

AG No 404

NON-ACCOUNTABLE

CE-SUP-B-43

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**ANNEXES  
TO  
HARBOR DEFENSE PROJECT  
HARBOR DEFENSES OF  
BOSTON**

COPY NO. 5

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DOD DR. 1200.6, Sept. 27, 1968

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7063, 17 July 1967.

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SUPPLEMENT  
TO  
THE HARBOR DEFENSE PROJECT  
HARBOR DEFENSES  
OF  
BOSTON

1. This is a REGISTERED DOCUMENT, and consists of eight Annexes and three Appendices.
2. The SHORT TITLE of this document is CE-SUP-B-43.
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 28, AR 386-5.~~
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 CCA-AN-B.

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9	.....	Commanding General, Eastern Defense Command and First Army.
10	.....	Commanding General, First Service Command.
11, 12	.....	Commanding General, New England Sector.
13	.....	District Engineer, Boston, Mass.
14	.....	New England Division Engineer, Boston, Mass.
15	.....	Chief of Ordnance, for Commanding Officer, Submarine Mine Depot, Fort Monroe, Va.
16	.....	Commanding General, Harbor Defenses of Boston.
17, 18, 19	.....	

*Handwritten notes:*  
- A large 'X' is drawn over the entire list.  
- 'Delete' is written in cursive across the middle of the list.  
- 'S-3' is written next to item 4.  
- 'S-3' is written next to item 8.  
- 'S-3' is written next to item 9.

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No Exhibits.

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SUPPLEMENT

to

HARBOR DEFENSE PROJECT

HARBOR DEFENSES OF BOSTON

1943

AUTHORITIES

1. 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 OCA-P-POC). The latter document was approved by the Secretary of War in 1st Indorsement, AG 680.2 (5-17-32) (Misc E, December 27, 1932, OOCA, dated August 11, 1932).

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 OOCA). The original Annexes were approved by the Secretary of War in 14th Indorsement The Adjutant General's Office, dated August 13, 1934, on letter, subject: "Annexes Harbor Defense Project, First Corps Area", dated Headquarters First Corps Area", August 11, 1932, AG 660.2 (5-6-32), (Misc E, OOCA). Short title of the Approved Annexes was "OCA-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-WFD-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 Proceedings, Modernization Harbor Defenses of Boston", Headquarters

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First Coast Artillery District, dated September 2, 1942, file  
AG 660.2.

4. 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", EDC,  
July 10, 1943 CA 660.2/992.

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**ANNEX A**

**ARMAMENT**

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- 3-A - Location of Army Controlled Land
- 4-A - Location of Elements
- 5-A - Fields of Fire, Batteries 8" and Larger
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SECTION I - GENERAL

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1. Basic Project: The basic project for the Harbor Defenses of Boston as authorized by the War Department is set forth in the references listed below:

a. Letter, WD AG 660.2 (9-11-40) M-WPD-M dated September 25, 1940, Subject: "Modernisation of Harbor Defense Projects, Continental United States," lists the modern project armament.

b. Letter, April 17, 1943 (AMTB), Letter, WD AG 660.2, April 17, 1943, Subject: "Defense of Harbors against Motor Torpedo Boats."

c. Letter, Subject: "Proceedings Local Planning Committee, Ground Mine Defenses of Boston Harbor" as approved by the War Department in 2nd Indorsement AG 476 (12-21-42) O-B-S-E, April 1, 1943 to CG, EDC.

d. Annexes to the Harbor Defense Project as approved by the Secretary of War in 4th Indorsement, AG 660.2 (1-29-38) (Misc) E, dated May 19, 1938.

e. Modernisation Program, Harbor Defenses of Boston, as approved by WD in 7th Indorsement, Office C of E, September 17, 1942 to letter, Subject: "Local Board Proceedings, Modernization, Harbor Defenses of Boston."

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 Organisation:

a. The tactical organization for the Harbor Defenses of Boston is shown on exhibit 1-A. Under the Harbor Defense Commander, a north groupment and a south groupment control all armament except AMTB and AA guns and the mine batteries. Each of these two groupments is composed of two groups, a primary gun group and a six inch gun group. The 90-mm and 3-inch seacoast batteries are assigned a primary mission of defense against motor torpedo boats and are controlled from a group station which maintains liaison with the AACF and disseminates intelligence of air and sea activity. The mine group station, functioning directly under the HDCEP, controls thirty (30) mine groups assigned to two (2) mine batteries. No guns are assigned this group, protection of the mine fields will be effected by the coordinated fire of the gun groups. The HECF has liaison facilities to the mine, AA and AMTB group stations. No facilities

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for observation of water areas are provided at the HDOP: a Forward HDOP at Fort Dawes is existent and has these facilities. 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 HECF. Adequate communications exist to these facilities. Cooperative arrangements with the Air Corps are secured through higher Army command echelons and through the AACF to each of which there are adequate communications. 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.

c. All project armament of this harbor defense is completed or is under construction; therefore, no list of armament in order of tactical importance is submitted.

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SECTION II - SEACOAST ARTILLERY

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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		COMPLETION DATE	EXHIBIT NO. OF FIELD OF FIRE
					GUNS	MOUNT		
1	114	208	4th Cliff	2-6"	T 2	M4	1944	5B1
2	117	McCook	Ft Andrews	2-6"	1900	1900	complete	5B2
3	118	Long	Ft Duvall	2-16"	1919M3	1919	complete	5B3
4	123	Whipple	Ft Standish	2-6"	1900	1900	complete	5B4
5	126	Jewell	Outer Brewster	2-6"	T 2	M3	1943	5B5
6	127	105	Ft Daves	2-16"			1944	5B6
7	127	207	Ft Daves	2-6"	T 2	M3	1943	5B7
8	130	Gardner	Ft Ruckman	2-12"	1917	1917	complete	5B8
9	131	206	East Point	2-6"	1903A2	M1	1943	5B9
10	131	Murphy	East Point	2-16"	NK II M1	M4	1943	5B10
AMTB								
1-5	SEE ANNEX A, SECTION 3							
6	117	Bumpus	Ft Andrews	2-3"	1902M1	1902	complete	5B11
7	122	Stevens	Ft Strong	2-3"	1902M1	1902	complete	5B12
8	122	Basinger	Ft Strong	2-3"	1902M1	1902	complete	5B13
9	123	Williams	Ft Standish	3-3"	1903	1903	complete	5B14
10	127	Taylor	Ft Daves	2-3"	1902M1	1902	See Note 1.	
Note 1. W.D. states in 3rd Ind. to Letter, Hq. H.D. of Boston, subject, "Reclassification of Battery", that Taylor will be retained as a project battery for (1) spare parts, (2) reinforcing fire of other batteries, (3) resighting; AMTB Battery 4 uses the BC and magazines. Taylor's guns remain emplaced and serviceable.								

FORM # 1

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5 b.

## BATTERIES AUTHORIZED FOR EXCLUSION FROM THE BASIC PROJECT

LOC NO.	NAME	LOCATION	NO & CAL OF GUNS	MODEL		STATUS OF MAGAZINES & EMPLOYMENT	REF NO.	PG. NO.
				GUNS	MOUNT			
123	Morris	Ft Standish	Emplacement and			magazine empty		
121	Bartlett	Ft Warren	Mine explosives storage					
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	2-12"	1895	1897	In use		
124	Terrill	Ft Standish	Emplacement empty			AMTB 3 uses magazines		
128	Lincoln	Ft Banks	Emplacement empty			HDGP uses magazines		
128	Kellogg	Ft Banks	Emplacement empty			Ord Storage in magazines		
129	Winthrop	Ft Heath	3-12"	1881ML	1896	In use		
131	155-mm	East Point	2-155	1918	Mobile	In use		
<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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. Authorizes the removal of the guns and carriages of Battery Sanders.</p>								

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5 b. (cont'd)

C. (cont'd)

BATTERIES AUTHORIZED FOR EXCLUSION FROM THE BASIC PROJECT								
LOC NO.	NAME	LOCATION	NO & CAL OF GUNS	MODEL		STATUS OF MAGAZINES & EMPLOYMENT	REF NO.	PG. NO.
				GUNS	MOUNT			
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.								

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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	900	600
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	900	600
Cons. 207	2	6" BC	HE 90	300	200
			AP 105	900	600
Cons. 105	2	16" BC	AP 2240	300	200
Gardner	2	12" BC	AP 1070	350	232
			AP 975	100	67
			HE 700		90
Cons. 206	2	6" BC	HE 90	300	200
			AP 105	900	600
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
Stevenson	2	12" DC	870# AP	300	200
Winthrop	3	12" DC	870# AP	450	300
155	2	155 1918	HE	150	100
			SAP	450	300
Authority: Letter January 12, 1943, WD AG 471 (1-10-43) and (3-16-43) OB-SPDDO-M Subject: "War Reserve Ammunition Seacoast Artillery.					

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WAR RESERVE AND BATTLE ALLOWANCE OF AMMUNITION					
BATTERY OR CONSTRUCTION NO.	NO. OF GUNS	CALIBER AND TYPE	TYPE PROJ.	WAR RESERVE	BATTLE ALLOWANCE
<u>AMTB AMMUNITION ALLOWANCES</u>					
1. For each fixed AMTB 90mm gun a mobilization allowance of 400 rounds with the M48 fuse and a day of supply of 0.5 rounds.					
2. For each AMTB gun (fixed and mobile) one unit of fire of 90mm ammunition 95% with M43 fuse and 5% with shot AP.					
3. For each 37mm AMTB gun, the authorized anti-aircraft ammunition allowance as set up by Eastern Defense Command. This is five units of fire.					
<u>Authority:</u> Letter, A.G.O., April 17, 1943, Subject, "Defense of Harbors Against Motor Torpedo Boats," AG 660.2 (4-12-43) OB-S-SPDDO-M.					

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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.

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SECTION III - MISCELLANEOUS

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DEFENSE AGAINST MOTOR TORPEDO BOATS										
TACTICAL NO.	LOC NO.	SITE NO.	NAME OR CONST. NO.	NO. OF GUNS	CAL OF GUNS	TYPE OF MOUNT	COMPLETION DATE	MISSION		EXHIBITS
								PRI	SEC	
1	119	1-D	941	2	90mm	T3	1943	MTB	AA	7A
				2	90mm	M3				
				2	37mm	M1A1				
2	124	1-A	942	2	90mm	T3	1943	MTB	AA	7A
				2	90mm	M3				
				2	37mm	M1A1				
3	123	1-F	943	2	90mm	T3	1943	MTB	AA	7A
				2	90mm	M3				
				2	37mm	M1A1				
4	127	1-A	944	2	90mm	T3	1943	MTB	AA	7A
				2	90mm	M3				
				2	37mm	M1A1				
5	129	1-A	945	2	90mm	T3	1943	MTB	AA	7A
				2	90mm	M3				
				2	37mm	M1A1				
6	117	1-B	Bumpus	2	3"	Ped	Complete	MTB	Other	5B11
7	122	1-A	Stevens	2	3"	Ped	Complete	MTB	Sea-	5B12
8	122	1-B	Bassinger	2	3"	Ped	Complete	MTB	borne	5B13
9	123	1-A	Williams	3	3"	Ped	Complete	MTB	target	5B14
10	119	1-A	AA1	3	3"	AA	Complete	AA	MTB	2E
11	123	1-D	AA2	3	3"	AA	Complete	AA	MTB	2E
12	122	1-B	AA3	3	3"	AA	Complete	AA	MTB	2E
Authority:				Letter WD AGO 640.2, April 17, 1943, Subject: "Defense of Harbors Against Motor Torpedo Boats."						

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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: "Dispersion, Concealment, and Camouflage of All Camps and Stations." File No. CE 467 GOF. January 17, 1942.
- (2) War Department Directive: "Passive Protection Measures." File No. AG 381 (2-25-42) OB-S-SPAAC-M. March 5, 1943.
- (3) Supplemental Letter to (2) (same title). File No. AG 381 (4-2-43) OB-S-SPAAC-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  $4\frac{1}{2}$  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.

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- (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.

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GOVERNMENT OWNED AND LEASED LAND							
LOC NO.	SITE NO.	NAME	ACRES	ACQUIRED	PURPOSE	REF NO.	PAGE NO.
111	all	Gurnet Point	.94	5-15-43	Fire control stations	1	18
112	all	Brant Rock	.47	2-9-42	Fire control stations	2	18
112A	all	Holly Hill	.3		Ser 296	3	18
114	all	Fourth Cliff	48.56	12-5-42	6" Gun Btry	4,5	18
115	all	Strawberry Pt.	16	4-1-43	SCR-296 and Fire control stations	6	18
116	all	Strawberry Hill	.44	7-25-06	SCR 296 and fire control stations	7	18
117	all	Ft Andrews	88	1898 1904	Military Post	8	18
118	all	Ft Duvall	8.55	1917	16" Gun Btry	9	18
119	all	Ft Revere	75.07	1897 1901 1906 1924	Military Post	10	18
120	1A	Pt Allerton	.85	4-20-43	Fire control stations	11	18
	2A	Pt Allerton	1.97	1906	SCR-582 and fire control stations	12	18
	3A	Pt Allerton	.44	6-1-43	SCR-296	13	18
121	all	Ft Warren	28	1825	Military Post	14	18
122	all	Ft Strong	65.94	1869 1926	Military Post	15	18
123	all	Ft Standish	62	1825 1826	Military Post	16	19
124	all	Great Brewster	21.7	1917	AMTB Battery	17	19
125	all	Calf Island	18.05	1918	SCR-268	18	19
126	all	Outer Brewster	17.5	1913	6" Gun Btry	19	19
127	all	Ft Dawes	100	1906	Military Post	20	19
128	all	Ft Banks	42.89	1890 1942	Military Post	21	19
129	all	Ft Heath	17.2	1890 1894	Military Post	22	19
130	1 A	Ft Ruckman	.38	4-20-42	Fire Control station	23	19

FORM # 5

16

~~SECRET~~

~~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	45.12	1904 1907	Military Post	24	19
131	all except 1A, 2A and 5A	East Point	29.91	1941 1943	16" and 6" Gun Batteries	25	19
	1A & 2A	East Point	1.29	1943	Fire control stations	26	19
	5A	East Point	.51	1943	Fire control stations	27	19
132	1A	Marblehead Neck	.21		Fire Control stations	28	19
	2A		.32	5-27-41	Fire control stations	29	19
	3A		1.88	6-18-43	SCR 296 and fire control station	30	19
133A	all	Gales Point	.37	5-20-42	SCR 296 and fire control stations	31	20
134	all	Coolidge Pt.	.28	2-4-42	Fire Control Stations	32	20
134A	all	Eastern Pt	.45		Fire control stations	33	20
135	all	Emerson Pt	.59		Fire control stations	34	20
136	all	Halibut Pt	1.85		Fire control stations	35	20
137	all	Castle Hill	.34		Fire control stations	36	20

FORM # 5

~~SECRET~~

REF NO.	WAR DEPARTMENT AUTHORIZATION
1	<b>GURNET POINT</b> Letter from Sec. of Navy to Sec. of War, dated May 15, 1943, grants Army the right to occupy and use.
2	<b>BRANT ROCK</b> Letter CE 601.1, Subject: "Acquisition of Land, Marshfield, Mass." approved by W.D. in 2nd Indorsement dated 1-13-42.
3	<b>HOLLY HILL</b> In process of acquisition.
4	<b>FOURTH CLIFF</b> 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	<b>FOURTH CLIFF</b> Letter CE 601.4, Subject: "Transfer of 2.56 Acres of Land to W.D. by Navy Dept." dated Jan. 18, 1943 which incloses letter from Sec. of the Navy to Sec. of War, in which title to the land is transferred to the War Department.
6	<b>STRAWBERRY POINT</b> Lease obtained under authority of AR 100-61, Paragraph 12.
7	<b>STRAWBERRY HILL</b> Acquired 7-25-06.
8	<b>FORT ANDREWS</b> Acquired by purchase in 1898 and 1904. Named Ft Andrews by G.O. No. 43, Hq of the Army, A.G.O. 1900.
9	<b>FORT DUVALL</b> Acquired under authority of the Act of Congress dated 2-14-1917. Named Ft Duvall in G.O. No. 13, W.D. 1922.
10	<b>FORT REVERE</b> 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.
11	<b>POINT ALLERTON</b> Letter CE 601.1, Subject: "Acquisition of Land at Point Allerton, Hull, Mass." approved by W.D. in 2nd Indorsement dated 11-12-42.
12	<b>POINT ALLERTON</b> W.D. G.O. No. 173, dated October 12, 1906.
13	<b>POINT ALLERTON</b> 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.
14	<b>FORT WARREN</b> G.O. No. 32, Hq of the Army, Adjutant General's Office, 1833.
15	<b>FORT STRONG</b> G.O. No. 134, Hq of the Army, Adjutant General's Office, 1899.

FORM # 2a

~~SECRET~~

9

REF NO.	WAR DEPARTMENT AUTHORIZATION
16	<b>FORT STANDISH</b> G.O. No. 43, Hq of the Army, Adjutant General's Office 1900
17	<b>GREAT BREWSTER</b> G.O. No. 6, W.D. 1937
18	<b>CALF ISLAND</b> Act of Congress dated August 18, 1890 and act of Congress dated February 14, 1917, G.O. No. 6, W.D. 1937.
19	<b>OUTER BREWSTER</b> W.D. AGO G.O. No. 6, 1937.
20	<b>FORT DAVES</b> Act of Congress, June 25, 1906 and W.D. G.O. No. 1, 1941
21	<b>FORT BANKS</b> 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.
22	<b>FORT HEATH</b> Act of Congress, August 18, 1890, W.D. G.O. No. 137, 1908 and W.D. G.O. No. 43, 1900.
23	<b>FORT RUCKMAN</b> Letter C.E. 601.1, Subject: "Acquisition of Land, Nahant, Mass." approved by W.D. in 2nd Indorsement dated April 8, 1942.
24	<b>FORT RUCKMAN</b> W.D. G.O. No. 13, 1922.
25	<b>EAST POINT</b> Act of Congress, July 2, 1917 and Act of Congress, June 13, 1940.
26	<b>EAST POINT.</b> 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.
27	<b>EAST POINT</b> Lease under authority of AR 100-61 paragraph 12.
28	<b>MARBLEHEAD NECK</b> Letter, C.E. 601.1, Subject: "Acquisition of Land, Marble- head Neck, Mass." approved by W.D. in 2nd Indorsement dated 2-2-43.
29	<b>MARBLEHEAD NECK</b> Letter, C.E. 601.1, Subject: "Acquisition of Land, Marble- head Neck, Mass." approved by W.D. in 2nd Indorsement dated 2-6-41.
30	<b>MARBLEHEAD NECK</b> 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

19

~~SECRET~~

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



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



H D C P  
FORT BANI

FWD. HDCF  
FORT DAWI

SOUTH  
C-1  
PT. ALLERTON

G1  
FOURTH  
CLIFF

LONG 2-16" B.C.  
FT. DUVAL

CONST. NO. 105 2-16" B.C.  
FT. DAWES

G2  
STRAWBERRY  
POINT

MC COOK 2-6" B.C.  
FT. ANDREWS

WHIPPLE 2-6" B.C.  
FT. STANDISH

CONST. NO. 208 2-6" B.C.  
FOURTH CLIFF

JEWELL 2-6" B.C.  
OUTER BREWSTER

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

G4  
AMTB  
DAWES

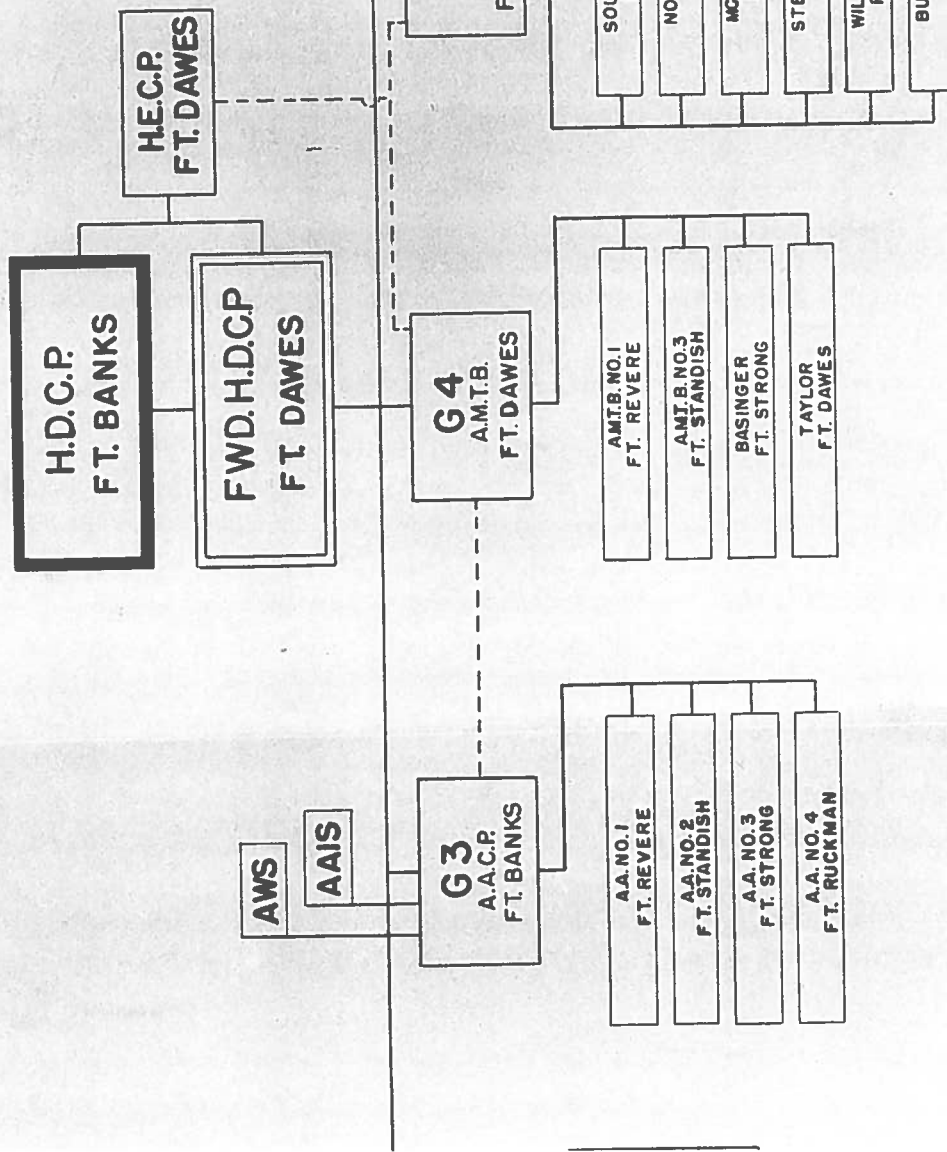
AMTB NO. 1  
FT. REVERE

AMTB NO. 2  
GREAT BREWSTER

AMTB NO. 3  
FT. STANDISH

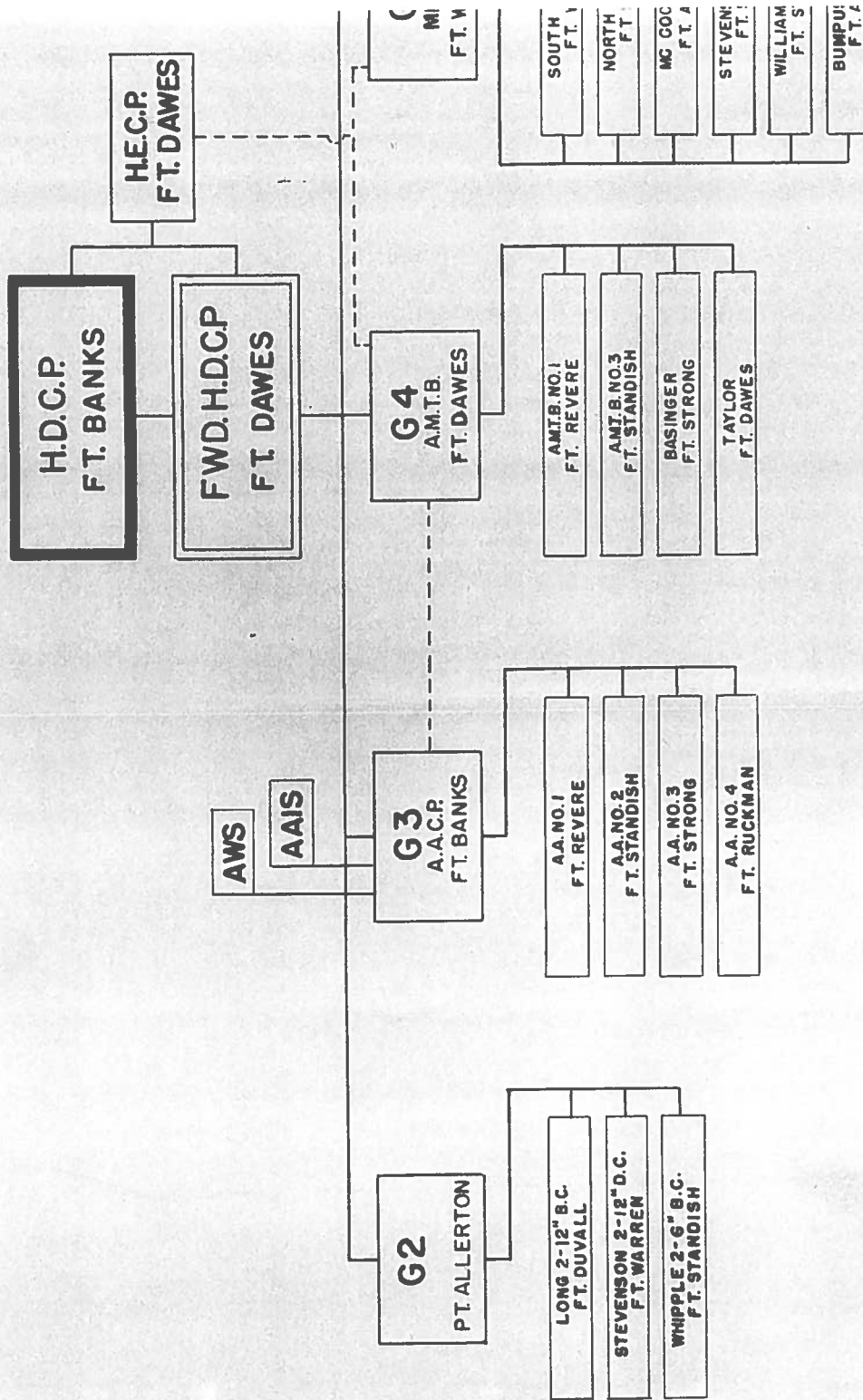
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FT. DAWES

AMTB NO. 5  
FT. HEATH

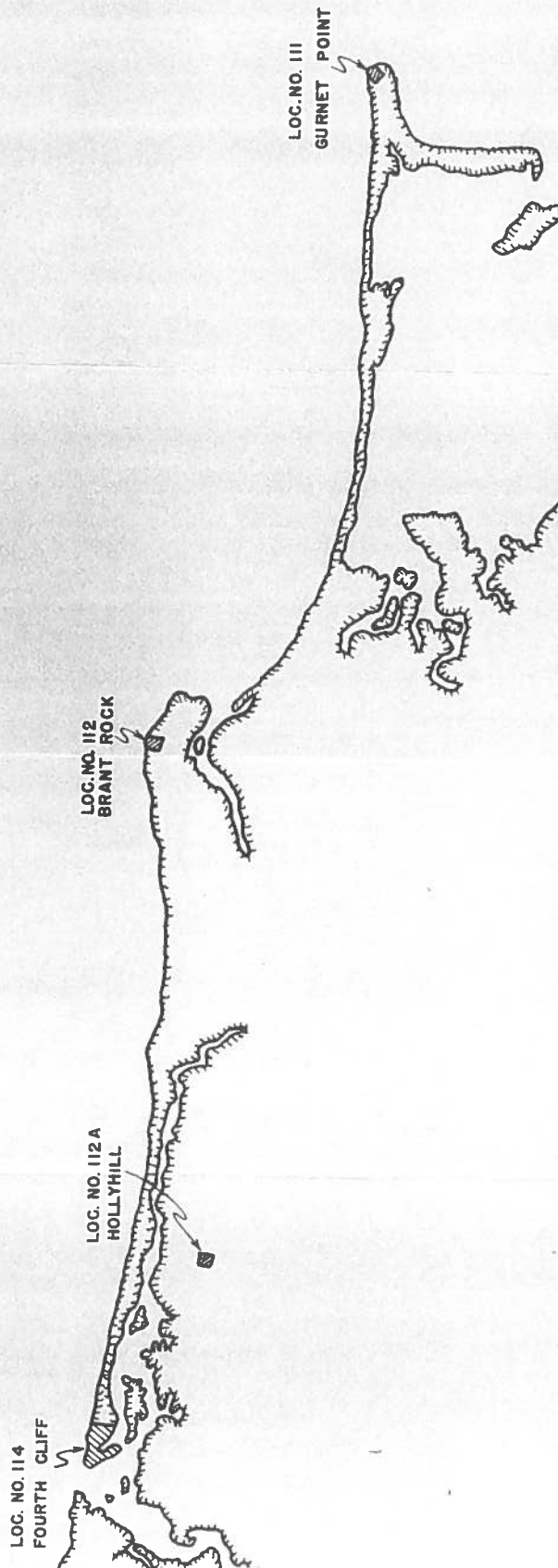
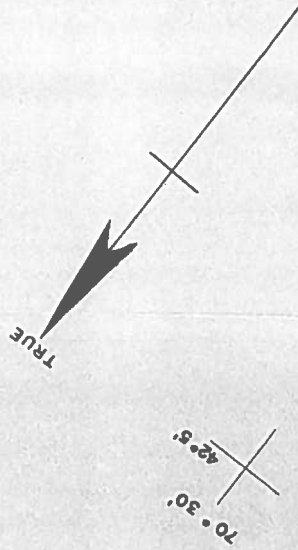


**SECRET**

HARBOR DEFENSES OF BOSTON		REVISED DATE
CURRENT TACTICAL ORGANIZATION		
PREPARED BY H.D. OF BOSTON	DATE 7-1-43 EX. NO. 2A	

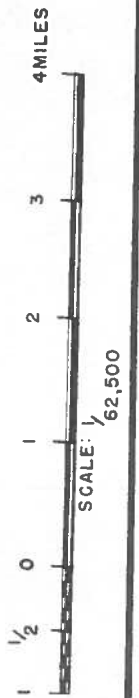


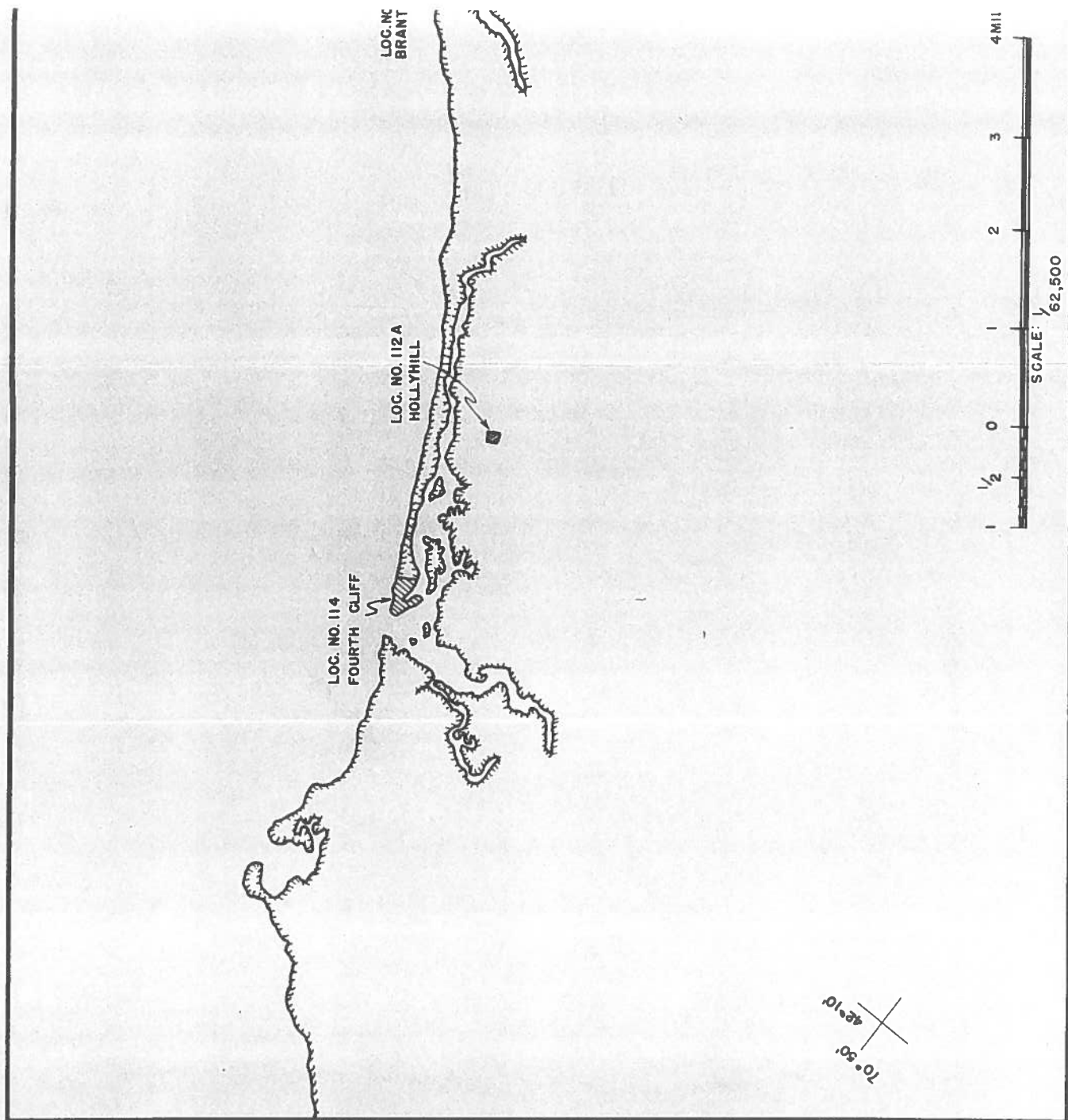




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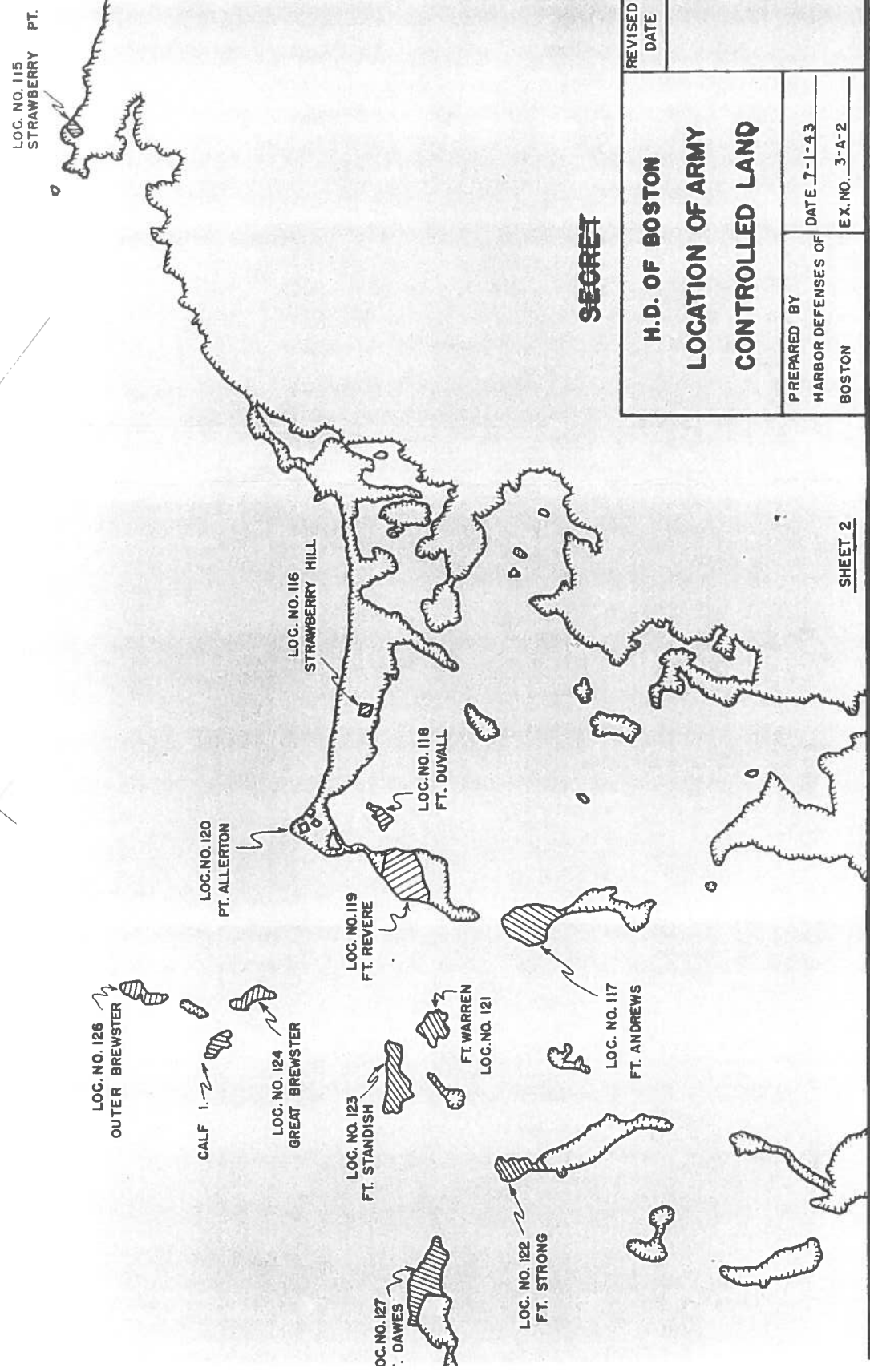
H.D. OF BOSTON		REVISED DATE
LOCATION OF ARMY CONTROLLED LAND		
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 3-A-1







70° 50'  
42° 20'

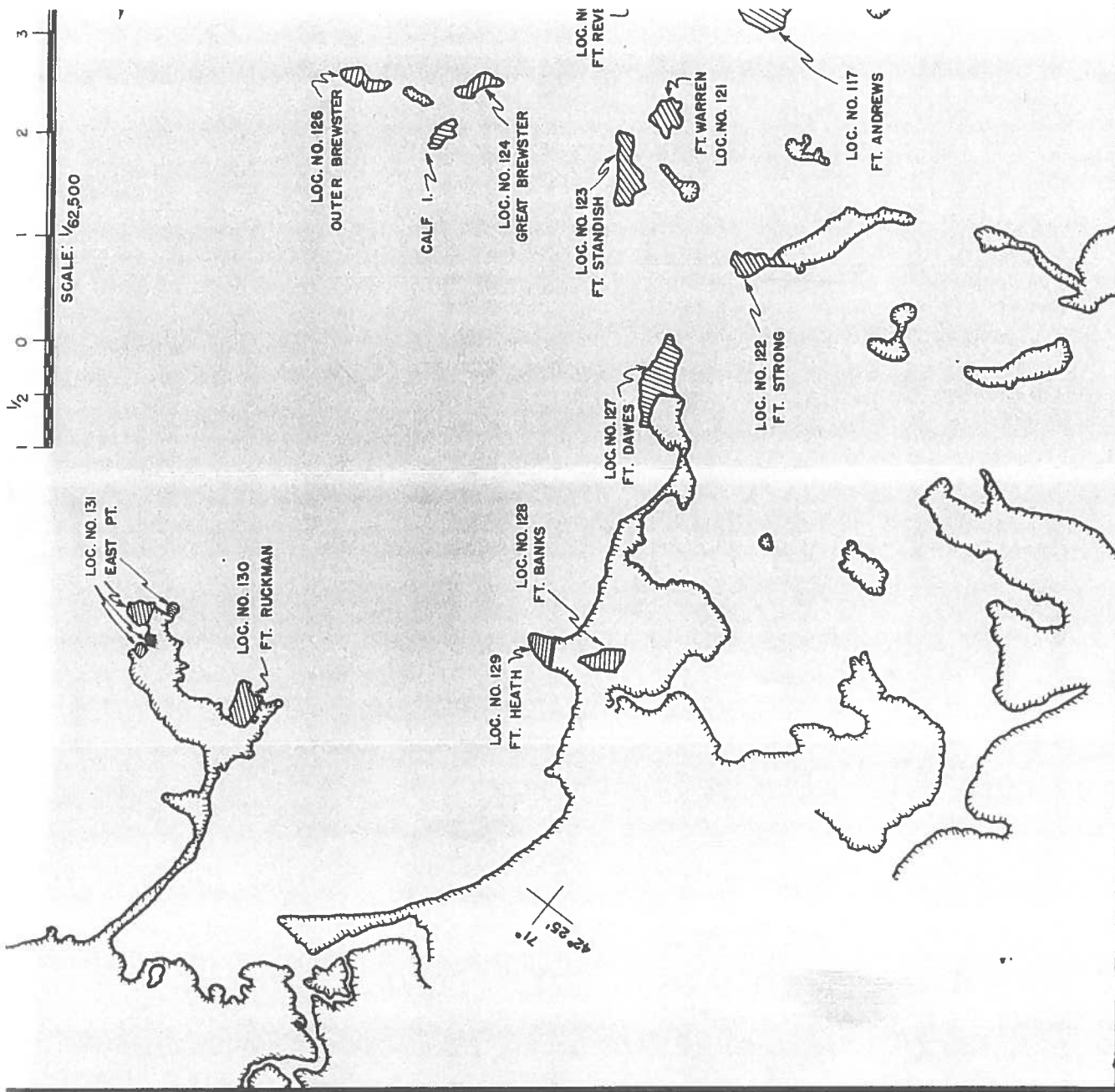
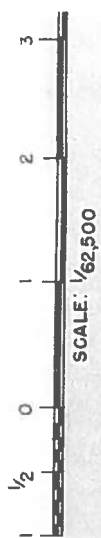


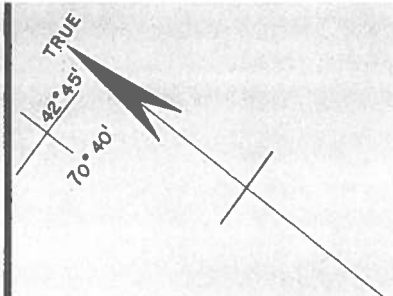
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<b>H.D. OF BOSTON</b>		REVISED DATE
<b>LOCATION OF ARMY</b>		
<b>CONTROLLED LAND</b>		
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 3-A-2

SHEET 2

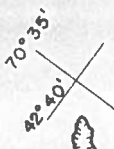






CASTLE NECK  
LOC. NO. 137

HALIBUT  
POINT  
LOC. NO. 136



LOC. NO. 135  
EMERSON  
POINT

CAPE ANN

COOLIDGE  
POINT  
LOC. NO. 134

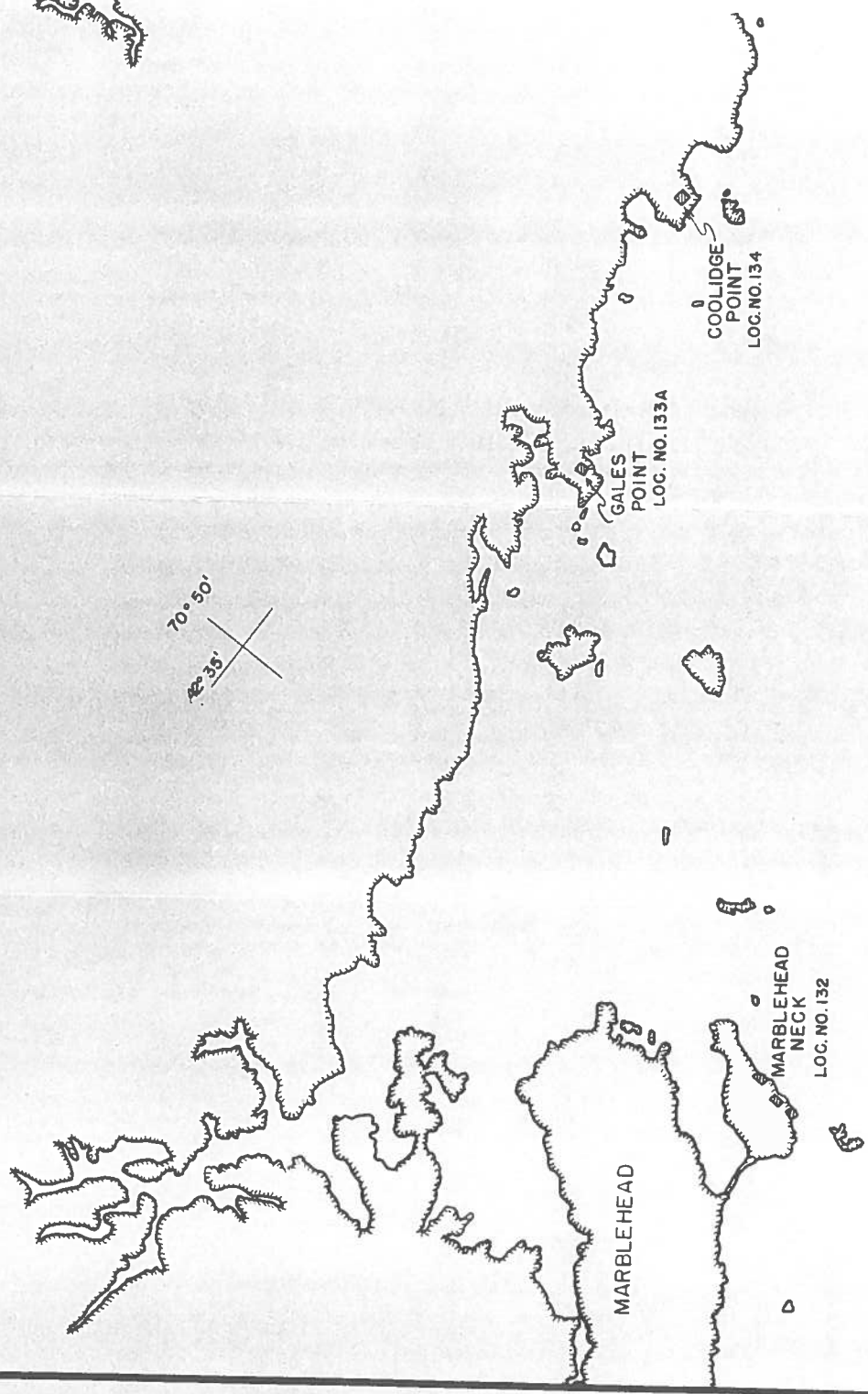
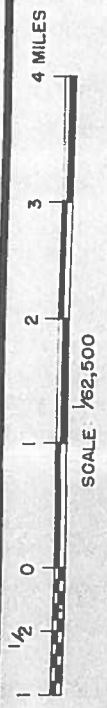
SALES  
POINT  
LOC. NO. 133A

EASTERN POINT  
LOC. NO. 134A

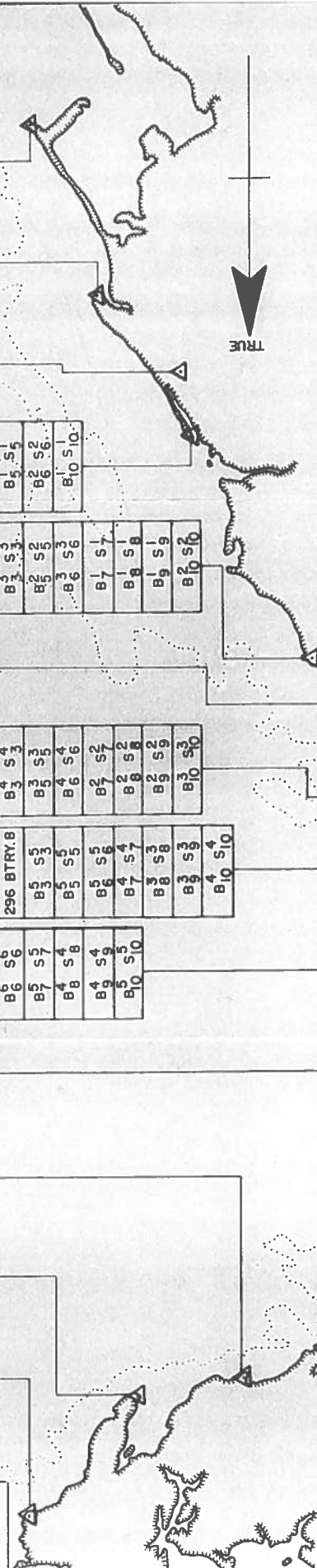
**SECRET**

REVISED DATE	
<b>HD. OF BOSTON</b>	
<b>LOCATION OF ARMY</b>	
<b>CONTROLLED LAND</b>	
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE <u>7-1-43</u> EX NO. <u>3-A-3</u>

SHEET 3



137	LOC. NO. 136	LOC. NO. 135	LOC. NO. 134A	LOC. NO. 134	LOC. NO. 133A	LOC. NO. 132	LOC. NO. 131	LOC. NO. 120	LOC. NO. 116	LOC. NO. 115	LOC. NO. 114	LOC. NO. 112A	LOC. NO. 112	LOC. NO. 111
E	HALIBUT POINT	EMERSON POINT	EASTERN POINT	COOLIDGE POINT	GALES POINT	MARBLEHEAD NECK	EAST POINT	ALLERTON POINT	STRAWBERRY HILL	STRAWBERRY POINT	FOURTH CLIFF	HOLLY HILL	BRANT ROCK	GURNET POINT
IO	C2 OP4	C2 OP3	B8 S8	B7 S7	296 BTRY.10	C2 OP2	G6CP OP	G1CP OP3	296 BTRY.6	C1 OP2	G1CP	296 BTRY.1	B2 S2	C1 OPI
UTH	B10 S10	B8 S8	B7 S7	B8 S8	B7 S7	296 BTRY.9	G7CP OP	BC 3	B4 S4	G2CP OP	BTRY.11	B1 S1	B1 S1	B1 S1
UTH	PORTSMOUTH	B8 S8	B10 S10	B8 S8	B6 S6	B6 S6	BTRY.10	SCR 582	B4 S4	296 BTRY.3	B2 S2	B1 S1	B1 S1	B1 S1



LOC. NO. 127	LOC. NO. 126	LOC. NO. 125	LOC. NO. 124	LOC. NO. 123	LOC. NO. 119	LOC. NO. 118	LOC. NO. 117	LOC. NO. 121	LOC. NO. 122
FORT DAWES	OUTER BREWSTER	FORT BANKS	GREAT BREWSTER	FORT STANDISH	FORT ANDREWS	FORT REVERE	FORT DUVALL	FORT WARREN	FORT STRONG
FWD. HDGP	BTRY. 5	HDGP	AMTB 2	BTRY. 4	BTRY. 2	AMTB 1	BTRY. 3	G5-MINES	AMTB 8
HECP	296 BTRY.5	296 BTRY.5	AMTB 2	AMTB 3	AMTB 6	M2	B1 S1	M1	AMTB 7
C2 OPI	B4 S4	B4 S4	M2	B2 S2	B1 S1	M2	B2 S2	B1 S1	AMTB 8
G4-AMTB	296 BTRY.4	296 BTRY.4	296 BTRY.4	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8
BTRY. 6	B2 S2	B2 S2	B2 S2	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8
BTRY. 7	B2 S2	B2 S2	B2 S2	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8
AMTB 4	B2 S2	B2 S2	B2 S2	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8
296 BTRY.7	B2 S2	B2 S2	B2 S2	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8
SCR 582	B2 S2	B2 S2	B2 S2	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8
B2 S2	B2 S2	B2 S2	B2 S2	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8
B4 S4	B2 S2	B2 S2	B2 S2	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8
B7 S7	B2 S2	B2 S2	B2 S2	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8
M2	B2 S2	B2 S2	B2 S2	B4 S4	B1 S1	M2	B1 S1	B1 S1	AMTB 8

