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FM 31-12

DEPARTMENT OF THE ARMY FIELD MANUAL

**ARMY FORCES
IN
AMPHIBIOUS
OPERATIONS
(THE ARMY LANDING FORCE)**



HEADQUARTERS, DEPARTMENT OF THE ARMY
MARCH 1961

FIELD MANUAL

ARMY FORCES IN AMPHIBIOUS OPERATIONS
(THE ARMY LANDING FORCE)

FM 31-12

CHANGES No. 1

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D.C., 12 June 1963

FM 31-12, 28 March 1961, is changed as follows:

Substitute the phrase "combat service support" for the phrase "administrative support" throughout this manual.

Delete the last paragraph of the FOREWORD.

1. Purpose and Scope

* * * * *

c. Users of this manual * * * and complete evaluation. Comments should be forwarded direct to the U. S. Army Combat Developments Command, Combined Arms Agency (ATTN: CAGCA-CJ), Fort Leavenworth, Kans.

* * * * *

3. Relation to Navy and Marine Corps Doctrine

a. When an amphibious * * * under naval doctrine. Pertinent Army-Navy-Marine Corps doctrine is set forth in the joint publication FM 31-11, Naval Warfare Publication (NWP) 22A, and Landing Force Manual (LFM) 01. Naval tactics, techniques and procedures are set forth in Naval Warfare Information Publications (NWIP's Series 22 and Marine Corps Landing Force Manuals (LFM's).

* * * * *

6. Definition

(Superseded)

An amphibious operation is an attack launched from the sea by naval and landing forces involving a landing on a hostile shore.

10. Types of Amphibious Operations

* * * * *

b. *Secondary Types.* Secondary types of * * * are as follows:

* * * * *

(2) *Amphibious raid.* Landings from the * * * unconventional warfare activities (ch. 9). A **special type of amphibious raid** is the amphibious reconnaissance which is a landing conducted by small elements, involving stealth rather than force of arms and which normally includes a planned retraction of the landed elements. It is conducted for the purpose of securing information. It is frequently employed during the initial preparations prior to an amphibious attack. It is also employed to establish or maintain coordination with or to support unconventional warfare and intelligence agencies.

* * * * *

(4) Rescinded

11. Operational Sequence

* * * * *

b. The successive events * * * land campaign are—

* * * * *

(6) *Termination.* Termination of the * * * the initiating directive. The firm establishment of the Army landing force on the shore is **usually** specified as one of these conditions (par. 33). Dissolution of the * * * the amphibious operation.

21. Army Component Force

* * * * *

g. Within the Army * * * of maneuver ashore. When employed in the assault, the reinforced infantry division task organization will typically provide for assault **battalion** landing teams, a division artillery grouping, a division reserve grouping, a division shore party grouping, and a division **combat service support** grouping. The reinforced armored division may be employed as an assault division.

h. The assault landing team is the basic subordinate task organization of the assault echelon of a landing force. It is normally designated by prefixal words reflecting the type and echelon of the tactical unit around which the tactical grouping is formed, e.g., **brigade landing team (Bde LT)** and **battalion landing team (BLT)**. For reference purposes, an assault landing team may be further identified according to the type means to be used for ship-to-shore movement, e.g., **Bde LT(S)** when using surface movement means (landing craft and amphibious vehicles) and **Bde LT(A)** when using air movement means (helicopters).

33. Termination

a. Termination of the * * * landing force commander—

- * * * * *
- (4) (Superseded) The landing force commander has stated that he is ready to assume responsibility for subsequent operations.
- * * * * *

52. Selection of Landing Beaches and Landing Zones

* * * * *

d. A landing beach is that portion of a usable coastline usually required for the landing of one assault landing team, e.g., BLT. The term may also be used to define a tactical locality, such as the shore of a bay, over which a force larger or smaller than a BLT may be landed. Considerations in the selection of landing beaches are—

* * * * *

63. Weather

* * * * *

b. (Superseded) The Army Component Commander will—

- (1) Provide himself with an air weather service forecaster to serve his staff weather officer throughout the amphibious operation.
- (2) Arrange to have his Staff Weather Officer accompany and assist him in his participation in the amphibious task force commander's planning conference.
- (3) Require that his staff weather officer prepare a weather support appendix to the intelligence annex of applicable operation orders. This appendix will spell out specific weather support to be provided the army landing force commander, communication channels to be used in passing this data, and any other weather information pertinent to the amphibious operation.

c. (Added) Detailed weather information is required to include existing and forecasted—

- (1) Cloud ceilings and horizontal visibility as affected by weather.
- (2) Wind data.
- (3) Light data.
- (4) Precipitation.
- (5) Surf and sea conditions including breaker height and computed effective breaker heights.
- (6) Water and surface free air temperature.

88. Engineer Amphibious Support Command (EASC)

- * * * * *
- b. Detailed information on * * * amphibious attack are—
- * * * * *
- (2) The EASC provides * * * at division level. Hq and Hq Co Engr Amph Bn, however, can * * * parties if required.

92. Shore Party Planning

- * * * * *
- c. *Requirements for Shore Parties.*
- * * * * *
- (3) Shore parties are usually provided as follows—
- (a) *Assault landing team shore party.* (Superseded) One with each battalion landing team which lands over a landing beach in the initial assault.
- (b) *Brigade shore party.* (Superseded) When the brigade is employed as a subordinate echelon of the landing force with responsibility for establishment or operation of a beach support area (s), a brigade shore party may be required.
- (c) *Division shore party.* (Superseded) One per assault division.

94. General Considerations

- * * * * *
- d. The assault is made * * * within division beachheads. The landing team of reinforced battalion size is the basic unit of dispersion.
- * * * * *

104. Employment Techniques

- * * * * *
- c. *Call Fire.* Call fire is fire * * * of the landing force. Direct support ships are designated to provide call fires for specific units through their respective shore fire control parties, while ships in general support of a unit (brigade, division, or higher level) are provided to answer calls for fire from the supported unit and its subordinate elements as directed.

126. Nuclear Weapons Employment

- * * * * *
- c. *Planning Considerations.*
- * * * * *

(9) *D-Day prearranged fires.* The use of * * * a priority requirement. Where pre-H-hour fires are used to assist the assault landings, care must be taken to avoid contaminating the **landing zones**, beaches, and their approaches, or impeding the actions of friendly forces.

* * * * *

133. General Planning Considerations

* * * * *

b. The principle factors which influence planning for ship-to-shore movement are—

* * * * *

(4) The protection available * * * of the assault.

* * * * *

(b) Passive protection places * * * accurate target information. In particular, the great mobility of the helicopter is exploited both during the initial assault and during subsequent maneuver.

* * * * *

134. Ship-To-Shore Planning Sequence

Ship-to-shore movement plans * * * the following sequence:

* * * * *

d. The final detailed * * * has been made. These plans represent the sum of detailed landing plans prepared by corresponding naval and landing force echelons at all levels from the individual ship-embarkation **team** to the task force level.

137. Tactical-Logistical Group

* * * * *

e. (Superseded) Within assault divisions of the landing force, Tac Log Groups are established as follows:

Echelon	Tac Log Group	Navy control ship and Navy control officer
Div -----	Div Tac Log Gp-----	Asst central control
Bde LT ¹ -----	Bde LT Tac Log Gp-----	Primary control
BLT -----	BLT Tac Log Gp-----	Primary control

¹ When employed as an echelon of the division landing force.

285. Continuation of the Attack

Each command echelon * * * seize final objectives. For example, infantry division **brigades** and combat support units will have reverted to an essentially normal tactical organization, and will be prepared to operate in their normal role before a coordinated attack from the division beachhead is launched.

306. General

a. Staffs at brigade, division, and higher command levels * * * staff planning exercises.

* * * * *

319. Fire Support School

* * * * *

b. Organization. The school is * * * naval gunfire officers. All battalion and brigade operations officers, artillery observers and liaison officers, and forward air control personnel should attend. Naval instructor support is highly desirable.

* * * * *

355. Landing Force Task Organization

* * * * *

c. The assault landing team is the basic subordinate echelon of the landing force. It is a task organization formed around a unit of brigade, battalion, or company size. Assault landing team * * * to be executed.

* * * * *

356. Command Structure and Control Facilities

* * * * *

g. The commander conducting the operation determines the degree and duration of command authority to be exercised by the landing force commander over units operating the near shore and/or movement means between the near and far shores. Considerations include the * * * and landing areas.

* * * * *

Amphibious Vehicle Employment Plan

Origin ¹	Number and type amphibious vehicles ²				Wave ³	Destination ⁴	Remarks ⁵
	LVTH	LVTP 6	LARC 5				
LST-583	10	1			1	Beach RED-1	Co A, 1st Armd Amph Bn
LST-762	5						
LST-854	10	1			1	Beach RED-2	Co B, 1st Armd Amph Bn
LST-1076	5						
*	*	*	*	*	*	*	*
LST-1126		6			2	Beach RED-1	Aslt Plats, Co A and B, BLT 1/168.
LST-1141		6					
LST-1146		12			2	Beach RED-2	Aslt Plats, Co A and B, BLT 1/669.
*	*	*	*	*	*	*	*
LST-1176			21			Primary control vessel,	1st How Bn(-) (105mm), 45th Arty.
LST-1178			9			Beach RED.	
*	*	*	*	*	*	*	*

¹ The first column lists the origin of the amphibious vehicles. This is usually a landing ship for the initial employment of a vehicle. It may be the amphibious vehicle unit for subsequent employment.

² The second column indicates the number and type of amphibious vehicles to be employed.

³ The third column shows the wave in which the amphibious vehicles are employed.

⁴ The fourth column indicates the destination of the amphibious vehicles listed in column two.

⁵ The fifth column is the remarks column. If LVTH are used, the armored amphibious unit is indicated here. If LVTP and LARC are used, the type of load (troop unit or equipment) is shown.

Figure 19. (Superseded) Amphibious vehicle employment plan (incomplete).

Helicopter Availability Table

Aviation unit designation ¹	Total number of helicopters ²	Number of helicopters available for use ³		Type ⁴	Transport carriers ⁵	Deck launching capacity ⁶	Remarks
		First trip—(90 percent)	Other trips—(80 percent)				
110th Trans Co (Med Hel).	15	14	12	CH-37	LPH-1	4	
111th Trans Co (Med Hel).	15	14	12	CH-37	LPH-2	4	
112th Trans Co (Med Hel).	15	14	12	CH-37	LPH-3	4	Cruise speed estimated—100 knots.

¹ List in column one the transport aircraft (aviation) unit designation.

² List in column two total number of helicopters available in the unit for the operation.

³ List in column three the number of helicopters available for use for: a. the first trip; b. subsequent trips.

⁴ List in column four the type helicopter available.

⁵ List in column five the ships from which the helicopters will operate.

⁶ List in column six the deck launch capacity of the helicopter transports.

Figure 20. (Superseded) Helicopter availability table (incomplete).

Division Assault Schedule for Landing Beaches						
Landing area (or landing subarea)		Landing Beach				
OHIO ¹		RED 1 ²	RED 2 ²	GREEN ²	WHITE ²	
SCHEDULE WAVES	Wave Number ³	Landing time ⁴	Craft/vehicle unit serial nr	Craft/vehicle unit serial nr	Craft/vehicle unit serial nr	Craft/vehicle unit serial nr
	1	H-hour	18 LVTH 1st Armd Amph Bn 612	18 LVTH 1st Armd Amph Bn 613	18 LVTH 1st Armd Amph Bn 614	18 LVTH 2d Armd Amph Bn 615
	2	H+3 min	18 LVTP BLT 1/168 210	18 LVTP BLT 1/169 310	18 LVTP BLT 1/170 410	18 LVTP BLT 1/171 510
	3	H+6 min	10 LCVP BLT 1/168 211	10 LCVP BLT 1/169 311	10 LCVP BLT 1/170 411	10 LCVP BLT 1/171 511
ON-CALL WAVES	Control point	Reporting time				
	Report primary control vessel	H-hour	10 LCVP BLT 1/168 212			10 LCVP BLT 1/171 512
	Line of departure	H+30 min			10 LCVP BLT 1/170 412	

¹Enter the code word used to designate the landing area or landing subarea within which the division landing beaches are located in the upper left block of the table.

²In succeeding columns (one for each landing beach to be used), show the color or color-number designation of the landing beach and the composition of each wave, to include the number and type of landing craft or amphibious vehicles, the assault unit, and the serial number of the element of the unit.

³List in column one the wave number of each scheduled wave.

⁴List in column two the time of landing for scheduled waves and reporting time to line of departure or other control point for on-call waves.

Figure 21. (Superseded) Division assault schedule for landing beaches (incomplete).

Division Assault Schedule for Landing Zones

		Landing zone		
		ALPHA ¹	BRAVO	CHARLIE
Wave No. ²	Landing time ³	No. helicopters unit serial No. ⁴	No. helicopters unit serial No.	No. helicopters unit serial No.
S				
C	L-hour	8 CH-37 BLT 1/168 703, 704.	8 CH-37 BLT 1/169(-) 802.	8 CH-37 Co, BLT 1/170 812
H	L+5			
E	L+7	8 CH-37 BLT 1/168 708.	8 CH-37 BLT 1/169(-) 804.	8 CH-37 Co, BLT 1/170 813
D				
U	L+10			
L	L+15	8 CH-37 BLT 1/168 705, 706.	8 CH-37 BLT 1/169(-) 805.	4 CH-37 Co, BLT 1/170 814
E				
D				
W				
A				
V				
E				
S				
		*	*	*
O	Ship			
N	Ready for loading time			
	LPH 201	4 CH-37 BLT 1/168 716.	4 CH-37 BLT 1/169(-) 814.	
C	LPD 203			4 CH-37 Co, BLT 1/170 (supplies)
A				
L				
L				
		*	*	*

¹ Provide a column in the table for each landing zone in which elements of the division will execute an assault landing.

² List in consecutive order the number of each scheduled wave of helicopters. For a particular landing zone, all waves may be scheduled waves. On-call waves are preplanned but the time of landing is not predetermined.

³ Landing time may be in terms of H-hour applicable for beach landings or in terms of another designated time such as L-hour earlier or later than H-hour.

⁴ Enter for each wave, the number and type of helicopters to be employed, the designation of the major unit using the helicopters, and the serial number of each serialized element comprising the helicopter loads.

Figure 22. (Superseded) Division assault schedule for landing zones (incomplete).

Division Landing Sequence Table

Unit ¹	Element ²	Serial ³ No.	Craft or vehicle		Ship ⁶	Landing beach ⁷	Remarks ⁸
			No. ⁴	Type ⁵			
1/10 Armor	Co B (-1st Plat)	607	3	LCU	LSD-14	RED	
1/10 Armor	1st Plat, Co B	608	1	LCU	LSD-15	RED	
Div CP (Fwd)		10	5	LCVP	APA-231	BLUE	Free boats
111th Sig Bn	Op CP and Div Adv CP	102	9	LCVP	AKA-1002	BLUE	Personnel only
BLT 1/168	Shore party elms	502	3	LCM-8	APA-211	RED	Eqp and pers
210th Tk Co	Co HQ (-)	203	6	LCM-6	APA-642	RED	
1st Avn Co	Avn Recon Plat	404	1	LCM-6	APA-642	BLUE	
1/10 Armor	HQ & HQ Co	603	See remark		LST-1138	RED	LST to beach
1/10 Armor	Co A	604	See remark		LST-1138	RED	do
12th Engr Lt Eqp Co	12th Engr Lt Eqp Co	712	See remark		LST-1138	RED	do

¹ The first column contains the designation of the units or organizations in the estimated sequence for landing. When a unit is divided into two or more serialized elements to which serial numbers are assigned, the unit may be listed on more than one line in this table. See the division serial assignment table.

² The second column contains a description of the serialized element, of the unit listed in column one, that is to be landed.

³ The third column contains the serial number of the serialized element. In this table the numbers are not in numerical sequence. The serial assignment table is a ready cross reference for determination of the composition of the serialized element.

^{4,5} The fourth and fifth columns show the minimum number of the smallest type of landing craft required to land the element. Enter an appropriate remark when elements are embarked in an LST which will beach for unloading. Entries in columns 4, 5, and 6 are the same as in similar columns of the division serial assignment table.

⁶ Column six shows the ship from which the serialized element will debark.

⁷ The seventh column indicates the landing beach upon which it is anticipated the element will be landed.

⁸ The eighth column includes clarifying remarks.

Figure 23. (Superseded) Division landing sequence table (incomplete).

Division Serial Assignment Table

Serial No.¹	Unit²	Pers³	Vehicles equipment⁴	Craft No./type⁵	Ship⁶	Remarks⁷
100	Div Adv CP, Gp No. 1	DIVISION HQ & HQ CO 23	6¼-ton trk 4¼-ton tlr	7 LCVP	AGC-6	
101	HQ & HQ Co (Recon Party)	6	2¼-ton trk 2¼-ton tlr	2 LCVP	AGC-6	Free boats
* * * * *						
200	BLT 1/168 Comd Gp	12	BLT 1/168 2¼-ton trk	2 LVTP	LST-1002	Free boats
201	BLT 1/168 Altn Comd Gp	16	2¼-ton tlr 4¼-ton trk 4¼-ton tlr	4 LCVP	APA-209	Free boats
202	Det HQ Co, 1/168	4	1¼-ton trk	1 LCVP	APA-209	6th wave 1/168
* * * * *						
250	HQ & HQ Btry 1/211 Arty	60	9¼-ton trk 9¼-ton tlr 3¼-ton trk 3¼-ton tlr	9 LCM	AKA-2002	On call
* * * * *						
267	Co A (-), 20th Engr Bn	40	5 trk, 5-ton, dump 2 tractors, 5-ton 2 tractors, D7; 1 trk, 2½-ton; 1 tlr, 1½-ton, water		LST-1003	Beached
* * * * *						

- ¹ The first column contains the serial numbers in numerical order.
- ² The second column describes the unit, part thereof, or combinations of units which constitute the serialized element.
- ³ The third column indicates the number of personnel in the serialized element.
- ⁴ The fourth column indicates the accompanying vehicles, and supplies and equipment which require special handling. The information in the column is useful in embarkation planning.
- ⁵ The fifth column shows the minimum number and smallest types of landing craft which are required to land the serialized element. Other considerations permitting, substitution of larger craft can be made.
- ⁶ The sixth column shows the ship from which the serialized element is to debark.

Figure 24. (Superseded) Division serial assignment table (incomplete).

BLT 1/168 Landing Zone BRAVO

Wave ¹	Transport aviation unit ²	Flight No. ³	No./type helicopters ⁴	From carrier (origin) ⁵	To report (load) ⁶	Time ⁷			Landing site ⁸	Load description ⁹
						Load	Launch	Land		
1	210th Trans Co	10-1	4 CH-37	LPH-1	LPH-1	L-48	L-43	L-HOUR	10	Heliteam 602-1, 602-2, 602-3, 602-4.
2	211th Trans Co	12-1	4 CH-37	LPH-3	LPH-3	L-48	L-43	L-HOUR	12	-----
	212th Trans Co	13-1	4 CH-37	LPH-4	LPH-4	L-43	L-38	L + 5	13	-----
	213th Trans Co	14-1	4 CH-37	LPH-5	LPH-5	L-43	L-38	L + 5	14	-----
3	210th Trans Co	10-2	4 CH-37	LPH-1	LPH-1	L-38	L-33	L + 10	10	-----
	211th Trans Co	12-2	4 CH-37	LPH-3	LPH-3	L-38	L-33	L + 10	12	-----
	212th Trans Co	13-2	4 CH-37	LPH-4	LPH-4	L-33	L-28	L + 15	13	-----
4	213th Trans Co	14-2	4 CH-37	LPH-5	LPH-5	L-33	L-28	L + 15	14	-----

- ¹ Enter in column one the designated helicopter wave number.
- ² List in column two the transport aviation unit designation.
- ³ List in column three the assigned flight number.
- ⁴ List in column four the number and type of helicopters to be used.
- ⁵ List in column five the helicopter carrier in which the helicopters will be transported.
- ⁶ List in column six the helicopter carrier or other appropriate place where the helicopters are to be loaded and launched.
- ⁷ List in columns seven, eight and nine the time, in relation to L-hour, of helicopter loading, launching, and landing.
- ⁸ List in column ten the specific landing site destination of each helicopter flight.
- ⁹ Describe in column eleven the troop elements and any equipment requiring special handling, which are to be loaded.

Figure 26. (Superseded) Helicopter employment and assault landing table (incomplete).

BLT 1/712 landing diagram-Landing Beach RED

Wave ¹	Time of landing ²	Serial nr. ³	Units ³	Formation ⁴
1	H hr	231	Co B (-), 281st Armcd Amph Bn	X X X X X X X X X X X X X X
2	H f 2	210	Co A (-) (Boat Teams 2-1, 2, 3, 4, 5, 6, 7)	X X X X X X X X X X X X X X
S		220	Co B (-) (Boat Teams 2-8, 9, 10, 11, 12, 13, 14)	2-1 2-2 2-3 2-4 2-5 2-6 2-7 2-8 2-9 2-10 2-11 2-12 2-13 2-14
E		*	*	*
U	H f 30	262	Det BLT shore party	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
L				7-12 7-10 7-8 7-6 7-4 7-2 7-1 7-3 7-5 7-7 7-9 7-11
E				⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
D	H f 40	206	Bn recon pliat	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
D				8-8 8-6 8-4 8-2 8-1 8-3 8-5 8-7 8-9
* * * * *				
	Free Boats ⁵	201 242 248 269	Bn CO and party Arty Bn CO and party Shore party dossier Shore party dossier	Free boat: 001 X Free boat: 002 ⊙ Free boat: 003 ⊙ Free boat: 004 ⊙
O	At LD H f 50	271	Det, Trp B (-), 1st Recon Sq, 26th Cav	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
A				12-8 12-6 12-4 12-2 12-1 12-3 12-5 12-7 12-9
C	At LD H f 75	290	Co B (-), 20th Engr Bn	3 LCU from LSD 7
L				* * * * *

LEGEND
X - LVTH ⊙ - LCVP
X - LVTP ⊙ - LCH-6

¹List in the first column the wave number.
²List in the second column the time, in terms of H-hour, the wave will land.
³List in the third and fourth columns the major unit in the wave and the serial number of each serialized element boated in the wave. When a serialized element is formed into numbered boat teams, the boat team is assigned the same number as the landing craft or amphibious vehicle into which the team loads. Landing craft within a wave are numbered from the center to the flanks, with the even numbers on the left and odd numbers on the right. Amphibious vehicles within a wave are numbered consecutively from left to right.
⁴Show in the fifth column the number of craft or vehicles in the wave, the number assigned each one and its position in the wave.
⁵Free boats are assigned to provide for landing of the boated element at a time selected by the commander concerned with consideration to the situation ashore.
6All, or selected, on-call waves are listed in the landing diagram.

Figure 27. (Superseded) Landing diagram for landing beaches (incomplete).

APPENDIX V

REFERENCE DATA

(SHIPS, LANDING CRAFT, AMPHIBIOUS VEHICLES)

3. Various craft, amphibious vehicles, and ships are illustrated in the figures which follow. The term "troops" as used in the data under each of these figures includes the individual arms and equipment carried by dismounted personnel.

Change data for figures as indicated below.

Figure 30. Landing craft, vehicle, personnel (LCVP).

Capacity: 36 troops, or 3.5 tons cargo.

Figure 31. Landing craft, mechanized (LCM-6).

Capacity: 80 troops, or 32 tons cargo.

Figure 32. Landing craft, mechanized (LCM-8).

Capacity: 200 troops, or 60 tons cargo.

Figure 33. Landing craft, utility (LCU).

Speed: 5 knots (loaded)

10 knots (light)

Capacity: 400 troops, or 180 tons cargo.

Figure 34. Landing vehicle, tracked, personnel (LVTP-5).

Dimensions: Length—29 feet 7 inches

Width—11 feet 8½ inches

Height—9 feet 7 inches

Capacity: 34 troops, or 6 tons cargo (waterborne), or 9 tons cargo (overland).

Figure 35. Landing vehicle, tracked, personnel (LVTP-6).

Capacity: 20 troops, or 4 tons cargo (waterborne), or 5 tons cargo (overland).

Figure 38. Lighter, amphibious, resupply, cargo (LARC-5).

Length: 35 feet

Figure 40. Amphibious force flagship (AGC).

Troop capacity: Assault troops—none.

Landing force commander's staff

50 off, 200 EM

Landing craft: 2 LCVP and 4 LCPL

Figure 42. Attack cargo ship (AKA).

Troop capacity: 320

Cargo capacity: 4,900 tons

Landing craft: 9 LCM-6; 15 LCVP

Cargo booms: 3 60 tons; 1 40 ton; 6 10 ton

Figure 43. Rescinded

Figure 44. Tank landing ship (LST).

Draft: 5 feet
 Troop capacity: 400
 Largest equipment carried: 10 medium tanks (beaching)
 20 medium tanks (docking)

Figure 45. Dock landing ship (LSD).

Dimensions: Length—510 feet
 Beam—84 feet
 Draft—18 feet
 Speed: Maximum—21 knots
 Troop capacity: 340
 Cargo capacity: 2,400 tons

Figure 46. Amphibious transport dock (LPD).

Troop capacity: 900
 Cargo capacity: 2,800 tons

Figure 47. Amphibious assault ship

Dimensions: Length—888 feet
 Beam—129 feet
 Draft—30 feet
 Aircraft—5 CH-37 helicopters and 24 CH-37 helicopters
 Capacity: 2,250 troops
 Speed: 30 knots

Make the following additions, changes, and deletions in the glossary.

Amphibious Assault—The principal operational type of amphibious operation. It involves the landing and establishment of a landing force on a hostile shore.

Amphibious Operation—An attack launched from the sea by the naval and landing forces embarked in ships or craft involving a landing on a hostile shore.

Amphibious Reconnaissance—An amphibious raid conducted by minor elements, involving stealth rather than force of arms, for the purpose of securing information, followed by a planned withdrawal.

Amphibious Task Force—A task organization formed for the conduct of an amphibious operation. An amphibious task force always includes a navy force and a landing force with their organic aviation.

Assault Landing Team—(A general term) A basic * * * grouping is formed, e.g., **Battalion Landing Team**.

Battle Group Landing Team (BGLT)—Delete.

Brigade Landing Team (Bde LT)—An assault landing team. A balanced task organization composed of a brigade and the rein-

forcing combat and service elements required for combat and interim logistical support during the period it conducts independent tactical operations.

Landing Beach—That portion of a usable coastline usually required for the landing of one assault landing team, e.g., one BLT. However, it may also be that portion of a shoreline constituting a tactical locality, such as the shore of a bay, over which a force smaller than a BLT may land.

By Order of the Secretary of the Army:

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NG: State AG (3); Units—Div (1) except Armor Div (4); Div Arty (1).

USAR: units—same as Active Army except allowance is one copy to each unit.

For explanation of abbreviations used, see AR 320-50.

FOREWORD

Within the Army mission “to seize, occupy and defend land areas” is an inherent requirement for strategic and tactical mobility. As a basic means of deployment of Army forces in an offensive posture, the amphibious operation is vital to the accomplishment of the Army mission. By design, the amphibious operation affords an Army force a mobile base from which the force is projected ashore for assault landings and seizure of the lodgment area required to prosecute subsequent land operations.

The capability of projecting Army assault forces ashore from a mobile sea base in conjunction with assault by airborne forces provides for selective application of optimum combat power.

In an amphibious attack, assault landing teams are moved rapidly from ship-to-shore in landing craft, amphibious vehicles, and helicopters. Army amphibious vehicles and helicopters used for ship-to-shore movement afford mobility to assault landing teams during their advance to objectives inland.

This manual is written primarily from the viewpoint of the commander. It emphasizes the differences between amphibious operations and normal land warfare. It provides basic guidance for participation in amphibious operations by an Army force as a component of an amphibious task force.

In addition to coverage of the amphibious operation, this manual includes basic doctrine for Army conducted shore-to-shore operations in Part V.

Coverage envisages the Army landing force for a typical amphibious attack as a small field army or an independent corps of three to five assault divisions. The manual is equally applicable when a reinforced division constitutes the Army landing force.

For additional and more detailed coverage, see FM 31-(), The Battle Group Landing Team (Amphibious) (when published).

FIELD MANUAL
No. 31-12

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 28 March 1961

ARMY FORCES IN AMPHIBIOUS OPERATIONS
(THE ARMY LANDING FORCE)

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PART ONE
THE AMPHIBIOUS OPERATION

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Purpose and Scope

a. This manual sets forth the fundamental principles, doctrine, and procedures relative to the US Army component of an amphibious task force. It is designed primarily to provide guidance for the Army component commander and his staff and subordinate echelon commanders in the planning of, preparation and training for, and participation in an amphibious operation.

b. The purpose of this manual is to provide guidance for preparation of Army forces for rapid integration of effort with naval forces, and air forces when they participate, for conduct of an amphibious operation. The intent is to achieve optimum joint force efficiency and combat power without reducing or disrupting the capability of any Service component force for executing its primary role.

c. Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the specific page, paragraph, and line of the text in which change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to Commandant, US Army Command and General Staff College, Fort Leavenworth, Kansas.

d. The terms used throughout this field manual may be found in AR 320-5 and JCS Publication No. 1 except for those not yet incorporated in these two publications. The latter are defined in the Glossary.

2. Perspective

The principles in this manual are set forth within the following framework—

a. The amphibious operation is precisely defined by the Joint Chiefs of Staff and has a specific, limited scope.

b. Army forces participate in an amphibious operation as the army component of a joint force and within the principles, doctrine, and procedures for unified and joint operations as established by the Joint Chiefs of Staff.

c. Within the primary function assigned to the Army—“. . . to seize, occupy and defend land areas . . .” is an inherent requirement for strategic and tactical mobility. Correspondingly, the Army functions include “to organize, and equip, in coordination with the other Services, and to provide army forces for joint amphibious and airborne operations, and to provide for the training of such forces, in accordance with doctrine established by the Joint Chiefs of Staff.” In addition, the Army shares in the common functions assigned to all Services which include preparation for mobilization, maintaining mobile reserve forces in readiness, and maintaining forces for assignment to unified and specified commands.

3. Relation to Navy and Marine Corps Doctrine

a. When an amphibious task force is composed of Navy and Marine Corps forces only, the force is a uni-Service force and functions under naval doctrine. Pertinent naval doctrine, tactics, techniques, and procedures are set forth in Naval Warfare Publication (NWP)-22, *Amphibious Operations*; Naval Warfare Information Publications (NWIP) Series 22; and Marine Corps Landing Force Manuals (LFM).

b. This manual is a reflection of applicable Navy-Marine Corps doctrine, techniques, and procedures to assure unity of effort and to avoid duplication of Service functions. However, it must be recognized that organizational, technical, and procedural differences exist between land forces designed specifically for amphibious operations as compared with those designed for sustained land warfare in general.

4. Application

a. In applying the provisions of this manual, commanders must recognize the great influence of the operational environment on the operation plan. While the provisions of this manual are applicable in varying degrees to all situations, task organizations, tactics, procedural systems and techniques, adjustments will be required to conform to the conditions of a particular situation. Each operation must be tailored to the conditions imposed by the specific mission, available means and other variables of the operational environment as discussed in paragraphs 13 through 15.

b. In keeping with the aim set forth in paragraph 1, currently established Army doctrine and procedures for land warfare are applicable to the Army component of an amphibious task force except as specifically modified herein through operational necessity.

c. Although coverage in this manual pertains primarily to Army participation in amphibious operations as defined, the principles set forth are applicable in part to other assault landing operations in which certain fundamental techniques characteristic of the amphibious operation are employed.

5. Basis

The basis for terminology, responsibilities, and procedures relative to unity of effort of joint forces emanates from Joint Chiefs of Staff Publications:

a. JCS Pub. 1 (Dictionary of United States Military Terms for Joint Usage).

b. JCS Pub. 2 (Unified Action Armed Forces (UNAAF)).

c. (C) JCS Pub. 3 (Joint Logistics and Personnel Policy and Guidance (U)).

Section II. NATURE AND SCOPE OF THE AMPHIBIOUS OPERATION

6. Definition

An amphibious operation is—

a. An attack launched from the sea by naval and landing forces involving a landing on a hostile shore.

b. A tactical withdrawal of land forces from a hostile shore, effected by naval forces.

7. Distinguishing Characteristics

a. By definition, the amphibious operation, as an attack, has two distinguishing characteristics—

(1) Major elements of the landing force are embarked in naval ships or craft for movement to the objective area.

(2) The attack involves execution of assault landings on a hostile shore.

b. The amphibious operation, as an attack, is further characterized as follows:

(1) Normally, it includes extensive air participation.

- (2) It incorporates ship-to-shore movement for deployment of the landing force from the assault shipping to designated landing areas.
- (3) It does not encompass other operations which possess some like characteristics and involve some of the techniques of an amphibious operation. Combat operations involving shore-to-shore movement across sea areas and inland waters in means other than naval ships are not amphibious operations. Similarly, administrative unloading of personnel and material from ships onto friendly territory to include water terminal and logistics over-the-shore operations are not amphibious operations.

8. Purposes

a. Amphibious operations are conducted for purposes which are related directly to the assigned functions of each of the several military Services of the Department of Defense. Within the responsibilities and functions assigned to it, any Service or Service component may have a mission requirement which can be resolved through employment of one of the various types of amphibious operations. Additionally the requirement may emanate directly from the mission of a unified, specified, or other joint force command.

b. In general, amphibious operations are conducted to provide strategic and tactical combat mobility to land combat forces. Specifically they may be conducted to obtain a lodgment area in the initiation of a land campaign; to obtain a site for an advanced base for naval, air, or logistical operations; to deny the use of the seized area to the enemy; to maneuver land combat forces incident to continuation of an existing land campaign; to create deception; to gain information; to destroy installations or forces; or to facilitate a show of force. Amphibious withdrawals are conducted for the purpose of evacuating a force to preclude loss of the force or to retract the force specifically for tactical redeployment elsewhere.

c. Within these parameters, amphibious operations may be categorized according to operational purpose as follows:

- (1) *Invasion.* This category implies initial but large scale intervention by land combat forces into an enemy controlled territory. The invaded territory may be controlled by a single large nation or may be territory of a smaller nation which is allied with other hostile powers. Invasion implies intent to enter forcibly a national political area and to occupy captured territory for an indefinite period of time.

- (2) *Seizure*. This category implies capture of a voluntarily restricted portion of an enemy controlled territory. Capture of an isolated land mass such as an island falls within this category. A seizure may involve occupation for an indefinite period of time.
- (3) *Tactical maneuver*. The operational purpose is a tactical maneuver when the enemy controlled territory has already been invaded and is controlled in part by friendly land combat forces. An amphibious operation is conducted to place land combat forces in a better location with respect to the enemy in furtherance of land operations in progress. The territory involved will be absorbed into the overall occupied area in a relatively short time.
- (4) *Withdrawal*. A redeployment of the total land combat force from an independent area of a hostile occupied area. As a separate category, it is not an incidental part of any other type or form of amphibious operation.
- (5) *Special*. This category includes those minor operations such as raids and demonstrations which are conducted as secondary efforts within a strategic or tactical operation. Such operations do not in themselves have a major influence on the outcome of a campaign.

9. Scope

The amphibious operation is a complete operation within itself. However, when it is conducted by a joint force it is usually one phase or part of a campaign of larger magnitude. As an entity, the typical amphibious operation includes planning; embarkation of land forces and equipment; task force rehearsals; movement to, or from, the objective area; final preparation of the objective; assault landing, or withdrawal, of land forces with accompanying supplies and equipment; and support of the landing, or withdrawing force until termination of the amphibious operation. The amphibious operation does not include marshalling of forces; preliminary training in amphibious techniques; initial preparation of the objective area; independent supporting operations; and operations prior to the initiation of or subsequent to the termination of the amphibious operation. Movement of the landing force to or from the objective area is made predominantly by naval surface and subsurface ships but may include land or sea based aircraft. Movement between naval ships and the hostile shore is made by landing craft, amphibious vehicles, and helicopters. An amphibious operation may include integrated, small scale airborne operations.

10. Types of Amphibious Operations

a. *Principal Type.* Amphibious attack is the paramount operational type of amphibious operation. It involves the landing and establishment of a landing force on a hostile shore. It is employed for invasions and seizures and for tactical maneuvers incident to a land campaign in progress.

b. *Secondary Types.* Secondary types of amphibious operations do not involve establishing a landing force on a hostile shore for indefinite duration. These are as follows:

- (1) *Amphibious withdrawal.* A withdrawal of forces from a hostile shore wherein the withdrawal force is embarked primarily on naval ships. It is conducted for the purpose of evacuating forces to preclude loss of these forces or to retract the forces specifically for tactical redeployment in other areas (ch. 9).
- (2) *Amphibious raid.* Landings from the sea on a hostile shore involving swift incursion into or a temporary occupancy of an objective, followed by a planned withdrawal. Raids are conducted for the purpose of inflicting loss or damage; tactical deception; securing information; capturing or evacuating individuals or materiel; or establishing, supporting, or coordinating with unconventional warfare activities (ch. 9).
- (3) *Amphibious demonstration.* An operation conducted for the purpose of deceiving the enemy by a show of force with the expectation of causing the enemy to adopt a course of action unfavorable to himself. The demonstration differs from the raid in that the force, if landed, does not have a true tactical objective ashore (ch. 9).
- (4) *Amphibious reconnaissance.* A landing conducted by small elements, involving stealth rather than force of arms and which normally includes a planned retraction of the landed elements. It is conducted for the purpose of securing information (par. 67). It is frequently employed during initial preparations prior to an amphibious attack or raid. It is also employed to establish or maintain coordination with or to effect support of unconventional warfare and intelligence activities.

11. Operational Sequence

a. The sequence of events or activities in the amphibious attack as the paramount type of amphibious operation follows a well defined pattern which is also recognizable, although to a lesser degree, in the other types.

b. The successive events, often called phases, of the amphibious attack as conducted by a joint force in connection with a land campaign are—

- (1) *Planning.* The planning period begins upon receipt of the initiating directive and extends to the time of embarkation. During this phase the principal plans of the amphibious task force and its Service components are prepared. Although the planning phase is deemed to extend only until embarkation begins, planning continues throughout the operation. Concurrently with preparation of plans for the operation itself, related preparatory activities are conducted to include completion of training and marshalling of forces and materiel for loading. Supporting operations, such as preliminary preparation of the objective area, may be initiated during the planning phase (ch. 3).
- (2) *Embarkation.* Embarkation is the loading of forces with their equipment and supplies into ships. The embarkation phase is the period during which forces move to embarkation areas and embark in assigned shipping. The amphibious task force is activated as a joint force at a designated time which will approximate the time embarkation commences (ch. 8).
- (3) *Rehearsal.* The rehearsal phase is the period during which the amphibious task force rehearses the planned operation to test the adequacy of plans, the time schedules for detailed operations, and the combat readiness of participating forces. Rehearsals are also a medium for familiarizing forces with plans and the testing of communications. Rehearsals are usually conducted as an intermediate step in movement of the amphibious task force to the objective area (par. 247—253).
- (4) *Movement.* This phase includes those naval activities involving the conveying of the assault shipping and the requisite protection of the force. Ships are grouped and moved according to ship operational characteristics without regard to organization of the embarked forces. Ships are moved at speeds and over routes according to security requirements. These movements groups or convoys rendezvous in or near the objective area and arrive on station according to time of commitment of the ship or the embarked force. The embarked forces continue to receive and process intelligence information, revise plans, orient and train personnel, and make ap-

propriate final adjustments in preparation for the assault. During this phase, preparation of the objective area is intensified. The movement phase is completed when all elements of the amphibious task force have arrived in the objective area (pars. 254—261).

- (5) *Assault*. The assault incorporates the whole purpose of all preceding events and activities—the establishment of the landing force ashore and accomplishment of the amphibious task force mission. The assault phase includes the final preparation of the objective area, stationing of assault shipping and control systems, the ship-to-shore movement of the assault echelon of the landing force, tactical operations requisite to establishing the beachhead, operations in support of the landing force, the landing of the followup echelon of the landing force, and establishment of command, control, reinforcing, and supporting facilities ashore.
- (6) *Termination*. Termination of the amphibious operation is predicated on the accomplishment of the mission of the amphibious task force in accordance with the specific conditions contained in governing instructions set forth in the initiating directive. The firm establishment of the Army landing force on shore is invariably specified as one of these conditions (par. 33). Dissolution of the amphibious task force normally is directed by higher authority upon termination of the amphibious operation.

12. Employment Considerations

a. The amphibious operation integrates virtually all types of ships, aircraft, weapons, and land forces in a concerted military effort against a hostile shore.

b. Mobility and flexibility are inherent characteristics of the amphibious operation. The amphibious operation exploits the element of surprise and capitalizes on enemy weaknesses through application of the required type and degree of force at the most advantageous locations at the most opportune times.

c. When the amphibious operation is a phase in a campaign with an ultimate purpose beyond the objective of the included amphibious operation, the accomplishment of the mission of the amphibious task force is a final achievement only for the amphibious task force. Under this condition, accomplishment of the amphibious task force mission is a vital step toward a major land force objective. Accordingly, the timing, means, and plans used

to accomplish the mission of the amphibious task force must contribute to the further objective and permit a smooth transition to subsequent consolidation and buildup essential to support of further land force operations ashore.

d. A salient feature of the amphibious attack is an inherent requirement to build up combat power ashore from an initial zero to the requisite full, coordinated striking power. To conduct any amphibious operation successfully, it is mandatory that control of the sea and air space in the objective area be achieved. Such control must be sustained and improved by the amphibious task force. Sea and air lanes interconnecting the base areas and the amphibious task force objective area must be controlled. Additionally, it is essential that the initial and final preparatory operations create conditions in the objective area which will give the landing force the potential of achieving superior land combat power ashore. These requirements must be resolved in planning to include composition of the amphibious task force.

e. The primary limitations of amphibious operations are the time required for detailed planning and preparation and the relatively slow speed of movement of task force shipping.

Section III. OPERATIONAL ENVIRONMENT—FORMS OF WAR

13. General

a. An amphibious task force is by design a balanced force with an inherent strategic and tactical maneuver capability.

b. The conduct of an amphibious operation is a principal means of initiating or continuing the application of military force.

c. The amphibious task force embodies a land force which is afforded mobility and a sustaining capacity by a mobile seaborne base with integral air support. A factor that gives worth and utility to the amphibious operation is the ability to move a given force to an objective area for projection ashore at a time of our choosing and in whatever strength planned.

d. A capability to conduct amphibious operations enhances the deterrent potential of military forces in preventing war. The existence of an amphibious attack capability may induce a defender to disperse his forces and to expend wasteful effort in attempting to defend his coastline.

14. Operational Environment

a. Environment Variables. The situation may require employment of an amphibious task force in a wide range of operational

environments. There are many variables in these operational environments such as the scale of use of nuclear, chemical, and biological weapons, the geographic locale, and friendly and enemy force structure.

b. Scale of Use of Nuclear, Chemical, and Biological Weapons. The scale of use of nuclear, chemical, and biological weapons may vary for each type weapon in wide range from a very high level of usage through a low level of usage to none at all during a particular campaign. In general, the effect on planning and execution of the amphibious operation will be comparable to the effect usage of these weapons has on normal combat operations. Commanders must carefully evaluate the prospective scale of use of nuclear, biological, and chemical weapons and determine the compatible pattern of operations. Planning aspects of weapons employment are covered in chapters 3 and 5.

c. Geographic Locale. By its nature, the amphibious operation is executed in an area accessible to naval ships. Considering that approximately three-fourths of the earth's surface is covered by water, many and varied land areas are accessible to an amphibious task force. Areas to seaward of a coastline are of principal concern to the naval component of the amphibious task force. The Army component must be capable of assault landing operations under varying conditions in coastal areas and inland. Variables of terrain, climate, degree of development, population, and political-social-economic factors have general importance comparable to that in preparation for normal land operations. During preparations for an amphibious operation, the landing force must be thoroughly oriented on the geographic factors peculiar to the objective area.

d. Friendly Force Structure. Size and composition of an amphibious task force will vary with the form of war, mission of the force, and other factors of operational environment. US Army forces must prepare for participation in amphibious operations as the landing force. Also an Army force may participate in an amphibious operation as a component of a combined landing force or in conjunction with a US Marine Corps force. Preparation of forces for amphibious operations must be in accord with the wide range of operational environments possible in modern warfare. Particular force requirements in preparation of Army forces for an amphibious operation arise from the need to provide—

- (1) Adequate ship-to-shore movement means which also furnish interim mobility to assault landing teams ashore.
- (2) Organizations for interim combat and logistical support in the objective areas.

e. Enemy Force Structure. Enemy forces may have overall numerical superiority and portions of his coastline may be well organized for defense. An enemy is expected to defend his coastline by a combination of organized defensive works, mobile maneuver forces, and long range fires. The most likely areas for an amphibious attack will generally be the more heavily defended areas. US Army forces must be trained and psychologically prepared to execute amphibious attacks against any likely enemy and in heavily defended areas.

15. Forms of War

a. In the offensive phase of a general war when conditions favorable to employment of an amphibious task force are achieved, such a force can be committed in offensive action to seize and occupy enemy territory. Army forces, once established ashore, can strike deep into enemy territory. Because of their familiarity with the combat and administrative aspects of a land campaign, Army forces are ideally suited for employment under these conditions.

b. The role of amphibious operations in a limited war includes assistance to a friendly nation in repelling invasion by assault landings on the invader's flank or rear, by assault landings to restore the situation in an area that has fallen to unfriendly domination, and by assault landings in territory controlled by hostile or dissident elements to aid an allied nation in resisting seizure of its government. Limited war may require speed in commitment of forces and a rapid conclusion of the offensive action. An amphibious attack is particularly suited to establishment of a sizeable, balanced land combat force in hostile territory in response to a limited war situation. In a limited war situation, limitations, particularly in weapon use, may be imposed with intent to limit the scope of the conflict.

c. Forces capable of conducting amphibious operations may be deployed in extension of the national interests in specific military contingencies arising from the underlying conditions of a cold war. The existence of forces capable of launching an amphibious attack is in itself a stabilizing influence. The flexibility afforded by an amphibious capability is practically unlimited in such situations short of war. The force can remain dispersed at sea near troubled areas for considerable periods of time.

CHAPTER 2

ORGANIZATION AND COMMAND

Section I. ORGANIZATION

16. General

a. No standard organization is applicable to all situations that may be encountered in an amphibious operation. The force organized for conduct of an amphibious operation is a task organization which is designated as an amphibious task force. Composition of a specific amphibious task force is determined in consideration of operational requirements and the forces and materiel available.

b. Flexibility and economy of force are achieved in forming the amphibious task force since elements are phased into it, committed and released from active control according to operational needs and on a scheduled or unscheduled basis. For example, the assault echelon for an amphibious attack is collected as an entity only at the time of the assault. Other echelons and supporting task groupments are incorporated into the task force as required. The element of time must be borne in mind to achieve a realistic understanding of the amphibious task force structure and command relations.

17. Principles of Amphibious Organization

Considerations that govern task organizations of forces for any combat operations apply to amphibious operations. However, the organization for the execution of the amphibious operation reflects the interrelationship between the tasks of the landing force and the tasks of the corresponding naval forces at every echelon.

18. The Amphibious Task Force

a. For clarity, distinction is made between an amphibious task force comprised of Navy and Marine Corps forces alone and an amphibious task force which is a joint force comprised of components of two or more Services. The organization and composition of the amphibious task force as a joint force including a significant US Army component is discussed herein. As used hereafter, the term "amphibious task force" refers to a joint force.

b. The amphibious task force as a joint force is organized with- in the principles and doctrine for joint operations as set forth in JCS Publication Number 2, UNAAF. The amphibious task force itself is formed to provide for centralized operational direction of component forces for a limited duration. The amphibious task force is activated as a joint force at the time and for a duration necessary to assure centralized direction of the force during the operational phases of the amphibious operation as differentiated from the planning phase.

c. The amphibious task force will always include a Navy component and an Army component including their organic aviation. When Air Force forces are employed in lieu of or to significantly augment Navy tactical air elements, an Air Force component is also included. Organization and composition of the amphibious task force will be as directed by the establishing authority and as determined during planning. Appendix II depicts, by example, the basic organization structure of an amphibious task force.

19. Naval Component Force

a. The principal naval fleets are organized for administrative purposes into various type commands and for operations into numbered fleets. Coverage herein is restricted to those portions of Navy task organization which Army personnel are most likely to encounter when engaged in an amphibious operation.

b. As a minimum the Navy component of the amphibious task force consists of those forces necessary for movement, protection, landing or withdrawing and supporting the landing force, and for establishing and maintaining control of the sea and air space of the objective area.

c. The task organization of the Navy component is based primarily on the requirement for establishing the landing force ashore. It will include such of the following task groups as are required. For simplicity and more effective control, two or more of the listed task groups may be combined.

- (1) *Transport groups.* Groups which provide for the embarkation, movement to the objective, landing, and initial logistic support of the assault echelon of the landing force. They comprise all shipping in which the landing force is embarked. Naval craft available for use as ship-to-shore movement means are with the transport groups.
- (2) *Control group.* Personnel, ships and craft designated to control the ship-to-shore movement by surface means.
- (3) *Tactical air control groups.* Shipborne organizations

necessary to operate a tactical air control center and a tactical air direction center (afloat) for the control of air operations.

- (4) *Fire support groups.* Groups of battleships, cruisers, destroyers, rocket ships, and other types assigned to provide naval gunfire, rocket fire, and missile support for the landing and subsequent operations ashore.
- (5) *Shore-based Navy tactical air groups.* Task organizations of tactical air units assigned to the amphibious task force which are to be landbased within, or sufficiently close to, the objective area to provide tactical air support to the amphibious task force.
- (6) *Support carrier group.* A task organization of aircraft carriers with embarked aircraft and supporting ships, which provides naval air support to the amphibious task force.
- (7) *Screening group.* A task organization to furnish protection to the amphibious task force en route to the objective area and during operations in the objective area.
- (8) *Mine warfare group.* A task organization which conducts offensive and defensive mine operations in support of the amphibious task force.
- (9) *Reconnaissance and underwater demolition group.* A task organization including ships, embarked reconnaissance troops, and underwater demolition teams, which conduct reconnaissance, hydrographic surveys, and demolition of natural or man-made obstacles.
- (10) *Tactical deception group.* A task organization which conducts deception operations against the enemy, including electronic, communication, visual, and other methods designed to misinform and confuse the enemy.
- (11) *Close covering group.* A task organization which provides protection against attack by aircraft and surface ships. It is ordinarily composed of battleships, cruisers, destroyers, and aircraft carriers, as needed.
- (12) *Patrol plane group.* A task organization of patrol aircraft units which conduct such missions as scouting, reconnaissance, and antisubmarine operations while the amphibious task force is en route to, and in, the objective area.
- (13) *Air transport group.* A task organization of transport aircraft units which provide air transport for personnel and material.

- (14) *Administrative group.* The agency which is responsible for administrative and special details in the objective area—repair and salvage, hydrographic surveys, laying of nets, buoys, and beacons, initial harbor development and control, port control functions, boat pools, mail, and other tasks as assigned. During the initial stages of the assault, virtually all administrative functions are performed by the amphibious task force commander or his subordinates participating in the assault. Administrative duties are passed to the commander of the administrative group as the progress of the assault permits.
- (15) *Other groups.* Other type task groups may be formed as required.

20. Landing Force—Withdrawal Force

The landing force or withdrawal force of an amphibious task force comprises those units to be landed or withdrawn in execution of the amphibious operation. Depending upon composition of the amphibious task force, the landing force or withdrawal force as a whole may be a uni-Service, joint or combined force. Subsequent discussions in this manual concern primarily a landing force comprised of US Army units.

21. Army Component Force

a. The Army component of an amphibious task force is a task organization formed of Army units assigned thereto for participation in an amphibious operation.

b. The Army component as discussed herein is also referred to as the Army landing force. The term “landing force” is used in general reference to the entire force to be landed. The commander of the Army component is the Army landing force commander.

c. The composition and size of the Army component force varies with the type amphibious operation, landing force mission, mission of Army forces subsequent to termination of the amphibious operation, and the operational environment. It is formed on a basic tactical organization varying in size from the lowest tactical echelon capable of semi-independent operations to a field army. A typical Army landing force for an amphibious attack is envisaged as a small field army or independent corps of three to five divisions.

d. The Army landing force and each of its subordinate echelons must be balanced forces capable of independent operations for the execution of an amphibious attack. An amphibious attack by its very nature requires reinforcement of the basic tactical element at each echelon of the landing force to provide combat and

interim administrative support capability pending establishment of normal support systems in the objective area. Shore parties formed as special task organizations within the landing force provide the required combat and interim logistical support ashore in the landing areas. Shore parties are discussed in paragraphs 86 through 93.

e. Amphibious operations involve functions not necessarily encountered in normal land combat. The landing force employs special units discussed in chapter 5 and is specially organized for these functions, which are—

- (1) Combat loading of units, equipment, and supplies in Navy ships.
- (2) Debarkation and landing of units by landing craft, amphibious vehicles, and helicopters.
- (3) Conduct of assault operations from a ship base.
- (4) Utilization of naval gunfire and missile support.
- (5) Utilization of naval air support.
- (6) Discharge of cargo from assault shipping and landing and movement of materiel across beaches.
- (7) Operation and tactical employment of Army landing craft, amphibious vehicles, and helicopters as ship-to-shore movement means.

f. The amphibious attack requires that the landing force at various times during the operation be organized in one of the following functional forms—

- (1) *Basic tactical organization.* The conventional organization employed for normal tactical and administrative purposes within land warfare.
- (2) *Task organization.* A temporary tactical organization for the amphibious operation.
- (3) *Organization for landing.* Temporary tactical groupments of forces for control and coordination during landing. Characteristics of ship-to-shore movement means and operational requirements are prime considerations.
- (4) *Organization for embarkation.* Temporary administrative groupment of forces for control and coordination at embarkation.

g. Within the Army landing force, the reinforced division as the smallest organization of combined arms and services, is normally employed as the lowest landing force echelon for conduct of assault landings and execution of a scheme of maneuver ashore.

When employed in the assault, the reinforced infantry division task organization will typically provide for assault battle group landing teams, a division artillery grouping, a division reserve grouping, a division shore party grouping, a division headquarters and troops grouping, and a division trains grouping. The reinforced armored division may be employed as an assault division.

h. The assault landing team is the basic subordinate task organization of the assault echelon of a landing force. It is normally designated by prefixal words reflecting the type and echelon of the tactical unit around which the task grouping is formed, e.g., infantry battle group landing team (BGLT) and armored infantry battalion landing team (BLT). For reference purposes, an assault landing team may be further identified according to the type means to be used for ship-to-shore movement, e.g., (BGLT(S) when using surface movement means (landing craft and amphibious vehicles) and BGLT(A) when using air movement means (helicopters)).

22. Air Force Component

a. When the Air Force furnishes the preponderance of tactical aviation, an air support force will be formed. An Air Force officer will be designated as the air support force commander and, with respect to his own forces, enjoys a status similar to the landing force commander. When the preponderance of aviation comes from the Navy or Marine Corps any participating Air Force will be organized as a separate task group under the command of an Air Force officer.

b. When Air Force air support elements assigned to the amphibious task force are relatively small, such elements may be attached to the naval force component.

c. Subsequent discussions in this manual consider the principal air support, for the amphibious assault, other than organic army aviation, to be provided by the naval forces. However, Air Force air support considerations are important in the light of the transition from one supporting Service to the other during or following termination of the amphibious operation.

23. Subdivision of the Amphibious Task Force

The amphibious task force may be subdivided into such subordinate task organizations as required to meet operational requirements. Subordinate task organizations which may be formed are an advance force, an amphibious task group consisting of a naval attack group and a parallel landing group, demonstration forces, and reconnaissance forces. These subordinate task organizations are discussed separately in succeeding paragraphs.

24. Advance Force

a. An advance force is a part of the amphibious task force which precedes the main body to the objective area (pars. 262-270). Its function is to prepare the objective for assault by conducting such operations as reconnaissance, seizure of supporting positions, minesweeping, preliminary bombardment, underwater demolition operations, and air operations. As many of the following components as may be required are included—

- (1) Tactical air control group.
- (2) Fire support group.
- (3) Support carrier group.
- (4) Screening group.
- (5) Mine warfare group.
- (6) Reconnaissance and underwater demolition group.
- (7) Tactical deception group.
- (8) Close covering group.
- (9) Demonstration group.

b. If subsidiary operations, such as the capture of offshore islands and extensive land reconnaissance operations are to be conducted, a landing group, a transport group, and a control group may be included in the advance force.

c. The advance force is usually dissolved on D-day and its components are reassigned to other parts of the amphibious task force.

25. Demonstration and Reconnaissance Forces

A demonstration force is formed within the amphibious task force when required for conduct of operations intended to deceive the enemy. It may include elements of the Army landing force. Forces for conduct of reconnaissance or raiding operations will be formed similarly to the demonstration force.

26. Subordinate Amphibious Task Groups

a. Under certain circumstances, it may be necessary to form subordinate parallel attack groups (naval task group) and landing groups within the amphibious task force. In reality, the parallel task groups so formed constitute an amphibious task group as a joint force subordinate to the amphibious task force. Decision to form subordinate task groups is made during planning by the amphibious task force commander after consultation with the Army landing force commander and is likely when—

- (1) Simultaneous or nearly simultaneous assaults will be

conducted in landing areas so widely separated as to preclude effective control by a single tactical commander ;
or

- (2) The size of forces involved precludes effective centralized control.

b. When required, subordinate task groups are established as follows :

- (1) *Attack group.* An attack group is a subordinate task organization of the Naval component. It is composed of assault shipping and supporting naval units designated to transport, protect, land, and support a landing group.
- (2) *Landing group.* A landing group is a subordinate task organization of the landing force with the capability of executing assault landings as a self contained tactical force. Formation of landing groups for the main landings implies establishment of dispersed beachheads. A landing group may be formed as the advance force echelon of the Army landing force (par. 24).

Section II. COMMAND

27. General

a. The principles of command for joint forces as set forth in JCS Publication No. 2, UNAAF are generally applicable in determination of command authorities and responsibilities for an amphibious operation.

b. The authorities, responsibilities, and procedures for command applicable for an amphibious operation executed by a combined force involving US forces are as prescribed for the international military alliance involved. These factors frequently differ between alliances but will generally correspond to United States principles and operational procedures. For this reason, direction of combined force amphibious operations is omitted from subsequent discussions.

28. Higher Authority

a. An amphibious operation to be executed by a joint force will usually be initiated by the commander of a unified or specified command or higher authority. The authority issuing the initiating directive for the amphibious operation is called the establishing authority.

b. The command next above an amphibious task force composed of forces from two or more US military Services is a joint force command. Typically it will be a unified command, a subordinate unified command, a specified command, or a joint task force. The Joint Chiefs of Staff could be the next higher authority. Command above the amphibious task force level is dependent upon operational circumstances and the desires of the establishing authority. The establishing authority may provide a joint task force or subordinate unified command as the next higher authority above the amphibious task force when—

- (1) The operation is one of several interrelated operations constituting a campaign.
- (2) The scope or conditions of the operation are of such magnitude as to preclude centralized direction of execution by the establishing authority.

c. Recognizing that the requirement for the conduct of an amphibious operation may emanate from a source other than the establishing authority, such source is referred to as the originating authority.

29. The Initiating Directive

The establishing authority's initiating directive for an amphibious operation, normally will—

- a. Provide for the establishment of an amphibious task force and assign thereto the tasks to be accomplished.
- b. Assign forces.
- c. Designate the amphibious task force commander, the landing force commander, and other commanders as appropriate.
- d. Provide special instructions on command authority, responsibilities, and organization.
- e. Prescribe relationships during planning, and coordinating instructions.
- f. Define the objective area.
- g. Prescribe a code name and set target dates for execution of the operation.
- h. Contain special instructions pertaining to allocation and employment of nuclear, chemical, and biological weapons.
- i. Provide positive instructions governing termination of the operation and disposition of forces at termination.
- j. Provide guidance and instructions, to include organization and command authority, regarding continuation of operations subsequent to termination of the amphibious operation.

k. Assign tasks and responsibilities for conduct of combat and administrative operations related to or in support of the amphibious task force and prescribe coordinating instructions pertaining thereto.

30. The Amphibious Task Force

a. *Task Force Commander.* The amphibious task force commander will invariably be a Navy officer. Usually, the same individual will also be commander of the Naval component of the amphibious task force.

b. *Command Authority During Planning* (app. II).

- (1) An amphibious task force composed of two or more US Service components is a joint force and in effect a joint task force. Under special circumstances, depending upon the scope and purpose of the amphibious operation, the amphibious task force may be established as a joint task force at the beginning and possess full terms of reference accordingly.
- (2) For the conduct of planning, the establishing authority will designate the amphibious task force commander as a coordinating authority, with responsibilities as indicated in UNAAF.

c. *Command Authority During Operational Phases* (app. II).

- (1) Upon activation of the amphibious task force at commencement of embarkation, the amphibious task force commander assumes responsibility for the entire force and the operation. Thereafter and until termination of the amphibious operation, the amphibious task force commander exercises operational control over the entire amphibious task force.
- (2) The amphibious task force commander exercises operational control through component force commanders and commanders of subordinate joint forces when formed. No Navy commander, other than the amphibious task force commander exercises command authority over, or assumes responsibility for, the operations of Army landing force units, except where a Navy officer has been designated commander of a subordinate joint force which includes Army landing force units as discussed in paragraph 31.
- (3) Component force commanders remain responsible with regard to forces of their own military Service for—
 - (a) Internal administration and discipline.

- (b) Training in own Service techniques and tactical methods.
 - (c) Logistic functions normal to the component except as otherwise directed by higher authority.
 - (d) Tactical employment of their own force.
- (4) No significant directives will be issued by the amphibious task force commander, any component force commander, or any subordinate joint force commander which affects the plans, dispositions, or intentions of another force commander without consultation with the force commanders concerned.
- (5) At a time specified by higher authority, the amphibious task force commander becomes responsible for the objective area including its land, sea, and air space. Subsequently, the amphibious task force commander will exercise operational control over forces not a part of the amphibious task force when such forces are operating within the objective area during the amphibious operation. When such forces are merely passing through the objective area, control will be exercised only to the extent required to prevent or minimize mutual interference.
- (6) Subject to the overall operational control of the amphibious task force commander and in consonance with (3) above, responsibility for the conduct of operations ashore, and for the security of all personnel and installations within the area of operations ashore, is vested in the landing force commander.
- (7) The interrelationship of naval and landing force tasks during the planning for and execution of the amphibious operation requires establishment of parallel chains of command and corresponding commanders at all levels within the amphibious task force. The following fundamental considerations govern the application of such a system of parallel command.
- (a) The amphibious task force Service component commanders are on a corresponding level of command with regard to their respective components.
 - (b) Corresponding commanders are established at each subordinate level of both the naval force and the landing force.
 - (c) The amphibious task force commander deals with matters of command which affect only the naval forces through the naval chain of command. Matters of com-

mand which affect only the landing force are dealt with through the landing force chain of command. Matters of command which affect both the naval force and the landing forces are dealt with through the corresponding naval force and landing force chains of command. Corresponding commanders at all levels are required to maintain a close and continuous relationship, to ensure that, except in emergencies, no commander makes decisions affecting corresponding commanders without consultation. In such cases, the commander making the emergency decision will notify corresponding commanders of his action at the earliest possible time.

31. Delegation of Command Authority

a. The amphibious task force commander will delegate operational control over an element of the Army landing force to a subordinate Navy commander only when—

- (1) Simultaneous or nearly simultaneous assaults are conducted in areas so widely separated as to preclude effective control by a single tactical commander. (This condition requires the formation of subordinate amphibious task groups consisting of an attack group and a landing group.) (See par. 26.)
- (2) Separate operations are conducted by a detached portion of the amphibious task force, such as the operations of an advance force which contains Army landing force units.

b. The decision to delegate authority over Army landing force units is made by the amphibious task force commander during the planning phase, after consultation with the Army landing force commander.

32. Transfer of Control of Functions

As conditions warrant and as command, control, and coordination facilities are established ashore, the amphibious task force commander delegates to the landing force commander, or other appropriate commander ashore, the responsibility for control of air, and naval gunfire support as applicable, and responsibility for direction of all or part of the air defense task. Responsibility for overall fire support coordination is discussed in paragraph 100. Refer to chapter 5 for details on control of naval gunfire (par. 108), air operations (par. 113), and air defense (par. 124).

33. Termination

a. Termination of the amphibious operation is dependent upon accomplishment of the amphibious task force mission. This is a gradual or transitional process and is not predicated solely on time or space. In an amphibious assault, the mission includes the establishment of the landing force ashore. The landing force is established ashore when in the opinion of the landing force commander—

- (1) The task force beachhead has been secured.
- (2) Sufficient tactical and supporting forces have been established ashore to insure the continuous landing of forces and materiel requisite to subsequent operations.
- (3) Command, communications, and supporting arms control and coordination facilities have been established ashore and when.
- (4) The landing force commander has stated that he is ready to assume responsibility for subsequent land operations.

b. When the Amphibious Task Force Commander and the Landing Force are satisfied that the conditions of *a* above have been met, the Amphibious Task Force Commander will report these facts to higher authority designated in the initiating directive. This authority will then terminate the amphibious operation, dissolve the amphibious task force, and provide additional instructions as required, to include command arrangements and disposition of forces to be thereupon effective.

34. Staff

Except when specifically directed for special situations, a joint staff will not be formed at the amphibious task force level or included echelons. An augmented staff will be formed based on the existing staff of the naval commander designated as the amphibious task force commander and as determined during planning. Command and control facilities will be integrated to the extent necessary to insure accomplishment of the mission with minimum disruption of separate uni-Service organizations, procedures, and techniques.

PART TWO
PLANNING THE AMPHIBIOUS OPERATION

CHAPTER 3
PLANNING THE AMPHIBIOUS ATTACK

Section I. THE APPROACH TO PLANNING

35. General

a. An amphibious attack will usually be one phase of a campaign plan. It is an operation with a specific beginning and termination. Planning for an amphibious attack as discussed in this chapter is essentially that planning which produces the plans to be executed by the component forces of the amphibious task force. Commands outside the amphibious task force will plan and execute independent but related supporting operations that are outside the scope of the amphibious operation. Such related and supporting operations include administrative support in mounting areas (ch. 14), preliminary amphibious training (ch. 13), initial preparation by fire in the objective area (par. 264), and operations in the objective area subsequent to termination of the amphibious operation. Commanders above the amphibious task force level assure that related and supporting activities are appropriately coordinated during planning and execution of the amphibious attack.

b. Planning procedures for an amphibious attack by a joint force as discussed herein are also generally applicable to planning for the other types of amphibious operations such as the amphibious raid (par. 10.). Planning procedures are essentially the same as those for normal operations of land forces as set forth in FM 101-5. Any differences which arise are due to the complex nature of the amphibious attack and the necessity for integrated participation of forces of two or more Services. Amphibious planning must be concurrent, parallel (coordinate), and detailed.

c. Planning is continuous from issue of the initiating directive by the establishing authority until the operation is terminated.

d. Plans for an amphibious attack must be complete and in much greater detail than for normal land operations where cus-

tom, long usage, standing operating procedures, and training permit omission of much detail without danger of misunderstanding.

e. Time required for planning is a definite factor in determination of when the operation can be executed. Required planning time will vary with the operational purpose, i.e., invasion, seizure or tactical maneuver, scope as reflected by size of the Army landing force, and the level of amphibious experience of participating forces.

