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FM 7-100

DEPARTMENT OF THE ARMY FIELD MANUAL

**INFANTRY
DIVISION**

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**HEADQUARTERS, DEPARTMENT OF THE ARMY
OCTOBER 1958**

FOREWORD

The significance of land forces as an essential element of national security in the atomic era is emphasized by world conditions and the nature of the threats confronting the United States. The military power of this Nation must be capable of supporting in full measure the national policy and to this end must be so constituted as to deter aggression in all its forms. The United States Army is an indispensable component of this requisite, flexible power.

The infantry division described in this manual is designed as a basic combat unit of the combined arms and services of the United States Army. Provided with suitable means of mobility, it can be moved on short notice to any threatened spot and there can apply selectively the degree of force required by the terms of the situation. This division is a powerful and versatile fighting force which can maneuver rapidly and fight hard, day or night, with or without atomic weapons, under any condition of ground combat. Flexibility, dispersion, and rapid concentration are characteristics of its operations.

This manual provides the commanders and staff officers of infantry divisions and higher echelons a body of fundamentals and principles which, when applied with common sense and imagination, will provide a sound basis for solving the problems which arise in modern ground combat. At all echelons reliance must be placed upon the competence and ability of trained subordinate commanders to execute the semi-independent and rapidly changing operations of the infantry division and its major elements described herein. The traditional mission of the Army—to close with and destroy the enemy—requires unit commanders who display initiative and professional judgment at increasingly high levels commensurate with the mounting difficulties of ground combat.

The American soldier, properly led and adequately supported, continues to be a dominant and decisive factor in any war which may be thrust upon our Nation. Irrespective of the effect of new weapons, it is upon his courage, initiative, and determination to come to grips with the enemy and overpower him that final success will depend.



*General, United States Army
Chief of Staff*

FIELD MANUAL
No. 7-100

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 3 October 1958

INFANTRY DIVISION

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*This manual supersedes TT 7-100-2, 1 March, 1957.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Purpose

This manual provides essential guidance with regard to the organization and employment of the infantry division and its components to enable the commander to utilize the capabilities of his force in a manner best suited to accomplish his mission.

2. Scope

a. This manual covers organization of the infantry division and the broad tactical and administrative doctrine for employment of the division in the offense, defense, retrograde, and in situations short of war, as an independent force or as part of a larger force.

b. The doctrine herein covers operations in all terrain. Certain considerations for special operations (arctic, jungle, mountain, desert, amphibious) will be found in manuals appropriate to that type operation.

c. The material presented herein is applicable to atomic warfare. Where applicable, appropriate modifying guidance for nonatomic warfare is integrated throughout the manual.

d. This manual avoids repetition of material included in other publications. It should be used in conjunction with FM 100-1, FM 100-5, FM 100-10, FM 100-31, FM 101-1, FM 101-5, and FM 101-10. In the light of *b* above and when in conflict with these manuals, this manual will govern. This manual deals with the operations of the division as a whole. Operations of divisional units are covered in other manuals and training texts (app. I).

3. Application of Doctrine

This manual does not present a set of rules of employment which can be used to insure success on the battlefield. It does provide essential guidelines which, when coupled with experience, judgment, and imagination, will enable the commander to utilize the capabilities of his force in a manner best suited to the accomplishment of his mission.

Stereotyped operations must be avoided. Commanders must be alert to opportunities for exploiting new developments and must be able to integrate them into current tactics or modify tactics as necessary. Flexibility of mind and an unfettered imagination are required to properly reflect these developments in the application of doctrine.

Section II. ROLES AND OPERATIONAL ENVIRONMENT

4. General

a. The diverse conditions and situations likely to be encountered in the future require that the infantry division be prepared to operate in a wide variety of roles. Flexibility, versatility, combat power, endurance, ability to apply measured force, and suitability for rapid tactical or strategic deployment are characteristics provided to the infantry division to permit its employment under any of these situations or conditions.

b. Tactics and techniques of the division will vary with the operational environment. Reasonable tactical discussion must be based on mutual understanding of the major aspects of the environment. Application of the doctrine contained in this manual must reflect the specific conditions of a particular situation within the wide range of possible roles and operational environments discussed in the following paragraphs.

5. Atomic Warfare

a. Atomic warfare may involve a wide range of conditions depending upon the number and yields of weapons being employed. The employment of large numbers of weapons of all yields presents one set of conditions; whereas small yield weapons employed at infrequent intervals present another set of conditions. Commanders in the field must carefully evaluate the scale of use of atomic weapons and determine risks and the allowable pattern of operations for each situation.

b. General atomic warfare is a condition in which nuclear weapons, including multimegaton yields, are used on an unlimited scale between opposing nations. This condition would certainly be accompanied by immediate ground action in those areas where opposing forces are in close proximity. The thermonuclear exchange may result in ascendancy or dominance by one side or it may develop into a lesser degree of employment of atomic weapons or in a temporary stalemate.

c. The infantry division has a unique and vital role in a general atomic war. The strategic mobility of the division when supported by adequate air and/or sea lift will permit its movement alone or as part of a larger force to the centers of enemy power. The division can be utilized to exploit the chaos following nuclear attack, to seize

vital facilities and communications centers, to establish order and military government, to encourage such elements of the population as desired to cooperate, and to secure the victory and shorten the war.

6. Nonatomic Warfare

Nonatomic warfare is a condition in which either or both the United States and enemy forces have atomic capabilities; however, neither side has used atomic weapons. A nonatomic war may be widespread and prolonged. It may be transformed rapidly and without warning into one in which large numbers of atomic weapons of all yields are employed. The infantry division is capable of performing its mission in a nonatomic as well as an atomic war. Its role in nonatomic war will be to serve as the basic unit of the combined arms in the destruction of the enemy and his will to fight and in the seizure and control of land areas leading to his defeat.

7. Situations Short of War

Situations short of war are the conditions in which military forces are employed in extension of national interests but short of open hostilities. Examples of operations in such situations include show of force, truce enforcement, international police action, and occupation. For the use of the infantry division in this role, see chapter 9.

8. Geographic Environment

This manual visualizes that the infantry division will be employed in a variety of geographical areas. The division must be prepared on short notice for movement to, and employment in, any part of the world. The division must be prepared to operate under widely varying conditions which may involve poor road nets, underdeveloped areas, difficult and varied types of terrain, and extremes of climate.

9. Force Structure

The division may be employed as part of a land force of army groups, armies, and corps, with a fully developed communications zone. Equally possible may be its commitment on independent or joint operations of no more than corps size, or on small combined operations with allied forces. Lines of communications may be hastily developed and in some instances may be primarily by air. The division must be prepared to operate within a wide range of force structures with several types of lines of communications.

CHAPTER 2

ORGANIZATION

Section I. INFANTRY DIVISION

10. Purpose and Scope

This chapter provides the division commander and staff a concise picture of the combat and combat support elements of the division in terms of mission, capabilities, and employment. No attempt is made to examine each element in detail or to repeat unnecessarily doctrine contained in other manuals.

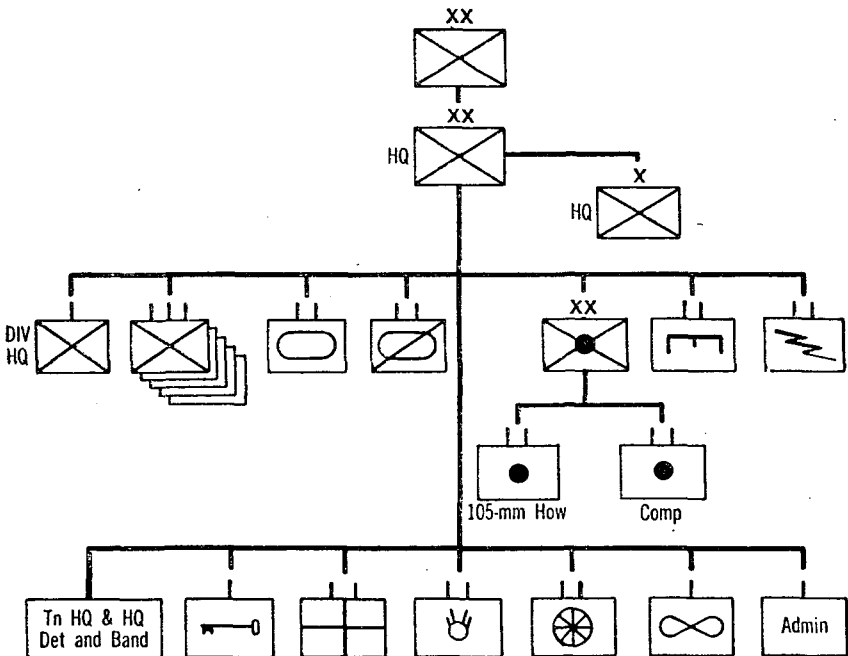


Figure 1. Infantry division.

11. Mission

The mission of the infantry division is to destroy, defeat, or repel the enemy by aggressive offensive action employing fire, maneuver, and close combat.

12. Capabilities

The capabilities of the infantry division include the following:

a. Conducting all types of ground operations under varying conditions of weather and terrain, either alone with appropriate attachments, or as part of a larger force, with or without the support of atomic weapons.

b. Receiving and coordinating additionally all types of reinforcing ground units, both combat and administrative, to approximately one-half of the division aggregate strength.

c. Sustaining itself in combat over an extended period of time.

d. Delivering atomic fires with organic delivery means to include prepositioning.

e. Being tailored organizationally to meet the requirements of the mission, and to respond to the demands of a changing situation, particularly when operating alone.

13. Mobility

a. Vehicular. The infantry division can be completely motorized by the attachment or support of five additional transportation light truck companies (assuming availability of vehicles of the transportation battalion for movement of units). Employing organic transportation, it can move limited distances by shuttling.

b. Air.¹ The infantry division is air transportable except for the medium tanks and tank recovery vehicles. Light gun tanks and armored carriers are air transportable if optimum conditions exist.

c. See chapter 3 for further discussion of mobility.

14. Employment

a. The infantry division is one of the basic large units of the combined arms and services. It comprises a balanced force of essential arms and services organized and equipped to provide a lean, basic structure. The infantry division is self-sustaining and capable of effective operations either alone or as part of a larger force.

b. The division can perform in an air-landed role as part of a larger airborne assault force, but certain additional and substitute support may be required. This support will usually include artillery, antitank, and reconnaissance units.

¹ The air transportability of the individual units in this chapter is based on Air Force medium and heavy transport aircraft.

Section II. COMBAT UNITS

15. Battle Group

a. Mission. The mission of the battle group is to close with the enemy by fire and maneuver in order to capture or destroy him; or to deny to the enemy a vital area, to contain his forces, or to effect maximum casualties and disorganization prior to taking offensive action.

b. Capabilities. The capabilities of the battle group include the following:

- (1) Providing base of fire and maneuver elements.
- (2) Seizing and holding terrain.
- (3) Operating in all types of terrain and under varying climatic conditions.
- (4) Conducting independent operations on a limited scale when provided appropriate attachments.
- (5) Operating as motorized, mechanized, or air-transported infantry when furnished appropriate transportation.

c. Mobility.

- (1) *Vehicular.* The battle group is capable of achieving complete mobility by the attachment of one light truck company.

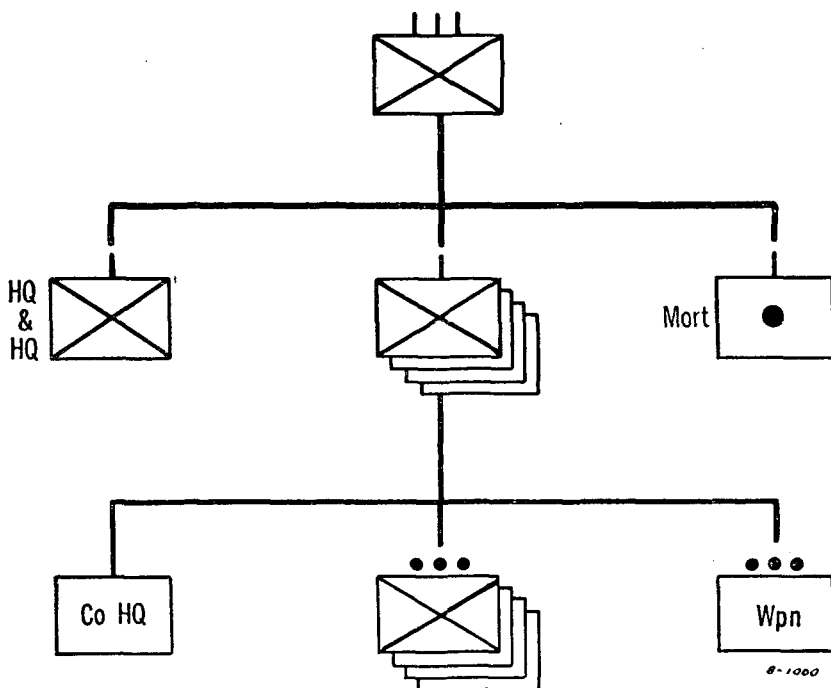


Figure 2. Battle group.

Armored mobility of the assault elements of the battle group can be attained by attachment of two companies of armored carriers.

(2) *Air.* The battle group is air transportable.

d. Employment. The battle group normally is employed as an organic element of the infantry division. When properly reinforced, the battle group may be assigned independent missions under corps or field army control. The organic mortar battery provides close, continuous fire support. Battle group task forces may be formed by the attachment of armor and cavalry units, additional fire support and Army aviation elements, and engineer and transport means. The composition of such task forces can be designed to meet the needs of specific tactical situations.

16. Cavalry Squadron

a. Mission. The mission of the cavalry squadron is to perform reconnaissance, security, and limited combat missions for the infantry division.

b. Capabilities. The capabilities of the cavalry squadron include the following:

- (1) Performing reconnaissance and counterreconnaissance missions and providing security, e. g., covering force over extended frontages.
- (2) Operating as the major element of, or as part of, a task force.
- (3) Executing combat missions as an economy of force unit.

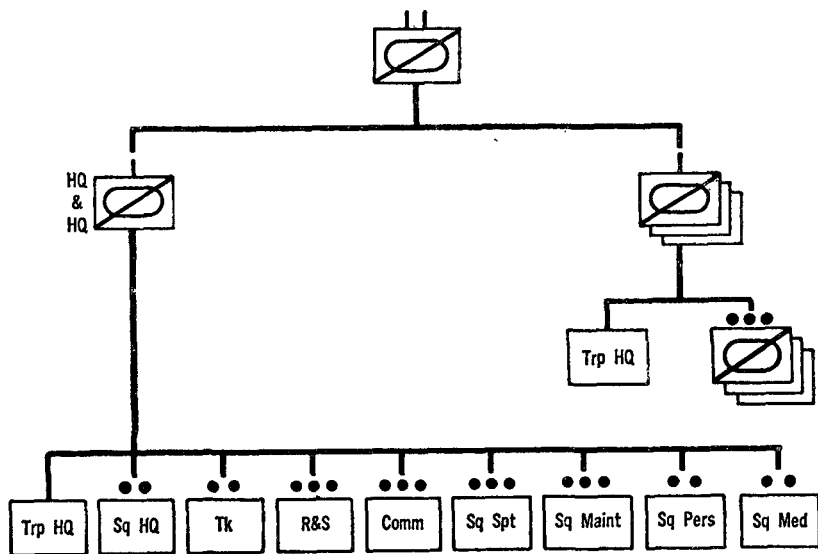


Figure 3. Cavalry squadron.

- (4) Maintaining communications over wide areas and at extended distances from other units.
- (5) Performing extended battle area surveillance by means of photographic and electronic devices.

c. Mobility.

- (1) *Vehicular.* The squadron is completely mobile with organic transportation.
- (2) *Air.* The squadron is air transportable except for the tank recovery vehicle. Light gun tanks and armored carriers are air transportable if optimum conditions exist.

d. Employment.

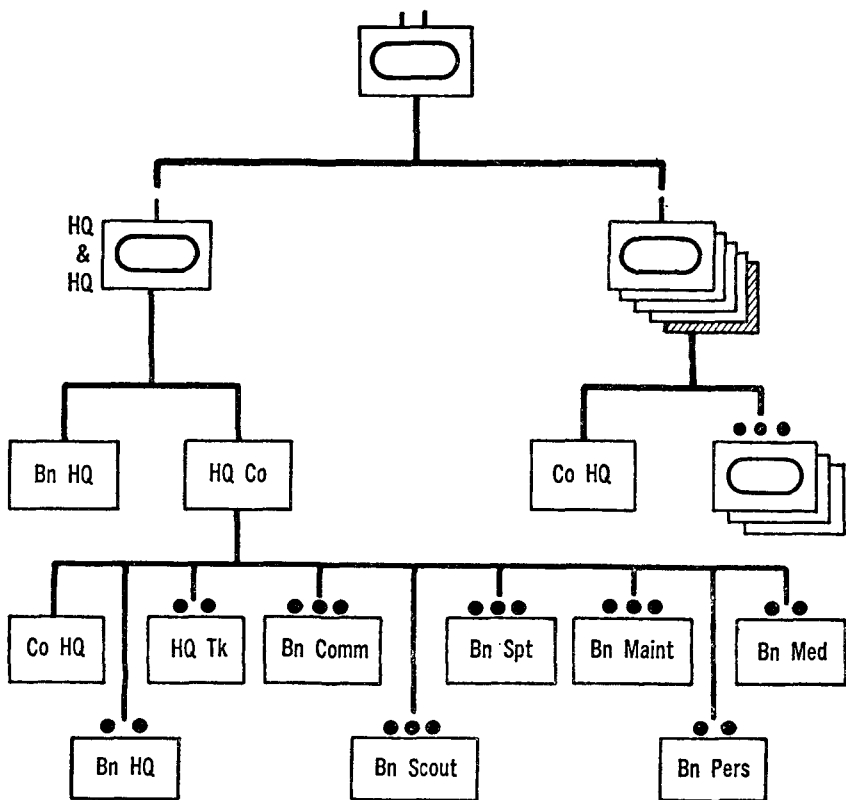
- (1) The squadron will normally operate under division control, but may be attached to a battle group. It is organized to operate as a unit, but troops may be attached to battle groups or the armor battalion for specific missions.
- (2) The squadron performs both distant and close reconnaissance for the division. The reconnaissance troops are utilized to gain information of the enemy and terrain in the immediate battle area.
- (3) The organic reconnaissance and surveillance platoon provides the means for the squadron to perform reconnaissance more effectively and to provide security over extended distances. It is organized and equipped with special devices specifically for the collection of intelligence information. Also, the capabilities of the platoon increase the capability of the squadron to perform battlefield surveillance and to extend the depth of reconnaissance operations. Missions assigned to this platoon normally are executed in coordination with ground action by troops of the squadron.
- (4) The cavalry squadron, with or without reinforcements, may be employed as an economy of force unit. It is particularly suited for conducting delaying actions, holding wide fronts lightly, and seizing critical terrain and holding it for limited periods of time. The squadron may be effectively used as an enveloping force in the pursuit. It may be used to conduct demonstrations, feints, or secondary attacks in order to deceive and hold the enemy in place. It may be assigned a mission as division reserve. When suitably reinforced, it may also be used to link up with airborne or air landed forces in a penetration.
- (5) It may also be employed as a rear area security force.
- (6) The detailed operations of the cavalry squadron are contained in FM 17-35.

17. Armor Battalion, 90-MM

a. Mission. The mission of the armor battalion is to close with and destroy enemy forces, using fire, maneuver, and shock action in close combat. It is the primary antitank means available to the division commander.

b. Capabilities. The capabilities of the armor battalion include the following:

- (1) Supporting infantry as a component of the combined arms team.
- (2) Attacking or counterattacking under hostile fire as a member of the combined arms team.
- (3) Destroying enemy armor by fire.
- (4) Exploiting breakthroughs.
- (5) Exploiting the effects of atomic fires.



LEGEND


 Not included in reduced strength battalion.

Figure 4. Armor battalion, 90-mm.

- (6) Conducting independent operations when reinforced.
- (7) Conducting retrograde operations when reinforced.
- (8) Conducting link-up operations with airborne or air landed forces in a penetration.
- (9) Participating in defensive operations.
- (10) Seizing and holding terrain when reinforced.
- (11) Forming the nucleus for one or more mobile task forces.

c. Mobility.

- (1) *Vehicular.* The battalion is completely mobile with organic transportation.
- (2) *Air.* The battalion is not transportable because the tanks and tank recovery vehicles cannot be airlifted in currently available aircraft.

d. Employment.

- (1) The operations of the armor battalion generally follow the doctrine, tactics, and techniques contained in FM 17-33.
- (2) The armor battalion of the infantry division may be employed—
 - (a) As a battalion under division control with reinforcements.
 - (b) With 1 or more companies attached to 1 or more battle groups and the battalion (minus) attached to another battle group or under division control.
 - (c) As a battalion attached to a battle group.
- (3) When the armor battalion remains under division control, it usually is employed as part of the division reserve in blocking or counterattacking roles. When suitably reinforced, it may be the division reserve.
- (4) When tank companies are attached to battle groups, the primary role of the tank is to assist the advance of the battle groups or elements thereof by fire, maneuver, and shock action. These tank companies should be employed on the most favorable terrain and against decisive objectives. Tank companies may be used as reinforcing elements operating under battle group control or attached by company or platoon to rifle companies. The tactical integrity of tank platoons should be maintained. For special operations such as jungle or city fighting it may be necessary to employ tank sections to operate with infantry. Suitable plans should be made for the rapid regrouping of these tank companies to permit employment of the battalion.
- (5) When the entire armor battalion or a major portion thereof is attached to a battle group, the primary role of the armor unit normally should be to participate in the main attack. The armor battalion should be reinforced with motorized or

mechanized infantry given adequate fire and logistical support, and committed on favorable terrain to assist in seizing the final objective. When required, infantry may be attached to tank companies to form tank-infantry teams.

- (6) In certain situations, armor units may be attached to the cavalry squadron.
- (7) The battalion may be employed as a task force with the attachment of infantry and such other combat and service support units as may be required. Normally, the armor battalion operating as a task force requires the attachment of infantry and engineers and the support of artillery, Army aviation, and service units. The battalion, with suitable reinforcements, may furnish the nucleus for a maximum of five reinforced company-size mobile task forces.

Section III. FIRE SUPPORT

18. Division Artillery

a. Mission. The mission of the division artillery is to support the division by both atomic and nonatomic artillery fires.

b. Capabilities. The capabilities of the division artillery include the following:

- (1) Supporting combat action of the division by atomic and non-atomic fires.
- (2) Performing countermortar and limited counterbattery fires.
- (3) Determining limited survey and meteorological data.
- (4) Assisting in the intelligence collection effort, particularly in target acquisition.
- (5) Assisting in the collection of data for atomic poststrike analysis and damage assessment.
- (6) Receiving and controlling attached artillery units and coordinating the fires of supporting or reinforcing artillery.
- (7) Providing personnel and equipment to assist the division artillery commander in discharging his responsibilities as fire support coordinator.

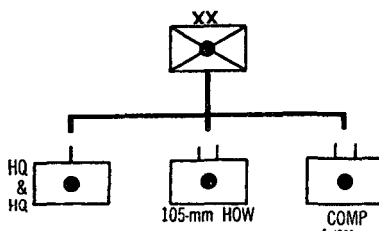


Figure 5. Division artillery.

- (8) Serving as an alternate command post for the division main command post.

c. Mobility.

- (1) *Vehicular.* All firing batteries are tactically mobile with organic transportation; however, the headquarters batteries and service batteries lack certain administrative transport. The organic ammunition trains are capable of transporting normal requirements of artillery class V supplies.

- (2) *Air.* The division artillery is air transportable.

d. Employment. The division commander assigns missions to division artillery based on recommendations of the division artillery commander. The widely dispersed deployment of the division normally precludes either battalion controlling all of its organic batteries. Thus, in order to provide the necessary support and to exercise tactical control, each battalion normally has batteries of the other battalion attached. The net result is two battalions each of mixed calibers, capable of providing artillery support in a particular area, along an axis of advance, or to a particular force. When the division is operating in a widely dispersed formation, artillery support in some areas may be provided by independent batteries or battery groups. If the deployment of the division permits, the 8-inch howitzer and 762-mm rocket batteries should be held under division artillery control. Where wide deployment does not permit effective centralized control, these batteries should be placed under control of the artillery battalions.

19. Field Artillery Howitzer Battalion, 105-MM, Towed

a. Mission. This battalion provides the organic light artillery support for the division.

b. Employment. The 105-mm howitzer batteries are used to reinforce the battle group mortar batteries or to provide general support. A battle group should be supported habitually by the same 105-mm howitzer battery. The 105-mm howitzer battery may be controlled by

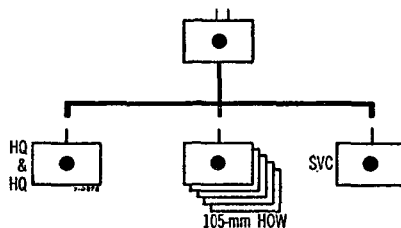


Figure 6. Field artillery howitzer battalion, 105-mm, towed.

either artillery battalion, by battery groups, or by division artillery, or it may be attached to the supported force.

20. Field Artillery Composite Battalion

a. Mission. This battalion provides atomic and nonatomic general fire support for the division.

b. Employment.

- (1) The two 155-mm howitzer batteries may both be attached to 1 of the battalions or 1 battery attached to each of the 2 battalions and are employed in a general support role.
- (2) The 8-inch howitzer battery and the 762-mm rocket battery normally are employed in a general support role under division artillery control; however, either or both may be attached to artillery battalions. They are normally employed as batteries. However, the 762-mm rocket battery may be employed by the platoon and the 8-inch howitzer battery may be employed by the firing section.

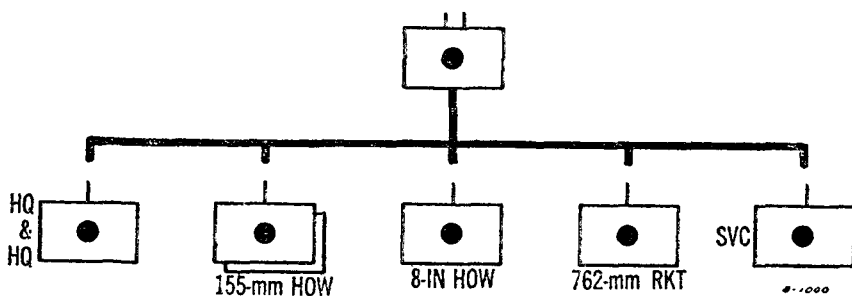


Figure 7. Field artillery composite battalion.

Section IV. COMBAT SUPPORT

21. Aviation Company

a. Mission. The mission of the aviation company is to provide the division with aerial observation, surveillance, target acquisition, command reconnaissance and liaison, aerial movement of personnel and supplies, aeromedical evacuation, and other aerial support.

b. Capabilities. The capabilities of the aviation company include the following:

- (1) Providing day and night aerial observation, reconnaissance, and surveillance. Within capabilities of the aircraft, observation missions are flown in the division zone of action for the purpose of locating, verifying, and reporting targets, adjusting artillery and tank fires, and studying terrain.

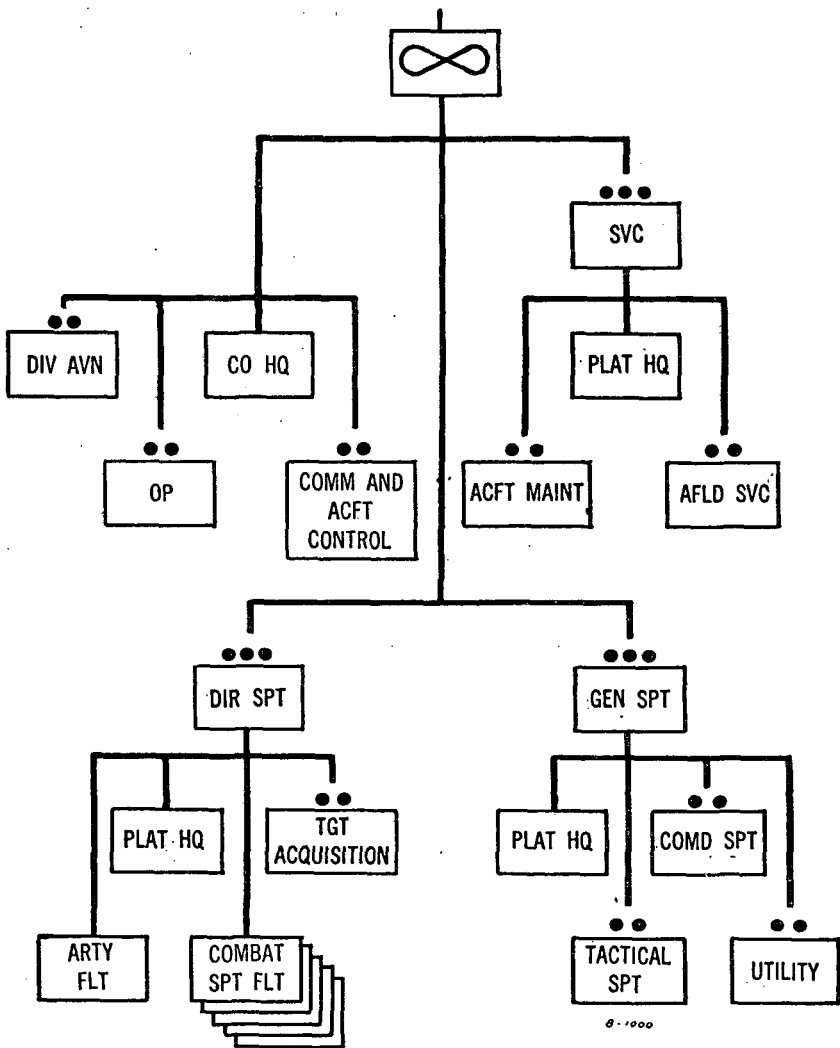


Figure 8. Aviation company.