SECRET

H.D. OF BOSTON

# LOCATION OF ELEMENTS

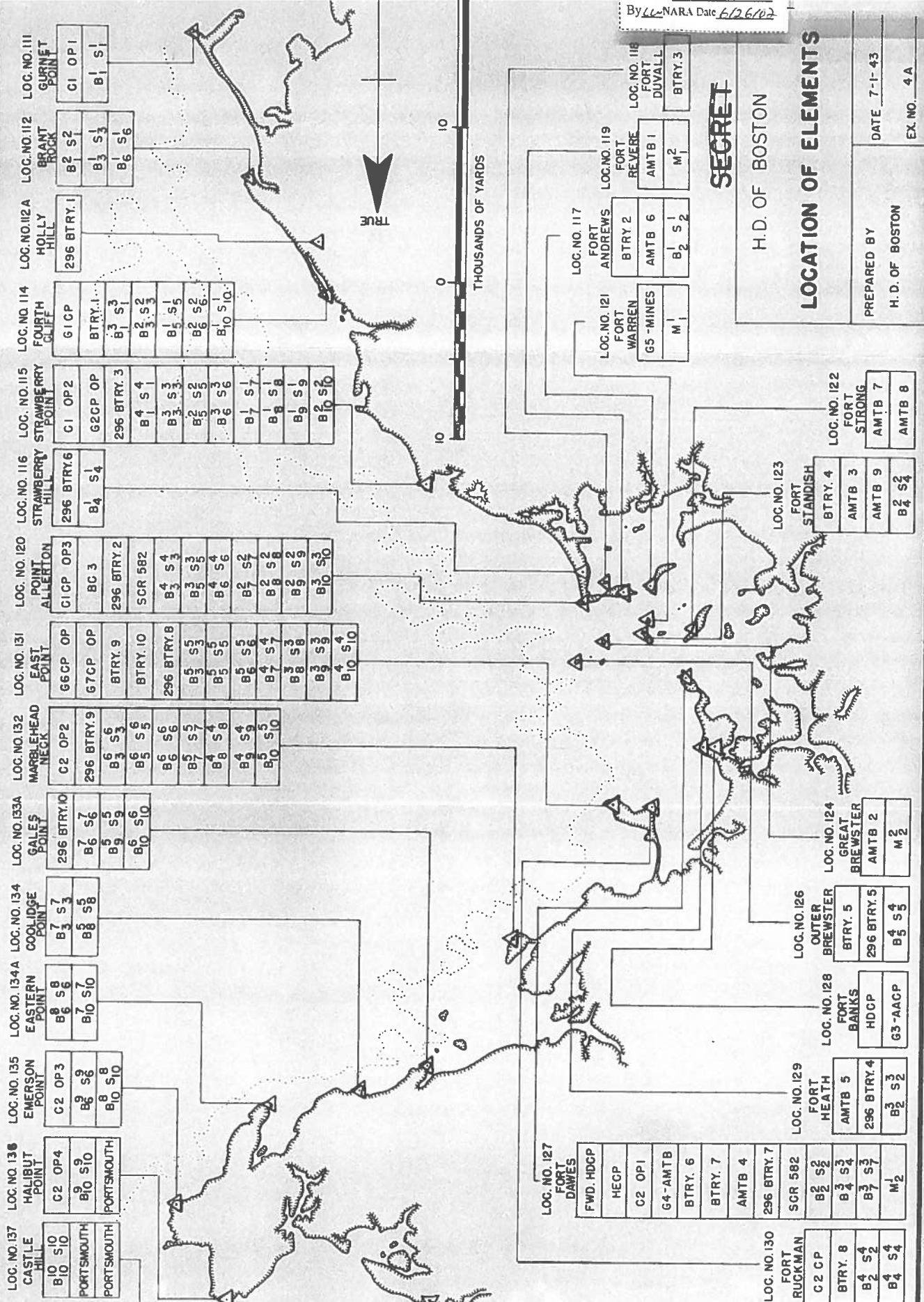
PREPARED BY  
H.D. OF BOSTON

DATE 7-1-43

EX. NO. 4 A

REVISED  
DATE





SECRET

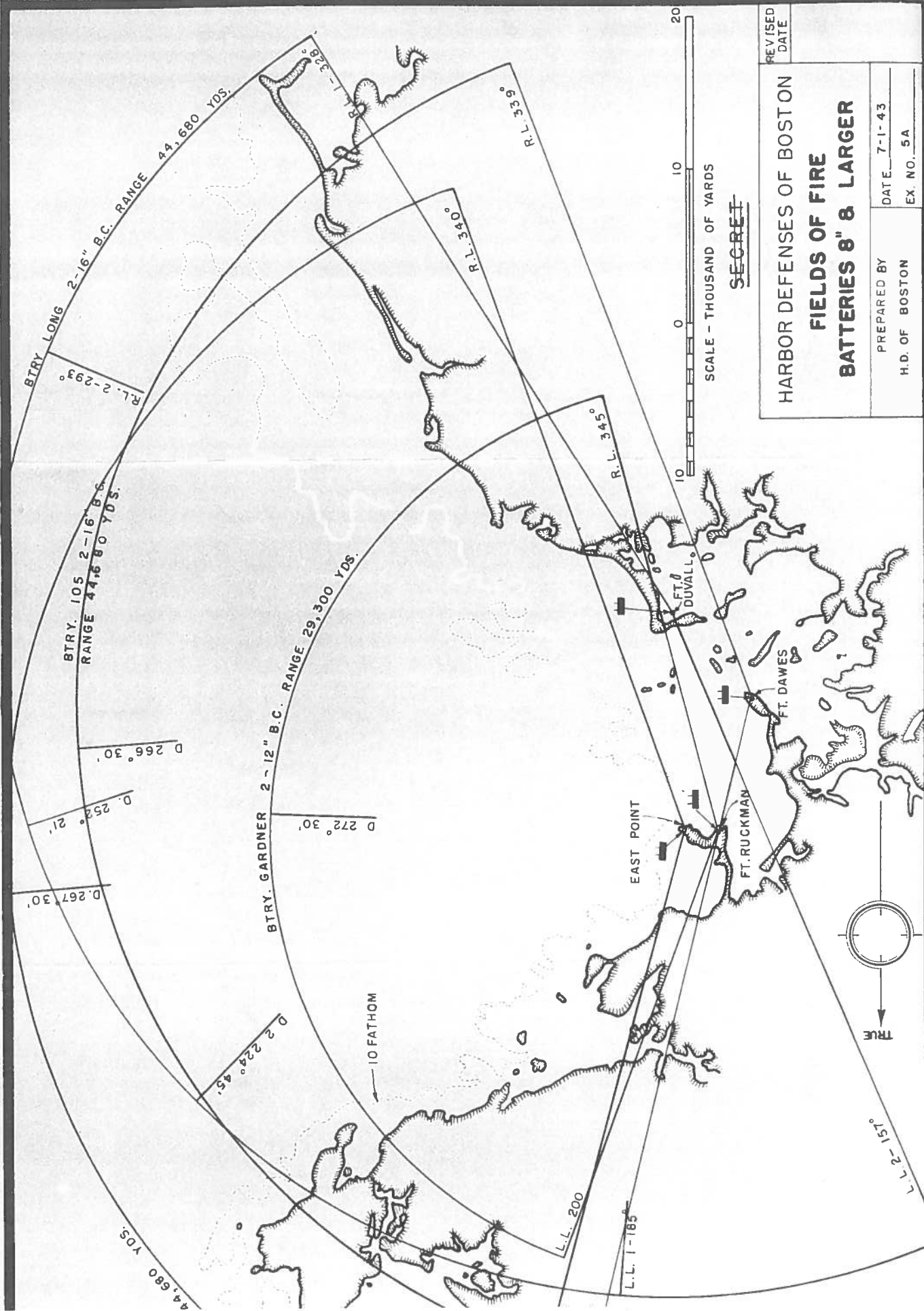
H.D. OF BOSTON

## LOCATION OF ELEMENTS

PREPARED BY  
H.D. OF BOSTON

DATE 7-1-43

EX. NO. 4 A

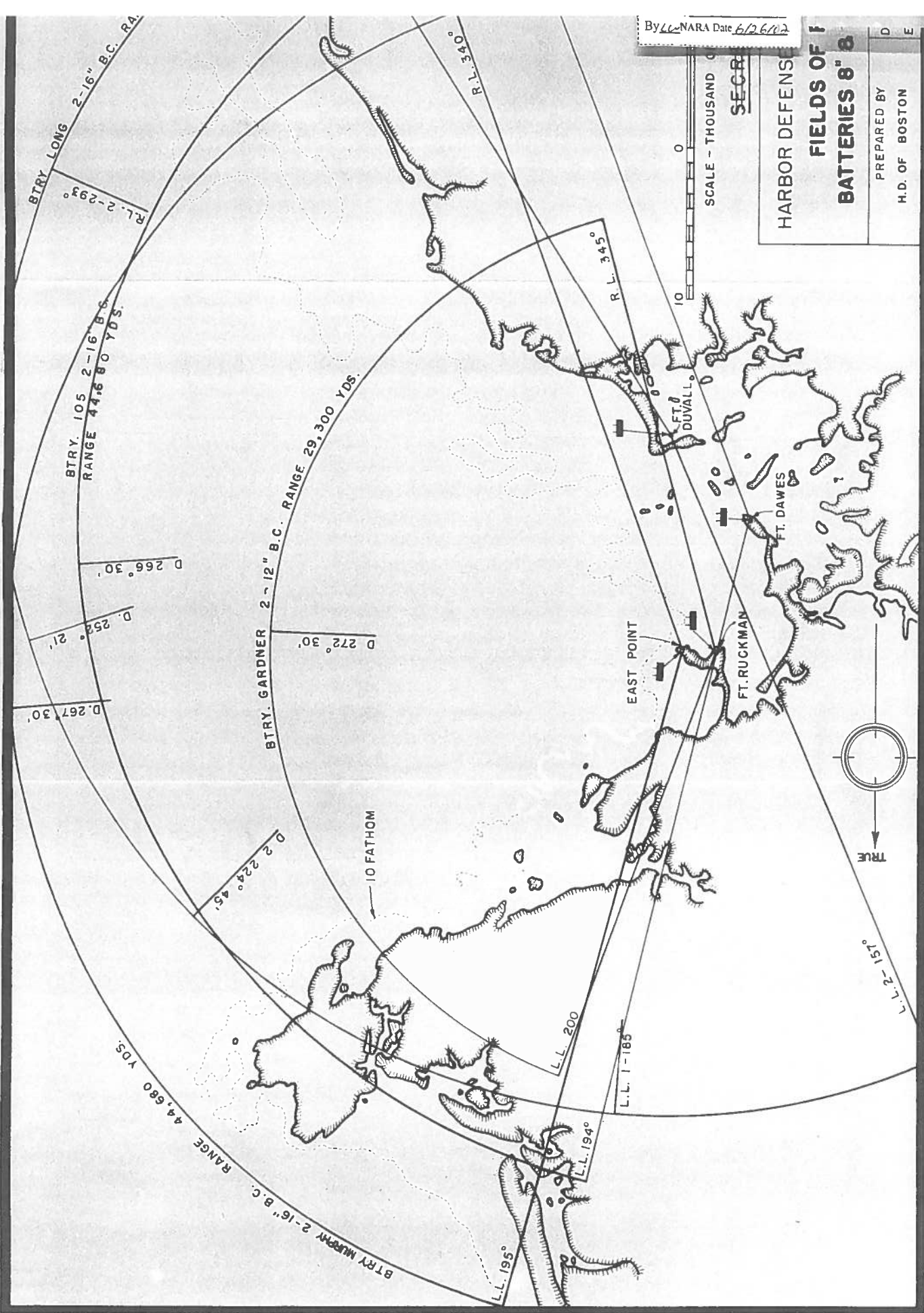


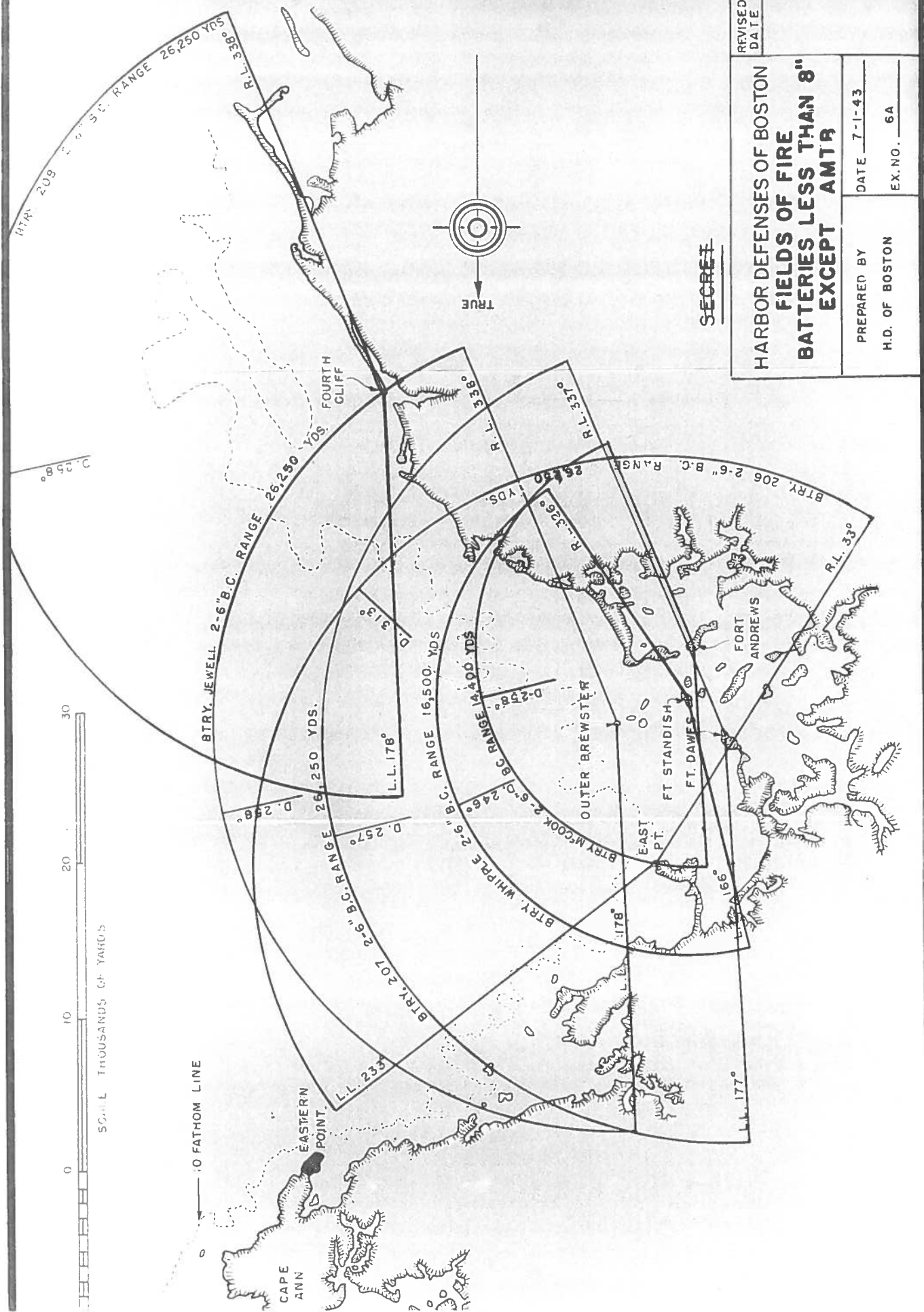
**SECRET**

HARBOR DEFENSE

**FIELDS OF FIRE  
BATTERIES 8" B**

PREPARED BY  
H.D. OF BOSTON





**SECRET**

REVISED  
DATE

HARBOR DEFENSES OF BOSTON  
FIELDS OF FIRE  
BATTERIES LESS THAN 8"  
EXCEPT AMTR

PREPARED BY

H.D. OF BOSTON

DATE 7-1-43

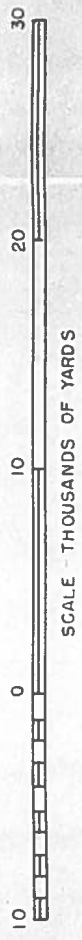
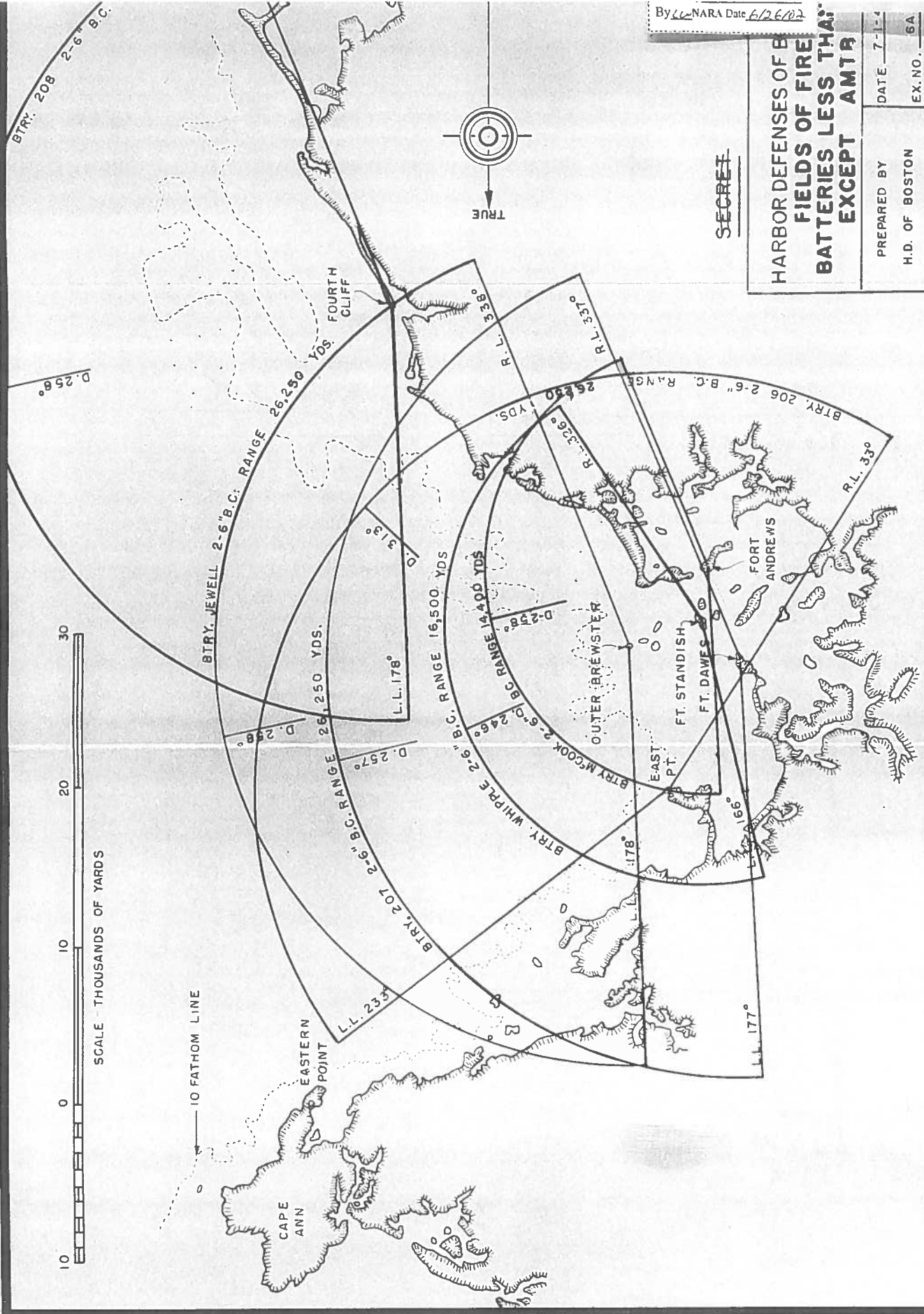
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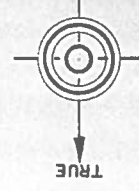
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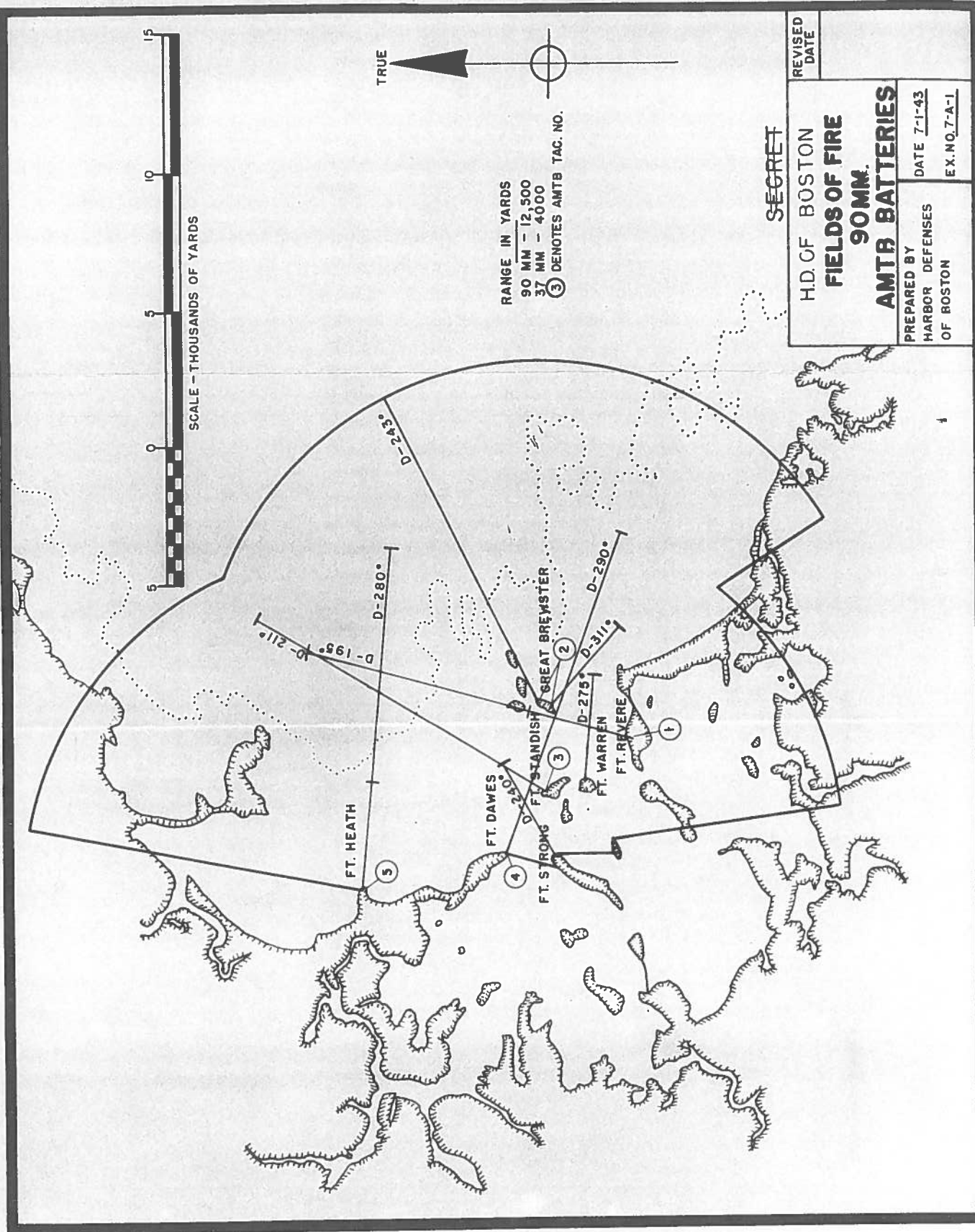
**HARBOR DEFENSES OF BOSTON  
FIELDS OF FIRE  
BATTERIES LESS THAN  
EXCEPT AMTR**

DATE	7-1-4
EX. NO.	6A
PREPARED BY	H.D. OF BOSTON



10 FATHOM LINE





**SECRET**

REVISED  
DATE

H.D. OF BOSTON

**FIELDS OF FIRE**

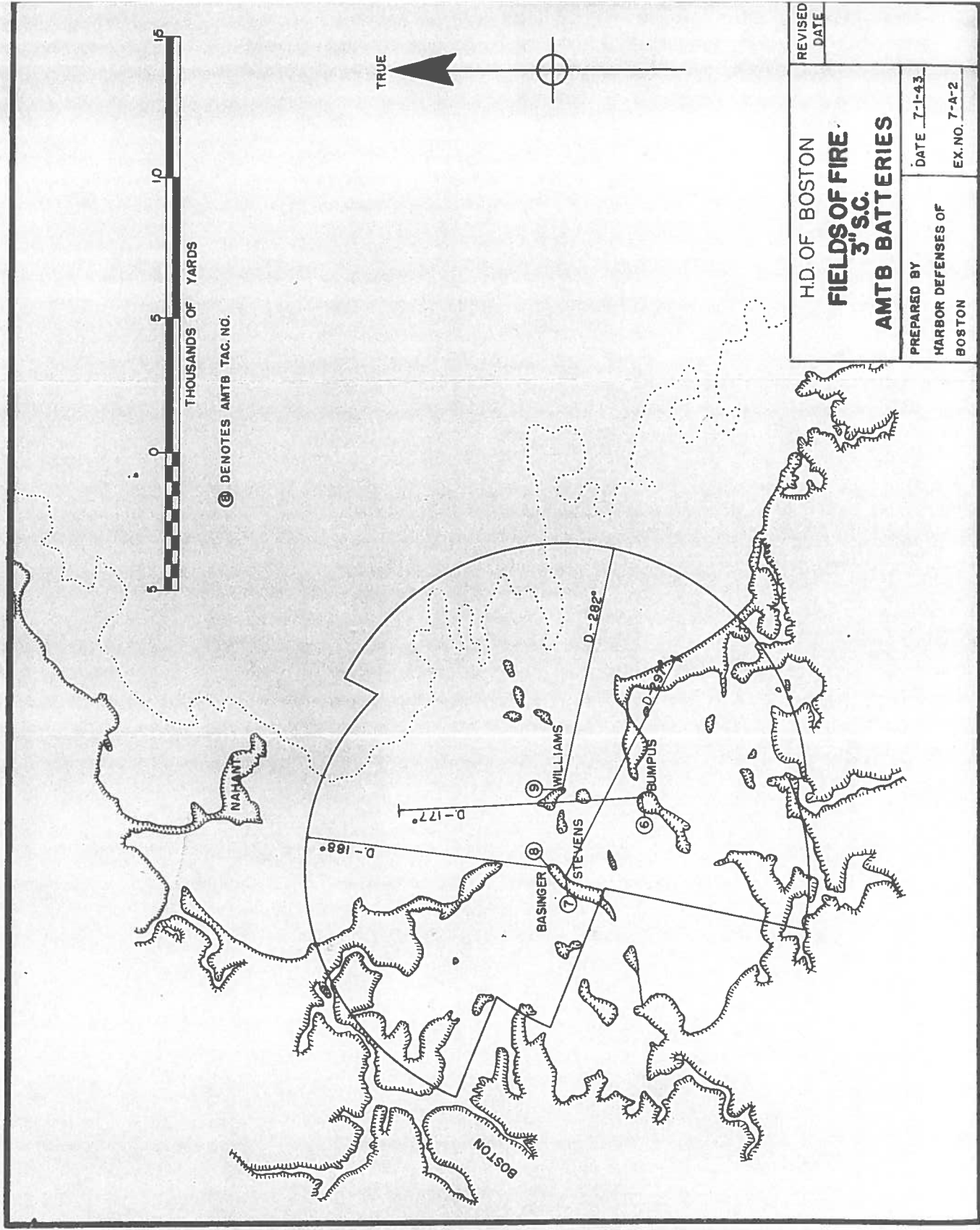
**90MM.**

**AMTB BATTERIES**

PREPARED BY  
HARBOR DEFENSES  
OF BOSTON

DATE 7-1-43

EX. NO. 7-A-1



H.D. OF BOSTON		REVISED DATE
<b>FIELDS OF FIRE</b> <b>3" S.C.</b> <b>AMTB BATTERIES</b>		
PREPARED BY	DATE 7-1-43	EX. NO. 7-A-2
HARBOR DEFENSES OF BOSTON		

**SECRET**

# **ANNEX B**

**FIRE CONTROL**

**SECRET**

~~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 - Redars
- 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  $15^{\circ}$  or greater. However, this limitation has been reduced in importance by use of multiple base and observing stations so that all important fields of fire are adequately covered by base lines which permit of accurate plotting of the target. The  $15^{\circ}$  intersection are plotted on the exhibits of the fields of fire of each battery. Base line data is computed for successively numbered base and 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 1:1.00004213, and the greatest reduction of scale encountered within the system is 1:0.99998142; the ratio is unity at the two standard parallels.



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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~~

ORIENTATION DATA				
LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
		<u>HARBOR DEFENSE COMMAND POST</u>		
128	1-A	CP	94,145.75	87,131.42
		<u>FORWARD HARBOR DEFENSE COMMAND POST</u>		
127	1-J	CP - OP	96,209.38	83,551.43
		<u>HARBOR ENTRANCE CONTROL POST</u>		
127	1-E	CP - OP	96,095.37	83,207.61
		<u>GROUPMENT I</u>		
111	1-A	OP 1	128,631.55	40,948.96
115	1-D	OP 2	113,699.97	70,905.14
120	1-B	OP 3	102,907.82	77,869.09
120	1-B	CP	102,904.81	77,871.55
		<u>GROUPMENT II</u>		
127	1-I	OP 1	96,275.48	83,302.64
130	1-A	OP	98,554.13	91,480.63
132	1-A	OP 2	107,208.36	100,752.92
135	1-A	OP 3	128,413.05	118,309.31
136	1-A	OP 4	125,415.78	124,197.05
		<u>GROUP 1</u>		
114	1-A	CP and OP	119,070.45	59,899.25
		<u>GROUP 2</u>		
115	1-B	CP and OP	113,580.50	70,795.25
		<u>GROUP 3 - ANTIAIRCRAFT</u>		
128	1-A	AA CP	94,145.75	87,131.42
		<u>GROUP 4 - ANTI MOTOR TORPEDO BOAT</u>		
127	1-E	CP and OP	96,095.37	83,207.61
		<u>GROUP 5 - SUBMARINE MINES</u>		
121	1-A	CP and OP	98,920.34	79,515.60
		<u>GROUP 6</u>		
131	1-A	CP and OP	100,620.19	91,165.67



ORIENTATION DATA				
LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
<u>GROUP 7</u>				
131	4-A	CP and CP	100,628.28	91,928.22
<u>RADAR</u>				
112A	1-A	SCR 296 #1	118,000.00	56,000.00 Map
115	1-B	SCR 296 #3	114,000.00	70,000.00 Map
116	1-B	SCR 296 #6	112,000.00	75,000.00 Map
120	1-A	SCR 296 #2	102,921.57	77,773.18
126	1-B	SCR 296 #5	103,291.34	81,969.10
127	1-X	SCR 296 #7	96,196.10	83,563.46
129	1-C	SCR 296 #4	95,000.00	88,000.00 Map
131	4-A	SCR 296 #8	100,628.28	91,928.22
132	3-4-1	SCR 296 #9	108,000.00	101,000.00 Map
133	1-A	SCR 296 #10	112,807.59	108,649.46
<u>Comp. 208 TAC No. 1</u>				
114	1-B	DP No. 1 Gun	119,023.80	60,039.66
114	1-B	BC	119,006.96	60,079.55
111	1-A	B <sup>1</sup> S <sup>1</sup>	128,631.55	40,948.93
112	1-A	B <sup>2</sup> S <sup>2</sup>	124,735.75	51,535.10
114	1-C	B <sup>3</sup> S <sup>3</sup>	118,969.68	60,182.34
115	1-B	B <sup>4</sup> S <sup>4</sup>	113,581.23	70,794.55
<u>Battery McCook TAC No. 2</u>				
117	1-C	DP No. 1 Gun	98,830.14	77,142.15
117	1-D	BC	98,889.61	77,067.00
117	1-A	B <sup>1</sup> S <sup>1</sup>	98,592.73	76,795.81
127	1-C	B <sup>2</sup> S <sup>2</sup>	96,386.94	82,939.55
129	1-B	B <sup>3</sup> S <sup>3</sup>	95,262.16	87,786.14
130	1-A	B <sup>4</sup> S <sup>4</sup>	98,554.13	91,480.63

ORIENTATION DATA				
LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
<u>Battery Long TAG No. 3</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 <sup>1</sup> S <sup>1</sup>	124,735.75	51,535.10
114	1-C	B <sup>2</sup> S <sup>2</sup>	118,969.68	60,182.34
115	1-C	B <sup>3</sup> S <sup>3</sup>	113,441.20	70,769.16
120	1-B	B <sup>4</sup> S <sup>4</sup>	102,907.82	77,869.09
131	4-A	B <sup>5</sup> S <sup>5</sup>	100,628.28	91,928.22
132	2-A	B <sup>6</sup> S <sup>6</sup>	107,179.61	100,445.64
134	1-A	B <sup>7</sup> S <sup>7</sup>	117,139.23	110,182.60
<u>Battery Whipple TAG No. 4</u>				
123	1-B	DP No. 1 Gun	99,261.40	80,127.65
123	1-E	BC	98,776.60	80,562.62
116	1-A	B <sup>1</sup> S <sup>1</sup>	103,365.17	75,679.64
123	1-C	B <sup>2</sup> S <sup>2</sup>	99,162.12	80,271.75
123	1-G	CRF	99,212.43	80,206.14
127	1-I	B <sup>3</sup> S <sup>3</sup>	96,271.35	83,509.86
130	1-A	B <sup>4</sup> S <sup>4</sup>	98,554.13	91,480.63
<u>Battery Jewell TAG No. 5</u>				
126	1-A	DP No. 1 Gun	103,400.01	81,950.06
126	1-A	BC	103,385.29	81,979.84
114	1-A	B <sup>1</sup> S <sup>1</sup>	119,068.46	59,903.01
115	1-D	B <sup>2</sup> S <sup>2</sup>	113,695.80	70,908.97
120	1-D	B <sup>3</sup> S <sup>3</sup>	102,808.02	77,817.35
126	1-A	B <sup>4</sup> S <sup>4</sup>	103,386.55	81,975.09
131	4-A	B <sup>5</sup> S <sup>5</sup>	100,628.28	91,928.22
132	1-A	B <sup>6</sup> S <sup>6</sup>	107,125.95	100,154.26

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ORIENTATION DATA				
LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
<u>Conn. 103 TAC No. 6</u>				
127	1-B	DP No. 1 Gun	96,547.61	82,477.78
127	1-C	BC	96,391.62	82,989.82
112	1-A	B <sup>1</sup> S <sup>1</sup>	124,735.75	51,535.10
114	1-B	B <sup>2</sup> S <sup>2</sup>	119,008.02	60,075.34
115	1-B	B <sup>3</sup> S <sup>3</sup>	113,584.65	70,791.37
120	1-C	B <sup>4</sup> S <sup>4</sup>	102,912.27	77,876.53
131	1-A	B <sup>5</sup> S <sup>5</sup>	100,620.19	91,165.67
132	3-A	B <sup>6</sup> S <sup>6</sup>	107,208.36	100,752.92
133	1-A	B <sup>7</sup> S <sup>7</sup>	112,807.99	108,649.46
134A	1-A	B <sup>8</sup> S <sup>8</sup>	123,128.68	111,214.38
135	1-A	B <sup>9</sup> S <sup>9</sup>	128,488.16	118,232.57
<u>Conn. 207 TAC No. 7</u>				
127	1-F	DP No. 1 Gun	96,569.98	82,950.67
127	1-D	BC	96,387.58	83,018.65
115	1-A	B <sup>1</sup> S <sup>1</sup>	113,354.98	70,690.47
120	1-D	B <sup>2</sup> S <sup>2</sup>	102,808.02	77,817.35
127	1-B	B <sup>3</sup> S <sup>3</sup>	96,416.60	83,032.84
131	3-A	B <sup>4</sup> S <sup>4</sup>	100,587.67	92,199.15
132	3-A	B <sup>5</sup> S <sup>5</sup>	107,208.36	100,752.92
<u>Battery Gardner TAC No. 8</u>				
130	3-A	DP No. 1 Gun	98,704.43	91,434.97
130	1-A	BC	98,554.13	91,480.63
115	1-C	B <sup>1</sup> S <sup>1</sup>	113,441.20	70,769.16
120	1-B	B <sup>2</sup> S <sup>2</sup>	102,904.01	77,868.72
131	2-A	B <sup>3</sup> S <sup>3</sup>	100,604.52	91,124.89
132	2-A	B <sup>4</sup> S <sup>4</sup>	107,182.61	100,443.33
134	1-A	B <sup>5</sup> S <sup>5</sup>	117,139.23	110,182.60

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FORM # 6

~~SECRET~~

2

ORIENTATION DATA				
LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
<u>Const. 206 TAG No. 9</u>				
131	3-A	DP No. 1 Gun	100,904.71	91,131.28
131	2-A	BC	100,604.52	91,124.89
115	1-A	B <sup>1</sup> s <sup>1</sup>	113,354.98	70,690.47
120	1-C	B <sup>2</sup> s <sup>2</sup>	102,910.33	77,880.32
131	1-A	B <sup>3</sup> s <sup>3</sup>	100,620.19	91,165.67
132	1-A	B <sup>4</sup> s <sup>4</sup>	107,125.95	100,154.26
133	1-A	B <sup>5</sup> s <sup>5</sup>	112,807.59	108,649.46
<u>Battery Murphy TAG No. 10</u>				
131	6-A	DP No. 1 Gun	100,956.55	91,296.35
131	5-A	BC	100,587.72	92,194.62
114	1-A	B <sup>1</sup> s <sup>1</sup>	119,069.89	59,900.60
115	1-D	B <sup>2</sup> s <sup>2</sup>	113,695.80	70,908.97
120	1-D	B <sup>3</sup> s <sup>3</sup>	102,808.02	77,817.35
131	2-A	B <sup>4</sup> s <sup>4</sup>	100,604.52	91,124.89
132	1-A	B <sup>5</sup> s <sup>5</sup>	107,125.95	100,154.26
133	1-A	B <sup>6</sup> s <sup>6</sup>	112,807.59	108,649.46
134A	1-A	B <sup>7</sup> s <sup>7</sup>	123,133.75	111,215.83
135	1-A	B <sup>8</sup> s <sup>8</sup>	128,488.16	118,232.57
136	1-A	B <sup>9</sup> s <sup>9</sup>	125,426.16	124,215.17
137	1-A	B <sup>10</sup> s <sup>10</sup>	112,556.19	124,333.37 Map.
<u>AMTB Battery 1</u>				
119	1-D	BC	100,786.39	77,794.65
119	1-D	DP No. 1 Gun	100,880.77	77,818.10
<u>AMTB Battery 2</u>				
124	1-A	BC	101,824.04	81,026.66
124	1-A	DP No. 1 Gun	101,845.74	81,011.01

FORM # 6

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~~SECRET~~

ORIENTATION DATA				
LOC NO.	SITE NO	STATION	COORDINATES	
			X	Y
<u>ANTB Battery 3</u>				
123	1-F	BC	98,704.62	80,814.18
123	1-F	DP No. 1 Fixed Gun	98,736.95	80,929.23
<u>ANTB Battery 4</u>				
127	1-A	BC	96,619.85	82,361.23
127	1-A	DP No. 1 Fixed Gun	96,632.36	82,292.10
<u>ANTB Battery 5</u>				
129	1-A	BC	95,410.78	87,690.16
129	1-A	DP No. 1 Fixed Gun	95,414.47	87,606.20
<u>Battery Eugene ANTB 6</u>				
117	1-B	DP No. 1 Gun	98,892.76	77,144.84
117	1-B	BC CRF	98,790.91	77,128.96
<u>Battery Stevens ANTB 7</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 ANTB 8</u>				
122	1-B	DP No. 1 Gun	96,381.66	80,656.58
122	1-B	BC CRF	96,405.84	80,649.99
<u>Battery Williams ANTB 9</u>				
123	1-A	DP No 1 Gun	99,243.29	80,077.48
123	1-A	BC CRF	99,266.83	80,105.71
<u>SOUTH MINES</u>				
121	1-B	M <sub>1</sub> <sup>1</sup>	101,013.63	77,506.62
119	1-C	M <sub>1</sub> <sup>2</sup>	99,025.15	79,478.03
<u>NORTH MINES</u>				
127	1-I	M <sub>2</sub> <sup>1</sup>	96,273.41	83,506.14
124	1-B	M <sub>2</sub> <sup>2</sup>	101,853.55	81,033.60

~~SECRET~~

3

COMMAND AND FIRE CONTROL ELEMENTS EXCLUDING BATTERIES										
LOC NO.	SITE NO.	STATION	GAS & BOMB PRTN	ELEV	H.I.	TYPE OF INST	ARC OF VIEW		MEN	TYPE OF STRUCTURE
							LL	RL		
111	1-A	C <sub>1</sub> <sup>1</sup> OP	No	62	90	AI	144	353	6	Tower
114	1-A	C1 OP OP	No	52	85	AI	158	327	10	Cottage
115	1-B	C2 OP OP	No	35	65	AI	121	333	14	Cottage
115	1-D	C <sub>1</sub> <sup>2</sup> OP	No	25	40	AI	112	310	6	Cottage
120	1-B	C1 OP OP	Yes	100	131	DPF	115	295	12	Cottage
121	1-A	C5 CP	No	70	86	AI	135	310	10	Tower
127	1-I	C <sub>2</sub> <sup>1</sup> OP	No	90	58	AI	157	315	6	Cottage
127	1-J	FWD HDCP	No	60	68	AI	150	320	20	Cottage
127	1-E	HDCP, C4	No	100	110	AI	163	15	30	Cottage
128	1-A	HDCP, C3	Yes	50	N	O	N	E	70	Casemate
130	1-A	C2 CP	Yes	85	120	AI	189	143	12	Tower
131	1-A	C6 OP CP	No	38	100	AI	190	61	10	Tower
131	4A	C7 OP	No	45	107	AI	356	125	10	Tower
132	3A	C <sub>2</sub> <sup>2</sup> OP	No	63	78	AI	185	69	6	Tower
135	1-A	C <sub>2</sub> <sup>3</sup> OP	No	60	89	AI	200	40	6	Tower
136	1-A	C <sub>2</sub> <sup>4</sup> OP	No	100	146	DPF	80	315	6	Tower

#### 4. Post Telephone System

a. The post telephone system of the harbor serves 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 at this post. This system, consisting of a four position, 400 line, common battery switchboard with terminals and power plant is housed in the bombproof casemate of abandoned Battery Lincoln adjacent to the HDQP. This switchboard serves Forts Banks, Dawes, and Heath, and connects to switchboards at Forts Warren and Andrews. Additional trunk lines connect to commercial outlets.

c. The switchboard at Fort Andrews serves the post and has connections to Forts Revere, Duvall, and Warren. The switchboard at Fort Warren serves that post; Forts Revere, Standish, Strong and connects to Forts Banks, Dawes, and Andrews. These post Switchboards are located in the same structure as the Fire Control Switchboards.

d. Additional combined fire control and post telephone switchboards are being installed at East Point and Fort Standish.

e. 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 HDQP and furnishes an alternate means of communication to New England Sector Headquarters; the other is a commercial type set and is installed in the HDQP. It participates in naval intelligence nets.

#### 6. Radio Communications

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

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <b>Cons. 208</b>					TACTICAL NO. <b>1</b>					
LOCATION NO. <b>114</b>					FIELD OF FIRE EXHIBIT <b>5-B-1</b>					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
114	1-B	BC	45	75	AI AI	157	340	8	Manhole	B <sub>8</sub> <sup>2</sup> S <sub>6</sub> <sup>2</sup>
111	1-A	B1S1	62	84	AI AI	144	353	6	Tower	G <sub>1</sub> <sup>1</sup> CP
112	1-A	B2S2	25	97	DPF AI	123	353	6	Tower	B <sub>3</sub> <sup>1</sup> S <sub>3</sub> <sup>1</sup> B <sub>6</sub> <sup>1</sup> S <sub>6</sub> <sup>1</sup>
114	1-C	B3S3	40	75	AI AI	147	337	6	Tower	B <sub>3</sub> <sup>2</sup> S <sub>3</sub> <sup>2</sup>
115	1-B	B4S4	35	65	AI AI	121	333	6	Cottage	B <sub>6</sub> <sup>3</sup> S <sub>6</sub> <sup>3</sup> G2 CP G2 CP
At each station except BC one instrument is an M2.										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
DP	B <sup>1</sup>	333.285	21,372.05
DP	B <sup>2</sup>	326.113	10,244.70
DP	B <sup>3</sup>	159.228	152.60
DP	B <sup>4</sup>	153.166	12,049.22

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	139.796	11,280.26
B <sup>2</sup>	B <sup>3</sup>	126.304	10,393.38
B <sup>3</sup>	B <sup>4</sup>	133.088	11,897.48



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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>McCook</u>					TACTICAL NO. <u>2</u>					
LOCATION NO. <u>117</u>					FIELD OF FIRE EXHIBIT <u>5-2-2</u>					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
117	1-D	BC	100	114	AI AI	152	245	4	Brick Cottage	P2
117	1-A	B1S1	127	130	DPF AI	160	350	6	Cottage	
127	1-C	B2S2	86	88	AI AI	222	79	6	Manhole	
129	1-A	B3S3	78	80	AI AI	197	348	6	Cottage	
130	1-A	B4S4	85	112	DPF AI	189	143	6	Tower	C2 CP B <sub>4</sub> S <sub>4</sub> BC 8
DPF's are M1, AI's are M1910 AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
D.P.	B <sup>1</sup>	034.430	419.90
D.P.	B <sup>2</sup>	157.148	6291.19
D.P.	B <sup>3</sup>	161.468	11226.09
D.P.	B <sup>4</sup>	178.897	14341.14

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	160.250	6527.71
B <sup>2</sup>	B <sup>3</sup>	166.934	4975.40
B <sup>3</sup>	B <sup>4</sup>	221.703	4948.37

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Long</u>					TACTICAL NO. <u>3</u>					
LOCATION NO. <u>118</u>					FIELD OF FIRE EXHIBIT <u>5-B-3</u>					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
120	1-B	BC	100	131	DPF AI	115	295	4	Cottage	B <sub>8</sub> <sup>2</sup> S <sub>8</sub> <sup>2</sup> B <sub>3</sub> <sup>4</sup> S <sub>3</sub> <sup>4</sup> C1 CP C1 CP
112	1-A	B1S1	10	80	AI AI	123	353	6	Tower	B <sub>1</sub> <sup>2</sup> S <sub>1</sub> <sup>2</sup> B <sub>6</sub> <sup>7</sup> S <sub>6</sub> <sup>7</sup>
114	1-C	B2S2	40	59	AI AI	147	337	6	Tower	B <sub>1</sub> <sup>3</sup> S <sub>1</sub> <sup>3</sup>
115	1-C	B <sup>3</sup> S <sup>3</sup>	50	93	DPF AI	109	325	6	Tower	B <sub>8</sub> <sup>1</sup> S <sub>8</sub> <sup>1</sup>
120	1-B	B <sup>4</sup> S <sup>4</sup>	100	118	DPF AI	155	302	6	Cottage	B <sub>8</sub> <sup>2</sup> S <sub>8</sub> <sup>2</sup> BC 3 C1 CP C1 CP
131	4-A	B <sup>5</sup> S <sup>5</sup>	45	107	DPF AI	356	125	6	Tower	B <sub>3</sub> <sup>5</sup> S <sub>3</sub> <sup>5</sup> G7 CP G7 CP
132	2-A	B <sup>6</sup> S <sup>6</sup>	74	101	DPF AI	178	040	6	Cottage	B <sub>8</sub> <sup>4</sup> S <sub>8</sub> <sup>4</sup>
134	1-A	B <sup>7</sup> S <sup>7</sup>	80	113	DPF AI	184	121	6	Tower	B <sub>8</sub> <sup>5</sup> S <sub>8</sub> <sup>5</sup>
At each station except BC one instrument is an M2.										

## BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
DP	B <sup>1</sup>	317.982	34,185.66
DP	B <sup>2</sup>	314.381	23,949.02
DP	B <sup>3</sup>	298.008	13,125.33
DP	B <sup>4</sup>	228.404	1,410.30
DP	B <sup>5</sup>	175.330	15,045.32
DP	B <sup>6</sup>	192.764	24,108.56
DP	B <sup>7</sup>	204.690	36,595.23

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	146.304	10,393.38
B <sup>2</sup>	B <sup>3</sup>	152.426	11,943.40
B <sup>3</sup>	B <sup>4</sup>	123.982	12,702.80
B <sup>4</sup>	B <sup>5</sup>	170.790	14,242.73
B <sup>5</sup>	B <sup>6</sup>	217.566	10,745.53
B <sup>6</sup>	B <sup>7</sup>	225.648	13,928.48

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Whipple</u>					TACTICAL NO. <u>4</u>					
LOCATION NO. <u>123</u>					FIELD OF FIRE EXHIBIT <u>S-B-4</u>					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
123	1-E	BC	15	50	AI AI	179	89	4	Cottage	P/
123	1-G	CRF	13	17	CRF	179	89	4	Cottage	
116	1-A	B <sup>1</sup> S <sup>1</sup>	100	106	DPF AI	150	300	6	Cottage	
123	1-C	B <sup>2</sup> S <sup>2</sup>	15	32	AI AI	130	333	6	Cottage	
127	1-I	B <sup>3</sup> S <sup>3</sup>	52	58	AI AI	177	300	6	Cottage	M <sup>1</sup> C <sup>1</sup> OP
130	1-A	B <sup>4</sup> S <sup>4</sup>	90	112	DPF AI	189	143	6	Tower	BC 8 B <sup>4</sup> S <sup>4</sup> C2 OP

DPF's are M1, AI's are M1910 A1.

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
D.P.	B <sup>1</sup>	317.305	6051.92
D.P.	B <sup>2</sup>	145.434	174.99
D.P.	B <sup>3</sup>	138.522	4514.39
D.P.	B <sup>4</sup>	176.435	11374.99

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	137.533	6225.20
B <sup>2</sup>	B <sup>3</sup>	138.244	4340.73
B <sup>3</sup>	B <sup>4</sup>	195.981	8291.22

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Jewell</u>					TACTICAL NO. <u>5</u>					
LOCATION NO. <u>126</u>					FIELD OF FIRE EXHIBIT <u>5-B-5</u>					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
126	1-A	BC	65	79	AI AI	168	340	4	Manhole	B <sub>5</sub> <sup>4</sup> S <sub>5</sub> <sup>4</sup>
114	1-A	B <sup>1</sup> S <sup>1</sup>	52	95	AI AI	158	327	6	Cottage	B <sub>10</sub> <sup>1</sup> S <sub>10</sub> <sup>1</sup> G1 CP G1 CP
115	1-D	B <sup>2</sup> S <sup>2</sup>	25	40	AI AI	112	310	6	Cottage	C <sub>1</sub> <sup>2</sup> CP B <sub>10</sub> <sup>2</sup> S <sub>10</sub> <sup>2</sup>
120	1-D	B <sup>3</sup> S <sup>3</sup>	125	171	DPF AI	143	323	6	Tower	B <sub>10</sub> <sup>3</sup> S <sub>10</sub> <sup>3</sup> B <sub>7</sub> <sup>2</sup> S <sub>7</sub> <sup>2</sup>
126	1-A	B <sup>4</sup> S <sup>4</sup>	65	79	AI AI	172	348	6	Manhole	BC 5
131	4-A	B <sup>5</sup> S <sup>5</sup>	45	80	AI AI	356	125	6	Tower	B <sub>3</sub> <sup>5</sup> S <sub>3</sub> <sup>5</sup> G7 CP G7 CP
132	1-A	B <sup>6</sup> S <sup>6</sup>	40	86	AI AI	190	065	6	Tower	B <sub>9</sub> <sup>4</sup> S <sub>9</sub> <sup>4</sup> B <sub>10</sub> <sup>5</sup> S <sub>10</sub> <sup>5</sup>
At each station except BC one instrument is an M2.										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
DP	B <sup>1</sup>	324.599	27047.60
DP	B <sup>2</sup>	317.001	15096.65
DP	B <sup>3</sup>	008.152	4174.90
DP	B <sup>4</sup>	151.731	28.419
DP	B <sup>5</sup>	164.476	10355.97
DP	B <sup>6</sup>	191.567	18581.59

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	153.980	12,247.31
B <sup>2</sup>	B <sup>3</sup>	122.395	12,894.55
B <sup>3</sup>	B <sup>4</sup>	187.922	4,197.80
B <sup>4</sup>	B <sup>5</sup>	164.511	10,328.26
B <sup>5</sup>	B <sup>6</sup>	218.305	10,482.72

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY Cons. 105					TACTICAL NO. 6					
LOCATION NO. 127					FIELD OF FIRE EXHIBIT 5-B-6					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
127	1-G	BC	93	95	AI AI	147	55	4	Manhole	
112	1-A	B <sup>1</sup> S <sup>1</sup>	25	69	AI AI	123	020	6	Tower	B <sub>1</sub> <sup>2</sup> S <sub>1</sub> <sup>2</sup> B <sub>3</sub> <sup>2</sup> S <sub>3</sub> <sup>2</sup>
114	1-B	B <sup>2</sup> S <sup>2</sup>	45	75	AI AI	172	341	6	Manhole	BC 1
115	1-B	B <sup>3</sup> S <sup>3</sup>	35	57	AI AI	136	334	6	Cottage	B <sub>1</sub> <sup>4</sup> S <sub>1</sub> <sup>4</sup> G2 CP G2 CP
120	1-C	B <sup>4</sup> S <sup>4</sup>	60	114	DPF AI	158	340	6	Garage	B <sub>5</sub> <sup>5</sup> S <sub>5</sub> <sup>5</sup>
131	1-A	B <sup>5</sup> S <sup>5</sup>	38	100	DPF AI	190	61	6	Tower	B <sub>5</sub> <sup>5</sup> S <sub>5</sub> <sup>5</sup> G6 CP G6 CP
132	3-A	B <sup>6</sup> S <sup>6</sup>	60	109	DPF AI	185	69	6	Tower	B <sub>7</sub> <sup>5</sup> S <sub>7</sub> <sup>5</sup> G <sub>2</sub> <sup>2</sup> CP
133	1-A	B <sup>7</sup> S <sup>7</sup>	80	154	DPF AI	233	130	6	Tower	B <sub>9</sub> <sup>5</sup> S <sub>9</sub> <sup>5</sup> B <sub>10</sub> <sup>6</sup> S <sub>10</sub> <sup>6</sup>
134A	1-A	B <sup>8</sup> S <sup>8</sup>	20	64	AI AI	258	105	6	Cottage	B <sub>10</sub> <sup>7</sup> S <sub>10</sub> <sup>7</sup>
135	1-A	B <sup>9</sup> S <sup>9</sup>	60	105	DPF AI	200	40	6	Tower	B <sub>10</sub> <sup>8</sup> S <sub>10</sub> <sup>8</sup> G <sub>2</sub> <sup>2</sup> CP

At each station except BC one instrument is an M2.

## BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
DP	B <sup>1</sup>	317.667	41857.13
DP	B <sup>2</sup>	314.926	31722.85
DP	B <sup>3</sup>	304.448	20659.93
DP	B <sup>4</sup>	305.865	7853.69
DP	B <sup>5</sup>	205.116	9995.07
DP	B <sup>6</sup>	210.257	21157.32
DP	B <sup>7</sup>	211.852	30811.43
DP	B <sup>8</sup>	222.769	39145.18

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	146.151	10,283.12
B <sup>2</sup>	B <sup>3</sup>	153.156	12,010.26
B <sup>3</sup>	B <sup>4</sup>	123.579	12,810.12
B <sup>4</sup>	B <sup>5</sup>	170.214	13,485.36
B <sup>5</sup>	B <sup>6</sup>	214.496	11,632.69
B <sup>6</sup>	B <sup>7</sup>	215.339	9,680.22
B <sup>7</sup>	B <sup>8</sup>	256.044	10,635.02
B <sup>8</sup>	B <sup>9</sup>	216.679	8,846.61

7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Gons. 207</u>					TACTICAL NO. <u>7</u>					
LOCATION NO. <u>127</u>					FIELD OF FIRE EXHIBIT <u>5-B-7</u>					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
127	1-D	B0	80	88	AI AI	138	356	4	Manhole	
115	1-A	B1 S <sup>1</sup>	40	100	DFF AI	110	324	6	Tower	B <sup>1</sup> S <sup>1</sup> <sub>9</sub>
120	1-D	B <sup>2</sup> S <sup>2</sup>	125	163	DFF AI	144	323	6	Tower	B <sup>2</sup> S <sup>2</sup> <sub>10</sub>
										B <sup>3</sup> S <sup>3</sup> <sub>5</sub>
127	1-H	B <sup>3</sup> S <sup>3</sup>	85	88	AI AI	135	355	6	Manhole	
131	5A	B <sup>4</sup> S <sup>4</sup>	60	88	AI AI	160	353	6	Cottage	BC 10
132	3-A	B <sup>5</sup> S <sup>5</sup>	50	116	DFF AI	190	063	6	Cottage	B <sup>6</sup> S <sup>6</sup> <sub>2</sub> OF
At each station except BC one instrument is an M2.										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
D.P.	B <sup>1</sup>	306.145	20,785.78
D.P.	B <sup>2</sup>	309.451	8,078.62
D.P.	B <sup>3</sup>	118.179	174.00
D.P.	B <sup>4</sup>	203.481	10,083.46
D.P.	B <sup>5</sup>	210.862	20,738.74

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	124.048	12,729.13
B <sup>2</sup>	B <sup>3</sup>	129.215	8,249.34
B <sup>3</sup>	B <sup>4</sup>	204.468	10,070.70
B <sup>4</sup>	B <sup>5</sup>	217.740	10,816.68

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Gardner</u>					TACTICAL NO. <u>8</u>					
LOCATION NO. <u>130</u>					FIELD OF FIRE EXHIBIT <u>4-B-8</u>					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYP OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
130	1-A	BC	85	128	DPF AI	181	143	4	Tower	B <sub>2</sub> S <sub>2</sub> B <sub>2</sub> S <sub>4</sub> C2 CP
115	1-C	B <sup>1</sup> S <sup>1</sup>	90	85	AI AI	109	325	6	Tower	B <sub>3</sub> S <sub>3</sub>
120	1-B	B <sup>2</sup> S <sup>2</sup>	100	132	DPF AI	108	301	6	Cottage	B <sub>4</sub> S <sub>4</sub> BC 3 C1 CP C1 CP
131	2-A	B <sup>3</sup> S <sup>3</sup>	28	101	DPF AI	356	125	6	Tower	B <sub>10</sub> S <sub>10</sub> BC 9
132	2-A	B <sup>4</sup> S <sup>4</sup>	74	93	DPF AI	178	40	6	Cottage	B <sub>5</sub> S <sub>5</sub>
134	1-A	B <sup>5</sup> S <sup>5</sup>	80	105	DPF AI	184	121	6	Tower	B <sub>7</sub> S <sub>7</sub>
At each station except BC one instrument is an M2.										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
D.P.	B <sup>1</sup>	324.507	25,382.04
D.P.	B <sup>2</sup>	342.800	14,201.40
D.P.	B <sup>3</sup>	279.269	1,225.23
D.P.	B <sup>4</sup>	223.263	12,370.53
D.P.	B <sup>5</sup>	224.518	26,292.88

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	123.971	12,705.75
B <sup>2</sup>	B <sup>3</sup>	170.159	13,454.13
B <sup>3</sup>	B <sup>4</sup>	215.219	11,406.34
B <sup>4</sup>	B <sup>5</sup>	225.632	13,927.95

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Cons. 206</u>					TACTICAL NO. <u>9</u>					
LOCATION NO. <u>131</u>					FIELD OF FIRE EXHIBIT <u>5-B-9</u>					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYP OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
131	2-A	BC	43	93	AI AI	190	61	4	Tower	B <sup>4</sup> <sub>10</sub> S <sup>4</sup> <sub>10</sub> B <sup>3</sup> <sub>8</sub> S <sup>3</sup> <sub>8</sub>
115	1-A	B <sup>1</sup> S <sup>1</sup>	40	108	DPF AI	110	324	6	Tower	B <sup>1</sup> <sub>7</sub> S <sup>1</sup> <sub>7</sub>
120	1-C	B <sup>2</sup> S <sup>2</sup>	60	114	DPF AI	148	330	6	Garage	B <sup>2</sup> <sub>6</sub> S <sup>2</sup> <sub>6</sub>
131	1-A	B <sup>3</sup> S <sup>3</sup>	38	109	DPF AI	190	61	6	Tower	B <sup>5</sup> <sub>6</sub> S <sup>5</sup> <sub>6</sub> Q6 OP Q6 OP
132	1-A	B <sup>4</sup> S <sup>4</sup>	40	78	AI AI	190	065	6	Tower	B <sup>6</sup> <sub>5</sub> S <sup>6</sup> <sub>5</sub> B <sup>5</sup> <sub>10</sub> S <sup>5</sup> <sub>10</sub>
133	1-A	B <sup>5</sup> S <sup>5</sup>	80	146	DPF AI	233	130	6	Tower	B <sup>6</sup> <sub>10</sub> S <sup>6</sup> <sub>10</sub> B <sup>7</sup> <sub>6</sub> S <sup>7</sup> <sub>6</sub>
At each station except BC one instrument is an M2.										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
D.P.	B <sup>1</sup>	328.655	23,933.99
D.P.	B <sup>2</sup>	351.393	13,401.89
D.P.	B <sup>3</sup>	096.892	286.59
D.P.	B <sup>4</sup>	214.586	10,959.84
D.P.	B <sup>5</sup>	214.194	21,179.36

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	124.543	12,680.09
B <sup>2</sup>	B <sup>3</sup>	170.219	13,481.29
B <sup>3</sup>	B <sup>4</sup>	144.104	11,095.93
B <sup>4</sup>	B <sup>5</sup>	146.225	10,220.05

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Murphy</u>					TACTICAL NO. <u>10</u>					
LOCATION NO. <u>131</u>					FIELD OF FIRE EXHIBIT <u>5-B-10</u>					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYP. OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
131	5-A	BC	60	88	AI AI	185	18	4	Cottage	B <sub>4</sub> S <sub>4</sub>
114	1-A	B <sup>1</sup> S <sup>1</sup>	52	77	AI AI	150	344	6	Cottage	B <sub>3</sub> S <sub>3</sub> G1 CP G1 CP
115	1-D	B <sup>2</sup> S <sup>2</sup>	25	43	AI AI	112	325	6	Cottage	C <sub>1</sub> <sup>2</sup> OP B <sub>5</sub> S <sub>5</sub>
120	1-D	B <sup>3</sup> S <sup>3</sup>	125	179	DPF AI	143	323	6	Tower	B <sub>3</sub> S <sub>3</sub> B <sub>7</sub> S <sub>7</sub>
131	2-A	B <sup>4</sup> S <sup>4</sup>	38	109	DPF AI	230	68	6	Tower	B <sub>8</sub> S <sub>8</sub> BC 9
132	1-A	B <sup>5</sup> S <sup>5</sup>	40	72	AI AI	175	064	6	Tower	B <sub>6</sub> S <sub>6</sub> B <sub>9</sub> S <sub>9</sub>
133	1-A	B <sup>6</sup> S <sup>6</sup>	80	162	DPF AI	233	130	6	Tower	B <sub>6</sub> S <sub>6</sub> B <sub>9</sub> S <sub>9</sub>
134A	1-A	B <sup>7</sup> S <sup>7</sup>	20	63	AI AI	230	77	6	Cottage	B <sub>6</sub> S <sub>6</sub>
135	1-A	B <sup>8</sup> S <sup>8</sup>	60	97	DPF AI	200	40	6	Tower	B <sub>6</sub> S <sub>6</sub> C <sub>2</sub> <sup>3</sup> OP

At each station except BC one instrument is an M2.