36. Concurrent Planning

The purpose of concurrent planning is to reduce the overall time required for completion of planning. Within the amphibious task force, the necessity for concurrent planning by two or more echelons of a Service component and also by corresponding echelons of all Service components, arises from the fact that many of the problems are of mutual concern to all participants. For example, allocation of available support means such as naval gunfire support and ship-to-shore movement means cannot be finally determined until plans of subordinate echelons of the Army component are sufficiently advanced to provide a basis for evaluating requirements. Commanders responsible for planning must expedite guidance to subordinate commanders to provide a basis for preliminary plans.

37. Parallel Planning

a. Planning for all joint operations necessitates close and continuous cooperation between all echelons of the forces involved. The amphibious attack involves a high degree of integration by Army and Navy forces in both the planning and the execution phases.

b. Parallel planning starts with receipt of the initial planning directive which establishes the task organizations and command relationships for all echelons of the task force.

c. Decisions, even those falling entirely within the sphere of responsibility of an individual commander, must be reached on a basis of common understanding of purpose and with a free interchange of information.

d. Parallel planning, as well as concurrent planning, is enhanced when corresponding headquarters or their staff planners are located in the same general area.

38. Detailed Planning

a. The complex nature of the amphibious attack demands the

maximum attention to detail in planning at all echelons of command.

b. Plans developed by subordinate echelons generally reflect portions of overall plans which have been developed in considerable detail by higher echelons.

c. The requirement for detail in plans is reflected in the coverage of specific planning in subsequent chapters.

39. Alternate Plans

a. To reduce the planning problem to manageable proportions and to provide flexibility, alternate plans are prepared. Each set of alternate plans is based on a different set of assumptions or planned course of action to meet contingencies.

b. The time lapse between initiation of planning for an amphibious assault and execution necessitates use of assumptions as to conditions which will exist in the objective area at the time of the assault. Variables of enemy strength, dispositions, and employment of nuclear, chemical, and biological weapons, naval and air forces make the framing of valid assumptions a difficult task. When the uncertainties of weather and sea conditions are added to other variables, the problem of assumptions becomes even more difficult.

c. As the time for the assault approaches, information on conditions in the objective area and the status of friendly forces must be made available to the responsible commanders and their staffs. The decision must be made as to the specific plan to be executed. The decision as to which specific plan will be executed may be deferred until a short time before the selected hour of landing.

Section II. INITIATION OF PLANNING

40. General

a. The initiating directive for an amphibious operation is the basis for initiation of planning. Normally, for the conduct of amphibious task force planning, the establishing authority will appoint the amphibious task force commander as a coordinating authority with responsibilities as indicated in JCS Publication 2, UNAAF.

b. To expedite preparation of plans within the amphibious task force, commanders of the Service components of the task force as well as commanders of principal subordinate echelons within the component forces must be designated as soon as possible.

c. A planning directive will be issued by the amphibious task force commander to insure that interdependent plans will be coordinated, planning will be completed in time allowed, and important aspects will not be overlooked. The planning directive specifies the principal plans to be prepared and sets a deadline date for the completion of each major step in the planning process.

d. The amphibious task force commander's operation plan will be prepared by his staff. The commanders of Service components of the amphibious task force will participate as required in preparation of the amphibious task force operation plan, and will prepare appropriate plans for their respective components.

41. Initial Landing Force Planning

a. At amphibious task force level, planning will typically commence in a planning conference conducted by the designated amphibious task force commander. In consideration of the initiating directive from the establishing authority, the amphibious task force commander and commanders of Service components of the amphibious task force initiate preliminary planning actions to arrive at the basic decisions discussed below in section III.

b. Basic guidance for landing force planning is derived from analysis of the initiating directive for the amphibious operation. Additional information and guidance on applicable Army matters will result from direct communication and coordination between the commander of the Army component of the amphibious task force and the next higher Army component commander. Specifically, the influence of administrative considerations, particularly logistics and personnel, on the landing force plan of operations must be taken into account at the inception of planning and continually thereafter.

c. The Army component commander (Army landing force commander) will determine the extent of participation by commanders of subordinate echelons of the landing force in preliminary planning.

d. The Army landing force commander, using the amphibious task force planning directive as a guide, will prepare a planning program. The purpose of the planning program is to assure timely production of information needed as a basis for basic decisions and outline plans early in the planning process and to schedule all planning tasks for completion within the time allotted. The planning program also serves as a basis for assignment of planning tasks to staff planners and commanders of subordinate landing force echelons. It provides a medium for requisite coordination

and control during planning. Subordinate commanders and principal staff sections of headquarters engaged in the planning will also prepare appropriate planning programs.

42. Security During Planning

a. Security during planning is a responsibility of commanders at all echelons. Specific responsibilities are discussed in chapter 4.

b. Surprise is especially important to success in the amphibious assault. The enemy must be denied knowledge of the location and time of the operation and means to be employed. The assembly of staffs, the conduct of rehearsals, and the concentration of forces all tend to disclose the nature of projected operations.

c. Security provisions at all echelons must be established before planning begins and must be rigidly enforced.

Section III. PRELIMINARY PLANNING DECISIONS

43. General

Early in the planning process, certain basic, interrelated particulars must be determined at amphibious task force level. The factors upon which the determinations are based must be considered from the viewpoint of all components of the task force. In general, each particular will be evolved by the Service Component commander having principal interest but when finally determined, it is applicable in subsequent detailed planning by all components. The amphibious task force commander as a coordinating authority will assure a final determination on each particular. Those items on which Service component commanders are unable to agree will be referred to the establishing authority for decision.

44. Preliminary Planning Decisions

The following items, which are discussed in subsequent paragraphs, must be determined at amphibious task force level early in the planning process:

a. The amphibious task force objective area and a broad concept of operations, if not definitely specified by the establishing authority.

b. Objectives to be seized to accomplish the amphibious task force mission.

c. Employment of nuclear weapons and allocation of these weapons.

d. Employment of chemical and biological weapons.

- e. Potential landing beaches.
- f. Potential landing zones and drop zones.
- g. Beachheads and corresponding landing areas, to include designation of landing sub-areas as subdivisions of the shoreline in a landing area when required.
- h. Concept of operations ashore.
- i. Selection of specific landing beaches, landing zones, and drop zones.
- j. Tentative date and time of landings.
- k. The type and scope of deception operations to be conducted.

45. Amphibious Task Force Objective Area and Mission

a. The objective area is the geographic area of responsibility assigned to the amphibious task force commander by the establishing authority. It includes the land, sea, and air space requisite to operations of the amphibious task force.

b. The mission assigned the amphibious task force in the initiating directive usually includes the designation of an area or areas to be seized within the objective area. The amphibious task force commander in coordination with the task force component commanders, selects a general course of action for the force as a whole designed to seize those objectives essential to accomplishment of the amphibious task force mission.

c. The mission for the Army component in the amphibious assault is designed to accomplish the amphibious task force mission. However, when the operational purpose is invasion or tactical maneuver, the mission of the Army force must be oriented toward preparations for the land campaign beyond termination of the amphibious operation which establishes the force on the hostile shore. In particular, consideration must be given to the need for rapid landing of followup units for exploitation beyond the beachhead and buildup of administrative support for the ultimate force.

46. Nuclear Weapons

a. All aspects of planning and executing an amphibious operation are influenced by the decision to employ nuclear weapons and the enemy's intent and capability to employ them. The determination as to employment of nuclear weapons is announced in the initiating directive together with a tentative allocation and any restrictions on employment of weapons.

b. The amphibious task force commander, after receipt of a planning allocation of nuclear weapons from the establishing

authority, decides upon the overall employment and allocations to task force components.

c. Within the authority extended for the employment of nuclear weapons, the commander of each component of the amphibious task force exercises authoritative direction over the employment of weapons which have been allocated to, or for the support of, his force regardless of the delivery system employed.

47. Chemical and Biological Weapons

As in the case of nuclear weapons, determination as to employment of chemical and biological weapons is announced in the initiating directive. Appropriate employment guidance will be included in the amphibious task force commander's planning directive.

48. Potential Landing Beaches

The commander of the Naval component of the amphibious task force will specify continuous segments of coastline over which troops, equipment, and supplies can be landed by surface means. Such continuous segments of usable coastline constitute potential landing sites for consideration by landing force echelons. The length of each potential surface landing site will, as a minimum, be sufficient for one landing beach. The Naval component commander furnishes pertinent information concerning these sites, the suitability of seaward approaches, and information on tides. The determination or confirmation of the characteristics of landing beaches is an early intelligence requirement.

49. Potential Landing Zones and Drop Zones

The commander of the Army component of the amphibious task force determines potential areas within the objective area for the landing of assault landing teams by helicopter and for airborne forces if employed as a part of the amphibious task force.

50. Beachheads and Corresponding Landing Areas

a. The process of determination of beachheads and their corresponding landing areas begins with consideration of potential sites for landings. The beachheads, landing areas, and the concept of operations ashore are closely interrelated and must be considered concurrently.

b. A beachhead is an area extending inland from the water's edge which when secured will permit the continuous landing of troops and materiel and provide the maneuver space required for further operations ashore. The landing force commander

determines possible beachheads that are applicable to the various concepts of operations ashore which he considers (par. 76).

- (1) The establishment of a secure and effective beachhead is inherent in the mission at each echelon of command within the landing force. It must be recognized that establishment of a beachhead is a condition to be achieved during the assault and not an end in itself. Beachhead lines are only phase lines derived as a trace of objectives essential to establishment of the beachheads.
- (2) The final beachhead applicable to the Army landing force will generally conform to the landing force lodgment area as derived from analysis of the amphibious task force mission. The landing force commander in evolving his concept of operations ashore must tentatively select beachheads for the next subordinate landing force command echelon. For example, when the landing force is a corps, the corps commander must consider possible division beachhead lines. Beachheads may be either separate and dispersed, or zones of action defined by a boundary, within the beachhead of the next higher echelon as depicted in figure 1.

c. A landing area is that part of the objective area within which are conducted the landing operations of an amphibious task force. It includes the beach, the approaches to the beach, the transport areas, the fire support areas, the air occupied by close supporting aircraft, and the land included in the advance inland to the initial objective.

- (1) When two or more divisions will execute assault landings, the situation will usually warrant designation of more than one landing area, or the subdivision of the shoreline in a single landing area into two or more landing sub-areas. Upon selection of a general landing area, the Army landing force commander subdivides the usable shoreline to correspond to zones of action for the next subordinate echelons. Landing beaches within the assigned zone of action are selected by the division commander to support his scheme of maneuver ashore.
- (2) The landing area(s) finally selected must satisfy both naval and landing force requirements. Considerations in selection of landing areas include:
 - (a) Ability of naval forces to support the assault landings and subsequent operations.
 - (b) Degree of shelter from unfavorable sea and weather conditions.

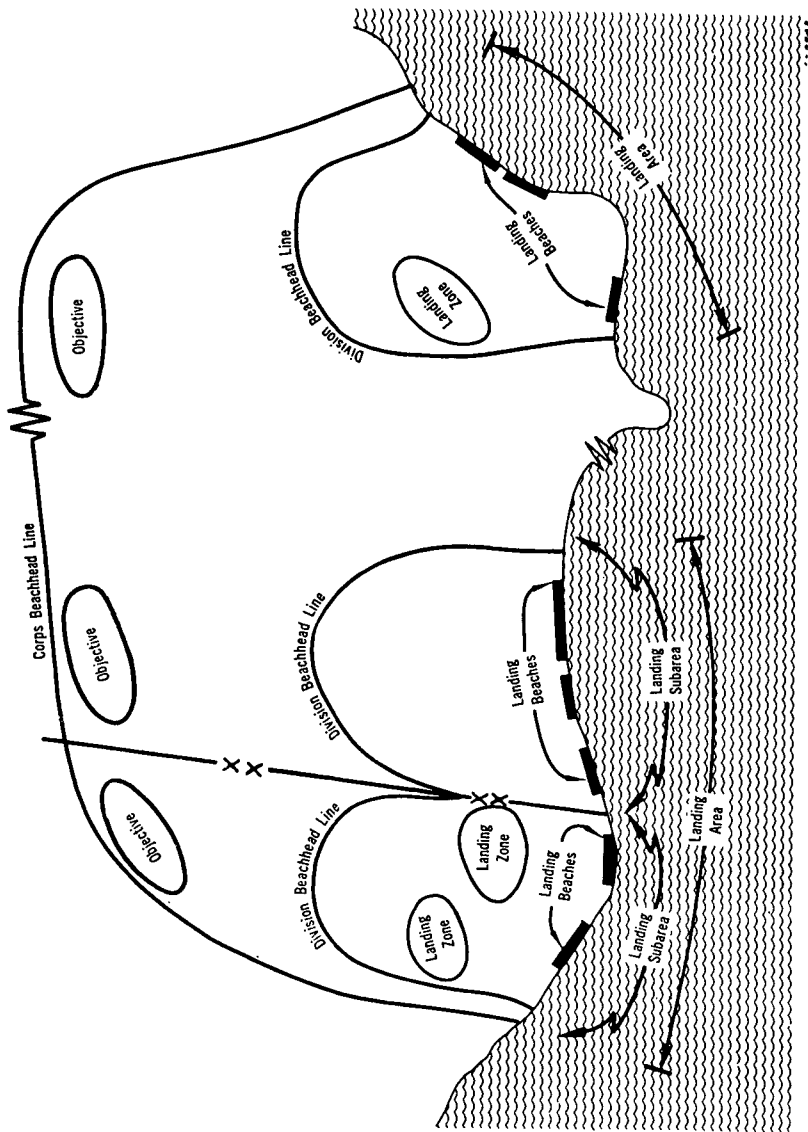


Figure 1. Beachheads and landing areas (schematic).

- (c) Hydrographic features of the beach approaches as related to characteristics of assault ships and craft to be employed.
 - (d) Hydrographic features of the offshore areas.
 - (e) Extent of mineable waters and conditions affecting the ability of the enemy to defeat mine countermeasures.
 - (f) Hostile capabilities and dispositions.
 - (g) Conditions affecting the practicability of improving unloading facilities to include early seizure and rehabilitation of port facilities.
 - (h) Suitability of the landing area for ease of tactical maneuver ashore to rapidly attain the land force final objective.
 - (i) Suitability of included landing sites.
 - (j) Terrain inland from the beaches.
 - (k) Adequacy and accessibility of routes of egress from the beaches.
 - (l) Suitability of the area for administrative support activities.
- (3) The Naval component commander delineates the sea areas and air space required for the establishment of each beachhead tentatively selected by the landing force commander. The amphibious task force commander designates the combinations of sea and beachhead areas and air space as possible landing areas, and indicates their relative desirability from an overall amphibious task force viewpoint.
- (4) The landing force commander in development of his concept of operations ashore, selects primary and alternate landing areas from among those designated by the amphibious task force commander. The landing force commander maintains continuous liaison with interested commands to insure that there is complete understanding on any restrictive considerations. Consistent with the ability of sea and air forces to provide support, the landing force commander selects those landing areas which will best facilitate accomplishment of the landing force mission.
- (5) The landing force commander coordinates his final selections with other component commanders and the amphibious task force commander to assure concurrence in the light of the ability of assigned forces to support operations in the selected landing areas.

51. Concept of Operations Ashore

a. Following determination of suitable landing areas, the landing force commander develops in broad outline his primary and alternate concepts of operations ashore. The offensive ashore to seize ground objectives is the end for which the amphibious assault is the means. It will be executed by the landing force and will be supported directly by the sea and air components of the amphibious task force.

b. A concept of operations that can be supported by sea and air components is a prerequisite to initiation of detailed planning. The landing force commander's concept of operations must be in sufficient detail to reflect basic assumptions; designated objectives; general scheme of maneuver; formation for landing as evolved in consideration of task organization, beachhead lines, ship-to-shore movement means; fire support; and plans for any subsidiary operations.

c. The landing force commander's concept of operations ashore is the principal medium for coordination with other component commanders to assure that planned operations ashore can be supported. When appropriate commanders have concurred in the concept of operations ashore, the landing force commander issues planning guidance to his subordinate commanders. The planning guidance will usually be in the form of an outline plan.

52. Selection of Landing Beaches and Landing Zones

a. The landing force commander must assure selection of primary and alternate landing beaches and landing zones early in preliminary planning.

b. Considerable detailed planning by all amphibious task force components hinges on the type of landing means to be used by assault landing teams. An early tentative allocation of landing craft, amphibious vehicles, and helicopters is necessary as a preliminary to selection of landing beaches and landing zones.

c. Final selection must necessarily be based upon the scheme of maneuver and formation for landing developed at division level. However, a tentative selection of sites for landings may be incorporated in the outline plans of the landing force commander when above division level, to assure early coordination with other Service component commanders.

d. A landing beach is that portion of a usable coastline usually required for the landing of one assault landing team, e.g., BGLT. The term may also be used to define a tactical locality, such as the shore of a bay, over which a force larger or smaller than a BGLT

may be landed. Considerations in the selection of landing beaches are—

- (1) Suitability for execution of the plan of operations ashore.
- (2) Capacity for landing troops, equipment, and supplies.
- (3) Suitability for beaching landing ships, landing craft, and amphibious vehicles.
- (4) Beach trafficability.
- (5) Suitability of offshore approaches.
- (6) Number, location, and suitability of beach exits and areas for supply dumps.
- (7) Location, type, and density of beach obstacles, including underwater obstacles.
- (8) Nature of the terrain immediately inland from the beaches.
- (9) Suitability of communications facilities, including roads, railroads, waterways, and airstrips.
- (10) Suitability of the beach from the standpoints of expected prevailing weather, surf, and tidal conditions.

e. A landing zone is a major subdivision of a landing area. Landing zones are selected for those assault landing teams which move from ship-to-shore in helicopters. Similarly, landing zones and drop zones are selected for any assault forces transported to the area by aircraft for air landing or parachute delivery within landing areas used in the amphibious assault. As in the case of landing beaches, final selection of landing zones and sites must be based upon the scheme of maneuver applicable at the division level. A tentative selection of landing zones may be made by the landing force commander in development of his concept of operations ashore. Landing zones and drop zones must be coordinated early with other component commanders to assure that the proposed landings can be supported. The principal considerations in selection of landing zones are—

- (1) The landing force concept of operations ashore.
- (2) Enemy capabilities and dispositions, particularly the location, type, and density of air defense installations.
- (3) Location, nature, and extent of practicable landing zones.
- (4) Nature of terrain over which assault landing teams must maneuver after landing.
- (5) Requirements for administrative support.
- (6) Employment of close support aircraft, naval gunfire, missiles, and artillery in support of the landing.
- (7) Availability of aircraft routes to and from landing zones

with consideration to restrictive effects on employment of fire support means in support of other forces.

53. Tentative Date and Time of Landing

a. The amphibious task force commander, after consultation with task force component commanders, selects the tentative date and hour for landing. During planning, tentative dates and hours are announced as early as possible on a need-to-know basis.

b. The date and hour of landings may differ. For example, initial assault landings over a landing beach and in a landing zone within one landing area will not necessarily be executed simultaneously.

c. Principal considerations in selection of the date and hour of landing are—

- (1) Availability of forces.
- (2) State of training and equipment of forces.
- (3) Present and projected enemy situation.
- (4) Seasonal conditions in the area of operations.
- (5) Local conditions in the objective area relative to weather, tides, current, and light data.
- (6) Limiting dates established by higher authority.
- (7) Coordination with preliminary and other operations.
- (8) Need for tactical surprise.
- (9) Concept of operations ashore.
- (10) Most effective employment of air, missile, and gunfire support including nuclear fires.

54. Deception Operations

The type and expected success of preassault deception operations to be conducted in support of or by the amphibious task force will have an influence on detailed planning by the landing force. Decision on such operations should be reached during preliminary planning (par. 263).

Section IV. DETAILED PLANNING

55. General

a. When the basic decisions have been made, detailed planning begins. Detailed plans for the naval forces provide for transporting, protecting, landing, and supporting the Army force. To ensure that naval plans support the operation plans of the landing force ashore, the Army commander must remain constantly in-

formed of plans of the Naval commander and must keep the amphibious task force commander informed on Army plans. There must also be a continual exchange of information between coordinate commanders at all subordinate echelons.

b. For the Army landing force commander, detailed planning entails development of the landing force operation plan, including alternate plans, with the usual supporting plans. In addition to the supporting plans prepared for normal land operations, plans for landing, embarkation, rehearsals, movement to the objective area, and preassault operations must be prepared for an amphibious operation.

56. Plan for Landing

a. The plan for landing is composed of certain specific documents which present in detail all instructions for execution of the landing. The documents are incorporated in annexes to the operation plans.

b. Detailed landing plans usually are not prepared at landing force echelons above the division. At levels above the division, the landing plan consists of consolidated extracts from the landing plans of subordinate echelons and details for the landing of such units of the landing force as have not been attached or attached for landing to subordinate echelons. Preparation of landing plans is covered in chapter 5.

57. Embarkation Planning

a. Embarkation planning includes—

- (1) Determination of shipping requirements.
- (2) Development of the detailed organization of the landing force for embarkation.
- (3) Determination of the shipping in which landing force organizations, equipment and supplies will be embarked.
- (4) Preparation of detailed loading plans and loading schedules.
- (5) Determination of embarkation areas.

b. Detailed plans for the actual loading of personnel, equipment, and supplies in assault shipping are not usually prepared at landing force echelons above the division. Embarkation planning requirements and considerations are covered in chapter 8.

58. Rehearsal, Movement, and Preassault Planning

Detailed planning for rehearsals, movement to the objective area, and preassault operations is accomplished as discussed in chapter 11.

CHAPTER 4

INTELLIGENCE PLANNING

Section I. REQUIREMENTS AND RESPONSIBILITIES

59. General

The principles of intelligence as applied in normal land operations apply. FM 30-5 (Combat Intelligence) furnishes basic guidance. Some differences in intelligence organization and procedures arise from the joint force structure of the amphibious task force and requirements and limitations peculiar to amphibious operations.

60. Special Considerations

Most of the special intelligence considerations in amphibious operations derive from the following:

a. A relatively long period of time usually elapses between the initiation of planning and the execution of the operation.

b. Collection agencies of the Army force will be able to gather only limited amounts of information prior to physical contact with the enemy.

c. Before landing, lower echelons of the Army force are entirely dependent on higher echelons for information and intelligence.

d. Assault landing teams are committed to action with no opportunity for ground reconnaissance and must depend on orientation conducted prior to arrival in the objective area.

e. The time lapse from the initiation of a request for information until receipt of the information may be extensive.

f. The difficulties of communication while aboard ship and necessary security measures complicate dissemination of intelligence.

g. There is need for full exploitation of special reconnaissance teams and unconventional forces in support of the collection effort.

61. Requirements

a. Intelligence planning for an amphibious operation is governed by the specialized intelligence needed to—

- (1) Arrive at the basic preliminary planning decisions discussed in chapter 3.

- (2) Conduct subsequent detailed planning.
- (3) Execute the operation.

b. Early collection and dissemination of intelligence required by the Army component commander for development of the concept of operations ashore are particularly important since planning for the overall operation stems from it.

c. Information and intelligence required is relative to terrain, weather, and the enemy situation as in normal land operations. However, included within each of these categories are items of special emphasis as discussed below.

62. Terrain

a. Intelligence requirements relative to terrain place emphasis on information about beaches and the terrain inland to the beach-head line. The characteristics and locations of the beaches may have considerable influence on the task organization, scheme of maneuver, fire support, available avenues of approach, use of organic and special equipment, rate of landing, and administrative support. Terrain inland from the beaches influences the scheme of maneuver; employment of air landing assault forces; employment of supporting fires to include nuclear, biological, and chemical weapons; security of the landing force and logistical support.

b. Required information about beaches includes—

- (1) Location, length, width, gradient, soil composition, and trafficability.
- (2) Natural and manmade obstacles on and adjacent to beaches.
- (3) Exits from the beaches.
- (4) Key terrain adjacent to the beaches.
- (5) Enemy beach defenses.
- (6) Sea approaches including depth of water, underwater gradient, and offshore obstacles.
- (7) Surf, tide, and current conditions.

c. The amphibious attack imposes extraordinary responsibilities for administrative support at all echelons of the Army landing force. These responsibilities generate a requirement for information on such items as water and air terminal facilities, transportation systems, storage facilities, shelter, construction materials, utilities, and indigenous labor.

63. Weather

a. Weather conditions assume critical importance in amphibious

operations. Weather affects the surf and conditions of the sea, which are critical to the use of landing craft, amphibians, landing ships, and ships in landing operations. The sea in the landing area can be disturbed by distant as well as local storms. Winds and visibility influence control and coordination of the landing forces, the use of tactical and transport aircraft, the employment of nuclear, biological, and chemical weapons, fire and air support operations, and navigation. Precipitation affects not only visibility, but also trafficability and maneuver ashore.

b. Detailed weather information is required to include predicted—

- (1) Visibility as affected by weather.
- (2) Winds.
- (3) Light data.
- (4) Precipitation.
- (5) Surf and sea conditions including height of deep water waves and breaking surf.
- (6) Temperature.

64. Enemy Situation

There is a requirement for current information on the enemy situation in great detail at all stages of planning. Initially, planning is based on assumptions supplemented by available intelligence. However, the relative inability to alter plans materially once the assault has begun and the need for information by the smallest tactical units prior to the assault are reasons for seeking accurate and detailed information on the enemy situation.

65. Responsibilities

a. The intelligence effort incident to an amphibious operation involving a joint force will probably involve centralized planning, direction, control, and coordination at a joint force command level above the amphibious task force. The joint force commander may well be the commander who establishes the amphibious task force.

b. The amphibious task force commander is responsible during planning for—

- (1) Determination of intelligence requirements for planning by the naval forces, review of intelligence requirements of the landing force and other forces, and consolidation into intelligence requirements for the amphibious task force as a whole.
- (2) Collection and processing of information and dissemination of intelligence to major elements of the amphibious

task force in accordance with special requirements of each.

- (3) Acquisition and distribution of maps, charts, photographs, and special intelligence materials.
- (4) Preparation of intelligence estimates affecting the task force as a whole.
- (5) Preparation of intelligence studies which relate to the mission and area of operations.
- (6) Establishment of liaison with operational intelligence agencies which are not part of the amphibious task force, including area and departmental agencies as necessary.
- (7) Initiation of requests and directives for the collection of information by reconnaissance, observation, and other operating agencies.
- (8) Security and counterintelligence measures, in addition to those specified by higher authority.
- (9) Preparation and distribution of an intelligence annex to the amphibious task force operation plan.
- (10) Establishment of a target information center.

c. The Army component commander (Army landing force commander) is responsible during planning for—

- (1) Determination of intelligence requirements for planning by the landing force and making these requirements known to the amphibious task force commander.
- (2) Collection and processing of information and dissemination of intelligence to the landing force.
- (3) Establishing liaison with intelligence agencies of the amphibious task force and with area intelligence agencies, in cooperation with the amphibious task force commander to assist in the collection of information of primary interest to the landing force.
- (4) Dissemination of maps, charts, photographs, and special intelligence materials to Army units.
- (5) Preparation and distribution of an intelligence annex to the landing force operation plan.

66. Division Level Planning

During planning, divisions as subordinate echelons of the Army landing force centralize the intelligence planning and effort of organic and attached units. Centralization will serve to avoid duplication of requests and facilitate coverage of all intelligence requirements from the division viewpoint.

67. Collection

a. Agencies and Sources. The principal collection agencies and sources of information involved in production of intelligence for the planning and execution of an amphibious operation are described below.

- (1) *Reconnaissance agencies.* During the planning phase, the collection of information by reconnaissance must be coordinated. Reconnaissance agencies which are normally available for the exploitation of sources of information during the planning phase are aerial, submarine, surface, and ground reconnaissance elements, underwater demolition teams and landing force reconnaissance patrols. Continuous liaison is therefore maintained between appropriate headquarters for the purpose of exploiting all sources which may disclose information pertinent to the production of intelligence to support the planning and execution of the amphibious operation. As required, requests for specific information are submitted to departmental and national agencies.
- (2) *Sources.* All sources of information which may be of intelligence value are exploited by the amphibious task force. Among these sources are former residents and visitors to the objective area, commercial and industrial studies of the objective area prepared by civilian businesses, captured enemy military personnel and documents, film and brochure travelogues of the objective area, strategic studies of the enemy order of battle and the objective area available from strategic intelligence agencies, air and surface photography, hydrographic charts, technical intelligence reports, and weather and climate forecasts and studies.

b. Division Collection Effort. The division echelon of the landing force can contribute little, if anything, to the collection effort until the assault is initiated. Once the assault is initiated, division units are rapidly established in the collection network. The intelligence plan should provide for the early landing of intelligence specialists and a collection plan to secure information needed by division and higher headquarters.

c. Army Landing Force Reconnaissance Units.

- (1) Amphibious reconnaissance units are units specifically trained, organized, and equipped to perform reconnaissance missions in the objective area. These missions are

executed by moving undetected to and from the landing areas and reconnoitering the beachhead by stealth. These units are employed to gather specific information concerning beach and inland terrain, routes of communication and enemy installations, organizations, and supply. They may also be used to contact, evacuate, or land secret agents and informants in the objective area. Amphibious reconnaissance units are capable of collecting essential information not available from other sources and of checking doubtful information. Limitations on their operations are those posed by secrecy requirements and the detailed planning and coordination necessary for the accomplishment of their mission (see FM 110-115).

- (2) There are no regularly organized amphibious reconnaissance units in the Army. Army requirements for this type unit may be met by conversion, re-equipment, and retraining of an existing land reconnaissance unit for the specific mission assigned.
- (3) Reconnaissance may be conducted on a portion of a coastline which has been selected as a landing site or which is under consideration as a possible landing site. A reconnaissance may be required prior to the final selection of landing beaches or to determine the necessity of special measures to be undertaken in the ship-to-shore movement. Reconnaissance is usually subject to the direction of the amphibious task force commander because the operation involves naval units not under the control of the Army landing force commander. The time at which information is desired, particularly its relation to the period in which secrecy is paramount, affects the decision to employ reconnaissance units. Large land masses generally offer excellent patrolling opportunities. The patrolling of small, strongly defended areas seldom justifies the risks involved.

68. Dissemination of Intelligence

a. Dissemination is accomplished at each command level of the amphibious task force, in accordance with requirements determined during the planning phase. A distribution plan is prepared, listing the intelligence aids to be promulgated, the commanders who are to receive them, methods of delivery, number of copies, and delivery dates.

b. The scope, content, time of submission, method of transmission, and responsibility for preparation of intelligence reports and

summaries are determined by the amphibious task force commander as early as possible during the planning phase. Each command must be afforded the means and opportunity to prepare the reports and summaries required for its own purposes, using the information available to the amphibious task force. One of the basic requirements in amphibious planning is a complete exchange of information and intelligence between commands and a mutual understanding of conclusions reached. After the planning phase has ended, additional intelligence reports and summaries are prepared and distributed by the amphibious task force commander and subordinate commanders as required.

Section III. SECURITY AND COUNTERINTELLIGENCE

69. Requirement

The forces involved in an amphibious operation are vulnerable to enemy attack when mounting, moving to the objective area, and during the initial assault stage of the landing. Vulnerability is especially high on the hostile shore prior to establishment on shore of adequate combat power and administrative support. Adequate security measures must be instituted at the inception of planning as discussed in chapter 3.

70. Military Intelligence Unit Support

To assist the commander in the application of counterintelligence measures and procedures, the Army landing force will include appropriate counterintelligence (security) elements of military intelligence units. These military intelligence units provide the commander with operational counterintelligence support as indicated in AR 381-100. This support begins with the initiation of the amphibious operation and continues throughout the operation. Counterintelligence or security elements are located at units of division size or larger to provide commanders with operational counterintelligence support. Counterintelligence personnel may be formed into teams which are temporarily attached to battle groups or to other elements of the Army landing force.

71. Security and Counterintelligence Measures

a. The amphibious task force commander prescribes the special security and counterintelligence measures to be taken during planning and preparation for the operation. Other commanders issue necessary directives to, and supervise the activities of, their forces. Special measures may include—

- (1) Establishment of secure planning areas.

- (2) Use of code names and symbols.
- (3) Special classification of material used in planning.
- (4) Restrictions on dissemination of intelligence, information, and completed plans.
- (5) Communication security.
- (6) Cover and deception plans.
- (7) Measures for handling civilians.
- (8) Armed Forces censorship.
- (9) Control of accredited correspondents to include field press censorship.
- (10) Measures to counter subversion within and espionage directed against the amphibious task force.
- (11) Security of classified documents and material.

b. Detailed information on counterintelligence and measures and procedures which are normally applicable to both amphibious and land operations are contained in FM 30-5.

CHAPTER 5

OPERATIONS PLANNING

Section I. SCOPE AND RESPONSIBILITIES

72. General

Operations planning for a particular amphibious operation will be enhanced to the degree that commanders concerned have anticipated participation of their command in the operation. Appropriate Army units maintain information, such as personnel and tonnage data, which will facilitate planning and organization for landing and embarkation for any particular amphibious operation.

73. Scope of Operations Planning

a. The initial operations planning aim of the amphibious task force commander and commanders of Service components is completion of preliminary staff estimates and studies required to achieve the preliminary planning decisions discussed in paragraphs 43 through 54.

b. Operations planning as discussed in this chapter is primarily the detailed planning for tactical operations in the objective area. This includes protection of the force, final preparation of landing areas by fires, ship-to-shore movement, assault landings, fire support, and further operations ashore to accomplish the amphibious task force mission.

c. As in preliminary planning, the landing force commander's concept of operations ashore is of prime concern (par. 51). Backward planning is the rule with selection of objectives to be seized by the landing force as the starting point in a step-by-step process back through the entire operation.

d. At the Army landing force level, operations planning continues once preliminary planning decisions have been made, to accomplish planning tasks in the general sequence outlined below—

- (1) Modify the initial planning program as required.
- (2) Issue initial planning guidance to commanders of subordinate echelons of the Army landing force.
- (3) Prepare staff estimates and studies required to develop

the concept of operations ashore in the detail needed for preparation of an outline operation plan.

- (4) Prepare an outline operation plan and distribute it to corresponding and subordinate commanders for use in preparation of their detailed plans.
- (5) Prepare and issue alternate outline plans.
- (6) Review the adequacy of forces and supporting means continually in the light of new information and requirements and recommendations of subordinate commanders. Initiate requests to higher authority for any additional units and supporting means required.
- (7) Adjust allocations of forces and supporting means to subordinate commanders as necessary.
- (8) Review and approve plans of subordinate echelons of the Army landing force.
- (9) Complete the Army landing force operation plan and annexes thereto.
- (10) Submit plans for concurrence or approval as prescribed in planning directives.
- (11) Issue plans.

e. At subordinate echelons of the Army landing force down to and including divisions, the sequence of detailed operations planning is generally as in *d* above.

74. Responsibilities

a. Commanders of Service components of the amphibious task force are responsible for development of the complete operation plan for their respective component. In particular—

- (1) The Army landing force commander formulates the detailed scheme of maneuver ashore and the plan of supporting fires and the landing force landing plan (ship-to-shore movement plan) which support it.
- (2) The Naval force commander plans for protecting, landing, and supporting the landing force.
- (3) The Air Force component commander, when an Air Force component is formed, prepares detailed plans for accomplishment of support tasks assigned.

b. The amphibious task force commander prepares the amphibious task force operation plan. The plan is applicable to the entire task force. It will incorporate appropriate portions of plans developed in detail by Service component commanders.

75. General

a. The amphibious task force objective area (par. 45) is in reality a combat area established to prevent or minimize mutual interference between friendly forces engaged in combat operations through centralized direction and unity of effort. It is organized by the amphibious task force commander as required for command and control purposes.

b. The objective area consists of land, sea, and air space. The land area within the objective area is of primary concern to the Army landing force commander. The Naval force commander is concerned primarily with the sea area within the objective area. Much of the air space is of mutual concern. Detailed, integrated plans for air space utilization and control must be incorporated in the operation plan of each Service component of the amphibious task force.

c. The basic pattern for organization of the objective area is set by selection of landing areas and beachheads (par. 50). The number of division beachheads to be established will equal or exceed the number of landing areas. The objective area as discussed above is depicted schematically in figure 2.

76. Organization of the Land Area

a. The basic land area organization is determined by the Army landing force commander when he designates the landing force beachhead line. The beachhead lines of subordinate echelons generally prescribe zones of action applicable during the assault. Selection of landing beaches, landing zones, and drop zones further outlines the land area organization.

b. Boundaries may be prescribed to further define land zones of action within a beachhead and to facilitate coordination (fig. 1). Boundaries used to prescribe zones of action for units are based in general on the same fundamentals applicable to normal land operations. When dispersed formations are employed for the assault landings, the responsibility for areas and intervals between tactical formations must be clearly delineated. Such areas and intervals must be kept under surveillance. Areas occupied by enemy forces which constitute a threat to the landing force must either be effectively controlled by fire or cleared.

c. Considerations which require special attention are—

- (1) Terrain analysis is required in selecting a beachhead area to determine the major compartment of coastal ter-

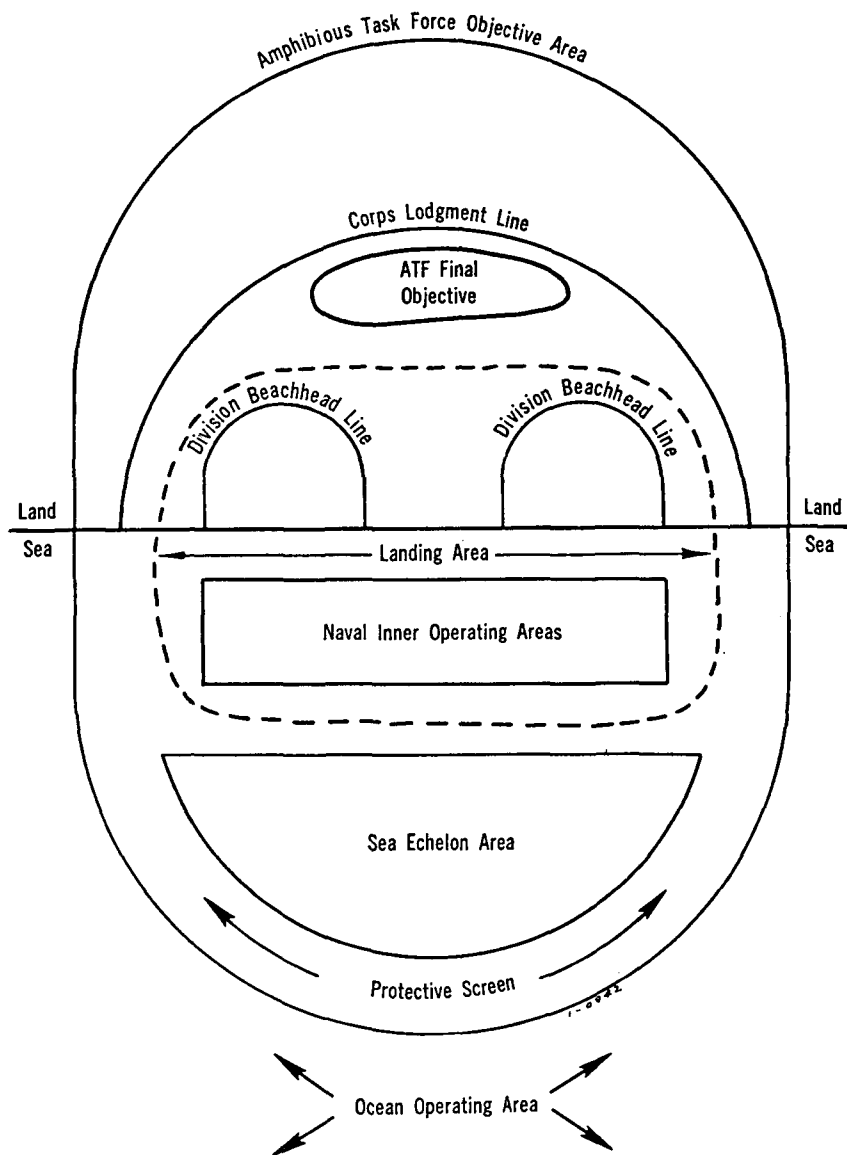


Figure 2. Organization of the objective area-schematic.

rain which is most suited to the size of the landing force. A single major compartment is ideal. If the land form is very broken, it may be necessary to group together several small compartments. On the other hand, the force may be too small for the terrain forms in the locality and thus be required to land with one or possibly two open flanks.

- (2) The beachhead area should be selected so as to take maxi-

mum advantage of natural obstacles in the interest of flank security, defensibility and economy of force. Ideally suited to this purpose are unfordable rivers, coastal swamps, escarpments, and other such obstacles, particularly those which hinder or prevent the movement of enemy armor.

- (3) In selection of final beachhead objectives which establish the trace of the beachhead line, consideration should be given to terrain features which facilitate exploitation out of the beachhead in continuation of the attack to include bridgeheads over important obstacles.
- (4) Zones of action within beachheads must be determined so as to insure availability of adequate landing sites for assault forces.
- (5) Zones of action within beachheads should be determined with a view to best use of roads or trafficable terrain to facilitate a rapid advance inland.
- (6) Limitations and capabilities of fire support means, particularly naval gunfire, must be taken into account in determination of zones of action.

77. Sea Area Organization

a. In order to minimize the possibility of interference between various task groups of the Naval component of the amphibious task force and other supporting forces, sea areas are distinctively designated by the amphibious task force commander, or higher commander. The sea area is divided into a number of operating areas, each of which comes under the category of either ocean operating areas outside the objective area or sea areas in the objective area.

b. Ocean operating areas outside the objective area are of three kinds: The first are close support areas near, but not necessarily in, the objective area. These areas are assigned to support carrier groups, hunter-killer groups, and certain naval logistic support components. The second are distant support areas, located in the vicinity of the objective, but at a considerable distance to seaward of it. These areas are assigned to distant supporting forces such as striking and covering forces, hunter-killer groups, and their logistic support groups. The third is a distant retirement area located to seaward of the objective. This area is divided into a number of operating areas to which assault shipping may retire and operate in the event of heavy weather or to prevent concentration of shipping at the objective.

c. Sea areas in the objective area are those sea areas in the landing area and extending outward to the inner limits of the close support ocean operating areas. The number and titles of the areas will vary with each operation. Sea areas in the objective area usually will include—

- (1) *Antisubmarine screening area.* An area within which the air and surface elements of the area antisubmarine screen operate to protect the amphibious shipping and gunfire support units in support of the assault.
- (2) *Outer transport areas.* Areas inside the area antisubmarine screen to which assault transports proceed initially after arrival in the objective area. These areas should provide reasonable protection against weather, and adequate room for maneuver in case of an enemy air or submarine attack. Provision is made during planning for their early establishment directly off the selected landing beaches and at a distance sufficient for transports to take station beyond effective range of hostile shore batteries. Although transports do not necessarily anchor during the early phases, it is desirable that the areas selected have depths of water and character of bottom suitable for ships to anchor if circumstances permit.
- (3) *Outer landing ship areas.* Areas to which landing ships proceed initially after their arrival in the objective area. They are usually located on the flanks of the outer transport area. The same considerations apply in the selection of outer landing ship areas as apply in the selection of outer transport areas.
- (4) *Inner transport areas.* Areas as close to the landing beaches as depths of water, navigational hazards, boat traffic, and enemy action permit, to which transports may move to expedite unloading.
- (5) *Helicopter transport areas.* Areas seaward from or on the flanks of the outer transport and landing ship areas, but preferably inside the area screen, to which helicopter transports proceed and launch or recover helicopters. The area is used when wind conditions are such that operations cannot be conducted from regularly assigned stations in the transport area.
- (6) *Fire support areas.* Areas in which fire support ships operate while providing gunfire support to the landing force. The areas selected should provide optimum fields of fire, be as close to the shore as depths of water and hazards to navigation permit, and so located that the

operations of fire support ships will not hazard or interfere with landing operations.

- (7) *Control ship stations.* Stations assigned control ships for controlling the ship-to-shore movement.

d. The sea areas in the objective area may be established according to the Navy's sea echelon plan. This is a plan to meet the requirements of dispersal and to reduce mine countermeasures effort. The plan provides for a transport area and a sea echelon area.

- (1) *Transport area.* An area assigned to a transport organization for the purpose of debarking troops and equipment. It consists of mineswept lanes, areas, and channels leading from a sea echelon area to the beaches. The maximum number of ships in the transport area is directly limited by dispersion requirements, availability of forces for mine countermeasures, and local hydrography and topography. Landing ship areas, helicopter transport areas, control ship stations, and fire support areas are dispersed within this swept area.
- (2) *Sea echelon area.* An area to seaward of a transport area from which assault shipping is phased into the transport area, and to which assault shipping withdraws from the transport area. Determination of the size and location of the sea echelon area for a particular operation is based on—
 - (a) Dispersion as a defense against special weapons attack.
 - (b) Antisubmarine protection.
 - (c) Mine countermeasures effort.

78. Area Organization for Control of Landings

a. Organization of the sea operating area close to the shore for execution of ship-to-shore movement involves certain coordination and control devices as discussed below. Figure 3 depicts the organization of the area adjacent to a landing beach for control purposes (par. 136).

- (1) The line of departure is a designated line off-shore approximately parallel to the landing beach from which the successive boat waves are dispatched for their final movement to the beach. If beaches are separated, each beach has its own line of departure, which is marked by a ship or ships of the control organization. The location of the line of departure is governed by topographic, hydrographic, and tactical considerations.

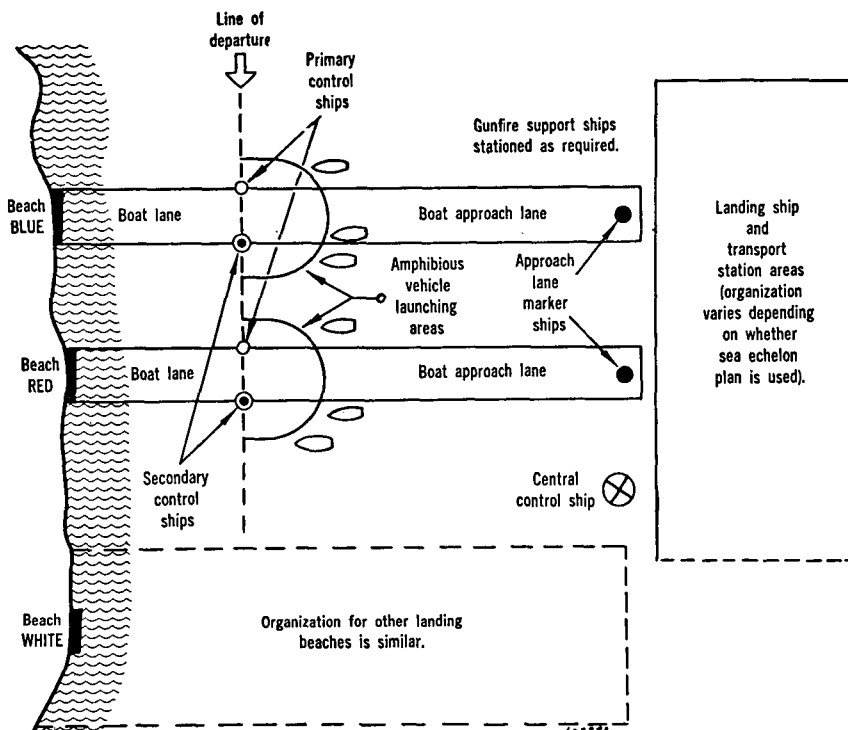


Figure 3. Area organization off landing beaches for control.

- (2) Boat lanes extend seaward from landing beaches to the line of departure. The width of the boat lanes is determined by the length of the corresponding beaches.
- (3) Approach lanes are extensions of boat lanes from the line of departure toward the transport area. They may be terminated by marker ships, boats, or buoys. Adjacent approach lanes may be parallel or may diverge to seaward to provide for early dispersion of the boat waves.
- (4) A floating dump area is an off-shore area in which are stationed a designated number of landing craft or amphibious vehicles, loaded with supplies to meet early demands of the troops ashore. A floating dump area should be located in the vicinity of the line of departure, with due regard for adequate dispersion and ease in control.
- (5) Special unloading berths into which transports may move for unloading are established in the vicinity of the approach lanes. This results in reduction of the running time of landing craft and amphibious vehicles and assists in the dispersion of transports.

- (6) A casualty evacuation control berth is established for a ship which may be specially equipped for handling casualties. Usually this is a landing ship in which a casualty evacuation control officer is embarked. Normally one berth is allotted to each beach. A berth is established to serve one or more landing beaches depending upon proximity of landing beaches, and is located as close to the beach as conditions permit.
- (7) The transfer area is a designated area to seaward of the surf line, off a landing beach, where personnel and material are transferred from landing craft to amphibious vehicles. It is established when troop plans, terrain, or hydrographic conditions dictate.
- (8) A transfer berth is located off a landing beach in the proximity of the transfer line. A crane-equipped ship or a barge is stationed here to transfer troops, supplies, and equipment from landing craft to amphibious vehicles.
- (9) The amphibious vehicle launching area is a designated area located in the near vicinity and to seaward of the line of departure. The ships carrying amphibious vehicles move into this area to unload them. The area is so located in relation to the line of departure as to ensure a minimum amount of maneuver and sea area transit by the amphibious vehicles prior to crossing the line of departure.
- (10) The causeway launching area is an area located near the line of departure but normally clear of the approach lanes, where ships can launch pontoon causeways. This area is so located that the causeways can be launched in a minimum amount of time and with least interference from other units operating in the immediate area.

b. The Army landing force commander and the amphibious task force commander, in coordination, plan the necessary approach and retirement lanes, check points, rendezvous areas, and terrestrial aids to navigation in order to facilitate the control of helicopters employed in the ship-to-shore movement and for the control of aircraft transporting airborne forces into the objective area for landing.

Section III. OPERATIONS ASHORE

79. General

The assigned mission of the Army landing force is translated into specific objectives ashore by the Army landing force com-

mander. The objectives serve as the primary basis for determining the size and composition of the landing force and the scheme of maneuver. The scheme of maneuver, fire support, and phasing of the operation make up the landing force commander's concept of operations. Before deciding on a scheme of maneuver, the landing force commander must take cognizance of several conditions which are inherent in the amphibious attack. These conditions and their effect on the landing force organization for landing must be considered in development of the scheme of maneuver. They are covered in this section preliminary to discussion of the scheme of maneuver itself in paragraphs 94 through 96.

80. Development of Combat Power Ashore

a. In the amphibious attack, combat power is developed ashore progressively during the assault. The landing force is able to exert only a small fraction of its total combat power in the initial assault. The attack is initiated by small units fighting independently, supported by naval guns, missiles, and tactical aircraft. There is a gradual increase in land combat power until the entire Army landing force is ashore and functioning as a cohesive organization exerting its maximum combat power. The echelonment reflected in the landing plan is designed to provide for this orderly progression and development of combat power ashore.

b. The momentum of the assault must be maintained by rapid and aggressive action. Delays for reorganization, regrouping, or reestablishment of centralized control must be reduced to the absolute minimum.

c. The employment of dispersed forces in amphibious operations aggravates problems in achieving mass control, communications, combat support, and administrative support, just as it does in land warfare.

81. Echelonment for Landing

a. The rate of landing and development of combat power ashore depend upon several factors, the most important of which are—

- (1) The availability of assault shipping and landing craft, amphibious vehicles, and helicopters as ship-to-shore movement means.
- (2) The capacity of the landing beaches and landing zones.
- (3) The degree of enemy interference with the landing.
- (4) The extent of fire support provided the landing force.
- (5) Terrain, weather, and sea conditions in the landing area.
- (6) The necessity for balance among combat, combat support, and administrative support units.

- (7) The adequacy of area available ashore when maneuver and dispersal requirements are considered.

b. These factors influence the rate of landing, and thus, the composition of the assault echelon of the landing force. In particular, the number and types of amphibious assault ships and ship-to-shore movement means available may limit the materiel that can be landed in the initial assault. Economy in the use of assault shipping and effectiveness in the initial assault dictate that only essential personnel, equipment, and supplies be included in the assault echelon. On the other hand, organization of the force for landing involves a reinforcement of assault units to provide the self sufficiency required during the initial stages of the offensive ashore. Portions of units and their supplies and equipment not needed early in the assault are phased for later arrival in the objective area and/or landing.

c. For purposes of reference, the organization for movement and landing of the Army landing force is broadly divided into three echelons which are depicted in figure 4.

- (1) The advance force echelon includes any elements of the Army landing force included in the amphibious task force advance force.
- (2) The assault echelon is essentially the reinforced assault divisions comprised of assault landing teams which land in scheduled or on-call waves and the assault reinforcing elements which land on a non-scheduled basis over landing beaches or in landing zones already secured by assault landing teams. The assault echelon is transported in assault shipping.
- (3) The followup echelon is comprised of those elements of reinforced assault divisions not required or accommodated in the assault echelon and units of the Army landing force not attached to the reinforced assault divisions. The followup echelon is transported in either assault shipping or followup shipping or both.

82. Phasing of the Attack

a. In phasing the attack, consideration must be given to the rate of landing of tactical and administrative forces plus the factors considered in phasing a land offensive. Phasing which calls for exploitation out of the beachhead must be realistic in consideration of the capability to land the exploitation force.

b. The landing force will seldom be able to secure control of the entire beachhead in a single sustained attack. Therefore, the

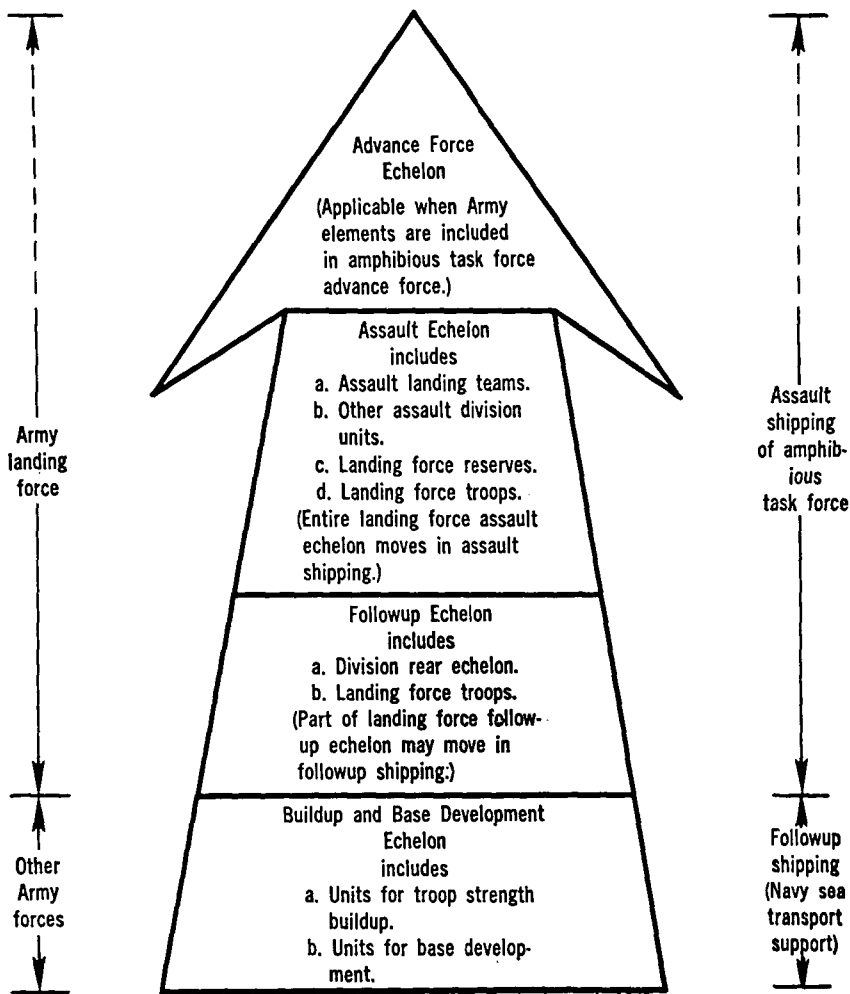


Figure 4. Echelonment of Army forces for movement to the objective area.

Army landing force commander must phase the operation in his concept of operation. Objectives and phase lines can then be designated to implement the commander's concept.

c. The initial phase of an amphibious assault is characterized by decentralized execution. In phasing the assault on the hostile shore, the landing force commander should not slow these decentralized attacks by attempting to reestablish centralized control too early. On the other hand, he should not subject his forces to defeat in detail by procrastinating in the reestablishment of centralized control. The reestablishment of centralized control progresses from lower to higher echelons successively.

83. Fire Support

a. One outstanding difference between land operations and amphibious operations is the complete dependence of the landing force on nonorganic means for fire support initially in the latter. Until such time as Army fire support means are landed and prepared to carry out their designated missions, dependence is placed on naval guns, missiles, and aircraft for fire support. As the fire support means of the landing force are established progressively ashore, there is a diminution in dependence on aircraft, missiles, and naval guns which then continue in their normal support role to provide fires to supplement landing force fires.

b. Dependence upon naval gunfire, missile, and air support influences the selection of initial objectives and the maneuver of the landing force. Naval guns, missiles, and aircraft are ideally suited to support dispersed tactical formations. Their mobility permits employment wherever required in the beachhead, within the limitations imposed by sea areas, weather, and the maximum range of naval guns.

c. Nuclear weapons employment will have a great influence on landing force deployment. Primary targets for nuclear weapons, employed in support of the landing, are enemy nuclear weapons installations, defenses, and troop concentrations. Targets are selected for nuclear destruction which will best assist in the establishment of the landing force ashore and which will facilitate further operations. Care must be exercised that the employment of nuclear weapons in support of the landing does not create obstacles which unnecessarily canalize, delay, or deny the use of an area important to the landing force.

84. Reserves

a. The reserve in an amphibious attack may consist of fires, maneuver elements, or a combination of both.

b. To provide security to the landing force and flexibility to the amphibious assault, the Army landing force commander will usually plan to withhold a portion of the initial assault force during the initial assault. Such a force, capable of being landed when and where desired in order to best influence the tactical situation as it develops ashore, is in reality a landing force reserve.

c. Within assault divisions, reserves available may be limited during the initial assault when all assault landing teams are committed to achieve maximum shock effect. Division assault reinforcing elements to be landed on a non-scheduled basis provide a means whereby the division commander can influence the action

ashore. While afloat, certain assault reinforcing units may be treated as a reserve for commitment upon landing as required by the situation.

d. Commitment of the reserve is more complex than in normal land operations for the following reasons—

- (1) While the reserve is afloat in ships, its commitment may be delayed pending availability of landing craft, amphibious vehicles, or helicopters plus the time required for debarkation and movement ashore.
- (2) If the reserve is afloat in landing craft or amphibious vehicles, or on a ship with helicopters standing by, the ship-to-shore movement of other elements of the landing force may be delayed for lack of suitable landing means.
- (3) Landing of the reserve by surface means may also depend on the availability of a suitable landing beach near the area of intended employment.
- (4) Because of the decentralized nature of initial operations ashore, difficulty may be encountered in coordinating the landing of the reserve with operations ashore.

e. When there is no longer any advantage in keeping the reserve afloat, it is landed and positioned ashore to facilitate future employment. This should not be undertaken until sufficient area has been seized ashore to permit adequate dispersion.

f. Because of the generally obscure nature of the initial operations ashore, it is unlikely that commitment of the reserve to a specific area can be decided upon prior to initiation of the assault. Maximum flexibility of the reserve should be maintained until a specific need for its commitment arises.

g. The reserve should be capable of taking over the assault mission of committed units. It, therefore, should have plans for each such contingency and be provided with adequate attachments including a shore party. Means for landing the reserve in an assault role should be provided in the plan.

h. A shortage of assault shipping or the need to reduce congestion in the objective area, may favor retention of higher echelon reserves of the Army landing force in a base area(s) for transport to the objective area in aircraft.

i. Employment of fires held in reserve (nuclear or nonnuclear) is planned for various contingencies, for use in support of forces ashore, and to facilitate exploitation (see FM 6-20).

85. Organization for Landing

a. The task organization of the Army landing force and its subordinate echelons for the amphibious assault is known as the

organization for landing. Basically, it groups the forces which are to execute the landing and initial operations ashore in accordance with the commander's concept for the attack. The concept of operations with related considerations of terrain and enemy dictates the allocation of troops and fires for the assault, for support, and for reserve. These, in turn, dictate the sequence of landing.

b. Initially in the assault, there is an absence of normal control and support from the next higher command echelon. Therefore, each command echelon is reinforced to make it relatively self-sufficient and capable of independent operations until such time as the next higher command echelon is ashore and able to assume responsibility for control and support. In the interest of speed, mobility, flexibility, and economy of force, attachments should be limited to those essential to that echelon's operations for the time which it can reasonably be expected to operate independently.

c. The organization for landing, in order to support the concept of operation, should accomplish the following—

- (1) Provide maximum shock effect at the points of landing and a cumulative shock effect in the direction of the objectives.
- (2) Provide depth to the assault to ensure flexibility and a sustained build-up of combat power as the attack develops.
- (3) Provide for the required dispersion consistent with other requirements.
- (4) Provide flexibility sufficient to exploit weaknesses found in enemy defenses.
- (5) Provide for the timely establishment and employment of both tactical and administrative support systems ashore.
- (6) Provide for the tactical integrity of subordinate organizations commensurate with the preceding requirements.

d. Reinforcement of subordinate echelons follows the normal procedure of attaching units to subordinate organizations to achieve unity of command. Attachments are made for a specified or unspecified time or until a certain event has taken place, just as they are in land warfare. Some units may be attached only for landing. A unit, attached for landing to an organization, is under control of the organization to which attached for the purpose of landing only. Subsequent to landing, the unit attached for landing reverts to control of its parent or other designated organization. The headquarters making attachments for landing designates the

approximate time or sequence that the unit attached for landing is to be landed. The organization to which a unit is attached schedules the unit ashore as directed by the higher headquarters. Attachments for landing are made by the Army landing force commander and subordinate echelon commanders when it is necessary to land a unit early in order that preparations may be made for subsequent operations and it is undesirable to delegate greater command authority over such unit to a subordinate commander. Examples are attachment to an assault division for landing of a battery of the corps observation battalion or elements of a construction unit which must make early reconnaissance.

Section IV. SPECIALIZED UNITS AND SHORE PARTIES

86. General

Army unit organization and equipment are not based on the special requirements of the amphibious operation. However, the Army meets the requirements of the amphibious operation through temporary internal reorganization of assault units and grouping of units as task organizations, to include certain units which by design provide specialized support needed in the assault of a hostile shore. While the units discussed below are referred to as specialized units, the purpose of such reference is only to emphasize the need for planning for their inclusion in an Army force that is to conduct an amphibious attack. Certain Naval units which are attached to the landing force to provide specialized support ashore are also discussed in this section.

87. Armored Amphibious Battalion

This Army unit is designed to provide continuous close fire support by delivering direct fire on landing beaches and approaches to the beaches. Armored amphibians organic to companies of the battalion mount a 105-mm howitzer and are normally employed in the first assault wave. They provide close fire support during the landing after the lifting of naval gunfire from landing beaches. After landing and until tanks and artillery are ashore, they provide mobile firepower in support of the attacking force.

88. Engineer Amphibious Support Command (EASC)

a. The Engineer Amphibious Support Command is an Army organization designed to provide specially qualified personnel and units for performance of combat and interim administrative support functions as part of an Army force executing assault landings. While the EASC may be employed in landing operations

other than the amphibious operation, discussion herein is limited to its role in the joint amphibious operation.

b. Detailed information on EASC organization and equipment and its employment will be contained in the EASC TOE and FM 5-144 when published. Capabilities of the EASC as a guide to its employment in the amphibious attack are—

- (1) The EASC commander and commanders of its component units serve as special staff assistants to the Army landing force commander and commanders of subordinate echelons during planning for the amphibious attack.
- (2) The EASC provides qualified command and control nuclei for Army landing force shore parties. Basic organization of the EASC is designed to provide the command element and specialized shore party units as nuclei for nine shore parties at the battle group landing team or comparable level and three shore parties at division level. Hq and Hq Co Engr Amphib Bn, however, can provide the nuclei for an additional division shore party and three battle group shore parties if required.
- (3) One battalion equipped with amphibians (LVTP) is organic to the EASC. The amphibians serve as a ship-to-shore movement means in the initial assault. The amphibians also provide a means of mobility to assault landing teams ashore until such time as tactical carriers and organic vehicles are available in the beachhead. The use of amphibians which provide both armor protection and mobility makes possible a rapid, continuous movement from ships to relatively deep initial objectives without delay on landing beaches. The amphibians are also useful as a means of effecting delivery of critical supplies from ships directly to users inland from the beach.

89. Transportation Amphibious Vehicle and Boat Units

a. Transportation amphibious vehicle units are organized, equipped, and trained to operate wheeled landing vehicles. The vehicles are used to transport supporting units, equipment, and supplies from ship-to-shore and inland without the necessity for transfers at the waterline. They may be used to transfer a floating reserve, or may be preloaded with priority supplies and designated as floating dumps. Although their lack of armor argues against their employment in the initial assault, their use for reconnaissance and evacuation purposes, in addition to logistical support of forces ashore, makes them an indispensable utility vehicle.

b. Transportation Boat Battalions are flexible organizations consisting of a battalion headquarters and headquarters company and assigned or attached light, medium, and heavy boat companies organized as separate companies. Landing craft organic to Transportation Boat Companies are employed as ship-to-shore movement means in the amphibious attack to supplement naval landing craft. Landing craft are essential for the landing of armor and heavy equipment early in the assault before landing ships can be brought to the beach. Subsequent to the initial assault, landing craft are required for the continued movement of units and cargo from ships to landing beaches. Craft organic to the medium and heavy boat companies can land the heaviest pieces of equipment of the infantry and armored divisions.

90. Transportation Transport Aircraft Units

Army transportation transport aircraft units equipped with helicopters which can operate from naval ships are employed for ship-to-shore movement of assault landing teams in the initial assault. The helicopters are also employed in the continuation of the attack ashore, in the movement of critical supplies, in the evacuation of wounded to medical facilities afloat, in the landing of reserves, and for miscellaneous administrative support purposes. The availability of helicopters usable as ship-to-shore movement means is an important factor to be considered early in the development of Army landing force plans. The influence of helicopter employment on the scheme of maneuver is discussed in section V below.

91. Air Naval Gunfire Liaison Company (ANGLICO)

The ANGLICO is a Fleet Marine Force unit which is maintained for attachment to a US Army or allied division being supported by naval gunfire ships and close support aviation. The ANGLICO provides qualified US Navy and Marine Corps personnel to advise on the capabilities, limitations, and employment of naval gunfire and air support and the organization and communications needed to request, direct, and control this support. The ANGLICO is comprised of a company headquarters, a division tactical air control party (TACP), a division naval gunfire liaison team and five air-naval gunfire platoons. Each platoon is composed of a shore fire control party (SFCP) and a tactical air control party (TACP) which provide liaison, gunfire spotting, and forward air control personnel at battle group or comparable level.