- (2) Moving troops, patrols, supplies, and equipment within the combat zone by air.
- (3) Transporting commanders and staff on reconnaissance or liaison missions, as well as liaison officers, couriers, and messengers.
- (4) Performing aerial photography, wire laying, radio relay, aeromedical evacuation, battle area illumination, propaganda leaflet dissemination, and radiological survey.

(5) Employing general categories of assigned aircraft as follows:

- (a) *Airplane, utility.* This tactical multipassenger airplane is capable of operating from hastily prepared airstrips and is used for aerial photography, battle area illumination, transport of personnel and light cargo, and for other general tactical, logistical, and utility missions.
- (b) *Airplane, observation.* This tactical two-place airplane is capable of operating from hastily prepared airstrips and is used for observation, reconnaissance, aerial photography, and limited utility missions.
- (c) *Helicopter, reconnaissance.* This helicopter is used for command transportation, reconnaissance, survey, messenger service, liaison, and other limited utility missions.
- (d) *Helicopter, utility.* This multipassenger helicopter is used for aeromedical evacuation and aerial movement of troops, patrols, supplies, and equipment. It is also used for utility missions beyond the capabilities of the reconnaissance type helicopter.

c. Mobility.

- (1) *Vehicular.* The company is completely mobile with organic transportation.
- (2) *Air.* The company is air transportable.

d. Employment.

- (1) The aviation company is normally employed in two echelons, forward and rear.
 - (a) The forward echelon consists of the direct support platoon, augmented by aircraft from the general support platoon and elements of the headquarters and service platoons as required. The direct support platoon is composed of the target acquisition, artillery flight, and combat support flights which may operate independently from the base airfield, satellite airfields, airstrips, or landing areas to support combat elements of the division.
- 1. The artillery flight provides aviation support to the division artillery and is responsible for flying missions for aerial adjustment of indirect fire weapons.
- 2. The target acquisition section provides aviation support to the cavalry squadron for surveillance activities in support of the division effort.
- 3. The combat support flights provide the nucleus for support of a battle group or task force organization. The same combat support flight should habitually support a given battle group. It receives additional aircraft from the general support platoon as required.

(b) The rear echelon consists of the headquarters, service, and general support platoons. The rear echelon normally operates from the base airfield established in the division service area. It is responsible for reinforcing the direct support platoon and supporting the remainder of the division.

(2) Observers will be provided by combat elements of the division.

22. Engineer Battalion

a. Mission. The primary mission of the engineer battalion is to increase the mobility and combat effectiveness of the division by means of general engineer work. A secondary mission is to undertake and carry out infantry combat missions when required.

b. Capabilities. The capabilities of the engineer battalion include the following:

(1) Providing engineer staff planning and supervision for organic and attached engineer troops.

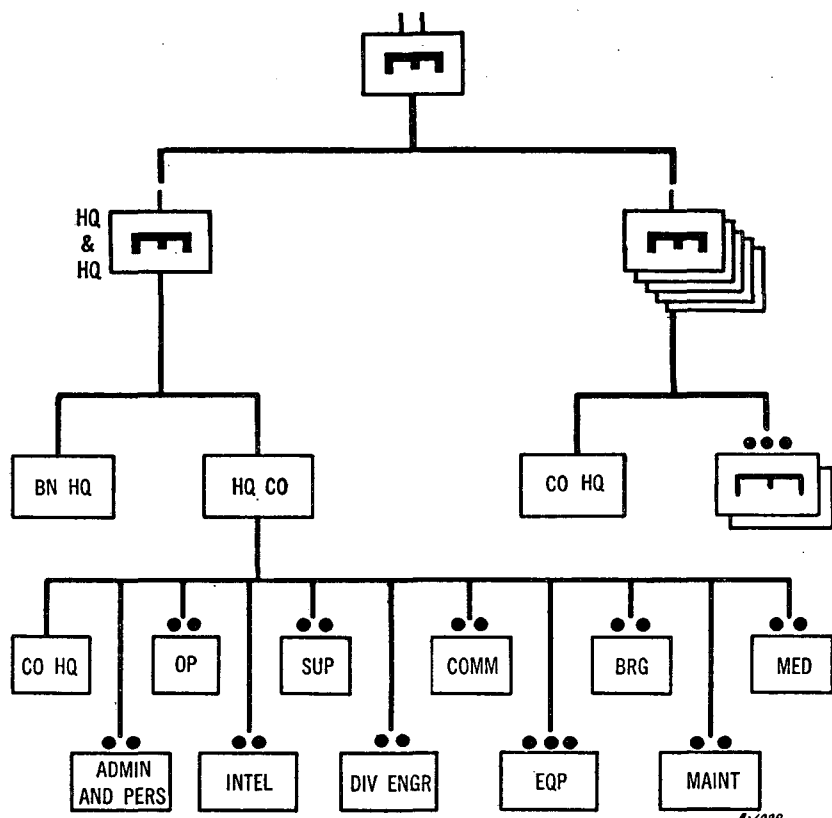


Figure 9. Engineer battalion.

- (2) Performing construction, repair, and maintenance of roads, bridges, fords, and culverts.
 - (3) Providing support of hasty stream-crossing operations with boats and rafts; coordination of organic and attached engineer troops for deliberate river crossing.
 - (4) Assisting in the removal of obstacles, including mines and boobytraps.
 - (5) Assisting in the emplacement of obstacles, including mines and boobytraps.
 - (6) Preparing and executing demolitions, including employment of prepositioned nuclear weapons.
 - (7) Assisting other troops in preparation of fortifications and camouflage.
 - (8) Performing engineer reconnaissance and intelligence.
 - (9) Providing general construction, including construction of landing strips.
 - (10) Performing construction and placement of deceptive devices.
 - (11) Providing engineer class II and IV supplies.
 - (12) Providing engineer third echelon maintenance support.
 - (13) Providing water purification and supply.
 - (14) Providing map supply.
 - (15) Providing technical advice to supported units on engineering matters, including recommendations for employment of engineer troops.
 - (16) Providing assistance in assault of fortified positions.
- c. Mobility.*
- (1) *Vehicular.* The battalion is completely mobile with organic transportation.
 - (2) *Air.* The battalion is air transportable except for the tank, 90-mm with dozer.

d. Employment.

- (1) The engineer battalion is a self-contained unit designed to provide an optimum combination of equipment and individual skills for forward area engineer tasks. Projects are normally accomplished by combat companies or by platoons; they may be reinforced with engineer construction equipment and operators, and river crossing equipment from headquarters and headquarters company, when required. The companies or platoons may be employed in a direct support, general support or attachment role to assist the division in the accomplishment of its mission. In general, greater flexi-

bility and resultant efficiency in the overall engineer effort is realized by retaining the elements of the battalion under battalion control. When tactical, terrain, or climatic conditions warrant, engineer units are attached to infantry units. When feasible, the same engineer units should support the same infantry units for operational efficiency. When it is necessary to commit engineer elements as infantry, it is preferable to commit them as a unit.

- (2) Normally, engineer units are not held in reserve. When the requirement for engineer effort within the division exceeds the capability of the divisional battalion, additional engineer support must be provided by corps from army engineer units attached.
- (3) When the cavalry squadron, armor battalion, or task force organizations are committed on separate missions, the engineer battalion provides adequate engineer support. Attached assault bridging is particularly important.
- (4) Engineer staff support for the brigade headquarters, when committed, is provided by the division engineer section.

23. Transportation Battalion

a. The transportation battalion provides tactical mobility to selected assault elements of the division when directed and provides a pool of vehicles for movement of other personnel and supplies. It is composed of 2 companies of armored carriers capable of providing armored transportation for the assault elements of 1 battle group and 1 truck company capable of motorizing 1 battle group. The drivers of the armored carriers are trained to fight as infantry when required.

b. For details concerning organization, capabilities, and employment, see chapter 5.

Section V. ADMINISTRATIVE SUPPORT

24. Division Trains

a. The division trains consist of a trains headquarters and headquarters detachment and band, administration company, aviation company, medical battalion, ordnance battalion, quartermaster company, and a transportation battalion. Division trains may include service units attached from corps and army.

b. For organization and detailed information of the division trains, see chapter 5.

Section VI. CONTROL

25. Division Headquarters and Headquarters Company

a. Mission. The division headquarters and headquarters company provides the necessary personnel for command, control, and supervision of operations and administration of the division and attached units.

b. Capabilities. The capabilities of the division headquarters and headquarters company include the following:

- (1) Establishing and operating three command posts (main, brigade, and tactical command posts).
- (2) Providing security, messes, and administrative and medical support for the three command posts. Limited medical support for the three command posts. Limited medical support for the three command posts.

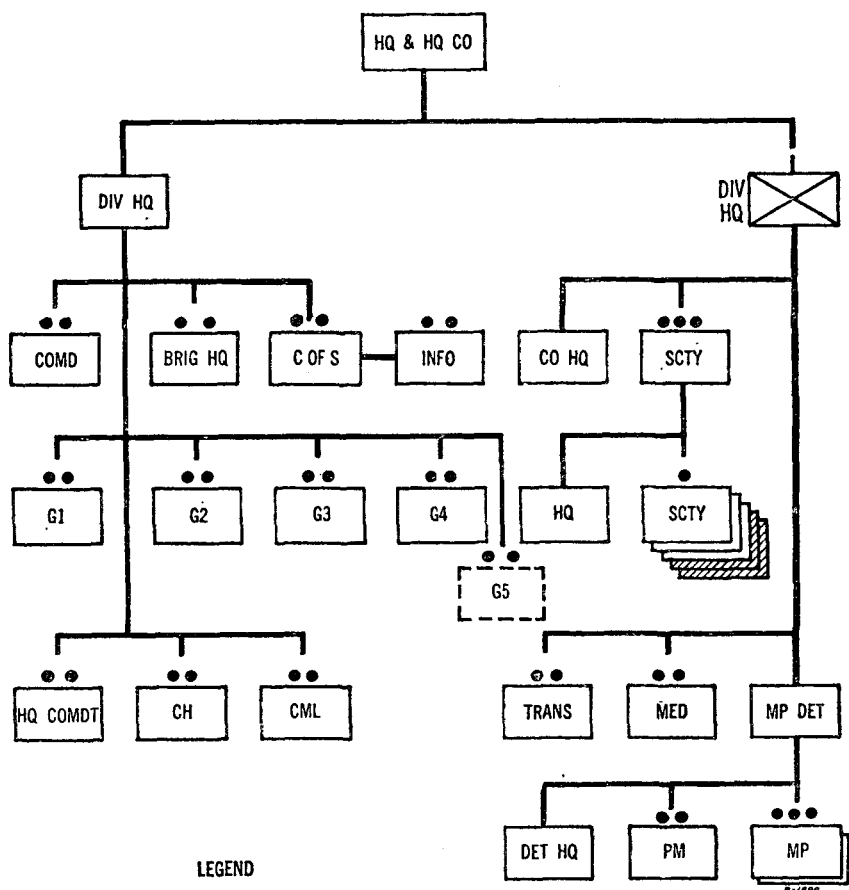


Figure 10. Headquarters and headquarters company, infantry division.

port can also be provided to the division headquarters rear echelon.

- (3) Providing a military police detachment that performs the military police services for the division. See chapter 5 for detailed military police capabilities.
- (4) Providing second echelon maintenance for its own vehicles and weapons.

c. Mobility.

- (1) *Vehicular.* Transportation is pooled in the company transportation section except for the brigade headquarters, medical section, and military police detachment. Displacement can be accomplished with one shuttle move using organic transportation.
- (2) *Air.* The headquarters and headquarters company is air transportable.

d. Employment. In combat the forward echelon of division headquarters is normally located in two command posts, the main and brigade, which are separated so as to minimize the probability of both being destroyed in a single atomic attack. In a rapidly moving situation, the division commander may also establish a tactical command post.

- (1) The main command post is the principal command post of the division. It consists of those staff agencies required by the commander to assist him in supervision and control of tactical operations.
- (2) The brigade command post is established by the brigade headquarters under the command of the assistant division commander. The mission of the brigade headquarters is to command, control, and supervise operations of subordinate and attached elements of the division when the division commander desires to reduce his span of control over any of these elements, and to function as an alternate division headquarters, capable of temporarily taking over the command function of the division in an emergency. It is not capable of performing this mission over a sustained period without considerable augmentation. Other missions that may be assigned include commanding a task force or supervising major activities of the division, such as the infantry training or the rehabilitation of units.
- (3) A tactical command post may be used by the commander to permit his close supervision of an action or series of actions. It should be manned by a small, highly mobile group prescribed by the division commander.

26. Signal Battalion

a. Mission. The mission of the signal battalion is to provide signal communication support.

b. Capabilities. The capabilities of the signal battalion include the following:

- (1) Providing signal communications for the division headquarters and headquarters company, brigade headquarters, division trains headquarters, and rear command post, exclusive of staff and unit radio sets.
- (2) Establishing and operating a division area communications system of signal centers that can be rapidly installed, easily displaced, and operated with reliability at extended distances.
- (3) Providing photographic service, except aerial photography, for the division to include ground and aerial still picture laboratory service for the division units.
- (4) Providing signal supply and field maintenance of signal equipment for the division. See chapter 5.
- (5) Operating the division area ground messenger service.

c. Mobility.

(1) *Vehicular.* The battalion is approximately 80 percent mobile with organic transportation.

(2) *Air.* The battalion is air transportable.

d. Employment.

- (1) The division signal battalion is organized to install, operate, and maintain an area communication system which is highly mobile and adaptable to a wide variety of tactical situations. This communication system is a network of interconnected communication means, tailored to meet the existing requirements, and preplanned to satisfy subsequent requirements, but

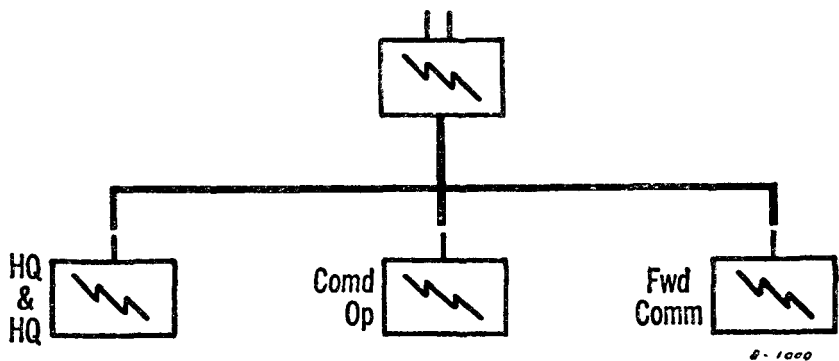


Figure 11. Signal battalion.

capable of frequent change in structure without interruption of service. Under the area concept, a number of signal centers or switch points are established in the division zone to support the dispersed divisional elements. These signal centers or switch points are so interconnected by multichannel radio relay and field cable as to provide alternate routes between any two points in the system.

- (2) The inherent flexibility of the area system and the use of multichannel radio relay in lieu of field wire facilitate dispersion and operation of headquarters and supporting units at more extended distances.
- (3) The signal centers and switch points in the area communication system are employed to provide—
 - (a) Points of entry into the system for supported headquarters, units, and installations so that they can use the trunk lines and channels in the system.
 - (b) Terminal, testing, patching, and switching facilities for the radio relay, field cable trunks, and the local lines in the system.
 - (c) Local communications, to include message center, messenger, cryptographic, teletypewriter, and telephone switchboard service for designated headquarters, and for other units and installations as required to supplement organic capabilities.
- (4) The radio relay trunk lines in the area communication system are employed to provide—
 - (a) Means of communication from division headquarters echelons to immediately subordinate elements and between these elements.
 - (b) Long lines and channels for use of other divisional elements in lieu of, or to supplement, organic communication means on either a common-user or allocated-channel basis, as required.
- (5) Signal centers in the area communication system are generally located with or near major divisional elements. The basic radio relay system is extended to other users by field wire lines, by FM radio/wire integration links, or in some instances, by radio relay extension links.
- (6) The following means of communication are available:
 - (a) Twelve voice telephone channels between major division elements, to include the division trains and division artillery. (Radio relay.)
 - (b) Twelve voice telephone channels between adjacent battle groups. (Radio relay.)

- (c) Teletype facilities wherever radio relay is installed.
- (d) Separate tactical (vehicular) radio nets for command, intelligence, and administrative traffic, employing equipment of sufficient power and range to span the distance involved.
- (e) Scheduled messenger service.
- (7) The following photographic support is provided:
 - (a) The mission of the photographic section of the signal battalion is to perform photography for the division (except aerial photography) and still photographic laboratory service for all divisional units.
 - (b) Two mobile laboratories are provided for the processing of still pictures. One laboratory is stationed at the division aviation company base airfield, the other in the signal battalion area.

CHAPTER 3

MOBILITY

Section I. GENERAL

27. Importance

Mobility, both strategic and tactical, is a vital factor in achieving victory in war. Commanders must capitalize on the mobility of the infantry division in moving to and fighting on the battlefield. Mobility is relative in nature in that it must be weighed against the mobility of the enemy. It is the ability not merely to move, but to move more rapidly than the enemy over obstacles and various types of terrain in order to gain or maintain an advantage over him. Mobility is as much a state of mind as it is a matter of equipment. Equipment must not be thought of as mobility in itself, but as means to be exploited to achieve mobility. Foot movement may be the most appropriate means of achieving mobility under some situations. Under conditions of adverse weather and terrain, vehicles may be a deterrent to mobility. True mobility is achieved by exploiting the means appropriate to the situation.

28. Purpose

The purpose of this chapter is to highlight the means by which the mobility characteristics of the division may be exploited.

Section II. STRATEGIC MOBILITY

29. General

The division's equipment and organization are designed for strategic mobility to meet worldwide commitments. The division must be capable of executing a strategic move on short notice. The strategic movement capability is dependent upon the structure and equipment of the division, but of equal importance is the state of training and preparedness for movement. The division can be moved strategically by land, water, or air transport, or any combination thereof.

30. Air

Strategic mobility is optimized by air movement. By the use of aircraft, the division less the armor battalion and elements of the cavalry squadron and engineer battalion can be moved to locations throughout the world in a matter of hours, thereby capitalizing on strategic surprise. The division may be moved by air independently or as part of a larger airborne force. See TM 57-210 for technical information regarding air movement.

31. Water

Under certain circumstances strategic movement by water may be appropriate, e. g., in situations in which the time element is not critical or when sufficient aircraft are not available for complete air movement. Strategic movements by water may be purely administrative in nature, or they may be tactical movements in conjunction with amphibious operations (FM 101-10 and SR 55-720-1 (POM)).

32. Land

In some strategic movements, such as those wholly within a given land mass, rail and truck transport may be utilized. Rail and truck movements should be used when the situation permits. As in the case of movement by water, when the time element is not critical or when aircraft are not available, movement by rail and truck may be preferred or necessary. Rail and truck transportation are frequently used to move the division to points of departure for movement by air or water means (FM 101-10 and FM 25-10).

33. Planning and Preparation

Detailed planning and preparation for strategic movement are essential. Being prepared for strategic movement requires movement Standing Operating Procedure (SOP's), realistic uni-service and joint training, and vigorous leadership. The division should maintain movement data as specified by SR 55-720-1, prepare detailed loading plans for subordinate units, and maintain transportation requirements for movement by land, water, and air to include packing, crating and loading materials (App. IV, Aircraft Requirement Tables). The division should plan for—

- a. Establishing liaison with higher headquarters and supporting service elements and other participating units, as appropriate.
- b. Utilizing advance parties.
- c. Closing-out of the present location administratively.
- d. Marshalling.
- e. Moving to loading areas.
- f. Providing security.
- g. Operating after arrival at the destination.

- h.* Operating the rear echelon until it rejoins the division.
- i.* Furnishing logistical support (supply and service) in the new area.

34. Training

a. To minimize delay between receipt of a warning order and the departure of the division, thorough training and realistic rehearsals are required.

b. Units are trained for the closeout at their present location. Rehearsals are conducted when the division or subordinate units vacate for extensive field training or field exercises. For rehearsal purposes the unit assumes that it is departing permanently.

c. Units must be able to load and unload rapidly. Training begins with familiarization with the transportation means and progresses to the loading of appropriate type mockups. The division training area should include mockups of the type transportation in which the division may be moved. Elaborate, expensive scale mockups are not essential to effective training and in most instances rough improvised mockups will suffice. It is desirable to have teams of trained specialists to assist in training key unit personnel in loading and unloading procedures. After attaining proficiency in mockup loading, where practicable, the units train with the actual transportation means.

d. Joint training should be frequent and should include "point to point" movement. Units are trained in the procedures at departure and arrival areas. Rehearsals should be conducted at each echelon, progressing ultimately to the division in an actual movement and subsequent ground operation. See FM 57-30.

Section III. TACTICAL MOBILITY

35. General

Tactical mobility includes both the mobility within the combat zone and mobility on the battlefield itself. It encompasses the mobility of both the combat elements and their necessary administrative support. Battlefield mobility is the ability of the force to move, fight, and be supplied on the battlefield after it has joined with the enemy. Because of tactical situations, the battlefield supply accompanying a divisional unit may consist of only that which can be carried on the individual and in unit transportation. To enhance success in battle, the tactical mobility of the division must surpass that of the enemy. The division is capable of operating with transportation varying from its organic means or less, to that required to achieve full mobility. With support of additional means from higher echelon or other Services, the division may achieve maximum tactical mobility by land, water, and air.

36. Air

a. Army Transport Aviation.

- (1) *General.* The organization of the division facilitates the use of Army transport aviation to enhance its battlefield mobility. Such use of aircraft must be considered a normal operation. See TM 57-210 for technical information regarding air movement and FM 57-35 for detailed information on Army transport aviation combat operations.
- (2) *Availability.* Aircraft within the division are assigned to the aviation company. Mobility of the division is improved by company's support of the reconnaissance effort, and its use to move troops and supplies and to evacuate casualties. The company can lift simultaneously approximately 1 infantry platoon or 6 tons of supply during sustained operations utilizing utility aircraft of the general support platoon. Since the troop lift, supply, and evacuation capabilities are limited, careful coordination and planning are essential to insure their most efficient use. In such coordination and planning, consideration should be given to the additional Army transport aviation support which is available within the field army, and its use should be fully exploited. Plans for employing units using Army transport aviation can encompass operations up to and including the tactical airlift of battle groups.
- (3) *Types of operations.* Army transport aviation can be employed in conjunction with the following missions:
 - (a) Rapidly exploiting the effects of nuclear weapons.
 - (b) Enveloping defended areas or traversing natural barriers which hinder the seizure of an objective.
 - (c) Assisting all types of tactical maneuvers.
 - (d) Assisting armored or motorized forces in exploitation or pursuit operations.
 - (e) Seizing critical terrain features, particularly in fluid operations such as pursuit, exploitation, and advances to contact.
 - (f) Reinforcing units cut off, surrounded, or isolated.
 - (g) Moving reserves, particularly in defense on a wide front or mobile defense.
 - (h) Resupply by air.
 - (i) Concentrating dispersed forces in preparation for a tactical operation.
 - (j) Dispersing forces as may be required following a phase of operations.
 - (k) Combating partisan or guerilla forces.
 - (l) Attacking enemy airborne or air landed forces.
 - (m) Movement of reconnaissance forces and patrols.

- (n) Evacuation of casualties.
- (o) Ship to shore movement in conduct of amphibious operations.
- (4) *Request.* Requests for Army transport aviation support for tactical operations is made through the normal command channel. For logistical support operations, see FM 100-10.
- (5) *Control.* Army transport aviation units from higher headquarters may be attached or placed in support of the division. Normally, division will retain operational control of such units; however, circumstances may require it to be passed to a lower level. Delegation of operational control might be favored when—
 - (a) A subordinate unit is better able to plan, coordinate, and control the overall operation.
 - (b) The planned operations do not transcend the area of responsibility of the unit conducting the operation.
 - (c) The unit conducting the operation has been assigned the responsibility for selecting the objectives of the air-transported force.
 - (d) The unit conducting the operation has adequate communication facilities for control of Army transport aviation.
- (6) *Planning.* Planning for operations employing Army transport aviation should begin early, and should be continuous until the operation is executed. Simplicity should be a guiding principle in the preparation of air-landed operational plans. The amount of detail included in planning varies with the scope of the operation, size of the force, and the planning time available. Plans for air movement and the tactical plan for operations in the objective area are closely interrelated. The detailed plans for Army air-landed operations are developed in the following sequence:
 - (a) The ground tactical plan, including a determination of the strength and composition of the forces required, and the development of a logistical plan to support it.
 - (b) The landing plan, which indicates the sequence, time, and place of arrival of troops and material.
 - (c) The air movement plan based on the landing plan. The air movement plan may include the flight plan, flight diagram, and movement control information.
 - (d) The loading plan based on the air movement plan. The loading plan may include a preparation schedule for units in the assembly area, air loading table, designation of loading areas, march table for move to ready areas, schedule of activities in the ready areas, and composition of loading

area control groups and any special instructions to them.
See FM 57-35.

b. Air Force Troop Carrier Support.

- (1) *Use.* Air Force troop carrier units may be used to achieve tactical mobility. This use may include—
 - (a) Transport for the division or elements thereof as part of an airborne force.
 - (b) Fixed-wing lift into friendly territory of the combat zone from communication zone or theater support areas.
 - (c) Supply and evacuation.
- (2) *Planning.* Plans for operations employing troop carrier aircraft include maintaining up-to-date requirements to move the division or its subordinate elements by various types of aircraft. Aircraft requirements for the division to move by Air Force aircraft are indicated in Appendix IV, Aircraft Requirement Tables. These tables should be used as a guide in determining specific requirements. The initial echelon may be increased or decreased depending upon the tactical requirement for the operation. When aircraft are not available in the quantities required, elements which have a relatively less important operational role are phased back. See TM 57-210 for technical information regarding air movement.

37. Land

The division possesses the capability of moving over many types of terrain by various means. Combinations of the following land transportation means are used as availability and the situation dictate:

a. Foot. Despite the development of various means which provide increased mobility on the battlefield, success in battle may well depend on the ability to attain a greater degree of foot mobility than the enemy. To attain this greater foot mobility requires that—

- (1) Units be trained and disciplined so that they complete foot movements in condition to fight. Such movements should be restricted to those necessary.
- (2) Commanders make every effort to reduce loads carried by the individual to the minimum essential items.
- (3) The individual soldier be properly motivated. He must understand that his survival depends on his physical and mental conditioning which enables him to outmove and outfight the enemy soldier.

b. Trucks. Truck transportation organic to the battle groups is limited; however, the division transportation battalion provides a

central pool of transportation for division units. The truck transport company of the battalion has a varying tactical lift capability which is directly allied to the simultaneous logistical lift requirement. This company is capable of motorizing one battle group. The division can be completely motorized by the attachment or support of five additional light truck companies (assuming availability of vehicles of transportation battalion for movement of unit), or can be moved in one shuttle using organic transportation. Maximum use of trailers for cargo purposes is necessary to attain the highest degree of mobility.

c. Armored Carriers.

- (1) These vehicles are in the two armored carrier companies of the transportation battalion. There are sufficient carriers organic to the division to lift the assault elements of six rifle companies or the combat elements of a battle group during sustained operations.
- (2) Some of the characteristics of the carrier include cross-country mobility, protection while moving through fire swept areas, shielding while moving across areas of radiation contamination, and a limited amphibious capability.
- (3) The division can best capitalize on the armored carrier by employing it with tank elements to move the infantrymen to positions where they can dismount and close with the enemy, thus adding to the mobility of infantry elements and tank-infantry mobile task forces. It is especially effective in this mission in the exploitation of atomic fires. It can also be used in a straight troop transport role. For detailed information on tactical employment of the armored carrier, see FM 7-10, FM 17-20, and FM 55-37.
- (4) It may be used to evacuate casualties and to transport supplies through areas subjected to enemy fire.

d. Tanks.