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
D.P.	B <sup>1</sup>	330.018	36,246.19
D.P.	B <sup>2</sup>	328.000	24,040.25
D.P.	B <sup>3</sup>	352.179	13,605.57
D.P.	B <sup>4</sup>	064.031	391.57
D.P.	B <sup>5</sup>	214.857	10,794.63
D.P.	B <sup>6</sup>	214.331	21,013.75
D.P.	B <sup>7</sup>	228.070	29,809.63

FROM	TO	AZIMUTH	LENGTH
B <sup>1</sup>	B <sup>2</sup>	153.979	12,250.10
B <sup>2</sup>	B <sup>3</sup>	122.395	12,894.55
B <sup>3</sup>	B <sup>4</sup>	170.598	13,488.74
B <sup>4</sup>	B <sup>5</sup>	215.839	11,138.16
B <sup>5</sup>	B <sup>6</sup>	213.775	10,220.05
B <sup>6</sup>	B <sup>7</sup>	256.043	10,640.29
B <sup>7</sup>	B <sup>8</sup>	216.658	8,842.42
B <sup>8</sup>	B <sup>9</sup>	153.021	6,606.75
B <sup>9</sup>	B <sup>10</sup>	090.607	12,860.31

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Harpy (cont.)</u>						TACTICAL NO. <u>10</u>				
LOCATION NO. <u>131</u>						FIELD OF FIRE EXHIBIT <u>5-8-10</u>				
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYP OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
136	1-A	B <sup>9</sup> S <sup>9</sup>	100	130	DPF AI	80	315	6	Tower	C <sub>2</sub> OP HD of P
137	1-A	B <sup>10</sup> S <sup>10</sup>	125	150	DPF AI	141	302	6	Cottage	HD of P
At each station except BC one instrument is an M2.										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH

FROM	TO	AZIMUTH	LENGTH

~~SECRET~~

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>AMTB I</u>					TACTICAL NO. <u>AMTB 1</u>					
LOCATION NO. <u>119</u>					FIELD OF FIRE EXHIBIT <u>7-A-1</u>					
LOC NO.	SITE NO.	STA	ELEV	H. I	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
119	1-D	BC	60	60	AA BC M1 Dir. AA M9 Finder, Height M1 or M2	77	262	4	Wooden Cottage	

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
BC	DP	256.047	97.25

FROM	TO	AZIMUTH	LENGTH

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7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>AMTB 4</u>					TACTICAL NO. <u>AMTB 4</u>					
LOCATION NO. <u>127</u>					FIELD OF FIRE EXHIBIT <u>7-4-1</u>					
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
127	1-A	BC	30	40	AA BC M1 Dir. AA M9 Finder, Height M1 or M2	183	314	4	Concrete Cottage	

## BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
BC	#1 Gun	349.743	70.25

FROM	TO	AZIMUTH	LENGTH

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BATTERY AMTB 5  
LOCATION NO. 129

TACTICAL NO. AMTB 5  
FIELD OF FIRE EXHIBIT 7-A-1

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Bumpus</u>					TACTICAL NO. <u>AMTB 6</u>					
LOCATION NO. <u>117</u>					FIELD OF FIRE EXHIBIT <u>5-B-11</u>					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYP. OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
117	1-E	BC	110	115	AI AI	153	300	4	Cottage	CRF AMTB 6
117	1-E	CRF	110	113	CRF	153	300	4	Cottage	BC AMTB 6
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

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Stevens</u>						TACTICAL NO. <u>AMTB 7</u>				
LOCATION NO: <u>122</u>						FIELD OF FIRE EXHIBIT <u>5-B-12</u>				
LOC NO.	SITE NO.	STA	ELEV	H.I.	NO. AND TYPR 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 AMTB 7
122	1-A	CRF	20	24	CRF	229	167	4	Parapet	BC AMTB 7
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

FORM # 8

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BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Basinger</u>						TACTICAL NO. <u>AMTB 8</u>				
LOCATION NO. <u>122</u>						FIELD OF FIRE EXHIBIT <u>5-B-13</u>				
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
122	1-E	BC	32	34	AI AI	264	165	4	Crows Nest	CRF AMTB 8
122	1-E	CRF	32	34	CRF	118	276	4	Crows Nest	BC AMTB 8
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

7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>Williams</u>						TACTICAL NO. <u>AMTB 9</u>				
LOCATION NO. <u>123</u>						FIELD OF FIRE EXHIBIT <u>5-B-14</u>				
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYP 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	CRF AMTB 9
123	1-A	CRF	20	35	CRF	180	90	4	Wooden Cottage	BC AMTB 9
AI's are M1910 AI						AI				

## BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
CRF	DP	039.824	036.76

FROM	TO	AZIMUTH	LENGTH

BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>SO MINES</u>					TACTICAL NO. <u>M1</u>					
LOCATION NO. <u>121</u>					FIELD OF FIRE EXHIBIT <u>1-B</u>					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYPR OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
121	1-B	M1 CP	60	70	AI	126	310	4	Brick Cottage	M1
119	1-C	M1 <sup>2</sup> <sub>1</sub>	110	120	DPF	110	274	6	Cottage	
121	1-B	M1 <sup>1</sup> <sub>1</sub>	60	70	AI	126	310	6	Brick Cottage	M1 CP
DPF's are M1, AI's are M191D AI										

BASE LINE DATA FOR STATIONS LISTED ABOVE

FROM	TO	AZIMUTH	LENGTH
M1 <sup>1</sup> <sub>1</sub>	M1 <sup>2</sup> <sub>1</sub>	134.753	2800.09

FROM	TO	AZIMUTH	LENGTH

SEE WD LTR FILE 660.2  
 DATED 30 DEC. 43 SUBJECT,  
 "DATUM POINTS, HD Boston" (SECRET)

EXISTING DATUM POINTS

Location:	Stations Served		
No.	Azimuth	Range	Type
112	G <sub>1</sub> ; BC <sub>1</sub> ; B <sub>1</sub> <sup>1</sup> S <sub>1</sub> <sup>1</sup> ; B <sub>1</sub> <sup>3</sup> S <sub>1</sub> <sup>3</sup> ; B <sub>3</sub> <sup>2</sup> S <sub>3</sub> <sup>2</sup> ; B <sub>5</sub> <sup>1</sup> S <sub>5</sub> <sup>1</sup> ; B <sub>6</sub> <sup>2</sup> S <sub>6</sub> <sup>2</sup> ; B <sub>10</sub> <sup>1</sup> S <sub>10</sub> <sup>1</sup> .		Brant Rock Fire Control Tower
114	B <sub>1</sub> <sup>2</sup> S <sub>1</sub> <sup>2</sup> ; B <sub>3</sub> <sup>1</sup> S <sub>3</sub> <sup>1</sup> ; B <sub>6</sub> <sup>1</sup> S <sub>6</sub> <sup>1</sup> .		Fire Control Tower
115	G <sub>1</sub> ; BC <sub>1</sub> ; B <sub>1</sub> <sup>2</sup> S <sub>1</sub> <sup>2</sup> ; B <sub>1</sub> <sup>3</sup> S <sub>1</sub> <sup>3</sup> ; B <sub>3</sub> <sup>1</sup> S <sub>3</sub> <sup>1</sup> ; B <sub>3</sub> <sup>2</sup> S <sub>3</sub> <sup>2</sup> ; B <sub>5</sub> <sup>1</sup> S <sub>5</sub> <sup>1</sup> ; B <sub>6</sub> <sup>1</sup> S <sub>6</sub> <sup>1</sup> ; B <sub>6</sub> <sup>2</sup> S <sub>6</sub> <sup>2</sup> ; B <sub>10</sub> <sup>1</sup> S <sub>10</sub> <sup>1</sup> .		Cedar Point Old Tower
115	C <sub>1</sub> ; G <sub>2</sub> ; BC <sub>3</sub> ; C <sub>1</sub> <sup>2</sup> ; C <sub>1</sub> <sup>3</sup> ; B <sub>1</sub> <sup>4</sup> S <sub>1</sub> <sup>4</sup> ; B <sub>3</sub> <sup>3</sup> S <sub>3</sub> <sup>3</sup> ; B <sub>3</sub> <sup>4</sup> S <sub>3</sub> <sup>4</sup> ; B <sub>4</sub> <sup>1</sup> S <sub>4</sub> <sup>1</sup> ; B <sub>5</sub> <sup>2</sup> S <sub>5</sub> <sup>2</sup> ; B <sub>5</sub> <sup>3</sup> S <sub>5</sub> <sup>3</sup> ; B <sub>6</sub> <sup>3</sup> S <sub>6</sub> <sup>3</sup> ; B <sub>6</sub> <sup>4</sup> S <sub>6</sub> <sup>4</sup> ; B <sub>7</sub> <sup>1</sup> S <sub>7</sub> <sup>1</sup> ; B <sub>7</sub> <sup>2</sup> S <sub>7</sub> <sup>2</sup> ; B <sub>8</sub> <sup>1</sup> S <sub>8</sub> <sup>1</sup> ; B <sub>8</sub> <sup>2</sup> S <sub>8</sub> <sup>2</sup> ; B <sub>9</sub> <sup>1</sup> S <sub>9</sub> <sup>1</sup> ; B <sub>9</sub> <sup>2</sup> S <sub>9</sub> <sup>2</sup> ; B <sub>10</sub> <sup>2</sup> S <sub>10</sub> <sup>2</sup> ; B <sub>10</sub> <sup>3</sup> S <sub>10</sub> <sup>3</sup> .	C <sub>1</sub> ; BC <sub>3</sub> ; B <sub>3</sub> <sup>3</sup> ; B <sub>3</sub> <sup>4</sup> ; B <sub>4</sub> <sup>1</sup> ; B <sub>5</sub> <sup>3</sup> ; B <sub>6</sub> <sup>4</sup> ; B <sub>7</sub> <sup>1</sup> ; B <sub>7</sub> <sup>2</sup> ; B <sub>8</sub> <sup>2</sup> ; B <sub>9</sub> <sup>1</sup> ; B <sub>9</sub> <sup>2</sup> ; B <sub>10</sub> <sup>3</sup>	Minots Light
124	C <sub>2</sub> ; G <sub>2</sub> G <sub>5</sub> ; G <sub>6</sub> ; G <sub>7</sub> ; M <sub>1</sub> ; M <sub>2</sub> ; BC <sub>2</sub> ; BC <sub>6</sub> ; BC <sub>7</sub> ; BC <sub>8</sub> ; BC <sub>9</sub> ; BC <sub>10</sub> ; M <sub>1</sub> <sup>1</sup> M <sub>1</sub> <sup>2</sup> ; M <sub>2</sub> <sup>1</sup> ; C <sub>1</sub> <sup>2</sup> ; C <sub>1</sub> <sup>3</sup> ; B <sub>1</sub> <sup>4</sup> S <sub>1</sub> <sup>4</sup> ; B <sub>2</sub> <sup>1</sup> S <sub>2</sub> <sup>1</sup> ; B <sub>2</sub> <sup>2</sup> S <sub>2</sub> <sup>2</sup> ; B <sub>2</sub> <sup>4</sup> S <sub>2</sub> <sup>4</sup> ; B <sub>3</sub> <sup>3</sup> S <sub>3</sub> <sup>3</sup> ; B <sub>3</sub> <sup>5</sup> S <sub>3</sub> <sup>5</sup> ; B <sub>4</sub> <sup>1</sup> S <sub>4</sub> <sup>1</sup> ; B <sub>4</sub> <sup>3</sup> S <sub>4</sub> <sup>3</sup> ; B <sub>4</sub> <sup>4</sup> S <sub>4</sub> <sup>4</sup> ; B <sub>5</sub> <sup>2</sup> S <sub>5</sub> <sup>2</sup> ; B <sub>5</sub> <sup>5</sup> ; S <sub>5</sub> <sup>5</sup> ; B <sub>6</sub> <sup>3</sup> S <sub>6</sub> <sup>3</sup> ; B <sub>6</sub> <sup>5</sup> S <sub>6</sub> <sup>5</sup> ; B <sub>7</sub> <sup>1</sup> S <sub>7</sub> <sup>1</sup> ; B <sub>7</sub> <sup>3</sup> S <sub>7</sub> <sup>3</sup> ; B <sub>7</sub> <sup>4</sup> S <sub>7</sub> <sup>4</sup> ; B <sub>8</sub> <sup>1</sup> S <sub>8</sub> <sup>1</sup> ; B <sub>8</sub> <sup>3</sup> S <sub>8</sub> <sup>3</sup> ; B <sub>9</sub> <sup>1</sup> S <sub>9</sub> <sup>1</sup> ; B <sub>9</sub> <sup>3</sup> S <sub>9</sub> <sup>3</sup> ; B <sub>10</sub> <sup>2</sup> S <sub>10</sub> <sup>2</sup> ; B <sub>10</sub> <sup>4</sup> S <sub>10</sub> <sup>4</sup> .	HF-AMTB 4 CRF - AMTB 6; CRF - AMTB 7; CRF - AMTB 8;	Boston Light
126		C <sub>1</sub> ; BC <sub>3</sub> ; M <sub>1</sub> <sup>2</sup> ; M <sub>1</sub> <sup>1</sup> ; R <sub>3</sub> <sup>3</sup> ; R <sub>4</sub> <sup>4</sup> ; B <sub>1</sub> <sup>1</sup> ;	Outer Brewster Dock

Location:		Stations Served			
No.	Azimuth	Range	Type		
126	C <sub>1</sub> ; C <sub>2</sub> ; G <sub>5</sub> ; G <sub>6</sub> ; G <sub>7</sub> ; M <sub>1</sub> ; M <sub>2</sub> ; BC <sub>3</sub> ; BC <sub>4</sub> ; BC <sub>5</sub> ; BC <sub>6</sub> ; BC <sub>7</sub> ; BC <sub>8</sub> ; BC <sub>9</sub> ; BC <sub>10</sub> ; C <sub>1</sub> <sup>3</sup> ; C <sub>2</sub> <sup>1</sup> ; C <sub>2</sub> <sup>2</sup> ; M <sub>1</sub> <sup>1</sup> ; M <sub>1</sub> <sup>2</sup> ; M <sub>2</sub> <sup>1</sup> ; M <sub>2</sub> <sup>2</sup> ; B <sub>2</sub> <sup>2</sup> S <sub>2</sub> <sup>2</sup> ; B <sub>2</sub> <sup>3</sup> S <sub>2</sub> <sup>3</sup> ; B <sub>2</sub> <sup>4</sup> S <sub>2</sub> <sup>4</sup> ; S <sub>2</sub> <sup>4</sup> ; B <sub>3</sub> <sup>4</sup> S <sub>3</sub> <sup>4</sup> ; B <sub>3</sub> <sup>5</sup> S <sub>3</sub> <sup>5</sup> ; B <sub>3</sub> <sup>6</sup> S <sub>3</sub> <sup>6</sup> ; B <sub>3</sub> <sup>7</sup> S <sub>3</sub> <sup>7</sup> ; B <sub>4</sub> <sup>2</sup> S <sub>4</sub> <sup>2</sup> ; B <sub>4</sub> <sup>3</sup> S <sub>4</sub> <sup>3</sup> ; B <sub>4</sub> <sup>4</sup> S <sub>4</sub> <sup>4</sup> ; B <sub>5</sub> <sup>3</sup> S <sub>5</sub> <sup>3</sup> ; B <sub>5</sub> <sup>4</sup> S <sub>5</sub> <sup>4</sup> ; B <sub>5</sub> <sup>5</sup> S <sub>5</sub> <sup>5</sup> ; B <sub>6</sub> <sup>5</sup> S <sub>6</sub> <sup>5</sup> ; B <sub>6</sub> <sup>6</sup> S <sub>6</sub> <sup>6</sup> ; B <sub>6</sub> <sup>7</sup> S <sub>6</sub> <sup>7</sup> ; B <sub>7</sub> <sup>3</sup> S <sub>7</sub> <sup>3</sup> ; B <sub>7</sub> <sup>4</sup> S <sub>7</sub> <sup>4</sup> ; B <sub>7</sub> <sup>5</sup> S <sub>7</sub> <sup>5</sup> ; B <sub>8</sub> <sup>2</sup> S <sub>8</sub> <sup>2</sup> ; B <sub>8</sub> <sup>3</sup> S <sub>8</sub> <sup>3</sup> ; B <sub>8</sub> <sup>4</sup> S <sub>8</sub> <sup>4</sup> ; S <sub>8</sub> <sup>4</sup> ; B <sub>8</sub> <sup>5</sup> S <sub>8</sub> <sup>5</sup> ; B <sub>9</sub> <sup>2</sup> S <sub>9</sub> <sup>2</sup> ; B <sub>9</sub> <sup>3</sup> S <sub>9</sub> <sup>3</sup> ; B <sub>9</sub> <sup>4</sup> S <sub>9</sub> <sup>4</sup> ; B <sub>10</sub> <sup>3</sup> S <sub>10</sub> <sup>3</sup> ; B <sub>10</sub> <sup>4</sup> S <sub>10</sub> <sup>4</sup> ; B <sub>10</sub> <sup>5</sup> S <sub>10</sub> <sup>5</sup> .	HF AMTB 1 HF AMTB 2 HF AMTB 3 HF AMTB 4 HF AMTB 5 CRF AMTB 7 CRF AMTB 8 CRF AMTB 9 CRF 4	Graves Light		
132	G <sub>6</sub> ; G <sub>7</sub> ; BC <sub>9</sub> ; BC <sub>10</sub> ; B <sub>3</sub> <sup>5</sup> S <sub>3</sub> <sup>5</sup> ; B <sub>5</sub> <sup>5</sup> S <sub>5</sub> <sup>5</sup> ; B <sub>6</sub> <sup>5</sup> S <sub>6</sub> <sup>5</sup> ; B <sub>6</sub> <sup>7</sup> S <sub>6</sub> <sup>7</sup> ; B <sub>6</sub> <sup>8</sup> S <sub>6</sub> <sup>8</sup> ; B <sub>7</sub> <sup>4</sup> S <sub>7</sub> <sup>4</sup> ; B <sub>8</sub> <sup>3</sup> S <sub>8</sub> <sup>3</sup> ; B <sub>9</sub> <sup>5</sup> S <sub>9</sub> <sup>5</sup> ; B <sub>9</sub> <sup>5</sup> S <sub>9</sub> <sup>5</sup> ; B <sub>10</sub> <sup>4</sup> S <sub>10</sub> <sup>4</sup> ; B <sub>10</sub> <sup>6</sup> S <sub>10</sub> <sup>6</sup> ; B <sub>10</sub> <sup>7</sup> S <sub>10</sub> <sup>7</sup> .		Marblehead Light		
135	C <sub>2</sub> <sup>3</sup> ; B <sub>6</sub> <sup>9</sup> S <sub>6</sub> <sup>9</sup> ; B <sub>10</sub> <sup>8</sup> S <sub>10</sub> <sup>8</sup> .		Thacher Island		
136	C <sub>2</sub> <sup>4</sup> ; B <sub>10</sub> <sup>9</sup> S <sub>10</sub> <sup>9</sup> ; B <sub>2</sub> <sup>1</sup> S <sub>2</sub> <sup>1</sup> (HD Portsmouth)		Straitsmouth Island Light		

# PROPOSED DATUM POINTS

Priority	Location	Stations Served		Type	Estimated Costs		
		Azimuth	Range	of	Const.	Material	Labor
							Total
1	126 (Green Isl. - West Shore)	C <sub>2</sub> ; G <sub>6</sub> ; G <sub>7</sub> ; BC <sub>8</sub> ; BC <sub>9</sub> ; BC <sub>10</sub> ; M <sub>2</sub> ; B <sub>2</sub> <sup>4</sup> S <sub>2</sub> <sup>4</sup> ; B <sub>3</sub> <sup>5</sup> S <sub>3</sub> <sup>5</sup> ; B <sub>4</sub> <sup>4</sup> S <sub>4</sub> <sup>4</sup> ; B <sub>5</sub> <sup>5</sup> S <sub>5</sub> <sup>5</sup> ; S <sub>5</sub> ; B <sub>6</sub> <sup>5</sup> S <sub>6</sub> <sup>5</sup> ; B <sub>7</sub> <sup>4</sup> S <sub>7</sub> <sup>4</sup> ; B <sub>8</sub> <sup>3</sup> S <sub>8</sub> <sup>3</sup> ; B <sub>9</sub> <sup>3</sup> S <sub>9</sub> <sup>3</sup> ; S <sub>9</sub> <sup>3</sup> ; B <sub>10</sub> <sup>4</sup> S <sub>10</sub> <sup>4</sup> .	BC <sub>8</sub> ; M <sub>2</sub> <sup>2</sup> ; B <sub>2</sub> <sup>4</sup> ; B <sub>3</sub> <sup>5</sup> ; B <sub>4</sub> <sup>4</sup> ; B <sub>5</sub> <sup>5</sup> ; B <sub>6</sub> <sup>5</sup> ; B <sub>7</sub> <sup>4</sup> ; B <sub>8</sub> <sup>3</sup> ; B <sub>9</sub> <sup>3</sup> ; B <sub>10</sub> <sup>4</sup> .	A	\$250	\$500	\$750
3	131 (Shag Rocks - Nahant)	C <sub>1</sub> ; G <sub>5</sub> ; M <sub>1</sub> ; M <sub>2</sub> ; BC <sub>3</sub> ; BC <sub>4</sub> ; BC <sub>5</sub> ; BC <sub>6</sub> ; BC <sub>7</sub> ; C <sub>1</sub> <sup>3</sup> ; C <sub>2</sub> <sup>1</sup> ; M <sub>1</sub> <sup>1</sup> ; M <sub>2</sub> <sup>1</sup> ; B <sub>2</sub> <sup>2</sup> S <sub>2</sub> <sup>2</sup> ; B <sub>2</sub> <sup>3</sup> S <sub>2</sub> <sup>3</sup> ; B <sub>3</sub> <sup>4</sup> S <sub>3</sub> <sup>4</sup> ; B <sub>4</sub> <sup>2</sup> S <sub>4</sub> <sup>2</sup> ; S <sub>4</sub> <sup>2</sup> ; B <sub>4</sub> <sup>3</sup> S <sub>4</sub> <sup>3</sup> ; B <sub>5</sub> <sup>3</sup> S <sub>5</sub> <sup>3</sup> ; B <sub>5</sub> <sup>4</sup> S <sub>5</sub> <sup>4</sup> ; B <sub>6</sub> <sup>4</sup> S <sub>6</sub> <sup>4</sup> ; S <sub>6</sub> <sup>4</sup> ; B <sub>7</sub> <sup>2</sup> S <sub>7</sub> <sup>2</sup> ; B <sub>7</sub> <sup>3</sup> S <sub>7</sub> <sup>3</sup> ; B <sub>8</sub> <sup>2</sup> S <sub>8</sub> <sup>2</sup> ; B <sub>9</sub> <sup>2</sup> S <sub>9</sub> <sup>2</sup> ; S <sub>9</sub> <sup>2</sup> ; B <sub>10</sub> <sup>3</sup> S <sub>10</sub> <sup>3</sup> .		B	\$ 50	\$150	\$200
3	131 (Spouting Horn - Nahant)	C <sub>2</sub> ; B <sub>3</sub> <sup>6</sup> S <sub>3</sub> <sup>6</sup> ; B <sub>5</sub> <sup>6</sup> S <sub>5</sub> <sup>6</sup> ; B <sub>6</sub> <sup>6</sup> S <sub>6</sub> <sup>6</sup> ; B <sub>7</sub> <sup>5</sup> S <sub>7</sub> <sup>5</sup> ; S <sub>7</sub> <sup>5</sup> ; B <sub>8</sub> <sup>4</sup> S <sub>8</sub> <sup>4</sup> ; B <sub>9</sub> <sup>4</sup> S <sub>9</sub> <sup>4</sup> ; B <sub>10</sub> <sup>5</sup> S <sub>10</sub> <sup>5</sup> .	B <sub>3</sub> <sup>6</sup> ; B <sub>6</sub> <sup>6</sup> ; B <sub>7</sub> <sup>5</sup> ; B <sub>8</sub> <sup>4</sup> .	A	\$250	\$500	\$750
2	131 (Great Pig Rocks)	BC <sub>4</sub> ; BC <sub>5</sub> ; C <sub>2</sub> ; B <sub>3</sub> <sup>6</sup> S <sub>3</sub> <sup>6</sup> ; B <sub>7</sub> <sup>7</sup> S <sub>7</sub> <sup>7</sup> ; B <sub>4</sub> <sup>2</sup> S <sub>4</sub> <sup>2</sup> ; B <sub>5</sub> <sup>4</sup> S <sub>5</sub> <sup>4</sup> ; B <sub>6</sub> <sup>6</sup> S <sub>6</sub> <sup>6</sup> ; B <sub>7</sub> <sup>7</sup> S <sub>7</sub> <sup>7</sup> ; B <sub>7</sub> <sup>5</sup> S <sub>7</sub> <sup>5</sup> ; B <sub>8</sub> <sup>4</sup> S <sub>8</sub> <sup>4</sup> ; B <sub>9</sub> <sup>5</sup> S <sub>9</sub> <sup>5</sup> ; B <sub>10</sub> <sup>6</sup> S <sub>10</sub> <sup>6</sup> ; B <sub>9</sub> <sup>5</sup> S <sub>9</sub> <sup>5</sup> ; B <sub>10</sub> <sup>6</sup> S <sub>10</sub> <sup>6</sup> ; B <sub>8</sub> <sup>6</sup> S <sub>8</sub> <sup>6</sup> ; S <sub>6</sub> .	B <sub>3</sub> <sup>6</sup> ; B <sub>7</sub> <sup>7</sup> ; B <sub>6</sub> <sup>6</sup> ; B <sub>8</sub> <sup>7</sup> ; B <sub>9</sub> <sup>5</sup> ; B <sub>8</sub> <sup>4</sup> ; B <sub>9</sub> <sup>5</sup> ; B <sub>10</sub> <sup>6</sup> ; B <sub>10</sub> <sup>6</sup> .	A	\$250	\$500	\$750

PROPOSED DATUM POINTS (Cont'd)

Priority	Location	Stations Served		Type	Estimated Costs			
		Azimuth	Range	of	Const.	Material	Labor	Total
3	137 (Plum Island)	C <sub>2</sub> <sup>4</sup> , B <sub>10</sub> <sup>9</sup> S <sub>10</sub> <sup>9</sup> , B <sub>10</sub> <sup>10</sup> S <sub>10</sub> <sup>10</sup>	C <sub>2</sub> <sup>4</sup> , B <sub>10</sub> <sup>9</sup>	A	\$250	\$500	\$750	
		B <sub>2</sub> <sup>1</sup> S <sub>2</sub> <sup>1</sup> (HD Portsmouth)	B <sub>10</sub> <sup>10</sup>					
		B <sub>2</sub> <sup>2</sup> S <sub>2</sub> <sup>2</sup> (HD Portsmouth)						
NOTES: A - Dolphin type piling made up of five piles					TOTAL	\$1050	\$2150	\$3200
B - Pole erected on rocks.								

Minots Light and Outer Brewster Dock are the only satisfactory ranging points for DPF's in vicinity of Boston Harbor.

No adequate ranging points exist for DPF's located at Location numbers 124, 130, 131, 132, 133, 134, 136, and 137. It is therefore considered necessary that the ranging datum points listed above be constructed. Priorities 1 and 2 have been given to datum points necessary to stations of Battery No. 206 which will remain in maintenance classification "A"; all other proposed datum points are placed in Priority 3.



7

BATTERY FIRE CONTROL ELEMENTS										
BATTERY <u>North Minas</u>					TACTICAL NO. <u>M2</u>					
LOCATION NO. <u>122</u>					FIELD OF FIRE EXHIBIT <u>1-D</u>					
LOC NO.	SITE NO.	STA	ELEV	H. I.	NO. AND TYP. OF FC INSTR.	ARC OF VIEW		MEN	TYPE OF CONST.	COMB. WITH STA.
						LL	RL			
122	1-D	M2 CP	50	50	AI	90	270	4	Cottage	
127	1-I	M <sub>2</sub> <sup>1</sup>	50	58	AI	157	315	6	Cottage	B <sub>4</sub> <sup>3</sup> S <sub>4</sub> <sup>3</sup> C <sub>2</sub> <sup>1</sup> CP
124	1-B	M <sub>2</sub> <sup>2</sup>	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 <sub>2</sub> <sup>1</sup>	M <sub>2</sub> <sup>2</sup>	293.898	6103.39

FROM	TO	AZIMUTH	LENGTH

~~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~~

~~SECRET~~

10

RADAR EQUIPMENT

SCR-296

AUTHORITY--T/BA 4 C3 dated Jan 15, 1943

LOC NO.	SITE NO.	ASSIGNMENTS			GROUND ELEVATION	EFFECTIVE ANTENNA HEIGHT	EXHIBIT
		PRIMARY	ADDITIONAL				
112A	1-A	Cons 208	Cons 105	Long	150	256	5-B-1
120	1-A	McCook	Cons 206	Cons 207	97	153	5-B-2
115	1-E	Long	Murphy	Cons 208	60	166	5-B-3
129	1-C	Whipple	McCook	None	73	179	5-B-4
126	1-B	Jewell	Cons 207	Whipple	65	171	5-B-5
116	1-B	Cons 105	Gardner	Jewell	100	206	5-B-6
127	1-K	Cons 207	Whipple	McCook	50	156	5-B-7
131	4-A	Gardner	Jewell	Murphy	53	111	5-B-8
132	3-A-1	Cons 206	Long	Gardner	70	176	5-B-9
133	1-A	Murphy	Cons 105	Cons 206	72	171	5-B-10

SCR-582

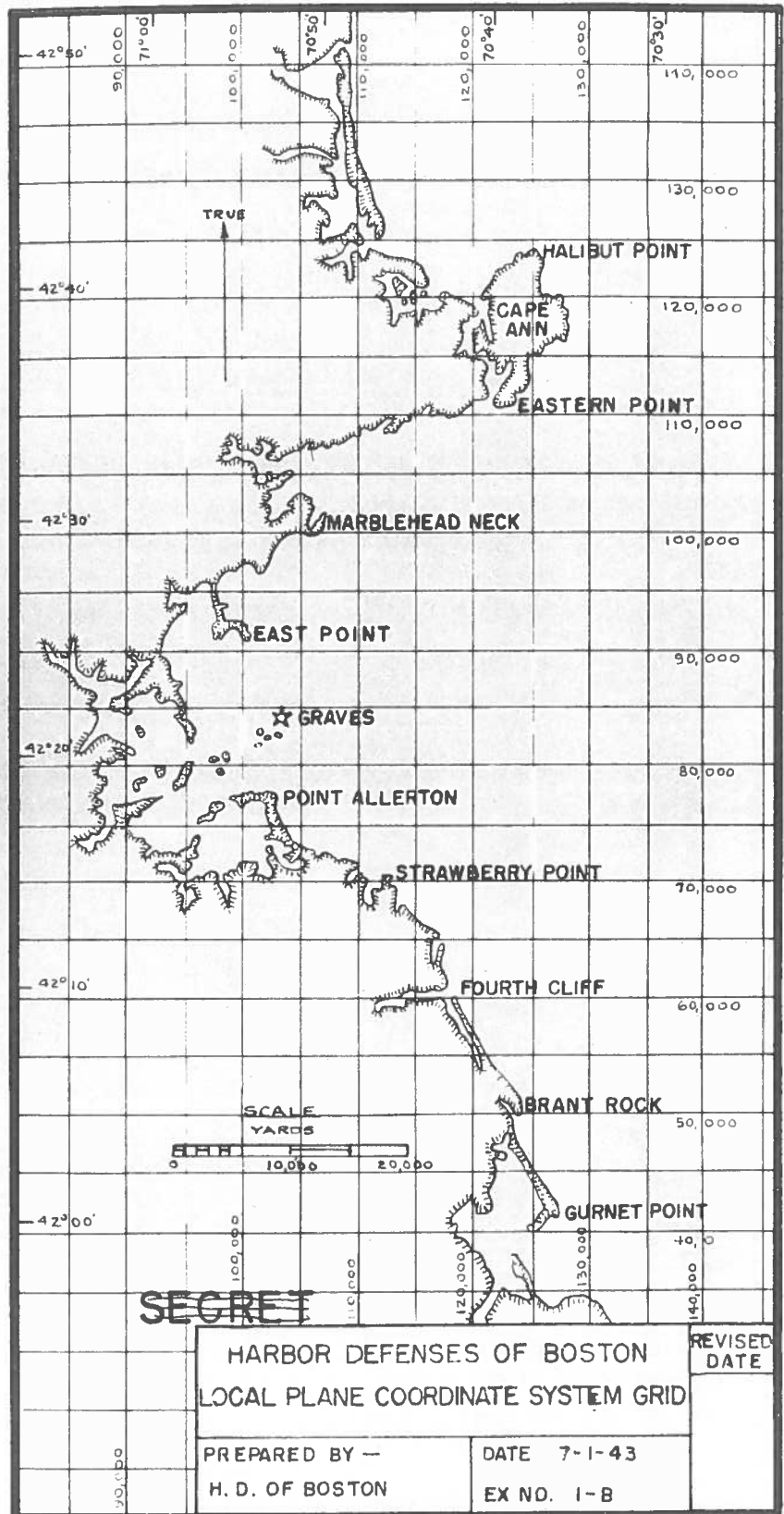
AUTHORITY--Letter, Hq NES, file 413.68, dated Nov. 7, 1942;  
2nd Ind. Hq C of E, file 665 CM 19150 SPEOF, dated Nov. 25, 1942  
and 3rd Ind, OC Sig O, file SPSRB 665.1 HD(1st Ser C)(11-7-42)  
dated Dec. 2, 1942.

LOC NO.	SITE NO.	ASSIGNMENT	GROUND ELEVATION	EFFECTIVE ANTENNA HEIGHT	EXHIBIT
120	1-B	Harbor Surveillance	110	136	5-B-11
127	1-E	Harbor Surveillance	100	127	5-B-12

35

FORM # 9

~~SECRET~~



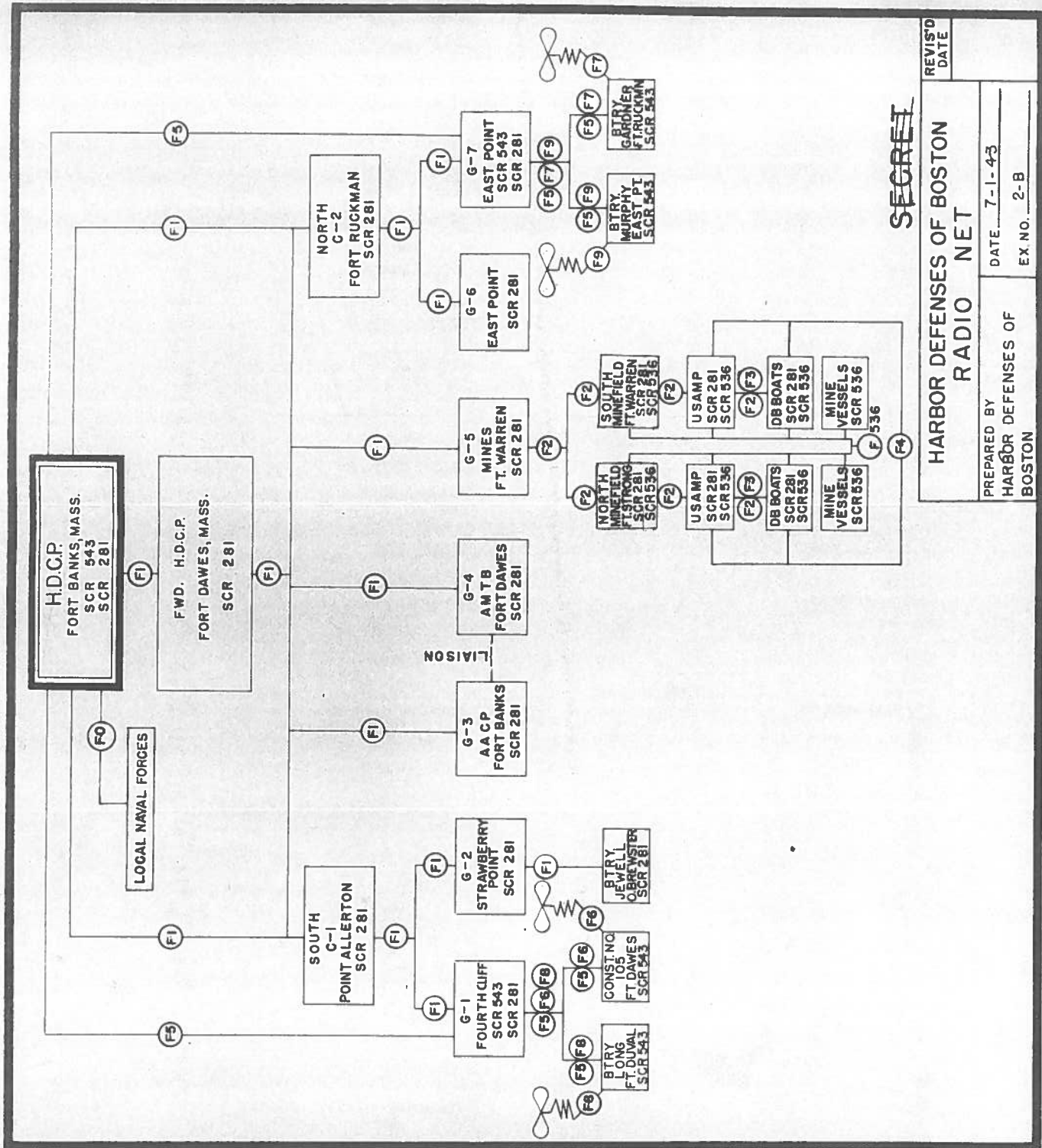
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HARBOR DEFENSES OF BOSTON  
LOCAL PLANE COORDINATE SYSTEM GRID

REVISED  
DATE

PREPARED BY —  
H. D. OF BOSTON

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



**H.D.C.P.**  
FORT BANKS, MASS.  
SCR 543  
SCR 281

**F.W.D. H.D.C.P.**  
FORT DAWES, MASS.  
SCR 281

LOCAL NAVAL FORCES

**SOUTH C-1**  
POINT ALLERTON  
SCR 281

**G-1**  
FOURTH CLIFF  
SCR 543  
SCR 281

**G-2**  
STRAWBERRY POINT  
SCR 281

**G-3**  
A.A.C.P.  
FORT BANKS  
SCR 281

**G-4**  
A.M.T.B.  
FORT DAWES  
SCR 281

**G-5**  
MINES  
FT. WARREN  
SCR 281

**G-6**  
EAST POINT  
SCR 281

**G-7**  
EAST POINT  
SCR 543  
SCR 281

**NORTH C-2**  
FORT RUCKMAN  
SCR 281

**BTRY LONG**  
FT. DAWES  
SCR 543

**CONST NO**  
FT. DAWES  
SCR 543

**BTRY JEWELL**  
OBERLIN  
SCR 281

**NORTH MINFIELD**  
FT. STRONG  
SCR 281  
SCR 536

**SOUTH MINFIELD**  
FT. WARREN  
SCR 281  
SCR 536

**USAMP**  
SCR 281  
SCR 536

**DB BOATS**  
SCR 281  
SCR 536

**MINE VESSELS**  
SCR 536

**BTRY MURPHY**  
EAST PT.  
SCR 543

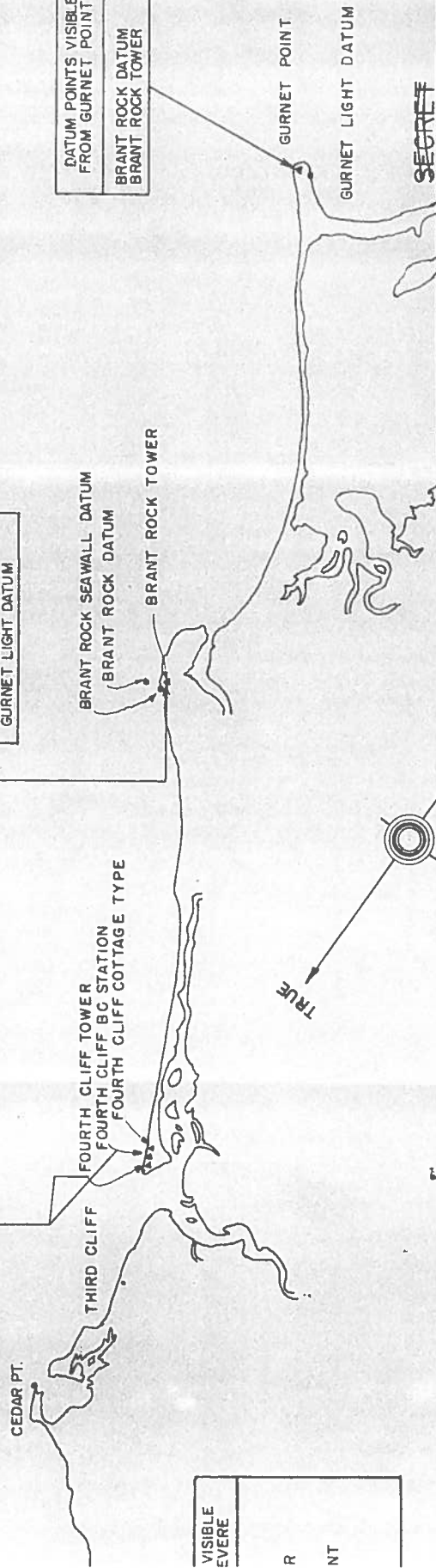
**BTRY GARDNER**  
FT. RUCKMAN  
SCR 543

DATUM POINT'S VISIBLE FROM FORT STANDISH	DATUM POINT'S VISIBLE FROM OUTER BREWSTER
LAG ROCKS, NAHANT GREEN ISLAND RAVES LIGHT OSTON LIGHT ATER, BREWSTER MC COOK BUMPUS STEVENSON WOLF ISLAND REAT PIG ROCKS ER ISLAND	GRAVES LIGHT EAST POINT SHAG ROCKS GREAT PIG ROCKS

DATUM POINTS VISIBLE FROM FOURTH CLIFF TOWER & FOURTH CLIFF B.C. STATION
BRANT ROCK TOWER BRANT ROCK DATUM BRANT ROCK SEAWALL DATUM THIRD CLIFF CEDAR POINT
FOURTH CLIFF COTTAGE TYPE SAME AS TOWER EXCEPT NOT ABLE TO SEE THIRD CLIFF

DATUM POINTS VISIBLE FROM BRANT ROCK
FOURTH CLIFF THIRD CLIFF CEDAR POINT GURNET LIGHT DATUM

DATUM POINTS VISIBLE FROM GURNET POINT
BRANT ROCK DATUM BRANT ROCK TOWER



VISIBLE EVERE
R
NT

SECRET

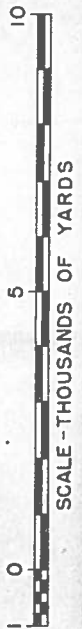
REVISED  
DATE

# HARBOR DEFENSES OF BOSTON DATUM POINTS

PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

DATE 7-1-43

EX. NO. 3-B-1



SCALE 80,000

DATUM POINTS VISIBLE FROM EAST PT. 1A & 2A	DATUM POINTS VISIBLE FROM EAST PT. 4A & 5A	DATUM POINTS VISIBLE FROM FORT DAWES	DATUM POINTS VISIBLE FROM FORT STRONG	DATUM POINTS VISIBLE FROM FORT WARREN	DATUM POINTS VISIBLE FROM FORT STANDISH	DATUM POINTS VISIBLE FROM FORT RUCKMAN
DEER ISLAND BC MCCOOK, BC, BUMPUS GRAVES LIGHT GREAT PIG ROCKS EAST POINT OUTER BREWSTER BOSTON LIGHT CAMP ISLAND GREEN ISLAND MARBLEHEAD LIGHT	MARBLEHEAD LIGHT GRAVES LIGHT GREAT PIG ROCKS EAST POINT OUTER BREWSTER BOSTON LIGHT CAMP ISLAND GREEN ISLAND	BUMPUS CRF MCCOOK BASINGER CRF BOSTON LIGHT CAMP ISLAND OUTER BREWSTER GREEN ISLAND GRAVES LIGHT SHAG ROCKS, NAHANT STEVENSON BC	BC BUMPUS, BC MCCOOK BOSTON LIGHT BC STEVENSON OUTER BREWSTER CAMP ISLAND GREEN ISLAND DEER ISLAND GRAVES LIGHT SHAG ROCKS, NAHANT	SHAG ROCKS, CAMP ISLAND GREEN ISLAND GRAVES LIGHT BOSTON LIGHT OUTER BREWSTER BC WHIPPLE, CRF WILLIAMS EAST POINT	SHAG ROCKS, NAHANT GREEN ISLAND GRAVES LIGHT BOSTON LIGHT OUTER BREWSTER BC MCCOOK BC BUMPUS BC STEVENSON CAMP ISLAND GREAT PIG ROCKS DEER ISLAND	GRAVES LIGHT EAST POINT OUTER BREWSTER MARBLEHEAD LIGHT

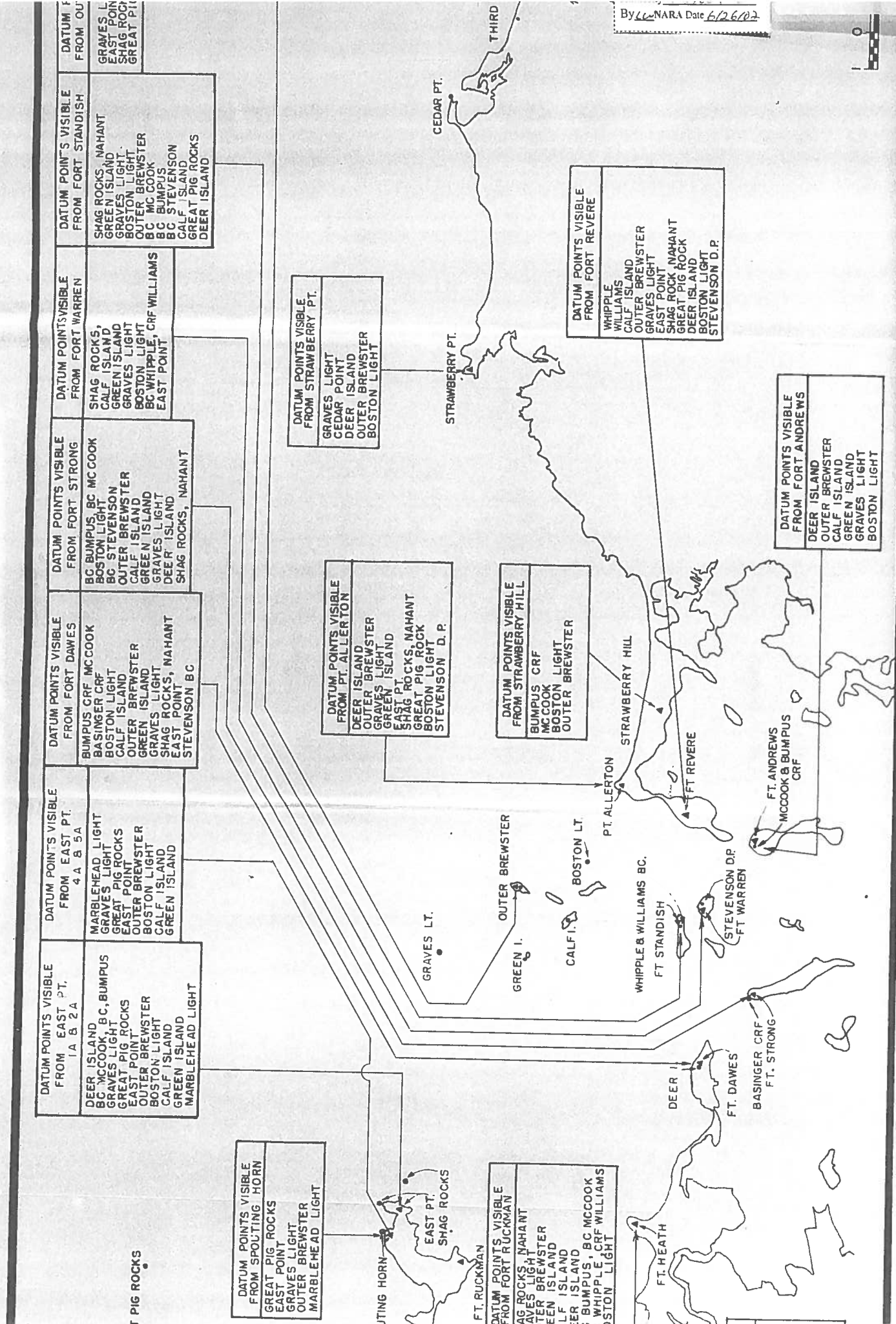
DATUM POINTS VISIBLE FROM SPOUTING HORN
GREAT PIG ROCKS EAST POINT GRAVES LIGHT OUTER BREWSTER MARBLEHEAD LIGHT

DATUM POINTS VISIBLE FROM PT. ALLERTON
DEER ISLAND OUTER BREWSTER GRAVES LIGHT GREEN ISLAND EAST PT. SHAG ROCKS, NAHANT GREAT PIG ROCK BOSTON LIGHT STEVENSON D.P.

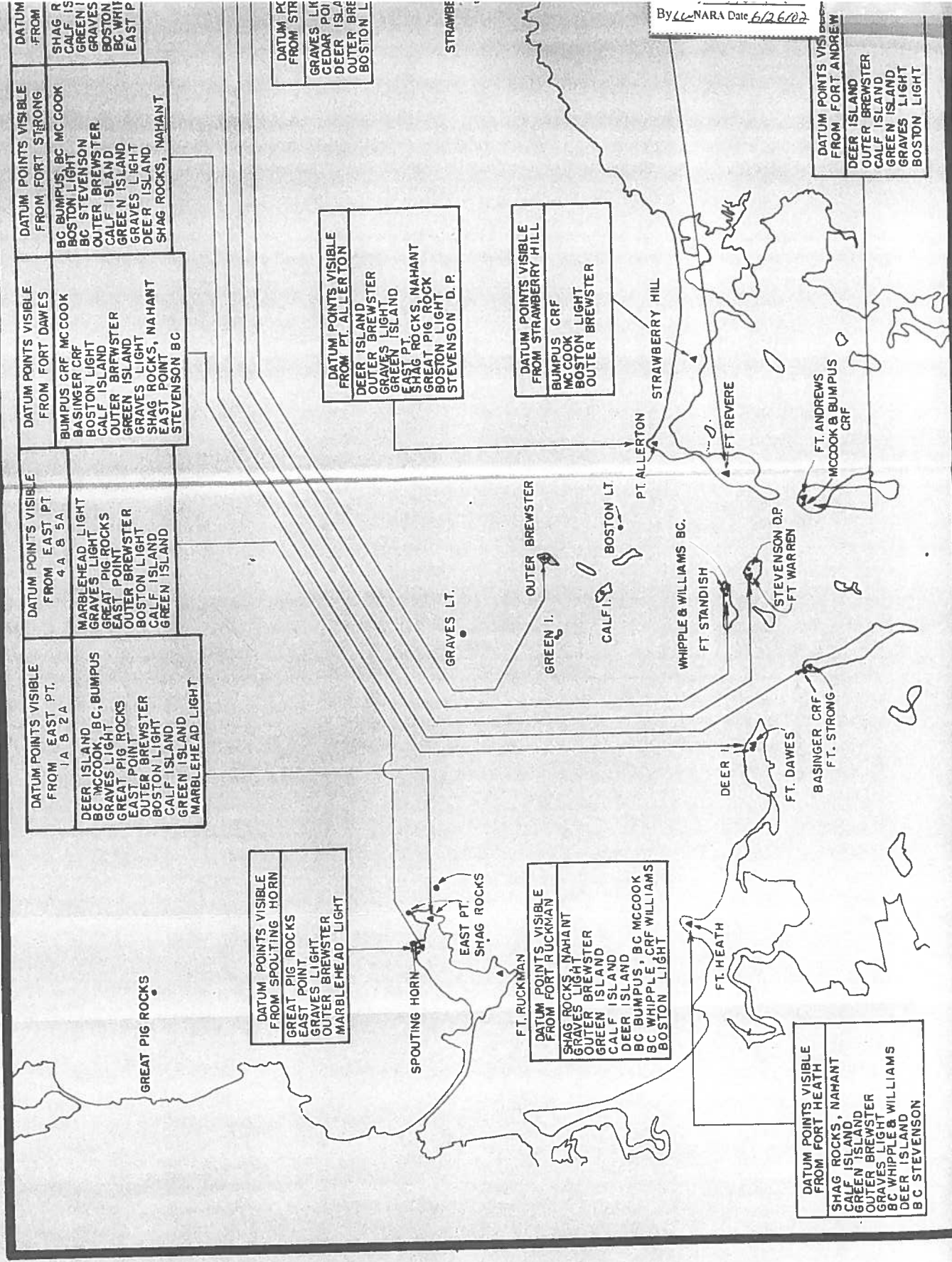
DATUM POINTS VISIBLE FROM FORT RUCKMAN
AG ROCKS, NAHANT GRAVES LIGHT OUTER BREWSTER GREEN ISLAND CAMP ISLAND DEER ISLAND BUMPUS, BC MCCOOK WHIPPLE, CRF WILLIAMS BOSTON LIGHT

DATUM POINTS VISIBLE FROM FORT REVERE
WHIPPLE WILLIAMS CAMP ISLAND OUTER BREWSTER GRAVES LIGHT EAST POINT SHAG ROCK, NAHANT GREAT PIG ROCK DEER ISLAND BOSTON LIGHT STEVENSON D.P.

DATUM POINTS VISIBLE FROM FORT ANDREWS
DEER ISLAND OUTER BREWSTER CAMP ISLAND GREEN ISLAND GRAVES LIGHT BOSTON LIGHT







By NARA Date 6/26/07

DATUM POINTS VISIBLE FROM EAST PT. 1A & 2A	DATUM POINTS VISIBLE FROM EAST PT. 4A & 5A	DATUM POINTS VISIBLE FROM FORT DAWES	DATUM POINTS VISIBLE FROM FORT STRONG	DATUM FROM
DEER ISLAND BC MCCOOK, BC, BUMPUS GRAVES LIGHT GREAT PIG ROCKS EAST POINT OUTER BREWSTER BOSTON LIGHT CALT ISLAND MARBLEHEAD LIGHT	MARBLEHEAD LIGHT GRAVES LIGHT GREAT PIG ROCKS EAST POINT OUTER BREWSTER BOSTON LIGHT CALT ISLAND GREEN ISLAND	BUMPUS CRF MCCOOK BASINGER CRF BOSTON LIGHT CALT ISLAND OUTER BREWSTER GREEN ISLAND GRAVES LIGHT SHAG ROCKS, NAHANT EAST POINT STEVENSON BC	BC BUMPUS, BC MCCOOK BOSTON LIGHT BC STEVENSON OUTER BREWSTER CALT ISLAND GREEN ISLAND GRAVES LIGHT DEER ISLAND, NAHANT SHAG ROCKS	SHAG R CALT IS GREEN I BOSTON BC WHIT EAST P

DATUM POINTS VISIBLE FROM SPOUTING HORN
GREAT PIG ROCKS EAST POINT GRAVES LIGHT OUTER BREWSTER MARBLEHEAD LIGHT

DATUM POINTS VISIBLE FROM PT. ALLERTON
DEER ISLAND OUTER BREWSTER GRAVES LIGHT GREEN ISLAND EAST PT. SHAG ROCKS, NAHANT GREAT PIG ROCK BOSTON LIGHT STEVENSON D.P.

DATUM POINTS VISIBLE FROM FORT RUCKMAN
SHAG ROCKS, NAHANT OUTER BREWSTER GREEN ISLAND CALT ISLAND DEER ISLAND BC BUMPUS, BC MCCOOK BC WHIPPLE CRF WILLIAMS BOSTON LIGHT

DATUM POINTS VISIBLE FROM STRAWBERRY HILL
BUMPUS CRF MCCOOK LIGHT BOSTON LIGHT OUTER BREWSTER

DATUM POINTS VISIBLE FROM FORT HEATH
SHAG ROCKS, NAHANT CALT ISLAND GREEN ISLAND OUTER BREWSTER GRAVES LIGHT BC WHIPPLE & WILLIAMS DEER ISLAND BC STEVENSON

DATUM POINTS VISIBLE FROM FORT ANDREW
DEER ISLAND OUTER BREWSTER CALT ISLAND GREEN ISLAND GRAVES LIGHT BOSTON LIGHT



VISIBLE POINT LIGHT
GHATHOUSE LIGHT

POINTS VISIBLE FROM COOLIDGE POINT ROCKS
------------------------------------------------

DATUM POINTS VISIBLE FROM GALES POINT
COOLIDGE POINT TOWER
MARBLEHEAD LIGHT
GREAT PIG ROCKS

DATUM POINTS VISIBLE FROM MARBLEHEAD NECK
EAST POINT
SPOUTING HORN
GREAT PIG ROCKS
EASTERN POINT LIGHT
COOLIDGE POINT TOWER
CALF ISLAND
GREEN ISLAND
GRAVES LIGHT
OUTER BREWSTER

TRUE

LEGEND  
▲ BASE END STATIONS  
• DATUM POINTS

GRAVES LIGHT  
OUTER BREWSTER

GREEN I., CALF IS.