92. Shore Party Planning

a. *Definition.* A shore party is a task organization of the land-

ing force formed for the purpose of facilitating the landing and movement through the beaches of troops, equipment, and supplies; for the evacuation from the beaches of casualties and prisoners of war; and for facilitating the beaching, retraction, and salvaging of landing ships and craft. It comprises elements of both the naval and landing forces. Advance elements of Air Force organizations are attached as required to provide for reception of their aircraft and special supplies and equipment.

b. Command Authority. The conduct of shore party operations is a command function of the landing force. This command function is executed by the Army landing force commander and commanders of those subordinate echelons of the landing force which organize shore parties.

c. Requirements for Shore Parties.

- (1) The landing beach constitutes an obstacle to be crossed by initial assault landing teams and all reinforcing units, equipment, and supplies that are subsequently landed over the beach. Combat units which land in the assault and move inland lack the direct support system on which they normally rely. They must depend on a beach support area for the reinforcement and support required to sustain them in the attack.
- (2) The shore party is the special task organization formed to accomplish combat engineering type tasks which facilitate landing and passage of the beach obstacle, and to afford an interim administrative support capability through development and operation of a beach support area.
- (3) Shore parties are usually provided as follows—
 - (a) *Assault landing team shore party.* One with each battalion or battle group landing team which lands over a landing beach in the initial assault.
 - (b) *Brigade or combat command shore party.* When the brigade or combat command is employed as a subordinate echelon of the landing force with responsibility for establishment or operation of a beach support area(s), a brigade or combat command shore party may be required.
 - (c) *Division shore party.* One per assault division, infantry or armored.
 - (d) *Corps shore party.* One per corps.

Note. At field army level the equivalent of the shore party is an organization called an army base. Its command element is typically a logistical command headquarters (pars. 337—340).

d. Shore Party Functions. Functions performed by shore parties vary in emphasis and magnitude depending upon the echelon and stage of development. For example, combat engineering tasks to expedite landing team movement through the beach predominate during the assault. Work to develop and improve the beach area is initiated by the landing team shore party as early as the combat situation permits. By the time general unloading begins during the division stage, the shore party will normally be devoting its principal efforts to administrative support tasks (par. 189). The principal shore party functions are listed below but not necessarily in either time or priority sequence—

- (1) Reconnaissance and marking of beach areas, approaches thereto from seaward, and exits inland therefrom.
- (2) Clearance of obstacles, both man-made and natural, in the beach support area.
- (3) Construction or improvement of roads, hardstands, storage areas, pipelines, utilities, storage facilities, etc., within the beach support areas.
- (4) Provision of initial emergency maintenance service to the forces ashore.
- (5) Evacuation of casualties, evacuation of prisoners of war, maintenance of records of personnel evacuated, and limited holding thereof, and evacuation of other personnel as directed.
- (6) Establishment of communications to seaward, within the beach support area, and inland to tactical units.
- (7) Provision of transportation support during unloading and initial movement inland of troops, equipment, and supplies.
- (8) Initial receipt, unloading, movement inland, storage, segregation, and issue of all classes of supply.
- (9) Establishment and interim operation of supply points for support of forces ashore.
- (10) Traffic control within the beach support area, and to seaward after the initial assault for landing ships, craft, and amphibious vehicles.
- (11) Defense and security of the beach support area and its activities.
- (12) Provision and operation of assembly areas for incoming units.
- (13) Unloading of ships.
- (14) Improvement of beach approaches from seaward and marking navigation channels and hazards.

- (15) Assistance to units in landing and moving across the beaches.
- (16) Maintenance of appropriate records of units, equipment, and supplies landed.
- (17) Execution, in the beach support area, of the unit and installation dispersion policy of the landing force commander.
- (18) Establishment and operation of water supply points.
- (19) Implementation of plans for land utilization in the beach support area.

e. Responsibilities for Shore Party Plans.

- (1) The amphibious task force commander is responsible for overall plans to provide the naval facilities and means to insure effective support of shore party operations. Examples of such plans are the pontoon causeway and lighterage plan, the unloading plan, the casualty evacuation plan, and the prisoner of war evacuation plan. In addition, the amphibious task force commander provides the naval components required for shore party operations. These components, organic to a naval beach group, are attached to the landing force for use within the shore party as a beach party (*i* below). The attachment is made sufficiently in advance to allow for adequate integrated training before embarkation begins.
- (2) The Army landing force commander is responsible for—
 - (a) Determining and presenting his requirements for naval support of shore party operations to the amphibious task force commander. These requirements should be presented as early as possible in the initial planning period.
 - (b) Planning for and insuring that the necessary orders for shore party organization are issued by himself or subordinate commanders, as required. These orders include provisions for attachment of Army units, allocation of equipment, and information and instructions as to the time the attachment of naval beach parties and reinforcing elements become effective.

f. The Shore Party Plan.

- (1) The landing force commander and appropriate subordinate commanders prepare shore party plans containing instructions for the functioning of the shore party including the beach party. The shore party plan includes—
 - (a) Organization and mission of the shore party.

- (b) Instructions to subordinate elements.
 - (c) Shore party communications instructions.
 - (d) Beach defense instructions.
 - (e) Administrative instructions.
 - (f) Concept for development of the administrative support system.
- (2) Additional aspects of shore party planning are discussed in chapter 7 as they apply to the various administrative support functional areas.

g. Shore Party Planning Considerations. In developing the shore party plan, consideration must be given the following factors, insofar as they affect shore party operations.

- (1) The landing force scheme of maneuver.
- (2) Expected enemy activity and located enemy installations in the landing area.
- (3) Topographic and hydrographic conditions in the landing area and adjacent areas.
- (4) Requirements for beach development.
- (5) Requirements for dispersal of facilities to provide for passive defense against nuclear, chemical, and biological weapons.
- (6) Amounts and types of equipment to be landed.
- (7) Types of ships to be unloaded.
- (8) Availability of personnel for shore party operations.
- (9) Availability of shore party equipment.
- (10) Policy on disposition and methods of handling prisoners of war.
- (11) Casualty evacuation policies.
- (12) Coordination required with other agencies to include those responsible for base development in the objective area.

h. Shore Party Task Organization Planning.

- (1) Shore party task organization planning is centered on the requirements for units by type and number for organization of all necessary shore parties within each assault division. Organic division units are not usually employed as shore party units because they are required in their normal role as the division advances inland from beach support areas (par. 172).
- (2) In planning shore party organization, the division determines its overall shore party troop needs. The division includes those units, or portions thereof, that will be

attached to subordinate elements (assault landing teams) which will organize shore parties. Requirements for specific type units are derived from analysis of functions to be performed by the division shore party. Higher commanders may direct that divisions accomplish or initiate tasks within division beach support areas to assure early availability of required facilities ashore. Units designated for accomplishment of such tasks are attached to the assault division for initial employment under control of its shore party commander.

- (3) Shore party functions and the conditions under which they are performed are peculiar to assault landings in hostile territory. In organizing shore parties, command and control elements and units that are specially trained and equipped for shore party operations must be made available to commanders of Army landing force echelons.
- (4) The Engineer Amphibious Support Command is the TOE organization especially designed to meet the Army's need for specialized elements for shore parties (par. 88). The EASC is designed for employment in increments to provide nuclei for the shore parties normally required by three assault divisions, and a shore party command element at the corps or comparable level.
 - (a) The EASC provides only certain specialized elements required for formation of shore parties. Its organic units are organized, trained, and equipped to meet the need for skills and equipment not common to other Army units and, in addition, they are especially qualified to advise and assist tactical commanders responsible for the planning and conduct of shore party operations.
 - (b) The EASC provides the command and control framework for shore parties from the assault landing team echelon through the corps or similar echelon and is sufficiently flexible to permit organization with either balanced or tailored nuclei as the situation requires.
- (5) Since the EASC provides only the basic nuclei for shore parties, the shore party task organization at each echelon must also include the Army combat support and service units required. Units usually provided in the division shore party task organization include engineer combat battalions, transportation terminal, boat and amphibious units, and various other engineer, quartermaster, military police, ordnance, signal, chemical, transporta-

tion, and civil affairs units and detachments. Army units attached to the shore party normally are of the field army or logistical command type. In an operation where establishment of an army base is planned, it is desirable to attach service troops which will eventually be assigned to the logistical command designated for this mission. These service units which initiate administrative support operations ashore as components of shore parties provide continuity in operations during the evolution of the administrative support system.

- (6) As indicated above, the EASC or elements thereof normally is provided as the nucleus of the shore party at each echelon of the Army landing force from assault landing team through corps. In the event that an EASC is not available, its equivalent must be provided on a provisional basis for the specific operation. In such a case, units designated for shore parties must be especially trained and equipped well in advance of execution of the operation.
- (7) An example of a shore party task organization for an assault division is contained in appendix III.

i. Naval Beach Group. A Naval Beach Group is a permanently organized naval unit, consisting of a headquarters unit, beachmaster unit, amphibious construction battalion, and boat unit, designed to provide an administrative group from which may be drawn—

- (1) Elements organized as the beach party unit of the shore party. The beach party provides close offshore control to facilitate beaching of landing craft, landing ships, and amphibious vehicles. It assists as required in the retraction and salvage of landing craft and landing ships and provides facilities for communicating with the naval forces afloat.
- (2) Elements required for performance of strictly naval tasks afloat or ashore.

93. Airmobile Support Party

An airmobile support party is a task organization formed for employment in a landing zone to facilitate landing and interim logistical support of elements in the zone. Its composition, organization, and equipment are influenced by the scope of the contemplated operations.

a. Functions. The support functions to be performed in a landing zone are generally comparable to the functions performed

by a shore party in a beach area. Functions listed below are not necessarily in time or priority sequence.

- (1) Report the feasibility of landing aircraft, based on terrain conditions and the enemy situation.
- (2) Conduct radiological surveys.
- (3) Reconnoiter, prepare, maintain, and mark landing sites.
- (4) Establish and operate electronic and visual navigation aids to guide aircraft.
- (5) Establish and maintain communications necessary to perform assigned tasks.
- (6) Direct and regulate helicopter operations within the landing zone.
- (7) Select areas adjacent to landing sites for supply points, support party command posts, casualty evacuation stations, prisoner of war holding points, and local defense positions. Establish and operate the necessary installations.
- (8) Unload and load helicopters.
- (9) Maintain records of supplies received, issued, and available in landing zone installations.
- (10) Provide traffic control when required.
- (11) Provide local security for support party installations.
- (12) Provide emergency helicopter maintenance and servicing.

b. Organization. Support party task organization is tailored to meet requirements in a particular landing zone, and with consideration to the composition and mission of the associated assault elements. The support party is comprised of personnel of the assault landing team, transport aircraft unit, division service units, or division shore party units as required. A typical support party for a landing zone will include—

- (1) A small support party headquarters consisting of a command section and military police, security, and communications sections as required.
- (2) A terminal air traffic regulation element consisting of pathfinder personnel and selected personnel of the helicopter unit(s) involved.
- (3) A logistical support element.

c. Employment. Support party personnel are phased into the landing zone according to the functions to be performed.

- (1) An advance party precedes the first wave of helicopters

to perform necessary reconnaissance, select exact sites of landing, and establish necessary communications and navigation aids.

- (2) Logistical support personnel to perform tasks such as preparing, maintaining, and marking landing sites; unloading and loading helicopters; establishment of supply installations, and casualty evacuation stations; and helicopter emergency maintenance and refueling are phased into the landing area as the situation permits.

Section V. LANDING FORCE SCHEME OF MANEUVER

94. General Considerations

a. The general scheme of maneuver of the landing force in an amphibious attack is based on the same fundamentals of combat that apply in any land force attack although certain conditions and considerations require particular attention. The Army landing force commander must take cognizance of the items discussed in paragraphs 79 through 85 as well as the considerations noted in this section.

b. The fundamental goal of the initial assault is to rapidly gain control of requisite space ashore as a base for subsequent operations. The more land space that can be gained and controlled before the hostile forces can react in a coordinated effort, the greater the chance of overall success. A coordinated employment of amphibious vehicles and helicopters for the ship-to-shore movement and as a means of mobility in subsequent maneuver of assault landing teams ashore affords the commander considerable flexibility in planning the attack.

c. An attack launched from the sea will retain an overall frontal assault appearance with its rear oriented on the beach support areas where the principal reinforcing units and administrative support are landed. Any scheme of maneuver which complicates early establishment of a system to achieve an uninterrupted flow of reinforcement and support must be avoided.

d. The assault is made on the widest front with the greatest depth possible, consistent with the capability of the landing force to accomplish its mission ashore. Dispersion ashore to meet active use or the threat of use of nuclear weapons is accomplished through the use of multiple, separated division beachheads and separated landing beaches and landing zones within division beachheads. The landing team of reinforced battalion or battle group size is the basic unit of dispersion.

e. The use of dispersed landing sites creates problems in achievement of mass with attendant difficulties in control, higher echelon support, and mutual support between tactical units. Mass is best achieved by the combined capabilities of fire support means and rapid maneuver by highly mobile forces. A large proportion of the combat units of the force are landed in the initial assault. Through dispersed, coordinated assault landings on beaches and inland the accumulative shock effect of the assault causes disruption of enemy resistance over an extended area in both width and depth. Thus, by the combined capabilities of firepower and the near simultaneous assault by maneuver units, mass is achieved early in the assault.

f. A concept of dispersed landing sites and rapid seizure of a beachhead places heavy dependence on nuclear, chemical, and biological weapons support. In an operational environment devoid of active use or threat of use of nuclear, chemical, and biological weapons, landings against a strong enemy will require more frequent and greater physical massing of forces and conventional fires. When such weapons are not employed, there will be—

- (1) A decrease in the land area a given combat force can clear and control.
- (2) A reduction in the width and depth of the landing area and less dispersion between beachheads and between landing beaches.
- (3) A reduction in the acceptable distance between landing beaches and landing zones inland from beaches.
- (4) A significant reduction in the speed of the operation. However, the use of amphibians and helicopters as a means of mobility ashore will provide for increased speed.

g. The type of combat units in the landing force task organization and their employment influence the scheme of maneuver.

- (1) Assault divisions will normally be reinforced infantry divisions. However, armored divisions or elements thereof may be landed early in the assault. Usually the base unit for formation of assault landing teams is an infantry unit. It is adaptable to ship-to-shore movement in either amphibious vehicles or helicopters.
- (2) Armor and armored cavalry in unit strength are landed by landing ship or craft as soon as possible to facilitate rapid progress inland, early link-up with forces which landed at inland landing zones, and expeditious clearance of the beachhead area.

- (3) Artillery in the assault echelon may be either self-propelled or towed. Self-propelled artillery is best suited for most conditions and is landed in the same manner as armor. Assault landing teams which move ashore by surface means will normally include self-propelled artillery.
- (4) Air defense units are attached to assault divisions for early establishment ashore as a means for protection of forces ashore from enemy attack from the air.

95. Employment of Army Helicopters

a. Helicopters organic to Army transport aircraft units and other units of the Army landing force are employed as a means of mobility during the amphibious attack. While they are used in the same role as in regular land operations, an adaption to the environment of the amphibious assault is necessary.

b. The principles, procedures, and techniques for employment of Army helicopters in amphibious operations are those regularly applicable in Army operations with modification as required to meet requirements peculiar to operations from naval ships and the ship-to-shore movement control system. Doctrine for movement of Army forces in helicopters, once they are based ashore, is contained in FM 57-35 (Airmobile Operations).

c. Army helicopters which are transportable in and operable from naval ships, afford the Army landing force commander great flexibility in planning for assault landings and maneuver ashore. Use of helicopters in conjunction with landing craft and amphibious vehicles permits a rapid ship-to-shore movement, and the simultaneous commitment of a large proportion of assault landing teams to achieve a maximum shock effect. Landings by helicopter lend depth to the initial assault with a reduction in concentration and vulnerability on landing beaches.

d. Early in planning, the Army landing force commander decides on the allocation of available Army transport aircraft units. Units are attached to commanders of assault divisions to provide ship-to-shore movement means for assault landing teams as required to carry out the scheme of maneuver.

e. The employment of helicopters in the assault is not without cost. The control of forces operating simultaneously on land, on sea, and in the air in landing areas becomes more difficult. The coordination of fires is more complex because of the requirement for additional coordination and restrictive measures. The problem of coordinating air support operations with helicopter

operations from helicopter transports is introduced. Control of helicopters during the ship-to-shore movement is covered in paragraphs 130 through 140.

96. Basic Maneuver Requirements

The landing force scheme of maneuver must—

a. Provide for the seizure of objectives indicated as requisite to insure protection for and buildup of the landing force ashore as a primary purpose.

b. Utilize avenues of approach of adequate capacity which are accessible from usable landing beaches and landing zones.

c. Be supportable by naval gunfire and tactical air until artillery is established ashore.

d. Provide that each unit be capable of initial success without dependence on other initial assault units.

e. Provide for development of mutual support between units as the attack progresses.

f. Provide sufficient landing beaches for the speedy landing of assault reinforcing and followup units and supplies.

g. Provide for early clearance of beach support areas required for establishment of administrative support ashore.

h. Provide for the required degree of coordination and control.

i. Provide for a disposition of forces which facilitates conduct of planned operations after accomplishment of the amphibious task force mission.

Section VI. FIRE SUPPORT PLANNING

97. General

a. Fire support in the amphibious attack is complex. It involves the integration of air, naval gunfire, and artillery fire support systems for delivery of nuclear and conventional fires. Fires of air defense weapons except when employed in a surface-to-surface role, are not treated herein as fire support. The broad terms air, naval gunfire, and artillery as used herein include the various missile fire support systems. Fire support planning includes consideration of the fire support means available, their application to competing requirements, the choice of the proper means for each task, and the allocation of means. Adequate fire support requires coordinated plans, maximum effectiveness in the use of means, and adequate systems for request and conduct of fires (see FM 6-20).

b. The term "supporting arms planning" as used by the Navy and Marine Corps encompasses fire support planning as well as air defense planning. Naval gunfire, air support, artillery, air defense, and nuclear weapons are each discussed in greater detail in separate sections below.

98. Fire Support Requirements

a. Naval operations in the objective area (such as beach reconnaissance, hydrographic survey, removal of beach and underwater obstacles, and minesweeping) normally require fire support by ships and aircraft and on occasion, by artillery. In addition, a definite allocation of aircraft and suitable type ships must be made for the conduct of operations to protect the task force from hostile air, surface, or subsurface attack.

b. The landing force must be supported by naval gunfire and aircraft in attack of targets on shore before, during, and after the initial assault landings. Until fire support means of the landing force itself are landed and ready to fulfill requests for fire support, support normally rendered by Army weapons must be provided by naval gunfire and aircraft, so far as it is possible to do so.

c. Since the availability and contemplated employment of one supporting weapons system influences the requirements for the others, the fire support requirements of all Service components of the amphibious task force must be considered in planning the employment of fire support means.

99. Fire Support Planning Responsibilities

a. The tasks involved in planning fire support and the responsibilities of the commanders concerned are—

- (1) Targets are selected by the commander being supported.
- (2) The general policy as to the priority of targets to be attacked by naval gunfire and aircraft is formulated by the amphibious task force commander. The landing force commander establishes target priorities among targets which are of primary concern to the landing force.
- (3) The selection and allocation of ships and aircraft to provide the required fire support is a function of the amphibious task force commander or his designated representative. The selection and allocation of artillery to provide required fire support is a function of the landing force commander. The selections and allocations by both commanders are interdependent. Constant liaison and exchange of information on the subject are essential.

(4) The determination of the time when fire missions in support are to be delivered is a function of the supported unit commander. The support delivered must conform to his requirements as far as practicable.

(5) Adjustment of naval gunfire in support of the Army landing force is a function of the landing force. When the supported unit commander lacks adequate facilities for the conduct of fire, he designates targets and specifies type and amount of ammunition and timing of fires. Adjustment is accomplished by the supporting agencies.

b. Fire support planning responsibilities of the amphibious task force commander are—

(1) Coordination of plans for employment of all aircraft, naval gunfire, and artillery.

(2) Preparation of coordinated naval gunfire and air plans for all phases of the operation.

(3) Planning for the establishment of a supporting arms coordination center (SACC) at each appropriate level in the amphibious task force.

c. Fire support planning responsibilities of the Army landing force commander are—

(1) Establishing either a fire support element (FSE) in the tactical operations center or a fire support coordination center (FSCC) at each appropriate level of the landing force for accomplishment of landing force fire support coordination responsibilities during planning and execution of the operation.

(2) Determining landing force requirements for air, naval gunfire, and artillery fire support and ensuring that requirements are integrated with the scheme of maneuver.

(3) Coordinating requests of the landing force for fire support.

(4) Presenting the coordinated requests for naval gunfire and air support to the amphibious task force commander.

d. When subordinate amphibious task groups (attack group-landing group) are formed and where separate landing areas are designated, each subordinate attack group commander is normally assigned responsibility for the control and coordination of fire support in his landing area.

e. Army landing force fire support plans are prepared as outlined in FM 6-20.

100. Fire Support Coordination

a. Coordination Principles. Plans for the fires of aircraft, naval gunfire, and artillery must be coordinated to ensure that those arms are economically employed with maximum effectiveness and the requisite degree of safety. Such coordination in planning is achieved through application of the following principles—

- (1) Unnecessary duplication of missions must be avoided.
- (2) Missions must not unduly endanger friendly forces.
- (3) Interference by one means of support with the employment of another must be reduced to a minimum.
- (4) Each means of support must be employed on missions best suited to its capabilities consistent with the situation, time available, relative amounts of ammunition on hand and difficulty of ammunition supply.
- (5) Fire control is accomplished by the lowest echelon wherein adequate personnel and facilities are available.
- (6) Final coordination of fires is accomplished at the lowest echelon able to effect complete coordination of the particular mission. Fires are coordinated at each echelon to the degree to which that echelon is involved in the mission.

b. Responsibility for Coordination.

- (1) Initially the amphibious task force commander has responsibility for overall coordination of supporting fires. Coordination of landing force requests for fire support is a landing force function. As command and control agencies and fire support means of the landing force are established ashore, responsibility for discharge of appropriate fire support coordination functions is passed to the commander ashore.
- (2) When the Army landing force commander has established the necessary facilities ashore, and conditions permit, the responsibility for overall fire support coordination is transferred to him by the amphibious task force commander.
- (3) To obtain the most effective fire support coordination, it is highly desirable that the commander responsible for coordination also exercise control of these fires. When control of close air support is passed from the amphibious task force commander to the commander ashore, the situation normally permits a concurrent shift in responsibility for control of naval gunfire and for the overall

coordination of all supporting fires. If, after such a shift of responsibility, it becomes necessary to return one or another of the control functions afloat, the difficulties in the separation of responsibility for supporting arms may be accepted on a temporary basis. The principle of concurrent shift of responsibility for control and coordination of supporting fires is similarly applicable to attack groups and landing groups.

c. *Fire Support Coordination Agencies.*

- (1) The supporting arms coordination center (SACC) is the agency through which the amphibious task force commander (and advance force commander or attack group commander when appropriate) exercises overall coordination of the supporting fires which he controls. The SACC operates in the flagship of the Navy commander concerned. The supporting arms coordinator is in charge of the center and is the direct representative of the Navy commander who is charged with supporting fires coordination at the time. The supporting arms coordinator, with the advice of the corresponding landing force fire support coordinator, integrates the fire plans of the supporting arms to insure their most effective use in furthering the landing force scheme of maneuver. When responsibility for the coordination of supporting fires is passed to the landing force commander ashore, the supporting arms coordination center continues to monitor appropriate supporting arms circuits.
- (2) The Army landing force agencies which accomplish fire support coordination are the fire support coordination center (FSCC) or the tactical operations center (TOC). The individual designated as fire support coordinator by the landing force commander (or landing group commander when appropriate) is the direct representative of the commander under whom the center is functioning.
 - (a) *Operations while afloat.* Landing force fire support coordination personnel function in close cooperation with the supporting arms coordination center. Personnel of the two centers who have similar duties are stationed in the same or contiguous spaces. The fire support coordinator receives requests from subordinate landing force echelons. He coordinates these requests and advises the supporting arms coordinator of landing force requirements for fire support, and the manner in which this support can be employed most effec-

tively. He also keeps the supporting arms coordinator advised of the activities of artillery ashore.

- (b) *Advance force representatives.* Some landing force fire support coordination personnel normally accompany the advance force to advise its commander on the attack of targets which present a potential threat to the landing force. These personnel normally rejoin their parent unit upon dissolution of the advance force.
- (c) *Displacement ashore.* On order of the landing force commander (or appropriate subordinate commander), the fire support coordination center or tactical operation center displaces ashore, leaving in the supporting arms coordination center sufficient personnel to provide continuity of coordination until the landing force fire support agency is established and functioning ashore.
- (3) When subordinate amphibious task groups (attack group-landing group) are formed, the fire support coordination agencies are employed in a manner similar to the agencies of the amphibious task force and Army landing force commanders.

Section VII. NAVAL GUNFIRE PLANNING

101. General

a. Naval gunfire plays a vital role in reducing the enemy defensive capabilities by destroying enemy personnel and installations prior to D-day, in protecting and covering the assault on D-day, and in supporting the landing force operations ashore after D-day. The effective employment of naval gunfire requires well-coordinated planning.

b. Planning for effective employment of naval gunfire requires recognition of the following basic requirements—

- (1) Sufficient ships and spotting aircraft to accomplish the mission.
- (2) Sufficient quantities and types of munitions to maintain the required volume of fire.
- (3) Adequate sea room and suitable hydrographic conditions in the fire support area.
- (4) Local air and naval superiority.
- (5) Positive observation of the naval gunfire target area by one or more agencies.

- (6) Separate communication circuits between ships, landing force organizations ashore, and ground and air observers.
- (7) Sufficient time to effect essential destructive fires.
- (8) Integration of the naval gunfire support with the landing force scheme of maneuver and organic fires, air operations, and associated naval operations.

102. Naval Gunfire Planning Responsibilities

a. The amphibious task force commander is responsible for preparation of the overall naval gunfire support plan, based on the requirements submitted by the landing force commander and on the naval requirements. The planning includes allocation of gunfire support ships and facilities. He also is responsible for the general policy as to priority of types of targets to be taken under fire.

b. The Army landing force commander is responsible for determination of landing force requirements for naval gunfire support including selection of targets to be destroyed in preassault preparation operations, those to be fired on in support of the landing force, and the timing of these latter fires in relation to landing force operations. After determining his requirements for naval gunfire support, fire support means, and priority of targets, the landing force commander presents them to the amphibious task force commander.

c. When subordinate amphibious task groups are formed and separate landing areas are prescribed, each attack group commander, guided by the requirements of the corresponding landing group commander, and by naval requirements, plans the naval gunfire for his landing area, under the policy direction and overall guidance of the amphibious task force commander.

103. Planning Sequence

Naval gunfire support plans are usually developed in the following sequence—

- a.* Landing force overall requirements are submitted.
- b.* Naval requirements are determined.
- c.* Requirements are consolidated. On the basis of this consolidation, the amphibious task force commander determines the numbers and types of ships required to support the operation. So far as practicable, landing force requirements are approved and incorporated in the final fire support plan. The amphibious task force commander may request additional fire support ships, if available means cannot satisfy requirements. If additional

fire support ships cannot be made available by higher authority, the amphibious task force commander, in consultation with the landing force commander, adjusts plans accordingly.

d. After final allocation of fire support ships, landing force and naval requirements are adjusted and detailed plans are prepared.

104. Employment Techniques

a. *Types of Fires.* Both prearranged fires and call fires (c below) are extensively employed in pre-D-day, D-day, and post-D-day naval gunfire operations. Planned fires in support of landing force operations are prearranged as far as practicable but provision for call fires must also be made.

b. *Prearranged Fire.* Prearranged fire is fire delivered on known or suspected targets in accordance with a planned schedule either on a time or on an on-call basis. Prearranged fire may be either close support or deep support.

(1) *Close support fires.* Plans for prearranged close support fire provide for neutralization of short-range direct or indirect fire weapons which can bring fire to bear on the ship-to-shore movement, the landing beaches, landing zones, or axes of advance. For continuity in supporting either the initial landings or the ground operations to follow, the close support fires must be scheduled to continue until it is anticipated that naval gunfire spotters ashore will be able to conduct call fires. Major considerations in planning close support fires include—

- (a) *Terrain.* To determine the area which might contain weapons capable of delivering direct fires or short-range indirect fires on the troops as they land and advance inland, and to determine masks which might interfere with shipboard observation and delivery of fires into defiladed areas.
- (b) *Troop safety.* To provide for lifting of fires ahead of and to flanks of advancing troops at a prescribed distance determined by bursting radius of ammunition used, type of fuze, overhead or flank fire, battery dispersion, probable error, and estimated rate of troop advance.
- (c) *Observation of troop advance.* To provide a basis for modification of schedules of fires when advance is at other than the planned rate.
- (d) *Size of target areas.* To determine the amount of ammunition required to obtain and maintain neutralization.

- (2) *Deep support fires.* Plans for prearranged deep support fires provide for neutralization of long-range weapons, defense against enemy armored attack, and interdiction fires. The major factors which must be considered in planning prearranged deep support are the availability of suitable fire support ships and the availability of spotting aircraft.

c. Call Fire. Call fire is fire delivered on a specific target in response to a request from the supported unit. Plans for providing call fires require that shore fire control parties (SFCP) be operating with the landing force units that will request the fires and that provision be made for air spotters where and when required. Naval gunfire liaison personnel are required in the fire support coordination element at each command echelon of the landing force. Direct support ships are designated to provide call fires for specific units (battalion or battle group level) through their respective shore fire control parties, while ships in general support of a unit (brigade, combat command, division, or higher level) are provided to answer calls for fire from the supported unit and its subordinate elements as directed.

105. Pre-D-Day Naval Gunfire Plans

a. The primary objective of pre-D-day naval gunfire is preparation of the landing area for the assault.

b. The plan usually includes the following elements—

- (1) Assignment of ships to fire support areas and zones of responsibility.
- (2) Announcement of ammunition allowances and plans for replenishment.
- (3) Naval gunfire communications instructions.
- (4) Designation of targets, provision for damage assessments, and acquisition of target intelligence.
- (5) Provision for availability of spotting aircraft and reference to appropriate air support plans.
- (6) Provision for coordination with minesweeping, underwater demolition, and air operations.
- (7) Provision for recording target information and reporting latest intelligence data to the amphibious task force commander.

106. D-Day Naval Gunfire Plans

a. Plans for naval gunfire operations on D-day provide for—

- (1) *Employment of naval gunfire in final preparation of the*

landing area. This fire is designed to destroy or neutralize enemy defense installations which might interfere with the approach and final deployment of the amphibious task force, and to assist in isolation of the landing area. Naval gunfire is used to support underwater demolition teams and minesweepers during their operations. Immediately prior to H-hour, major emphasis is placed on the destruction and neutralization of enemy defenses most dangerous to the successful landing of assault landing teams.

- (2) *Fires in close support of the ship-to-shore movement.* Gunfire is continued on the landing beach and landing zone defenses until the safety of the leading waves requires the fires to be lifted.
- (3) *Close support fires during and subsequent to landings.* The final approach of the leading waves of assault craft or vehicles necessitates a shift of the scheduled fires inland from the landing beaches or outward from the landing zones. The major portion of the fires delivered in close support of the landings consists of large and medium caliber prearranged fire delivered on a closely fixed schedule in the zones of action of assault landing teams. Scheduled fires are based on an estimated rate of advance of assault forces. Since the actual rate of advance and the estimated rate of advance may not coincide, the amphibious task force commander, through the supporting arms coordination center, retards or accelerates the movement of scheduled fires as requested by the landing force commander. Prearranged close support fires continue until the shore fire control party with each assault landing team is in a position to conduct the fires of the assigned direct support ships.
- (4) *Deep support fires.* Deep support fires usually are delivered by ships assigned in general support. Each such ship is assigned a zone of responsibility which it covers by fire and observation. Within assigned zones of responsibility, ships neutralize on a prearranged schedule known enemy targets, interdict enemy routes of communication, attack targets of opportunity, execute counterbattery fire, reinforce fires of direct support ships as directed, and conduct missions assigned by the supported unit.

b. Essential elements of the plan for naval gunfire operations on D-day include—

- (1) Initial assignment of ships to fire support areas, zones of responsibility, and in direct and general support of specific landing force units.
- (2) Location, when required, of helicopter approach and retirement lanes, and necessary coordinating instructions. These same instructions will be found in the appropriate portions of the related air support plan.
- (3) Announcement of ammunition allowances and plans for replenishment.
- (4) Naval gunfire communications instructions.
- (5) Designation of targets, target areas, deep support areas, and probable routes of approach of enemy reinforcements.
- (6) Provisions for spotting aircraft.
- (7) Instructions for massing fires of several ships.
- (8) Provisions for coordination with the ship-to-shore movement, minesweeping, underwater demolition, artillery, and air operations.

107. Post-D-Day Naval Gunfire Plans

Naval gunfire ships are assigned to continue support of the landing force after D-day by providing—

- a.* Call fires in direct support of units ashore.
- b.* Close and deep fires in general support.
- c.* Fires on the flanks of the landing area and fires against targets of opportunity.

108. Control of Naval Gunfire

Control of naval gunfire is exercised by, and passes to different commands and agencies as the operation progresses. Arrangements must be made to provide appropriate commanders the proper facilities for control of naval gunfire.

a. The advance force commander is responsible for control during pre-D-day bombardment. Control is normally exercised through the advance force supporting arms coordination center.

b. The amphibious task force commander assumes responsibility for control of naval gunfire upon arrival in the objective area. Control is exercised through his supporting arms coordination center.

c. When subordinate amphibious task groups are formed and separate landing areas are designated, the amphibious task force

commander may assign to each attack group commander responsibility for control of naval gunfire in his landing area, retaining only overall direction as it applies to the operation as a whole.

d. When the landing force commander establishes the necessary control facilities ashore, responsibility for control of naval gunfire (fire control) may be passed to him. He is then authorized to assign naval gunfire support missions directly to the fire support ships and to supervise the execution of these missions. In this case, the amphibious task force commander (or his designated subordinate) retains responsibility for—

- (1) Allocation of available fire support ships.
- (2) Logistic support of fire support ships.
- (3) Functions of operational control of fire support ships other than fire control.

109. Conduct of Fire

a. When ships are placed in direct or general support of specific landing force units, the selection of targets, the timing of fires on targets, specifications of line of fire (when not inconsistent with safe navigation), and the adjustment of fires are functions of the supported landing force unit. Liaison teams and shore fire control parties (SFCP) organic to the Air Naval Gunfire Liaison Company (par. 91) are attached to landing force units to provide specialists and communications needed for conduct of naval gunfire.

b. A ship placed in direct support of a specific unit delivers call fire missions on request. Fires are conducted and adjusted by a shore fire control party or assigned air spotter of the supported unit. The ship delivers prearranged fires according to schedules prepared in advance.

c. A ship placed in general support of a specific unit (normally brigade or division level) conducts fire missions which are directed, usually in general terms, by the naval gunfire liaison team of the supported unit. Fires delivered in general support, if observed, are adjusted by an assigned spotting agency, which may be either an air spotter, a ground spotter, or a shipboard spotter. Fire missions against targets of opportunity are conducted directly by the fire support ships as provided for in the plans. Specific fire missions may be ordered by the commander responsible for controlling naval gunfire support. For prearranged fires, these orders are issued in the form of a schedule.

Section VIII. AIR SUPPORT PLANNING

110. General

a. Air support of the amphibious operation includes all air operations conducted in fulfilling air support requirements of all forces assigned to the amphibious task force. Because of the importance of air support operations and the necessity for complete coordination of the use of air space within the amphibious task force objective area, air support planning is extensive and detailed.

b. All air operations must be integrated into the amphibious task force plan, whether the support is provided by air elements assigned to the Service components of the amphibious task force, or by air elements which are not a part of the task force.

c. Success in an amphibious operation requires a distinct margin of air superiority in the area of operations. Complete destruction of enemy systems for attack from the air is rarely attained. Air defense planning is covered in paragraphs 121 through 124.

111. Principal Air Support Planning Considerations

a. All aircraft operating within the objective area must be under centralized control. A tactical air control system capable of providing the requisite centralized control must be organized.

b. Initially, air support is provided by aircraft operating from carriers or from land bases within effective range of the objective area. As facilities for operating land based aircraft are established within the objective area, aircraft operating from such facilities are also utilized through the tactical air control system on missions in support of task force operations.

c. The amphibious task force will normally employ the Navy-Marine Corps tactical air control system which is by design peculiarly adapted to conditions of the amphibious assault.

d. Plans must ensure that all Army landing force command levels are provided direct access to the agency exercising control of aircraft allocated to close air support. This direct access with monitoring of air support requests by intermediate command echelons is inherent in the Navy-Marine Corps tactical air control system when the ANGLICO is attached to assault divisions of the Army landing force.

e. Plans will usually provide for rapid seizure of existing airfields or airfield sites and sites for early warning and air control facilities to:

- (1) Provide for the early deployment ashore of air elements

designated for continuing support of the Army landing force.

- (2) Extend the radius of warning and control to improve the task force air support capabilities.

112. Air Support Planning Responsibilities

a. The amphibious task force commander has the following responsibilities:

- (1) Determination of overall requirements of the amphibious task force. Naval requirements remain generally constant throughout the operation. Air superiority must be attained and maintained in the objective area, and the movement of enemy forces into, and within the objective area must be curtailed or halted. There is a continuing requirement for air support in defense against enemy air, surface, and subsurface attack.
- (2) Determination of air support capabilities. The amphibious task force commander determines the air support capabilities of each component of the task force in terms of sorties, endurance on station, ordnance loads, and payloads.
- (3) Coordination of all air support requests. The amphibious task force commander coordinates all requests for air support originating within the task force and allocates aircraft in accordance with the capabilities previously determined. If stated requirements exceed capabilities, he makes requests for additional support to higher authority.
- (4) The tactical air commander prepares an air plan for the amphibious task force commander to govern the conduct of air operations throughout the operation. Air plans of commanders of Service components of the amphibious task force must be in conformity with the amphibious task force plan.

b. The Army landing force commander has the following responsibilities—

- (1) Determination of Army landing force air support requirements. He coordinates all requests for air support originating within the landing force, and submits the consolidated requirements to the amphibious task force commander.
- (2) Determination of Army landing force air support capabilities. He determines the air support capabilities of

Army landing force units and submits information on them to the amphibious task force commander.

- (3) Submission of plans for deployment of aviation elements and Army air traffic control agencies (FOC) ashore. He submits recommendations to the amphibious task force commander for the deployment ashore of landing force and other aviation.
- (4) Preparation of an air plan. He prepares an air plan based on the amphibious task force air plan.

113. Control of Air Operations

Control of air operations is exercised by various commanders as the operation progresses. Plans must be made to provide each such commander with the proper facilities for control of air operations.

a. The advance force commander is responsible for pre-D-day air operations in the objective area. Control is exercised through the tactical air direction center (TADC) established in the flagship of the advance force commander.

b. The amphibious task force commander assumes responsibility for control of all air operations upon arrival in the objective area. Control is exercised through the tactical air control center (TACC) which is established in his flagship. Subordinate tactical air direction centers (TADC), as designated in advance, monitor air control circuits in readiness to assume all or a part of the duties of the TACC if required.

c. When subordinate amphibious task groups (attack group-landing group) are formed for operations in widely separated landing areas, the amphibious task force commander normally assigns to each attack group commander responsibility for control of air support in his respective landing area. The attack group commander exercises control through a tactical air direction center (TADC) in his flagship. Overall direction of air support, as it applies to the operation as a whole, is retained by the amphibious task force commander and exercised through the task force TACC.

d. The Army landing force commander establishes flight operations centers (FOC) ashore for the regulation of Army air traffic. Air control facilities that parallel the naval control agencies afloat must be established ashore to control all air operations in support of the land operations to and beyond termination of the amphibious operation. Since the Army landing force does not have the means for establishing ashore air control facilities and

agencies comparable to the TACC and TADC, it is essential that special provision be made in planning for another Service to provide the necessary air control facilities. The ashore control and direction centers initially are in a standby status monitoring all air control circuits. Upon recommendation of the landing force commander, the amphibious task force commander may pass responsibility for overall control of air operations to the landing force commander or other designated commander ashore. The passage of control may be incremental; e.g., control of close air support may be passed ashore prior to control and responsibility for aircraft employed in other air support operations. After passage of control ashore, the naval control centers afloat continue to monitor air circuits, ready to assume active control in the event of an emergency ashore. When control of tactical air operations in support of the Army landing force is passed to an Air Force commander ashore, control will be exercised through the Air Force tactical air control system.

114. Content of Air Support Plans

Plans for air support include provision for—

a. Pre-D-day operations.

- (1) Counterair and air defense operations.
- (2) Interdiction of the objective area.
- (3) Destruction of enemy forces and installations.
- (4) Spotting naval gunfire.
- (5) Antisubmarine warfare.
- (6) Search and rescue.
- (7) Reconnaissance, including weather reconnaissance.
- (8) Harassment.
- (9) Psychological warfare operations.
- (10) Deception.
- (11) Electronic countermeasures.

b. D-day Operations.

- (1) Continuation of applicable pre-D-day air support operations.
- (2) Pre-H-hour neutralization of the landing area.
- (3) Helicopter assault operations.
- (4) Troop carrier operations.
- (5) Close air support operations.
- (6) On-call smoke aircraft.
- (7) Air observation and spotting.

- (8) Tactical air coordinators (airborne).
- (9) Night battlefield illumination.
- (10) Air delivery of supplies.
- (11) Evacuation.

c. Post-D-day Operations. Post-D-day air support operations can only be planned in general since mission requirements will depend on the tactical situation. Applicable pre-D-day and D-day operations are continued. Plans must assure continuous and adequate support of the landing force operations ashore to include the period of conversion from primarily carrier based to land based support as the operation progresses.

d. Air Control and Warning. Comprehensive plans for aircraft control and air warning for the amphibious task force are prepared, including provisions for the echeloning of air control organizations ashore.

e. Air Delivery of Supplies. Plans contain provisions for delivery of supplies by air to fulfill requirements established by the landing force commander.

f. Troop Carrier Operations. If the tactical plan involves movement of forces into the objective area by air transport, the landing force commander integrates the requirement in his comprehensive request for air support.

g. Liaison and Observation Aircraft. Plans include provision for the early arrival of liaison and observation aircraft in the objective area. They may be flown to the area or transported in ships.

h. Airfield Construction. Plans are made for early rehabilitation or construction of airfields required in the objective area to provide adequate air support for the planned land force operations.

i. Air Charts. Air support plans must include provisions for supply and distribution of air charts needed by components of the amphibious task force.

115. Detailed Planning Within the Army Landing Force

a. The Army landing force plans in detail for the employment of Army aviation to support the ship-to-shore movement and scheme of maneuver ashore. Detailed planning also establishes requirements for air support by the other components of the amphibious task force. Any enemy facilities to be captured intact must be specified and exempted from destruction.

b. Recommendations and requests from subordinate echelons of the landing force are evaluated and consolidated with overall

landing force requirements into a comprehensive request for air support. In determining overall requirements, it is advisable to consider pre-D-day requirements separately from D-day and subsequent requirements.

- (1) Landing force requests for pre-D-day air operations concern primarily intelligence needs and offensive air operations to reduce enemy forces and defensive installations in landing areas. The scope of pre-D-day operations may be limited by the need for surprise. The request for air operations is in the form of a detailed statement of the mission to be accomplished and a general recommendation for the ordnance and numbers of aircraft to be employed. The request will usually cover—
 - (a) Destruction of located enemy installations, particularly those which cannot be attacked effectively by naval gunfire.
 - (b) Photographic, radar, ferret, and visual coverage of landing areas, important terrain localities and critical points in the routes of communications.
 - (c) Interdiction and harassment missions, designating types of targets and effects desired.
 - (d) Psychological warfare missions.
 - (e) Deception missions.
 - (f) Electronic warfare missions.
 - (g) Missions in support of guerrilla and clandestine operations.
 - (h) Airborne raids.
- (2) The landing force request for air support of operations ashore commencing D-day includes the tasks to be accomplished, number and type of aircraft desired, ordnance to be employed, times at which required, and coordination provisions. The request may be in the form of an air schedule with amplifying instructions appended.

116. Air Support During the Assault

a. In air operations during the assault, emphasis is placed on close support of the assault landing teams while execution of all other required air support operations continues. Offensive and defensive air operations begun prior to the assault are maintained and preparation of the landing areas continues.

b. Close air support will normally be carried out as follows—

- (1) Until the tactical air control parties (TACPs) landed with the assault units are established ashore, close air

support missions are executed under the direction of the airborne tactical air coordinators. When the tactical air control parties are established ashore, they request close air support from the tactical air control center (TACC) or the tactical air direction centers (TADC) afloat. The TACC (or TADCs) assign aircraft to missions as requests are received. As the landing progresses, air control elements to be established ashore, land and prepare to operate shorebased facilities for control of air operations.

- (2) As air support control agencies are established ashore, they function initially under the TACC (or TADC) afloat. These agencies subsequently operate under the designated commander when control of close air support has been passed ashore by the amphibious task force commander. In either case, requests are sent by the TACP directly to the air control agency, which assigns aircraft to close air support missions.
- (3) The terminal phase of close support air strikes is executed under the control of a forward air controller, a tactical air coordinator (airborne) or an air support radar team. Close air support missions are executed only on the approval of the commander of the supported landing force unit and commanders of units close enough to the target area to be affected.

c. As soon as the minimum required facilities can be provided, observation and liaison type aircraft are deployed ashore. Prior to their deployment ashore, observation missions may be performed by high performance aircraft from carriers or supporting bases.

d. Smoke, reconnaissance, and other tactical air missions are continued during the assault.

e. While control of air operations is retained by the amphibious task force commander, landing force air requirements for each day subsequent to D-day are consolidated by the landing force commander daily, and are presented to the amphibious task force commander, who informs the landing force commander of allocations for the following day. The amphibious task force commander determines the degree of emphasis to be placed on additional supporting operations, on the basis of the air operations order and changes in the situation. He makes a continuing evaluation of targets reported and damage assessed by pilots and ground observers, and on the basis of this evaluation the specific assignments are made. The landing force commander provides

target intelligence and damage assessment information to the amphibious task force commander.

Section IX. FIELD ARTILLERY PLANNING

117. General

a. Field artillery, as the principal fire support means of the Army landing force, plays a major supporting role in the amphibious operation. Field artillery is capable of providing close and continuous fire support, and its fires can be massed rapidly on critical points.

b. The tactics and techniques of the employment of field artillery in the amphibious operation involve an adaptation of normal employment principles to the conditions of the amphibious assault.

118. Plans for Field Artillery Support

a. Plans must provide for the early landing and entry into action of field artillery. The amount of field artillery support which can be provided will exert a considerable influence on the overall fire support requirements of the amphibious task force.

b. The burden of providing fire support for the landing force rests initially on naval gunfire and aircraft. Neither is capable of providing the close continuous support provided by field artillery. As a field artillery firing capability is built up ashore, the requirements for naval gunfire and close air support may progressively decrease.

c. Whenever offshore islands, peninsulas, or promontories exist within artillery range of the landing area and the tactical considerations permit, emplacement of field artillery thereon may be advisable. Preliminary operations for the seizure of such geographic features should be conducted sufficiently in advance of the main landings to permit occupation and fortification of positions, registration of fires, and participation in the pre-H-hour bombardment. Such landing operations will normally be conducted by the advance force of the amphibious task force.

d. Within its capabilities, field artillery may be able to support local naval operations such as minesweeping, minelaying, and the protection of minefields and anchorages.

e. Field artillery suited to landing early in the assault is included in the task organization of assault landing teams. In planning employment of field artillery units, it is particularly important to recognize the range and trajectory limitations of

naval gunfire as they affect the ability to support a rapid, inland advance of assault landing teams.

119. Planning Responsibilities

a. The Army landing force commander is responsible for planning the employment of field artillery required to support the operation.

b. Commanders of subordinate echelons of the Army landing force plan for employment of field artillery included in the task organization for their command.

120. Planning Considerations

a. Organization for combat for the assault must provide for unity of command with control of fires decentralized to the commanders ashore. This requirement implies control of field artillery ashore at any given time by the commander of the landing force echelon who has his command and fire control agencies established ashore. Initially it will be the assault landing team commander, and then progressively higher echelons as they become established ashore.

b. For purposes of landing and initial employment ashore, field artillery units are generally attached to commanders at levels next below those to which units are assigned for normal operations. Centralization of control is effected gradually as higher echelon command and control agencies are established ashore.

c. The means available for transporting artillery and ammunition from ship to shore is an important factor in planning for its employment.

d. Artillery position areas must be pre-selected and coordinated to the extent practicable during planning.

e. Landing plans provide for early landing of liaison personnel, forward observers, and personnel for activities such as reconnaissance and survey to facilitate rapid employment of firing units when landed. Artillery units in the assault echelon will usually be landed on a nonscheduled basis.

f. To exploit fully the capability of field artillery, air observation is required as soon as firing units are in position. Plans should include provisions for spotting aircraft for this purpose, until such time as landing force observation aircraft are able to operate in the objective area.

g. Shipping availability may limit the amount of field artillery which can be embarked in assault shipping. Other weapons such as tanks, armored amphibians or air defense artillery may be

used in field artillery roles. When so used, the fires are integrated by artillery fire direction centers, and necessary observation and survey control assistance is provided.

Section X. AIR DEFENSE PLANNING

121. General

a. Air defense includes all measures designed to nullify or reduce the effectiveness of the attack by hostile aircraft or missiles after they are airborne. It is divided into active and passive air defense.

(1) Passive air defense includes such measures as camouflage, dispersion, rapid displacement, cover, concealment, and protective construction. Imagination and ingenuity as applied in normal land operations are equally applicable in amphibious operations to enhance the effectiveness of deceptive measures. Passive air defense planning is the responsibility of commanders at all echelons.

(2) Active air defense includes electronic countermeasures, attack by fighter aircraft, and surface-to-air fires. Effective planning is vital to the successful integration of all available means in support of the active air defense effort.

b. In order to minimize the impact of the enemy air threat, counter air, surface-to-surface fires, and air defense must be exploited. Prior to and during the operation, offensive action is necessary to destroy or neutralize enemy airfields, missile sites, radars, control facilities, and support facilities. This may be accomplished by aerial bombardment, attack by missiles, guerrilla actions, and subversive action. The most effective attacks cannot be expected to eliminate the enemy air threat completely. Therefore, air defense is vital to the successful execution of an amphibious attack.

c. Planning and execution of the air defense effort must be closely coordinated with all other operations involving the use of the air space in the objective area. This coordination is necessary to insure freedom of action for friendly aircraft while preventing the enemy from making effective use of the air space.

d. Basic guidance for employment of air defense artillery is included in FM 44-1, (Air Defense Artillery Employment).

122. Principal Air Defense Planning Considerations

a. Air defense of the objective area must be centrally coordinated.

b. Air defense is initially provided by shipborne surface-to-air fires and aircraft operating from carriers or from land bases within effective range of the objective area.

c. Mobile surface-to-air missile systems provide the Army landing force commander a capability for rapidly establishing an effective active air defense ashore.

d. Army landing force air defense means should be landed as early in the assault as the situation permits for employment as the primary active air defense means of the forces ashore.

e. When operational ashore, Army air defense means provide protection to forces afloat within range.

f. The extent of the enemy air threat to forces in the objective area influences the requirements for air defense artillery.

123. Air Defense Planning Responsibilities

a. Planning for air defense, including the coordination of air defense fire and ECM, is initially the responsibility of the amphibious task force commander. His planning responsibilities include—

- (1) Establishment and dissemination of appropriate rules for engagement.
- (2) Coordination of plans for early warning and air surveillance.
- (3) Determination of the general policy for priorities for air defense.
- (4) Establishment of appropriate air defense sectors. The area generally conforming to the final Army landing force beachhead area normally will be established as an air defense sector to facilitate employment of landing force air defense systems and ultimate passage of control of air defense ashore.
- (5) Establishment of air defense restricted areas as required. An air defense restricted area is an area in which special rules for the operation of aircraft pertain.

b. The Army landing force commander is responsible for—

- (1) Determination of landing force requirements for air defense.
- (2) Submission of requirements for support of the landing force air defense effort to the amphibious task force commander along with a statement of Army landing force air defense capabilities.

- (3) Insuring that Army air defense means are available and allocated in the proper numbers and types to permit establishment of an effective land based air defense system ashore.
- (4) Providing in landing plans for early movement of Army air defense units ashore in the assault.
- (5) Early establishment of land based early warning and target acquisition means ashore.
- (6) Establishment of necessary Army Air Defense Command Posts (AADCPs) ashore to provide proper fire supervision and fire distribution.
- (7) Determination of landing force air defense priorities.

124. Control of Air Defense

a. Initially, the amphibious task force commander is responsible for air defense of the force. Control is exercised through the Combat Information Center (CIC) which is established in his flagship.

b. The objective area is normally divided into air defense sectors. Each sector is assigned to a Sector Air Defense Commander with the Task Force Air Defense Commander exercising overall supervisory control.

c. The designation of the area generally conforming to the final army landing force beachhead area as an air defense sector facilitates passage of air defense control ashore. Normally, control of air defense of this sector will be passed to the landing force commander while the Task Force Air Defense Commander retains overall supervisory control of air defense of the objective area.

d. The landing force commander establishes air defense control agencies ashore that parallel the naval control agencies afloat. When adequate air defense means and control facilities are ashore, and upon recommendation of the landing force commander, the amphibious task force commander may pass overall control of air defense to the landing force commander.

Section XI. NUCLEAR, CHEMICAL, AND BIOLOGICAL PLANNING

125. General

a. Detailed planning for employment of nuclear, chemical, and biological weapons in the amphibious operation closely parallels

the planning for their use in other operations involving joint forces. Weapons employment planning is a part of the overall fire support planning discussed in paragraphs 94 through 96. The principles and procedures of fire support coordination are not changed by the introduction of these weapons. However, the importance and extent of coordination are increased because of the magnitude of their effects.

b. The initiating directive for the amphibious operation will inform the amphibious task force commander of the number and type of nuclear, chemical and biological weapons available, the authority for using them, and restrictions placed upon their employment. If certain targets within the amphibious task force objective area are to be exempt from nuclear, chemical, and biological attack, the initiating directive defines such targets. The amphibious task force commander may be given complete tactical and administrative control of the weapons allocated to him for the operation; or some of the weapons may be delivered by other forces (par. 46).

126. Nuclear Weapons Employment

a. *Planning Responsibilities.*

- (1) Command responsibility for planning for the use of nuclear weapons during an amphibious operation rests primarily with the Army landing force commander and the amphibious task force commander.
- (2) The amphibious task force commander is responsible for—
 - (a) The preparation of the amphibious task force nuclear weapons support plan. He is responsible for allocating the available nuclear weapons to meet the needs of all forces assigned to the amphibious task force and for establishing the level of reserve weapons.
 - (b) Plans for assignment of nuclear weapons, including their component parts, to the various ships whose commanders then become responsible for their storage, surveillance, security, movement, and where appropriate, their delivery. In conjunction with the landing force commander, he makes plans to move nuclear weapons ashore when the tactical situation requires.
 - (c) The preparation and dissemination of signal instructions pertaining to nuclear weapons employment, to include communications codes to be used during the amphibious operation.

- (3) The Army landing force commander is responsible for planning for the nuclear weapons support of operations ashore including the selection of targets and timing of fires in relation to tactical operations. He is likewise responsible for planning for the security, maintenance, and movement of nuclear weapons which are displaced ashore. After determining his requirements, the landing force commander presents them to the amphibious task force commander. The list of requirements includes—
 - (a) Target priority list.
 - (b) A detailed plan for each target to include type, number and timing of prearranged weapons desired, the desired yields, methods of delivery, ground zero, and height of burst for each.
 - (c) Type and number of on-call and reserve weapons desired.

b. Planning Sequence. The following is the sequence in which nuclear weapons employment is usually planned—

- (1) Landing force requirements are submitted.
- (2) Naval requirements are determined.
- (3) The amphibious task force commander consolidates the landing force and naval requirements. On the basis of consolidated requirements, the number of nuclear weapons required to support the amphibious operation is determined. The weapons are then allocated for prearranged and target-of-opportunity fires and for reserve missions. So far as is practicable, the initial landing force requirements are approved and incorporated in the amphibious task force nuclear weapons support plans. The amphibious task force commander may request additional nuclear weapons if those provided do not satisfy the support requirements. If additional nuclear weapons cannot be made available by a higher authority, the amphibious task force commander, in consultation with the landing force commander, adjusts plans accordingly.
- (4) After the final allocation of nuclear weapons, the amphibious task force commander designates the method of delivery to be used for each prearranged weapon and specifies the authority for using target-of-opportunity weapons.
- (5) When the weapon is to be delivered by a commander outside the amphibious task force, the amphibious task force

commander provides him with the essential information involved in the specific delivery. Detailed plans are then prepared by both commanders.

c. Planning Considerations.

- (1) *Authority to employ.* Authority to employ nuclear weapons is delegated to the lowest echelon which has the capability to acquire targets and to coordinate and control the use of nuclear support within its zone of action.
- (2) *Supply and resupply of weapons.* The initiating directive specifies the number, by type, of nuclear weapons allocated to the amphibious task force commander. The initiating directive also specifies procedures for requesting additional weapons. Plans are made for pickup and delivery of weapons to ships during embarkation in accordance with the nuclear weapons support plan. Plans are made for resupply of nuclear weapons, to include—
 - (a) Procedures for requesting additional allocations.
 - (b) Procedures and assigned responsibility for pickup of weapons and delivery in the objective area.
 - (c) Receipt, inspection, security, and storage in the objective area.
 - (d) Lead times for obtaining resupply weapons.
- (3) *Preliminary target evaluation.* The initial step in fire support planning is the determination of the potential targets and their nature, configuration, and location on the ground. Target evaluation involves examination of targets to determine their military importance and the relative priority for attack by appropriate weapons. Considerations in evaluation and selection of targets include—
 - (a) Physical nature of the target which should be such as to warrant clearly the expenditure of a nuclear weapon.
 - (b) Location of the target, which should be such that an attack on it will not endanger friendly forces.
 - (c) Characteristics of nuclear weapons available.
 - (d) Effect on the operations of the amphibious task force of the destruction or neutralization of the target.
 - (e) Probable effect of attack on enemy capabilities.
 - (f) Terrain and weather, which may affect the accuracy of delivery and the burst effectiveness.

- (4) *Target analysis.* A target analysis is made for each target as a result of the foregoing evaluation to determine the capabilities and relative suitability of available weapons systems for attack of the target. Information on terrain and weather is studied and the following is determined for each target—
- (a) Weapon system.
 - (b) The height of burst desired.
 - (c) Desired ground zero.
 - (d) Time of delivery, based on necessity for coordination with the operations of other forces.
 - (e) Predicted effect to be gained in the target area and on other portions of the objective area adjacent to the target area to include fallout pattern for possible near surface or surface burst.
 - (f) The number of weapons desired for attack of the target.
 - (g) Troop safety considerations.
- (5) *Target priority.* When the various selected targets have been analyzed, they are compared and a relative priority for their attack is determined.
- (6) *Selection of weapons and delivery means.* The factors which govern the selection of nuclear weapons and delivery means for any particular situation are—
- (a) Availability of weapons, including the number and types of weapons allocated for a particular operation, and time and space factors.
 - (b) Method of delivery, including aircraft, missiles, rockets, artillery, and naval gunfire. Delivery systems involve variations in accuracy of delivery, weapon type, range, and all-weather capability.
 - (c) The target defined by type, composition, location, size, vulnerability, value, and degree of importance.
 - (d) Weather and topographic conditions.
 - (e) Safety of friendly forces.
- (7) *Prearranged fires.* The fire support plans will usually provide for prearranged nuclear fire support. The delivery of prearranged fires must be timed so as to maintain the element of surprise if practicable, support the scheme of maneuver, and ensure the safety of friendly forces. Prearranged fire plans include provisions for standby reserve weapons ready for immediate delivery in

the event a weapon does not perform satisfactorily and achieve sufficient damage to the target.

- (8) *Pre-D-day prearranged fires.* Surprise may be forfeited by using nuclear weapons during pre-D-day operations. However, such attacks will usually be warranted when—
- (a) The existing enemy dispositions offer a concentrated and remunerative target.
 - (b) Low air, surface, or subsurface weapons are necessary to destroy certain hard targets. The resultant radioactivity will limit early troop operations in the target area. Depending on the tactical situation, commanders must accept either high-radiation doses or delays, to permit radioactive decay. Several hours may be required before transit is safe, and it may be days before the area of highest intensity may be occupied.
 - (c) The time and space factors preclude the enemy's ability to reinforce or react effectively.
- (9) *D-day prearranged fires.* The use of nuclear weapons in the D-day preparation may be advantageous when destruction over a wide area is required, when pre-D-day preparations are not used, when destruction must be accomplished in the minimum time, or when simultaneous destruction of several targets is a priority requirement. Where pre-H-hour fires are used to assist the assault landings, care must be taken to avoid contaminating the landing zones, beaches, and their approaches, or impeding the actions of friendly forces.
- (10) *Target of opportunity fires.* Targets for attack may be so located as to be profitable for only a relatively short period of time. The ability to attack such targets of opportunity effectively depends upon—
- (a) Timely discovery of the target.
 - (b) Rapid and accurate analysis of the target.
 - (c) Existence of a system whereby authority and capability for nuclear weapons employment are vested in the lowest practicable echelon.
 - (d) Availability of suitable nuclear weapons in the amphibious task force.
 - (e) Maintenance of weapons in an advanced state of readiness.
 - (f) Availability of rapid delivery means.
 - (g) Existence of an effective system for requesting and

approving nuclear fire support, and for coordination with all affected commands.

(h) Target acquisition means available.

- (11) *Potential target areas.* Plans may include the assignment of priorities to certain important areas such as avenues of approach to beaches or landing zones, open flanks, and potential assembly areas for enemy armor.

d. *Content of Nuclear Weapon Support Plan.* The amphibious task force nuclear weapons support plans are usually consolidated in a separate document with appropriate portions included in other plans such as naval gunfire, air support, and fire support coordination. The nuclear weapons support plan includes instructions for both preplanned and target of opportunity fires. Plans may include tactical damage assessment requirements, alternate targets, and alternate weapons.

- (1) The plan for use of prearranged nuclear weapons includes, in each case—
 - (a) Target description.
 - (b) Weapon system.
 - (c) Height of burst.
 - (d) Desired ground zero.
 - (e) Time of burst.
 - (f) Predicted effect on the target.
 - (g) Provisions for coordination with other operations and fires to include troop safety aspects.
- (2) Plans for target of opportunity fires include—
 - (a) Allocation and location of weapons.
 - (b) Procedures for obtaining their delivery.
 - (c) Alert status of weapons and delivery means.
 - (d) Responsibilities of all affected commanders.
 - (e) Provisions for adequate warning, and troop safety aspects.

127. Defense Against Nuclear Weapons

a. *Planning Responsibilities.*

- (1) *Amphibious task force commander.* The amphibious task force commander is responsible for the planning of overall defense of the amphibious task force against nuclear attack, based on the active and passive defense measures required by the landing force and the forces afloat.
- (2) *Army landing force commander.* The Army landing force commander is responsible for determining and prescribing the active and passive defense measures re-

quired by the landing force. He then presents to the amphibious task force commander those requirements for active defense measures which must be provided by other forces.

b. Nuclear Defense Plans. Provisions for active and passive defense against enemy nuclear attack are included in operation plans. The particular factors to be considered include—

- (1) *Active defense.* In general, the active protective measures which are employed in defense against enemy attack by other weapons are supplemented for nuclear defense by plans to—
 - (a) Employ nuclear or conventional weapons to eliminate enemy nuclear capabilities.
 - (b) Destroy enemy launching sites by amphibious raids or attack by air transported forces.
 - (c) Increase air defense measures.
 - (d) Increase air and ground reconnaissance.
 - (e) Increase communication security measures, including the use of countermeasures.
- (2) *Passive defense.* Emphasis must be placed on dispersion and mobility. Increased mobility during the ship-to-shore movement and operations ashore will allow for greater unit separation. In addition, provisions are made for—
 - (a) Training and indoctrination of personnel.
 - (b) Individual protection.
 - (c) Distribution of trained radiological defense personnel.
 - (d) Decontamination of personnel, equipment, supplies and terrain.
 - (e) An adequate surface and air radiological monitoring system.
 - (f) Creation of nuclear salvage units.
 - (g) Plans for handling mass casualties including employment of mass evacuation units.
- (3) *Content of nuclear defense plans.* Nuclear defense plans include provisions for cooperation and coordination, beginning at the time of embarkation, between the corresponding landing force and naval elements. Plans usually provide for assignment of defense missions, damage control, special monitoring provisions, location of nuclear, chemical, and biological defense materials, salvage of contaminated material, and similar measures. On occasion, certain of these measures may be included in other appropriate plans for the operation, such as those

for the ship-to-shore movement in the case of passive defense measures and certain fire support plans in the case of active defense measures.

- (4) *Special provisions for the ship-to-shore movement.* Plans are prepared to cover the action required if, during the ship-to-shore movement, the enemy succeeds in attacking the amphibious task force with one or more nuclear weapons which may result in—
- (a) Contamination of a landing beach or landing zone.
 - (b) Loss of a part of the force with a corresponding requirement for alteration of the tactical plan or for unit replacement.
 - (c) Mass casualties.

c. Conduct of Nuclear Defense. Effective conduct of nuclear defense requires the establishment of a nuclear defense center by each appropriate naval commander and the assignment of staff responsibilities for nuclear defense by commanders of each echelon of the landing force. These agencies perform the following functions for their respective commanders—

- (1) Collection, recording, and evaluation of monitoring and casualty data.
- (2) Control of monitoring teams.
- (3) Supervision of decontamination installations.
- (4) Advice to commanders on nuclear defense matters, including the determination of the location of ground zero, the execution of special ship-to-shore movement provisions, and rescue and salvage operations.

128. Chemical and Biological Weapons Employment

a. Planning. Planning responsibilities and planning sequence for the use of chemical and biological weapons are the same as for other fires employing the same delivery systems. Chemical and biological fire plans are included in appropriate elements of the overall fire plan, i.e., naval gunfire, air support, and artillery plans. Since chemical and biological fires are sensitive to weather conditions, planning must include provision for cancellation of fires in the event weather conditions at the time of attack will result in undue hazard to friendly forces or degradation of effects. In such an event, alternate means of attacking these targets must be provided.

b. Employment Considerations. General considerations for employment of chemical and biological weapons are contained in TM 3-200 and FM 3-5. Considerations in determining utilization of

such weapons in support of amphibious operations are discussed below.

(1) *Chemical.*

- (a) Non-persistent effect agents can be used to attack beach areas and installations which are to be used by friendly forces once ashore. The actual time of attack should be selected so that maximum casualties will have been generated at the time friendly forces enter the area. Examples of targets suitable for attack by this type agent are beach support areas, port facilities, and communications centers.
 - (b) Persistent effect agents can be used to assist in isolation of the objective area and on targets in areas not required for subsequent operations. Examples of targets suitable for attack by persistent effect agents are defiles, critical areas in the enemy lines of communications, and reserve troop areas. In most instances, persistent effect agent attacks are on-call and are delivered during maximum enemy concentration in the target area.
 - (c) Incapacitating agents can be used to attack beach defenses immediately prior to the initial assault landings. Targets in which friendly or potentially friendly civilians are intermingled are also suitable for attack by this type agent.
 - (d) Smoke can be used in screening, particularly during underwater demolition operations, minesweeping, and ship-to-shore movements. Smoke laid in the form of haze is used to obstruct enemy observation from elevated inland positions. When the wind is onshore, blinding smoke may be laid directly on enemy observation posts. Smoke can be used to deceive the enemy as to the intention of the landing force and the location of the main attack.
- (2) *Biological.* Biological weapons are best suited for attack of deep personnel targets. Reserves available to the enemy commander having overall responsibility for defense of the area in which the landings are taking place are suitable targets for BW attack. The time required for significant casualties to develop is a major consideration in selecting the time for an attack by biological weapons. In general, two to fifteen days are required. This delay in casualty production may prohibit the use

of biological weapons in support of landings in which no D-day prearranged fires are permitted. However, off-target attacks may be possible without compromising security of the operation.

