED BY: H.D. OF BOSTON	DATE 7-1-43 EX. NO. 2A

DECLASSIFIED
Authority NND 760162
Date 2/15/00
By WDP NARA





70° 30'
42° 5'

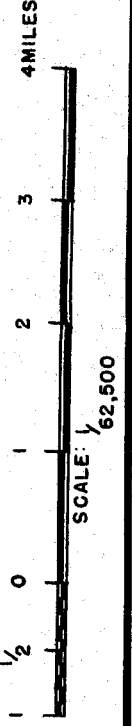


SECRET

H.D. OF BOSTON		REVISED DATE
LOCATION OF ARMY		
CONTROLLED LAND		
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 3-A-1

DECLASSIFIED
Authority NND 760162
By WDR/MSRA Date 7/15/60

SHEET 21



LOC. NO. 112
BRANT ROCK

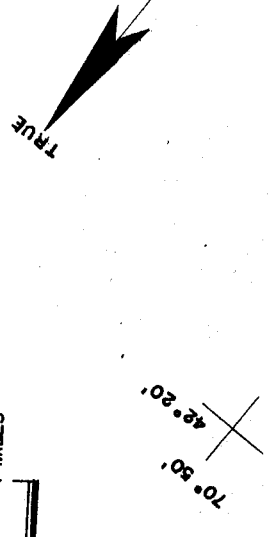
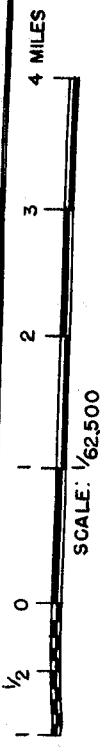
LOC. NO. 112 A
HOLLYHILL

LOC. NO. 114
FOURTH CLIFF



70° 30'
42° 5'

70° 30'
42° 10'



LOC. NO. 131
EAST PT.

LOC. NO. 130
FT. RUCKMAN

LOC. NO. 126
OUTER BREWSTER

CALF I.

LOC. NO. 124
GREAT BREWSTER

C. NO. 129
HEATH

LOC. NO. 128
FT. BANKS

LOC. NO. 123
FT. STANDISH

LOC. NO. 127
FT. DAWES

LOC. NO. 119
FT. REVERE

FT. WARREN
LOC. NO. 121

LOC. NO. 122
FT. STRONG

LOC. NO. 117
FT. ANDREWS

LOC. NO. 120
PT. ALLERTON

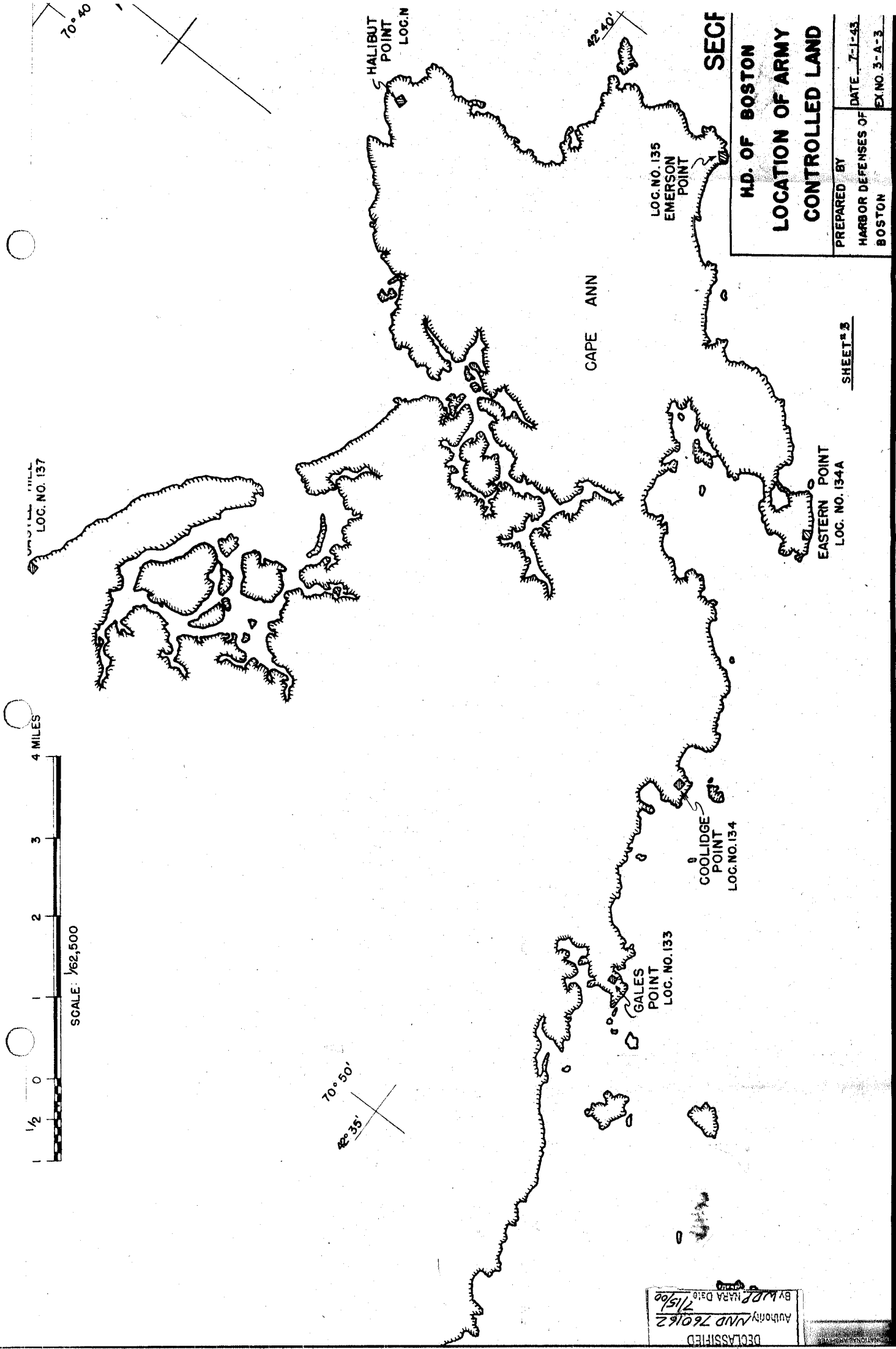
LOC. NO. 116
STRAWBERRY HILL

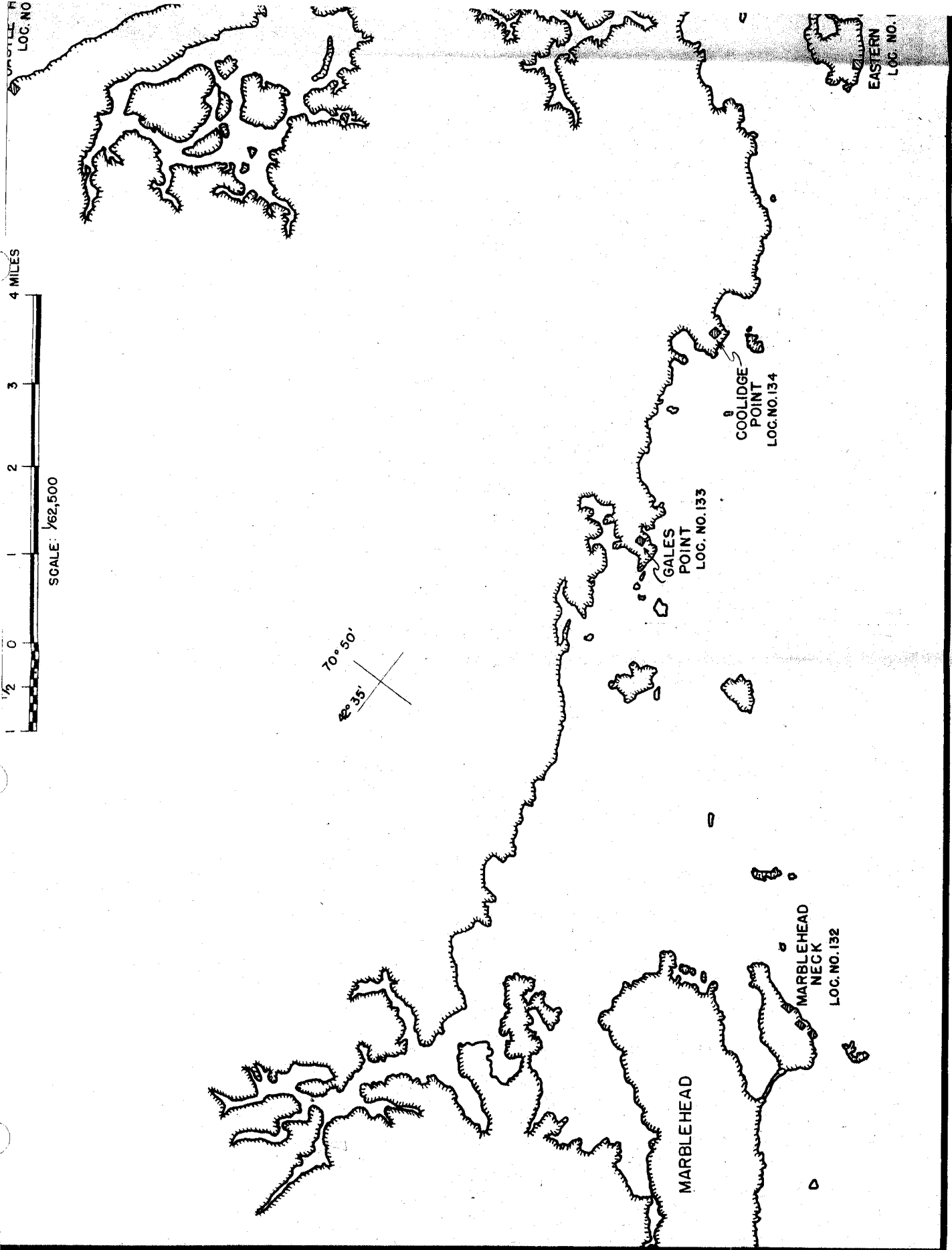
LOC. NO. 118
FT. DUVAL

LOC. NO. 115
STRAWBERRY PT.

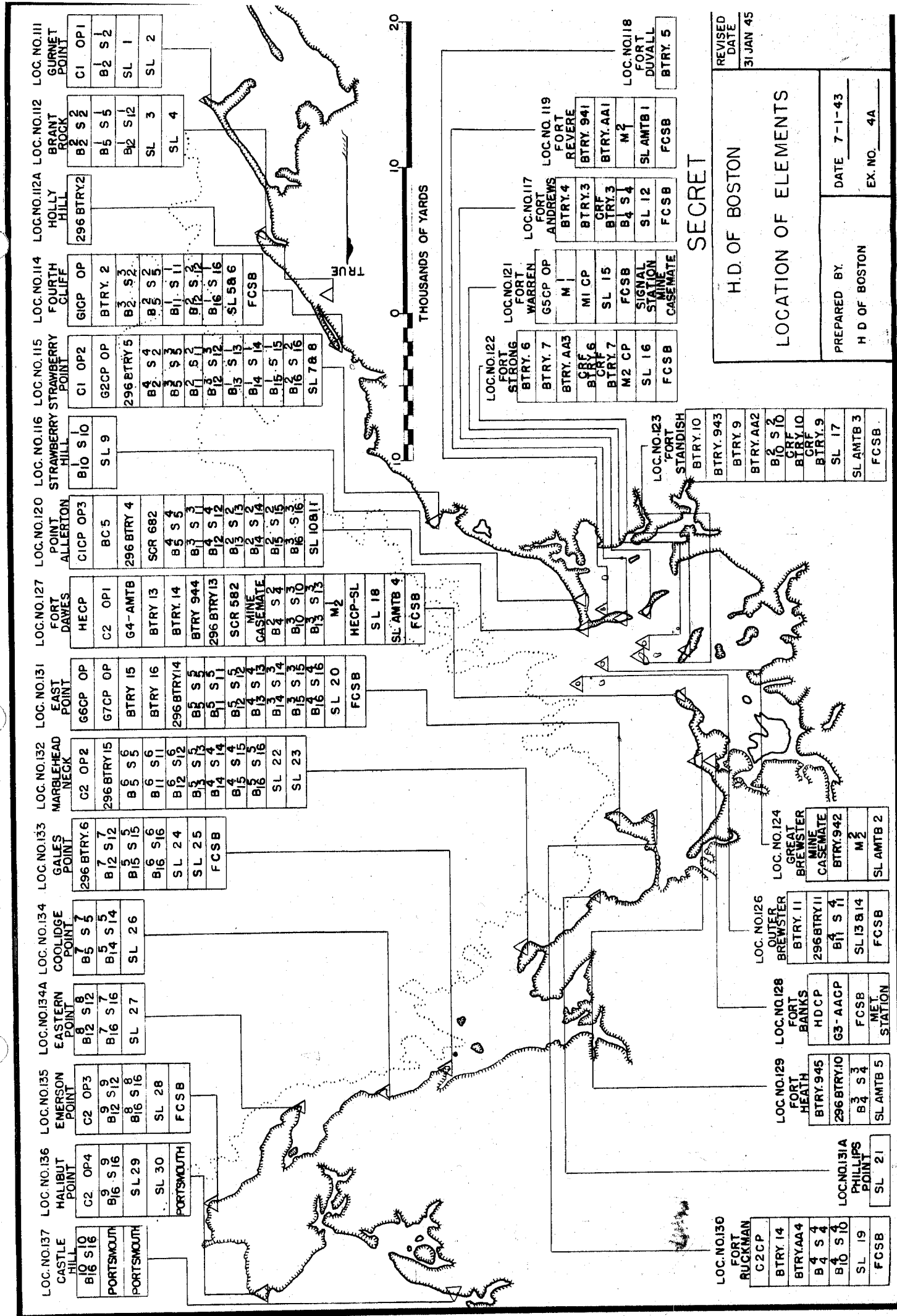
SECRET

H.D. OF BOSTON		REVISED
LOCATION OF ARMY		DATE
CONTROLLED LAND		DATE 7-1-43
PREPARED BY	HARBOR DEFENSES OF	EX. NO. 3-A-2
BOSTON		





DECLASSIFIED
Authority NND 760162
By WDR/NARA Date 7/15/00



SECRET

H.D. OF BOSTON

REVIS
DATE
31 JAN 45

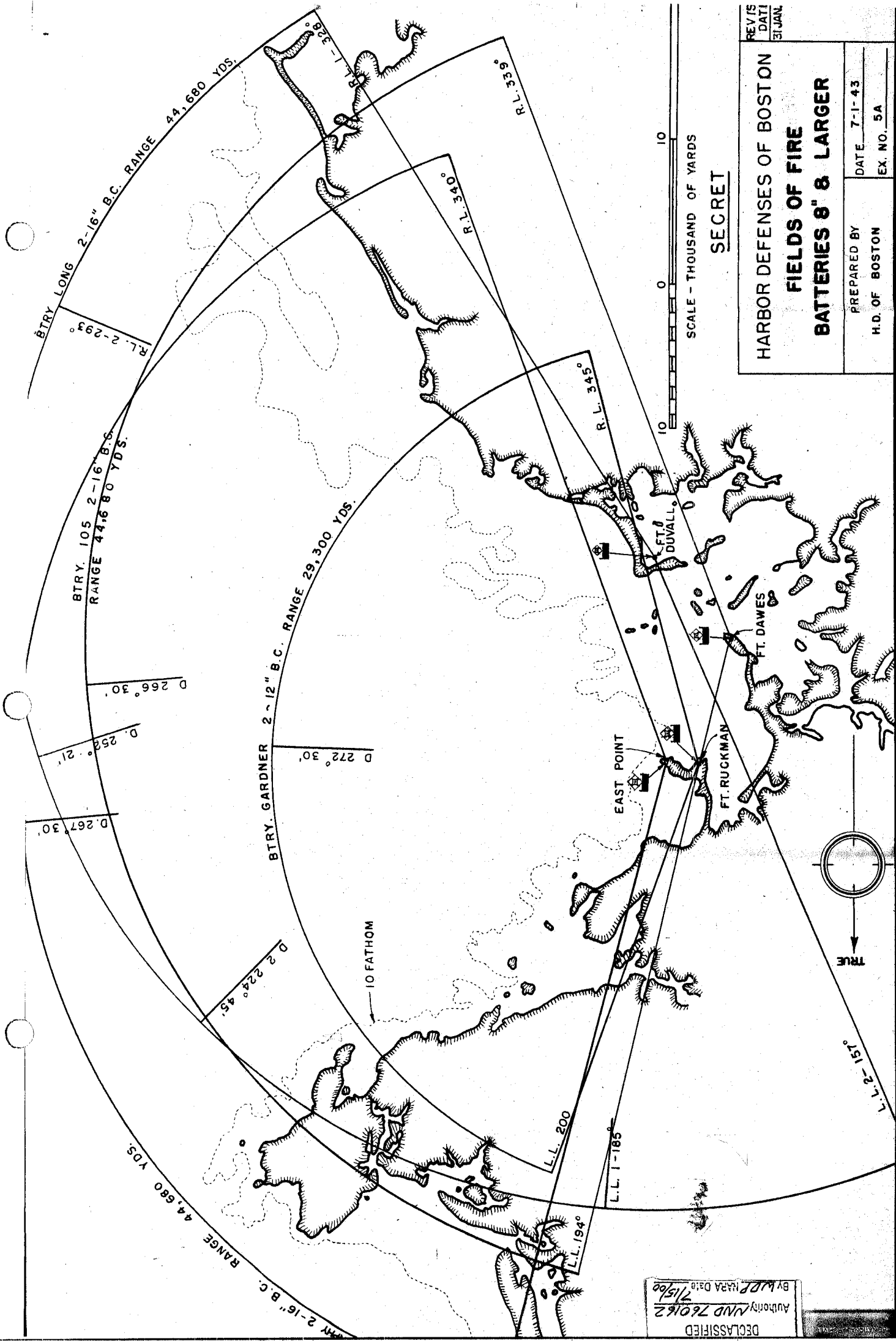
LOCATION OF ELEMENTS

PREPARED BY:

H D OF BOSTON

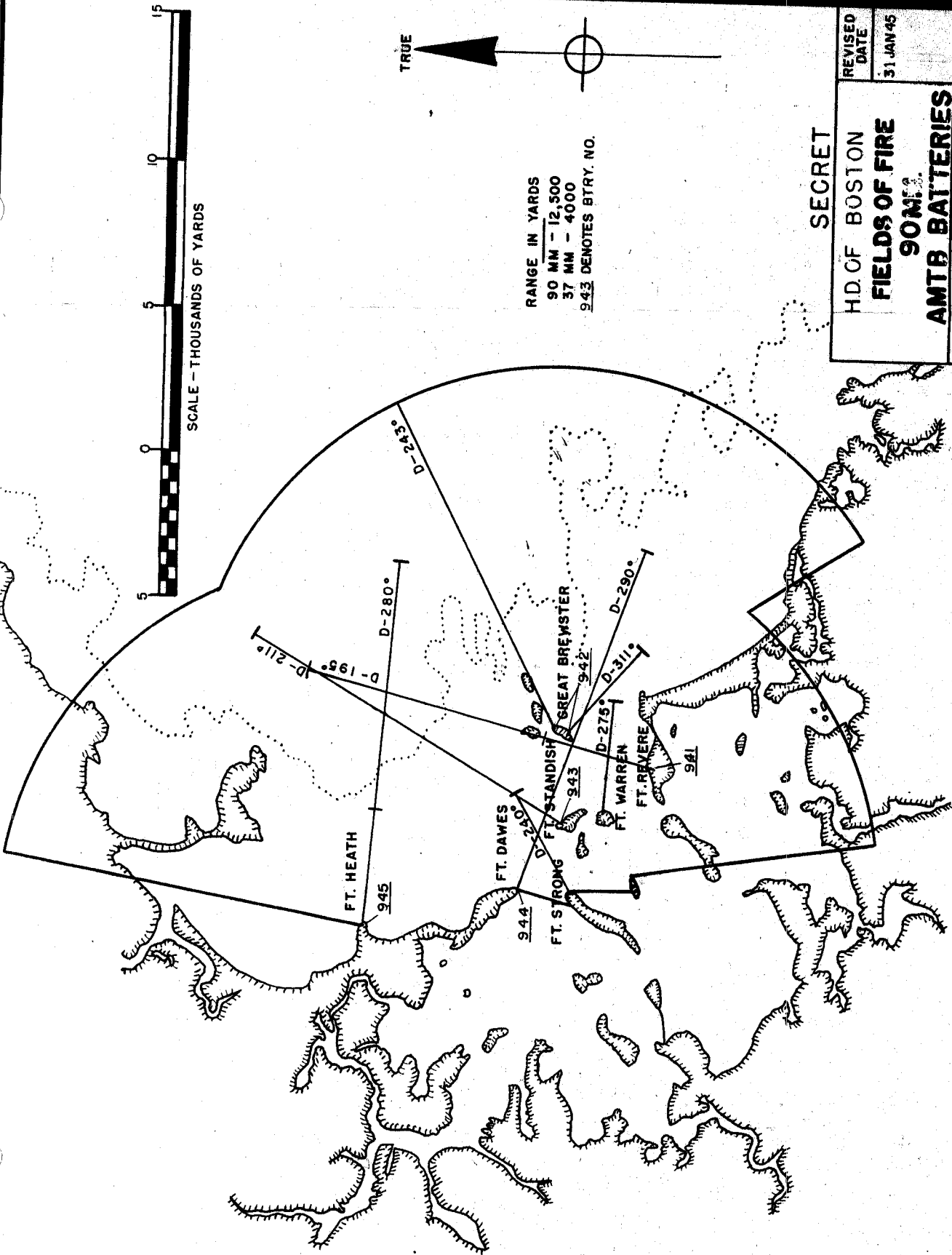
DATE 7-1-43

EX. NO. 4A



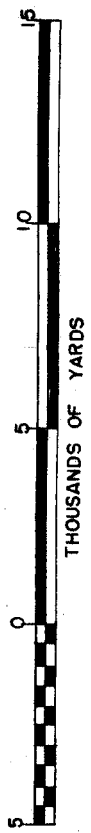
REVISED DATE 31 JAN	
HARBOR DEFENSES OF BOSTON FIELDS OF FIRE BATTERIES 8" & LARGER	
PREPARED BY H.D. OF BOSTON	DATE 7-1-43 EX. NO. 5A

DECLASSIFIED
Authority NND 760162
BY WDP NARA Date 2/15/60

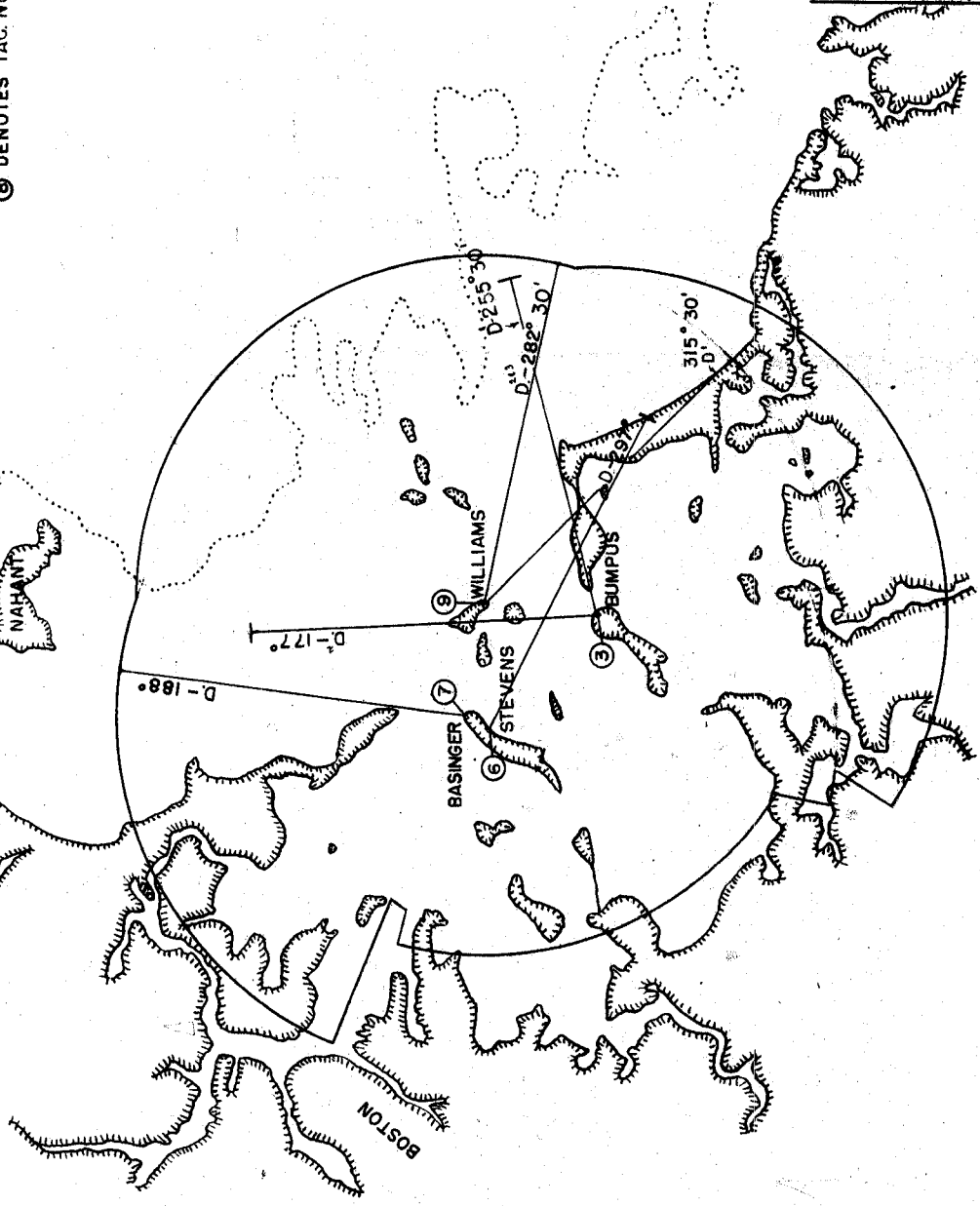
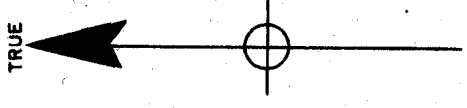


SECRET	
HD. OF BOSTON	REVISED DATE 31 JAN 45
FIELDS OF FIRE 90MM ²	
AMTB BATTERIES	DATE 7-1-43
PREPARED BY HARBOR DEFENSES OF BOSTON	EX. NO. 7-A-1

HID OF BOSTON		REVISED DATE
FIELDS OF FIRE		31 JAN 45
3" SC.		
AMTB BATTERIES		
PREPARED BY	DATE	EX. NO.
HARBOR DEFENSES OF BOSTON	7-1-43	7-A-2



③ DENOTES TAG NO.



SECRET

ANNEX B

FIRE CONTROL

SECRET

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00

SECRET

ANNEX B - INDEX

- Par. 1 General
- Par. 2 Orientation Data
- Par. 3 Command and Fire Control Elements Excluding Batteries
- Par. 4 Post Telephone System
- Par. 5 Teletype
- Par. 6 Radio Communications
- Par. 7 Battery Fire Control Elements
- Par. 8 Datum Points
- Par. 9 Land Acquisition
- Par. 10 Radar Equipment

EXHIBITS

- 1-B - Local Plane Coordinate System Grid
- 2-B - Radio Net
- 3-B - Datum Points
- 4-B - Arc of Detection - Radars
- 5-B - Fields of Fire - Individual Batteries
- 6-B - Circuit Diagram
- 7-B - Cable routings
- 8-B - Schematic Cable Diagram
- 9-B - Fire Control Installations

SECRET

1. General: Fire control equipment is subject to the inherent limitations of the particular type used, its physical location, and effects of weather variations.

a. Plotting boards require an angle of intersection at the target of 15° or greater. However, this limitation has been reduced in importance by use of multiple base end observing stations so that all important fields of fire are adequately covered by base lines which permit of accurate plotting of the target. The 150 intersections are plotted on the exhibits of the fields of fire of each battery. Base line data is computed for successively numbered base end stations; however, within the limits of visibility and the operational limits of the plotting boards, various base lines may be utilized.

b. DPF's are effective sources of fire control data when sited above 90' elevation. Many coastline sites have sufficient elevation so that the required height has been achieved by medium sized towers and low cottage type observation stations. Pending actual installation of M1 and M2 DPF's full use should be made of older type DPF's as additional means of securing emergency fire control data.

c. Radars have been installed on commanding heights atop a special 100' steel tower or on an existing high observation station. Radars have been primarily assigned to that battery whose field of fire is best served by the arc of detection of the radar. Additional assignments of the radar sets to batteries have also been made. These assignments thicken and extend the coverage of the fields of fire and eliminate or lessen the effects of land masks.

d. Normal limit of local atmospheric visibility is 20,000 yds. Frequent haze, fog, and other conditions of reduced visibility operate to establish an average expectancy of 10,000 yds. or less. Fire control by operation of plotting boards using baselines or DPF's is subject to visibility limits but radar will overcome this weakness provided enemy vessels can be so identified through available intelligence channels or equipment designed for identification purposes.

e. The Navy, Air Forces, and Coast Guard have established agencies and procedures for identification and location of enemy sea borne and air borne craft. This information is available to the Harbor Defense Commander through the higher Army Command echelons, H. E. C. P., and direct communication to the agency involved.

2. Orientation Data:

a. The standard grid system used by the Harbor Defenses of Boston is computed from a Lambert Conformal Conic Projection for the Boston area. This system uses as its central meridian $70^{\circ} 55'$ West Longitude, and it uses as standard parallels $41^{\circ} 57'$ and $42^{\circ} 39'$ North Latitude. The area covered by this system is bounded by $69^{\circ} 56'$ and $71^{\circ} 55'$ West Longitude and by $41^{\circ} 40'$ and $42^{\circ} 50'$ North Latitude.

b. The projection is such that, along the two standard parallels, distances computed by the Lambert coordinates will be equal to the actual geodetic distances. Any computations between the standard parallels will give distances smaller than the actual geodetic distances, and any computations outside the standard parallels will give distances greater than the actual geodetic distances. However, expressed as a ratio, the greatest magnification of scale encountered within the system is 1:100004213, and the greatest reduction of scale encountered within the system is 1:99998142; the ratio is unity at the two standard parallels.

SECRET

c. At any point the scale will be the same in all directions, but only for infinitesimal distances. Along any given parallel, the scale is constant, but it varies from parallel to parallel.

d. Lambert Grid coordinates are computed from the geographic positions by the use of United States Coast and Geodetic Survey tables compiled for the purpose.

SECRET

DECLASSIFIED
Authority NND 760162
By WDP/NARA Date 7/15/00

SECRET

2

ORIENTATION DATA				
LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
			<u>HARBOR DEFENSE COMMAND POST</u>	
128	1A	CP	94,145.75	87,131.42
			<u>HARBOR ENTRANCE CONTROL POST</u>	
127	1-E	CP - OP	96,314.81	83,012.07
			<u>GROUP I</u>	
111	1A	OP 1	128,630.18	40,951.72
115	1D	OP 2	113,699.83	70,905.12
120	1-B	OP 3	102,907.82	77,869.09
120	1-B	CP	102,904.81	77,871.55
			<u>GROUP II</u>	
127	1-I	OP 1	96,275.48	83,502.64
130	1-A	CP	98,554.17	91,480.59
132	3-A	OP 2	107,212.71	100,754.05
135	1-A	OP 3	128,489.00	118,232.11
136	1-A	OP 4	125,426.28	124,215.01
			<u>BATTALION COMMAND POST 1</u>	
114	1-A	CP and OP	119,070.24	59,899.81
			<u>BATTALION COMMAND POST 2</u>	
115	1-B	CP and OP	113,580.40	70,795.29
			<u>BATTALION COMMAND POST 3 - ANTIAIRCRAFT</u>	
128	1-A	AA CP (Center Filter Board)	94,154.17	87,163.37
			<u>BATTALION COMMAND POST 4 - ANTI-MOTOR TORPEDO BOAT</u>	
127	1-E	CP & OP	96,314.81	83,012.07
			<u>BATTALION COMMAND POST 5 - SUBMARINE MINES</u>	
121	1-A	CP and OP	98,919.85	79,517.39
			<u>BATTALION COMMAND POST 6</u>	
131	1-A	CP and OP	100,620.12	91,165.95
			<u>BATTALION COMMAND POST 7</u>	
131	4-A	CP and OP	100,628.16	91,927.81

DECLASSIFIED
 Authority NND 76012
 BY WDP Date 7/15/00

ORIENTATION DATA

LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
112A	1-A	SCR 296 #1 <u>R.D.A.R</u>	119,265.16	56,892.31
115	1-E	SCR 296 #3	113,336.22	70,676.52
116	1-B	SCR 296 #6	103,343.71	75,694.05
120	1-A	SCR 296 #2	102,921.58	77,773.20
126	1-B	SCR 296 #5	103,291.16	81,968.83
127	1-K	SCR 296 #7	96,196.07	83,563.45
129	1-C	SCR 296 #4	95,207.61	87,800.18
131	4-A	SCR 296 #8	100,628.16	91,927.81
132	3-A-1	SCR 296 #9	107,185.86	100,754.12
133	1-A	SCR 296 #10	112,807.65	108,649.27
<u>CONS. 208 TAC NO. 2</u>				
114	1-B	DP No. 1 Gun	119,023.77	60,039.70
114	1-B	BC	119,007.28	60,078.97
111	1-A	B ¹ S ¹	128,630.18	40,951.72
112	1-A	B ² S ²	124,735.60	51,534.99
114	1-C	B ³ S ³	118,969.79	60,182.40
115	1-B	B ⁴ S ⁴	113,581.15	70,794.61
<u>BATTERY BULPUS TAC NO. 3</u>				
117	1-B	DP No. 1 Gun	98,892.76	77,144.84
117	1-E	BC CRF	98,790.91	77,128.96
<u>BATTERY MCCOOK TAC NO. 4</u>				
117	1-C	DP (Center Plug between guns)	98,830.14	77,142.15
117	1-D	BC	98,746.29	77,207.89
117	1-A	B ¹ S ¹	98,592.71	76,795.82
127	1-C	B ² S ²	96,386.94	82,939.55
129	1-B	B ³ S ³	95,262.16	87,786.14
130	1-A	B ⁴ S ⁴	98,554.17	91,480.59

FORM #6

ORIENTATION DATA

LOC NO.	SITE NO.	STATION	COORDINATES	
			X	Y
<u>BATTERY LONG TAC NO. 5</u>				
118	1-A	DP No. 1 Gun	101,853.13	76,932.84
120	1-B	BC	102,904.81	77,871.55
112	1-A	B ¹ S ¹	124,735.60	51,534.99
114	1-C	B ² S ²	118,969.79	60,182.40
115	1-C	B ³ S ³	113,441.28	70,769.03
120	1-B	B ⁴ S ⁴	102,907.82	77,869.09
131	4-A	B ⁵ S ⁵	100,628.16	91,927.81
132	2-A	B ⁶ S ⁶	107,179.54	100,445.90
134	1-A	B ⁷ S ⁷	117,137.56	110,181.86
<u>BATTERY STEVENS TAC NO. 6</u>				
122	1-A	DP No. 1 Gun	96,065.92	80,055.40
122	1-A	BC CRF	96,065.85	80,065.78
<u>BATTERY BASINGER TAC NO. 7</u>				
122	1-E	DP No. 1 Gun	96,381.66	80,656.58
122	1-E	BC CRF	96,405.84	80,649.99
<u>BATTERY WILLIAMS TAC NO. 9</u>				
123	1-A	DP No. 2 Gun	99,243.29	80,077.48
123	1-A	BC CRF	99,266.83	80,105.71
<u>BATTERY WHIPPLE TAC NO. 10</u>				
123	1-B	DP (Center Plug between guns)	99,261.40	80,127.65
123	1-E	BC	98,776.60	80,562.62
116	1-A	B ¹ S ¹	103,365.31	75,679.75
123	1-C	B ² S ²	99,162.19	80,271.75
123	1-G	CRF	99,212.43	80,206.14
127	1-I	B ³ S ³	96,271.35	83,509.86
130	1-A	B ⁴ S ⁴	98,554.17	91,480.59

ORIENTATION DATA

LOC NO.	SITE NO.	STATION	COORDINATES	
			X	Y

BATTERY JEWELL TAC NO. 11

126	1-A	DP No. 1 Gun	103,399.59	81,949.87
126	1-A	BC	103,385.18	81,979.84
114	1-A	B ¹ S ¹	119,068.30	59,903.59
115	1-D	B ² S ²	113,695.72	70,908.97
120	1-D	B ³ S ³	102,808.00	77,817.25
126	1-A	B ⁴ S ⁴	103,386.41	81,974.94
131	4-A	B ⁵ S ⁵	100,628.16	91,927.81
132	1-A	B ⁶ S ⁶	107,125.66	100,153.36

CONS. 105 TAC NO. 12

127	1-B	DP No. 1 Gun	96,547.58	82,477.47
127	1-G	BC	96,391.62	82,989.82
112	1-A	B ¹ S ¹	124,735.60	51,534.99
114	1-B	B ² S ²	119,008.35	60,074.78
115	1-B	B ³ S ³	113,584.59	70,791.45
120	1-C	B ⁴ S ⁴	102,912.37	77,876.55
131	1-A	B ⁵ S ⁵	100,620.12	91,165.95
132	3-A	B ⁶ S ⁶	107,212.71	100,754.05
133	1-A	B ⁷ S ⁷	112,807.65	108,649.27
134A	1-A	B ⁸ S ⁸	123,128.00	111,214.43
135	1-A	B ⁹ S ⁹	128,489.00	118,232.11

CONS. 207 TAC NO. 13

127	1-F	DP No. 1 Gun	96,569.97	82,950.30
127	1-D	BC	96,386.60	83,018.44
115	1-A	B ¹ S ¹	113,355.07	70,690.43
120	1-D	B ² S ²	102,808.00	77,817.25
127	1-H	B ³ S ³	96,416.60	83,032.84
131	5-A	B ⁴ S ⁴	100,587.66	92,199.20
132	3-A	B ⁵ S ⁵	107,212.71	100,754.05

ORIENTATION DATA				
LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
<u>BATTERY GARDNER TAC NO. 14</u>				
130	3-A	DP No. 1 Gun	98,704.43	91,434.97
130	1-A	BC	98,554.17	91,480.59
115	1-C	B ¹ S ¹	113,441.28	70,769.03
120	1-B	B ² S ²	102,904.01	77,868.72
131	2-A	B ³ S ³	100,608.63	91,125.15
132	2-A	B ⁴ S ⁴	107,183.38	100,444.49
134	1-A	B ⁵ S ⁵	117,137.56	110,181.86
<u>CONS. 206 TAC No. 15</u>				
131	3-A	DP No. 1 Gun	100,904.74	91,131.29
131	2-A	BC	100,608.63	91,125.15
115	1-A	B ¹ S ¹	113,355.07	70,690.43
120	1-C	B ² S ²	102,910.37	77,880.63
131	1-A	B ³ S ³	100,620.12	91,165.95
132	1-A	B ⁴ S ⁴	107,125.66	100,153.36
133	1-A	B ⁵ S ⁵	112,807.65	108,649.27
<u>BATTERY URFHY TAC NO. 16</u>				
131	6-A	DP No. 1 Gun	100,956.93	91,296.40
131	5-A	BC	100,587.73	92,194.68
114	1-A	B ¹ S ¹	119,069.73	59,901.09
115	1-D	B ² S ²	113,695.72	70,908.97
120	1-D	B ³ S ³	102,808.00	77,817.25
131	2-A	B ⁴ S ⁴	100,608.63	91,125.15
132	1-A	B ⁵ S ⁵	107,125.66	100,153.36
133	1-A	B ⁶ S ⁶	112,807.65	108,649.27
134A	1-A	B ⁷ S ⁷	123,133.08	111,215.94
135	1-A	B ⁸ S ⁸	128,489.00	118,232.11
136	1-A	B ⁹ S ⁹	125,426.28	124,215.01
137	1-A	B ¹⁰ S ¹⁰	112,584.23	124.347.60

FORM #6

SECRET

2

ORIENTATION DATA				
LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
		<u>BATTERY 941</u>		
119	1-D	BC	100,971.95	77,801.16
119	1-D	DP No. 1 Fixed Gun	100,881.01	77,817.40
		<u>BATTERY 942</u>		
124	1-A	BC	101,842.31	81,036.98
124	1-A	DP No. 1 Gun	101,845.71	81,010.92
		<u>BATTERY 943</u>		
123	1-F	BC	98,704.71	80,914.03
123	1-F	DP No. 1 Fixed Gun	98,737.13	80,929.18
		<u>BATTERY 944</u>		
127	1-A	BC	98,621.68	82,360.30
127	1-A	DP No. 2 Fixed Gun	96,646.07	82,329.49
		<u>BATTERY 945</u>		
129	1-A	BC	95,411.15	87,632.57
129	1-A	DP No. 1 Fixed Gun	95,414.24	87,606.33
		<u>SOUTH MINES</u>		
119	1-C	M ₁ ²	101,012.58	77,507.07
121	1-B	M ₁ ¹	99,024.10	79,479.74
		<u>NORTH MINES</u>		
127	1-I	M ₂ ¹	96,273.40	83,506.25
124	1-B	M ₂ ²	101,858.56	81,067.97

FORM #6

9

SECRET

DECLASSIFIED
 Authority NND 76012
 BY WDP/NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

COMMAND AND FIRE CONTROL ELEMENTS EXCLUDING BATTERIES										
LOC. NO.	SITE NO.	STATION	GAS BOMB & SPLITTER PAFN	ELEV	H.I.	TYPE OF INST	ARC OF VIEW		MEN	TYPE OF STRUCT
							LL	RL		
111	1-A	C ₁ ¹ OP	S	67	74.1	AI	144	353	6	Tower
114	1-A	G1 OP	S	52	77	AI	158	327	10	Cotta
115	1-B	G2 OP	S	35	57.1	AI	121	333	14	Cott
115	1-D	C ₂ ¹ OP	S	25	40	AI	112	310	6	Cott
120	1-B	C ₁ ³ OP	S	100	126.7	DPF	115	295	12	Cotta
121	1-A	G5 CP	S	70	73	AI	135	310	10	Tower
127	1-I	C ₂ ¹ OP	S	50	63.9	AI	157	315	6	Cottage
127	1-E	MECP, G4	S	100	107	AI	163	15	30	Cottage
128	1-A	MDCP, G3	GB	50	N	O	N	0	70	Casemate
130	1-A	C2 CP	S	85	120	AI	189	143	12	Tower
131	1-A	G6 OP	S	38	92.8	AI	190	61	10	Tower
131	4A	G7 OP	S	45	91	AI	356	125	10	Tower
132	3A	C ₂ ² OP	S	63	100.1	AI	185	69	6	Tower
135	1-A	C ₂ ³ OP	S	60	106.1	AI	200	40	6	Tower
136	1-A	C ₂ ⁴ OP	S	100	130.9	DPF	80	315	6	Tower
121	1-A	Sig Sta	S	70	86	AI	135	310	4	Tower
128	1-A	Met Sta	-	35.4					4	Met St.
114	1-B	Swbd	GB						6	Swbd
117	1-F	Swbd	S						6	Swbd
119	1-B	Swbd	S						6	Swbd
121	1-C	Swbd	S						6	Swbd
122	1-C	Swbd	S						6	Swbd
123	1-H	Swbd	S						6	Swbd
126	1-A	Swbd	B						6	Swbd
127	1-L	Swbd	GB						6	Swbd
128	1-A	Swbd	GB						6	Swbd
130	3-A	Swbd	GB						6	Swbd
131	6-A-1	Swbd	GB						6	Swbd
133	1-A	Swbd	S						6	Swbd
135	1-A	Swbd	S						6	Swbd
120	1-E	Cable Hut	S						0	Cable H.
129	1-D	Cable Hut	S						0	Cable H.

G- Gas Protection
 B- Bomb Protection
 S- Splinter-protected

FORM #7

4. Post Telephone System:

a. The post telephone systems of the harbor defense serve all Forts of the harbor defense and the recently constructed outlying observation stations. This service is accomplished through a net work of submarine, subterranean, and aerial cables.

b. Fort Banks, located on the mainland in Winthrop is the Harbor Defense Headquarters post. In 1942, a modern telephone plant for the post administrative system was installed in the concrete "H" Station at Site 1-A on this post. This switchboard, manufactured by the Kellogg Switchboard and Supply Co., is an eight-position, 800 line, multiplied common battery manual switchboard with terminals and power plant. There are twenty commercial trunk connections, currently connected 13 to Ocean Central, 2 to Northeastern Sector, and 5 vacant. Trunk connections with other post switchboards are as follows: 6 to Fort Warren, 5 to Fort Revere, 1 to Army Base, 2 to Medford Supply Depot, 2 to Headquarters First Service Command, 2 to the District Engineer, and one to Sagamore. Forts Dawes, Heath, and Ruckman are also served by this switchboard. This board is bomb-proofed in an old mortar magazine of concrete construction with earth top and is also gas-proofed.

c. The Fort Andrews switchboard, which is currently inoperative but in condition for immediate use, is at Site 1-F in an old-type bomb-proof, ungas-proofed structure. It is a one-position, 100-line, 10-trunk switchboard manufactured by the Leach Electric Company.

d. The Fort Revere switchboard is at Site 1-B, and is a one-position, 100-subline, 10-trunk, common battery manual board manufactured by Stromberg Carlson Telephone Manufacturing Company. It has one trunk line to the Town of Hull as well as 5 trunks to Fort Banks and 3 to Fort Warren. It also serves Fort Duvall and Fourth Cliff and, temporarily, Fort Andrews. This switchboard is located in an old type bomb-proof shelter with a concrete splinter proof front wall. It is not gas-proofed.

e. The Fort Warren switchboard is located at Site 1-C, and is a one-position, 100-subline, 10-trunk, common battery manual board made by the Stromberg-Carlson Telephone Manufacturing Company. It has 1 trunk line to the Town of Hull, 6 to Fort Banks, and 3 to Fort Revere. It serves Forts Strong and Standish, Great Brewster, Outer Brewster, Calf Island, and, temporarily, Fort Andrews. This switchboard is in a granite and brick building which is splinter-proof, but not gas-proof.

f. Additional combined fire control and post telephone switchboards may be installed at East Point and Fort Standish, depending on a survey now being made by the Signal Officer, First Service Command.

g. Fire control and post telephone systems require a similar source of electrical energy. It has proved both economical and expedient to operate jointly through all the cables of the Harbor Defenses utilizing the power equipment of the administrative system for both systems.

5. Teletype:

There is no teletype net within the Harbor Defense Project. Two teletypes are on hand: one is installed in the HDCP and furnishes an alternate means of communication to Northeastern Sector Headquarters the other is a commercial type set and is installed in the HECF. It participates in naval intelligence nets.

6. Radio Communications:

A chart showing the radio net for the Harbor Defenses is shown on exhibit 2-B, this Annex.