- (1) Tank elements, when attached to the battle groups, provide them with mobile firepower, and may be used to increase mobility by transporting supported infantry. One tank platoon can lift approximately one rifle platoon.
- (2) The tank has good cross-country mobility, better protective features for its crew than the armored carrier, and inherent fire support means.
- (3) When the division is employed in an airborne role, to offset the absence of the 90-mm gun tanks, consideration should be given to the use of the Gun 90-mm SP, M-56 and/or the 76-mm gun tank which is air-transportable if optimum conditions exist.

38. Water

a. Use. Tactical movement by water may be appropriate in many situations in which inland or coastal waterways provide the most feasible axes of advance and/or lines of communications. To maintain mobility in crossing water barriers, the division must use all available crossing means. In such situations appropriate water transportation means are provided the division. The division has its organic armored carriers which are used to the maximum. Additional support may include the landing vehicles of the engineer amphibious support command, Army aircraft, landing craft and amphibious trucks of transportation units, Naval landing craft, or any combination of these. See FM 101-10 for capabilities of water means.

b. Planning. Planning for crossing water obstacles must begin well in advance of arrival at the obstacle to insure maintaining mobility during the crossing operation. SOP's must be used and detailed loading plans must be prepared for the use of aircraft, amphibious vehicles, and other crossing means. Emphasis must be placed on the proper allocation and control of all crossing equipment. Rehearsals are conducted commensurate with unit state of training, time and equipment available, and need for secrecy.

39. Planning and Preparation

Detailed, timely planning and thorough preparation are required to attain the highest degree of tactical mobility. The use of mobile task force organizations (app. III) may afford a means of increasing mobility. The planner must have an understanding of certain procedures which must be habitually accomplished to maximize the mobility of the division. These procedures include—

a. Continuous, rapid, and accurate reconnaissance for all operations.

b. Continuous engineer effort. When mobility is threatened because of lack of organic engineer support, additional support is requested from higher headquarters. This is particularly true in crossing major water barriers, clearing extensive minefields, and reducing obstacles created by atomic fires.

c. Rapid, reliable, and timely transmission of orders to minimize delays in execution.

d. Integration of communication plans, with operational plans to insure continuous control.

e. A continuous intelligence effort to develop enemy positions, strength, and movements.

f. Rapid evacuation of casualties.

g. Provision of sufficient tactical and administrative transportation for all units.

- h. Careful planning of traffic regulation and control activities to provide for dispersion, control, and efficient movement.
- i. Planning of friendly atomic fires to minimize interference with movement.
- j. Checking of areas subjected to atomic fires, enemy or friendly, by rapid poststrike analysis to determine the effects, and modifying operational plans where necessary.
- k. A continuous high status of maintenance within divisional units.
- l. Centralized control and allocation of transportation.

40. Training

a. *General.* Training must include the use of all means of transportation, both organic or available to the division from outside sources.

b. *Foot.* Units must be trained to move and fight on foot. This is the foundation upon which further training is based. Such training must include an intense physical conditioning program conducted throughout the division.

c. *Land Vehicles.* During individual training, drivers of the armored carriers receive basic infantry and signal communications training, and designated infantry men of each rifle squad are trained to drive armored carriers and act as substitute drivers. Armored carriers should be integrated into all levels of unit and combined arms training. During the training, infantry, artillery, engineer, and tank units with truck and armored carrier units must train as a team. This training should stress the use of transportation in night operations and marches especially as concerns the inherent capabilities and limitations of armored carriers used to mount mobile task forces.

d. *Army Aviation.* Training in the use of Army aviation, including organic aircraft, reaches into every echelon of the division. It includes staff training in planning air-transported operations and detailed unit training. Certain training, such as familiarization with aircraft and loading and unloading procedures, is similar to that for movement in Air Force aircraft. Other training should include assembly of units, execution of the tactical plan, and training with Army transport aviation units. Training with Army transport aviation units is imperative. It must be comprehensive and is conducted by all elements of the division. Of particular importance is the fact that training is progressive and emphasizes the employment of combat elements including pathfinder and terminal guidance teams. Subordinate units conduct detailed training for the employment of patrols and squads and progress through platoon and company size operations. This phase of training must be stressed because

of the probably frequency of these type operations. Finally, means permitting, battle group size exercises should be conducted. These exercises encompass all phases of the operation culminating with the tactical operation in the objective area and subsequent supply and evacuation. In training and operations, aircraft and pilots organic to the division should be under the operational control of those elements they normally support.

e. Water Vehicles. Units must train in the use of amphibious vehicles. This must include training with elements of the engineer amphibious support command and training in the use of landing craft when appropriate. Specific training should be conducted in river-crossing operations.

Section IV. TROOP MOVEMENT

41. General

Rapid and efficient movement combines appropriate transportation, aggressive leadership, effective staff planning, and responsiveness by well-trained units. To achieve a high degree of mobility, the attainment of superior standards of troop movement training must be emphasized throughout the division. Since the majority of movements are conducted all or in part by land, the specifics as discussed in paragraph 42 concern primarily ground troop movement. Though detailed procedures may vary, the underlying principles as contained in paragraph 42*a* apply for troop movements by air, land, or water, or any combination thereof.

42. Ground Movement

a. General. The atomic battlefield increases the requirement for efficient day and night ground movement. The characteristics of such movements are speed, control, security, and secrecy.

- (1) *Speed* is obtained through detailed plans, simplicity of operations, and full use of available means.
- (2) *Control* is obtained through centralized preparation of plans and orders, and dissemination by rapid and reliable communication means. Control can best be exercised through normal command and communication channels, rather than by external semi-independent agencies created temporarily for this purpose.
- (3) *Security* is provided by each commander from his own resources.
- (4) *Secrecy* is the product of aggressive counterintelligence measures.

b. Plans and Orders. Planning must be continuous, rapid, and in the detail that time permits. The staff must maintain up-to-the-minute information on the enemy situation, friendly troop dispositions, status of supply, availability of transportation, and reconnaissance of probable routes of movement.

c. Reconnaissance.

- (1) Speed of movement is closely related to the accuracy of reconnaissance. The assignment of routes to subordinate units is greatly dependent upon the mission of the unit, enemy capabilities, and the nature of the route. Considering the risk of disclosing information to the enemy, all routes under consideration by the division should be reconnoitered and properly controlled.
- (2) The cavalry squadron, utilizing organic ground means and support from the aviation company, conducts ground and aerial reconnaissance. Route reconnaissance may include engineer support for bridge reconnaissance. The organic photographic facilities for the division enhance the route reconnaissance capability.

d. Selection of Routes.

- (1) To reduce vulnerability to atomic fires, the division should use multiple routes to include cross country routes. This not only allows moves to be completed more rapidly, but also provides dispersion, flexibility, and mutual flank protection. On the extended battlefield the division has a relatively large area of operations and the problem of route availability is frequently minimized.
- (2) When moving on multiple routes, elements of the division often use secondary roads. Provision should be made for engineer support if required. Care is exercised to assign routes suitable to the various division loads.

e. Organization of the Column.

- (1) Whenever possible, elements should move in multiple columns, each organized to permit continuous movement. The following should be considered in planning the formation of the march elements and the order of march:
 - (a) Mission of the units upon arrival and the disposition which will best accomplish those missions.
 - (b) Present disposition of units.
 - (c) Routes available.
 - (d) Nature and extent of probable interference.
 - (e) Difference in rates of march of various elements.
 - (f) Degree of separation of units on the move.
 - (g) Degree of probability that the enemy will employ atomic weapons.

- (h) Implications of movement conducted during hours of darkness or under conditions of limited visibility.
- (i) Degree of flexibility and relative invulnerability of column formation.
- (j) Degree of tactical control.
- (2) The division may be divided into 7 major march serials: 5 battle groups, division troops, and division trains. However, there is no standard formation; march serials are organized as required by the tactical situation; in particular elements of division artillery, other division troops, and the division trains move with the battle groups.

f. Concentration of Force. The division commander must make the decision as to the degree to which elements of the division are concentrated during the move and on arrival. He must consider the threat of enemy employment of atomic weapons and the effect which implementation of this threat could have on the movement. He may prescribe dispersion criteria for various enemy atomic attack capabilities.

g. Security.

- (1) The division commander and each subordinate commander are responsible for the security of their commands. The division commander prescribes the security measures for the division.
- (2) The cavalry squadron and the aviation company assist in providing security for the division. During a move involving the major portion of the division, these units are used actively under division control.

h. Control. The rapid movement of forces requires flexibility, responsiveness, and effective control. Great emphasis must be placed on the movement control of divisional units, and of corps units operating in the division zone. The movement plan or an SOP should provide for—

- (1) Establishment of unit priorities and control of the movement to and on routes. Routes must be clearly marked and vehicle operators thoroughly briefed.
- (2) Communications facilities to march elements and control posts. Radio communication is normal; however, radio silence may be required. In such instances a desirable alternate communications means may be aerial messenger.
- (3) The granting of a clearance by the division highway traffic officer prior to movement. A surveillance system to check unit locations and march dispersion and to assist in controlling the march.
- (a) March discipline and strict adherence to march techniques are imperative. Violations must be corrected immediately

to maintain uninterrupted movement and to reduce the vulnerability of the division.

- (b) An efficient method of detecting and correcting violations is aerial surveillance. Consistent with tactical security, this system is used to the maximum. March serials and march units identify themselves to aerial observers by displaying panels.
- (c) Ground surveillance should be used for all marches. Staff officers at all echelons should be used to check and control columns.
- (4) Efficient use of military police.
 - (a) Movement on multiple routes during periods of poor visibility and the existence of major intersections, defiles, and detours along routes increase control problems.
 - (b) Minimum essential traffic control posts should be used. In conjunction with control posts and consistent with tactical security requirements, aerial and mobile ground control teams can be used with each column. The aerial control team can land and control situations until relieved by a ground control team.
 - (c) Additional military police support from higher headquarters should be obtained for special operations requiring close movement control procedures.

i. Logistics.

- (1) Through timely coordination and planning the service support units must provide for emergency repair and resupply on the move and after arrival at the destination.
- (2) Mobility is enhanced through emphasis on organizational maintenance. All motor maintenance elements within the division exert maximum effort to keep vehicles operational.
- (3) To prevent hindrance to the tactical mobility, the division trains move independently, when practicable, and generally on one or more interior routes. They may march to the new location in a single move or may displace by echelon.

j. Night Marches. Enemy air and atomic capabilities and the requirement for secrecy frequently dictate movement at night or under conditions of poor visibility. In general, night marches are organized and conducted in the same manner as day marches; however, reduced visibility places greater emphasis on control, liaison, and maintenance of direction. These aspects require careful prior reconnaissance and preparation and necessitate intensive control measures.

k. References. FM 19-25, FM 21-18, and FM 25-10.

CHAPTER 4

COMMAND AND CONTROL

Section I. COMMAND

43. Division Commander

a. The division commander is responsible for what the division does or fails to do. He fulfills this responsibility by establishing high standards of performance and insuring that the division and its elements maintain them in training and in combat. In the exercise of command, the commander anticipates and takes corrective action to eliminate or minimize problems, makes timely decisions, prepares plans, issues orders, and supervises activities.

b. The mental attitude of the commander must evince a flexibility of thought and boldness of action competent to meet every exigency on the atomic battlefield. He must thoroughly understand the capabilities and versatility of the division and of atomic and nonatomic fire support. Above all, the commander must have an appreciation of the physical and mental capacities and limitations of the personnel he commands.

44. Assistant Division Commander

a. The assistant division commander normally functions from the brigade headquarters in a capacity directed by the division commander. It is incumbent upon him to keep abreast of the situation at all times in the event he must assume command. Close liaison is maintained between the division commander and assistant division commander; however, during tactical operations, the two should be together for a minimum time only to preclude loss of both to one atomic weapon.

b. Tasks that he may perform include the following:

- (1) Commanding task forces using brigade headquarters.
- (2) Serving as director for long range planning.
- (3) Assisting the commander when efficient control of the situation requires additional, high-level supervision.
- (4) Supervising training matters within the division.
- (5) Serving as principal adviser to the commander in formulation of policy and plans.

- (6) Performing such other duties as the division commander directs.

45. Command Considerations

The following aspects of command require emphasis to capitalize on the characteristics of the infantry division:

a. Leadership.

- (1) Through frequent visits to critical areas, the commander can offset disorganization which may be engendered by enemy use of atomic weapons, reassure the troops, bolster confidence and morale, and instruct and motivate subordinate commanders. While making these visits, he should guard against weakening the chain of command by unnecessary or imprudent intervention.
- (2) The commander develops leadership and fosters self-reliance, aggressiveness, and initiative in subordinate unit commanders by permitting them the maximum allowable freedom of action. Atomic warfare with dispersed formations requires strong subordinate commanders who are capable of making independent decisions.
- (3) By his own exemplary leadership, the commander creates in his division an atmosphere conducive to a high state of discipline, morale, *esprit de corps*, and proficiency in order to increase the combat reliability of the division.

b. Training.

- (1) Training should emphasize that atomic warfare is characterized by dispersion and semi-independent actions by the combat elements. Mutual support between units may be lacking for limited periods of time. This fluid situation must be accepted by everyone as normal and not worthy of undue concern.
- (2) SOP's must be developed and practiced in training which will minimize the effects of atomic strikes. These procedures should provide for prompt action and control in the damage area and for the rehabilitation of units and individuals (app. V).
- (3) Emphasis on disciplinary training will assist in insuring positive response to command in critical situations.

c. Operations.

- (1) The division commander must have intimate, personal knowledge of operations in the forward areas. This requirement stems from the streamlined organization of the division (only one headquarters between company and division headquarters) and a combat environment which may require rapid

and drastic changes in the situation. The fact that there is only one intervening headquarters results in a rapid flow of immediate battle area information to him and a quick and accurate response to his orders.

- (2) The conditions created by the requirements for mobility, dispersion, and frequent use of task forces, normally make necessary the decentralization of control and the use of mission type orders once an operation is underway.
- (3) The division commander's concept of operation must be complete and thoroughly understood by subordinate commanders to enable them to operate in a fluid situation in accordance with the commander's intentions.
- (4) Since atomic fires can be decisive, the division commander insures that either he or his designated representative is available at all times to authorize timely use of atomic weapons. When the commander is absent from his command post, he insures that his staff knows where he is, keeps him informed of the situation, and knows of actions he has taken or orders he has issued.
- (5) Timely estimates, logical decisions, and considered actions will govern the employment and exploitation of atomic weapons against the enemy and the reaction to atomic weapons employed by the enemy. These estimates, decisions, and actions should result in a violent execution that brings to bear the maximum friendly combat power at the decisive point and time. By failing to plan for and to implement immediate, aggressive reaction to the enemy's atomic attack, the commander endangers the success of his mission and risks total destruction or defeat in detail.

d. Communications.

- (1) The control required for dispersed operations is attainable with the organic signal communication system. This system must be exploited by the commander in conjunction with his personal visits.
- (2) The inherent limitation of radio communication with respect to transmission security requires strict adherence to radio operation discipline. Alternate reliable means of communication are established whenever possible.

Section II. ORGANIZATION FOR COMBAT

46. General

a. The division commander organizes his forces for combat to accomplish his specific mission. The pattern of this organization may vary with each situation and will represent a tailoring of divisional

elements to fulfill the combat power requirements of the plan to accomplish the mission. This pattern may be altered rapidly to meet adjustments or changes in the plan.

b. The development of the organization for combat will include consideration of possible requirement for replacement of major units rendered ineffective by atomic attack. The reserve is an available source for immediate replacement of a combat unit. Rapid adjustment or change in the organization for combat is facilitated by execution of established procedures for assessment of damage and casualties and reporting combat effectiveness of units (app. V).

c. The organization for combat is derived from three major types of units—combat, combat support, and service support units.

47. Organization for Combat

a. In organizing for combat the five battle groups, the armor battalion, cavalry squadron and the two artillery battalions are the basic combat elements. They may be combined in varying proportions to form the maneuvering force, base of fire, and reserve. Armor, cavalry, and armored carrier elements may be attached as dictated by the situation. Artillery, engineer, aviation, transportation, signal, medical, military police, ordnance, CAMG, and quartermaster elements may also be attached or placed in support.

b. The division organization permits a high degree of flexibility to suit the missions and situation. At each echelon of command, forces are grouped in the number of task organizations which can be controlled effectively. The division commander may employ the brigade headquarters to control two or more battle groups and reinforcing elements when acting together to perform a single mission or task, and form other task organizations under designated commanders to reduce the span of control of the division.

48. Task Forces

a. General. Frequently, situations favor the use of a task force. In such cases, the division commander tailors the force to accomplish the particular mission. In general, there are two broad types of control under which task forces may be employed.

- (1) The task force operates under close division control with the task force headquarters, operating in a manner similar to that of a battle group headquarters.
- (2) The task force operates independently or semi-independently under general mission type orders, when beyond controlling distance of the division headquarters.

b. Organization.

- (1) *General.* The task force may vary in size from a platoon reinforced to one or more reinforced battle groups. Task forces also may be formed around the armor battalion or cavalry squadron. The organization and employment of company and smaller type task forces is discussed in FM 7-40 and FM 7-10. For typical organization of large task forces, see appendix III.
- (2) *Composition.* The mission, terrain, own and enemy situations are factors in determining the composition of the task force. It should be a balanced force including combat, combat support, and service support elements. The supporting elements should be attached or allocated to the unit or organization designated to command the operation. Since it is usually difficult to reinforce a task force during the conduct of independent operations, prior planning of its composition and organization is necessary.
- (3) *Considerations in organizing task forces.*
 - (a) Reconnaissance and security.
 - (b) Communications over wide areas.
 - (c) Control means.
 - (d) Flexibility of organization.
 - (e) Atomic and nonatomic fire support.
 - (f) Logistical support.
 - (g) Aircraft for movement and supply.
 - (h) Span of effective control of commander.
 - (i) Intelligence personnel support.
 - (j) Enemy strength, disposition, and capabilities.
 - (k) Availability of ground transportation.
 - (l) Terrain over which task force will operate.
 - (m) Missions assigned to the task force.
- (4) *Command.* When the armor battalion or cavalry squadron or a battle group form the nucleus of a task force, it is usually commanded by the respective commanders of these organizations. A task force made up of more than one battle group is usually commanded by the assistant division commander who uses the brigade headquarters. When one reinforced battle group is used as a task force on an independent or semi-independent mission, it may operate under brigade headquarters.

c. Operations. The task force plan is based on orders issued by the division commander. In an operation where the task force is working

closely with the remainder of the division, orders are generally expressed in terms of terrain objectives and other control measures. In certain independent operations, a terrain objective and a general mission-type order without other control measures may be assigned. Offensive, defensive, and retrograde operations are planned and conducted in accordance with the principles outlined in chapters 6, 7, and 8.

d. Training. All appropriate elements of the division should be trained to participate in various task force organizations. The training must prepare units or parts of units to organize into task forces rapidly and to operate effectively as a routine procedure.

49. Reinforcement

Certain missions assigned the infantry division may require attachment or support of units from corps or army.

a. The principal combat and combat support units which may reinforce the division are infantry, armor, field artillery, antiaircraft artillery, ground reconnaissance, and engineer units. Electronic warfare, combat surveillance, and chemical units may reinforce the division.

b. The principal service support units which may reinforce the divisions are maintenance, recovery and disposition, and medical units.

c. Army transport aviation units, armored carrier companies, and transportation truck companies may reinforce the division either in a combat or service support role.

Section III. COMMAND POSTS

50. General

a. Command posts are the nerve centers of the division, and the manner in which they function determines to a large extent the effectiveness of command and the degree of control exercised by the division commander. For this reason, it is imperative that sound SOP's be developed for organization, operation, location, movement, internal arrangement, and security of the major command posts of the division (division main, brigade, tactical, and rear command posts).

b. The composition of the various command posts is changed as the situation warrants. Personnel and impedimenta must be kept to a minimum to preserve mobility and to eliminate nonessential activity.

c. Command posts should normally be positioned in the vicinity of other units in order to take advantage of the added security afforded. Local security is provided by command post personnel. Defense against air attack and detection by enemy observation require em-

phasis on and rigid enforcement of passive measures, such as overhead cover and camouflage.

d. Command posts should be moved as often as the situation requires to maintain control and to reduce possibility of detection; however, too frequent changes in location should be avoided in the interest of efficient staff operation and conservation of personnel effort. Continuous command post operation is insured by the employment of mobile communications facilities, by planning moves in coordination with the signal officer, and by moving by echelon.

e. The procedures, tasks, and responsibilities involved in establishment and operation of the division main and rear command posts are shown in FM 101-5.

f. Both the brigade command post and the division artillery command post serve as alternates to the main command post. The priority in which each will assume this function will vary with the policy of the division commander and the tactical situations which confront him. The decision as to which specific headquarters will assume command is a local command prerogative.

51. Main Command Post

The main command post is the principal location from which the division commander exercises command.

a. Location. The site selected for a main command post should satisfy the following considerations:

- (1) Facilitate command and control of subordinate units.
- (2) Provide access to higher, lower, and adjacent headquarters.
- (3) Contain sufficient area to accommodate all staff sections. While not part of the main command post, sufficient area also must be provided for a motor park, messes, elements of headquarters company, the military police detachment, the signal center personnel, and helicopter landing zone or airstrip.
- (4) Utilize existing shelter and communications systems.
- (5) Provide adequate cover, concealment, and dispersion.
- (6) Facilitate defense with means available. Should not be too close to probable targets of enemy air and artillery (to include rockets and guided missiles), should take advantage of incidental protection from other units, and should be located where it will not be affected by probable enemy penetrations.
- (7) Provide sufficient drainage and hardstanding.
- (8) Require a minimum of road and other construction.

b. Composition. The main command post normally consists of those elements of the staff required to assist the commander in tactical operations.

From Div Hq & Hq Co	From Div Tn	From Other Hq
CG, Aides, and Secretary	AG Team	Div Arty Representatives
CofS Sec	Avn Sec	Engr Sec
G1 Sec	Surg Sec	Sig Sec
G2 Sec	Trans Sec	Atch Intel Specialists
G3 Sec		Air Force Teams
G4 Sec		
*G5 Sec		
HQ Comdt Sec		
Ch Sec		
Cml Sec		
PM Sec		
Info Sec		

*Normally a member of division general staff only when required for combat operations or when authorized by HQ DA.

- Notes: 1. A G2-G3 operations center and a war room are also established in the main command post.
2. FSCC may be physically located at or adjacent to the main command post.

Figure 12. Typical composition main command post.

52. Tactical Command Post

A tactical command post is established where required and is manned by a small, mobile group consisting of the divisions commander, selected staff officers, and communication and security personnel. The requirement for security and complete communications favors location of the tactical command post near the advance signal center or one of the forward signal centers which served the battle groups.

53. Brigade Command Post

The brigade command post normally operates in one echelon in a location from which the assistant division commander and his brigade staff can best accomplish their mission. Consideration should be given to establishing it in vicinity of one of the area communication centers for added security and complete communications.

54. Division Rear Command Post

The division rear command post is the location from which personnel support and administrative services for the division are provided. The trains commander has tactical command of the rear command post. When distance from the trains headquarters, or the tactical situation dictates, he appoints an officer present at the rear command post as officer in charge. The small group of division

special staff officers who operate from the rear command post remain directly responsible to the division commander for their operations. Any or all of these special staff officers may, if the commander desires, operate from the main command post.

a. Location. The division rear command post may be located in 1 of 2 general areas. When practicable, it will be forward of the division rear boundary in the division service area; however, it may operate behind the division rear boundary near a forward army area communications center for the following reasons:

- (1) It is relatively immobile.
- (2) Suitable bivouac sites are often lacking in forward areas.
- (3) Displacements should be kept to a minimum to avoid disruption of administrative activities.
- (4) It need not be in proximity to frontline troops to perform its mission.

b. Composition.

- (1) The division rear command post normally includes—
 - (a) The division headquarters rear echelon, consisting of certain special staff sections (fig. 21).
 - (b) The division administration center, consisting of the unit personnel sections of organic and attached units under the technical supervision of the adjutant general.
- (2) Units, agencies, and facilities located with or adjacent to the rear command post include—
 - (a) Administration company (minus).
 - (b) An APO unit.
 - (c) Civil affairs/military government units.
 - (d) Red Cross representatives.
 - (e) Press representatives.
 - (f) Division rest camp.
 - (g) Rear echelon signal center.
 - (h) Bath and laundry facilities.

Section IV. DIVISION STAFF

55. General

a. Staff coordination must be accomplished speedily, decisions rendered promptly, and instructions dispatched without delay. The requirement for expedited staff action can be fulfilled by insuring that staff responsibilities are clearly delineated, vital coordination is effected orally, and cooperation is accomplished in a spirit of teamwork. Staff officers must make frequent visits to subordinate units in order to understand fully the important aspects of the situation and requirements of units. These visits also help these officers to maintain

a mental attitude that will assist in differentiating between trivia and urgent matters.

b. General and special staff functions, procedures, and relationships are outlined in FM 101-5.

c. The arrangement of the headquarters, as pertains to elements of G2, G3, and the fire support coordination center (FSCC), discussed in paragraphs 58 and 61 and figure 13, may be used on a permanent basis to conduct all operations including employment of atomic weapons.

56. General Staff

As a minimum, one officer in each general staff section should be qualified as an atomic weapons staff officer. They have the additional task of providing information on the use of atomic weapons as it affects their general staff functions.

57. Special Staff

a. The officers of the division special staff normally operate either from the division main or rear command posts, or from the organization to which they are assigned.

b. The division special staff includes—

<i>Special staff officer</i>	<i>Organization to which assigned</i>
Adjutant general-----	Administration company
Armor officer ¹ -----	Armor battalion
Aviation officer ¹ -----	Aviation company
Artillery officer ¹ -----	Division artillery
Chaplain-----	Division headquarters and headquarters company
Chemical officer-----	Division headquarters and headquarters company
Engineer ¹ -----	Engineer battalion
Finance officer-----	Administration company
Headquarters commandant-----	Division headquarters and headquarters company
Inspector general-----	Administration company
Special services officer-----	Administration company
Staff judge advocate-----	Administration company
Surgeon-----	Medical battalion
Ordnance officer ¹ -----	Ordnance battalion
Provost marshal-----	Military police detachment
Quartermaster officer-----	Quartermaster company
Signal officer ¹ -----	Signal battalion
Transportation officer ¹ -----	Transportation battalion

¹ Also commander of organization to which assigned.

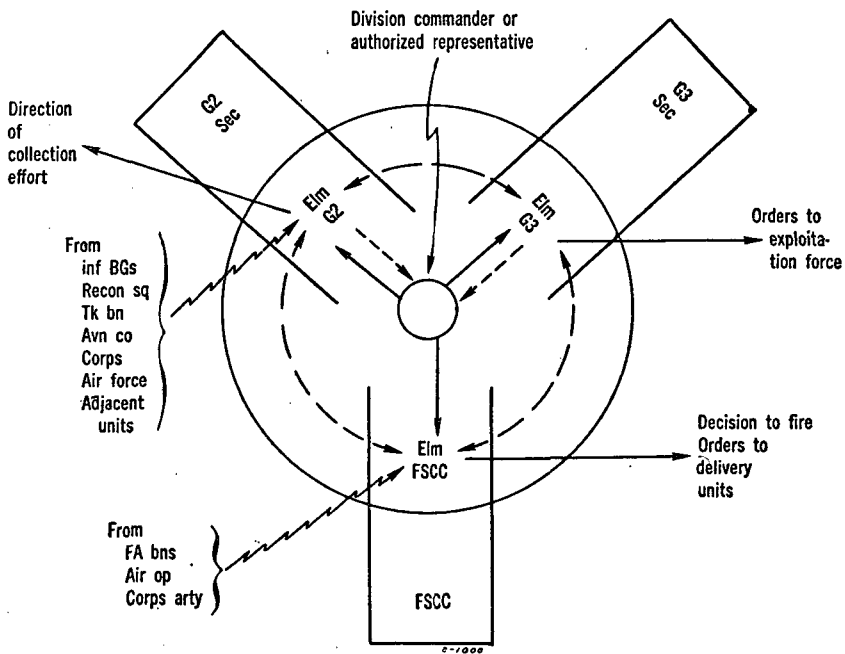
c. Sufficient officers in division artillery and at least one officer in the engineer battalion should be qualified as an atomic weapons staff officer.

58. Staff Procedures for Atomic Weapon Employment

a. Those command and staff personnel who are directly involved in the several functions of atomic weapons employment are, in effect, the division's atomic weapon employment team. These functions, some of which may be performed concurrently, are shown in the following table:

Function	Personnel involved
Target development.....	G2 and FSCC.
Guidance to include preliminary decision to employ atomic fire.	Division commander.
General analysis of targets in relation to their possible effect upon the mission to be accomplished, the planned scheme of maneuver, priority of attack, assigned objectives, and the tactics to be employed.	G3.
Detailed target analysis, direction and coordination of atomic and nonatomic fires.	FSCC.
Final decision to fire.....	Division commander or designated representative for atomic fire.
Final integration of scheme of maneuver and atomic fire.	G3.
Immediate poststrike damage assessment.....	FSCC.

b. To varying degrees, the above steps are interdependent and require continuous coordination. Maximum efficiency in weapon employment will result when the personnel listed in the table have constant person-to-person coordination with each other and work as a team. There is no intention herein to subdivide staff sections or agencies. However, to achieve the desired teamwork, the arrangement of the headquarters must provide that the elements of G2, G3, and the FSCC listed in the table are located in a single installation or in immediately adjacent installations.