129. Defense Against Chemical and Biological Weapons

a. Defensive measures against chemical and biological attack employed for normal land operations are equally applicable during amphibious operations.

b. Special consideration must be given to allocation of lift for decontamination supplies. Priorities for the lift of these supplies is determined after an evaluation of the probability of use by the enemy of chemical weapons.

c. Plans must include provision for decontamination of personnel and equipment while afloat if subjected to attack by chemical weapons. Special training in decontamination operations under such conditions is required.

Section XII. SHIP-TO-SHORE MOVEMENT PLANNING

130. General

a. The ship-to-shore movement is that part of the amphibious operation which pertains to the timely deployment of the landing force from the assault shipping to designated positions ashore in the landing area.

b. The purpose of the ship-to-shore movement is the landing of units, equipment, and supplies at the proper times and places and in the formation required by the landing force scheme of maneuver ashore.

c. The ship-to-shore movement may encompass any or all of the following operations—

- (1) Assembly of landing ships, landing craft, amphibious vehicles, and helicopters in required formations for debarkation and landing.
- (2) Debarkation of personnel, equipment, and supplies from ships into appropriate ship-to-shore movement means.
- (3) Transfer operations.
- (4) Controlled landing of the assault echelon of the landing force to include equipment and supplies.

d. The ship-to-shore movement commences on order of the amphibious task force commander and is brought to a close when

unloading of assault shipping is completed. It is divided into two periods—

- (1) The assault and initial unloading period which is primarily tactical in character with emphasis on responsiveness to landing force requirements ashore.
- (2) The general unloading period which is primarily logistic in character with emphasis on speed and volume of unloading operations.

131. Relation to Other Planning

Detailed planning for the ship-to-shore movement can begin only after the scheme of maneuver ashore is determined (pars. 94–96). The ship-to-shore movement planning must, in turn, be substantially completed before embarkation planning can begin. The plans for the ship-to-shore movement and fire support plans must be carefully coordinated. The ship-to-shore movement plans must provide for the requisite logistic support of forces ashore.

132. Responsibilities for Ship-to-Shore Movement Planning

a. The amphibious task force commander is responsible for the preparation of the overall ship-to-shore movement plan. This includes the allocation of ships and ship-to-shore movement means.

b. The Army landing force commander is responsible for determining his requirements for the ship-to-shore movement and presenting them to the amphibious task force commander. He advises the amphibious task force commander of the availability of Army landing craft, amphibious vehicles and helicopters as ship-to-shore movement means. He is responsible for preparation of landing plans by appropriate landing force echelons.

c. When subordinate amphibious task groups (attack group-landing group) are formed, plans for the ship-to-shore movement are prepared by the attack group and landing group commanders.

d. Commanders of other major forces assigned to the amphibious task force, including those assigned for movement to the objective area for initiation of tasks not directly related to the amphibious task force mission, are responsible for determining and presenting their requirements for the ship-to-shore movement to the amphibious task force commander. Normally these requirements will be integrated by the landing force commander into those of the landing force and reflected in appropriate landing plans.

133. General Planning Considerations

a. Assault divisions usually constitute the highest Army landing force echelon preparing ship-to-shore movement plans in the

minute detail required for execution of initial assault landings. Higher echelons of the Army landing force coordinate and consolidate division plans as required. Higher echelon units not attached to divisions for landing will generally land during the general unloading period or subsequent to it when such units are in the followup echelon of the landing force.

b. The principal factors which influence planning for the ship-to-shore movement are—

- (1) The necessity for timely satisfaction of requirements of the initial assault operations ashore to include maintenance of tactical integrity of the landing force. The organization for landing must assure adequate control upon landing with a rapid achievement of overall tactical control by commanders of assault landing teams. Maintenance of tactical integrity is accomplished by proper combat loading of assault shipping and by proper assignment of troops to landing ships, landing craft, amphibious vehicles, and helicopters in the landing plan.
- (2) The required degree of dispersion of assault shipping as reflected in the sea area organization.
- (3) The composition of available assault shipping, and the type and quantity of ship-to-shore movement means available.
- (4) The protection available to the amphibious task force. Protection comprising both active and passive measures must be provided during the ship-to-shore movement. Of particular importance is the effective protection acquired through speed of execution and aggressiveness in the conduct of the assault.
 - (a) Active protection includes offensive air operations, air defense, anti-submarine and anti-small boat screens, covering forces, active electronic counter-measures, smoke, and naval gunfire.
 - (b) Passive protection places major emphasis upon dispersion and mobility. Dispersion is achieved initially through unit separation afforded by the proper embarkation of units in assault shipping. The required dispersion of assault shipping is achieved by proper organization of the sea areas in the objective area. Dispersion within and separation between assault waves must be a compromise between the degree of dispersion considered essential and the concentration of combat power requisite to success. Lateral separa-

tion of boat lanes and approach lanes is maximized to obtain the greatest spread consistent with the convergence required by location of landing beaches and landing zones and lanes for return of surface craft, amphibious vehicles, and helicopters to ships. Mobility permits speed in movement which denies the enemy accurate target information. In particular, the great mobility of helicopter is exploited both during the initial assault and during subsequent maneuver.

- (5) The need to maintain sufficient flexibility to exploit weaknesses in enemy defenses when discovered. Alternate plans and plans for employment of reserves contribute to flexibility.
- (6) The availability and planned utilization of fire support means.
- (7) The need for speed and positive control.

134. Ship-to-Shore Planning Sequence

Ship-to-shore movement plans are prepared concurrently by the corresponding naval and landing force commanders at the several echelons of command. Plans are usually formulated in the following sequence—

a. Landing force and naval requirements for ship-to-shore movement means are consolidated.

b. Detailed landing force and naval ship-to-shore plans are prepared to support the tactical plan. Ship-to-shore movement means available within both the landing force and naval force are applied to meet the overall requirement for means.

c. If the means available cannot satisfy the requirements, the landing force and/or amphibious task force commander request that additional means be made available. If additional means cannot be made available by higher authority, the ship-to-shore movement plans must be adjusted accordingly.

d. The final detailed landing force and naval ship-to-shore plans are prepared after the final allocation of means has been made. These plans represent the sum of detailed landing plans prepared by corresponding naval and landing force echelons at all levels from the individual ship/embarcation term to the amphibious task force level.

135. Organization for Ship-to-Shore Movement

a. *Organization for the Ship-to-Shore Movement Involves—*

- (1) Area organization of the objective area to facilitate exe-

cution and control of the ship-to-shore movement (pars. 75—78).

- (2) Organization of forces with particular consideration to requirements of the scheme of maneuver ashore and to the characteristics of assault shipping and ship-to-shore movement means (par. 85).

b. Organization of Shipping and Craft.

- (1) The transport (APA, LPH, LPD) normally is the basic unit of the assault shipping. An assault landing team is normally embarked in one of these types. In some cases, assault landing teams may be landed in the assault from landing ships, either directly on the beach, or by amphibious vehicles launched from landing ships (LST or LSD).

- (2) The landing ships, landing craft, and amphibious vehicles employed for assault landings are organized to correspond to the landing force organization for landing. Landing craft and/or amphibious vehicles of Army landing force units are organized for the ship-to-shore movement so as to maintain unit integrity and internal command relations to the extent practicable. The organization of ships, craft, and vehicles must meet control and maneuverability requirements. The organization includes boat waves, boat groups, and boat flotillas.

- (a) The boat group is the basic organization of landing craft and amphibious vehicles. One boat group is organized for each assault landing team to be landed in the first trip of landing craft or amphibious vehicles. The personnel required to command and operate a boat group are the boat group commander, assistant boat group commander, wave commanders, wave guide officers (for amphibious vehicle waves), an officer, petty officer or non-commissioned officer designated as boat officer to command each landing craft or amphibious vehicle not carrying one of the above officers, and crews and necessary communications personnel.

- (b) A boat wave consists of the landing craft or amphibious vehicles within a boat group which carry the troops that are to be landed simultaneously. The organization into waves facilitates the control of the boat group as a whole, for it permits the group commander to exercise command through wave commanders rather than dealing directly with individual

landing craft or amphibious vehicles. During the ship-to-shore movement, the boat wave operates as a unit and is maneuvered by the boat wave commander. The boat group lands in successive waves in accordance with prearranged plans. For assault purposes, waves are numbered successively from front to rear as first wave, second wave, etc. When landing ships are used to land assault landing teams in assault by beaching they are organized as waves but are not included in a boat group.

- (c) The boat flotilla is an organization of two or more boat groups organized to facilitate control when the operation of two or more boat groups demands the presence of a common commander.

c. Organization of Assault Units for Landing.

- (1) The assault landing team is the basic task organization of assault divisions of the landing force for the movement from ship to shore. The assault landing team should be differentiated from the embarkation team which is an administrative grouping of forces for the overseas movement.
- (2) For movement by landing craft and amphibious vehicles, assault landing teams are formed into boat teams. A boat team consists of the troops and equipment carried in one landing craft or amphibious vehicle in one trip from ship-to-shore. The boat team commander is the senior landing team officer or non-commissioned officer aboard. Landing craft and amphibious vehicles carrying boat teams which are to be landed simultaneously are formed into boat waves. The assault landing team elements in each wave are commanded by the senior commander of the landing team elements boated in that wave. This organization is applicable whether the landing team is transported in Army or naval craft and vehicles.
- (3) For movement by helicopter, assault landing teams are formed into helicopter teams which constitute a load for the type helicopter to be used. The helicopter teams (heliteams) each consist of the personnel and equipment carried by one helicopter in one trip from ship to shore. Helicopters which contain the personnel and equipment which are to be landed in the same landing zone at approximately the same time are formed as a helicopter wave. A helicopter flight is an individual helicopter, or

two or more helicopters grouped under a flight leader and launched from a single helicopter carrier or base at approximately the same time. A helicopter wave is composed of one or more flights and can consist of helicopters from more than one ship.

- (4) Airborne forces may be landed by parachute, transport aircraft, or seaplane. For a detailed discussion of the organization of airborne forces for assault landings, see FM 57-30.

136. Control of Ship-to-Shore Movement

a. The amphibious task force commander is responsible for control of the ship-to-shore movement. Initially, the entire ship-to-shore movement is centrally controlled to permit coordination of support with the landing of assault elements (fig. 3).

b. The system for the control of the ship-to-shore movement is governed by the landing force plan for landing. The maximum area over which effective centralized control may be exercised varies in each situation and is in large part, governed by communication capabilities.

c. Control of the movement of landing ships, landing craft, and amphibious vehicles from the transport and landing ship areas to landing beaches is exercised through a Navy control group. The organization of the control group is based on the arrangement and number of landing beaches to be used. Control officers and control ships are designated by the amphibious task force and naval transport group commanders for their respective levels of command. The control organization parallels the landing force organization for landing and may include—

- (1) The central (force) control officer, designated by the amphibious task force commander for overall coordination, and embarked in the central control ship.
- (2) An assistant central control officer for each transport organization landing an assault division when two or more divisions are landing simultaneously. Assistant central control officers are embarked in assistant central control ships. They coordinate, as necessary, the movement of landing craft, amphibious vehicles, and landing ships to their respective beaches.
- (3) A primary control officer for each transport organization landing an assault battle group landing team or equivalent formation. Primary control officers are embarked in primary control ships. They control the move-

ment of landing craft, amphibious vehicles, and landing ships to and from the beaches. When elements of an assault landing team are to be landed over widely separated beaches, a primary control officer may be required for each beach.

- (4) Secondary control officers, embarked in secondary control ships, stationed on the line of departure to assist the primary control officer.
- (5) Approach lane control officers, embarked in approach lane marker ships, stationed at the seaward end of the approach lanes. They control the movement of the waves between the seaward end of the approach lane and the line of departure. When amphibious vehicles are used in the ship-to-shore movement, they normally are launched near the line of departure and do not come under the control of the approach lane control officers.
- (6) Boat group commanders embarked in landing craft, who are in command of all boats of their boat groups from the time the boats are lowered, or they report, until their last organized wave has landed. Each boat group commander operates initially under the commanding officer of his respective assault transport. After reporting to the control organization, each boat group commander operates under the direction of the primary control officer until all waves of his boat group have landed.
- (7) Assistant boat group commanders embarked in landing craft. They assist the boat group commanders in their duties.
- (8) Wave commanders embarked in landing craft and amphibious vehicles. These officers form the waves and, under the direction of the boat group commander, control all subsequent movements of the waves.
- (9) Wave guides embarked in wave guide boats when amphibious vehicles are used. They assist in the navigation of amphibious vehicles to the beach.
- (10) Casualty evacuation control officers initially embarked in control ships and, where the situation permits, transferred to specially designated evacuation control ships located off the landing beaches. These officers control the evacuation from their assigned beaches.

d. Control of the movement of helicopters from ships to landing zones is exercised by the amphibious task force commander through the tactical air control center (TACC) aboard the flagship. The

naval control system as discussed herein is premised on employment of landing force helicopters for the ship-to-shore movement.

- (1) Transport helicopter units employed in the ship-to-shore movement are subordinate elements of the landing force under command of the landing force commander. These units are directed to execute the ship-to-shore movement in accordance with the amphibious task force plan for control of the ship-to-shore movement.
- (2) The control of the helicopter ship-to-shore movement is decentralized to a helicopter direction center (HDC), a subordinate control agency of the naval tactical air control center. The HDC is aboard one of the Navy helicopter transports (LPH). Control is exercised as follows—
 - (a) Individual ships control the launching of their embarked helicopters and direct them to flight rendezvous points located in the immediate vicinity of each ship. After the flight has assembled at the rendezvous point, the parent ship then directs the flight leader with his flight to proceed to a wave rendezvous point where it forms, as required by plan with flights from other ships into a helicopter wave.
 - (b) From the wave rendezvous points, the HDC vectors waves to the departure point located at the seaward end of the helicopter approach lane system. For schedule waves, this is done in accordance with the time schedule in the employment and assault landing table. From the departure point, waves are dispatched along the selected approach lane to the initial point located at the inland terminus of the approach lane in the vicinity of the landing zone.
 - (c) Helicopter waves remain in the approach lane from one air control point to the next. Tactical air coordinators (airborne) assist the HDC in directing the maneuver of helicopter waves to designated landing zones and return.
 - (d) Upon arrival at the initial point, the wave leader reports to the HDC, deploys into landing formation and proceeds to the landing zone.
 - (e) Immediately after discharging their loads, helicopters rendezvous by flights and proceed via the retirement route to a breakup point near their parent ship. At this point, helicopters are released by the HDC to return to their ship or are dispatched for other use.

- (3) Upon release from ship-to-shore movement tasks, landing force helicopters are based ashore and control of Army air traffic is exercised by an Army flight operations center.

137. Tactical-Logistical Group

a. A tactical-logistical group (Tac Log Group) is a group organized from personnel within the landing force to advise Navy control officers promptly of landing force requirements during the ship-to-shore movement.

b. The Army landing force Tac Log Group is a temporary agency consisting of personnel designated by the Army landing force commander. Tac Log Groups are similarly formed by subordinate commanders of the landing force down to assault landing team level. The group functions as the commander's staff liaison representatives for the purpose of advising corresponding Navy control officers of landing force requirements while the ship-to-shore movement is being executed.

c. The Tac Log Group of each echelon of the landing force is embarked in the same ship with the Navy control officer exercising control over the ship-to-shore movement of that echelon. The officers detailed to the Tac Log Group must have copies of the operations plan and the administrative plan for their particular echelon and must be intimately familiar with landing documents such as the serial assignment table, landing sequence table, assault schedule, and individual loading plans of the various ships lifting that echelon. The Tac Log Group operates in the radio net of the landing force echelon which it represents.

d. A Tac Log Group performs the following tasks during the ship-to-shore movement—

- (1) Informs appropriate commanders of the landing force and its subordinate echelons of the progress of the ship-to-shore movement.
- (2) If adjustments are ordered in the sequence of landing, it assists the corresponding Navy control officer in making such adjustments.
- (3) Assists the corresponding Navy control officer in identifying units, equipment, and supplies in the vicinity of the control ship.
- (4) Passes landing force requests to the corresponding Navy control officer.
- (5) Furnishes the corresponding Navy control officer with

information as to the location of units, equipment, and supplies aboard ships.

e. Within assault divisions of the landing force, Tac Log Groups are established as follows—

Inf Div Echelon	Armd Div Echelon	Tac Log Gp	Navy Control Ship and Navy Control Officer
Div Bde ¹ BGLT	Div CC BLT	Div Tac Log gp Bde or CC Tac Log gp BGLT or BLT Tac Log gp	Asst central control Primary control Primary control

¹ When employed as an echelon of the division landing force.

138. Ship-to-Shore Movement Categories

a. For convenience in planning for the initial or assault unloading period and to provide flexibility in its execution, three categories of movement are employed. These are scheduled, on-call, and nonscheduled movements.

b. Scheduled movements are those for which landing ships and craft, amphibious vehicles, or helicopters containing the personnel, equipment, and supplies which are to be landed simultaneously are formed as scheduled waves. Scheduled waves are formations of landing craft, amphibious vehicles, landing ships, or helicopters carrying assault elements of the landing force whose time and place of landing are predetermined.

c. On-call movements are those involving assault craft and vehicles containing personnel, equipment, and supplies whose need ashore shortly after H-hour is anticipated, but whose time or place of landing cannot be accurately predicted. They are on-call to previously designated commanders who request landing at the desired time and place through their Tac Log Group. The number of on-call units or items must be kept to a minimum if their high priority for landing status is to be preserved.

- (1) Depending on availability of landing means, on-call units and supplies may be loaded in assault craft or vehicles initially or may utilize the second trip of such means for landing. On-call waves of surface craft or vehicles either report to specified control vessels at predetermined times or remain in a transport area until required. On-call elements and supplies to be landed by helicopter are held in readiness aboard helicopter transports. They are landed on-call of the responsible landing force commander.

- (2) Amphibious vehicles preloaded with selected supplies (floating dumps) for which a need can be foreseen before such supplies are available ashore through regular unloading operations, are placed in an on-call status. Shortly after H-hour such preloaded amphibious vehicles report to control vessels and are dispatched to shore at the request of the commander ashore through his Tac Log Group.

d. Nonscheduled movements are those for the landing of landing force elements and supplies held in readiness for landing during the assault unloading period, but not included in either the scheduled or on-call category.

- (1) This category usually includes the assault reinforcing units of assault divisions and elements of higher echelons that are to debark before the general unloading period begins. The probable sequence of landing of nonscheduled units is determined during planning and is shown in the landing sequence table (par. 140). Nonscheduled units are landed according to requirements of the troop commander concerned. The landing of nonscheduled units is directed when the need ashore can be predicted with a reasonable degree of accuracy. The responsibility for their landing may be assigned by the amphibious task force commander to the commanders of the cognizant naval transport organizations. In the landing of nonscheduled units, the maximum coordination between landing force and naval echelons is essential to insure efficient use of landing ships and craft. The control officers concerned regulate the movement to landing beaches of ships and craft containing units and supplies in accordance with instructions from appropriate naval transport organization commanders and requests from the Tac Log Groups. The following basic procedures apply whether the landing of nonscheduled units and supplies is centralized at the amphibious task force level or decentralized—

- (a) *Initiation of the movement.* As soon as the situation ashore permits, the landing force commander requests the amphibious task force commander to land the required nonscheduled units. In order to provide maximum support to the landing force, reduce the communication load, and facilitate the efficient use of landing craft, the request includes as many units as it is anticipated will be required ashore during a specified period. Unless a need for change is indicated, the list of units

requested follows the sequence shown in the landing sequence table. The initial list of units to be so landed is determined, to the extent practicable during planning by agreement between the landing force and amphibious task force commanders. In reaching this agreement, consideration is given to the anticipated situation ashore and the availability of landing craft at the time it is estimated the landing of the non-scheduled units will commence. Requests for change in the initial list of nonscheduled units to be landed are made by the landing force commander as soon as possible after the need for such change arises.

- (b) *Continuation of the movement.* The landing force commander continually reviews the progress of the landing. Periodic and timely requests are submitted to the amphibious task force commander for landing such units and items of supply as are desired.
 - (c) *Change in planned sequence or place of landing.* Since units and supplies must be placed on the beaches as required by the situation ashore it may be necessary to alter the planned sequence for landing. However, this may be done only at an overall sacrifice of speed. The landing force commander may specify changes in sequence or place of landing of any unit. A combat loaded ship, however, is adaptable to only minor changes in the plan for unloading equipment and supplies. The landing of nonscheduled units may, by request of the landing force commander, be suspended entirely for a temporary period if required by the situation ashore. Likewise a shore party commander may request the appropriate control officer to stop the landing of units on his beach when conditions justify such temporary suspension. Units whose landing has been deferred upon request of the landing force are not landed until again specifically requested. In requesting such deferment, the landing force takes note of the fact that such action may disrupt the planned use of lighterage. The size of a unit, or the stowage of supplies in a ship, may be such that if not unloaded, the deferment will interfere with subsequent unloading.
- (2) For helicopter movements, the nonscheduled landing category consists of any landing force elements and equipment or supplies which are to be moved ashore by

helicopter and which are not included in either the scheduled or on-call categories. The landing of this category commences upon completion of scheduled movements in accordance with the requests of responsible landing force commanders. Once started it may be interrupted to permit on-call landings or the landing of other selected units or supplies or may be temporarily suspended because of unforeseen conditions such as a requirement of the landing force to employ landing force helicopters for other tactical or logistical purposes. Modification of the planned sequence of movement should be kept to a minimum since alterations will complicate the ship-to-shore movement.

139. Serial Numbers

a. Serial numbers are used as a convenient means of identifying elements of the landing force and other amphibious task force elements which are to be landed prior to the expected commencement of general unloading. The use of serial numbers facilitates control of the ship-to-shore movement by serving as a brevity code to identify units and as an aid in preparation of check-off lists to assure all units are landed. They do not indicate a priority or sequence of landing.

b. Landing force elements whether in the scheduled, on-call, or nonscheduled unit category are assigned serial numbers. Landing force supplies including those in floating dumps are not assigned serial numbers. The Army landing force commander allocates a block of numbers to each subordinate commander. Blocks of numbers are suballocated down to the lowest unit which prepares detailed plans for landing of the assault echelon of the landing force. A single serial number is assigned to each serialized element (unit, part of a unit, or grouping, including its accompanying equipment) which for tactical or logistic reasons is to be embarked entirely in one ship and is to be landed as a unit at approximately the same time at one landing beach or landing zone.

140. Ship-to-Shore Planning Documents

Specific landing plan documents which present in detail all instructions for execution of the landing are prepared by various command echelons of the landing force and naval force. Landing plan documents which are normally prepared or used by an Army landing force in planning for an amphibious operation are discussed in appendix IV.

CHAPTER 6

SIGNAL COMMUNICATIONS PLANNING

Section I. GENERAL

141. Scope and Requirements

a. The fundamental principles governing signal communications in amphibious operations are essentially the same as those in other types of joint action. The communications-electronics systems of participating Service components remain intact but are integrated into a single system by means of lateral connections and employment of common procedures. The additional communications required by the amphibious task force commander for control of the force as a whole must also be considered.

b. Some special signal communication requirements encountered in amphibious operations include—

- (1) Close coordination and liaison at all parallel echelons of the amphibious task force and the preparation of a single overall communication plan.
- (2) The physical limitations on communication means, other than radio and visual, require strict radio discipline and the immediate development of integrated communication means ashore.
- (3) The vulnerability of electrical communication equipment to damage from salt water requires special waterproofing and special handling of equipment.
- (4) The necessity for access to communication equipment needed in the assault establishes the requirement for a special loading plan.
- (5) Special communication facilities are required by units of the Army landing force due to the nature of the operation.

142. Signal Communications Responsibilities

a. The commander establishing the amphibious task force is responsible for—

- (1) Allocating frequencies among the Service components of the joint force.

- (2) Establishing priorities for frequency requirements during each phase of the operation.
 - (3) Assigning to participating component commanders the responsibility for providing communications required.
 - (4) Preparing the communications-electronics plan containing the details of communications which are of joint interest.
 - (5) Prescribing standard procedures within the joint force for signal security, intelligence, and precedence.
 - (6) Reviewing, coordinating, and consolidating communication requirements of component commanders.
- b. The amphibious task force commander is responsible for—
- (1) Determination of communication requirements of Navy forces, review and approval of communication requirements of the landing force and other forces while operating as part of the amphibious task force, and for consolidation of communication requirements for the amphibious task force as a whole.
 - (2) Acquisition and assignment of necessary technical facilities such as frequencies, call signs, and crypto channels to subordinate elements of the force.
 - (3) Determination of priorities and allocation of shipboard communication facilities to each participating force. Certain radio equipment is installed aboard amphibious ships for use by the landing force. Other available shipboard facilities include boat and helicopter messengers as well as operating spaces.
 - (4) Determination, consolidation, and coordination of the electronic warfare requirements of all participating forces.
 - (5) Establishment of provisions to ensure adequate communications for the naval elements of the amphibious task force during the planning phase.
 - (6) Preparation of plans in support of cover and deception plans prescribed for the operation.
 - (7) Announcement of requirements for establishing liaison between all commands of the participating forces for communication planning.
 - (8) Preparation and promulgation of a complete and coordinated plan for the employment of communications during the operation.
- c. The Army landing force commander is responsible for—
- (1) Establishing provisions for adequate landing force communications during the planning phase.

- (2) Determination of requirements for communication facilities controlled by higher headquarters and submitting these requirements to the amphibious task force commander.
- (3) Preparation of requests for the allocation of shipboard communication services or facilities for use by landing force units while embarked.
- (4) Development of a landing force electronic warfare plan and stating the requirements for electronic warfare support to the amphibious task force commander.
- (5) Maintenance of liaison with the amphibious task force commander and subordinate landing force units in all communication planning matters.
- (6) Development and promulgation of a complete and coordinated communication plan for the landing force and for submitting this plan to the amphibious task force commander for review, coordination, approval and inclusion in the amphibious task force communication plan as appropriate.

d. Responsibilities of Commanders of Other Forces. Commanders of other major forces of the amphibious task force are responsible for the determination of their communication requirements and the submission to the amphibious task force commander of those requirements which must be met by other elements of the amphibious task force.

143. Communication Means

a. The physical conditions of amphibious operations require an almost complete dependence upon radio communications during the assault landing. Radio, including radio-teletype and radio facsimile, is especially adapted to amphibious operations in that it requires no physical connecting links, can be used over long distances, and can be used between rapidly moving units. Radio communication is complicated by the relative fragility of the equipment, vulnerability to damage by salt water, heavy operational loads, multiplicity of frequencies, vulnerability to enemy interference, and rigid security requirements. Except for some radios operated by Marine Corps signal detachments aboard amphibious force flagships for embarked landing force headquarters, ship radio installations which operate in landing force nets are operated by embarked landing force personnel.

b. The complexity and limitations of radio communications necessitate the establishment of telephone systems (wire or radio relay) as soon as practicable after landing by assault elements. Temporary wire lines may be installed if time and the tactical

situation permit. Telephone systems are consolidated, expanded, and improved as subsequent units land. Communications ashore may be linked with headquarters ships at sea by means of facsimile, radio-teletype, and radio-relay equipment.

c. During the movement to the objective area, operational messages which cannot be transmitted by other means are delivered by aircraft or surface vessel. Messenger service is established ashore as soon after the assault as practicable.

d. Visual means should be used whenever conditions are favorable. Visual means employed are flashing light, semaphore, pyrotechnics, panels, flag hoist, and arm and hand signals.

e. Whistles, sirens, bells, and similar devices may be used to transmit short messages which are interpreted in accordance with a prearranged code.

f. During the embarkation, landing force units establish message centers at locations near the ships' communication spaces. These message centers will remain in operation until the landing force command echelon has left the ship. During the movement to the objective area, the landing force depends solely upon naval agencies for the intraconvoy and external communications. All landing force communications during the voyage must be processed through the ship's communication officer. The shore party establishes advance message centers ashore early in the assault. From these centers, messenger service is instituted from the beach to ships in the transport area.

Section II. COMMUNICATIONS PLANNING

144. General

a. Changes in command relationships, task organization, and disposition of forces require maximum flexibility in communication plans. These plans must not create a requirement for a large number of nonessential functional circuits. Multiple-purpose circuits must be utilized to the maximum by all forces. Common agencies must be used where practicable in order to assist in the reduction of mutual interference by decreasing frequency requirements. Use of alternate means other than electrical must be exploited to ensure the most rapid and secure delivery of information between widely dispersed forces within the amphibious task force.

b. The communication requirements of an amphibious operation vary with the size and composition of the amphibious task force. Planning to meet these requirements commences, and is conducted concurrently with other planning but embodies the added problem of ensuring that communications support is adequate during the

planning period. The following factors must be considered in providing communications during the amphibious operation.

- (1) Each major command of the amphibious task force must have communications compatible with the tactics and techniques employed by that force. The channels provided must assure effective exercise of command and coordination of supporting fires. The dissimilar nature of forces involved may require additional circuits to permit the desired degree of command and control.
- (2) Elements of the amphibious task force may operate in widely separated areas during certain phases of the amphibious operation. To ensure that adequate communications are provided for each major group of the amphibious task force, some duplication may be necessary. The communication plan of each element must, however, permit operation of the force as a whole without undue interference between elements when they are in close proximity. In addition, the nature of the amphibious assault, with its requirement for provision of extensive support from the sea by surface and air means, makes it imperative that plans for tactical communication circuits be detailed and their preparation thoroughly coordinated.
- (3) Separation of individual ships and forces as a passive measure of defense against nuclear weapons increases the requirement for longer range radio communications. Accordingly, allocation of shipboard equipment must be considered carefully in the light of naval and landing force requirements. In this respect, the nature of shipboard equipment allocated for the control of or use of forces landing by helicopter must be planned with particular consideration to the nature of the terrain and the distances which may exist initially between landing zones ashore and the ships of the amphibious task force.
- (4) Plans must ensure that the administrative, and tactical communication requirements of all elements of the amphibious task force are met by specific technical provision of communication circuits and nets, and that these provisions are fully coordinated.
- (5) Consideration must be given to the communication requirements involved in the actual assembly of the amphibious task force.

145. Communications During the Planning Phase

Communications must be established at the commencement of the planning phase between all major participating commands.

The preservation of maximum communication security is essential, and it must be maintained even though planning headquarters are separated by great distances. Personal liaison will reduce this communication security problem as well as facilitate concurrent planning.

146. Communications During Embarkation

Before embarkation commences, plans must provide for adequate communications between naval elements and the forces to be embarked. The landing force commander normally will be assigned the responsibility of planning for, and providing or obtaining, communications in the embarkation area. This may include the coordination of permanent facilities, military or civilian, with those organic to landing force units. Plans must provide for establishment of communications in the pier or beach areas to control embarkation. Early liaison must be established between corresponding naval and landing force elements to ensure efficient functioning of communications during embarkation.

147. Communications During the Rehearsal

In order to test and correct deficiencies discovered in the communication systems, equipment, and techniques, plans should provide for a full-scale rehearsal for all elements of the task force (pars. 247-253). Communication security requirements may dictate adoption of the following precautionary measures during the rehearsal:

- a. Use of minimum power for establishment of radio nets.
- b. Change of frequencies and call signs. However, the security gained by this technique must be weighed against the confusion which might occur during subsequent phases of the operation as a result of this change. The decision as to the degree to which this security device may safely be employed will depend primarily on the state of training of the forces involved.

148. Communications During Movement to the Objective Area

a. Plans for communications during the movement to the objective area will require Navy forces to provide all external and intership communications. The use of communication facilities, particularly radio, must be severely restricted to prevent disclosure to the enemy of the location, movement, and intentions of the amphibious task force. The amphibious task force commander prescribes the conditions of radio silence in effect during the movement. Communication plans must reflect these restrictions and

provide for the handling of important messages within the imposed limitations (pars. 254-261).

b. The amphibious task force commander controls all communications of the amphibious task force during movement to the objective area. This control is delegated to the commander of each movement group, who maintains positive control of communications within his particular movement group, including communications of embarked landing force elements.

c. Radio transmitters or receivers may be operated for drill, test, or other purposes only after security restrictions are removed, or when specific permission of the movement group commander has been received. The test and repair of equipment may be permitted by ship commanding officers, provided positive measures are taken to prevent radiations beyond the ship's hull.

d. Provisions are made whenever practicable for helicopter or fast-ship courier and messenger service within movement groups, and for air delivery to flagships of other movement groups by carrier aircraft or seaplane.

149. Communications During the Assault

a. During the assault, primary reliance must be placed on radio and radio relay communications. This requirement is considered in planning the numbers and types of circuits required and the assignment of available frequencies. Communication plans of both naval and landing forces provide for sufficient channels of communications during the ship-to-shore movement to permit the exercise of those measures of control and coordination which are required at all echelons. Communication plans of the landing force provide for the rapid development of landing force communication systems ashore in order to insure facilities which respond to the needs of the tactical situation as the assault progresses (ch. 12).

b. In the objective area, all communications with forces external to the amphibious task force are provided initially by the amphibious task force commander. As soon as practicable, installation of long-range facilities ashore is completed by the landing force commander, who then assumes responsibility for external communications for forces ashore.

c. Radio equipment required for interim use by the landing force in operating landing force radio nets while still afloat, is provided from facilities installed in amphibious shipping. The use of such equipment allows landing force units to have their complete allowance of equipment available for the movement ashore.

d. Radio silence is usually lifted just prior to H-hour on order of the task force commander. This is desirable in order to test all circuits immediately prior to the assault.

150. Communications Deception and Countermeasures, and Protection Against Enemy Countermeasures

a. The scope of employment of communications deception and countermeasures is usually specified in directives from higher authority. However, the needs of the amphibious task force for the employment of these techniques should be made known to higher authority during planning. The employment of communications deception and countermeasures is ordinarily most profitable when the enemy has definitely committed himself to a course of action, or when the value of confusing or disrupting his radio communications outweighs the value of the communications intelligence which might be obtained by passive measures. Plans for the use of communications deception and countermeasures must be flexible because the employment of such techniques remains a command decision.

b. During planning, equipping, and training for the operation, commanders must bear in mind that the enemy may attempt to deny the successful employment of radio equipment by radio jamming, especially during the assault phase. Just as in normal land operations, measures must thus be taken to minimize the effects of enemy interference. These measures may include—

- (1) Use of alternate frequencies and call signs.
- (2) Development of plans for locating enemy jamming stations.
- (3) Provision of specialized training for all operators in antijamming procedures.
- (4) The use of authentication.
- (5) Provisions for other means of communication (such as beamed super-high-frequency, infrared, visual, boat messenger, and helicopter messenger).
- (6) Offensive action to locate and to neutralize or destroy enemy jamming stations.

151. The Communication Plan

a. The amphibious task force communication plan is based on the operation and administrative plans which it is designed to support, as reflected in the communication requirements of the amphibious task force commander, and the coordinate requirements of the commanders of the participating Service component

forces. These may include radio and missile guidance and control frequencies, call signs, compatible cryptographic and authentication systems, and special communication equipment or support.

b. The communication plan fulfills the communication requirements of the operation in terms of circuits, channels, and facilities required, and policies and procedures governing the operation and coordination of the overall system. The plan includes—

- (1) General coverage of the communication situation, including assumptions, guiding principles, and the concept of operational communication employment.
- (2) Announcement of the communication mission.
- (3) Delegation of communication tasks and responsibilities to major components of the force.
- (4) Detailed instructions relative to the organization, installation, operation, coordination, and maintenance of the communication system.
- (5) Assignment and employment of call signs, frequencies, cryptographic aids, and authentication systems.
- (6) Instructions concerning countermeasures, cover and deception, security, recognition and identification, navigation aids, and other special communication and electronics functions.
- (7) Communication-electronics logistics support.

c. The plan is prepared in minute detail to facilitate its use by participating commanders at all echelons. When information contained in any of the various appendixes to the communication plan is to be included in subordinate commanders' communication plans, sufficient copies must be provided to permit inclusion therein. This procedure eliminates duplication of preparation and reproduction, and minimizes the possibility of errors.

d. Communication plans of Service components of the task force are based upon the amphibious task force communication plan. The number and scope of those plans should be kept to the minimum consistent with distribution and security considerations.

Section III. ARMY LANDING FORCE COMMUNICATIONS

152. Army Landing Force Communication Requirements

a. The communication requirements for a landing force in an amphibious operation include those normal to a land campaign and, in addition, special requirements incident to—

- (1) Administrative support control.

- (2) Naval air support.
- (3) Naval gunfire support.
- (4) Influencing the ship-to-shore movement of units, equipment, and supplies.

b. Landing force communications undergo a continuous transition during the assault. Initially, the landing force is dependent almost entirely on radio nets. As the landing force becomes established ashore, successively higher echelons install telephone circuits (wire or radio relay) from the beach inland. The normal radio nets are usually established and opened upon the initiation of the ship-to-shore movement. Initially, all stations will be afloat. Progressively, as the assault forces land, a transition takes place in which stations are transferred from an afloat to an ashore status. Each command echelon of the landing force undergoes this transition.

c. Throughout the ship-to-shore movement, naval communication channels, parallel to those of the landing force but established for different purposes, exist. These may be employed in an emergency by the landing force; conversely, in an emergency, the naval forces may use landing force facilities.

153. Shore Party Communications

a. The shore party communications, provided by signal elements of the Engineer Amphibious Support Command, are an integral part of the landing force network (par. 92). They provide for—

- (1) Landing force participation in control of the ship-to-shore movement.
- (2) Operation, control, and direction of administrative support of the landing force.
- (3) Temporary telephone communications between the beaches and tactical organizations inland.

b. Shore party radio communications include—

- (1) A local net linking the shore party commander, beachmaster, shore party message center, and other shore party installations as required.
- (2) The shore party command net which links shore party commanders, tac-log groups, and principal headquarters of the landing force.
- (3) Shore party laterals which link each shore party with adjacent shore parties.
- (4) Liaison nets which provide communications between the shore party and the tactical headquarters ashore to

facilitate the response of the administrative support system to tactical requirements.

c. The shore party has access to naval nets through the beachmaster who is responsible for establishing and maintaining communications with naval agencies afloat.

154. Naval Gunfire Communications

The control and direction of naval gunfire support is provided through the following nets of primary interest to the landing force—

a. *The Shore Fire Control Spotting Net.* The primary purpose of this net is to conduct naval gunfire missions, with either ground or air spotter, and to transmit supplementary information between the fire support ship and the shore fire control parties (SFCP) with landing force elements ashore. This net provides communications between the naval gunfire spotter, the direct fire support ship(s), and the landing team naval gunfire liaison officer, and may include an air spotter.

b. *Division Naval Gunfire Support Net.* This net provides radio communications between the division naval gunfire officer, the naval gunfire liaison officers of the landing teams, and ships in general support of the division.

c. *Naval Gunfire Air Spot.* This net is used when the assigned air spotter does not have radio equipment capable of operating in the shore fire control spotting net. It is used by the air spotter to call for and adjust fire in a manner similar to that employed in the shore fire-control spotting net.

155. Naval Air Support Communications

The nets of primary concern to the landing force in the request and control of naval air support are—

a. *Tactical Air Request Net.* This net is guarded by the tactical air control parties (TACP) at battle group and division levels and by the naval tactical air direction center (TADC). It is monitored by the tactical air control center (TACC) of the amphibious task force and by the air liaison officer (ALO) of the landing force. It is utilized by the TACP to request immediate air support missions from the TADC, to furnish tactical information to the TADC, and to report the effectiveness of air-support missions.

b. *Tactical Air Direction Net.* This net is guarded by the TACP at battle group and division levels, by the TADC, by the TACC, by the tactical air controller-airborne (TAC-A), and by the air-

craft on station to provide air support. The net is used for the control of supporting aircraft in flight on offensive missions and as a means by which aircraft can report and request target information.

c. Tactical Air Observation Net. This net is guarded by the TACP at battle group and division levels, by the TADC, by the TACC, and by the aircraft on observation or reconnaissance missions. The net is used to communicate with tactical air observers and to deliver a continuing and complete description of the ground situation as observed by the tactical air observers.

d. Tactical Alert Net. This net is used for warning of enemy aircraft, submarine, mine, and suicide boat activity. Local area air-raid and air defense control conditions are transmitted over this net. Each unit ashore, beginning with the assault landing team, maintains listening watch on this net until the next higher headquarters is established ashore.

156. External Communications

External communications are provided initially by the amphibious task force for all forces taking part in the amphibious operation. It is important that external communication facilities be established ashore rapidly because naval facilities afloat are usually available for only a limited time.

157. Organization of Headquarters for Landing

To permit the continuity of communications between forces afloat and those ashore, headquarters of divisions, landing groups when formed, and the Army landing force displace ashore in two or more echelons.

CHAPTER 7

ADMINISTRATIVE SUPPORT PLANNING

Section I. GENERAL

158. General

a. The general aspects of planning, applicable to administrative support planning, are described in chapter 3. Planning for other major functional areas, many elements of which impact on administrative support planning, is discussed in chapters 4, 5, 6, and 8.

b. Administrative support planning for amphibious operations is characterized by the necessity for concurrent, parallel, and detailed planning by all participating forces. The scope of unforeseen contingencies which may confront the attacking forces is amplified by the absence of prior physical contact with the enemy in the objective area. Accordingly, administrative support plans must be designed to provide maximum flexibility and the most effective and economical use of resources.

c. The most significant influence on administrative support planning for the amphibious operation is the necessity for reliance on forces afloat to provide continuing and coordinated administrative support to the assault echelon of the landing force during that period in which the administrative support system is primarily ship-based.

d. In an amphibious operation, the most significant departure from the normal administrative support system is the necessity for a greater than normal degree of administrative self-sufficiency in elements of the assault echelon of the landing force pending establishment of the normal administrative support system ashore. Administrative support in the amphibious assault starts from a ship-based status and proceeds through decentralized beach support areas established ashore. In general, the subordinate echelon beach support activities come under centralized control and are expanded as successively higher command and control agencies are established ashore.

e. The discussions in this chapter are particularly applicable to administrative support planning for an amphibious operation in

which the operational purpose is invasion of a large land mass which requires development of an administrative support system to support a continuing land campaign. The principles and procedures set forth herein are also applicable to operations of lesser magnitude.

159. Principles

Basic administrative support principles are generally applicable to the amphibious operation. Differences dictated by the nature of the operation are reflected in the following principles which are applicable in planning for amphibious operations—

a. The prime objective in planning for administrative support is timely and adequate support of tactical operations to successfully establish the force ashore. The build-up of an extensive administrative support capability for support of future operations is often a complimentary but secondary consideration.

b. Administrative support operations ashore are initially decentralized and controlled by assault landing team commanders in the interest of unity of command ashore.

c. Assault units of the landing force must be reinforced to provide an interim administrative support capability until such time as administrative support can be provided by the next higher echelon.

d. Commanders of assault units must be relieved of extraordinary administrative support responsibilities as soon as possible.

e. Administrative support plans must be simple and flexible, and meet conditions of the operational environment.

160. Planning Considerations

a. Basic considerations which exert a marked influence on administrative support planning for an amphibious operation include the following—

- (1) Size and composition of the amphibious task force.
- (2) Character and expected duration of the operations.
- (3) Distance of the objective area from supporting bases.
- (4) Estimated impact of enemy interference on the overseas supply line.
- (5) Availability of logistic means.
- (6) Target date for execution of the plan.
- (7) The requirement for a progressive increase in the level and form of logistic support as forces build up ashore in the objective area.

- (8) Weather conditions in the objective area.
- (9) Terrain and hydrography in the objective area.
- (10) Availability of local resources, including labor.
- (11) Support required to satisfy prisoner of war and civilian population requirements.
- (12) The nature, extent and require-in-service dates of base development facilities such as port facilities, air strips, missile launching sites, and submarine base facilities.

b. Administrative support planning for an amphibious operation must provide for support under the following adverse conditions—

- (1) In the face of enemy opposition.
- (2) An initial lack of usable ports and airfields.
- (3) Support of the operation from established bases which may be widely dispersed and at great overwater distances from the objective area.
- (4) A general absence of applicable experience factors and known requirements, necessitating reliance on estimates.
- (5) A greater than normal dependence upon support provided by another Service.

c. The estimates upon which administrative support plans are based must meet stringent standards of accuracy. Once shipping is loaded and en route to the objective area, personnel and material not loaded will not be available and units or materiel improperly loaded must remain so. Losses sustained en route are not replaceable until the arrival of followup shipping.

d. The time element in administrative support planning for an amphibious operation is of major importance. The detailed nature of such planning, and the high degree and span of coordination required make time a major element for consideration.

161. Area Damage Control and Rear Area Security

a. Area Damage Control.

- (1) The impact of nuclear and CBR conditions on administrative support operations as discussed in FM 100-10 are applicable to amphibious operations. The administrative support planner must consider these effects carefully, with emphasis on the extraordinary measures occasioned by unique qualities of amphibious operations.
- (2) Congestion on landing beaches under conventional warfare conditions is due in part to the use of the beach as a terminal for the transfer of personnel and materiel

from water to land transport means. Personnel and materiel concentrations are built up in the vicinity of the beaches. Under nuclear and CBR conditions, the beach must be crossed as rapidly as possible with shipment inland to dispersed locations. Terminal and holding operations on the beach must be minimized. This is accomplished by—

- (a) Maximum use of amphibious vehicles from ship to initial destination inland from beaches, or by cargo transfer from landing craft to amphibious vehicles offshore.
 - (b) Maximum use of landing ships to permit rapid unloading of preloaded vehicles which can transport loads to destinations inland from the beach.
 - (c) Procedures and equipment for rapid handling of supplies.
 - (d) Rapid and early construction to permit crossing of the beach by wheeled vehicles and egress from the beach to prepared and protected dump areas.
- (3) Appropriate earthmoving equipment should be provided for in planning to enable rapid construction of protective shelter and to improve existing shelters. Administrative support installations are dispersed and balanced stocks are placed at the various locations to avoid concentration of any given commodity.
 - (4) Each echelon of the landing force from the reinforced division level up prepares an area damage control plan for implementation in the beach area as required. Each shore party from the assault landing team level up organizes area damage control teams for accomplishment of area damage control in their own beach support area, and to assist in area damage control operations in adjacent areas as required. Fundamentals of area damage control operations are contained in FM 54-1 and FM 100-10.
- b. *Beach Support Area Security.*
- (1) The senior tactical commander ashore, i.e., landing team, division or corps commander, is responsible for rear area security in his beachhead area. He will normally assign the function of defense and security of the beach support area, as a defined portion of the beachhead area, to his shore party commander.
 - (2) Combat units may be needed by the shore party commander to accomplish his beach support area security

function. The number and type of units to be included in the shore party task organization as a security force depends on the planned scheme of maneuver ashore and the expected situation during the assault.

- (3) The tactical commander coordinates beach support area security plans with his overall tactical plans, and particularly with portions concerning beachhead flank security.

162. Administrative Plans

a. The administrative plan and administrative order including the format thereof are discussed in FM 101-5. The magnitude and complexity of administrative planning for an amphibious operation require that the plan be divided into manageable components. These components normally include a logistics plan, a personnel plan, and a civil affairs plan which are collectively, the administrative plan.

b. Normally, the three component plans are published as annexes of the operations plan. This use of a series of plans enables the planners to proceed on their segments of the overall administrative plan without the delay which might result if only one plan were prepared. In addition, the plans when published are in more usable form and permit flexibility in distribution.

Section II. RESPONSIBILITIES

163. General

Responsibilities for administrative support planning generally parallel those prescribed for operations planning (ch. 5).

164. Commanders of Mounting Agencies

Commanders designated to provide support during mounting of the amphibious task force participate in the overall administrative support planning. Their responsibilities are described in chapter 14.

165. Amphibious Task Force Commander

The amphibious task force commander is responsible for—

a. Consolidation of those logistic requirements of all elements of the amphibious task force which must be fulfilled by the naval forces and determination of the availability of means to meet these requirements.

b. Allocation of naval means to meet these consolidated logistic requirements.

c. Preparation of the overall embarkation schedule to include plans for the assembly of shipping at points of embarkation (ch. 8).

d. Review and approval of embarkation and loading plans.

e. Organization of assigned logistic shipping into echelons as necessary to insure continuing support of the landing force tactical plan.

f. Provision of means required for the establishment and maintenance of an adequate logistic support system in the objective area.

g. Development of plans for handling prisoners of war and civilian evacuees and internees as well as establishing policy for the administration of civil affairs if not prescribed by higher authority.

h. Development of overall plans for evacuation and hospitalization.

166. Army Landing Force Commander

The Army landing force commander is responsible for—

a. Determination of overall administrative support requirements of the landing force including units, special equipment, and shipping.

b. Allocation of means to meet the administrative support requirements of the landing force.

c. Determination of the landing force logistic requirements to be fulfilled by the naval forces and the submission of these requirements to the amphibious task force commander.

d. Development of plans for the assembly of supplies, equipment, and personnel to be embarked to include those of other forces that the landing force is responsible for embarking.

e. Preparation of the landing force embarkation and ship loading plans and orders, in coordination with the amphibious task force commander (ch. 8).

f. Planning for the coordination of administrative support required by all elements of the landing force.

g. Development of plans for administration of civil affairs in accordance with policies established by the amphibious task force commander and/or higher authority.

h. Preparation of the landing force administrative plans.

167. Other Major Force Commanders

Commanders of other major forces of the amphibious task force are responsible for the determination of their administrative support requirements and the submission to the amphibious task force commander of those requirements which must be met by other elements of the amphibious task force.

168. Army Base Commander

When an army base command is to be employed, the responsibilities of the army base commander for administrative support planning are as described in chapter 15 and in the discussions of administrative support functional areas in subsequent sections of this chapter.

169. Subordinate Tactical Commanders of the Landing Force

a. Administrative planning responsibilities of commanders of subordinate echelons of the landing force generally parallel those listed for the landing force commander in paragraph 166. Administrative planning within assault divisions is usually centralized at division level. Planning for shore party operations and logistical operations in landing zones is a responsibility of the appropriate tactical commander. Shore party commanders provide advice and assistance.

b. Specific responsibilities of commanders in each administrative support functional area are covered in appropriate sections which follow.

Section III. SCOPE OF ADMINISTRATIVE SUPPORT

170. General

a. The scope of administrative support for an amphibious operation includes necessary planning, support during embarkation and movement to the objective area, and support of the landing force ashore in the objective area until termination of the amphibious operation.

b. Support prior to and during embarkation is discussed in chapters 8 and 14. Support during movement is accomplished primarily by naval forces augmented as necessary by embarked personnel. The discussion in this section will cover the scope of administrative support during the amphibious assault to termination of the amphibious operation.

c. Plans for administrative support during the assault must provide for a smooth transition from the interim administrative

support procedures used during the assault landings to the standard procedures employed in conventional operations.

d. The purpose of the discussion in this section is to provide basic information on the development of the administrative support system for an amphibious operation as a basis for more detailed consideration of the various administrative support functional areas in ensuing sections.

171. Development of Administrative Support System

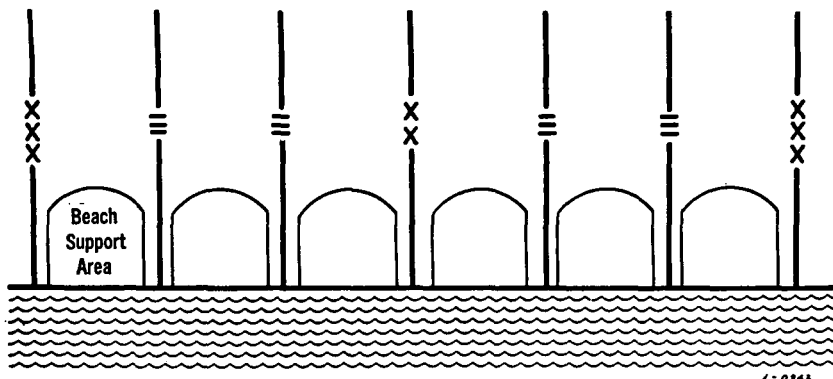
a. As stated in paragraphs 158 through 162, landing force elements which land in the initial assault are dependent on ship-based support and must have a high degree of administrative self-sufficiency.

b. Landing force plans provide for a gradual or evolutionary establishment of the immediate direct support system normally provided a land combat force. Evolution proceeds from the ship-based support status during the initial assault, through decentralized support from beach support areas ashore with a centralization of control and a consolidation of support means as successively higher echelons are established ashore. This progressive development is designed to provide the required degree of administrative self-sufficiency initially to the assault echelon of the landing force; the methodical progression to a centrally controlled administrative support effort; and the relief of each subordinate echelon as soon as possible from abnormal administrative support responsibilities.

c. Development of the administrative support system ashore as described above requires employment of special task organizations called shore parties (par. 92). Shore parties provide the interim administrative support capability in beach support areas. Air-mobile support parties (par. 93) perform comparable functions in support of assault units in landing zones.

d. As each echelon of the landing force moves ashore and inland, initially it is dependent on its shore party operating in the beach support area for administrative support. For example, as illustrated in figure 5, an assault landing team depends on its attached shore party.

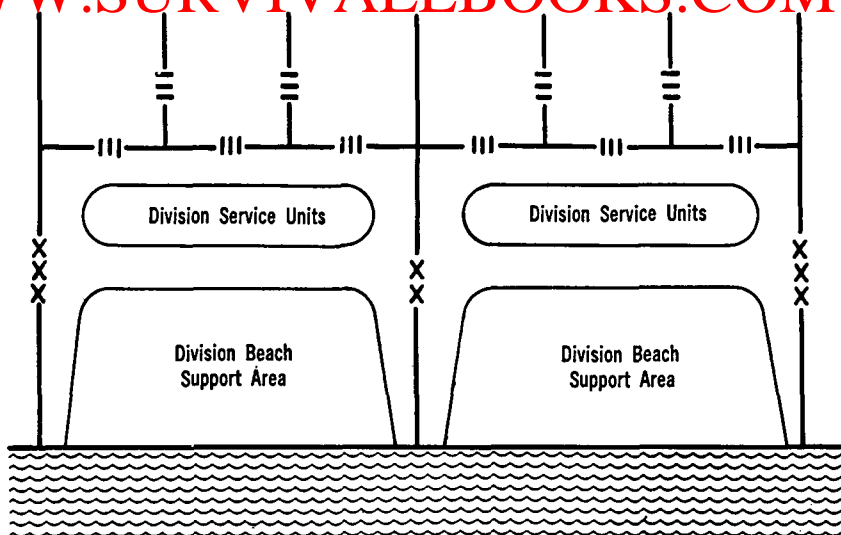
e. For discussion purposes and to best visualize the development of the administrative support system ashore, it is convenient to refer to administrative support stages. Stages as discussed below include a corps stage which is applicable when the Army landing force includes subordinate corps. Stages will be modified as appropriate when this is not the case. Each such stage progresses methodically to the next.



(Beach support areas operated by assault landing team shore parties.)

Figure 5. Administrative support development, assault landing team stage (schematic)

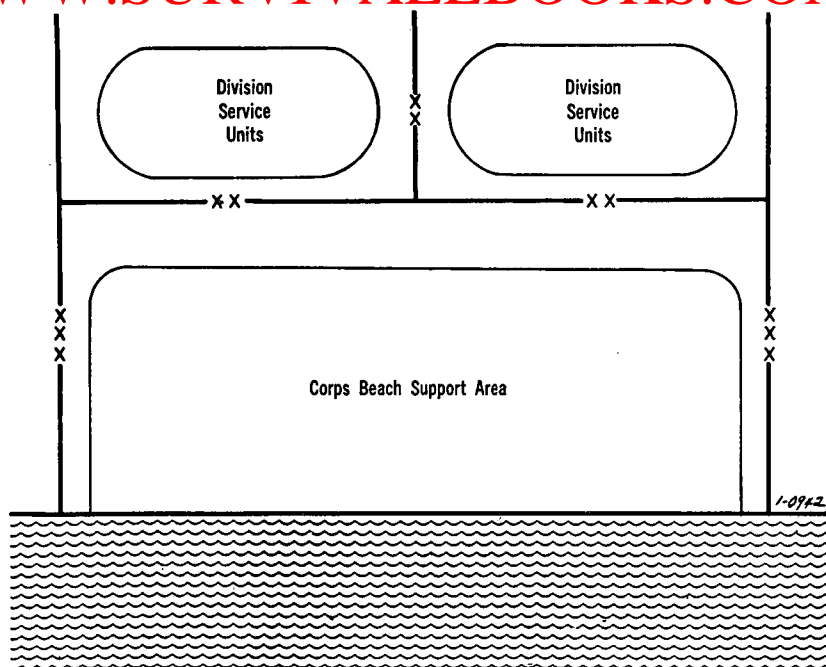
- (1) In the assault landing team stage, the landing team commander is responsible for all operations of his landing team to include shore party operations in the beach support area. During this stage, and particularly under the threat of nuclear and CBR conditions, the requirement for dispersion may necessitate that landing team shore parties operate separate beach support areas for indefinite periods and provide a degree of administrative support normally associated with higher echelon shore parties. A situation of this nature requires provision of requisite service units for assault landing team shore parties.
- (2) Usually, the assault division stage begins when the division commander and the division shore party commander are established ashore with sufficient communications and control means to assume control of tactical and administrative support operations in the division zone ashore. In general, control over landing team beach support areas of the division is consolidated, lateral communications are established and augmented, and landing team shore parties are relieved from attachment to landing teams and attached to the division shore party. Battle group rear boundaries are established and the division commander assumes responsibility for beach support areas and division shore party operations (fig. 6). Organic division service units which have landed are disposed inland from beach support areas, and function in their normal role in support of division units.



(Assault landing team shore parties revert to command of the division commander. The division beach support area is operated by the division shore party.)

Figure 6. Administrative support development, assault division stage (schematic).

- (3) The corps stage is entered when the corps commander and the corps shore party commander are established ashore with sufficient means to assume control of tactical and administrative support operations. In general, control over division beaches is consolidated and lateral communications are extended to include all beach support areas in the corps zone of operations. Division shore parties are relieved from attachment to divisions and come under control of the corps shore party commander. Division rear boundaries are established and the corps commander assumes responsibility for beach support areas and shore party operations. The bulk of all division units are now located forward of the division rear boundary. Organic division service units are established and operating normally as an intermediate link between division units and the beach support areas. During this stage field army and logistical command units, in the followup echelon of the landing force are landed preparatory to the next stage (fig. 7).
- (4) The army base stage is initiated when the field army commander is established ashore with sufficient means to assume control of tactical and administrative support operations.



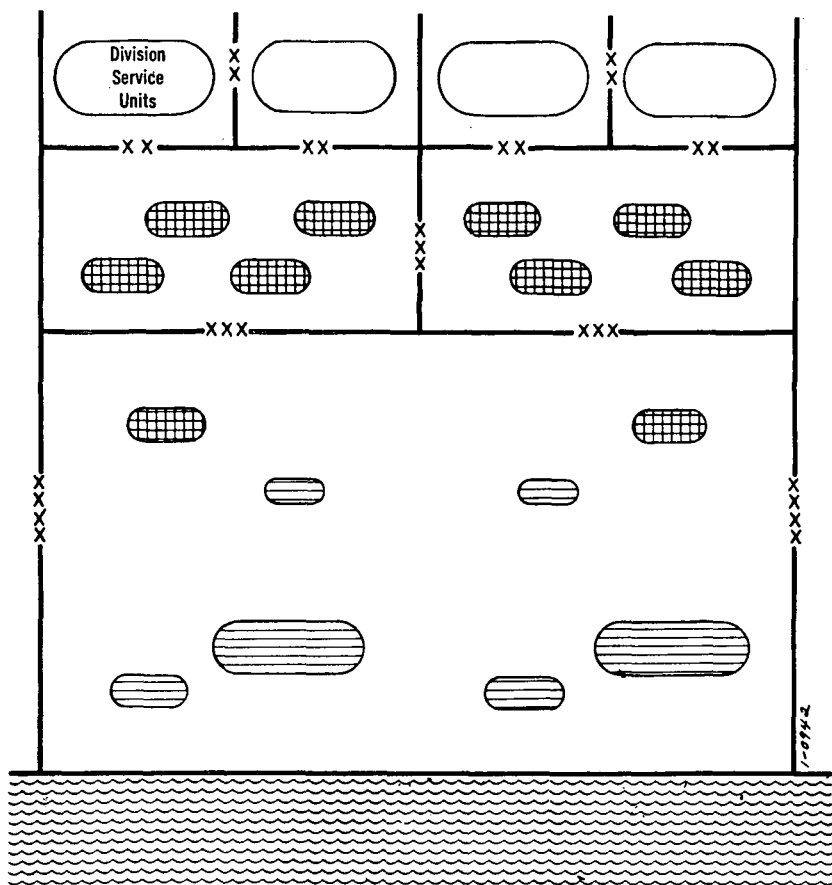
(Division shore parties revert to command of the corps commander. The corps beach support area is operated by the corps shore party. The corps stage occurs when the Army landing force is a field army with subordinate corps.)

Figure 7. Administrative support development, corps stage (schematic).

- (a) In general, the corps beach support areas are considered as one army base area with dispersed facilities. Units of corps shore parties are relieved from attachment to corps and placed under command of the army base commander. Corps rear boundaries are established and the field army commander assumes responsibility for administrative support of the field army and for the field army area (fig. 8).
- (b) Usually the field army commander will delegate authority for control and direction of all or a part of the administrative support operations to the army base commander during this stage. Corps shore parties may or may not be dissolved entirely at this time. They may continue to operate under the army base commander, have their operational scopes reduced, or be dissolved.
- (c) During this stage, there is a gradual separation both organizationally and physically of field army and army base units. Field army units, either from the shore

parties or subsequently landed, are physically moved forward to locate them for normal employment. Additional army base (logistical command) units are landed, or are released from shore parties and placed under the army base commander for operation of the army base. A complete organizational and physical separation is sought prior to the next phase of the overall operation.

- (d) The amphibious task force is usually dissolved prior to or during the army base stage.
- (5) The final stage of development leading to establishment of the normal administrative support system ashore nor-



LEGEND



-  Field army service units.
-  Army base service units.

Figure 8. Administrative support development, army base stage (schematic).

mally occurs subsequent to termination of the amphibious operation. The administrative support relationships and system will be as directed for support of operations to be conducted subsequent to termination of the amphibious operation. Typically, the logistical command headquarters, with certain units, is relieved from attachment to the field army and operates as a communications zone logistical command.

172. Support in Limited Scale Operations

The administrative support development process described above applies principally when the operational purpose of the amphibious attack is invasion for the purpose of initiating subsequent land operations of major proportions. When amphibious operations of lesser magnitude are undertaken, modification of the process of administrative support development is necessary.

a. In an offensive operation of limited duration and scope such as the seizure of a small island by a reinforced division, the administrative support of the operation, in general, will be as indicated for the assault landing team and division stages in paragraph 171. Development of facilities ashore is minimized and certain activities such as casualty evacuation may remain primarily ship-based. Supply build-up ashore and base development is limited to that necessary for the conduct of planned operations ashore with minimum margins for safety. In the event the objective area is so limited in extent that the division will not move beyond supporting distance of the division beach support area, division service units normally are incorporated in the shore parties.

b. In an amphibious operation where the operational purpose is tactical maneuver with no intention of developing the landing area as an administrative support base, the administrative support of the operation, in general, will be that necessary for conduct of the assault and subsequent maintenance of the landing force committed to the operation. Administrative support of the force subsequent to termination of the amphibious operation may be provided through juncture with other forces advancing overland. On the contrary, the purpose of the amphibious operation may be to seize a coastal area in which to establish a forward administrative support base in order to shorten overland lines of communications.

173. Other Considerations

a. The preceding paragraphs describe the fundamental aspects in the development of the administrative support in an amphibious operation. A large variety in type of operation, size of operation,

organization, and purpose is possible and probable and will require modification of the basic system described.

b. Planning for an amphibious operation which is one phase of a larger campaign as contemplated in this section, necessitates consideration of base development requirements in preparation of the Army landing force administrative plan. Base development is discussed in chapter 15.

Section IV. SUPPLY

174. General

a. Normally, authority higher than the joint force conducting the operation designates the nature and extent of supply support and the agencies to furnish it. Support for a large scale amphibious operation usually involves a major effort by the established overseas logistical agencies designated to support the operation and may involve agencies in the zone of interior.

b. Initial directives for the supply support of a major amphibious operation will prescribed—

- (1) Supply agencies involved and their responsibilities.
- (2) Levels of supply to accompany the assault echelon as assault supplies and levels for resupply of the landing force.
- (3) Rate of reserve supply buildup in the objective area for support of subsequent operations.

c. The mounting agency (ch. 14) will be directed to provide supply support to landing force units in the mounting area and during the amphibious operations. Supplies required by the landing force are those to—

- (1) Maintain the force in the mounting area.
- (2) Fill equipment requirements of units prior to embarkation.
- (3) Fill assault or initial supply requirements determined by the Army landing force. Supplies in this category are loaded in assault shipping with the landing force assault echelon.
- (4) Fill requirements for resupply as determined by the Army landing force. Supplies in this category are transported in followup shipping and are for support of the landing force during the operation.
- (5) Fill on-call emergency requirements for critical items as requested by the Army landing force commander during the operation.

- (6) Fill requirements for class IV project supplies required for beach and base development by units of the landing force.

d. The necessity for continuing and coordinated supply support to the landing force during the period when its supply system is primarily ship-based demands that the naval and landing forces develop a control and delivery system which will ensure such support until the supply system is established ashore. Control and delivery arrangements vary from operation to operation. In every case, comprehensive and detailed planning is essential. In consonance with these considerations, supply planning for the amphibious operation itself is accomplished under two general categories, assault or initial supply and resupply. Supplies fall into one of these categories depending on the type of shipping which transports the supplies. Assault or initial supply consists of supplies carried in assault shipping to provide the required initial support for the landing and associated operations. Resupply consists of supplies carried in followup shipping to effect replenishment and to support the landing force attack to accomplishment of the task force mission. A third category, buildup supply, includes supplies to be built up in the objective area for support of planned land operations subsequent to termination of the amphibious operation. Detailed planning for supplies in this category is normally accomplished by the logistical command headquarters designated to function as the army base headquarters, or some other logistical agency, but in coordination with the Army landing force commander.

175. Planning Considerations

Primary considerations which affect supply planning for support of an amphibious operation include—

- a.* Size of forces involved and rate of force buildup in the objective area.
- b.* Availability of shipping.
- c.* Estimated civilian and POW requirements.
- d.* Capacity to handle supplies in the objective area.
- e.* Existing facilities in the objective area and rate of base development.
- f.* Order and shipping time.
- g.* Duration of automatic supply.
- h.* Feasibility and extent of emergency supply.
- i.* Availability of local resources in the objective area.
- j.* Coordination with other related operations.

k. Climate and weather.

l. Duration, scope, and intensity of the operations in the objective area.

m. Need for special items.

n. Planned future operations.