BATTERY FIRE CONTROL ELEMENTS										
BATTERY Cons. 208					TACTICAL NO. 2					
LOCATION NO. 114					FIELD OF FIRE EXHIBIT 5-B-1					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		RANGE	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
114	1-B	BC	45	75	DPF AI	157	340	8	Manhole	B ₁₂ ² S ₁₂ ²
111	1-A	B1S1	67	90.1	DPF AI	144	353	6	Tower	C ₁ ¹ OP
112	1-A	B2S2	25	69	AI AI	123	353	6	Tower	B ₅ ¹ S ₅ ¹
										B ₁₂ ¹ S ₁₂ ¹
114	1-C	B3S3	40	75	AI AI	147	337	6	Tower	B ₅ ² S ₅ ³
115	1-B	B4S4	35	65	AI AI	121	333	6	Cottage	B ₁₂ ³ S ₁₂ ³
										G2 OP G2 CP

At each station one instrument is an M2A1

*Limited Std DPF installed

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
CP	B ¹	333.285	21,369.00
DP	B ²	326.114	10,244.76
DP	B ³	159.280	152.57
DP	B ⁴	153.158	12,053.64

FROM	TO	AZIMUTH	LENGTH
B1	B2	159.787	11,277.12
B2	B3	146.306	10,393.38
B3	B4	153.080	11,901.95

FORM #8

BATTERY FIRE CONTROL ELEMENTS										
BATTERY Bumpus LOCATION NO. 117					TACTICAL NO. 3 FIELD OF FIRE EXHIBIT 5-B-2					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		LEN	TYPE OF CONST	COMB. WITH STA.
						LL	RL			
117	1-E	BC	110	115	AI AI	153	300	4	Cottage	CRF 3
117	1-E	CRF	110	113	CRF 9' M 1918	153	300	4	Cottage	BC 3
AI's are M1910 AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
CRF	DP	261.138	103.08

FROM	TO	AZIMUTH	LENGTH

FORM #8

BATTERY FIRE CONTROL ELEMENTS										
BATTERY McCook					TACTICAL NO. 4					
LOCATION NO. 117					FIELD OF FIRE EXHIBIT 5-B-3					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEM	TYPE OF CONST.	CO B. WITH STA.
						LL	RL			
117	1-D	BC	100	113	DPF AI	152	245	4	Brick Cottage	C2 CP B4 S4 10 10 BC 14
117	1-A	B1S1	127	135	DPF AI	160	350	6	Cottage	
127	1-C	B2S2	86	88	AI AI	222	79	6	Manhole	
129	1-B	B3S3	78	80	AI AI	197	348	6	Cottage	
130	1-A	B4S4	85	120	DPF AI	189	143	6	Tower	
DPF's are M1, AI's are M1910 AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
D.P.	B1	034.433	419.90
D.P.	B2	157.148	6291.19
D.P.	B3	161.468	11226.09
D.P.	B4	178.897	14341.10

FROM	TO	AZIMUTH	LENGTH
B1	B2	160.250	6527.70
B2	B3	166.934	4975.40
B3	B4	221.703	4948.36

BATTERY FIRE CONTROL ELEMENTS										
BATTERY Long					TACTICAL NO. 5					
LOCATION NO. 118					FIELD OF FIRE EXHIBIT 5-B-4					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
120	1-B	BC	100	126.7	DPF AI	115	295	4	Cottage	B ² ₁₄ S ² ₁₄ B ⁴ ₅ S ⁴ ₅ C1 OP C1 CP
112	1-A	B1S1	10	85	AI AI	123	353	6	Tower	B ² ₂ S ² ₂ B ¹ ₁₂ S ¹ ₁₂
114	1-C	B2S2	40	83	AI AI	147	337	6	Tower	B ³ ₂ S ³ ₂
115	1-C	B3S3	50	93	AI AI	109	325	6	Tower	B ¹ ₁₄ S ¹ ₁₄
120	1-B	B4S4	100	118.7	AI AI *	155	302	6	Cottage	B ² ₁₄ S ² ₁₄ BC 5 C1 CP C1 OP
131	4-A	B5S5	45	107	AI AI *	356	125	6	Tower	B ⁵ ₁₁ S ⁵ ₁₁ G7 OP G7 CP
132	2-A	B6S6	74	101	AI AI *	178	040	6	Cottage	B ⁴ ₁₄ S ⁴ ₁₄
134	1-A	B7S7	80	118	DPF AI	184	121	6	Tower	B ⁵ ₁₄ S ⁵ ₁₄

At each station one instrument is an M2A1

* Limited std DPF installed

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
DP	B ¹	317.982	34185.64
DP	B ²	314.380	23949.06
DP	B ³	298.008	13125.33
DP	B ⁴	228.404	1410.30
DP	B ⁵	175.330	15044.92
DP	B ⁶	192.764	24108.80
DP	B ⁷	204.688	36593.87

FROM	TO	AZIMUTH	LENGTH
B ¹	B ²	146.306	10393.36
B ²	B ³	152.426	11943.40
B ³	B ⁴	123.982	12702.80
B ⁴	B ⁵	170.789	14242.34
B ⁵	B ⁶	217.564	10746.09
B ⁶	B ⁷	225.646	13926.63

DECLASSIFIED
Authority NND 760162
By WDR Date 7/15/00

BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Stevens</u>					TACTICAL NO. <u>6</u>					
LOCATION NO. <u>122</u>					FIELD OF FIRE EXHIBIT <u>5-B-5</u>					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
122	1-A	BC	20	24	AI AI	229	167	4	Parapet	CRF 6
122	1-A	CRF	20	24	CRF 9' M1913	229	167	4	Parapet	BC 6
AI's are M1910 AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
CRF	DP	179.614	10.38

FROM	TO	AZIMUTH	LENGTH

BATTERY FIRE CONTROL ELEMENTS										
BATTERY Basinger					TACTICAL No. 7					
LOCATION NO. 122					FIELD OF FIRE EXHIBIT 5-B-6					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
122	1-E	BC	32	34	AI AI	165	264	4	Crows Nest	CRF 7
122	1-E	CRF	32	34	CRF 9' M1918	118	276	4	Crows Nest	BC 7

AI's are M1910 AI

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
CRF	DP	105.245	25.06

FROM	TO	AZIMUTH	LENGTH

FORM #8

BATTERY FIRE CONTROL ELEMENTS

BATTERY Williams
LOCATION NO. 123

TACTICAL NO. 9
FIELD OF FIRE EXHIBIT 5-B-7

LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB WITH STA
						LL	RL			
123	1-A	BC	20	35	AI AI	203	145	4	Wooden Cottage	CC
123	1-A	CRF	20	35	CRF 9' M 1918	180	90	4	Wooden Cottage	
AI's are M910 AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
CRF	DP	336.226	31.23

FROM	TO	AZIMUTH	LENGTH

FORM #8

BATTERY FIRE CONTROL ELEMENTS										
BATTERY Whipple					TACTICAL NO. 10					
LOCATION NO. 123					FIELD OF FIRE EXHIBIT 5-B-8					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO AND TYPE OF FC INSTR	ARC OF VIEW		ITEM	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
123	1-E	BC	15	33.1	AI AI	179	89	4	Cottage	P 1
123	1-G	CRF	13	17	CRF 15' M1916	179	89	4	Cottage	
116	1-A	B ¹ S ¹	100	101	DPF AI	150	300	6	Cottage	
123	1-C	B ² S ²	15	32	AI AI	130	333	6	Cottage	
127	1-I	B ³ S ³	52	63.9	AI AI	177	300	6	Cottage	17
130	1-A	B ⁴ S ⁴	90	112	DPF AI	189	143	6	Tower	cl 0 2 BC B ⁴ S 4 C2 C
DPF's are M1, AI's are M1910 AI.										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
D.P.	B ¹	317.303	6051.93
D.P.	B ²	145.453	174.95
D.P.	B ³	138.522	4514.40
D.P.	B ⁴	176.435	11374.95

FROM	TO	AZIMUTH	LENGTH
B ¹	B ²	137.532	6225.17
B ²	B ³	138.244	4340.73
B ³	B ⁴	195.982	8291.18

FORM # 8

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 2/15/00

BATTERY FIRE CONTROL ELEMENTS									
BATTERY Jewell					TACTICAL NO. 11				
LOCATION NO. 126					FIELD OF FIRE EXHIBIT 5-B-9				
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CO CONST. WIL ST
						LL	RL		
126	1-A	BC	65	79.5	DPF AI	168	340	4	Manhole B ⁴
114	1-A	B ¹ S ¹	52	77	AI AI	158	327	6	Cottage B ¹
									G
									G
115	1-D	B ² S ²	25	40	AI AI	112	310	6	Cottage C ² B ² S ² 16
120	1-D	B ³ S ³	125	171	DPF AI	143	323	6	Tower B ³ S ³ 16
									B ² S ² 13
126	1-A	B ⁴ S ⁴	65	79.6	AI AI	172	348	6	Manhole BC 1
131	4-A	B ⁵ S ⁵	45	99.4	AI AI	356	125	6	Tower B ⁵ S ⁵ 5 E
									G7 O
									G7 O
132	1-A	B ⁶ S ⁶	40	86	AI AI	190	065	6	Tower B ⁴ S ⁴ 16
									B ⁵ S ⁵ 16

At each station one instrument is an I2A1

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
DP	B1	324.598	27047.12
DP	B2	316.999	15096.74
DP	B3	008.147	4174.75
DP	B4	152.268	28.32
DP	B5	164.477	10355.68
DP	B6	191.568	18580.92

FROM	TO	AZIMUTH	LENGTH
B1	B2	153.979	12246.75
B2	B3	122.395	12894.45
B3	B4	187.920	4197.73
B4	B5	164.510	10328.00
B5	B6	218.306	10482.23

FORM # 8

20
SECRET

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00

BATTERY FIRE CONTROL ELEMENTS										
BATTERY Cons. 105					TACTICAL NO. 12					
LOCATION NO. 127					FIELD OF FIRE EXHIBIT 5-B-10					
LOC NO.	SITE NO.	STA.	ELEV	H:I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COM WITH STA.
						LL	RL			
127	1-G	BC	93	88	DPF AI	147	55	4	Manhole	
112	1-A	B ¹ S ¹	25	77	AI AI	123	020	6	Tower	B ² S ² B ¹ S ¹ 5
114	1-B	B ² S ²	45	75	AI AI	172	341	6	Manhole	BC
115	1-B	B ³ S ³	35	57	AI AI	136	334	6	Cottage	B ⁴ S ⁴ 2 G2 G2
120	1-C	B ⁴ S ⁴	60	114	AI AI *	158	340	6	Garage	B ² 1
131	1-A	B ⁵ S ⁵	38	100.8	AI AI *	190	61	6	Tower	B ³ 1 G6 G
132	3-A	B ⁶ S ⁶	63	108.1	AI AI *	185	69	6	Tower	B ⁵ 1 C ² 2
133	1-A	B ⁷ S ⁷	72	154	DPF AI	233	130	6	Tower	B ⁵ 15 B ⁶ 13
134A	1-A	B ⁸ S ⁸	20	64	AI AI	258	105	6	Cottage	B ⁷ 16
135	1-A	B ⁹ S ⁹	60	122	DPF AI	200	40	6	Tower	B ⁸ 16 C ³ 2

At each station one instrument is an I2 AI

BASE LINE DATA FOR STATIONS LISTED ABOVE

*Limited std DPF installed

FROM	TO	AZIMUTH	LENGTH	FROM	TO	AZIMUTH	LENGTH
DP	B ¹	317.667	41856.92	B ¹	B ²	146.152	10282.48
DP	B ²	314.926	31723.28	B ²	B ³	153.156	12011.00
DP	B ³	304.447	20659.69	B ³	B ⁴	123.579	12809.96
DP	B ⁴	305.862	7853.60	B ⁴	B ⁵	170.214	13485.64
DP	B ⁵	205.114	9595.59	B ⁵	B ⁶	214.512	11635.89
DP	B ⁶	210.265	21160.77	B ⁶	B ⁷	215.323	9676.66
DP	B ⁷	211.352	30811.57	B ⁷	B ⁸	256.042	10634.36
DP	B ⁸	222.767	39145.01	B ⁸	B ⁹	217.377	8831.09
DP	B ⁹	221.776	47944.22				

FORM # 8

BATTERY FIRE CONTROL ELEMENTS.										
BATTERY Cons. 207 LOCATION NO. 127					TACTICAL NO. 13 FIELD OF FIRE EXHIBIT 5-B-11					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
127	1-D	BC	80	95	DPF AI	138	356	4	Manhole	
115	1-A	B1S1	40	105	DPF AI	110	324	6	Tower	B1 S1 15 15
120	1-D	B2S2	125	163	DPF AI	144	323	6	Tower	B3 S3 16 16 B3 S3 11 11
127	1-H	B3S3	85	87	AI AI	135	355	6	Manhole	
131	5-A	B4S4	60	83	AI AI	160	353	6	Cottage	BC 16
152	3-A	B5S5	63	116	DPF AI	190	065	6	Cottage	B6 S6 12 12 C2 OP 2
At each station one instrument is an M2 AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
D.P.	B1	206.144	20785.67
D.P.	B2	309.450	8078.44
D.P.	B3	118.288	174.17
D.P.	B4	203.480	10083.85
D.P.	B5	210.870	20742.26

FROM	TO	AZIMUTH	LENGTH
B1	B2	124.048	12729.19
B2	B5	129.216	8249.39
B3	B4	204.467	10070.74
B4	B5	217.755	10820.20

FORM # 8

SECRET

7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY Gardner					TACTICAL NO. 14					
LOCATION NO. 130					FIELD OF FIRE EXHIBIT 5-B-12					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYPE OF FC INSTR.	ARC OF FIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	%L			
130	1-A	BC	85	128	DPF AI	181	143	4	Tower	B ¹ S ⁴ ₄ B ⁴ S ⁴ ₁₀ C2 CP
115	1-C	B ¹ S ¹	50	85	AI AI	109	325	6	Tower	B ³ S ³ ₅
120	1-B	B ² S ²	100	132	DPF AI	108	301	6	Cottage	B ⁴ S ⁴ ₅ BC 5 C1 CP C1 OP
131	2-A	B ³ S ³	28	101	AI AI *	356	125	6	Tower	B ⁴ S ⁴ ₁₆ BC 15
132	2-A	B ⁴ S ⁴	74	93	AI AI *	178	40	6	Cottage	B ⁶ S ⁶ ₅
134	1-A	B ⁵ S ⁵	30	110	DPF AI	184	121	6	Tower	B ⁷ S ⁷ ₅
*Limited std DPF installed At each station one instrument is an M2 AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
DP	B ¹	324.507	25382.04
DP	B ²	342.800	14201.40
DP	B ³	279.241	1929.24
DP	B ⁴	223.262	12371.91
DP	B ⁵	224.517	26291.18

FROM	TO	AZIMUTH	LENGTH
B ¹	B ²	123.971	12705.75
B ²	B ³	170.177	13453.69
B ³	B ⁴	215.203	11405.15
B ⁴	B ⁵	225.631	13924.87

FORM # 8

SECRET

DECLASSIFIED
Authority NND 760162
By WDP/HARA Date 7/15/00

SECRET

7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY Cons. 206					TACTICAL NO. 15					
LOCATION NO. 131					FIELD OF FIRE EXHIBIT 5-B-13					
LOC NO.	SITE NO.	STA.	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
131	2-A	BC	43	93	DPF AI	190	61	4	Tower	B ⁴ ₁₆ S ⁴ ₁₆ B ³ ₁₄ S ³ ₁₄
115	1-A	B1S1	40	113	DPF AI	110	324	6	Tower	B ¹ ₁₃ S ¹ ₁₃
120	1-C	B2S2	60	114	AI AI *	148	330	6	Garage	B ⁴ ₁₂ S ⁴ ₁₂
131	1-A	B3S3	38	109	AI AI *	190	61	6	Tower	B ⁵ ₁₂ S ⁵ ₁₂ G6 OP G6 CP
132	1-A	B ⁴ S ⁴	40	78	AI AI	190	065	6	Tower	B ⁶ ₁₁ S ⁶ ₁₁ B ⁵ ₁₆ S ⁵ ₁₆
133	1-A	B5S5	72	146	DPF AI	233	130	6	Tower	B ⁶ ₁₆ S ⁶ ₁₆ B ⁷ ₁₂ S ⁷ ₁₂
* Limited std DPF installed										
At each station one instrument is an M2 AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
DP	B1	328.655	23934.07
DP	B2	351.393	13401.59
DP	B3	096.943	286.72
DP	B4	214.587	10958.91
DP	B5	214.195	21179.20

FROM	TO	AZIMUTH	LENGTH
B1	B2	124.544	12680.3
B2	B3	170.219	13481.2
B3	B4	215.899	11094.8
B4	B5	213.774	10220.8

FORM #8

SECRET

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00

BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Murphy</u>					TACTICAL NO. 16					
LOCATION NO. <u>131</u>					FIELD OF FIRE EXHIBIT <u>5-B-14</u>					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
131	5-A	BC	60	88	DPF AI	185	13	4	Cottage	B ⁴ S ⁴ 13 13
114	1-A	B1S1	52	85	AI AI	150	344	6	Cottage	B1 S1 11 11 G1 OP G1 CP
115	1-D	B2S2	25	48	AI AI	112	325	6	Cottage	C2 OP B2 S2 11 11
120	1-D	B3S3	125	179	DPF AI	143	323	6	Tower	B3 S3 11 11 B2 S2 13 13
131	2-A	B4S4	38	109	AI AI	230	68	6	Tower	B3 S3 14 14 BC 15
132	1-A	B5S5	40	70	AI AI	175	064	6	Tower	BC S6 11 11 B4 S4 15 15
133	1-A	B6S6	72	162	DPF AI	233	130	6	Tower	B7 S7 12 12
134A	1-A	B7S7	20	63.6	AI AI	230	77	6	Cottage	B5 S5 15 15 B8 S8 12 12
135	1-A	B8S8	60	114	AI AI	200	40	6	Tower	B9 S9 12 12 C3 OP 2

At each station one instrument is an M2 AI

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
DP	B1	330.018	36245.54
DP	B2	328.001	24040.05
DP	B3	352.181	13605.66
DP	B4	063.818	388.12
DP	B5	214.857	10793.47
DP	B6	214.330	21013.37
DP	B7	228.068	29808.89
DP	B8	225.627	38516.84
DP	B9	216.624	41016.88
DP	B10	199.382	35036.78

FROM	TO	AZIMUTH	LENGTH
B1	B2	153.979	12249.65
B2	B3	122.395	12894.4
B3	B4	170.616	13488.4
B4	B5	215.824	11134.6
B5	B6	213.774	10220.6
B6	B7	256.040	10639.4
B7	B8	217.357	8826.8
B8	B9	152.892	6721.2
B9	B10	090.592	12842.7

FORM # 8

SECRET

7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY Murphy (Cont.)						TACTICAL NO. 16				
LOCATION NO. 131						FIELD OF FIRE EXHIBIT 5-B-14				
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
136	1-A	B ⁹ S ⁹	100	148.9	DFT AI	80	315	6	Tower	C ₂ ⁴ OP HD of P
137	1-A	B ¹⁰ S ¹⁰	125	144.5	DFT AI	141	302	6	Cottage	HD of P

At each station one instrument is an M2 AI

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH

FROM	TO	AZIMUTH	LENGTH

FORM # 8

SECRET

SECRET

7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY 941 LOCATION NO. 119					TACTICAL NO. FIELD OF FIRE EXHIBIT 7-A-1					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	CO.B. WITH STA.
						LL	RL			
119	1-D	BC	60	60	AA, BC, 111 77 Dir AA 19A2 Finder, Height 11A2	262	4	4	Wooden Cottage	

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
BC	DP #1 Fixed Gun	280.125	92.38

FROM	TO	AZIMUTH	LENGTH

FORM #8

SECRET

DECLASSIFIED
Authority NND 760162
7/15/00
By WDR NARA Date

REPRODUCED AT THE NATIONAL ARCHIVES

BATTERY FIRE CONTROL ELEMENTS										
BATTERY 942					TACTICAL NO.					
LOCATION NO. 124					FIELD OF FIRE EXHIBIT 7-A-1					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
124	1-A	BC	103	105	AA BC ML Dir. AA M9A2 Finder, Height M1A2	95	22	4	Wooden Cottage	

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
BC	DP #1 Fixed Gun	352.57	26.28

FROM	TO	AZIMUTH	LENGTH

FORM #8

SECRET

7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY 943 LOCATION NO. 123						TACTICAL NO. FIELD OF FIRE EXHIBIT 7-A-1				
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST. WITH STA.	COIB.
						LL	RL			
123	1-F	BC	20	40	AA BC M1 Dir. AA M9A2 Finder, Height M1A2	120	300	4	Wooden Tower	

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
BC	DP #1 Fixed Gun	244.953	35.79

FROM	TO	AZIMUTH	LENGTH

FORM #8

SECRET

SECRET

7

BATTERY FIRE CONTROL ELEMENTS

BATTERY 944

LOCATION NO. 127

TACTICAL NO.

FIELD OF FIRE EXHIBIT 7-A-1

LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
127	1-A	BC	30	40	AA BC ML Dir AA M9A2 Finder Height MLA2	183	314	4	Concrete	Cottage

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
BC	DP #1 fixed Gun	349.748	70.29

FROM	TO	AZIMUTH	LENGTH

FORM #8

30

SECRET

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY 945					TACTICAL NO.					
LOCATION NO. 129					FIELD OF FIRE EXHIBIT 7-A-1					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
129	1-A	BC	43	52	AA BC MI Dir AA M9A2 Fin- der, Height MLA2	140	360	4	Wooden Cottage	

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
BC	DP #1 fixed Gun	353.284	26.42

FROM	TO	AZIMUTH	LENGTH

FORM #8

31

SECRET

DECLASSIFIED
 Authority NND 760162
 BY WDP NARA Date 2/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY SO MINES						TACTICAL NO. M1				
LOCATION NO. 121						FIELD OF FIRE EXHIBIT 1-D				
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		LEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
121	1-B	M1 CP	60	60	AI	126	310	4	Brick Cottage	M1 ₁
119	1-C	M2 ₁	110	121	DPF	110	274	6	Cottage	
121	1-B	M1 ₁	60	60	AI	126	310	6	Brick Cottage	M1 CP

DPF's are M1, AI's are M1910 AI

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
M1 ₁	M2 ₁	314.771	2800.98

FROM	TO	AZIMUTH	LENGTH

32

FORM #8

SECRET

DECLASSIFIED
 Authority NND 760162
 BY WDP NARA Date 7/15/00

BATTERY FIRE CONTROL ELEMENTS										
BATTERY North Mines					TACTICAL NO. M2					
LOCATION NO. 122					FIELD OF FIRE EXHIBIT 1-D					
LOC. NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPE OF FC INSTR	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
122	1-D	M2 CP	50	112.9	AI	90	270	4	Cottage	
127	1-I	M ¹ ₂	50	63.9	AI	157	315	6	Cottage	B ³ S ³ 10 10 C ¹ ₂ OP
124	1-B	M ² ₂	100	100	DPF	33	270	6	Manhole	
DPF's are M1, AI's are M1910 AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
M ¹ ₂	M ² ₂	293.584	6094.20

FROM	TO	AZIMUTH	LENGTH

FORM #8

SECRET

8. Datum Points: Exhibit 3-B is a chart showing existing datum points and the using base end stations.

9. Land Acquisition: No additional land is required for fire control installations.

SECRET

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00

SECRET

10

RADAR EQUIPMENT							
SCR-296							
AUTHORITY - T/O & E 4-260-1, C3, dated 28 September 1944							
LOC. NO.	SITE NO.	ASSIGNMENTS			GROUND ELEVATION	EFFECTIVE ANTENNA HEIGHT	EXHIBIT
		PRIMARY	ADDITIONAL				
112A	1-A	Cons 208		Long	150	256	4-B-1
120	1-A	McCook	Cons 206	Cons 207	97	153	4-B-2
115	1-E	Long	Murphy	Cons 208	60	166	4-B-3
129	1-C	Whipple	McCook	None	73	179	4-B-4
126	1-B	Jewell	Cons 207	Shipple	65	171	4-B-5
116	1-B	Cons 105	Gardner	Jewell	100	206	4-B-6
127	1-K	Cons 207	Whipple	McCook	50	156	4-B-7
131	4-A	Gardner	Jewell	Murphy	53	111	4-B-8
132	3-A-1	Cons 206	Long	Gardner	76	176	4-B-9
133	1-A	Murphy	Cons 105	Cons 206	72	171	4-B-10
Set at Site 1-B, Location 116 cancelled. Buildings erected and footings for tower placed (See ltr HQ ASF SPMS 660.2 dated 23 Nov 1943, subject: "Curtailement of Construction on 16" Batteries Construction Nos. 105, 109 and 111.)							
SCR-582							
AUTHORITY - Letter, Hq NES, file 413.68, dated Nov. 7, 1942; 2nd Ind. Hq C of E, file 665 CM 19150 SPEOF, dated Nov. 25, 1942 and 3rd Ind, OC Sig O, file SPSRB 665.1 HD(1st Ser C) (11-7-42) dated Dec. 2, 1942							
LOC. NO.	SITE NO.	ASSIGNMENT			GROUND ELEVATION	EFFECTIVE ANTENNA HEIGHT	EXHIBIT
120	1-B	Harbor Surveillance			110	136	4-B-11
127	1-E	Harbor Surveillance			100	127	4-B-12
Set at Location 120 is SCR-682							
Ref: Letter, War Department, AGO, AG 413.44 (24 Jul 43) OB-S-SPMS, 26 Jul 43, Subject: "Issue of Instructions on Replacement of SCR-582 Radar Sets by SCR-682 Radar Set."							

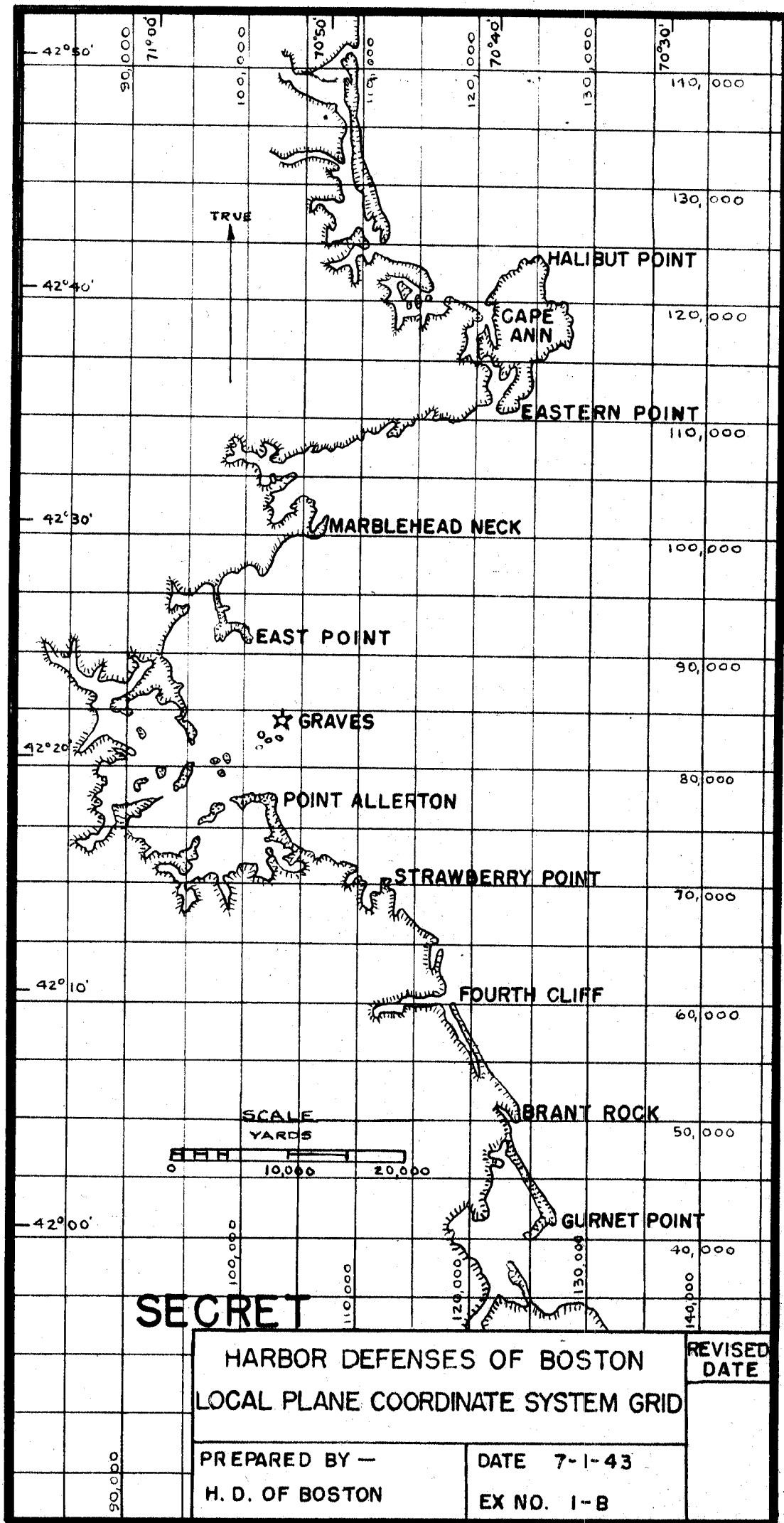
FORM # 9

35

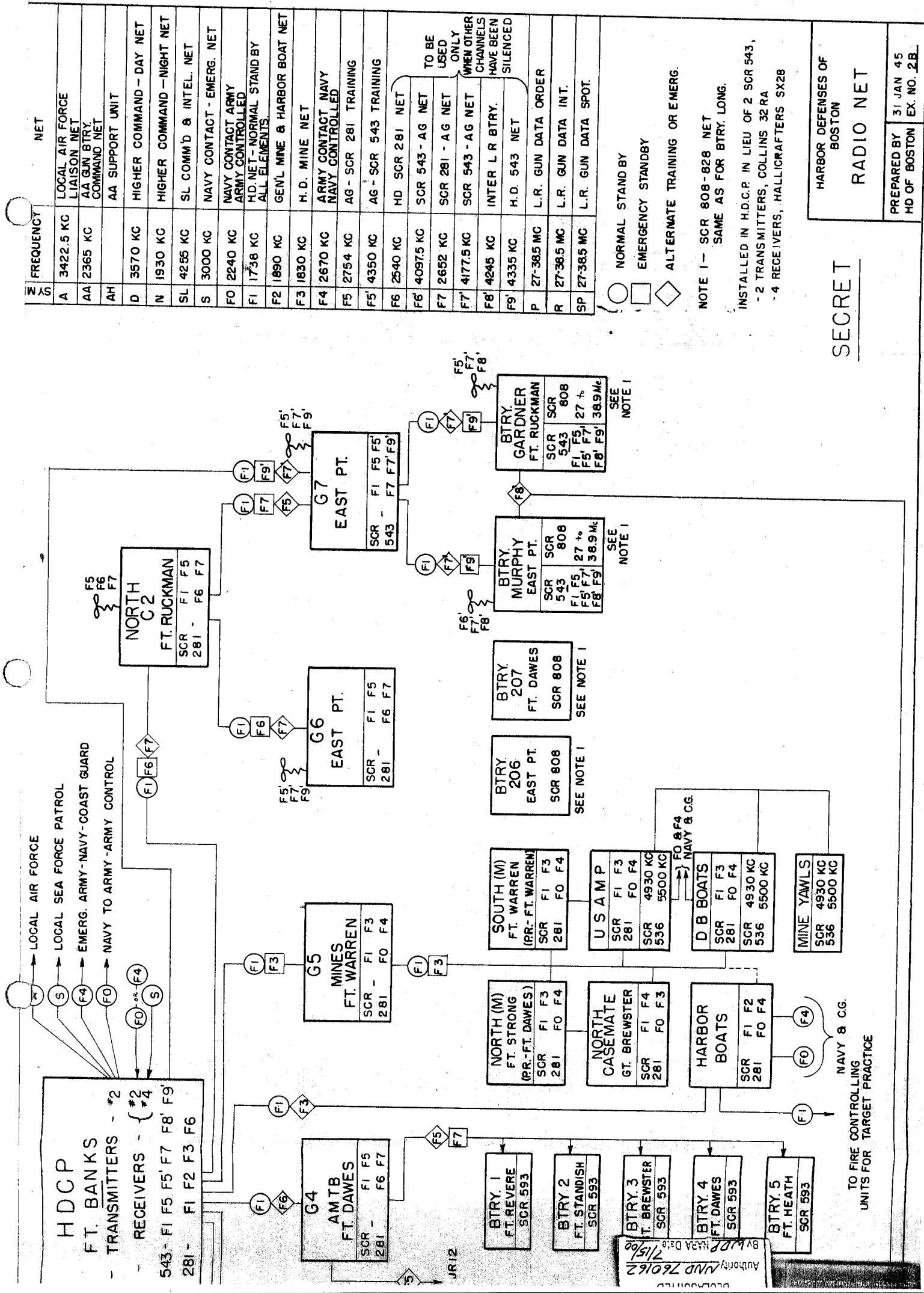
SECRET

DECLASSIFIED
Authority AND 760162
BY WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES



DECLASSIFIED
Authority NND 760162
7/15/60
By WDR NARA Date



NET

SY	FREQUENCY	NET
A	3422.5 KC	LOCAL AIR FORCE
AA	2365 KC	LIAISON NET
AA	2365 KC	AA GUN BTRY. COMMAND NET
AH		AA SUPPORT UNIT
D	3570 KC	HIGHER COMMAND - DAY NET
N	1930 KC	HIGHER COMMAND - NIGHT NET
SL	4255 KC	SL COMM'D & INTEL. NET
S	3000 KC	NAVY CONTACT - EMERG. NET
FO	2240 KC	NAVY CONTACT ARMY
F1	1738 KC	ARMY CONTROLLED
F2	1890 KC	HD NET - NORMAL STAND BY
F3	1830 KC	GEN'L MNE & HARBOR BOAT NET
F4	2670 KC	H.D. MINE NET
F5	2754 KC	ARMY CONTACT NAVY
F5	2754 KC	NAVY CONTROLLED
F5	2754 KC	AG - SCR 281 TRAINING
F5	4350 KC	AG - SCR 543 TRAINING
F6	2540 KC	HD SCR 281 NET
F6	4097.5 KC	SCR 543 - AG NET
F7	2652 KC	SCR 281 - AG NET
F7	4177.5 KC	SCR 543 - AG NET
F8	4245 KC	INTER L R BTRY. WHEN OTHER CHANNELS HAVE BEEN SILENCED
F9	4335 KC	H.D. 543 NET
P	27-385 MC	L.R. GUN DATA ORDER
R	27-385 MC	L.R. GUN DATA INT.
SP	27-385 MC	L.R. GUN DATA SPOT.

☐ NORMAL STAND BY
☐ EMERGENCY STANDBY
☐ ALTERNATE TRAINING OR EMERG.

NOTE 1 - SCR 808-828 NET
 SAME AS FOR BTRY. LONG.
 INSTALLED IN H.D.C.P. IN LIEU OF 2 SCR 543,
 - 2 TRANSMITTERS, COLLINS 32 RA
 - 4 RECEIVERS, HALLICRAFTERS SX28

SECRET

HARBOR DEFENSES OF BOSTON	
RADIO NET	
PREPARED BY	31 JAN 45
HD OF BOSTON	EX. NO. 2B

TO FIRE CONTROLLING UNITS FOR TARGET PRACTICE



VISIBLE FROM	CI (R)
G2	
BC 5 (R)	
C2	
C3	
B4 S2	
B5 S3	
B4 S5 (R)	
B10 S1 (R)	
B2 S2	
B3 S3 (R)	
B11 S11 (R)	

VISIBLE FROM	B12 S3
B12 S12 (R)	
B1 S1 (R)	
B2 S3 (R)	
B4 S4 (R)	
B4 S14	
B5 S15 (R)	
B5 S5 (R)	
B2 S2	
B16 S16 (R)	

VISIBLE FROM	G1
BC 2	
B2 S2	
B3 S3	
B5 S5	
B5 S6	
B1 S11	
B12 S12	
B2 S2	
B16 S16	

VISIBLE FROM	B2 S2
B5 S5	
B12 S12	

VISIBLE FROM	G1
BC 2	
B2 S2	
B3 S3	
B5 S5	
B1 S11	
B12 S12	
B16 S16	

LEGEND

- ▲ BASE END STATION
- DATUM POINTS
- (R) RANGING POINTS

ALL DATUM POINTS ARE EXISTING

PT.

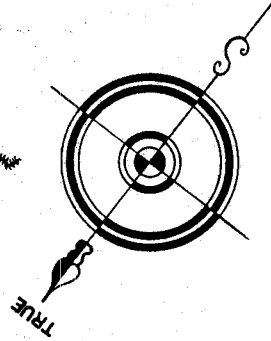
CEDAR PT. OLD TOWER

FOURTH CLIFF TOWER

BRANT ROCK TOWER

GURNET PT.

Authority NND 760162
By WDR HRA Date 7/15/62



SECRET

REVISION	DATE	31 JAN 4
HARBOR DEFENSES OF BOSTON		
DATUM POINTS		
PREPARED BY	DATE	7-1-43
HARBOR DEFENSES OF BOSTON	EX. NO. 3-B-1	

© MINOTSLIGHT

STRAWBERRY PT.

OUTER BREWSTER DOCK

BOSTON LIGHT

PT. ALLERTON

T. HEATH

FT. STANDISH

T. DAWES

F.T. WARREN

FT. STRONG

FT. ANDREWS

REVERSE

STRAWBERRY HILL

STRAWBERRY PT.

SECRET

SCALE $\frac{1}{80.0}$

0 5

SCALE - THOUSANDS OF

GALES POINT

MARBLEHEAD NECK

**SPOUTING HORN
(PROPOSED)**

**SHAG ROCKS
(PROPOSED)**

GRAVES LIGHT

OUTER BREWSTER

CALF ISLAND

**GREEN ISLAND
(PROPOSED W.)**

SECRET

REVISED
DATE
31 JAN 45

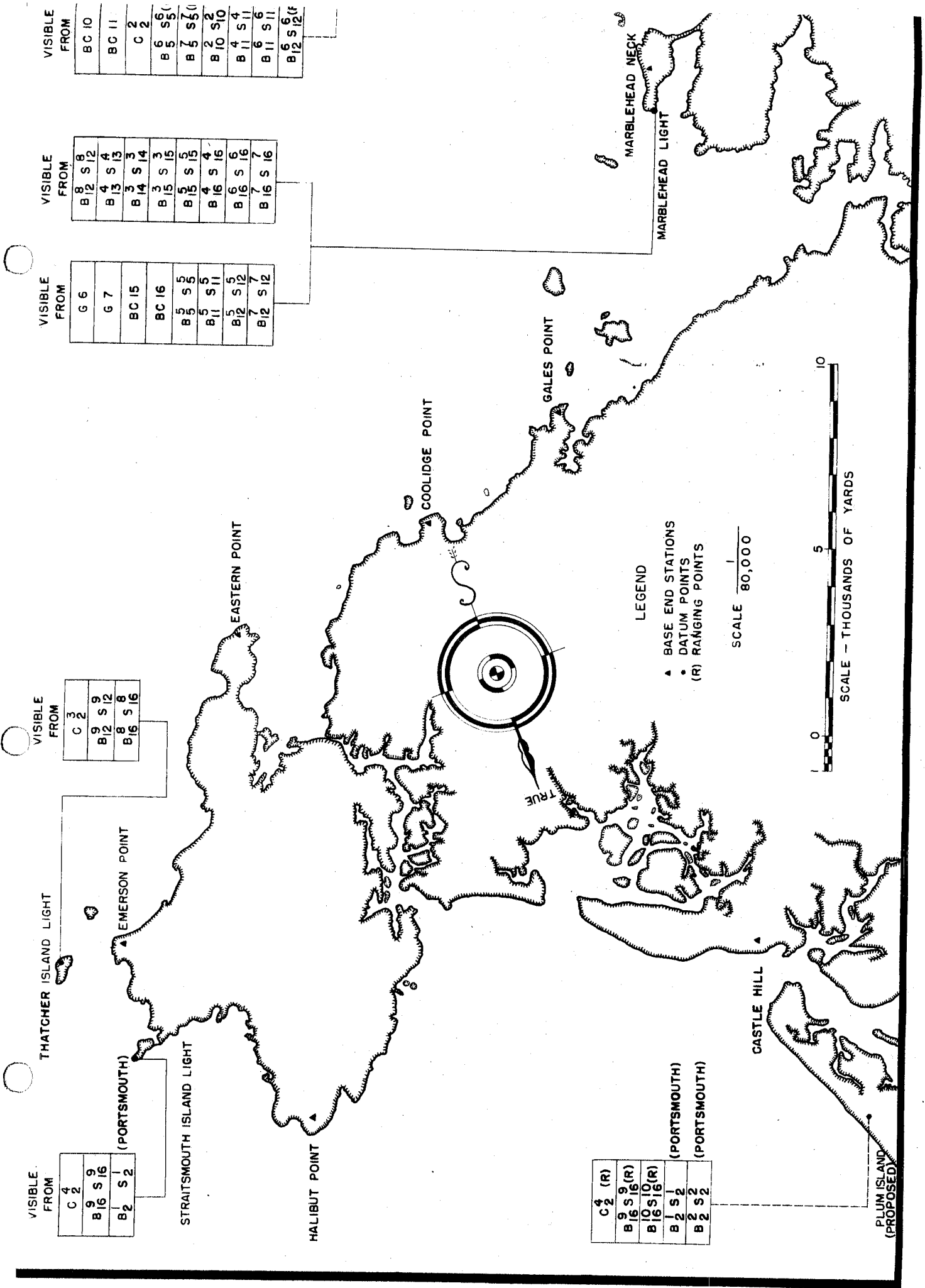
HARBOR DEFENSES OF BOSTON
DATUM POINTS

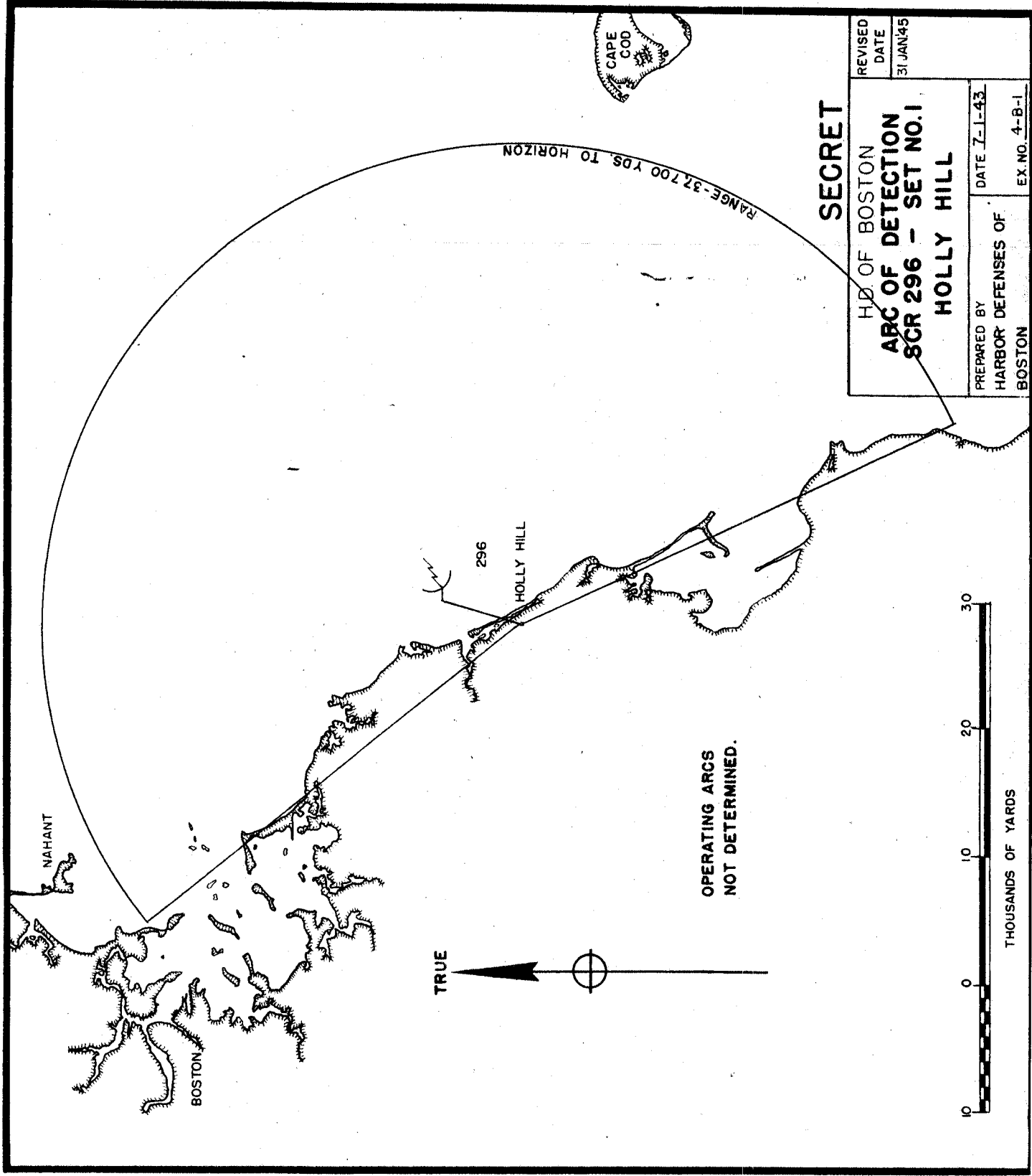
PREPARED BY
HARBOR DEFENSES OF
BOSTON

DATE 7-1-43

EX. NO. 3-B-2

VISIBLE FROM	VISIBLE FROM	VISIBLE FROM	VISIBLE FROM	VISIBLE FROM	VISIBLE FROM	VISIBLE FROM	VISIBLE FROM	VISIBLE FROM	VISIBLE FROM
G 6	BC 10	B 7 S 7 (R)	C 2	C 1	B 3 S 4	C 2	B 5 S 5 (R)		
G 7	BC 11	B 5 S 5 (R)	B 6 S 6 (R)	G 5	B 4 S 4	G 6	B 4 S 4 (R)		
BC 15	C 2	B 4 S 4 (R)	B 11 S 11	M 1	B 5 S 5	G 7	B 10 S 10		
BC 16	B 5 S 5 (R)	B 14 S 14 (R)	B 12 S 12 (R)	M 2	B 6 S 6		B 10 S 10		
B 5 S 5	B 7 S 7 (R)	B 15 S 15	B 13 S 13 (R)	BC 5	B 11 S 11		B 10 S 10		
B 5 S 5	B 10 S 10	B 15 S 15 (R)	B 14 S 14 (R)	BC 10	B 11 S 11		B 12 S 12 (R)		
B 12 S 12	B 11 S 11	B 16 S 16	B 15 S 15	BC 11	B 12 S 12		B 13 S 13		
B 12 S 12	B 11 S 11	B 16 S 16 (R)	B 16 S 16	BC 12	B 13 S 13		B 14 S 14		
	B 12 S 12 (R)			BC 13	B 13 S 13		B 15 S 15		
				C 1	B 14 S 14		B 16 S 16		
				C 2	B 15 S 15				
				M 1	B 16 S 16				
				M 2					
				B 4 S 4					

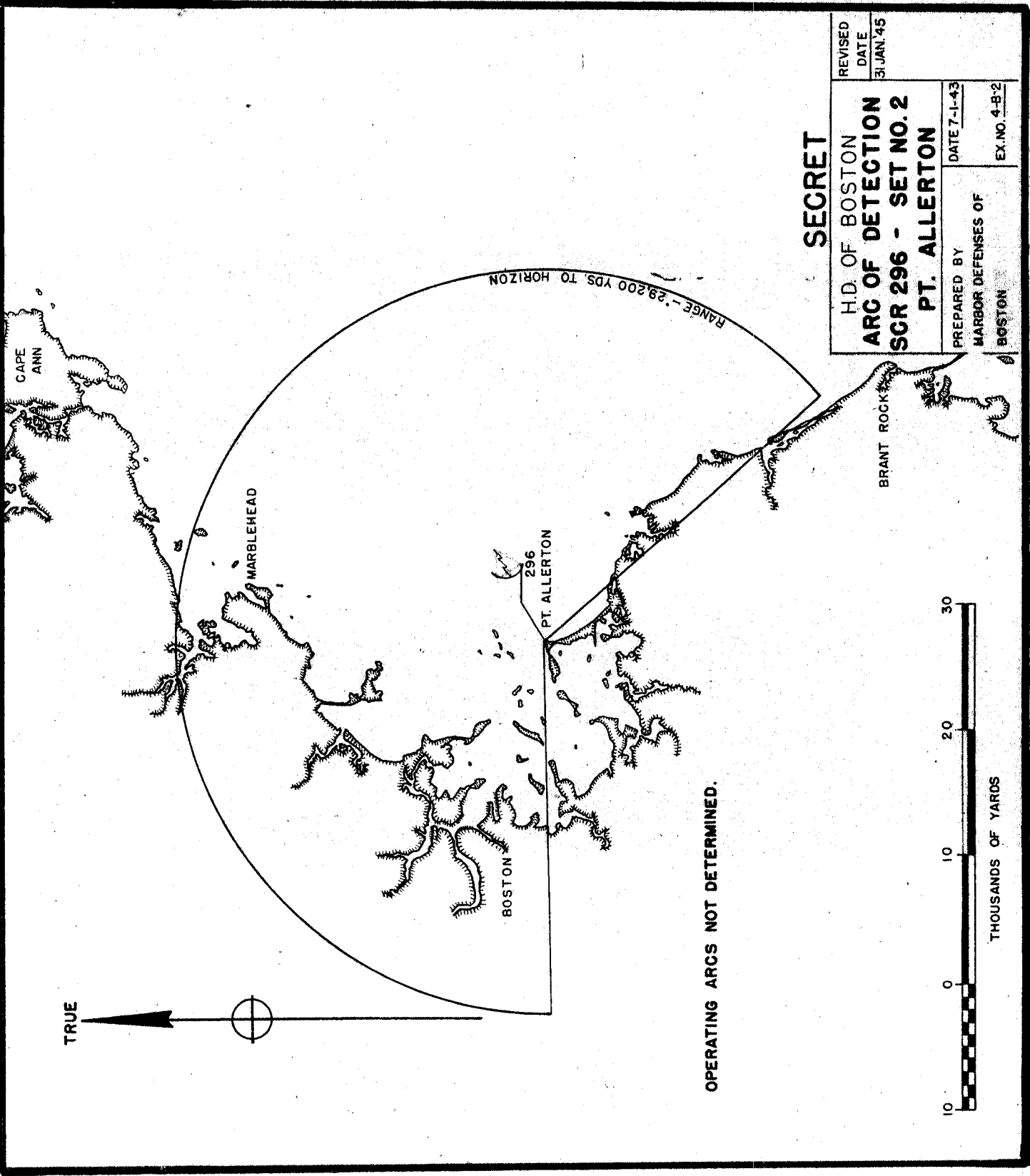




SECRET

HD OF BOSTON	
ARC OF DETECTION	
SCR 296 - SET NO. 1	
HOLLY HILL	
REVISOR	DATE
31 JAN 45	
PREPARED BY	DATE
HARBOR DEFENSES OF	7-1-43
BOSTON	EX. NO. 4-B-1