Legend

- ~~~~~ Atomic target information.
- - - - - Person-to-person coordination and exchange of information.
- Orders.

Figure 13. Procedures for effective atomic weapons employment.

Section V. FIRE SUPPORT COORDINATION

59. General

The FSCC is the agency charged with the accomplishment of the fire support coordination functions in the infantry division. The establishment of a division of FSCC is habitual in infantry division operations. Establishment of FSCC's at lower echelons is dependent upon the responsibilities and functions of the echelon, the tactical situation, and the desires of the commander. Normally, fire support coordination functions at lower echelons are exercised informally by the personnel involved through close liaison, frequent meetings, and flexible communications. See FM 6-21.

60. Command Responsibility

a. A major part of the division's combat power lies in its atomic fire capability. This requires that the division commander devote increased personal attention to the planning and execution of fire

support. He must be constantly aware of the capabilities and availability of the various atomic delivery means.

b. The commander evaluates targets in terms of the mission, nature of the target, and the availability of atomic weapons, and specifies results desired, also contingent and limiting requirements. However, evaluation in terms of delivery capabilities, troop safety, detailed effects, and predicted condition of target area normally requires a detailed analysis by the staff and recommendations to the commander.

c. The division artillery commander is the fire support coordinator. Based on the division commander's concept and policies, and in conformance with the use of atomic weapons planned by G3, he prepares the fire plan, which includes the atomic fire plan. His principal assistant in fire support coordination activities is the division artillery assistant executive officer, who represents him in fire support matters in his absence. The fire support coordinator at lower echelons is normally the senior artillery officer at the echelon concerned. At each echelon, the fire support coordinator is responsible for the details of coordination of fire support based on the supported commander's decision, combat orders, and policies, and is responsible for the preparation of the fire plan.

61. Fire Support Coordination Center (FSCC)

a. The division FSCC is the fire coordination agency of the division commander in which representatives of the division and the fire support agencies work together to plan and coordinate fire support. The FSCC plans, recommends, and coordinates, atomic and nonatomic fires for the commander and is responsible for the detailed analysis of atomic targets.

b. The G2 establishes procedures for channeling all atomic target information to the FSCC and for processing and evaluation this information at the FSCC. The FSCC is responsible for maintaining current situation maps whereby detailed target intelligence can be displayed to the commander and G3 and detailed target analysis accomplished.

c. The location of the FSCC is designated by the division commander and is ordinarily located at the main command post in close proximity to the G2 and G3 sections. Procedures must provide for continuous operations during displacement.

d. The size and composition of the FSCC is determined by the division commander and may vary to meet the needs of the situation. In the planning phase prior to an operation, the FSCC may be enlarged to expedite the handling of the mass of details involved in

planning and coordination. During the exploitation phase, the FSCC may be reduced to the minimum size required to implement the detailed plans, to effect departure from the detailed plans to meet unforeseen situations, and to engage targets of opportunity promptly. A typical infantry division FSCC may include, in addition to the fire support coordinator—

- (1) The G3 air.
- (2) The G2 air or his representative.
- (3) Representative of each fire support agency supporting the division.
- (4) Target intelligence personnel.
- (5) Target analysis personnel.
- (6) Other advisers as required (e. g., chemical officer).
- (7) Supporting operations and communications personnel.

62. Employment of Atomic Weapons

a. Atomic weapons provide the commander with a decisive means for influencing the outcome of battle. It is of paramount importance that the commander's scheme of maneuver be closely coordinated with his plan for the employment of atomic weapons in order that he may realize the maximum potential from these weapons. The primary criterion for employing atomic weapons will be to use them to gain maximum tactical benefits. This may be achieved by obtaining maximum casualties and materiel damage, but these objectives are not primary and are sought only to achieve tactical advantage. Because of the limitation in numbers of these weapons, they must be employed with care to insure the most effective use of limited resources on profitable targets, and decisiveness by exploiting fully the results of atomic attack. The commander should employ the most effective overall atomic weapons system available, consistent with the following criteria for safety and restraint:

- (1) There should be a reasonable margin of safety for friendly and neutral military forces, civilian population, and resources.
- (2) Consistent with the attainment of objectives, every effort must be made to minimize casualties among enemy civil personnel not directly associated with the operation of military, industrial, or transportation facilities essential to the enemy military effort.
- (3) Weapons selected should be of the smallest yield available consistent with inflicting the desired degree of damage on the designated military target. This selection should take

into account the errors applicable to the target acquisition system and the delivery system required without allowance for gross error.

b. Atomic fires may be "scheduled" for delivery at a particular time, they may be preplanned for "on-call" targets, or they may be delivered against "targets of opportunity". Preplanning expedites and simplifies subsequent delivery; hence, the possible need for atomic fires should be anticipated and the fire preplanned as "on-call". Frequently, fire on a "target of opportunity" will be effective only if quickly delivered. Concurrent planning by the commander and staff must be continuous to insure that targets of opportunity can be readily engaged when located. To achieve quick delivery, procedures must provide for rapid transmission of the request.

c. Nonatomic fires supplement atomic fires. They may be used to attack close-in targets which escape atomic fire damage, to augment the damage caused by atomic fires, or as the sole fire support means employed against a target.

d. To effect economy of atomic firepower, a target will always be analyzed to ascertain if it can be successfully attacked with nonatomic fires.

e. Procedures must provide for continuous operations during displacement.

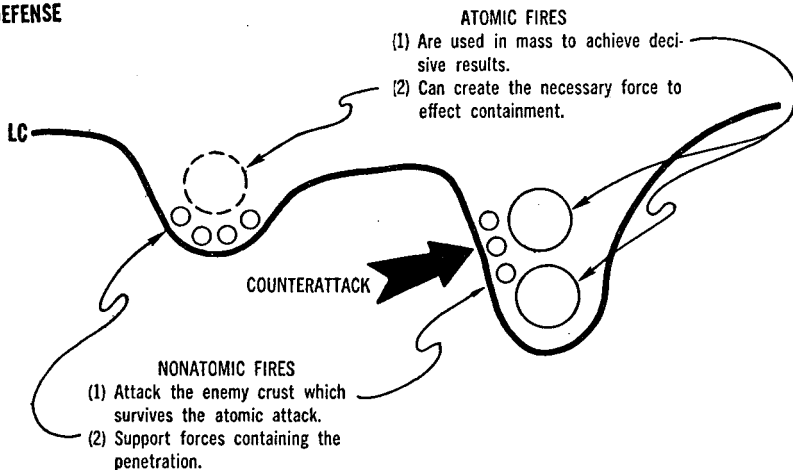
f. The fire plan and the employment of prepositioned atomic weapons must be coordinated.

63. Fire Support Requests

a. Atomic fire requests are processed through command channels. Procedures are designed to insure rapid transmission and delivery of requests to the commander, or to his representative authorized to act on the request. The request may also be sent through fire support channels to alert the fire direction center and to insure delivery by using a dual transmission through fire support channels. Decision to employ, or not to employ, atomic weapons rests with the commander or his designated representative.

b. Requests for nonatomic tactical air support pass directly from the requesting unit to division G3 air.

DEFENSE



OFFENSE

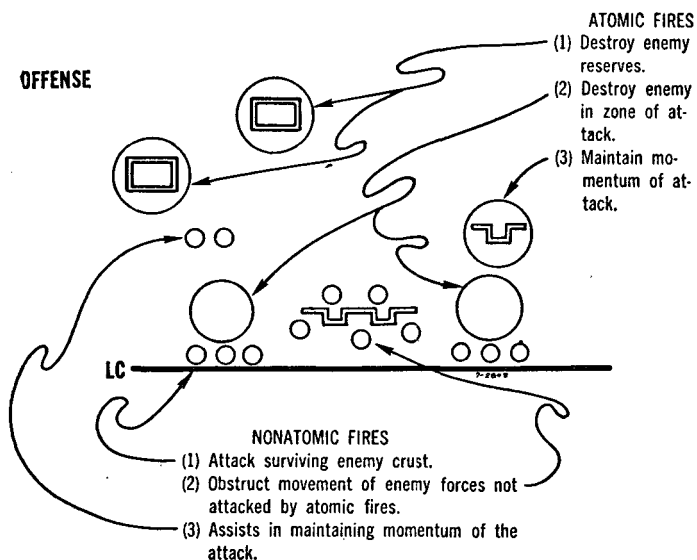
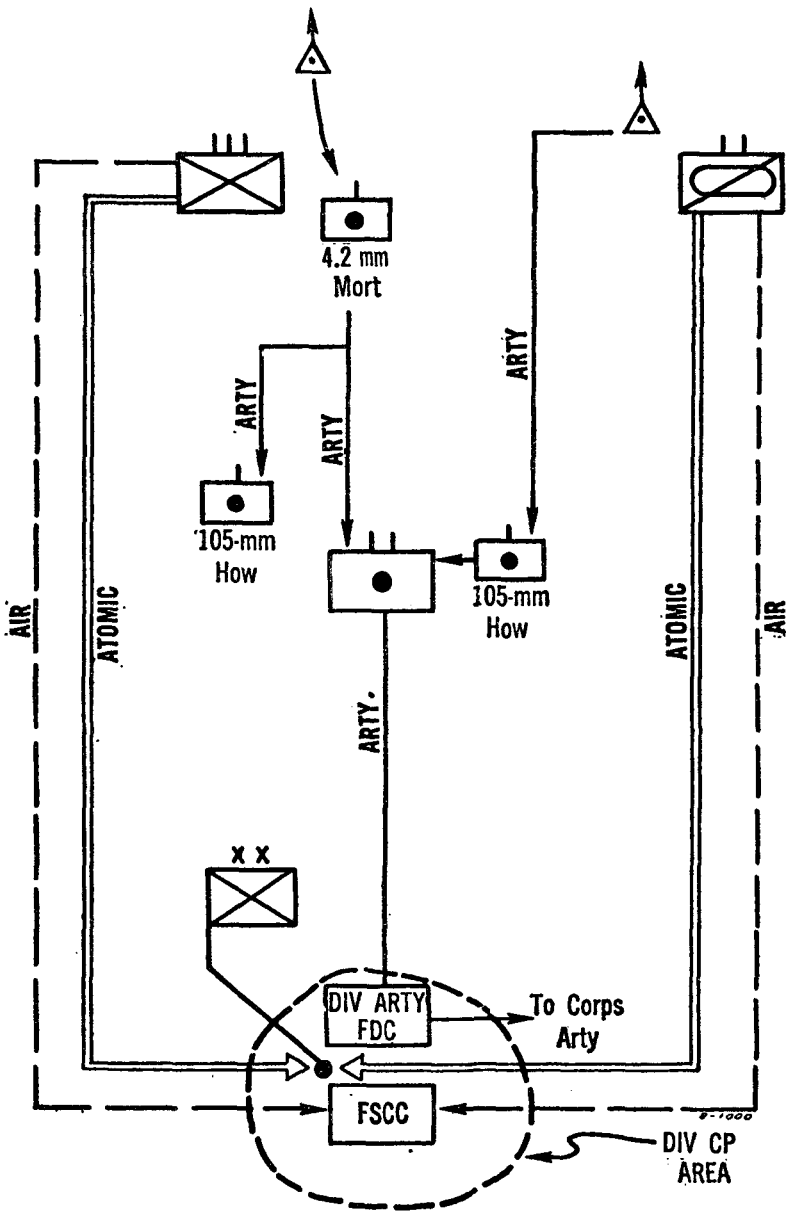
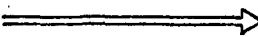


Figure 14. Integration of atomic and nonatomic fires.



Requests for—

Atomic fires 

Tactical air support 


Nonatomic artillery support 

Figure 15. Fire support requests.

Section VI. INTELLIGENCE

64. General

The tremendous firepower available in the division makes target acquisition one of the most important intelligence objectives. The possibly fleeting nature of remunerative targets for atomic weapons requires a sure and rapid intelligence system.

65. Intelligence

The intelligence capabilities of the infantry division must be understood and exploited in order to capitalize on the organic, powerful, long-range weapons. Detailed intelligence procedures are prescribed in FM 30-5, FM 30-7, and other appropriate field manuals; however, certain areas which require emphasis or modification are discussed below.

a. Reconnaissance. Successful reconnaissance provides much of the information necessary for the conduct of operations. It also provides valuable security information.

- (1) Aggressive ground reconnaissance is a positive means of determining disposition and identification of enemy forces. The greater the dispersion on the battlefield, the more readily patrols can penetrate and develop enemy positions.
- (2) Air reconnaissance should be conducted unceasingly; however, aircraft should also be used in conjunction with ground reconnaissance. Helicopters can expedite the results of patrolling and extend the range of patrols by moving them to their starting points in enemy territory and picking them up at prearranged rendezvous.
- (3) The current combat surveillance capability is being increased quantitatively and qualitatively by improved electronic and other technical surveillance devices both ground based and airborne. This equipment operated by trained personnel, will assist commanders in maintaining a continuous and systematic watch over the battle area under all conditions of weather and visibility.

b. Communications. The requirement for a swiftly functioning intelligence system is greatly assisted by the area communication system from the standpoint of volume capacity and transmission distances. Other means and methods that speed intelligence include—

- (1) A separate intelligence radio-teletypewriter net provides direct communications between division headquarters and major subordinate tactical units.
- (2) Timely information is obtained by monitoring radio transmissions of subordinate units.

c. Processing.

- (1) The G2 section must be organized to process a mass of information quickly. Information collected by the infantry companies having a distinct bearing on the mission of the division, particularly target intelligence information, will be forwarded without delay to division G2 section through the battle group S2. Initial evaluation of information will be cursory in nature with additional evaluation by battle group performed later. Other information collected by companies, such as individual vehicle sightings or small groups of personnel, should be filtered at battle group and a summary of such activities forwarded on a periodic basis. To assist the G2 in processing intelligence information, a military intelligence detachment normally will be attached to the division. This detachment provides the G2 with specialized assistance in the fields of order of battle, photointerpretation, prisoner of war interrogation, language interpretation, translation, and counterintelligence matters.
- (2) The assistant G2 air will normally operate from the division base airfield in order to expedite the processing of information obtained by aerial photography and airborne surveillance and reconnaissance. The division aviation officer is responsible for operational aspects of utilizing Army aviation for aerial photography based upon detailed mission requirements determined by the G2 air. The signal officer has staff responsibility for the technical aspects of Army aerial photography and the production of prints.

66. Counterintelligence

Counterintelligence is that aspect of military intelligence activities relating to all security control measures, both offensive and defensive. Effective counterintelligence practices assist in denying the enemy the information needed to effectively employ atomic weapons. Communication security, counterreconnaissance, and deception are among the most important measures that will accomplish this purpose. Counterintelligence personnel are attached to the division to assist the G2 in his counterintelligence responsibilities. Detailed capabilities of counterintelligence units and counterintelligence procedures are prescribed in FM 30-9 and FM 30-9A and AR 381-100. For discussion of deception measures, see paragraph 143.

a. Communication Security. Radio is the primary means of communication. It is subject to enemy interception, and therefore stringent measures must be enforced to safeguard all transmissions and to eliminate all that are unnecessary (FM 101-5).

b. Counterreconnaissance. It is the duty of every unit to protect itself against enemy reconnaissance activities. The most effective action that can be taken by units in the battle area is to remain concealed from enemy air observation and to defeat enemy ground reconnaissance elements as they attempt to penetrate the forward reconnaissance screen. Since at least some of the attempted enemy penetrations will be successful, all personnel must be thoroughly trained to have no unnecessary items of intelligence value on their persons.

c. Electronic Warfare Support. An electronic warfare unit and U. S. Army Security Agency support may be attached to the division.

d. Counterespionage. Counterespionage includes both the offensive and defensive counterintelligence effort to neutralize espionage through the detection, investigation, and misdirection of opposing intelligence organizations. It is accomplished through the penetration and surveillance of hostile espionage and subversive organizations, including partisans and guerillas, as well as the standard investigative techniques used to expose and destroy any conspiracy. It requires liaison and cooperation with other investigative organizations, and all organizations screening and controlling mass movements of prisoners and noncombatants within the area of Army responsibility.

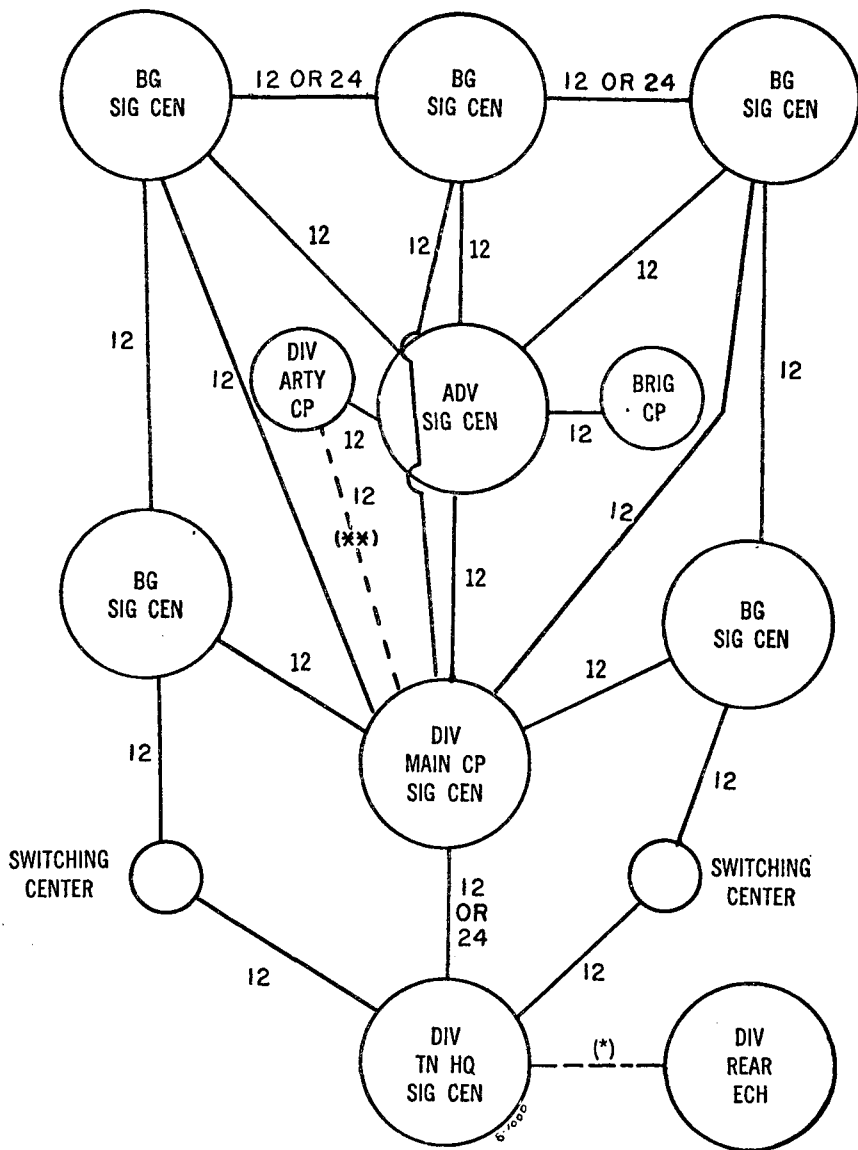
Section VII. SIGNAL COMMUNICATIONS

67. General

To keep pace with the swiftly changing situation and to bring the full power of the division to bear in accomplishing the mission, the commander, his staff, and the operational units require a highly responsive, flexible, and reliable signal system.

68. Area Signal Communications

a. An *area* signal communications network facilitates control of the division. The basic concept involved is one of multiple alternate routing within the radio relay system. A series of mobile signal centers are used, each of which supports designated areas and units. These centers are tied together by 12-channel radio relay links. For every possible disposition of division forces, there are a number of configurations of the *area* system. The actual engineering and construction of the most appropriate network are the responsibilities of the division signal officer. Since the division is seldom stationary, it follows that the signal system is never static. It is continuously being changed to support not only the current disposition of units, but also the projected future movements of units. Such a condition is dependent upon complete detailed integration of signal planning with overall operational planning. Several typical layouts of the area system are shown in the following figures.



NOTE: Signal centers include switching centers.

Figures denote numbers of radio relay channels.

* Radio, radio relay link, or wire line as appropriate.

** NOT ALWAYS PROVIDED

Figure 16. Basic area communications system.

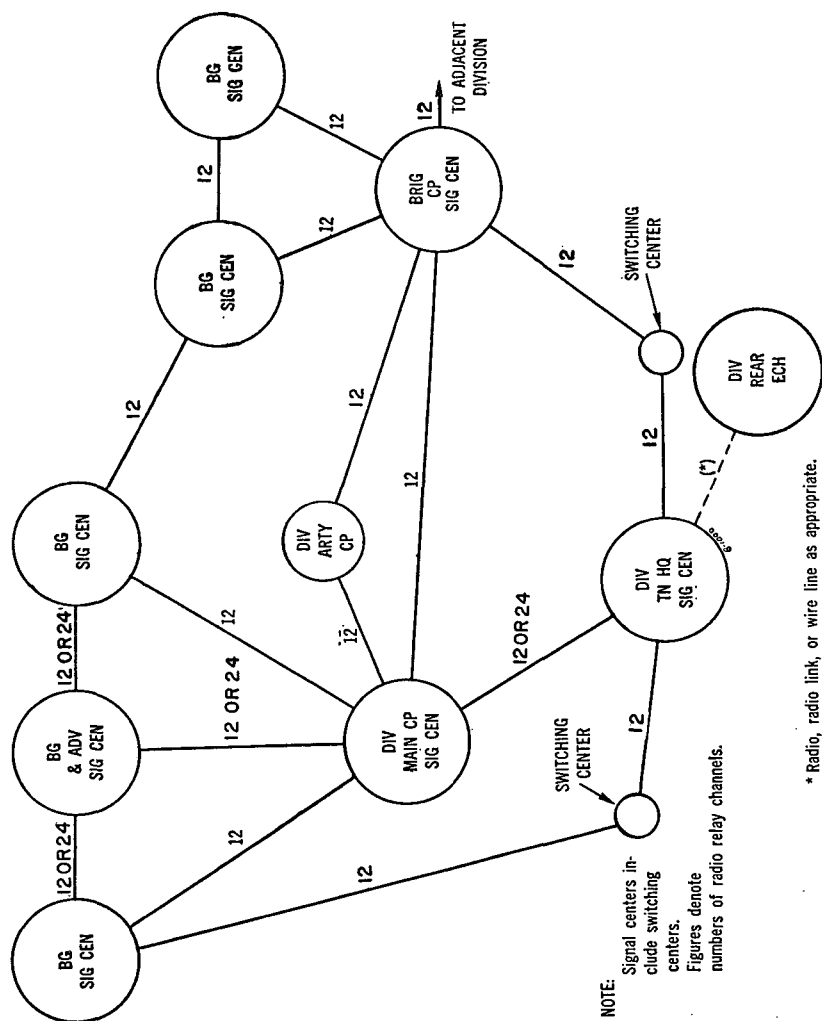
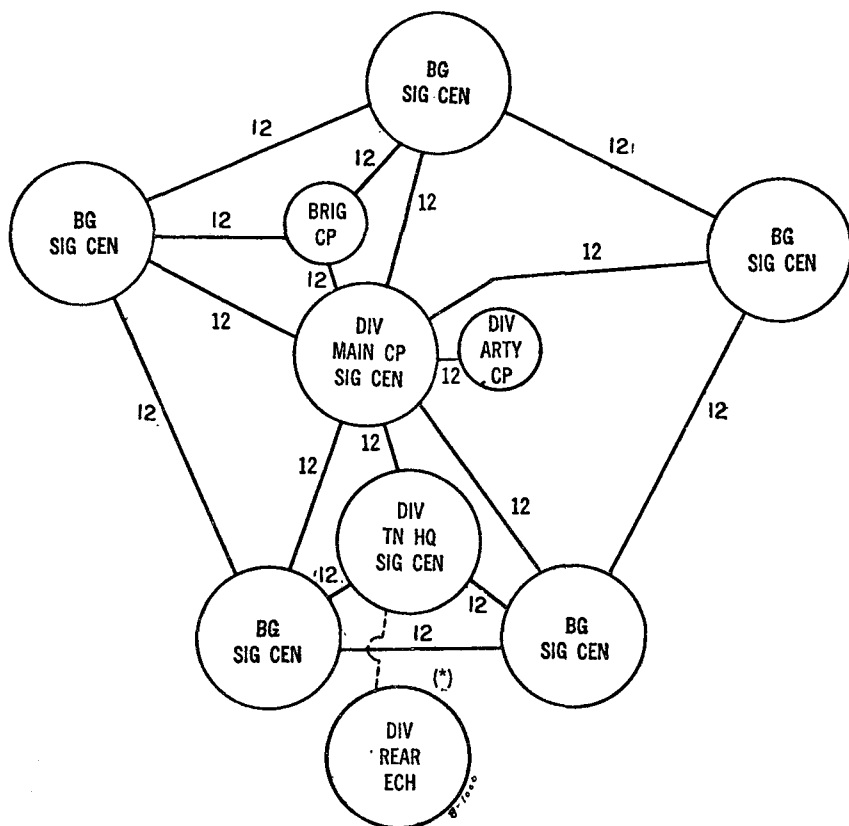


Figure 17. Division area communications system, task force of two battle groups.



NOTE: Signal centers include switching centers.

Figures denote numbers of radio relay channels.

* Radio, radio relay link, or wire line as appropriate.

Figure 18. Division area communications system, all-around formation.

b. The major communication support furnished by the division signal battalion is accomplished by direct support from the signal center platoon with each battle group, and by signal installations at the division advance signal center, division main signal center, brigade headquarters, division artillery headquarters, and division trains headquarters signal center. Each of these centers is equipped to provide a portion of the division radio, local wire, radio relay, radio wire integration, and message center service. In addition, a small signal platoon, capable of providing wire, message center, and limited radio facilities, is assigned to the division administration center located in the division rear command post.

c. Once placed in direct support, the battle group area support platoons normally remain and move with the battle groups they support. All communication equipment is mounted in vehicles. In addition to

the organic equipment capabilities of each platoon, additional facilities may be acquired by augmentation from reserves contained in the headquarters, headquarters and service company of the signal battalion.

d. It will be noted from the preceding figures that there is always a forward signal center in operation. This is essential to the reliability and flexibility of the system as a whole under conditions of atomic warfare. The advance center serves in part as an alternate for the signal center at the division main command post in event of damage to the latter center, and signal equipment not needed at the main command post may frequently be kept in standby at the advance center. By coordination with G3, location of the advance signal center is selected to serve as the nucleus of the next division main command post. It can also serve as the alternate tactical or brigade command post. In the regular process of occupation of a succession of division command posts, the advance signal center provides for a smooth transition from a small facility into a major hub or terminal of the principal links to the forward combat units of the division. When the division main command post displaces to this site the process begins over again, since a new advance signal center will be established.

e. The division trains signal center is tied into the division main command post by a 12- or 24-channel radio relay link, and to other signal centers in the area system by means of two 12-channel radio relay links which normally pass through rear switching centers. Trains units are dispersed in the vicinity of one of these signal installations and thereby have access to the area system.

f. The division signal battalion has a limited field wire construction capability. Its principal employment is to install short lines from radio relay sets to switchboards, and to lay field wire lines to units in the immediate vicinity of area switching or signal centers. The primary trunk line service between signal centers is provided by radio relay. When circumstances require an extensive wire trunk system, the signal battalion is reinforced from Army troops. Vehicular radio is used as an alternate means and for special purpose traffic.

g. The division area communication system may provide organic and attached artillery units with logistic and administrative communication on a common user basis. In addition, the system will provide certain sole user circuits to field artillery for fire control.

69. Radio Nets

a. General. Radio communication nets for the division are shown in figure 19.

b. Arrangements. The arrangements within the division for particular operations will vary from the type or standard shown. The arrangement illustrated indicates the basis on which radio sets have been included in tables of organization and equipment.

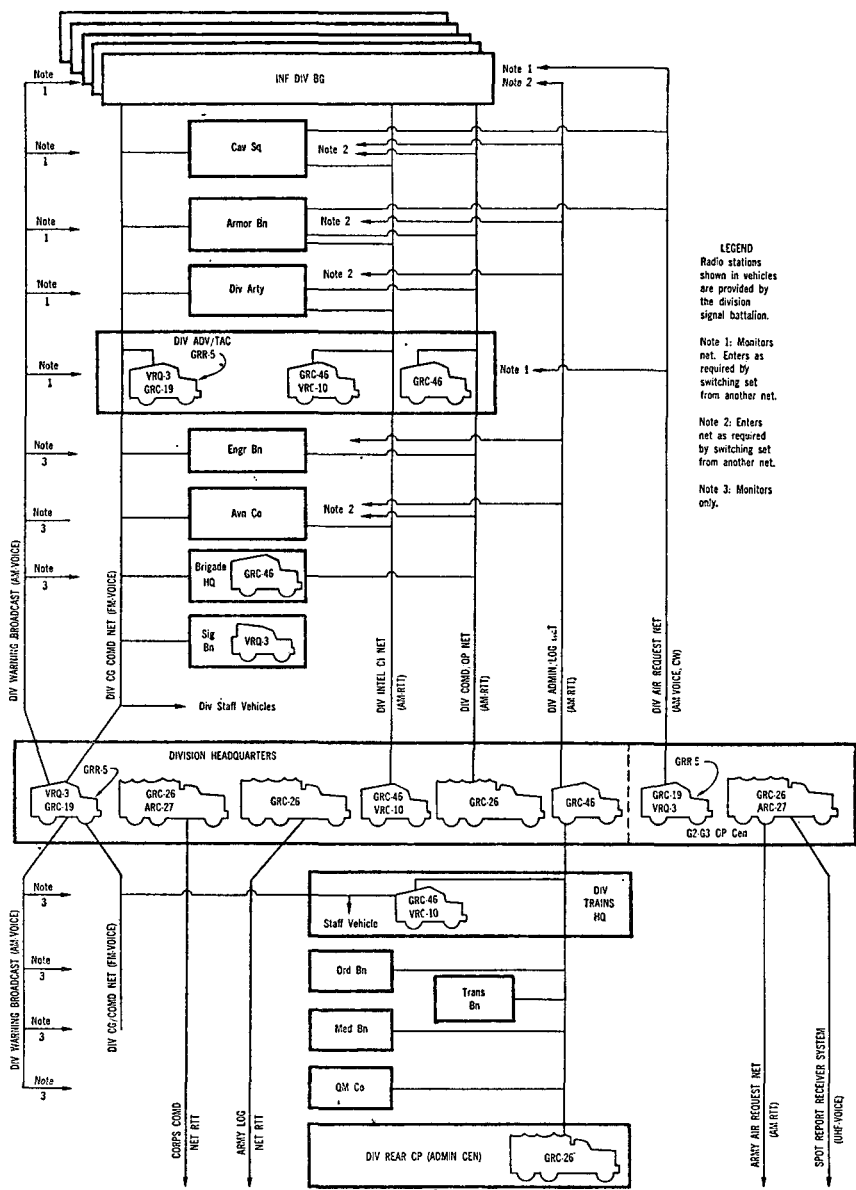


Figure 19. Type division radio nets and stations.

c. Division Command, Intelligence, and Administrative/Logistics Nets (AM-RTT).

- (1) The signal battalion and other divisional units are equipped to operate 3 separate functional radio-teletypewriter nets; 1 primarily for command operations, 1 primarily for intelligence operations, and 1 primarily for administrative/logistical operations.
- (2) The full operation of these three nets represents a maximum capability. Additional sets have not been provided to permit simultaneous displacement of all net stations at any echelon. The apparent shortage of displacement or utility sets results from expectations that full operation of all three nets simultaneously will be required infrequently, that the nets will be combined as traffic and transmission conditions permit, and that stations or nets will be placed in standby status when other means of communication are available.

d. Division Commanding General/Command Net (FM-Voice).

- (1) The division commanding general/command net is intended primarily for radio communications between the division commander and staff and the commanders of all major subordinate units. The number of radio stations in the net restricts its use. While specific employment of the net is governed by the division commander's desires, it is usually limited to vertical communications only. Under such circumstances, lateral radio communications between subordinate unit commanders are established by the calling commander entering the unit FM net of the called commander.
- (2) The signal battalion operates the net control station in the commanding general/command net on a 24-hour basis. The battalion is equipped to establish relay stations in the net, either by use of the radio sets provided for the purpose, or by use of the radio/wire integration station facilities. Airborne relay stations, when required, are established by the division aviation company.
- (3) Radio sets organic to the command vehicles of the armored carrier companies provide for signal communication with commanders of mechanized units.

e. Division Warning Broadcast Net (AM-Voice)

- (1) The signal battalion operates the net control station in a division warning broadcast net (AM-voice). The net is employed to broadcast air alerts, CBR attack warnings, fall-out warnings, radiological safety data, atomic strike warnings, and similar information of an urgent operational nature applying to major segments of or the division as a whole.

These transmissions need not be handled through strict command channels, and no immediate receipt or reply is required.

- (2) The division artillery, battle group headquarters, and the cavalry squadron and armor battalion have radio sets, normally employed in other nets, which may transmit in the warning broadcast net. While use of these stations is governed by division instructions, the division artillery station usually broadcasts all air alerts. The cavalry squadron usually broadcasts urgent reconnaissance information to elements of the division with whom they are not in direct radio contact.
- (3) Each battle group, separate battalion, separate company, and some subordinate elements of these units are equipped with a radio for receiving information broadcasts in this net. In addition, a set is provided in each signal center in the division area communication system for receiving warnings from the net for local dissemination. This function is normally accomplished by telephone to associated headquarters staffs and to installations connected to the centers who have no other better means of receiving the information.
- (4) The nature of the information broadcast on this net tends to make it a prime target for electronic countermeasures. It is expected that divisions will establish adequate safeguards, to include abbreviated transmissions and limitations on use.

f. Air Request Radio Nets.

- (1) Radio sets are provided for establishing a separate division air request net (AM-voice/CW). The net control station is operated by the signal battalion, normally with the division G3 air. The battle group headquarters, cavalry squadron, and armor battalion are provided radio sets for use in this net.
- (2) The radio sets used in this net are also used in secondary roles, such as, for transmission in the division warning broadcast net.
- (3) The signal battalion operates the division station in the Army air request net and is located with the G3 air.

g. Spot Report Receiver System.

- (1) The signal battalion is equipped to operate on UHF-voice radio station in the spot report receiver system for monitoring Air Force close air support missions flown for the division. The station is mounted in the same vehicle as the division station in the Army air request net.

- (2) A second UHF-voice radio set is provided in the signal battalion primarily as an alternate for the above station. It may be used to monitor Air Force reconnaissance missions flown for the division; however, a separate set is provided in the division headquarters TOE for use of G2 for this purpose.
- (3) Both of these facilities are frequently supplemented by similar monitoring sets operated by the division air liaison officer. The battle group headquarters, cavalry squadron, and armor battalion are also equipped with UHF-voice radio sets for use in the spot report receiver system.

h. Radio/Wire Integration Stations.

- (1) An FM-voice radio/wire integration station is operated at each signal center (except the rear command post) to connect mobile FM radio stations into the division area communications system on a push-to-talk basis. This system of stations is one of the more important features of the area system.
- (2) The system of integration stations is used to establish communication between mobile FM radio stations and elements connected to the area system by telephone. It is also used in lieu of FM radio relay stations to establish communications between FM radio stations operating beyond direct FM range. The system of stations is supplemented by similar facilities within some of the division combat units operating on unit net frequencies. Some of the more important specific uses foreseen for this system of integration stations are—
 - (a) For use of the commanding general and division staff, when traveling, to contact division elements connected to the area communication system by telephone, and for use as relay stations in the division commanding general/command net (FM-voice).
 - (b) For initial establishment of telephone service from the division area communication system to using units until wire links can be established.
 - (c) For voice communication between mobile combat elements in the division forward area and supporting division logistical elements in the rear area who may be connected to the area communication system by wire or radio/wire integration links.
 - (d) For communication between low-flying Army aircraft operating over distant parts of the division area, and airstrips or flight control elements connected to the area communication system when direct FM contact can not be maintained.