176. Planning Detail

Supply planning for an amphibious operation is accomplished in great detail by all agencies concerned. Any significant errors or failure to plan in sufficient detail can seriously affect the outcome of the operation because—

a. Initially the landing force is almost completely dependent on shipborne supplies.

b. Shipping limitations usually preclude the inclusion of other than minimum safety margins.

c. Initial dependence on shipborne supply offers the landing force a minimum of supply flexibility since supplies are not available until unloaded.

d. Errors of omission cannot be rectified after sailing.

177. Planning Initial Supply Requirements

a. Planners must insure that sufficient supplies are embarked in assault shipping to guarantee that adequate quantities are available, to include a reasonable safety margin, for operations until the first resupply shipping arrives, is unloaded, and available for use. Generally a supply level of from 5 to 15 days is adequate to meet this requirement.

b. Supplies accompanying the assault echelon must be selectively determined and loaded to—

(1) Enable rapid unloading to provide for early availability of supplies and to allow early withdrawal of assault shipping from the landing area.

(2) Minimize congestion in beach support areas during the early, critical phases.

(3) Economize in the use of assault shipping. Supplies which accompany forces in the followup echelon may be increased to compensate for minimum quantities accompanying the assault echelon.

c. In planning supply operations in an active nuclear situation, provision is made for only minimum safety levels ashore until such time as areas for adequate dispersion have been secured. Frequent shipping provides continuity of supply. Provision for

emergency requirements is made by planning for air transport of supplies and by providing for commodity loading of ships to facilitate unloading of a given type of cargo when needed ashore.

d. Landing force planning for initial supply must provide for the following—

- (1) The assembly and loading of supplies to be landed with troops to insure availability prior to and during embarkation.
- (2) The establishment of floating dumps containing limited amounts of selected supplies for emergency on-call issue.
- (3) The selective discharge of supplies.
- (4) Loading of emergency supplies for movement ashore by helicopter.
- (5) Positive and efficient control of the movement of supplies from ship to the desired location ashore.
- (6) Installation of bulk fuel unloading, storage, and transport facilities as soon as possible.

e. Planning for initial supplies covers supplies carried by units and individuals to initiate combat action or support thereof, and supplies carried in excess of immediate initial needs to provide the required degree of interim self-sufficiency to each echelon of the landing force pending development ashore of a support capability by a higher echelon.

- (1) For the initial assault, a basic load is designated to provide for the immediate needs of the individual, weapon, or vehicle.
- (2) The supplies carried in excess of the basic load are called reserve supplies and are divided into three categories to facilitate requirements planning and coordination during embarkation, and the ship-to-shore movement. Although each category of reserve supplies is planned and loaded as a separate and distinct entity, the situation upon landing may result in the simultaneous unloading of several categories. The three categories are individual reserves, assault echelon reserves, and landing force reserves.
 - (a) Individual reserve supplies consist primarily of water, ammunition, rations, fuel, and medical supplies to sustain the assault units of the landing force for a period of 1 to 2 days. The individual reserves are loaded on unit transportation including vehicles scheduled to land in assault waves. The remainder is

packed for ease of handling and is given a high unloading priority.

- (b) Assault echelon reserves consist of a prescribed quantity of supplies of all classes for the entire assault echelon of the landing force. Ordinarily, supplies for 5 to 10 days will be prescribed. Assault echelon reserves are combat loaded throughout the assault shipping. Supplies for which an early need ashore is anticipated are preloaded in amphibious vehicles and landing craft as floating dumps (par. 179). Selected items are loaded in ships carrying assault landing teams, and scheduled for early movement ashore. Mobile loading of these supplies is accomplished to the extent practicable to reduce handling requirements ashore. When unitized loads are used, they should not be discharged until shore party materials handling equipment is ashore.
- (c) Landing force reserves consist of a prescribed quantity of supplies of all classes for the entire landing force. Ordinarily, supplies for 10 to 30 days will be prescribed. These supplies, or a portion of them, may be carried in assault shipping in a lower priority than the assault echelon reserves. The balance is loaded on followup shipping. Scheduling of followup shipping and the levels of reserve supplies prescribed for transport in assault shipping must be compatible to assure continuity of supply to the landing force. Administrative loading may be used in loading landing force reserve aboard followup shipping.

178. Emergency Supply

a. In supply planning adequate provision must be made for availability and prompt delivery on an emergency basis of supplies which are still afloat until such time as quantities ashore are adequate to meet contingencies.

b. Plans must be made for the air delivery or air landing of critical supplies during the early stages of the operation.

- (1) Routine requests by subordinate echelons of the landing force for air delivery of supplies by nonorganic aircraft are submitted through appropriate channels to the commander of the amphibious task force who, after approving the request, forwards it to the designated support agency for execution.
- (2) Emergency requests for air delivery of supplies are

submitted by assault landing teams to division. When delivery can not be accomplished by aircraft organic to or immediately available to the division, the request, after approval, will be submitted through channels to the designated support agency for execution.

c. To provide a large, readily available emergency reserve, plans may provide for some of the shipping scheduled to carry supplies in later convoys to be loaded and located in ship holding points. Shipping for this purpose is usually commodity loaded for selective discharge and may be provided directly from the zone of interior. Holding points should provide sheltered anchorage for shipping and may be located some sailing distance from the objective area. Shipping is called forward from holding points as necessary to meet requirements of the landing force. When the tactical situation permits and the supplies are no longer required for emergency needs, they are moved to the objective area for unloading in accordance with the preplanned supply schedule. This shipping must not be used as floating warehouses.

d. In an active nuclear situation, requirements may arise for replenishment of major quantities of classes II and IV items in addition to normal requirements for supplies to meet operating needs (primarily classes III and V). Because it will generally be impracticable to transport such items in significant reserve quantities in the initial convoys, planning must provide for rapid replenishment from a base area using preloaded shipping or air transport.

179. Floating Dumps (Supply Points)

a. Planning provides for the establishment of floating dumps or supply points to fill the immediate needs of forces ashore. These supply points provide an emergency means of supply for assault landing teams. The floating supply points consist usually of landing craft and amphibious vehicles loaded with supplies by types and amounts for which a need can be anticipated on an on-call basis prior to the time the supplies are available from supply points ashore.

b. When amphibious vehicles are employed as floating supply points, there are usually six to ten such amphibious vehicles per assault landing team. Each vehicle carries such supplies as ammunition, water, and medical supplies.

c. Landing craft may be used as floating supply points. In this case, three to six craft are usually required for each assault landing team. The advantage of using landing craft for this purpose is that their speed enables them to effect replenishment

from comparatively distant ships. However, their employment for this purpose has the disadvantage of contributing to congestion on the beach and requiring the rehandling and reloading of cargo on land vehicles for movement inland.

d. Instructions regarding floating supplies normally appear in the division and landing team logistics plans. The number and type of landing ships or landing craft and amphibious vehicles allocated for the transport of floating supplies is determined by the assault division commander in coordination with the transport group commander. The composition of loads for the craft or vehicles normally is determined by the assault landing team commander. For coordination purposes, the division commander may prescribe the composition of such loads in general terms.

e. Floating supplies are an emergency means for the maintenance of supply during the early and critical period of the assault. They are discontinued when supplies ashore are adequate for current needs.

f. To obtain supplies, the assault landing team commander advises his shore party, or airmobile support party, of requirements when required supplies are not ashore—

- (1) The shore party on the beach notifies the Tac Log Group of the requirement (par. 137). The Tac Log Group maintains data on loads and status of supplies on craft, ships, and vehicles as floating dumps and informs the control officer as to which vehicles or craft should be dispatched to the beach with the requested supplies. The shore party is informed of the shipment through the same channels. Returning vehicles or craft are directed to the appropriate ship for replenishment by the control officer based on information from the Tac Log Group.
- (2) The support party in a landing zone notifies the Tac Log Group aboard a helicopter carrier. The Tac Log Group determines which ship or ships can best supply the required items and initiates the request for emergency supply to the appropriate naval control officer. A reserve of unitized emergency supplies must be readily available aboard the helicopter transport or ships with a helicopter landing platform. These supplies are the equivalent of supplies in floating dumps destined for landing beaches.

180. Planning for Resupply Requirements

a. In supply planning for amphibious operations, it is necessary

to insure continuous supply support in the objective area following the initial assault to meet the replenishment and consumption requirements and reserve requirements for the landing force.

b. As in normal operations, levels of supply to be built up and maintained in the objective area include an operating level and a safety level. These levels should be built up as soon as possible to insure adequate supply support during the critical early stages of the operation. Adequate resupply will minimize requirements for emergency supply support. Detailed coordinated planning of shipping is required to achieve a balance between that allocated to combat support and that allocated to logistical support.

c. Supply convoys are scheduled at such intervals that large concentrations of shipping and an over-extension of the capability for handling supplies in the objective area are avoided.

d. Control of followup shipping is accomplished by placing it in an on-call status to be ordered in by the amphibious task force commander as requested by the landing force commander or by carefully planned schedules for phasing in automatically. The method used depends on the distance between the objective area and loading points, availability of forward sheltered ports or anchorages for use as regulating stations, limitations imposed by naval convoy escort availability, availability of aircraft for supply purposes, and the capability of the enemy to interfere with supply shipping.

e. Supply is usually on an automatic basis for the area of operations for the first thirty to sixty days with a transition during this period to a requisition basis. As the supply support system develops and control thereof is progressively centralized, data is provided the supply agencies as a basis for modifying the automatic flow (see FM 100-10).

181. Buildup Supplies

In planning requirements and scheduling of shipping for buildup supplies required for subsequent operations, close coordination between the Army landing force commander and theater logistical agencies is essential. The levels for buildup supplies normally will be designated at a command level above the amphibious task force.

182. Class IV Project Supplies

Apart from the supply planning for general support of the landing force, requirements for class IV project supplies, such as construction materials, must be determined. Supplies in this

category are scheduled for movement to the objective area according to time of need by the units assigned to accomplish the projects. Plans include a procedure for ready identification of supplies to facilitate discharge at the time and place required.

183. Flexibility

a. A basic requirement of the landing force is that each echelon keep the supply system flexible through mobility until such time as the shore area becomes stabilized and under control of the landing force.

b. The required mobility and flexibility are achieved in the following ways—

- (1) Properly packed supplies of selected types are made available on an on-call status aboard suitable shipping for transport by helicopter to the location required.
- (2) Specified quantities and types of supplies are maintained in floating dumps for delivery as required.
- (3) Specified supplies are mobile loaded in vehicles aboard landing ships. When conditions permit, the landing ships are beached and the loaded vehicles proceed to appropriate inland locations.
- (4) As soon as feasible, suitable routes are opened or developed in the beachhead area to permit direct routing of mobile loaded supplies to the maximum number of consumers.
- (5) Centralized control of the supply system is progressively established by landing force echelons to permit coordination of requests and the best utilization of the available means to meet requests.

184. Expansion of Supply Operations Ashore

a. Overall development of administrative support operations ashore is discussed in section III.

b. In the assault division stage of the operation, the division commander assumes control of tactical and administrative support operations to include responsibility for beach support areas and shore party operations exercised through the division shore party commander. Organic division service units are interposed as the intermediate link between the beach support area supply points operated by the shore party and subordinate tactical echelons of the division. The flow of supplies is from ships or floating dumps to support area supply points to organic service units of the division to using units. To conserve transportation and avoid rehan-

ding, supplies may physically bypass the division service units. Tactical units continue to draw class V supplies directly from shore party supply points and some units, particularly major users, continue to draw class III supplies from this source. These supply points functionally parallel the forward field army supply points in a conventional land operation.

c. In the corps stage, the corps commander assumes control of tactical and administrative support operations and exercises his responsibility for beach support areas and shore party operations through the corps shore party commander. At this time, supply support so far as divisions are concerned, is approaching normal operations. At this time, the corps contrary to normal procedures in a conventional land operation, is directly responsible for supply support of its divisions as in the case of an independent corps. The supply sequence remains generally the same as in the division stage except that field army service units attached to the corps will establish or initiate establishment of supply installations as an additional link between beach support area supply points and divisions. These units are phased into the operation with consideration to the distance between divisions and the beach support areas and the status of unloading. Field army service units are phased in during the corps stage so that the supply system is established or well developed at the start of the army base stage. In addition, other field army units responsible for supply support and supply elements of the logistical command to be employed as the army base begin landing as a preliminary to establishment of normal supply procedures. These units are in addition to service units of the field army or logistical command which may have been attached to shore parties.

d. In the army base stage, corps rear boundaries are established, corps are relieved of responsibility for supply support and the field army commander assumes control of tactical and administrative support operations. Corps shore parties are relieved from attachment to corps and placed under command of the army base commander. The field army commander exercises his responsibility for the former corps beach support areas through the army base commander. Corps shore parties may continue to provide supply support, or may have their supply support responsibilities reduced or terminated. Usually, supply support responsibility will be assumed by the army base commander, corps shore parties will be phased out, and service units attached to the shore parties will be reassigned. During this phase, a gradual organizational and physical separation of logistical command (army base) and field army units takes place and field army supply elements are located

for normal employment. Supply operations during this phase progress toward the normal with the establishment of field army supply installations backed up by a logistical command operating as the army base under command of the field army commander. The army base, during this phase, progresses toward the normal alignment of a logistical command in support of a field army as a preliminary to the establishment of a field army rear boundary and relief of the field army commander of responsibility for the army base.

Section V. MAINTENANCE

185. General

a. Normal maintenance and repair facilities are not available in the early stages of an amphibious operation. To overcome this deficiency, vehicles and equipment undergo an intense period of overhaul and maintenance prior to embarkation and the quantities of repair parts to accompany assault units are carefully planned.

b. Plans are made for establishment of maintenance facilities ashore as soon as feasible. Organic maintenance personnel and equipment of assault units are included in the assault echelon if practicable. If impracticable, certain maintenance personnel selected for their ability, and equipped with appropriate tools, are included in the assault echelon. Drivers and equipment operators should be given special maintenance training in preparation for the amphibious operation to supplement the normal maintenance capability.

186. Waterproofing

Proper waterproofing of vehicles and equipment reduces requirements for maintenance ashore. Dewaterproofing areas ashore are designated where vehicles and other equipment are returned to normal operating condition.

Section VI. TRANSPORTATION

187. Sea Transportation

a. Transport ships used in amphibious operations are of two general categories, Navy assault ships and commercial type ships provided by the Military Sea Transportation Service (MSTS). Ships of both types when assigned to the amphibious task force are referred to as assault shipping. Other ships used to transport personnel, equipment, and supplies in support of the amphibious task force are referred to as followup shipping.

b. Assault shipping is under command of the amphibious task force commander. Followup shipping normally remains under other naval control until it arrives in the sea area for which the amphibious task force commander has responsibility, at which time it passes to the control of the amphibious task force commander. He is responsible for the movement, unloading, and security and protection of followup shipping while in the objective area.

c. Movement of assault shipping to the objective area is discussed in chapter 11.

188. Air Transportation

a. Administrative support needs for air transport are considered in overall air support planning (pars. 110—116).

b. Air transport requirements of the amphibious task force include:

- (1) Delivery of emergency supplies into the objective area.
- (2) Transport of airborne forces into the objective area when a part of the amphibious task force.
- (3) Air evacuation from the objective area.
- (4) Air movement of units such as reserves and priority cargo into the objective area.
- (5) Air movement of personnel, supplies, and equipment within the objective area in support of the offensive ashore.

c. Air transport support may be provided by Naval and/or Air Force elements, and within range limitations by Army transport aircraft units. Normally a Naval and/or Air Force command external to the amphibious task force will furnish the long range, continuing air transportation between supporting bases and the objective area. Army transport aircraft committed to the amphibious operation are based in the objective area as soon as possible to assure a readily available air transport means in close support of the Army landing force offensive ashore.

d. While transport aircraft are operating within the objective area they are controlled through the amphibious task force air control system (par. 113).

189. Planning for General Unloading

a. Ship-to-shore movement planning by assault divisions as discussed in paragraphs 130 through 140, encompasses the unloading of assault shipping. Ship-to-shore movement plans are partic-

ularly detailed insofar as the initial or assault unloading period is concerned. During the initial unloading period, supplies are unloaded on a selective basis. Supplementary instructions for general unloading and subsequent unloading of followup shipping are included in the division and higher echelon administrative plans. This planning covers any additional instructions needed for the general unloading period during which the remaining assault shipping is unloaded, and the organization for unloading operations when followup shipping arrives in the objective area. As the unloading of followup shipping progresses, there is a gradual evolution toward normal water terminal operations.

b. The time at which initial unloading is terminated and general unloading is begun is based on conditions ashore and therefore cannot be definitely predetermined. When conditions indicate that the attack is progressing satisfactorily, sufficient assault reinforcing units are ashore to support the attack, adequate assault supplies are ashore, and the beach support area is organized and operating satisfactorily, the landing force commander recommends to the amphibious task force commander that general unloading begin.

c. When the order to commence general unloading is issued, the control organization for the initial unloading period of the ship-to-shore movement ceases to operate but remains substantially intact ready to resume selective discharge if required. Tac Log Group activity is reduced to that related to general unloading procedures. Transports are unloaded as rapidly as beach support area facilities and craft availability permit without regard to type of cargo.

d. Ship unloading plans as developed by assault divisions and higher echelons must be adaptable to the situation which will exist upon completion of the unloading of assault shipping. In particular, they must be suited to beach conditions and conform to the capability of the shore party to handle personnel, equipment and supplies ashore. Followup shipping will transport the units in the followup echelon of the landing force that are not accommodated in assault shipping. Unloading plans must provide for the landing of such units as well as bulk supplies and equipment.

190. Development of the Transportation System Ashore

a. In the early stages of an amphibious attack, land transportation is limited to organic transportation of initial assault elements and transportation units attached to the shore party.

b. Use of amphibious vehicles permits transport of supplies directly from the water to the using unit or to inland supply in-

stallations of the shore party. A further advantage of such vehicles is their ability to negotiate inland water barriers.

c. As successive command echelons are established ashore, control of transportation elements attached to subordinate shore parties is centralized to the extent required for best utilization. In some instances, distance or lack of communications may make it more desirable to continue decentralized control until such time as centralized control is feasible.

d. Because of the dependency of supply and other administrative support activities ashore on transportation, planning must provide for the landing of transportation elements in balance with requirements for movement capability.

e. The availability of transportation facilities is an important consideration in planning for administrative support. Beach support areas should be sited for best utilization of existing facilities. Construction or rehabilitation of landing ramps, roads, bridges, beach exits, and landing strips necessary for the operation of land and air vehicles is given high priority.

f. To avoid congestion and confusion in beach areas, detailed planning for traffic control, to include guides and route markers, is essential. Plans should provide for early implementation of a system for assignment of movement priorities to assure maximum utilization of available transportation.

Section VII. MEDICAL SERVICE

191. General

a. Medical support planning for an amphibious operation, as in any operation, must provide for maintaining the health of the command, and for the treatment, evacuation, and hospitalization of the sick and wounded.

b. Plans for medical support provide for a gradual transition from the initial assault when casualties are evacuated directly to ship-based facilities, to the time when the normal medical service support system is established ashore in the objective area. The development of the medical service support system is planned in consonance with the balance of the administrative support system planned for the objective area.

c. Air evacuation is used where practicable and is employed as early in the operation as conditions permit.

d. This section considers medical evacuation for a large scale amphibious operation where the operational purpose is invasion

with ultimate development of a complete medical service system in the objective area. Principles and procedures apply equally to operations of lesser scope and magnitude and require only curtailment or modification to meet the requirements of a specific operation.

192. Medical Planning Considerations

Considerations for medical planning include the following:

- a. Overall mission of the force and the supporting medical mission.
- b. Policies of higher commanders.
- c. Characteristics of the objective area, including terrain, climatological and disease incidence data, season, sanitary conditions ashore, and cover available; and the corresponding preventive medicine, hygiene, and sanitation measures which must be instituted prior to and during the operation.
- d. Physical and psychological factors affecting own personnel.
- e. Lines of communication and evacuation.
- f. Evacuation policies and procedures.
- g. Specific medical supplies required.
- h. Size and types of the forces involved, and their tactical employment.
- i. Estimated casualties based upon the amount and type of enemy opposition expected and the character, probable duration, and objectives of the operation.
- j. Medical personnel, units and facilities required and available in the objective area, and status of training.
- k. Medical facilities and forces outside the objective area, which will provide medical support.
- l. Medical needs for the civilian population and prisoners of war.
- m. Need for special Naval medical units.
- n. Requirements for specially fitted ships to serve as evacuation control ships.
- o. Requirements for specifically designated and fitted landing craft and helicopters to provide ambulance facilities.
- p. Requirements for hospital ships and for the designation and medical augmentation of specific amphibious ships to meet anticipated hospitalization requirements.

193. Medical Planning Responsibilities

a. *Amphibious Task Force Commander.* The amphibious task force commander is responsible for the following, and prepares plans accordingly:

- (1) Provision of medical service to all embarked personnel during the period between embarkation and landing.
- (2) Provision of medical personnel, supplies, and equipment for all naval units based ashore and not attached to the landing force.
- (3) Seaward evacuation by surface means from the beaches; receipt of patients and hospitalization afloat within the objective area; and initial casualty reporting for the entire task force.
- (4) Evacuation by ship or air from the objective area to medical facilities outside the objective area.
- (5) Air transport of medical supplies and equipment.
- (6) Formulation in conjunction with the landing force commander of an evacuation policy for the operation.
- (7) Establishment of medical requirements and standards for the civilian population in the objective area, when these are not prescribed by higher authority.

b. *Landing Force Commander.* The landing force commander is responsible for the following, and prepares plans accordingly:

- (1) Provision of medical service to landing force personnel prior to embarkation.
- (2) Assistance to ships' medical department by providing medical personnel to care for landing force personnel while embarked.
- (3) Evacuation to the rear; and from the objective area as directed.
- (4) Provision of medical service to all personnel ashore in the objective area who are not otherwise provided medical service.
- (5) Determination of the medical service requirements of the landing force which must be furnished by the Navy, and submission of these requirements to the amphibious task force commander.
- (6) Submission of recommendations to the amphibious task force commander concerning establishment of the evacuation policy for the operation.

194. Medical Plans

a. The amphibious task force medical plan is usually issued as

an annex to the operation plan. It provides for medical service to all elements of the amphibious task force in accordance with the foregoing responsibilities, and includes the following :

- (1) A statement of the medical situation.
- (2) A statement of the evacuation policy.
- (3) Clear delineation of the medical responsibilities, organization, and employment of the several elements, with particular emphasis on shifts in responsibility during the several phases of the operation and the measures necessary to ensure coordinated medical action by all elements of the task force.
- (4) Provision for medical services in connection with the evacuation of casualties from the objective area.
- (5) Medical supply, including operation of medical supply dumps afloat and provision for the automatic replenishment of supply and exchange of medical equipment.
- (6) Procedures and responsibilities for keeping necessary records and reports of the flow of casualties.
- (7) Provisions for medical service to patients while afloat.
- (8) Provision for obtaining medical intelligence.
- (9) Measures for preventive medicine, radiological medicine, hygiene, and sanitation.

b. The landing force medical plan usually is issued as an annex to the landing force administrative plan and includes the following :

- (1) The organization and employment of landing force medical facilities in support of the operation.
- (2) Provision for collection of medical intelligence.
- (3) Provision for zones and phases of medical responsibility.
- (4) Provision for casualty evacuation.
- (5) Announcement of the evacuation policy.
- (6) Provision for medical supply and its control.
- (7) Medical instructions to subordinate units of the command.
- (8) Measures for preventive medicine, radiological medicine, hygiene, and sanitation.
- (9) Provision for medical reports and records.

195. Development of Medical Service Support

a. During the initial assault, casualties are collected and treated by organic medical personnel and are evacuated to the shore party medical evacuation facility. At this point, the cas-

ualties are classified and evacuated by designated amphibious vehicles or craft, or by helicopter to casualty evacuation control ships. At the control ship, casualties are treated, sorted, and evacuated to the casualty carrying ship designated to receive the particular type casualty.

b. Medical support planning for an amphibious operation provides for a progressive development of the medical support system by stages as discussed in section III above. As each successive echelon is established ashore, the commander thereof assumes responsibility for treatment and evacuation ashore. Augmentation of medical facilities at each echelon from those of the next higher echelon and the provision of medical support by the shore party at each echelon make this system possible. Other than the increased capability provided each echelon by appropriate augmentation, the only major deviation from normal procedures is the beach evacuation station established and operated by the shore party and landing zone evacuation stations which provide the link from Army evacuation channels ashore to Navy evacuation channels afloat. In general, each successive echelon of the landing force terminates its evacuation chain at the shore party medical facility. Evacuation seaward is a Navy responsibility. Evacuation by helicopter may involve movement of casualties directly from units ashore to medical facilities afloat.

c. Landing craft, amphibious vehicles, and helicopters returning to ships provide the necessary transportation.

d. Casualties which occur during movement to the beach remain in the craft or vehicle for return to the ship. Initially, casualties occurring on the beach are carried by litterbearers directly to returning craft or vehicles.

e. During the division stage, organic division medical support is established and the mobile army surgical hospital (MASH) is landed and established in support of the division.

f. As soon as adequate airfields are available in the objective area, air evacuation of casualties to bases outside the objective area is initiated.

g. In the corps stage, the corps assumes control of evacuation of casualties from divisions and corps units. Field army medical units normally are attached to the corps for this purpose. During the corps stage, medical support ashore becomes essentially normal. Throughout this stage and continuing through termination of the amphibious operation, additional medical facilities such as general hospitals, convalescent hospitals, and holding units are landed,

some initially under corps control and all eventually becoming part of the field army or army base (logistical command) administrative support system. Air evacuation normally will be in operation and hospital ships usually will be operating from established ports or beaches.

h. In the army base stage, the field army commander relieves the corps of responsibility for evacuation and hospitalization. During this stage, field army medical units are physically separated from army base medical units as a final step prior to establishment of a communications zone and a normal logistical command organization.

Section VIII. PERSONNEL

196. General

Planning of personnel operations for an amphibious operation involves all the personnel activities normal to land combat. As in other planning for the amphibious operation, personnel planning is accomplished in great detail to provide for various contingencies.

197. Replacements

a. The normal flow of replacements for units participating in an amphibious attack is interrupted and establishment of the replacement system ashore is not accomplished until some time after the assault.

b. It is desirable to obtain a personnel overstrength, particularly in assault units, during training. The degree of overstrength depends on the type of operation, its scope and expected duration, anticipated enemy resistance, the ability of units to administer and train the overstrength, and the availability of shipping space. Assigning overstrength during the training phase insures that units will embark at or over authorized TOE strengths and provides trained, previously oriented replacements during the early stages of the operation.

c. Prior to embarkation, the replacements are assembled under control of parent organizations for movement to the objective area. If the overstrength personnel exceeds the handling capability of an organization, replacement companies may be attached for this purpose.

d. Overstrengths may be transported in assault shipping, in early followup shipping, or may be held in the mounting area for transport by air as soon as conditions in the objective area permit.

e. Unit replacements may be transported in the same manner as overstrength replacements. Instructions and authority for employment of unit replacements are set forth in the administrative plans of the Army landing force.

f. The normal replacement system is established in the objective area when the situation permits.

g. Computation of personnel losses in amphibious operations is described in FM 101-10.

198. Morale and Welfare

a. Planning must provide for maximum facilities for rest, recreation, and religious activities prior to embarkation and for adequate supply of post exchange items both prior to embarkation and enroute to the objective area. Because of the relatively crowded conditions aboard ship, special planning is required to assure opportunity for recreation and religious activities enroute.

b. In the interests of security, outgoing mail normally is suspended several days prior to sailing. Mail is held at the postal unit and the interruption is not publicized. Delivery of incoming mail is continued as long as possible and is reestablished as soon as possible in the objective area.

c. Morale and welfare activities in the objective area are those normal for a land offensive.

199. Discipline, Law and Order

a. During training for an amphibious operation, maximum effort is placed on attaining and maintaining a high degree of discipline. This factor, important in every military activity is particularly important during the early stages of an amphibious operation where the discipline of the command may be a major factor in the success of the operation.

b. If there are prisoners in confinement in the command, prompt action is taken to dispose of their cases prior to embarkation. Incidents requiring trial by courts-martial may be handled en route. Those occurring early in the assault may require holding of offenders, or evacuation to ships pending opportunity to try cases after stabilization of the operation ashore.

200. Graves Registration

Graves registration activities in amphibious operations are conducted essentially the same as in land warfare operations as prescribed in FM 10-63, Handling of Deceased Personnel in Theaters of Operations.

201. Prisoners of War

a. The handling of prisoners of war in an amphibious operation varies little from that in land operations. The principal differences, for which additional planning is required, are:

- (1) The Army landing force chain of evacuation for POW terminates in POW collecting points in the beach support areas or landing zones.
- (2) POW are moved from collecting points to ships for further movement to Army receiving points in base areas. The mounting agency provides military police escort guards for ships designated to evacuate POW.
- (3) Based on announced criteria, POW of immediate value for intelligence or psychological warfare purposes are evacuated directly to the appropriate headquarters or ship.

b. In planning the POW evacuation policy for the objective area, provision is usually made for the evacuation of prisoners of war from the objective area in the initial stages of the operation. Retention in the objective area is begun and increased as facilities, supplies, and capabilities for employment permit, consistent with reasonable safety of the prisoners from enemy action.

c. Planning must consider the number of POW anticipated, the source of guards, and rations and medical care required.

Section IX. CIVIL AFFAIRS

202. General

a. An amphibious operation may involve the seizure of an area in which the administration of civil affairs (CA) must be exercised. Responsibility for civil affairs administration during the amphibious operation usually will rest with the landing force commander. Civil affairs activities in an amphibious operation vary little from normal land operations. However, certain aspects require emphasis in planning.

b. Higher echelon commanders establish policies concerning the control and handling of civilians in the objective area. Policies are disseminated to all personnel participating in the landing.

203. Relation to Military Operations

The primary concern of the landing force commander and of his subordinate commanders is to establish the degree of control

over the populace and the invaded area necessary to achieve the security of their forces and the accomplishment of their mission. A secondary concern is to fulfill obligations to the civilian population imposed by international law, the customs of warfare, and policy of higher headquarters. The degree of control required depends on the effect the local population can have on military operations and on the capability of the existing local government to exercise control.

204. Requirements

Civil affairs planning will include:

a. Provision of CA command support units to appropriate command echelons (division, corps, field army) of the landing force to perform recurring CA duties and to remain with these echelons throughout the amphibious operation and through subsequent operations as required. CA personnel should land relatively early in the assault.

b. Provision of CA area support units assigned to function in specific areas and initially attached to appropriate echelons of the landing force. These units will remain in their designated areas and revert successively to higher echelons of command established ashore in accordance with the transfer of responsibilities for areas.

c. Plans for development of the invaded area as a source of supply for operations and for use of available facilities, supplies, and services for the satisfaction of needs of the landing force, area civilians, and base development.

d. Provision of military supplies for civilian use when appropriate.

e. Allocation of shipping space to CA units, supplies, and equipment, and inclusion of these units in landing sequence tables.

205. Planning Considerations

The following considerations are applicable to all CA operations but normally require special emphasis in planning for an amphibious operation:

a. CA plans must be sufficiently flexible to permit their adaptation to a situation ashore which may differ considerably from that anticipated.

b. Efficient administration and control of the objective area and its populace is best assured by continuity of CA personnel and units, and by minimum changes in policy. To ensure stability

of CA operations, overall policies should therefore be established by the highest echelon participating directly in the operation, normally the amphibious task force; and CA command support units should be attached as early as possible.

c. CA operations will be limited to the minimum essential functions in conformity with the military situation, treaties, agreements and policies

d. Area support units should be organized and trained for their specific assignment prior to embarkation, and may require amphibious training.

e. Active nuclear warfare may result in such activities as—

- (1) Increased requirements for recovery assistance, rescue, and aid for civilians.
- (2) Maintenance of discipline, law, and order on a major scale.

CHAPTER 8

EMBARKATION PLANNING

Section I. GENERAL

206. General

a. This chapter concerns embarkation of the Army landing force in naval assault shipping as a part of the amphibious operation. Embarkation is the actual loading of personnel, supplies and equipment in assigned shipping.

b. Embarkation is encompassed by the more inclusive term, mounting. With the exception of embarkation, mounting activities are not within the scope of the amphibious operation itself. The other activities of mounting, which are a prelude to embarkation, are covered in chapter 14.

c. An embarkation area is an area ashore, including a group of embarkation points, in which final preparations for embarkation are completed and through which assigned loads for craft and ships are called forward to embark.

d. Embarkation must be an orderly assembly of personnel and materiel for loading in assigned shipping in a sequence designed to meet the requirements of the landing force scheme of maneuver ashore. Landing plan documents must be essentially completed before detailed embarkation planning can be started.

e. Embarkation may be conducted at any number of widely dispersed locations. Depending upon factors such as location and ship speed, embarkation of the various elements of an Army landing force may not be initiated simultaneously.

207. Airborne Units

When the amphibious task force includes airborne forces, related planning for their embarkation in aircraft is accomplished as discussed in FM 57-30, Airborne Operations.

Section II. ORGANIZATION FOR EMBARKATION

208. General

The organization of embarkation consists of a temporary administrative task organization established by the landing force

commander and a specific task organization of Navy forces established by the amphibious task force commander. The task organizations are formed to simplify the planning and execution of embarkation at all levels of command.

209. Naval Organization for Embarkation

Assault shipping assigned to transport the landing force to the objective area is formed into tactical groupings. The number and type of ships assigned to each of these groupings is determined by the size and composition of the corresponding echelon of the landing force organization for embarkation.

210. Landing Force Organization for Embarkation

Assault elements of the landing force are organized into administrative groupings called embarkation teams, embarkation elements, embarkation units, and embarkation groups. Through this organization the landing force commander exercises direction and control of both the planning and execution of embarkation of the landing force. The organization for embarkation generally follows the tactical organization.

211. Naval and Landing Force Parallel Organizations

a. The embarkation team consists of the landing force units and supplies and equipment embarked in a single ship. A ship is the parallel naval echelon. The embarkation team commander is designated in the embarkation order of the next higher landing force echelon. The embarkation team embarkation officer (par. 212) may be designated in the same order, or by the embarkation team commander.

b. The embarkation element consists of two or more embarkation teams grouped together to conform to the organization for landing. A transport (or landing ship) element is the parallel naval echelon. The transport element is formed only when the number of ships in a transport unit is greater than can be properly controlled by a single commander. Element commanders and embarkation officers are designated in the same manner as for the embarkation team. An assault reinforcing battalion embarking in more than one ship is a typical embarkation element. In this case the battalion commander is the embarkation element commander; he might also be an embarkation team commander.

c. The embarkation unit consists of two or more embarkation teams or two or more embarkation elements grouped together to conform to the organization for landing. A transport (or landing ship) unit is the parallel naval echelon.

- (1) The number of embarkation units formed by a reinforced division will vary with the mission assigned and the task organization. Generally, there will be about seven embarkation units for a reinforced infantry division.
- (2) The embarkation unit commander is designated in the embarkation order of the embarkation group (division). The embarkation unit embarkation officer may be designated in the same order, or by the embarkation unit commander.

d. The embarkation group consists of two or more embarkation units, two or more embarkation elements (when units are not formed), or a combination of embarkation elements and embarkation units which conforms to the organization for landing. A transport group is the parallel naval echelon. Normally, a transport group lifts a reinforced division. The division commander in the organization for embarkation become the embarkation group commander. The group embarkation officer is designated by the embarkation group (division) commander. Normally the division transportation officer is designated group embarkation officer.

212. Embarkation Officers

Officers specially trained in the technique of planning and supervision of loading for an amphibious operation are assigned to landing force organizations, to major amphibious ships, and to naval staffs involved in an embarkation. In the landing force organization, such officers are called embarkation officers. They have the status of special staff officers in the headquarters to which they are assigned. In the naval organization, such officers are called ship (or staff) combat cargo officers. The embarkation officers and naval combat cargo officers advise and assist their respective commanders in planning the embarkation and supervising its execution. The embarkation officers and combat cargo officers of related landing force and naval organizations maintain continuous liaison during the planning and execution of embarkation.

213. Embarkation Control Offices

To facilitate control and coordination during loading, the landing force embarkation organization commander at each level establishes at the embarkation point a control office which is used in common by the control agencies of the landing force embarkation organization and the corresponding naval transport organization. From the control offices, liaison is established with port and other external agencies. Secure, reliable, and rapid communica-

tion must be established and maintained between naval forces and landing forces in the embarkation area, between supply installations and embarkation points, and between the marshalling or advance staging areas and embarkation points. Upon completion of the embarkation phase of the operation, this temporary control organization is dissolved.

214. Embarkation Advance Party

The landing force provides in planning for the formation of an advance party for each ship in which an embarkation team will embark. The composition of advance parties will vary, however, they will usually include the team embarkation officer and assistants, a communications detail, a billeting detail, a mess detail, a guard detail and a ship's platoon. The ship's platoon is a subordinate element of the embarkation advance party which handles, maintains, and stows cargo during embarkation, movement, and debarkation.

Section III. EMBARKATION PLANS

215. Scope

a. Embarkation planning includes—

- (1) Determination of shipping requirements.
- (2) Development of detailed landing force and naval organizations for embarkation.
- (3) Determination of desired assignment of landing force personnel, equipment, and supplies to each ship.
- (4) Preparation of detailed loading plans and loading schedules.

b. Plans for the assembly of assault shipping, and for the movement of troops to embarkation points are prepared by the amphibious task force and landing force commanders respectively. These plans must be closely coordinated, and hence are distributed as soon as possible to commands having operational control of the assault shipping and troop units to be assigned to the amphibious task force. The plans are also distributed to area and base commanders concerned to permit early initiation of preliminary movements and preparations for embarkation. The assembly and movement plans are usually issued by the amphibious task force and landing force commanders, respectively, as separate documents in the form of embarkation schedules and movement orders.

216. Embarkation Planning Responsibilities

The amphibious task force commander, the landing force com-

mander, and the subordinate commanders within the organization for embarkation have specific embarkation planning responsibilities, as indicated below.

a. The amphibious task force commander is responsible for—

- (1) Allocating shipping space to the landing force commander.
- (2) Organizing naval forces for embarkation.
- (3) Preparing the overall embarkation schedule to include movement of assault shipping to embarkation points in accordance with the embarkation plans and loading plans.
- (4) Reviewing and approving the overall landing force embarkation plans and loading plans.
- (5) Providing ship loading characteristics pamphlets to the landing force commander.
- (6) Developing plans for the procurement and coordination of means required from external agencies to support the embarkation.
- (7) Advising the landing force commander as to personnel and materiel of Navy and other forces which are to be embarked with the landing force.

b. The Army landing force commander is responsible for—

- (1) Determining assault and followup shipping requirements of the landing force, and advising the amphibious task force commander thereof.
- (2) Developing the organization of the landing force for embarkation. The landing force commander recommends, if necessary, adjustments in naval transport organization so that the shipping assigned by type for use by the major units of the landing force will conform to the required organization for embarkation in order to conform to the organization for landing.
- (3) Determining the support required from naval forces afloat and responsible mounting agencies at the embarkation points during loading, and advising the amphibious task force commander thereof.
- (4) Designating shipping in which landing force units will be embarked, assembling the detailed embarkation and loading plans, and submitting them to the amphibious task force commander.

c. The commanding officer of each ship is responsible for the detailed planning required to embark the landing force embarkation team in his ship in accordance with the embarkation plan

prepared by the embarkation team commander. The individual ship planning is developed in the detail required to insure an orderly execution of the embarkation and encompasses those specific items enumerated in paragraph 223*d*. The commanding officer reviews and approves the detailed loading plans of the embarkation team commander from the viewpoint of the safety and performance of his ship.

d. The embarkation team commander is responsible for the preparation of detailed loading plans for the ship which will embark the troops, equipment and/or supplies of the embarkation team. These plans encompass those specific items enumerated in paragraph 223*e*. He coordinates these plans with the individual ship commander.

217. Embarkation Planning Considerations

In planning for embarkation, consideration must be given to the following, all of which will affect the provisions of the embarkation plan:

a. The organization for embarkation of the landing force must be compatible with the plan for the ship-to-shore movement, which, in turn, must support the scheme of maneuver ashore.

b. The tactical integrity of landing force units must be maintained. However, units must be so loaded as to minimize the effects attending the loss of one ship.

c. The number of ships in the objective area at one time should be the minimum which will meet requirements. The units of the landing force not required initially in the assault, or whose employment is deferred, are loaded and dispatched so that their arrival in the objective area is scheduled to coincide with their contemplated employment. Careful planning by all echelons, both landing force and Navy, is necessary to accomplish this objective. In addition, the manner in which ships are loaded frequently determines the number required in the objective area at one time and the speed with which they are unloaded.

d. Landing force commanders and their staffs at the several levels of command are embarked in the same ships as the corresponding naval commanders.

e. Embarkation areas and points must be selected. Generally, the selection of embarkation areas and embarkation points is influenced by the time available for loading, available space, piers, beach loading areas, and other usable facilities. Consideration must be given to—

- (1) Availability of suitable storage facilities.
- (2) Adequacy of road nets and space available for processing supplies and equipment brought into the marshalling or staging areas.
- (3) Availability of harbor services.
- (4) Availability of a suitable protected anchorage or roadstead.
- (5) Suitability of beaches for the beaching of landing craft and ships and for amphibious vehicles to enter and leave the water.

f. The location of marshalling areas in relation to embarkation areas may require provisions for intermediate troop staging areas to assure final movement to the embarkation areas without interruption. This may require the maintenance of a staging and embarkation organization beyond the time the principal elements of the force sail, in order to accommodate landing force echelons which are to proceed to the objective area in later increments. Embarkation organizations should be formed in marshalling areas so that a final check on the preparation for embarkation may be made and deficiencies corrected.

g. Ship loading characteristics pamphlets must be furnished to the landing force. They are provided by the Navy for each amphibious type ship. The pamphlet contains all ship's data that are required by the landing force for embarkation. The diagrams and capacity totals in the pamphlet show the accommodations and cargo space for each ship. All data in the pamphlet must be complete, accurate, and self-explanatory in every detail. Each pamphlet includes—

- (1) A listing of the general transport characteristics of the ship, including principal physical characteristics, troop accommodations, organic landing craft, and such other information as may be appropriate under this listing. Pamphlets for large ships such as APA, AKA, LPH, LPD, and LSD also include an inboard profile of the ship, to approximate scale, showing the relative location of compartments and cargo holds, and a plan view showing debarkation stations and location of landing craft.
- (2) Troop berthing diagrams, in approximate scale, showing troop officer and troop enlisted berthing spaces with the number of bunks in each berthing space.
- (3) Troop cargo space diagrams, drawn to scale, showing information or square footage of deck space, hatches, locations of stanchions and other obstructions or irregu-

larities, and overall dimensions, and indicating the bale cubic capacity and clearance under frames and hatch coamings. If the compartment is fitted for the stowage of special cargo such as gasoline, ammunition, pyrotechnics, or vehicles, such information is included.

218. Sequence of Embarkation Planning

Following receipt of the initiating directive for an amphibious operation, embarkation planning commences at all echelons, and proceeds concurrently. The major steps will overlap, but are usually accomplished in the following general sequence:

a. The establishment of liaison between corresponding naval and landing force commanders.

b. Provision by the amphibious task force commander of planning data concerning the personnel and materiel of naval and other forces to be embarked with the landing force.

c. Determination by the landing force commander of his assault and followup shipping requirements, and the submission of these requirements to the amphibious task force commander.

d. Allocation of shipping by the amphibious task force commander. If sufficient shipping is not available, consultation is required between interested commanders in order to adjust plans or to determine the requirement for additional shipping.

e. Distribution of ship's characteristics pamphlets to the landing force.

f. Establishment of organizations for embarkation by the naval and landing force commanders.

g. Selection and preparation of embarkation areas.

h. Selection and preparation of marshalling facilities for the landing force.

i. Determination of control, security, and communication facilities required during the embarkation.

j. Development of plans for the assembly of assault shipping and for the movement of personnel and materiel to embarkation points.

k. Preparation, review, approval and promulgation of detailed embarkation plans and loading plans.

219. Content of Embarkation Plans and Loading Plans

a. The amphibious task force commander and subordinate Navy commanders prepare loading plans. They are issued as a part of the operation plan. These loading plans prescribe—

- (1) The organization of the Navy forces for loading.

- (2) Availability of shipping for the embarkation of the landing force, including schedules of arrival and departure from embarkation points.
- (3) Availability of special handling equipment.

b. Within the landing force, three basic embarkation plans are normally prepared. These are the Army landing force plan, the embarkation group plan, and the embarkation unit plan. They are issued to accompany operation plans. These embarkation plans prescribe—

- (1) The organization for embarkation and assignment to shipping.
- (2) Supplies and equipment to be embarked.
- (3) Location and assignment of embarkation areas.
- (4) Control and communications arrangements which will prevail during embarkation.
- (5) Schedules, movement details, and embarkation sequence of personnel and materiel in conformity with embarkation schedules announced by the amphibious task force commander.
- (6) Instructions covering the operation of material handling equipment.
- (7) Special instructions covering the loading and handling of nuclear weapons.

c. Each embarkation team commander prepares a detailed ship loading plan. It is reviewed and approved by the commanding officer of the ship from the viewpoint of his ability to carry it out, and in terms of the safety of his ship. Complete loading plans include—

- (1) *A consolidated embarkation and tonnage table.* This table is a list of all units embarked on a single ship together with the total personnel, and the cubic feet, square feet and short tons of cargo. It contains all the information contained in the unit personnel and tonnage table (UP & TT), in an abbreviated form.
- (2) *A consolidated unit personnel and tonnage table (UP & TT).* This table is a tabulation of total personnel, the cubic displacement and weight of all supplies, and the square, cubic displacement and weight of vehicles to be embarked. Data contained in the unit personnel and tonnage table is a recapitulation of information shown in the cargo and loading analysis and vehicle summary and priority tables.
- (3) *A consolidated vehicle summary and priority table.* This table is a list of all vehicles to be embarked according

to unloading priority. This table provides the basis for vehicle stowage plans and is of value to personnel concerned with loading, unloading, and logistical control during the ship-to-shore movement.

- (4) *A consolidated cargo and loading analysis.* This table is a complete list of all cargo, less vehicles, with detailed stowage information and shows which cargo is palletized and mobile loaded. Information contained in this table is of vital importance to logistical control personnel during the ship-to-shore movement.
- (5) *A consolidated vehicle table.* This table, prepared by embarkation unit, group, and landing force embarkation officers, is a consolidation of information contained in the embarkation organizations' loading plans. This table is not a part of the published loading plan. It is a ready reference for locating vehicles by troop unit, type, and ship.
- (6) *A stowage diagram.* This diagram is a graphic scale depiction of cargo stowage spaces. It is prepared jointly by the team embarkation officer and the combat cargo officer. It shows the exact location of vehicles and cargo within each cargo compartment. Space diagrams in the ship's loading characteristics pamphlets are used as the basis for preparation of stowage diagrams.
- (7) *A profile loading diagram.* A profile loading diagram if required, is prepared by the team embarkation officer and the ship combat cargo officer from information contained in the stowage diagrams. It is included in the loading plan for transports and cargo ships but not for landing ships. It is a distorted profile view of the ship showing cargo compartments in which landing force cargo is stowed.

Section IV. LOADING METHODS

220. General

The manner in which a ship is loaded determines the order and speed in which the equipment and supplies can be unloaded. Loading methods used in embarkation for an amphibious assault are of vital importance to successful execution of the ship-to-shore movement. The principal aim in loading is to provide for optimum use of available shipping to satisfy requirements of the landing force plan of operations. The four methods of ship loading which

may be used in loading for an amphibious operation are administrative, combat, commodity, and selective loading—

a. Administrative Loading. Administrative loading is a method of loading troops and/or equipment and supplies in a ship or aircraft for maximum utilization of personnel and cargo space. It is used when direct opposition from the enemy will not be encountered upon landing. This method of loading may be employed when transporting personnel and cargo to the objective area in followup shipping, or when tactical employment immediately upon landing is not required.

b. Combat Loading. Combat loading gives primary consideration to the facility with which troops, equipment, and supplies can be unloaded ready for combat on landing, rather than to economical utilization of ship space.

(1) Combat loading is used in the loading of amphibious assault shipping. Selected units, with their essential combat equipment and supplies, are loaded in such a manner that they will be ready for commitment in support of the tactical plan upon landing. Proper combat loading will provide for flexibility to meet contingencies such as changes in the tactical plan, and loss or damage of ships. It also will facilitate discharge of cargo to meet emergency calls for equipment or supplies.

(2) There are three types of combat loading which may be employed depending upon the mission, organization, types of equipment assigned to the forces (including ships), and the planned tactical employment of the force. They differ mainly as to the degree of availability of a given unit for landing and as to the tactical integrity of units. They are:

(a) *Combat unit loading.* Combat unit loading is the method by which all or a part of a unit, such as an assault reinforcing battalion is completely loaded in a single ship, with its essential combat equipment and supplies in such manner as to be immediately available to support the tactical plan upon debarkation, and to provide a maximum of flexibility to meet possible changes in the tactical plan.

(b) *Combat organizational loading.* Combat organizational loading is the method by which a unit with its equipment and initial supplies is loaded into a single ship, together with other units, in such a manner as to be available for unloading in a predetermined order. It permits debarkation of complete units and equipment

which will be available for tactical employment after assembly ashore. This method is more economical in ship space than combat unit loading.

(c) *Combat spread loading.* Combat spread loading is the method of loading by which some of the troops, equipment, and initial supplies of a unit are loaded on one ship and the remainder are loaded in one or more other ships. This method is commonly used in loading units equipped with numerous vehicles and/or large amounts of heavy equipment. Organizations so loaded are available for employment after being landed and joined with their equipment and supplies.

c. *Commodity Loading.* Commodity loading is a method of loading in which various types of cargo such as ammunition, rations, or boxed vehicles are loaded together in order that each commodity can be discharged without disturbing other cargo. It is also called block stowage. Portions of compartments are completely filled with items of the particular commodity and are separated from other commodities. This method is frequently applicable to loading of Class V in which complete ships are often commodity loaded.

d. *Selective Loading.* Selective loading is a method of loading and stowing equipment and supplies aboard ship in a manner designed to facilitate issue to designated units. Supplies and equipment are stowed so that they can be discharged and delivered on call. Selective loading differs from commodity loading in that all classes of supplies required to support specified units are loaded and stowed so as to be discharged according to planned and/or anticipated requirements.

221. Methods of Stowage

There are several methods by which equipment, supplies, and materiel required in an amphibious operation are stowed. These methods are designed to afford quick and immediate access to, and unloading of, this cargo in order to make it available in planned sequence in support of the landing force. These methods of stowage are defined in *a* through *c* below.

a. *Horizontal Stowage.* Horizontal stowage is the lateral distribution of unit equipment or categories of supplies so that they can be unloaded simultaneously from two or more holds.

b. *Vertical Stowage.* Vertical stowage of unit equipment or a given category of supplies is a method of stowage in depth within a single compartment by which the loaded items are continually

accessible for unloading, and the unloading can be completed without corresponding changes or prior unloading of other cargo.

c. Balanced Stowage. Balanced Stowage is loading a vessel with precalculated increments of items of all classes and services in quantities proportional to expected or estimated unit rates of consumption or needs of a specific number of personnel.

Section V. EXECUTION OF EMBARKATION

222. General

The embarkation is executed in accordance with the approved embarkation plans and is a mutual responsibility of the naval forces, landing forces, and external supporting agencies as designated.

223. Responsibilities in Execution of Embarkation

a. Responsibilities of the amphibious task force commander are—

- (1) Overall coordination and control, and general supervision of the execution of embarkation in accordance with the embarkation schedule and loading plans.
- (2) Movement of assault shipping to embarkation points in accordance with the embarkation schedule.
- (3) Coordination with external agencies for control of the embarkation and movements to embarkation points.
- (4) Provision of communications facilities, including adequate security measures, required afloat.

b. Responsibilities of the landing force commander are—

- (1) Preparation of the landing force for embarkation.
- (2) Making known the assistance which will be required from forces afloat in loading.
- (3) Movement of embarkation components to and within the embarkation areas, and assembly of cargo and personnel on shore in accordance with the embarkation schedule and loading plans.
- (4) Coordination of security measures with external agencies as prescribed by higher authority.
- (5) Supervision of troop activities during loading.
- (6) Provision of an embarkation control office ashore.
- (7) Provision of communications ashore in the embarkation area, including adequate communications security measures. To preclude significant commitment of

organic communications equipment of the landing force that is to be embarked, additional equipment should be provided for use in the embarkation area. If possible, arrangements should be made with the commander of the area in which the embarkation is to take place to provide for the embarkation area shore communications requirements.

c. External agencies may be given responsibilities such as the following by higher authority:

- (1) Specifying and making available required marshalling and staging areas, embarkation areas, and embarkation points, and developing and operating facilities therein.
- (2) Providing authorized supplies and services to the amphibious task force, including supplies to be loaded at each embarkation area and necessary communications facilities for use during embarkation.
- (3) Coordination and control of administrative movements within the embarkation areas.
- (4) Security of the embarkation area or areas.
- (5) Providing lighterage.
- (6) Providing, at each embarkation point, loading equipment required on the piers, technical assistance, dunnage, and other aids.
- (7) Providing transportation for troop movements.

d. Commanding officers of individual ships are responsible for—

- (1) Having all troop spaces ready for troop use in accordance with the ship's loading characteristics pamphlet.
- (2) Handling, securing, and stowage of cargo in their ships in accordance with the approved loading plans. The commanding officer's responsibility commences with the actual lifting or transportation of each piece of cargo by personnel under his control. When transported, lifted, or loaded by personnel not under his control, the commanding officer's responsibility begins when the cargo is safely stowed on board, and accepted by him.
- (3) Making provision for winchmen, hatch tenders, hatch officers, and all other personnel for handling cargo in their ships, except for the ship's platoon which is provided by the landing force.
- (4) Making provisions for lighterage and craft.
- (5) Providing cargo handling gear and lashing gear (to include slings, lowering lines, and guide lines) as prescribed by ship's allowance.

- (6) Providing for billeting and messing of the personnel of the advance party who embark in his ship.
- e. The embarkation team commander is responsible for —
 - (1) Ensuring that personnel, equipment, and cargo are ready for embarkation for his assigned ship in accordance with the loading plans. This includes preparation of equipment and supplies, such as filling fuel tanks and loading basic ammunition loads in trucks and tanks; waterproofing vehicles; marking supplies and equipment; crating; and packaging.
 - (2) Providing an advance party for his assigned ship, to arrive at the embarkation point prior to the commencement of loading (par. 214). The personnel of the advance party board the ship and assist in the embarkation by providing communications facilities for landing force use, labor (ship's platoon), billeting guides, and guards, and by performing other duties as may be required.
 - (3) Organizing and operating an embarkation team control office, if one is required, at the embarkation point.

CHAPTER 9

WITHDRAWALS, RAIDS, AND DEMONSTRATIONS

Section I. AMPHIBIOUS WITHDRAWALS

224. General

a. The amphibious withdrawal as a type of amphibious operation (par. 10) is conducted for the purpose of evacuating forces to preclude loss of these forces or to retract the forces specifically for tactical redeployment in other areas.

b. The amphibious withdrawal extends from the initial measures in defense of the embarkation area, in conformity with the requirements imposed by the enemy situation, to the embarkation of the final covering force elements of the force being withdrawn.

225. Organization and Command Relationships

The organization of forces, the responsibilities for accomplishment of tasks, and the command relationships during an amphibious withdrawal are essentially the same as those existing in the objective area during the assault phase of an amphibious attack. Such variations in responsibility and command authority as are required by the specific situation must be announced in the directive for the operation.

226. Characteristics

The amphibious withdrawal has the following distinguishing characteristics:

a. Except in the case of withdrawal associated with amphibious raids, planning processes will usually be abridged.

b. Where enemy action against the embarking force is substantial or when the requirement for the forces elsewhere is great, the time available for execution of the withdrawal will be brief.

c. Facilities for embarkation and loading may be extremely restricted.

d. Where the withdrawal is conducted in the face of strong enemy action, the requirements for security are of paramount importance.

- e.* All of the requisite fire support means may not be available.
- f.* Means for controlling the withdrawal may be limited.
- g.* The operation may, of necessity, be conducted under adverse conditions of weather, terrain and hydrography.
- h.* Circumstances may render it advisable to conduct the operation under conditions of limited visibility.

227. Sequence of Execution

Regardless of its specific purpose, the amphibious withdrawal is executed in the general sequence outlined below:

- a.* Defense of embarkation areas, as required by the enemy situation, by air, naval, and land covering forces accompanied by the embarkation of personnel, supplies, and equipment which are not required for support of further operations ashore.
- b.* Progressive reduction of troop and materiel strength ashore under the protection of air, naval, and land covering forces. Depending on limitation of afloat cargo capacity and/or loading time, all usable military materiel is either evacuated or destroyed.
- c.* Withdrawal of the final land covering force, with priority to heavy elements such as artillery and armor, usually under cover of darkness, and supported as necessary, by air and naval fire support means.

228. Fire Support

The defense of an embarkation area(s) on a hostile shore requires close, coordinated employment of all fire support means comparable to that required for an assault landing (pars. 97—100). The procedure used in this coordination is essentially the same in both cases. The primary difference is that, in the assault, fire support means and control facilities are progressively built up ashore, whereas in a withdrawal the means and control facilities are progressively decreased ashore until eventually their functions are performed by units afloat or airborne. If requisite fire support is available, isolation of the embarkation area may be more readily achieved than in the landing area for an attack, since the enemy has less opportunity to preplan and accomplish his desired troop and weapon dispositions.

229. Embarkation Procedures

- a.* Planning for embarkation of forces incident to an amphibious withdrawal is conducted in accordance with the normal planning procedures as set forth in chapter 8 if the embarkation is preparatory to movement and conduct of an amphibious attack. When

embarkation is incident to a decision to terminate operations on shore and to redeploy the land forces to a base area, the planning procedures are abridged as necessary to conform to time requirements.

b. Combat loading will be employed in embarkation of the withdrawing force in preparation for a subsequent amphibious attack. Embarkation for movement to base areas will normally involve administrative loading.

c. The initial size of the embarkation area depends on factors such as—

- (1) Terrain essential for defensive operations by the covering force in the event embarkation is accomplished under enemy pressure.
- (2) Number of personnel and amount of materiel to be embarked.
- (3) Availability of effective fire support means.
- (4) Nature and extent of available embarkation facilities.
- (5) Time available for the embarkation.
- (6) Type and quantity of shipping available.

Section II. AMPHIBIOUS RAIDS

230. General

An amphibious raid, as a type of amphibious operation (par. 10), is conducted for purposes such as inflicting loss or damage; tactical deception; securing information; capturing or evacuating personnel or materiel; or establishing, supporting, or coordinating with unconventional warfare activities.

231. Organization and Command Relationships

The principles of organization and of command stated in chapter 2 are applicable for amphibious raids involving an Army force. However, the wide variation in the purpose of raids and the composition of the raiding force and associated naval forces requires definition of command arrangements applicable in each case.

232. Planning Considerations

a. General Considerations. An amphibious raid is planned and executed in the same general manner as an amphibious attack for the purpose of seizing an objective ashore, except that specific provision is invariably made for withdrawal. Because a raid involves a relatively small force and has a limited purpose, the plans for a raid may embody the following variations:

- (1) It may be unnecessary for the selected landing beaches or landing zones to meet all the requirements of an amphibious assault. In small scale raids, they are chosen from the point of view of insuring tactical surprise.
- (2) The limited duration of a raid may make it possible to conduct the operation without local naval and air superiority.
- (3) Final deployment of the raiding force may not be required until it reaches the objective ashore.
- (4) The limited objective and short duration of the amphibious raid will usually simplify logistic support requirements.
- (5) Through prearrangement, it may be possible for a small-scale raid to be executed with very limited communications means.

b. Detailed Planning Considerations. In planning a raid, considerations of basic importance are as follows:

- (1) Surprise is an essential ingredient in the success of an amphibious raid and offsets, in large measure, the lack of logistic and fire support normally associated with amphibious operations.
- (2) Security during the planning and execution of a raid must receive particular attention, to include full exploitation of elaborate cover plans, or may be confined to simple ruses.
- (3) The choice of landing areas for the raiding force is influenced by:
 - (a) Enemy dispositions.
 - (b) Sea approaches.
 - (c) Hydrographic and beach characteristics.
 - (d) Availability of suitable landing zones.
 - (e) Location of and avenues of approach to the objective of the raiding force.
- (4) The time which it is estimated the raiding force will remain ashore may influence the choice of H-hour and, consequently, the conditions of visibility under which the raiding force may be landed. It will likewise affect the scope of logistic arrangements which must be made.
- (5) The purpose of the raid, including its relation to other concurrent or imminent operations which it may support, will influence the selection of D-day for the raid. In addition, these same factors may affect the availability

of shipping, aircraft, logistic and/or fire support means for the raid.

- (6) The planning for the embarkation of forces assigned to participate in an amphibious raid is similar to that required in preparation for the amphibious attack, subject to the necessary increase in security measures required (ch. 8).
- (7) Fire support planning is similar to that for an amphibious attack, except that, where surprise is a major factor, supporting fires usually are withheld, and radio silence maintained until surprise is lost.
- (8) Planning for the ship-to-shore movement is generally similar to that for an amphibious attack, except that the movement may, in some instances, be made entirely by helicopter.
- (9) The withdrawal must be planned in detail, to include alternate provision, as to both time and place, for reembarkation. If the landing point and withdrawal point are not the same, positive means of location and identification of the latter must be established. Special situations may permit planning for the withdrawal of the raiding force directly into friendly territory without reembarkation. Withdrawal by air may be possible when the area of the raid includes a usable airfield, terrain suitable for landing helicopters, or water suitable for landing seaplanes.

233. Rehearsals

Thorough, integrated rehearsal is requisite to precision and speed in execution of a raid. All participating forces must be drilled in every detail of debarkation, movement ashore, operations ashore, withdrawal, and reembarkation. Timing, so vitally important in all amphibious raids, cannot be accurately estimated or adhered to without adequate rehearsals by the entire raiding force. The provisions of section II, chapter 11 are generally applicable.

Section III. AMPHIBIOUS DEMONSTRATIONS

234. General

a. An amphibious demonstration, as a type of amphibious operation (par. 10), is conducted for the purpose of deceiving the enemy by a show of force with the expectation of deluding the enemy into a course of action unfavorable to him. The demon-

stration may include a feint at landing involving an approach to a beach or landing zone. It may involve the landing of a token force without intent to seize a tactical objective ashore.

b. A demonstration may be conducted in conjunction with an amphibious attack to confuse the defender as to the time, place, or strength of the main attack, and normally includes preparatory and supporting fires.

235. Demonstrations Outside An Objective Area

An amphibious demonstration may be conducted outside the objective area for a planned amphibious attack to divert or immobilize enemy strategic reserves or other forces capable of affecting the amphibious attack, distract enemy attention from the operation, or to precipitate a general air or naval engagement. Such a demonstration may be executed by a separate amphibious task force. The time and place of the demonstration is decided by higher authority, with consideration to recommendations of the commander of the amphibious task force whose operations are to be supported.

236. Demonstrations Within An Objective Area

An amphibious demonstration may be conducted within the objective area of an amphibious task force by a portion of the task force. The demonstration may be intended to cause the enemy to employ his reserves improperly or to disclose his weapons positions, by premature fires. A demonstration may place an early burden on the enemy's communications system, harass him, or precipitate a general air or naval engagement. The decision to conduct such a demonstration is made during planning by the amphibious task force commander, following consultation with the landing force commander.

237. Planning Considerations

In planning demonstrations for execution within the objective area, consideration must be given to—

a. *Location.* The demonstration area must be near enough to the main landing area to permit subsequent employment of the demonstration force in accordance with the tactical plan. On the other hand, it should be sufficiently separated from the main landing area to avoid interference with the main landing, and to ensure that the enemy will be materially delayed in correcting any improper disposition of his forces. The demonstration area must be suitable for an actual landing, for only in such an area can the threat of landing be plausible. The demonstration area

should also be important to the enemy, since only a threat to an area of value will induce the enemy to react. If an alternate landing demonstration is intended solely to cause the enemy to disclose his positions by opening fire prematurely, or to harass him, it may be conducted in the main landing area prior to D-day.

b. Timing. The time of a demonstration conducted in support of a main landing is based on the time of the supported landing.

(1) *Prior to main landing.* A demonstration may be conducted prior to the main landing if the purpose is—

(a) To draw enemy forces to the threatened area and away from the area of the main landing.

(b) To cause the enemy to disclose his positions.

(c) To provide protracted and systematic harassment.

(d) To divert the attention of the enemy from the main landing.

(e) To cause a premature commitment of enemy forces.

(2) *Simultaneously with main landing.* A demonstration may commence at the same time as the main landing if it is desired—

(a) To prevent redeployment of enemy forces.

(b) To deceive the enemy as to the location of the main attack.

(3) *Subsequent to main landing.* A demonstration may be conducted subsequent to the main landing if the desired effect is to divert enemy forces or fire from the point of the initial landing. Successive demonstrations may be executed at a number of points after the main landing.

c. Forces. The demonstration force must be of such composition and size as to cause the desired reaction. When the demonstration force is constituted from within the amphibious task force, the landing force reserve and the shipping in which it is embarked may be employed if the presence of the reserve is not required in the immediate area of the main landing. On completion of the demonstration, the demonstration force is dissolved, and its elements are reassigned in accordance with the operation order or plan.

d. Fire Support. The demonstration force should execute supporting fires of a nature and scope which insures credibility. Factors which may serve to limit the availability of supporting fires are availability of fire support ships, aircraft and ammunition supply.

e. Rehearsals. Sufficient rehearsals are held to insure that the demonstration will be realistic.

238. Execution

a. The effectiveness of a demonstration increases in direct proportion to the degree of realism involved in its execution. It should be neither underplayed nor overplayed, since to do either may destroy the effect sought. It is important that the enemy receive a convincing impression of preparations for a landing. All visible, audible, and electronic aspects of the demonstration must appear to be authentic. A demonstration normally includes the approach of the demonstration forces to the demonstration area, at least a part of the ship-to-shore movement and the employment of supporting fires. A brief but intense preliminary bombardment will usually be more effective than deliberate harassing fire over longer periods of time. A communications deception plan should be used. Underwater demolition teams and tactical deception units may be employed.

b. The demonstration must be prolonged a sufficient period of time to allow the enemy time to react to it. The movement of waves toward the beach or landing zones is conducted as a normal ship-to-shore movement, except that boat waves do not actually beach and helicopter waves do not land. Empty landing craft maintain sufficient distance from the beach so as to preclude close enemy observation. At a prearranged time or distance from the beach, or landing zone, or upon signal, the boat waves and/or helicopter waves withdraw. Smoke may be used to conceal the withdrawal.