Authority: *NND 760162*
By: *WDP* Date: *7/15/60*



SECRET

REVISED
DATE

31 JAN '45

H.D. OF BOSTON
ARC OF DETECTION
SCR 296 - SET NO. 2
PT. ALLERTON

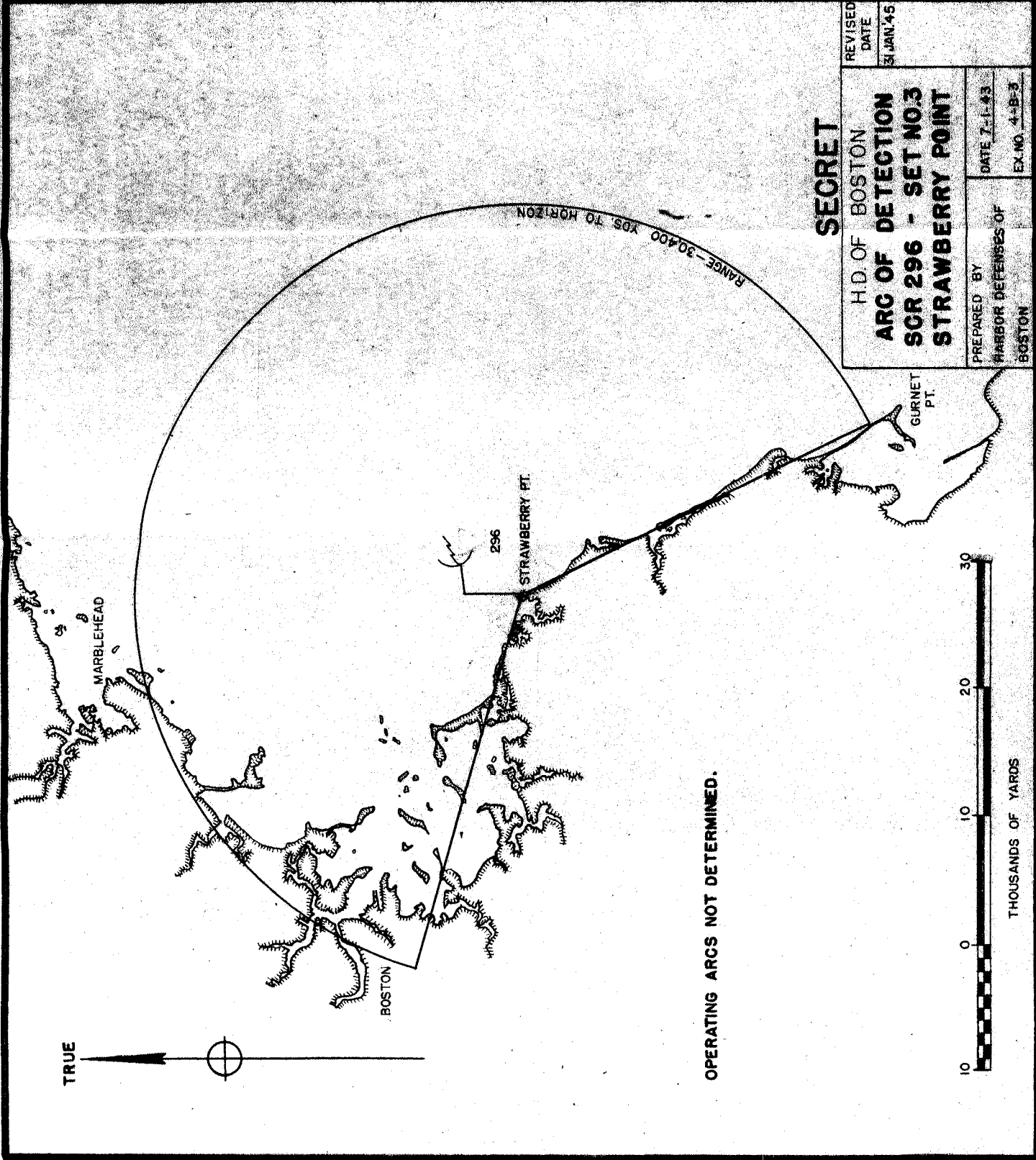
DATE 7-1-43

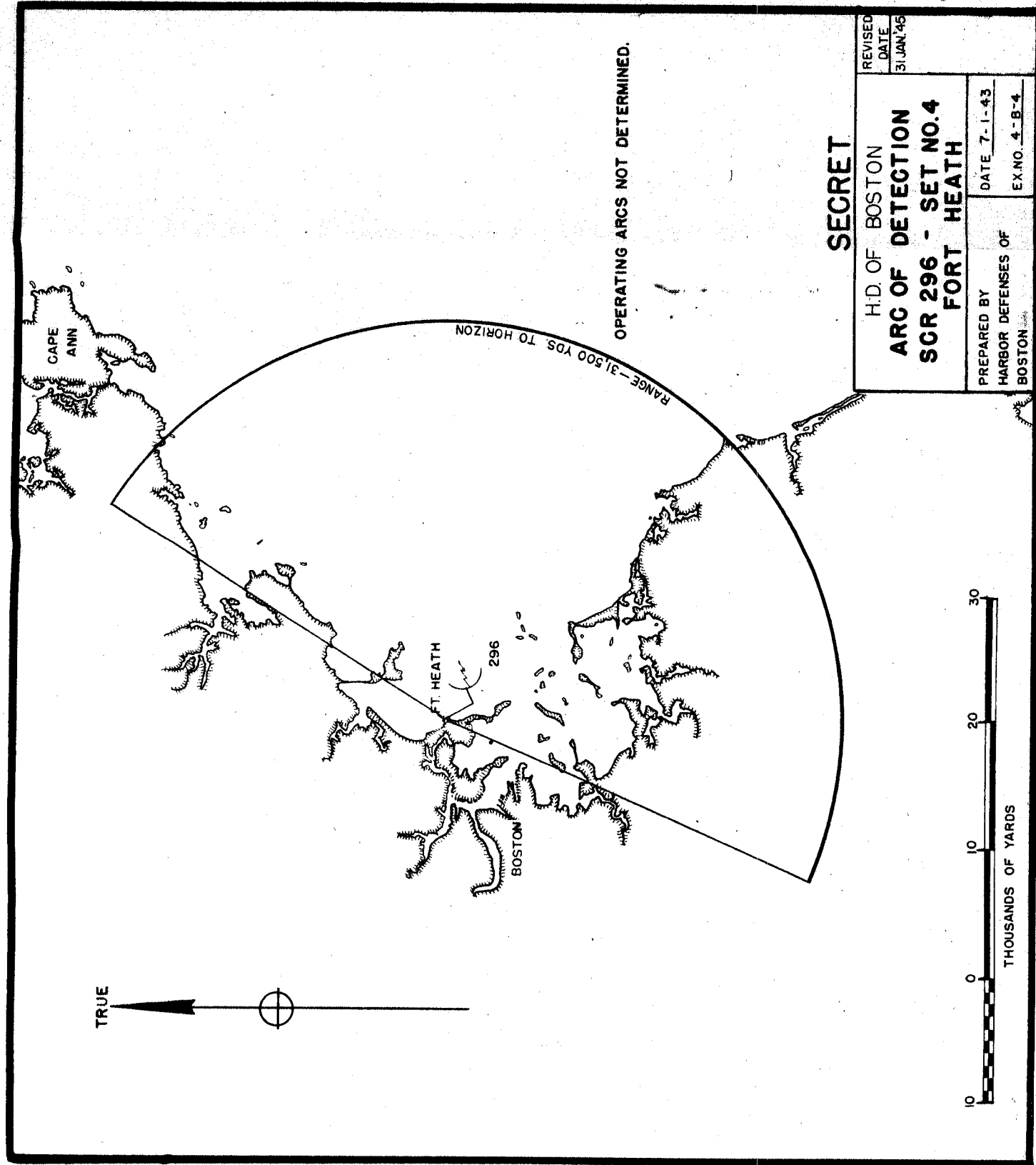
PREPARED BY
HARBOR DEFENSES OF
BOSTON

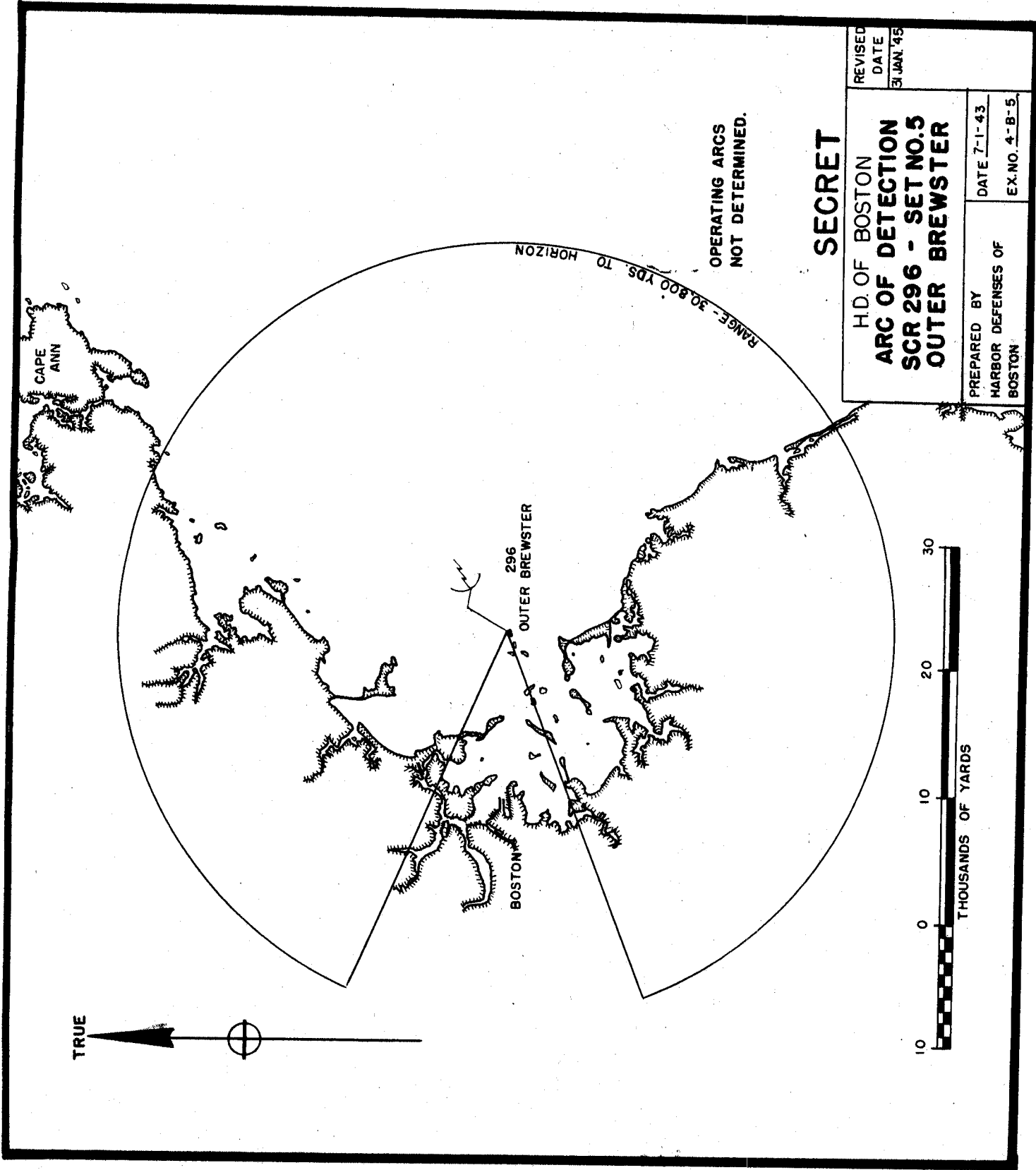
EX. NO. 4-B-2

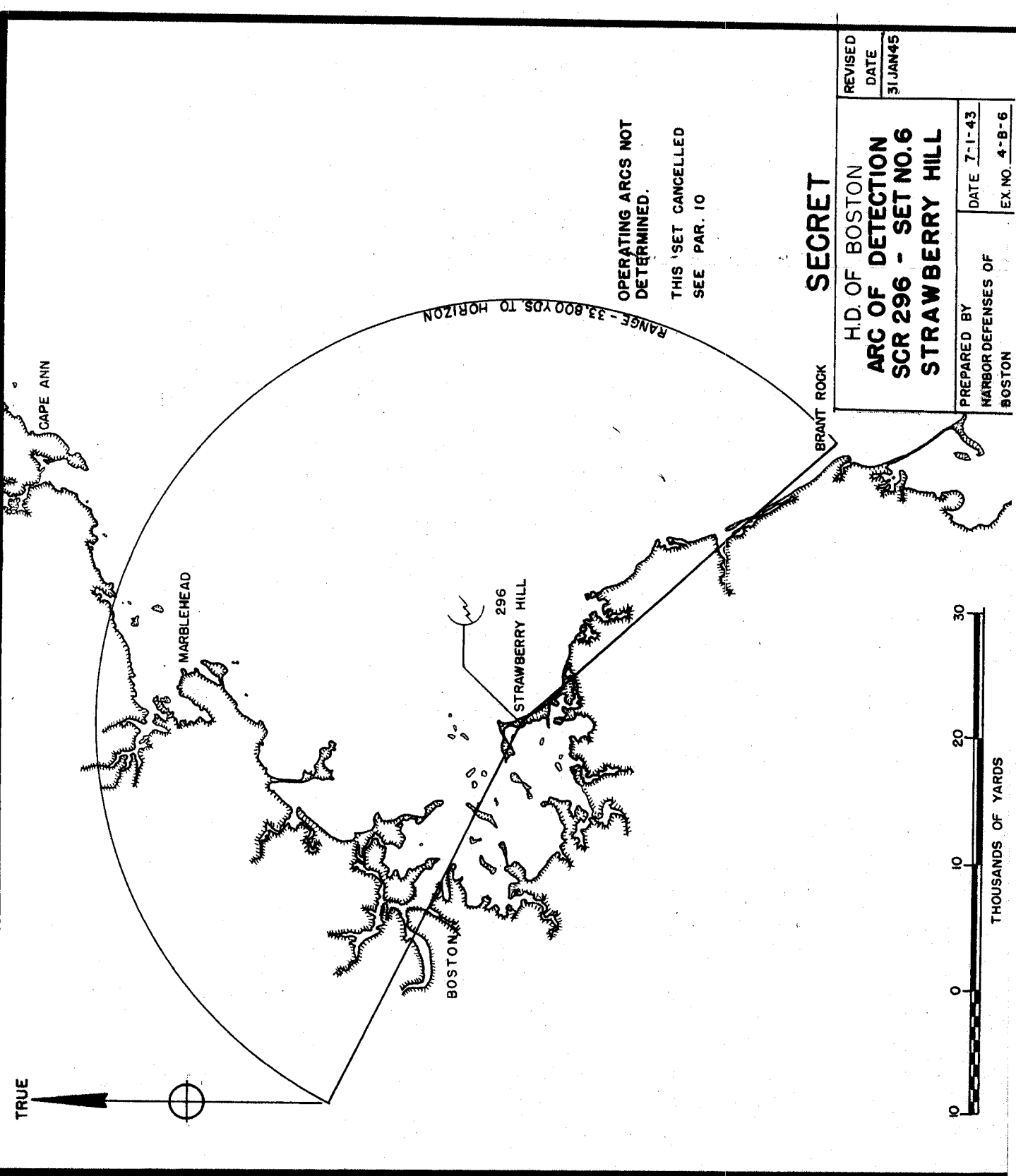
SECRET

H.D. OF BOSTON	REVISED DATE
ARC OF DETECTION	31 JAN '45
SCR 296 - SET NO.3	
STRAWBERRY POINT	
PREPARED BY	DATE 7-1-43
HARBOR DEFENSES OF BOSTON	EX NO. 4-B-3





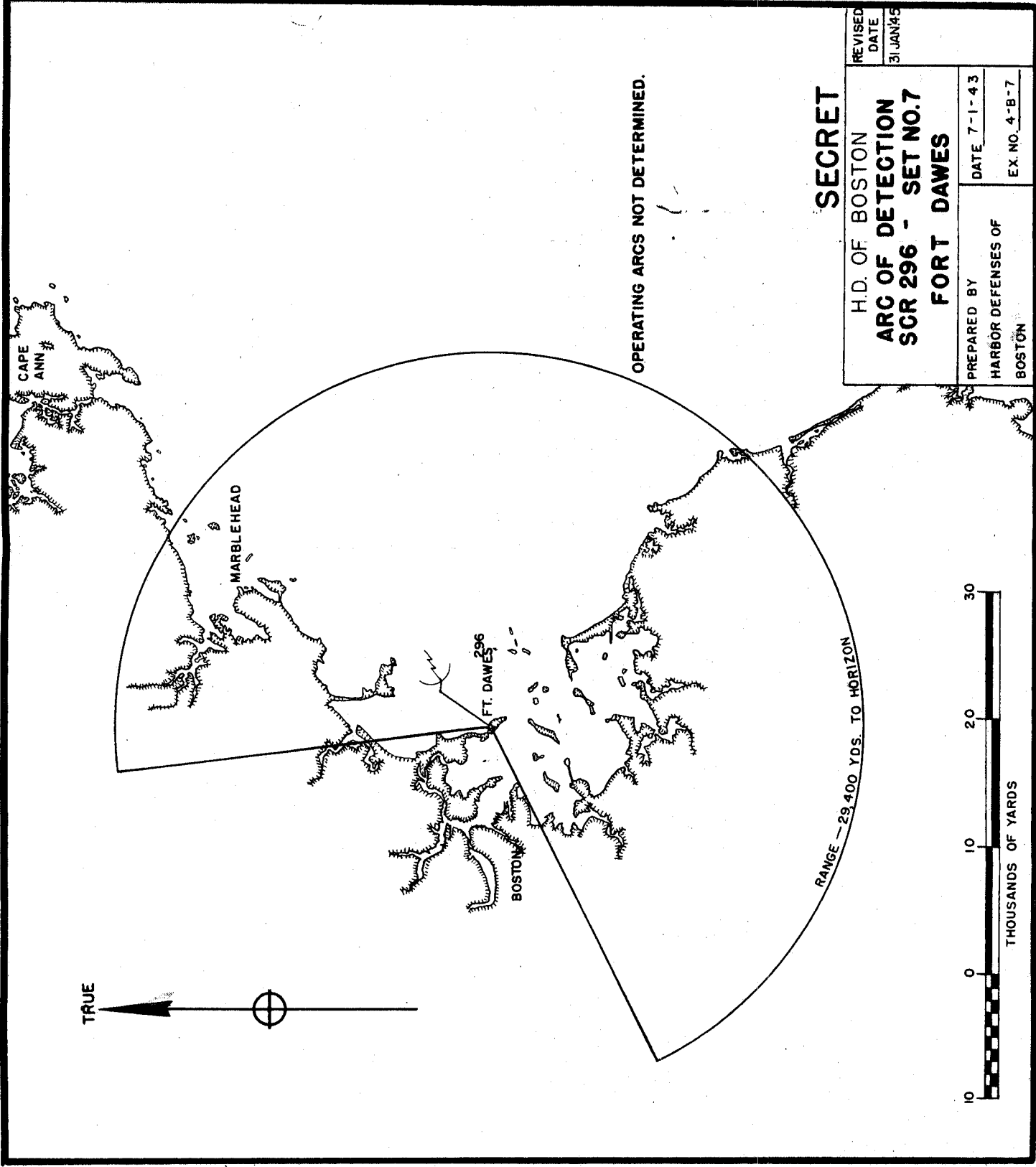




OPERATING ARCS NOT
DETERMINED.
THIS SET CANCELLED
SEE PAR. 10

SECRET

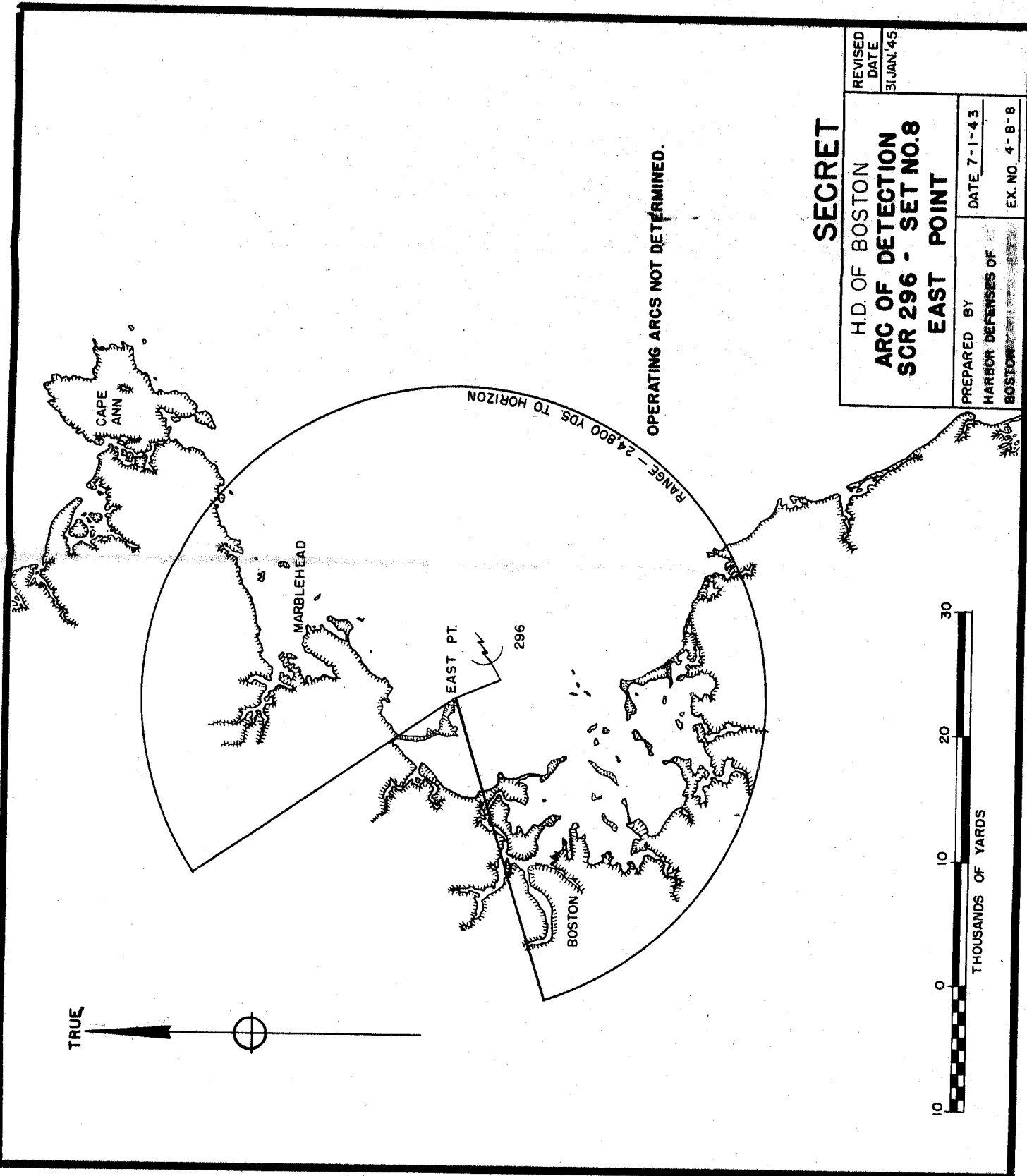
H.D. OF BOSTON		REVISED
ARC OF DETECTION		DATE
SCR 296 - SET NO. 6		31 JAN 45
STRAWBERRY HILL		
PREPARED BY	DATE	EX. NO.
HARBOR DEFENSES OF	7-1-43	4-B-6
BOSTON		



SECRET

H.D. OF BOSTON	
ARC OF DETECTION	
SCR 296 - SET NO. 7	
FORT DAWES	
REVISOR DATE	31 JAN 45
PREPARED BY	DATE 7-1-43
HARBOR DEFENSES OF BOSTON	EX NO. 4-B-7

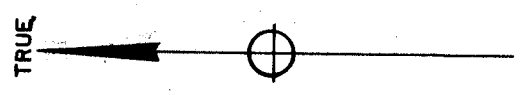
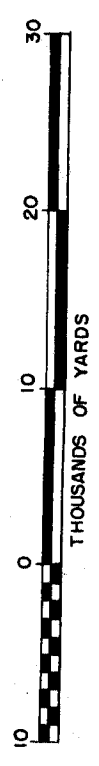
Authority: *NND 760162*
By *WDR* HARA Date: *7/15/60*



SECRET

H.D. OF BOSTON	
ARC OF DETECTION	
SCR 296 - SET NO.8	
EAST POINT	
REVISOR DATE	31 JAN '45
PREPARED BY	DATE 7-1-43
HARBOR DEFENSES OF BOSTON	
EX. NO. 4-B-8	

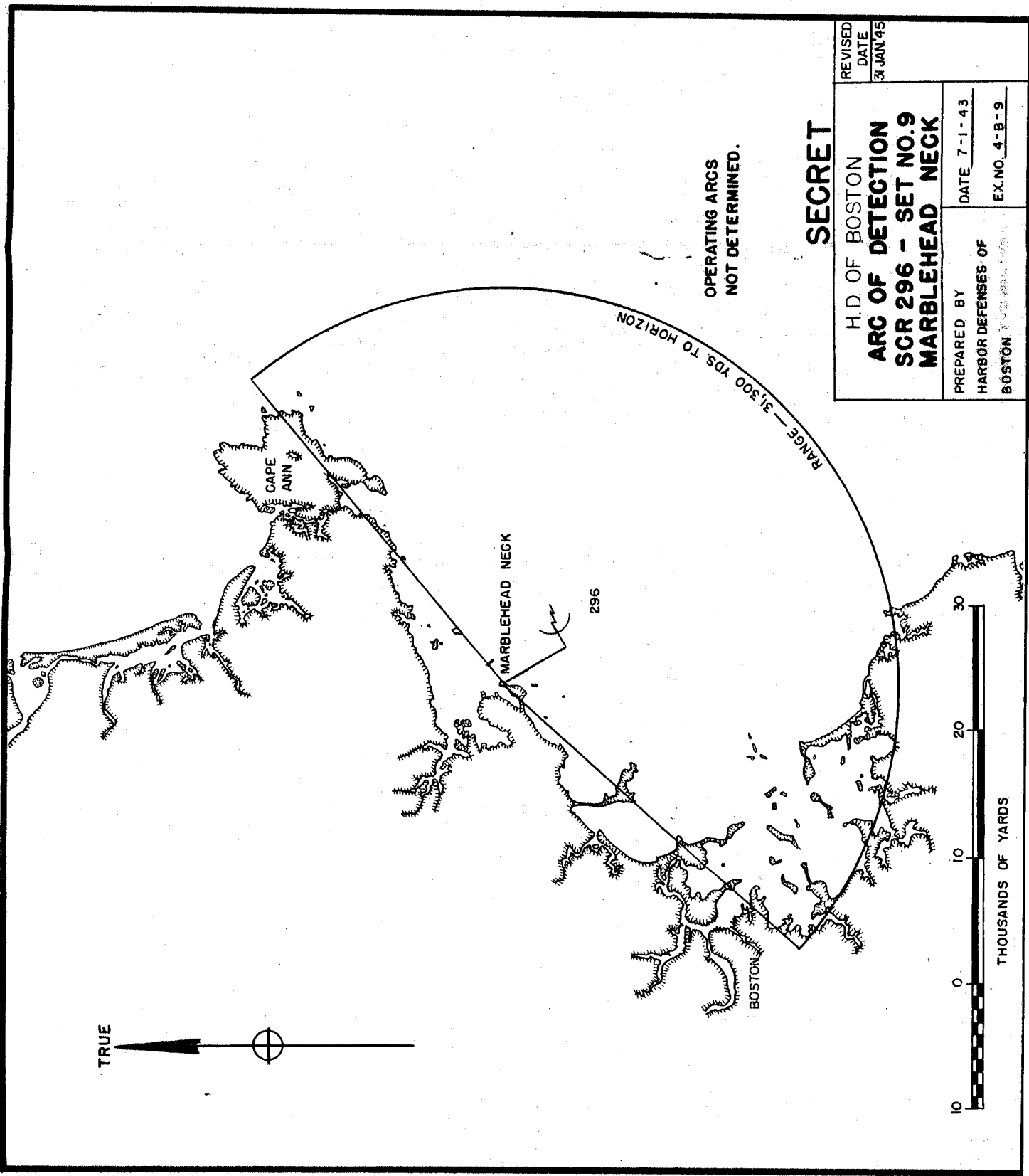
OPERATING ARCS NOT DETERMINED.

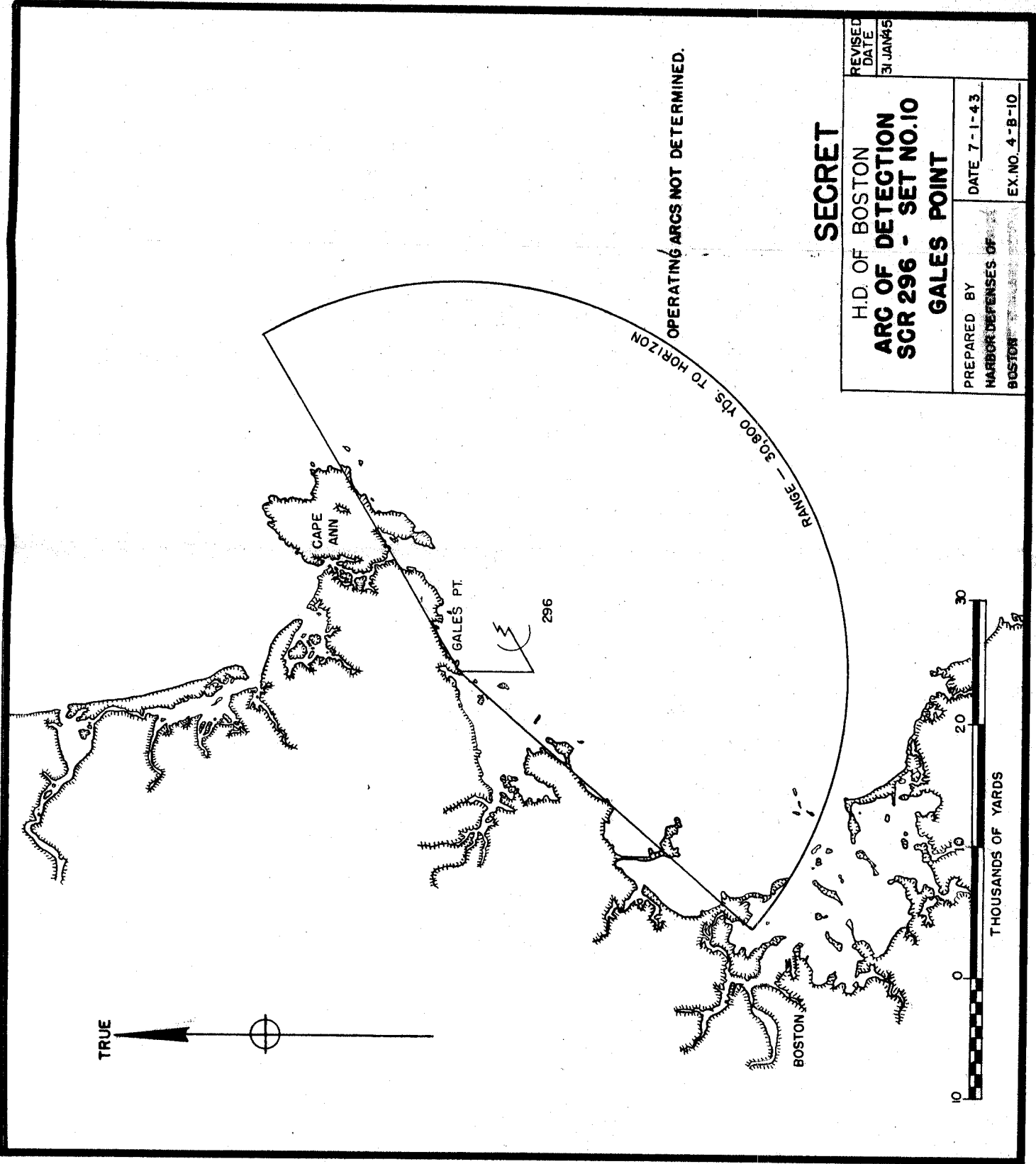


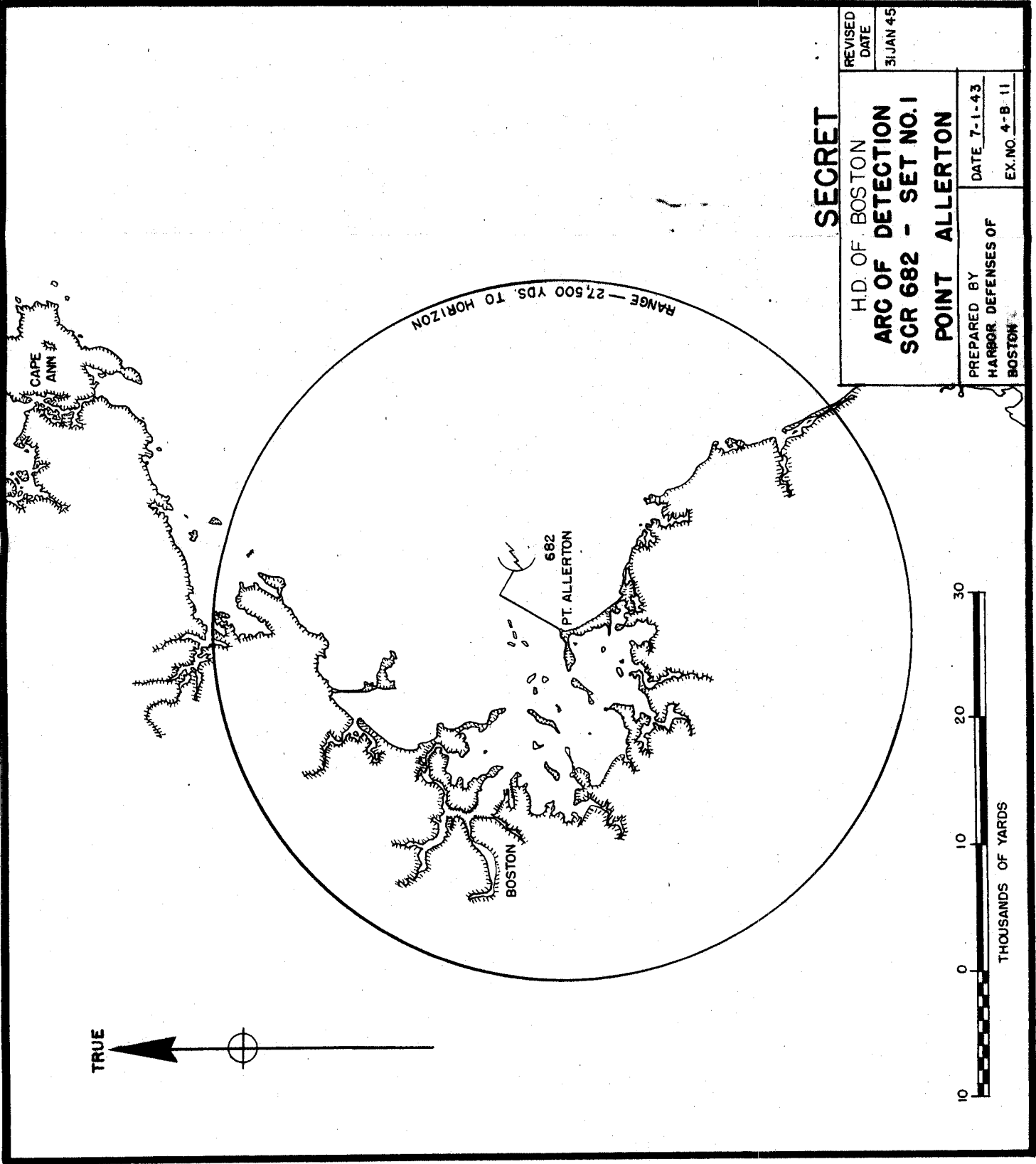
H.D. OF BOSTON ARC OF DETECTION SCR 296 - SET NO.9 MARBLEHEAD NECK		REVISED DATE 31 JAN 45
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43 EX. NO. 4-B-9	

SECRET

OPERATING ARCS
NOT DETERMINED.







SECRET

REVISED
DATE

31 JAN 45

H.D. OF BOSTON

ARC OF DETECTION

SCR 682 - SET NO. 1

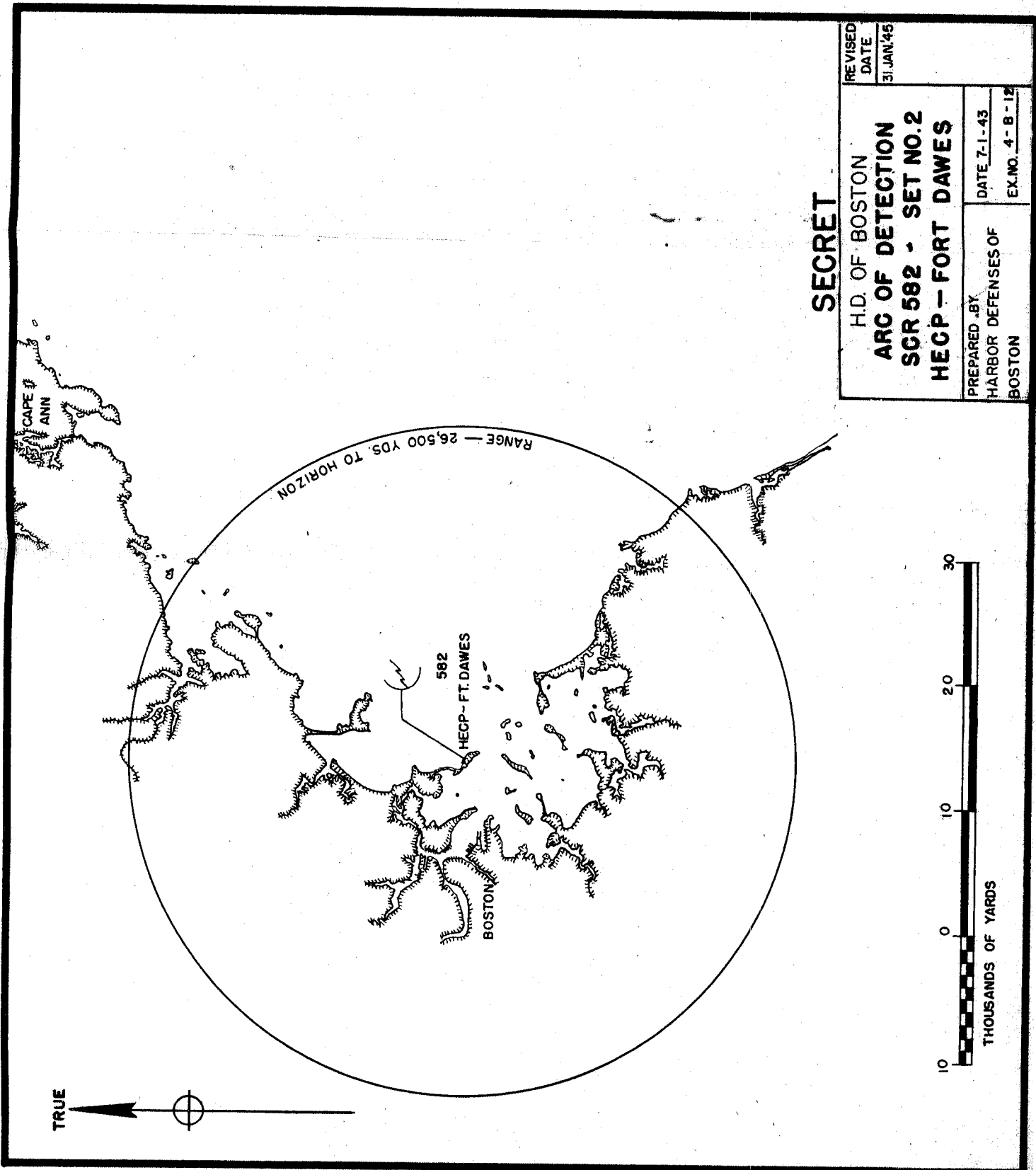
POINT ALLERTON

DATE 7-1-43

EX. NO. 4-B 11

PREPARED BY
HARBOR DEFENSES OF

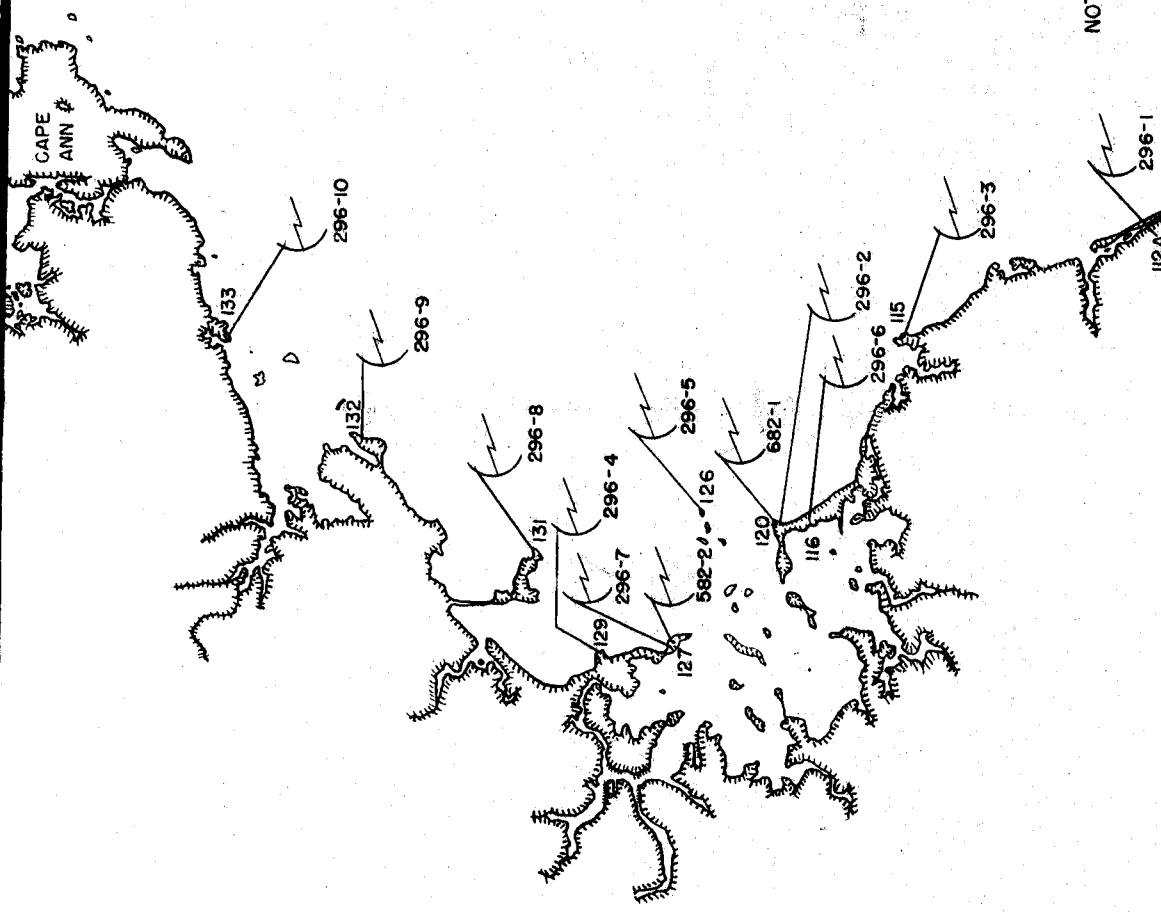
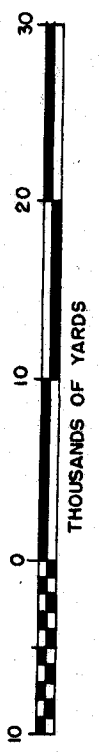
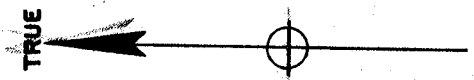
BOSTON



SECRET

H.D. OF BOSTON	REVISED DATE	31 JAN 45
	ARC OF DETECTION SCR 582 - SET NO. 2 HECP - FORT DAWES	
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE	7-1-43
	EX. NO.	4-B-12

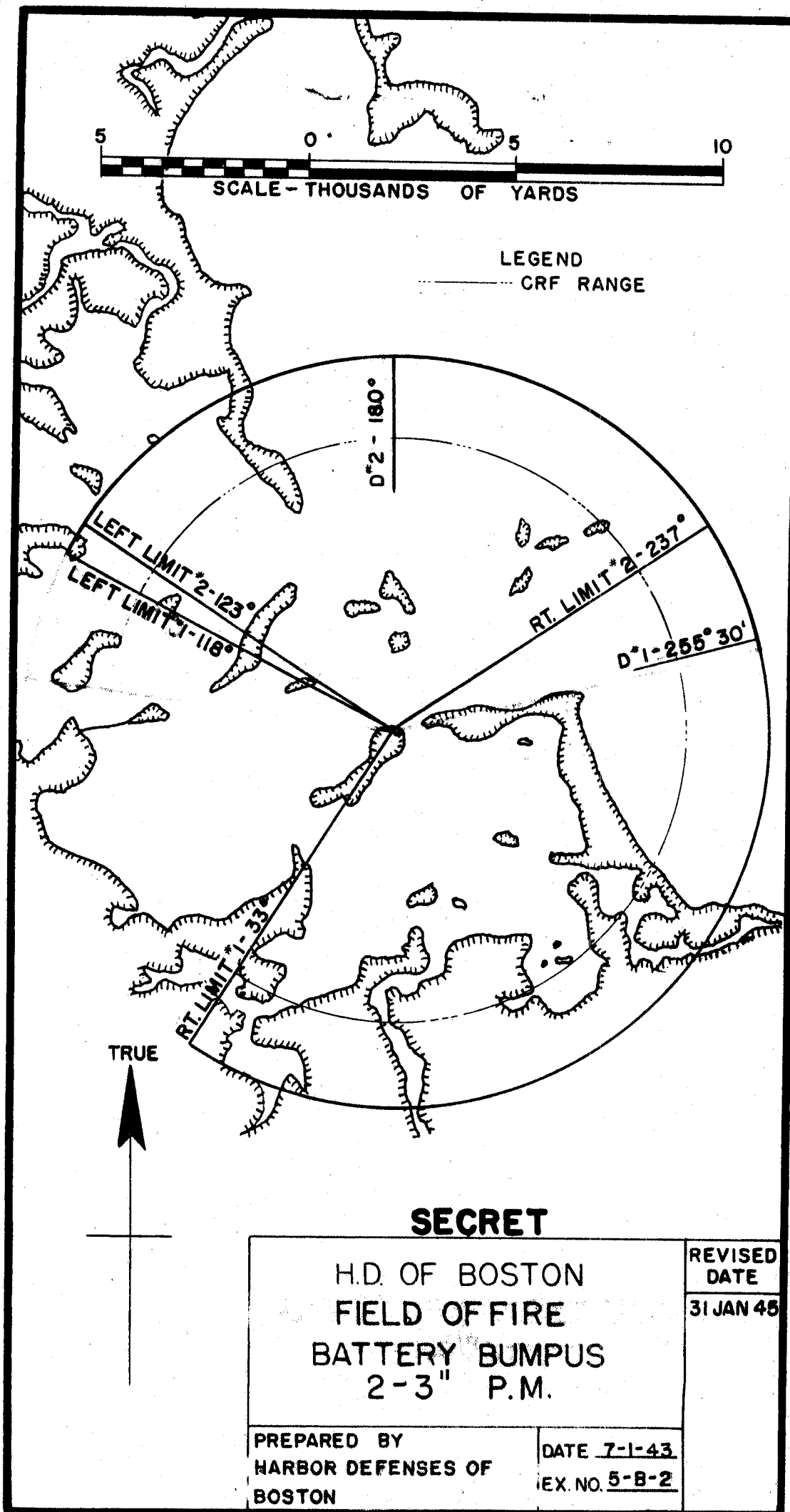
Authority NND 760162
By WDR HARA Date 7/5/60