SCALE - THOUSANDS OF YARDS  
0 5 10

SCALE 80,000  
**SECRET**

EAST POINT  
SPOUTING HORN

GREAT PIG ROCKS

MARBLEHEAD NECK

MARBLEHEAD LIGHT

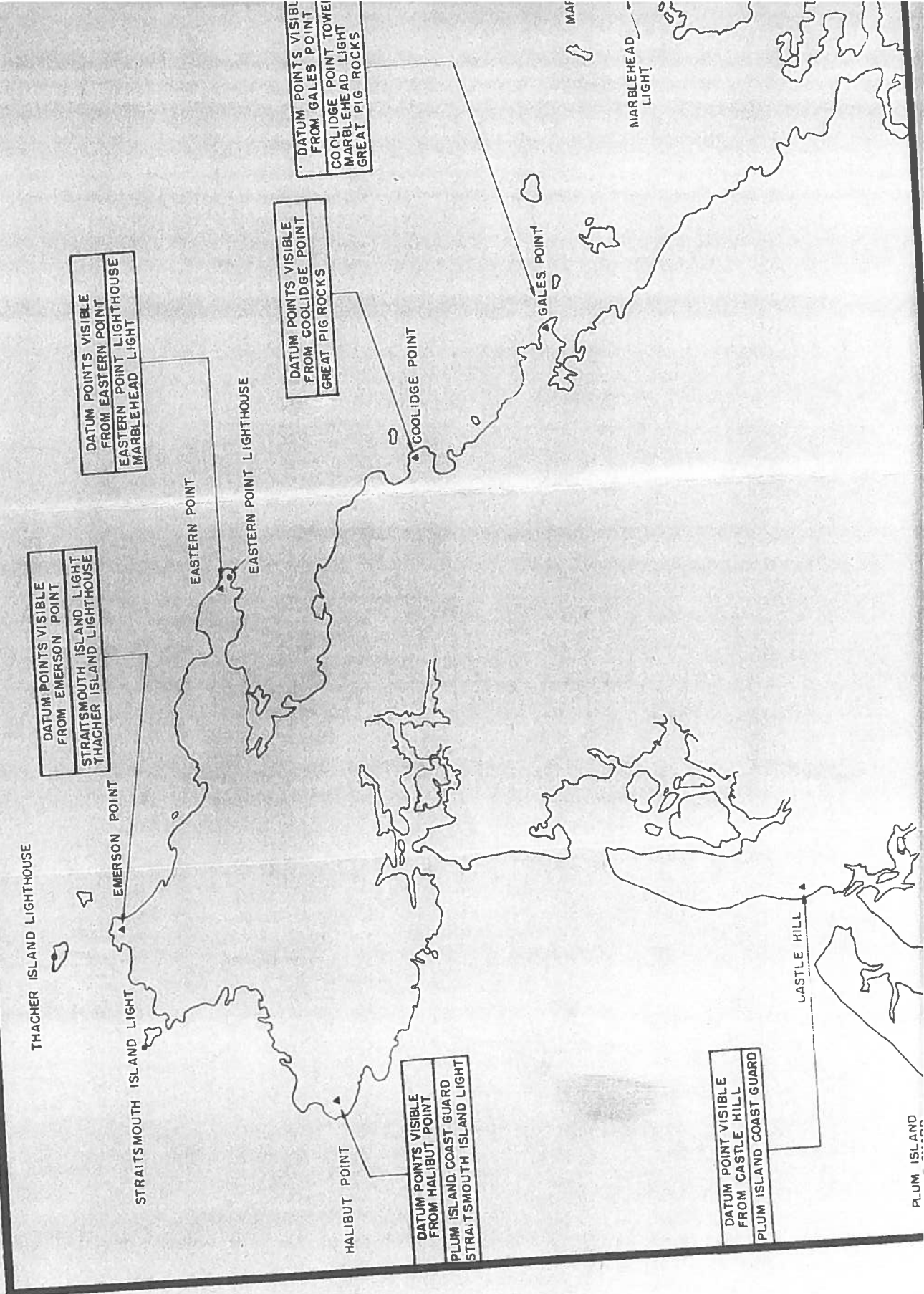
ILES POINT

REVISED  
DATE

# HARBOR DEFENSES OF BOSTON DATUM POINTS

PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

DATE 7-1-43  
EX. NO. 3-B-2



THACHER ISLAND LIGHTHOUSE

STRAITSMOUTH ISLAND LIGHT

EMERSON POINT

EASTERN POINT

EASTERN POINT LIGHTHOUSE

DATUM POINTS VISIBLE FROM HALIBUT POINT  
PLUM ISLAND COAST GUARD  
STRAITSMOUTH ISLAND LIGHT

HALIBUT POINT

COOLIDGE POINT

DATUM POINTS VISIBLE FROM COOLIDGE POINT  
GREAT PIG ROCKS

GALE'S POINT

MARBLEHEAD LIGHT

CASTLE HILL

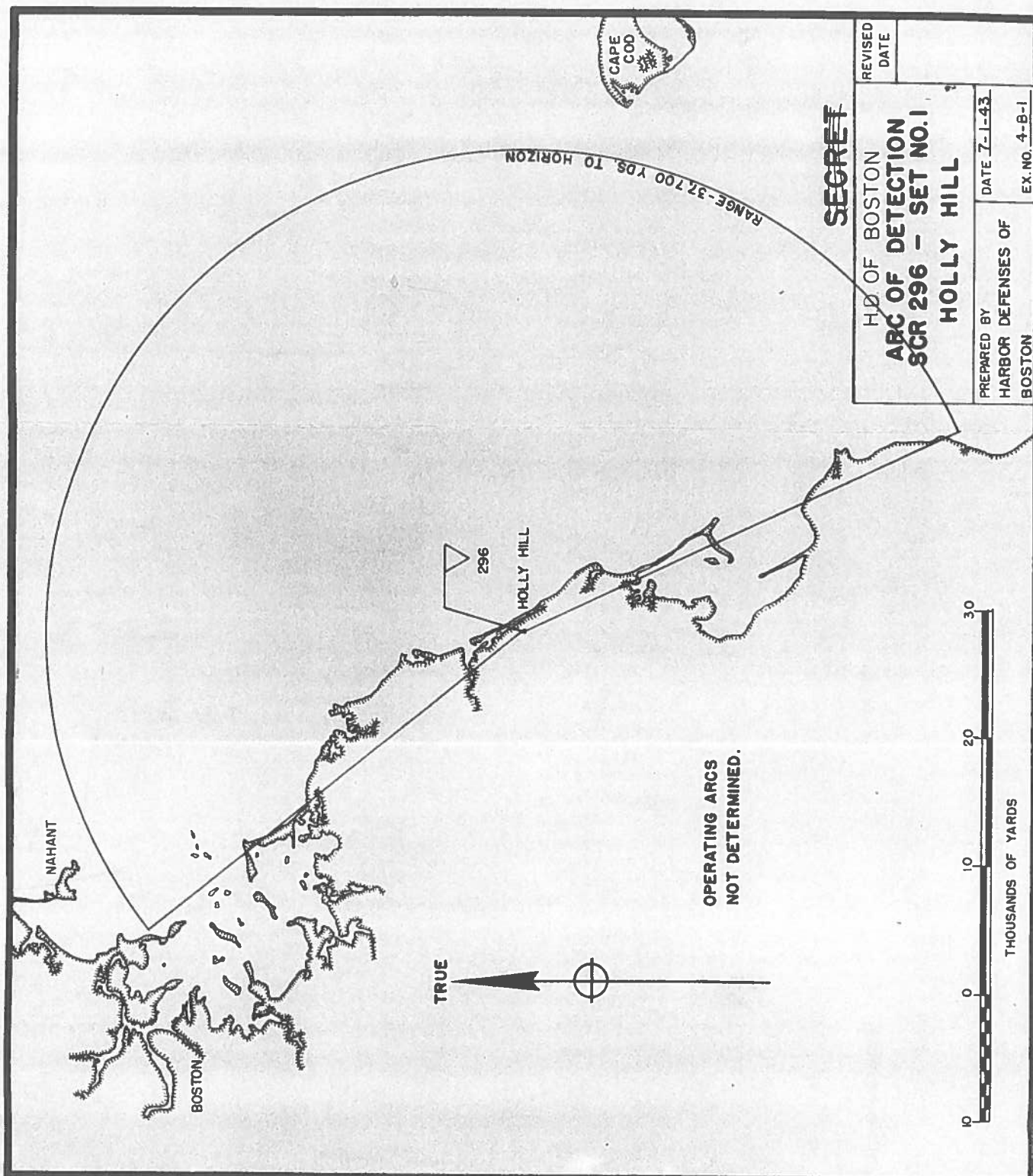
DATUM POINT VISIBLE FROM CASTLE HILL  
PLUM ISLAND COAST GUARD

PLUM ISLAND

DATUM POINTS VISIBLE FROM GALE'S POINT  
COOLIDGE POINT TOWER  
MARBLEHEAD LIGHT  
GREAT PIG ROCKS

DATUM POINTS VISIBLE FROM EASTERN POINT  
EASTERN POINT LIGHTHOUSE  
MARBLEHEAD LIGHT

DATUM POINTS VISIBLE FROM EMERSON POINT  
STRAITSMOUTH ISLAND LIGHT  
THACHER ISLAND LIGHTHOUSE



**SECRET**

REvised  
DATE

H.Q. OF BOSTON

**ARC OF DETECTION**  
**SCR 296 - SET NO. 1**

**HOLLY HILL**

DATE 7-1-43

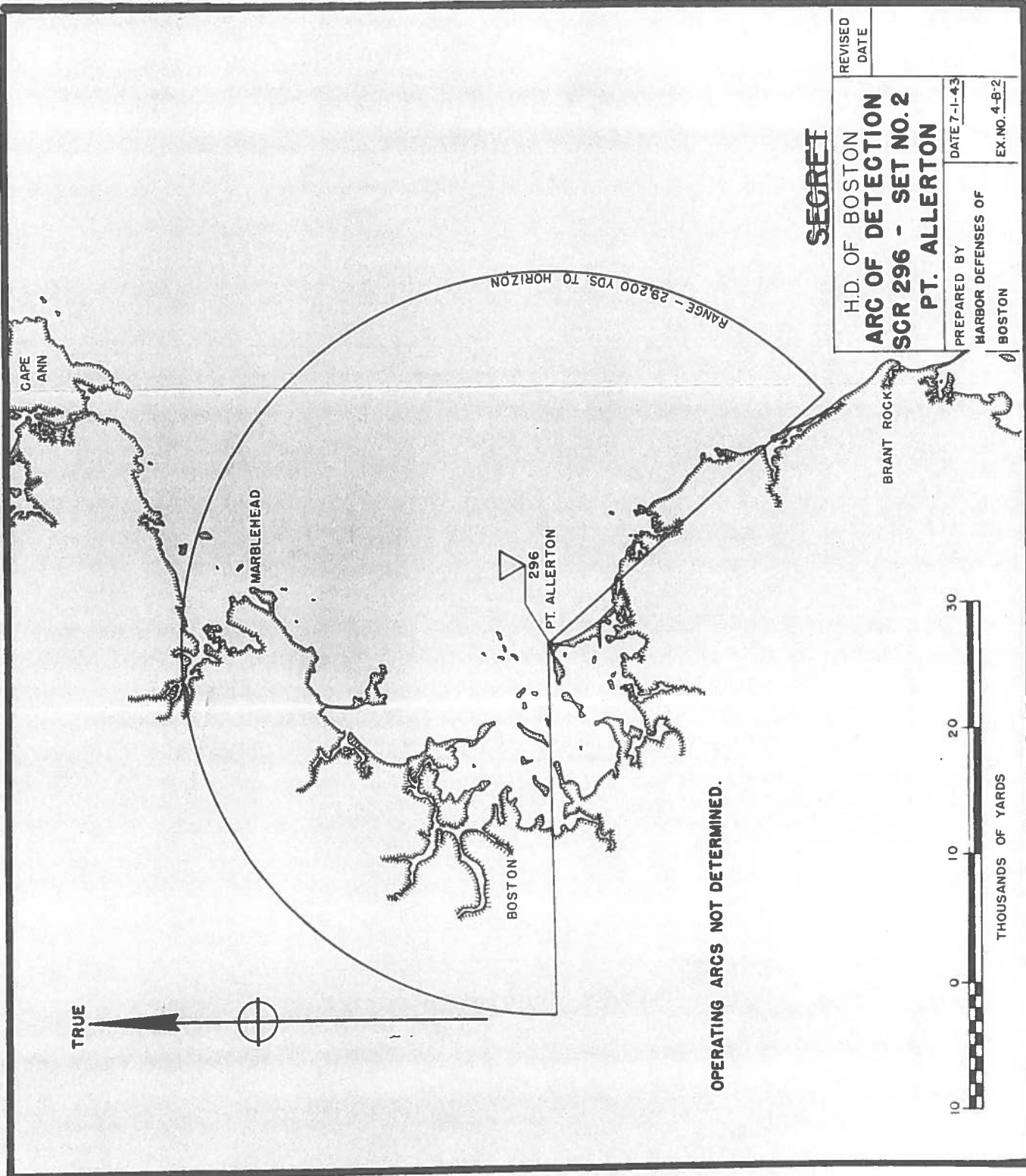
PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

EX. NO. 4-B-1

TRUE

OPERATING ARCS  
NOT DETERMINED.

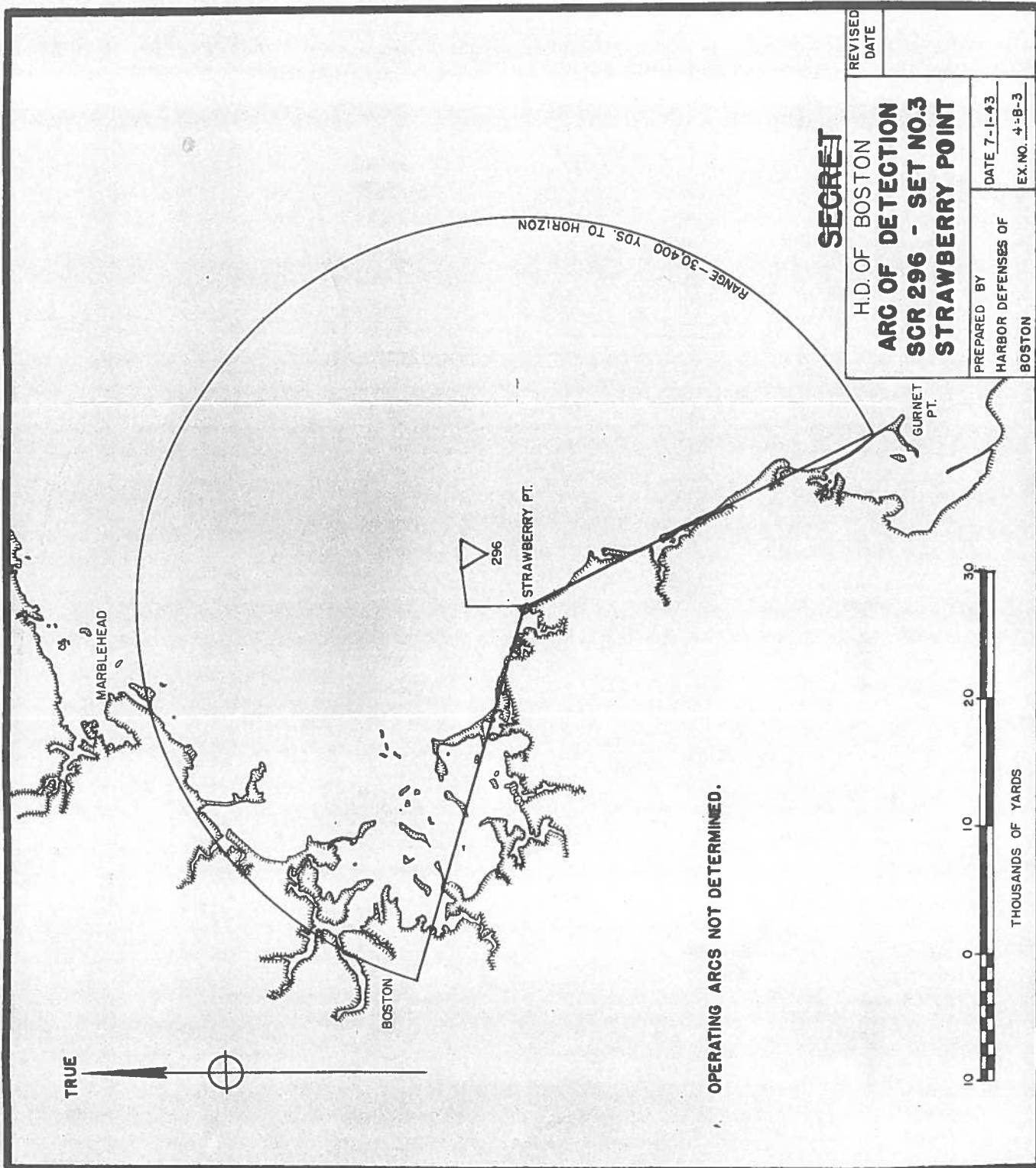
THOUSANDS OF YARDS



**SECRET**

H.D. OF BOSTON	
ARC OF DETECTION	
SCR 296 - SET NO. 2	
PT. ALLERTON	
REVISOR	DATE
DATE 7-1-43	EX. NO. 4-B-2
PREPARED BY	HARBOR DEFENSES OF
BOSTON	





**SECRET**

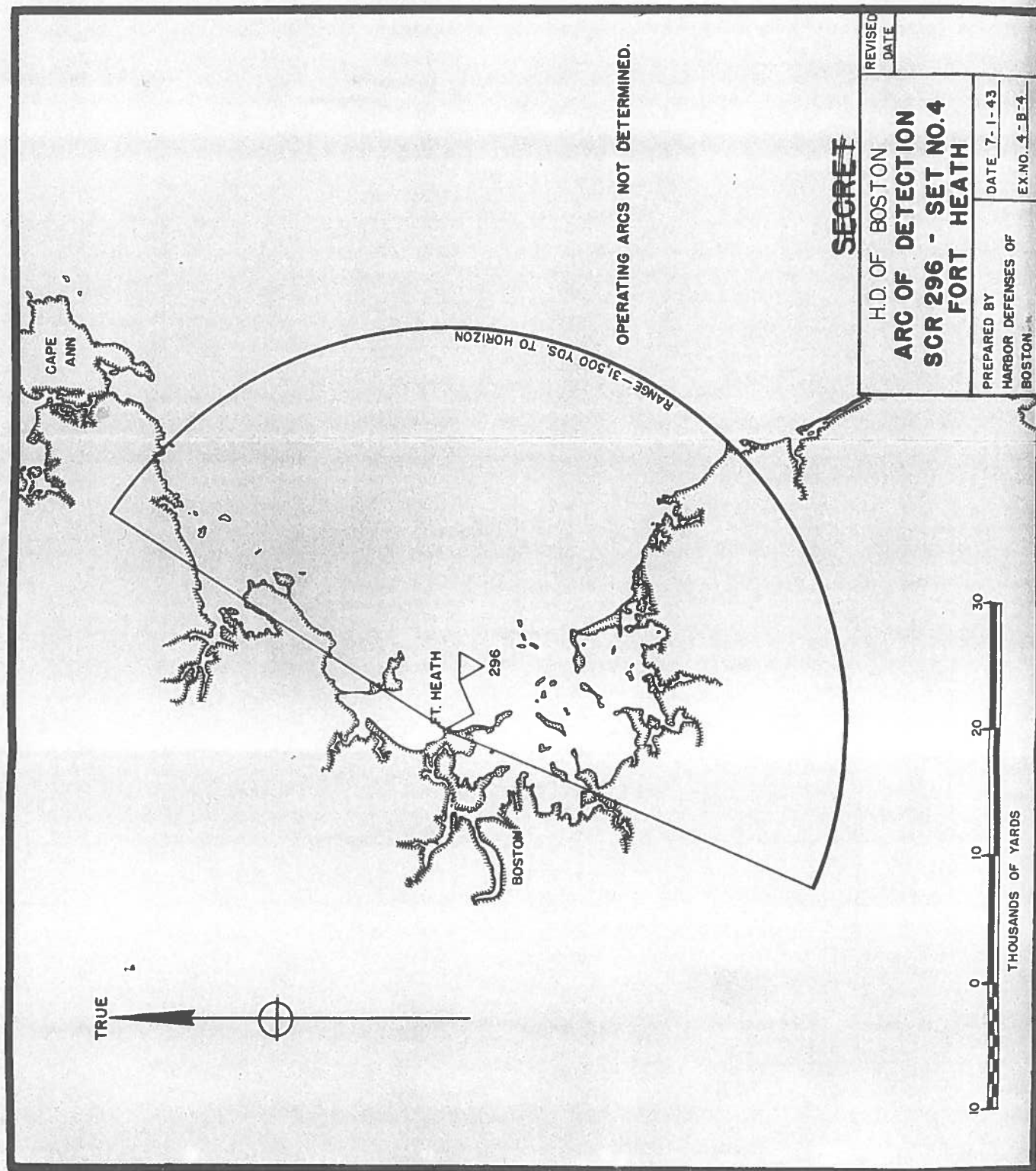
REVISED  
DATE

H.D. OF BOSTON

**ARC OF DETECTION  
SCR 296 - SET NO. 3  
STRAWBERRY POINT**

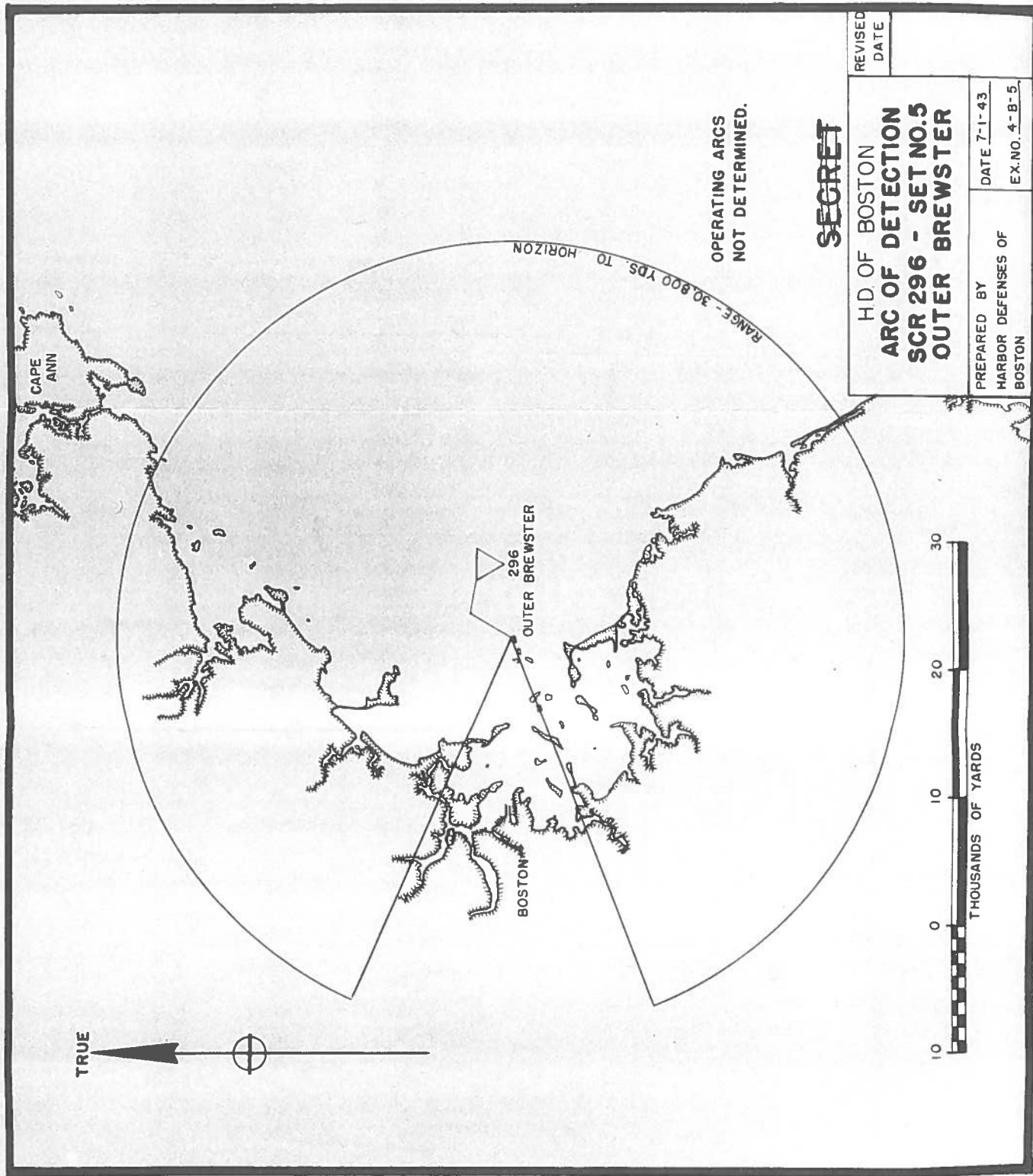
PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

DATE 7-1-43  
EX. NO. 4-B-3



**SECRET**

REVISED DATE	
H.D. OF BOSTON	
<b>ARC OF DETECTION</b>	
<b>SCR 296 - SET NO.4</b>	
<b>FORT HEATH</b>	
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43 EX. NO. 4-B-4



OPERATING ARCS  
NOT DETERMINED.

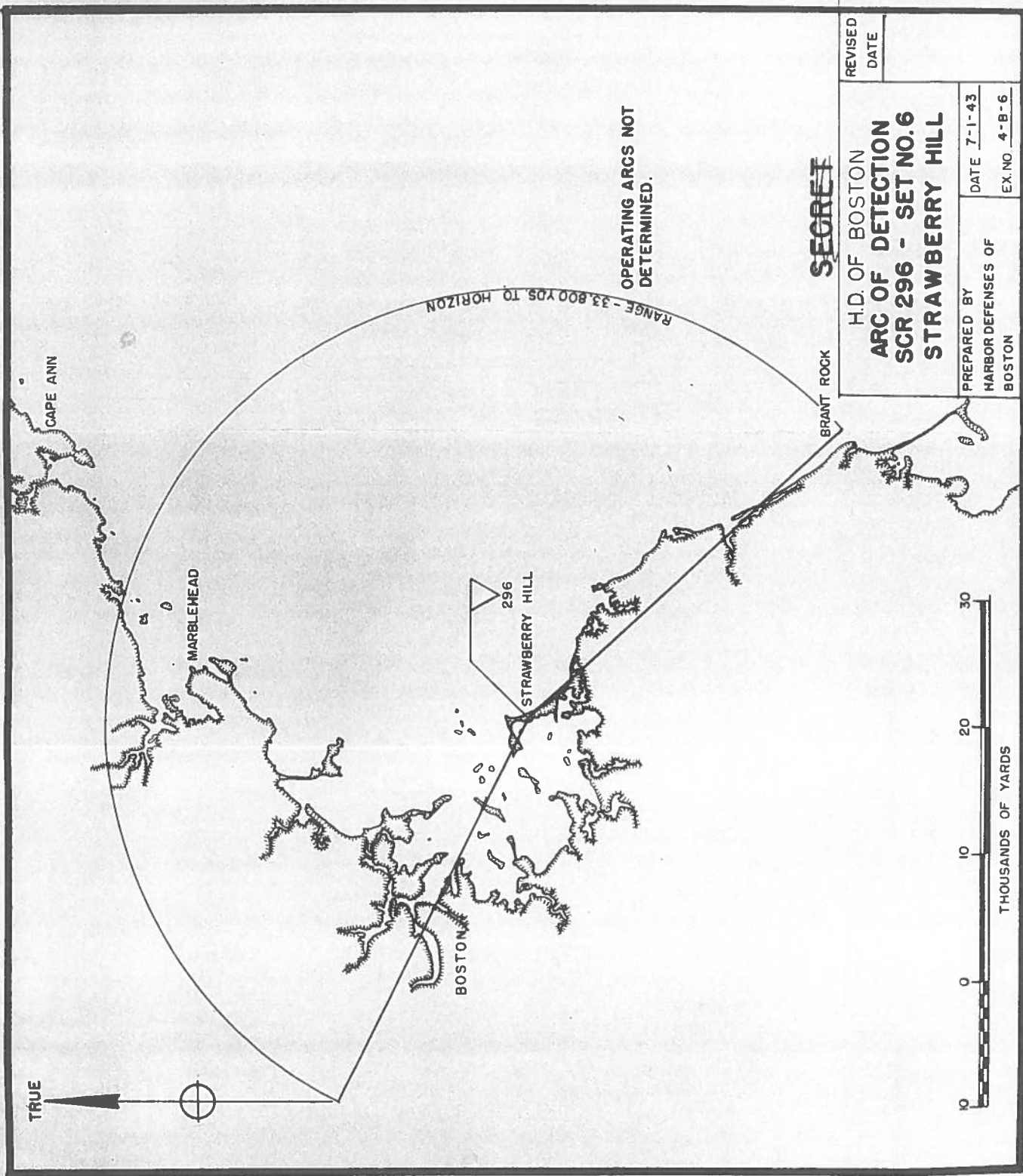
**SECRET**

REVISED  
DATE

HD OF BOSTON  
**ARC OF DETECTION  
SCR 296 - SET NO. 5  
OUTER BREWSTER**

PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

DATE 7-1-43  
EX. NO. 4-B-5



**SECRET**

REVISED  
DATE

H.D. OF BOSTON

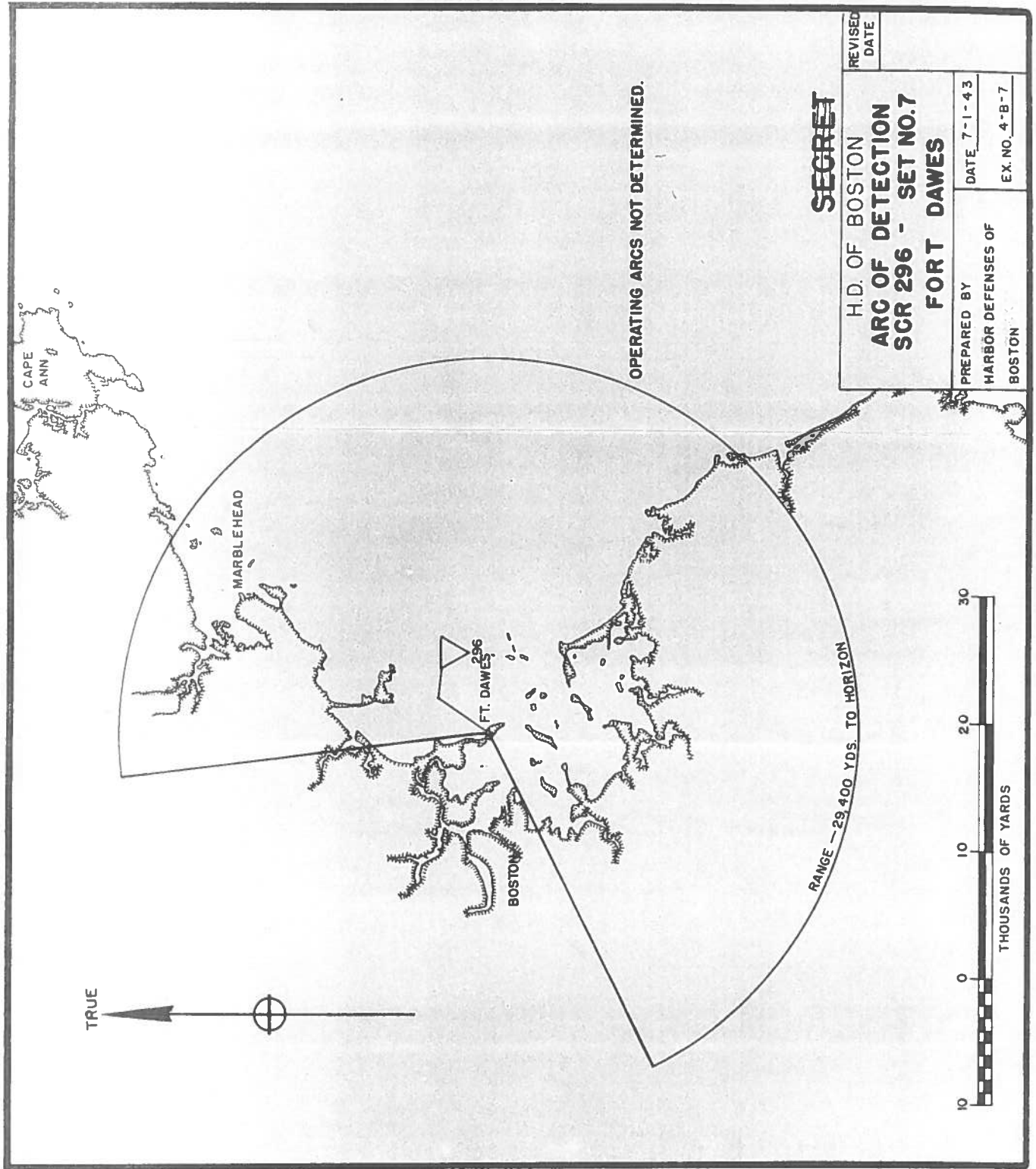
**ARC OF DETECTION  
SCR 296 - SET NO. 6  
STRAWBERRY HILL**

DATE 7-1-43

EX NO 4-B-6

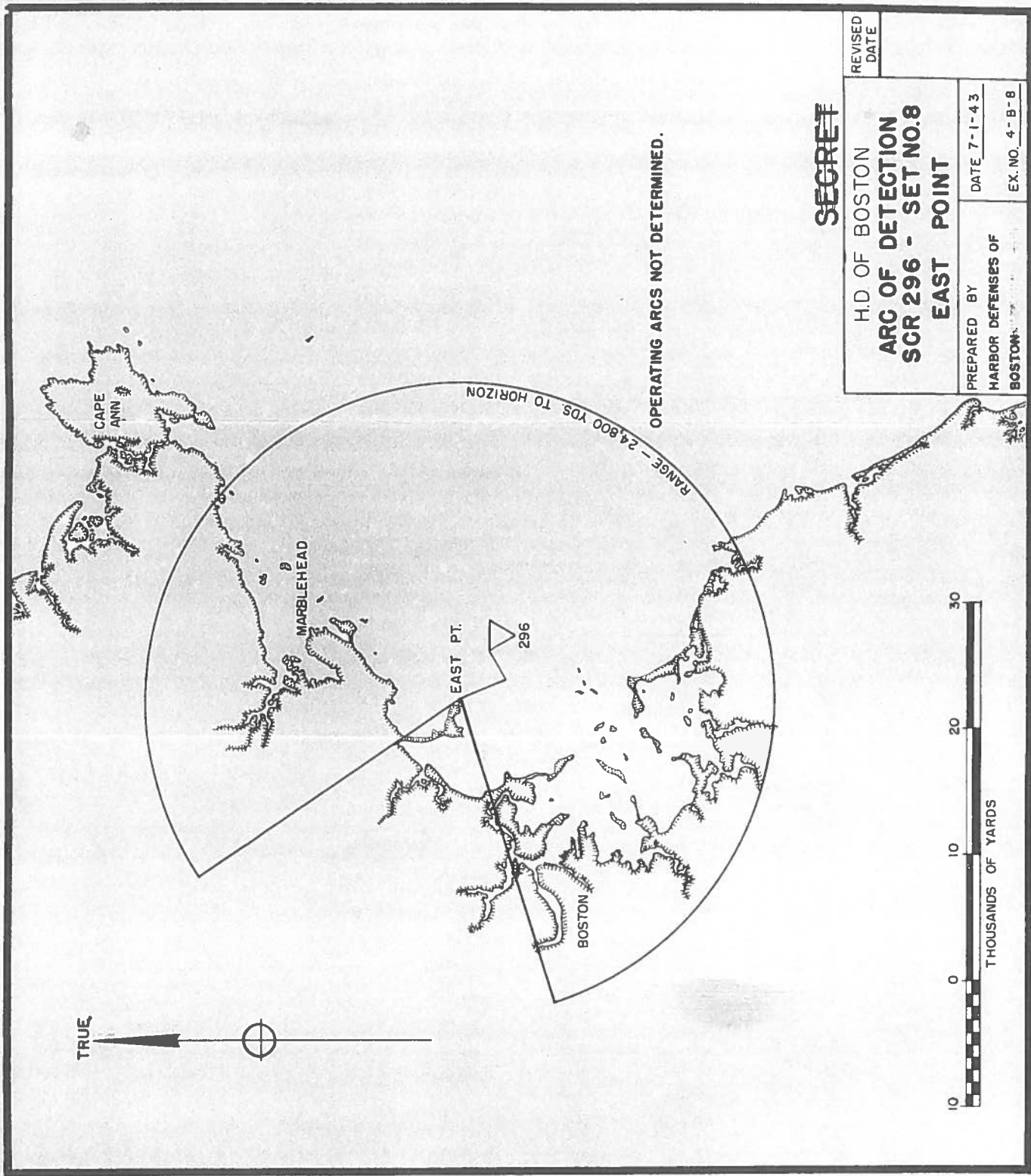
PREPARED BY  
HARBOR DEFENSES OF  
BOSTON





**SECRET**

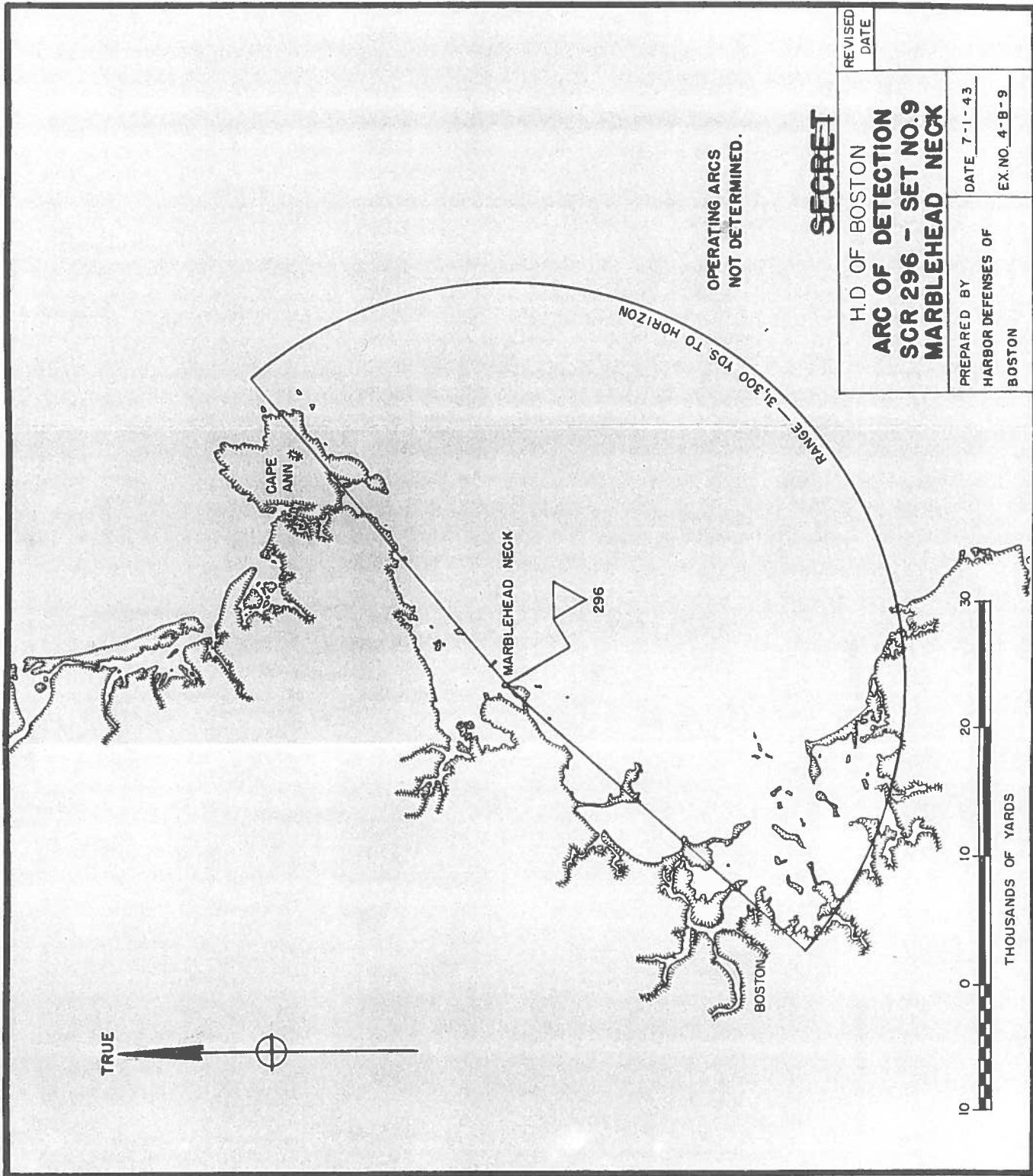
H.D. OF BOSTON		REVISED DATE
<b>ARC OF DETECTION</b>		
<b>SCR 296 - SET NO.7</b>		
<b>FORT DAWES</b>		
PREPARED BY	DATE	EX. NO.
HARBOR DEFENSES OF BOSTON	7-1-43	4-B-7



OPERATING ARCS NOT DETERMINED.

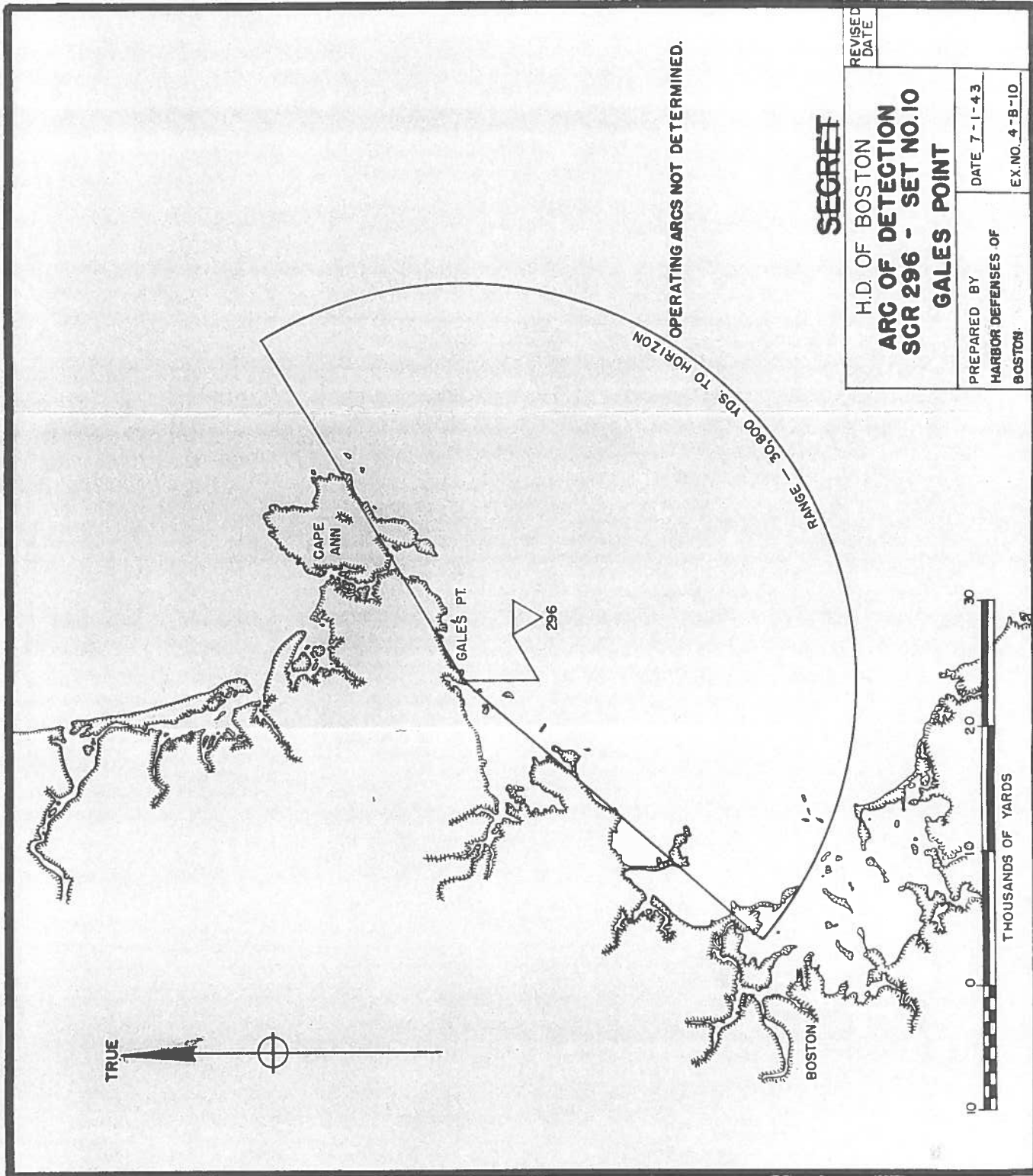
**SECRET**

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



**SECRET**

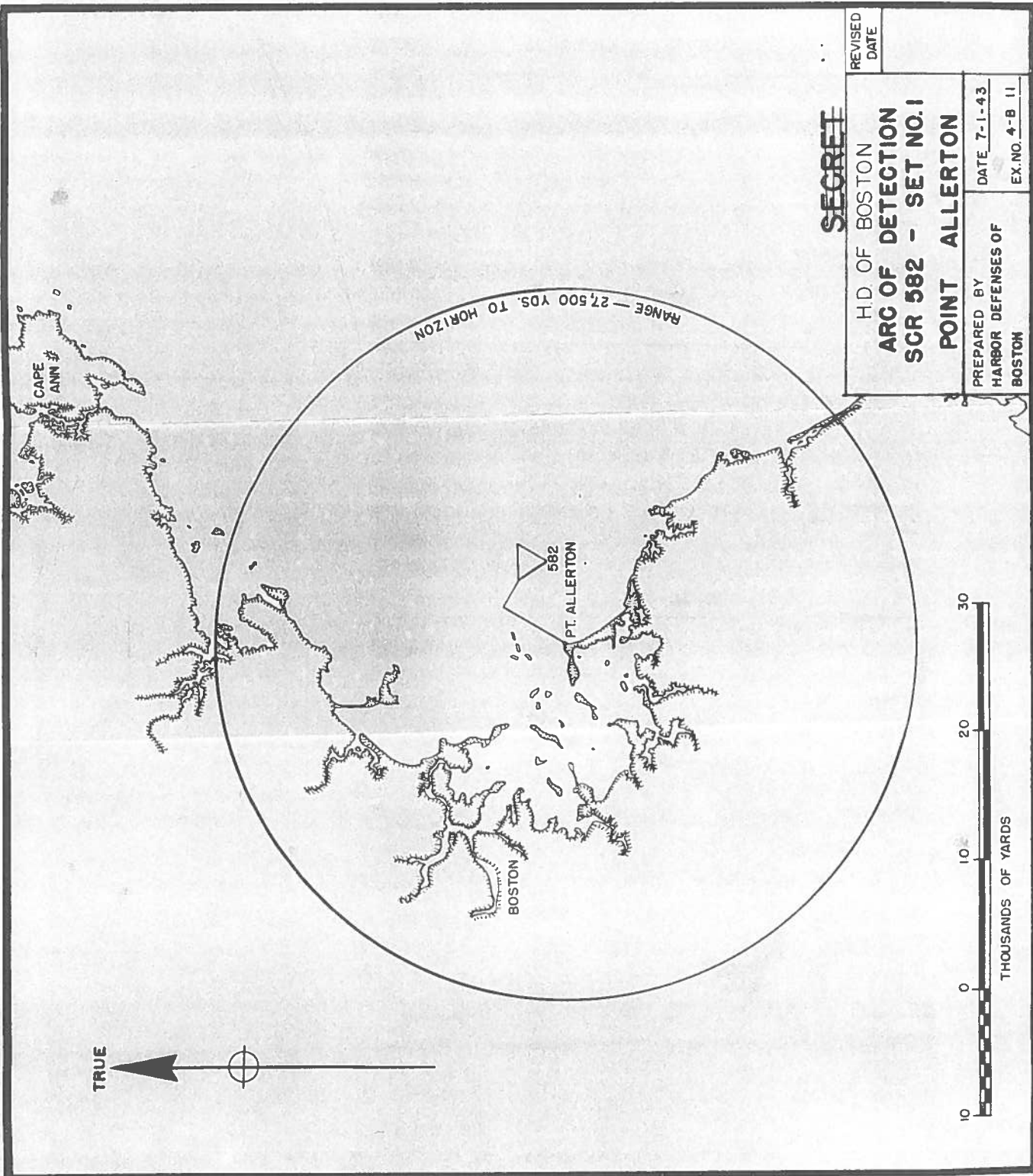
H.D. OF BOSTON		REVISED DATE
<b>ARC OF DETECTION</b> <b>SCR 296 - SET NO.9</b> <b>MARBLEHEAD NECK</b>		
PREPARED BY	DATE 7-1-43	EX. NO. 4-B-9
HARBOR DEFENSES OF BOSTON		



**SECRET**

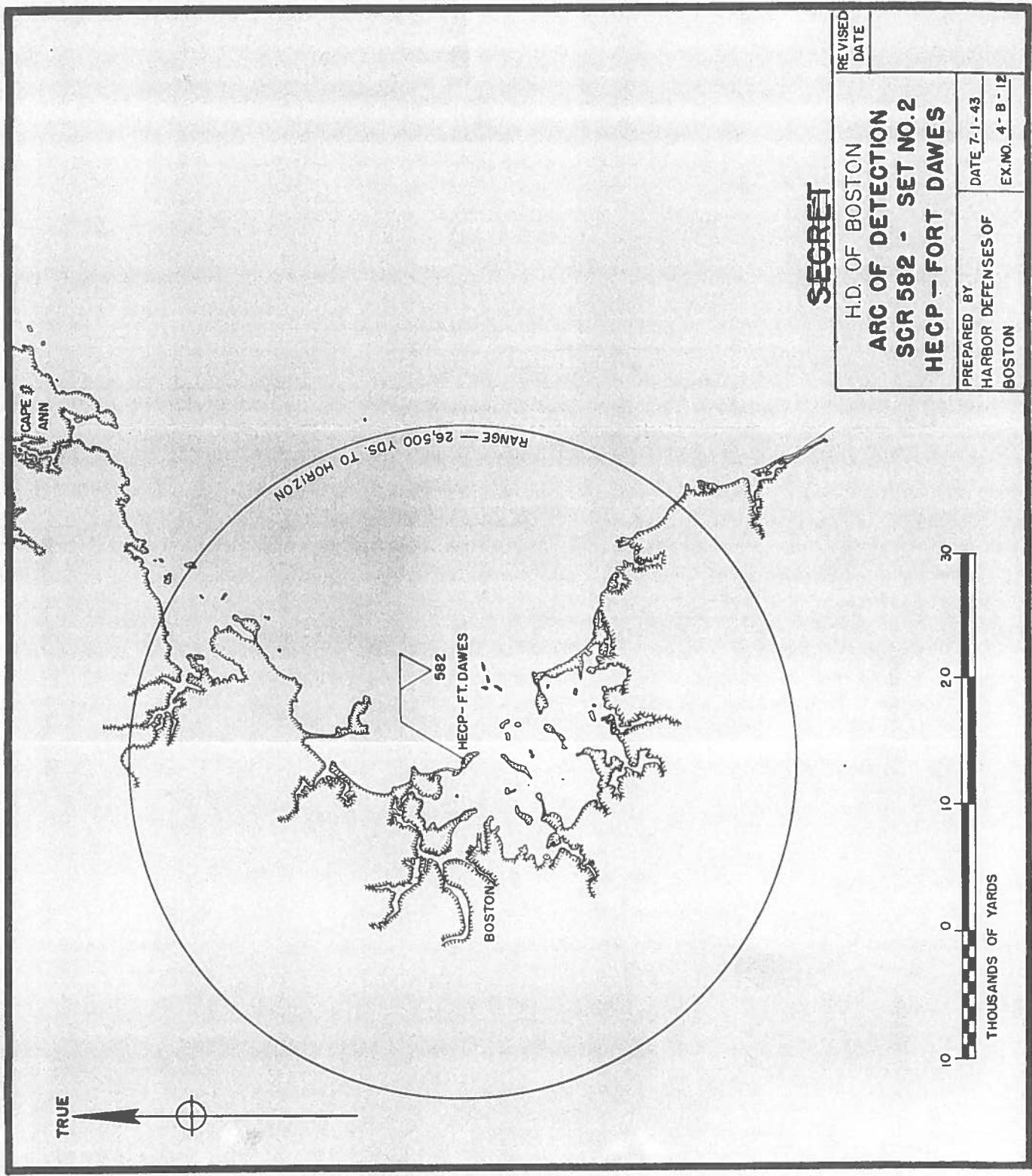
H.D. OF BOSTON		REVISED DATE
<b>ARC OF DETECTION</b>		
<b>SCR 296 - SET NO.10</b>		
<b>GALES POINT</b>		
PREPARED BY	DATE 7-1-43	EX. NO. 4-B-10
HARBOR DEFENSES OF BOSTON.		





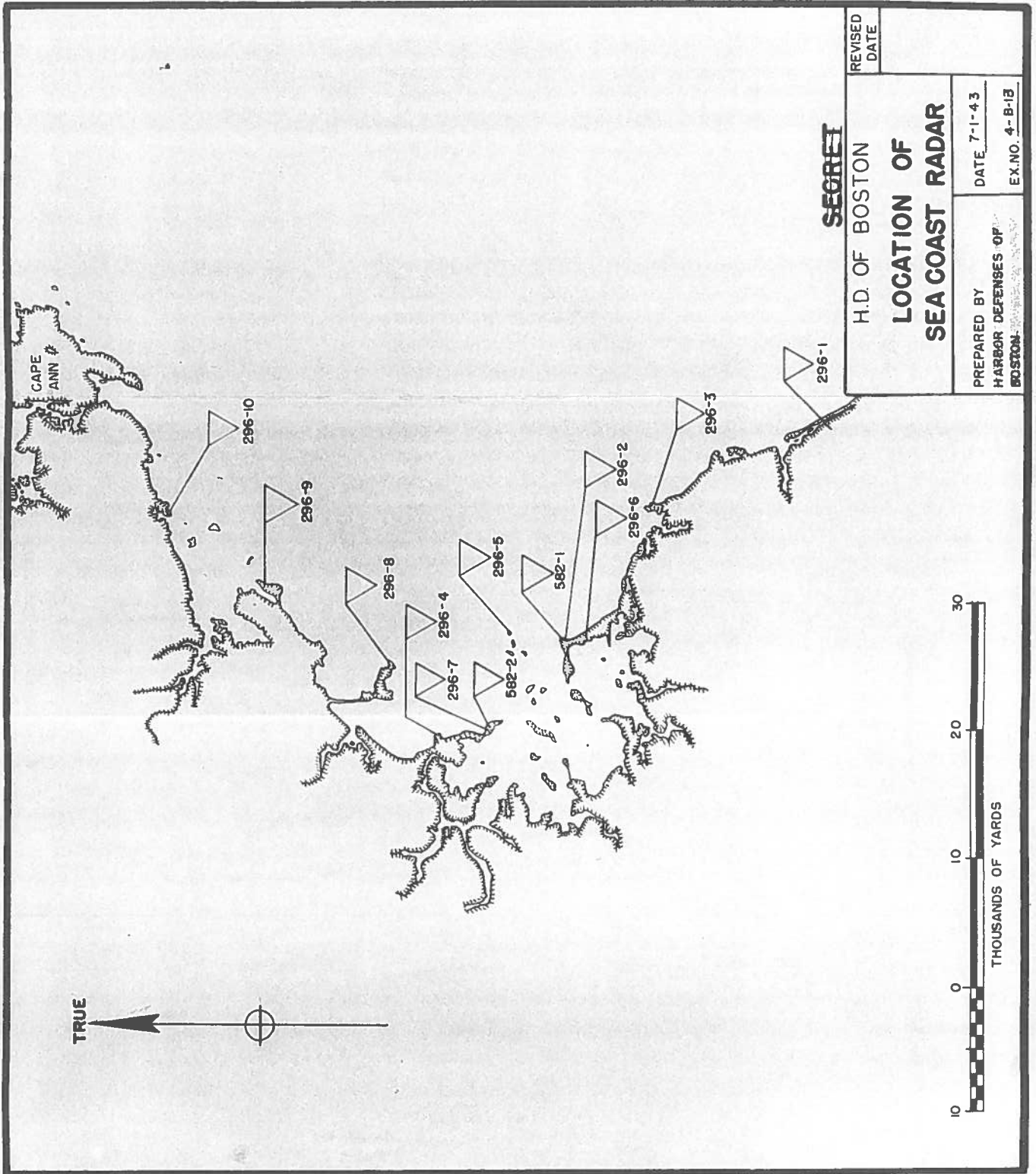
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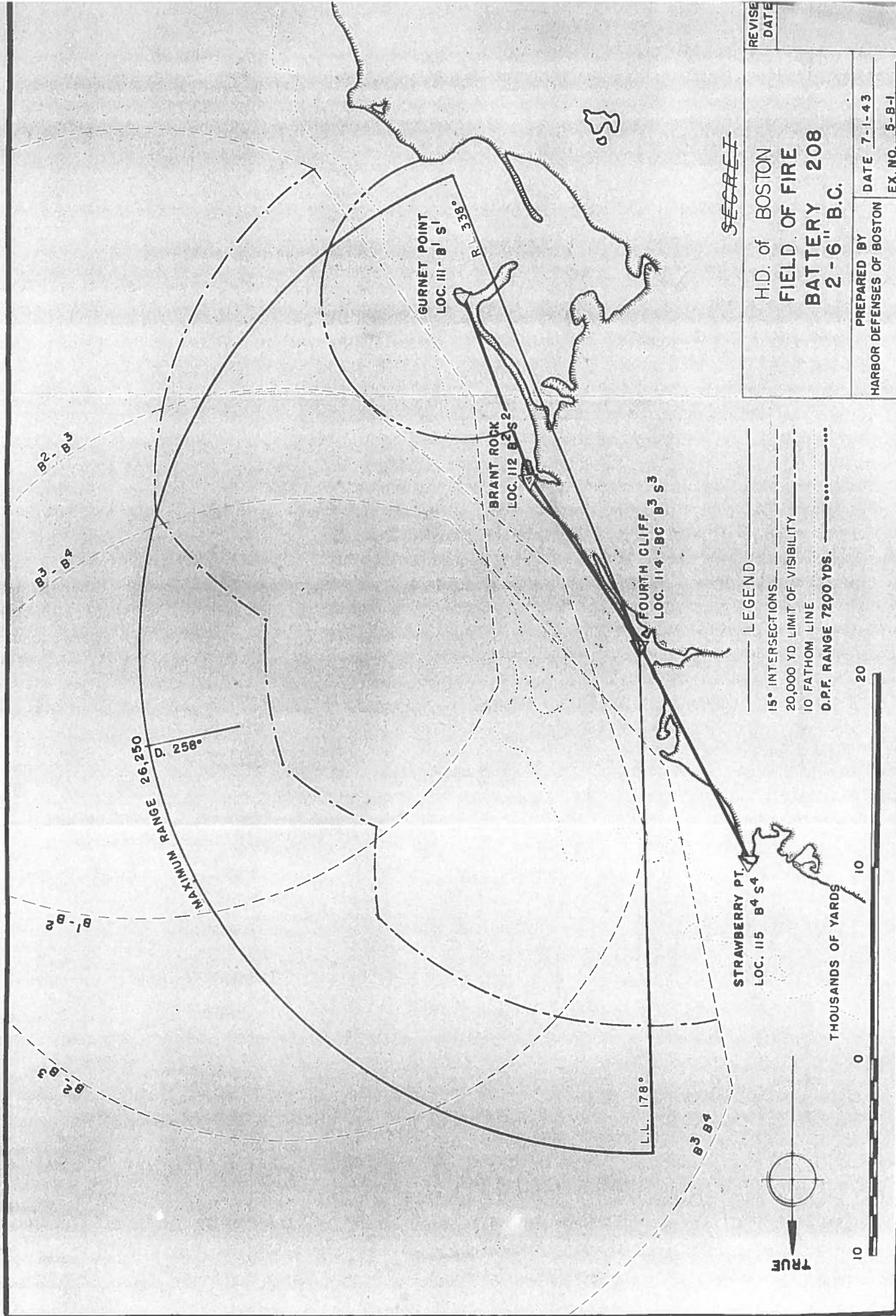
H.D. OF BOSTON		REVISED DATE
<b>ARC OF DETECTION</b>		
<b>SCR 582 - SET NO.1</b>		
<b>POINT ALLERTON</b>		
PREPARED BY	DATE 7-1-43	EX. NO. 4-B 11
HARBOR DEFENSES OF		
BOSTON		



**SECRET**

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





**SECRET**

H.D. of BOSTON FIELD OF FIRE BATTERY 208 2-6" B.C.		REVIS DATE
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43 EX. NO. 5-B-1	

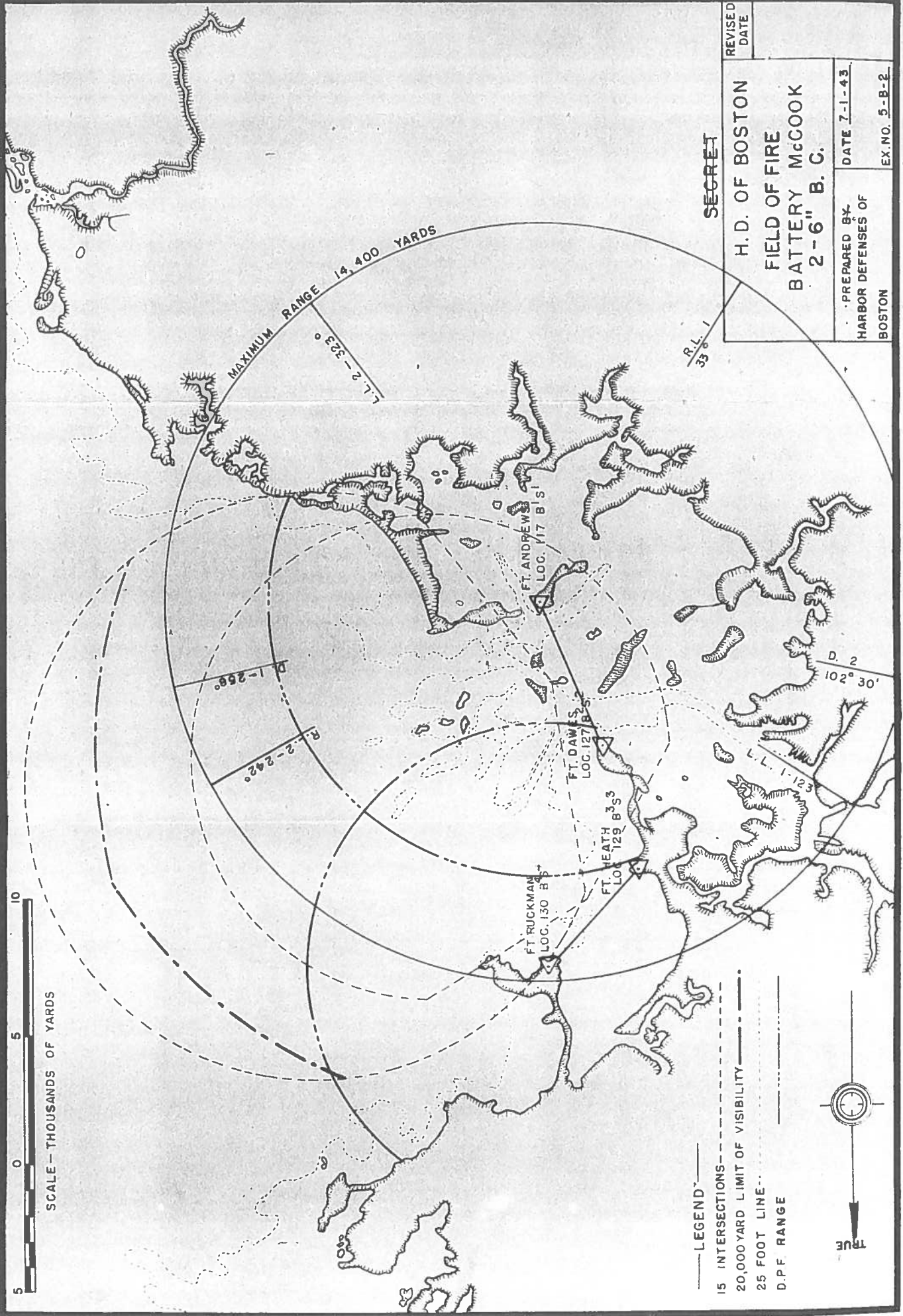
- LEGEND
- 15° INTERSECTIONS
  - 20,000 YD LIMIT OF VISIBILITY
  - 10 FATHOM LINE
  - D.P.F. RANGE 7200 YDS.