CHAPTER 10

LANDINGS UNDER UNUSUAL CONDITIONS

Section I. LANDINGS UNDER LOW VISIBILITY CONDITIONS

239. General

a. A landing under low visibility conditions is one in which the ship-to-shore movement is executed, and at least the initial objectives seized, under cover of darkness, or under limited light conditions imposed by fog, rain, snow, or smoke.

b. Landings under these conditions may be undertaken deliberately for the following purposes :

- (1) Achievement of tactical surprise.
- (2) Elimination or reduction of the effectiveness of particular enemy dispositions which cannot otherwise be accomplished.
- (3) Achievement of secrecy in the landing of reconnaissance or raiding forces.

c. Circumstances such as a change in the enemy situation, last minute changes in plans for the assault, and weather conditions may warrant a landing under reduced visibility conditions.

240. Planning

Planning for an amphibious operation to be executed under conditions of reduced visibility requires the greatest possible attention to detail and simplicity. Plans provide for seizure of limited ground objectives with easily recognized approaches thereto.

241. Operational Considerations

The following factors must be considered when planning an amphibious operation to be executed under conditions of reduced visibility :

a. Hazards of weather are more significant. Conditions that are tolerable in daylight may be disastrous during reduced visibility.

b. Minesweeping and obstacle clearance on beaches conducted during darkness cannot be expected to be as thorough as when accomplished in daylight.

c. Underwater demolition team reconnaissance should be conducted prior to D-day. However when underwater demolition teams can be employed only just prior to the landing, their value lies mainly in locating and marking the proper landing beaches, making surf reports, and executing assault demolition operations just prior to H-hour.

d. Landing force reconnaissance units may be introduced covertly into the objective area. These units, either prior to and/or during the ship-to-shore movement, conduct reconnaissance and pathfinder missions.

e. Navigation and control is more difficult than in daylight.

(1) Emphasis must be placed on precise navigation to assure landings at the proper places and times. Consistent with the conditions under which the landing is being executed, all appropriate means available must be used to ensure the correct positioning and guidance of all units. Radar silence may be imposed and preclude its use.

(2) The effective employment of helicopters for the ship-to-shore movement is dependent upon the ability to position navigational aids and control personnel for the approach and landings. The nature of the terrain and the degree of darkness are also determining factors in helicopter operations during periods of low visibility.

f. Low visibility conditions provide a measure of passive defense against enemy air and surface attack. However, these same conditions degrade the conduct of active defense.

g. Special preparations and equipment are required. Special visual signal apparatus of directional and secure nature is employed. Provision is normally made for use of night viewing devices, screened identification lights, luminous markings, radar beacons, radar reflectors, and portable radio direction finders. All equipment is prepared to reduce noise to the minimum.

h. Techniques for the ship-to-shore movement by surface craft and vehicles are modified for low visibility conditions. In order to preserve tactical surprise, all efforts must be made to maintain radio silence until the last possible moment before the landing of the first scheduled wave, or until it is reasonably certain that the force has been discovered. Sound equipment, screened colored lights for identification and signaling, lucite wands, and flashlights with colored filters are used to control the waves. If possible, the use of radio is restricted to that necessary for vectoring boat waves. Lines of departure may be nearer the beaches than

in daylight operations. Transports, approach lane marker ships, and primary control ships track assault waves by radar and, when necessary, vector them by voice radio. Radar equipped boats may be used to lead waves in to the beaches. Personnel with beach marker lights are included in the first wave on each landing beach to mark the center of the beach; they may, when possible, precede the first wave ashore.

i. Preliminary bombardment by naval gunfire must not divulge the intended places of landing and thereby sacrifice surprise. Emphasis is placed on destruction of enemy radar and other detection devices. Effective, close support of forces ashore by naval gunfire can be accomplished by the use of radar beacons, and by special training of fire support ships and shore fire control parties. Sight contact, or positive radar plot of the leading wave is required if fire is to be delivered on beaches or landing zones just prior to H-hour.

j. Preassault air operations must be designed so as not to disclose either the intent to land or the selected landing area. Timing of air strikes on the actual landing beaches and landing zones just prior to H-hour is difficult since pilots may not be able to observe the approaching assault waves. Close air support for forces ashore can be delivered by utilizing suitable means for identification of targets and bomb lines, and compatible electronic control systems such as air support radar equipment.

242. Rehearsals for Landings Under Low Visibility

Because of the special considerations involved and detailed coordination required in execution, extensive rehearsals are required in preparation for landings under low visibility conditions.

Section II. LANDINGS UNDER COLD WEATHER CONDITIONS

243. General

a. Amphibious operations conducted under cold weather conditions, and in sea-ice areas follow the same basic principles as operations under more favorable conditions. The impact of an environment in the northern regions of the world on military operations is discussed in FM 31-71, Northern Operations.

b. Cold weather conditions impose certain limitations on the amphibious task force because of reduced visibility; effects of sea-ice on ships, landing craft and amphibious vehicles; possible failure or decreased reliability of communications equipment;

effects of low temperatures on personnel and materiel efficiency; and poor cross-country mobility.

244. Planning and Preparation

The limitations imposed by cold weather conditions require careful and detailed consideration during planning and preparation. Provision must be made for—

a. Adaptation and preparation of craft, vehicles, and equipment for cold weather operation.

b. Adequate and flexible plans for logistic support during the operation.

c. Special equipment and supplies required for the landing and operations ashore.

d. Training of personnel in survival, special operating techniques and procedures, and maintenance of equipment. See FM 31-70, Basic Cold Weather Manual.

PART THREE
EXECUTION OF THE AMPHIBIOUS OPERATION

CHAPTER 11
REHEARSAL, MOVEMENT, AND PREASSAULT
OPERATIONS

Section I. GENERAL

245. Sequence of Activities

The activities discussed in this chapter are conducted by the amphibious task force following embarkation of the advance force echelon and/or assault echelon of the landing force. They are activities which take place prior to commencement of assault landings in the objective area.

246. Planning Considerations

Planning for rehearsals, movement to the objective area, and preassault operations is accomplished in conjunction with the overall planning for the amphibious operation. Principal planning considerations are covered in Part Two, however, further aspects of importance in planning are also noted in the coverage which follows.

Section II. REHEARSALS

247. Scope and Purpose

a. The rehearsal is that part of the amphibious operation in which one or more exercises are conducted by the amphibious task force or elements thereof, under conditions approximating those contemplated for the actual operation. Rehearsals are executed in accordance with a plan which approximates the plan for the specific operation. Units in the advance force echelon and the assault echelon of the Army landing force will participate in rehearsals. Selected elements in the followup echelon may be required to participate. It is assumed, prior to undertaking rehearsals for a specific amphibious operation, that elements of the

amphibious task force have already achieved a satisfactory state of training in amphibious operations in general.

b. The purpose of rehearsals is to test—

- (1) Adequacy of plans and familiarity of all echelons with plans.
- (2) Timing of detailed operations.
- (3) Combat readiness of participating forces.
- (4) Communications (par. 147).

248. The Rehearsal Plans

Responsibility for the preparation of rehearsal plans is the same as for the preparation of the actual operation plan. Rehearsal plans should be issued separately, but should be as similar to the operation and administrative plans for the actual operation as practicable.

249. Rehearsal Planning Considerations

In planning for rehearsals, consideration must be given to the number, nature and scope of rehearsals, the date and time for each, and the area in which they will be conducted. A consideration of particular importance to the landing force in planning for rehearsals is the difficulty of repair or replacement of equipment damaged or lost during rehearsals conducted after final departure from the mounting area.

a. The number, nature, and scope of rehearsals will be influenced by—

- (1) The complexity of the tasks assigned the amphibious task force.
- (2) The time available for rehearsals.
- (3) The state of training of forces.
- (4) Suitability of available rehearsal areas.
- (5) Special or unusual problems to be faced in the actual operation, the solution to which must be accorded special attention in rehearsal.
- (6) Intelligence and counterintelligence considerations.

b. The dates upon which rehearsals are conducted and the time allocated for them must provide for—

- (1) Complete and careful execution of the entire rehearsal.
- (2) Reembarkation of troops, equipment, and supplies in a manner which conforms to the original embarkation plan.
- (3) Rehabilitation or replacement of equipment and supplies, and repair or replacement of any damaged or lost amphibious vehicles, landing craft, ships, or aircraft.

- (4) Critiques at all levels of command in order to evaluate the rehearsal exercise, to emphasize lessons learned, and to correct mistakes.
 - (5) Time to revise plans in which the rehearsal has disclosed deficiencies.
- c. Selection of the rehearsal area is influenced by—
- (1) Suitability of the area for landings.
 - (2) Similarity of the rehearsal area to the actual landing area(s).
 - (3) Feasibility of employing live ammunition.
 - (4) Security.
 - (5) Susceptibility to enemy interference.
 - (6) Location in relation to the objective area and embarkation areas.
 - (7) Conditions which might adversely affect the health of the force.
 - (8) Activity of civilians, vehicles, shipping, and small craft which might interfere with the rehearsal.

250. Types of Rehearsals

Separate force, staff, and integrated rehearsals are held in preparation for the amphibious operation. A critique follows each rehearsal.

a. Separate force rehearsals are those conducted by elements of an amphibious task force whose tasks are not intimately associated with those of the main body of the amphibious task force. The advance force and the demonstration force are examples of forces which usually conduct separate rehearsals. Supporting forces, not a part of the amphibious task force and which do not participate directly in the assault, may not be required to participate in integrated rehearsals of the amphibious task force. Such forces hold separate rehearsals or may be rehearsed with other participants with whom coordination of mutual support is required.

b. Staff rehearsals are those conducted by all staffs scheduled to participate in the amphibious operation, and take the form of command post exercises. They are conducted prior to integrated rehearsals. Whenever possible, such rehearsals should include the exercise of communication facilities.

c. Integrated rehearsals are those held for the main body of the amphibious task force. At least two integrated rehearsals are desirable for elements that participate in the initial assault landings.

- (1) The first integrated rehearsal usually omits actual bombardment and unloading of supplies, while stressing perfection of communications and control in execution of the ship-to-shore movement. Only token numbers of landing craft, amphibious vehicles, helicopters, and landing ships may be employed, but the full control system for both surface craft and aircraft should be exercised.
- (2) The final integrated rehearsal is conducted, as nearly as possible, in accordance with the plans for the actual operation. If practicable, it includes naval gunfire and air support with live ammunition. There should be extensive troop participation, and unloading is carried out as determined during planning, in sufficient degree to test effectively the tactical and logistic plans, the operation of the ship-to-shore movement control organization, and the functioning of the shore party, including naval components.

251. Preoperational Briefings

Prior to rehearsal, and again prior to the assault, preoperational briefings should be held at all levels of command to ensure thorough understanding of the plans. The movement to the objective area, where a long sea passage is involved, provides an excellent opportunity for final briefings.

252. Security

a. Because of similarity between the rehearsal and the actual operation, strict security measures must be enforced during rehearsals. The reconnaissance for, selection of, and arrangements for the use of the areas in which rehearsals are to be held must be carefully conducted. Deceptive measures may be necessary to ensure the security of the rehearsal.

b. Unauthorized observation by personnel not part of the amphibious task force, or unauthorized communication by personnel of the amphibious task force with external agencies, must be prevented. Sealing off of personnel and ships, and establishment of security perimeter patrols around the rehearsal area, both at sea and ashore, are primary means of achieving security. Special precautions must be taken to achieve communication security (ch. 6).

253. Rehearsal Restrictions

During the early phases of planning, a determination of the feasibility of conducting a full scale rehearsal must be made.

The most significant factor to be considered is the threat of an enemy nuclear attack on the amphibious task force. This threat may be such as to preclude all but staff or separately conducted integrated rehearsals for parallel elements of the naval and landing forces. In an emergency situation, the requirement for the timely execution of the amphibious operation may preclude the conduct of a full scale rehearsal.

Section III. MOVEMENT TO THE OBJECTIVE AREA

254. Method of Accomplishment

a. Movement of the amphibious task force to the objective area includes departure of ships from loading points in an embarkation area, the passage at sea, and the approach to and arrival in the objective area. The passage at sea may be made without a stop, or it may be interrupted by rehearsals, by stops in staging areas for logistic reasons, and by stops at regulating points. Movements for the purpose of postponement may be necessitated by adverse weather or other unfavorable situations.

b. Shore based air units of the amphibious task force deploy to assigned bases as directed.

255. Naval Organization for the Movement

For movement to the objective area, the amphibious task force is subdivided into movement groups, according to the speed and other characteristics of the ships involved and according to the time the ships are desired in the objective area. The organization for movement to the objective area must closely parallel, or permit rapid deployment into, the organization for landing and support of operations ashore (pars. 79—85).

a. Pre-D-day movement groups comprise the advance force. The advance force usually proceeds to the objective area as a single movement group. However, if there is a wide disparity of speed between ships, or if an advance force echelon of the landing force is to capture off-lying islands or other key terrain points, it may be necessary to organize the advance force into two or more movement groups.

b. D-day movement groups which comprise the main body of the amphibious task force may all arrive in the objective area on D-day, or may be echeloned into the area. The components arriving on D-day may consist only of the forces required to initiate the landing. The remaining components may be phased in during succeeding days. Such movement groups include—

- (1) One or more transport groups;
- (2) One or more landing ship groups;
- (3) One or more support groups; and
- (4) One or more support carrier groups.

c. Post D-day movement groups of the amphibious task force which are scheduled to arrive in the objective area after D-day are usually organized into one or more fast-movement groups and/or one or more slow-movement groups.

256. Planning Responsibility

a. *Movement Plan.* The amphibious task force commander is responsible for preparing a movement plan. When several subordinate attack groups are involved, he usually prepares a general movement plan in which coordinating measures are included as required. Subordinate force group commanders prepare their own detailed movement plans. Movement plans are generally among the last plans to be completed during the planning phase. Each movement plan is usually included as an annex to the appropriate operation plan.

b. *Postponement Plan.* The amphibious task force commander prepares a postponement plan which is usually promulgated as a part of his operation order. Postponement may be necessary after the amphibious task force has started its movements from final staging areas toward the objective area. Usually, the postponement is on a 24-hour basis which involves backtracking or the diversion of ships into a designated sea area. A longer postponement may involve a return to a staging area.

c. *Alternate Movement and Approach Plans.* The alternate plan for an amphibious operation may so differ from the preferred plan that separate movement and approach plans are necessary. It will seldom be possible to determine far in advance the time at which an alternate plan will be placed in effect. Movement plans must be flexible enough for execution at any point between the final staging area and a point as close as practicable to the objective area.

257. Staging Areas

Plans may be made by the amphibious task force commander to use staging areas while en route from embarkation areas to the objective area. The amphibious task force may stage through one or more intervening ports for logistic support, emergency repairs, and/or final rehearsals. If rehearsals are to be held,

provision is made for replacing or repairing urgently needed equipment or supplies.

258. Logistics En Route

The landing force has no major logistic problem during the passage at sea. Naval ships in which troops are embarked furnish subsistence and provide medical service. Economy in the use of fresh water by all aboard is essential. Landing force logistic activity consists primarily of maintenance of equipment. Naval commanders afford all practicable assistance to embarked troop commanders in the servicing and maintenance of equipment during the movement.

259. Training En Route

a. Such training exercises as are practicable are conducted during the passage. Training conducted while a ship is underway is limited to activities which do not interfere with the ship's operating procedure. Crowded conditions aboard ship require that troop training be thoroughly planned, organized, and coordinated with ship's commanding officers in order to avoid conflict with other shipboard activities.

b. Embarked troops participate in ship's emergency drills and debarkation drills, conduct landing force training as appropriate with particular emphasis on indoctrination on the operation, and conduct physical drills. Ships provide facilities so far as they are able to assist in the troop training.

260. Communications En Route

The amphibious task force commander controls communications during movement to the objective area (par. 148).

261. The Approach

The approach to the objective area includes the arrival of the various movement groups in the vicinity of the objective area, deployment of movement groups from the cruising formations, reforming as necessary according to assigned tasks, and proceeding to designated positions. Frequently the final approach and deployment are made under cover of darkness. During this critical period, added protective measures are taken.

Section IV. PREASSAULT OPERATIONS

262. Purpose and Scope

a. Operations, preparatory to an amphibious attack, are conducted for the following purposes:

- (1) To isolate the objective area.
- (2) To gain information of the enemy.
- (3) To prepare the objective area for assault landings.

b. Preassault operations are those operations conducted in the objective area by subordinate elements of the amphibious task force which are normally organized into an advance force (par. 24).

c. It is recognized that related supporting operations may be conducted by other theater forces prior to arrival of the advance force (par. 35). Since such supporting operations contribute to the preparation of the objective area for the amphibious assault, they should be responsive to the requirements of the amphibious task force. Considerations in paragraphs 263 and 264 are applicable to such supporting operations although they are not a part of the amphibious operation.

263. Deception

The operations of all forces, prior to arrival of the main body of the amphibious task force in the objective area must be conducted so as to avoid disclosure of the objective (strategic deception) and landing areas (tactical deception).

a. Strategic deception is conducted under the direction of a commander above the level of the amphibious task force. Operations to achieve strategic deception are sometimes based on disclosure of information of operations not intended for execution, and may include embarkation, rehearsal, and departure therefor. Actual operations for purposes of strategic deception, such as bombing and bombardment, are conducted over a wide area with the same intensity at several points. Sometimes, in order to create an incorrect reaction, there is a complete omission of attacks on certain areas for as long a period as the situation will permit.

b. Tactical deception is usually accomplished by the advance force or the main body of the amphibious task force.

264. Operations Prior to Arrival of Advance Force

a. *Requirements.* The nature of a specific amphibious operation may impose certain preparatory requirements which cannot be met by the forces assigned to the amphibious task force commander. To ensure that all his requirements are fulfilled, the amphibious task force commander submits requests to higher authority for accomplishment of tasks by forces not a part of the amphibious task force. These operations are undertaken on di-

rection of the higher authority prior to the arrival of the advance force, or prior to the arrival of the main body of the amphibious task force if an advance force is not employed.

b. Responsibilities for Planning.

- (1) The landing force commander and commanders of other major elements of the amphibious task force are responsible for the preparation of their requirements for pre-assault operations, and for the submission of those requirements to the amphibious task force commander.
- (2) The amphibious task force commander is responsible for the consolidation of requirements of all elements of the amphibious task force, and forwarding those requirements that cannot be fulfilled by his own forces to higher authority for accomplishment.

c. Tasks. Any or all of the tasks discussed below may be accomplished prior to the arrival of the advance force.

- (1) *Isolation and attainment of superiority.* Isolation of the objective area is accomplished primarily by air operations designed to sever lines of communications. However, bombardment of enemy installations by naval gunfire, and sinking of enemy shipping by surface or submarine attacks, also contribute to isolation. Air, surface, and subsurface superiority is attained by bombardment, surface and air sweeps, and antisubmarine operations. Destruction or neutralization of distant enemy forces that could threaten the amphibious task force, including the advance force, provides freedom from enemy interference while the task force is en route to the objective area.
- (2) *Destruction of specific targets.* Destruction of specific targets in the objective area may be undertaken by air and naval gunfire, by raids, and/or through clandestine operations. Raids and clandestine operations may be undertaken by units or individuals transported by surface, subsurface, or air means.
- (3) *Harassment.* Harassment by air and naval gunfire bombardment, and by other operations serves to confuse the enemy and to impede his defense efforts.
- (4) *Psychological warfare.* Reduction, by psychological means, of the enemy's will to resist is accomplished as appropriate and feasible. Examples are the use of leaflets and radio broadcasts.
- (5) *Collection of enemy information.* Information about the

objective area and enemy installations and dispositions may be obtained by—

- (a) Aerial photography, submarine periscope photography, and photography from the decks of surface ships.
- (b) Surveys made by underwater demolition teams operating from submarines or surface ships.
- (c) Operations of amphibious reconnaissance patrols and raiding forces.
- (d) Operations of friendly agents in enemy territory.
- (e) Electronics intercept and direction finding.
- (f) Visual aerial reconnaissance.

265. Decision to Employ an Advance Force

If not made by higher authority, the decision as to the employment of an advance force is made early in planning by the amphibious task force commander, after consultation with the landing force commander. The decision is made after weighing the relative advantages of strategic and/or tactical surprise and the requirements for preparation of the objective area.

a. Principal considerations concerning surprise are—

- (1) Complete strategic surprise is difficult to attain against an alert enemy, because hostile air and submarine reconnaissance, and our own preliminary reconnaissance and bombardment all militate against it. The prospects of achieving strategic surprise will decrease with efforts to isolate the objective area.
- (2) Tactical surprise also may be difficult to attain when the objective is a small geographic locality. Against large land masses, however, tactical surprise may be achieved, regardless of the intent shown by the preassault preparation of the objective area. These preassault operations should cover areas in addition to those selected for the landing. Amphibious task force movements and their timing should not indicate the areas toward which the attack is directed until the ship-to-shore movement actually commences. Tactical surprise, while desirable, may not always be necessary if the effectiveness of the preparation is sufficient to offset the disadvantages incurred by the loss of surprise.

b. The requirement for preparation of the objective area is determined after consideration of the extent of enemy fixed defenses, including mines, beach and landing zone obstacles, and shore defenses.

- (1) When the landing area selected is extensively organized for defense, the offshore areas heavily mined, and when the main defending forces are occupying fixed defenses with corresponding light reserves, advance force operations are indicated.
- (2) When the landing area selected is lightly defended and the main defending force is held in reserve, the advantage of conducting advance force operations for the purpose of destruction is weighed against the disadvantage of disclosing the selected landing area(s). Unless the objective area can be isolated and reinforcements excluded, the enemy ground forces may build up their local strength rapidly during advance force operations, regardless of the destructive and disruptive effects of the attacks. Under these conditions, pre-D-day operations are directed toward attacking enemy troops, destroying enemy reserves, and interfering with enemy communication nets.

266. Advance Force Planning Responsibilities

a. The landing force commander is responsible for the preparation of his requirements for naval gunfire, air bombardment, pre-D-day seizure of supporting positions, demonstrations, and reconnaissance, and for the submission of these requirements to the amphibious task force commander. The landing force commander is also responsible for indicating the landing force staff representation he desires to accompany the advance force commander. If pre-D-day landings or demonstrations are to be conducted, the landing force commander will direct the landing group commander of the advance force to coordinate his planning with the advance force commander.

b. The amphibious task force commander is responsible for consolidating the requirements of the landing force with those of the other elements of the amphibious task force, and for issuing directives to the advance force commander to prepare the detailed plans for operations of the advance force. The amphibious task force commander reviews the detailed plans of the advance force to ensure that they meet his overall requirements.

c. The advance force commander is responsible for the detailed planning for operations of his force. He ensures that his plans will fulfill the overall requirements of the amphibious task force. He prepares naval gunfire, air bombardment, minesweeping, landing site reconnaissance, underwater demolition, and (if required) mine and net laying, and pre-D-day landing plans. Any landings

or demonstrations to be conducted are planned in consultation with the landing group commander of the advance force. In this planning, the advance force commander follows the same procedures the amphibious task force commander observes when planning the main landings.

d. When the advance force includes a landing group, the landing group commander plans his operations in conjunction with the advance force commander, following the same procedures the landing force commander observes when planning the main landing.

267. Advance Force Tasks

Tasks to be accomplished by the advance force may include any or all of the following:

a. *Destruction of Defenses Ashore.* The advance force destroys landing beach and landing zone defenses, gun emplacements, control and observation posts, and any other installations which could be used by the enemy in opposing the assault landings. Naval gunfire, air bombardment, and artillery, if emplaced, are utilized for the destruction of enemy facilities.

b. *Preparation of Sea Areas.* The advance force prepares the sea areas in the objective area for amphibious operations by minesweeping, minelaying, hydrographic surveys, and net laying, as necessary.

c. *Preparation of Beaches and Beach Approaches.* The advance force prepares the beaches for landing and the approaches to the beaches for passage of landing craft, landing ships, and amphibious vehicles. All natural or man-made obstacles, including mines, which make passage and landing hazardous are destroyed. Underwater demolition teams accomplish destruction, removal, or marking of such obstacles in the sea approaches to and on selected beaches between the 3-fathom curve and the high-water line. The landing force maintains liaison with the underwater demolition teams to obtain first-hand information of the landing beaches and beach approaches. In certain situations, at the request of the landing force commander, underwater demolition team personnel may assist in the removal of land mines and obstacles on the beaches above the high-water line.

d. *Beach Reconnaissance.* Beach reconnaissance is conducted by the advance force to collect the latest possible detailed information on beach gradients, obstacles (natural and man-made), tide and surf, depths of water, contour of the sea bottom, routes of exit from the beaches, soil trafficability, beach defenses, and

suitability of the selected beaches for landing. Beach reconnaissance is usually performed by underwater demolition teams. However, such reconnaissance may be accomplished in conjunction with landing force reconnaissance units, or by the latter alone.

e. Isolation of the Objective, and Attainment and Maintenance of Local Air Superiority. Attacks by air and naval gunfire and amphibious raids are made, when required, against airfields, aircraft, missile launching sites, communications and supply centers, shipping, and other critical targets, to isolate the objective and attain and/or maintain local air superiority.

f. Pre-D-Day Landings. Pre-D-day landings may be executed for reconnaissance, destruction or harassment purposes; to capture offshore islands or promontories for the establishment of artillery, navigation aids, radar stations, or interim logistic bases. Ship-to-shore movement of forces to be landed is effected by surface craft or helicopter, usually in the same manner as for the main landings. Airborne units may be employed for these pre-D-day missions.

g. Demonstration. Demonstrations may be conducted to deceive and confuse the enemy.

h. Electronic Countermeasures. The advance force obtains maximum information of the enemy's communications and electronic facilities in, and adjacent to, the objective area. During advance force operations, these facilities are neutralized or destroyed in order to prepare the objective area for assault. Before destruction is ordered, due consideration must be given to the following:

- (1) Intelligence which may be gained through interception of enemy communications; and
- (2) Possible use of enemy facilities in the objective area, which may be captured by the landing force.

268. Advance Force Planning Considerations

Principal considerations in the preparation of advance force plans are—

- a.* Sufficiency of means assigned by the amphibious task force commander for the accomplishment of the advance force mission.
- b.* Enemy air, surface, and subsurface attack capabilities.
- c.* Anticipated enemy counterbattery fires.
- d.* Requirements for beach and landing zone preparation, incorporating the detailed troop requirements.

- e.* Number, type, and priority of targets to be attacked.
- f.* Requirements for minesweeping operations.
- g.* Requirements for beach and landing zone reconnaissance and underwater demolition operations, including support.
- h.* Requirements for defensive minelaying operations.
- i.* Requirements for support of any pre-D-day landing to be made.
- j.* Necessity for coordination of naval gunfire and air strikes.
- k.* Requirements for ammunition supply and replenishment.
- l.* Requirements for observing, reporting, evaluating, and taking action on the results of naval gunfire and air strikes.
- m.* Provisions for continuous development, utilization, and dissemination of new intelligence and target information obtained from visual, photographic, and electronic reconnaissance as well as from other sources.

269. Supporting Arms

- a.* An advance force provides support for its various elements as they accomplish their tasks. The advance force commander establishes in his flagship an advance force supporting arms coordination center (par. 100*e*).
- b.* An advance echelon of the landing force commander's fire support coordination agency usually accompanies the advance force SACC (par. 100*c*(2)).

270. Dissemination of Intelligence

The advance force commander must disseminate the intelligence he obtains to the amphibious task force commander and landing force commander without delay. He also transmits detailed information on the results of his preassault operations in the objective area for evaluation in the light of plans for the assault landings.

CHAPTER 12

CONDUCT OF THE ASSAULT

Section I. GENERAL

271. General

a. This chapter contains a discussion of the execution of the assault phase of an amphibious attack. The assault begins when the assault elements of the main body of the amphibious task force arrive in assigned positions in the sea area of the objective area and concludes with the accomplishment of the amphibious task force mission. It encompasses—

- (1) Preparation by fire of the landing area(s) by means of naval gunfire and air bombardment.
- (2) Ship-to-shore movement of the assault elements of the landing force by landing craft, amphibious vehicles, and helicopters.
- (3) Assault landings on landing beaches and in landing zones and drop zones by initial assault elements of the landing force.
- (4) Offensive operations inland to seize objectives requisite to establishment and control of the force beachhead.
- (5) Logistic, air, and naval gunfire support throughout the assault, primarily by naval forces.
- (6) Landing of remaining landing force elements and materiel and the conduct of such operations as may be required to complete the accomplishment of the amphibious task force mission.

b. Most of the considerations important in the execution of the assault are discussed in preceding chapters in connection with planning. Reference should be made to chapter 5 in particular in conjunction with this chapter.

272. Organization of Forces for the Assault

The organization of forces for the assault is based on the parallel organization of the landing force and the naval forces which transport, land, and support the landing force. The landing force organization for landing is the specific tactical group-

ing of forces for the assault (par. 85). The naval organization must parallel that of the landing force to facilitate execution of the landing plan and the scheme of maneuver ashore.

273. Area Organization for the Assault

The amphibious task force commander and the landing force commander establish the area organization of the objective area for the assault in their operation plans (pars. 75-78).

Section II. PRELANDING OPERATIONS

274. General

If an advance force is employed in the operation, it will conduct preassault operations as discussed in chapter 11. When the main body of the amphibious task force arrives in the objective area, activities in final preparation for the initial assault landings commence. These prelanding activities encompass a continuance and intensification of fires and other operations for preparation of the landing area(s) and a preparation of forces for the ship-to-shore movement.

275. Final Preparation of the Landing Area

Final preparation of the landing area includes—

a. Naval minesweeping operations with special emphasis on ensuring the clearance of mines in the transport and fire support areas and in the sea approaches to the landing beaches.

b. Naval underwater demolition team operations to verify available information, obtain last minute information, and assist the assault landings by performance of as many of the following tasks as are assigned:

- (1) Hydrographic reconnaissance of the landing beaches and seaward approaches thereto.
- (2) Demolition of natural and man-made obstacles.
- (3) Sea mine clearance inshore from the three-fathom line.
- (4) Locating, improving, and marking usable channels.
- (5) Providing data obtained during prelanding operations to the landing force when of importance to it or in response to specific requests for information.
- (6) Guiding leading waves of assault craft to the landing beaches.

c. Air operations in preparation for the landings (par. 114*b*).

- (1) Air attack measures include preplanned air strikes against enemy defensive installations on, and in the

vicinity of, the landing beaches and landing zones. In addition, strike aircraft are provided for attack of targets of opportunity. Immediately prior to H-hour, strike aircraft intensify neutralization attacks in the immediate vicinity of landing beaches, helicopter approach and retirement lanes, and the landing zones. Schedule alterations are made to accommodate any changes in H-hour.

- (2) Air escort measures are conducted to neutralize enemy fires endangering friendly helicopters and transport aircraft.
- (3) Miscellaneous air operations conducted during this period may include tactical air observation, reconnaissance, air spot for naval gunfire and artillery, smoke missions, search and rescue, and electronic counter-measures.

d. Naval gunfire, which is intensified as H-hour approaches (par. 106).

e. Artillery fires, if artillery has been emplaced on offshore islands or promontories during preassault operations (par. 118*c*).

276. Final Preparations for Ship-to-Shore Movement

a. As the amphibious task force assault shipping starts the final approach to assigned positions for the assault, individual ships prepare for the debarkation of the embarked troops, equipment, and supplies in accordance with previously prepared plans. The commencement of loading into ship-to-shore movement means and the timing of the ship-to-shore movement are dependent on the designated H-hour. All elements must be prepared to modify plans on short notice to conform to changes in H-hour.

b. Personnel and agencies involved in control of the ship-to-shore movement make final preparations (par. 136). Personnel involved in control of surface movement means are transferred from transports to ships of the control group which then take stations as planned. Such transfers usually involve designated naval control personnel together with Tac Log Group representatives of the landing force. Agencies to control the helicopter movements take assigned stations and start operations as required to meet the time schedule for initial landings.

c. Debarkation of the initial assault elements of the landing force involving loading of personnel, equipment, and supplies into landing craft, amphibious vehicles, and helicopters is accomplished on a strict time schedule. Timing is based on the

scheduled time of landing in relation to H-hour, and takes into account the time necessary to load into ship-to-shore movement means and the calculated time en route from the ship to the landing beach or landing zone. Preparations are made for debarkation of oncall and nonscheduled units, and for dispatching these units when required.

277. Initiation of the Assault

Prior to arrival of the main body of the amphibious task force in the landing area(s), the decision is made to execute either the primary plan or one of the alternate plans for the assault (par. 39). After arrival of assault shipping in the assigned sea areas, H-hour is confirmed as soon as practicable, or is changed as necessary, by the amphibious task force commander following consultation with the landing force commander. The amphibious task force commander initiates the assault landings by pre-arranged signal.

Section III. SHIP-TO-SHORE MOVEMENT

278. General

a. The organization for the ship-to-shore movement, the sequence of operations, movement categories, and the control systems are discussed in paragraphs 130 through 140.

b. The initial assault landings are made by assault landing teams which seize initial objectives ashore to establish secure control over landing beaches and landing zones where assault reinforcing units and supplies can be landed. During this initial, or landing team stage of the assault, unity of command ashore is provided at the assault landing team level.

279. Continuation of the Ship-to-Shore Movement

a. Once initial assault landings are made, the ship-to-shore movement continues to build up combat power ashore. Assault reinforcing units, equipment and supplies of assault divisions are landed as scheduled, or in response to oncall requests of assault landing team commanders ashore. While still afloat, the assault division commander closely monitors the progress of operations ashore and influences the action as required. His principal means of influence at this stage include changes in the tactical plan, requests for additional air and naval gunfire support, changes in the scheduled sequence or place of landing of assault reinforcing units and supplies, and the landing of reserves.

b. When requisite command and control facilities for the exercise of the assault division commander's command functions are ashore, he displaces ashore. Usually, the division headquarters will be echeloned for landing to assure continuity of operations. Upon assumption of command ashore by the assault division commander, the division stage of the assault is entered. Depending upon the organization and command structure of the Army landing force, the stage of the assault successively changes as the next higher command echelon lands and centralizes command of the forces ashore.

Section IV. SUPPORTING ARMS EMPLOYMENT

280. General

The employment of supporting arms during the assault emphasizes the close support of the landing force and includes the coordinated employment of air, naval gunfire, and artillery support (pars. 97 and 100).

- a.* Air support during the assault (par. 116).
- b.* Naval gunfire support during the assault (par. 106).
- c.* Artillery support (par. 118).

281. Air Defense

During the assault, both passive air defense measures and active air defense measures must be exploited (pars. 121–124).

282. Nuclear, Chemical, and Biological Weapons

Employment of nuclear, chemical, and biological weapons and defense against such weapons are discussed in paragraphs 125 through 129.

Section V. OFFENSIVE OPERATIONS ASHORE

283. General

The offensive operations ashore are carried out in execution of the planned scheme of maneuver, as modified to meet conditions encountered ashore (par. 79).

284. Capture of the Beachhead

a. Operations of assault divisions are directed initially toward the establishment of a secure division beachhead which ensures the continuous landing of troops and materiel, and control of the terrain features and maneuver space required for conduct of

planned further operations. Plans for capture of the beachhead usually provide for intermediate objectives and phase lines to facilitate coordination and control of the advance inland (par. 82). Early juncture between elements landed over beaches and those landed in landing zones is usually desirable.

b. Reserves and assault reinforcing units of assault divisions are landed as required to maintain the momentum of the attack (par. 90).

c. Forces, such as elements of an armored division, for exploitation out of the beachhead are landed and assembled as early as possible to take advantage of exploitation opportunities. Timing of employment of such exploitation forces may be dependent upon the capability for logistical support developed ashore during the early stages of the assault.

285. Continuation of the Attack

Each command echelon of the Army landing force normalizes its task organization to the extent practicable, or required, upon seizure of initial assault objectives and in preparation for continuation of the attack to seize final objectives. For example, infantry division battle groups and combat support units will have reverted to an essentially normal tactical organization, and will be prepared to operate in their normal role before a coordinated attack from the division beachhead is launched.

Section VI. ADMINISTRATIVE SUPPORT OPERATIONS

286. General

During the assault, the administrative support system of the Army landing force is developed progressively ashore. The system to include its several stages of development is discussed in paragraphs 170 through 173.

287. Supply Support

Considerations and responsibilities in assuring adequate supply during the assault are covered in paragraphs 174 through 184. Emergency supply preparations and implementing procedures are of particular importance during the early stages of the assault.

288. Medical Service Support

Medical service support during the early stages of the assault and subsequent development of the medical service system ashore are discussed in paragraph 195.

289. General Unloading Operations

When the assault has progressed sufficiently to warrant general unloading of the balance of the assault shipping, the amphibious commander directs that general unloading begin (par. 189). The initiation of general unloading does not preclude the landing of nonscheduled units in accordance with the landing sequence table, or the unloading of designated supplies if an emergency arises ashore.

290. Followup Shipping

Followup shipping (par. 189) is moved to the objective area in accordance with the schedule desired by the amphibious task force commander. He orders shipping forward as necessary to fulfill the needs of the landing force for units, equipment, and supplies. The landing force commander informs the amphibious task force commander of his requirements for units, equipment, and supplies during the latter stages of the assault, and specifies the time at which they will be required.

Section VII. SIGNAL COMMUNICATIONS

291. General

Chapter 6 covers details of signal communications planning for the amphibious operation. Considerations of particular importance during the assault are discussed in paragraph 149.

292. Alternate Communications Requirements

Commanders must recognize that conditions during the initial stages of the assault preclude use of some of the alternate communications means usable in normal land operations. Radio and radio relay communications are a vital means of communications between forces ashore and those afloat. Radio equipment employed for this purpose must be as jam proof as possible and operators must be well trained in electronic counter-countermeasures. Readiness to exploit all feasible alternate means of communications during the assault is essential (par. 150).

Section VIII. TERMINATION OF THE AMPHIBIOUS OPERATION

293. Termination Criteria

Termination of the assault phase of an amphibious attack coincidentally marks the termination of the amphibious operation.

Termination is in accordance with the specific conditions set forth in the initiating directive (par. 11b(6)). Criteria for termination, with regard to conditions in the objective area, are stated in paragraph 33.

294. Effect of Termination

From the viewpoint of the committed Army force, the principal effect of termination of the amphibious operation is a change in command and support relations at the Army landing force level. Elimination of the task organization designations peculiar to the amphibious operation is a consequence of dissolution of the amphibious task force.

Section IX. CONTINUATION OF THE LAND CAMPAIGN

295. General

The purpose of a specific amphibious operation (par. 8) has a bearing on the operations of the Army force at termination of the amphibious operation. An amphibious operation may be conducted to obtain a lodgment area in the initiation of a land campaign. Plans for such an amphibious operation integrate, to the extent practicable, the force and materiel buildup for the subsequent land operations.

296. Continuity of Operations

The operational environment prevailing at termination of an amphibious operation will influence the character of subsequent operations. From the standpoint of the committed Army force, operations will be continuous, and in accordance with plans for the next operational phase of the campaign.

PART FOUR
ARMY RELATED AND SUPPORTING ACTIVITIES

CHAPTER 13
PRELIMINARY AMPHIBIOUS TRAINING

Section I. GENERAL

297. Purpose and Scope

a. The purpose of this chapter is to provide commanders and their staffs information of value in development of programs for progressive training in preparation for an amphibious operation. Coverage is oriented toward the training requirements of the infantry division, but it is readily adaptable to the needs of other units.

b. Amphibious training is normally conducted subsequent to the advanced training phases of unit ATPs. It may be necessary to conduct amphibious training concurrently with other training in the interest of reducing overall training time.

c. Amphibious operations require organization of Army units on a special task organization basis. The required task organization involves reinforcement of combat units. Attachment of units, or elements thereof, that will normally reinforce an assault division for an amphibious operation is appropriate when a division engages in intensive training for an amphibious operation.

d. While the Army can conduct shore-based training for amphibious operations unilaterally, certain basic training must be accomplished in concert with naval forces. Basic guidance for joint training, to include joint exercises, is set forth in JCS Pub. 2, Unified Action Armed Forces.

298. Training Objectives

Training of Army units for participation in amphibious operations requires the attainment of individual and unit proficiency in the techniques and procedures of amphibious operations. Aspects of particular importance are—

a. Marshalling and embarkation in assault shipping.

b. Familiarity with shipboard routine and duties of embarked troops.

c. Debarkation and ship-to-shore movement.

d. Execution of assault landings and operations ashore.

e. Heliteam operations from aircraft carriers.

f. Employment of naval gunfire and air support.

g. Shore party operations.

h. Signal communications.

299. Amphibious Training Phases

Training for amphibious operations is divisible into shore-based, elementary ship-based, and advanced ship-based phases. The order in which amphibious training is conducted is important as each phase is a prerequisite to that which follows. Amphibious training begins with individual training and ends with the conduct of joint amphibious exercises. The scope of training for each phase is—

a. *Shore-Based Training.* The shore-based training phase includes all training that can be conducted without the use of assault shipping. Indoctrination, individual and unit training, refresher staff training, and special amphibious training school instruction should be completed during this phase. When supporting elements are available their participation should be requested.

b. *Elementary Ship-Based Training.* Elementary ship-based training includes embarkation procedures and techniques, troop life aboard ship, drills in preparation for debarkation, ship-to-shore exercises, and landing exercises at the assault landing team level.

c. *Advanced Ship-Based Training.* Advanced ship-based training is a continuation of the previous afloat training and the culmination of all amphibious training. The training is conducted as an amphibious exercise at the reinforced division level or higher. The exercises should stress integration of all forces through teamwork and should test the proficiency of participating staffs.

300. Time Considerations

A minimum period of ninety days for amphibious training is desirable for troops inexperienced in amphibious operations. Experienced troops who have completed an amphibious operation require refresher training after rehabilitation and reorganization with replacement personnel. Information regarding the date at which ships will become available is essential to the proper planning of the entire amphibious training program. This informa-

tion must be given to troop commanders early in the shore-based training phase. The Navy is responsible for supplying the ships, landing craft, and support units required for afloat training. Therefore, the time allotted for elementary ship-based and advanced ship-based training is dependent upon the time that the ships are available.

301. Realism

a. Planning for Exercises. For security reasons, the planning for an amphibious operation requires that the preponderance of information and intelligence relating to the operation remain in the planning headquarters. Staffs of lower echelons receive all information and intelligence which is essential for the initiation of preliminary and concurrent planning. The planning for amphibious exercises is conducted in a manner approximating that appropriate when planning an actual amphibious operation. The information and intelligence material is handled as it would be for an actual operation. Details, such as formation of basic embarkation teams, ship requirements data, individual and vehicle equipment and supply loads, and marking and crating of supplies, are developed and promulgated as future planning data or as standing operating procedures. Realism from a logistical support standpoint requires use of properly marked dummy supplies, if the use of actual supplies is not feasible in exercises.

b. Conduct of Exercises. Combat troops should be acquainted with the expected conditions of an actual assault landing against an organized beach defense. The noise, confusion, unintelligible reports about movements of friendly and enemy troops, fatigue, evacuation of all types of casualties, and supply activity should be approximated in training (within the bounds of safety regulations), in order for troops to anticipate such conditions in battle. The conduct of initial assault landings must be aggressive and develop full combat efficiency. Ingenuity and imagination must be exercised to create, as nearly as possible, the physical and psychological phenomena of battle. Problems to be encountered under nuclear, chemical, and biological warfare conditions such as contamination of vital sea or beach areas, care of casualties, handling radio-active equipment, and dispersed formations should be injected into exercises in order to provide realistic situations for solution by commanders of all echelons.

302. Environmental Considerations

Training for amphibious operations should integrate to the extent practicable environmental factors that may be encountered

in objective areas. Special emphasis is required during training in order to operate effectively in extreme temperatures, under low visibility conditions, or unfavorable hydrographic and terrain conditions. Training areas in which the expected extreme conditions are approximated should be utilized whenever possible. Extreme conditions will necessitate special equipment or equipment modification. Training in the care, functioning, and employment of equipment under such conditions is essential.

303. Amphibious Training Facilities

The training required for amphibious operations is of such a specialized nature as to warrant the use of special amphibious training centers and/or facilities. The U.S. Navy and Marine Corps operate amphibious training establishments on a permanent basis. In the interest of economy, Army individuals and units are trained at existing facilities of the other Services to the extent practicable. A requirement for large-scale training of Army forces may necessitate establishment of Army amphibious training centers.

Section II. TRAINING PLANS

304. General

The unique character of an amphibious operation and the fact that it is a joint force endeavor necessitate emphasis of coverage in training plans of—

- a.* The organization and role of appropriate elements of other Services.
- b.* Organization and command relations within the amphibious task force as a joint force.
- c.* Formation within the Army landing force of special task organizations for embarkation and landing.
- d.* Fire support means, coordination agencies, and fire control procedures to include employment of the Naval ANGLICO.
- e.* Carrier based operation of Army helicopter units.
- f.* Ship-based administrative support during the assault.
- g.* Joint communications principles and procedures.
- h.* Intelligence and counterintelligence.
- i.* Employment of specialized units and equipment.

305. Scope of Training Plans

Training plans should incorporate a requirement for conduct of the following courses of instruction and type exercises:

- a.* Indoctrination courses in fundamental doctrine and principles applicable to the amphibious operation.
- b.* Special schools in amphibious techniques and for familiarization with amphibious shipping, craft, and vehicles.
- c.* Preparation of loading, embarkation, and landing plan documents.
- d.* Shore party courses of instruction and exercises.
- e.* Courses of instruction in preparation of equipment for loading, to include waterproofing.
- f.* Joint communications courses of instruction and exercises.
- g.* Ship embarkation and debarkation exercises, involving both personnel and materiel.
- h.* Ship-to-shore movement instruction and exercises employing landing ships, landing craft, amphibious vehicles, and helicopters.
- i.* Landing exercises to include tactical deployment ashore and interim administrative support activities.
- j.* Fire support exercises, to include request and fire control procedures for naval gunfire and air support.

Section III. STAFF TRAINING

306. General

a. Staffs at the battle group, division, and higher command levels require a thorough understanding of the fundamental doctrine for amphibious operations and a working knowledge of the techniques applicable in planning and executing these operations. The desired level of proficiency is acquired by courses of instruction and application of doctrine and principles for joint force operations, and amphibious operations in particular, in various command and staff planning exercises.

b. Staff training must encompass the organization and duties of staffs and coordination agencies at each echelon of an Army landing force as well as the staffs and agencies of corresponding Naval and Air Force echelons.

307. Training Objectives

a. Attainment of proficiency in amphibious planning techniques and procedures.

b. Familiarization of staff members with the functions of other members of their respective staffs and their counterparts at the next higher and subordinate echelons.

c. Familiarization of staff members with the relationship, or-

ganization, and functions of corresponding Naval and Air Force staffs.

d. Attainment of proficiency in staff operations during all phases of the amphibious operation.

Section IV. SHORE-BASED TRAINING

308. General

Shore-based training encompasses instruction in the basic procedures and techniques peculiar to amphibious operations, and training exercises which can be conducted without embarkation in ships. It includes individual staff, and unit training, to include conduct of special school courses.

309. Conduct of Shore-Based Training

Shore-based training in fundamentals of the amphibious operation is conducted by decentralizing the training responsibilities to the lowest echelon capable of presenting the instruction in accordance with the desired training efficiency and uniformity. Shore-based training is conducted both in a camp area and in an area which provides access to a landing beach. The training which is conducted at a beach area is an extension of the instruction covered in camp area training. Training support by units equipped with amphibious vehicles and landing craft is required. Practice in loading into landing craft and amphibious vehicles, and landing enhances shore-based training and permits emphasis on the more advanced techniques of amphibious operations during subsequent ship-based training.

310. Camp Area Individual Training

Individual training is conducted in training areas adjacent to, or within the camp area and so far as possible, concurrently with the various specialist schools. This permits all individuals to be available for unit training at the earliest possible time. The following subjects should be covered:

a. General characteristics and employment of amphibious ships, landing craft, amphibious vehicles, and helicopters. Personnel must be familiar with the characteristics and nomenclature of both Army craft and amphibious vehicles and naval ships, craft, and amphibious vehicles.

b. Organization for loading of personnel, equipment, and supplies into ship-to-shore movement means. Instruction must en-

compass organization of the boat team and heliteam, and the arrangement of personnel, equipment, and supplies in landing craft, amphibious vehicles, and helicopters. Mock-ups may be used in this training, however actual craft and vehicles are desirable. Instruction includes the duties and responsibilities of craft and vehicle crews; organization of teams; duties and positions of the team commander and the assistant team commander; and the arrangement of accompanying equipment and supplies in landing craft, amphibious vehicles, and helicopters.

c. Debarkation net procedures and lashing and lowering of equipment. Instruction which encompasses debarkation net procedures and lashing and lowering of equipment is conducted in the vicinity of debarkation platforms. Drills which include these subjects should be conducted.

d. Boat discipline and the technique of debarking from craft and vehicles. Instruction in boat discipline includes the conduct of troops upon entering the landing craft or amphibious vehicle, conduct during movement, relation of the boat crew to the boat team commander; and employment of boat signs. Instruction in debarkation covers the duties of the boat team commander and the assistant boat team commander when the craft is beached or when the amphibious vehicle stops, and methods of debarkation from landing craft and amphibious vehicles. Mock-ups or actual craft and vehicles may be used for this instruction.

e. Passage of natural and man-made beach obstacles. The removal of underwater obstacles up to the high water mark is usually accomplished by naval underwater demolition teams. The infantry, assisted by engineers when required, clears antipersonnel and vehicle obstacles on the beach only to the extent necessary for a safe passage. This subject can be divided into—

- (1) Types of beach obstacles.
- (2) Methods of reducing beach obstacles.

f. Indoctrination in the composition and combat support role of the shore party during initial assault landings.

g. Administrative support activities during the initial assault. Individuals in assault landing teams require instruction in the interim administrative support procedures applicable to them during the initial assault. Supply and medical procedures are particularly important.

h. Instruction in emergency survival techniques to include swimming in rough water, methods of abandoning amphibious vehicles, and use of life belts and rafts.

311. Camp Area Unit Training

a. Unit training begins with the smallest tactical unit. The emphasis of training then progresses to platoon, to company, to assault landing team as each tactical echelon attains satisfactory proficiency. Training in the following subjects may be conducted in the camp area:

- (1) Organization of embarkation teams and ship loading preparations.
- (2) Organization of assault landing teams for landing.
- (3) Formations, frontages, and intervals of craft and vehicles for the approach to landing beaches and/or landing zones.
- (4) Landing tactics and techniques.
- (5) The landing plan and preparation of landing plan documents.
- (6) Passage of beach obstacles.
- (7) Assault of a defended beach.
- (8) Beach area development.
- (9) Interim logistical operations during the assault.

b. Landing exercises (dry landings) may be conducted prior to completion of unit training in the camp area in order to familiarize personnel, in the most realistic manner possible, with the organizational and control problems incident to the landing and maneuvering of an assault landing team. Such exercises involve the preparation of plans for landing followed by a limited tactical movement inland from the beach area.

312. Practice Landing Area Training

a. Individual and unit training in a practice landing area is a continuation and expansion of the training conducted in camp areas. The organization for landing (assault landing teams) is applicable in this training. Shore party, landing craft, and amphibious vehicle support is required to derive full benefit from beach area training. Landing ship support during latter stages of this training is highly desirable. Standing operating procedures developed in camp area training are tested and improved.

b. It may be required that certain infantry units be trained in the procedures of landing in rubber boats. This training familiarizes personnel of the selected unit with the techniques required to launch, operate, and land rubber boats. Staff and troop officers must be familiar with plans and tactics required for rubber boat employment, including control procedures. If any of the units

which are designated to accomplish this training are to be landed by rubber boats in an actual operation, the period of training must be extended.

313. Training Equipment, Facilities and Aids

Extensive use of training aids is made during the shore based training phase. When certain types of training aids are limited in quantity, rotation of the available training aids among the units is arranged. Some of the training aids which may be utilized are—

- a.* Charts and slides to illustrate—
 - (1) Organization of a landing area.
 - (2) Debarkation and landing diagrams and tables.
 - (3) Development of beach support areas.
- b.* Training films.
- c.* Models to include—
 - (1) Landing ships, landing craft, transports, submarines, and aircraft.
 - (2) Relief and photo relief maps and sandtables.
 - (3) Built-up enemy beach defenses.
- d.* Debarkation platforms.
- e.* Mock-ups.
- f.* School ship.
- g.* Electric board for instruction in the conduct of ship-to-shore movement.
- h.* Actual items of special equipment.
- i.* Actual installations, such as the division facility for fire support coordination.

Section V. SPECIAL SCHOOLS

314. General

a. Special schools, or courses of instruction, are conducted during the initial stages of shore-based training. Such schools provide a means of establishing a desirable and uniform standard of training in amphibious techniques. Maximum use will be made of Navy amphibious school facilities, both for resident instruction and support of home station training with mobile training teams.

b. The unit designated to plan and conduct a special school is responsible for its supervision. If subordinate units of the division are made responsible for instruction, certain division staff personnel should be made available as instructors. Division schools

are under the direct supervision of those staff members who may be assigned to plan and conduct them. Instructor and/or demonstration team support from specialized units such as the Engineer Amphibious Support Command may be appropriate.

c. Appropriate nondivisional units stationed in the vicinity of the division should attend division special schools.

d. The special schools generally conducted, and discussed separately below, are—

- (1) Embarkation officer school.
- (2) Amphibious intelligence school.
- (3) Amphibious communication school.
- (4) Medical service school.
- (5) Fire support school.
- (6) Waterproofing school.
- (7) Helicopter/carrier school.

315. Embarkation Officer School

a. *Objective.* The embarkation officer school trains selected personnel in the principles and techniques of combat loading, embarkation, debarkation, and general unloading procedures.

b. *Organization.* The school is conducted under the direct supervision of the division transportation officer who is usually designated as the division embarkation officer.

c. *Curriculum.* The following subjects may be covered during the course of instruction:

- (1) Naval customs and terminology.
- (2) Command and administrative organization of a naval vessel.
- (3) Outline of amphibious task force organization.
- (4) Outline of embarkation officer duties and relations with the naval combat cargo officer.
- (5) Characteristics of transports and landing ships.
- (6) Ship loading and stowage methods.
- (7) Responsibilities of the loading officer during ship loading and unloading.
- (8) Ship's loading equipment and pier cargo handling equipment and procedures.
- (9) Procurement and use of ship loading characteristics pamphlets.
- (10) Measurements of vehicles and heavy equipment.
- (11) Packing and marking of equipment and supplies.
- (12) Preparation of embarkation forms, including loading and stowage plans.

- (13) Inspection of a ship and observation of actual loading.
- (14) Control systems for embarkation, debarkation, and unloading.
- (15) Loading characteristics of landing craft and amphibious vehicles.

316. Amphibious Intelligence School

a. Objective. The amphibious intelligence school is conducted for selected personnel whose duties require that they have additional and more thorough instruction with respect to intelligence and counterintelligence requirements and procedures for the amphibious operation.

b. Organization. The school is conducted under the direct supervision of the division intelligence officer. All intelligence officers and officers and selected noncommissioned officers of the division cavalry squadron should attend.

c. Curriculum. The following subjects may be covered during the course of instruction:

- (1) Order of battle and foreign organization as they relate to a specific operation.
- (2) Terrain analysis and beach studies.
- (3) Map and aerial photograph interpretation, including foreign maps and hydrographic charts.
- (4) Meteorological and hydrographic data.
- (5) Capabilities and limitations of available collection agencies.
- (6) Briefing and interrogation of reconnaissance patrols.
- (7) Training of amphibious reconnaissance units.
- (8) Special counterintelligence measures.
- (9) Operation of the division intelligence communications net.
- (10) Direction and coordination of, and cooperation and liaison with, special intelligence agencies available for amphibious operations.
- (11) Target information requirements of the fire support coordination center.

317. Amphibious Communication School

a. Objective. The amphibious communication school is conducted for selected communication personnel to instruct them in the communication requirements of an amphibious operation.

b. Organization. The school is conducted under the direct supervision of the division signal officer. All communication officers

and at least three non-commissioned officers from each communication platoon or section should attend. All of the above personnel should attend the general course. Separate courses involving radio, visual, wire, and messenger and message center instruction are conducted for enlisted specialists. In addition to the general course, officers attend certain classes of the other courses which may be pertinent to their specific duties.

c. Curriculum. The following subjects may be included in the various courses:

- (1) *General course.*
 - (a) Communication plans and orders.
 - (b) Communication equipment water proofing, testing, calibration, loading, and landing.
 - (c) Communication during the landing and initial operations ashore.
 - (d) Communication security.
- (2) *Radio and visual course.*
 - (a) Radio and visual means aboard ship and in the ship-to-shore movement.
 - (b) Navy shipboard radio organization.
 - (c) Authentication.
 - (d) Joint radio procedure.
 - (e) Antijamming procedure.
- (3) *Wire course.* Beachhead wire construction.
- (4) *Afloat message center and messenger course.*
 - (a) Operation of the communication center aboard ship.
 - (b) Authentication procedures.
 - (c) Messenger duties aboard ship.
 - (d) Cryptographic aids in use.

318. Medical Service School

a. Objective. The medical service school is conducted for selected medical personnel and prepares them to provide adequate medical support in an amphibious operation.

b. Organization. The school is conducted under direct supervision of the division surgeon. At least one medical officer and two noncommissioned officers from each company of the medical battalion, each battle group medical platoon, and each unit medical section should attend.

c. Curriculum. The following subjects may be covered during the course of instruction:

- (1) Familiarization with landing force organization and communication.

- (2) Responsibility for medical support.
- (3) Organization of the medical department of naval vessels.
- (4) Combat loading of medical equipment.
- (5) Sanitary standards for troops aboard ship.
- (6) Ship-to-shore movement operations.
- (7) Evacuation of casualties.
- (8) Special casualty handling methods.
- (9) Medical supply and resupply.
- (10) Waterproofing of medical equipment.

319. Fire Support School

a. Objective. The fire support school is conducted to train selected personnel in the employment of artillery, naval gunfire, and air support, and in systems for the control and coordination of these supporting arms in an amphibious operation. Active air defense is covered in this school or separately.

b. Organization. The school is conducted under the direct supervision of the division artillery officer. This officer should be assisted in his duties by the division air and naval gunfire officers. All infantry battle group operations officers, artillery forward observers and liaison officers, and forward air control personnel should attend. Naval instructor support is highly desirable.

c. Curriculum. The following subjects may be covered during the course of instruction:

- (1) Organization for artillery, naval gunfire, and air support.
- (2) Capabilities and limitations of these supporting arms.
- (3) Communication nets employed.
- (4) Responsibility for coordination of the supporting arms.
- (5) Coordination of planned fires.
- (6) Coordination of fires on targets of opportunity.
- (7) Demonstration of a division fire support coordination agency in operation.
- (8) A firing exercise in which artillery, naval gunfire, and aircraft actually attack targets, thus demonstrating the technique of coordination at the level of the division and below.

320. Waterproofing School

a. Objective. The waterproofing school is conducted to train selected motor transport personnel in the techniques of preparing motor vehicles for deep water fording.

b. Organization. The school is conducted under the direct supervision of the division ordnance officer. Instruction on appropriate equipment items of all technical services is incorporated.

c. Curriculum. The following subjects may be covered during the course of instruction :

- (1) Types of openings to be sealed.
- (2) Types of components to be sealed.
- (3) Waterproofing kits, identity, and components.
- (4) Preliminary preparation instructions.
- (5) Waterproofing to be accomplished prior to movement to point of embarkation.
- (6) Waterproofing to be accomplished at point of embarkation.
- (7) Waterproofing to be accomplished aboard ship.
- (8) Inspection of vehicles aboard ship.
- (9) Operating instructions and servicing after landing.

321. Helicopter/Carrier School

a. Objective. The helicopter/carrier school is conducted to train Army helicopter unit personnel in techniques of operation from Naval carriers (Landing Platform Helicopter).

b. Organization. The school is conducted under the general supervision of the landing force or corps G3. Both the staff aviation officer and the staff transportation officer will participate in conduct of this training since essential responsibilities of each are affected. Instruction should include both a shore-based and a ship-based phase.

c. Curriculum. The following subjects may be covered during the course of instruction :

- (1) Characteristics of the Naval Landing Platform Helicopter (LPH).
- (2) Organization for command and control (LPH).
- (3) Aircraft and unit loading techniques.
- (4) Flight operation and techniques from floating platform (LPH).
- (5) Logistics and maintenance support (LPH).
- (6) Security and safety procedures.
- (7) Heliteam and wave organization and employment.
- (8) Logistic support of heliteams in amphibious operations.
- (9) Deployment of helicopter units from carrier to shore base.

- (10) Practical exercise in which Army helicopter units deploy to LPH, conduct simulated heliteam operations and redeploy to shore base for further operations.

Section VI. SHIP-BASED TRAINING

322. General

a. Ship-based training is divided into two phases, namely, elementary and advanced. These phases of training for amphibious operations necessitate arrangements for joint training with Navy elements. Availability of naval shipping will usually require that elementary ship-based training be conducted over a considerable period of time involving rotation of division elements through a training cycle.

b. Advanced ship-based training warrants a complete, joint exercise employing the division and units which normally reinforce it for an amphibious attack as the landing force. Successful conduct of an exercise of this type requires planning and preparations comparable to those for an integrated rehearsal (par. 250). Advanced training may be conducted in conjunction with rehearsals for a specific amphibious operation.

323. Elementary Ship-Based Training

a. General. The elementary ship-based training phase commences as soon as possible after shore-based training is completed. Plans for this training will normally be completed during the shore-based training phase.

b. Training Aboard Ship.

- (1) *General.* Training aboard ship commences immediately following embarkation and loading. Opportunities for training which occur during the movement to a training area are utilized to the fullest extent. The maintenance of the morale of embarked troops is greatly dependent upon a carefully planned program of ship-based training. The program for training aboard ship may include shore-based training subjects which have not been covered thoroughly during that phase.
- (2) *At anchor.* Opportunities for training may arise during periods when the ships are at anchor. The commanding officer of troops arranges for execution of debarkation drills and continues this training until troops and the ship's personnel are familiar with the procedure for debarkation. Final drills are conducted with full equip-

ment, including heavy items such as machine guns, mortars, and radios, which require the use of lowering lines and slings.

- (3) *Shipboard general drills.* The troops receive instruction in the procedure required for the conduct of shipboard general drills. This instruction commences as soon as practicable after embarkation has been completed. The assigned assembly areas, abandon ship stations, and routes thereto should be the same as those for the debarkation plan.
- (4) *Underway.* While the ship is underway, the conduct of training may be restricted by space limitations and by the necessity for non-interference with the operation of the ship. These factors require that the training be carefully planned in conformity with the characteristics, organization, and routine of the ship. The underway training program includes—
 - (a) *Drills.* Debarkation and general drills are conducted frequently until their execution is satisfactory.
 - (b) *Map and terrain familiarization.* All available maps and aerial photographs of the landing area are made available for familiarization and detailed study of terrain.
 - (c) *Intelligence briefing.* Prior to embarkation, the extent to which troops are briefed with respect to characteristics of the enemy and the objective area may be restricted. Security restrictions which simulate those imposed in an actual operation are lifted when underway. Troops are briefed with respect to characteristics of the enemy (actual or simulated) and the exercise area.
 - (d) *Combat orientation.* The operation plan, or order, usually is promulgated to subordinate troop officers during the movement to the exercise area. These officers are briefed in the details of the plan, and in turn, conduct orientation classes for their respective organizations.
 - (e) *Physical drill.* Physical condition is maintained during the movement to the training area by various forms of physical exercises.
 - (f) *Miscellaneous.* Instruction in such subjects as the functioning and maintenance of weapons and the recognition of enemy vehicles and aircraft is included in the ship-board training program as time permits.

c. Ship-to-Shore Movement Exercises.

- (1) *Transports.* Ship-to-shore movement exercises for the troops embarked on transports include—
 - (a) Movement to debarkation stations and debarkation into landing craft.
 - (b) Formation of boat waves.
 - (c) Assembly in rendezvous areas.
 - (d) Control of the approach to the line of departure.
 - (e) Debarkation from landing craft at the beach and deployment ashore.
 - (f) Test of communication equipment.
 - (g) Reembarkation from the beach.
- (2) *Landing ships.*
 - (a) Training in the transfer of troops from transports to landing ships for landing in amphibious vehicles carried therein is conducted as applicable. Lack of adequate troop accommodations in some landing ships may necessitate transfer operations just prior to the ship-to-shore movement.
 - (b) Loading of troops in amphibious vehicles to be launched from landing ships. Movement to the beach, execution of assault landings, and movement to initial objectives.
 - (c) Unloading from beached landing ships.
- (3) *Helicopter transports.* Assault landing teams require training in movement from ship-to-shore in helicopters. Units that have attained proficiency in assault landings from helicopters in Army airmobile operations require additional training in the preparation of ship-to-shore movement documents and in shipboard routine and loading techniques. To afford maximum flexibility in the use of alternate ship-to-shore movement means, all battle groups of a division should receive training in ship-to-shore movement by helicopter.

324. Advanced Ship-Based Training

a. Advanced ship-based training consists essentially of full-scale amphibious exercises conducted at the division or higher level. Such exercises provide a means for developing a complete understanding of the cooperate and coordinate activity required in planning and successfully executing an amphibious attack. At the satisfactory conclusion of a complete advanced ship-based training phase, a reinforced division is prepared to participate in an amphibious operation as the Army landing force, or as a subordinate echelon thereof.

b. In the interest of economy in training time and funds, valuable advanced ship-based training can be achieved by command post type exercises which incorporate active participation of selected, but complete, assault landing teams.

CHAPTER 14

MOUNTING THE ARMY LANDING FORCE

Section I. GENERAL

325. General

a. Mounting is a broad term encompassing both marshalling and embarkation, and in addition, logistical support of the force. It involves all preparations made in areas designated for the purpose in anticipation of an operation. It includes the assembly in the mounting area, preparation and maintenance within the mounting area, movement to loading points, and subsequent embarkation into ships, craft, or aircraft.

b. A mounting area is a general locality where assigned forces of an amphibious or airborne operation, with their equipment and assault supplies, are assembled, prepared and loaded in shipping and/or aircraft preparatory to an assault. A mounting area includes or has available in installations nearby the following:

- (1) Camp area for the land based units involved.
- (2) Storage facilities for all equipment and supplies of the forces involved.
- (3) Maintenance and repair facilities for the equipment of land based forces.
- (4) Packaging and marking facilities.
- (5) Anchorage area for ships or airfield area for aircraft involved.
- (6) Loading facilities.
- (7) Spotting area for equipment and supplies to be loaded, located in the vicinity of loading facilities.
- (8) Training areas for units remaining in the mounting area for a considerable time.

c. Embarkation, as an activity of mounting, is within the scope of the amphibious operation itself and is conducted under the control of the amphibious task force commander. It is discussed in chapter 8. Marshalling, as the other principal activity of mounting, is the process by which units move to temporary camps in the vicinity of embarkation points, complete final preparations for combat, and prepare for loading. The general area in which

this activity takes place, including temporary camps, is known as a marshalling area. Marshalling areas are located within a mounting area as discussed in *b* above.

326. Mounting Requirements

a. Forces to be moved to the objective area in an amphibious operation will usually be brought into the mounting area(s) in a transient status. To the extent practicable, such forces are relieved of responsibility for furnishing their own administrative support. Principal efforts of the participating forces are devoted to final preparations for embarkation. Normally, an administrative organization with territorial responsibility will be designated as the mounting agency and will be assigned the mission of establishing and/or operating a mounting area or areas. The scope of administrative operations in support of the amphibious task force is governed by the directives of the establishing authority or other appropriate commander.

b. Depending upon the location of forces assigned to the amphibious task force and availability of facilities, mounting activities for a given amphibious operation may be conducted in a number of widely separated geographical areas. Close coordination between commanders responsible for operation of mounting areas and the elements of the amphibious task force is essential.

c. Mounting areas should be located to facilitate coordination and the final planning and preparation by components of the amphibious task force. Also the mounting areas must be located so as to facilitate continued administrative support to the objective area until such time as the attack has succeeded and the required administrative support system has been established therein.