NOTE: LOC. 116 CANCELLED

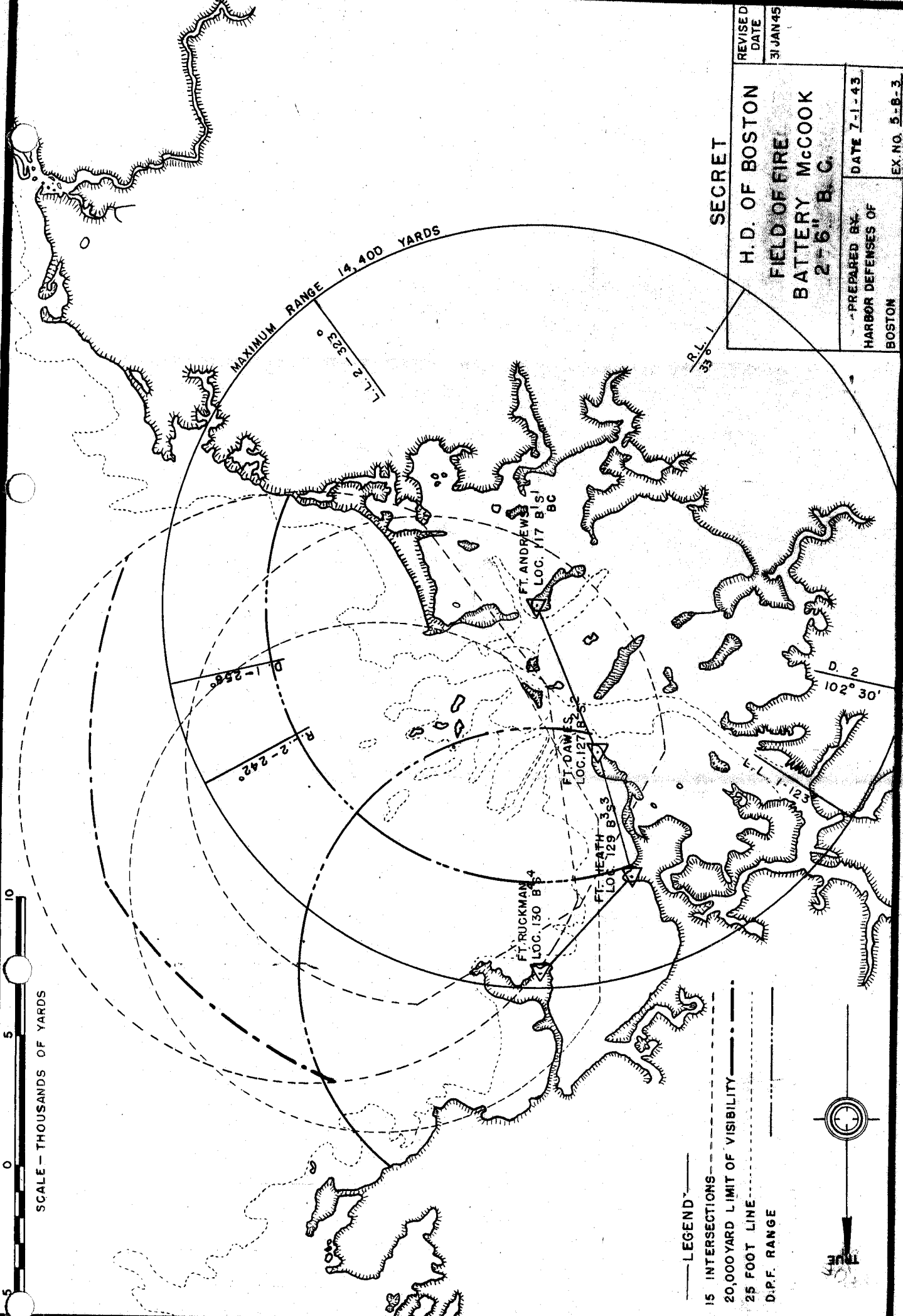
SECRET

H.D. OF BOSTON		REVISED DATE
LOCATION OF SEA COAST RADAR		31 JAN 45
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 4-B-18



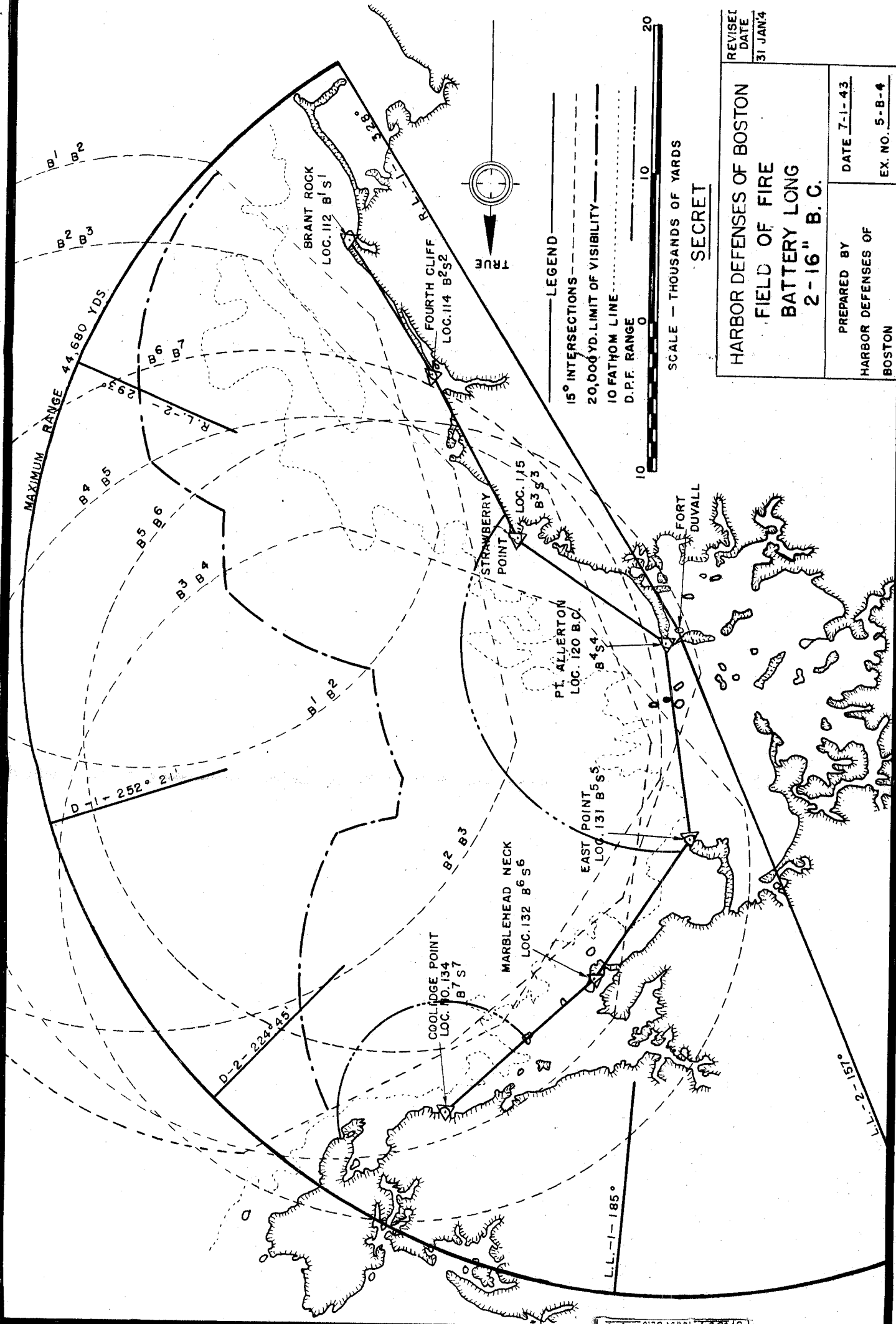
DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00

REVISED DATE 31 JAN 45	
SECRET	
H. D. OF BOSTON FIELD OF FIRE BATTERY MCCOOK 2-5" B. C.	
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43 EX. NO. 5-B-3



LEGEND
 IS INTERSECTIONS
 20,000 YARD LIMIT OF VISIBILITY
 25 FOOT LINE
 D.P.F. RANGE

SCALE - THOUSANDS OF YARDS



REVISED
DATE
31 JAN 4

HARBOR DEFENSES OF BOSTON
FIELD OF FIRE
BATTERY LONG
2-16" B.C.

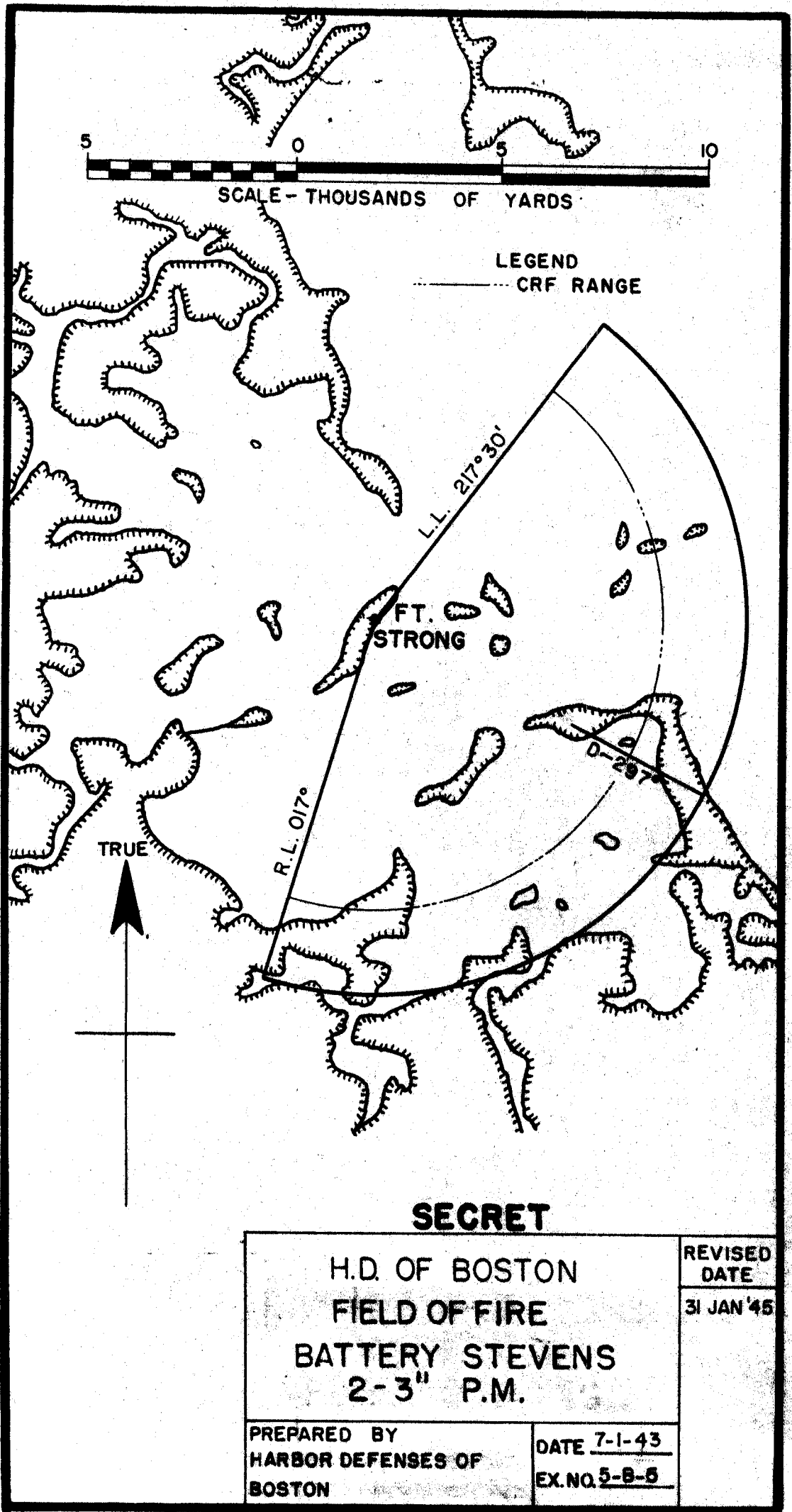
PREPARED BY
HARBOR DEFENSES OF
BOSTON

DATE 7-1-43

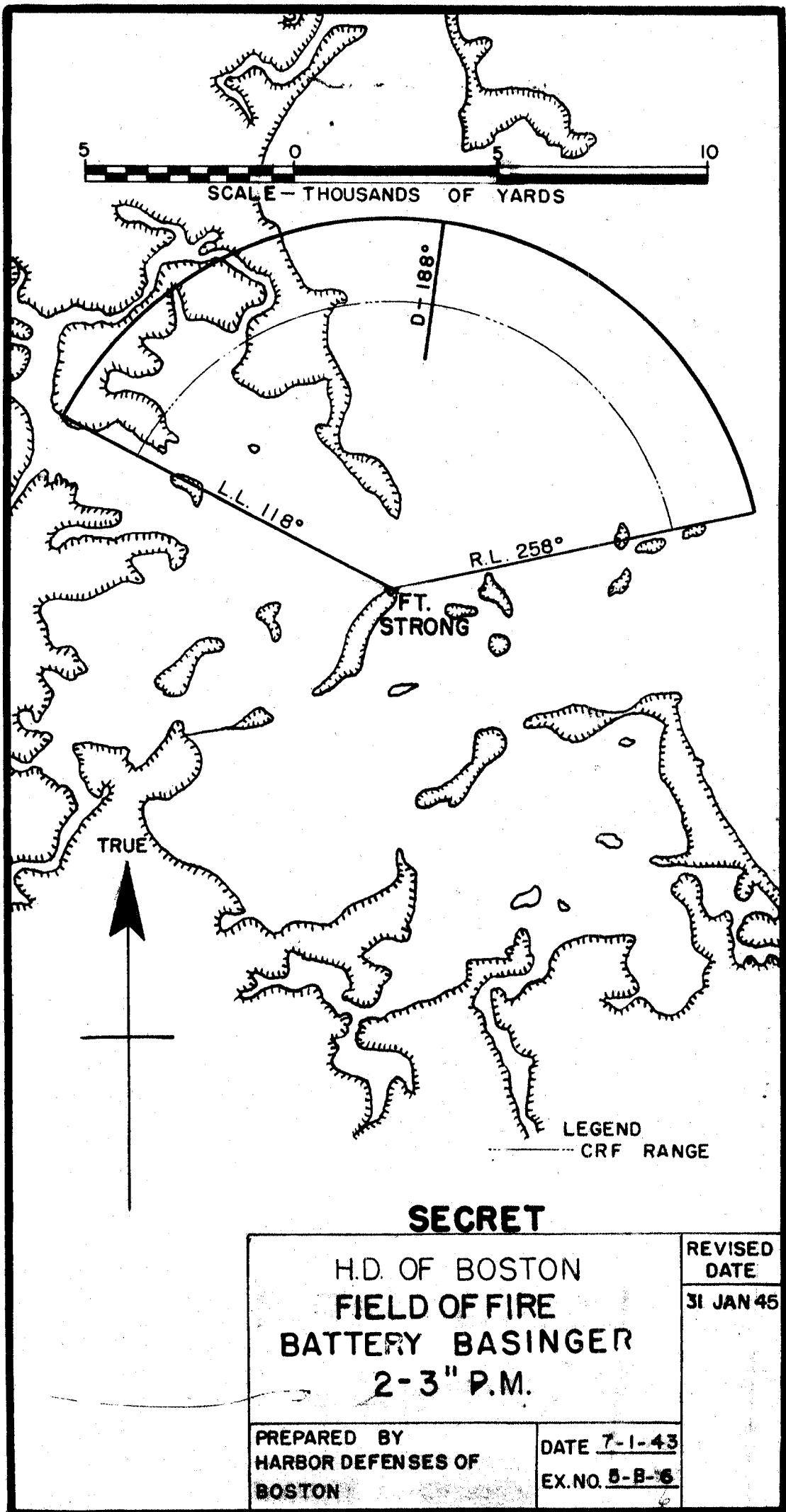
EX. NO. 5-B-4

SECRET

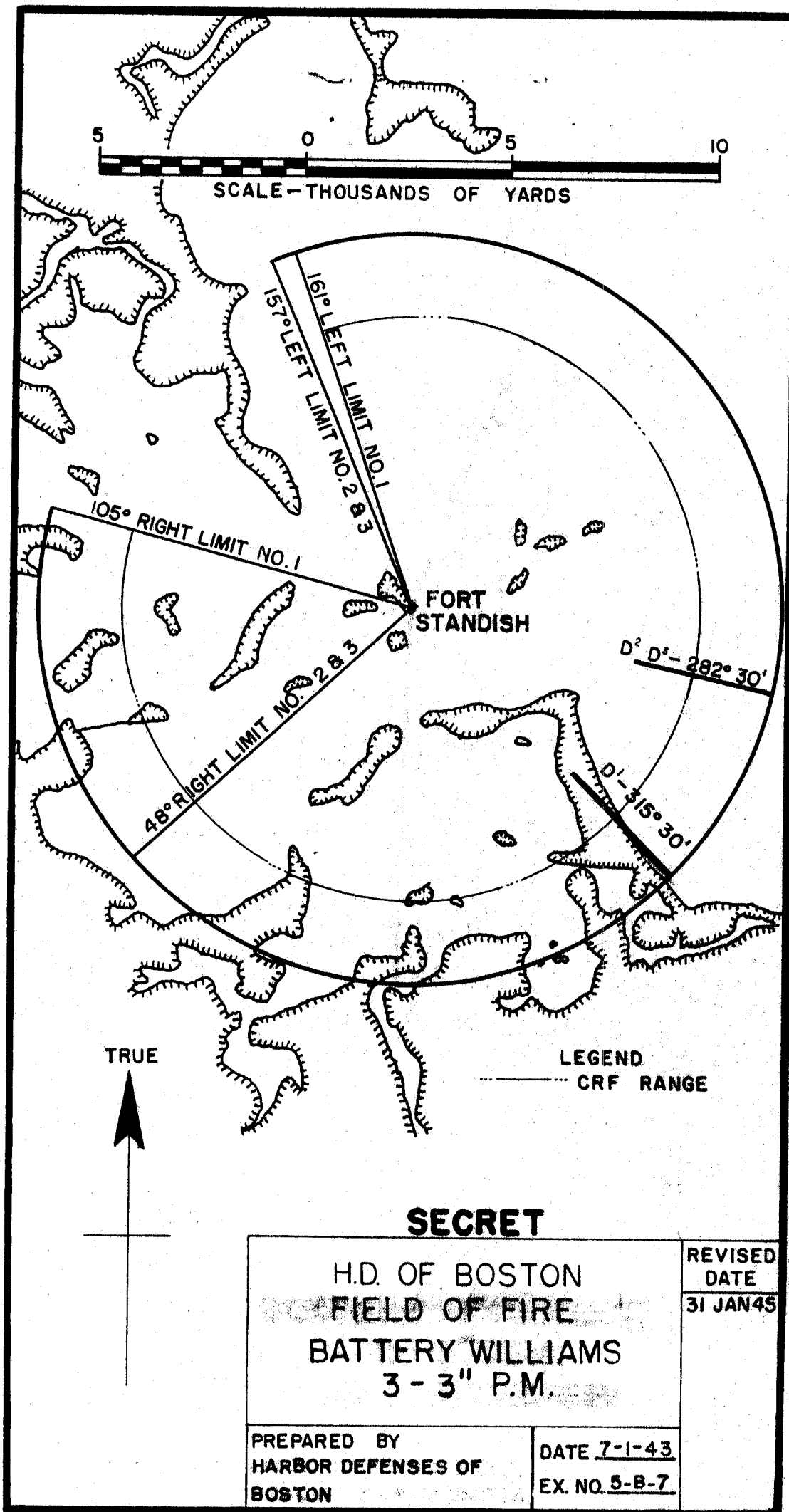
Authority NND 760162
By WDP WARA Date 7/15/60



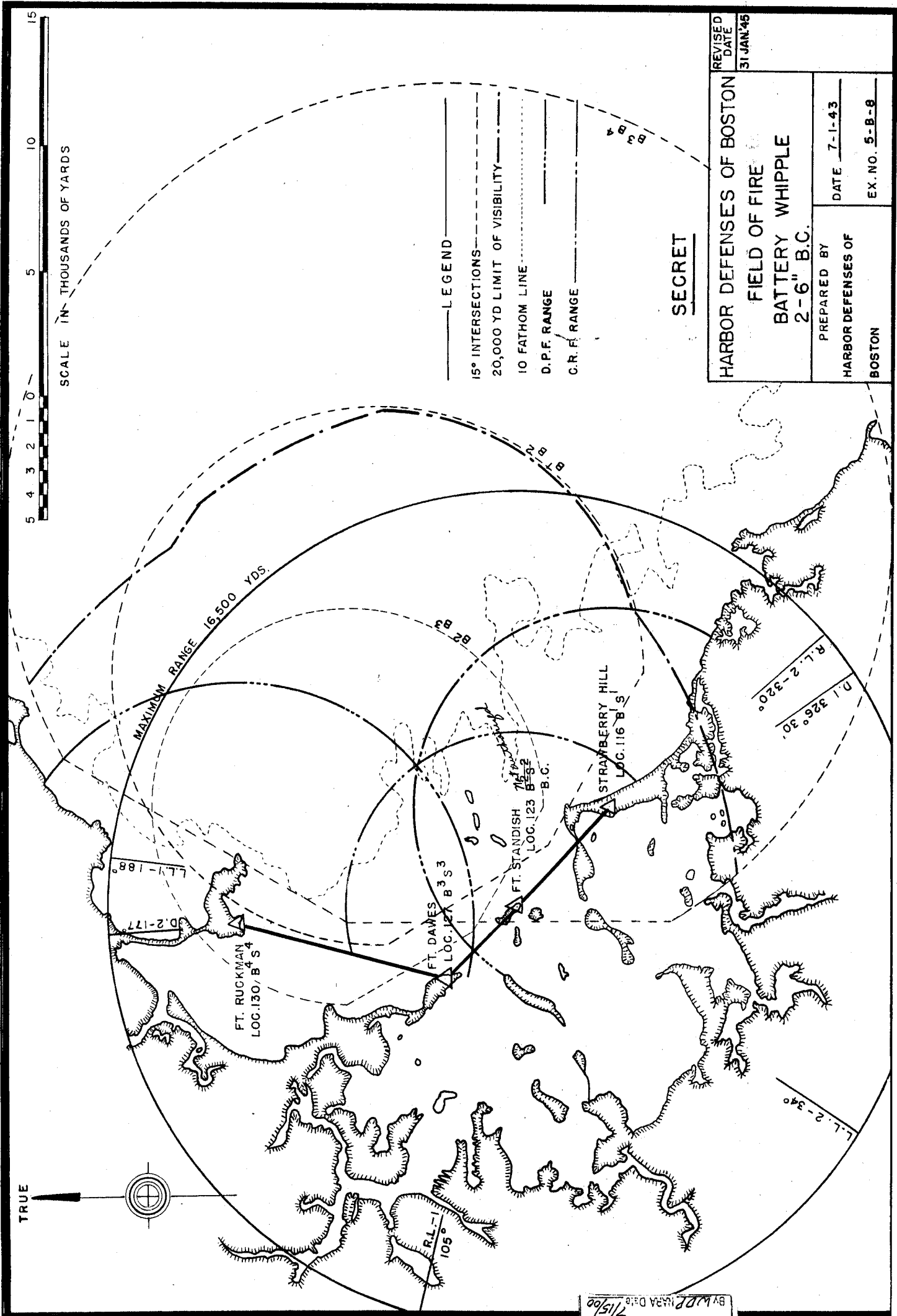
DECLASSIFIED
Authority NND 760162
By WDR HARA Date 7/15/00



DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00



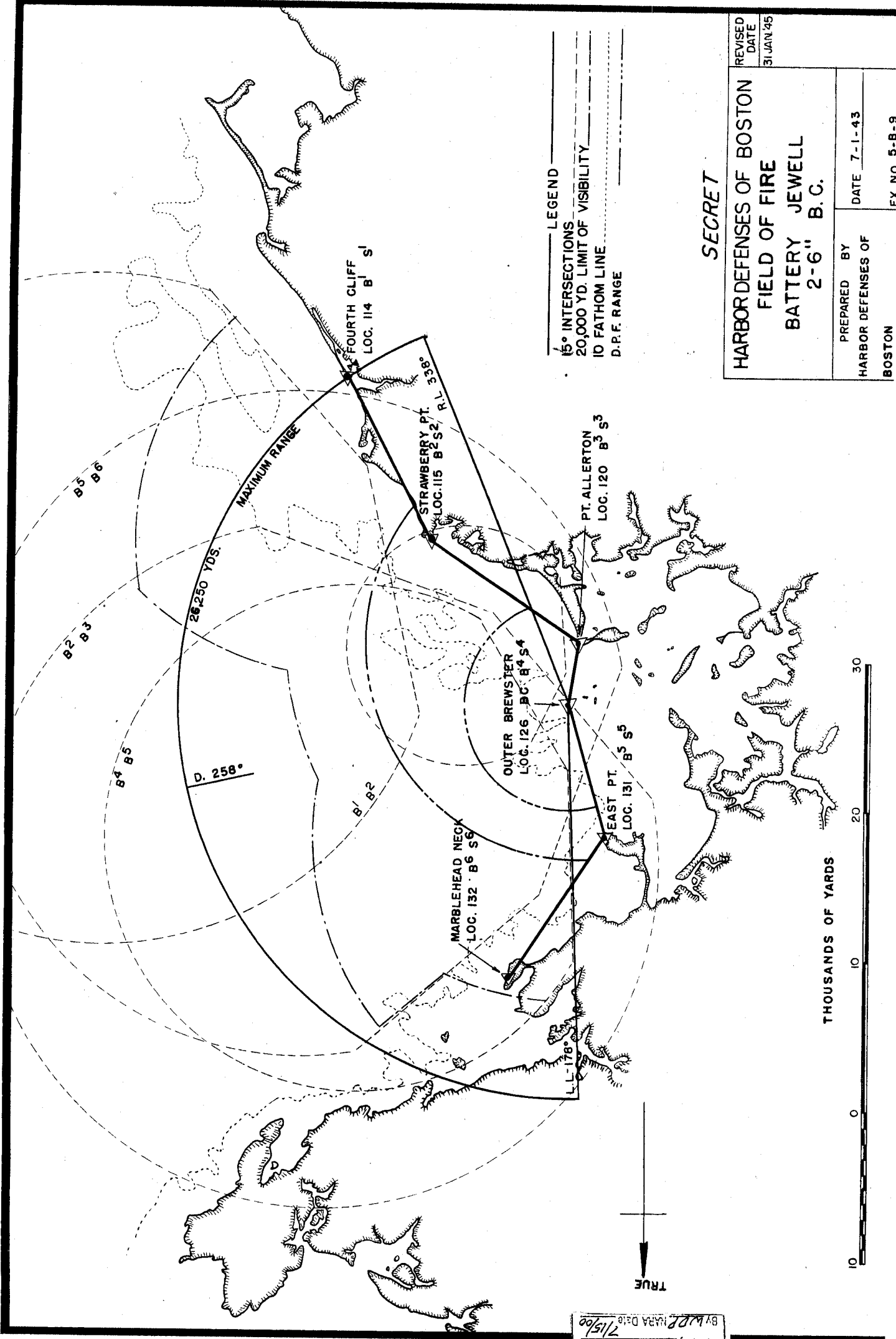
DECLASSIFIED
Authority NND 760162
7/15/00
By WDF NARA Date



HARBOR DEFENSES OF BOSTON		REVISED DATE	31 JAN 45
FIELD OF FIRE			
BATTERY WHIPPLE			
2-6" B.C.			
PREPARED BY	DATE	7-1-43	
HARBOR DEFENSES OF BOSTON	EX. NO.	5-B-8	

SECRET

Authority NND 760162
By WDP NARA Date 7/15/00



LEGEND

15° INTERSECTIONS

20,000 YD. LIMIT OF VISIBILITY

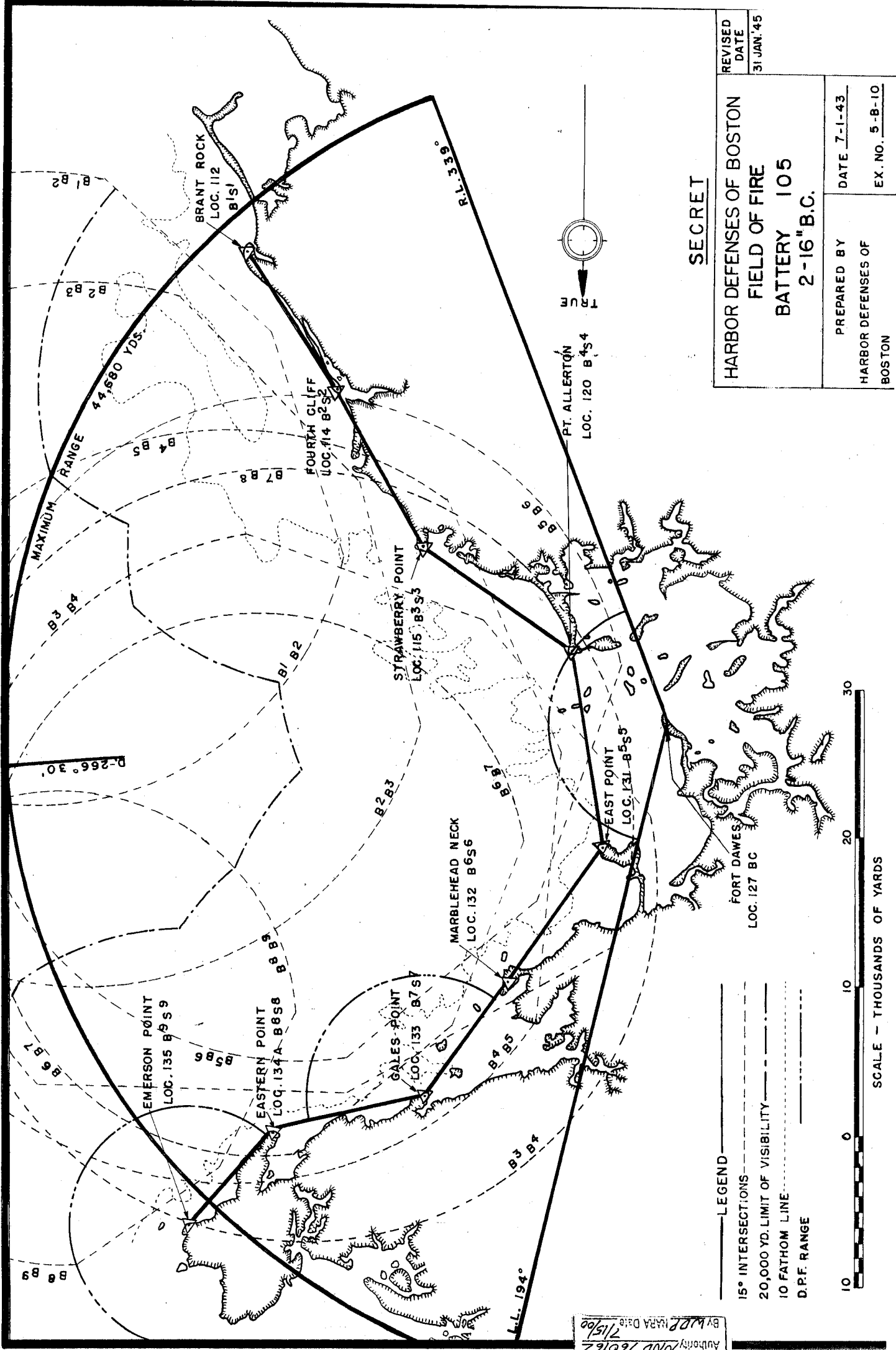
10 FATHOM LINE

D.R.F. RANGE

SECRET

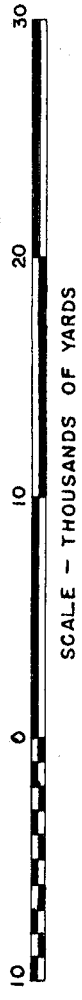
HARBOR DEFENSES OF BOSTON		REVISED DATE	31 JAN '45
FIELD OF FIRE			
BATTERY JEWELL			
2-6" B.C.			
PREPARED BY	DATE	7-1-43	
HARBOR DEFENSES OF			
BOSTON	FY NO 5-B-9		

Authority AND 760162
 By WDR Date 7/15/40

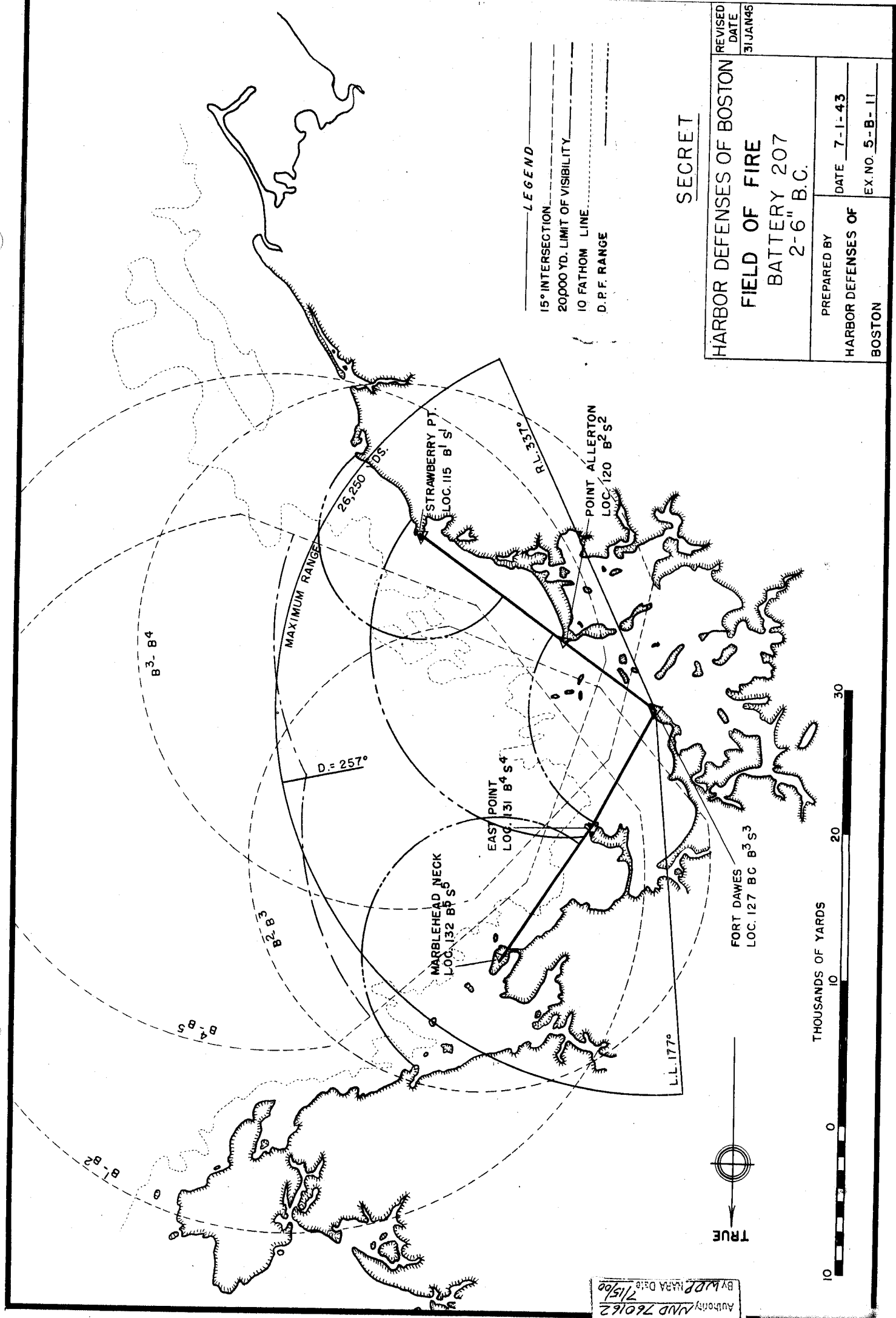


HARBOR DEFENSES OF BOSTON FIELD OF FIRE BATTERY 105 2-16" B.C.		REVIS DATE
PREPARED BY HARBOR DEFENSES OF BOSTON		DATE 7-1-43 EX. NO. 5-B-10

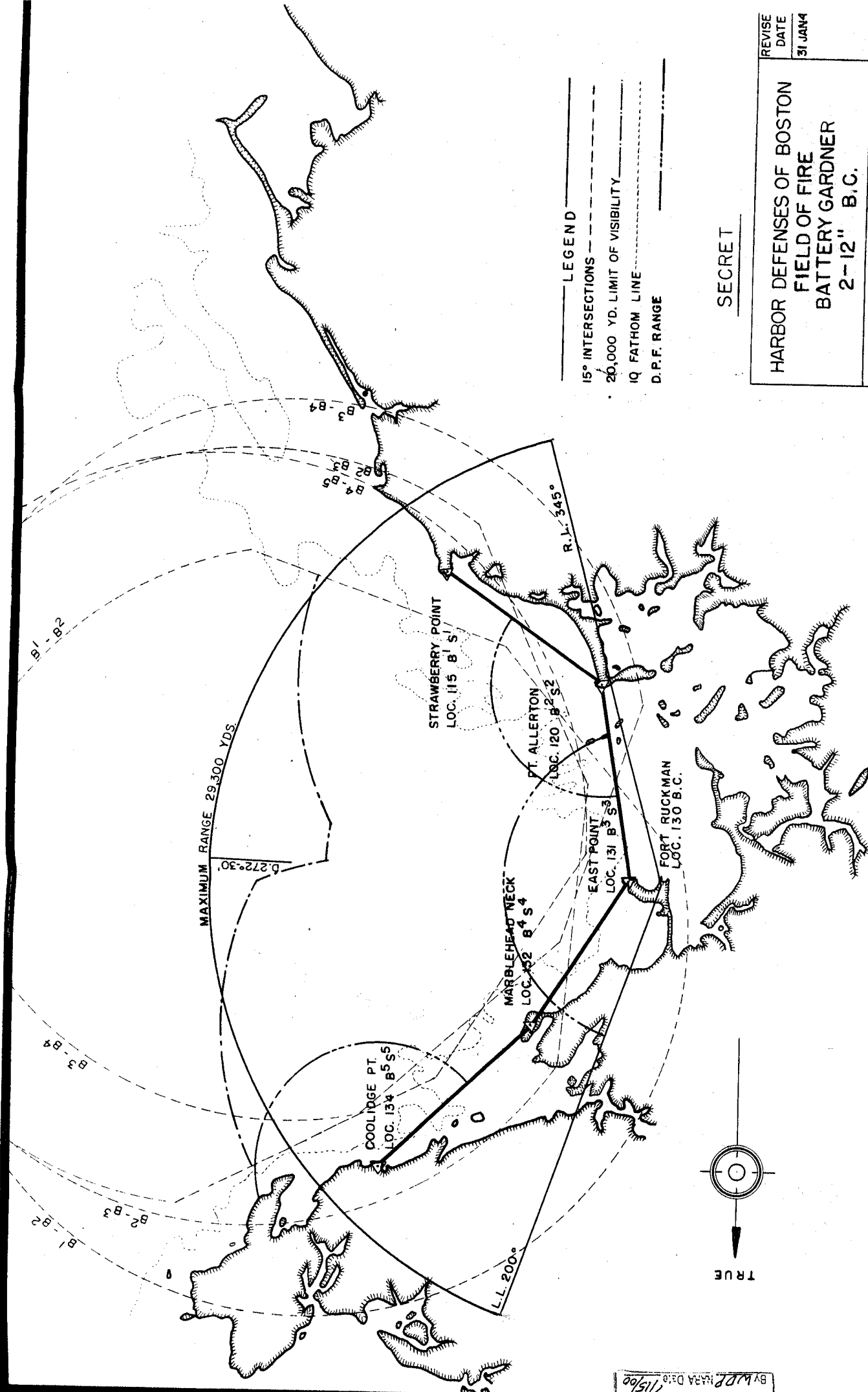
LEGEND
15° INTERSECTIONS
20,000 YD. LIMIT OF VISIBILITY
10 FATHOM LINE
D.P.F. RANGE



Authority AND 76012
By WDR Date 7/15/60



Authority AND 760162
By WPA Date 7/15/60

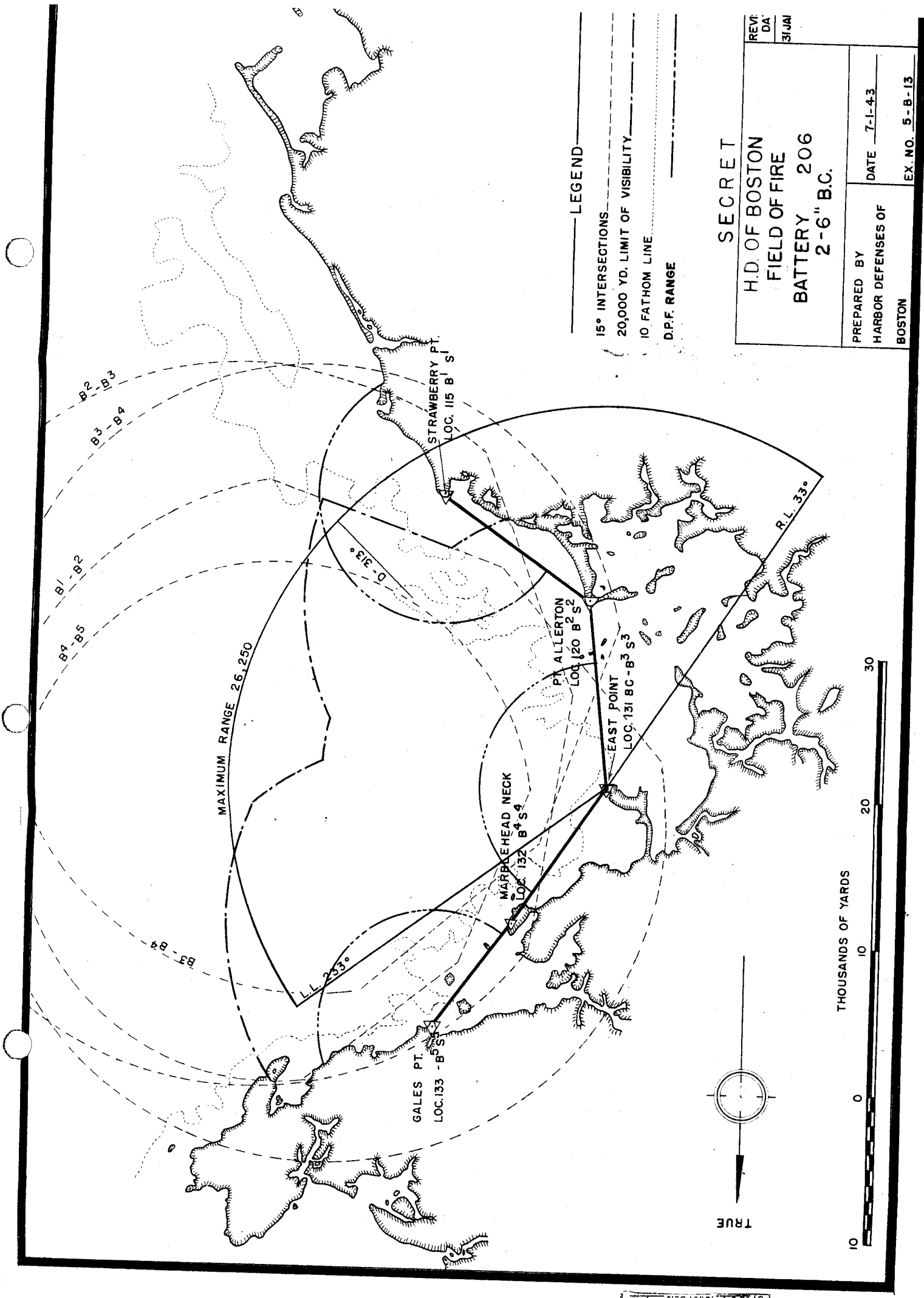


- LEGEND
- 15° INTERSECTIONS
 - 20,000 YD. LIMIT OF VISIBILITY
 - 10 FATHOM LINE
 - D.P.F. RANGE

SECRET

HARBOR DEFENSES OF BOSTON FIELD OF FIRE BATTERY GARDNER 2-12" B.C.		REVISE DATE 31 JAN 4
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 5-B-12

Authority NND 760162
By WDR NARA Date 7/15/60



LEGEND

15° INTERSECTIONS

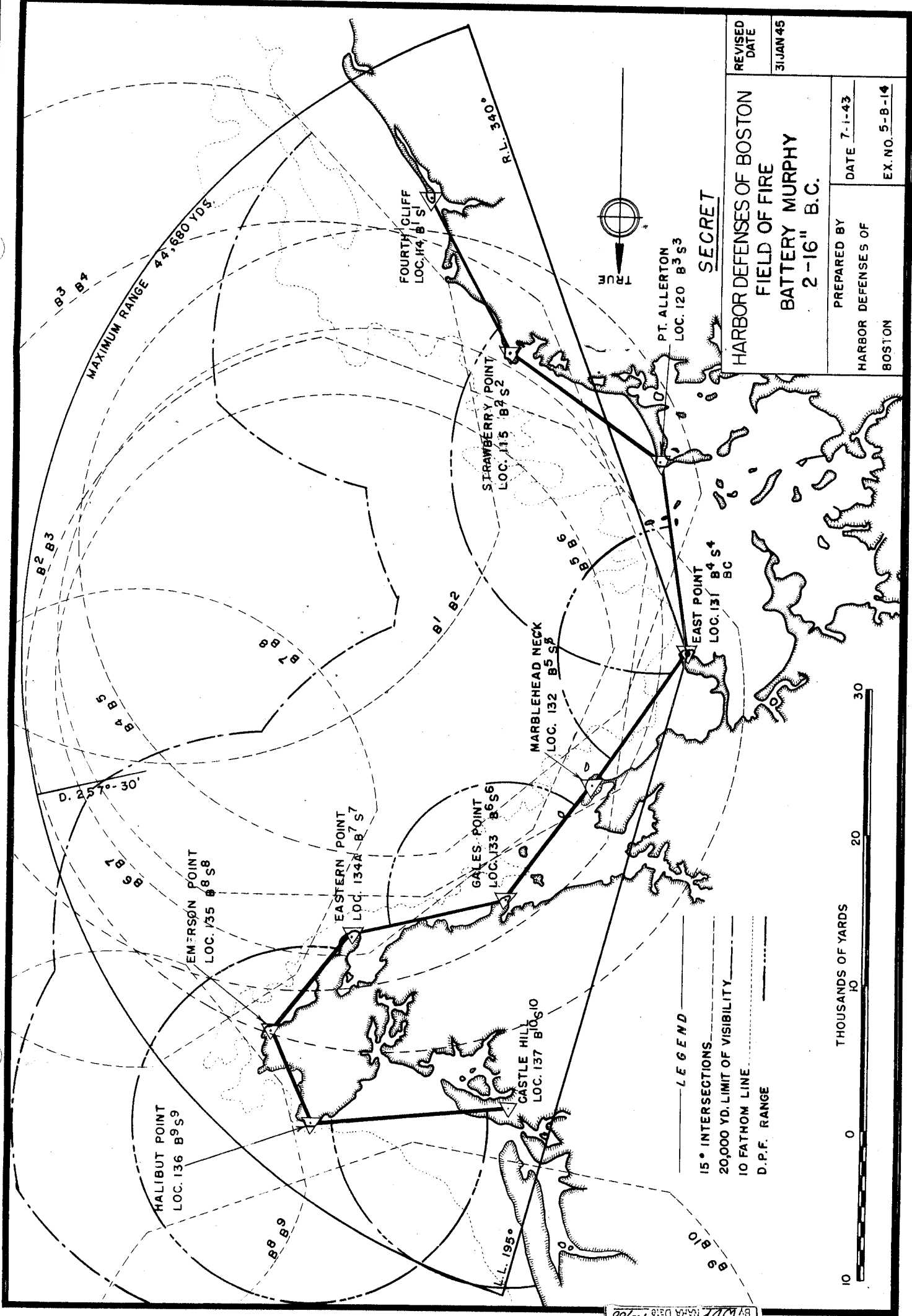
20,000 YD. LIMIT OF VISIBILITY

10 FATHOM LINE

D.P.F. RANGE

SECRET	
H.D. OF BOSTON FIELD OF FIRE BATTERY 206 2-6" B.C.	
REVI DA 31 JAI	DATE 7-1-43
PREPARED BY HARBOR DEFENSES OF BOSTON	EX. NO. 5-B-13

Authority AND 760162
7/15/60
BY WDP NARA Date



HARBOR DEFENSES OF BOSTON FIELD OF FIRE BATTERY MURPHY 2-16" B.C.		REVISED DATE 31 JAN 45
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 5-B-14

LEGEND

- 15° INTERSECTIONS
- 20,000 YD. LIMIT OF VISIBILITY
- 10 FATHOM LINE
- D.P.F. RANGE

Authority AND 76012
By WDP:WARA Date 7/15/60

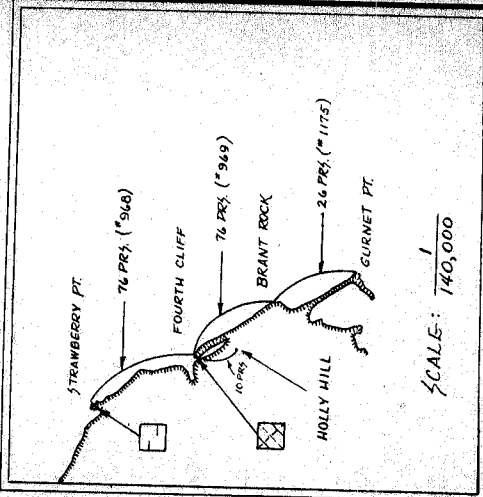
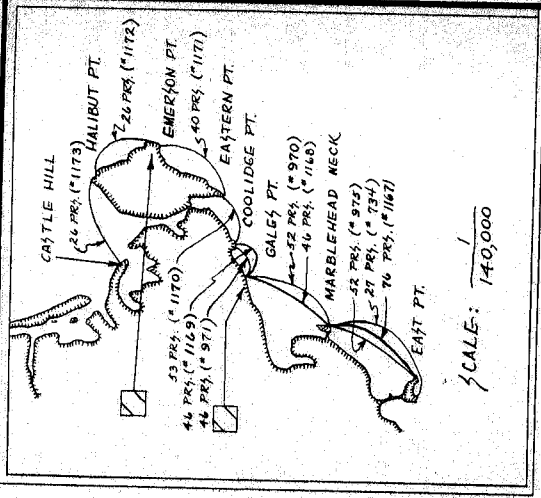
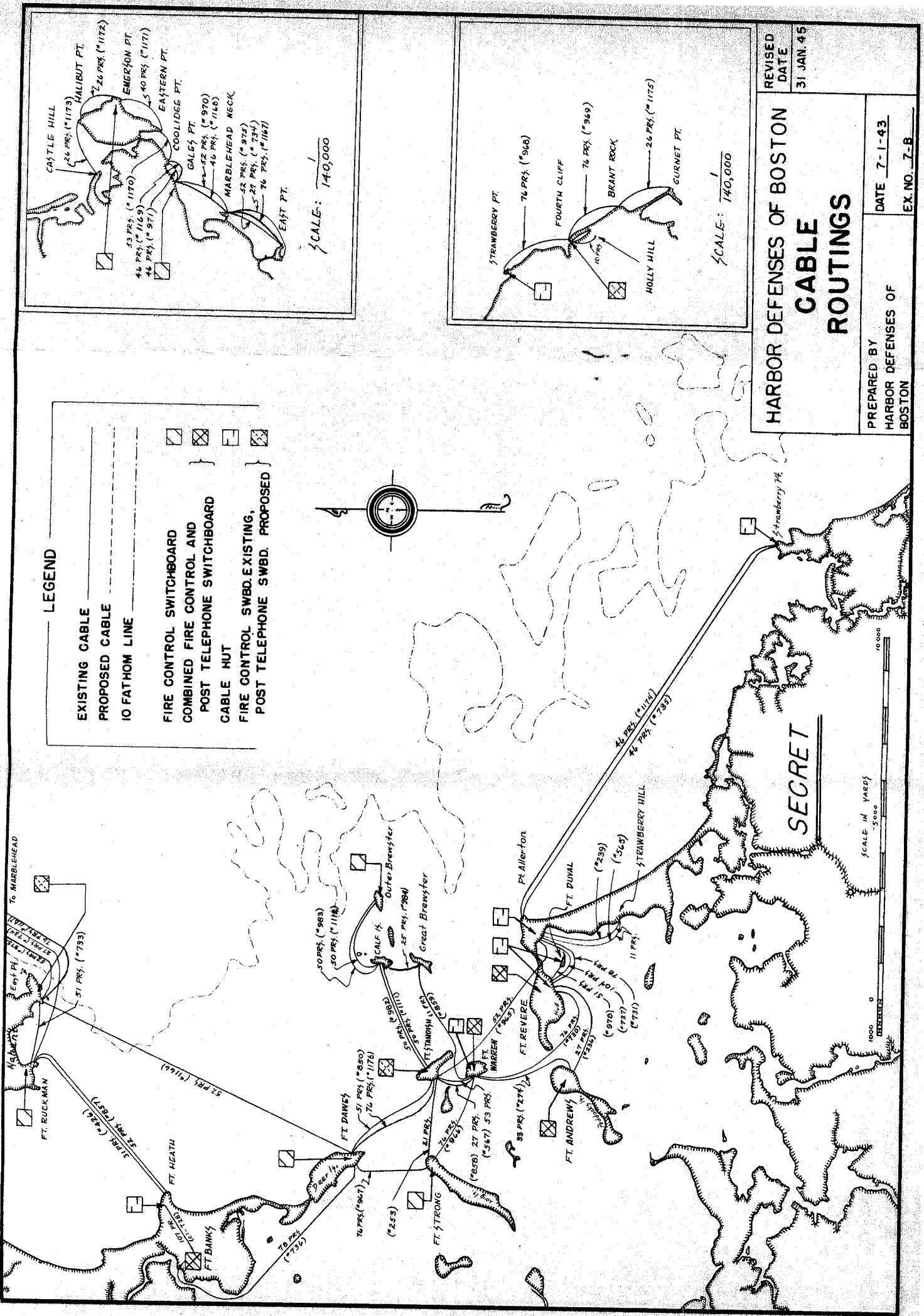
EXHIBIT 6-B

(To be provided at a later date)

In view of certain technical questions which have arisen in connection with the use of fire control communication cable pairs for both telephone and data transmission this exhibit is omitted at this time. The Chief Signal Officer will provide a revised circuit diagram for comment at a later date.