- (e) For communication between forward air controllers and air liaison officer communication facilities (normally at the division G2-G3 operations center) when connected into the area communication system.

Section VIII. CONTROL MEASURES

70. Dispersion

Atomic warfare necessitates controlled dispersion of units and installations. G3 is responsible for general planning of all movements to prevent congestion and to control dispersion. The detailed planning of control measures and march orders of administrative moves is under the general staff supervision of G4. The G3 is responsible for the general location of units within the division bivouacs, assembly areas, and in deploying the division for combat. In designating the location of units he will coordinate with the G4 and, when practicable, with the trains commander. The G3 gives first consideration to requirements of appropriate tactical units, keeping in mind the area, location, and accessibility requirements of administrative support elements.

71. Atomic Control Measures

a. The control measures described in FM 100-5 are applicable to both atomic and nonatomic warfare.

b. Atomic warfare requires that additional control measures be adopted and that existing control measures be redefined, when necessary, to facilitate the use of atomic weapons. These are—

- (1) *Atomic safety line (ASL)*. The ASL is a line used as a troop safety measure in the coordination of maneuver and atomic fires. It may be used to establish—
 - (a) The limits to which casualty producing effects or friendly weapons may be permitted to extend in the direction of friendly forces.
 - (b) The limit of advance of friendly troops before encountering casualty producing effects from planned friendly atomic fires.
- (2) *Atomic no-fire line*. This line is similar in purpose to the artillery no-fire line and is established by division on recommendations from the battle groups. It is a line beyond which the higher echelons of command may employ atomic weapons without coordination with the force that established the line. Casualty or damage producing effects (including flash-blindness) must not fall short of the line, and when feasible higher echelons should inform division of their anticipated employment of atomic fires beyond the line.

- (3) *Boundary.* In addition to other implications, a boundary serves as a control measure for coordinating atomic fires. When atomic fires employed by one force will have casualty or damage producing effects in the zone of an adjacent force, this atomic fire must be coordinated with and approved by the adjacent force.

CHAPTER 5

ADMINISTRATION

Section I. GENERAL

72. General

Atomic warfare necessitates more widely dispersed formations and increases the probability of operations in areas not completely secure; therefore, modifications of certain administrative procedures are required. Where appropriate, these modifications are covered in this chapter. Administration as used in this text, unless otherwise qualified, encompasses the fields of logistics, personnel, and civil affairs/military government.

73. Division Administrative Control Center (DACC)

One method of coordinating logistical support within the division is through the employment of a division logistics control center (DACC). The functions of this activity may include processing information on locations of logistic installations, traffic plans, route conditions and vehicle availability data. In addition, planning for consolidation and delivery of class I, II, and IV supplies moving from division distributing points or army supply points to using units may be accomplished by this agency. In fluid situations the DACC may serve to reduce the requirement for frequent publication of detailed administrative orders. This reduction is accomplished by the division G4 notifying the DACC of any changes in the administrative situation, status and location of army administrative support activities and other administrative operational matters. The Trains Commander will normally supervise the DACC.

74. Responsibility

The division commander is responsible for the provision of administrative support within the division, including attached units. The division G1 and G4 prepare plans, orders, and directives for approval by the division commander, and supervise their execution. For details regarding administrative responsibilities of general staff officers, see FM 101-1 and FM 101-5.

Section II. SUPPLY AND EVACUATION

75. Responsibility

The division commander has general responsibility for determining requirements, requisitioning, receipt, storage, maintenance, and distribution of all supplies for divisional units, including attached units. The G4 plans and coordinates functions pertaining to supply and evacuation. He exercises general staff responsibility and supervision over the supply activities of the division.

76. Classes of Supplies

For definitions, see SR 320-5-1.

77. Regulated Items

See FM 100-10.

78. Supply Procedures

Supply procedures shown in FM 100-10 are applicable, with modifications as shown in the following paragraphs.

79. Supply Distribution

a. General. The concept of operations of the division in widely dispersed formations and frequently in fluid situations affects distribution procedures. In certain situations, the roads leading from service units to combat units may not be secure. Air transportation is particularly useful in such situations. However, if not available, ground transportation must be used. Supply convoys, rather than individual or small groups of vehicles, are organized to transport supplies to using units. These convoys may require protection by combat elements.

b. Classes I, II, and IV, and Repair Parts.

- (1) *Classes I, II, and IV.* Class I, II, and IV supplies are normally delivered from army installations, by army transportation, to division technical services. To reduce the logistical tasks of combat elements, division technical services normally continue unit distribution of these supplies to battle groups, battalions, and separate units. Transportation required by division technical services to make unit distribution is requested from the division transportation section. Unit distribution by technical services may not be economical or feasible when supported units are changing location frequently. In such situations, it may be more efficient to attach sufficient transportation to units to permit supply point distribution.

- (2) *Repair parts.* Repair parts include those parts, assemblies, and components required for the support of maintenance. Prescribed loads of repair parts are carried by all units. Repair parts are normally requisitioned and issued through maintenance channels. Unit stocks of parts are normally replenished by mobile contact teams. These teams usually make direct exchange of serviceable for unserviceable assemblies and components. Required authorized parts, not included in the load authorized for the unit, are requisitioned by the maintenance officer directly on the appropriate divisional technical service unit, using the requisition procedures established by AR 711-16. Details are prescribed in the division SOP.

c. Classes III and V.

- (1) *Class III.* Normally supply point distribution is used by army class III supply points. The division will pick up motor and aviation gasoline from the army supply point utilizing the five 5,000-gallon tank trucks organic to the Class III Section, QM Company. These tank trucks haul class III products to the division distributing point or rendezvous point where they decant into 1,200-gallon tank trucks. The division quartermaster company has twenty-eight 1,200-gallon tank trucks of which approximately eighteen are attached to supported major gasoline consuming units to take care of their minimum daily requirements. The attached gasoline tank trucks will work from the supported unit to the division class III distributing point and return. Mobile filling stations will be established by the class III section as required. When the situation permits, the class III section makes unit distribution to battle groups, battalions, and separate units.
- (2) *Class V.* Units of the division obtain class V supplies from the supporting army ammunition supply point (ASP), using organic transportation.

80. Supply and Evacuation by Air

The concept of employment of the division emphasizes the importance of air transportation for movement of personnel and supplies. Full utilization should be made of organic and supporting army aviation, and consideration given to the use of air force troop carrier support. The division G4 plans for and uses aircraft for logistical operations. Supply by air and evacuation by air are planned simultaneously, since it is more economical to accomplish both in the same operation. Utilization of air transportation must be a routine

consideration and not be restricted to emergency situations. For supply by air procedures, see FM 100-10.

81. Supply Economy

Aggressive action must be taken by all commanders and staffs to control and conserve supplies, particularly ammunition and gasoline, from the time requirements are planned until final disposition is made. Maximum usefulness must be obtained from each item, waste minimized, and accumulation of excess supplies avoided. Commanders and staff officers, by staff visits and frequent, intensive inspections, insure that all units and individuals practice proper supply economy.

Section III. MAINTENANCE, BATTLEFIELD RECOVERY AND EVACUATION, AND SALVAGE

82. Maintenance

a. Responsibility. Division technical service units provide maintenance support to divisional units as shown in technical service sections of this chapter.

b. Categories and Echelons. For categories and echelons of maintenance, see FM 100-10.

83. Recovery and Evacuation

Commanders at all echelons are responsible, within their capabilities, for the prompt recovery and evacuation of damaged equipment and its repair and return to service. Normally, combat units are responsible for battlefield recovery; while evacuation is performed either by service elements of the division or by supporting army service units. When recovery and/or evacuation exceeds unit capabilities, respective divisional service units are notified of location and amount of equipment and provide assistance. Requests for assistance that are beyond the capabilities of divisional technical services will be forwarded by the special staff office concerned to the next higher echelon for necessary action.

84. Salvage

a. Definition. See SR 320-5-1.

b. Responsibility. Unit commanders are responsible for salvage operations. Each commander must insure that all individuals are trained in proper salvage discipline.

c. Evacuation. Evacuation of salvage materiel may be done by divisional combat or service units. When a combat unit has salvage materiel to evacuate, utilization is made of organic transportation moving to the vicinity of the division salvage collecting point or appropriate technical service installation. The quartermaster normally

establishes a division salvage collecting point near the class I distributing point. Each technical service provides operating personnel as required. Service unit transportation returning from combat units is also used to transport accumulated salvage materiel. The most economical use of transportation must be made.

d. Captured Enemy Materiel. See FM 100-10.

Section IV. DIVISION TRAINS

85. Organization

See figure 1. For detailed organization of elements of division trains, see paragraphs 91 through 132.

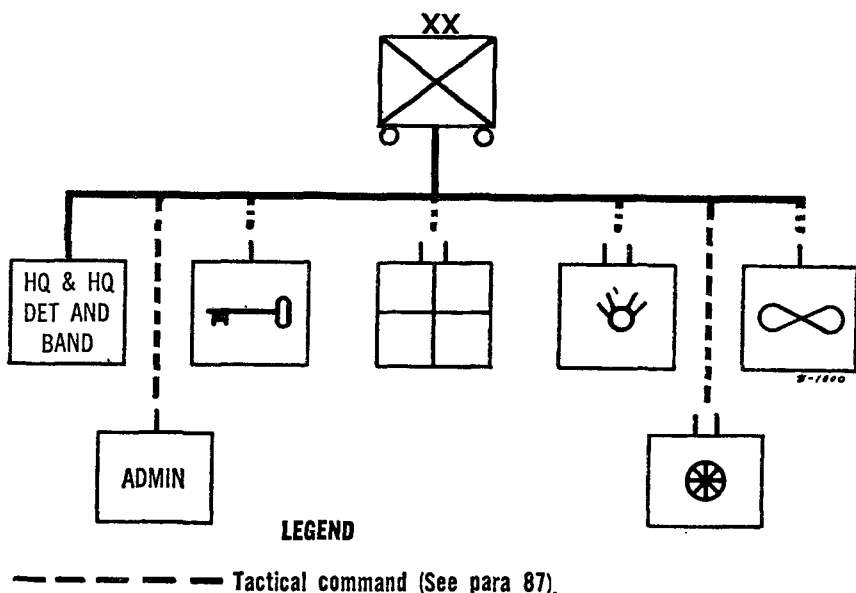


Figure 20. Organization, division trains.

86. Trains Headquarters

a. Trains Headquarters. This headquarters provides a commanding officer, executive officer, S1, S2, and S3 for tactical control of the infantry division trains. Two chaplains are provided to serve all units normally under control of the division trains.

b. Detachment Headquarters. This detachment furnishes administration, mess, and supply for trains headquarters and band. It performs first echelon vehicle maintenance; however, second echelon vehicle maintenance is normally furnished by the division ordnance battalion.

c. Headquarters Section. This section furnishes operations and clerical personnel for the trains commander and enlisted assistants for the chaplains.

87. Division Trains Commander

a. General. The division trains commander is a tactical commander. He is responsible to the division commander for all tactical activities of division trains. The division trains commander facilitates accomplishment of technical operations by close coordination with service unit commanders and staff officers, but he is not responsible for the administrative and technical operations of the service units, nor for the control of aviation operations and specialized aviation training.

b. Duties. The duties of the division trains commander are—

- (1) Tactical command of all components of division trains physically located in trains area.
- (2) Organization of division trains for movement and disposition within the trains area.
- (3) Movement of division trains in accordance with tactical plans. This duty includes route and trains area reconnaissance, selection of trains areas in coordination with G3 and G4, and posting of guides.
- (4) Protection and security of division trains on the march and in the trains area.
- (5) Tactical training of personnel of division trains, to include precombat and during-combat training in marksmanship, marches, bivouacs, security, and defensive combat.
- (6) Supervision of second echelon administrative support of elements of division trains.
- (7) Conduct of inspections to determine the fitness of division trains units to perform tactical functions in the field.
- (8) Coordination and implementation of rear area defense and area damage control plans for the division service area.
- (9) Supervision of organizational maintenance in units attached to division trains.
- (10) Exercising special and summary court martial jurisdiction and Article 15 authority.

88. Division Headquarters Rear Echelon (Rear Command Post)

The division headquarters rear echelon is organized around the administration company. The rear echelon is normally located in the division service area. However, it may operate outside the division area, to the rear, because of its relative immobility in fast-moving situations. See paragraph 54 for additional details concerning the division rear command post. For details regarding the administration company, see paragraphs 91 through 95.

89. Band

The band is organic to headquarters and headquarters detachment, infantry divisions trains. The primary mission of the band is to provide military, concert, and dance music. When performing its primary mission, the band is under the operational control of the division adjutant general. When not engaged in its primary mission, the band assists in maintaining local security and provides prisoner of war escorts, supply handlers, litter bearers, and messengers. The band may perform such other combat duties as the exigencies of the service demand.

90. Operation of Division Trains

a. General. The movement and location of the division trains are dependent on the tactical and administrative situation. Division trains are located to provide timely and adequate administrative support to all units of the division.

b. Control and Movement.

- (1) Normally the G4, coordinating with the G3, prepares orders for movement of division trains. The division trains commander exercises tactical command of the trains through commanders of organic and attached units. Trains headquarters maintains records of personnel, vehicles, and armament of subordinate units, and keeps a situation map showing the location and disposition of these units. The division trains commander normally issues oral or fragmentary movement orders prescribing routes, order of march, method of control, and security measures.
- (2) The division signal battalion provides signal communications for the trains headquarters and the division rear echelon. It also furnishes wire trunk communication to the headquarters of subordinate units of division trains.

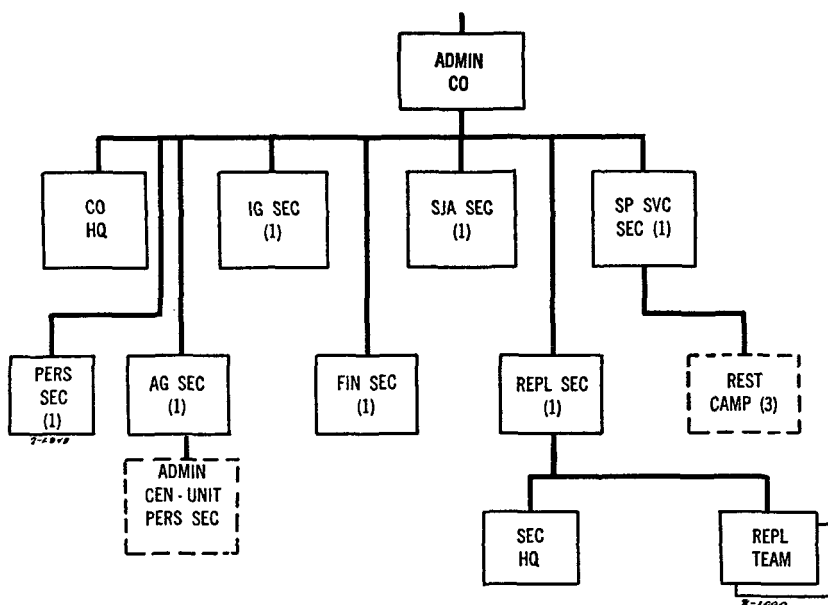
c. Division Service Area. The general area for the division trains is designated by the G4, after coordination with G3 and G1. Specific areas for elements of division trains are designated by the trains commander, coordinating with division special staff officers and commanders of units of the trains. The location of the elements of division trains in the service area must provide for adequate logistical support to divisional units. At the same time, consideration is given to minimizing interference with tactical dispositions and contemplated tactical operations. Fluid situations require increased emphasis on locating service units so that protection is afforded by combat elements. When the division organizes for all-round defense, the division service area is located in the center of the division area rather than in the rear portion of the area (par. 70).

d. Rear Area Defense and Area Damage Control. The G3 is responsible for plans for rear area defense and the G4 for area damage control plans. The divisions trains commander is responsible for coordinating and implementing rear area defense and area damage control plans and operations for the division service area. He assigns defensive missions to elements under his control and coordinates these missions for all-round defense. Each subordinate element of division trains, including attachments, is responsible for its own local security. The communication net available to the division trains commander at trains headquarters facilitates rear area defense and area damage control operations (FM 100-10).

e. Civil Defense. Civil defense, an integral part of area damage control, includes the mobilization, organization, and direction of the civil population. Civil defense affords protection to military installations from damage, minimizes military casualties, and permits the continuance of local support to military operations. The G5 is responsible for civil defense planning and measures for the control of the civilian population. He coordinates with G3 and G4 in their respective fields of interest. See also FM 41-10.

Section V. ADMINISTRATION COMPANY

91. Organization



- (1) Assigned for administration.
- (2) When division is in the field or deployed for combat.
- (3) When established, is operated by Sp Svc Section.

Figure 21. Administration company.

92. Mission

The mission of the administration company is—

a. To serve as a carrier unit for those elements of the division headquarters rear echelon which provide personnel and administrative services, including replacement support, to divisional units.

b. To provide second echelon personnel support for the division headquarters and headquarters company, and all elements of the division trains.

c. To serve as an organization through which the officer in charge of the rear command post exercises control over the elements assigned or attached to the division headquarters rear echelon.

d. To provide limited service support for the division rear echelon and the division administration center.

93. Capabilities

a. The company headquarters has organic mess, organizational motor maintenance, and supply personnel, and provides limited administrative support (except medical) to assigned and attached elements.

b. The replacement section provides facilities for processing and limited training of replacements, and processes hospital returnees, emergency returnees, and rotating personnel. Each of the 2 replacement teams has a holding capacity of 100 replacements at any one time.

c. The division special staff sections located with the company provide appropriate personnel services to the division and operate in accordance with the command and staff relationships and doctrine contained in FM 101-5.

d. The division trains personnel section provides second echelon personnel support for division headquarters and headquarters company and all elements of division trains.

94. Employment

a. Personnel sections of divisional units join the administration company, forming the administration center, when the division is in the field or deployed for combat. These personnel sections operate under the technical supervision of the adjutant general.

b. The company commander commands organic elements of the company and is the headquarters commandant for the division rear echelon. The company commander has no control over the operations of the division special staff sections, the replacement section, or the division trains personnel section, which are organic to the company.

c. Security of the rear echelon is achieved through use of assigned and attached personnel and passive defense measures consisting of dis-

person, camouflage, and concealment of personnel and equipment. Local ground security is coordinated and integrated with other forces in the area.

d. Atomic warfare dictates selection of an area for the rear echelon, which is not located within or adjacent to an area occupied by another activity, to avoid creation of a lucrative target.

e. The replacement section has organic administrative personnel. Mess personnel for independent operation must be provided by company headquarters. The replacement section is normally located at or near the rear command post where it operates under the technical supervision and operational control of the division adjutant general.

f. The adjutant general section operates in accordance with doctrine shown in FM 101-1 and FM 101-5. Sufficient personnel are included in the adjutant general section to operate an adjutant general forward element at the division main command post.

g. The division army post office (main) normally operates in the vicinity of the class I and III distributing points to facilitate pick up of mail by divisional units. The division APO will normally establish APO units in the forward troop areas as well as in the vicinity of the rear echelon as necessary to facilitate mail service and the provision of postal financial services for all units of the division.

h. When established, the division rest camp is normally operated by the division special services officer. Band support is furnished, when requested, by the division band element.

95. Mobility

The administration company is 100 percent air transportable and approximately 10 percent mobile with organic ground transportation.

Section VI. CHEMICAL

96. General

There are no chemical troop units in the division. Handling of supplies and performance of service are accomplished by troops of other services, or by Chemical Corps service units from higher headquarters.

97. Supply

a. Requisitions. The division chemical officer receives, edits, and consolidates requisitions for Chemical Corps items of supply and forwards divisional requirements to Army Chemical Corps depots, or supply point, if established. When feasible, supplies are delivered directly to the using units without stockage at a divisional supply

point. If divisional supply points are necessary, they are established by attached chemical units or set up as subdepots by detachments from Army chemical depots.

b. Flame fuel mixing and service equipment will be operated by division service personnel trained in fuel mixing operations and under control of the chemical officer.

98. Maintenance

Divisional unit commanders are responsible for organizational maintenance of Chemical Corps equipment within their units. Third echelon and higher maintenance support is arranged for by the division chemical officer. The division ordnance battalion and the engineer battalion assist in this maintenance, within their capabilities. This type of maintenance support is prescribed in detail in a division SOP. Maintenance which cannot be performed by divisional units is accomplished through evacuation to an Army chemical maintenance company, or by requesting a mobile maintenance team from an Army chemical maintenance company.

Section VII. AVIATION COMPANY

99. General

Organization, capabilities, and employment of the aviation company are shown in paragraph 21. With the exception of aircraft supply and maintenance functions, the aviation company receives its administrative support in the same manner as other divisional units.

100. Supply

Supply of aircraft, aircraft repair parts, components, and expendables are provided to the aviation company directly from the supporting transportation army aircraft maintenance unit.

101. Maintenance

The aviation company performs second echelon maintenance of aircraft. Maintenance teams may be assigned from the unit's service platoon to company elements operating from forward airstrips or landing areas. Third echelon maintenance support will be provided by the supporting transportation army aircraft maintenance unit.

Section VIII. ENGINEER BATTALION

102. General

Organization, capabilities, employment, and mobility of the engineer battalion are as indicated in paragraph 22.

103. Supply

a. Classes II, IV, and Repair Parts.

- (1) *Classes II and IV.* Requisitions for engineer class II and IV supplies are forwarded by units of the division to the division engineer battalion for editing and consolidation. Periodic requisitions are made by the engineer battalion on the supporting field army engineer depot or supply point for consolidated division requirements. The engineer battalion receives, breaks down, and issues engineer class II supplies to other elements of the division; class IV supplies are normally distributed direct from supply points to designated locations for requesting units to avoid unnecessary handling of heavy tonnage items. Unit distribution of engineer supplies is made within the division whenever possible; if this distribution is not feasible, units obtain supplies from a location established by the engineer battalion.
- (2) *Repair parts.* First and second echelon engineer repair parts are furnished to division units by the engineer battalion in accordance with the procedures prescribed above for engineer class II supplies. The engineer battalion maintains a small stock of selected repair parts to facilitate third echelon maintenance support of engineer equipment within the division.

b. Water Supply. Five water supply points may be established as required. Units of the division draw water from the nearest water supply point.

c. Map Supply. As prescribed by the division G2, the engineer battalion procures and issues maps and map substitutes to all elements of the division. Limited numbers of engineer sketches can be produced, but the battalion has no map production or reproduction capability.

104. Maintenance

The engineer battalion provides third echelon maintenance support for all engineer equipment in the division. Repairs are performed on site by mobile contact teams whenever possible. The accumulation of unserviceable equipment, turned in for repair, is not permitted to interfere with the mobility of the battalion. Items which cannot be readily repaired at the using unit are evacuated to the supporting field maintenance company.