Section II. RESPONSIBILITIES FOR MOUNTING

327. Overall Responsibility for Mounting

a. The authority who establishes an amphibious task force will assure an appropriate assignment of responsibility for mounting support. Typically, a joint force commander (unified command commander) has overall responsibility for mounting the operation and coordinating the requisite logistical support therefor when the operation is mounted in an overseas area.

b. The responsible joint force commander will normally assign the mounting mission to his Service component commanders, and they, in turn, to their principal administrative commanders.

328. Army Responsibility for Mounting

a. When the mounting of an amphibious operation occurs in an oversea area, the commander of the Army component of the appropriate unified command is responsible for mounting activities in support of the Army landing force. In addition, the Army component commander may be made responsible for certain mounting support to other Service components of the amphibious task force.

b. The commander of the Army component of the unified command normally will assign the mounting support mission to a subordinate Army logistical command commander. When conditions dictate, principal mounting activities may be planned and conducted by the field army or independent corps commander who commands the Army forces participating in the operation.

329. Navy and Air Force Responsibilities for Mounting

a. Naval and Air Force commands supporting forces of their respective services participating in the amphibious operation usually are responsible for—

- (1) Procurement, storage, and distribution of supplies and equipment pertaining to their own Services which are required for their own or other Service components of the amphibious task force.
- (2) Determination and submission of their own Service requirements for supplies and equipment from other Services.
- (3) Marshalling of their own supplies, equipment, and units, unless attached to the Army landing force or otherwise provided for in mounting instructions.

b. The Commander of the Naval component of the unified command, in addition, usually is charged with the following responsibilities relative to logistical support:

- (1) Providing overwater transportation for units of the followup echelon of the landing force and supplies and equipment to be transported to the objective area from the mounting area (s).
- (2) Evacuation of casualties and prisoners of war from the objective area by sea.
- (3) Establishment and operation of ship regulating and holding points as required.
- (4) Providing for planning and implementation of assigned base development projects in the objective area.

c. The commander of the Air Force component of the unified command, in addition, usually is charged with the following relative to logistical support:

- (1) Providing air transportation for movement of units, supplies, and equipment to the objective area as required.
- (2) Providing for air evacuation from the objective area as required.
- (3) Providing for planning for development of facilities required for Air Force operations in the objective area.

Section III. SUPPORT BY THE MOUNTING AGENCY

330. General

As soon as practicable after the initiation of planning at the unified command level for an amphibious operation, the mounting agency is designated and its basic responsibilities outlined. The administrative support requirements will normally include—

a. Provision of necessary facilities and service support within the mounting area(s) for the marshalling and embarkation of the Army landing force, and for such components of other Services as are directed.

b. Supply of the Army landing force prior to, and during the operation, including preparation of supplies and equipment for emergency delivery.

c. Assistance to the Army landing force in preparation of supplies and equipment for embarkation, and assistance in embarkation and loading (ch. 8).

d. Operation of embarkation facilities for subsequent echelons of the landing force after the departure of the assault shipping.

e. Provision for the receipt of prisoners of war evacuated from the objective area.

f. Provision for the receipt and care of casualties evacuated from the objective area.

g. Provision for the continued administrative support of the landing force until such time as a normal administrative support organization is established in the objective area.

331. Movement Control

The reception of units, supplies, and equipment in the mounting area(s) and their movement through marshalling areas to embarkation areas and points requires that a centralized system of movement control be established by the mounting agency. A special movement control section may be organized to operate in cooperation with established movement control agencies. The move-

ment control agency must ensure that all movements to and within the mounting area, which includes the port area, are properly timed. To be effective, the section must have authority to establish traffic control, to issue movement orders directly to units concerned, and to have jurisdiction over all transportation used in the mounting.

332. Transportation in Mounting Areas

During the marshalling process, units of the landing force will be required to prepare organic vehicles for loading. The mounting agency commander will, within his capabilities, furnish the transportation required by the landing force for administrative purposes while in the mounting area. Such vehicles as are furnished will normally be operated by landing force personnel, and be maintained by these personnel using facilities made available by the mounting agency commander.

333. Maintenance

Within the facilities and means available, the mounting agency commander furnishes direct support and general support maintenance to landing force units while they are in marshalling areas. This requirement is predicated upon the fact that the direct and general support maintenance units of the landing force will be required to prepare their equipment for embarkation. Use of qualified landing force personnel to assist in maintenance when they are not engaged in preembarkation preparations will be normal.

334. Facilities

a. Except in those instances where the mounting area(s) are located in the United States, or in a well-developed overseas theater of operations, marshalling facilities will be austere. When possible, tentage with minimum utilities will be provided; however, under the most austere circumstances troops will be required to use individual shelter equipment as housing until they embark.

b. Where possible, messing facilities for use by the troops of the landing force will be made available by the mounting agency. Operation of these messes will normally be the responsibility of unit commanders of the landing force, under the supervision of the mounting agency commander or his representative.

c. A coordinated signal communications system is installed and maintained by the mounting agency to meet marshalling and embarkation needs.

d. Facilities for medical service in camps and hospitalization in the general mounting area are provided by the mounting agency.

335. Supply

a. Principal supply support for a major amphibious operation is normally provided by the mounting agency. Since such support usually involves a major effort by the established oversea logistical agencies and may involve agencies in the continental United States, the feasibility of supporting the operation is often determined at departmental level. Landing force supply planning is discussed in chapter 7.

b. Initial directives for the supply support of a major amphibious operation generally prescribe the—

- (1) Supply agencies involved and their responsibilities.
- (2) Levels of initial supply which will accompany the assault echelon of the landing force and resupply for the landing force which will be transported in followup shipping.
- (3) Levels of buildup supply to be provided in the objective area to support subsequent operations, and the rate of buildup.

c. The mounting agency must participate in overall supply planning for the operation and ensure that designated supply agencies prepare to meet supply requirements of the landing force including those actions necessary to—

- (1) Maintain troops while in the mounting area.
- (2) Fill equipment shortages of units.
- (3) Replace damaged or lost equipment incident to training and rehearsals.
- (4) Provide troops with the planned level of supply which will accompany them to the objective area.
- (5) Secure special supplies and equipment required for the operation.
- (6) Load and ship those supplies which are stocked in the mounting area for shipment to the objective area as resupply and buildup, including emergency resupply (*d* below) of critical items called forward by the landing force commander.
- (7) Requisition or procure, and ship such supplies as are required to support the operation.

d. Provisions must be made for prompt availability of on-call emergency supplies until such time as quantities ashore in the objective area are adequate to meet all contingencies. During

the early stages of the operation, airdrop or air landing of critical supplies may be necessary. Arrangements to have supplies and aircraft available at the proper time must be completed through joint planning by the amphibious task force and mounting agency commanders.

e. Resupply and buildup supply.

- (1) Assault supply accompanies the assault echelon of the landing force. Resupply and buildup supply are the principal categories of supplies for subsequent shipment by the mounting agency commander. It is necessary to provide continuous resupply support to maintain the forces ashore in the objective area. Buildup supply must be shipped in accord with planned base development to accomplish supply buildup for support of subsequent land operations. Overall followup shipping requirements include those for units in the followup echelon of the landing force, units not assigned to the amphibious task force but to be employed in the objective area, resupply, and buildup supply. Priority must be given to building up the landing force in the objective area and to immediate support of operations. A careful balance between tactical and logistical support is required in determining loading of followup shipping.
- (2) Resupply and buildup are normally accomplished by the mounting agency commander by providing a steady flow of supplies to the objective area from the mounting area and from the zone of interior. Resupply convoys are scheduled at frequent intervals to avoid excessive concentrations of shipping and exceeding the capacity for terminal throughput in the objective area.
- (3) Resupply is usually on an automatic basis for the new area of operations for a period of from 30 to 60 days, undergoing at that time a transition to a requisition basis. As supply systems are developed in the new area and control is progressively centralized, information is provided to the mounting agency and supplying agencies as a basis for modifying the automatic flow.

336. Training Areas

Requirements for training areas for the landing force will be specified by the landing force commander. Such requirements will necessarily be dependent upon the length of time the landing force will remain in the mounting area, the size of the landing

force, and the nature of the operation planned. Where suitable terrain is available, the mounting agency commander will be responsible for arranging for its use by the landing force to include securing maneuver rights, if required, and adjustment of claims arising from use of the land.

CHAPTER 15

ARMY BASE SUPPORT AND BASE DEVELOPMENT

Section I. ARMY BASE SUPPORT

337. General

a. An amphibious operation may be a phase of a campaign plan which requires development of a large-scale army administrative support system in the amphibious operation objective area. Such a requirement will usually exist when a force comparable to a field army, or independent corps, is committed to conduct of offensive operations subsequent to termination of the amphibious operation.

b. When required, an army base is established as an intermediate stage of development of the administrative support system. An army base established in conjunction with an amphibious operation provides the tactical commander an agency for centralized direction of administrative support and base development in rear areas pending establishment of a communications zone (par. 171e). The basic need for establishment of an army base will normally stem from administrative support requirements for operations subsequent to termination of the amphibious operation rather than for the amphibious operation itself.

c. When an army base is to be established, a logistical command headquarters is attached to the Army landing force early in planning for employment as the army base command headquarters.

338. Planning Responsibilities

a. An Army command above the Army landing force level will issue planning guidance which outlines the nature, scope, and required time phasing of the administrative support system and base development.

b. The Army landing force commander is responsible for reflecting in his plans the Army administrative support and base development plans in accordance with directives from higher commanders. The Army landing force commander effects coordination to assure integration of requirements into the detailed plans for the amphibious attack.

c. The army base commander (logistical command commander), as a commander of a subordinate echelon of the Army landing force, prepares detailed plans for base development and administrative support buildup in the objective area. Planning includes development of requirements for troop units, project supplies and buildup supplies, and the desired phasing of units and materiel into the objective area. All plans are closely coordinated with tactical commanders.

d. Subordinate tactical commanders provide in their plans for the landing of army base advance party personnel and for the initiation of base development projects during early stages of the assault as directed.

339. Coordination of Plans

Close coordination between tactical commanders and the army base commander is effected throughout the planning phase.

a. Plans for beach support area development must facilitate to the extent practicable subsequent execution of base development plans.

b. Units and project supplies for initiation of construction of facilities with an early require-in-service date are attached, as required, to assault divisions, and included in division embarkation and landing plans.

c. Advance party personnel of the army base may be included in embarkation and landing plans of assault divisions.

d. The administrative support system at each stage of its development must satisfy the requirements of tactical operations. The introduction of units and materiel into the objective area must be scheduled to meet the planned evolution of the administrative support system. Of particular importance is the phasing in of field army service units for operation in their normal role in the area between divisions and army base installations (par. 171).

340. Considerations in Army Base Planning

a. Basic planning considerations are those applicable to the amphibious operation itself (par. 170).

b. The headquarters of the army base will normally not be fully operational in the objective area until the Army landing force commander is established ashore.

c. A considerable number of the troop units which will eventually revert to the command of the army base commander are

attached initially to assault division shore parties. Detailed planning for the embarkation, landing, and initial employment of such units is accomplished by assault divisions (par. 92).

d. The Army landing force commander initially may attach field army administrative support units to the army base in order to achieve centralized direction of administrative support in the area in rear of division rear boundaries. In this case, the army base commander is responsible for direct administrative support of divisions, and corps and/or field army units. As the situation stabilizes, the field army service units are detached from the army base for employment as in normal land warfare.

e. The army base continues to operate under command of the senior army tactical commander in the objective area pending establishment of a rear boundary and appropriate communication zone organization.

Section II. BASE DEVELOPMENT

341. General

a. Base development plans are the basis for timely provision of base facilities so designed, located, and manned as to effectively support military operations in the area concerned. Base development undertaken in the objective area during and subsequent to an amphibious operation varies in scope depending upon administrative support requirements. When a major base development effort is required, the base development plan is developed at a command level above the amphibious task force level.

b. Major base development usually involves the provision of facilities for support of all Services, some of which will be used jointly and others unilaterally. Facilities required may include any or all of the following:

- (1) *Army.* Terminals, general storage, ammunition storage, POL storage and distribution, refrigeration, hospitals, base shops, laundries, housing, headquarters installations, water supply, power, roads, railways, utilities, signal communications, those for civil affairs needs, and those for exploitation of natural resources and industrial rehabilitation.
- (2) *Navy.* Repair base, harbor and anchorage, operating base, naval air stations, supply base, and headquarters installations.
- (3) *Air Force.* Airbases, air depots, headquarters installa-

tions, and weather, communication, and navigational aid facilities.

c. Base development has a major impact on the planning for and execution of an amphibious operation since it is usually initiated and partially accomplished as an integral part of the operation. The capability for continuance of offensive operations after termination of the amphibious operation depends in large measure upon adequate base development. Troops, equipment, materials, and shipping to implement base development plans may be a considerable portion of the total requirements for an operation. These extensive requirements may conflict with those for the conduct of the amphibious attack itself and must be carefully evaluated to achieve the necessary balance between combat and logistical support requirements and capabilities.

342. Base Development Planning

a. Because base development planning involves all participating Services and must be undertaken early, it is normally initiated at a joint force level prior to or simultaneously with plans for conduct of the amphibious operation.

b. The final base development plan is assembled and published by the commander charged with its implementation. This commander is normally a joint force commander at area of operations level.

343. Base Development Phases

Base development in conjunction with an amphibious operation usually proceeds through three general phases as follows:

a. Facilities required at an early date are initiated by appropriate subordinate commanders of the army landing force. Units which are to construct the facilities are attached to an assault division or a corps and may be further attached to their respective shore party. These units continue functioning under the shore party commander until such time as a higher commander is established ashore and assumes responsibility for base development operations.

b. During the army base phase, the base development force is augmented by additional elements and the bulk of base development projects are undertaken. All elements of the base development force (agencies of all Services) normally are integrated into one centrally controlled joint effort. Control of the joint construction effort normally is delegated during this period to the

senior army commander in the objective area who, in turn, employs the army base commander as his agent for this purpose.

c. Upon dissolution of the army base and its transition to a TALOG or subordinate logistical command, responsibility for the continuation of base development passes to the TALOG commander or reverts directly to an agency at the joint force level. The joint construction effort may continue under the TALOG commander, or it may be dissolved with Service components reverting to control of respective Service commanders.

344. Additional Details of Base Development

A sample format for a base development plan is contained in FM 100-10.

PART FIVE
THE ARMY SHORE-TO-SHORE OPERATION

CHAPTER 16
SHORE-TO-SHORE OPERATIONS

345. General

a. This chapter provides guidance for commanders, staff officers, and other interested personnel for planning and executing shore-to-shore operations.

b. This chapter is included in this manual since amphibious operations and shore-to-shore operations are similar in certain respects and involve related procedures and techniques. Army shore-to-shore operations are not amphibious operations because they do not involve embarkation in naval ships. Both operations involve assault landings. Since a shore-to-shore operation is conducted by the commander of an Army force employing primarily Army means for movement of the force, a uni-Service rather than a joint force type command structure is normally used. Shore-to-shore operations, although similar to amphibious operations, are limited by the following factors :

- (1) They cannot be conducted when interference by enemy naval forces is a threat.
- (2) The overwater movement must be short.
- (3) The force to be landed must be small since the primary movement means are provided by the Army.

c. Depending upon mission requirements and the organization of forces for unified operations by higher echelon commanders, Naval and/or Air Force elements may be attached to or in support of the Army force.

346. Special Considerations

a. Shore-to-shore operations entail the following planning considerations :

- (1) Organization of the land force for movement and landing.
- (2) Embarkation of the land force in assault craft or transport aircraft.

- (3) Movement from an embarkation area to a landing area.
- (4) Execution of assault landings and a buildup of forces in the landing area.
- (5) Interim administrative support procedures for support of forces in the landing area.

b. Water movement and air movement are the two principal methods used for the movement of the landing force from the embarkation area to the landing area. Generally, the means for movement of a landing force to *distant* landing areas are Navy ships and Air Force transport aircraft. Army landing craft, amphibious vehicles, and Army transport aircraft may be used for movement to relatively close landing areas. Operations involving assault landings often include a combination of water and air movement means.

c. Amphibious operations and airborne operations are joint operations because the means for movement of the Army force to the objective area are provided by another military Service. Shore-to-shore operations are usually army operations because the means (landing craft, amphibious vehicles, and transport aircraft) are normally provided by the Army.

347. Types of Shore-to-Shore Operations

a. *Principal Type.*

Shore-to-shore attack. The shore-to-shore attack involves embarkation of a landing force at a near shore, overwater movement to a far shore in assault craft (or in assault craft and aircraft), assault landings, and subsequent operations to establish the landing force on the far shore.

b. *Other Types.*

- (1) *Shore-to-shore withdrawal.* The shore-to-shore withdrawal involves embarkation of a force at a far shore, overwater movement in assault craft (or in assault craft and aircraft) to a near shore, and debarkation of the force. It is conducted for the purpose of evacuating a force to preclude loss of the force or to retract the force specifically for tactical redeployment elsewhere.
- (2) *Shore-to-shore raid.* The shore-to-shore raid involves an overwater movement in assault craft (or in assault craft and aircraft) and the landing of a raiding force for a swift incursion into hostile territory followed by a planned withdrawal. It is conducted for purposes of inflicting loss or damage; tactical deception, securing in-

formation, capturing and evacuating personnel or materiel, and establishing or supporting unconventional warfare activities.

- (3) *Shore-to-shore deceptive operation (demonstration or feint)*. A shore-to-shore deceptive operation involves an overwater movement of assault craft (or assault craft and aircraft) as an exhibition of force with the expectation of causing the enemy to adopt a course of action unfavorable to himself. The deceptive operation may be either a feint involving the landing of a small force for a limited objective attack or a demonstration which does not involve the landing of a force on the far shore.
- (4) *Shore-to-shore reconnaissance*. A shore-to-shore reconnaissance is an overwater movement in assault craft (or in assault craft and aircraft) and the landing of small elements involving stealth rather than force of arms. It normally includes a planned withdrawal of the landed elements. It may be conducted for the purpose of securing information and may involve coordination with and support by guerrilla forces or clandestine agencies.

c. The remainder of this chapter concerns primarily the shore-to-shore attack since the characteristics and employment considerations of the attack may be applied in general to all other types of shore-to-shore operations.

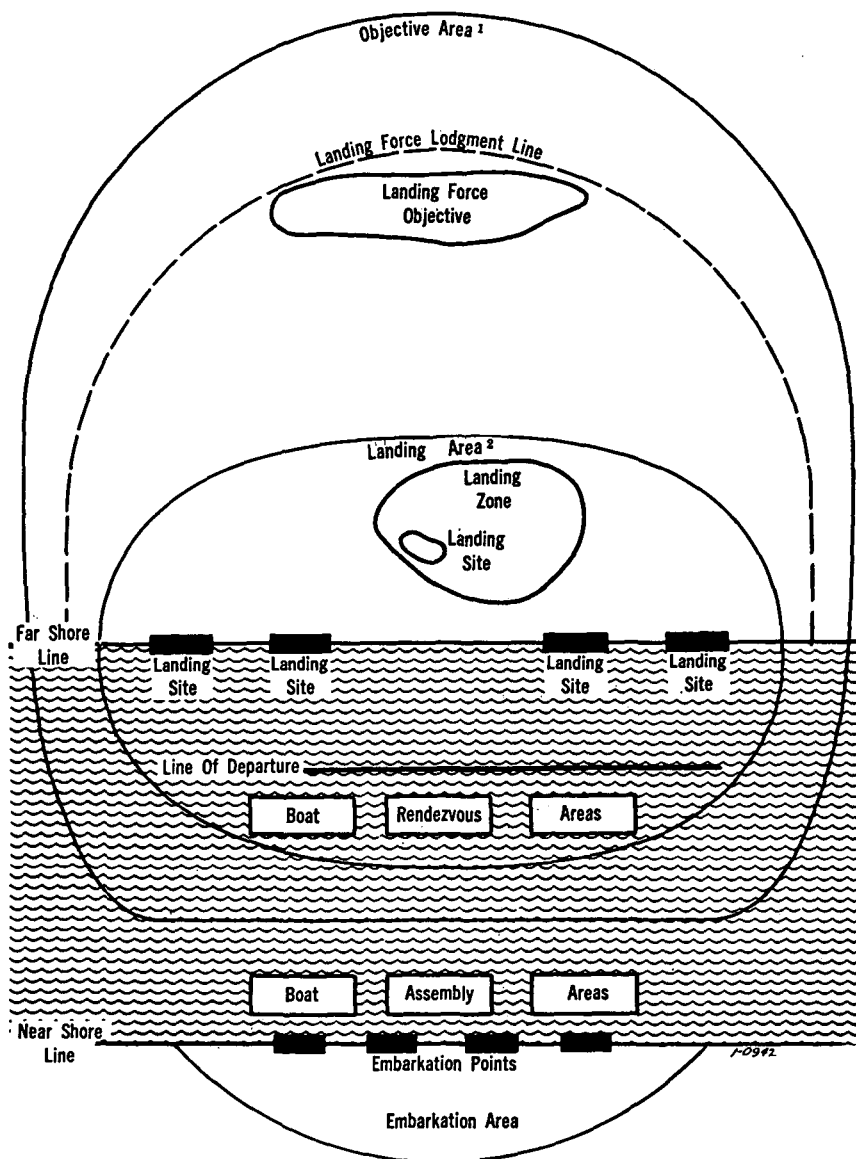
348. Area Organization

A type area organization for a shore-to-shore attack is depicted schematically in figure 9.

349. Characteristics

Principal characteristics of the shore-to-shore attack are—

- a. The operation is conducted by a land force tactical commander who is responsible for its planning and execution.
- b. The movement means employed are primarily landing craft, aircraft, and/or amphibious vehicles operated and controlled by Army units. Craft and aircraft of attached or supporting Naval and Air Force elements may be included.
- c. The landing area is often within the range of artillery or missiles emplaced on the near shore.
- d. The landing force is normally a reinforced division or smaller size unit.



Notes:

- ¹ The objective area may encompass the entire area between near and far shores depending upon distance and assigned area responsibilities.
- ² One or more landing areas may be designated. A single landing area may be sub-divided into landing sub-areas.

Figure 9. Area organization for a shore-to-shore attack (schematic).

350. Employment Considerations

Principal employment considerations are—

a. The landing force must be specially organized for embarkation to meet load carrying characteristics of available assault craft and aircraft, and to provide the desired tactical formation for execution of assault landings on the far shore.

b. The far shore landing area must be within the operating range of the landing craft and amphibious vehicles either from the near shore embarkation point or an intermediate refueling point.

c. The availability of Naval and/or Air Force support may be a limiting factor.

d. The size of the landing force is limited by the single lift capability of available landing craft, amphibious vehicles, and assault aircraft and by the feasibility of repeated shuttle operations.

e. Provisions must be made for administrative support of the landing force in the landing area pending establishment of a normal administrative support system.

351. Employment Situations

The shore-to-shore attack may be employed in a variety of situations. The decision to conduct a specific operation is usually made at the level of command which exercises control over the units required for the specialized support and movement of the landing force as well as the landing force itself. The shore-to-shore attack may be employed to accomplish the following type missions:

a. Seizure of offshore islands.

b. Coastal flanking movements to bypass enemy forces or heavily defended inland areas.

c. Coastal movements to bypass difficult terrain, or to cut enemy lines of communications.

d. Seizure of beach areas from which forces operating inland can be supported.

e. Passage of estuaries, wide rivers, lakes, and inland seas when requirements exceed the capabilities of normal river-crossing means.

f. Extension of control over coastal flank areas following an amphibious attack.

g. Seizure of a coastal area to permit early link up with and support of an airborne or airmobile force.

h. Seizure of coastal or offshore sites for emplacement of fire support or surveillance means.

352. Operational Sequence

Preparations for and execution of a shore-to-shore attack will normally involve events or activities in the general sequence indicated below.

a. Preparation Phase.

- (1) Preliminary planning.
- (2) Detailed planning.
- (3) Refresher training in shore-to-shore operations as required.
- (4) Preparation of near shore mounting facilities.
- (5) Assembly of forces, equipment, and supplies in the mounting area (s).

b. Execution Phase.

- (1) Embarkation.
- (2) Movement to the landing area.
- (3) Prelanding operations.
- (4) Assault landings.
- (5) Reinforcement and resupply.

353. General Planning Guidance

a. The general considerations of importance in planning for a shore-to-shore attack are those applicable in planning other amphibious type operations. For example, a specific shore-to-shore attack, comparable to a deliberate river crossing, warrants particular attention to the doctrine and procedures set forth in FM 31-60, River-Crossing Operations. A shore-to-shore attack involving landings from the sea requires consideration of factors similar to those used in planning for assault landings in an amphibious attack.

b. Analysis of the operational environment in which a shore-to-shore attack is to be conducted will indicate the vital considerations in planning. As for all assault landing operations, emphasis must be placed on factors critical to success in the initial assault landings, on the tactical operations on the far shore, and on means in support of the landing force scheme of maneuver.

c. For a shore-to-shore attack, the tactical commander must extend his concept of operations to all aspects of the operation just as for a river-crossing operation. He must plan for assembly of movement means and all aspects of their employment, to include navigation, control, and security during the crossing. On the other hand, in amphibious and airborne operations, Navy and

Air Force component commanders are responsible for assembly of movement means preparatory to embarkation and all aspects of the movement to the objective area.

d. Organization for landing and landing plans must support the scheme of maneuver of the landing force. Scheduling of the movement of reinforcing elements, equipment, and supplies to be landed following the initial waves assumes greater importance than in a ship-to-shore movement. Ship-to-shore movement affords flexibility through the selective unloading of units still afloat in the landing area under conditions of relatively short craft turnaround time. In a shore-to-shore movement, where craft turnaround time is normally longer, sufficient lift must be available to move a large proportion of the landing force units and initial supplies in a single trip.

354. Preliminary Planning

a. A tactical commander initiates planning for a shore-to-shore attack either in response to a directive to conduct such an operation or in anticipation of an operational requirement within his command.

b. One of the first steps is to determine the availability of specialized units, landing craft, amphibious vehicles, and aircraft. The number and the capacity of movement means available may limit the scope of the operation.

c. The following items must be determined by the tactical commander during preliminary planning to provide a basis for detailed planning:

- (1) An overall concept of the operation and any related or supporting operations, to include Navy and Air Force support.
- (2) The objective area for the operation, if not defined by a higher commander. Definition of the objective area is particularly important as a basis for coordination of the use and control of water area and airspace in the objective area and the routes thereto.
- (3) Intelligence requirements and procedures.
- (4) Potential landing areas on the far shore.
- (5) Employment of nuclear, chemical, and biological weapons and allocation of such weapons.
- (6) Task organization.
- (7) Organizational structure and extent of delegation of command authority and area responsibility to subordinate commanders.

- (8) Responsibilities for mounting the operation.
- (9) Concept of administrative support of the landing force.
- (10) The target date for execution of the operation.

d. Depending on the scope of the operation and the command structure, the following items are determined either by the overall tactical commander or by a designated subordinate commander:

- (1) Selection of landing force objectives which establish the trace of the landing force lodgment line.
- (2) Landing force scheme of maneuver.
- (3) Fire support means to be employed, to include requirements for naval gunfire and air support.
- (4) Selection of the landing area(s), and the necessary subdivision thereof.
- (5) Selection of landing zones and landing sites within the landing area(s).
- (6) Selection of the embarkation area(s).

355. Landing Force Task Organization

a. The landing force in a shore-to-shore attack is a task organization comprising the entire force to be landed in the objective area. The landing force and each of its principal subordinate echelons must be tailored to meet the requirements of the particular operation. The landing force may also include near shore support and movement units depending upon decisions on command structure for the force as a whole.

b. As in an amphibious attack, there will normally be a requirement for reinforcement of the basic tactical element at each command echelon of the landing force. Reinforcing elements provide the combat and interim administrative support capability required during conduct of relatively independent operations pending establishment of normal support systems in the landing area.

c. The assault landing team is the basic subordinate echelon of the landing force. It is a task organization formed around a unit of battle group, battalion, or company size. Assault landing team composition will vary depending on the mission and conditions under which the operation is to be executed.

d. The shore party is employed as a special task organization to accomplish combat support tasks which facilitate landing and passage of the far shore obstacle. It is tailored to afford the required interim administrative support capability in the landing area through development and operation of a far shore support area. Shore party organization may differ from that normal for an amphibious attack because—

- (1) Shore-to-shore attacks will seldom involve development of an administrative support system beyond the requirements for support of the landing force in the landing area. The shore party may operate the far shore support area for the duration of the operation without need for introduction of a logistical command organization. When extensive base development and buildup are not planned, service units in the shore party task organization will be primarily of the field army type rather than communications zone type.
- (2) Army shore party elements will perform functions normally assigned to the Naval ship-to-shore control agency and beach party in an amphibious operation. These functions include—
 - (a) Establishing and operating the landing force movement control system for control of landing craft and amphibious vehicle movements upon arrival in rendezvous areas in the landing area, and until departure for return to the near shore.
 - (b) Providing close offshore control to facilitate beaching of landing craft, lighters, and amphibious vehicles.
 - (c) Assisting crews in retraction of craft from the shore and in salvage operations.
- (3) Army shore party elements must plan for and prepare to install and operate special unloading facilities such as transfer points and pontoon causeways.

356. Command Structure and Control Facilities

a. The command structure for a shore-to-shore attack provides for a single tactical commander with overall responsibility for the operation. The tactical commander responsible for conducting the operation will normally be a commander at least one command level above the landing force. For example, when the landing force is a reinforced division, the corps commander conducts the operation as a whole. Retention of overall command authority at a level above the landing force insures centralized direction, coordination, and control of near shore activity to include fire support; movements, both water and air, between the near and far shores; and operations on the far shore.

b. Operations involving multiple landing teams conducting relatively independent operations in widely separated landing areas may require formation of intermediate landing force headquarters.

c. Factors to be considered in determining the command structure for a shore-to-shore attack include—

- (1) The primary means of movement to the objective area.
- (2) The purpose, scope, and expected duration of the operation.
- (3) The level of command at which the landing force is formed.
- (4) The related operations to be conducted concurrently.
- (5) The type and number of specialized support units available for the operation, particularly those which provide assault craft and fire support.
- (6) The effect of distance between the near and far shore on signal communications essential to coordination and control of tactical and administrative support.
- (7) The intentions of the overall tactical commander with respect to the displacement of his headquarters to the far shore.
- (8) The requirements for coordination and control of units and functions (embarkation, movement, landing, and interim administrative support of the landing force) not ordinarily encountered in a land attack.

d. Organization for command within a force should facilitate use of command headquarters and tactical control facilities in their normal role to the extent practicable.

e. The Engineer Amphibious Support Command provides specialized command and control elements to assist tactical commanders in the direction, coordination, and control of units operating near shore facilities, the units operating landing craft and amphibious vehicles between the near and far shore, and the shore party operating on the far shore as an element of the landing force. Upon initiation of planning, Engineer Amphibious Support Command elements are attached to appropriate commands to provide advice and assistance during planning and execution of the operation. Similarly, representatives of Transportation terminal and boat units and Army aviation units included in the task organization for the operation provide specialized advice and assistance during the planning and execution.

f. During preliminary planning, the tactical commander responsible for conduct of the operation prescribes the basic task organization for the operation. The task organization must be designed to facilitate coordination and provide centralized direction and control of all units in the following categories:

- (1) Units which prepare and operate mounting facilities on the near shore.
- (2) Units which provide and operate the landing craft and amphibious vehicles used as movement means between the near and far shores.
- (3) Units which provide and operate aircraft used as movement means between the near and far shores.
- (4) Units comprising the landing force.

j. Figure 11 depicts a situation involving a mounting in a rear degree and duration of command authority to be exercised by the landing force commander over units operating the near shore and/or movement means between the near and far shores. Considerations include the mission of the landing force, distance involved, tactical and administrative support situations on the near shore, landing craft and amphibious vehicle availability, extent of buildup of forces and supplies on the far shore, and the number and relative location of embarkation areas and landing areas.

h. The command structure must provide for—

- (1) Exercise of operational control by the landing force commander, or other designated commander, over the assault echelon (to include elements operating assault craft or aircraft) en route and during the initial assault landings.
- (2) Unity of command over forces at the far shore. The senior landing force officer at the far shore exercises command or operational control over all forces on the far shore.
- (3) The relief of the landing force commander, as soon as practicable from responsibilities which detract from his conduct of operations ashore in the landing area, e.g., near shore activities and the operation of assault craft between the near and far shores.

i. In a shore-to-shore attack involving the crossing of a relatively narrow body of water such as a wide river, a strait, or an estuary, the landing force commander will usually be delegated operational control over all units engaged in near shore and movement operations. The commander conducting the operation should plan for relief of the landing force commander from these extraordinary responsibilities when the major portion of the landing force and its command elements have displaced to the far shore. Similarly, when assault landing teams embark in widely separated areas for a direct, relatively short crossing to adjacent landing sites (fig. 10), delegation of operational control over near shore

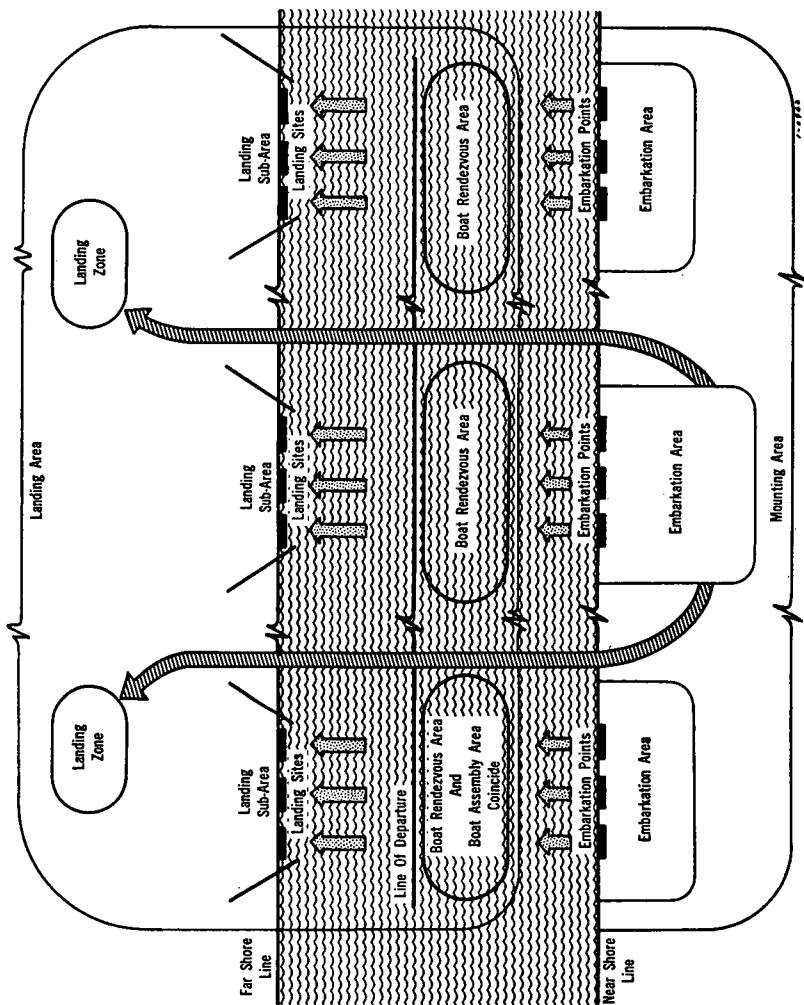


Figure 10. Area organization for a short crossing (schematic).

and movement units to the assault landing team commander for the initial assault may be appropriate.

j. Figure 11 depicts a situation involving a mounting in a rear area and a relatively long overwater crossing. When a shore-to-shore attack is mounted from an established water terminal in an administrative support area, terminal operating units will normally perform near shore tasks in support of the landing force. For a relatively long overwater crossing, movement control over assault craft during crossings will be accomplished by a near shore agency. Upon arrival in rendezvous areas in the landing area and until departure therefrom for return to the near shore, boat group commanders are responsive to the landing force movement control officer in the landing area. As an exception, and to obviate a change in control at a critical time, commanders of boat groups with the assault echelon are under the operational control of the embarked landing force commander during the initial crossing and assault landings. All water movements from rendezvous areas to the line of departure and then to the shore are controlled through the landing force movement control system. Upon departure from the landing area, boat group commanders revert to control of the designated near shore movement control officer.

357. Training

a. Preliminary individual, small unit, and staff training for shore-to-shore attack operations can be carried on in a general training area. Advanced training must be conducted in a water training area in which specialized craft and vehicles are available. Ideally the water training area should provide access to both a sea area with usable beaches and an inland water area. Advance training should culminate in a full scale exercise at the assault landing team level.

b. Shore-to-shore attacks will often be mounted in forward combat areas under security conditions which preclude rehearsals in the mounting area. For this reason, it is important that combat and supporting units achieve a capability of executing this type of operation without need for intensive refresher training.

c. Achievement of a satisfactory state of training in shore-to-shore attack operations minimizes the supplementary shore-based and ship-based training required for participation in an amphibious attack. Similarly, shore-to-shore training enhances a unit's capability for execution of a river-crossing involving use of amphibious vehicles and/or landing craft as assault crossing means.

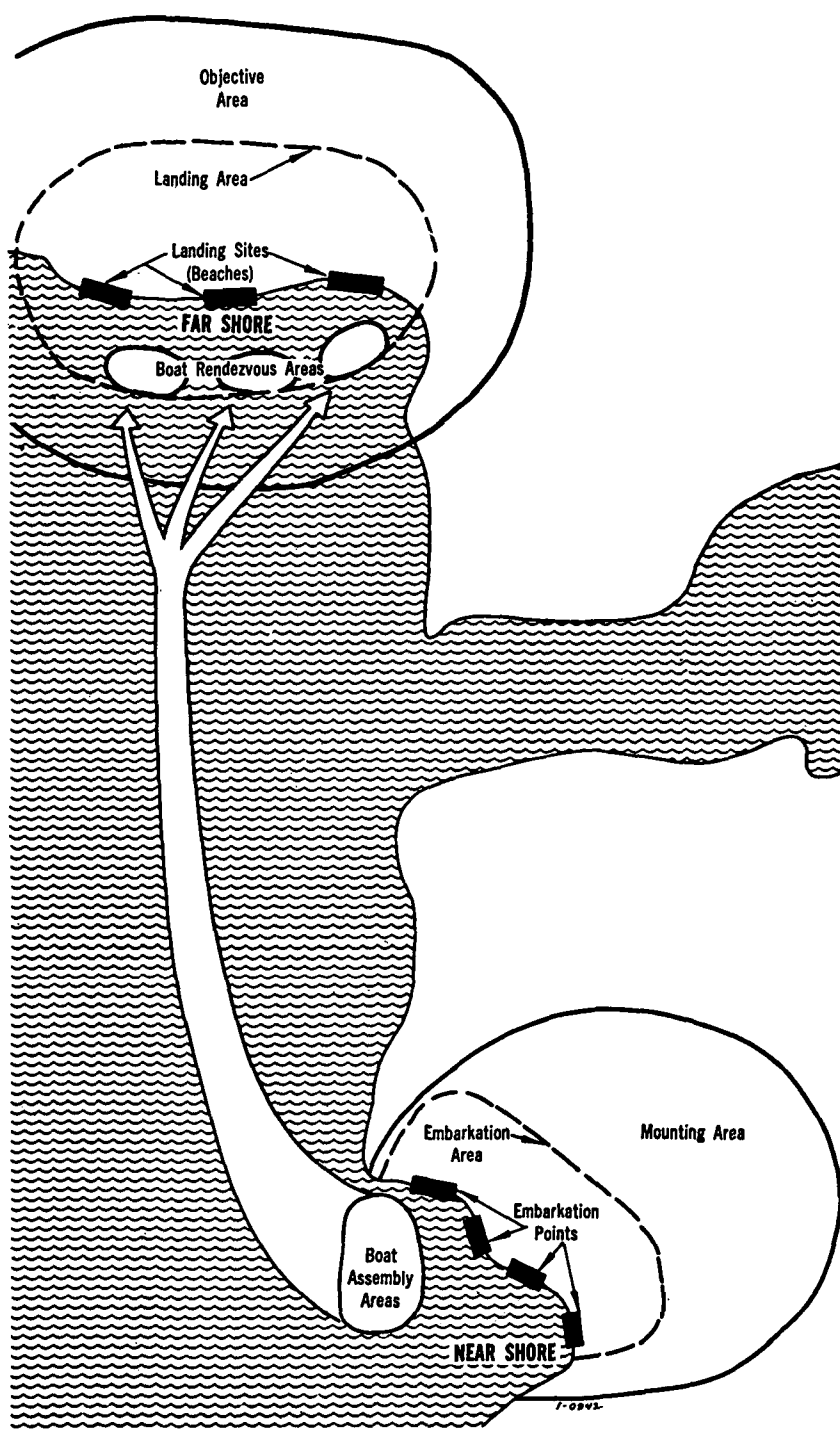


Figure 11. Area organization for a long crossing (schematic).

APPENDIX I

REFERENCES

JCS Pub 1	Dictionary of United States Military Terms for Joint Usage.
JCS Pub 2	Unified Action Armed Forces (UNAAF).
JCS Pub 3	Joint Logistics and Personnel Policy and Guidance (U).
AR 320-5	Dictionary of United States Army Terms.
AR 320-50	Authorized Abbreviations.
FM 3-5	Tactics and Techniques of Chemical, Biological and Radiological (CBR) Warfare.
FM 5-144	Engineer Amphibious Support Command (when published).
FM 6-20	Field Artillery Tactics and Techniques.
FM 7-100	Infantry Division.
FM 10-63	Handling of Deceased Personnel in Theaters of Operations.
FM 17-100	The Armored Division and Combat Command.
FM 19-25	Military Police Traffic Control.
FM 19-40	Handling Prisoners of War.
FM 21-5	Military Training.
FM 21-6	Techniques of Military Instruction.
FM 21-30	Military Symbols.
FM 24-18	Field Radio Techniques.
FM 24-20	Field Wire Techniques.
FM 24-150	Electronic Warfare (U).
FM 30-5	Combat Intelligence.
FM 31-8	Medical Service in Joint Overseas Operations.
FM 31-21	Guerrilla Warfare and Special Forces Operations.
FM 31-40	Tactical Cover and Deception (U).
FM 31-70	Basic Cold Weather Manual.
FM 31-71	Northern Operations.
FM 32-5	Communications Security (U).
FM 33-5	Psychological Warfare Operations.
FM 38-1	Logistics Supply Management.
FM 41-5	Joint Manual of Civil Affairs/Military Government.
FM 44-1	Air Defense Artillery Employment.

- FM 54-1 The Logistical Command.
- FM 55-51 Transportation Terminal Commands, Theater of Operations.
- FM 55-52 Transportation Terminal Battalion and Terminal Service Company.
- FM 55-53 Transportation Amphibious Truck Company.
- FM 55-58 Transportation Boat Units.
- FM 57-30 Airborne Operations.
- FM 57-35 Airmobile Operations.
- FM 60-30 Amphibious Operations, Embarkation and Ship Loading (Unit Loading Officer).
- FM 100-5 Field Service Regulations; Operations.
- FM 100-10 Field Service Regulations; Administration.
- FM 101-1 The G1 Manual.
- FM 101-5 Staff Officer's Field Manual; Staff Organization and Procedure.
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APPENDIX II

COMMAND RELATIONS EXAMPLE

1. Because an amphibious task force is a task organization, its composition and certain command relations will differ for each specific amphibious operation. Command relations within the amphibious task force change during the conduct of an operation. Principles applied in determining command relations with other commands and within an amphibious task force are set forth in paragraphs 6 through 12. Application of the principles is illustrated by the following example.

2. For purpose of this example—

a. The commander of an existing unified command establishes an amphibious task force for the conduct of an amphibious operation. The objective area is within the area of operations assigned to the unified command commander.

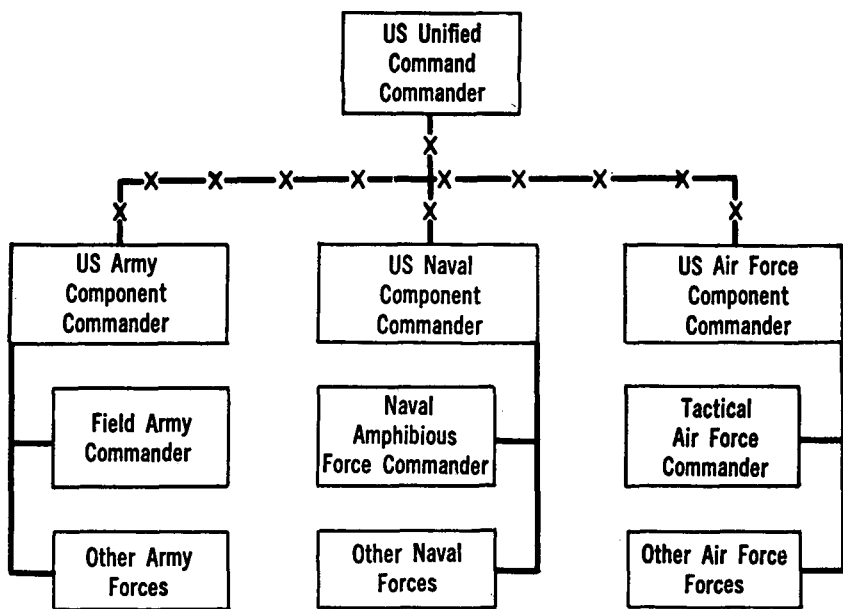
b. The Army component of the amphibious task force is a small field army with four divisions and requisite combat support and service units.

3. Command relations before establishment of the amphibious task force are illustrated by figure 12.

4. The unified commander issues the initiating directives for the amphibious operation. Thereby he designates a Navy officer as the amphibious task force commander and also a coordinating authority for preparation of the amphibious task force operation plan. Command relations for the planning periods are illustrated by figure 13.

5. At a specified time, approximating commencement of embarkation of forces for execution of the amphibious operation, the amphibious task force is activated as a joint force. The unified commander authorizes the amphibious task force commander to exercise operational control over the Service component forces of the amphibious task force. Command relations are illustrated by figure 14.

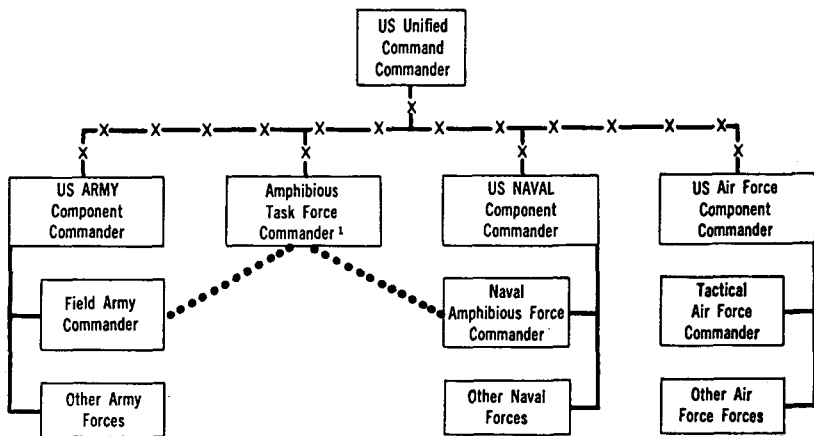
6. The amphibious task force commander exercises the authorized degree of operational control over Service component forces of the



LEGEND

- Command.
- X- Operational command.

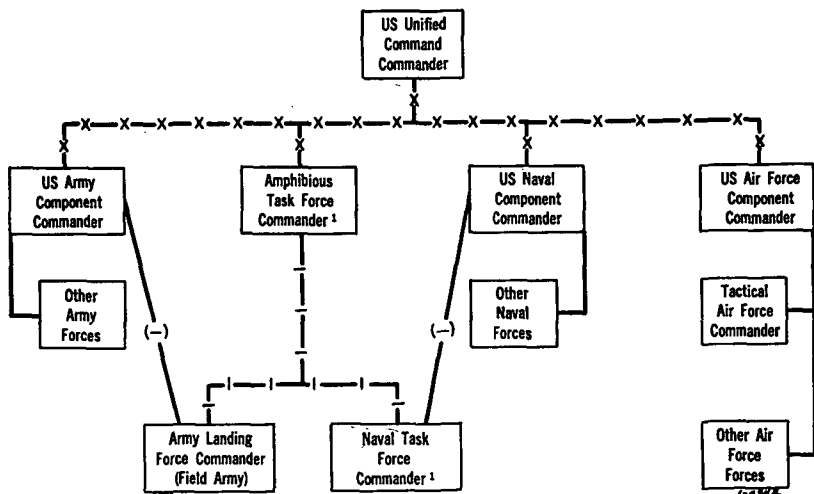
Figure 12. Command relations before establishment of the amphibious task force.



¹ Coordinating authority for planning.

- 1-0942
- LEGEND
- Command.
 - X- Operational command.
 - Directed co-ordination.

Figure 13. Command relations during planning for the amphibious operation.



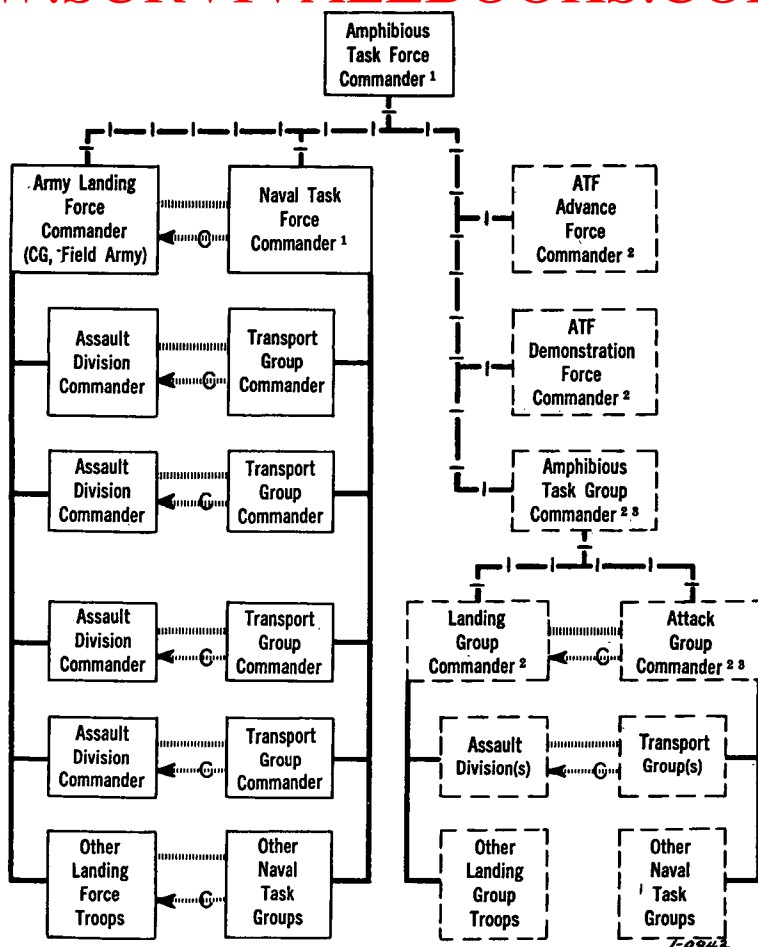
¹ Usually, the amphibious task force commander is also commander of the naval component of the ATF.

- LEGEND
- Command.
 - X— Operational command.
 - - - Operational control.
 - (-)- Command minus operational control.

Figure 14. Command relations during execution of the amphibious operation.

amphibious task force through the respective component commanders. The basic command relations within the amphibious task force are illustrated by figure 15. Also shown are subordinate joint forces; i.e., advance force, demonstration force, or amphibious task groups, which are formed by the amphibious task force commander only when the situation requires (par. 31).

7. At termination of the amphibious operation, the amphibious task force is dissolved. Command relations will revert to those shown by figure 12, or be as otherwise directed by the unified commander. Naval and Air Forces will support further land operations of the field army as directed by the unified commander.



¹ Usually the same individual.

² Subordinate command established only when situation requires.

³ Usually the same individual.

LEGEND

- Command.
- |— Operational control.
- Directed coordination.
- ◀⊕ Support.

Figure 15. Command relations within the amphibious task force during execution.

APPENDIX III

DIVISION SHORE PARTY TASK ORGANIZATION

1. The purpose of this appendix is to provide an example of a task organization for an assault division shore party (par. 92).

a. A division shore party, as a task organization is tailored for a particular operation. The normal functions of shore parties warrant consideration as to the need for attachment to an assault division of each type unit listed herein.

b. The assault division shore party task organization includes those units, or elements thereof, which are further attached to assault landing teams for employment in their shore parties during the landing team stage of the assault.

c. If Engineer Amphibious Support Command (EASC) elements are not available for attachment to an assault division, comparable provisional organizations must be formed and specially equipped and trained.

2. Consideration should be given to the need for the following type units in determining the composition of an assault division shore party.

EASC ELEMENTS

Spt Gp Comd, EASC
 Co, Engr Amph Bn, EASC
 Co, Engr Amph Eqp Bn, EASC
 Plat (Gp Sig Spt), Sig Co, EASC
 Plat (Med Spt), Med Co, Svc Spt Bn, EASC
 Det (Maint), DS Co, Svc Spt Bn, EASC

CHEMICAL

Cml Smk Genr Bn
 Hq & Hq Det, Cml Smk Genr Bn
 3 Cml Smk Genr Co
 Plat, Cml Co, Cmbt Spt

ENGINEER

Engr Cmbt Bn, Army
 Engr Pipeline Co
 Plat, Engr Sup Pt Co
 Det, Engr Fld Maint Co

MEDICAL

Med Bn (Sep)
 Hq & Hq Det, Med Bn (Sep)
 Med Amb Co (Sep)

Med Coll Co (Sep)

Med Clr Co (Sep)

Surg Hosp, Mbl Army

Plat, Med Air Amb Co

MILITARY POLICE

MP Bn

Hq & Hq Det, MP Bn

2 Co, Mp Bn

MP Esc Gd Co

ORDNANCE

Ord Bn

Hq & Hq Det, Ord Bn

Ord DS Co

Ord DAS Co

Det, Ord Fld Sup Co

Storage and Issue Plat, Ord SW and Msl DS Co

Ord Ammo Co

EOD Det (type AA)

GM DS Dets

QUARTERMASTER

QM Bn

Hq & Hq Det, QM Bn

QM Petrl Sup Co, Mbl

2 QM Svc Co

Plat, QM Subs Sup Co

Plat, QM Gr Reg Co

TRANSPORTATION

Trans Terml Svc Bn

Hq & Hq Det, Trans Terml Svc Bn

Trans Lt Boat Co

Trans Med Boat Co

Trans Terml Svc Co

Trans Trk Bn

Hq & Hq Co, Trans Trk Bn

Trans Lt Trk Co

Trans Amph Trk Co

Det Trans Army Acft Maint & Sup Co, DS

SIGNAL

Plat, Sig Co (Sep)

Det, Sig Fwd Sup & Maint Co, Sig Sup & Maint Bn, Army

PROVISIONAL SECURITY FORCE

Armd Cav Trp, Armd Cav Regt

Det, Avn Co, Armd Cav Regt

NAVAL BEACH PARTY

Det, Naval Beachmaster Unit

APPENDIX IV

LANDING PLAN DOCUMENTS

1. This appendix contains examples of documents prepared by various echelons of the landing force and naval force in connection with planning for ship-to-shore movement and assault landings. All of the documents described may not be required for a particular operation. Documents are prepared in the general format shown by the examples in the interest of standardization to facilitate coordination and consolidation of data at higher command echelons. Documents are included, as appropriate, in the landing plan annex to the operation plan, and constitute detailed instructions for the ship-to-shore movement.

2. The purpose of each document and the responsibilities for its preparation are discussed below—

a. Documents normally prepared at assault division—transport group level are—

- (1) *Landing craft availability table.* The purpose of this table is to set forth the types and numbers of landing craft available to a transport group as ship-to-shore movement means. The table is the basis for planning the assignment of landing craft to boat groups and to other tasks for which landing craft are to be employed. The table is prepared by the naval transport group in coordination with the assault division which it will transport and land. Naval landing craft and Army landing craft of Transportation Boat Companies that may be attached to the division are included in the tabulation to arrive at total craft availability. The table is normally included in the division landing plan annex. Figure 16 is an example of the table.
- (2) *Landing craft employment plan.* It is the plan for the designation and movement of landing craft from the various ships to satisfy landing force and naval requirements. The plan indicates the number of landing craft, their type, ship of origin, ships to which they are to report, time at which they are to report, and the period attached. The naval transport group commander prepares the plan. The employment plan is prepared in

Landing Craft Availability Table						
Ship ¹	LCVP ^{2 3}	LCM(3)	LCM(6)	LCP(L)	LCP(R)	Remarks
APA-220	22		2	1	1	
APA-224	22		2	1	1	
* *	*	*	*	*	*	*
AKA-98	15	2	6	1		
AKA-94	15	2	6	1		
AKA-76	15	2	6	1		
* *	*	*	*	*	*	*
LST-391	3			1		
LST-313	4					
* *	*	*	*	*	*	*
LSD-7	2		12			
* *	*	*	*	*	*	*
Total available	580	24	100	55	14	
Spares (10 percent)	58	3	10	6	2	
Naval requirements	80	0	5	20	10	
Total spares and naval use	138	3	15	26	12	
Total for landing force use ⁵	442	21	85	29	2	

¹Column one lists each transport and landing ship of the transport group.

²Across the top of the table are listed the various types of landing craft available within the transport group.

³Under the heading for each type landing craft, and on line with each transport and landing ship listed, are shown the number of landing craft available from each transport and landing ship.

⁴Army landing craft of transportation boat companies attached to the Army assault division to be lifted by the naval transport group are included to arrive at the total craft available for the ship-to-shore movement.

⁵At the bottom of the table is shown the total number of landing craft by type which are available for troop use in the ship-to-shore movement.

Figure 16. Landing craft availability table (incomplete).

coordination with the assault division commander when Army landing craft are involved. Figure 17 is an example of the plan.

- (3) *Amphibious vehicle availability table.* It is a tabulation of the type and number of amphibious vehicles available. The table indicates the unit to which the amphibious vehicles are organic, the ships which transport the vehicles, and the number and type of vehicles carried by each ship, with explanatory remarks. Commanders of assault divisions and other landing force command echelons to which amphibious vehicle units are attached for the as-

<i>Landing Craft Employment Plan</i>						
(1) <i>Number of craft</i>	(2) <i>Type</i>	(3) <i>From</i>	(4) <i>To</i>	(5) <i>Time of Arrival</i>	(6) <i>Period of Attachment</i>	(7) <i>Remarks</i>
18	LCVP	APA-220	APA-220			Ships organic boats
18	LCVP	APA-118	APA-220	100645	one trip	
6	LCVP	AKA-25	APA-220	100645	two trips	When released report to APA-224
2	LCM(6)	APA-220	APA-220			Ships organic boats
4	LCM(8)	LSD-802	APA-210	100645	one trip	Boats organic to Trans Med Boat Co
*	*	*	*	*	*	*

- NOTES:
1. Column (1) shows number of landing craft.
 2. Column (2) lists type of landing craft.
 3. Column (3) lists the ship of origin of the landing craft.
 4. Column (4) lists the ship to which the landing craft report.
 5. Column (5) lists the date and time at which the landing craft report.
 6. Column (6) specifies the assignment period.
 7. Column (7) contains additional instructions or clarifying remarks.

Figure 17. Landing craft employment plan (incomplete).

sault landings prepare the table. The table is normally included in the division landing plan annex. Table format is shown by figure 18.

- (4) *Amphibious vehicle employment plan.* This is a plan which indicates in tabular form the planned employment of amphibious vehicles, including their employment after the initial movement to the beach. Data include the origin of the amphibious vehicles, the number and type of vehicles to be employed, and the destination of the vehicles. The vehicle load and amplifying remarks are indicated in the remarks column. Figure 19 is an example of the table. Commanders of assault divisions to which amphibious vehicle units are attached prepare the employment plan and include it in their landing plan annex. This table cannot be completed until shipping availability is known and the division assault schedule for landing beaches is completed.

<i>Amphibious Vehicle Employment Plan</i>						
<i>Origin</i> ¹	<i>Number and type amphibious vehicles</i> ²			<i>Wave</i> ³	<i>Destination</i> ⁴	<i>Remarks</i> ⁵
	<i>LVTH</i>	<i>LVTP-5</i>	<i>DUKW</i>			
LST-588	10	1		1	Beach RED-1	Co A, 1st Armd Amph Bn
LST-589	5					
LST-591	10	1		1	Beach RED-2	Co B, 1st Armd Amph Bn
LST-592	5					
* * * * *						
LST-588		6		2	Beach RED-1	Aslt plats, Co A and B, BGLT 1/61
LST-593		6				
LST-594		12		2	Beach RED-2	Aslt plats, Co E and F, BGLT 1/61
* * * * *						
LST-1131			21		Primary control vessel, Beach RED	1st How Bn (-)(105-mm), 45th Arty.
LST-1132			9			
* * * * *						

- ¹The first column lists the origin of the amphibious vehicles. This is usually a landing ship for the initial employment of a vehicle. It may be the amphibious vehicle unit for subsequent employment.
- ²The second column indicates the number and type of amphibious vehicles to be employed.
- ³The third column shows the wave in which the amphibious vehicles are employed.
- ⁴The fourth column indicates the destination of the amphibious vehicles listed in column two.
- ⁵The fifth column is the remarks column. If LVTH are used, the armored amphibious unit is indicated here. If LVTP and DUKW are used, the type of load (troop unit or equipment) is shown.

Figure 19. Amphibious vehicle employment plan (incomplete).

- (5) *Helicopter availability table.* This document is a tabulation of the number of helicopters available for use in the ship-to-shore movement. It is a listing of helicopter units, the type and number of helicopters available for the first and subsequent lifts, and the ships from which the helicopters will operate. The table is prepared when required for use in planning by commanders of landing force echelons to which helicopter units are attached for the ship-to-shore movement. The table is prepared in the format shown by figure 20.
- (6) *Division assault schedule for landing beaches.* This document is a schedule of the assault landings at landing

Helicopter Availability Table							
Aviation unit designation ¹	Total number of helicopters ²	Number of helicopters available for use ³		Type ⁴	Transport carrier ⁵	Deck launching capacity ⁶	Remarks
		First trip— (90 percent)	Other trips— (80 percent)				
110th Trans Co (Med Hel)	15	14	12	H-37	LPH-1	4	
111th Trans Co (Med Hel)	15	14	12	H-37	LPH-2	4	
112th Trans Co (Med Hel)	15	14	12	H-37	LPH-3	4	Cruise speed estimated— 100 knots.

¹List in column one the transport aircraft (aviation) unit designation.

²List in column two total number of helicopters available in the unit for the operation.

³List in column three the number of helicopters available for use for: a. the first trip; b. subsequent trips.

⁴List in column four the type helicopter available.

⁵List in column five the ships from which the helicopters will operate.

⁶List in column six the deck launch capacity of the helicopter transports.

Figure 20. Helicopter availability table (incomplete).

beaches within the division landing area, or the division's landing sub-area as a subdivision of a larger landing area. It lists the number and type of landing craft or amphibious vehicles and the units by designation and serial number which use them for each scheduled and on-call wave to land over division landing beaches. For each scheduled wave, the time of landing is shown. For each oncall wave, the reporting time at the line of departure or other control point is shown. The schedule is prepared with consideration to recommendations of assault landing team commanders as to the number and composition of the waves. An example of this form is shown by figure 21.

- (7) *Division assault schedule for landing zones.* This document is a schedule of the assault landings to be executed in each landing zone in the division's landing area. The schedule lists the number and type of helicopters, and the units, by designation and serial number, which use them. The helicopter employment and assault landing table reflects additional and more detailed instructions. This assault schedule together with the assault schedule for landing beaches reflects the assault division commander's planned employment of units and the time schedule for execution of the initial assault landings. The schedule format is shown by figure 22.

Division Assault Schedule for Landing Beaches						
Landing area (or landing subarea)			Landing Beach			
OHIO ¹			RED 1 ²	RED 2 ²	GREEN ²	WHITE ²
S C H E D U L E D W A V E S	Wave Number ³	Landing time ⁴	Craft/vehicle unit serial nr	Craft/vehicle unit serial nr	Craft/vehicle unit serial nr	Craft/vehicle unit serial nr
	1	H-hour	18 LVTH 1st Armd Amph Bn 612	18 LVTH 1st Armd Amph Bn 613	18 LVTH 1st Armd Amph Bn 614	18 LVTH 2d Armd Amph Bn 615
	2	H+3 min	18 LVTP BGLT 1/711 210	18 LVTP BGLT 2/711 310	18 LVTP BGLT 3/711 410	18 LVTP BGLT 1/712 510
	3	H+6 min	10 LCVP BGLT 1/711 211	10 LCVP BGLT 2/711 311	10 LCVP BGLT 3/711 411	10 LCVP BGLT 1/712 511
O N C A L L W A V E S	Control point	Reporting time				
	Report primary control vessel	H-hour	10 LCVP BGLT 1/711 212			10 LCVP BGLT 1/712 512
	Line of departure	H+30 min			10 LCVP BGLT 3/711 412	

- ¹Enter the code word used to designate the landing area or landing subarea within which the division landing beaches are located in the upper left block of the table.
- ²In succeeding columns (one for each landing beach to be used), show the color or color-number designation of the landing beach and the composition of each wave, to include the number and type of landing craft or amphibious vehicles, the assault unit, and the serial number of the element of the unit.
- ³List in column one the wave number of each scheduled wave.
- ⁴List in column two the time of landing for scheduled waves and reporting time to line of departure or other control point for on-call waves.

Figure 21. Division assault schedule for landing beaches (incomplete).

(8) *Division landing sequence table.* The detailed plans for the ship-to-shore movement of nonscheduled units of the division by surface movement means are incorporated in one document, the landing sequence table (fig. 23). It presents a complete picture of the preplanned sequence for the landing of those units not included in scheduled or oncall waves. It is used by commanders and control agencies as the principal document for control of the ship-to-shore movement of nonscheduled units. The completed table also provides information needed for prep-

Division Assault Schedule for Landing Zones					
S C H E D U L E D W A V E S			Landing Zone		
			ALPHA ¹	BRAVO	CHARLIE
	Wave number ²	Landing time ³	Nr helicopters unit serial nr ⁴	Nr helicopters unit serial nr	Nr helicopters unit serial nr
	1	L-hour	8 H-37 BGLT 1/713 703, 704	8 H-37 BGLT 2/714 (-) 802	8 H-37 Co, BGLT 2/714 812
	2	L+5 L+7	8 H-37 BGLT 1/713 708	8 H-37 BGLT 2/714 (-) 804	8 H-37 Co, BGLT 2/714 813
	3	L+10 L+15	8 H-37 BGLT 1/713 705, 706	8 H-37 BGLT 2/714 (-) 805	4 H-37 Co, BGLT 2/714 814
*		*	* *	*	* *
O N C A L L	Ship	Ready for loading time	X	X	X
	LPH 201	L+30	4 H-37 BGLT 1/713 716	8 H-37 BGLT 2/714 (-) 814	
	LPD 203	L+30			4 H-37 Co, BGLT 2/714 (supplies)
*		*	* *	*	* *

¹Provide a column in the table for each landing zone in which elements of the division will execute an assault landing.