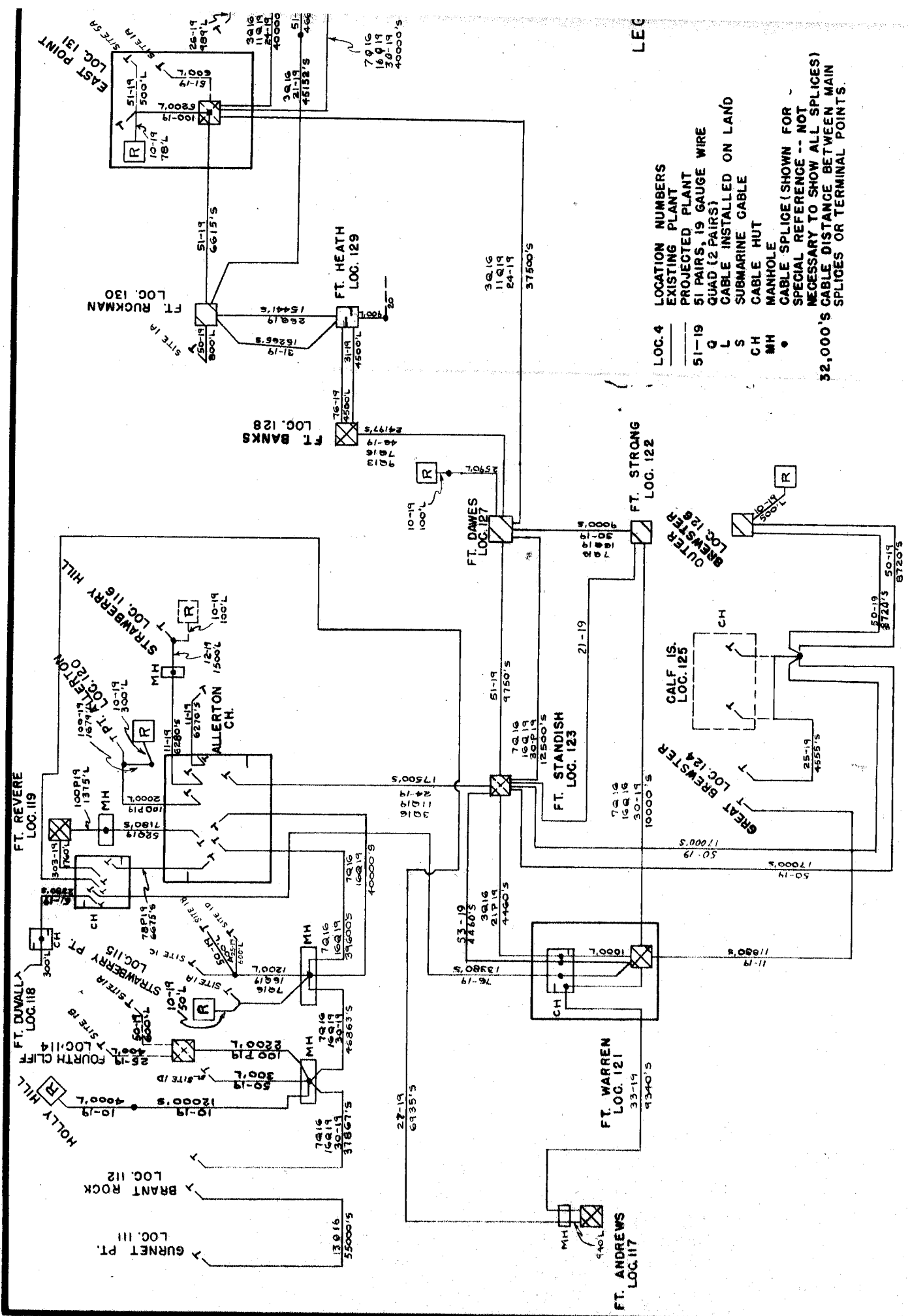
DECLASSIFIED
Authority NND 760162
By WDP HARA Date 7/15/00

Authority NND 760162
7/15/60
BY W.P. WARRA Date



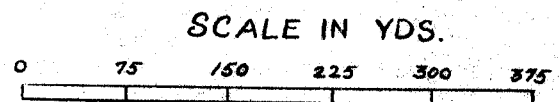
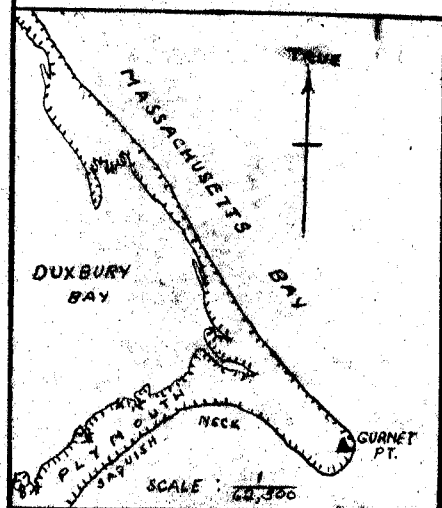
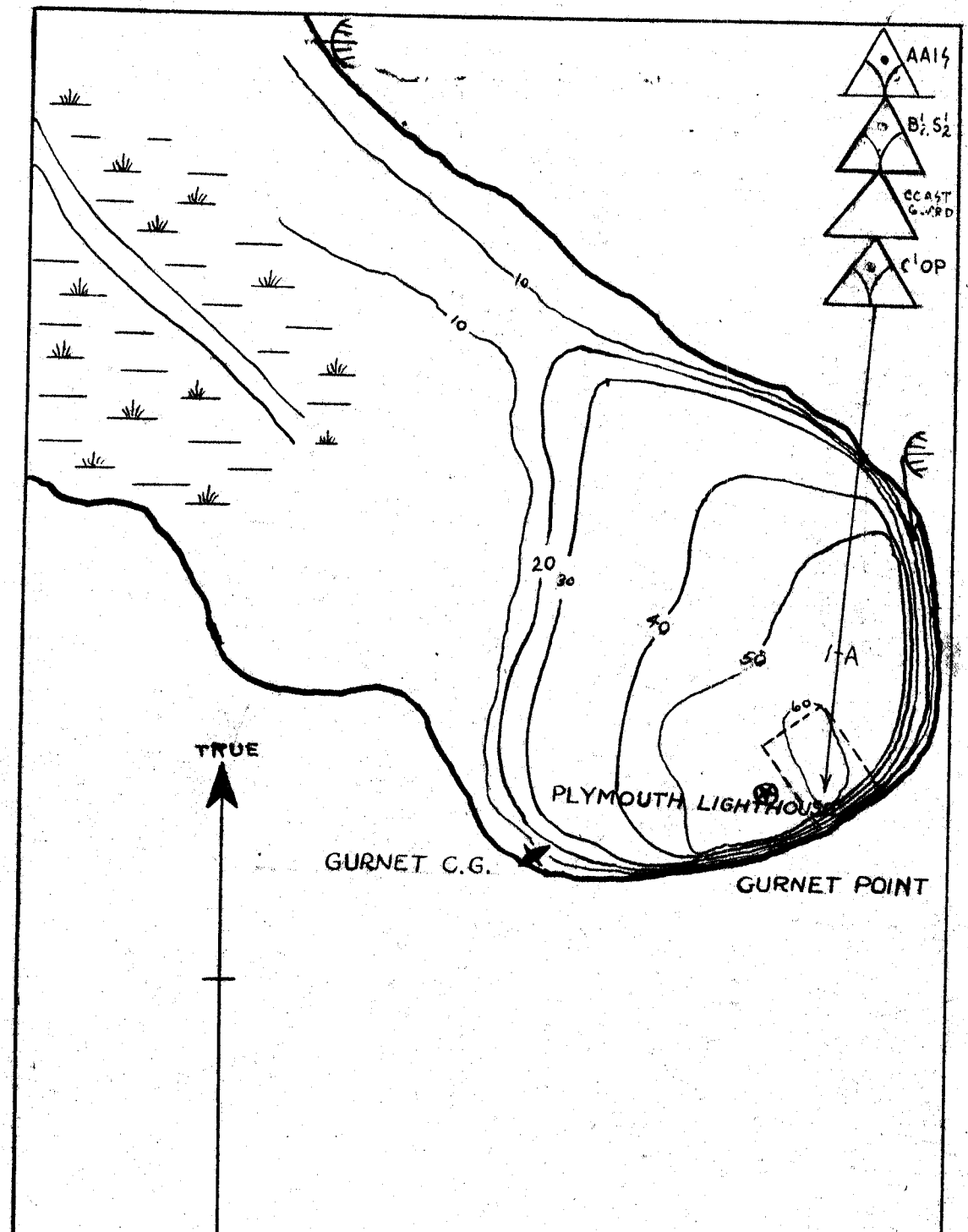
HARBOR DEFENSES OF BOSTON	
CABLE ROUTINGS	
REVISED DATE	31 JAN. 45
PREPARED BY	DATE 7-1-43
HARBOR DEFENSES OF BOSTON	EX. NO. 1-B

SECRET



LEG

- LOC. 4 LOCATION NUMBERS
 EXISTING PLANT
 PROJECTED PLANT
 51-19 51 PAIRS, 19 GAUGE WIRE
 Q L S CH MH
 CABLE INSTALLED ON LAND
 SUBMARINE CABLE
 CABLE HUT
 MANHOLE
 CABLE SPLICE (SHOWN FOR
 SPECIAL REFERENCE -- NOT
 NECESSARY TO SHOW ALL SPLICES)
 52,000'S CABLE DISTANCE BETWEEN MAIN
 SPLICES OR TERMINAL POINTS.

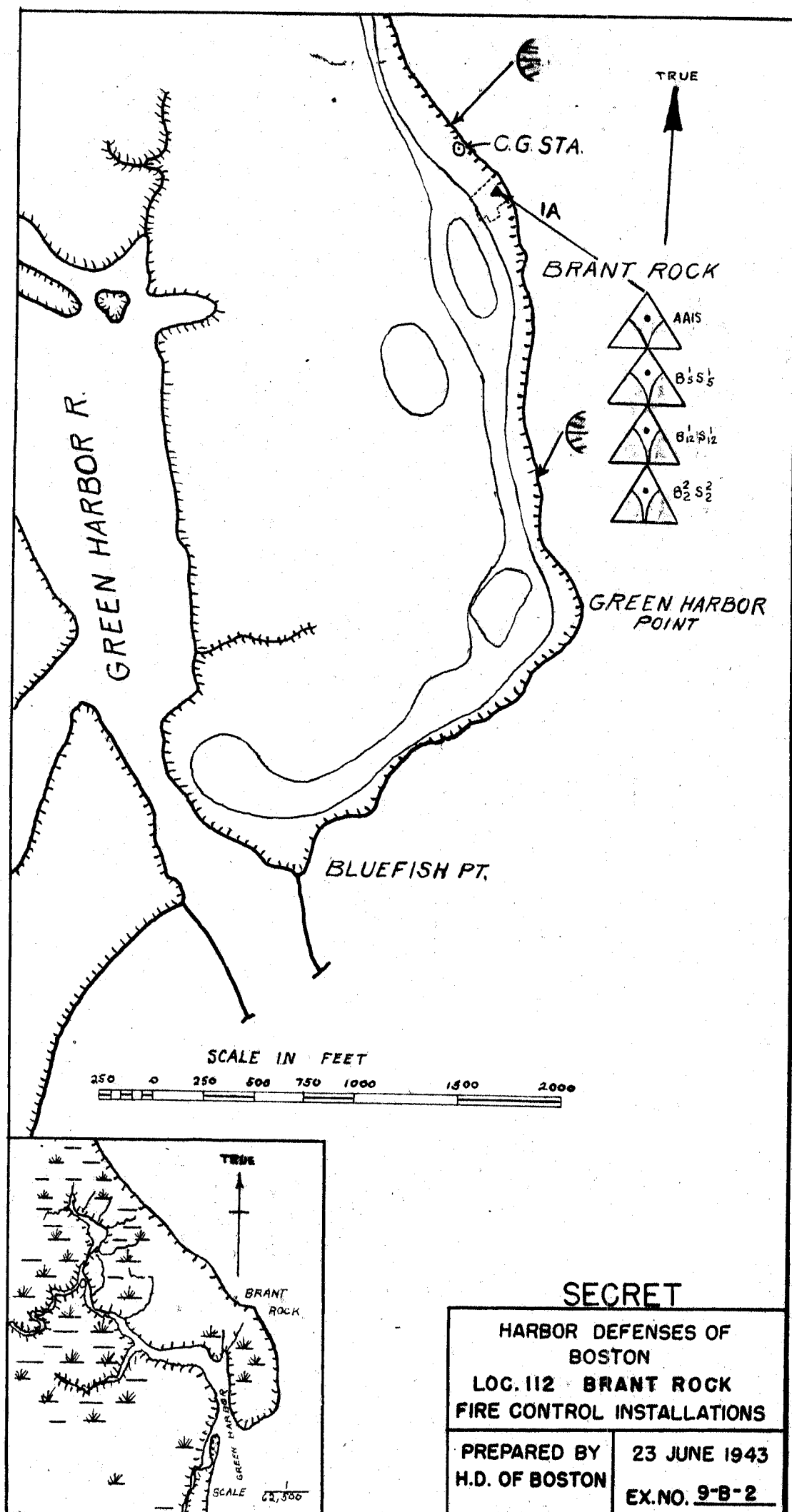


SECRET

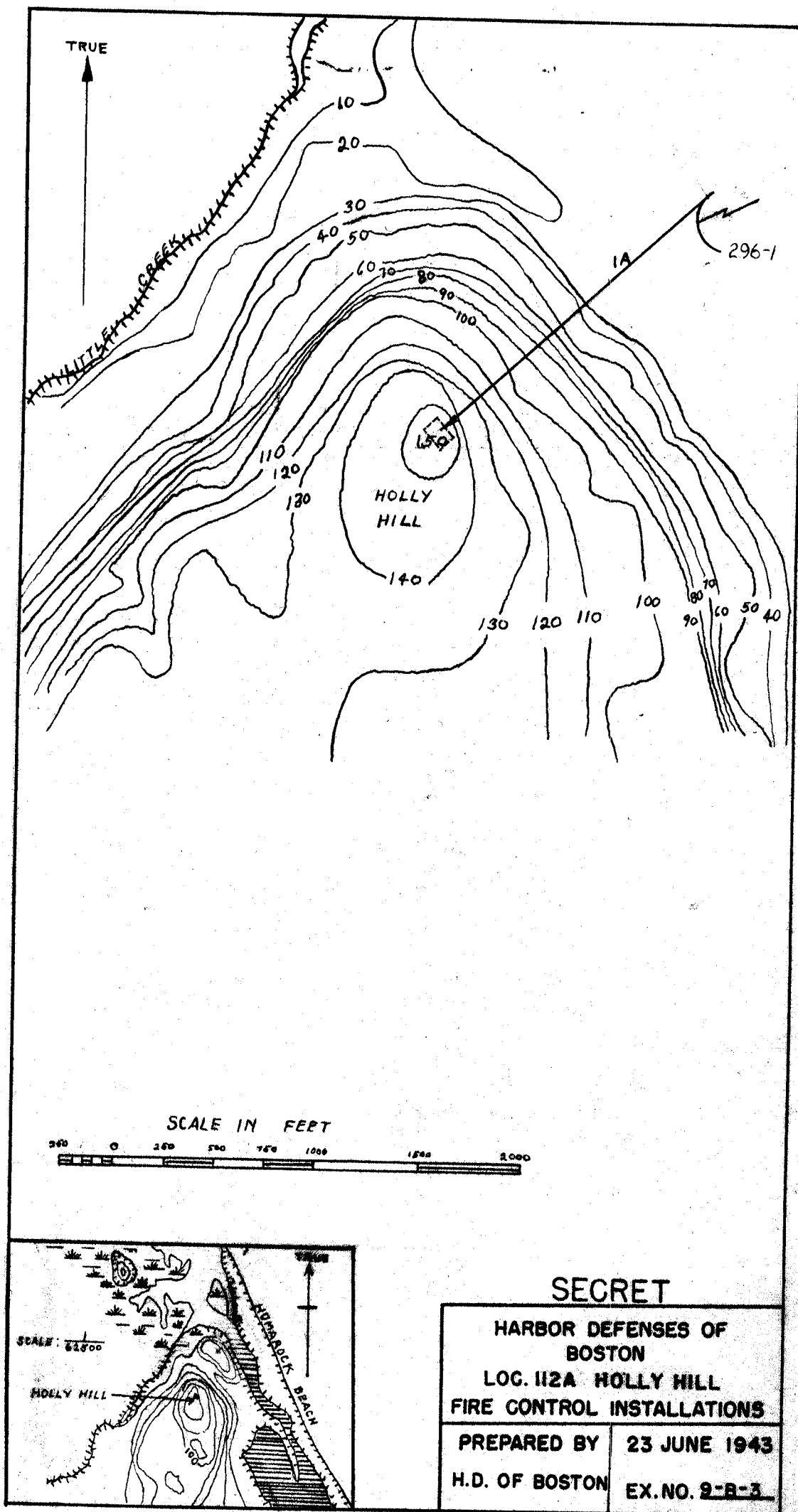
HARBOR DEFENSES OF BOSTON	
LOG. III GURNET POINT FIRE CONTROL INSTALLATIONS	
PREPARED BY H.D. OF BOSTON	22 JUNE 1943 EX. NO. 9-B-1

REVISED DATE: 31 JAN 45

DECLASSIFIED
Authority NND 760162
By WDP/HARA Date 7/15/00

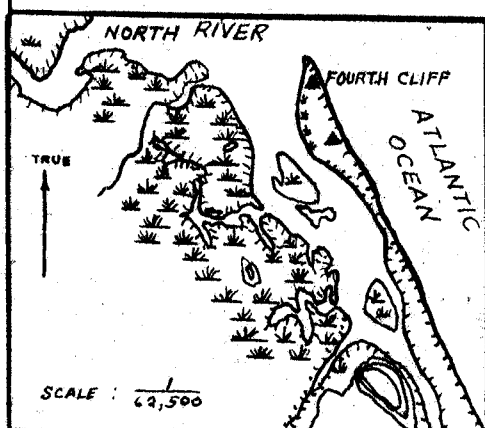
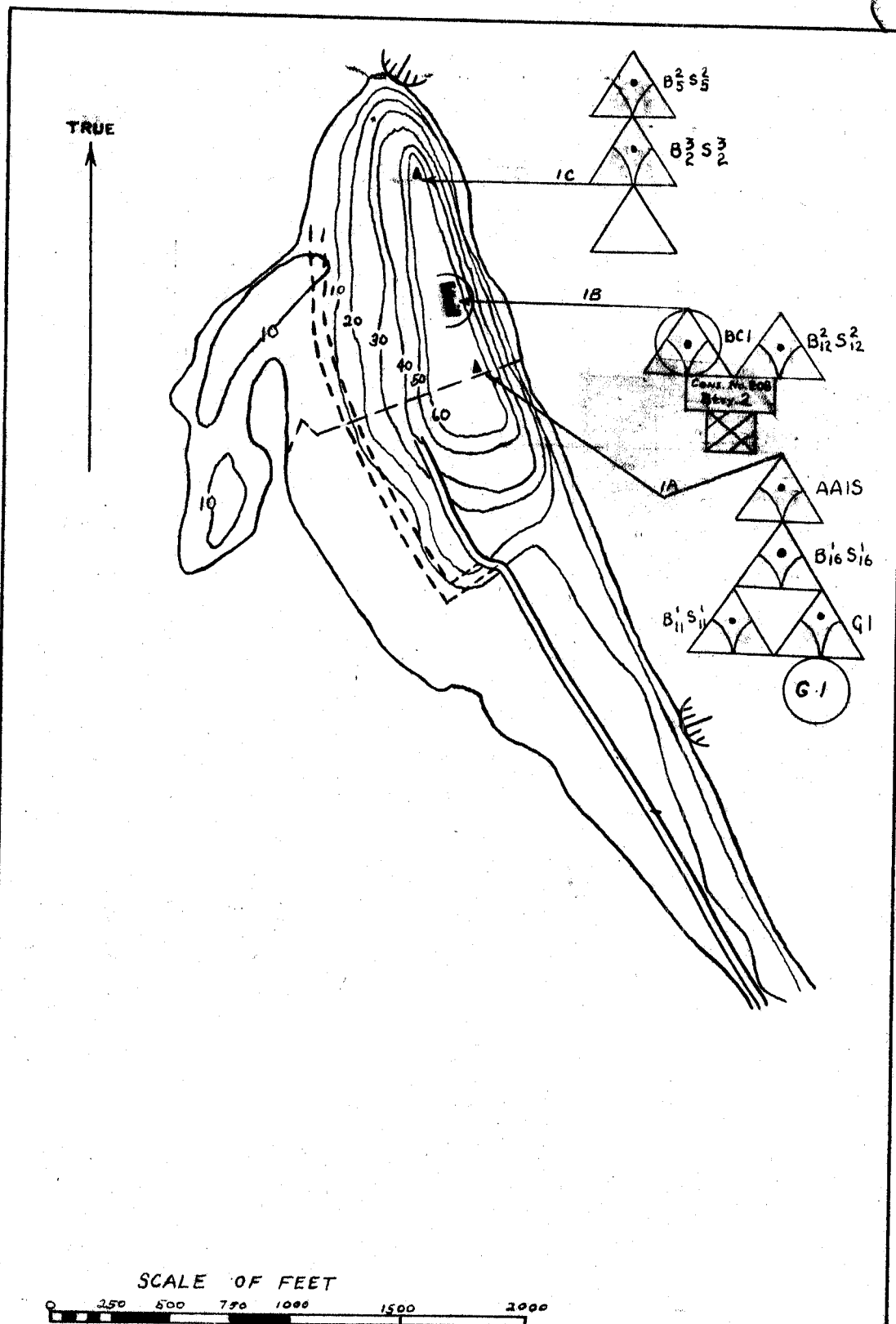


DECLASSIFIED
 Authority NND 760162
 BY WDP HARA Date 7/15/00



REVISED DATE: 31 JAN 45

DECLASSIFIED
 Authority NND 760162
 BY WDP NARA Date 7/15/00

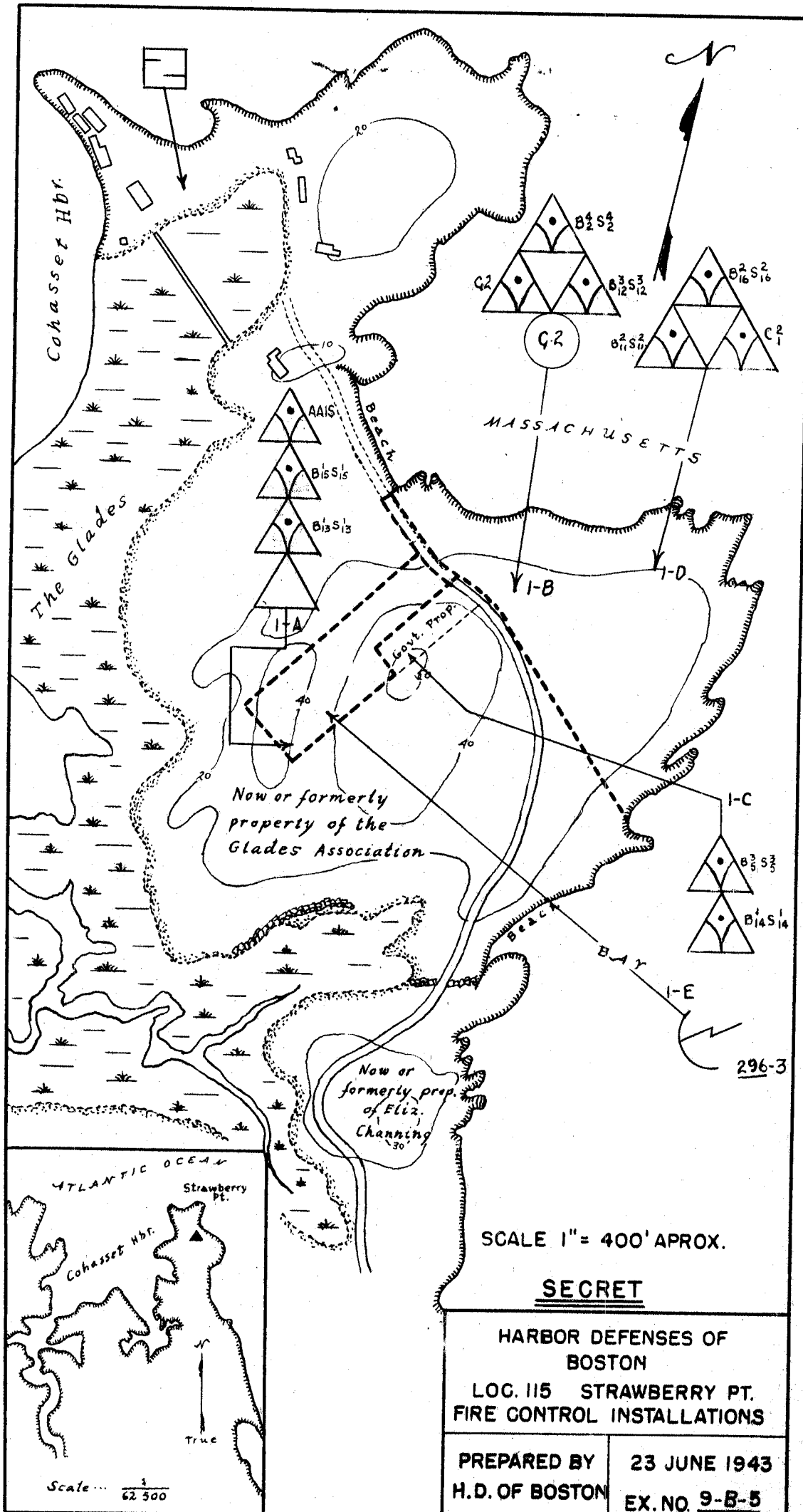


SECRET

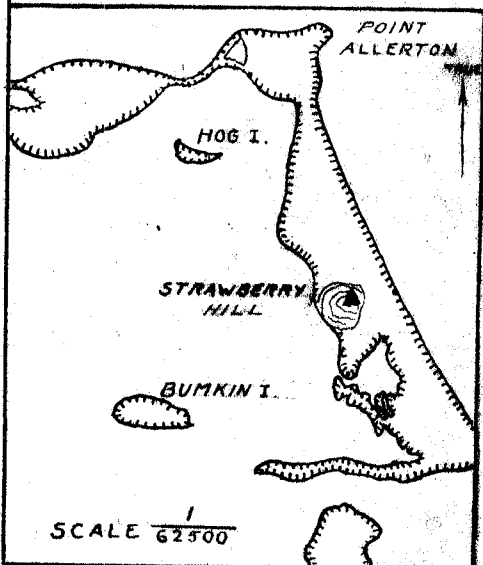
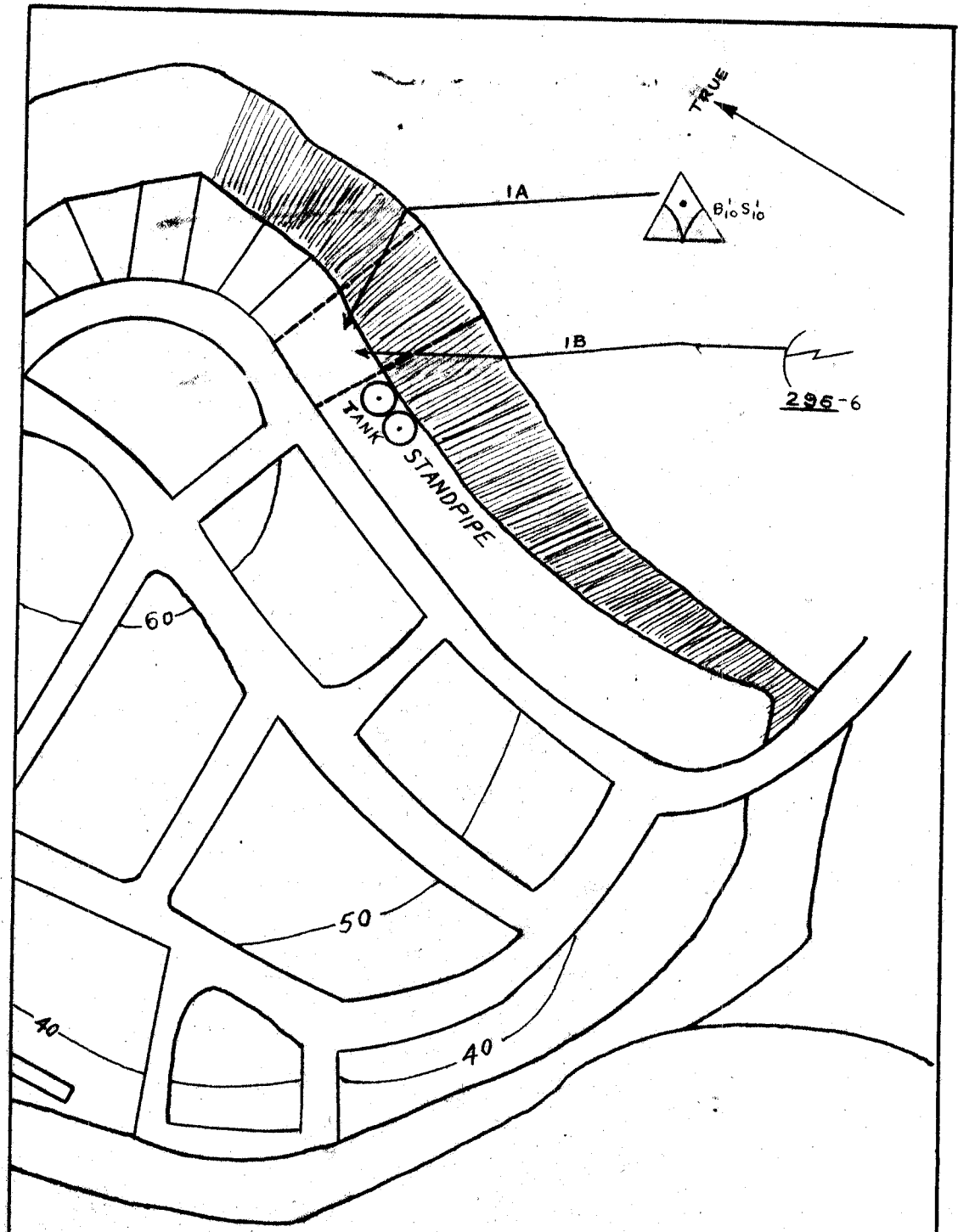
HARBOR DEFENSES OF BOSTON	
LOC. 114 FOURTH CLIFF FIRE CONTROL INSTALLATIONS	
PREPARED BY H.D. OF BOSTON	24 JUNE 1943 EX. NO. 9-B-4

REVISED DATE: 31 JAN 45

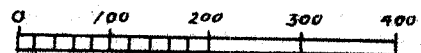
DECLASSIFIED
Authority NND 760162
By WDP HARA Date 7/15/00



DECLASSIFIED
 Authority NND 760162
 BY WDP NARA Date 7/15/00



NOTE: SITE IB CANCELLED

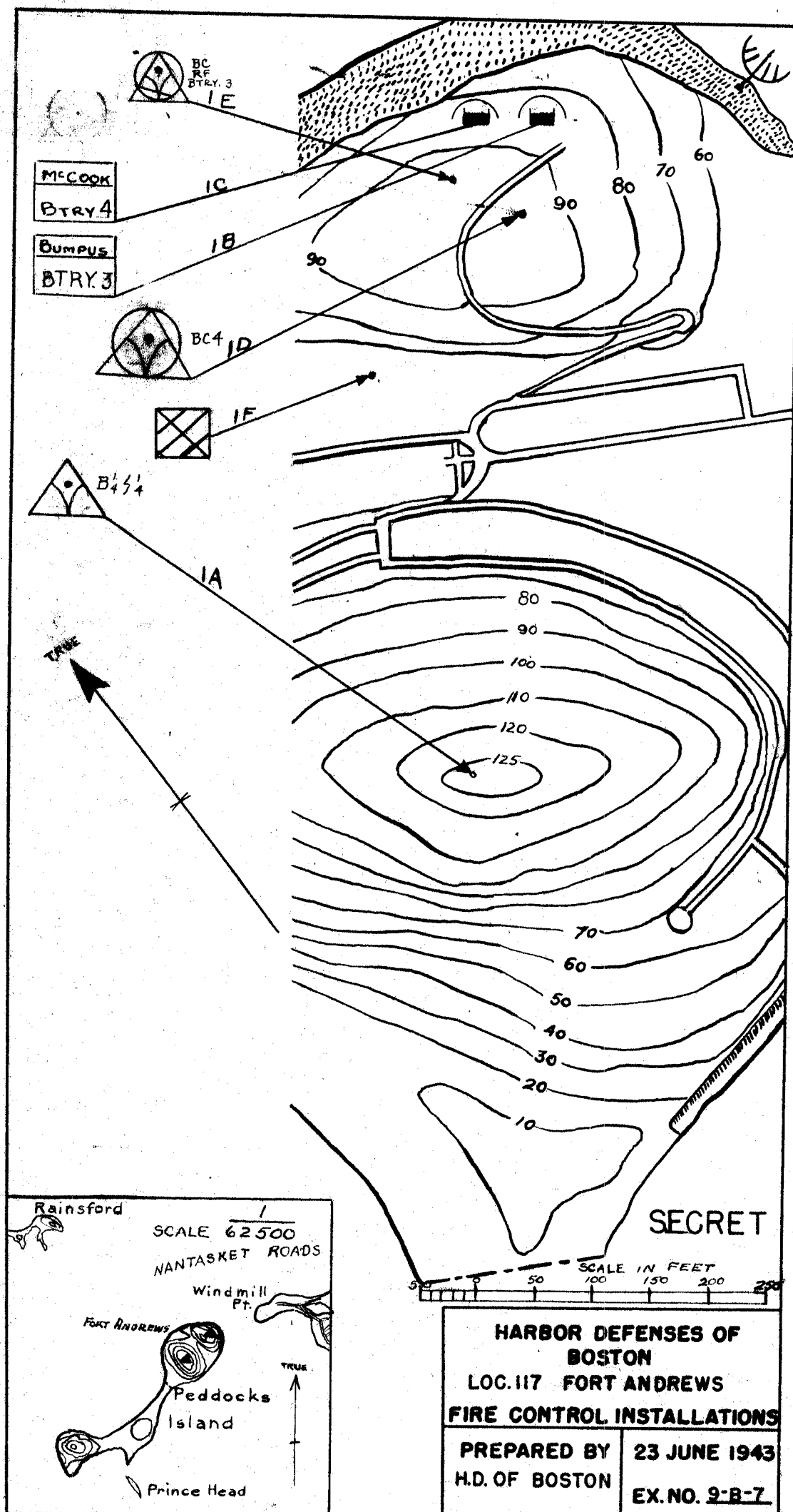


SCALE IN FEET
SECRET

HARBOR DEFENSES OF BOSTON	
LOC. 116 STRAWBERRY HILL	
FIRE CONTROL INSTALLATIONS	
PREPARED BY H.D. OF BOSTON	22 JUNE 1943 EX. NO. <u>9-B-6</u>

REVISED DATE: 31 JAN 45

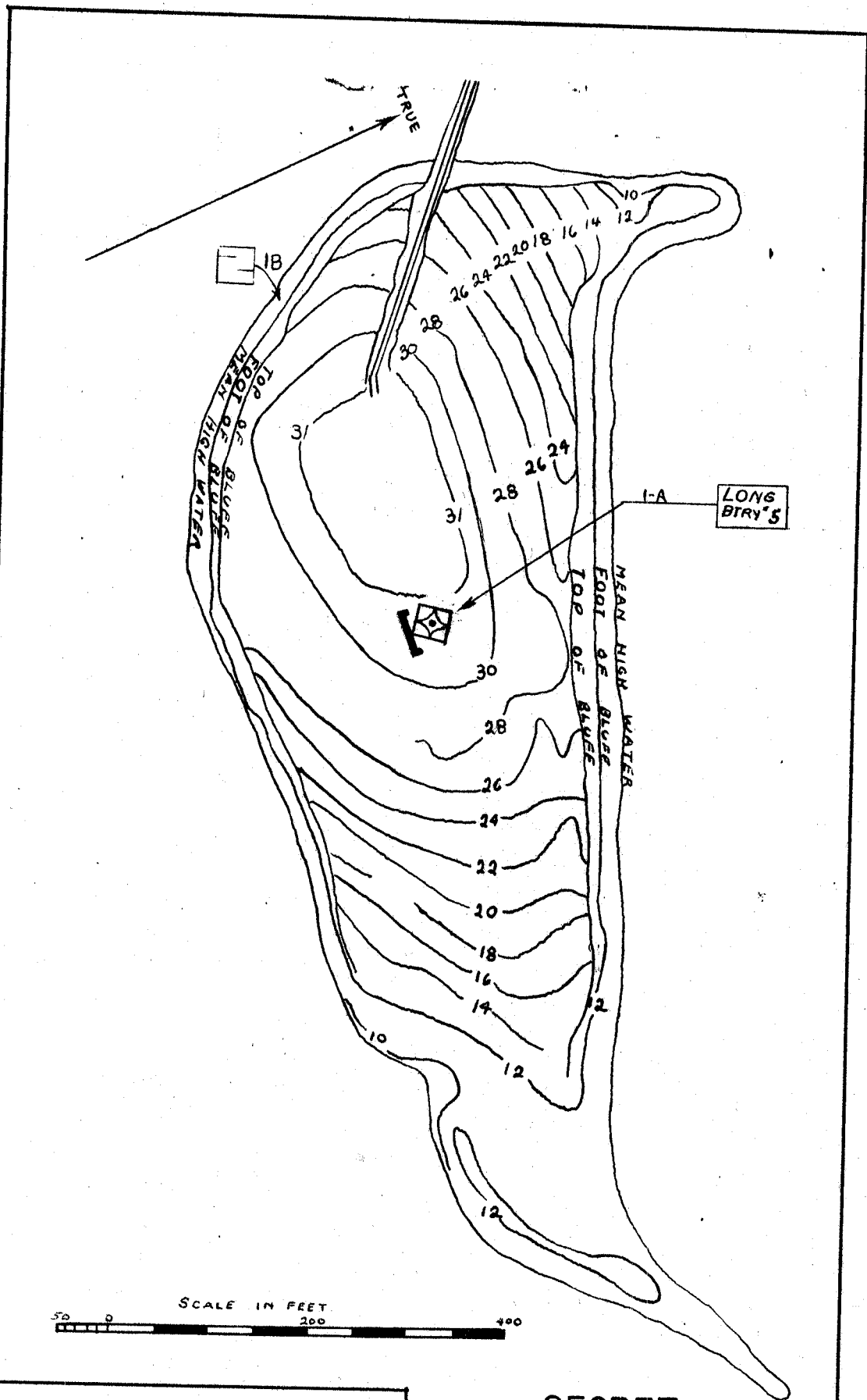
DECLASSIFIED
Authority: NND 760162
By: WDP/NARA Date: 7/15/00