Section IX. MEDICAL BATTALION

105. Organization

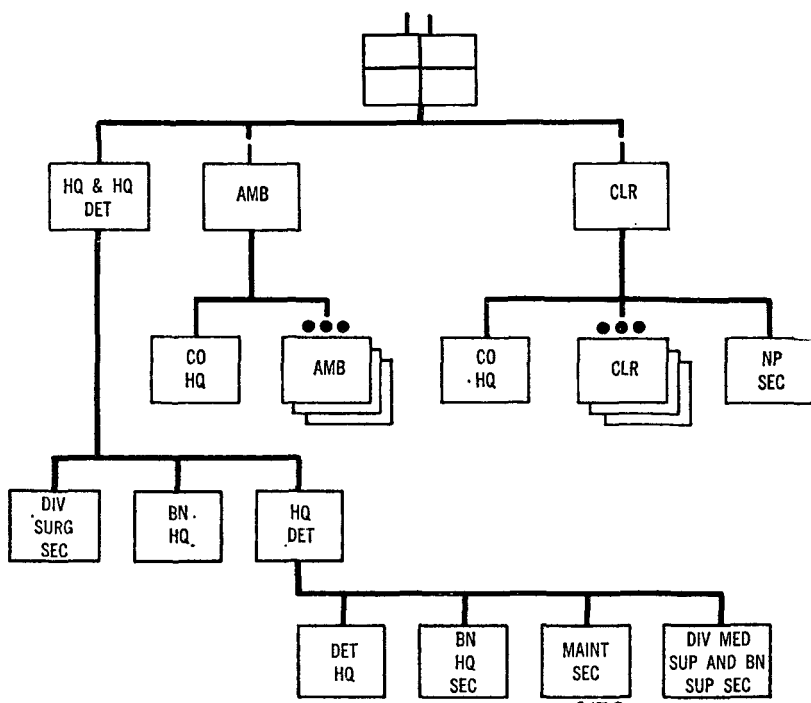


Figure 22. Medical battalion.

106. Mission

The mission of the medical battalion is to provide support to medical elements of the division and those divisional units without organic medical means.

107. Capabilities

- a. Administrative support of organic battalion elements and attachments.
- b. Definitive treatment and care for minor injuries and diseases.
- c. Sorting, emergency treatment, and care of serious injuries and diseases and preparation of patients for evacuation from the division area.
- d. Establishment of 3 clearing stations each capable of providing treatment and holding facilities for 80 patients.
- e. Ambulance transport of patients within the division area.
- f. Sorting and limited treatment of dental patients.

g. Establishment of a mental hygiene and psychiatric treatment facility.

h. Establishment of division medical classes II and IV distributing points.

108. Employment

a. General.

- (1) *Division surgeon.* The division surgeon is a special staff officer who normally operates in the division CP. Although assigned to the medical battalion, he does not command the unit, which has a designated commander. The division surgeon is responsible for the technical supervision of division medical service at all echelons.
- (2) *Medical battalion.* The division medical battalion operates under division control. Its elements, under the medical battalion commander, are employed on an area basis to insure optimum support to the division. In the assignment of geographical areas of responsibility to medical battalion elements, consideration is given to the tactical and logistical situation, troop concentrations, terrain and climatic conditions. Where tactics, terrain, climate, and other situations warrant, elements of the battalion may be attached to units or task forces.

b. *Headquarters and Headquarters Detachment.* The headquarters and headquarters detachment provides command, administrative, technical, and operational supervision of organic battalion elements and attachments.

c. *Ambulance Company.* The ambulance company provides transport for patients within the division area. Normally, ambulances are used to evacuate patients from unit areas and aid stations to the clearing station(s). Because of the close relationship between evacuation and clearing functions, ambulance platoons are normally assigned areas of responsibility identical to those of the clearing platoon to which they evacuate. The platoon is employed on an area basis under the platoon commander. In employment, the sections or individual ambulances are located in such manner as to expedite the transport of patients from unit areas or aid stations to the clearing stations. Maximum use is made of radio communications in control and dispatch of ambulances. Increasing area evacuation requirements may be met by the temporary attachment of personnel and equipment between ambulance platoons, or if the requirements are beyond the capability of the ambulance company, assistance is requested from higher headquarters. The company is normally assisted in its evacuation mission by division aviation and Army Medi-

cal Service helicopters in the movement of serious cases. See chapter 16, FM 100-1.

d. Clearing Company. The clearing company establishes one or more clearing stations accessible to evacuation routes and helicopter landing sites. The number of stations to be established is based on the tactical and logistical situations, troop concentrations, terrain, climate, and rear area defense and area damage control plans. Each station becomes a base of medical operations for its assigned geographical area of responsibility. Clearing stations sort, provide medical and surgical care to the extent necessary to return the patient to duty within the evacuation policy, or prepare him for evacuation. It receives patients from divisional, nondivisional, and transient units within its assigned area. During displacements, continuous medical service is maintained by movement of the platoon in sections, leap-frogging of platoons, or mutual support by operating platoons when feasible. Movement must of necessity be closely coordinated with supported units. Normally, clearing station patients are evacuated by Army ambulances, Army Medical Service helicopters, or other Army aircraft.

e. Division Medical Supply. The battalion medical supply section maintains a small stock of fast moving medical classes II and IV supplies. A medical supply distributing point is normally established in the vicinity of each clearing station. Division medical distributing points stock are replenished from medical supply installations in the corps or army area.

109. Mobility

The medical battalion is 100 percent air transportable. Ground mobility with organic vehicles of the ambulance company is 100 percent while the clearing company and headquarters and headquarters detachment, medical battalion, are approximately 25 percent and 10 percent mobile, respectively.

Section X. MILITARY POLICE DETACHMENT

110. Organization

See figure 23.

111. Mission

The mission of the military police detachment is to provide military police service to the division See FM 19-10 and FM 19-90.

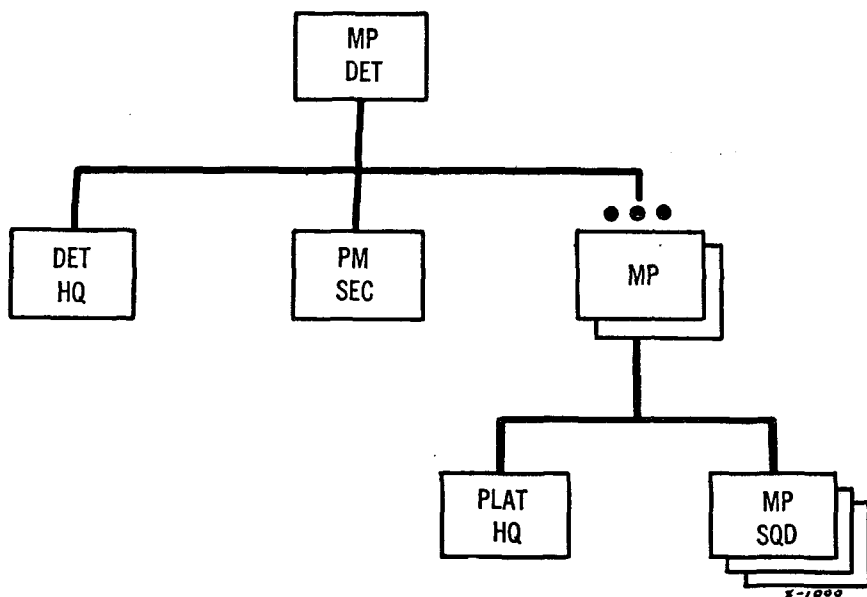


Figure 23. Military police detachment.

112. Capabilities

Personnel of the military police detachment are trained to perform all military police functions. The detachment has the following capabilities:

a. The provost marshal and detachment commander can operationally control and command, respectively, up to seven military police platoons.

b. One platoon, utilizing its headquarters personnel, can perform a maximum of one, or a proportionate part of all, of the following primary duties on a 24-hour continuing basis:

- (1) Operate five (two-man) *traffic control posts* (TCP) (fixed).
- (2) Operate five (two-man) *traffic patrols*.
- (3) Provide 10 men for security and for guarding POW and military prisoners.

c. Additional duties such as antiguerrilla operations; honor guards; route reconnaissance; testifying before courts and boards; searches; seizures; straggler control; and construction, erection, and maintenance of temporary route signs cannot be disregarded. The time expended on these duties is unpredictable; however, they do affect the capabilities shown in *a* and *b* above.

d. Each TCP and/or traffic patrol has a radio equipped ¼-ton truck. Aircraft organic to the division should be used for assistance in traffic control and transporting traffic control personnel.

TCP's and traffic patrols also aid in such duties as straggler control and enforcement of laws, regulations, and orders.

e. There will frequently be situations where the requirements for military police services exceed the capabilities of the military police detachment. In these cases military police augmentation from higher headquarters will be required.

113. Employment

The detachment is under command of the detachment commander and under operational control of the division provost marshal. The detachment is assigned to headquarters company of the division for administration. The techniques and details for training and performance of duties are contained in the 19-series field manuals. In the assignment of duties, unit integrity should be maintained. For the accomplishment of duties, the detachment may be employed as follows:

a. *In division Area, Exclusive of Areas Occupied by Battle Groups Actively Engaged.*

(1) One platoon (plus or minus) for—

(a) *Traffic control* to include TCP's and traffic patrols.

(b) Circulation control of individuals with TCP's acting as straggler control posts. Traffic patrols also enforce military law, orders, and regulations, apprehend offenders, and collect and control stragglers and prisoners of war.

(2) One platoon (plus or minus) for prisoner of war collecting point, detention facility, protecting individuals and property, and assisting in handling refugees and displaced persons.

b. *In the Entire Division Area to Include Support to Battle Groups and Task Force.*

(1) One platoon (plus or minus) in support of, or attached to a task force and/or one or more battle groups.

(2) One platoon (plus or minus) in the division area, exclusive of the battle group or task force areas where military police are operating.

114. Mobility

The military police detachment with equipment is 100 percent air transportable and has 100 percent ground mobility with organic vehicles.

Section XI. ORDNANCE BATTALION

115. Organization

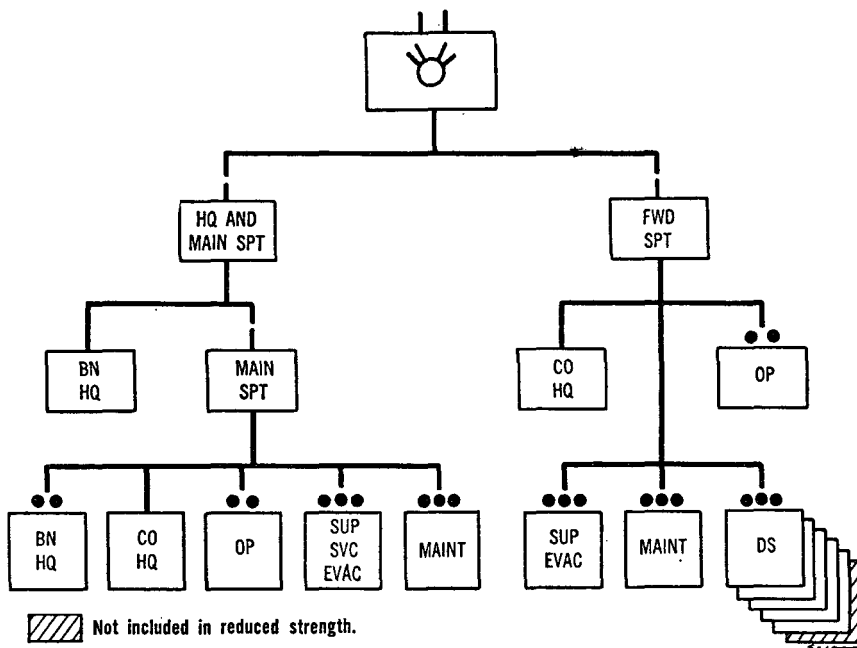


Figure 24. Ordnance battalion.

116. Mission

The mission of the ordnance battalion is to provide direct support ordnance service for an infantry division.

117. Capabilities

a. Supply. The ordnance battalion provides—

- (1) Ordnance supply support to the division, except for ammunition.
- (2) Administrative control of ammunition supply to the division and attached units.

b. Maintenance. The ordnance battalion—

- (1) Performs third echelon maintenance on ordnance wheel and track vehicles (approximately 75 percent during sustained combat operations), artillery, small arms, and instruments.
- (2) Assists in performance of organizational maintenance beyond using unit capabilities when third echelon maintenance workload permits.

c. Service. The ordnance battalion—

- (1) Provides technical assistance to all ordnance maintenance and general supply activities of the division.
- (2) Insures that ammunition personnel in battalion headquarters and in the battalion headquarters section are trained in special weapons munitions logistical matters.
- (3) Assists using units in battlefield recovery when requested and provides ordnance evacuation support to all divisional elements.
- (4) Operates the division ordnance collecting point.

118. Employment

The ordnance battalion provides integrated ordnance maintenance and supply service to the infantry division. The ordnance battalion is 80 percent mobile and has a flexible organization to permit employment of elements at multiple locations. Battalion elements possessing appropriate capabilities are located to facilitate support of using units. Control is normally centralized; however, elements may be attached to units for certain tactical operations. Emphasis is placed on movement of supplies and service to the place of use. Mobile contact teams are used to the extent practicable to make repairs at the using unit, to replenish repair parts stocks, and to make direct exchange of serviceable for unserviceable assemblies and components. Ordnance support is, in general, provided on a task and area basis, with elements providing support to specified units and to a portion of the division area. Emergency maintenance support will be provided to all transients upon request. Emergency supply support for all transients will be limited to that necessary to permit the transient to reach his normal support base. The battalion also performs limited maintenance on chemical equipment.

a. Headquarters and Main Support Company. The battalion headquarters and the main support company are normally located together in the division service area.

(1) *Battalion headquarters.*

- (a) This headquarters provides command, administrative (not second echelon personnel actions), technical, and operational supervision of organic battalion elements and attachments.
- (b) The battalion commander is the division ordnance officer. See FM 101-5.
- (c) The division ammunition office included in the headquarters of the battalion provides staff assistance for ammunition.

tion and special weapons, and administrative control of supply of these items to the division and attached units.

(2) *Main support company.* This company—

- (a) Provides enlisted personnel and equipment for the operation of the battalion headquarters, the division ordnance office section, and the division ammunition office.
- (b) Provides ordnance third echelon maintenance and direct exchange supply support to elements of the division which are normally located in the division service area.
- (c) Provides ordnance supply support other than direct exchange for all divisional units.
- (d) Provides reinforcing ordnance third echelon maintenance and general supply support to the forward support company.
- (e) Provides limited evacuation support of vehicles to supported units.
- (f) Establishes and operates the division ordnance collecting point.
- (g) Provides ordnance technical assistance service to all supported units.

b. Forward Support Company. The forward support company normally operates separately from the headquarters and main support company. Elements are located to provide ordnance support to forward units of the division. The forward support company provides—

- (1) Ordnance third echelon maintenance and direct exchange supply support to all divisional elements in the division forward area. The direct support platoons will habitually be assigned to support the same combat elements and the maintenance platoon of the forward company will support all other units in the division forward area.
- (2) Limited evacuation support and assistance in battlefield recovery.
- (3) Ordnance technical assistance to all supported units.
- (4) Appropriate elements to accompany separate task forces in order to provide prompt rehabilitation or recovery.

119. Mobility

Except for tank recovery vehicles, the battalion is air transportable. The battalion is 80 percent mobile with organic transportation. The forward support company is 100 percent mobile and headquarters and main support company is 70 percent mobile.

Section XII. QUARTERMASTER COMPANY

120. Organization

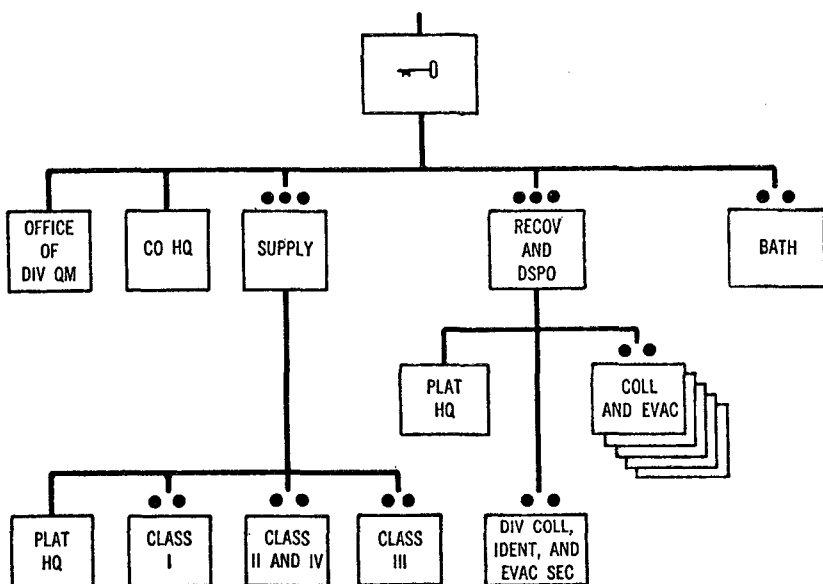


Figure 25. Quartermaster company.

121. Mission

The mission of the quartermaster company is to—

- a. Obtain, provide intransit storage, maintain reserves of, and prepare quartermaster supplies for distribution to divisional units.
- b. Provide bath service, graves registration service, second and limited third echelon maintenance of quartermaster equipment, post exchange activities, and receipt and evacuation of quartermaster salvage within the division.

122. Capabilities

The capabilities of the quartermaster company are to—

- a. Perform breakdown of class I supply for organic and attached separate units and to operate class I distributing point. To make unit distribution in trucks provided by the division transportation officer.
- b. Operate the division class III distributing point and to make unit or supply point distribution of petroleum products.
- c. Operate the division quartermaster class II and IV distributing section. To package limited quantities of supply for aerial delivery by Army aircraft.

d. Provide graves registration service.

e. Conduct salvage operations normally limited to the establishment of a salvage collecting point for the receipt and evacuation of quartermaster salvage items and captured quartermaster type material. Additional support from divisional or nondivisional units is required when a division salvage collecting point (salvage for all technical services) is established, or when large quantities of salvage are involved.

f. Perform post exchange activities limited to establishment and supervision of exchange activities. Personnel for the operation of unit exchanges must be provided by units.

123. Employment

a. *Division Quartermaster.* The division quartermaster is a special staff officer and has operational control of all quartermaster troops in the division. He supervises, directs, and coordinates the activities of the quartermaster company.

b. *Company Headquarters.* Company headquarters provides necessary command and supervision for the company, operates the company command post and unit mess, and provides organizational maintenance for organic company vehicles.

c. *Supply Platoon.* The supply platoon with its operating sections determines requirements for and procures all classes of quartermaster supply. The division quartermaster supply officer in the office of the division quartermaster is charged with overall guidance of the operations of the supply platoon, which includes—

- (1) *Class I section.* This section requisitions rations from army on the basis of ration requests from divisional units. Normally army delivers rations from army supply points to the division class I distributing point where rations are broken down. Normally, unit distribution is made in vehicles provided from the division transportation battalion. Authorized reserves of class I are carried on trailers provided by the division transportation battalion.
- (2) *Class II and IV section.* This section submits requisitions for nonregulated items to the appropriate class II and IV depot on the basis of requisitions received from battle groups and separate units. Requisitions for regulated items, and items in excess of authorized allowances are forwarded to the army quartermaster through command channels. Supplies are normally delivered by army to the class II and IV section, quartermaster company, which breaks down the supplies for unit or supply point distribution, using trucks of the transportation battalion. Authorized reserves of class II are carried on trailers provided by the transportation battalion.

(3) *Class III section.* This section determines division petroleum requirements on the basis of estimated requirements submitted by battle groups, battalions, and separate units. Daily status reports are submitted to the army class III supply point supporting the division. The class III section obtains gasoline in bulk from the army class III supplying point, using organic 5,000-gallon tank trucks, and delivers to the division class III distributing point, or to divisional units. Packaged petroleum products are transported from Army supply points to the distributing point in trucks provided by the transportation battalion. The division reserve of gasoline is carried in the five 5,000-gallon tank trucks organic to the company, in the 1,200 5-gallon cans transported in trailers provided by the transportation battalion, and when required in three 900-gallon collapsible tanks and two 3,000-gallon collapsible tanks authorized the company.

d. Recovery and Disposition Platoon. The division collecting, identification, and evacuation section operates the division collecting point. Five collecting and evacuation sections are available for support of battle groups and/or task forces. Normally, these sections receive, identify, and evacuate remains from forward areas to the division collecting point. Search and recovery operations are conducted only when the tactical situation permits. Army evacuates remains from the division collecting point to an army collecting point or cemetery.

e. Bath Section. The bath section operates six shower units organic to the quartermaster company. This section is capable of operating in six separate locations.

f. Quartermaster Equipment. The class II and IV section of the supply platoon has a limited capability for repairing office machines and general equipment. Quartermaster equipment requiring maintenance beyond the capabilities of the division is evacuated to supporting Army quartermaster maintenance units.

g. Laundry Service. Laundry service is provided by Army quartermaster laundry companies

124. Mobility

The quartermaster company is 100 percent air transportable and 80 percent mobile with organic ground transportation.

Section XIII. SIGNAL BATTALION

125. General

The organization, capabilities, and communications operations of the division signal battalion are covered in paragraphs 26, 68, and 69.

126. Supply

The division signal supply and maintenance section, headquarters and headquarters company, handles repair parts, replacement components, other class II and IV supplies, and signal salvage. The bulk of the items handled are dry batteries, wire, and radio tubes. No organic transportation is provided for procurement or delivery of signal supplies. Signal supplies are normally delivered to the division signal supply and maintenance section of the signal battalion by army. Unit or supply point distribution is made to division units, depending upon the tactical situation, and considering most efficient use of transportation.

127. Maintenance

a. Mobile Repair Teams. Signal maintenance support to divisional units is provided by mobile repair teams as follows:

- (1) Five "forward" teams, operating from forward signal centers in continuous support of the battle groups and other combat and service units in the area, including forward elements of the signal battalion.
- (2) Four "special" teams operating in general support of the division. Each team is equipped for a specific type of work, as follows:
 - (a) *Team 1.* General signal repair, including telephone, typewriter, cryptographic, and photographic.
 - (b) *Team 2.* Radio and radar repair.
 - (c) *Team 3.* Radio and avionic equipment (navigational, etc.) repair.
 - (d) *Team 4.* Radio, radio relay, and carrier repair.

b. Operations.

- (1) The mobile repair teams of the forward support platoons of the forward communications company provide limited or emergency signal field maintenance for battle group units. In addition, these teams assist in performing organizational signal maintenance for forward signal centers and miscellaneous units in the battle group area. The teams normally perform maintenance by direct exchange of defective items or subassemblies. Whenever possible, maintenance is performed "on call" in the area of the supported units. The teams act as receiving or salvage collecting points for defective equipment. Defective equipment turned in to the forward repair teams is repaired locally, if possible, for reissue. When local repair is not possible, defective parts or sets are returned to the division signal supply and maintenance section for repair. Items of equipment returned by forward

repair teams are normally exchanged immediately to permit expeditious issue to using units.

- (2) "Special" teams 1, 2, and 4 may be located with the division signal battalion, which is convenient to the principal users of their service. Team 3 may be stationed with the division aviation company. Since the teams are mobile, they may be dispatched to various locations in the division area, as required.
- (3) The repair of equipment which cannot be conveniently moved such as radars, radio relay and carrier, large radio sets, or switchboards, is performed on site. The more commonly used wire and radio equipment is repaired by the radio repair and maintenance section by direct exchange of end items or major components to the maximum possible extent, with subsequent repair of the defective component and return to stock at the appropriate echelon. Maintenance by turn-in, repair, and return to user is resorted to only when other methods cannot be followed.
- (4) There are a limited number of radio repair teams. Only infrequently will vehicular mounted radios require repair at the same time the vehicles are in the ordnance maintenance shop. Most vehicular mounted radios require immediate attention while the vehicle is in service. Radio repair teams should remain mobile and service units of the division, including elements of the signal battalion, at the location of the units.

Section XIV. TRANSPORTATION BATTALION

128. Organization

See figure 26.

129. Mission

The mission of the transportation battalion is to provide tactical mobility to combat elements of the division, and to provide the division with a pool of vehicles for administrative purposes.

130. Capabilities

The two companies of armored carriers can provide armored transportation for the combat elements of 1 battle group and the truck transport company can motorize 1 battle group.

131. Employment

a. Division Transportation Officer. The transportation battalion commander is the division transportation officer. As a commander,

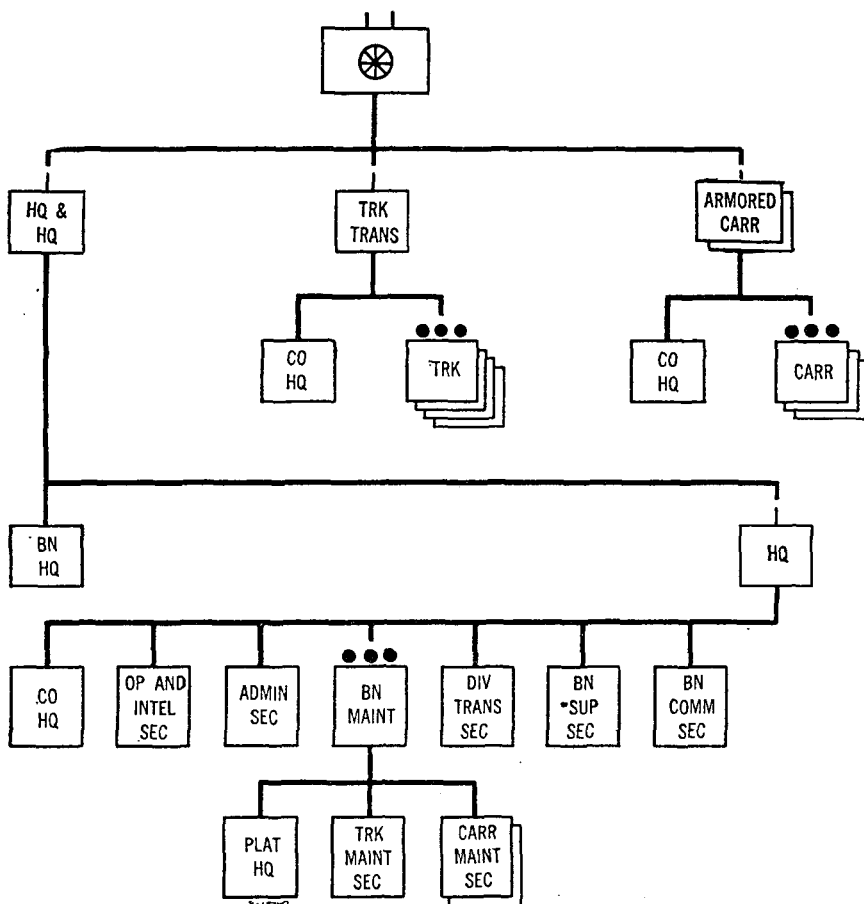


Figure 26. Transportation battalion.

he is concerned with the operation of his battalion. As a staff officer he advises and assists the commander and staff.

b. Division Transportation Section. The division transportation section is located at the division main command post. Personnel in the section advise and assist the commander and staff on transportation functions as outlined in FM 101-5. It also effects necessary coordination with air and ground transport moving into and out of the division area. In addition, the section is the nucleus of the division traffic headquarters with representation from the division provost marshal, engineer, and signal sections. Highway regulation plans are implemented by the provost marshal and engineer in the field of traffic control, and by area or unit commanders' exercise of organizational control. See FM's 55-37, 19-25, 25-10, and 100-10.

c. Transportation Battalion Deployment. The transportation battalion command post normally is located in the division service area. Companies are dispersed within the division area in formations compatible with the division mission and local requirements. When not attached to division units, armored carrier companies are located well forward in the division area in formations dispersed down to the platoon level. Headquarters and headquarters company and the truck company are similarly dispersed in the division service area.

d. Utilization. Transportation units, organic and attached, are under the operational control of the division transportation officer when not further attached to divisional units. For tactical operations, transportation units may be attached on a mission basis or for a specified time period, or may be placed in support of divisional units. Employment of vehicles individually should be avoided. Better vehicle utilization is obtained by preserving the unit integrity of transportation companies, platoons, and squads, thus utilizing the command and control capability of transportation unit leaders.

e. Task Forces. Transportation units used to motorize a task force are attached to the task force. Normally, the transportation battalion will furnish maintenance support for its vehicles and transportation staff augmentation to the task force commander from transportation battalion headquarters.

f. Division Administrative Support.

- (1) The transportation battalion furnishes motor vehicles and trailers for administrative support operations on a task basis. Motor vehicles are provided for distribution of class I, II, and IV, and packaged class III supplies. Trailers are required to transport a reserve of class I, II, and packaged class III supplies. Trailers used for these reserves are located as directed by the division quartermaster. They are moved by motor vehicles of the transportation battalion as directed in march orders.
- (2) Logistical support missions are planned to maintain transportation unit integrity, whenever possible. Three truck squads of the truck company are detailed to meet daily logistical commitments and the remaining squads are reserved when possible, for tactical requirements. The commitments are rotated periodically among the four platoons.