²List in consecutive order the number of each scheduled wave of helicopters. For a particular landing zone, all waves may be scheduled waves. On-call waves are preplanned but the time of landing is not predetermined.

³Landing time may be in terms of H-hour applicable for beach landings or in terms of another designated time such as L-hour earlier or later than H-hour.

⁴Enter for each wave, the number and type of helicopters to be employed, the designation of the major unit using the helicopters, and the serial number of each serialized element comprising the helicopter loads.

Figure 22. Division assault schedule for landing zones (incomplete).

aration of embarkation and loading plans for the units concerned. That portion of the landing craft employment plan and the amphibious vehicle employment plan which pertains to nonscheduled units must be completed before the landing sequence table can be completed. The table is a listing of units, by serialized elements, in the estimated order of their movement ashore. Data for each serialized element includes the minimum number and smallest type of landing craft or amphibious vehicle which can land the element, the landing beach on which the unit is expected to land, and pertinent remarks. The table is included in the landing plan annex to the division operation plan.

Division Landing Sequence Table							
Unit ¹	Element ²	Serial ³ nr	Craft or Vehicle		Ship ⁶	Landing ⁷ Beach	Remarks ⁸
			Nr ⁴	Type ⁵			
1st Med Tk Bn	Co E (-1st Plat)	607	3	LCU	LSD-14	RED	
1st Med Tk Bn	1st Plat, Co E	608	1	LCU	LSD-15	RED	
Div CP (Fwd)		10	5	LCVP	APA-231	BLUE	Free boats
111th Sig Bn	Op CP and Div Adv CP	102	9	LCVP	AKA-1002	BLUE	Personnel only
BGLT 1/711	Shore party elms	502	3	LCM(8)	APA-211	RED	Eqp and pers
210th Tk Co	Co HQ (-)	203	6	LCM(6)	APA-642	RED	
1st Avn Co	Avn Recon Plat.	404	1	LCM(6)	APA-642	BLUE	
1st Med Tk Bn	HQ & HQ Co	603	See remark		LST 1138	RED	LST to beach
1st Med Tk Bn	Co A	604	See remark		LST 1138	RED	do
12th Engr Lt Eqp Co	12th Engr Lt Eqp Co	712	See remark		LST 1138	RED	do
*	*	*	*	*	*	*	*

¹The first column contains the designation of the units or organizations in the estimated sequence for landing. When a unit is divided into two or more serialized elements to which serial numbers are assigned, the unit may be listed on more than one line in this table. See the division serial assignment table.

²The second column contains a description of the serialized element, of the unit listed in column one, that is to be landed.

³The third column contains the serial number of the serialized element. In this table the numbers are not in numerical sequence. The serial assignment table is a ready cross reference for determination of the composition of the serialized element.

^{4&5}The fourth and fifth columns show the minimum number of the smallest type of landing craft required to land the element. Enter an appropriate remark when elements are embarked in an LST which will beach for unloading. Entries in columns 4, 5, and 6 are the same as in similar columns of the division serial assignment table.

⁶Column six shows the ship from which the serialized element will debark.

⁷The seventh column indicates the landing beach upon which it is anticipated the element will be landed.

⁸The eighth column includes clarifying remarks.

Figure 23. Division landing sequence table (incomplete).

(9) *Division serial assignment table.* This basic table provides a listing, in numerical order of serial numbers, of all organic division and attached units by serialized elements scheduled by the assault division to land during the ship-to-shore movement. It is not essential that units reasonably expected to land after commencement of general unloading be included in the table; however, inclusion of all units provides a check against omission of

<i>Division Serial Assignment Table</i>						
<i>Serial nr</i> ¹	<i>Unit</i> ²	<i>Pers</i> ³	<i>Vehicles</i> ⁴ <i>equipment</i>	<i>Craft</i> <i>nr/type</i> ⁵	<i>Ship</i> ⁶	<i>Remarks</i> ⁷
100	Div Adv CP, Gp Nr 1	23	6 ¼-ton trk 4 ¼-ton tlr	7 LCVP	AGC-6	
101	HQ & HQ Co (Recon Party)	6	2 ¼-ton trk 2 ¼-ton tlr	2 LCVP	AGC-6	Free boats
* * * * *						
200	BGLT 1/711 Comd Gp	12	BGLT 1/711 2 ¼-ton trk 2 ¼-ton tlr	2 LVTP	LST-1002	Free boats
201	BGLT 1/711 Altn Comd Gp	16	4 ¼-ton trk 4 ¼-ton tlr	4 LCVP	APA-209	Free boats
202	Det HQ Co, 1/711	4	1 ¼-ton trk	1 LCVP	APA-209	6th wave 1/711
* * * * *						
250	HQ & HQ Btry, 1/211 Arty	60	9 ¾-ton trk 9 ¾-ton tlr 3 ¾-ton trk 3 ¾-ton tlr	9 LCM	AKA-2002	On call
* * * * *						
267	Co A (-), 20th Engr Bn	40	5 trk, 5-ton, dump; 2 tractors, 5-ton; 2 tractors, D7; 1 trk, 2½-ton; 1 tlr, 1½-ton, water		LST-1003	Beached
* * * * *						

¹The first column contains the serial numbers in numerical order.

²The second column describes the unit, part thereof, or combinations of units which constitute the serialized element.

³The third column indicates the number of personnel in the serialized element.

⁴The fourth column indicates the accompanying vehicles, and supplies and equipment which require special handling. The information in the column is useful in embarkation planning.

⁵The fifth column shows the minimum number and smallest types of landing craft which are required to land the serialized element. Other considerations permitting, substitution of larger craft can be made.

⁶The sixth column shows the ship from which the serialized element is to debark.

Figure 24. Division serial assignment table (incomplete).

units from the landing plan. The table serves as a ready reference for identification of serialized elements and for determination of landing craft, amphibious vehicle, or helicopter requirements for each serialized element to be landed. It is important to note that while the allocation of blocks of serial numbers to units is based on TOE organization, the actual assignment of serial numbers to units or parts of units listed in the table is based on the task organization for landing. The final division serial assignment table is prepared as a consolidation of lists of serial number assignments made by subordinate echelons. Figure 24 is an example which shows the table format.

- (10) *Assault area diagram.* This is a document which contains extracts from other pertinent landing forms. It usually shows diagrammatically the landing beach designations, the boat lanes, the organization of the lines of departure, the scheduled waves, the landing ship areas, the transport areas, and the fire support areas in the immediate vicinity of the boat lanes. Pertinent portions of the assault schedule and landing craft and amphibious vehicle employment plans are listed. The assault area diagram is prepared by the Naval transport group commander.
- (11) *Helicopter landing diagram.* This is a document which portrays graphically the routes to and from landing zones and the helicopter transports. It is prepared initially at the assault landing team-transport aircraft unit level. After it is reviewed and coordinated at division level, the diagram is submitted through landing force command channels to the amphibious task force commander for coordination with planned supporting fires and approval. Figure 25 shows an example of a helicopter landing diagram.
- (12) *Helicopter employment and assault landing table.* This document shows in tabular form the detailed plan for employment of available helicopters as ship-to-shore movement means. It is the timetable for the movement of assault landing team personnel, equipment, and supplies from ship to shore. The table shows the composition; exact time of loading, launching, and landing; and the landing zone and included landing site for each helicopter flight. The table is initially prepared at assault landing team-transport aircraft unit level, and is submitted for review, coordination, and consolidation by division headquarters. A consolidated version of the table is sub-

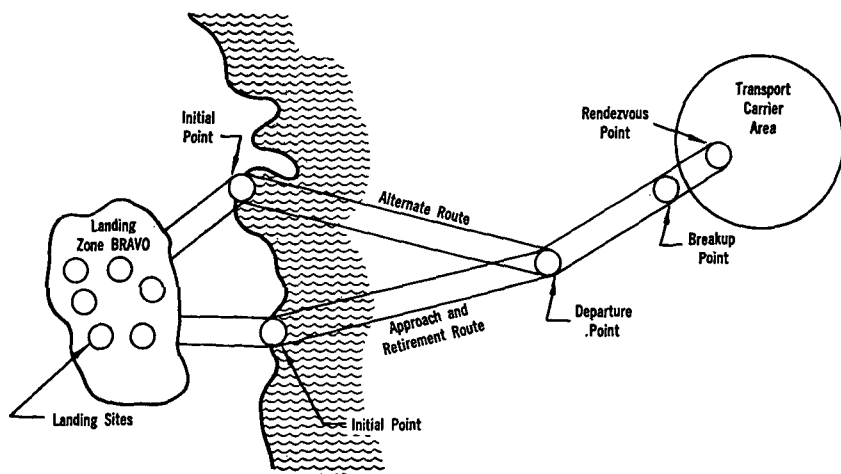


Figure 25. Helicopter landing diagram.

mitted by the division commander through landing force command channels for coordination, approval, and inclusion in the consolidated landing plan at amphibious task force level. An example of the table is shown by figure 26.

b. Landing documents prepared at assault landing team level include—

- (1) *Landing diagram for landing beaches.* A landing diagram is prepared for each landing beach by the assault landing team scheduled to execute the initial assault landing over the beach. It is a graphic portrayal of the detailed plan for the ship-to-shore movement. It is of particular value in informing the subordinate elements of the assault landing team, commanding officer of the ship, boat group commander, boat crews, and control personnel of the landing team commander's planned tactical disposition of the initial assault elements of the landing team. Figure 27 is an example of a landing diagram for a landing beach.
- (2) *Landing beach approach schedule.* This is a document which indicates for each scheduled wave to land at the beach, the times of departure from the rendezvous area (or ship, if landing craft or amphibious vehicles are dispatched directly to the line of departure); the line of departure and other control points; and the time of arrival at the landing beach. It shows the scheduled time of H-hour and the landing beach at the top of the table,

Helicopter Employment and Assault Landing Table

BGLT I/714-Landing Zone BRAVO

Wave ¹	Transport aviation unit ²	Flight nr ³	Nr/type of helicopters	From ⁵ carrier (origin) (load)	To ⁶ report (load)	Time ⁷			Landing ⁸ site	Load description ⁹
						Load	Launch	Land		
1	210th Trans Co	10-1	4 H-37	LPH-1	LPH-1	L-48	L-43	L-HOUR	10	Heliteam 602-1, 602-2, 602-3, 602-4
	211th Trans Co	12-1	4 H-37	LPH-3	LPH-3	L-48	L-43	L-HOUR	12	-----
2	212th Trans Co	13-1	4 H-37	LPH-4	LPH-4	L-43	L-38	L+5	13	-----
	213th Trans Co	14-1	4 H-37	LPH-5	LPH-5	L-43	L-38	L+5	14	-----
3	210th Trans Co	10-2	4 H-37	LPH-1	LPH-1	L-38	L-33	L+10	10	-----
	211th Trans Co	12-2	4 H-37	LPH-3	LPH-3	L-38	L-33	L+10	12	-----
4	212th Trans Co	13-2	4 H-37	LPH-4	LPH-4	L-33	L-28	L+15	13	-----
	213th Trans Co	14-2	4 H-37	LPH-5	LPH-5	L-33	L-28	L+15	14	-----

- ¹ Enter in column one the designated helicopter wave number.
- ² List in column two the transport aviation unit designation.
- ³ List in column three the assigned flight numbers.
- ⁴ List in column four the number and type of helicopters to be used.
- ⁵ List in column five the helicopter carrier in which the helicopters will be transported.
- ⁶ List in column six the helicopter carrier or other appropriate place where the helicopters are to be loaded and launched.
- ⁷ List in columns seven, eight, and nine the time, in relation to L-hour, of helicopter loading, launching, and landing.
- ⁸ List in column ten the specific landing site destination of each helicopter flight.
- ⁹ Describe in column eleven the troop elements and any equipment requiring special handling, which are to be loaded.

Figure 26. Helicopter employment and assault landing table (incomplete).

BGLT 1/712 landing diagram—Landing Beach RED

Wave ¹	Time of landing ²	Serial nr ³	Units ³	Formation ⁴
1	H -hr	231	Co B (-), 281st Armd Amph Bn	X X X X X X X X X X X X X X X X
2	H+2	210	Co A (-) (Boat Teams 2-1, 2, 3, 4, 5, 6, 7)	X X X X X X X X X X X X X X X X
3	H	220	Co B (-) (Boat Teams 2-8, 9, 10, 11, 12, 13, 14)	2-1 2-2 2-3 2-4 2-5 2-6 2-7 2-8 2-9 2-10 2-11 2-12 2-13 2-14
4	H			* * * * *
5	H			
6	H+30	262	Det BGLT shore party	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
7	H+40	206	BG recon platoon	7-12 7-10 7-8 7-6 7-4 7-2 7-1 7-3 7-5 7-7 7-9 7-11
8	H+40			⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
9	H			8-8 8-6 8-4 8-2 8-1 8-3 8-5 8-7 8-9
10	H			* * * * *
11	Free Boats ⁵	201	BGLT CO and party	Free boat: 001 X
12		242	Arty Bn CO and party	Free boat: 002 ⊙
13		268	Shore party dozer	Free boat: 003 ⊙
14		269	Shore party dozer	Free boat: 004 ⊙
15	At LD ⁶	271	Det, Trp B (-), 1st Recon Sq, 26th Cav	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
16	H+50			12-8 12-6 12-4 12-2 12-1 12-3 12-5 12-7 12-9
17	At LD	290	Co B (-), 20th Engr Bn	3 LCU from LSD 7
18	H+75			
19	H			* * * * *
20	H			

LEGEND

- X—LVTH. ⊙—LCVP.
- X—LVTP. ⊙—LCM-6.

1 List in the first column the wave number.
 2 List in the second column the time, in terms of H-hour, the wave will land.
 3 List in the third and fourth columns the major unit in the wave and the serial number of each serialized element. --- in the wave. When a serialized element is formed into numbered boat teams, the boat team is assigned the same number as the amphibious vehicle into which the team loads. Landing craft within a wave are numbered from the center to the flanks, with the even numbers on the left and odd numbers on the right. Amphibious vehicles within a wave are numbered consecutively from left to right.
 4 Show in the fifth column the number of craft or vehicles in the wave, the number assigned each one and its position in the wave.
 5 Free boats are assigned to provide for landing of the boated element at a time selected by the commander concerned with consideration to the situation ashore.
 6 All, or selected, on-call waves are listed in the landing diagram.

Figure 27. Landing diagram for landing beaches (incomplete).

and the courses the craft follow, names of control officers, names of boat group and assistant boat group commanders, the numbers of control ships, and other pertinent information at the bottom of the table. The approach schedule is prepared by the commander of the naval transport organization embarking an assault landing team. All approach schedules are submitted to higher command echelons for coordination, approval, and appropriate consolidation. The amphibious task force commander coordinates the overall ship-to-shore movement and modifies the approach schedule as necessary. An example of the approach schedule is shown by figure 28.

- (3) *Landing team assault schedule for landing beaches.* Under certain circumstances, it may be desirable to prepare an assault schedule comparable to the division assault schedule, shown in a(6) above, at the assault landing team, brigade, or combat command level. Assault schedules prepared at command echelons below the division follow the format shown by figure 21, but include only data applicable to the preparing command echelon.
- (4) *Helicopter employment and assault landing table.* This table, described in a(12) above, is prepared by the commander of each assault landing team scheduled to move from ship to shore by helicopter. The completed schedule is submitted to division headquarters for coordination, consolidation as required, and submission to the next higher landing force command echelon.
- (5) *Heliteam wave and serial assignment table.* This is a tabulation of the landing force units, equipment, and supplies that are to be loaded in each helicopter for ship-to-shore movement. It identifies each heliteam by its assigned serial number, with the flight and wave in which it is transported. The table is prepared by the assault landing team commander with the advice and assistance of the transport aircraft unit commander. The format of the table is shown by figure 29.

c. Ship debarkation documents prepared by the commanding officer of troops aboard each ship and/or the ship's commanding officer include—

- (1) *Landing craft and amphibious vehicle assignment table.* This table is prepared by the commanding officer of troops of each ship for all troops and emergency supplies embarked therein. The table reflects the applicable por-

Approach Schedule			
H-hour 0500 Z ¹		Landing Beach RED ²	
Wave ³	Leave Rendezvous Area ⁴	Leave line of departure ⁵	Land ⁶
1	H-40 min (Landing Ship Area)	H-30 min	H-hr
2	H-62 min	H-12 min	H+3 min
3	H-54 min	H-4 min	H+11 min
4	H-44 min	H+6 min	H+21 min
5	H-36 min	H+14 min	H+29 min
6	H-25 min	H+25 min	H+40 min
7	H-15 min	H+35 min	H+50 min

Course from rendezvous area to line of departure 040° T, 035° Magnetic
Course from line of departure to beach 355° T, 350° Magnetic
Boat group commander: Lt Wave, USN
Assistant boat group commander: LTJG Hatch, USN
Primary control officer: LCDR Beam, USN, embarked in PCC 531.

Note: (1) Distance used for computing the times listed:

- Rendezvous area to LD ----- 10,000 yards
- LD to beach ----- 4,000 yards
- Amphibious vehicle launching area to LD - - 1,000 yards

(2) Speeds used for computing the times listed:

- LCVP speed from rendezvous area to LD - - 6 knots
- LCVP speed from LD to beach ----- 8 knots
- LVTH speed from LST to LD - - - - - 3 knots
- LVTH speed from LD to beach - - - - - 4 knots

(3) First wave is composed of LVTH; the succeeding waves are composed of LCVP.

¹Scheduled time of H-hour.

²Appropriate landing beach.

³List in column one the scheduled waves.

⁴List in column two the time of departure, expressed in relation to H-hour, from the rendezvous area or ship.

⁵List in column three the time of departure, expressed in relation to H-hour, from the line of departure.

⁶List in column four the time of arrival at the beach, expressed in relation to H-hour.

Figure 28. Landing beach approach schedule.

Heliteam Wave and Serial Assignment Table								
Helicopter		Heliteam (load description)				Load weights ⁷		
Wave nr ¹	Flight nr ²	Team nr ³	Personnel ⁴	Nr ⁵ pers	Materiel ⁶	Pers	Materiel	Total
1	F-101	602-1	1st Sqd, 1st Plat, Co A	11	---	4080	---	---
			Plat Comdr, 1st Plat	1	---			
			Fire Team, 2d Sqd, 1st Plat	5				
				17				
	F-102	602-2	2d Sqd (-), 1st Plat, Co A	6	---	4080	---	---
		Wpns Sqd, 1st Plat	9	---				
		81-mm mortar FO Team	2					
			17					
	F-103	602-3	3d Sqd, 1st Plat, Co A	11		4080		
			Plat Sgt, 1st Plat	1				
			Fire Team, 1st Sqd, 2d Plat, Co A					
				17				
	F-104	602-4	---	--	---			
			---	--				
			---	--				
2	F-105	603-1	---	--	---			
	*	*	*	*	*	*	*	*

- ¹The helicopter wave number is shown in column one.
- ²The second column lists the flight number of the helicopter which transports the heliteam shown in columns three through six.
- ³Enter in column three the assigned heliteam number. When a heliteam is an entire serialized element, the serial number is used. When more than one heliteam is formed within a serialized unit or element, heliteam numbers are the base serial number with a suffix number, e.g., 602-1 and 602-2.
- ⁴List in column four a description of the units or individuals comprising the heliteam.
- ⁵Enter the number of personnel and the total in the heliteam.
- ⁶List the items of equipment or type and quantity of supplies which accompany the heliteam. Supplies and equipment may constitute the principal part of the load for certain flights.
- ⁷Enter the appropriate personnel and materiel load weights.

Figure 29. Heliteam wave and serial assignment table (incomplete).

tion of the plan for landing of scheduled waves presented in the assault landing team landing diagram for landing beaches. The table shows the assignment of boat teams to landing craft or amphibious vehicles within each wave. It may also include instructions for the assignment of floating dump emergency supplies to landing craft or amphibious vehicles. This table, together with the debarkation schedule, furnishes the ship's commanding officer the information needed for debarkation of troops and floating dump supplies. The table consists of four columns with content as follows:

- (a) Column one "Craft Number" lists the type landing craft or amphibious vehicle in which the boat team or emergency supplies are to be loaded and the identifying number of the craft or vehicle.
 - (b) Column two "Personnel and Materiel" lists in detail the troop units, individuals, and supplies or equipment to be loaded into each craft or vehicle.
 - (c) Column three "Boat Spaces" indicates the number of boat spaces assigned to the personnel, their equipment, and supplies. These boat spaces are totaled for each craft.
 - (d) Column four "Formation" shows the position of each craft assigned to a wave, in the formation which is to be employed in the movement of the wave to the line of departure.
- (2) *Debarkation schedule.* The debarkation schedule is prepared jointly by the commanding officer of the transport and the commanding officer of embarked troops. It is usually prepared after the troops are aboard the transport. Debarkation schedules are usually not prepared for those units embarked in landing ships which load into amphibious vehicles before the vehicles are launched from the landing ship. Column one of the table lists the sequence in which landing craft come alongside the debarkation stations. Succeeding columns, one for each debarkation station, list the identifying number of each individual boat and the boat teams or supplies loaded into it at the debarkation station. Boat numbers correspond to the numbers assigned in the landing craft and amphibious vehicle assignment table. A separate section of the schedule lists each item of heavy equipment or vehicle to be unloaded from each hatch and the type landing craft into which it is to be loaded.

- (3) *Helicopter enplaning schedule.* An enplaning schedule is prepared jointly by the commanding officer of the helicopter transport and the commanding officer of embarked troops. The schedule provides for the orderly enplaning of personnel, supplies, and equipment for ship-to-shore movement by helicopter. It shows the enplaning stations on the flight deck of the ship, the sequence in which helicopters are spotted at the enplaning stations, and the heliteam, equipment, or supplies to be carried by each helicopter on each designated flight.

APPENDIX V
REFERENCE DATA
(SHIPS, LANDING CRAFT, AMPHIBIOUS VEHICLES)

1. This appendix presents reference data on common types of landing craft, amphibious vehicles, and various ships especially suited for use in amphibious operations.

2. Characteristics of individual naval ships of the same general type often differ. For example, there are several classes of tank landing ships, with differing ship's characteristics for the ships of each class. The characteristics data indicated for the type ships illustrated herein is general, descriptive data and not applicable for use in detailed planning for an amphibious operation. Valid ship characteristics information for the specific ships to be employed in an amphibious operation is secured from appropriate naval agencies.

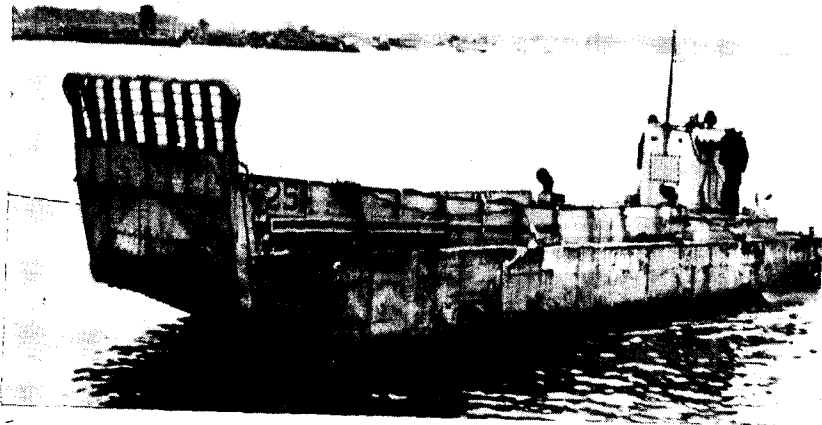
3. Various craft, amphibious vehicles, and ships are illustrated in the figures which follow.

a. *Landing Craft.* See figures 30 through 33.



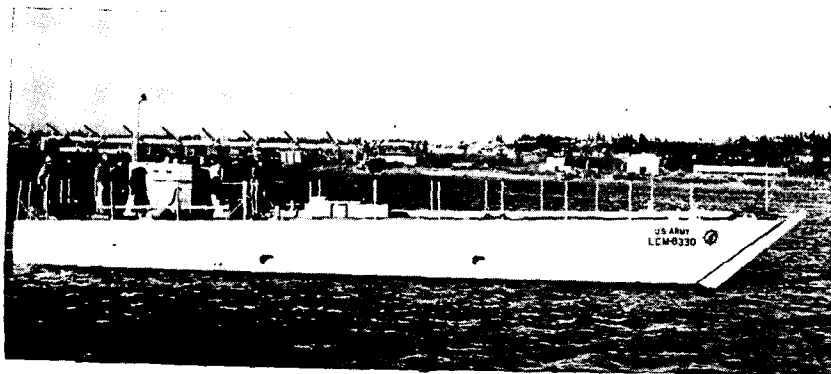
Dimensions:	Length—36 feet
	Beam—10 feet 5 inches
	Draft—3 feet
Speed:	Maximum—9 knots
Capacity:	36 troops or 7,000 pounds cargo
Largest equipment carried:	1— $\frac{3}{4}$ -ton truck

Figure 30. Landing craft, vehicle, personnel (LCVP).



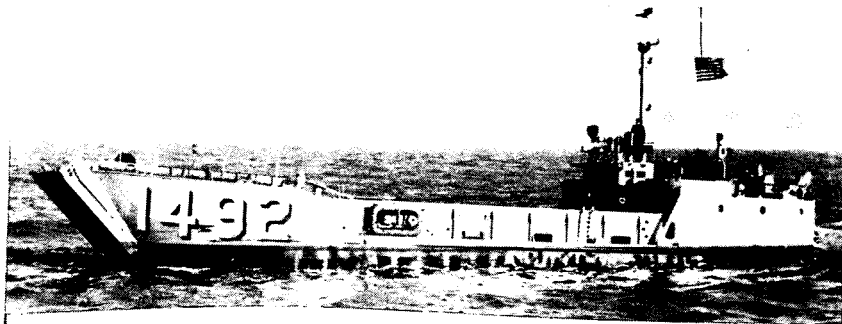
Dimensions: Length—56 feet
Beam—14 feet
Draft—4 feet
Speed: Maximum—11 knots
Capacity: 80 troops with field equipment, or 120 troops without field equipment, or 64,000 pounds cargo.
Largest equipment carried: 1 light tank, or 1 D-7 tractor with angle dozer, or 1 2½-ton truck with 1-ton trailer.

Figure 31. Landing craft, mechanized (LCM-6).



Dimensions: Length—73 feet
Beam—21 feet
Draft—5 feet
Speed: Maximum—10 knots
Capacity: 200 troops with equipment, or 107,000 pounds cargo.
Largest equipment carried: Any equipment of the infantry or armored division.

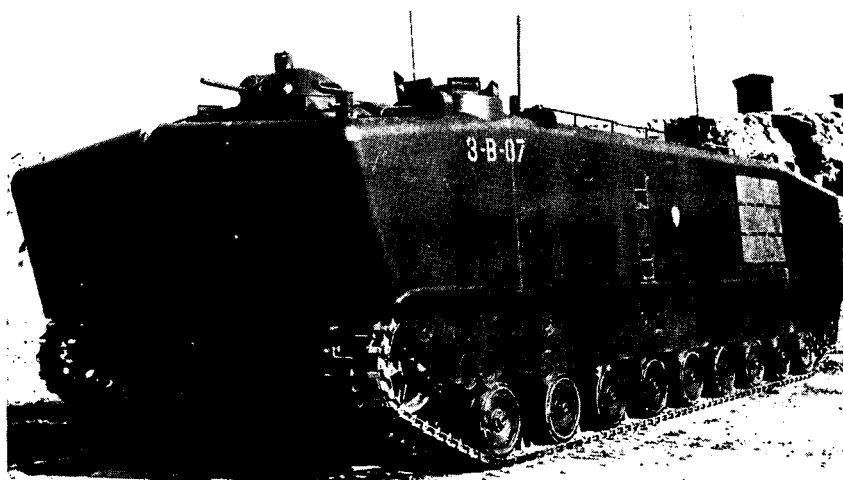
Figure 32. Landing craft, mechanized (LCM-8).



Dimensions:	Length—119 feet Beam—33 feet Draft—4 feet
Speed:	Maximum—8 knots Cruising—7 knots
Range:	1,200 miles at 7 knots
Capacity:	400 troops for short distances 170 tons cargo
Largest equipment carried:	4 medium tanks or 9 2½-ton trucks

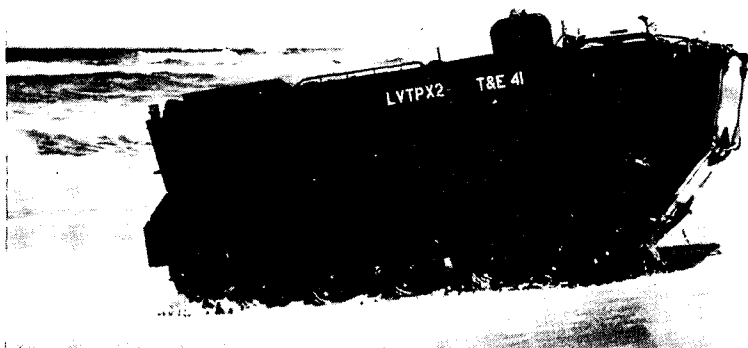
Figure 33. Landing craft, utility (LCU).

b. Amphibious Vehicles. See figures 34 through 39.



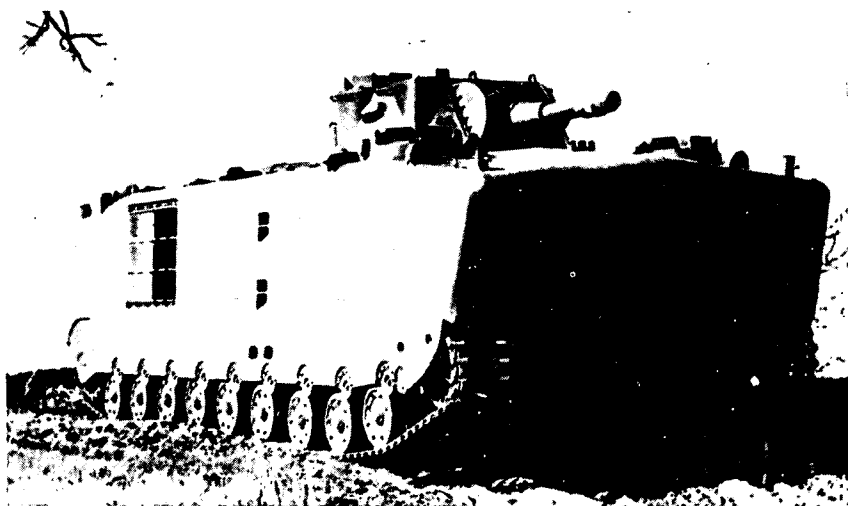
Dimensions:	Length—29 feet 7 inches Width—11 feet 8½ inches Height—8 feet 5 inches
Capacity:	34 troops with combat equipment 1—¼-ton truck with trailer
	Cargo: Waterborne—12,000 pounds Overland—18,000 pounds
Weight:	Combat equipped—34.8 tons
Speed:	Water—6.8 MPH maximum Land—30 MPH maximum
Range:	Water—45 miles Land—190 miles

Figure 34. Landing vehicle, tracked, personnel (LVTP-5).



Dimensions:	Length—21 feet 7 inches Width—10 feet 9 inches Height—9 feet 4 inches
Capacity:	20 troops with combat equipment Cargo: 8,000 pounds (water) 10,000 pounds (land)
Weight:	Combat equipped—24 tons
Speed:	Water—5.6 MPH Land—35 MPH

Figure 35. Landing vehicle, tracked, personnel (LVTP-6).



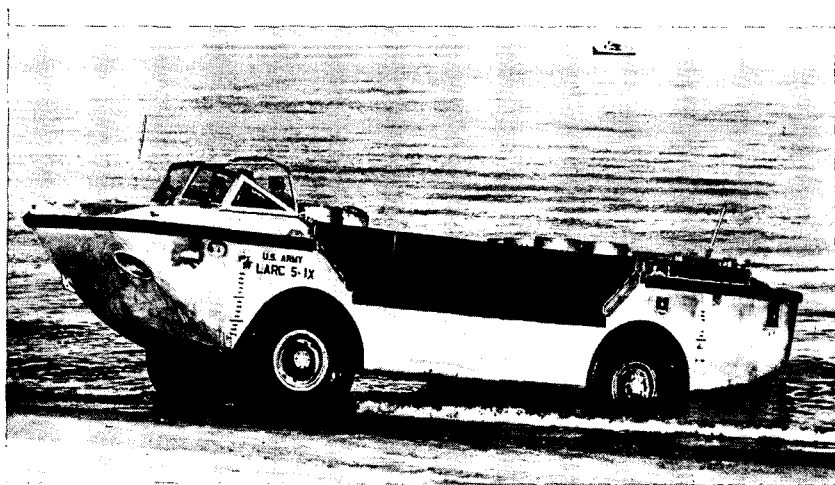
Height:	10 feet 9 inches
Length:	29 feet 7 inches
Width:	11 feet 8 inches
Weight:	41 tons
Armament:	1—105-mm howitzer 1—30 caliber machinegun 1—50 caliber machinegun
Speed:	Water—6.8 MPH maximum Land—30 MPH maximum
Range:	Water—45 miles Land—190 miles

Figure 36. Armored amphibian (LVTH-6).



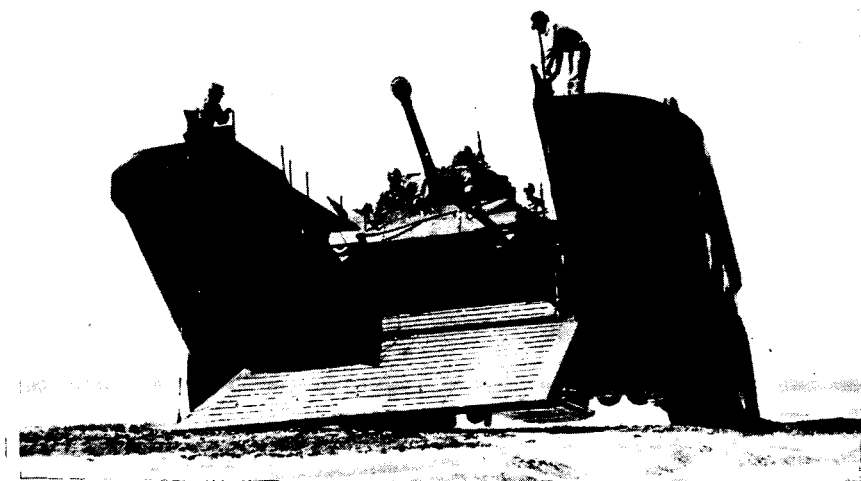
Dimensions:	Length—31 feet Width—8 feet 3 inches
Speed:	Water—6 MPH Land—50 MPH
Range:	Water—32 miles Land—400 miles
Capacity:	298 cubic feet cargo space; 25 troops or 2½ tons cargo (may be increased under favorable sea and surf conditions).
Largest equipment carried:	1—¼-ton truck, or 1 105-mm howitzer, or 12 litter patients.

Figure 37. Truck, amphibious, 2½ ton (DUKW).



Height:	9 feet 3 inches
Length:	35 inches
Width:	9 feet
Weight (empty):	18,000 pounds
Capacity:	5 tons
	25 troops with combat equipment
Largest equipment carried:	105mm gun w/crew and ammo
Speed:	Land—35 mph
	Water—10 mph
Range:	Land—270m
	Water—75m

Figure 38. Lighter, amphibious, resupply, cargo (LARC-5).



Dimensions:	Length—61 feet 8 inches Width—27 feet 9 inches Height—17 feet 6 inches Cargo compartment—38 feet x 14 feet x 5 feet 6 inches.
Speed:	Water—7 MPH Land—15 MPH
Capacity:	Rated—60 tons Emergency—100 tons 125 fully equipped personnel
Transport:	Can be transported in LSD
Range:	Land—150m Water—75m

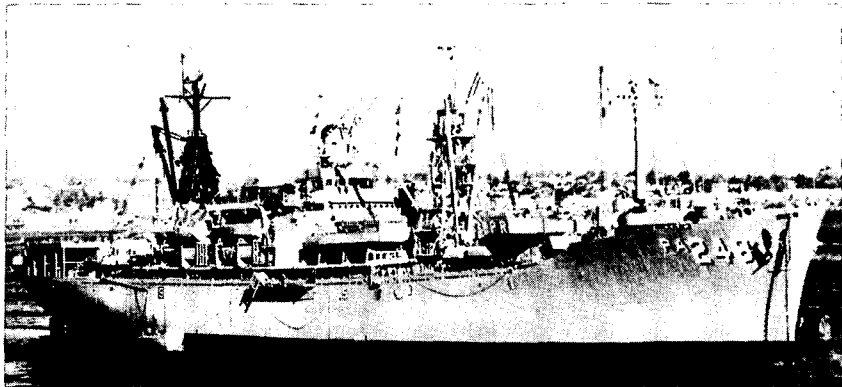
Figure 39. Barge, amphibious, resupply, cargo (BARC).

c. Ships. See figures 40 through 48.



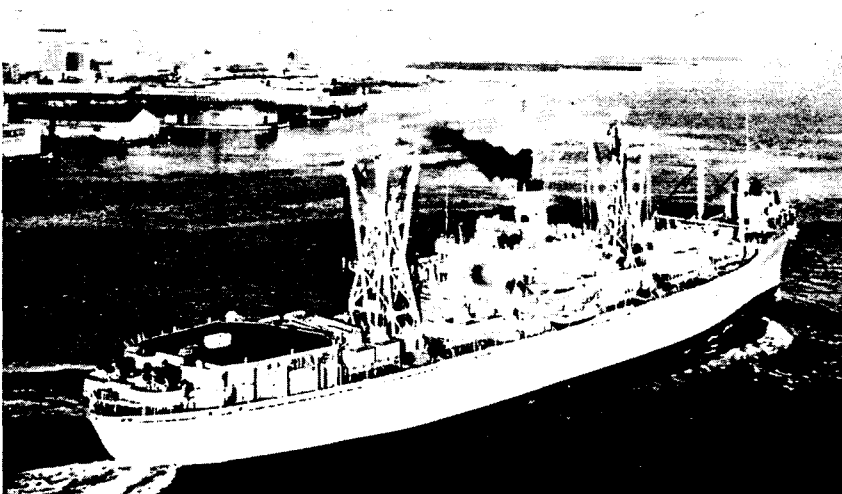
Dimensions:	Length—459 feet Beam—63 feet Draft—24 feet
Troop capacity:	600 including embarked Navy staff (200 Off, 370 EM)
Landing craft:	8 LCVP

Figure 40. Headquarters ship (AGC).



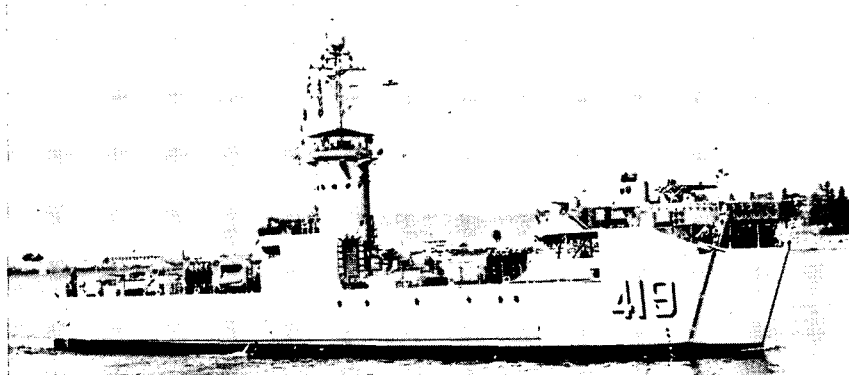
Dimensions:	Length—563 feet
	Beam—76 feet
	Draft—24 feet
Speed:	Maximum—17 knots
	Cruising—15 knots
Troop capacity:	1,500
Cargo capacity:	500 tons
Landing craft:	4 LCM6; 20 LCVP
Cargo booms:	1—30 ton; 2—60 ton

Figure 41. Attack transport (APA).



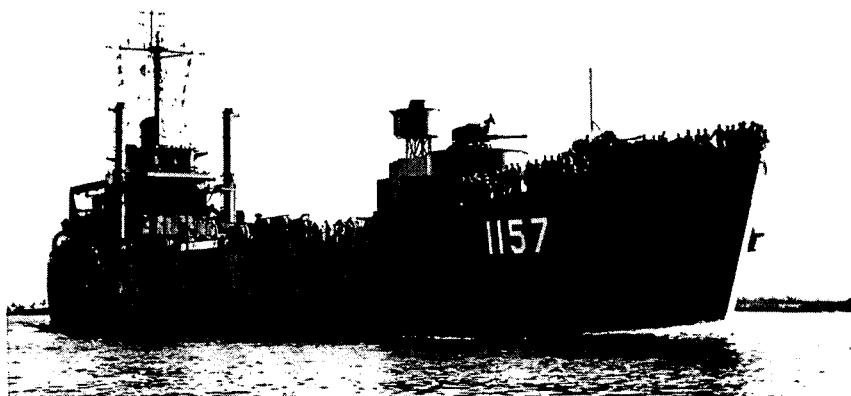
Dimensions:	Length—563 feet
	Beam—76 feet
	Draft—24 feet
Speed:	20 knots
Troop capacity:	275
Cargo capacity:	1,600 tons
Landing craft:	8 LCM—6; 12 LCVP
Cargo booms:	4—35 ton
	2—10 ton
	6—5 ton
	2—60 ton

Figure 42. Attack cargo ship (AKA).



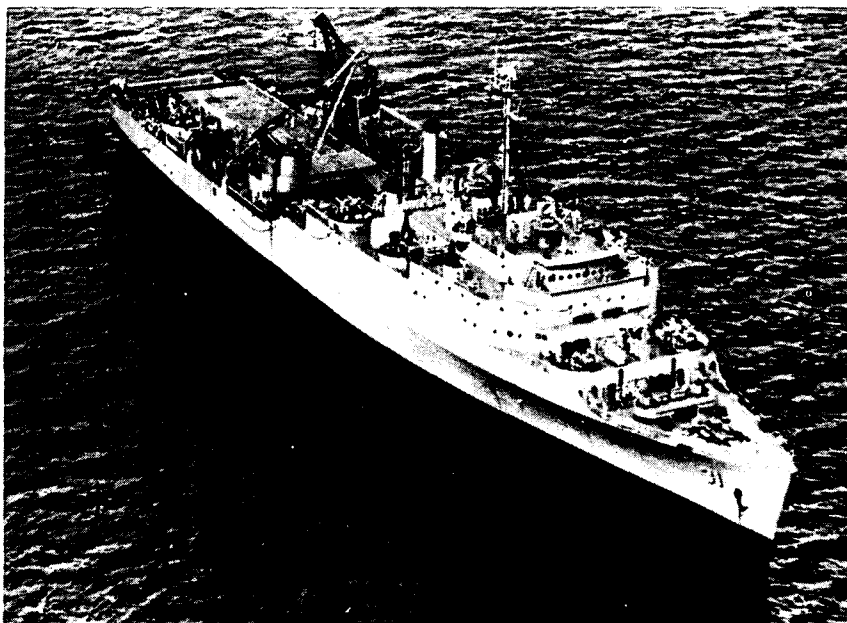
Dimensions:	Length—204 feet Beam—35 feet Draft—7 feet
Speed:	Maximum—13 knots Cruising—12 knots
Range:	4,900 miles at 12 knots
Displacement:	520 tons
Troop capacity:	54 troops
Cargo capacity:	165 long tons (beaching) 400 long tons (at sea)
Largest equipment carried:	5 medium tanks, or 6 LVT, or 9 DUKW

Figure 43. Medium landing ship (LSM).



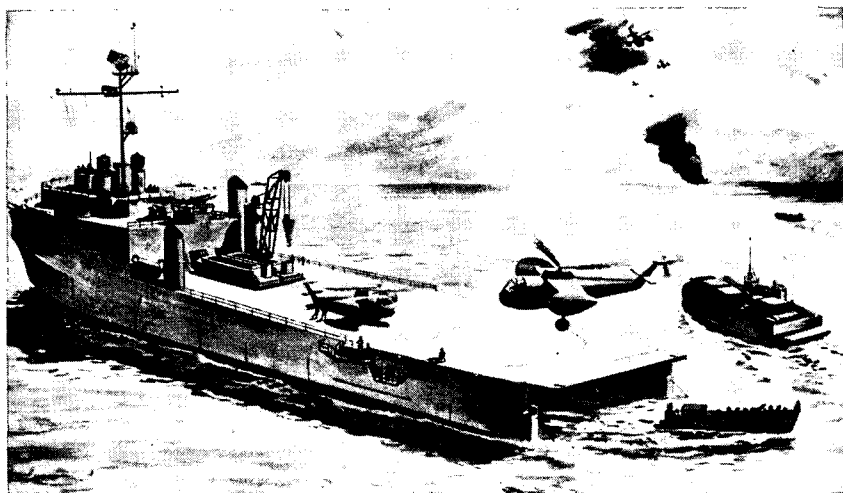
Dimensions:	Length—382 feet Beam—55 feet Draft—12 feet
Speed:	Maximum—15 knots Cruising—10 knots
Troop capacity:	500
Cargo capacity:	500 long tons (beaching) 1,600 to 1,900 long tons (at sea)
Landing craft:	4 LCPV
Largest equipment carried:	Tank deck—20 medium tanks or 20 LVT or 29 DUKW Main deck—approximately 25 vehicles under 25 tons

Figure 44. Tank landing ship (LST).



Dimensions:	Length—458 feet Beam—72 feet Draft—18 feet
Speed:	Maximum—17 knots Cruising—12 knots
Troop capacity:	220
Load:	3 LCU or 18 LCM-6 or 9 LCM-8 or 41 LVT or 47 DUKW Capacity may be increased by installation of mezzanine and upper decks above well deck to carry additional 51 LVT or 61 DUKW.

Figure 45. Dock landing ship (LSD).



Dimensions:

Length—510 feet

Beam—84 feet

Draft—18 feet

Speed:

20 knots

Troop capacity:

1,000

Cargo capacity:

2,500 tons

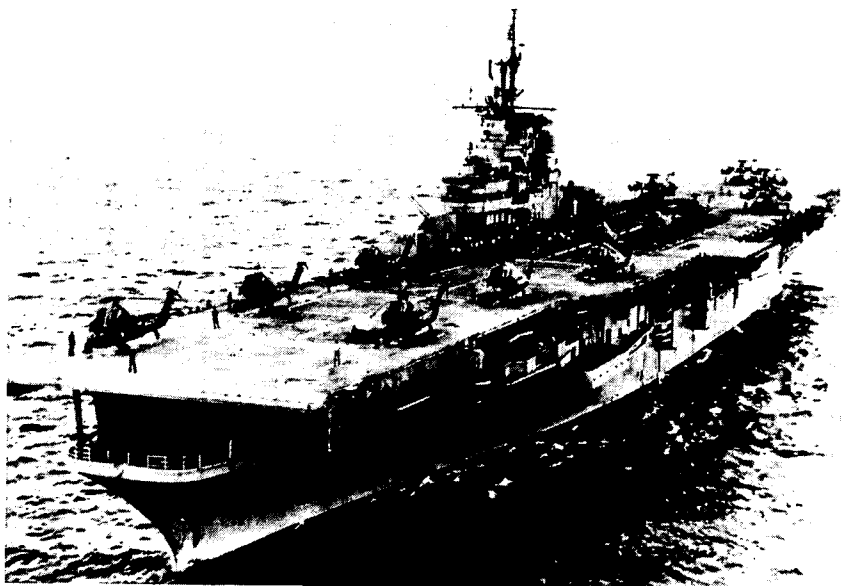
Aircraft:

6—H-37 or 12—H-34 (rotors folded)

Well capacity:

9—LCM6 or 1—LCU and 3—LCM6 or 4—
LCM8

Figure 46. Amphibious transport dock (LPD).



Dimensions:

Length—592 feet
Beam—105 feet
Draft—20 feet
Aircraft—20 H-37 helicopters or
40 H-34 helicopters

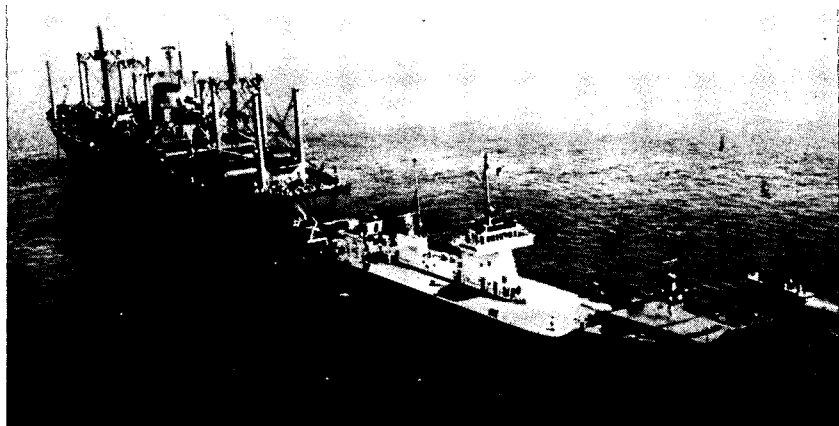
Capacity:

Troops—1,400

Speed:

20 knots

Figure 47. Amphibious assault ship (LPH).



Roll-on roll-off ship (left)

**Lift one-sixth of an armored division
—700 loaded combat vehicles.**

**Five loading ports—two on each side
and one at the stern.**

**Internal ramps for driving vehicles
to various decks.**

**No dock side or floating cranes re-
quired at either end of voyage.**

Speed—18 knots

**Cargo booms—4-10 ton, 17-15 ton,
2-60 ton**

Beach discharge lighter (right)

**Capable of receiving at sea wheeled
and tracked vehicles from roll-on
roll-off ship.**

**Capacity—600 tons vehicular cargo
and 1,000 tons general cargo.**

Speed—12 knots

**Accommodations for 204 vehicle
drivers.**

Figure 48. Beach discharge lighter (BDL).

GLOSSARY

Administrative Loading—A method of loading troops and/or materiel in a ship, craft, or aircraft for maximum utilization of troop and cargo space.

Airmobile Support Party—An Army task organization formed for employment in a landing zone to facilitate the assault landing and interim logistical support of elements in the landing zone.

Air Support Force—A task organization formed to include all Air Force units when such units constitute the preponderance of tactical aviation assigned to the amphibious task force.

Air Support Force Commander—The Air Force officer designated in the initiating directive to command the air support force when formed as part of the amphibious task force.

Amphibious Demonstration—An amphibious operation conducted for the purpose of deceiving the enemy by a show of force with the expectation of causing the enemy to adopt a course of action unfavorable to himself. A secondary type of amphibious operation.

Amphibious Raid—A landing from naval ships on a hostile shore involving swift incursion into, or a temporary occupancy of, an objective followed by a planned withdrawal. A secondary type of amphibious operation.

Amphibious Reconnaissance—A landing from naval ships conducted by minor elements, involving stealth rather than force of arms, for the purpose of securing information, followed by a planned withdrawal. A secondary type of amphibious operation.

Amphibious Task Force—A task organization formed for the conduct of an amphibious operation. An amphibious task force always includes a navy force and a landing force.

Amphibious Task Group—A subordinate force which may be formed within an amphibious task force. It is comprised of a naval attack group and a landing group.

Amphibious Withdrawal—A withdrawal of forces from a hostile shore wherein the withdrawal force is embarked primarily on naval ships.

Approach Lanes—Extensions of the boat lanes from the line of departure toward the transport area or a boat rendezvous area.

They may be terminated by marker ships, boats, or buoys.

Army Landing Force—The Army component of an amphibious task force. A task organization comprising all Army units assigned for participation in an amphibious operation. The commander of the Army component of the amphibious task force is the Army landing force commander.

Assault Echelon—In assault landing operations, the portion of the landing force scheduled for initial assault operations. It includes assault units, reserves and supporting elements required to securely establish the force in the objective area and to permit administrative movement of the followup echelon. It is transported from the mounting area to the objective area in assault shipping.

Assault Echelon Reserve Supplies—A prescribed quantity of supplies of all classes for the entire assault echelon of a landing force.

Assault Landing Team—(A general term). A basic subordinate task organization formed for execution of initial assault landings in hostile territory. A balanced task organization normally composed of an infantry unit and the reinforcing elements required for combat and interim logistical support during the period it conducts independent tactical operations. Normally designated by prefixal words reflecting the type and echelon of the tactical unit around which the task grouping is formed, e.g., Infantry Battle Group Landing Team.

Assault Phase—In an amphibious operation, the period between the arrival of the main body of the amphibious task force in the objective area and the accomplishment of the amphibious task force mission.

Assault Supply—(See initial supply).

Assembly Area—(See boat assembly area).

Attack Group—A subordinate task organization of the Navy forces of an amphibious task force. It is composed of assault shipping, and supporting naval units designated to transport, protect, land, and support a landing group.

Battalion Landing Team (BLT)—An assault landing team. It is a balanced task organization composed of a battalion level combat unit and the reinforcing combat and service elements required for combat and interim logistical support during the period it conducts independent tactical operations.

Battle Group Landing Team (BGLT)—An assault landing team.

It is a balanced task organization composed of an infantry battle group and the reinforcing combat and service elements required for combat and interim logistical support during the period it conducts independent tactical operations.

Beach Group, Naval—A permanently organized naval unit, consisting of a headquarters unit, beachmaster unit, amphibious construction battalion, and boat unit, designed to provide an administrative group from which may be drawn—(1) elements required for accomplishment of certain pre-D-day and D-day missions; (2) elements organized as the beach party unit of the shore party; (3) a naval task element to which may be attached other naval units to perform tasks afloat or ashore in the objective area.

Beach Party—The naval element of a shore party in an amphibious operation. It provides close offshore control to facilitate beaching of landing craft, landing ships, and amphibious vehicles. It assists as required in the retraction and salvage of landing craft and landing ships and provides facilities for communicating with the naval forces afloat.

Beach Support Area—A designated portion of a shoreline and adjacent inland area developed and operated as an administrative support area for forces operating ashore.

Boat Assembly Area—1. A designated area for assembly of empty landing craft prior to their being called alongside a ship or to a shore embarkation point for loading. 2. A designated area in which loaded landing craft or amphibious vehicles are assembled in formation for an overwater movement.

Boat Flotilla—An organization of two or more boat groups, organized to facilitate control when the operation of two or more boat groups demands the presence of a common commander.

Boat Group—The basic organization of landing craft or amphibious vehicles. One boat group is organized for each battalion landing team (or equivalent) to be landed in the first trip of landing craft or amphibious vehicles.

Boat Lanes—Designated lanes in which assault craft travel from the line of departure to the shore. The width of a boat lane is determined by the length of the corresponding landing beach.

Boat Rendezvous Area—A designated area in which loaded landing craft or amphibious vehicles assemble in assault landing formation for movement to the line of departure and thence to the shore.

Boat Team—The troops and accompanying supplies and equipment carried in one landing craft or amphibious vehicle in one trip.

Breakup Point—An air control point at which helicopters returning from a landing zone break formation and are released to return to base, or are dispatched for other employment.

Casualty Evacuation Control Berth—A berth established for a ship specially equipped for handling casualties and in which a casualty evacuation control officer is embarked.

Casualty Evacuation Control Officers—Medical officers designated to control and coordinate the seaward evacuation of casualties from assigned beaches. They are initially embarked in control ships and, when the situation permits, transfer to specially designated evacuation control ships located off the landing beaches.

Causeway Launching Area—Areas located near the line of departure but clear of the approach lanes, where ships can launch pontoon causeways.

Central Control Officer—The officer designated by the amphibious task force commander for the overall coordination of surface craft and vehicles during ship-to-shore movement. He is embarked in the central control ship.

Demonstration Group (force)—A subordinate force which may be formed within an amphibious task force to conduct operations constituting an exhibition of force intended to deceive the enemy. (See amphibious demonstration.)

Departure Point—An air control point at the seaward end of the helicopter approach lane system from which helicopter waves are dispatched along the selected approach lane to the initial point.

Embarkation Element—Two or more embarkation teams grouped together to conform to the organization for landing. A transport element/landing ship element is the parallel naval echelon.

Embarkation Group—Two or more embarkation units (when formed), or embarkation elements (when units are not formed), or combinations of embarkation elements and embarkation units which conform to the organization for landing. A transport group is the parallel naval echelon.

Embarkation Unit—Two or more embarkation elements grouped together to conform to the organization for landing. A transport unit/landing ship unit is the parallel naval echelon.

Establishing Authority—For an amphibious operation, the joint force commander who establishes an amphibious task force as a joint force and issues the initiating directive for the operation.

Floating Dump—Emergency supplies pre-loaded in landing craft, amphibious vehicles, or in landing ships. Floating dumps are located in the vicinity of the appropriate control officer who directs their landing as requested by the troop commander concerned.

Followup Echelon—In assault landing operations, the portion of the landing force scheduled to move into the objective area following the assault echelon.

Followup Shipping—Ships not assigned to an amphibious task force but which move troops and materiel to the objective area after the initial assault landings have been executed.

General Unloading Period—That part of a ship-to-shore movement in which unloading is primarily logistic in character, and emphasizes speed and volume of unloading operations. It encompasses the unloading of units and cargo from the ships as rapidly as facilities on the beach permit. It proceeds without regard to class, type, or priority of cargo, as permitted by cargo handling facilities ashore. (See initial unloading period.)

Helicopter Direction Center (HDC)—A naval air operations facility subordinate to the tactical air control center (TACC) or tactical air direction center (TADC), from which control and direction of helicopter operations are exercised.

Helicopter Flight—An individual helicopter, or two or more helicopters grouped under a flight leader and launched from a single helicopter transport or base at approximately the same time.

Helicopter Flight Rendezvous—An air control point in the vicinity of a helicopter transport or base where helicopters are assembled into flights prior to proceeding to the wave rendezvous. It is designated by code name.

Helicopter Landing Diagram—A diagram which portrays graphically routes to and from landing zones and the helicopter transports.

Helicopter Wave—One or more helicopters grouped under a single leader and scheduled to land in the same landing zone at approximately the same time. A helicopter wave is composed of one or more flights and can consist of helicopters from more than one ship.

Helicopter Wave Rendezvous—An air control point where helicopter flights are assembled into helicopter waves prior to executing a mission. It is designated by a code name.

Individual Reserve Supplies—Selected supplies, in excess of a prescribed basic load, required to sustain initial assault elements of an Army landing force for a period of 1 to 2 days. Individual reserve supplies consist primarily of water, ammunition, rations, fuel, and medical supplies, and are loaded on unit transportation.

Initial Supply—In an amphibious operation, supply scheduled for movement to the objective area to attain prescribed levels of supply in support of a landing force from the initial assault until resupply transported in followup shipping is available. Initial supply is moved in assault shipping.

Initial Unloading Period—That part of a ship-to-shore movement in which unloading is primarily tactical in character and must be instantly responsive to landing force requirements. (See general unloading period.)

Initiating Directive—The directive initiating an amphibious operation, issued by a commander of a command established by the Joint Chiefs of Staff or by other commanders so authorized by the Joint Chiefs of Staff or by other higher authority.

Landing Beach—That portion of a usable coastline usually required for the landing of one assault landing team, e.g., one BGLT. However, it may also be that portion of a shore line constituting a tactical locality, such as the shore of a bay, over which a force smaller than a BGLT may land.

Landing Force—1. A task organization comprising all forces to be landed in the objective area during an assault landing operation. 2. The highest troop command echelon within an amphibious task force.

Landing Force Reserve Supplies—Supplies of all classes scheduled for movement to the objective area to attain prescribed levels of supply in support of the entire landing force. (See assault echelon reserve supplies and buildup supplies.)

Landing Group—A subordinate task organization of a landing force. It is composed of especially organized, trained and equipped troops, including their aviation, capable of conducting landing operations against a position or group of positions so located as to permit their capture by troops operating under a single tactical command. It is formed only when circumstances demand.

Landing Sequence Table—A document which incorporates the detailed plans for the ship-to-shore movement of nonscheduled units.

Landing Zone—A specified zone within an objective area used for the landing of assault aircraft. A major subdivision of a landing area. It is the ground area specified for debarkation and initial deployment of an assault landing team or elements thereof.

Loading Plan—In amphibious operations: 1. The Navy plan covering the organization of Navy forces for loading and including the schedule of arrival and departure of amphibious shipping from embarkation points. 2. Detailed embarkation team plans providing for the combat loading of personnel, equipment and/or supplies to be loaded in the ship embarking the embarkation team.

Lodgment Area—In assault landing operations, the area secured by the entire landing force. It is normally defined as a trace of final landing force objectives. It provides sufficient area for the buildup of military force required for conduct of planned land combat operations.

Movement Plan—In amphibious operations, the naval plan providing for the movement of the amphibious task force to the objective area. It includes information and instructions concerning departure of ships from loading points, the passage at sea, and the approach to and arrival in assigned positions in the objective area.

Navy Tactical Air Control Squadron (TACRON)—An administrative and tactical element of the Navy tactical air control group. It provides the personnel to man the control facilities for the ship-based tactical air control center or tactical air direction center.

Nonscheduled Units—Units of the landing force held in readiness for landing during the initial unloading period, but not included in either scheduled or oncall waves. This category usually includes certain of the combat support units and most of the combat service support units with higher echelon (division and above) reserve units of the landing force. Their landing is directed when the need ashore can be predicted with a reasonable degree of accuracy.

Oncall Waves—Formations of landing craft, amphibious vehicles, landing ships, or helicopters carrying those elements of a landing force for which an early need ashore is anticipated, but

whose time and place of landing cannot be accurately predicted and therefore, are not specified.

Organization For Landing—The specific task organization of the landing force and its subordinate echelons for the execution of assault landings.

Organization For Embarkation—The temporary administrative grouping of elements of a landing force for control and coordination at embarkation and during the movement to the objective area.

Plan For Landing—In amphibious operations, a collective term referring to all the individually prepared naval and landing force documents which, taken together, present in detail all instructions for execution of the ship-to-shore movement.

Preassault Operations—In amphibious operations, those operations conducted in the objective area by subordinate elements of the amphibious task force which are normally organized into an advance force. They include reconnaissance, minesweeping, bombardment, bombing, underwater demolitions, and destruction of beach obstacles.

Pre-H-Hour Transfer—The transfer of control and Tac-Log personnel from their parent ships to assigned control ships, and the transfer of the necessary troops and accompanying equipment from transports to landing ships and/or transports in preparation for ship-to-shore movement.

Prelanding Operations—In amphibious operations, the initial events of the assault phase, encompassing (1) the continuation of preparation of the landing area initiated by an advance force (if employed), and (2) final preparation for the ship-to-shore movement.

Primary Control Officer—The officer embarked in a primary control ship assigned to control the movement of landing craft, amphibious vehicles, and landing ships to and from a landing beach.

Project Supply—Supply scheduled to satisfy bills of material for facilities to be constructed or rehabilitated in an area in support of current or planned operations.

Reconnaissance and Underwater Demolition Group—A task organization including ships, embarked reconnaissance troops, and underwater demolition teams, which conduct reconnaissance, hydrographic surveys, and demolition of natural or man-made obstacles.

Scheduled Waves—Formations of landing craft, amphibious vehicles, landing ships, or helicopters carrying the assault units of the landing force whose time and place of landing are predetermined.

Sea Echelon Area—An area to seaward of a transport area from which assault shipping is phased into the transport area, and which assault shipping withdraws from the transport area.

Sea Echelon Plan—The plan for reduction of concentration of amphibious shipping in the transport area, to minimize losses due to enemy attack by mass destruction weapons and to reduce the area to be swept of mines.

Seizure—As an operational purpose, the capture of a voluntarily restricted portion of an enemy controlled territory. Capture of an isolated land mass such as an island is usually categorized as a seizure.

Selective Unloading—The controlled unloading from assault shipping and movement ashore of specific items of cargo on request of the landing force commander. Normally, selective unloading parallels the landing of non-scheduled units during the initial unloading period of the ship-to-shore movement.

Serialized Element—A group of personnel, a unit, or a part of a unit with accompanying materiel which moves as an entity to a landing area for landing at approximately the same time and place. It is identified by an assigned serial number.

Serial Number—An arbitrary number, from a block of numbers assigned to a commander, which is assigned to each unit, part of a unit or grouping, including its accompanying materiel which is to be embarked entirely in one ship and is to be landed at approximately the same time at one landing beach or landing zone.

Shore-to-Shore Attack—An attack which involves embarkation of a landing force at a near shore, overwater movement to a far shore in assault craft, or assault craft and aircraft, assault landings, and subsequent operations to establish the landing force on the far shore.

Shore-to-Shore Operation—A land force operation involving a water crossing in assault craft, or in assault craft and aircraft, for the purpose of establishing a force on, or withdrawing it from, a far shore. It is usually a uni-Service operation.

Supporting Arms Coordinator—The officer in charge of a naval supporting arms coordination center (SACC). He is the direct representative of the Navy commander who is charged with

supporting fires coordination at the time. He integrates the fire plans of the supporting arms to ensure their most effective use in furthering the landing force scheme of maneuver ashore.

Tactical Air Commander (Afloat)—The officer (aviator), under the amphibious task force commander, who coordinates planning of all phases of air participation of the amphibious operation and air operations of supporting forces en route to and in the objective area. Until control is passed ashore, he exercises control over all operations of the tactical air control center (afloat) and is charged with—(1) control of all aircraft in the objective area assigned for tactical air operations, including offensive and defensive air; (2) control of all other aircraft entering or passing through the objective area; and (3) control of all air warning facilities in the objective area.

Tactical Air Controller—The officer (aviator) responsible to the tactical air commander for the internal functioning of the tactical air control center.

Tactical Air Control Party (TACP)—A troop facility for the integration, coordination, and employment of air support for the ground unit commander. It consists of an officer, or officers, who are qualified aviators, and communication personnel, to provide necessary communications and liaison between the unit in which it functions, and appropriate air control facilities and aircraft in flight in matters concerning air support.

Tactical Air Observer (TAO)—An officer trained as an air observer whose function is to observe from airborne aircraft and report on movement and disposition of friendly and enemy forces, on terrain, weather, and hydrography, and to execute other missions as directed.

Tactical-Logistical Group (Tac-Log Group)—A group organized from personnel within the landing force to advise Navy control officers promptly of landing force requirements during ship-to-shore movement in an amphibious operation. Tac-Log Groups composed of designated representatives are formed by commanders at each landing force echelon down to assault landing team level.

Transfer Area (Transfer Line)—A designated water area in which the transfer of troops and supplies from landing craft to amphibious vehicles is effected.

Transfer Berth—A berth located off a landing beach in proximity to the transfer line. A crane-equipped ship or barge is usually stationed in the transfer berth to assist in transferring troops, supplies, and equipment from landing craft to amphibious vehicles.

Wave Commanders—Officers assigned to form boat waves and control them in all subsequent movements under the direction of a boat group commander.

Wave Guide—A wave guideboat with embarked wave guide officer to assist in the navigation of amphibious vehicles to the shore.

Wave Number—The number assigned to each scheduled surface and helicopter wave. Waves are numbered successively from front to rear as first wave, second wave, etc.

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