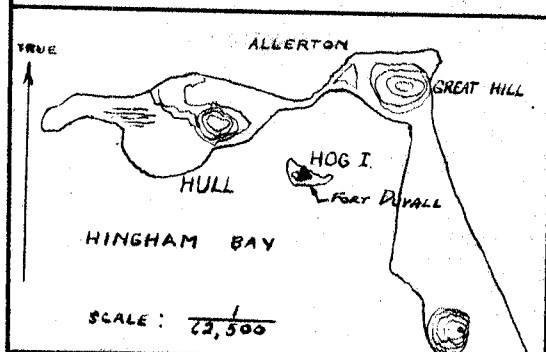
DECLASSIFIED

Authority NND 760162

By WDR/KARA Date 7/15/00



SCALE IN FEET
 50 0 200 400



SECRET

**HARBOR DEFENSES OF
 BOSTON
 LOC. 118 FORT DUVAL
 FIRE CONTROL INSTALLATIONS**

**PREPARED BY
 H.D. OF BOSTON**

**22 JUNE 1943
 EX. NO. 9-B-8**

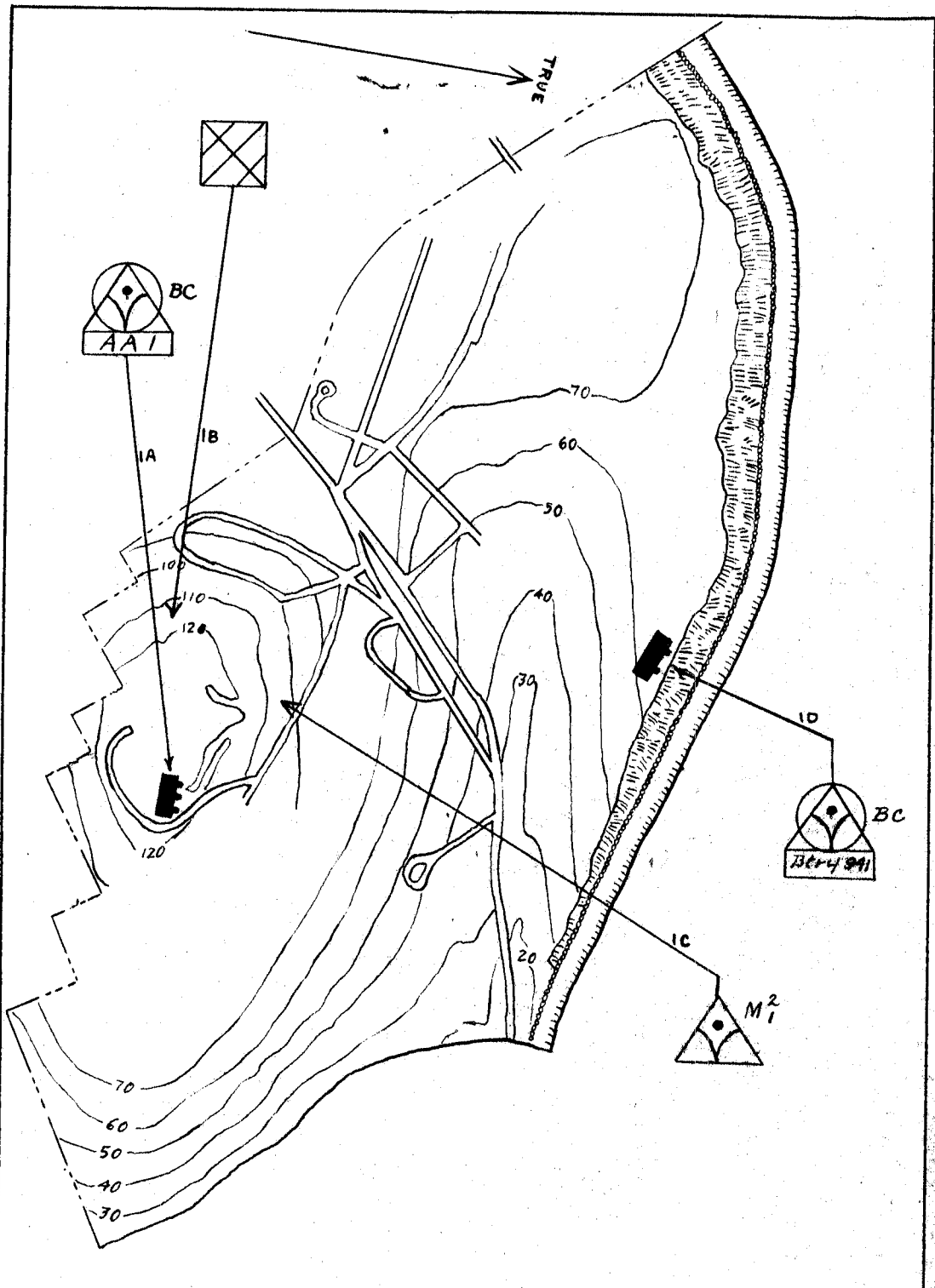
REVISED DATE: 31 JAN 45

By W.D.P. NARA Date 7/15/60

Authority NND 760162

DECLASSIFIED

REPRODUCED AT THE NATIONAL ARCHIVES



SCALE IN FEET
100 0 100 200 300 400

SECRET

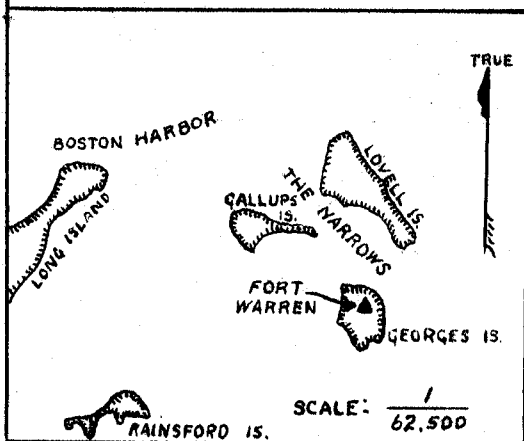
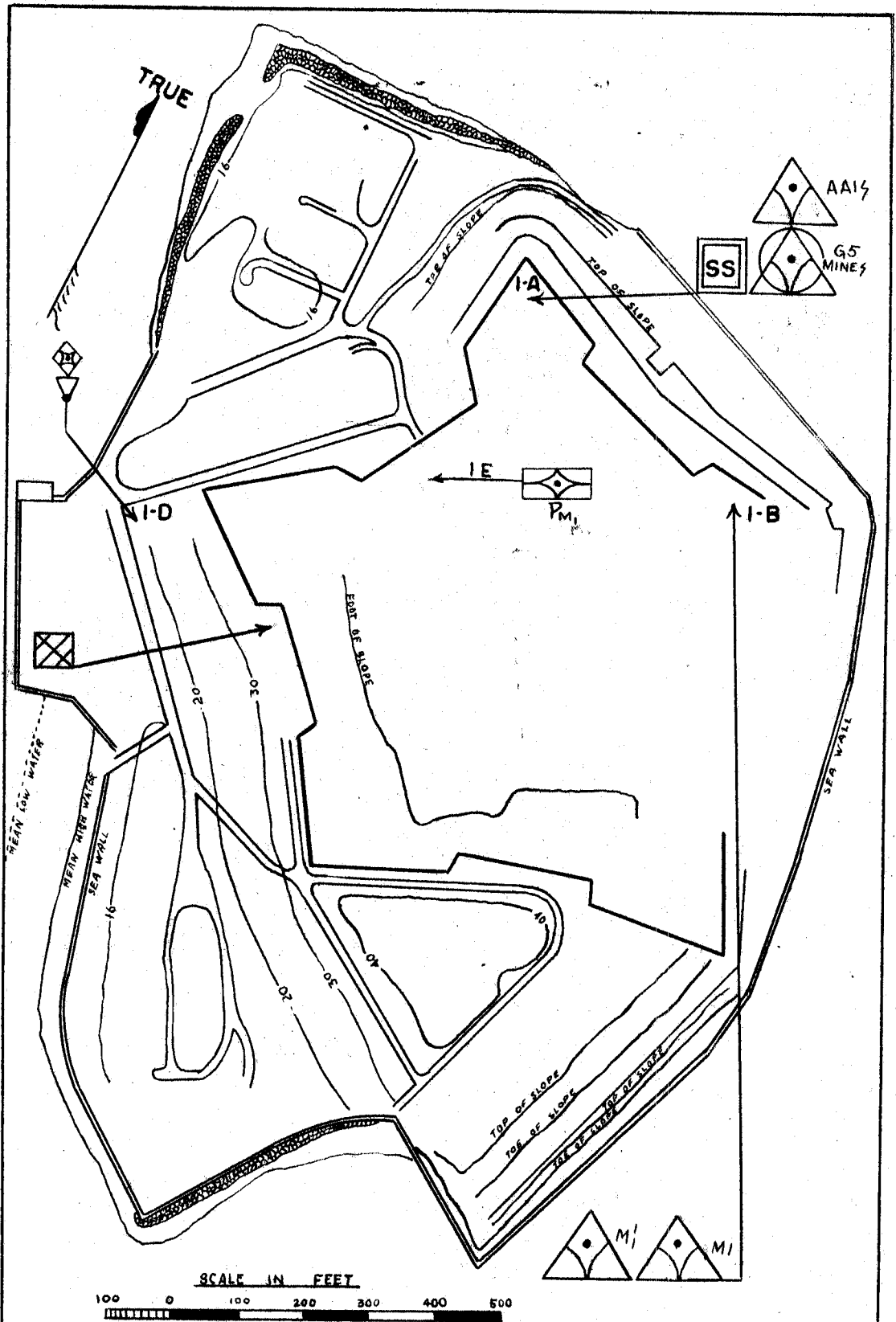
**HARBOR DEFENSES OF
BOSTON
LOC. 119 FORT REVERE
FIRE CONTROL INSTALLATIONS**

PREPARED BY
H.D. OF BOSTON

24 JUNE 1943
EX. NO. 9-B-9

REVISED DATE: 31 JAN 45

DECLASSIFIED
Authority NND 760162
By WDR HARA Date 7/15/60



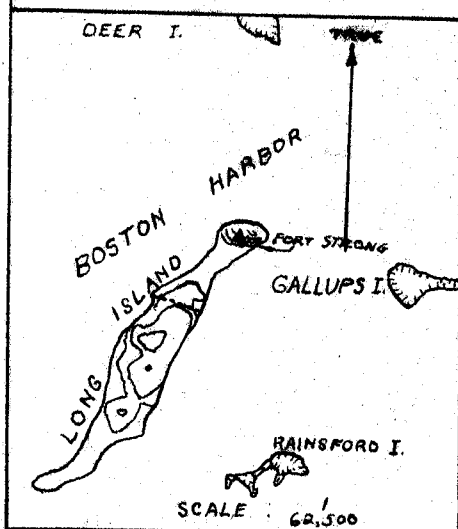
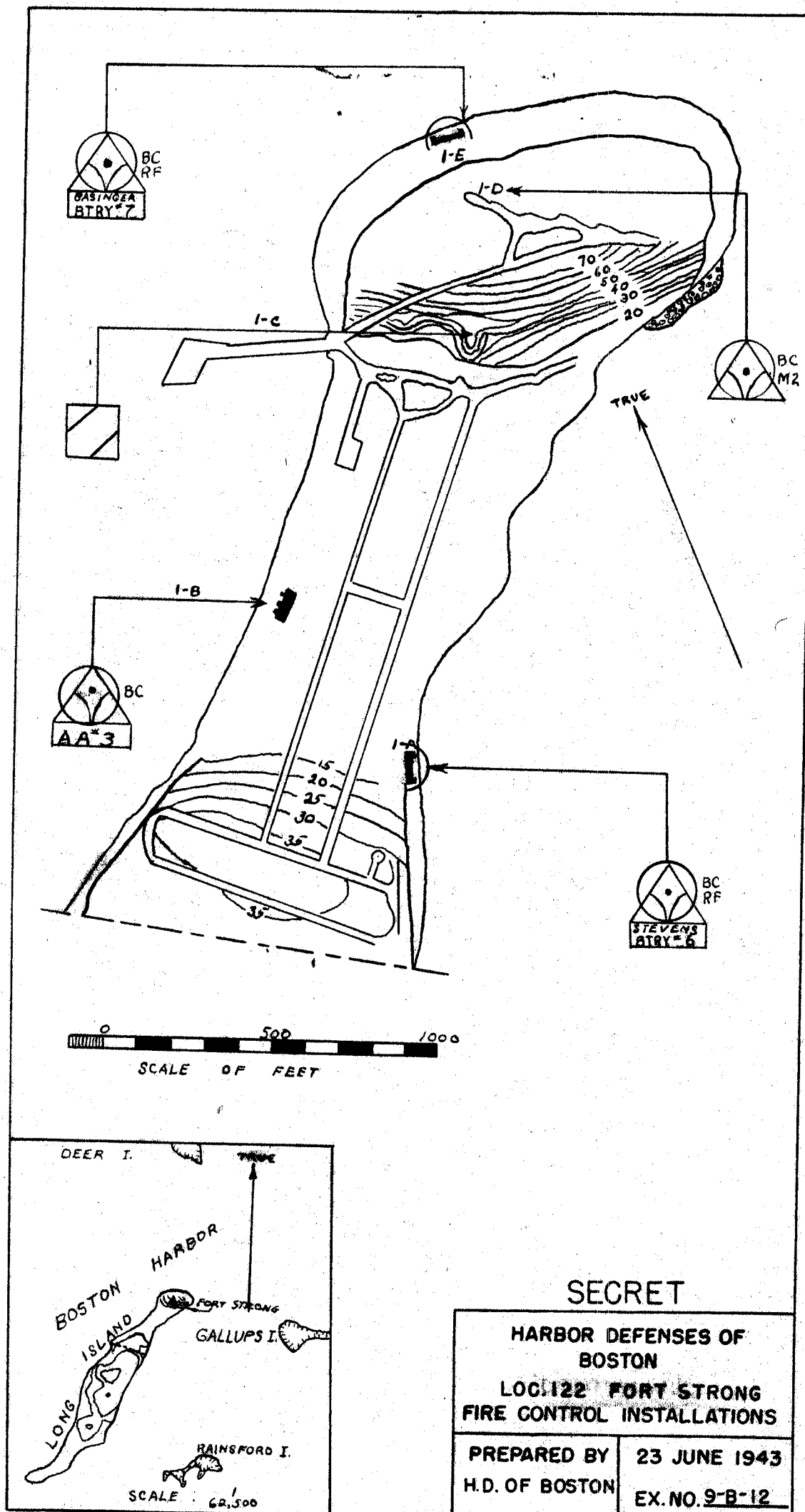
SECRET

HARBOR DEFENSES OF BOSTON	
LOC. 121 FORT WARREN	
FIRE CONTROL INSTALLATIONS	
PREPARED BY H.D. OF BOSTON	24 JUN. 1943
	EX. NO. 9-B-11

REVISED DATE: 31 JAN 45

DECLASSIFIED
Authority: NND 760162
By: WDP HARA Date: 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES



SECRET

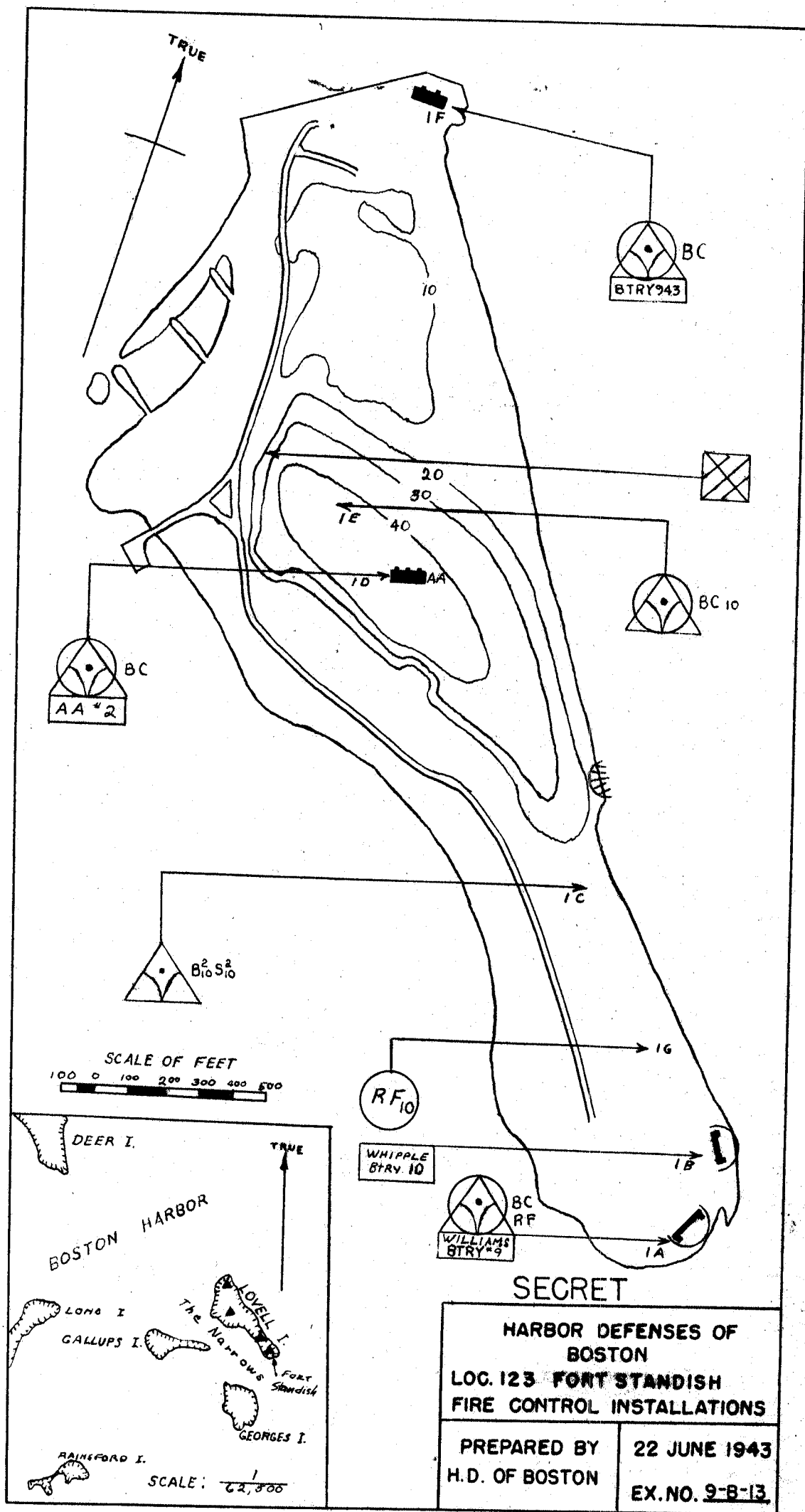
HARBOR DEFENSES OF
BOSTON
LOC. 122 FORT STRONG
FIRE CONTROL INSTALLATIONS

PREPARED BY
H.D. OF BOSTON

23 JUNE 1943
EX. NO. 9-B-12

REVISED DATE: 31 JAN 45

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00

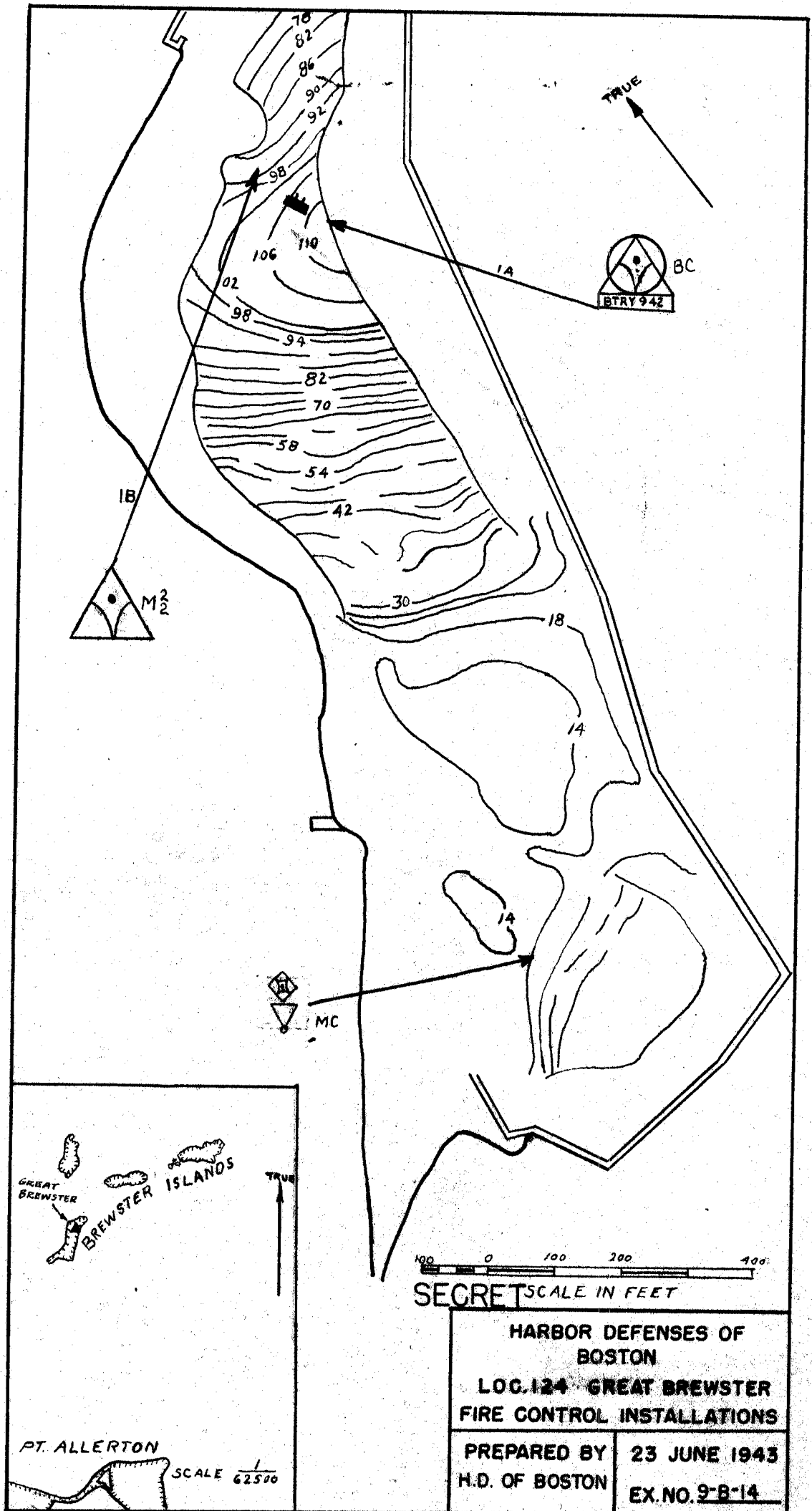


BY WDR WARA Date 7/15/60

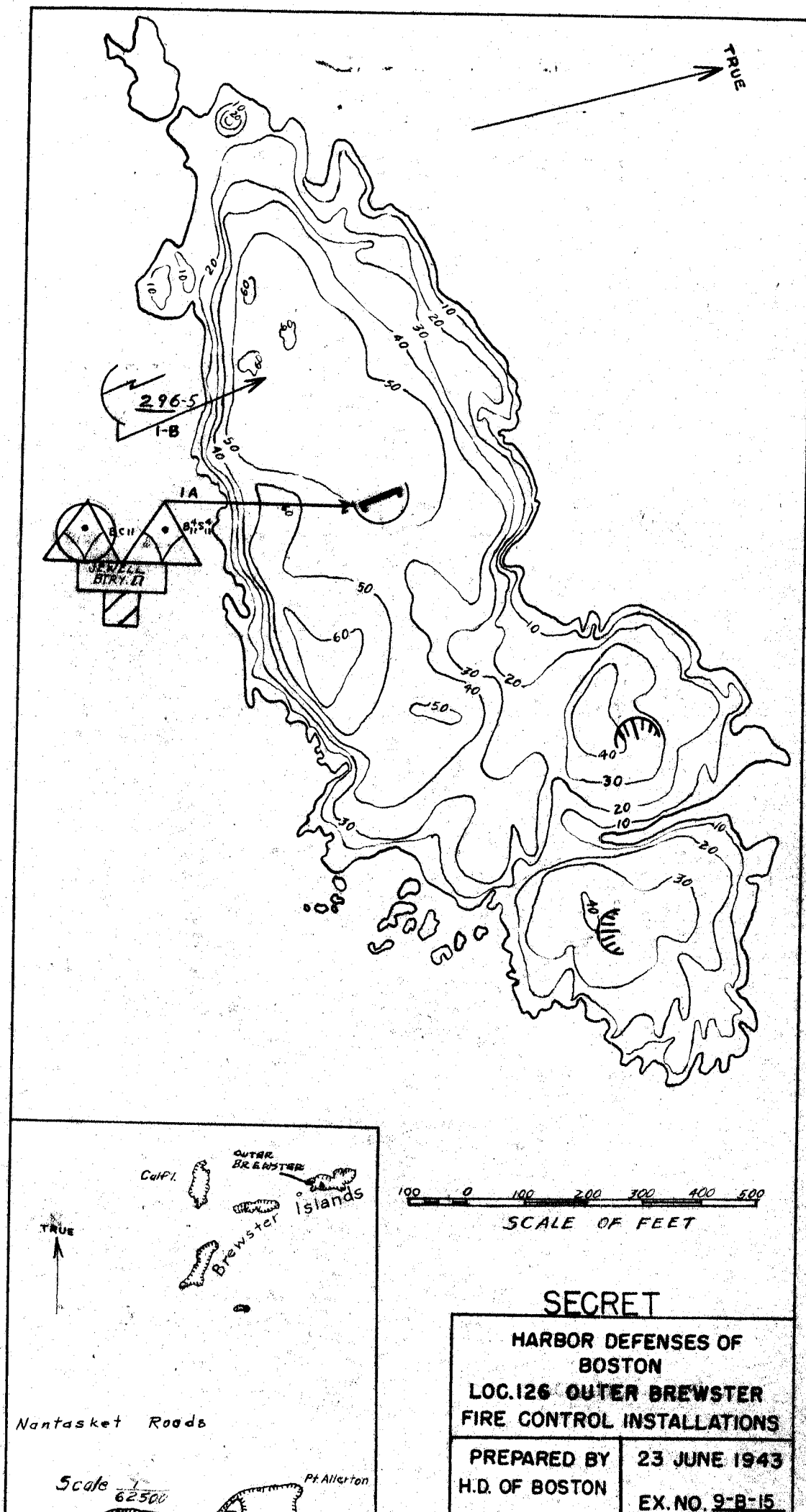
Authority AND 760162

DECLASSIFIED

REPRODUCED AT THE NATIONAL ARCHIVES



DECLASSIFIED
Authority NND 760162
By WDP HARA Date 7/15/00

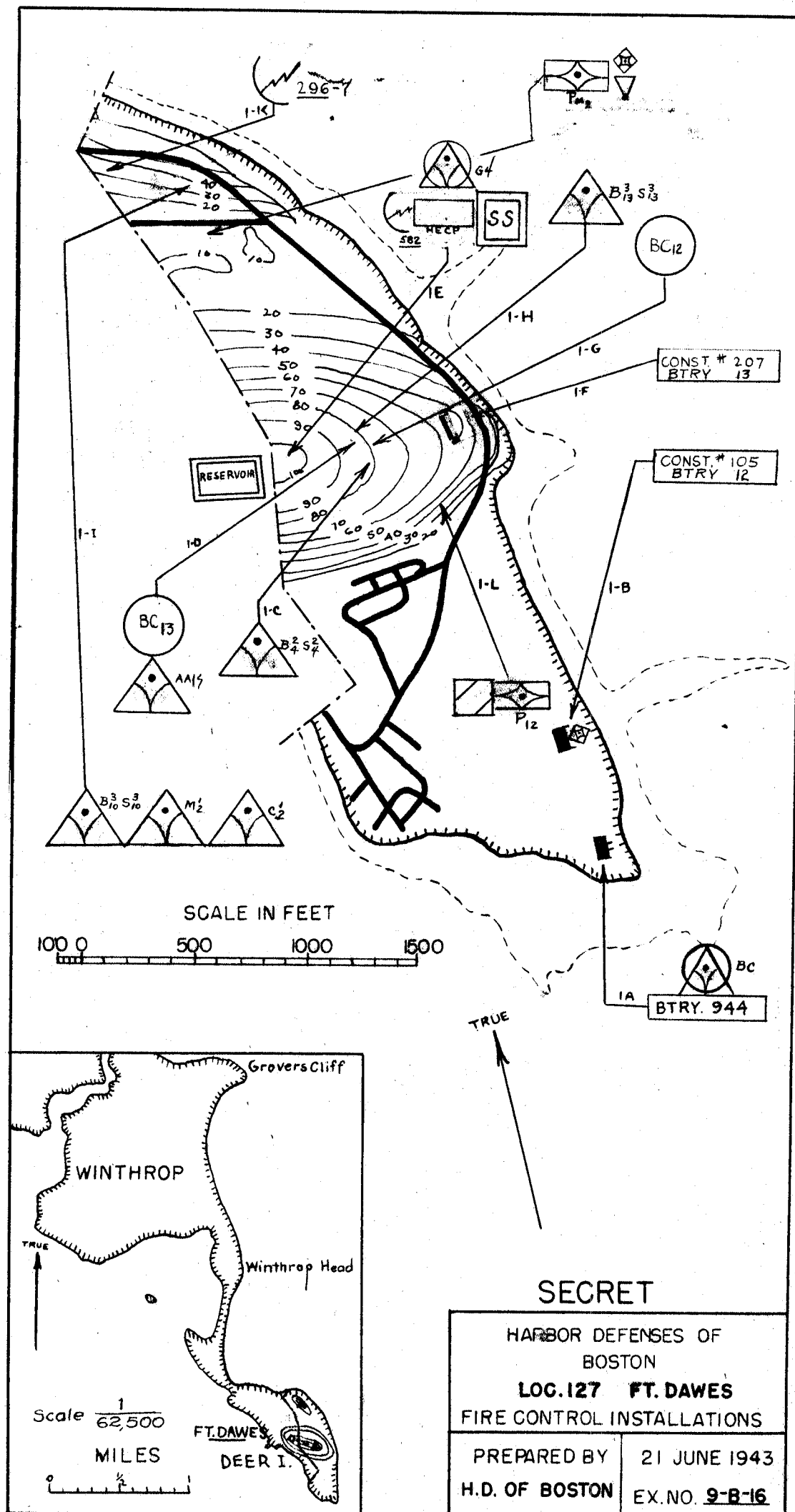


BY WDP NARA Date 7/15/60

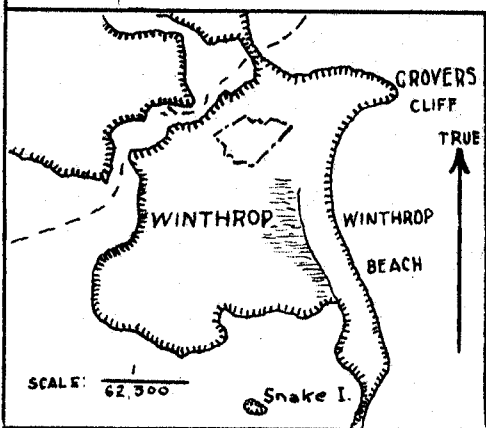
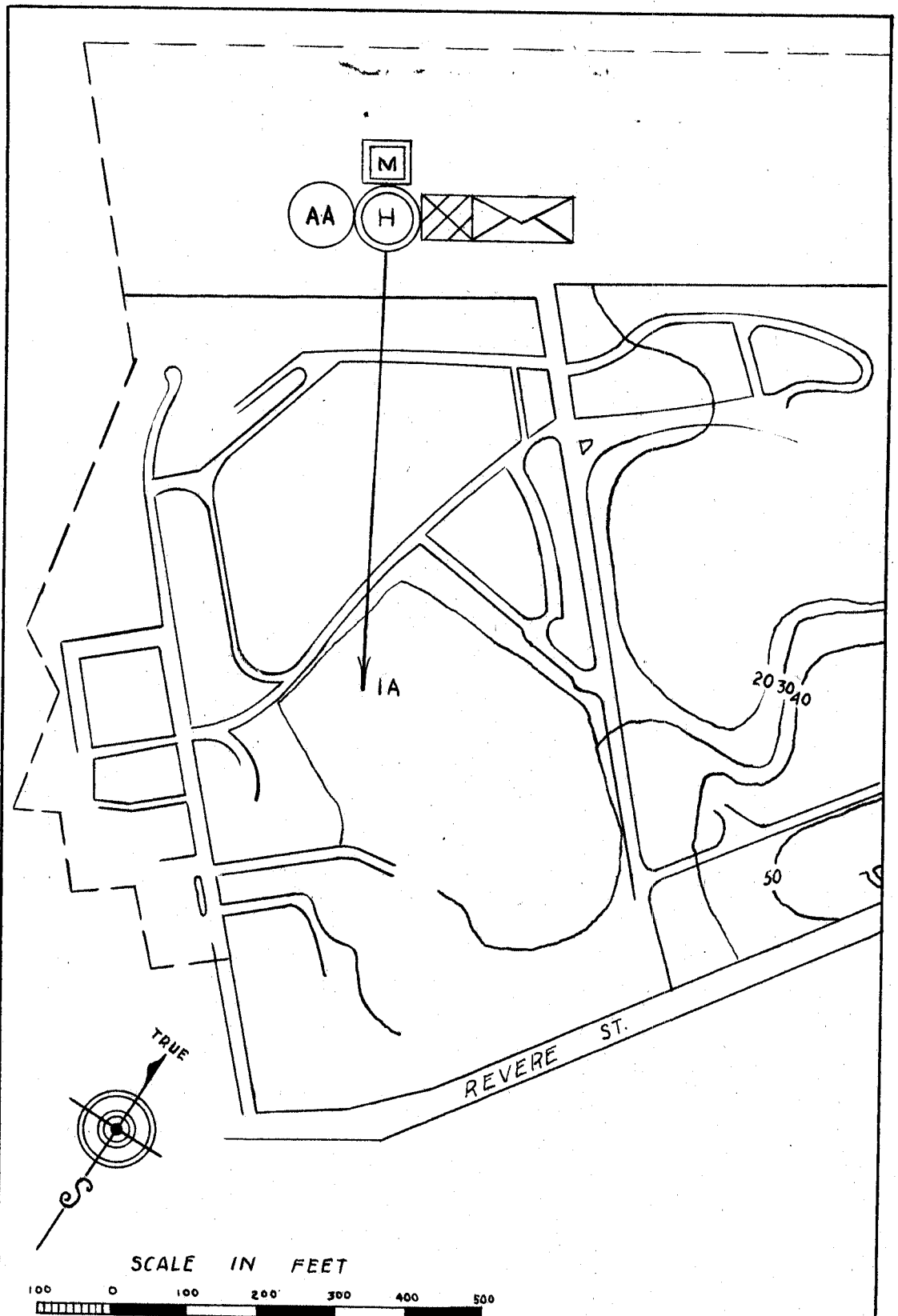
Authority NND 760162

DECLASSIFIED

REPRODUCED AT THE NATIONAL ARCHIVES



DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00



SECRET

HARBOR DEFENSES OF
BOSTON
LOC. 128 FT. BANKS
FIRE CONTROL INSTALLATIONS

PREPARED BY
H.D. OF BOSTON

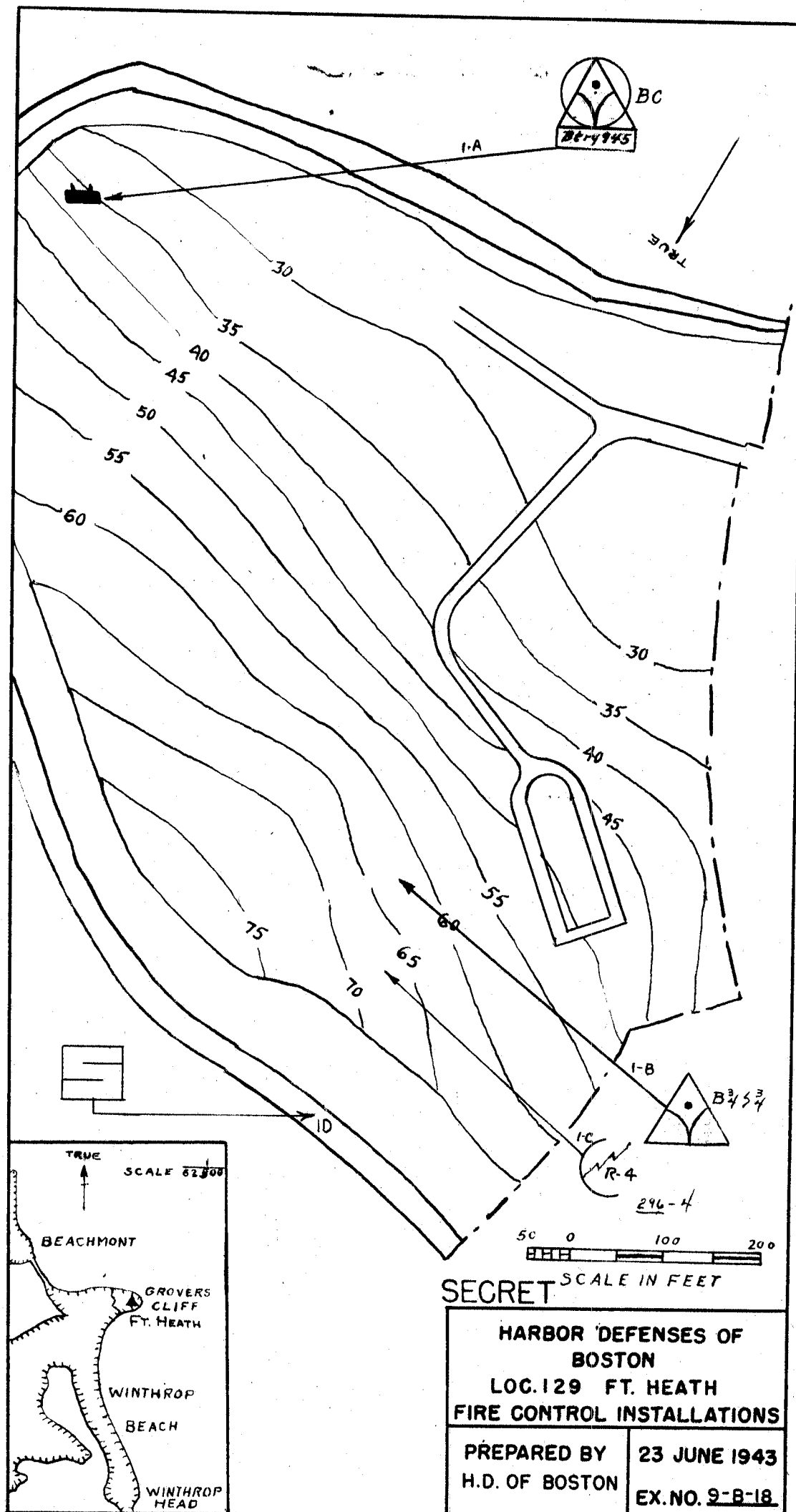
23 JUN 1943
EX. NO. 9-B-17

REVISED DATE 31 JAN 45

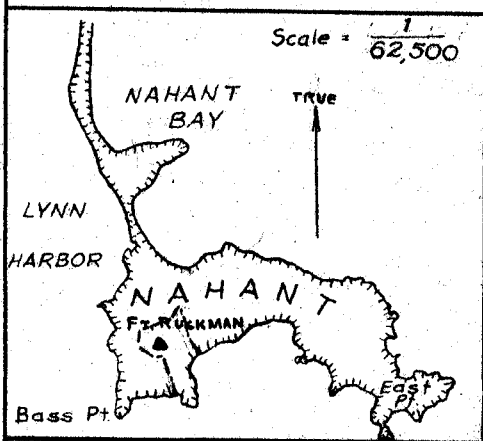
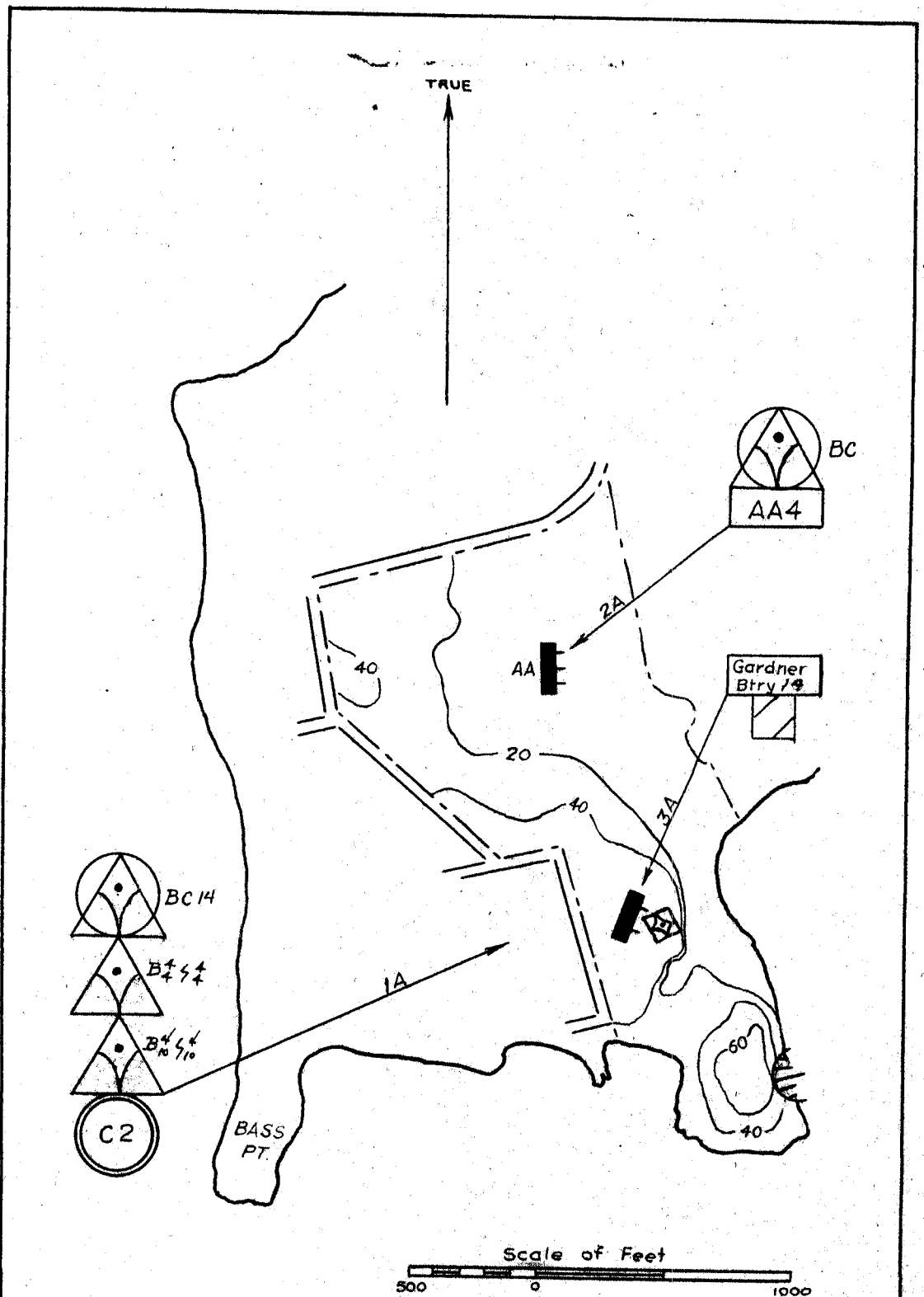
Authority NND 760162
By WDR NARA Date 7/15/00

DECLASSIFIED

REPRODUCED AT THE NATIONAL ARCHIVES



DECLASSIFIED
Authority NND 760162
BY WDR HARA Date 7/15/60



SECRET

HARBOR DEFENSES OF
BOSTON
LOC. 130 FT. RUCKMAN
FIRE CONTROL INSTALLATIONS

PREPARED BY
H.D. OF BOSTON

22 JUNE 1943
EX. NO. 9-B-19

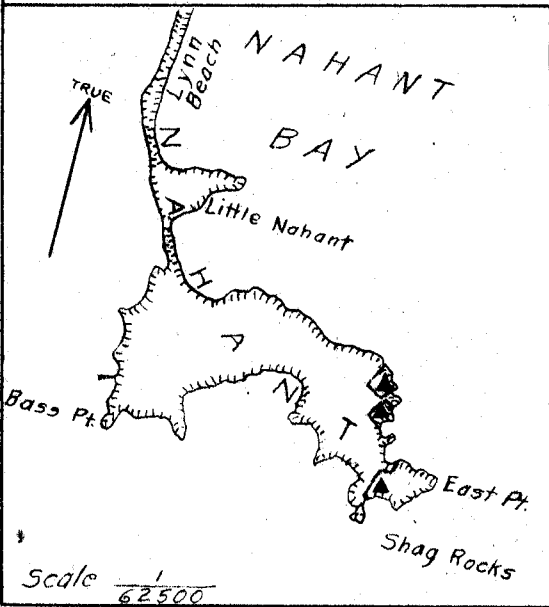
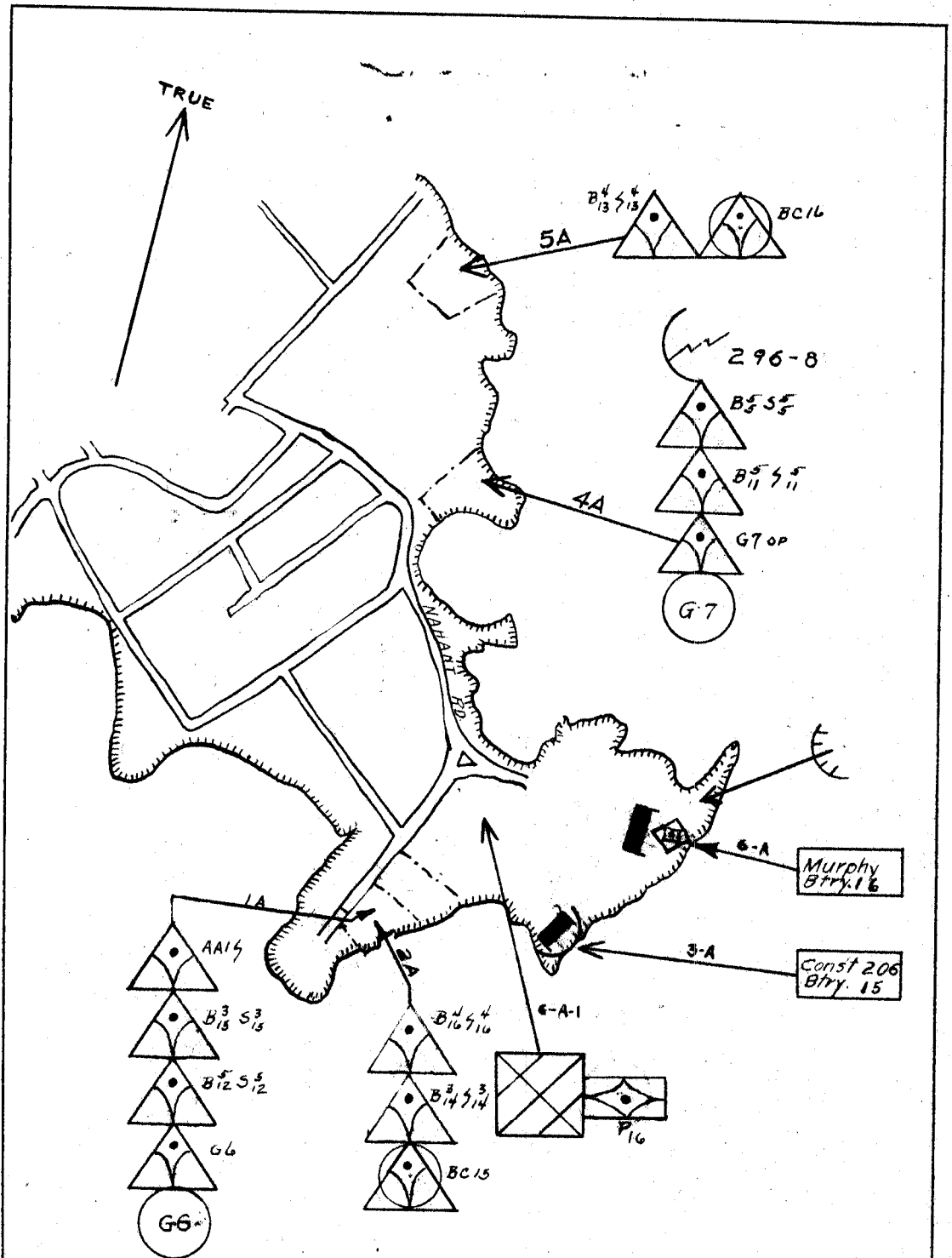
REVISED DATE - 31 JAN 45

By WDR HARA Date 7/15/00

Authority NND 760162

DECLASSIFIED

REPRODUCED AT THE NATIONAL ARCHIVES



0 100 200 300 400
SCALE IN FEET

SECRET

**HARBOR DEFENSES OF
BOSTON
LOC. 131 EAST POINT
FIRE CONTROL INSTALLATIONS**

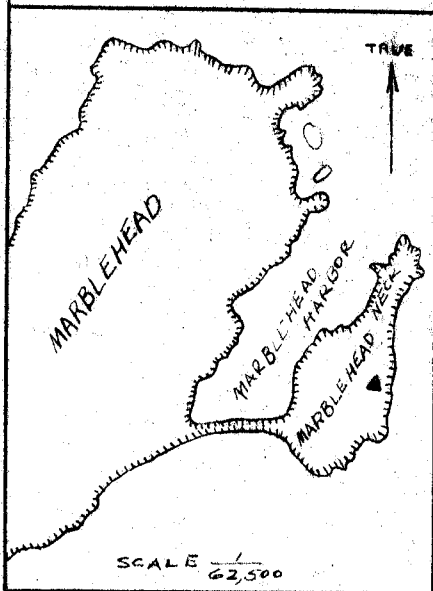
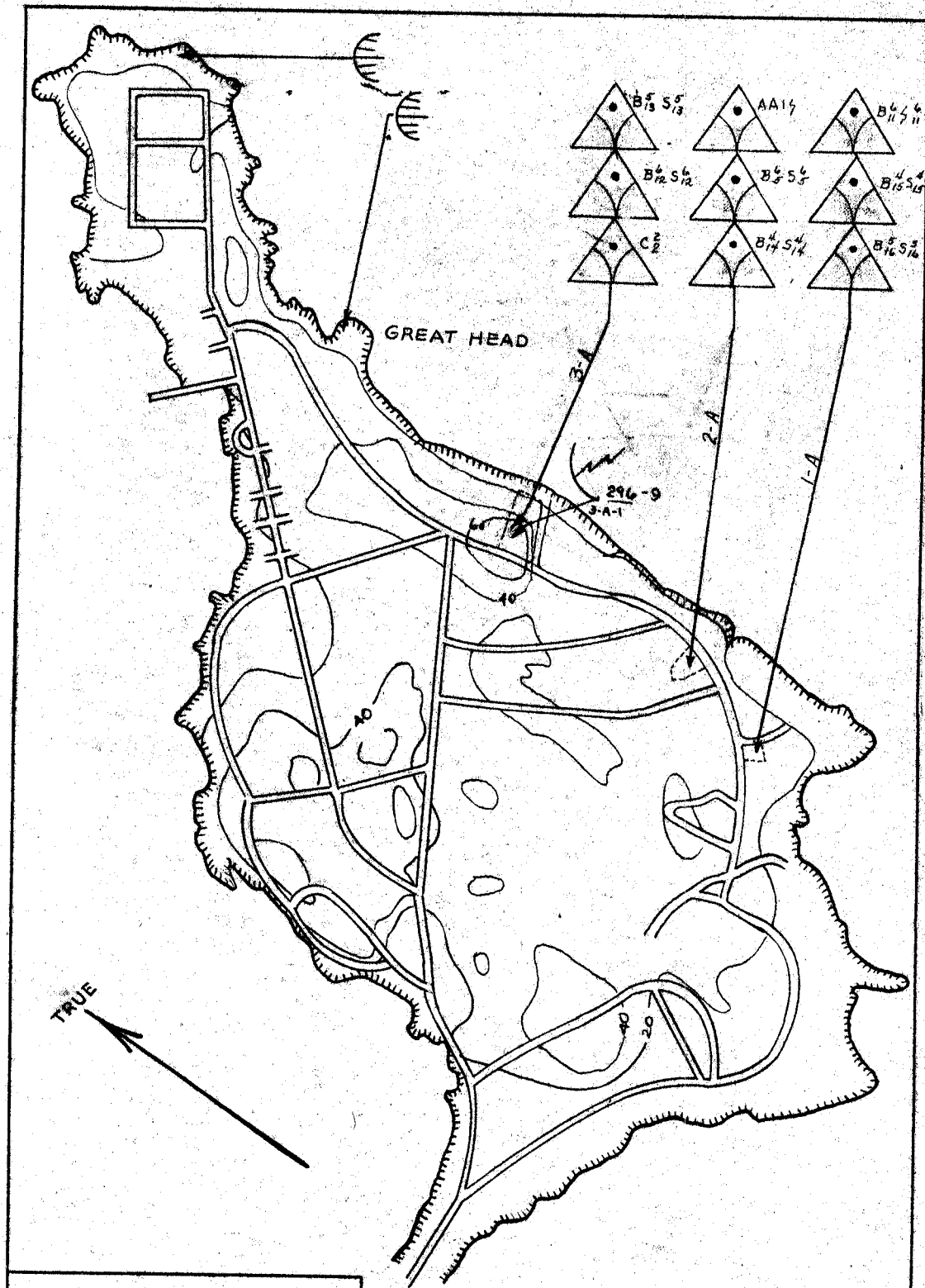
**PREPARED BY
H.D. OF BOSTON**