SCALE--THOUSANDS OF YARDS



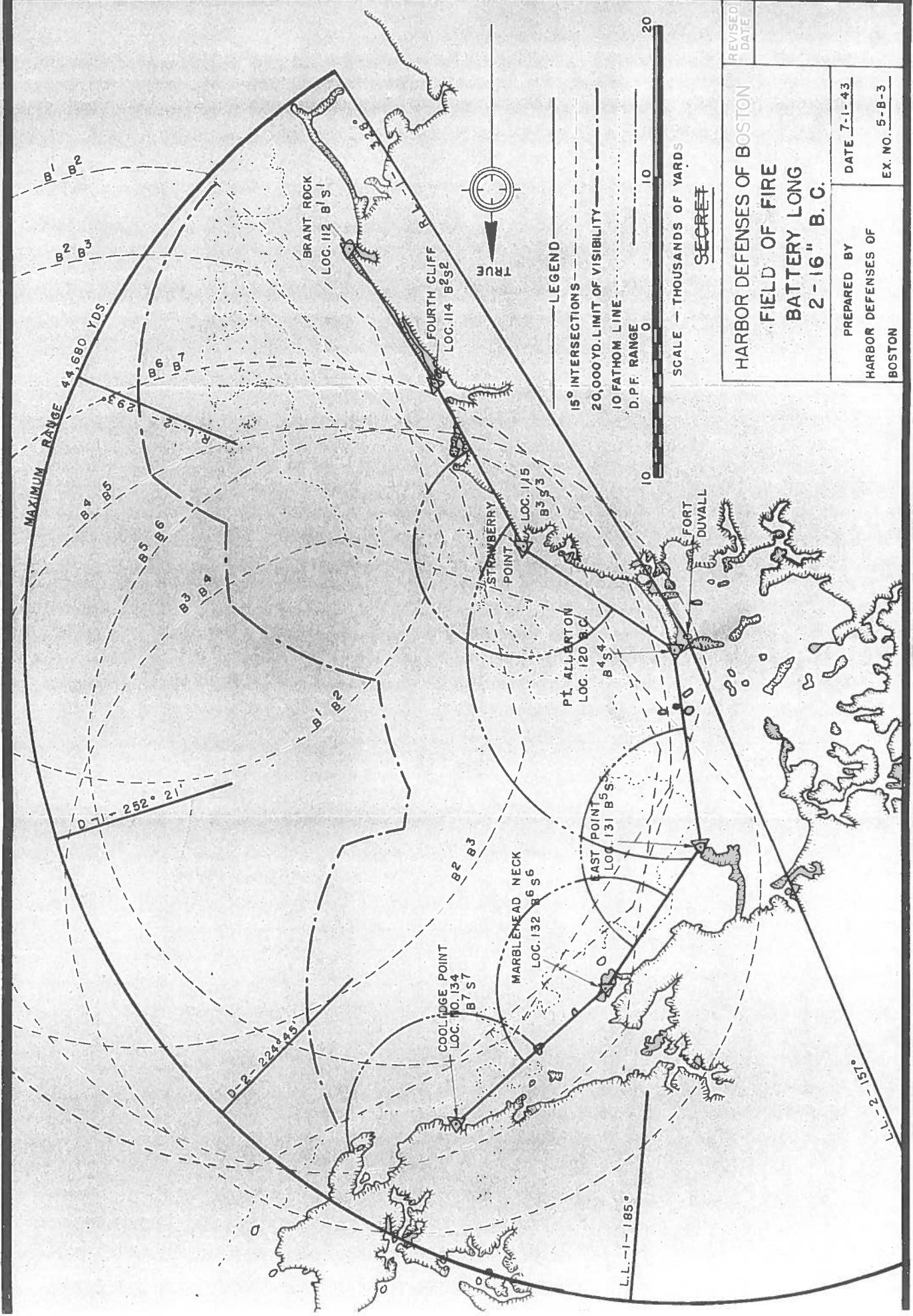
LEGEND

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



SECRET

REVISED DATE	
H. D. OF BOSTON	
FIELD OF FIRE	
BATTERY MCCOOK	
2-6" B. C.	
PREPARED BY	DATE 7-1-43
HARBOR DEFENSES OF BOSTON	EX. NO. 5-B-2



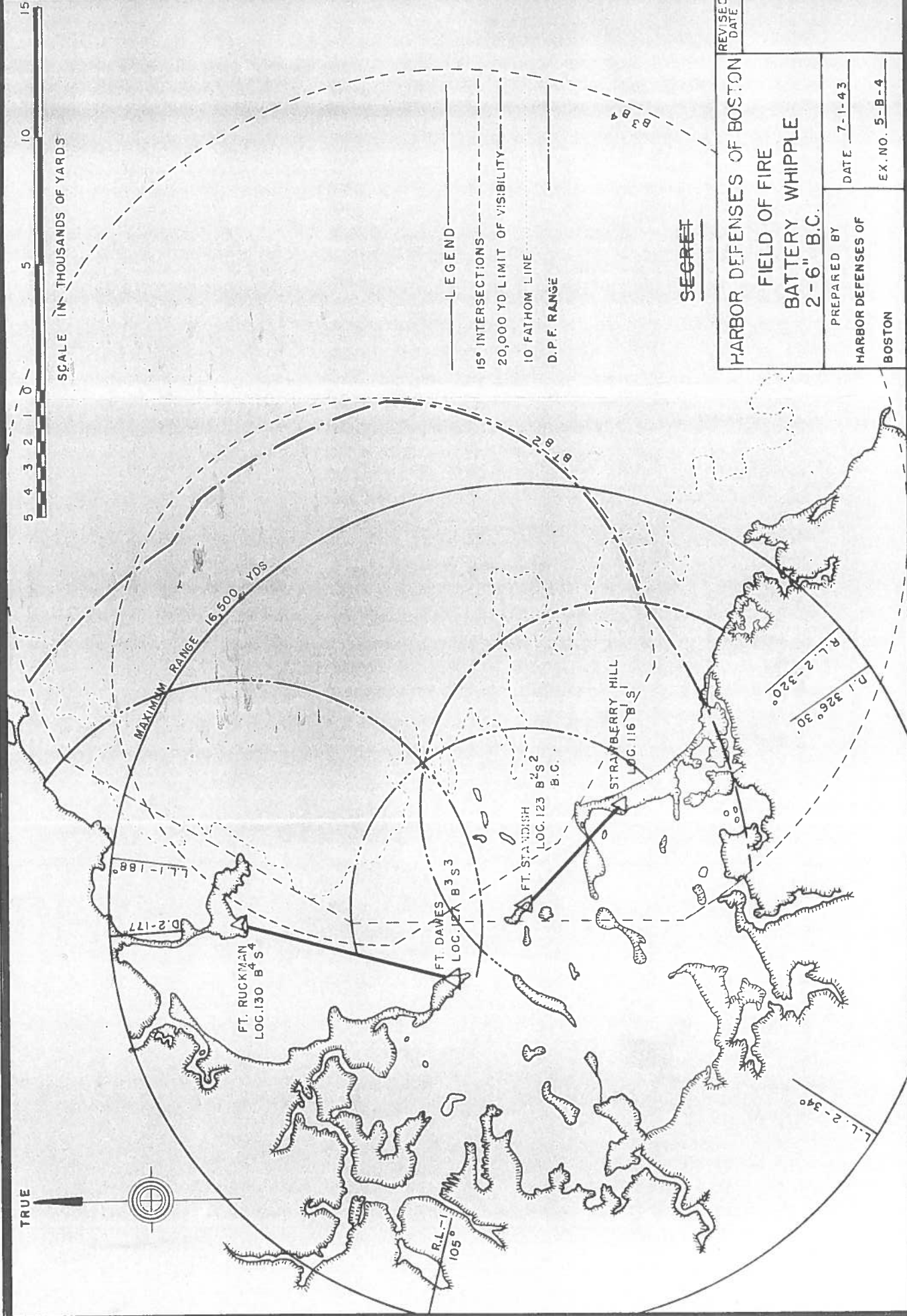
HARBOR DEFENSES OF BOSTON FIELD OF FIRE BATTERY LONG 2-16" B.C.	
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43 EX. NO. 5-B-3
REVISED DATE	

SECRET

TRUE



SCALE IN THOUSANDS OF YARDS



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 WHIPPLE

2-6" B.C.

PREPARED BY

DATE 7-1-43

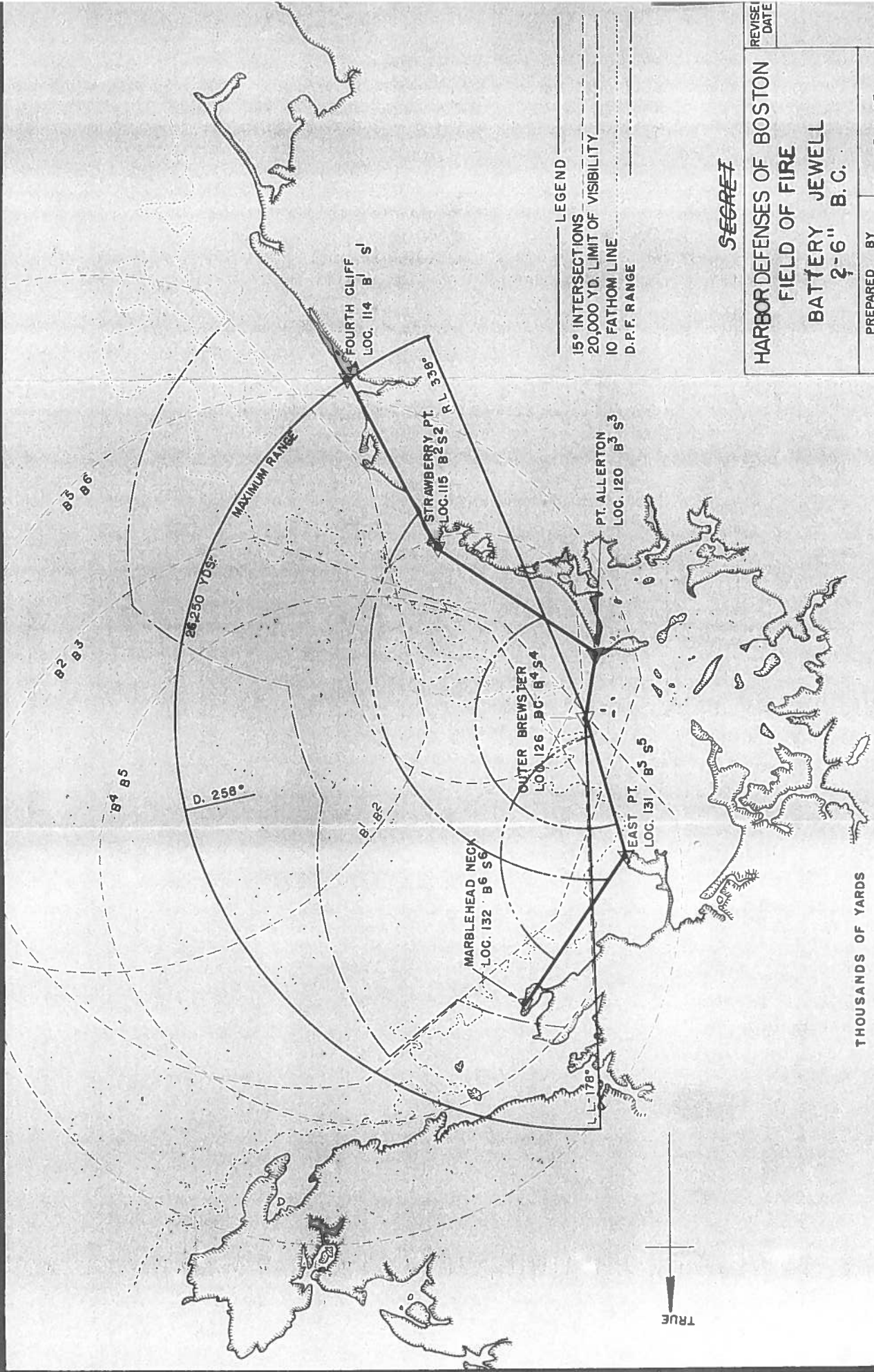
HARBOR DEFENSES OF

EX. NO. 5-B-4

BOSTON

REVISED  
DATE





LEGEND

15° INTERSECTIONS

20,000 YD. LIMIT OF VISIBILITY

10 FATHOM LINE

D.P.F. RANGE

~~SECRET~~

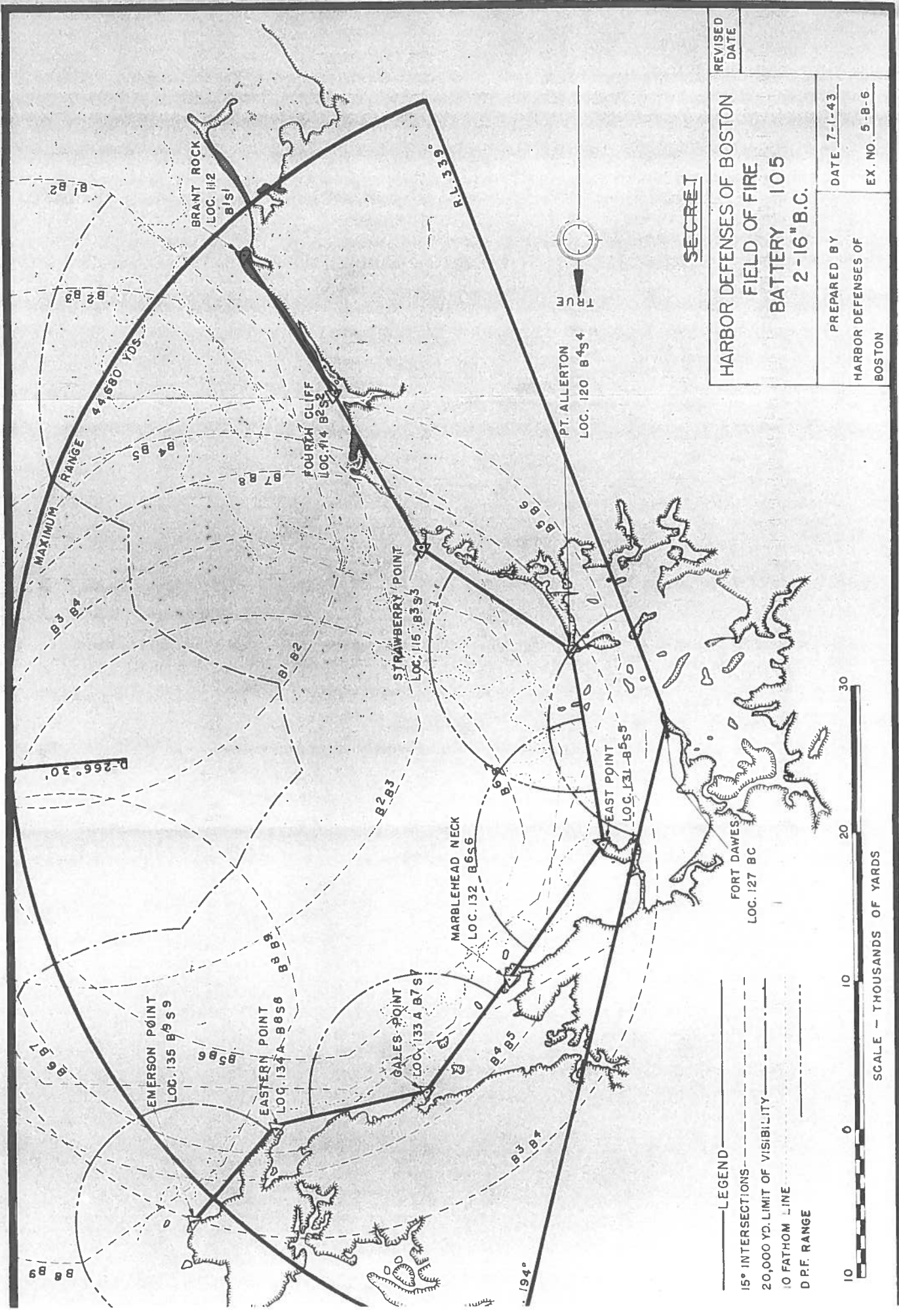
REVISION  
DATE

HARBOR DEFENSES OF BOSTON  
FIELD OF FIRE  
BATTERY JEWELL  
2-6" B.C.

PREPARED BY	DATE
HARBOR DEFENSES OF BOSTON	7-1-43
EX. NO. 5-B-5	

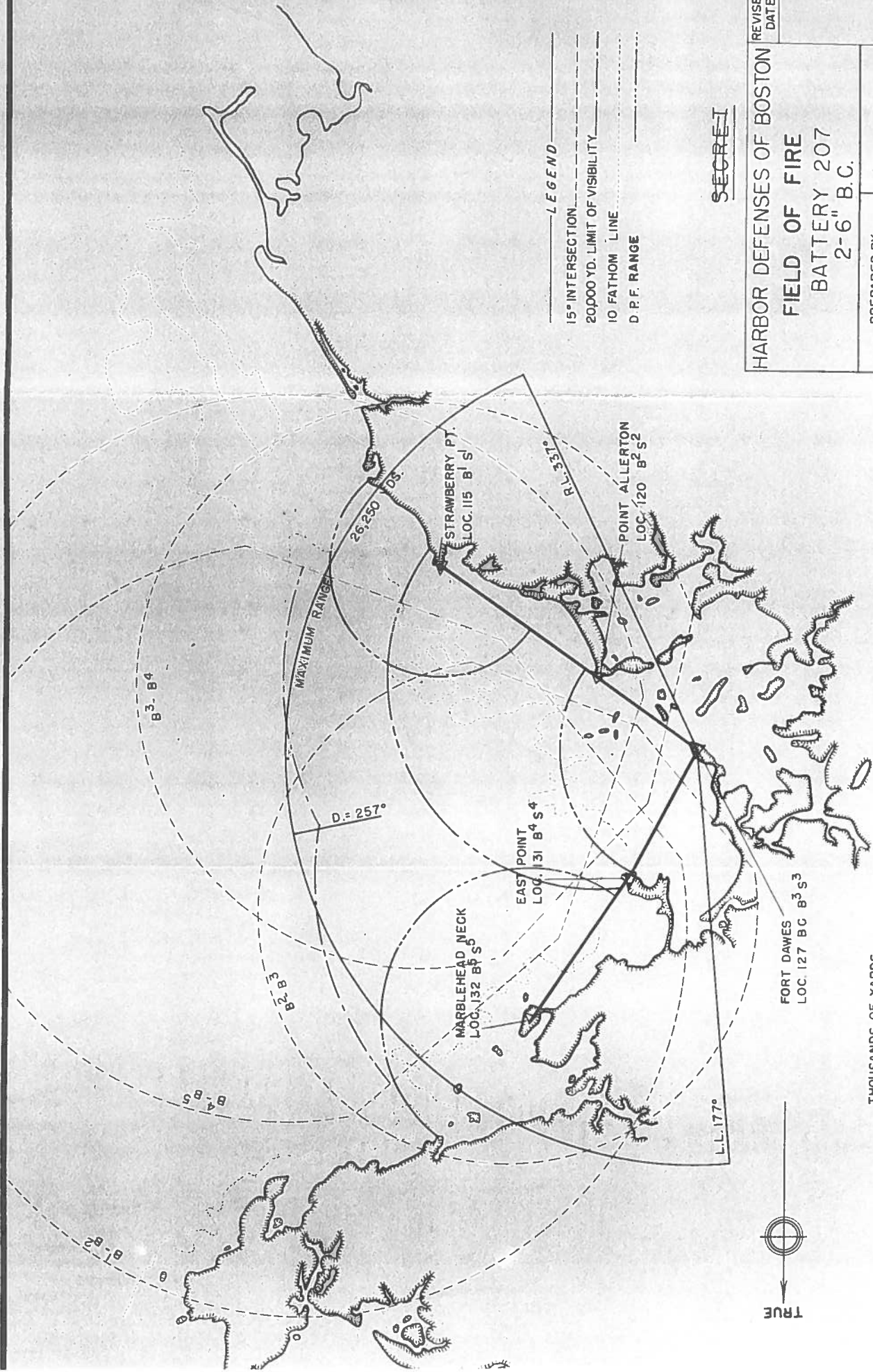
THOUSANDS OF YARDS





**SECRET**

HARBOR DEFENSES OF BOSTON FIELD OF FIRE BATTERY 105 2-16" B.C.		REVISOR DATE
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 5-B-6



LEGEND

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

SECRET

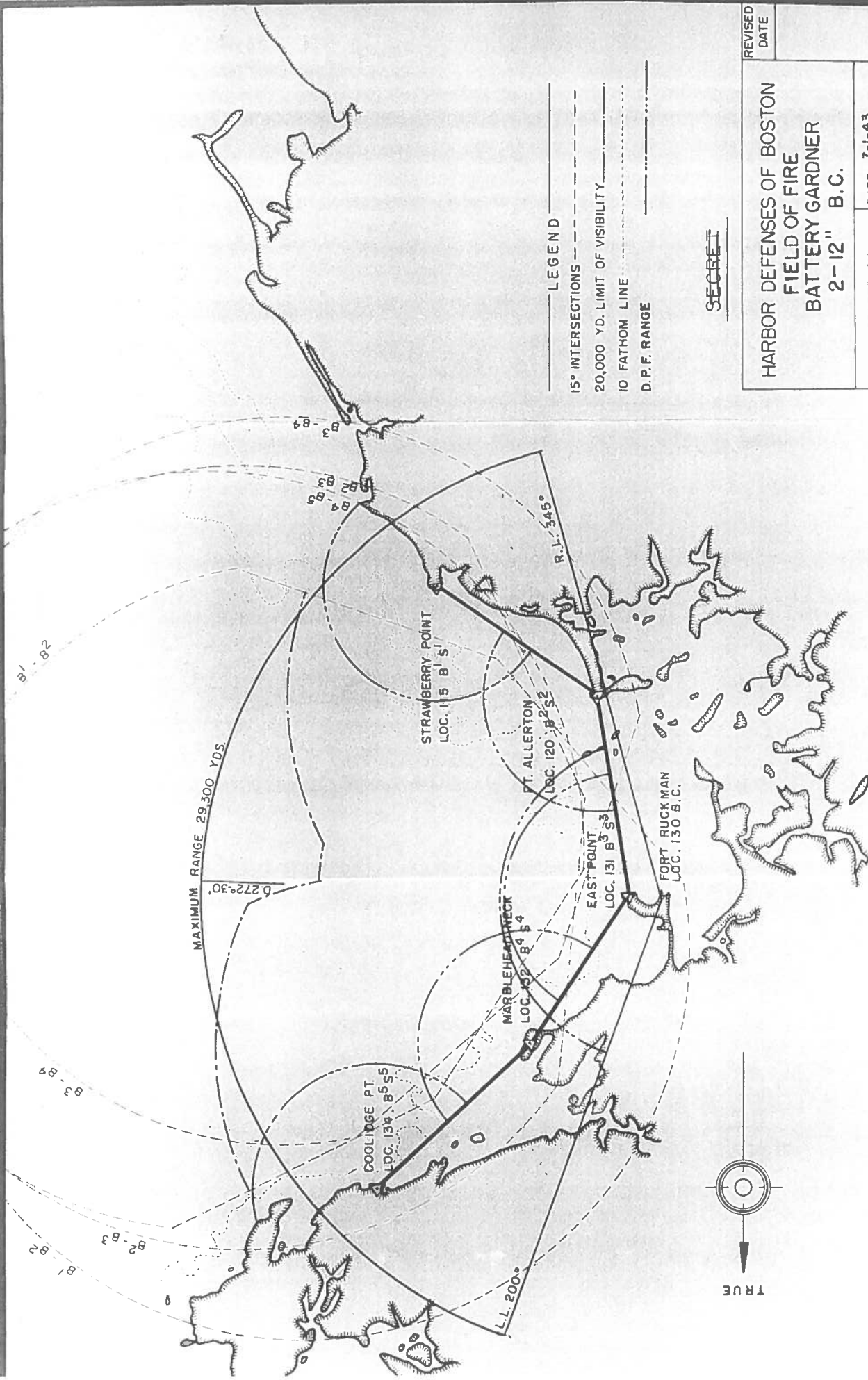
HARBOR DEFENSES OF BOSTON  
FIELD OF FIRE  
BATTERY 207  
2-6" B.C.

PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

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







LEGEND

15° INTERSECTIONS ———

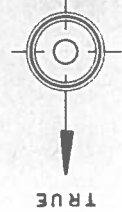
20,000 YD. LIMIT OF VISIBILITY ———

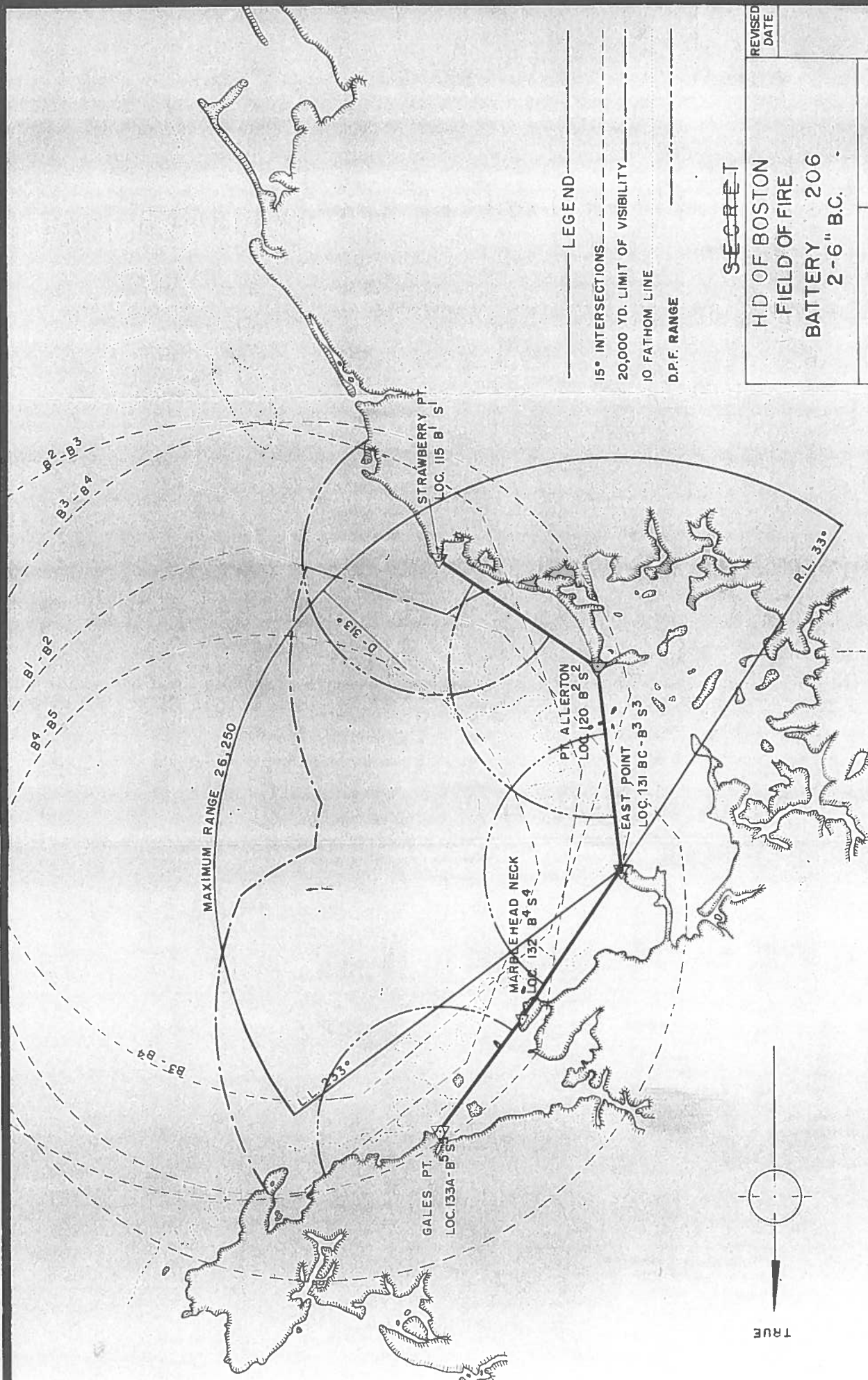
10 FATHOM LINE ———

D.P.F. RANGE ———

~~SECRET~~

HARBOR DEFENSES OF BOSTON FIELD OF FIRE BATTERY GARDNER 2-12" B.C.		REVISION DATE
PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 5-B-8



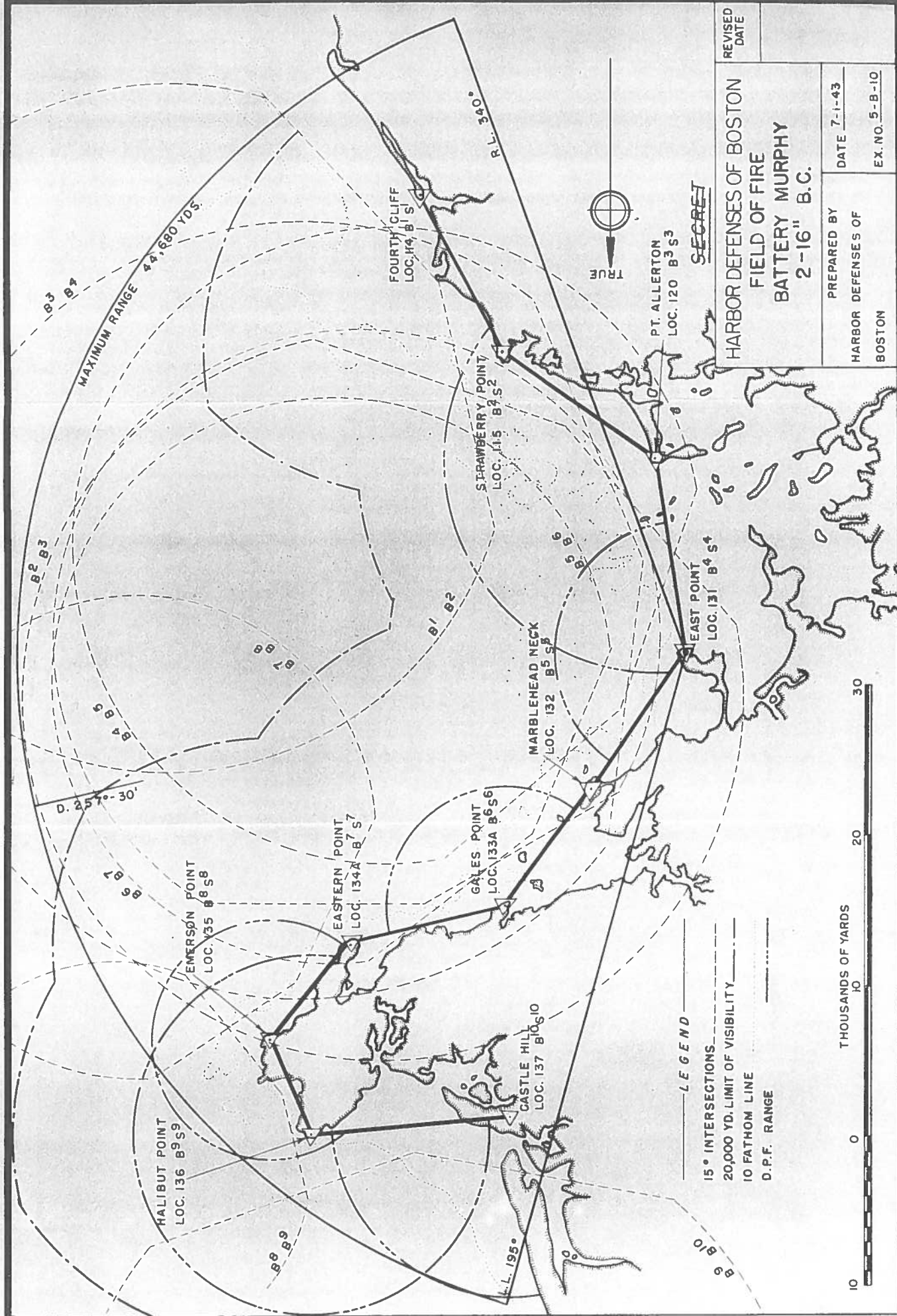


- LEGEND**
- 15° INTERSECTIONS
  - 20,000 YD. LIMIT OF VISIBILITY
  - 10 FATHOM LINE
  - D.P.F. RANGE

**SECRET**

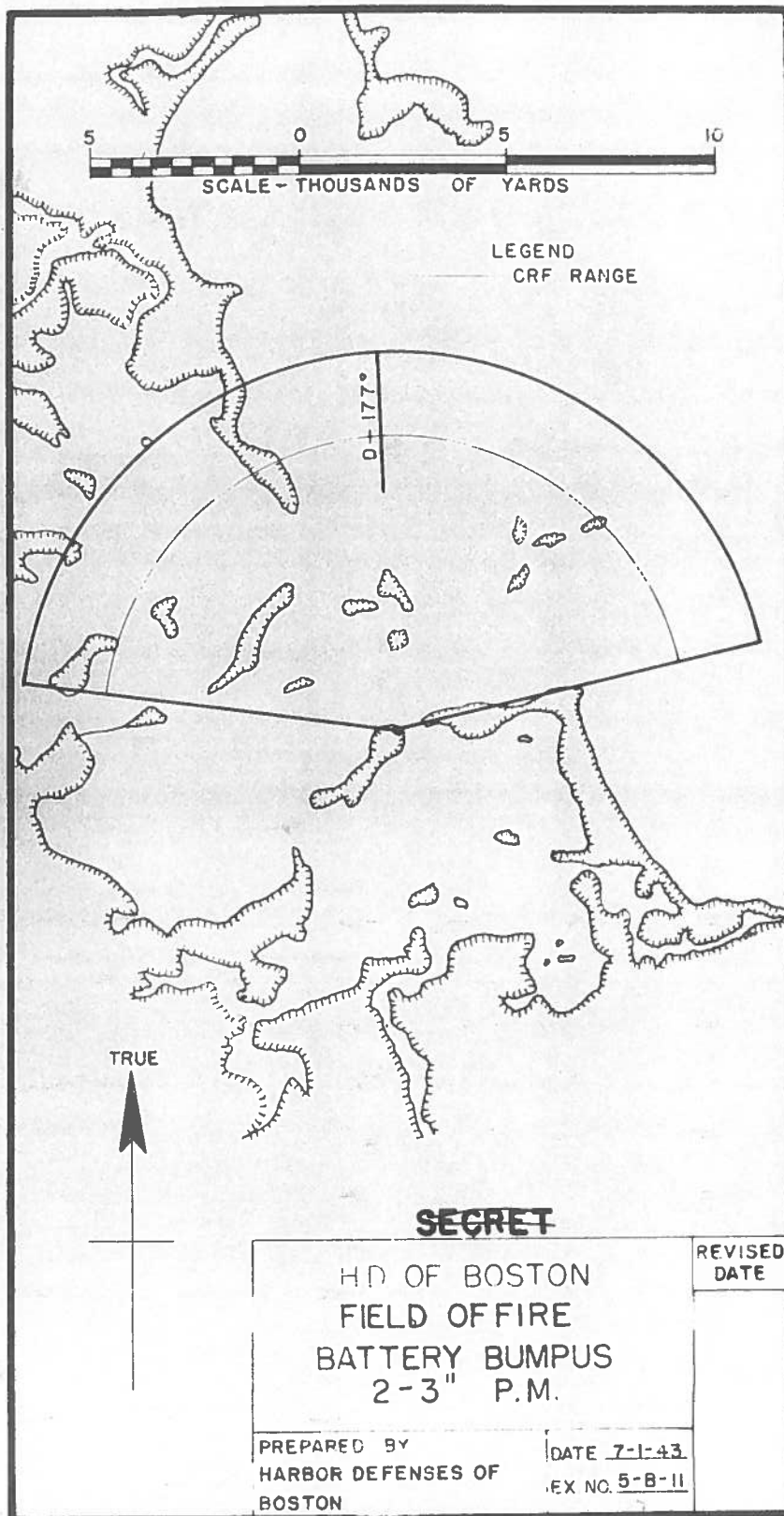
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PREPARED BY HARBOR DEFENSES OF BOSTON	DATE 7-1-43	EX. NO. 5-B-9

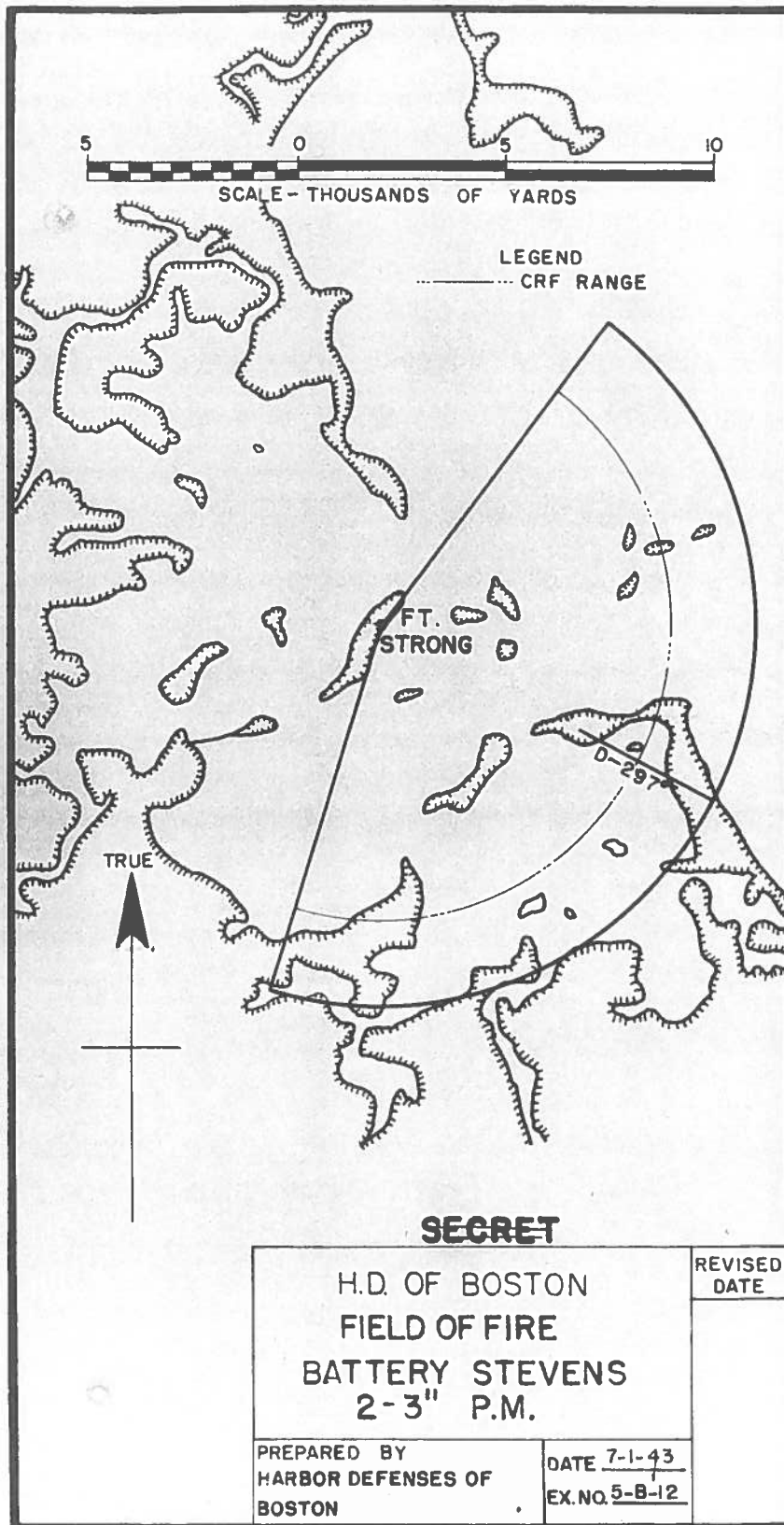


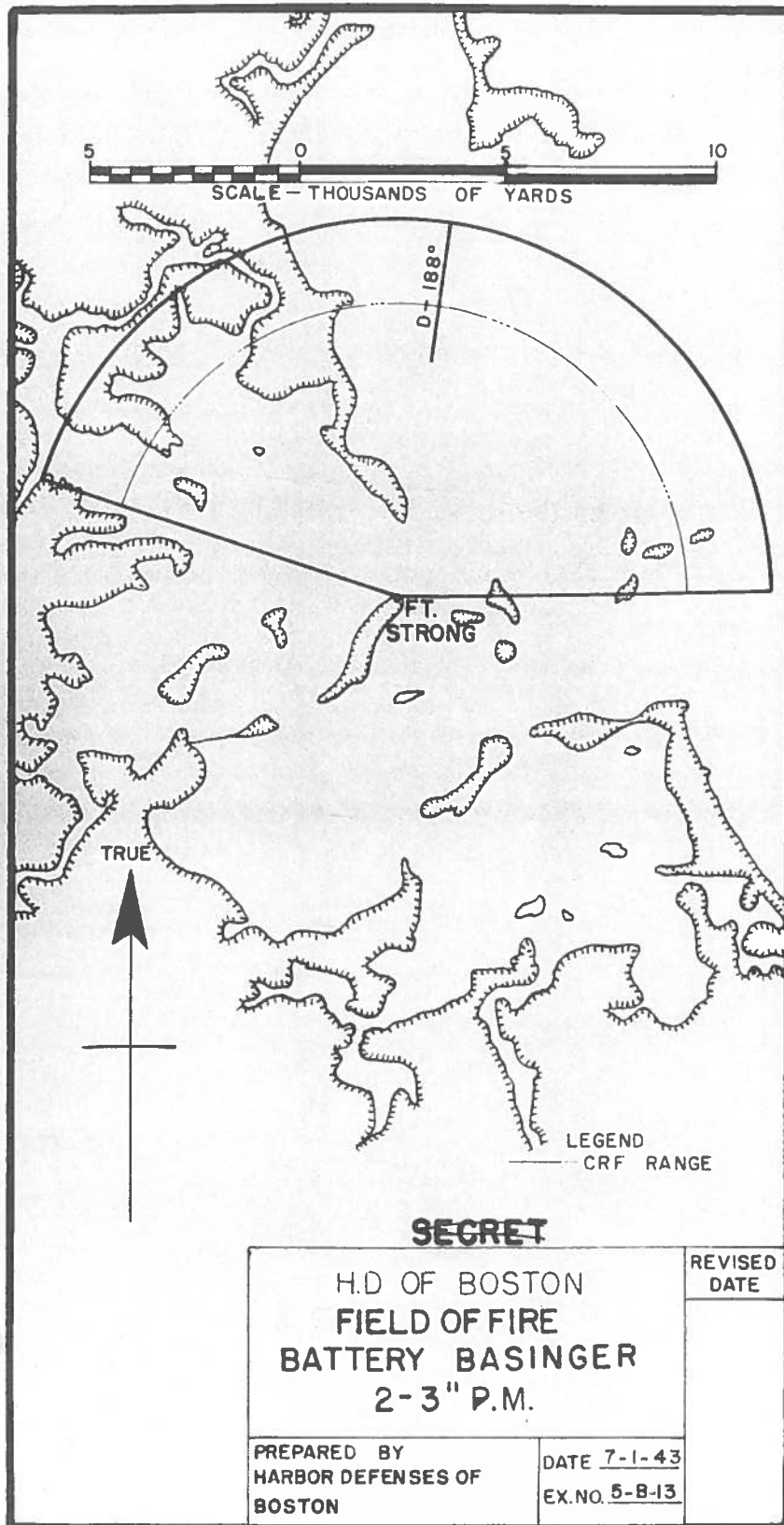


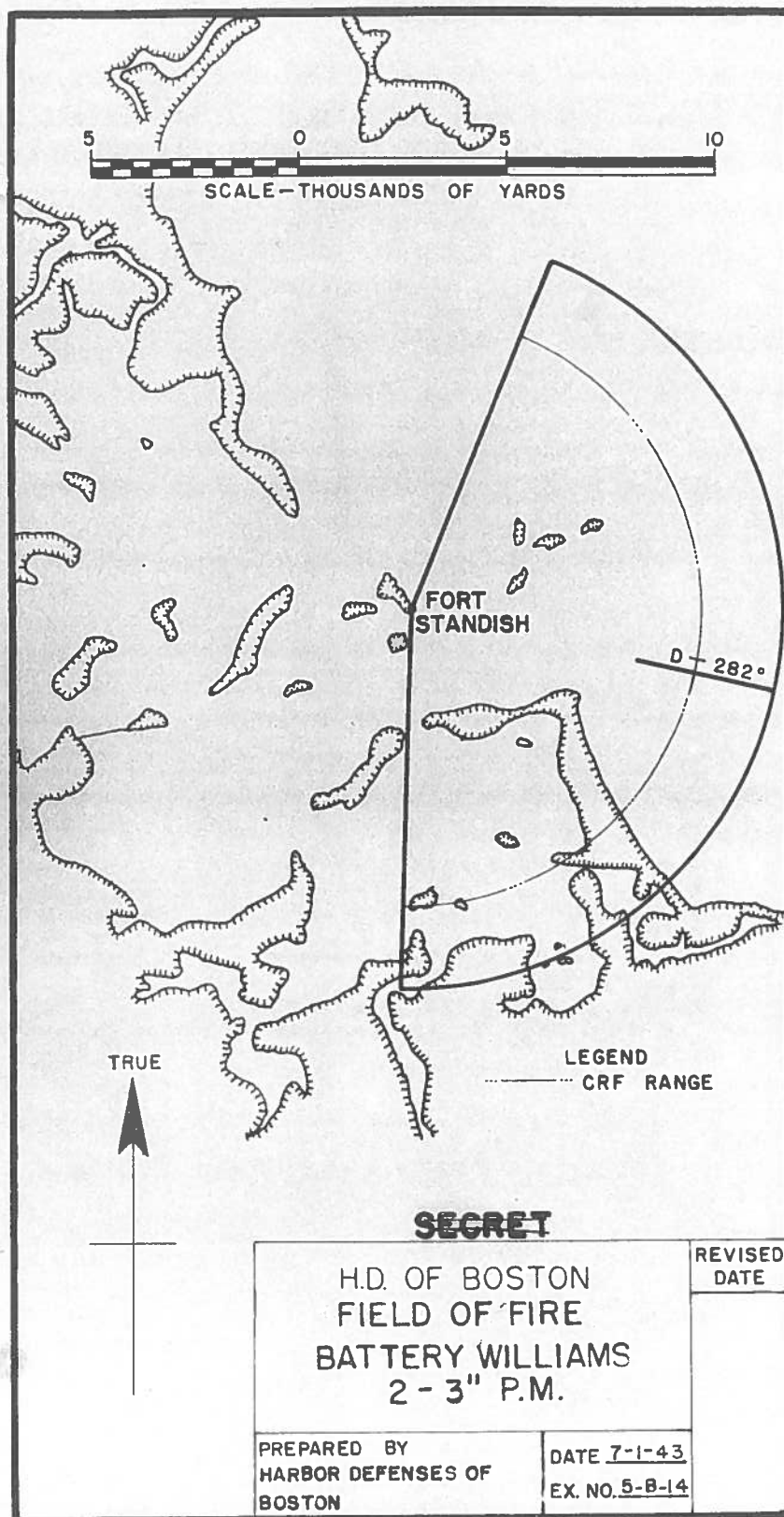
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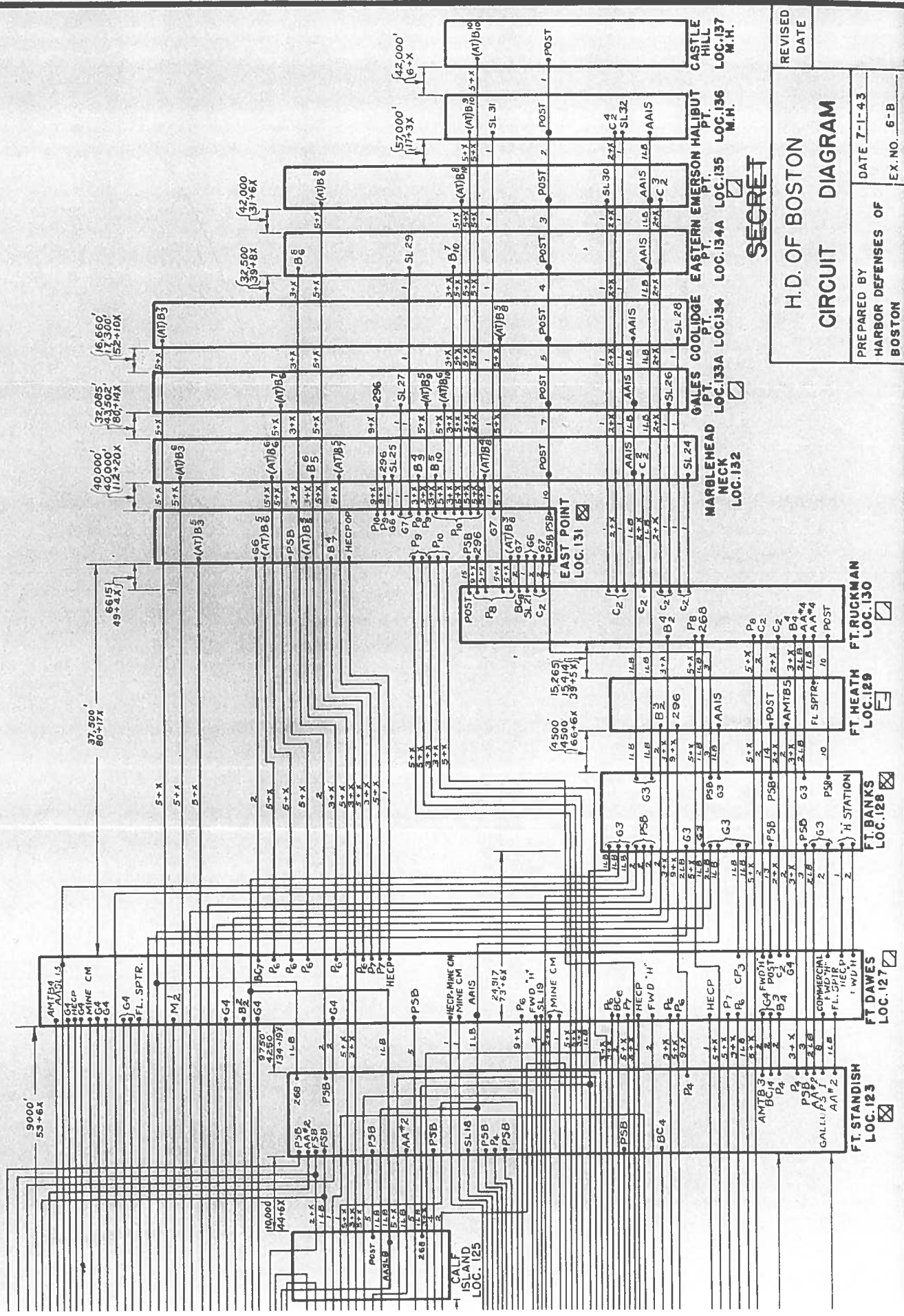






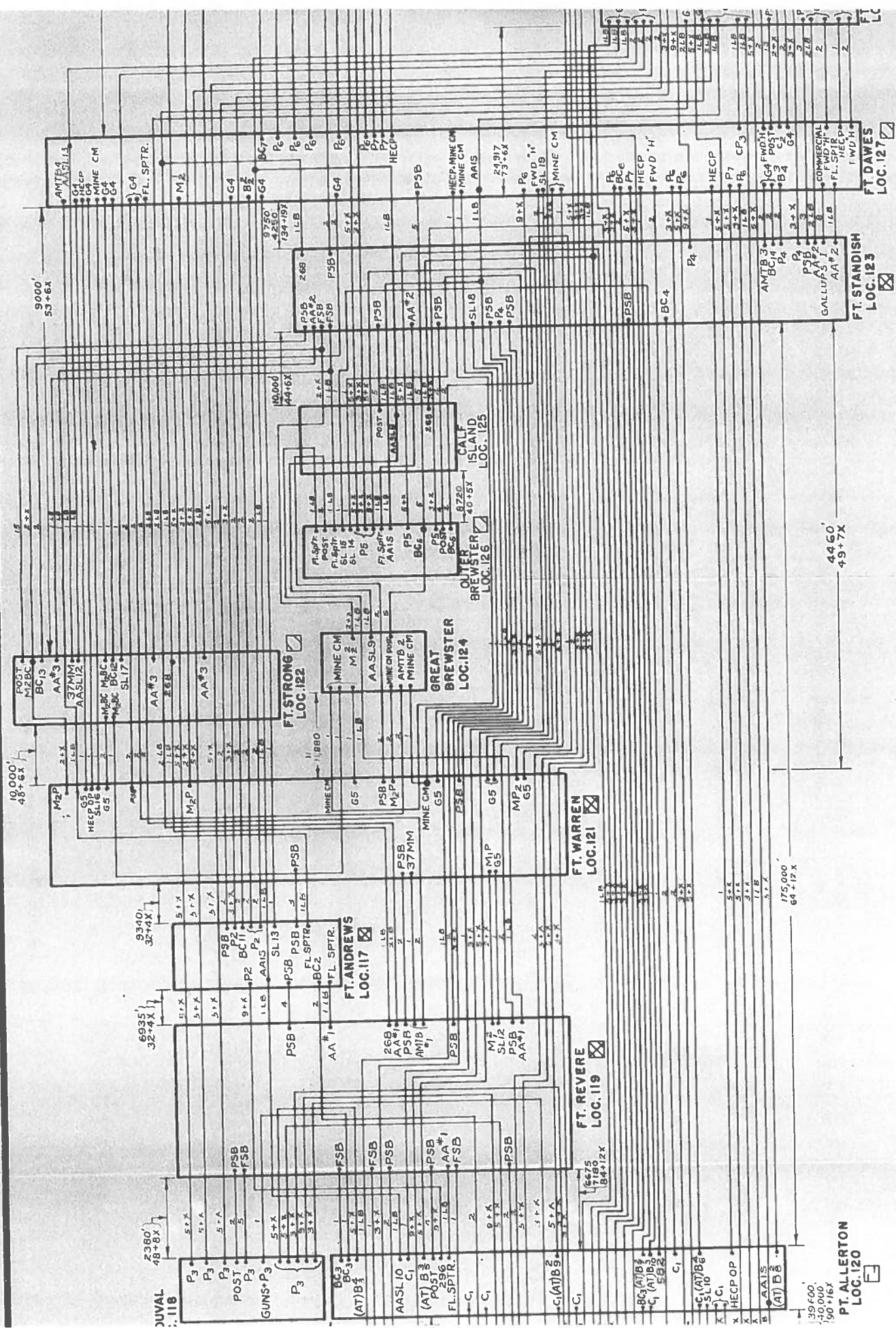






SECRET

H.D. OF BOSTON		REvised	DATE
CIRCUIT DIAGRAM		PREPARED BY	DATE 7-1-43
HARBOR DEFENSES OF BOSTON		EX. NO.	6-B



# LEGEND

(AT)B<sub>3</sub>  
3+X

AIDED TRACKING STATION  
FIRST NO. DENOTES TELEPHONE CIRCUIT.

X DENOTES T.I. CIRCUIT.

FIRE CONTROL SWITCHBOARD

COMBINED FIRE CONTROL AND POST

TELEPHONE SWITCHBOARD ROOM.

SUB-HUT OR CABLE.

MANHOLE.

ALL BASE END STATIONS ARE ALSO

SPOTTING STATIONS.