- (3) Normally armored carrier companies are not employed in administrative support operations. However, unit distribution of supplies or movement of replacements to tactical units is accomplished by armored carriers when required by the tactical situation.

- (4) Trailers are used habitually in administrative movements and whenever possible in tactical movements. Organizational equipment and class I, III, and V reserves of units being moved are carried in trailers to utilize fully the lift capacity of truck units. Training will emphasize use of trailers.

g. Transportation Battalion Administrative Support.

- (1) Administrative support within the battalion utilizes the contact party concept, rather than large centralized facilities to support the battalion. Detailed SOP must be provided to insure control without excessive signal communication requirements.
- (2) Second echelon maintenance support of organic armored carrier and truck companies is furnished by the battalion headquarters and headquarters company. Truck transport and armored carrier companies or elements thereof frequently will operate beyond supporting distance of the battalion. These units must be provided maintenance support by attachment of appropriate elements from the transportation battalion.
- (3) Maintenance support of attached, nondivisional transportation units will be furnished from outside the transportation battalion.

132. Mobility

The battalion, except for two tank recovery vehicles, is air transportable. It is 90 percent mobile for ground movement when task vehicles are not available for transport of organic equipment and personnel.

CHAPTER 6

OFFENSIVE OPERATIONS

Section I. GENERAL

133. Purpose

The infantry division employs the offense to close with and destroy or capture the enemy, and to seize and control terrain to further future operations.

134. Characteristics of Offensive Operations

a. Atomic Warfare. The division attack is characterized by the use of atomic fires, swift maneuver, violent assault, and rapid exploitation. Speed in exploiting the effects of firepower is essential. Air, ground, and water transport are used to increase mobility. For protection against enemy atomic fires, units remain dispersed and dug-in as long as possible. Units seek to gain surprise and preserve secrecy by capitalizing on cover, concealment, and deception. Upon seizure of the objective, minimum forces consolidate gains while other forces rapidly disperse.

b. Nonatomic Warfare. The characteristics of the attack in non-atomic warfare are similar to those of atomic warfare except that combat power is drastically reduced. The tempo and violence of the attack are slowed by this reduction of combat power. The fact that the enemy has not used atomic weapons during a particular operation does not eliminate the possibility that he may use them at any time. Any concentration of troops or materiel which offers him a lucrative atomic target is undertaken as a calculated risk.

135. Types of Offensive Operations

a. General. For discussion of types of offensive action, see FM 100-5.

b. Special Considerations.

(1) *Envelopments and turning movements.*

(a) Gaps between enemy units facilitate the attack by highly mobile units through these gaps and around the enemy's

flanks to seize objectives deep in his rear. In committing units through such gaps, care is exercised to prevent offering a lucrative target to the enemy in what may be a planned atomic killing area.

- (b) The mobility, weapons, and communications of the division facilitate provision of mutual support between units over large areas. Further, the allocation of atomic weapons and delivery means to enveloping or turning forces may permit these forces to operate beyond mutual support of other divisional units with minimal risk of defeat in detail.
- (2) *Penetrations.*
 - (a) The penetration may be a more acceptable form of maneuver when supported by atomic fires than it would be if supported by only nonatomic fires.
 - (b) Enemy defenses are destroyed or neutralized within the atomic weapons radii of effect. Penetrations through areas destroyed or neutralized by atomic fires avoid strong enemy defenses and permit the attacking force to strike rapidly into the enemy rear or exposed flanks.
 - (c) Atomic fires may permit multiple penetrations which force the enemy to fight in two or more directions simultaneously to meet the converging efforts of the attack.
 - (d) Atomic fires may also permit telescoping the phases of the attack and permit launching exploitation type operations from the line of departure.
 - (e) Security of the penetrating force is attained by using secondary attacks to contain the enemy on the shoulders of the penetration and by the speed of the main attack(s).

Section II. BASIC CONSIDERATIONS

136. Weather and Terrain

a. General. Terrain areas are held as means of controlling the battle and/or creating favorable opportunities for employment of atomic weapons.

b. Observation. Organic aircraft increase the capability for observation and may reduce the importance of securing high ground for this purpose. When weather or other conditions prevent utilization of organic aircraft for observation and/or surveillance, alternate means to include the normal observation posts or patrols supply essential information.

c. Obstacles. Obstacles to own forces may be created by atomic fires. A small enemy force defending an obstacle can delay friendly

attack forces and may cause them to mass. Such action may necessitate the use of atomic fires against targets which otherwise would be considered unremunerative in order to insure rapid traverse of the obstacle without massing. Armored carriers, Army aircraft, tanks, trucks, and any other means available are employed to cross or bypass obstacles without hesitation.

d. Cover and Concealment. Concealment impairs the enemy's ability to locate targets; however, use of wooded or built-up areas may increase casualties from secondary blast effect and fires. Deep valleys and ravines afford varying degrees of protection; however, if the axes of these features point towards desired ground zero, the damage is magnified by canalizing the blast effects.

e. Critical Terrain. The commander's plan is directed towards early seizure or control of those critical terrain features essential to accomplish the mission in the shortest possible time and to maintain the speed and momentum of the attack.

f. Avenues of Approach. Avenues of approach are selected which best provide for rapid movement to the objective and space for essential dispersion. Atomic weapons may permit neutralization of forces occupying terrain features which dominate avenues of approach.

g. Weather. Weather conditions affect terrain trafficability and atomic fire effects. Adverse weather reduces the mobility and effects from atomic fires, and therefore may dictate a plan of attack which otherwise would be less desirable.

h. Nonatomic Considerations. For nonatomic considerations of weather and terrain, see FM 30-5.

137. Atomic Weapons

a. The desired combat power for the attack can be obtained through varied combinations of units and fires. These combinations permit great flexibility in plans of attack and organization for combat.

b. Atomic weapons permit the division commander to consider many courses of action heretofore infeasible due to the limited forces available.

c. Atomic weapons reduce the requirement for mutual support between elements of the division and between division and higher headquarters. Independent or semi-independent division operations are possible when adequately supported by atomic weapons.

d. Atomic fires must be employed with the realization that troop movements may be made through or near the weapons effects area.

e. Bursts, creating radioactive fallout from friendly weapons, are avoided unless—

- (1) Type of burst giving fallout is required to neutralize the target.
- (2) The areas affected are not required for maneuver.

- (3) Dosages anticipated in contaminated areas to be traversed do not exceed acceptable dose rates.

f. The commander determines the acceptable degree of risk from enemy atomic fires. The overall situation may require a high degree of risk to some units to insure success of the entire operation. The risk of enemy atomic attack generally depends on—

- (1) Availability of atomic weapons to enemy.
- (2) Priority established by the enemy for use of atomic weapons.
- (3) Enemy ability to recognize targets.
- (4) Enemy ability to attack targets during time presented.
- (5) Enemy ability to exploit atomic attack.
- (6) Effectiveness of our protective measures.
- (7) Friendly tactical formations.

g. Efficient utilization of atomic fires by proper target and weapon selection is essential. The governing factor in deciding whether to strike a proposed target is the degree to which the strike contributes to the accomplishment of the mission.

h. For further details on the effects of atomic weapons employment, see FM 101-31.

138. Chemical Agents

a. General.

- (1) Toxic chemical agents are employed only on authority of higher headquarters.
- (2) The concept of the plan for the attack will be based upon the optimum use of chemical weapons in conjunction with high explosive and atomic fires.
- (3) The use of chemical agents in conjunction with atomic weapons will increase the destruction inflicted upon the enemy forces and retard his efforts to reorganize his defenses.
- (4) Toxic chemicals may be used to attack strong points which do not warrant direct assault or the use of an atomic weapon. When used by a small restraining force against strong points bypassed by our main forces, it will facilitate the early capitulation of the defenders.

b. Coordination and Control.

- (1) Under conditions of gas warfare the division commander exercises independent control over the employment of toxic chemical agents in his zone of responsibility when—
 - (a) Their effects do not endanger friendly troops in adjacent areas.
 - (b) Their residual contamination is not expected to exist beyond the period during which the division will be responsible for the area.

- (2) Under conditions of either of these exceptions, prior approval of the gas attack plan must be secured from the higher headquarters responsible for the areas affected or for subsequent operations. The headquarters approving the gas attack plan will accomplish essential coordination with all units concerned.

a. For further details of employment, see FM 3-5.

139. Combat Power

a. Combat power consists primarily of a combination of troop units and fires. Successful offensive operations require the development of a superior ratio of combat power over the enemy at the decisive time and place. The nature of enemy forces as compared to the nature of available friendly forces governs the determination of combat power required to accomplish the mission. The degree of superiority required is determined by the following factors:

- (1) *Mission and type of operation.* The mission assigned by higher headquarters as well as the commander's decision as to the type of operation to be conducted will initially govern the relative combat power required; e. g., a penetration would require a different balance of combat power in critical areas than would an envelopment.
- (2) *Enemy.* The enemy situation is carefully studied to determine weaknesses in strength, dispositions, capabilities, and tactics. The degree of required combat power is reduced by capitalizing on these weaknesses.
- (3) *Terrain.* Terrain advantages and disadvantages often contribute materially to the degree of combat power required; e. g., more force is required against an enemy defending on dominant terrain than on equal or inferior terrain.
- (4) *Momentum.* Relentless momentum during the attack keeps the enemy off balance and restricts his ability to apply his combat power effectively. As momentum increases, combat power may be reduced while still retaining the required force to accomplish the mission. Momentum of the attack is directed primarily at the decisive objective and is not dissipated on tasks of a secondary nature. Normally, fewer units and/or fires are required to maintain momentum than are required to resume the attack once this momentum is lost.
- (5) *Mobility.* Mobility provides the commander great flexibility in selecting and shifting the area for application of combat power. Superior mobility increases the tempo and facilitates the phasing of the attack. Aircraft may be employed to lift forces to seize objectives in rear of enemy defenses or to per-

form other missions which assist in increasing the speed of the attack.

- (6) *Timing.* The attack is timed to take advantage of superior mobility in forcing the enemy to fight at the time and place of the attacker's choosing. Rapid and bold decisions and speed of maneuver are essential elements in the attack. Proper phasing of combat power into the attack is required to maintain the momentum of the attack, to keep the enemy off balance, and to provide for adequate reserves. Timing of the attack is planned to exploit to the maximum the effects of atomic fires.
- (7) *Training.* A well-trained division requires fewer units to obtain the degree of combat power desired.
- (8) *Leadership.* Positive and dynamic leadership by all commanders is imperative to obtain the maximum results from the applied combat power. Separation of units and frequent loss of communications place great responsibility on commanders for independent thought and actions. Succession of command must not disrupt the attack.
- (9) *Logistical support.* Superior equipment, supplies, and materiel combined with efficient execution of logistical procedures increase the capability of the division to sustain combat power.

b. Atomic fires generally offer the commander the most flexible means of applying the desired combat power. Therefore, atomic fires may permit a commander to commit initially fewer units, while maintaining greater reserves to meet unforeseen developments.

140. Distribution of Force

a. *General.* Decisive superiority of combat power can rarely be obtained across the entire front. Hence, the commander determines the distribution of force necessary to achieve the required superiority in the selected area. Forces are normally divided into main attack(s), secondary attack(s), and reserves.

b. *Main Attack(s).* The main attack(s) accomplishes the primary task assigned by the division mission. It receives first priority in the allocation of combat power.

c. *Secondary Attack(s).* The secondary attack(s) is assigned tasks which best contribute to the success of the main attack. Minimum essential forces to perform required tasks are assigned to execute secondary attack(s). Limited atomic weapons availability may permit employing atomic fires only in support of main attacks with substantial enemy forces unaffected by such fires. Deception is then difficult and secondary attacks are designed to prevent the enemy from re-

disposing to meet the main attack. The availability of large numbers of atomic weapons may permit increasing the means available to the secondary attack. The mission assigned for the secondary attack must then be adjusted to conform with the increased capabilities of the forces in the secondary attack. A point can be reached where the missions and means assigned in the secondary attack approach that in the main attack. This becomes, in effect, an exploitation by the entire force without resort to secondary attacks to fix and deceive the enemy.

d. Reserves. Atomic weapons in reserve provide considerable combat power which to some extent offsets the requirement for a large reserve of troops. Atomic power permits a lesser degree of reliance on the troop reserve to provide flexibility than would otherwise be required.

e. Allocation of Combat Power. Proper allocation of combat power to the main, secondary attacks, and reserves is essential for successful accomplishment of the mission. Allocation of atomic fires is an important factor in determining the distribution of force required.

- (1) Considerations which affect the number of units and atomic weapons allocated for these forces are as follows:

(a) Main attack.

1. To provide decisive superiority over the enemy in the area of the main attack.
2. To maintain momentum of the attack to the objective.
3. To deny enemy use of critical terrain. This consideration applies equally to the secondary attack and reserves.

(b) Secondary attack.

1. To provide adequate combat power for accomplishment of its mission.
2. To deceive the enemy as to the location of the main attack.

(c) Reserves.

1. To provide forces for subsequent phases of the attack when the initial plan of attack is to seize an intermediate objective(s).
 2. To influence the attack rapidly.
 3. To meet unexpected enemy strength.
 4. To accomplish other missions, such as, flank security.
- (2) The main attack receives primary consideration for units and atomic fires. Generally, forces for an adequate reserve have higher priority than forces for the secondary attack. Careful distribution of available forces is required to obtain the best balance between the overall requirements of the secondary attack and the reserve.
 - (3) The degree of superiority of combat power required is discussed in paragraph 139.

f. Mobility. The maneuverability desired for the various tactical groupings determines the allocation of Army aviation, armored carriers, and other transportation means.

141. Coordination and Control

a. General. Success of the attack requires rapid response by the division to the will of the commander. He directs changes in organization for combat during the attack, rapid phasing of forces into the attack, and rapid exploitation of atomic fire effects. Proper control demands detailed integration of the communications plan and tactical plan.

b. Tactical Control Measures. Minimum required control measures are assigned to subordinate units of the division, thereby permitting maximum flexibility and freedom of action. Tactical control measures which may be employed are—

- (1) *Objectives.* Objectives are the most restrictive of control measures. A series of objectives are employed when strict control of successive terrain features is desired. Objectives may be used to provide for unity of effort, to phase the attack, to designate area responsibility during reorganization, or to facilitate change of direction. The size of the objective areas is governed by the ability of the force to seize and control the objective while avoiding dangerous concentrations. The mobility and firepower of the division enhance its ability to seize large and deep objectives. Communication network objectives are frequently more important than dominating terrain objectives in controlling the speed of advance. Subordinate commanders must understand the purpose for which an objective is assigned. If the objective is to be seized and occupied, it may be impractical to use atomic fires on it because of induced radiation. If the objective is assigned primarily as a location from which the enemy is to be removed, atomic fires may be used while the unit controls it from nearby terrain features.
- (2) *Area and directional control.* Area and directional control for subordinate units is accomplished by one or more of the following: a series of objectives, boundaries, direction of attack, and routes or axes of advance. Adequate space for the separation of units, necessity for speed, and flexibility favor use of axes of advance in deep penetrations, envelopments, and exploitation operations. Boundaries are favored when strict assignment for area responsibility is required; e. g., area clearance or mopup type operations, convergence of separate forces in a restrictive area, control of fires, or when planned employment of atomic fires jeopardizes the operations

of an adjacent unit. Directions of attack arrows are employed to indicate the desired center of mass for the direction of attack of a unit within its assigned area of operation.

- (3) *Line of departure and time of attack.* A line of departure and time of attack are assigned to each attacking unit to insure that the various maneuver and fire support elements of the division are committed at the desired time and place. The dispersion laterally and in depth of the division prior to the attack makes it frequently desirable to assign separate lines of departure and times of attack to the various attacking units. Attack times are varied to avoid predictable patterns. These control measures are assigned to exploit the peak effects of atomic fires. When feasible, atomic fires are delivered at the time of optimum target vulnerability.
- (4) *Phase lines and checkpoints.* Phase lines may be employed to control and coordinate the rate of advance.
- (5) *Atomic safety line (ASL).* For definition, see chapter 4.
- (6) *Dispersal areas.* Dispersal areas may be designated to control units which are a part of an attacking force. These areas are designated for the location of dispersed uncommitted forces. Their designation is normally made to meet contingencies such as the need to clear a route of a force thereon or to clear an objective area.

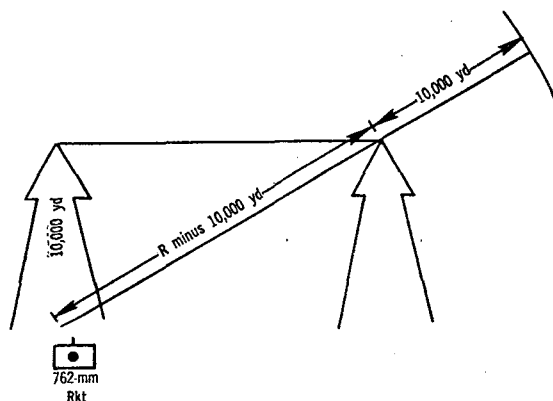
c. Dispersion Control. Control of dispersion in the attack is essential to avoid violating troop density restrictions. Strict discipline in controlling dispersion must be maintained during all phases of the attack.

d. Frontages.

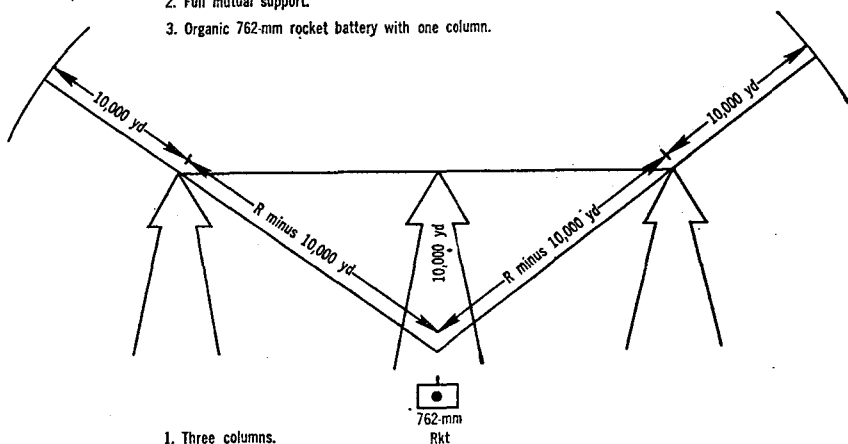
- (1) The frontages for the division in the attack depend upon the following considerations:
 - (a) Mission.
 - (b) Weather and terrain.
 - (c) Enemy and friendly situations.
- (2) Within the above consideration, the width and depth of offensive operations generally are determined by the ability of the division to control the attack, the degree of mutual support desired, and the required dispersion.
 - (a) *Control.* The capability to control an attack is governed by the range of radio communications means employed. This capability normally permits frontages which exceed those desired for mutual support. Control is rarely a limiting factor.
 - (b) *Mutual support.* When mutual support by light artillery is desired between attacking columns, the distance between

these echelons should not exceed 8,000 yards. When support by only general support fires is required, the distance between the flank attacking echelons is determined by the position and range of the delivery means. See figure 27 for illustrations of maximum distances between columns at which support by the 762-mm rocket is possible. The specific distance for mutual support by units is determined by the ability of the supported unit to defend and the time required by the supporting unit(s) to move to its assistance.

(c) *Dispersion.* As the distance between attacking echelons increases, the risk of defeat in detail increases. As distances decrease, vulnerability to a large yield or a group of small



1. Two columns.
2. Full mutual support.
3. Organic 762-mm rocket battery with one column.



1. Three columns.
2. Full mutual support.
3. Organic 762-mm rocket battery with one column.

NOTE: R is maximum range of 762-mm rocket.

Figure 27. 762-mm rocket support.

yield weapons increases. A proper balance must be maintained between dispersion and concentration to insure accomplishment of the assigned mission.

- (3) The frontage of the division is further determined by its ability to effect minimum essential screening between and on the flanks of the attacking echelons.

e. For further details on control, see paragraphs 70 and 71.

142. Security

a. *Purpose.* The purpose of security in the offense is to preserve secrecy and to gain and maintain freedom of action. Success of the attack, to a large measure, depends on the degree of security obtained prior to and during the attack. The violence and speed of the attack frequently offers the best security by keeping the enemy so heavily involved that he has neither the time nor means available to endanger the success of the attack.

b. *Plans.* The division plans and procedures provide for protection against all enemy counterattack capabilities.

c. *Bypassed Enemy Resistance.* Widely dispersed formations tend to bypass enemy strong points and to expose friendly flanks. Caution is exercised in bypassing enemy resistance to avoid being canalized into killing areas established by the enemy. Bypassed enemy must be contained or kept under surveillance pending subsequent mopup by following forces or destruction by atomic fires. Covering forces, patrols, flank guards, and echeloned reserves protect exposed flanks and gaps between units and may contain pockets of enemy resistance for subsequent neutralization. Protection from ground attack may be required for administrative and fire support units if areas in rear of attacking echelons have not been cleared. These considerations must not be permitted to slow or divert the momentum of the attack.

d. *Area Surveillance.* Early warning of impending enemy countermeasures and the collection of timely and accurate information is an integral part of security. Highly mobile reconnaissance and security forces are required for this function. The cavalry squadron and aviation company are used extensively in this role.

e. *Chemical, Biological, and Radiological Protective Measures.* The best defense against chemical, biological, and radiological attack is the detection and destruction of the source and delivery system of these weapons. Passive protective measures include—

- (1) Speed during the attack, the use of covered and concealed routes, and movements during periods of reduced visibility.
- (2) Dispersion consistent with combat power requirements.
- (3) Protection provided by tanks, armored carriers, and protective clothing.

(4) Training in collective protection measures.

(5) Deception (par. 143).

f. Air Defense. For a discussion on air defense see paragraphs 69 and 212.

g. For further discussions on security, see FM 100-5.

143. Tactical Deception

a. Purpose. The commander habitually employs tactical deception in the offensive to mislead the enemy as to his dispositions and plans, and to keep him off balance and unable to act decisively.

b. Plan. Tactical deception is considered concurrently with the development of the tactical plan. When implemented, the deception plan must support the real plan and in no way jeopardize the real plan if unsuccessful.

c. Measures. Active and passive means of deception are practically unlimited. However, means and measures employed are limited by time available to develop the deception story, time required to inject it into the enemy intelligence channels, and timelag required for the enemy to evaluate this information and react accordingly. The size and magnitude of the deception effort must be geared to this timelag. These measures are effective only when planned and implemented with care and in detail.

(1) *Active measures.*

(a) Secondary attacks, raids, feints, and demonstrations including the employment of atomic fires, to mislead the enemy as to the true location of the main attack.