**24 JUNE 1943
EX. NO. 9-B-20**

REVISED DATE: 31 JAN 45

DECLASSIFIED
Authority NND 760162
By WDP HARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES



SECRET

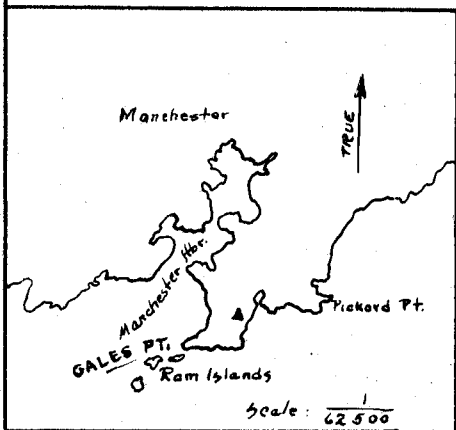
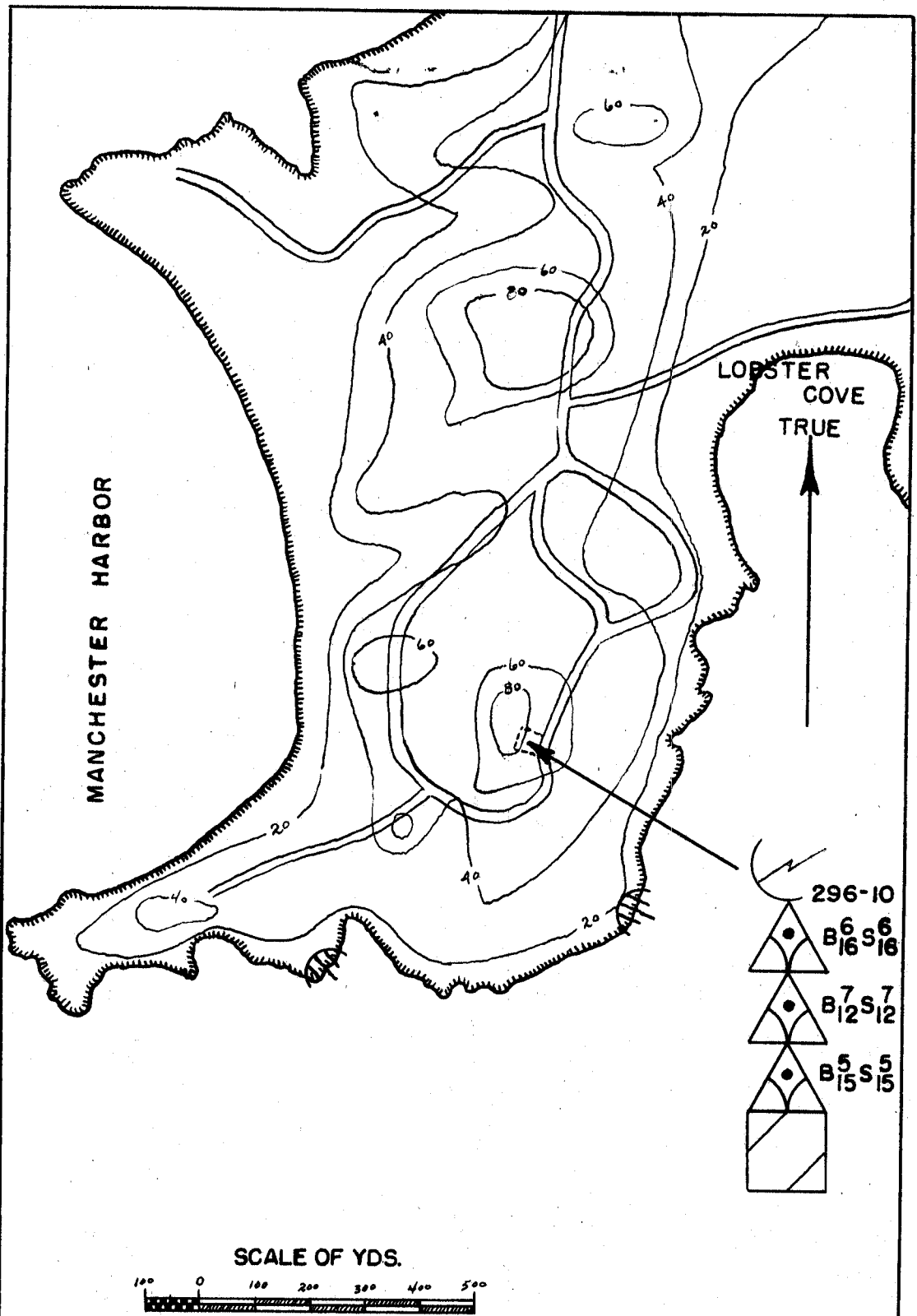
**HARBOR DEFENSES OF
BOSTON**

**LOC. 132 MARBLEHEAD NECK
FIRE CONTROL INSTALLATIONS**

PREPARED BY H.D. OF BOSTON	23 JUNE 1943 EX. NO. 9-B-21
--------------------------------------	--

REVISED DATE: 31 JAN. 45

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00



SECRET

HARBOR DEFENSES OF
BOSTON
LOC. 133 GALES POINT
FIRE CONTROL INSTALLATIONS

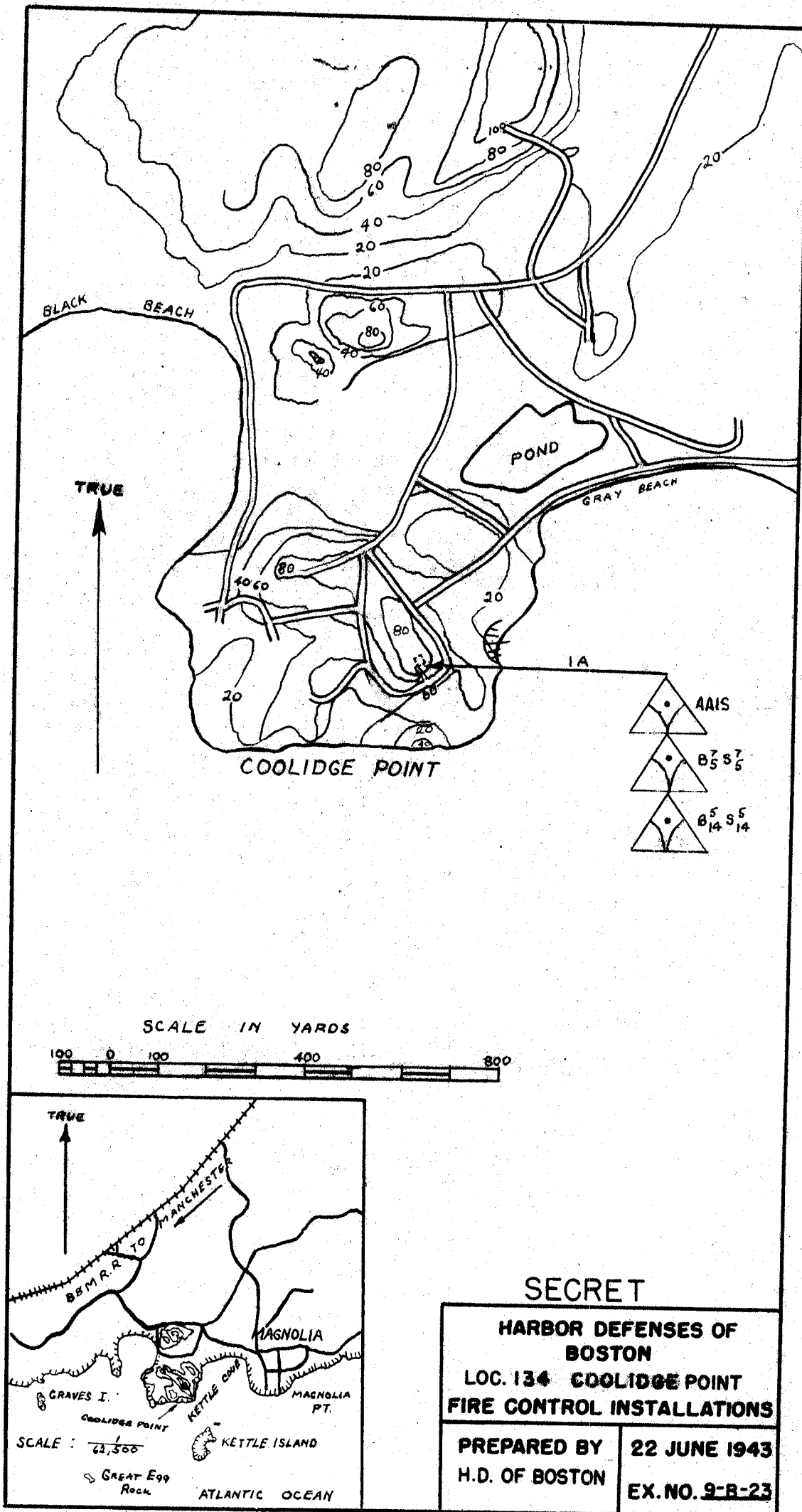
PREPARED BY
H.D. OF BOSTON

23 JUNE 1943
EX. NO. 9-B-22

REVISED 31 JAN '45

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES



SECRET

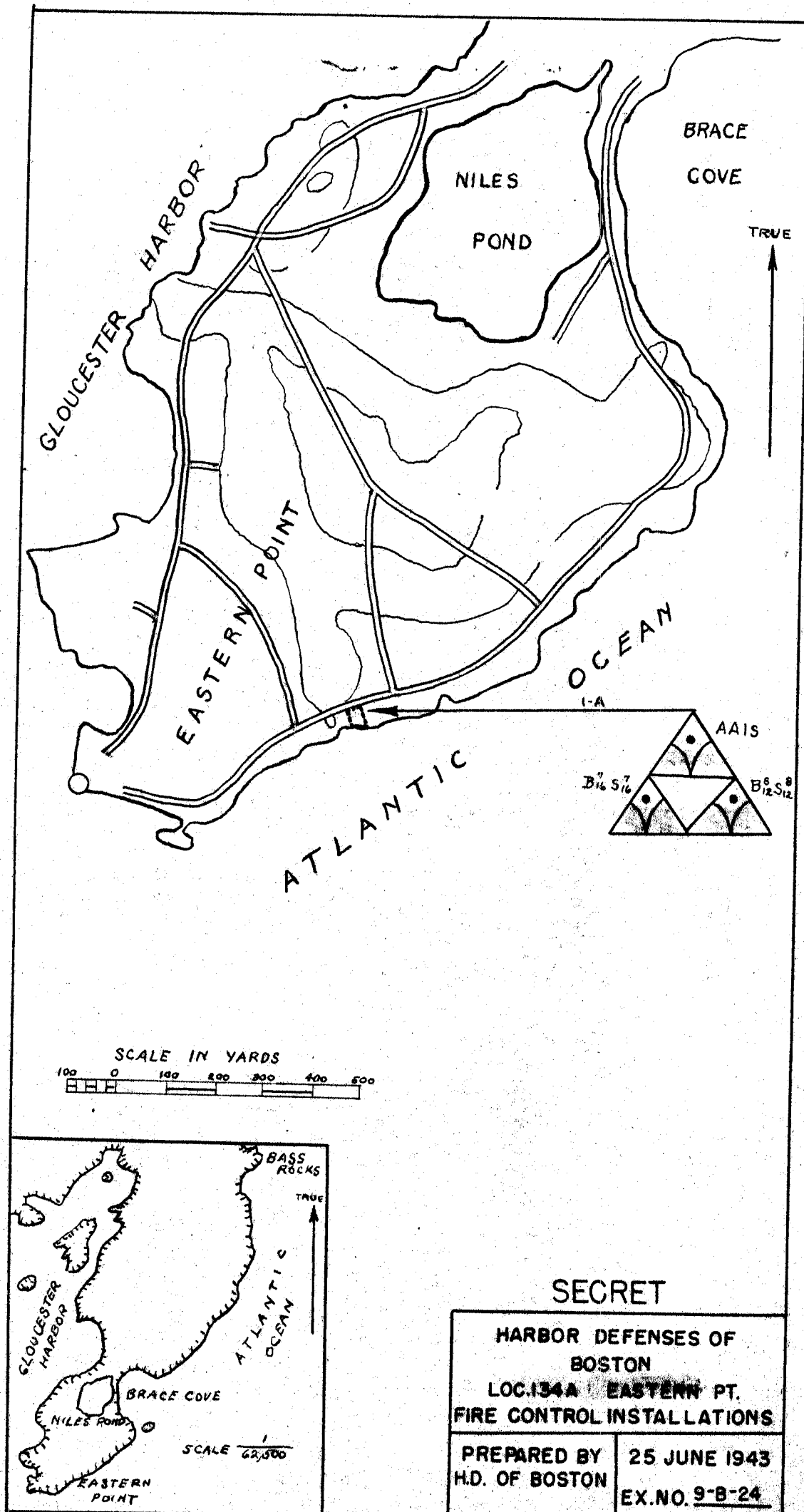
**HARBOR DEFENSES OF
BOSTON
LOC. 134 COOLIDGE POINT
FIRE CONTROL INSTALLATIONS**

**PREPARED BY
H.D. OF BOSTON**

**22 JUNE 1943
EX. NO. 9-B-23**

REVISED DATE: 31 JAN 45

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00

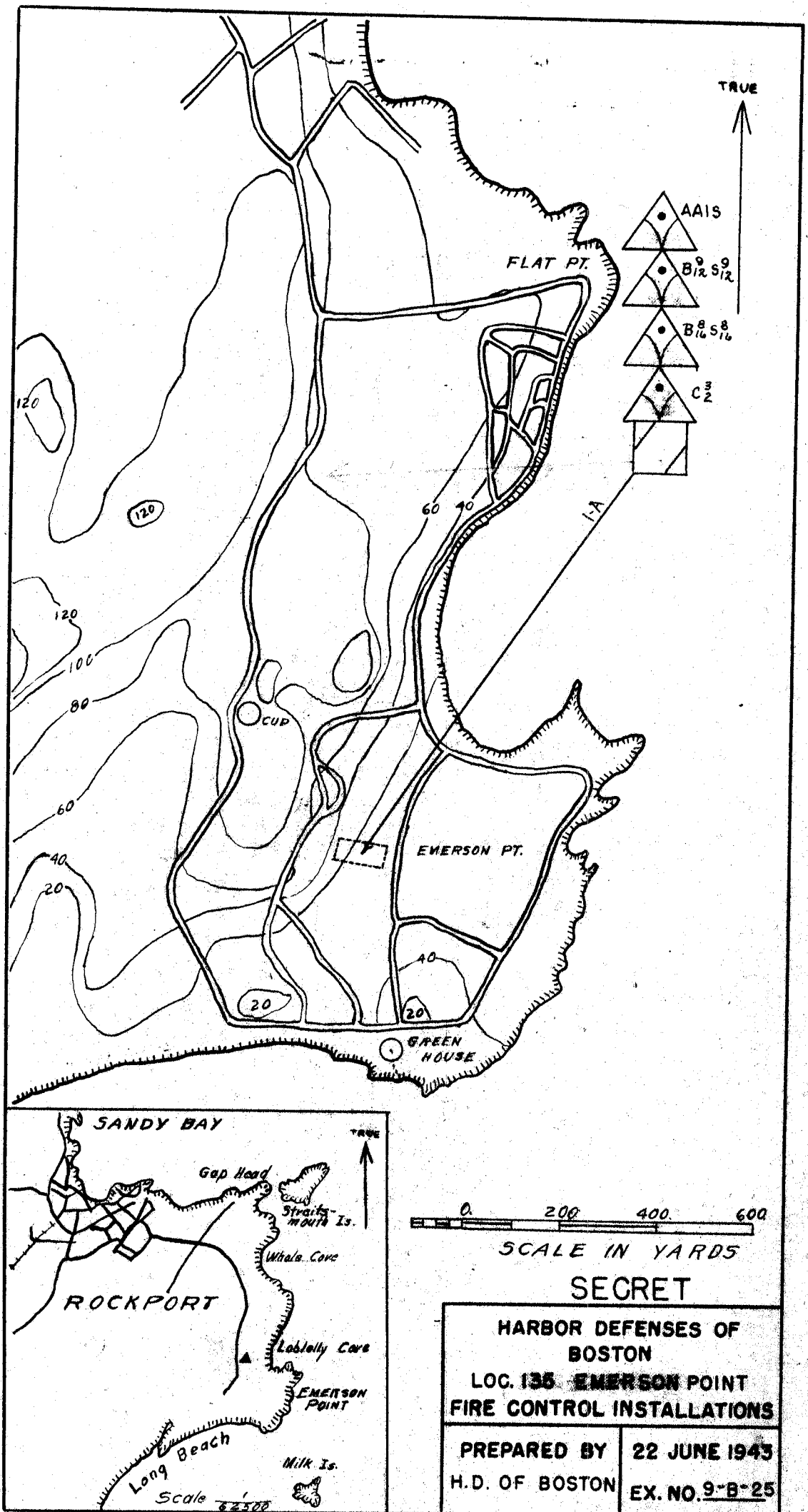


By WDP HARA Date 7/15/60

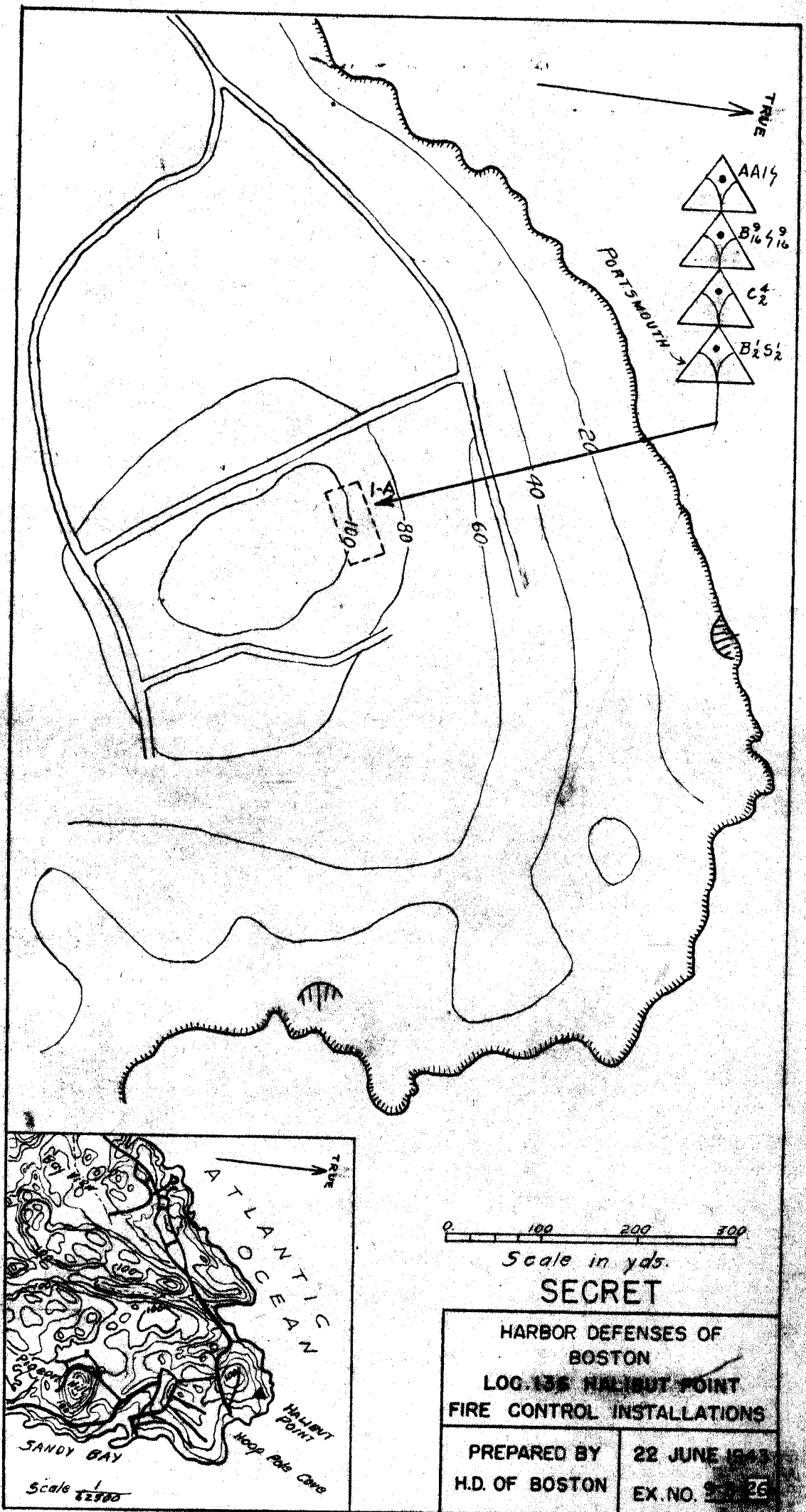
Authority NND 760162

DECLASSIFIED

REPRODUCED AT THE NATIONAL ARCHIVES



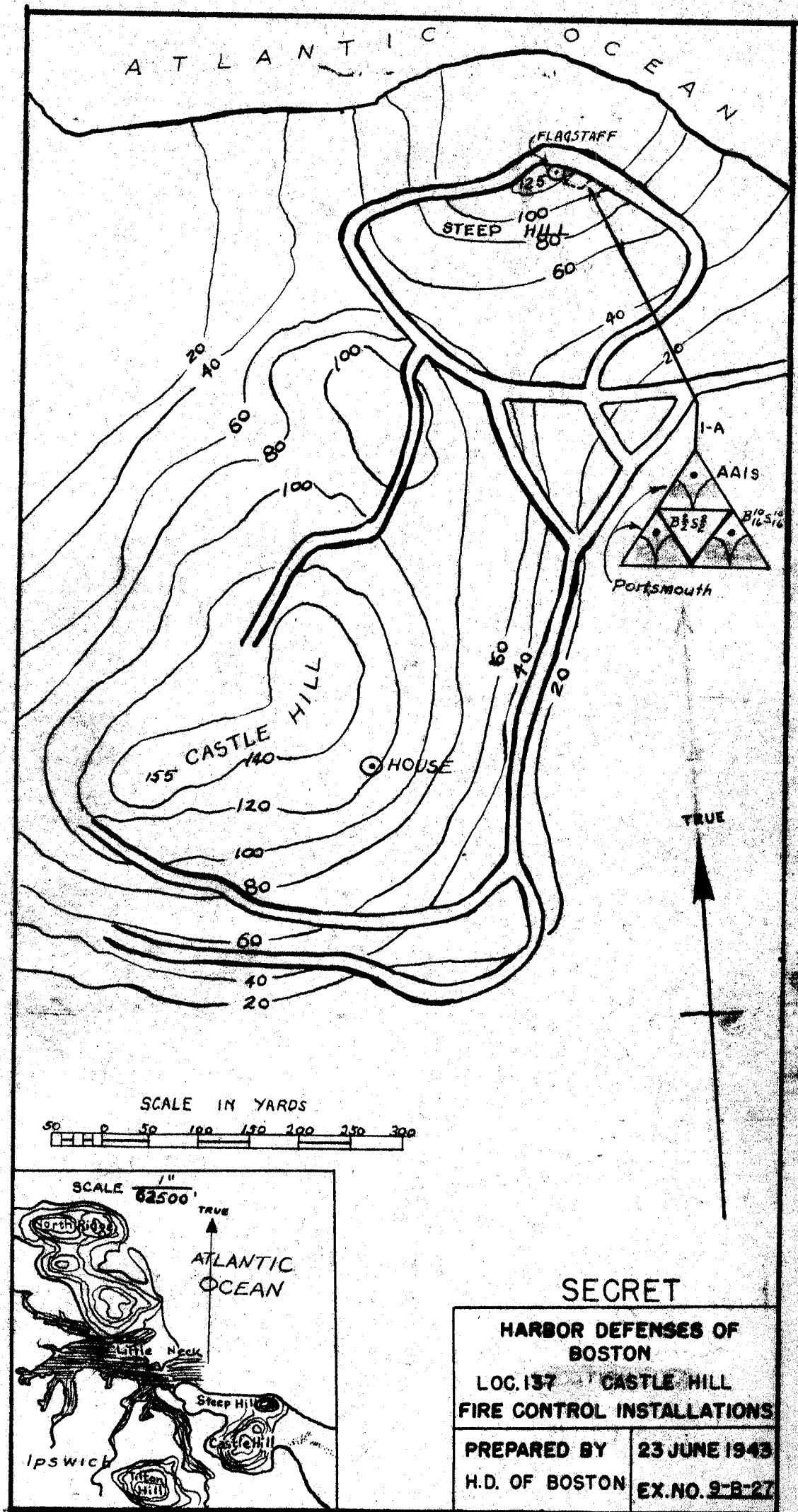
DECLASSIFIED
Authority NND 760162
By WDP/HARA Date 7/15/00



DECLASSIFIED

Authority NND 760162

By WDP NARA Date 7/15/00



By WDR NARA Date 7/15/00

Authority NND 760162

DECLASSIFIED

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

ANNEX C

SEACOAST SEARCHLIGHTS

SECRET

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00

SECRET

ANNEX C - INDEX

- Par. 1 General
- Par. 2 Tactical Organization
- Par. 3 List of Seacoast Searchlights
- Par. 4 Land Acquisition

EXHIBITS

1-C - Illumination Plan

1
SECRET

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

1. General:

a. The searchlight project for this Harbor Defense consists of forty-one portable lights. Five of the portable lights are for use with the 90mm ALTB batteries, four are for use with mobile 155mm batteries at Sagamore and Sandwich, and two extra are provided for maintenance reserve. Towers shown on this form are either on hand or have been approved in the Modernization Program.

b. Paragraph 4, 4th Indorsement, Headquarters, Army Service Forces, SPEPS 680.2 (22 Jun 43), 30 Aug 1943, on letter, Headquarters New England Sector, 470.3, 22 June 1943, Subject: "Requirements for Harbor Defense Searchlights" is the authority for the project allowances of searchlights.

c. Letter, Office, Chief of Engineers, SPEPR, 28 February 1944, Subject: "Replacement of Fixed-Type Searchlights Installed in Harbor Defenses," and letter, War Department AGO, AG 470.3 (11 Apr 44) OB-S-E, 14 April 1944, same subject, authorizes fixed searchlights to be replaced by portable searchlights.

2. Tactical Organization: The assignment of seacoast searchlights to elements of the tactical command is shown in column 3, paragraph 3, this annex. Searchlights for ALTB batteries are listed separately on this form; when these batteries are operative and searchlights are on hand, the tactical assignment of searchlights will be revised.

SEACOAST SEARCHLIGHTS										
TAC NO.	LOC NO.	TACT ASGMT.	TYPE	TYPE OF EMPLACEMENT	GROUND ELEVATION	HEIGHT OF TOWER	CONTROL LOCATION	POWER PLANT	LOC NO.	LOC. NO. OF SHELTER
								TYPE		
1	111	G1	P	Tower	10	38	114	P	111	119
2	111	C1	P	Tower	10	38	120	P	111	119
3	112	G1	P	Tower	20	38	114	P	112	119
4	112	C1	P	Tower	20	38	120	P	112	119
5	114	C1	P	None	60		120	P	114	119
6	114	G2	P	None	60		115	P	114	119
7	115	C1	P	Tower	20	38	120	P	115	119
8	115	G2	P	Tower	20	38	115	P	115	119
9	116	C1	P	Tower	10	38	120	P	116	119
10	120	G2	P	Tower	10	38	115	P	120	119
11	120	C1	P	Tower	10	38	120	P	120	119
12	117	G4	P	Concrete	10	30	127	P	117	117
13	126	C1	P	None	40		120	P	126	119
14	126	G2	P	None	40		115	P	126	119
15	121	G5	P	Concrete	25		121	P	121	121
16	122	G4	P	Concrete	25		127	P	122	122
17	123	G5	P	Concrete	30		121	P	123	123
18	127	H	P	Concrete	70		127	P	127	127
19	130	G6	P	Concrete	40		131	P	130	130
20	131	G6	P	None	40		131	P	131	130
21	131A	C2	P	Tower	20	38	130	P	131A	130
22	132	C2	P	Tower	20	38	130	P	132	130
23	132	G6	P	Tower	20	38	131	P	133	130
24	133	C2	P	None	60		130	P	133	130
25	133	G7	P	None	60		131	P	133	130
26	134	C2	P	Tower	20	38	130	P	134	130
27	134A	G7	P	Tower	20	38	131	P	134A	130

FORM #10

SEACAST SEARCHLIGHTS										
TAC NO.	LOC NO.	TACT ASGMT.	TYPE	TYPE OF EMPLACEMENT	GROUND ELEVATION	HEIGHT OF TOWER	CONTROL LOCATION	POWER PLANT		LOC. NO. OF SHELTER
								TYPE	LOC NO.	
28	135	G6	P	Tower	20	38	131	P	135	130
29	136	G7	P	None	80		131	P	136	130
30	136	C2	P	None	80		130	P	136	130
AMTB 1	119	AMTB 1	P	None	60		119	P	119	11
AMTB 2	124	AMTB 2	P	None	100		124	P	124	11
AMTB 3	123	AMTB 3	P	None	20		123	P	123	119
AMTB 4	127	AMTB 4	P	None	20		127	P	127	130
AMTB 5	129	AMTB 5	P	None	40		129	P	129	130
Note: Two additional portable lights in maintenance reserve.										
The following portable lights are not part of the Harbor Defense Project but are furnished by the Harbor Defense as approved in 4th Indorsement referred to in paragraph 1b.										
	109	(Mobile	P	Tower				P	109	109
	109	(155mm								
	109	(Bat-	P	None				P	109	109
	137B	(tery								
	137B	(	P	Tower				P	137B	137
	137B	(
	137B	(	P	Tower				P	137B	13

FORM #10

DECLASSIFIED
Authority NND 760162
2/15/00
By WDP NARA Date

SECRET

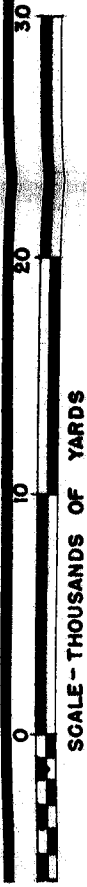
4. Land Acquisition: No real estate acquisition is required: trespass rights are sufficient for occupancy of outlying searchlight positions not on government property.

5

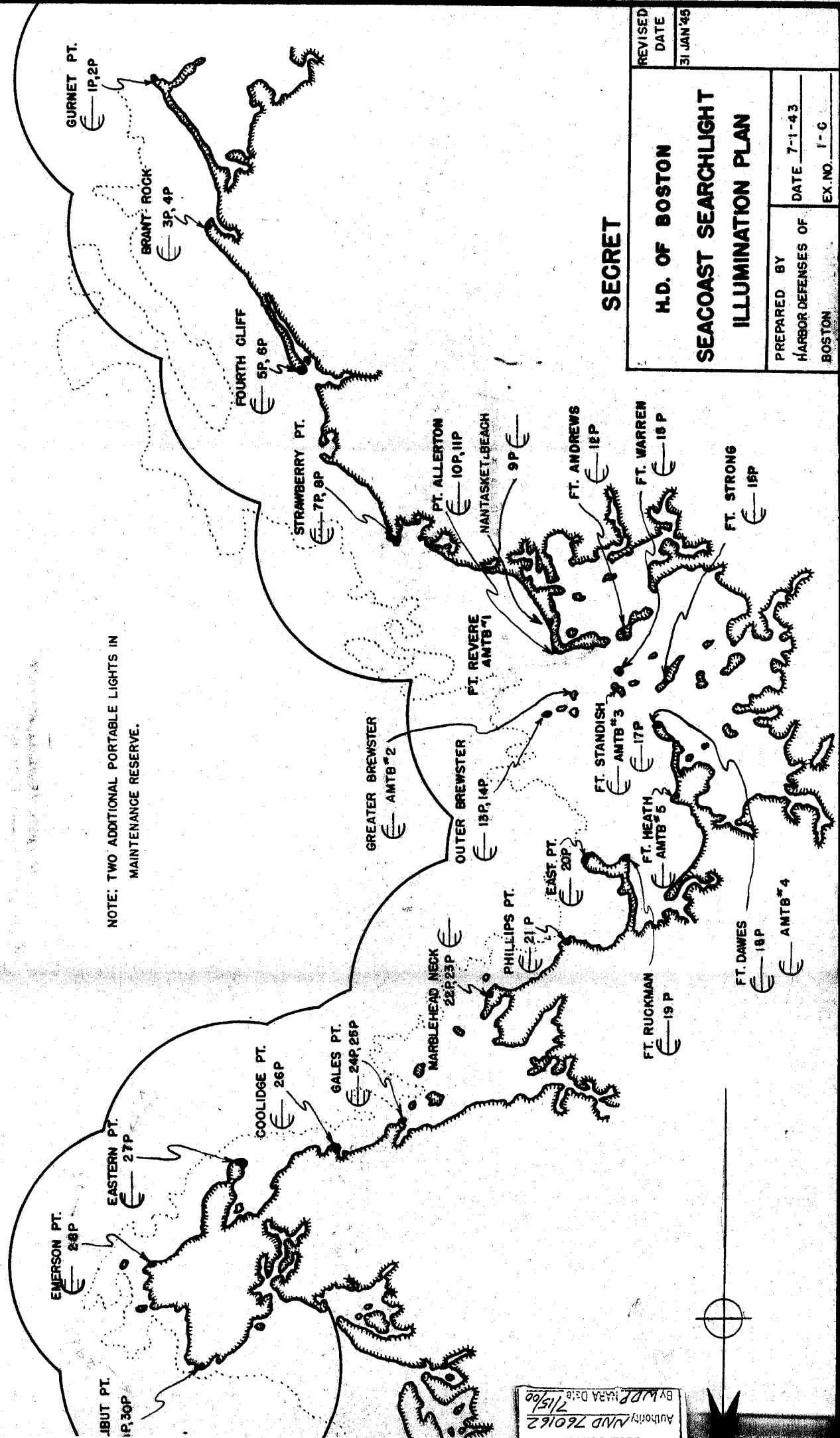
SECRET

DECLASSIFIED
Authority AND 760162
By WDR NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES



SCALE - THOUSANDS OF YARDS



SECRET

REVIS	DATE
31 JAN 45	
H.D. OF BOSTON	
SEACOAST SEARCHLIGHT	
ILLUMINATION PLAN	
PREPARED BY	DATE 7-1-43
HARBOR DEFENSES OF	EX. NO. 1-C
BOSTON	

Authority NMD 76062
By W.P. WRA Date 7/15/60

SECRET

ANNEX D

UNDERWATER
DEFENSE

SECRET

DECLASSIFIED
Authority NND 760162
By WDP/HARA Date 7/15/00

SECRET

ANNEX D - INDEX

- Par. 1 Authority
- Par. 2 Controlled Submarine Mine Project
 - a. Underwater Portion of Defense
 - b. Submarine Mine Flotilla
- Par. 3 Shore Facilities
- Par. 4 Mine Field Protection
- Par. 5 Storage of Explosives
- Par. 6 Land Acquisition

EXHIBITS

- 1-D - Underwater Facilities
- 2-D - Shore Facilities

SECRET

SECRET

1. Authority: 2nd Indorsement, War Department, A.G.O., dated 1 April 1943, (AG 476 (12-21-42) OB-S-E) on letter, Headquarters New England Sector, 381, 21 December 1942, subject: "Proceedings of Local Joint Planning Committee, Ground Mine Defense of Boston Harbor," authorized the basic underwater defense project and 2nd Indorsement, War Department, A.G.O., dated 20 July 1943, (AG 476 (7 Jun 43) OB-S-E) on letter, Headquarters New England Sector, 660.3, 7 June 1943, subject: "Additional Requirements for Underwater Defense Project, Harbor Defenses of Boston," authorized construction in implementation thereof.

2. Controlled Submarine Mine Project:

a. Underwater Portion of Defense: The underwater elements of the mine defense are shown in exhibit 1-D.

SECRET

SECRET

2 b.

SUBMARINE MINE FLOTILLA						
TYPE VESSEL	PRO- JECT REQ.	NO. ON HAND	NAME	LENGTH ft.	BEAM ft.	DRAFT ft.
Mine Planter	2	1	Abbott	189	37	11.6
DB Boat	5	4	L-90	64	18	4.75
			L-91	64	18	4.75
			L-98	64	18	4.5
			L-110	64	18	4.5
Motor Mine Yawl	12	10	M-305	26	8.5	3
			M-306	26	8.5	3
			M-315	26	8.5	3
			M-316	26	8.5	3
			M-317	26	8.5	3.25
			M-392	26	8.5	3
			M-461	26	7.5	2.5
			M-179	26	8.75	3
			M-180	26	8.75	3
			MT-68	25'10"	8.5	1.5

FORM # 11

3

SECRET

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 2/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

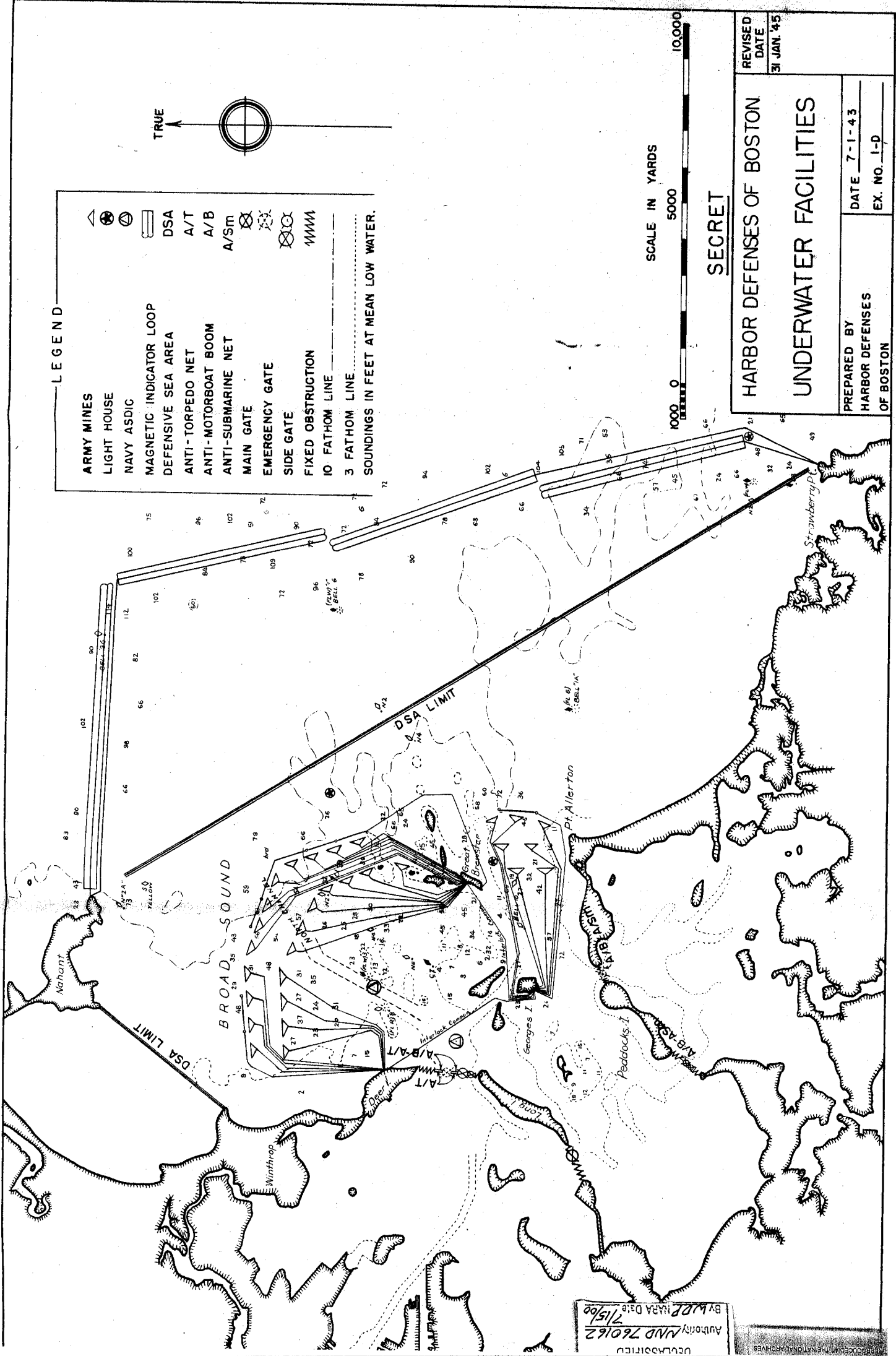
3. Shore Facilities: ~~Shore~~ facilities of the underwater defense are shown on exhibit 2-D. Two mine storehouses are provided; one at Fort Warren and one at Fort Strong. About one hundred mines can be stored inside at Fort Strong and about fifty-five at Fort Warren. Three casemates are required for the project. The casemates at Fort Dawes and Fort Warren each have a capacity of ten groups. The casemate at Great Brewster has a twenty group capacity. The plotting room for the Northern field is adjacent to the mine casemate at Fort Dawes. The plotting room for the Nantasket Roads field is located at Fort Warren in a bombproof. The loading room at Fort Warren has been enlarged to meet the requirements of the expanded ground mine project.

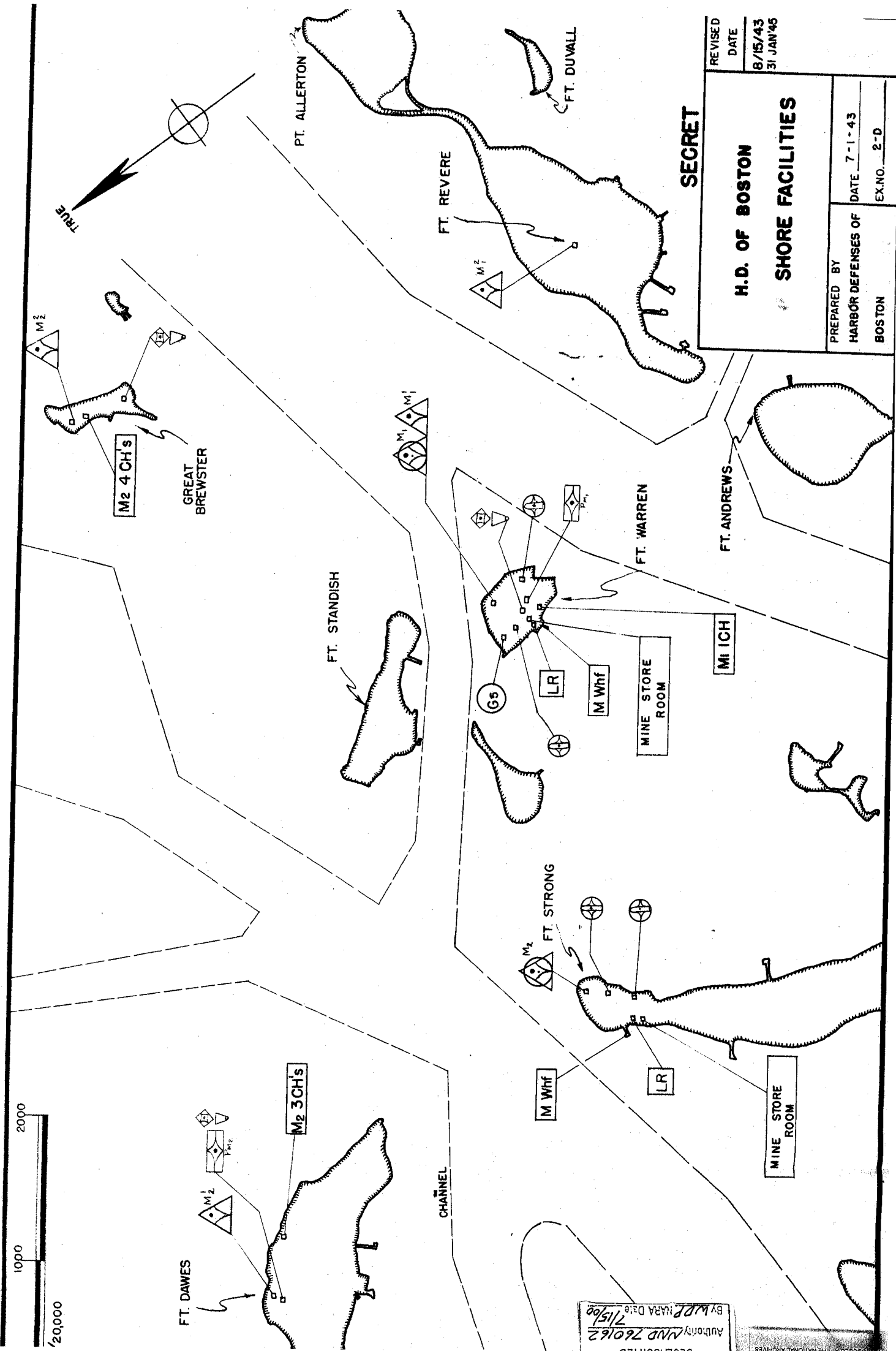
4. Mine Field Protection: The mine project for this Harbor Defense is divided between the two main channels. In the north or main channel, which is the most extensive planting area, 23 groups are located. In the South Channel or Nantasket Roads, 7 groups are located. Gun protection for these two fields is adequate; with the exception of Batteries Gardner, Murphy and the six inch at Fourth Cliff, all project armament can bring effective fire to bear on either or both of the planted areas. All of these gun batteries have adequate illumination, and in addition three lights are assigned the mine group for observation firing purposes.

5. Explosives and Safety Requirements: The magazines of outmoded and abandoned batteries are used for storage of mine explosives. At Fort Warren the magazines of Batteries Bartlett and Stevenson are available. At Fort Strong the magazines of Batteries, Drum, Ward and Hitchcock are used. The total amount of explosives for the project is 1,521,000 pounds. 1,170,000 pounds will normally be planted and 351,000 pounds, or 30% of the planted weight of explosives will normally be stored ashore in reserve. For peace-time storage of all explosives in the mine project an extensive repair program of abandoned magazines would be necessary. The magazines of Batteries Bartlett, Stevenson, Peace, Cushing-Whitman, Rice, Burbeck, Morris, Hitchcock, Ward, Smythe, and Drum, will, if put in proper repair, provide storage space for the explosives of the mine project. The provisions of TM 9-1900 are in effect in this harbor defense without exception.