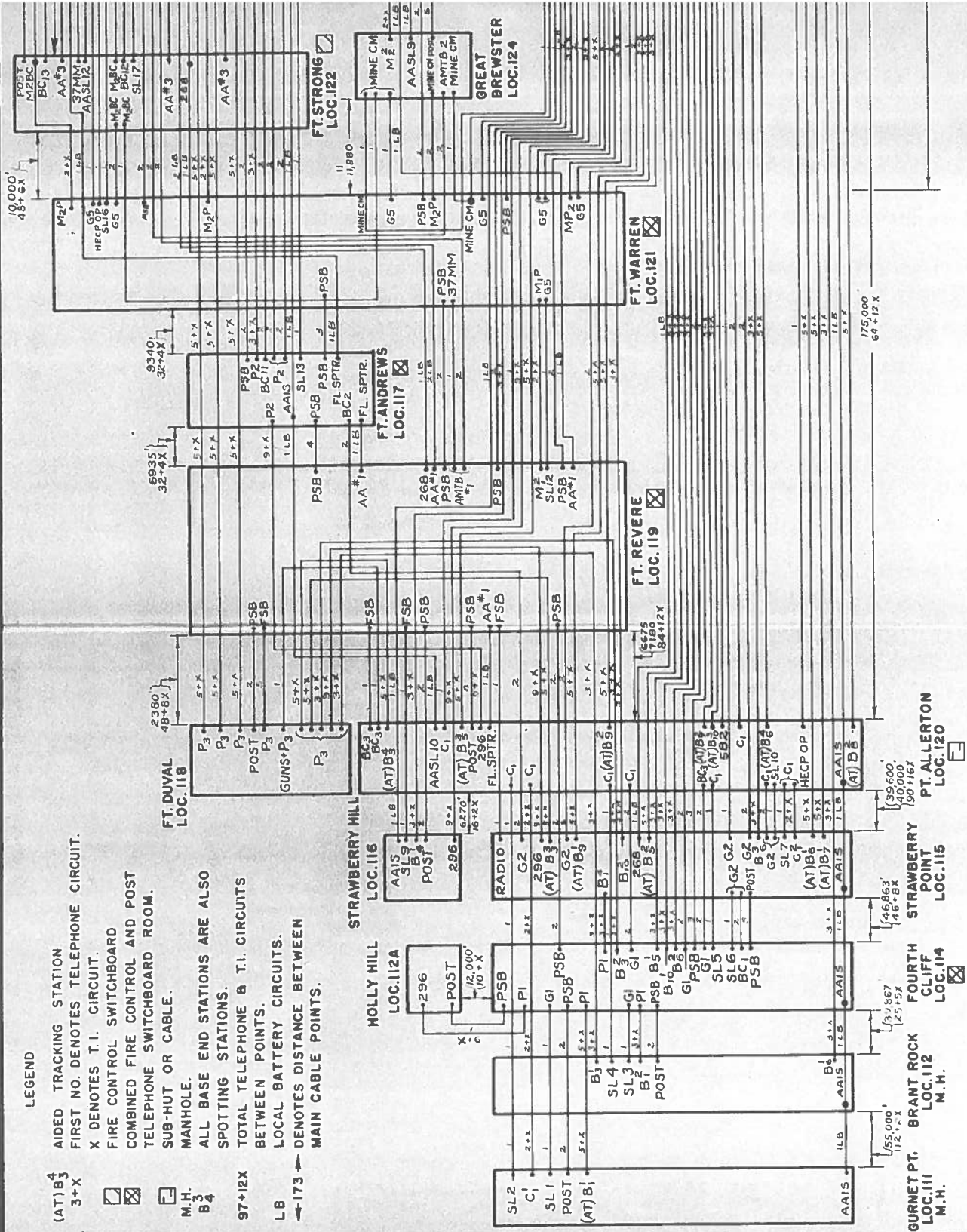
TOTAL TELEPHONE & T.I. CIRCUITS

BETWEEN POINTS.

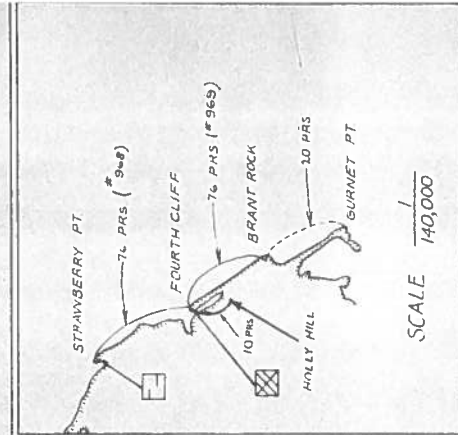
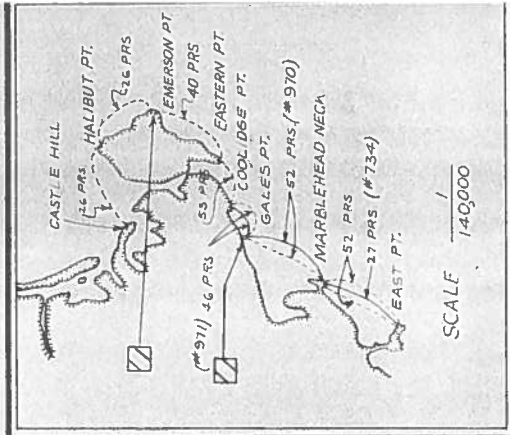
LOCAL BATTERY CIRCUITS.

173 DENOTES DISTANCE BETWEEN

MAIN CABLE POINTS.







## HARBOR DEFENSES OF BOSTON

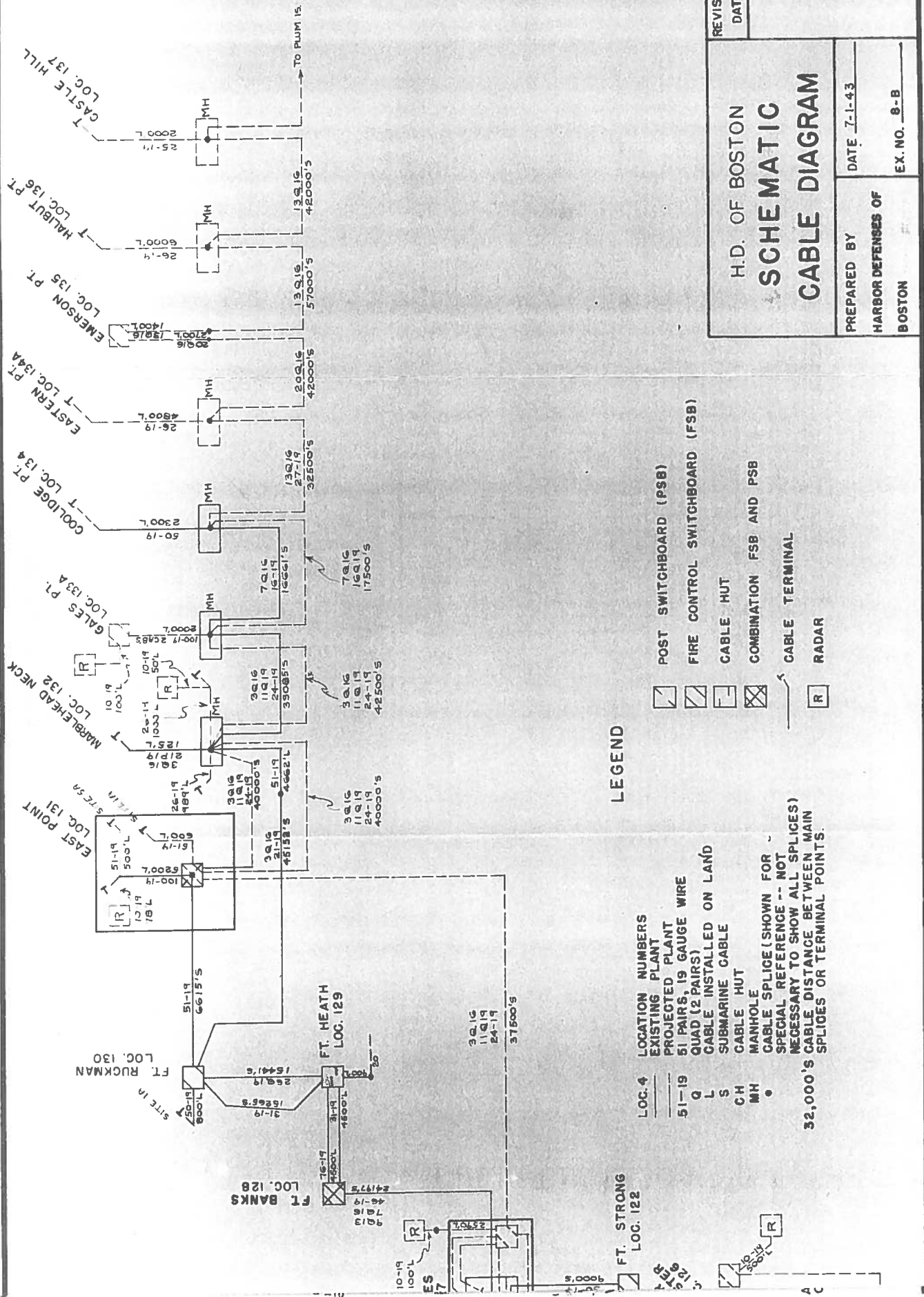
## CABLE ROUTINGS

PREPARED BY  
HARBOR DEFENSE OF  
BOSTON

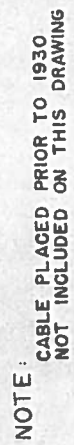
DATE 7-1-43  
EX.NO. 7-B

SECRET

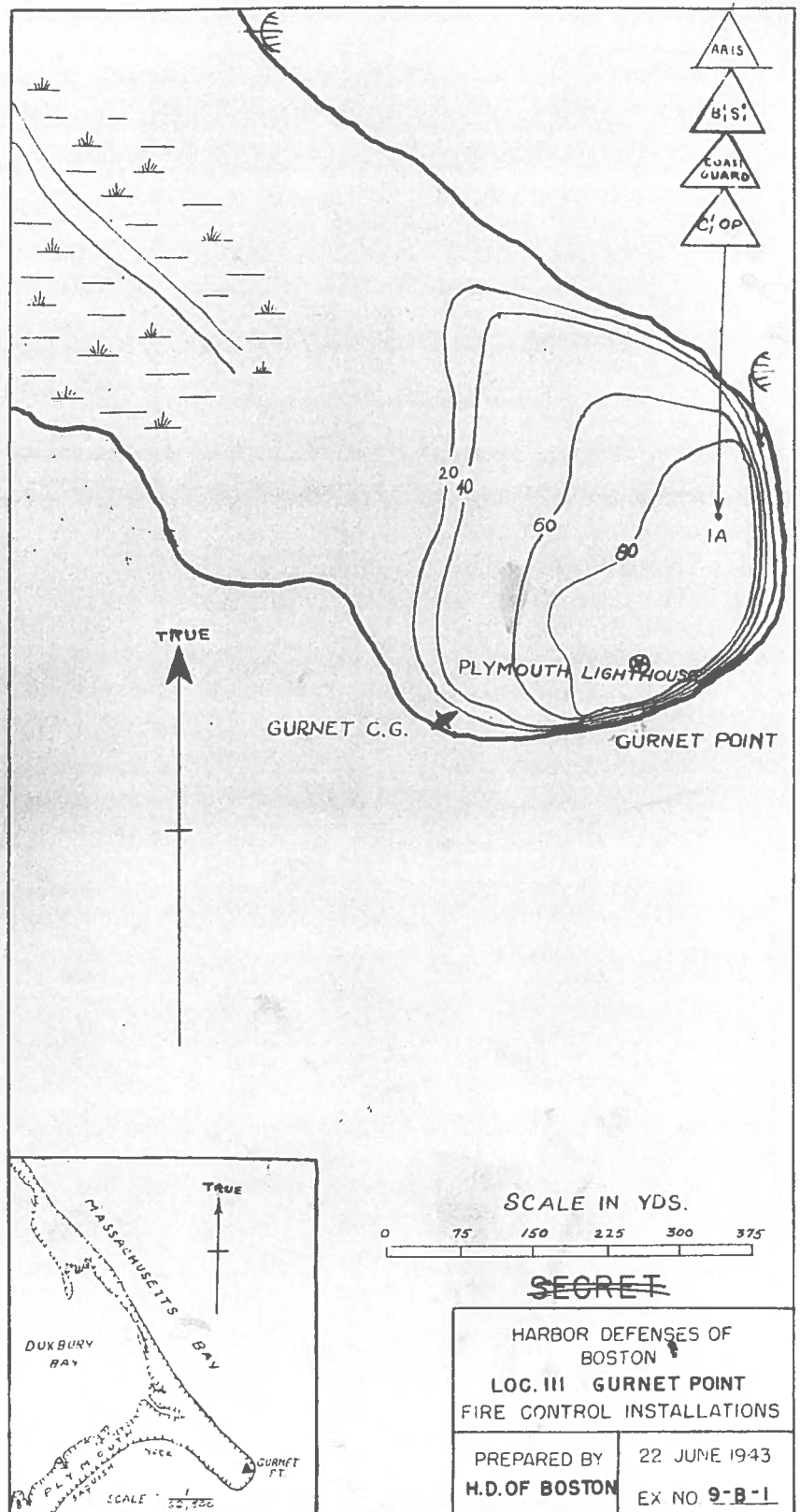
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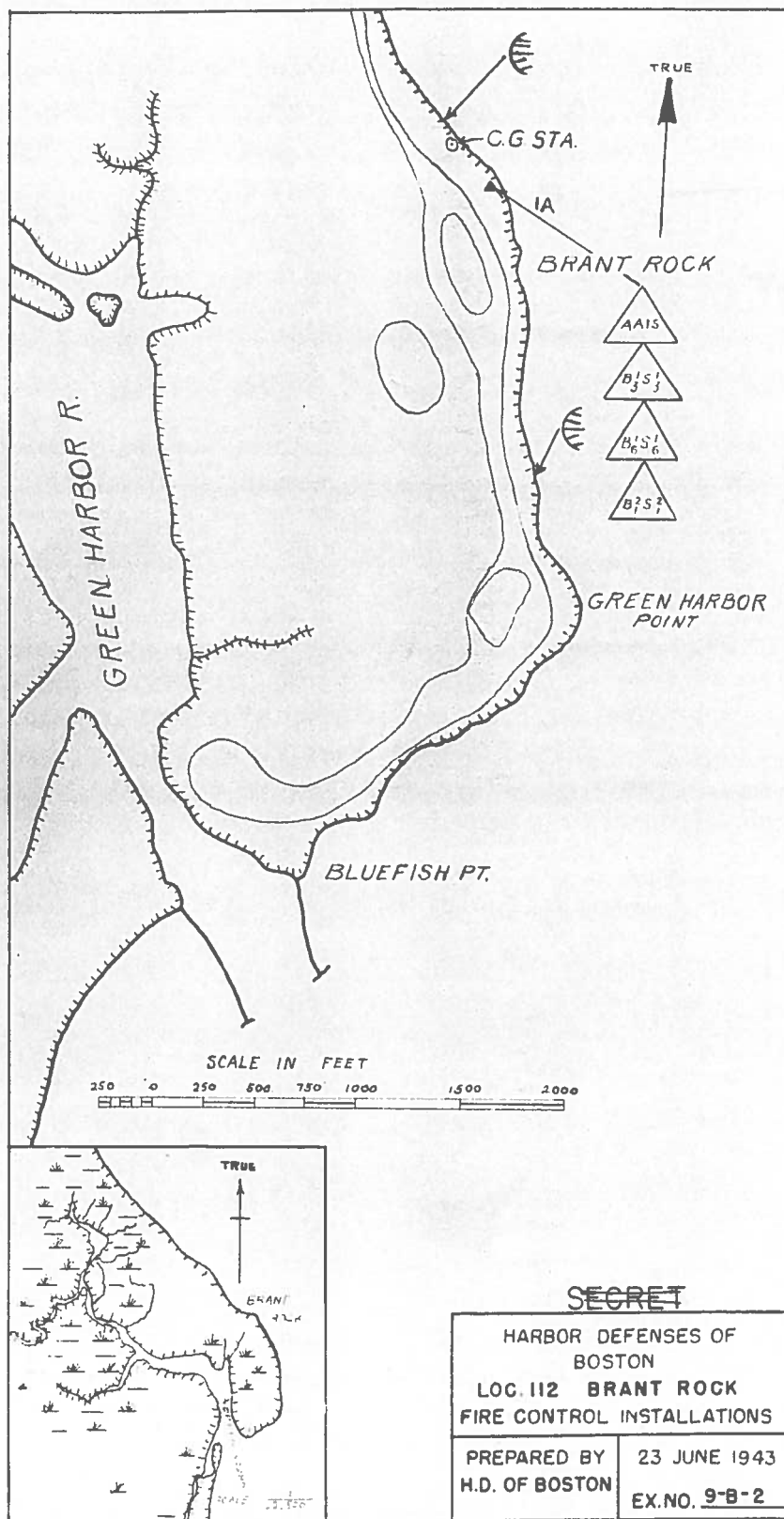
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<b>SCHEMATIC</b>			
<b>CABLE DIAGRAM</b>			
PREPARED BY	DATE	7-1-43	
HARBOR DEFENSES OF BOSTON	EX. NO.	8-B	

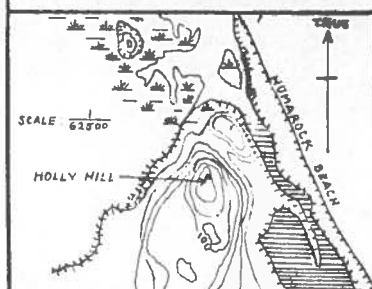
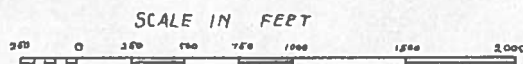
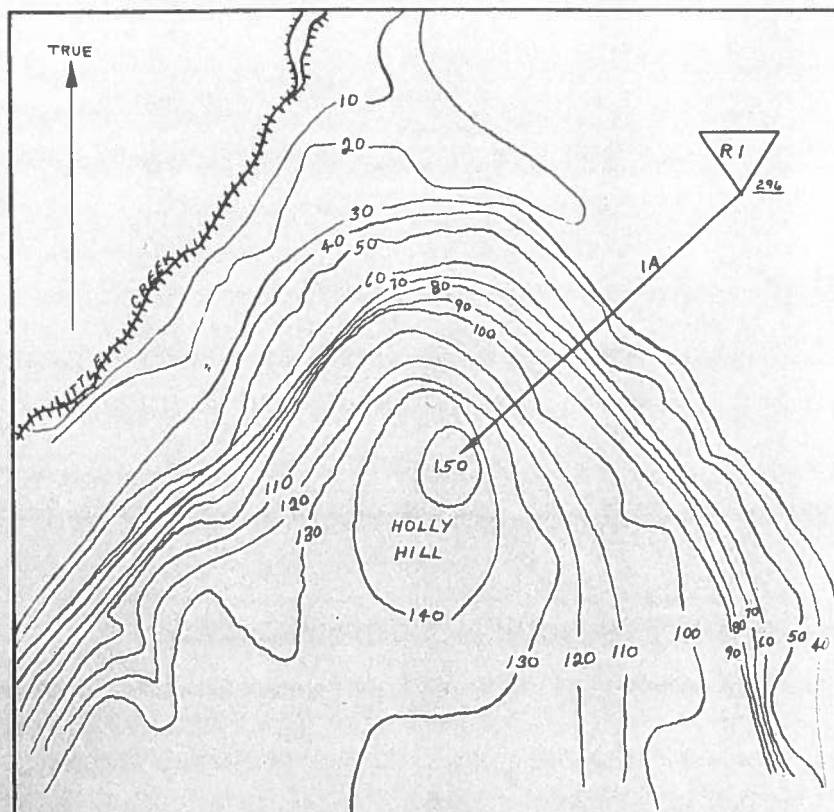


LOC. 4	LOCATION NUMBERS	EXISTING PLANT	PROJECTED PLANT
51-19	51 PAIRS, 19 GAUGE		
Q	QUAD (2 PAIRS)		
L	CABLE INSTALLED		
S	SUBMARINE CABLE		
CH	CABLE HUT		
MH	MANHOLE		
•	CABLE SPLICE (SHOW SPECIAL REFERENCE)		
32,000'S	NECESSARY TO SHOW CABLE DISTANCE BETWEEN SPLICES OR TERMINALS		





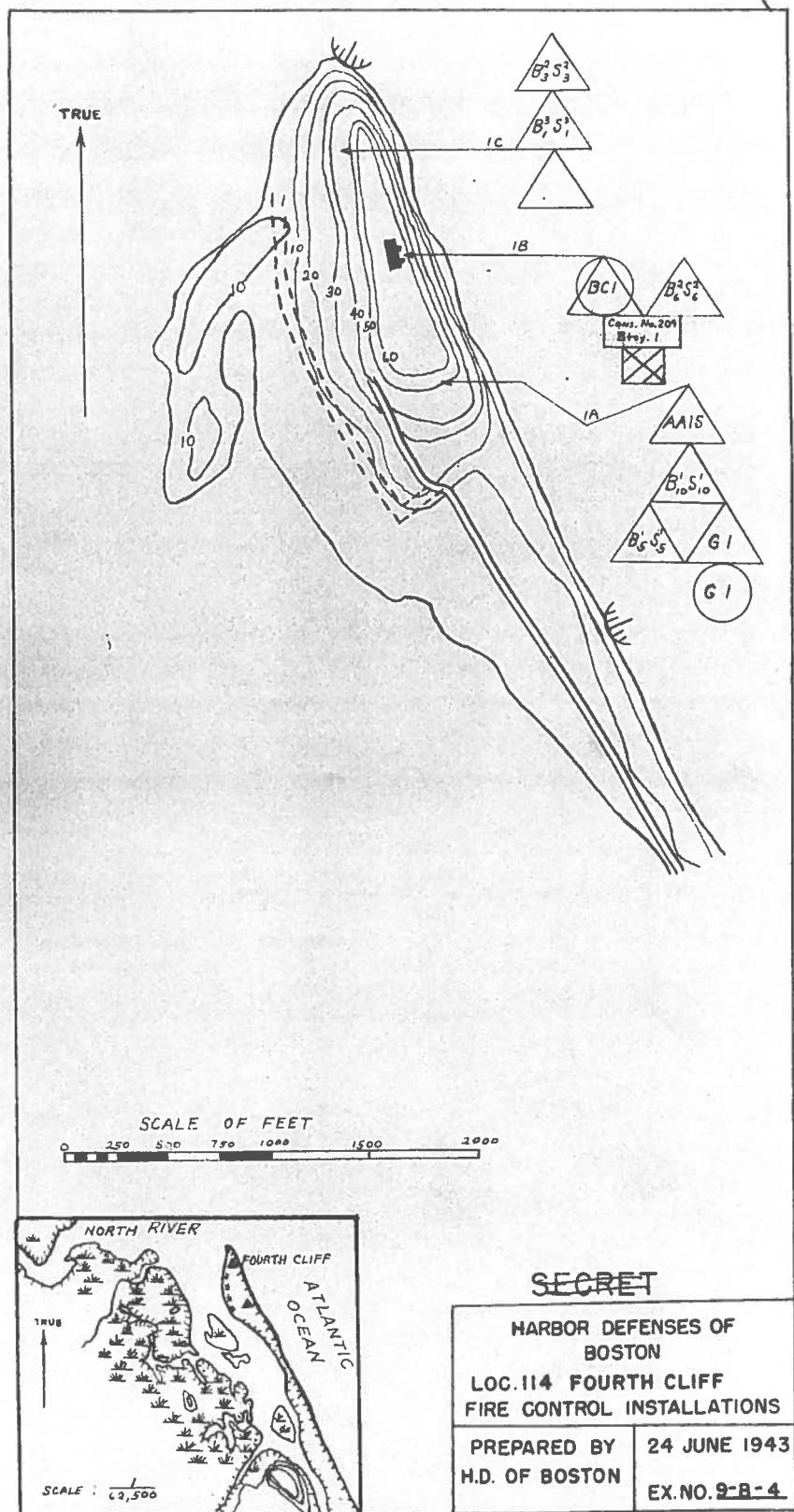


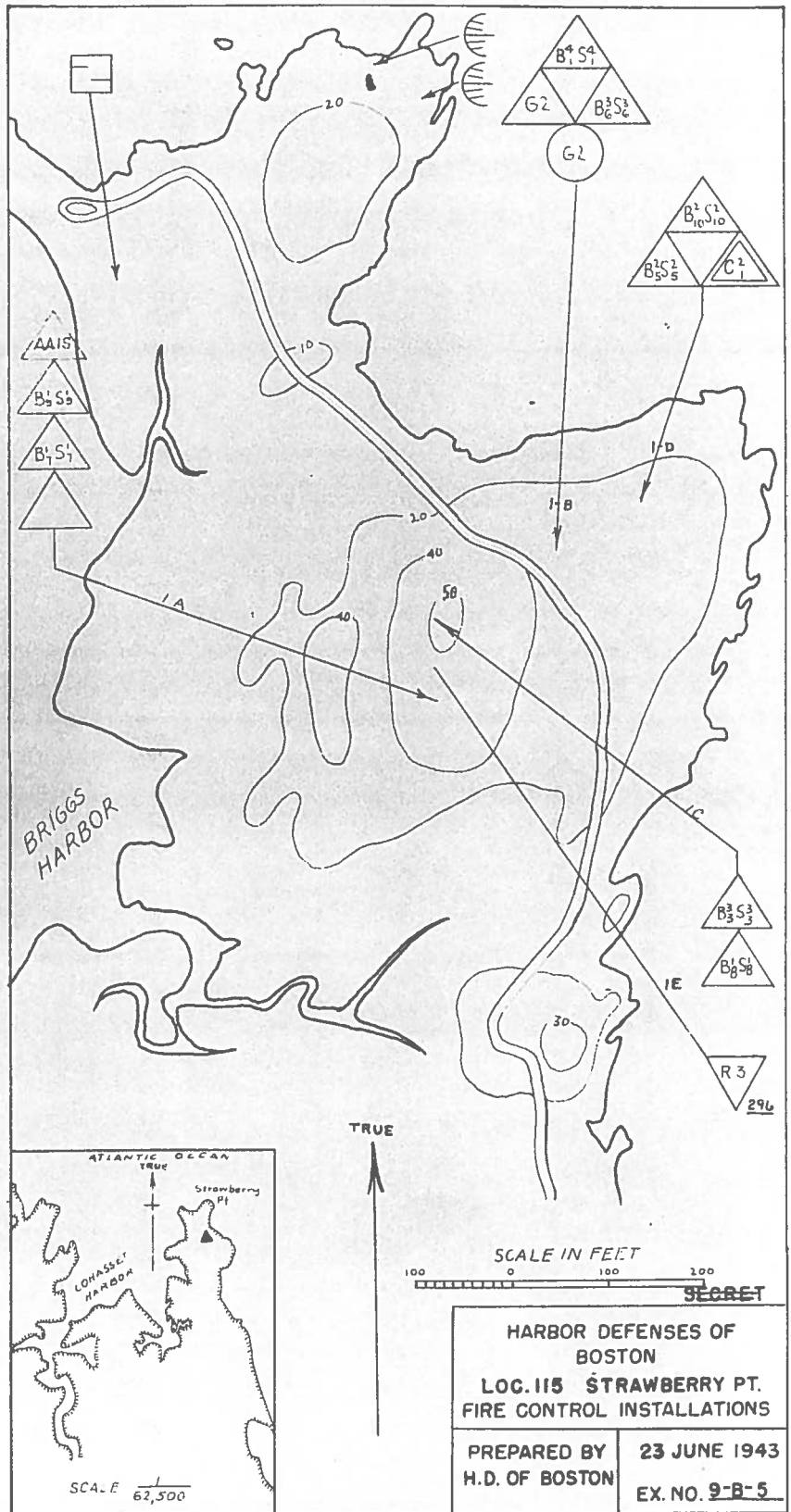


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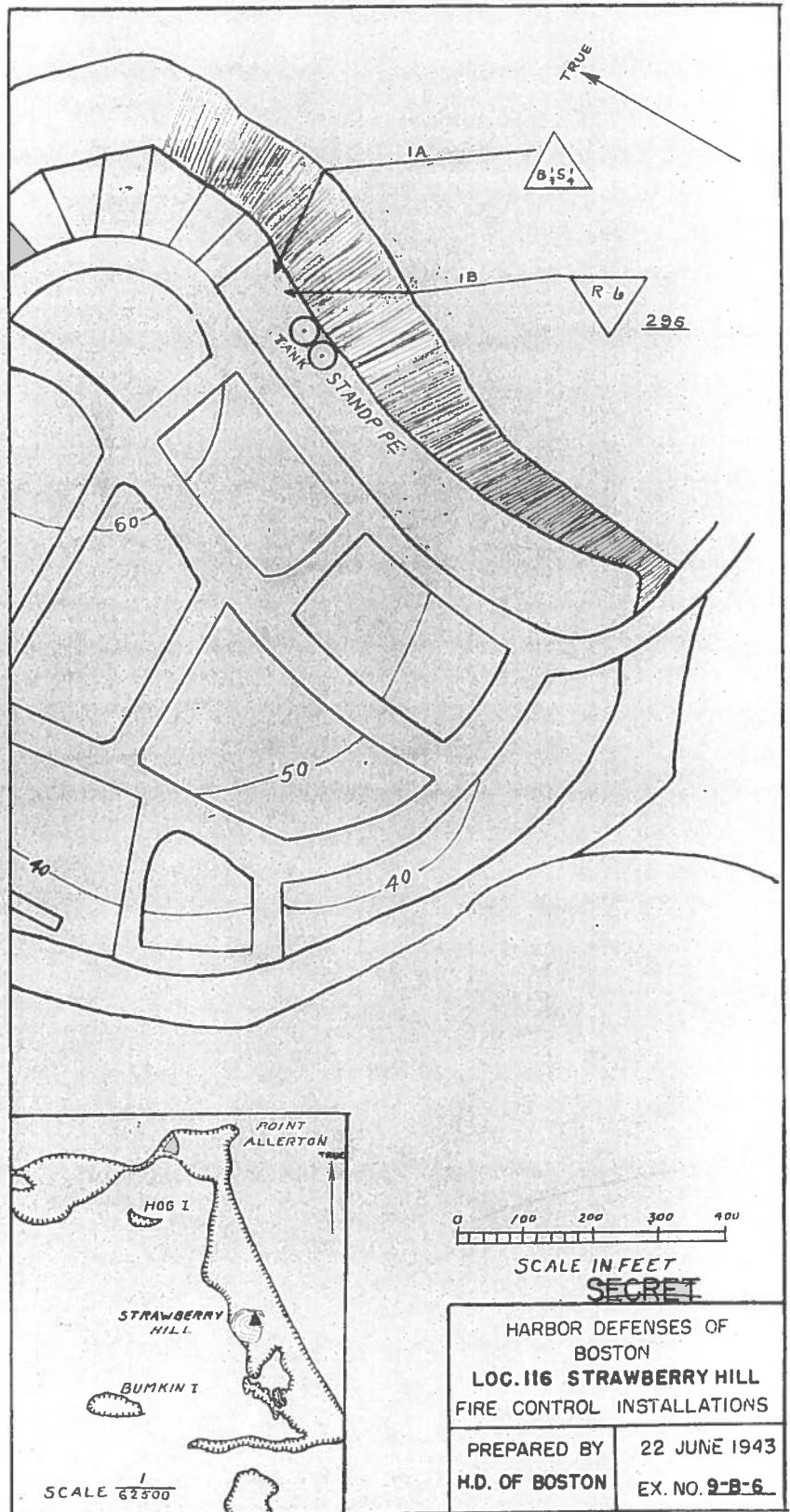
HARBOR DEFENSES OF  
BOSTON  
LOC. 112A HOLLY HILL  
FIRE CONTROL INSTALLATIONS

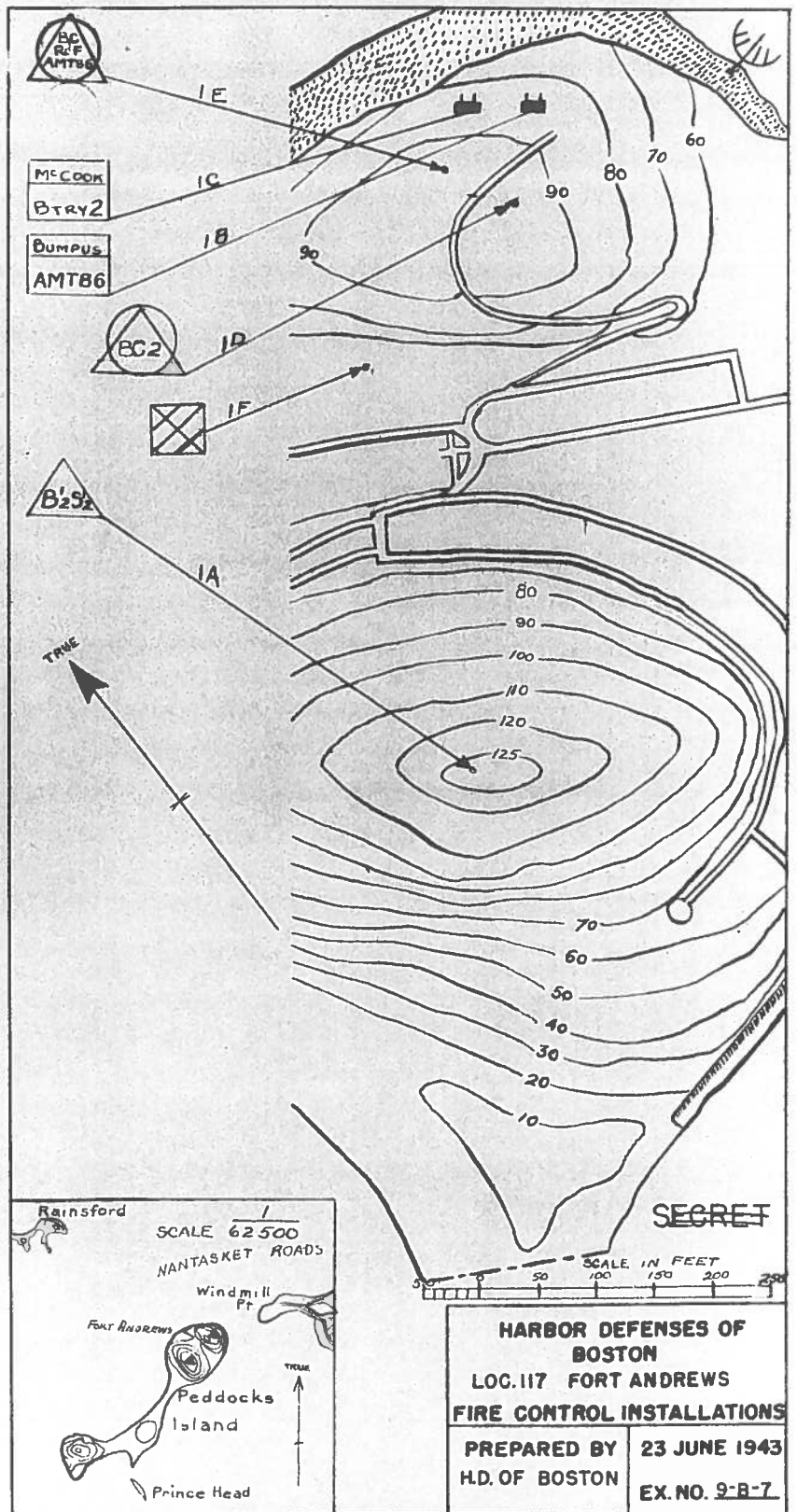
PREPARED BY	23 JUNE 1943
H.D. OF BOSTON	EX. NO. 9-B-3

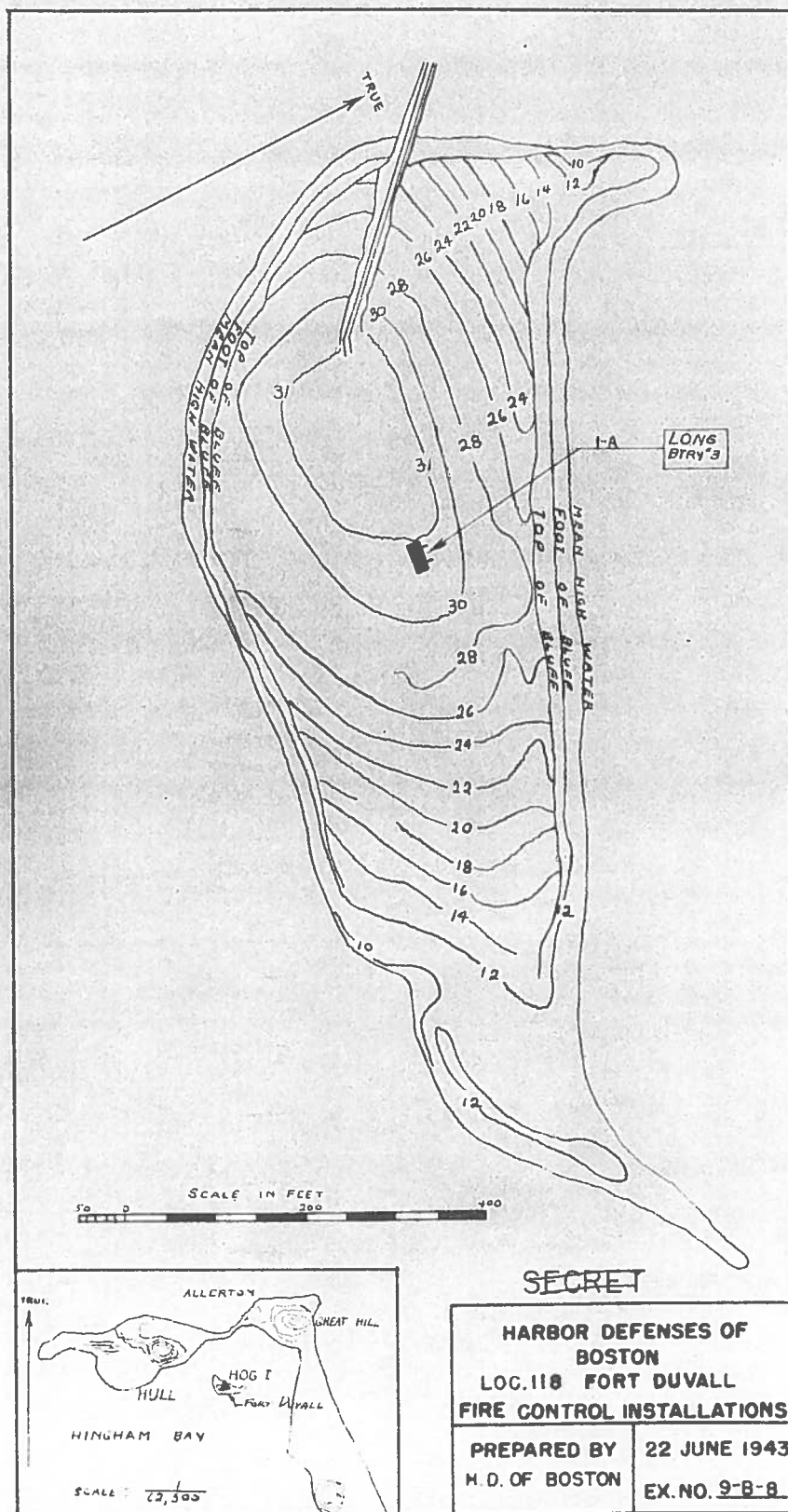


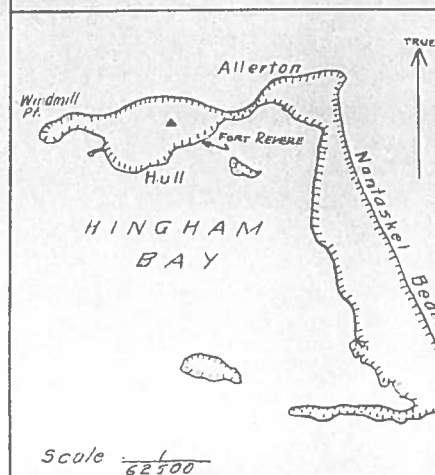
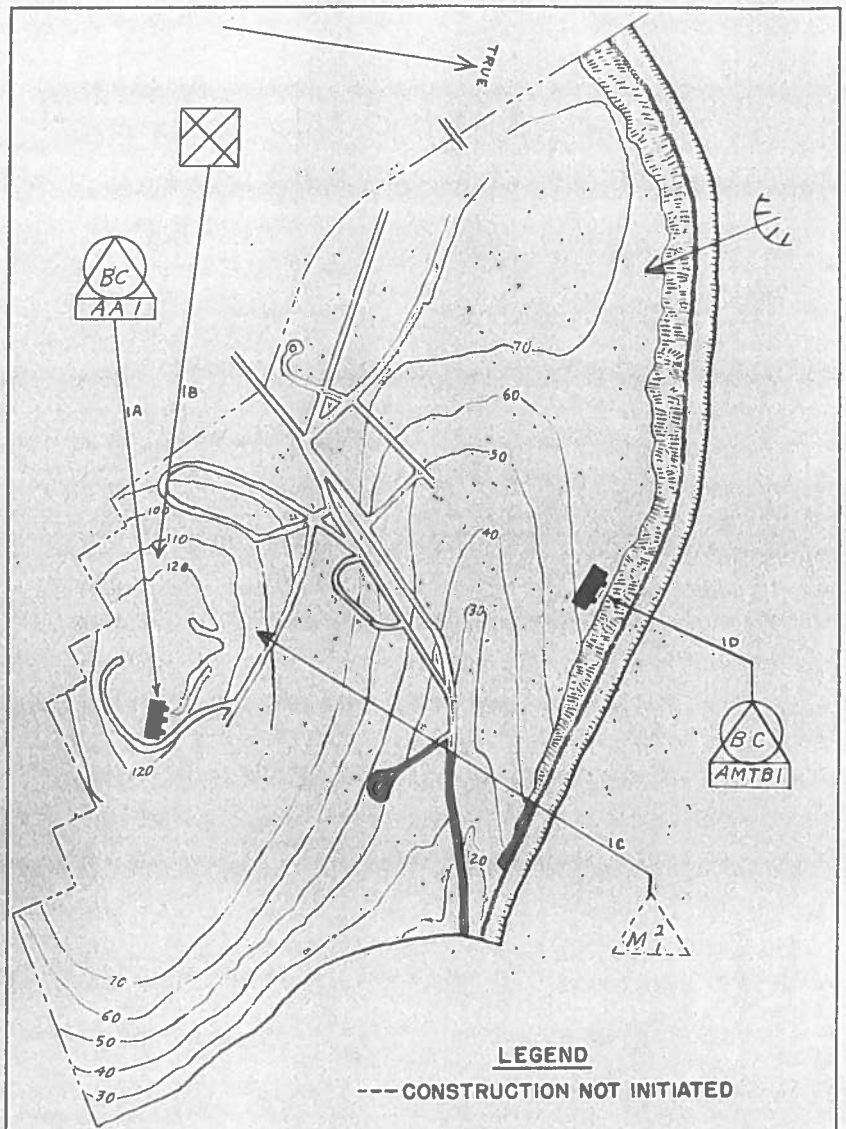












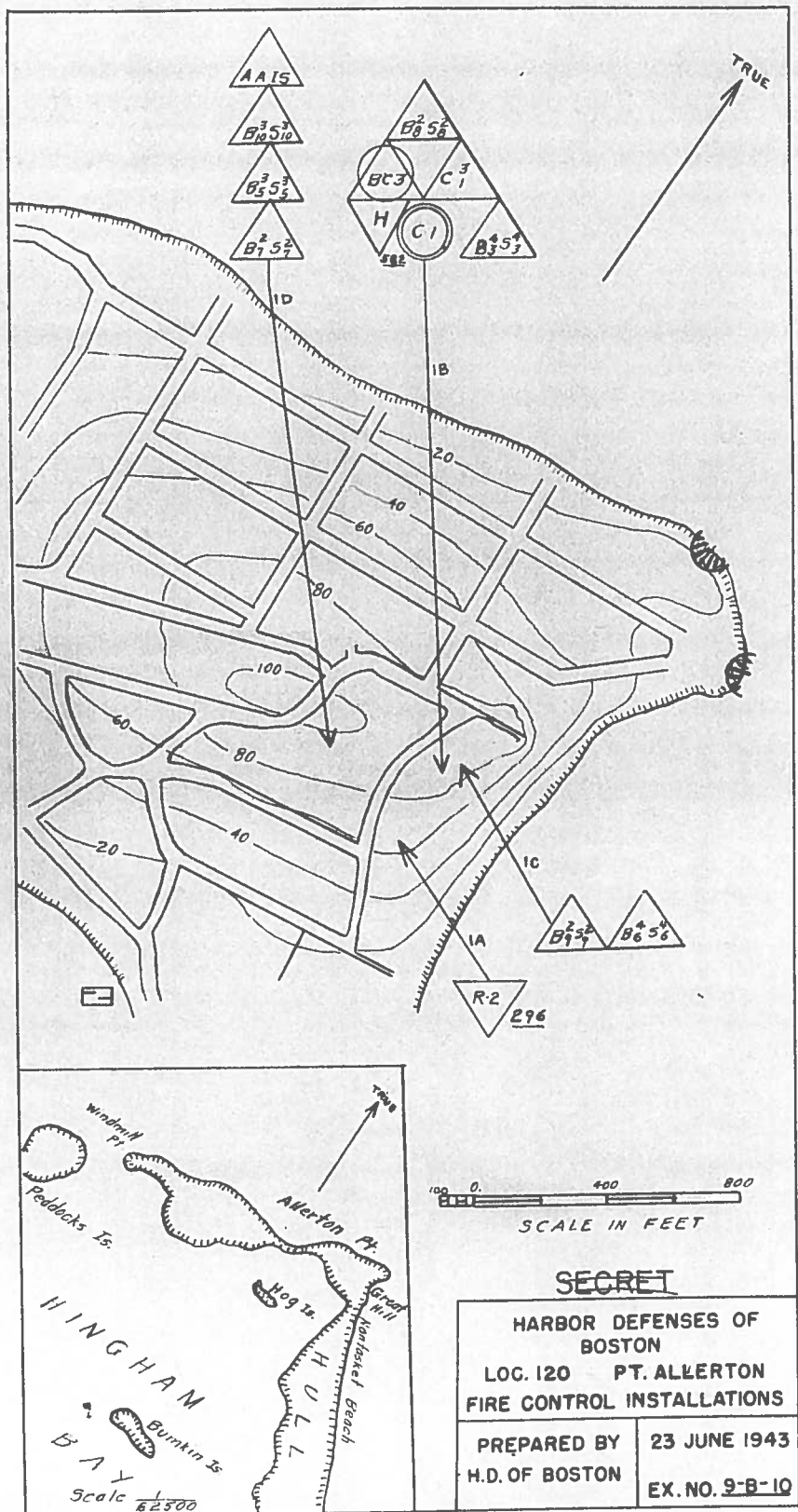
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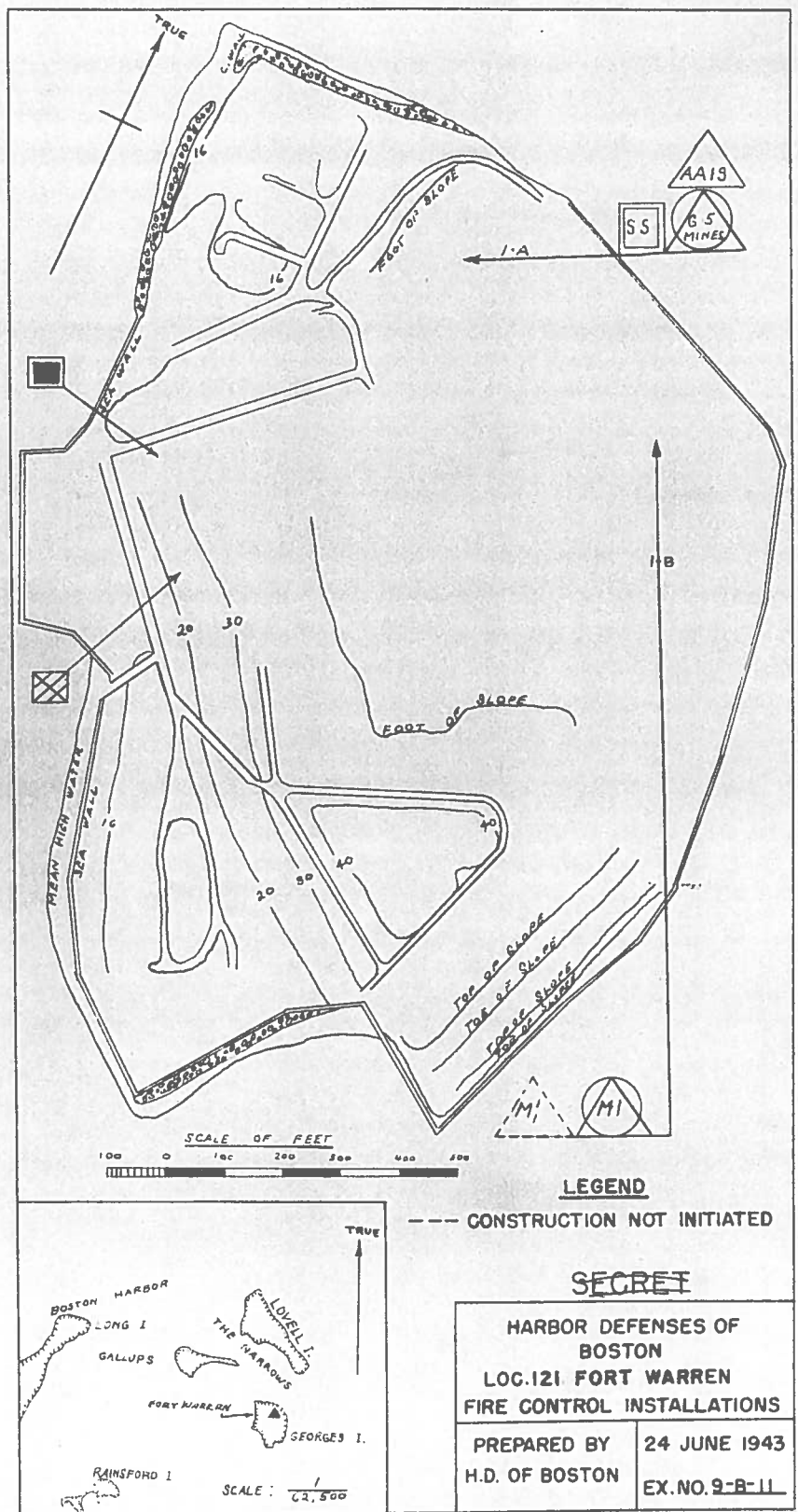
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HARBOR DEFENSES OF  
BOSTON  
LOC. 119 FORT REVERE  
FIRE CONTROL INSTALLATIONS

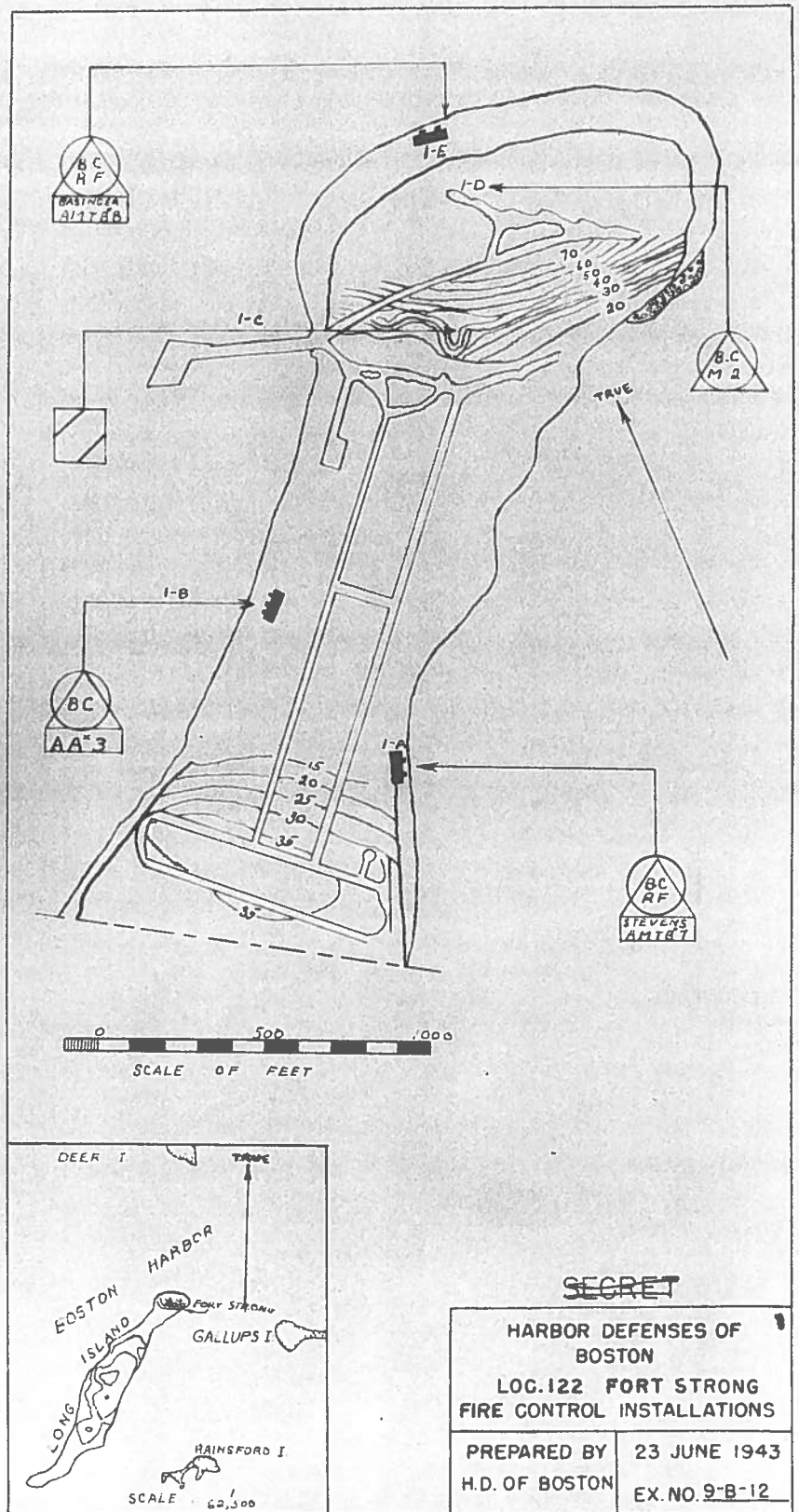
PREPARED BY H.D. OF BOSTON	24 JUNE 1943 EX. NO. 9-B-9
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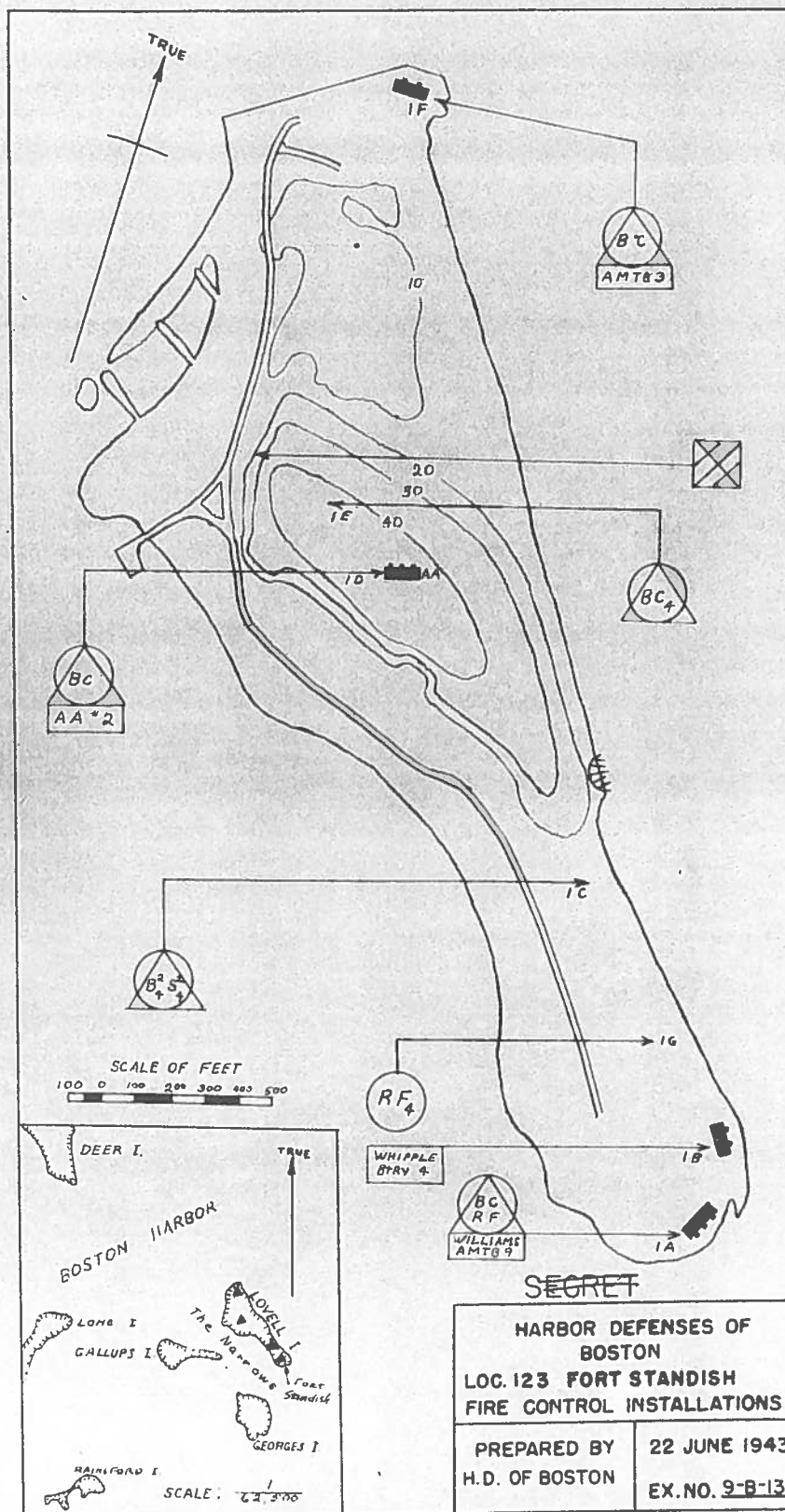