6. Land Acquisition: No additional real estate is required for the Underwater Defense Project.

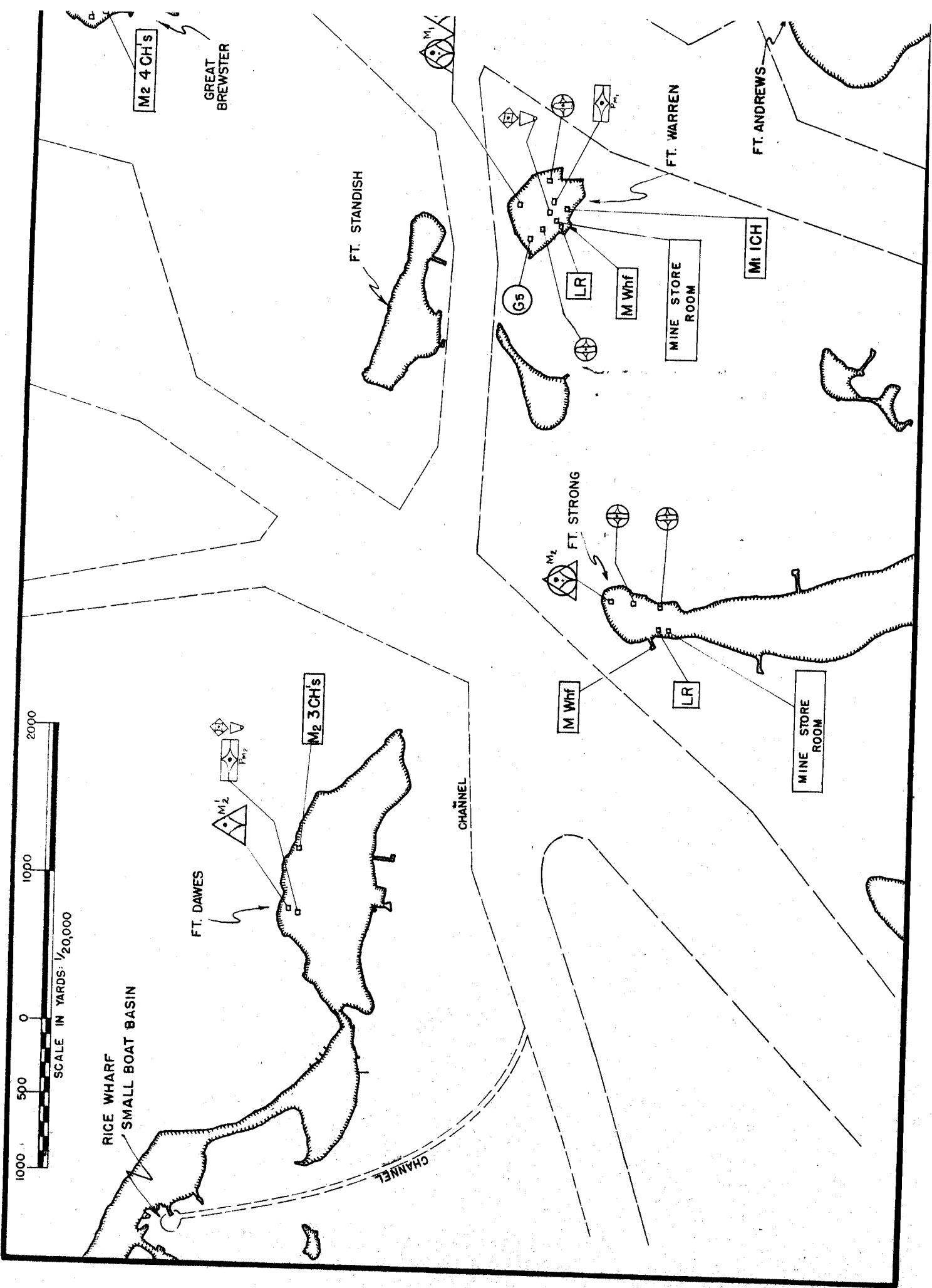
SECRET





SECRET	
H.D. OF BOSTON	
SHORE FACILITIES	
REVISED DATE	8/15/43
DATE	31 JAN'45
PREPARED BY	BOSTON
HARBOR DEFENSES OF	DATE 7-1-43
	EX.NO. 2-D

Authority: NND 760162
By WDP: NARA Date 7/15/00



SECRET

ANNEX E
ANTIAIRCRAFT
ARTILLERY

SECRET

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00

SECRET

ANNEX E - INDEX

- Par. 1 Tactical Organization
- Par. 2 a. Relations to Higher Echelons, AAAIS and AWS
b. Estimate of Reinforcements Required
- Par. 3 Gun Defense
- Par. 4 Searchlight Defense
- Par. 5 Automatic Weapons Defense
- Par. 6 AAIS
- Par. 7 Fire Control Telephone Net
- Par. 8 Radio Net
- Par. 9 Storage Facilities
- Par. 10 Major Items of Equipment
- Par. 11 Ammunition
- Par. 12 Land Acquisition

EXHIBITS

- 1-E - AA Tactical Organization
- 2-E - AA Fields of Fire & Illumination
- 3-E - AAIS
- 4-E - AA Fire Control Telephone Net
- 5-E - AA Radio Net
- 6-E - Automatic Weapons Defense, 40mm Guns.

SECRET

1. Tactical Organization: Exhibit 1-E shows the tactical organization for the AA elements of Boston Harbor. Four fixed 3" AA batteries of three guns each are located at Forts Revere, Standish, Strong, and Ruckman. Twenty AA searchlights are assigned to four platoons of five lights per platoon. These elements, the guns and searchlights, are controlled from the AACCP which is adjacent to the HDCP in the bombproof casemate at Fort Banks. Liaison with the AMTB battalion at Fort Dawes is maintained continuously, and both the AA batteries and the 90mm AMTB batteries are prepared to engage targets in the air or on the sea or land.

2. a. Relations to Higher Echelons, AAAIS, and AWS: For use against aircraft, the Harbor Defense AA elements are under the tactical control of the regional AA defense. Intelligence from the AWS system and the AAIS network of the region is disseminated to Harbor Defense AA and AMTB elements.

b. Estimate of Reinforcements Required: A study has been made to estimate the additional AA units required for a complete protection of the Harbor Defenses. These requirements are as follows: one searchlight battalion and eight gun batteries. The gun batteries should be located in the general areas listed below:

- (1) South End Nantasket Beach
- (2) South West End of Peddocks Island
- (3) Calf Island
- (4) Near Castle Island, South Boston
- (5) Near Airport, East Boston
- (6) Near General Edwards Bridge, Lynn
- (7) Little Nahant
- (8) Phillips Pt.

3. Gun Defense: The gun defense is shown on exhibit 2-E. One radar is authorized for each of the four AA gun batteries.

4. Searchlight Defense: See exhibit 2-E. Three radars are authorized for each of the four searchlight platoons. Sound locators on hand are to be retained until radar is made available.

5. Automatic Weapons Defense: 40mm and 50 calibre guns are allotted by T/O & E 4-260-1. These weapons are for the close-in protection of the batteries to which assigned and to thicken up the larger calibre AA gun defense. Fields of fire of 40mm guns are shown on exhibit 6-E. TBA tabulation of AA 40mm guns and 50 cal. M.G. are shown on following forms.

ANTIAIRCRAFT AUTOMATIC WEAPONS

Tabulation by battery for allowance of antiaircraft
automatic weapons as authorized by T/O&E 4-260-1

CALIBER	NO. OF GUNS	BATTERY	LOC.	ALT UNIT ION	
				BATTLE ALLOWANCE	STORAGE
40mm	2	Cons. 208	114	5 U/F	114
40mm	2	McCook	117	5 U/F	117
40mm	4	Long	118	5 U/F	118
40mm	2	Whipple	123	5 U/F	123
40mm	2	Jewell	126	5 U/F	126
40mm	4	Cons. 105	127	5 U/F	127
40mm	2	Cons. 207	127	5 U/F	127
40mm	4	Gardner	130	5 U/F	130
40mm	2	Cons. 206	131	5 U/F	131
40mm	4	Murphy	131	5 U/F	131

FORM # 16

ANTIAIRCRAFT AUTOMATIC WEAPONS

Tabulation by battery, for allowance of antiaircraft
automatic weapons as authorized by T/O&E 4-260-1

CALIBER	NO. OF GUNS	BATTERY	LOC.	AMMUNITION	
				BATTLE ALLOWANCE	STORAGE
50	2	Cons. 208	114	5 U/F	114
50	2	McCook	117	5 U/F	117
50	4	Long	118	5 U/F	118
50	2	Whipple	123	5 U/F	123
50	2	Jewell	126	5 U/F	126
50	4	Cons. 105	127	5 U/F	127
50	2	Cons. 207	127	5 U/F	127
50	4	Gardner	130	5 U/F	130
50	2	Cons. 206	131	5 U/F	131
50	4	Murphy	131	5 U/F	131
50	4	Btry 941	119	5 U/F	119
50	4	Btry 942	124	5 U/F	124
50	4	Btry 943	123	5 U/F	123
50	4	Btry 944	127	5 U/F	127
50	4	Btry 945	129	5 U/F	129
50	2	Bumpus	117	5 U/F	117
50	2	Stevens	122	5 U/F	122
50	2	Basinger	122	5 U/F	122
50	2	Williams	123	5 U/F	123
50	4	AA1	119	5 U/F	119
50	4	AA2	122	5 U/F	122
50	4	AA3	123	5 U/F	123
50	4	AA4	130	5 U/F	130
50	4	Two U.S.A.M.P.	Ship	5 U/F	Aboard

FORM #16

6. AAIS: Observers at each of the 20 AA searchlights operate on a twenty-four hour basis reporting all AA intelligence directly to the AACP. Additional AAIS stations are provided atop fire control towers as shown on exhibit 3-E.

7. Fire Control Telephone Net: See exhibit 4-E. The AACP maintains direct telephone communication to all tactical elements.

8. Radio Net: See exhibit 5-E. The radio net parallels the telephone net.

9. Storage Facilities: Forts Revere and Ruckman have standard Engineer steel shelters for storage of AA searchlights, radar, and sound locators.

10. Major Items of Equipment: (4 AA Gun Batteries & SL Platoons)

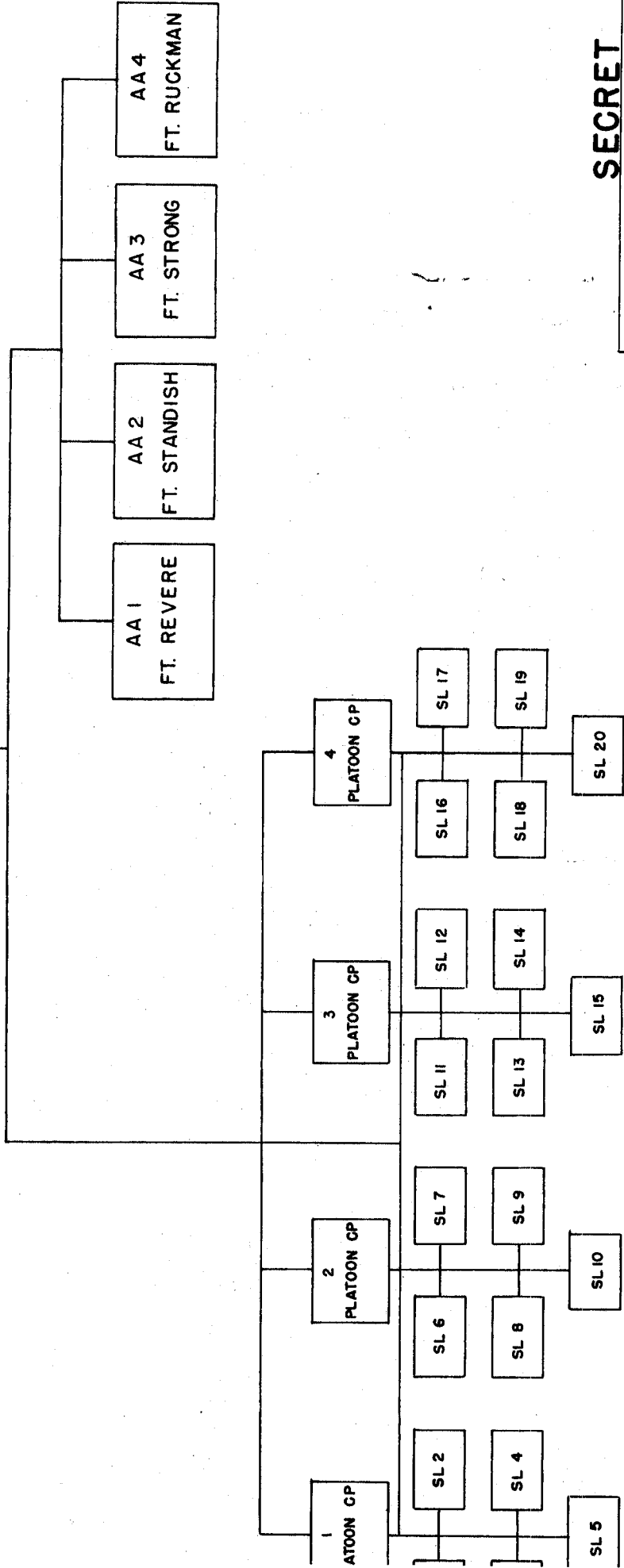
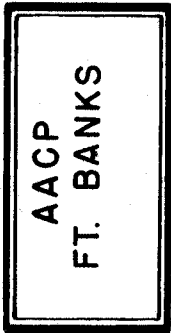
Item	Authorized	On Hand	To be Procured
3" AA Guns, fixed	12	12	0
50 cal. AA MG	16	16	0
Searchlights, 60"	20	20	0
SCR 584, 545, or 268	4	0	4
SCR 268	12	10	2
30 cal. M.G. M1917A1	40	40	0
Finder, Height, 13 $\frac{1}{2}$ ' M1 or 2	4	4	0
Radio Set			
SCR 694 or SCR 284	25	26	0
SCR 543	6	6	0
Director, AA, M7	5	0	5
Radio Set SCR 593	5	0	5

11. Ammunition:

a. Allowances for AA guns is currently contained in letter EDC, 10 August 1944, file ORD 471/711, subject: "Combat Levels of Ammunition for Ground Units of the Eastern Defense Command in the Continental United States."

b. All magazines for storage of AA ammunition are suitable and adequate, and satisfactorily comply with provisions of TM 9-1900 in all cases.

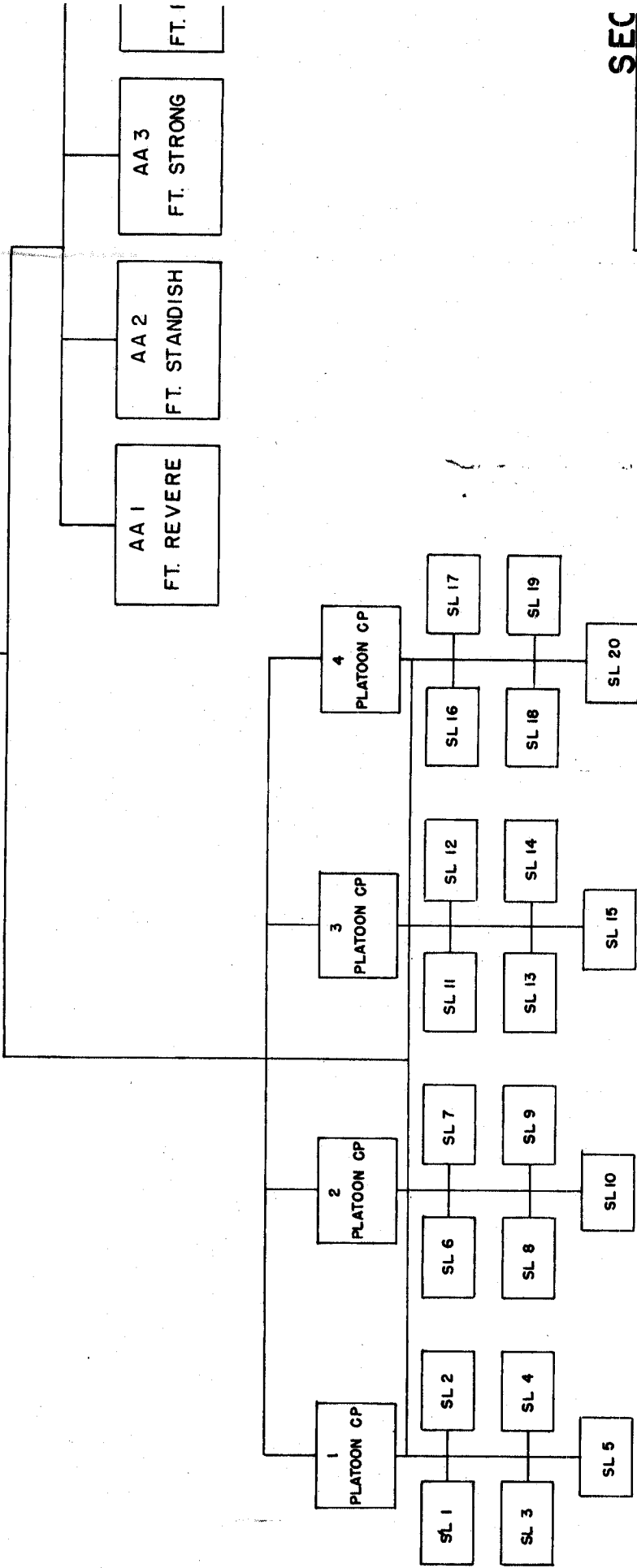
12. Land Acquisition: No additional land is required for the AA defenses of Boston Harbor.



SECRET

H.D. OF BOSTON		REVISED DATE
AA TACTICAL ORGANIZATION		31 JAN 43
PREPARED BY	DATE 7-1-43	EX. NO. 1-E
HARBOR DEFENSES OF BOSTON		

AACP
FT. BANKS

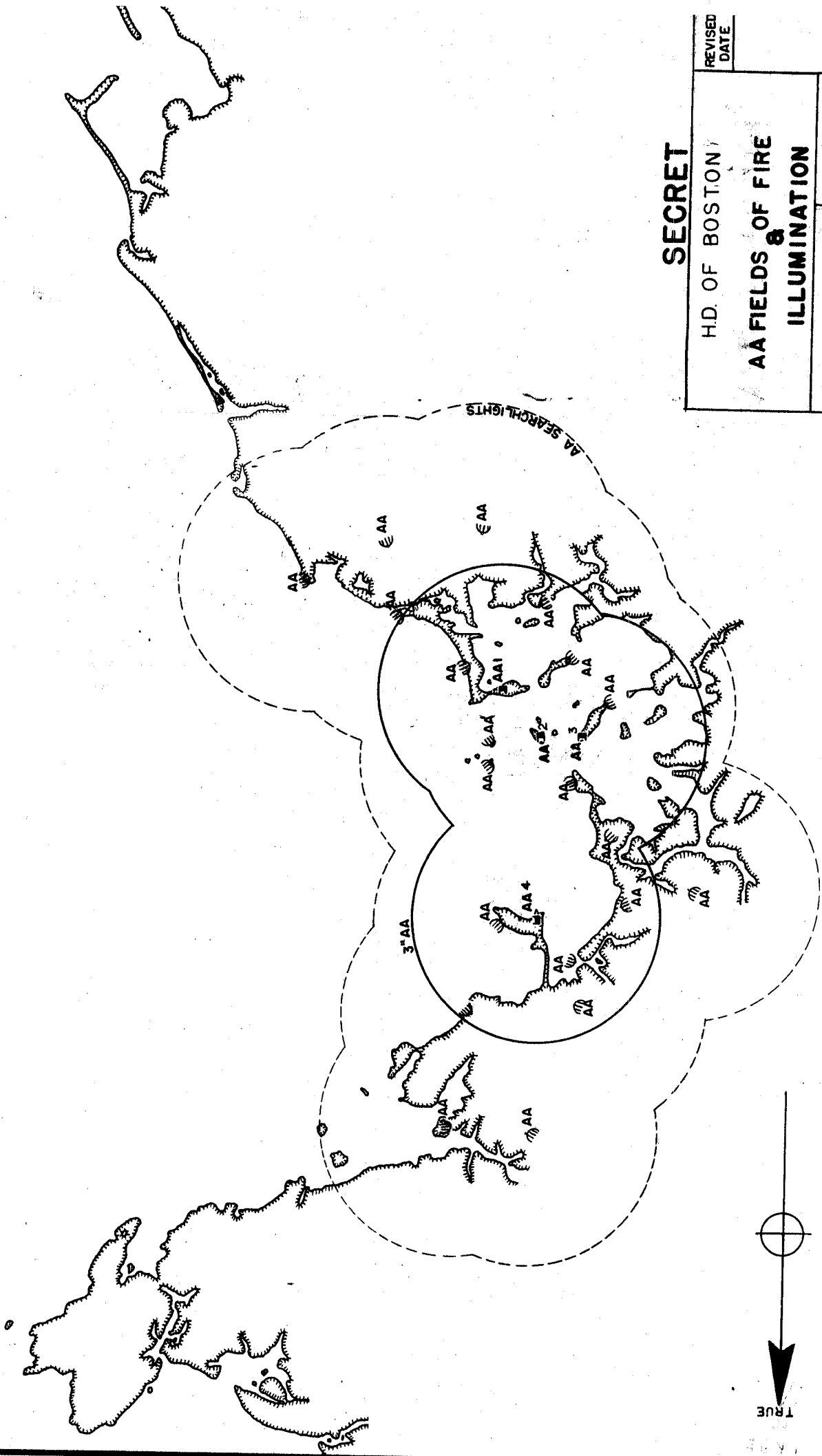


SEC

H.D. OF E

AA TACTICAL (

PREPARED BY
HARBOR DEFENSES OF
BOSTON



SECRET

HD. OF BOSTON

**AA FIELDS OF FIRE
&
ILLUMINATION**

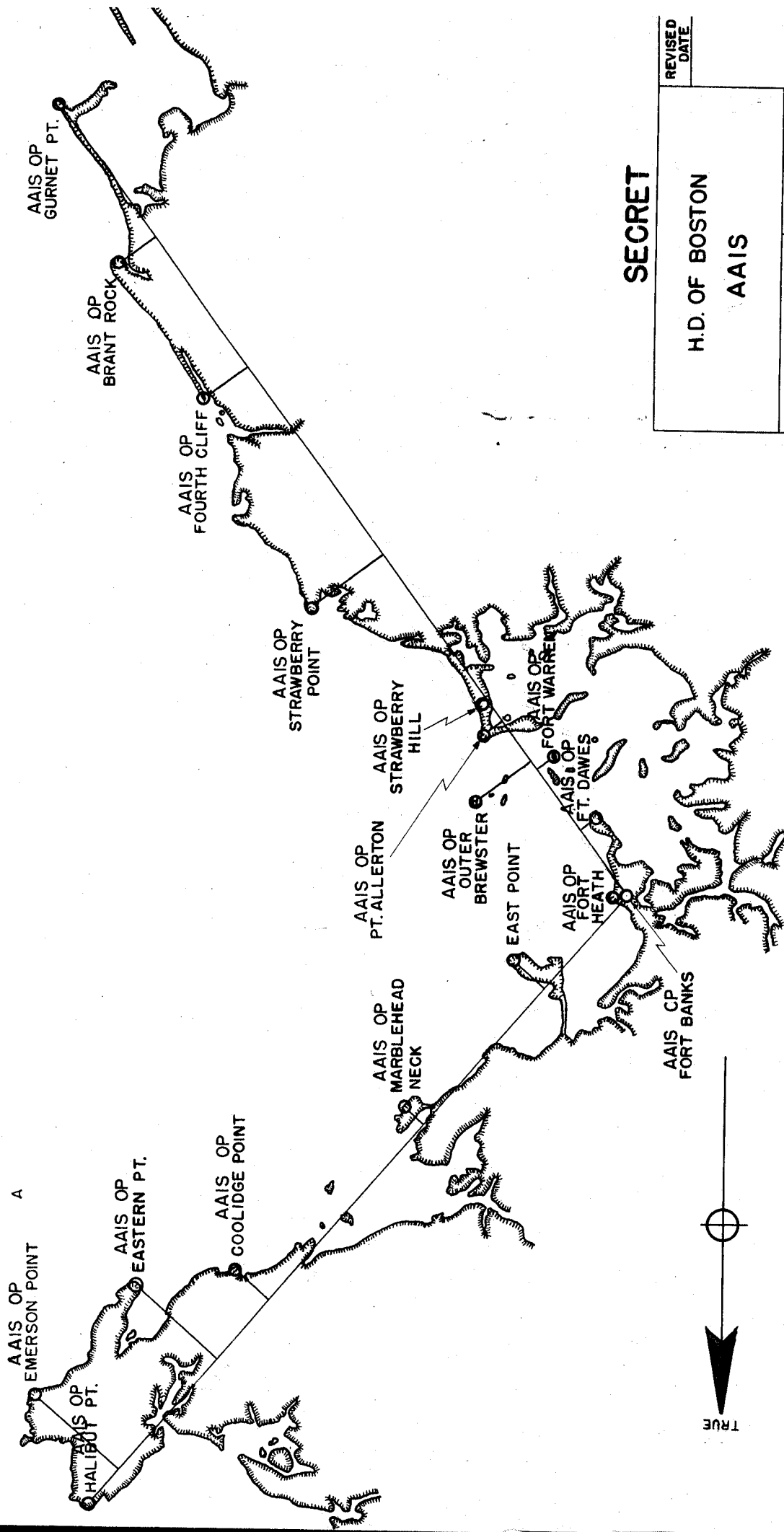
PREPARED BY
HARBOR DEFENSES OF
BOSTON

DATE 7-1-43

EX. NO. 2-E

REVISED
DATE

REPRODUCED AT THE NATIONAL ARCHIVES
Authority NND 760162
7/15/60
By WDR HARA Date



SECRET

H.D. OF BOSTON AAIS		REVISED DATE
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 3-E

Authority: NND 760162
By WDR: WARA Date: 7/15/60

AACP
FT. BANKS

AMTB
BATTALION

AA1
FT. REVERE

AA2
FT. STANDISH

AA3
FT. STRONG

AA4
FT. RUCKMAN

1
PLATOON CP

SL 1
SL 2
SL 3
SL 4
SL 5

2
PLATOON CP

SL 6
SL 7
SL 8
SL 9
SL 10

3
PLATOON CP

SL 11
SL 12
SL 13
SL 14
SL 15

4
PLATOON CP

SL 16
SL 17
SL 18
SL 19
SL 20

LEGEND

--- COMMAND
--- INTELLIGENCE
--- INTELLIGENCE & LIAISON

SECRET

H.D. OF BOSTON		REVISED DATE
AA FIRE CONTROL		31 JAN 45
TELEPHONE NET		
PREPARED BY	DATE 7-1-43	EX. NO. 4-E
HARBOR DEFENSES OF BOSTON		

AA 1
FT. REVERE
SCR 543
SCR 593

AA 2
FT. STANDISH
SCR 543
SCR 593

AA 3
FT. STRONG
SCR 543
SCR 593

AA 4
FT. RUCKMAN
SCR 543
SCR 593

IL 17
R 284

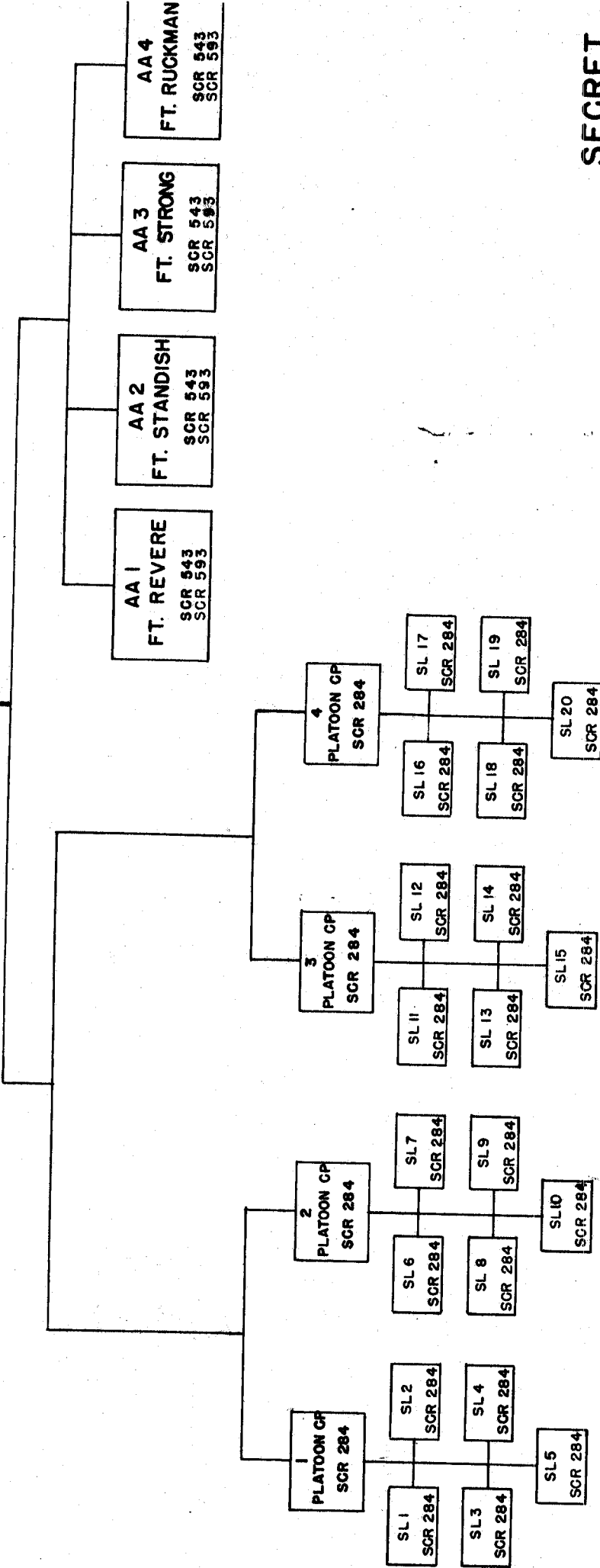
IL 19

DECLASSIFIED
Authority NND 760162
By WDP MRA Date 7/15/00

SECRET

H.D. OF BOSTON A.A. RADIO NET		REVISED DATE 31 JAN 45
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43 EX. NO. 5-E	

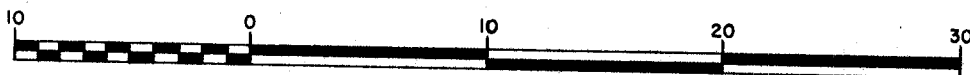
AACP
FT. BANKS
SCR 543 SCR 593
SCR 543 SCR 284



SECRET

HD. OF BOSTON	
A. A. RADIO NET	
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE EX. NO.

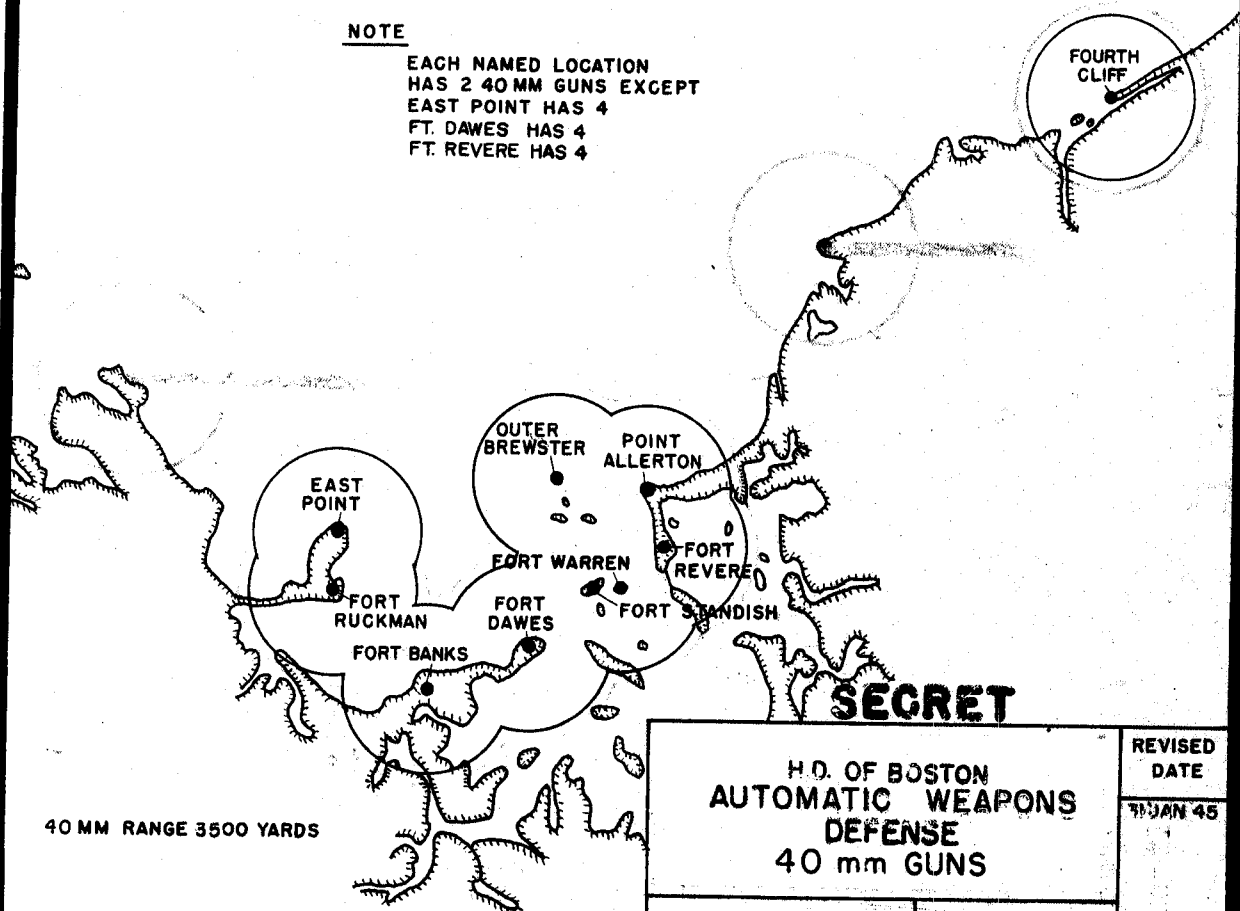
Authority: NND 760162
By WDP: WPA Date: 7/15/00



SCALE - THOUSANDS OF YARDS

NOTE

EACH NAMED LOCATION
HAS 2 40 MM GUNS EXCEPT
EAST POINT HAS 4
FT. DAWES HAS 4
FT. REVERE HAS 4



40 MM RANGE 3500 YARDS

SECRET

H.Q. OF BOSTON
AUTOMATIC WEAPONS
DEFENSE
40 mm GUNS

REVISED
DATE
1 JAN 45

PREPARED BY
HARBOR DEFENSES
BOSTON

DATE 7-1-43
EX. NO. 5-E

UNCLASSIFIED
Authority NND 760162
7/15/00
By WDP/MSA Date

SECRET

ANNEX F

GAS DEFENSE

SECRET

DECLASSIFIED
Authority NND 760162
By WDR NARA Date 7/15/00

SECRET

ANNEX F - INDEX

Par. 1 Requirements

Par. 2 Gas Defense of Bombproof Shelters

EXHIBITS

No Exhibits

1

SECRET

DECLASSIFIED
Authority AND 760162
By WDR NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

1. Requirements:

a. The gas defense project contemplates the use of collective protector units at permanent and bombproof structures, these collective protectors are installed by the Engineers at the time of construction or modernization of the structure.

b. Information available indicates that a collective protector unit supplies approximately 200 cubic feet of purified air per minute. Inactive persons require 3 cubic feet of air per minute; active persons 10 cubic feet per minute; therefore, one unit will supply air for a maximum of 20 active persons. Also, one unit will maintain a slight positive air pressure in an inclosure of 10,000 cubic feet capacity.

c. The life of a canister is 40 hours of active use. Assuming that not more than two eight-hour attacks will occur per week for three months, the reserve canisters are ample protection.

d. Power plants and isolated fire control stations do not require gas protection. Personal and organizational equipment is not within the scope of this project, nor is personnel outside gas-proof shelters.

SECRET

SECRET

2

GAS DEFENSE OF BOMBPROOF SHELTERS						
LOC NO.	SITE NO.	PURPOSE OF STRUCTURE	MEN	CAPACITY CU. FT.	REQUIREMENTS	
					COLLECTIVE PROTECTOR CANISTERS	RESERVE CANISTER
114	1-B	Plotting Room and Latrine - Cons 208	18	5356	2	4
* 117	1-G	McCook Plotting Room	18	2008	-	4
* 117	1-F	FCSB	6	2000	-	4
118	1-A	Long Plotting Room	22	3330	2	4
118	1-A	Long Latrine	30	2124	2	4
* 119	1-B	Revere FCSB	6	3072	-	4
* 120	1-B	CICP	12	3000	-	4
* 121	1-D	Warren FCSB	6	2944	-	4
* 121	1-C	M1 Casemate	10	15000	-	4
121	1-B	M1 Plotting Room	18	2800	3	6
* 122	1-C	FCSB	6	2000	-	4
* 123	1-E	Whipple Plotting Room	18	2000	-	4
* 123	1-H	FCSB	6	2000	-	4
124	1-C	M2 Casemate	10	15000	3	6
126	1-A	Plotting Room and Latrine - Cons 209	18	5356	2	4
127	1-B	Cons 105 Plotting Room	22	7012	4	8
127	1-B	Cons 105 Latrine	30	4000	1	2
127	1-F	Cons 207 Plotting Room and Latrine	18	5356	2	4
127	1-L	M2 Casemate	10	15000	3	6
* 127	1-L	M2 Plotting Room	18	2800	-	4
128	1-A	Banks HDGP	100	40180	4	8
* 130	1-A	C2 CP	12	3000	-	
130	3-A	Gardner Plotting Room	22	2988	2	4

3

SECRET

FORM # 12

DECLASSIFIED
 Authority NND 760162
 7/15/00
 BY WDP/NRA Date

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

2

GAS DEFENSE OF BOMBPROOF SHELTERS						
LOC NO.	SITE NO.	PURPOSE OF STRUCTURE	MEN	CAPACITY CU. FT.	REQUIREMENTS	
					COLLECTIVE PROTECTOR CANISTERS	RES. CANI
130	3-A	Gardner Tel. Exch.	6	2988	1	2
130	3-A	Gardner Latrine	30	2898	1	2
131	3-A	Cons 206 Plotting Room and Latrine	18	5356	2	4
131	6-A	Murphy Plotting Rm	22	9095	4	8
131	6-A	Murphy Latrine	30	3906	1	2
NOTE: One-half of reserve canisters are carried in local storage and one-half are stored by Chief of Chemical Warfare Service, earmarked for the harbor defense.						
* Collective protectors have not been installed in these installations.						

FORM # 12

4

SECRET

DECLASSIFIED
Authority NND 760162
By WDP/NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

ANNEX G

EQUIPMENT

SECRET

DECLASSIFIED
Authority NND 760162
By WDR/NARA Date 7/15/00

SECRET

ANNEX G - INDEX

Par. 1 Authorities

EXHIBITS

- 1-G - Consolidated Summary of Harbor Defense Elements
- 2-G - Consolidated Summary of Battery Installations
- 3-G - Consolidated Summary of Major Items of Equipment

SECRET

SECRET

1. Authority: T/O & E 4-260-1, dated 11 April 1944, and changes 1 to 3 inclusive.

2

SECRET

DECLASSIFIED
Authority AND 760162
By WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

CONSOLIDATED SUMMARY OF HARBOR DEFENSE ELEMENTS

HARBOR DEFENSES OF BOSTON

31 JANUARY 1945

INSTALLATION	NUMBER
37mm ATB Guns	10
40mm AA Guns	28
3-inch Seacoast Battery	5
3-inch AA Battery	4
90mm ATB Battery	5
6-inch BC Battery M1900	2
6-inch BC Battery (M1, M2, M3, or M4)	4
12-inch BC Battery M1917	1
16-inch BC Battery	3
Searchlight Battery	2
AA Searchlight Platoon	4
AA Searchlights	20
SC Searchlights (includes 2 spare)	37
Searchlight Operations (Cont.) Post	35
Mine Battery	2
Mine Casemate	3
Mine Plotting Room	2
Groups of Mines, Ground	30
DB Boats	5
Mine Yawls	12
Mine Planters	2
Base End Stations	63
Fire Control Sites	43
Fire Control Switchboards	13
Fixed Power Plants	8
Magazines	12
Meteorological Stations	1
Radio Set SCR-296	10
Radio Set SCR-582 or SCR-682	2
Signal Station	1

DECLASSIFIED
 Authority NND 760162
 By WDP NARA Date 7/15/00

SECRET

CONSOLIDATED SUMMARY OF HARBOR DEFENSE ELEMENTS

HARBOR DEFENSES OF BOSTON

31 JANUARY 1945

INSTALLATION	NUMBER
AA Battalion Command Post	1
Line Battalion Command Post	1
Long Range Gun Battalion Command Post	2
Other SC Battalion Command Post	3
Group Command Post	2
Harbor Entrance Control Post	1
Harbor Defense Command Post	1
Harbor Defense Observation Post	6
Combined Fort and Battalion Command Post	4
Forts	10

FORM #15

EXHIBIT 1-G

3a

SECRET

DECLASSIFIED
Authority NND 760162
BY WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

CONSOLIDATED SUMMARY OF BATTERY INSTALLATIONS

HARBOR DEFENSES OF BOSTON

1	2	3	4	5	6	7	8	9
BATTERY	FLANK OBS. STA. 90' /	OTHER OBS. STA. 125' /	OBS. STA. NOT INCL IN 2 & 3	BC STA	SPOT- TING STA.	MAGA- ZINES	BTRY POWER PLANT	SCR 296
with data computers								
Cons #208	1	0	3	1	4	1	1	1
Long	1	0	6	1	7	2	1	1
Jewell	0	1	5	1	6	1	1	1
Cons #105	1	1	7	1	9	2	1	1
Cons #207	2	1	2	1	5	1	1	1
Gardner	1	1	3	1	5	2	1	1
Cons #206	2	0	3	1	5	1	1	1
Murphy	1	3	6	1	10	2	1	1

NOTE: All BC Stations over 74' Elevation

FORM #14.
EXHIBIT 2-G-1

4

SECRET

DECLASSIFIED
Authority NND 760162
7/15/60
By WDR/NARA Date

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

CONSOLIDATED SUMMARY OF BATTERY INSTALLATIONS

HARBOR DEFENSES OF BOSTON

1	2	3	4	5	6	7	8	9
BATTERY	FLANK OBS. STA. 90'	OTHER OBS. STA. 125'	OBS. STA. NOT INCL IN 2&3	BC STA	SPOT- TING STA.	MAGA- ZINES	BTRY POWER PLANT	SCR- 296
without data computers								
McCook	2	0	2	1*	4	1	0	1
Whipple	2	0	2	1	4	1	0	1
Btry 941	0	0	0	1	0	2	2	0
Btry 942	0	0	0	1	0	2	2	0
Btry 943	0	0	0	1	0	2	2	0
Btry 944	0	0	0	1	0	2	2	0
Btry 945	0	0	0	1	0	2	2	0
Bumpus	0	0	0	1	0	1	0	0
Stevens	0	0	0	1	0	1	0	0
Basinger	0	0	0	1	0	1	0	0
Williams	0	0	0	1	0	1	0	0
Taylor	0	0	0	0	0	0	0	0
South Lines	1	0	1	1*	0	0	0	0
North Lines	1	0	1	1	0	0	0	0

* BC Station over 74' Elevation

NOTE: Magazines and power plants pertaining to 90mm and 3 inch seacoast batteries and magazines of Batteries McCook and Whipple not considered in calculation of Signal Equipment requirements under T/O & E 4-260-1.

FORM #14
EXHIBIT 2-G-2

SECRET

SECRET

CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT

Signal REQUIREMENTS FOR COMPLETE PROJECT

DATE 31 January 1945

STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
4Z309	Bell: MC-9	8
4H113	MC-153	130
4B303	Box BE-63	213
3B900-119	Case CS-119 or CS-39	523
4B417-3	Chest Set TD-3	855
3C114	Coil C-114-A	25
6E1009()	Converter M-209-()	7
3E1478	Cord CD-478	96
	Flag:	
6A1826B	Kit M-26-B	2
6A1144	MC-44	4
2C1411 ()	Frequency Meter Set SCR-211-()	1
	Gloves:	
6Z4809	LC-9	3
8A1346	PH-46	13
4B1112 ()	Handset TS-12-()	176
2B830 ()	Headset HS-30	855
6M567	Holder M-167	24
7A1334-193	Hydrogen Regulator ML-193	2
7A1200- SCM-12	Meteorological Observation Set SCM-12	1
2B1630 ()	Microphone T-30-()	855
	Panel:	
3H4065	BD-65	13
4E3675	BD-75	12
4C9974	TI Control (Modified BD-74)	8

FORM NO. 13

6

Exhibit 3-G-1

SECRET

DECLASSIFIED
Authority AND 760162
By WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT

Signal REQUIREMENTS FOR COMPLETE PROJECT

DATE 31 January 1945

STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
	Radio Set:	
2S268	SCR-268	12
2S281 ()	SCR-281-()	17
2S296	SCR-296	10
2S536	SCR-536	19
2S543 ()	SCR-543-()	15
2S584	SCR-584 or SCR-545	4
2S593	SCR-593	10
2S682	SCR-682 or SCR-582	2
2S694	SCR-694	25
2S808	SCR-808	9
2S828	SCR-828	36
6H6231	Reel Unit RL-31	27
2C7600-290	Remote Control Equipment RC-290	25
6B818	Signal Lamp Equipment EE-80	2
	Switchboard:	
4C9971	BD-71	8
4C9972	BD-72	5
4C9974	BD-74	13
4C9995.4	BD-95	46
4B5008 ()	Telephone EE-8-()	523
4B8191	Telephone Box EE-91	866
4E9304	Terminal Strip TM-184	18
	Test Set:	
3F4049	I-49	1
3F4325-26	TS-26/TSM or EE-65-()	13
4H3086 ()	Time Interval Apparatus EE-86-()	9

SECRET

DECLASSIFIED
 Authority NND 760162
 BY WDP NARA Date 7/15/00

SECRET

CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT

Signal REQUIREMENTS FOR COMPLETE PROJECT

DATE 31 January 1945

STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
6R38056-1	Tool Set TE-56-()	2
6J1038	Trailer K-38	2
6M1688	Typewriter MC-88	2
3F6050	Voltammeter I-50	57
6R51123	Wire Pike MC-123	4
1B110	Wire W-110B on DR-4 (miles)	60

8

FORM NO. 13

SECRET

Exhibit 3-G-1

DECLASSIFIED
Authority AND 760162
By WDP HARA Date 7/15/60

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT

Engineer REQUIREMENTS FOR COMPLETE PROJECT

DATE 31 January 1945

STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
	Camouflage net set:	
	No. 3	38
	No. 4	32
	Gage, tide	1
	Kit, spread beam attachment, searchlight, 60-inch, portable, Type 1.	42
	Searchlight, Set No. 1, 60-inch portable	5
	Tower, SL, 35'	15
	Trailer, tilting type, searchlight, 60-inch, 4-wheel, M1	2

FORM NO. 13

9

Exhibit 3-G-2

SECRET

DECLASSIFIED
Authority AND 760162
By WDR NARA Date 7/15/60

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT		
Ordnance REQUIREMENTS FOR COMPLETE PROJECT		
DATE 31 January 1945		
STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
FO02-0001483	Arms, scale, M1906	
FO02-0001486	Scale 1:80,000	20
	Scale 1:62,500	20
	Board:	
FO02-0002605	Adjustment, fire, M1	8
FO02-0002615	Correction, Range, M1A1	10
FO02-0002625	Deflection, M1	10
FO02-0002965	Plotting M3	7
FO02-0002970	Plotting M4	3
	Plotting M5C	5
FO02-0002974	Plotting M9C	2
FO02-0002981	Spotting M3	6
FO02-0002977	Spotting M7	4
FO02-0016264	Clinometer, M1912A1	5
FO02-0016731	Computer, gun data:	
FO02-0016738	M1	4
	M8	4
FO02-0017000	Correcter, percentage, M1	20
	Director:	
FO02-0017690	M5A2	48
FO02-0017696	M7A1B1	6
FO02-0017704	M9A2	7
FO02-0019232	Finder, depression, position	
FO02-0019236	M1	9
	M2A1	24
SNLF-2	Finder, height, M1A2 (SCRF's in lieu)	15
	Gun:	
SNLA-1	Automatic, 37mm M1A2, with carriage,	10
	37mm, M3 (AITEB)	
AO01-0023934	Automatic, 40mm M1, with carriage	28
	40mm, M2A1	
SNLA-1	Machine Browning:	
SNLA-1	Cal. .30, M1917A1	140
	Cal. .50, M2, Water cooled, Flexible	74
	Indicator:	
SNLF-2	Powder temperatur, M12	18
SNLF-2	Powder temperature, M13	10
FO02-0028500	Range, M1	38
	Instrument:	
FO02-0028803	Azimuth, M1910A1	122
FO02-0028734	Azimuth, M2A1	35
FO02-0028860	Observation, M1, BC, M1	10
SNL A-2	Motor Generator, M2	1
	Mount:	
SNL A-1	Machine Gun, Cal. .50, M1 M3	74
SNL A-1	Tripod, Machine Gun, 130 M1917A1	140

SECRET

10

Exhibit 3-G-3

Authority NND 760162
 7/15/60
 BY WDP NARA Date

DECLASSIFIED

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT

Ordinance REQUIREMENTS FOR COMPLETE PROJECT
DATE 31 January 1945

STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
FOO2-0038269	Predictor, mine, M1916	2
FOO2-0044575	Scale Prediction, M1	10
SNL F-2	Set, Control Equipment	5
SNL F-2	System Data Transmission	10
FOO2-0085720	Tester, stereoscopic, M1A1	9
SNL J-9	Thermometer, powder temp., M1	20
SNL J	Tool set, general Mechanics	7
SNL G-1	Trailer, M18	1
SNL G-1	Truck, 5-6 ton, 4x4, tractor	1
	Unit, Generating:	
SNL F-2	M17	90
FOO2-0097208	M18	6

11

SECRET

Exhibit 3-G-3

FORM NO. 12

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT		
<u>Quartermaster</u> REQUIREMENTS FOR COMPLETE PROJECT		
DATE 31 January 1945		
STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
35-B	Book; Emplacement	24
35-B	Fort Record	14
	Jane's All the Worlds;	
35G420	Aircraft	3
35G430	Fighting Ships	10
35 G	Lloyd's Register of Ships	1
35 G	Merchant Vessels of the U.S., including yachts and Government vessels - U.S. Dept. of Commerce	1
35 G	Mine Group Record	1

12

SECRET

Exhibit 3-G-4

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00

REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

ANNEX H - INDEX

Par. 1 Real Estate Requirements

EXHIBITS

No Exhibits

1

SECRET

1. Real Estate Requirements: There are no real estate requirements for the basic project.

DECLASSIFIED
Authority NND 760162
By WDP NARA Date 7/15/00