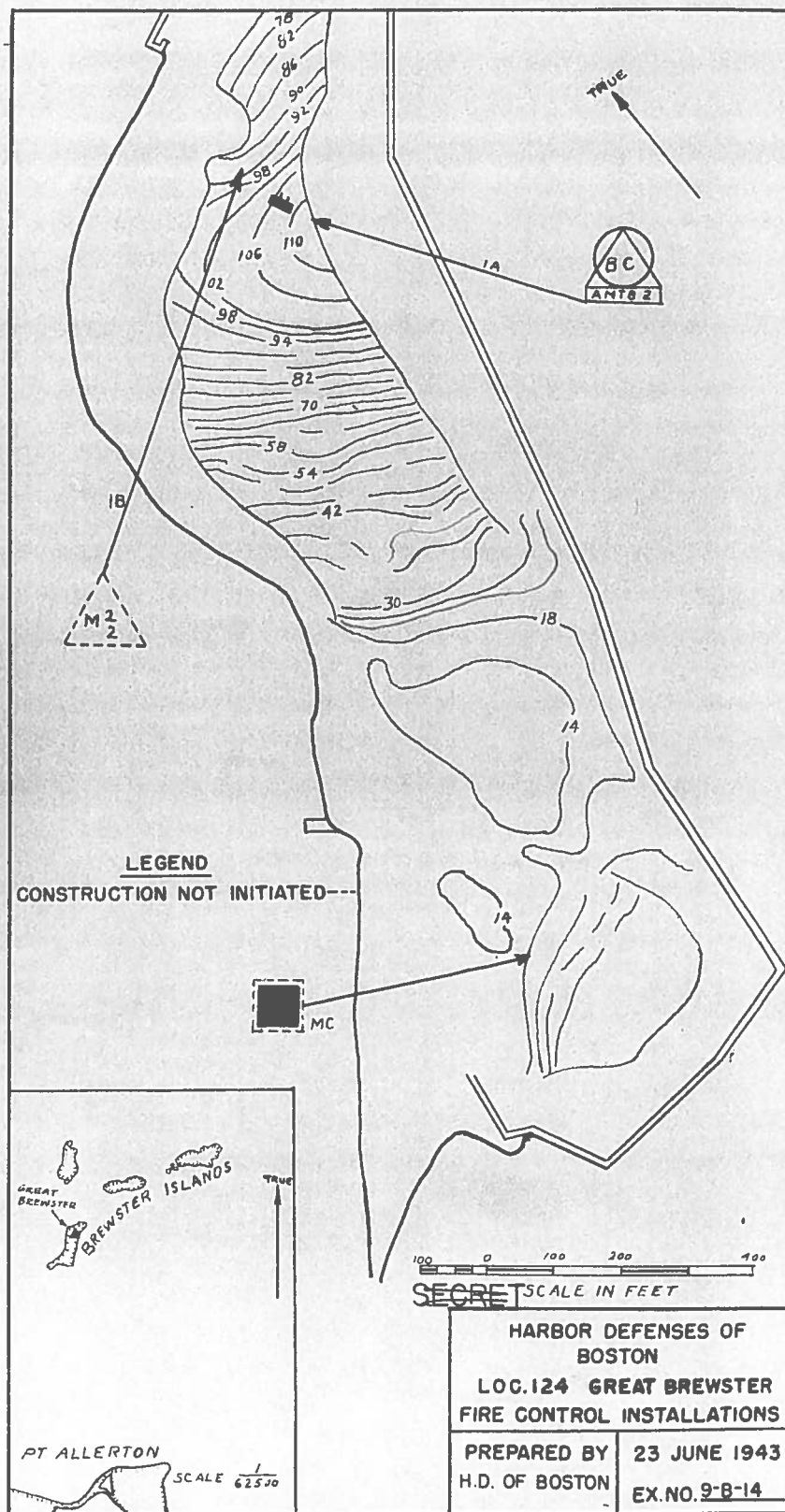


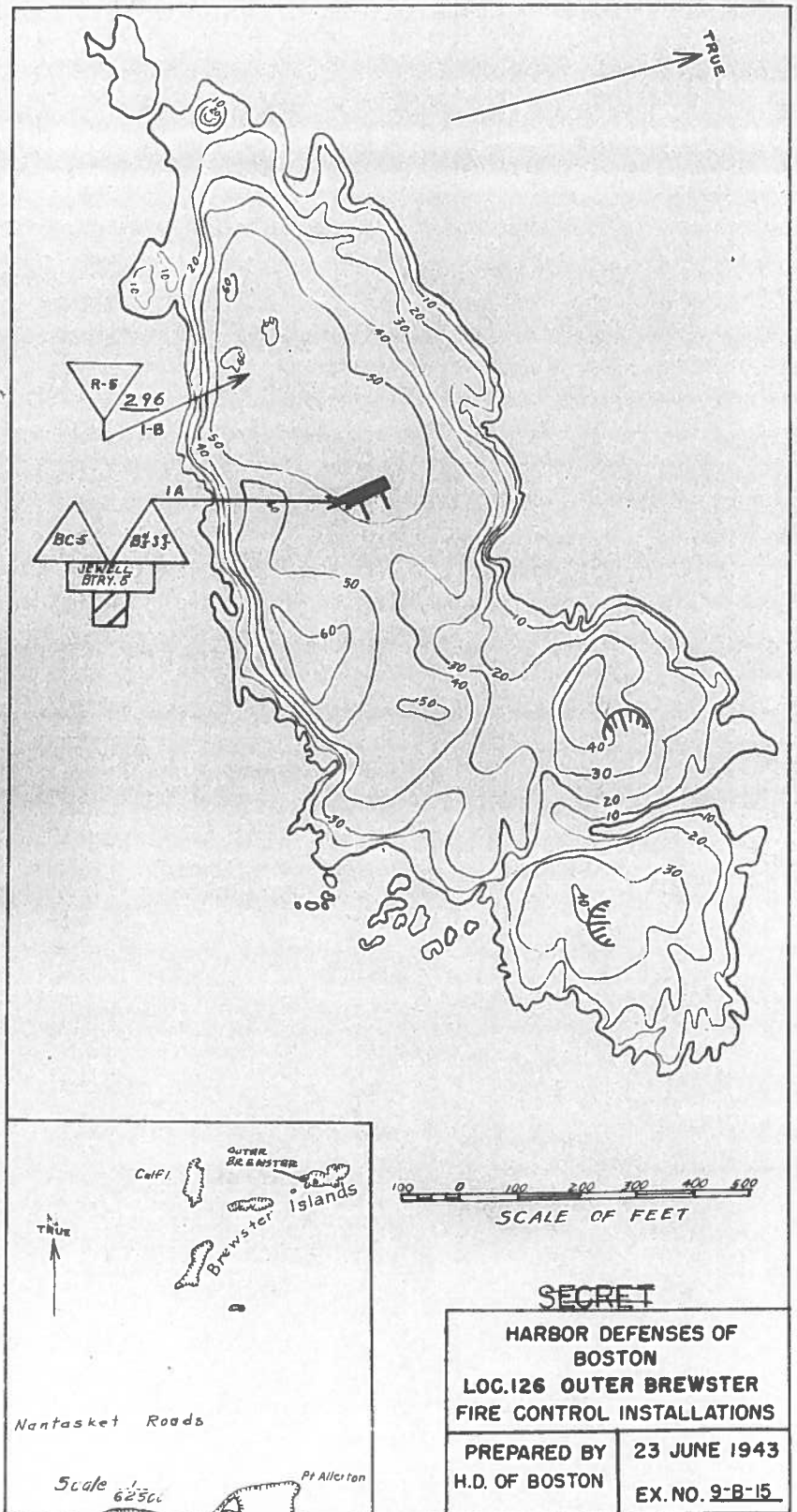


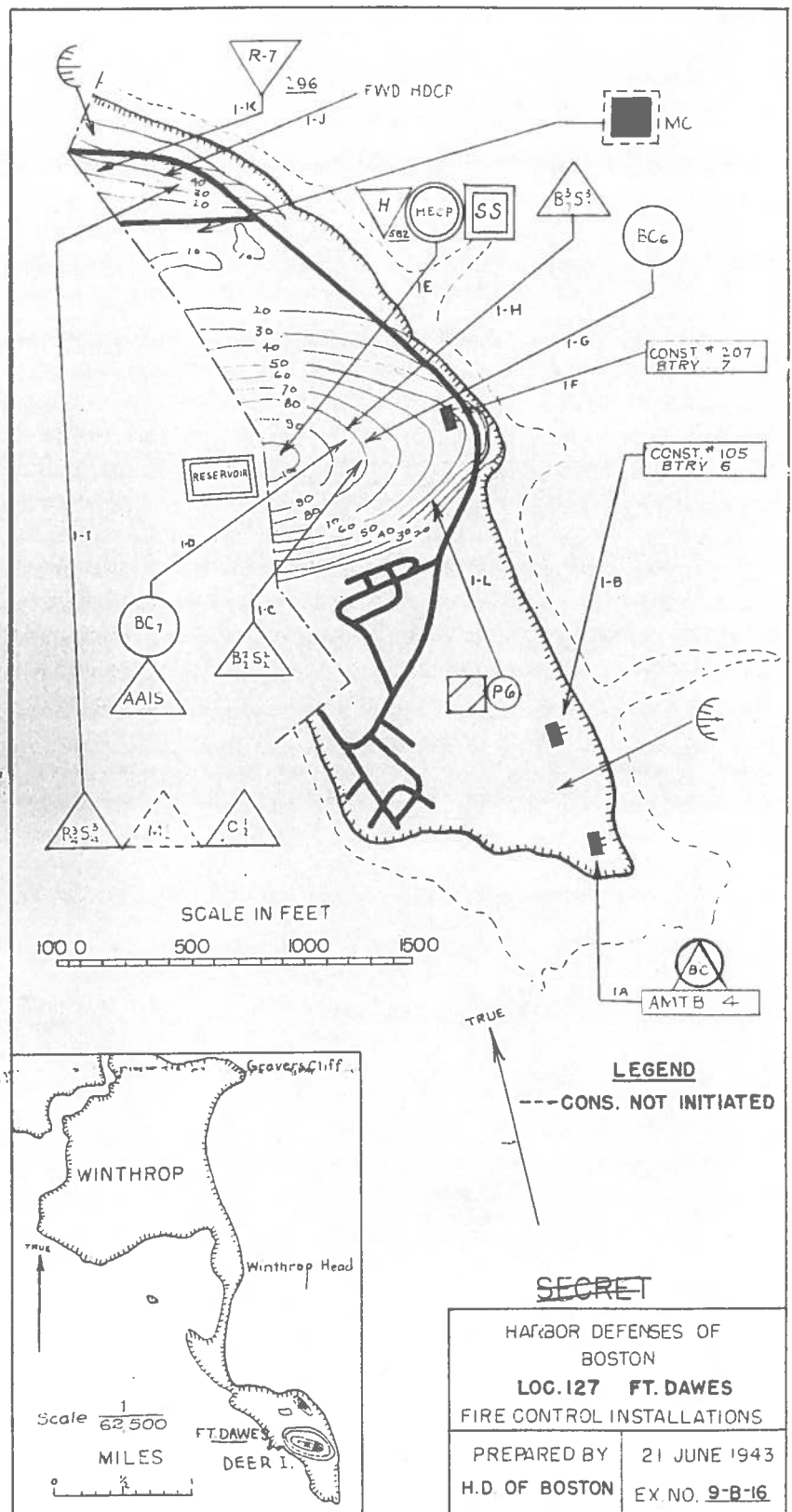




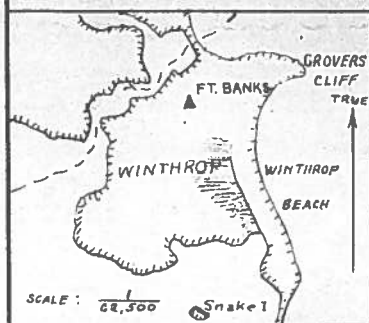
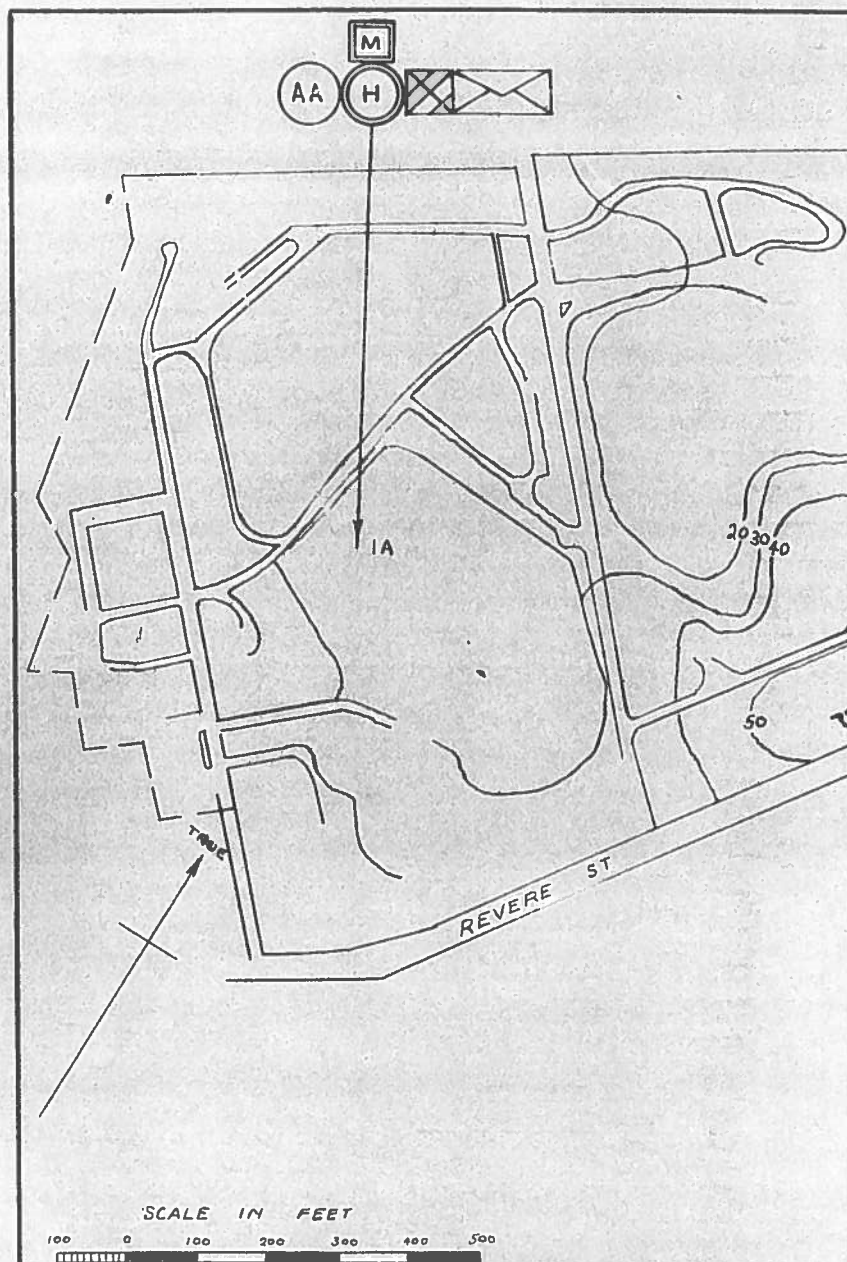










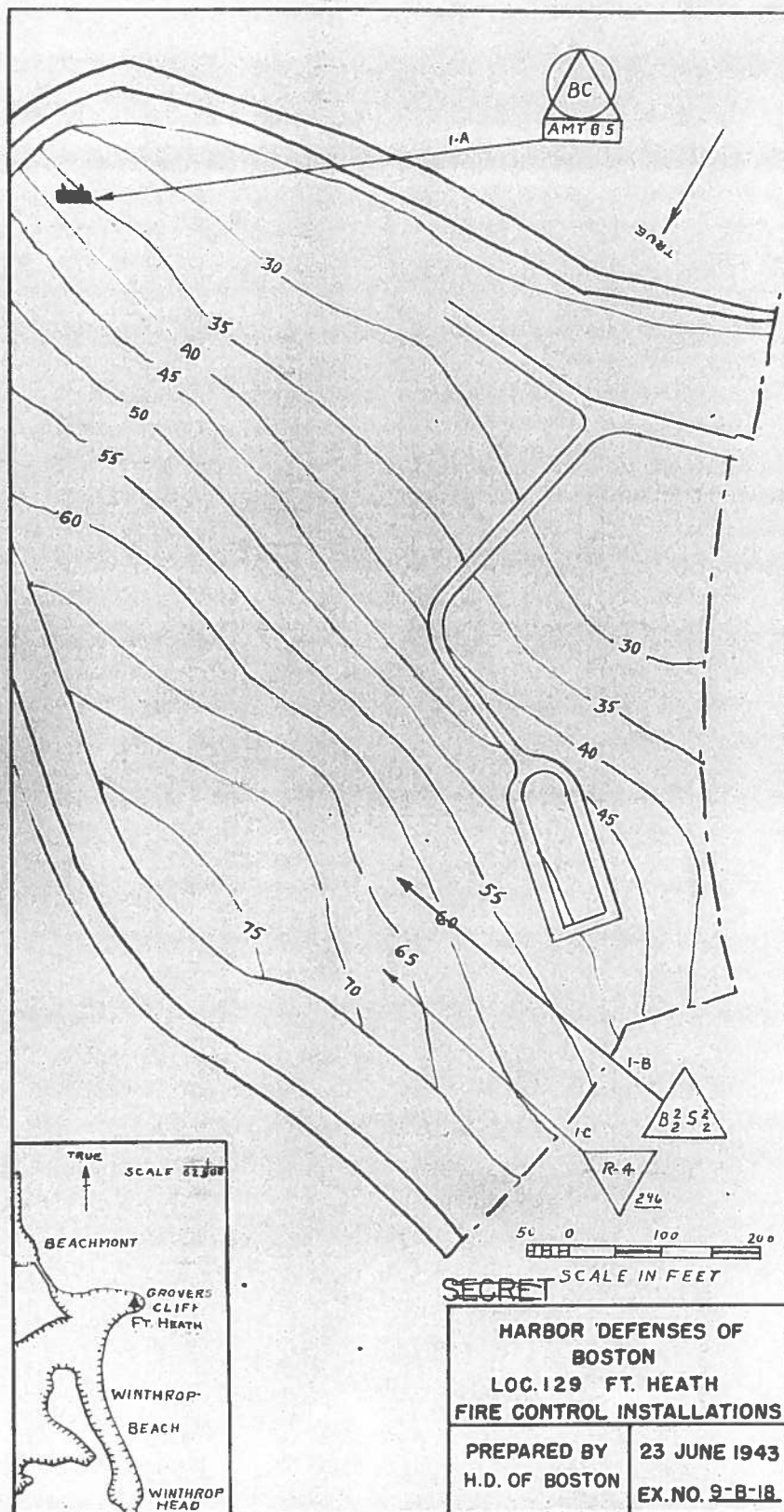


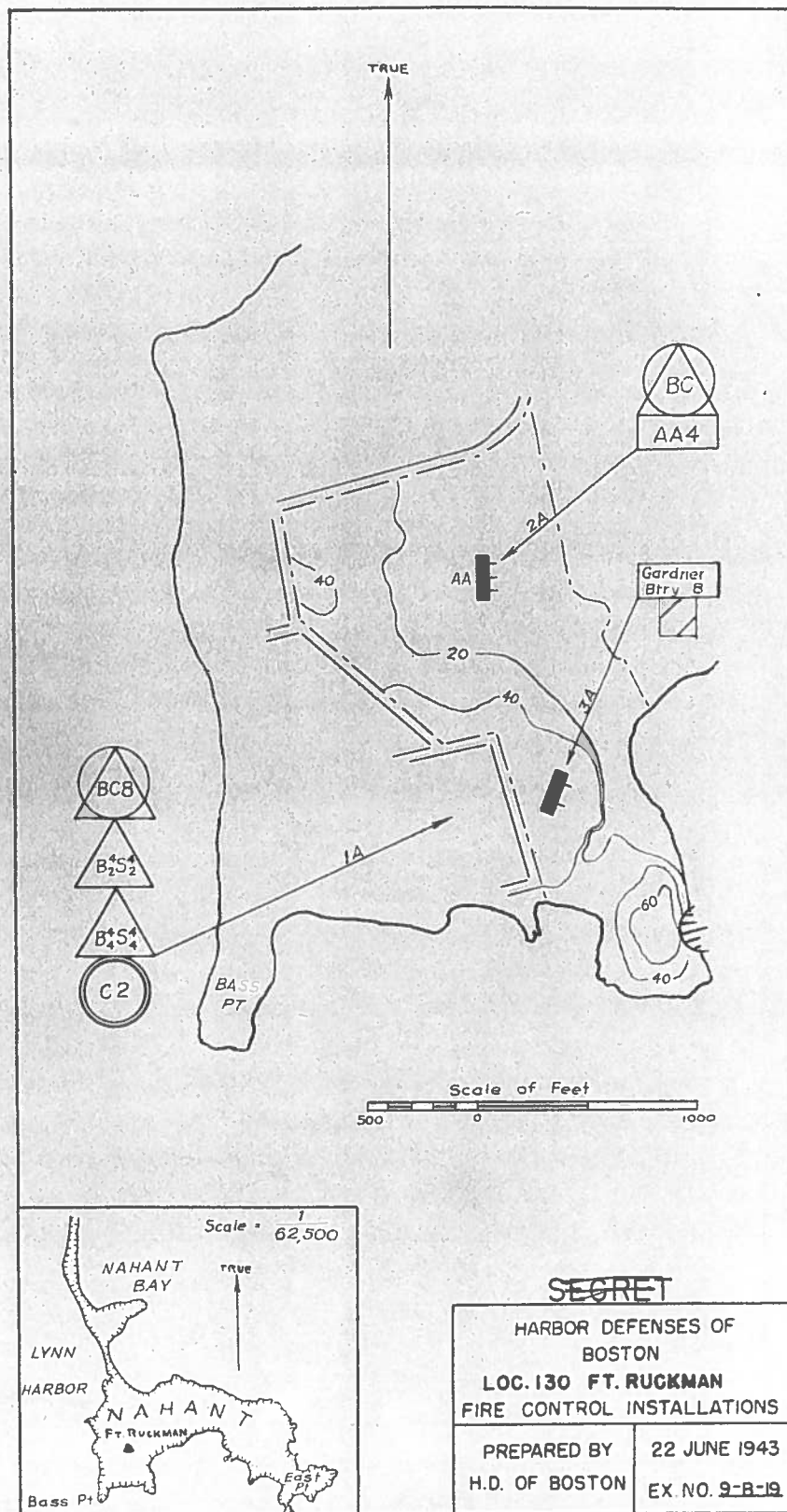
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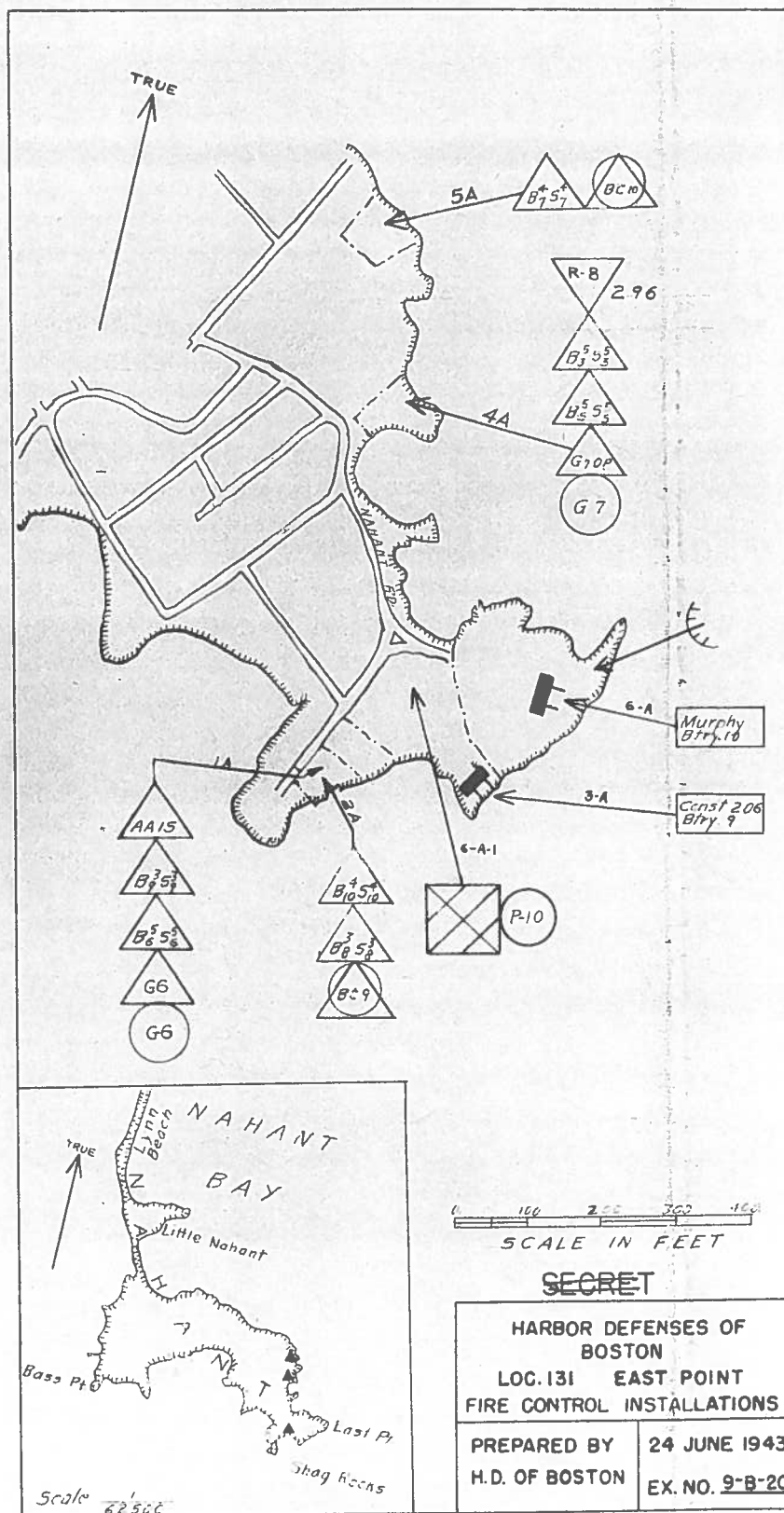
HARBOR DEFENSES OF  
BOSTON  
LOC. 128 FT. BANKS  
FIRE CONTROL INSTALLATIONS

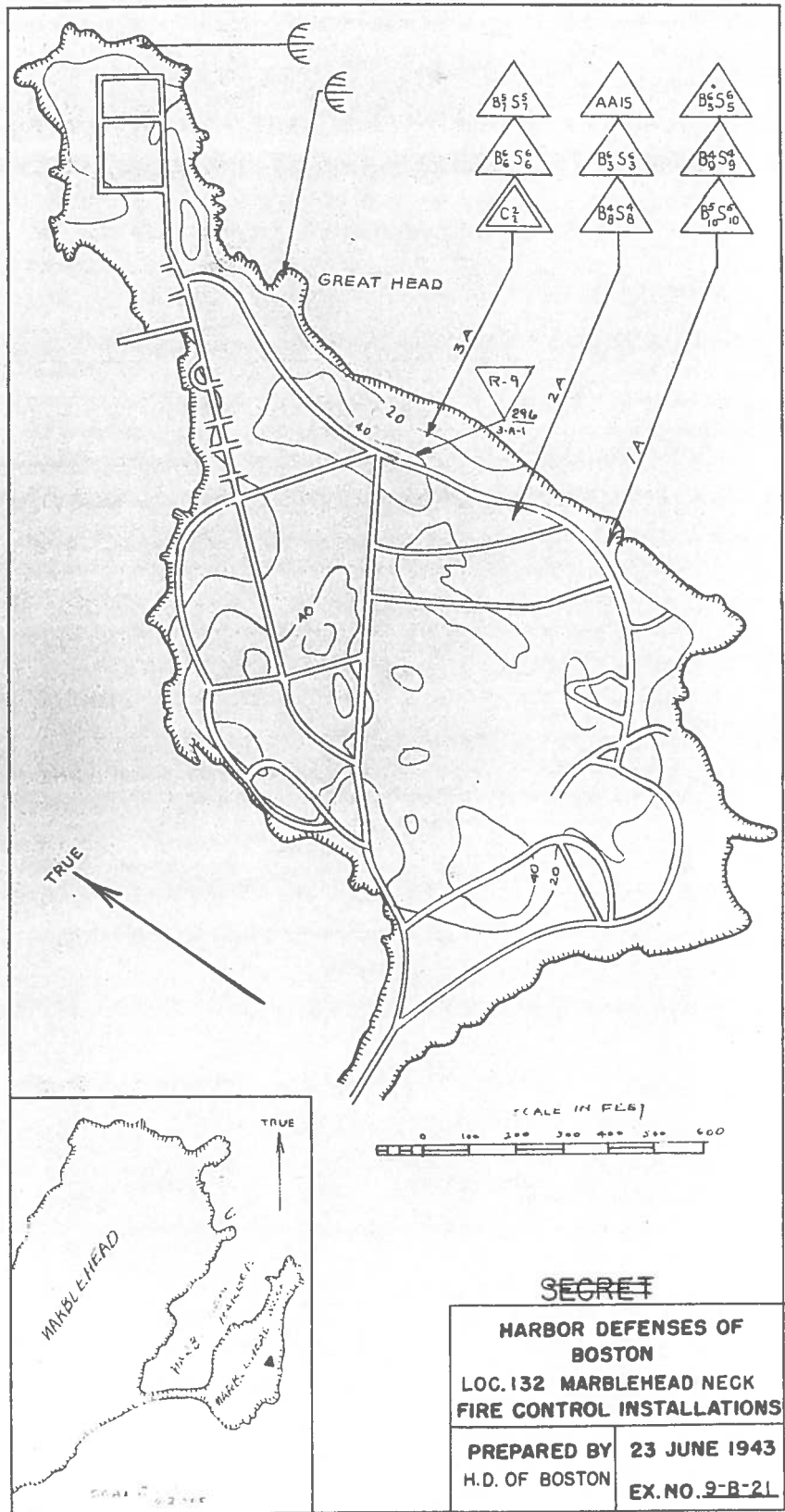
PREPARED BY H.D. OF BOSTON	23 JUNE 1943 EX. NO. 9-B-17
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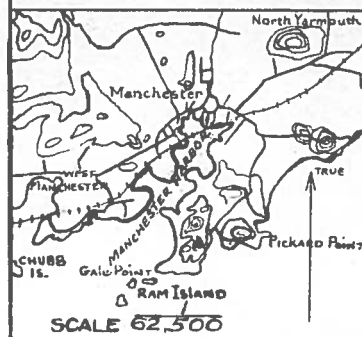
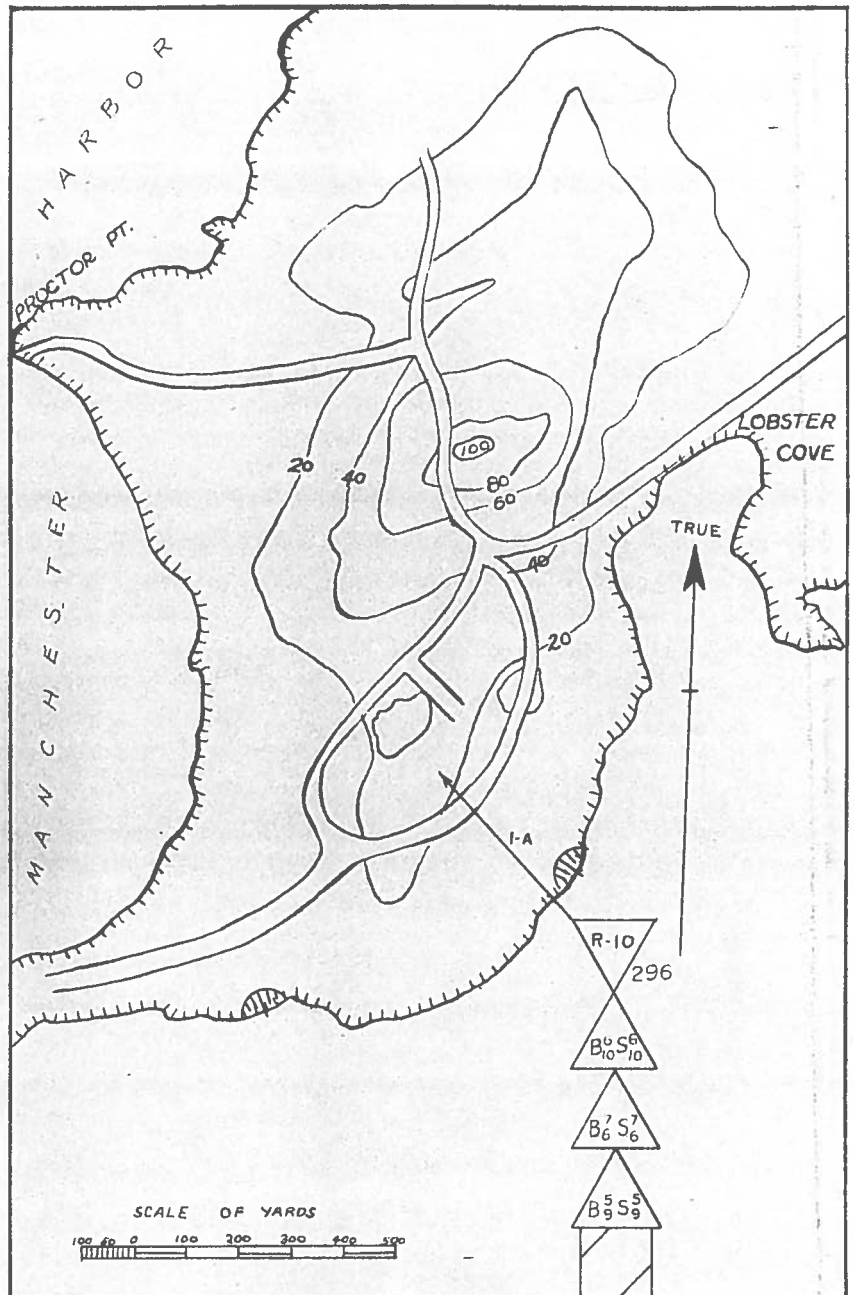










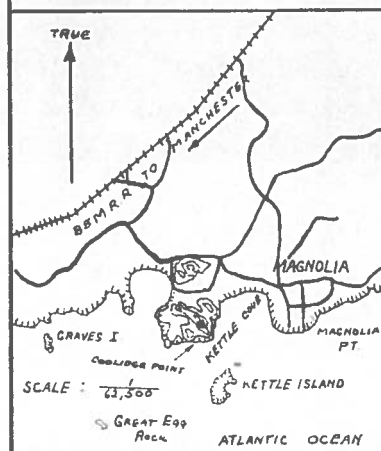
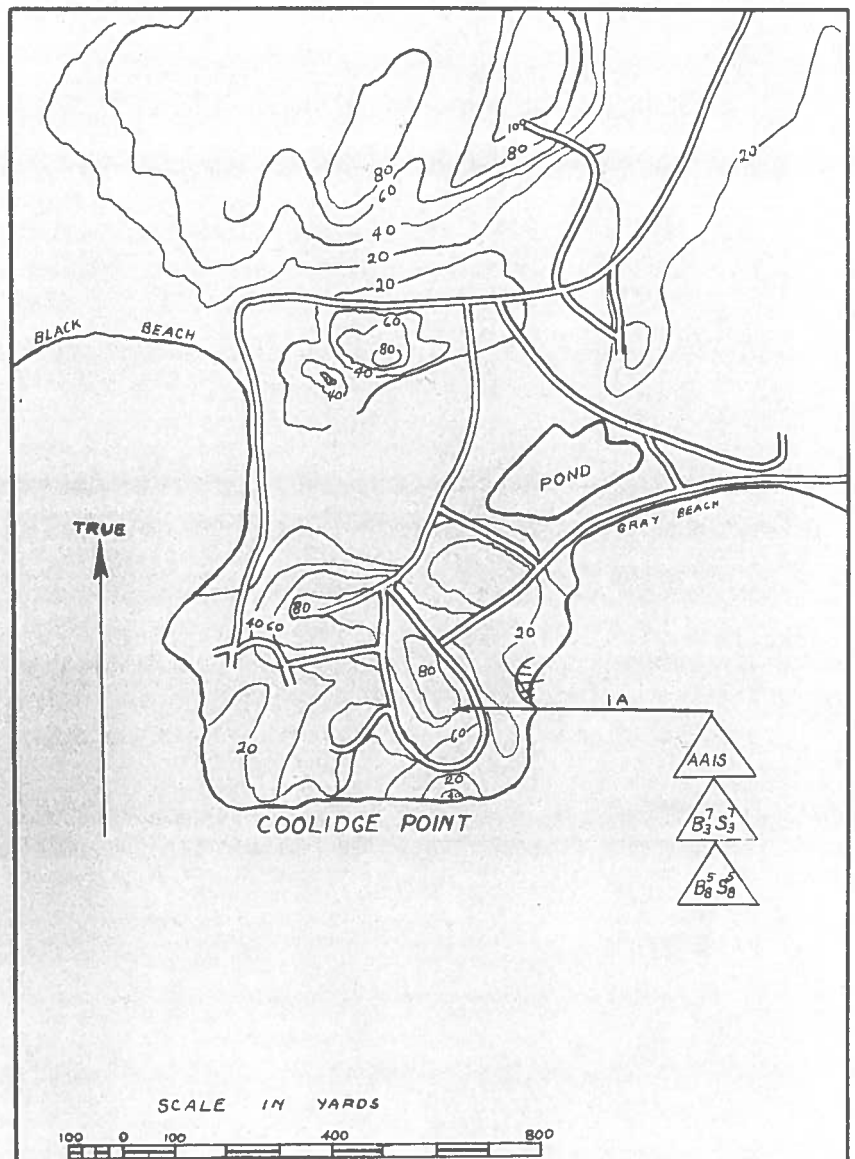


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HARBOR DEFENSES OF  
BOSTON  
LOG. 133 GALES POINT  
FIRE CONTROL INSTALLATIONS

PREPARED BY H.D. OF BOSTON	23 JUNE 1943 EX. NO. 9-B-22
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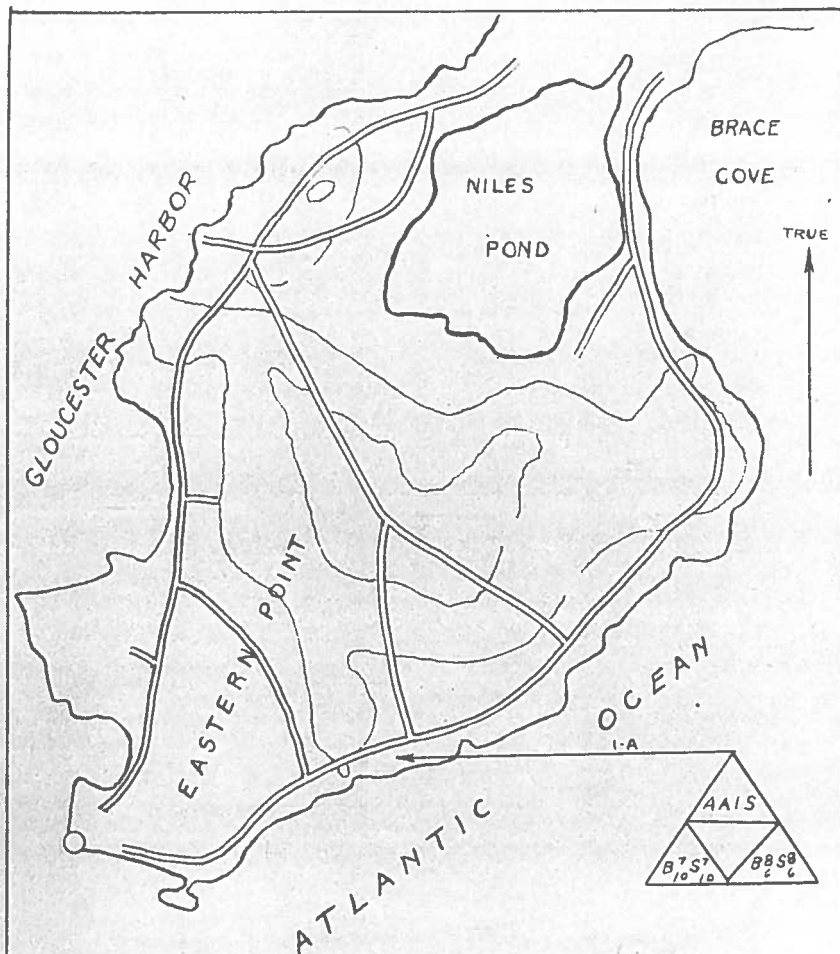


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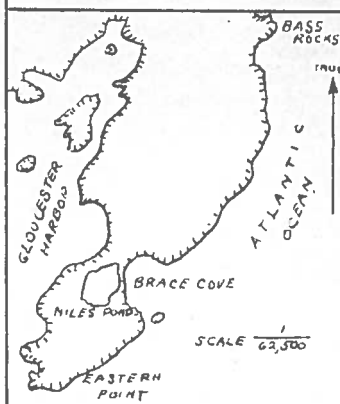
**HARBOR DEFENSES OF  
BOSTON  
LOC. 134 COOLIDGE POINT  
FIRE CONTROL INSTALLATIONS**

<b>PREPARED BY H.D. OF BOSTON</b>	<b>22 JUNE 1943 EX. NO. 9-B-23</b>
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SCALE IN YARDS  
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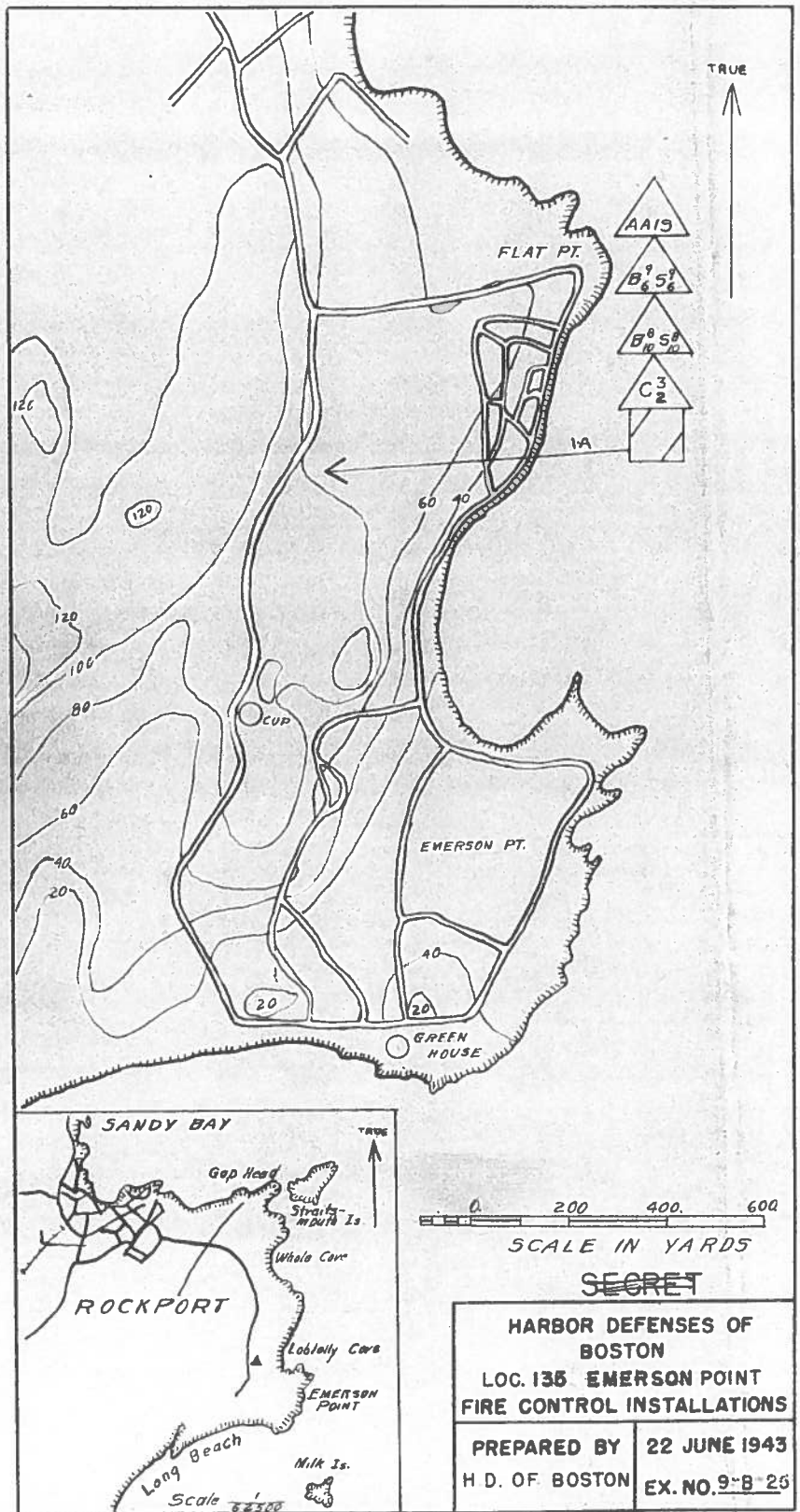


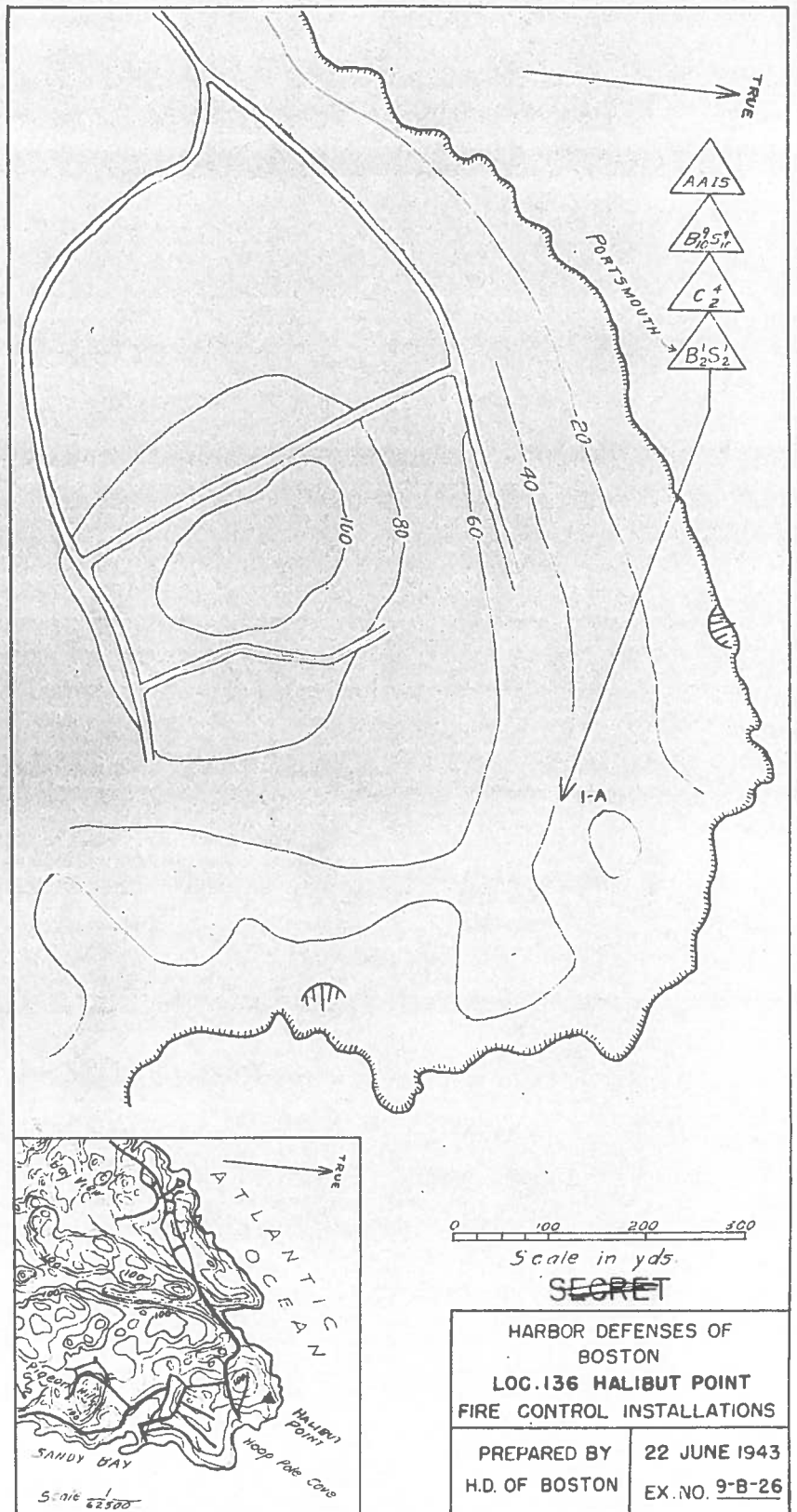
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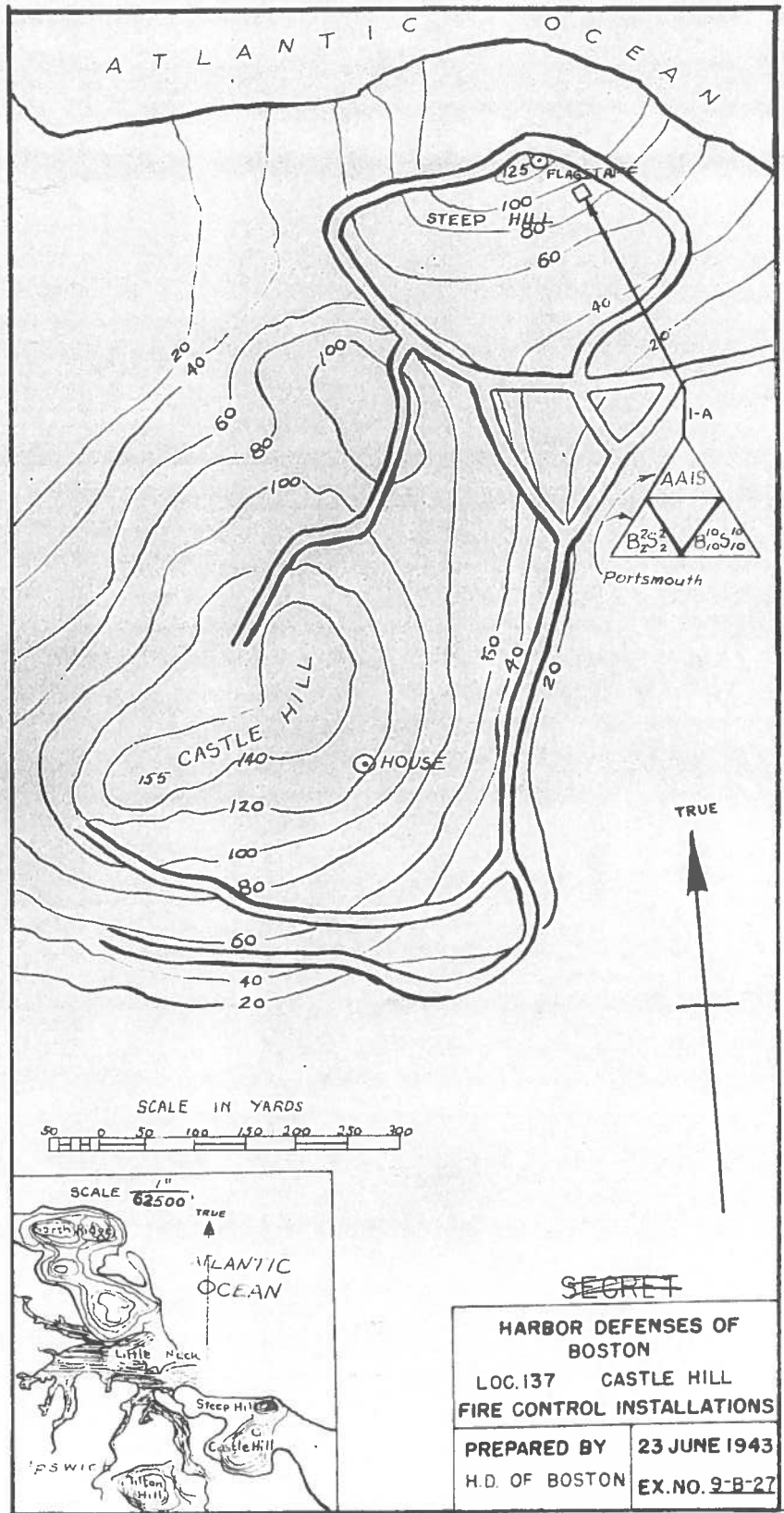
HARBOR DEFENSES OF  
BOSTON  
LOC. 134A EASTERN PT.  
FIRE CONTROL INSTALLATIONS

PREPARED BY  
H.D. OF BOSTON

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







**SECRET**

**HARBOR DEFENSES OF BOSTON**  
**LOC. 137 CASTLE HILL**  
**FIRE CONTROL INSTALLATIONS**  
**PREPARED BY 23 JUNE 1943**  
**H.D. OF BOSTON EX. NO. 9-B-27**

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# ANNEX C

## SEACOAST SEARCHLIGHTS

~~SECRET~~

~~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

~~SECRET~~



~~SECRET~~

1. General: The searchlight project for this Harbor Defense consists of five fixed and thirty-two portable lights. Five of the portable lights are for use with the 90mm AMTB batteries, 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.

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 AMTB 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.

~~SECRET~~

~~SECRET~~

3

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

FORM #10

3

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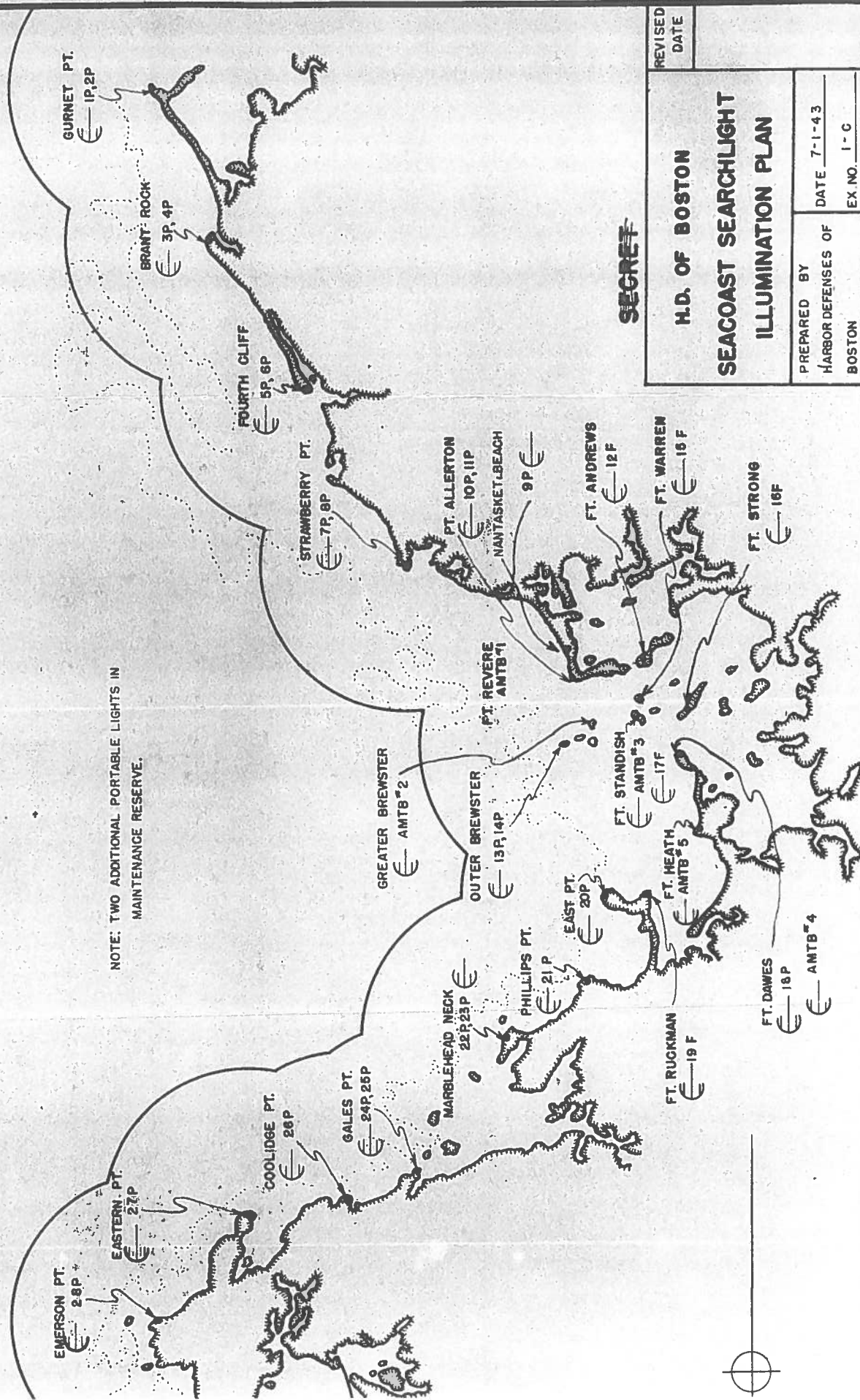
SEACOAST SEA RCHLIGHTS										
TAC NO.	LOC NO.	TACT ASGMT.	TYPE	TYPE OF EMPLACEMENT	GROUND ELEVATION	HEIGHT OF TOWER	CONTROL LOCATION	POWER PLANT		LOC. NO. OF SHELTER
								TYPE	LOC NO.	
28	135	06	P	Tower	20	38	135	P	135	130
29	136	07	P	None	80		136	P	136	130
30	136	C2	P	None	80		136	P	136	130
AMTB 1	119	AMTB 1	P	None	60		119	P	119	119
AMTB 2	124	AMTB 2	P	None	100		124	P	124	119
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.										

FORM #10

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

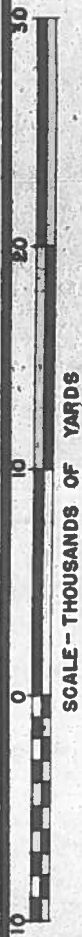


NOTE: TWO ADDITIONAL PORTABLE LIGHTS IN MAINTENANCE RESERVE.

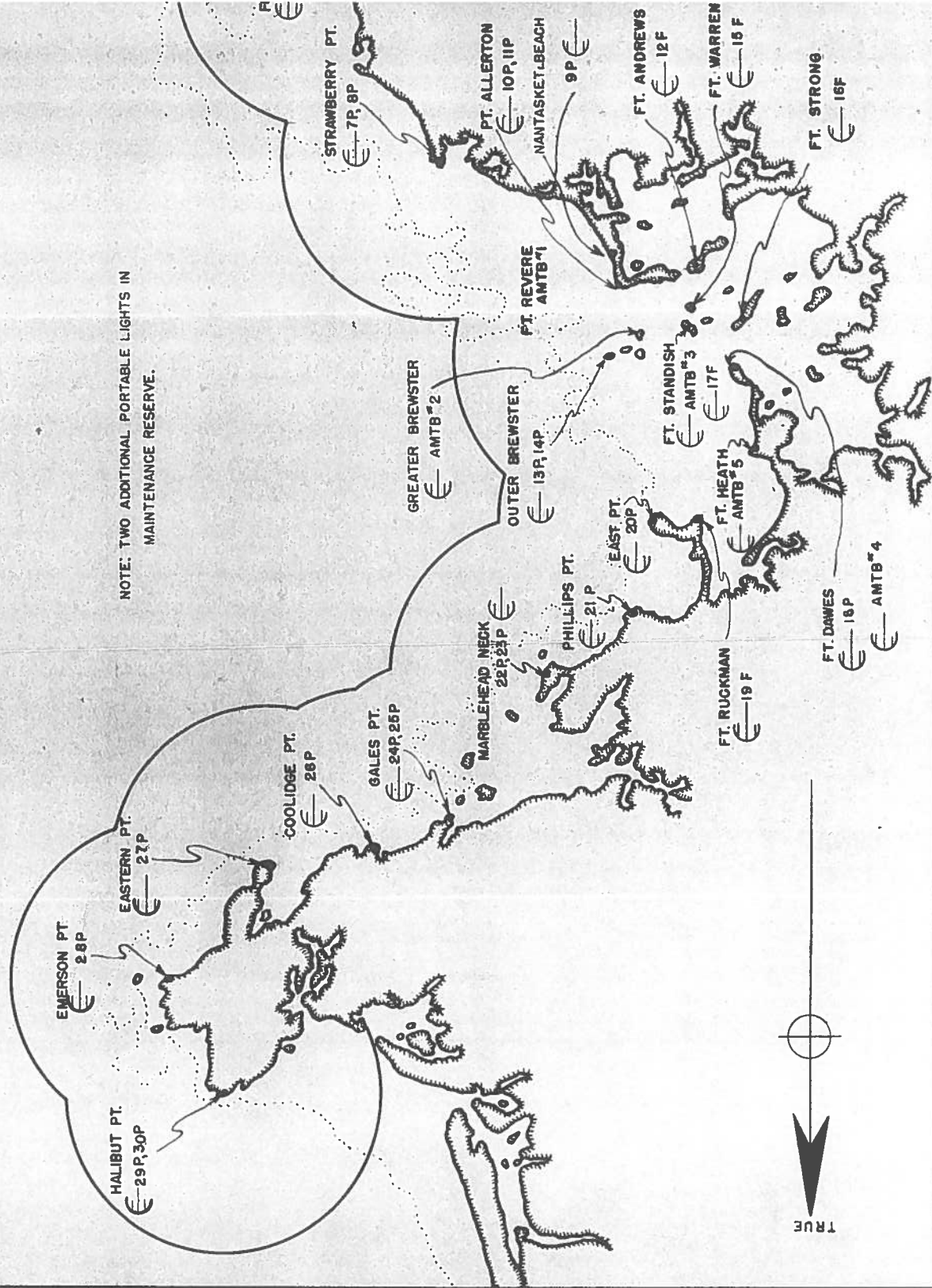


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H.D. OF BOSTON		REVISED DATE
SEACOAST SEARCHLIGHT ILLUMINATION PLAN		DATE 7-1-43
PREPARED BY	HARBOR DEFENSES OF BOSTON	EX NO. 1-C



NOTE: TWO ADDITIONAL PORTABLE LIGHTS IN  
MAINTENANCE RESERVE.





**SECRET**

# **ANNEX D**

**UNDERWATER  
DEFENSE**

**SECRET**

~~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~~

1. Authority: War Department authority for the mine project is contained in 2nd Indorsement to letter, W.D. AG 476 (12-21-42) O-S-E, April 1, 1943, subject: "Proceedings Local Planning Committee, Ground Mine Defenses of Boston Harbor." and in 2nd Indorsement dated July 20, 1943, to letter, subject: "Additional Requirements for Underwater Defense Project - HD of Boston", dated June 7, 1943, W.D. AG 476 (7 June 43) O-S-E.

2. Controlled Submarine Mine Project.

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

2 b

2 b

SUBMARINE MINE FLOTILLA						
TYPE VESSEL	NO. AUTH	NO. ON HAND	NAME	LENGTH ft	BEAM ft	DRAFT ft
Mine Planter	2	1	Abbott	189	38	12
Jr Mine Planter	0	1	"70"	114	27	11
DB Boat	4	6	L-48- Note 1	64	16	6.5
			L-52- Note 1	64	18	6.5
			L-90	64	18	6
			L-91	64	18	6
			L-98	64	18	6
			L-110	64	18	6
			Motor Mine Yawl	12	8	M-306
M-315	26	7.5				2.5
M-316	26	7.5				2.5
M-317	26	7.5				2.5
M-392	26	7.5				2.5
M-461	26	7.5				2.5
M-179	26	7.5				2.5
M-180	26	7.5				2.5

Note 1:

The L-48 and the L-52 are the old type boats and are not satisfactory.

Basis of authorizations is boats allowed for work with two mine planters and allowances as set up in the GCA-AN-B which was approved by the W.D. in 4th Ind., AG 660.2 (1-29-38) (Misc.) E, dated May 19, 1938.

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REVISED  
DATE

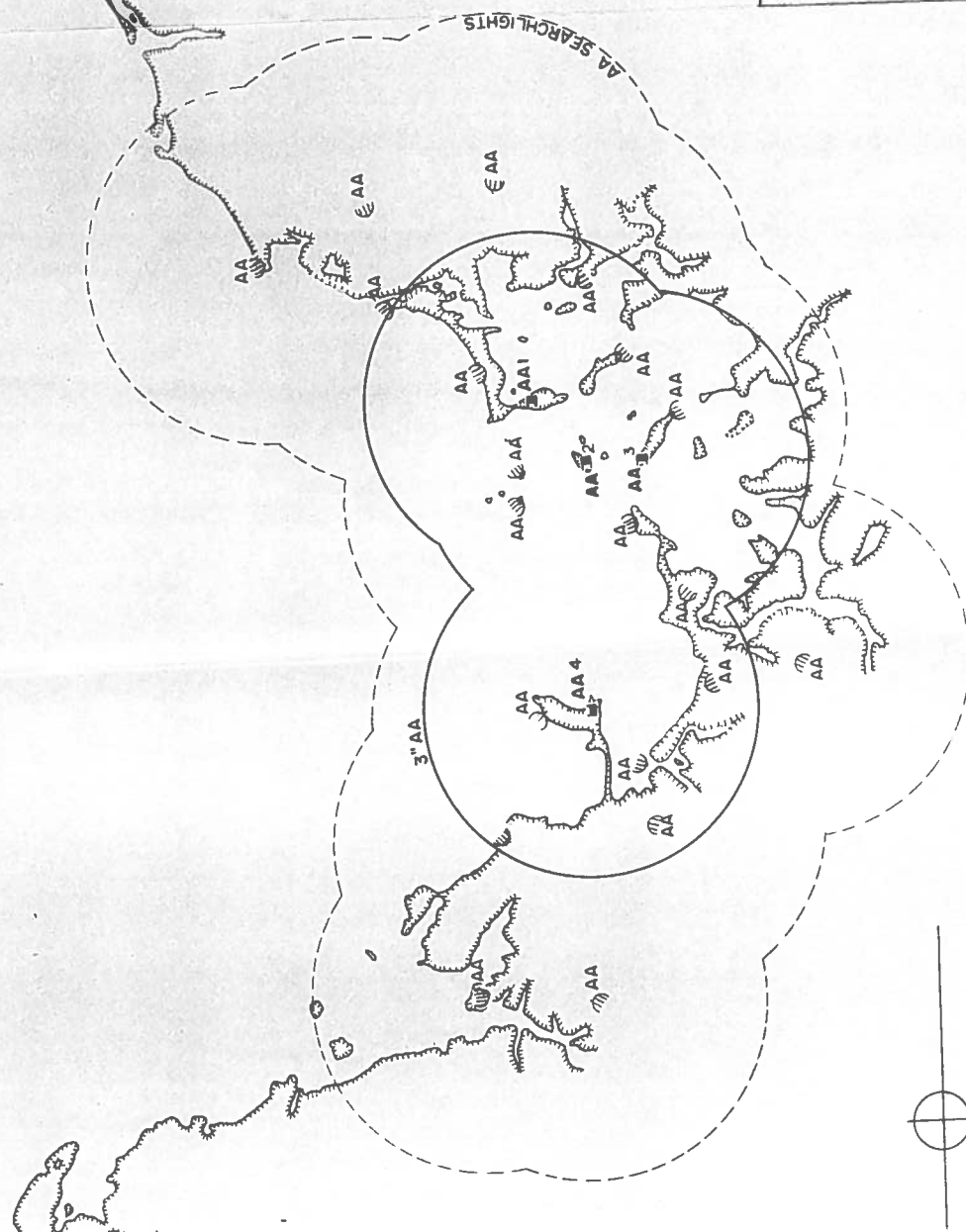
HD OF BOSTON

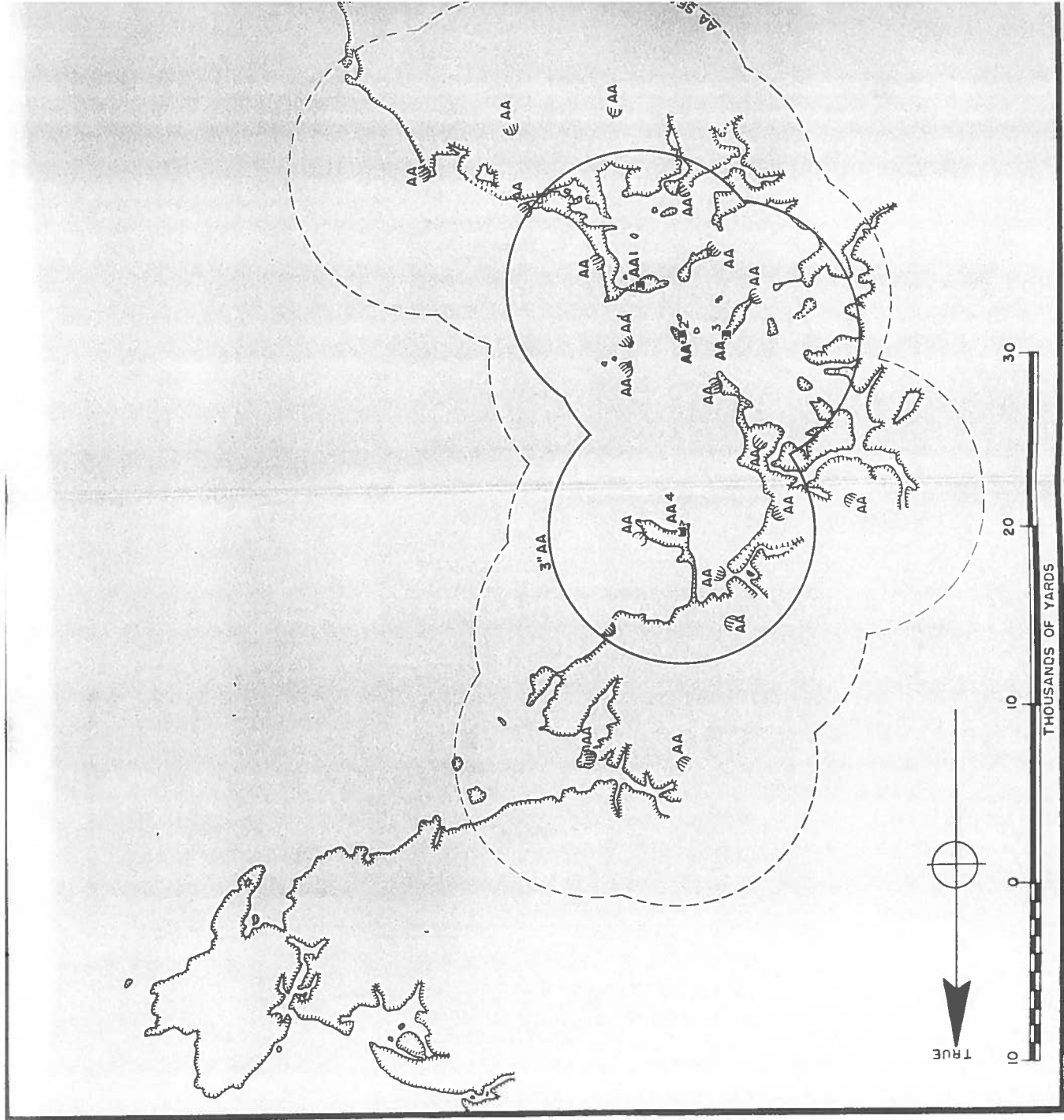
**AA FIELDS OF FIRE  
&  
ILLUMINATION**

DATE 7-1-43

EX. NO. 2-E

PREPARED BY  
HARBOR DEFENSES OF  
BOSTON







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 Mantasket Roads field is located at Fort Warren in a bombproof. The loading tank at Fort Warren has been enlarged to meet the requirements of the expanded ground mine project. Construction by field agencies has not been initiated on the following approved elements of the project: these elements are shown on Exhibits 2-D, 9-B-9, 9-B-11, 9-B-14, and 9-B-16.

a. Splinterproof ten group casemate and plotting room, three cable huts, and M<sup>1</sup> station at Fort Dawes.

b. M<sup>1</sup> station, enlargement of loading tank and renovation of plotting room at Fort Warren.

c. Splinterproof twenty group casemate, four cable huts, and M<sup>2</sup> station at Great Brewster Island.

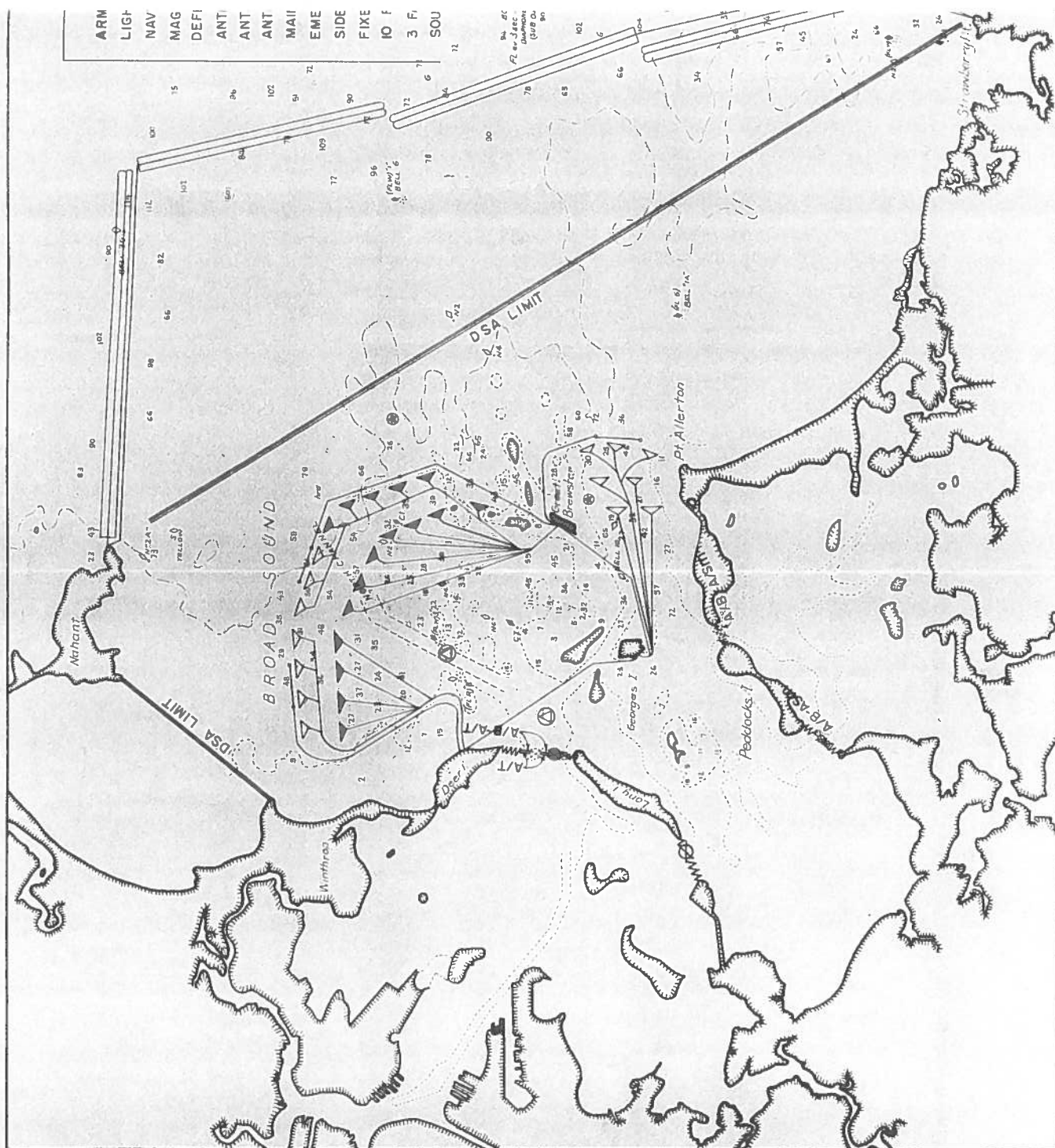
d. M<sup>2</sup> station at Fort Revere.

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 Mantasket 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 & 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, Oushing-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.



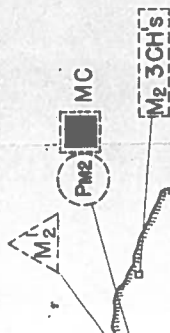


0 2000

LEGEND

- CONSTRUCTION NOT INITIATED

ES



FT. STANDISH

PT. ALLERTON

FT. REVERE

FT. DUVALL

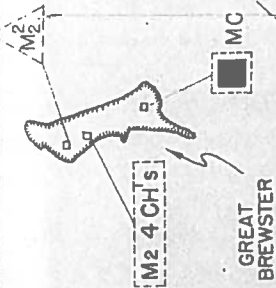
FT. WARREN

FT. ANDREWS

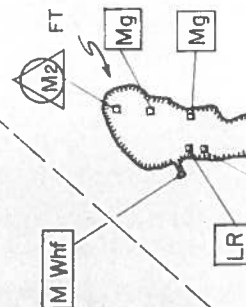
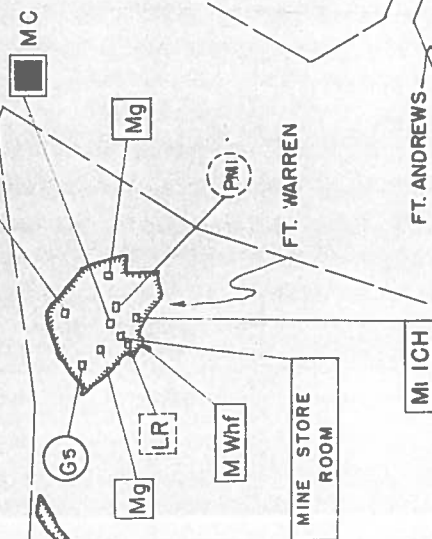
FT. STRONG

CHANNEL

TRUE



GREAT BREWSTER



SECRET

REVISED  
DATE  
8/15/43

H.D. OF BOSTON

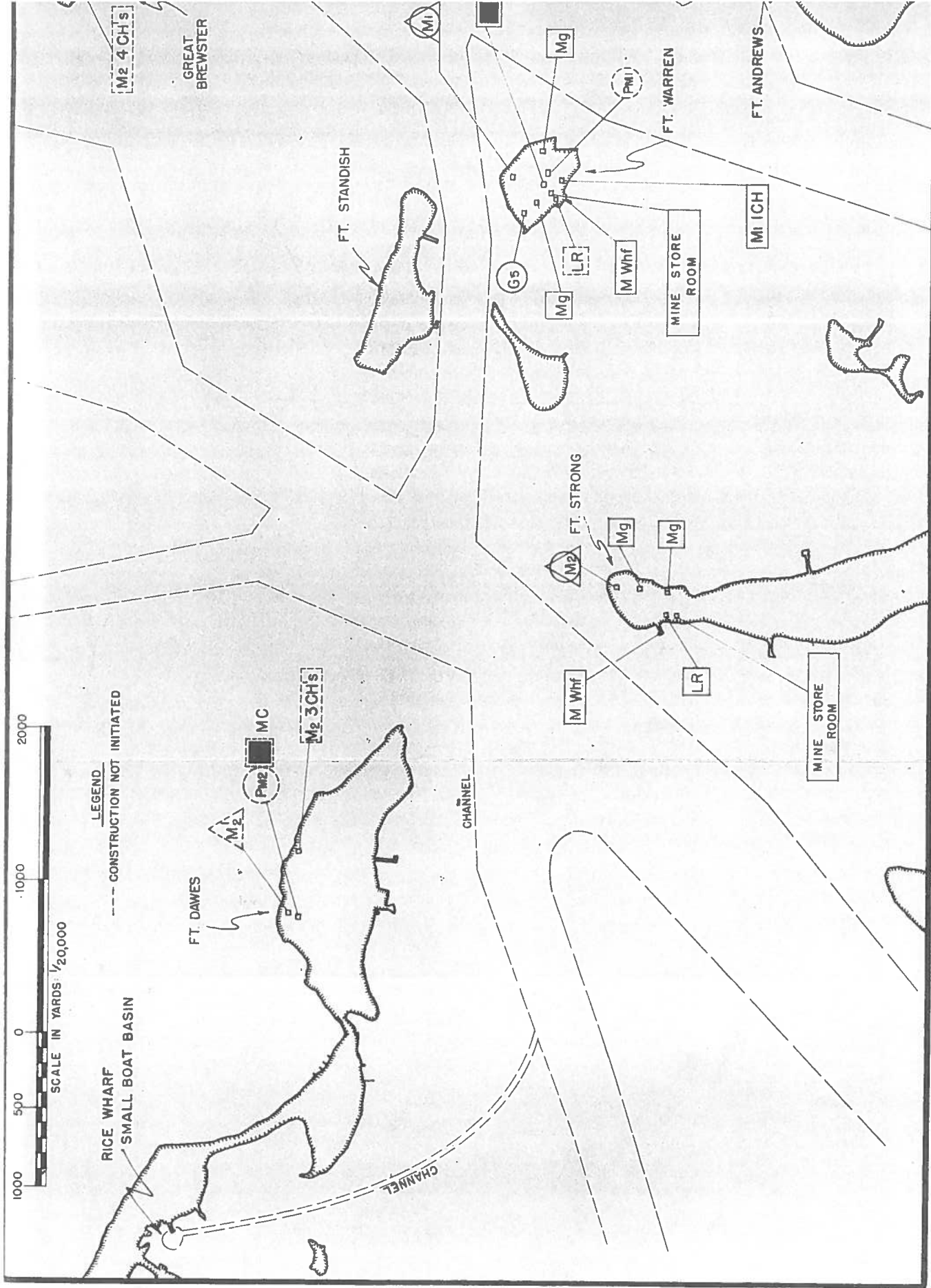
SHORE FACILITIES

PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

DATE  
7-1-43

EX. NO.  
2-D





~~SECRET~~

# ANNEX E

ANTIAIRCRAFT  
ARTILLERY  
(HARBOR DEFENSES)

~~SECRET~~



~~SECRET~~

ANNEX E - INDEX

- Par. 1 Tactical Organisation
- 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 Organisation
- 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, 37mm Guns.

SECRET

1. Tactical Organisation: 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 two groups, the gun group and the searchlight group, are controlled from the AACF which is adjacent to the HDOP in the bombproof casemate at Fort Banks. Liaison with the AMTB group 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 AAAIS 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: 37mm and 50 calibre guns are allotted by TBA. 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 37mm guns are shown on exhibit 6-E. TBA tabulation of AA 37mm guns and 50 cal. M.G. are shown on following forms.

## ANTI-AIRCRAFT AUTOMATIC WEAPONS

Tabulation by battery, for allowance of anti-aircraft automatic weapons as authorized by TB/A #4 with changes 1 to 4.

CALIBER	NO. OF GUNS	BATTERY	LOC.	AMMUNITION	
				BATTLE ALLOWANCE	STORAGE
37mm	2	Cons. 208	114	5 U/F	114
37mm	2	McCook	117	5 U/F	117
37mm	4	Long	118	5 U/F	118
37mm	2	Whipple	123	5 U/F	123
37mm	2	Jewell	126	5 U/F	126
37mm	4	Cons. 105	127	5 U/F	127
37mm	2	Cons. 207	127	5 U/F	127
37mm	4	Gardner	130	5 U/F	130
37mm	2	Cons. 206	131	5 U/F	131
37mm	4	Murphy	131	5 U/F	131

5

## ANTIAIRCRAFT AUTOMATIC WEAPONS

Tabulation by battery, for allowance of antiaircraft automatic weapons as authorized by TB/A #4 with changes 1 to 4.

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	3	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	AMTB 1	119	5 U/F	119
50	4	AMTB 2	124	5 U/F	124
50	4	AMTB 3	123	5 U/F	123
50	4	AMTB 4	127	5 U/F	127
50	4	AMTB 5	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

4

FORM # 16

~~SECRET~~

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:

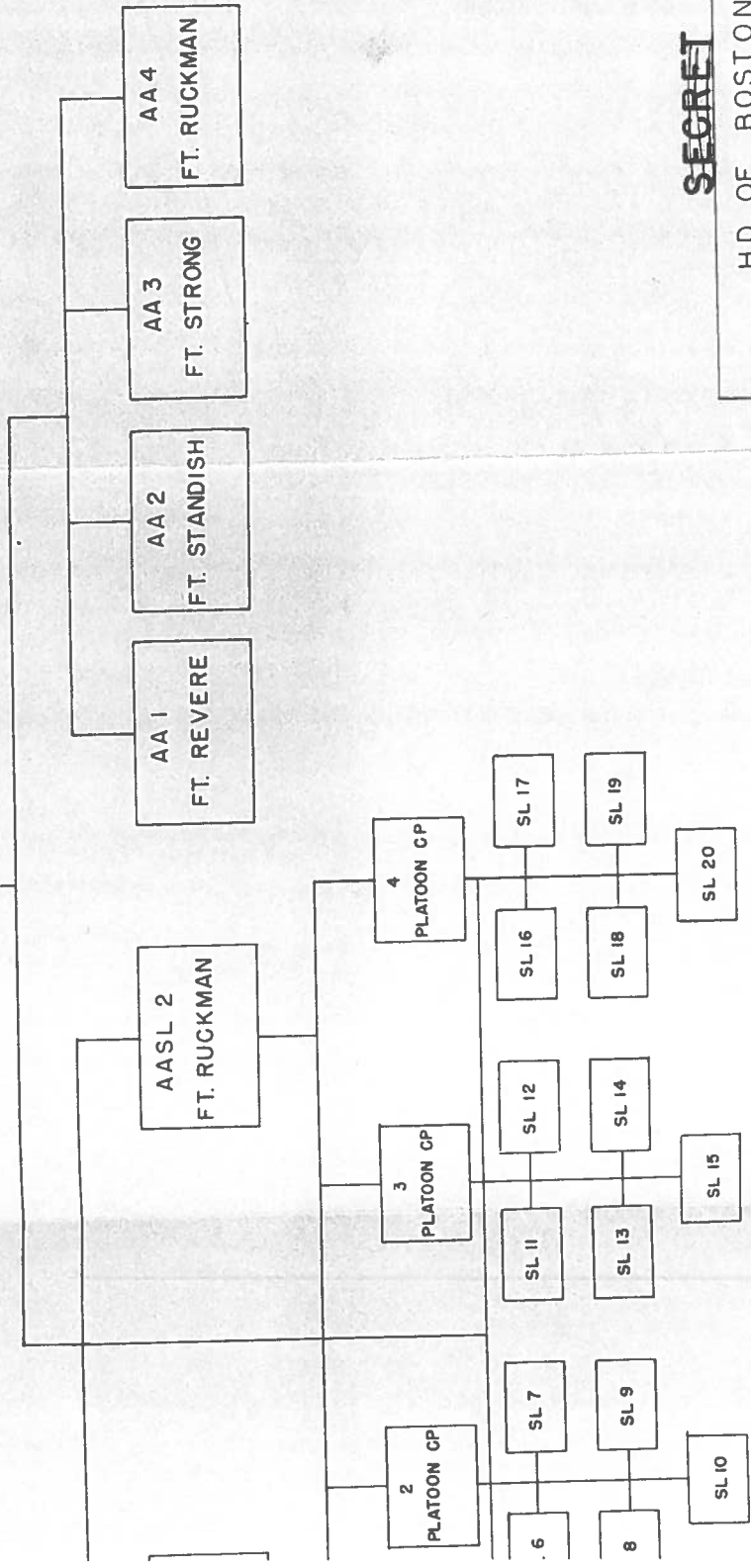
<u>Item</u>	<u>Authorized</u>	<u>On Hand</u>	<u>To be Procured</u>
3" AA Guns, fixed	12	12	0
50 cal. AA MG	16	16	0
Searchlights, 60"	20	20	0
SCR284, 345, or 268	4	4	0
SCR541 or 268	12	8	4
Sound Locator M2	16	16	0
30 cal. M.G. M1917A1	40	40	0
Finder, Height, 13 1/2' M1 or 2	4	0	4
Radio Set			
SCR284	26	26	0
SCR543	10	6	4
Director, AA, M7	5	0	5

11. Ammunition: Five units of fire for all AA weapons is authorized by letter, W.D. General Staff Operations Division, subject: "Ammunition Credits," file OPD 471 HEG (5-1-42) (3-12-42). The number of rounds constituting a unit of fire varies with the tactical situation.

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

~~SECRET~~

**AACP  
FT. BANKS**



**SECRET**

REVISED  
DATE

H.D. OF BOSTON

**AA TACTICAL ORGANIZATION**

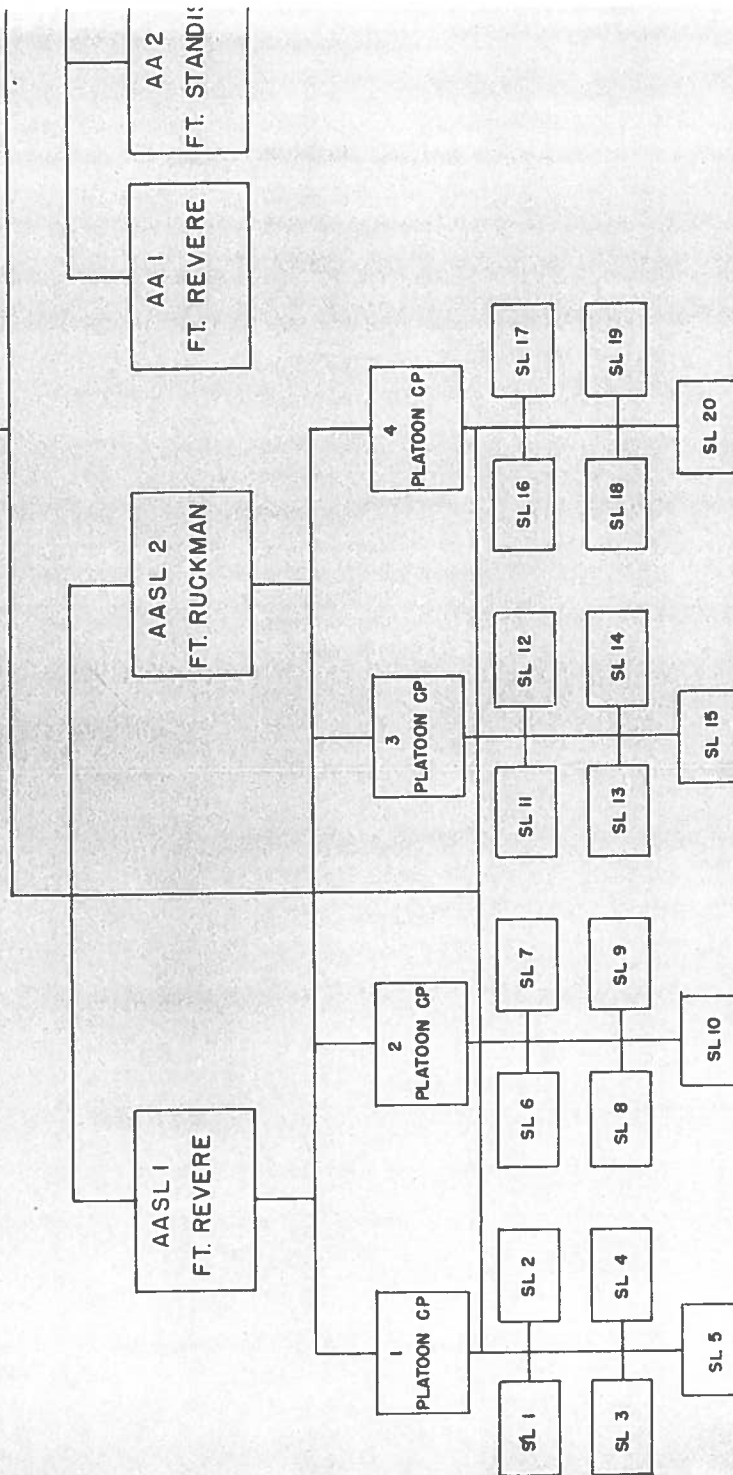
PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

DATE 7-1-43

EX. NO. 1-E



AACP  
FT. BANKS



AAIS OP  
GURNET PT.

AAIS OP  
BRANT ROCK

AAIS OP  
FOURTH CLIFF

AAIS OP  
STRAWBERRY  
POINT

AAIS OP  
PT. ALLERTON

AAIS OP  
MARBLEHEAD  
NECK

AAIS OP  
COOLIDGE POINT

AAIS OP  
EASTERN PT.

AAIS OP  
STRAWBERRY  
HILL

AAIS OP  
OUTER  
BREWSTER

EAST POINT

AAIS OP  
FORT  
HEATH

AAIS OP  
FORT WARREN

AAIS OP  
FT. DAWES

AAIS CP  
FORT BANKS

OP  
T. POINT

REVISED  
DATE

**SECRET**

H.D. OF BOSTON

AAIS

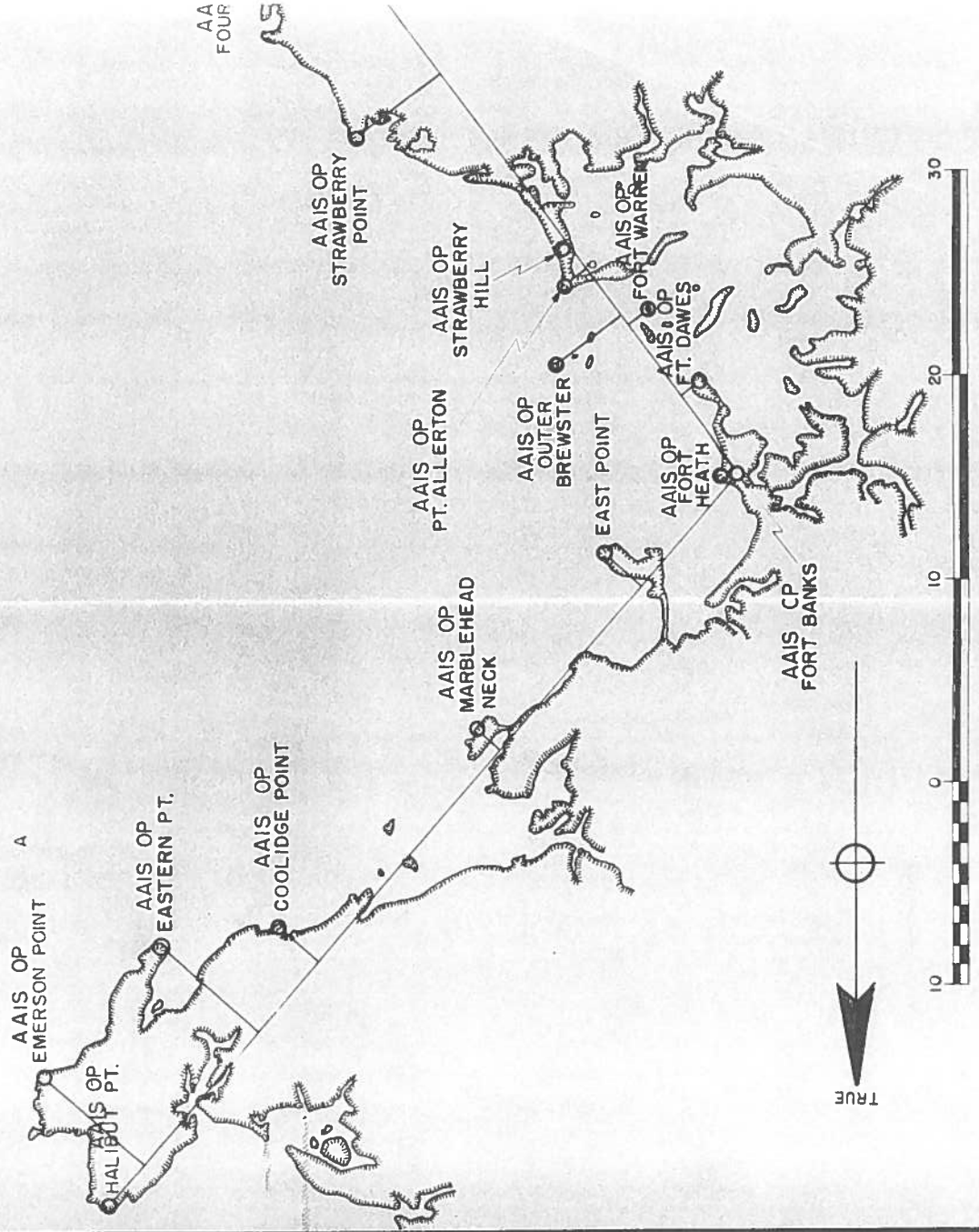
DATE 7-1-43

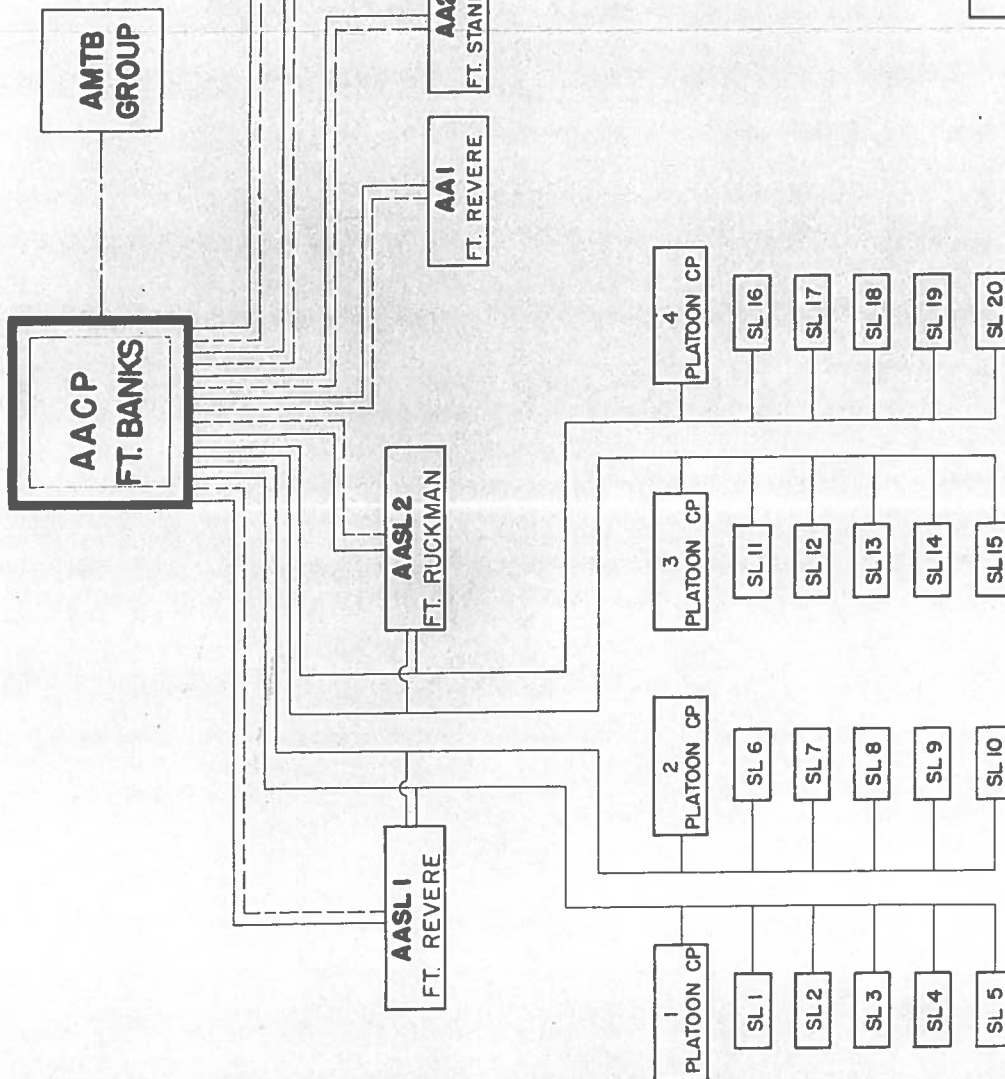
PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

EX. NO. 3-E



SCALE—THOUSANDS OF YARDS





# LEGEND

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

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REVISED  
DATE

H.D. OF BOSTON

AA FIRE CONTROL

TELEPHONE NET

PREPARED BY

HARBOR DEFENSES OF

BOSTON

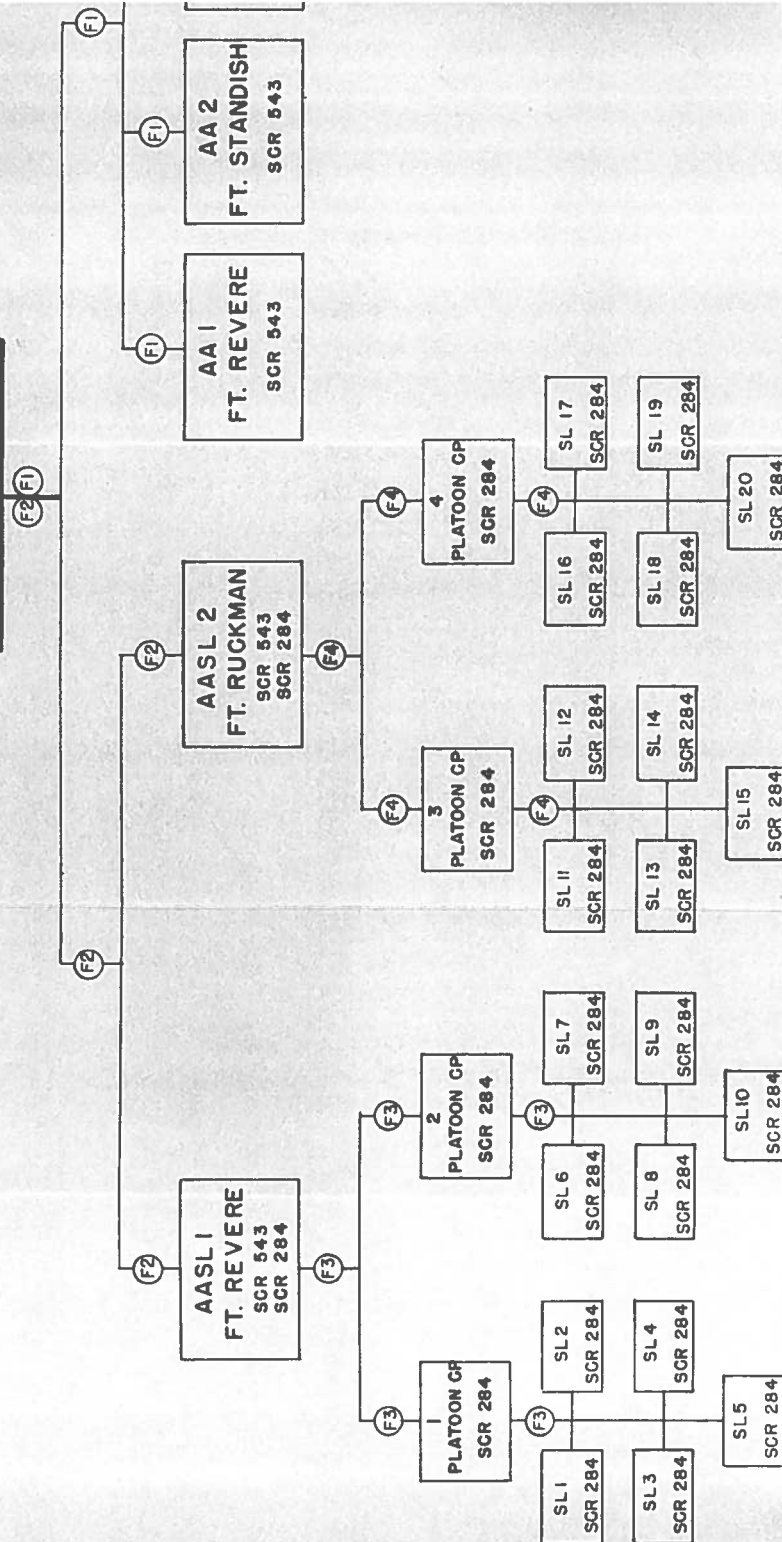
DATE 7-1-43

EX. NO. 4-E

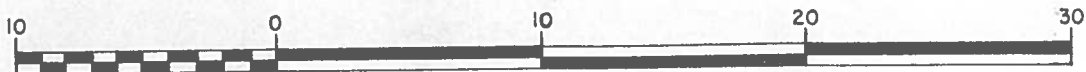




AACP  
FT. BANKS  
SCR 543  
SCR 543





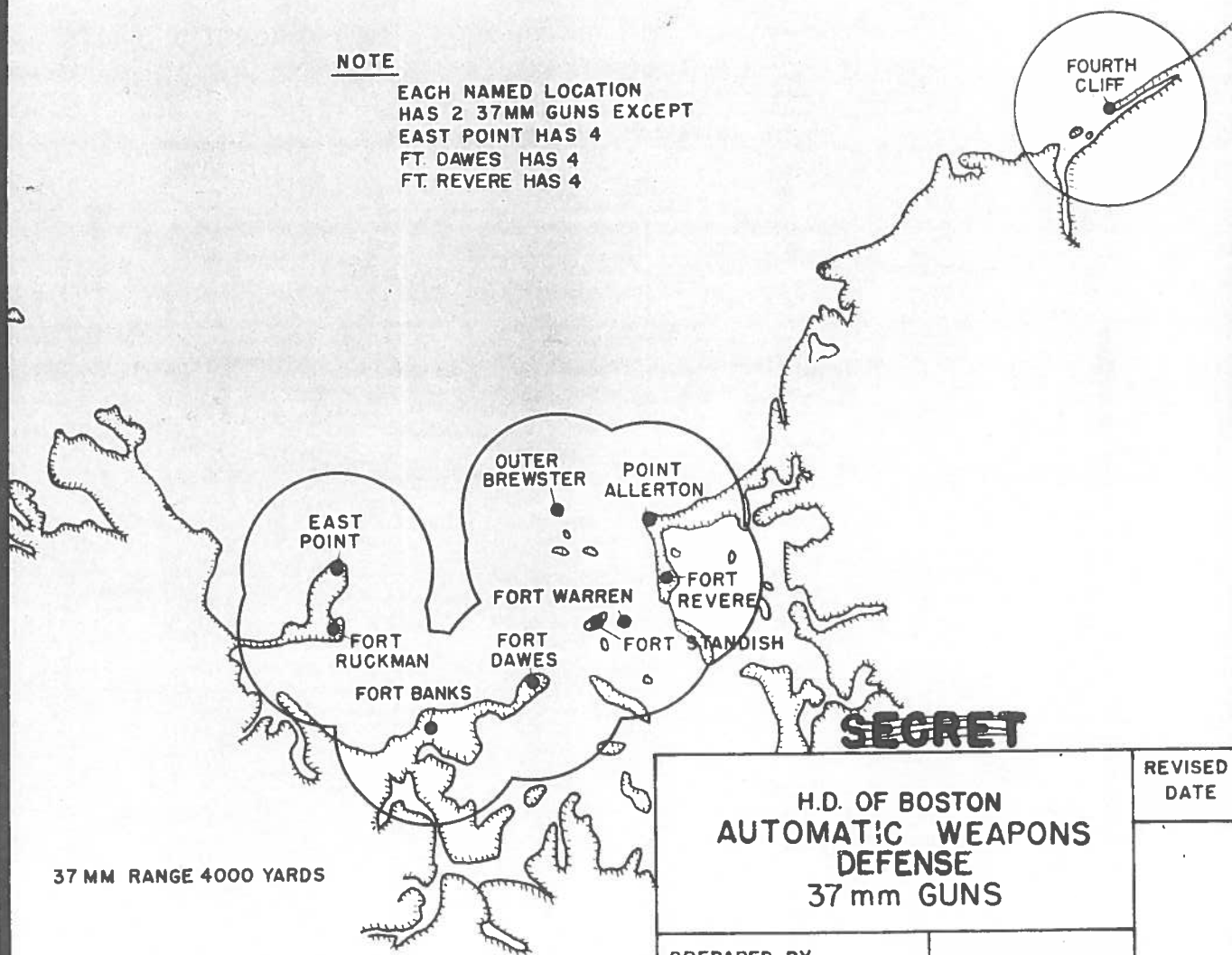


SCALE - THOUSANDS OF YARDS

NOTE

EACH NAMED LOCATION  
HAS 2 37MM GUNS EXCEPT  
EAST POINT HAS 4  
FT. DAWES HAS 4  
FT. REVERE HAS 4

FOURTH  
CLIFF



37 MM RANGE 4000 YARDS

H.D. OF BOSTON  
AUTOMATIC WEAPONS  
DEFENSE  
37 mm GUNS

REVISED  
DATE

PREPARED BY  
HARBOR DEFENSES OF  
BOSTON

DATE 7-1-43

EX. NO. 6-E

**SECRET**

**ANNEX F**

**GAS DEFENSE**

**SECRET**

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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	1	1	1	4	1	1	1
Whipple	2	0	2	1	4	1	1	1
AMTB 1	0	0	0	1	0	2	2	0
AMTB 2	0	0	0	1	0	2	2	0
AMTB 3	0	0	0	1	0	2	2	0
AMTB 4	0	0	0	1	0	2	2	0
AMTB 5	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
South Mines	1	0	1	1	0	0	0	0
North Mines	1	0	1	1	0	0	0	0

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Form #14.

Exhibit 2-G-2

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CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT

Signal REQUIREMENTS FOR COMPLETE PROJECT

DATE July 1, 1943

STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
4H3086A	Time interval apparatus, KE-86	15
	Meteorological Observation Set SCM-12	1
6M1688	Typewriter MC-83	4

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CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT

Signal REQUIREMENTS FOR COMPLETE PROJECT  
DATE July 1, 1943

STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER RE-QUIRED
4Z309	Bell MC-9	21
4H113	Bell MC-153	119
4B303	Box BE-63	79
4B1112A	Handset TS-12-A	175
	Head and Chest Set - All types	590
4E3675	Panel BD-75	15
3E4065	Panel BD-65	15
	Radio Sets	
	SCR-177 or Commercial equivalent	2
	SCR-584-545- or SCR-268	4
	SCR-541 or SCR-268	12
	SCR-543	7
	SCR-582	1
	SCR-536	26
	SCR-281	24
	SCR-284	26
	SCR-296	10
	SCR-584-545	5
409971	Switchboard BD-71	8
409972	Switchboard BD-72	5
	Switchboard BD-74-H	1
409974	Switchboard BD-74-J	5
	Switchboard BD-74-K	4
409995.4	Switchboard BD-95	47
4B5008	Telephone EE-8	589
4B8191	Telephone Box EE-91	689
	Telephone, wall and desk	105

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CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT		
<u>Engineer</u> REQUIREMENTS FOR COMPLETE PROJECT		
DATE <u>July 1, 1943</u>		
STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
	Searchlight, fixed, 30, 60" complete w/power plant and control equipment	5
	Searchlight, portable, 30, 60" complete w/power plant and control equipment	32
	Searchlight, portable AA, 60" complete w/power plant and control equipment	20
	Tower, 8 L, 35'	15

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CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT

Ordinance REQUIREMENTS FOR COMPLETE PROJECT

DATE July 1, 1940

STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
	Gun, machine, AA, Cal. 50, with mount	75
A-5	Gun, machine Cal. 30, M1917A1, with mount	138
A-29	Gun, 37mm M1A2 on carriage M3 or M3E1 (AMTB)	10
A-29	Gun, 37mm M1A2 w/mount M3A1	28
22-194	Board, Adj. Fire, M1	10
22-196	Board, Correction, Range, M1A1	10
22-193	Board, Deflection, M1	10
22-289	Board, Plotting, M4	3
22-269	Board, Plotting, M3	7
	Board, Plotting, Submarine	2
	Board, Spotting, M7	4
22-210	Board, Spotting, M3 or M2	6
F-203	Computer, data, gun M1	4
	Computer, data, gun, for long range 6" Btry's. 4	
22-180	Corrector, percentage, M1	23
22-295	Director, AA, M5	35
22-308	Director, AA, M7	6
F-243	Director, AA, M9	5
22-167	Finder, Depression Position, M1	6
	Finder, Depression Position, M2	32
22-270	Finder, Height, 13½ foot, M1 or M2	9
	Finder, Range, Self-contained	5
22-242	Engine-Generator, EG 2.5-30I or Generating Unit M5 or M6	50
22-246	Instrument, azimuth, M1910A1	122
	Instrument, azimuth, M2	18
22-271	Instrument, Flank spotting	12
22-187	Instrument, observation AA, BC, M1	9

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CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT		
Ordnance REQUIREMENTS FOR COMPLETE PROJECT		
DATE July 1, 1943		
STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
22-268	Set, control equipment, AAM1	5
73-3A23	Setter, fuse AA, 3"	16
73-3A25	Setter, fuse AA, 90mm (spare)	5
22-261	System, data transmission, M4A1	4
22-313	System, data transmission, M5	3
22-320	System, data transmission, M7	4
22-367	System, data transmission, M15	2
	System, data transmission, M17	1
22-297	System, cable, M10	5
D-43662	Unit, generating, M10 or M5	42
D-44136	Unit, generating, M7, portable	5
	Unit, generating, M1, fixed	5

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CONSOLIDATED SUMMARY OF MAJOR ITEMS OF EQUIPMENT		
<u>Chemical Warfare</u> REQUIREMENTS FOR COMPLETE PROJECT		
DATE <u>July 1, 1943</u>		
STOCK OR CATALOG NO.	ARTICLE	TOTAL NUMBER REQUIRED
3475-1	Collective Protectors	30
	Reserve Canisters	120

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Exhibit 3-G-4

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# ANNEX H

REAL ESTATE  
REQUIREMENTS

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~~SECRET~~

ANNEX H - INDEX

Par. 1 Real Estate Requirements

EXHIBITS

No Exhibits

~~SECRET~~

~~SECRET~~

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

~~SECRET~~



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ANNEX F - INDEX

Par. 1 Requirements

Par. 2 Gas Defense of Bombproof Shelters

EXHIBITS

No Exhibits

~~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 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.

c. 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.

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2

GAS DEFENSE OF BOMBPROOF SHELTERS						
LOC NO.	SITE NO.	PURPOSE OF STRUCTURE	MEN	CAPACITY CU.FT.	REQUIREMENTS	
					COLLECTIVE PROTECTORS	RESERVE CANISTER
114	1-B	Plotting Room and Latrine -Cons 208	18	5356	1	4
117	1-G	McCook Plotting Room	18	2008	1	4
117	1-F	FCSB	6	2000	1	4
118	1-A	Long Plotting Room	22	3330	1	4
118	1-A	Long Latrine	30	2124	1	4
119	1-B	Revere FCSB	6	3072	1	4
120	1-B	GICP	12	3000	1	4
121	1-D	Warren FCSB	6	2944	1	4
121	1-C	M1 Casemate	10	15,000	1	4
121	1-B	M1 Plotting Room	18	2800	1	4
121	1-B	M2 Plotting Room	18	2800	1	4
122	1-C	FCSB	6	2000	1	4
123	1-E	Whipple Plotting Room	18	2000	1	4
123	1-H	FCSB	6	2000	1	4
124	1-C	M2 Casemate	10	15,000	1	4
126	1-A	Plotting Room and Latrine -Cons 209	18	5356	1	4
127	1-B	Cons 105 Plotting Room	22	7012	2	8
127	1-B	Cons 105 Latrine	30	4000	1	4
127	1-F	Cons 207 Plotting Room and Latrine	18	5356	1	4
127	1-1	M2 Casemate	10	15,000	1	4
128	1-A	Banks HDGP	100	40,180	1	4
130	1-A	G2 CP	12	3000	1	4
130	3-A	Gardner Plotting Room	22	2988	1	4

3

FORM # 12

~~SECRET~~

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2

GAS DEFENSE OF BOMBPROOF SHELTERS						
LOC NO.	SITE NO.	PURPOSE OF STRUCTURE	MEN	CAPACITY CU. FT.	REQUIREMENTS	
					COLLECTIVE PROTECTORS	RESERVE CANISTER
130	3-A	Gardner	6	2988	1	4
130	3-A	Gardner Latrine	30	2898	1	4
131	3-A	Cons 206 Plotting Room and Latrine	18	5356	1	4
131	6-A	Murphy Plotting Room	22	9095	2	8
131	6-A	Murphy Latrine	30	3906	1	4

4

FORM # 12

~~SECRET~~

~~SECRET~~

# ANNEX G

EQUIPMENT

~~SECRET~~

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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

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1. Authorities: Equipment requirements are computed from the following:

TBA #4 dated July, 1942 and changes 1 to 4 inclusive.

TBA #44, as revised by W.D.T.C. No. 93-1942.

Letter, WD, 4-17-43, file AG 660.2, subject:  
"Defense of Harbors against Motor Torpedo Boats", with table  
"B" inclosed.

Training Circular 93-1942.

Modernisation Program as approved by War Department.

Expenditure Program, 1942, 1943, and Supplemental 1943.

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CONSOLIDATED SUMMARY OF HARBOR DEFENSE ELEMENTS

HARBOR DEFENSES OF BOSTON

July 1, 1943  
(date)

INSTALLATION	NUMBER
H. D. Command Post	1
H. D. Observation Post	1
Harbor Entrance Control Post	1
Groupment Command Post	2
Groupment Observation Post	7
Long Range Group Command Post	2
Other Gun Group Command Post	3
Antiaircraft Gun Group Command Post	1
Antiaircraft Automatic Weapons Group	0
Antiaircraft Searchlight Group	1
H.D. & Fort Signal Station	1
Forts	10
Fire Control Switchboard Installations	13
Searchlight Command Post	0
Meteorological Station	1
Mine Group Command Post	1
Mine Plotting Room	2
Mine Casemate	3
Mine Planters	2
D. B. Boats	5
Group of Mines, Buoyant	0
Group of Mines, Ground	30
Portable Seacoast Searchlights	32
Fixed Seacoast Searchlights	5
Searchlight Oper. (Cont.) Post (F or P)	35
SCR-582	2

Form #15

3

~~SECRET~~

EXHIBIT 1-G

~~SECRET~~

CONSOLIDATED SUMMARY OF BATTERY INSTALLATIONS

HARBOR DEFENSES OF BOSTON

1	2	3	4	5	6	7	8	9
BATTERY with data computers	<del>OTHER</del> 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
Cons #208	1	0	3	1	4	1	1	1
Long	6	1	1	1	7	1	1	1
Jewell	2	0	3	1	6	1	1	1
Cons #105	5	0	4	1	9	1	1	1
Cons #207	3	0	2	1	5	1	1	1
Gardner	5	1	0	1	5	1	1	1
Cons #206	4	0	1	1	5	1	1	1
Murphy	6	0	4	1	10	1	1	1

~~SECRET~~

Form #14.  
Exhibit 2-8-1