(b) Control and manipulation of radio communication within the unit to conceal from the enemy the time of attack. Frequent periods of radio silence followed by controlled traffic may be used to deny or indicate to the enemy other than the actual hour or day of attack.

(c) Disposition of actual items of equipment and/or simulation devices to mislead the enemy as to the true type, size, and the future intentions of the unit.

(2) *Passive measures.*

(a) Camouflage is the most effective passive measure employed prior to and during the offensive. Camouflage misleads the enemy by misrepresenting the true identity or existence of a unit.

(b) The use of dummy and real decoys, particularly prior to the offensive, to draw enemy fire away from the real item minimizes loss of personnel and equipment.

Section III. PLANNING THE ATTACK

144. General

a. Planning Sequence. Logical attack planning generally proceeds as follows:

- (1) *Analyze the mission.* Analyze the mission and determine the decisive task(s) to be accomplished by the attack. These frequently are expressed in terms of one or more terrain objectives which are to be seized.
- (2) *Consider factors affecting accomplishment of the mission.* Consider the elements which oppose the accomplishment of the mission. These are usually what is known about the enemy, and the effects of weather, and terrain. Consider own means available to accomplish the mission. Means are usually expressed as available combat power (units plus fire). The commander must know the effects obtainable from the varied employment of allocated atomic fires. Although maneuver units and atomic fires are not interchangeable, certain effects of one may be substituted for the other.
- (3) *Develop practical plans of attack.* A plan of attack is composed of a scheme of maneuver and a fire support plan. The scheme of maneuver and the fire support plan complement each other and are considered concurrently.
- (4) *Analyze attack plans.* Analyze and compare each practical plan and determine the preferred plan.
- (5) *Announce the decision and concept of operations.*
- (6) *Determine missions for major subordinate units.*
- (7) *Prepare organization for combat.*
- (8) For further discussion of staff planning to support this procedure, see FM 101-5.

b. Coordination. Attack plans require detailed coordination between the tactical and logistical plans because of the rapid phasing of the attack and the importance of avoiding congestion.

c. Administrative Support. Each plan of attack must be capable of being administratively supported. The use of atomic fires may permit deep exploitations which cannot be administratively supported with organic means. In such cases, additional means must be obtained from higher headquarters.

145. Development of Attack Plans

a. Scheme of Maneuver.

- (1) *Main attack scheme of maneuver.* The main attack seeks to secure the decisive objective of the division. The direction of attack is assigned based on the nature of the terrain,

maneuver room, and enemy situation. During the development of the main attack scheme of maneuver, there is a general visualization of the tasks to be performed by the secondary attack.

- (2) *Combat power for the main attack.* Combat power is allocated to achieve decisive superiority over the enemy in the area of the main attack.
- (3) *Combat power for the secondary attack(s) and reserve.* Combat power for the secondary attack(s) and reserve is determined concurrently because the requirements for these two forces often conflict. Generally an adequate reserve receives priority over forces for the secondary attack(s). The secondary attack(s), however, must have minimum essential power to accomplish its mission. Careful analysis of these conflicting requirements is made to achieve the best balance of power for these two elements.
- (4) *Secondary attack scheme of maneuver.* Objective(s), direction of attack, and required maneuver area for the secondary attack are selected to assist the main attack.
- (5) *Adjustment of plan.* The maneuver plan is adjusted to resolve conflicting force requirements and to complement the fire support plan. The reserve is located for rapid commitment in the expected area of employment, consistent with the requirements for security. Security forces are allocated, within means available, to assist in the accomplishment of the mission.

b. Fire Support Plan.

- (1) Specific atomic fires and general allocations of nonatomic fire support are planned concurrently and in the same sequence as the maneuver of the main and secondary attacks (a(2) and (3) above).
- (2) Nonatomic fires are integrated with atomic fires to attack essential targets which escape damage from atomic fires or on which atomic fires cannot be used because of the need to avoid obstacles or contamination, to maintain neutralization and to increase damage resulting from atomic fires, to block routes of reinforcement available to the enemy into the area, and to serve as an economy of force measure in areas not attacked by atomic fires.

146. Analysis of Attack Plans

a. Attack plans are carefully analyzed and compared by the commander. This analysis determines the advantages, disadvantages, risk involved, probable degree of success, and refinement of details

(to include the general organization for combat and allocation of fire support) for each plan.

b. The risk of destruction of his forces by enemy atomic fires during the attack is of primary concern to the commander. A procedure for visualizing and countering this risk is as follows:

- (1) Predict own dispositions during critical phases of the attack or during periods of maximum vulnerability.
- (2) Assume enemy atomic strikes on own forces.
- (3) Estimate probable damage.
- (4) Determine necessary counteractions to be taken.
- (5) Modify plan, where feasible, to minimize risk and record these counteractions as a checklist for use should an actual enemy atomic attack occur during the battle.

c. The preferred plan of attack is that plan which promises the greatest degree of success in accomplishing the mission commensurate with an acceptable degree of risk.

147. Concept of Operation

a. The commander's concept of operation for the adopted plan is finalized during the analysis of the attack plans. This concept is presented to the staff in sufficient detail to permit preparation of the necessary orders. The concept should give a word picture of the commander's visualization of the attack to include—

- (1) Ultimate objective of the attack.
- (2) General organization for combat (par. 148).
- (3) General control measures to be employed.
- (4) Development and phasing of the attack.
- (5) Alternate plans for foreseeable emergencies.

b. The concept of operation is disseminated to subordinate units to insure prompt and appropriate reaction in the absence of specific instructions or when deprived of communications with higher headquarters.

148. Organization for Combat

a. Organization for combat is tailored to fulfill the combat power requirement of the attack plan. It may be rapidly altered to meet adjustments or changes in plan during the attack.

b. Organization for combat includes three major elements: the maneuver forces, fire support forces, and administrative support units.

- (1) Main and secondary attacks usually include atomic fires and battle group(s) reinforced with tanks, Army aircraft, trucks, armored carriers, and supported by engineers and artillery. The reserve may consist of infantry, tanks, and atomic weapons reinforced by Army aircraft, trucks, armored personnel

carriers, and engineers. Any one of these forces may remain under division control or be organized into a task force. When a maneuver force consists of two or more major combat elements a task force may be formed and commanded by the assistant division commander. The task force, controlled by the brigade headquarters, may be employed whenever the division commander desires to reduce his span of control. Two battle groups may be employed as a single maneuver element commanded by the senior battle group commander.

- (2) Fire support forces are organized to provide maximum effective fire support in the attack. Atomic fires are normally controlled by the division commander. Control of nonatomic fires may be exercised by attaching artillery to the attack force or by retaining it under division control. In either case, the artillery organization for combat may include battalions, battery groups, or independent batteries. Battery groups are favored when a maneuver force is to be supported by more than a single battery and when these batteries cannot be effectively controlled by an artillery battalion headquarters. Artillery operating under division control is favored when the batteries supporting one maneuver force are within supporting distance of other forces moving along the same or parallel routes. When batteries are beyond this supporting distance, they may be attached to the supported unit.
- (3) During the attack, administrative installations and units are located to sustain the attacking units. Centralized control of logistical support is favored; however, control may be decentralized or logistical elements attached to supported units when required. A strict traffic control system is required to maintain the momentum of the attack and to avoid congestion.

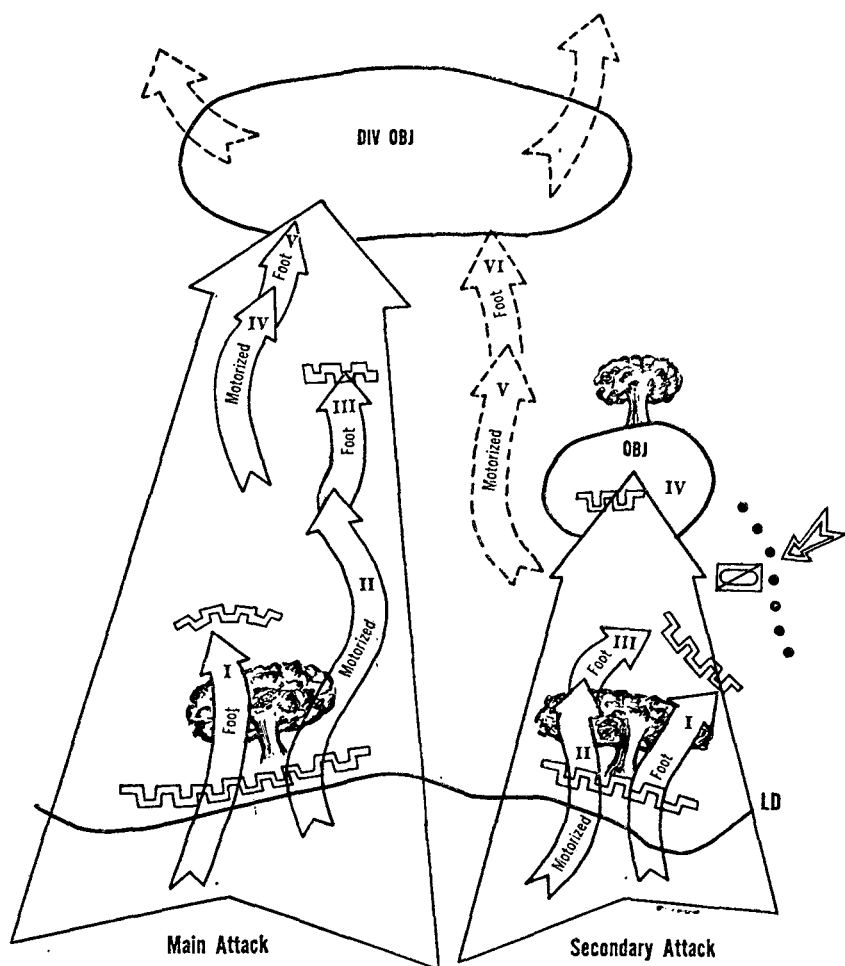
Section IV. CONDUCT OF THE ATTACK

149. Variations for Conduct of the Attack

a. General. The conduct of the attack varies in form depending upon the mission, terrain, the enemy situation, the number and type of atomic weapons available, and the degree of air and ground mobility attainable. All the variations are characterized by rapid overall movement, vigorous assaults, and rapid exploitation. The following are representative illustrations of the many variations and combinations which may be employed during the attack:

b. Continuous Flow (fig. 28).

- (1) *Description.* Continuous movement of forces to the division objective.



Roman numerals indicate a probable sequence of action for each attack.

Figure 28. Continuous flow.

(2) *Conditions of employment.*

- (a) Own mobility is limited to organic means and is approximately equal to that of the enemy.
- (b) Division has adequate combat superiority of atomic fires and/or maneuver units.
- (c) Enemy defenses are organized in depth up to or beyond the objective.
- (d) Attack plan provides for echelonment of reserves.

(3) *Characteristics.*

- (a) Attacking units are on foot, reserve units are motorized with available transportation. Throughout the advance,

- (b) Momentum and mutual support are provided by the rapid phasing of motorized units into the attack.
- (c) Security from enemy atomic fires is afforded by rapid movement of units not closely engaged with the enemy and by dispersion permitted with motorized reserves.
- (d) Deception, surprise, and variations of the plan of attack are permitted by responsive reserves and echelonment of units.

(1) *Description.* Rapid exploitation of atomic fires by mechanized elements of the division to seize the objective.

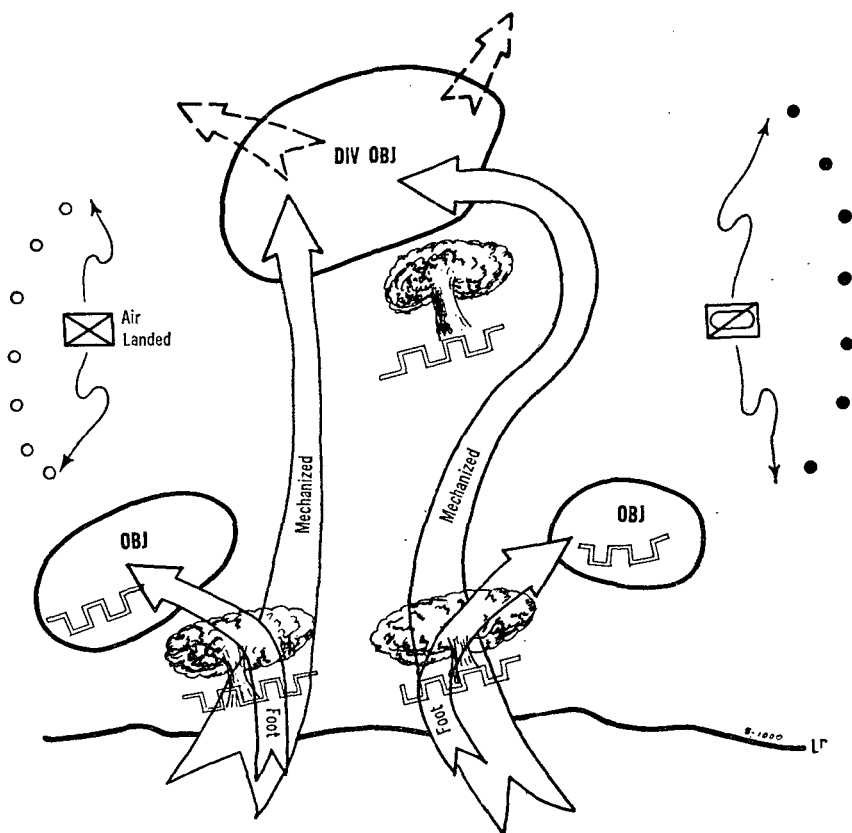


Figure 29. Mechanized penetration.

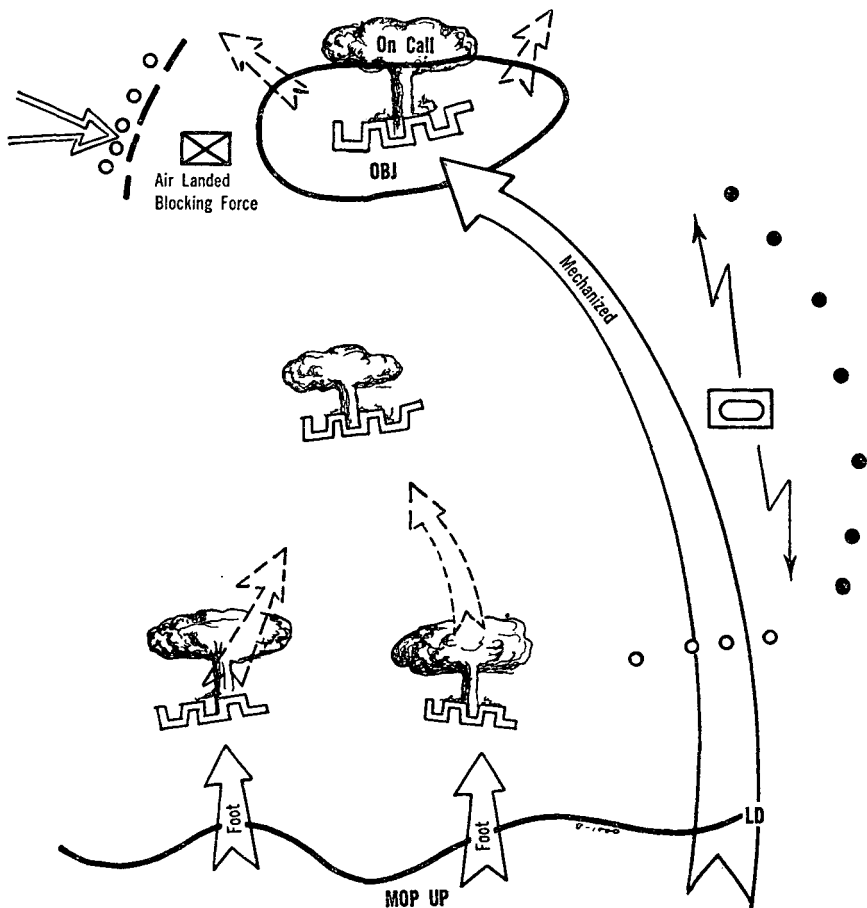


Figure 30. Mechanized envelopment.

(2) *Conditions of employment.*

- (a) Atomic weapons and/or secondary attacks are adequate to neutralize enemy resistance.
- (b) Mechanized forces or air-landed assault forces can hold the division objective until reinforced by the followup foot elements of the division.
- (c) Followup elements are motorized by higher headquarters.
- (d) Terrain is suitable for mechanized operations.

(3) *Characteristics.*

- (a) Excellent momentum of the main attack is provided.
- (b) Mutual support between the main and secondary attacks may be limited.
- (c) Security is provided by speed of attack and maximum employment of security forces.

- (d) Surprise, attained by the violence and speed of the attack, denies the enemy time to react effectively.
- (e) Flexibility is afforded by the ability of the mechanized attack elements to rapidly alter plan of attack.
- d. *Follow and Support* (fig. 31).

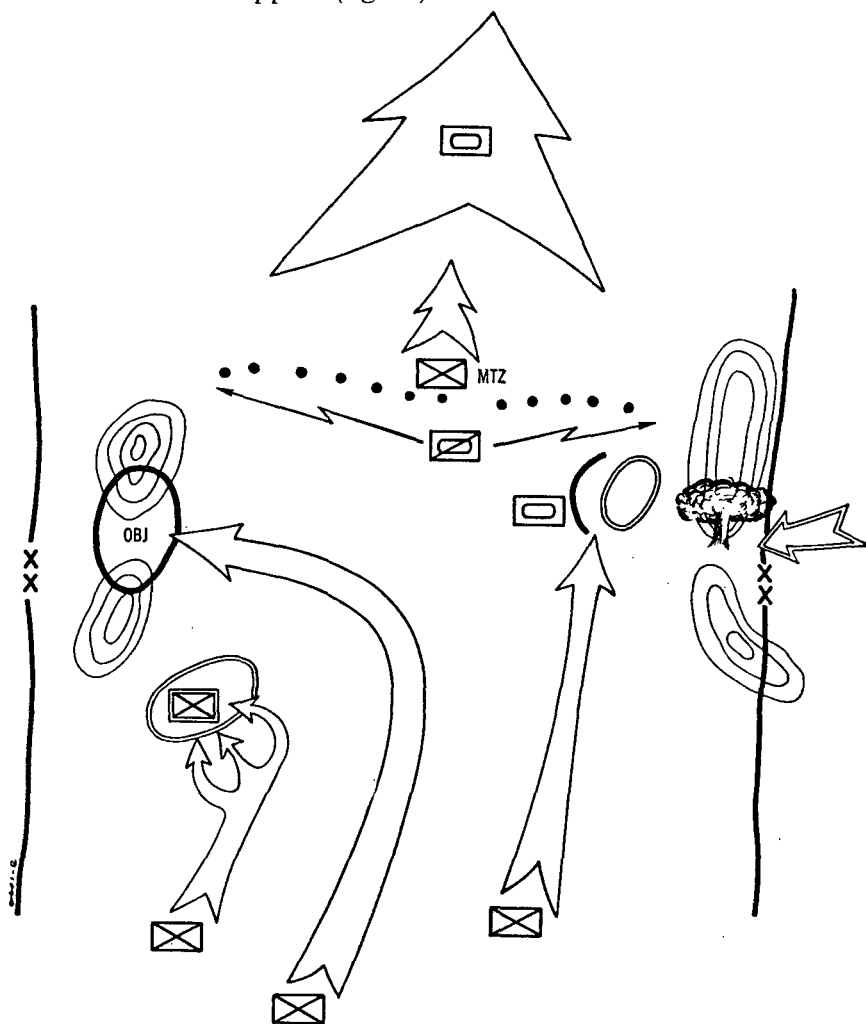


Figure 31. *Follow and support.*

- (1) *Description.* Seizure and control of terrain or neutralization of enemy resistance bypassed by an exploiting armored force.
- (2) *Conditions of employment.*
 - (a) Enemy forces, bypassed by the armor force, threaten lines of communications.

- (b) Relief is required for armored units containing pockets of enemy resistance.
- (c) Seizure or control of terrain features and avenues of approach is required to block movement of enemy reinforcements into the operations area.
- (d) Additional assistance is required by the armor force to break enemy resistance blocking routes to final objectives.
- (3) *Characteristics.*
 - (a) Preferably the entire division is motorized to approach the mobility of the armored force and to maneuver rapidly over the area of operations.
 - (b) Security is enhanced by the exploiting armored force and the mobility of division.
 - (c) Required superiority of force is readily determined, for the size and location of bypassed enemy forces are normally known.
 - (d) Flexibility is afforded by responsiveness of motorized elements to frequent changes in orders and missions.
 - (e) Elimination of bypassed enemy atomic delivery means and observation receive particular consideration.
- e. *Pursuit (fig. 32).*
 - (1) *Description.* The destruction of the enemy force by a rapid and violent exploitation of opportunities created by successful offensive operations.
 - (2) *Conditions of employment.*
 - (a) Enemy forces have lost the ability to influence the situation and to react in consonance with the pursuer's intent. The exploitation of atomic fires frequently permits employing pursuit forces during the initial assault.
 - (b) Division has the ability to maintain superior mobility.
 - (c) Enemy forces can no longer hold their positions and seek to escape.
 - (3) *Characteristics.*
 - (a) Attack consists of direct pressure forces and encircling forces.
 - 1. Direct pressure forces prevent enemy disengagement and inflict maximum casualties. Fast-moving columns push forward along all available routes to deny the enemy the opportunity for reorganization. Bypassed or contained pockets of resistance are destroyed by followup forces.
 - 2. Encircling forces, employing armored, motorized, and air-lifted units, seize objectives in the rear of the enemy to block his retreat in order to destroy him between the direct pressure and encircling forces. Atomic fires and

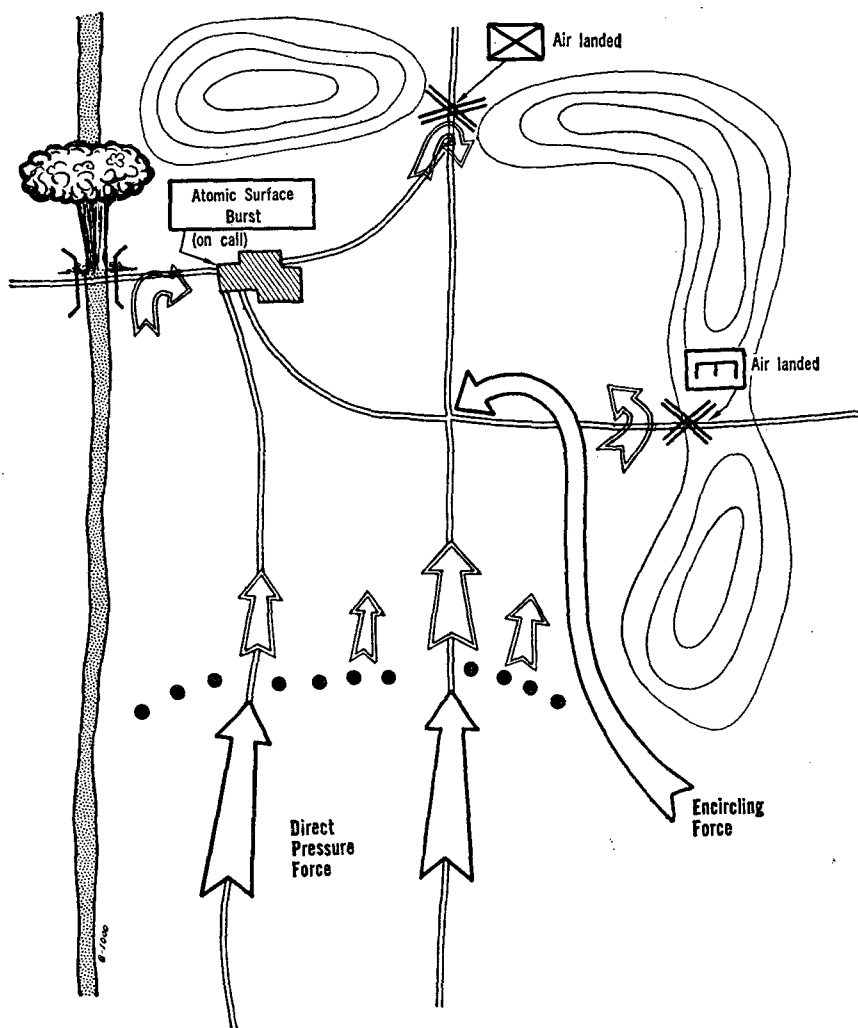


Figure 32. Pursuit.

CBR agents are effective in blocking restricted escape routes such as defiles, river-crossing sites, and communication centers.

- (b) Relentless pressure is maintained to the utmost limit of endurance of troops and equipment.
- (c) Inability of the enemy to react effectively minimized the need for mutual support.
- (d) Security is enhanced by the speed of the advance, dispersion forces, and the inability of the enemy to react effectively.

- (c) Control of the area is obtained by seizure of the communications network. This variation is frequently employed in undeveloped areas.
- (d) Area is occupied by weak hostile forces.
- (e) Friendly control of area is desired to prevent organized resistance (guerilla or partisan activities).
- (3) *Characteristics.* The characteristics are generally the same as the continuous flow except—
 - (a) Movement is often confined to roads, trails, and air.
 - (b) Action is frequently confined to small unit operations permitting the retention of large reserve forces under centralized control.
 - (c) Widely dispersed small unit actions minimize the vulnerability of the division to enemy atomic strikes but complicate centralized control.

150. Control

a. Efficient communications are essential for proper control of the attack. The division commander utilizes all possible means to keep informed of the progress of the attack, the situation of his subordinate units, and the enemy reaction. During the attack the commander moves where he can best control and influence his forces for a successful outcome of the battle.

b. In his exercise of control, the commander anticipates changes in his plan and is prepared to alter organization for combat, maneuver his forces, allocate and shift atomic and nonatomic fires, and employ his reserves to gain his objective.

c. Control is decentralized to subordinate forces when the situation dictates, but is regained at the earliest possible opportunity. Subordinate commanders are provided the means to execute independent action when required.

151. Fire and Movement

a. Prior to the attack, units occupy dispersed locations well to the rear of lines of departure. The principal target for nonatomic artillery frequently is the forward crust of enemy forces which survives atomic fires. Quick acting toxic chemicals of low persistency are particularly useful in the attack of this forward crust of enemy forces. The relatively short ranges to these targets permit echeloning nonatomic artillery in considerable depth (pars. 59–63). Maneuver units mass to the degree required for attack at the last possible moment prior to crossing the line of departure. Delays in the attack after the force has been concentrated are avoided to prevent offering a profitable target to enemy atomic fires. Once the mission for which

the force was concentrated has been completed, the elements immediately separate.

b. The reserve is held dispersed but still available for rapid employment. The vulnerability of reserve is weighed against its availability for rapid employment. Dispersed areas permit use of multiple routes to assist rapid concentration and employment of the reserve. Moreover, atomic weapons permit troop reserve locations to conform with the plan for probable employment with less attention to its availability for employment throughout the zone. Unexpected threats may be engaged by atomic weapons alone. At times the commitment of a portion of the reserve forces is sufficient to accomplish the desired task. This is particularly true of reserve atomic weapons.

c. Once the attack is launched, flexibility and speed are paramount. The attack plan is vigorously executed and all favorable developments exploited. If the advance in any portion of the zone lags, the weight of the attack is quickly shifted to another part of the zone offering greater opportunity for success. The progress of the attack is not delayed merely to preserve the alinement of units or to adhere to a preconceived plan of attack.

d. The attack is characterized by a series of rapid advances and assaults until the division objective is secure. Between areas of enemy opposition, attacking forces move rapidly in semideployed formations. As enemy resistance is encountered, the attacking echelons follow closely their supporting fires to assaulting distance of the hostile position. Atomic fires employed on the objective may make the assault unnecessary or considerably reduce the casualties received during the assault.

e. The assault is the final phase of an attack against an enemy position. In a short, violent, and well-coordinated effort, the assault force overruns the objective. Supporting fires continue until the last possible moment and then are shifted to the flanks and rear of the enemy position.

f. Timing the forward displacement of atomic delivery means is critical. Displacements are executed to maintain a continuous atomic fire capability and to insure the availability of atomic fires during critical phases of the battle.

g. The commander may employ atomic fires to neutralize areas without complete intelligence in order to maintain continuity and momentum of the attack. Atomic fires delivered during the attack must be timed to avoid interference with ground movement.

152. Continuation of the Attack

a. Every means available is employed by the division to continue the attack with minimum delay. Reorganization is accomplished without

specific halts. Minimum forces are utilized to secure the objective. Maximum use of supporting fires is made during this critical period. The remainder of the division deploys and regroups to continue the attack. Reconnaissance elements and motorized infantry elements maintain contact and obtain information upon which the commander plans future actions.

b. Continuation of the attack with fresh troops, a new direction of attack, or exploitation of success by the reserve may necessitate a passage of lines or a relief in place (par. 154).

c. For further discussion on continuation of the attack, see FM 100-5.

153. Discontinuance of the Attack

a. Contingencies of the situation may necessitate a temporary halt in the attack. The commander must anticipate required halt and prepare orders to include the time and area of the halt, missions and locations of subordinate units, and command and control measures to be employed. To prevent congestion some units may be diverted into dispersal areas prior to the halt.

b. The commander may have freedom of choice in discontinuing the attack. In this event, the dispersal area is preplanned to aid defense, to minimize vulnerability to enemy attacks, and to facilitate renewal of attack.

c. Actions taken by the division discontinuing the attack include—

- (1) Establishing a counterreconnaissance screen to minimize enemy interference with, and knowledge of, the division actions.
- (2) Maintaining contact with the enemy and develop information required for planning future actions.
- (3) Providing artillery fires for security forces in a manner and from positions which support deception.
- (4) Redeploying forces for the defense based on the probable future employment. For types of defense see chapter 7.
- (5) Accomplishing reorganization and resupply concurrently with the above.

154. Relief in Place and Passage of Lines

Relief of committed units may necessitate a relief in place or a passage of lines.

a. *Passage of lines* often creates troop concentrations that present remunerative atomic targets to the enemy. Primary consideration is given to speed, secrecy, and control to minimize this risk. Dispersion between attacking units under atomic conditions frequently permits passage *between* units, thereby facilitating the passage. For further discussion of passage of lines, see FM 100-5.

b. Relief in place prior to the attack is preferable to a passage of lines when sufficient time is available to effect the relief without concentrating units. Relief in place, during the attack, is rarely employed because of the extensive time required to effect the relief without concentrating units.

Section V. ADVANCE TO CONTACT

155. General

a. The purpose and characteristics of the advance to contact are discussed in FM 100-5.

b. Doctrine for movement when contact is remote is discussed in FM 101-10.

c. The remainder of this section applies to the advance when contact is imminent.

156. Basic Considerations in Advance to Contact

The basic considerations discussed in FM 100-5 and in paragraphs 136 through 143 generally apply as modified or emphasized by the following statements:

a. Terrain. Speed of the advance is essential. Primary emphasis is placed on maximum utilization of the existing road net and early seizure of terrain features to insure uninterrupted advance. Provisions are made early to overcome obstacles.

b. Atomic Weapons. Atomic fires may be employed to provide added security to the advance by blocking enemy avenues of approach into the operations area or by denying enemy access to terrain essential for the advance. Highly persistent toxic chemicals are employed in the same general manner as atomic fires to provide security to the advance. The vagueness of the enemy situation normally requires that the bulk of atomic fires be withheld for on-call missions.

c. Distribution of Force. Primary tactical groups are the covering force, advance guard, flank and rear security forces, and the main body. Within this framework, principles governing employment are—

- (1) Rapid and uninterrupted advance of the division.
- (2) Maximum all-around security and early development of the situation.
- (3) Retention of the bulk of the combat power uncommitted during the advance for rapid employment upon contact with the enemy.

d. Coordination and Control. Imminence of contact and the terrain largely determine the degree of control established. Control must permit rapid response by subordinate units to changes in mission, march procedures, organization, and tactical control measures. Axes

of advance are preferred if adequate maneuver room is available. The use of Army aircraft facilitates command control.

e. Formations. That formation is adopted which best satisfies the above principles for distribution of force. The basic formations are line, single column, multiple columns, and echelon. Normally the advance to contact is conducted in multiple columns. Subordinate tactical groupings employ various combinations of these formations as dictated by their individual situations and missions. It is visualized that multiple columns normally will be preferred.

- (1) *Line formation* is desirable when considerable information of the enemy is available, maximum combat power forward is indicated, and speed is essential.
- (2) *Column formation* provides maximum flexibility and ease of control. It insures that the bulk of the combat power is available for employment when required. It retains a sizeable reserve. It delays employment of units in the direction of the advance; however, the rapidity of atomic weapons employment greatly reduces this disadvantage. In a vague situation this is usually the most suitable formation.
- (3) *Echelon formation* is a combination of the column and line formations. It retains to varying degrees, the advantages and disadvantages of both. This formation may be employed to refuse an exposed flank.

157. Planning the Advance to Contact

The commander analyzes the mission, the terrain, and the situation to determine the best organization and distribution of force to be employed initially. Primary consideration is directed toward anticipated actions during the advance and probable employment of forces upon contact. During the advance, the commander continually analyzes the situation based on latest developments. He shifts forces and alters the plan of advance as required. Upon gaining contact with the enemy, the commander plans and executes his attack as outlined in paragraphs 144 through 154.

158. Organization for Advance to Contact

a. General. Organization for the advance depends upon the mission, knowledge of the enemy, terrain, probable order of commitment into action, and the relative mobility of units.

- (1) Infantry, armor, artillery, and engineers are interspersed throughout the formation and Army aviation is extensively employed.
- (2) Administrative support is located to facilitate operations but must not interfere with the tactical movements.

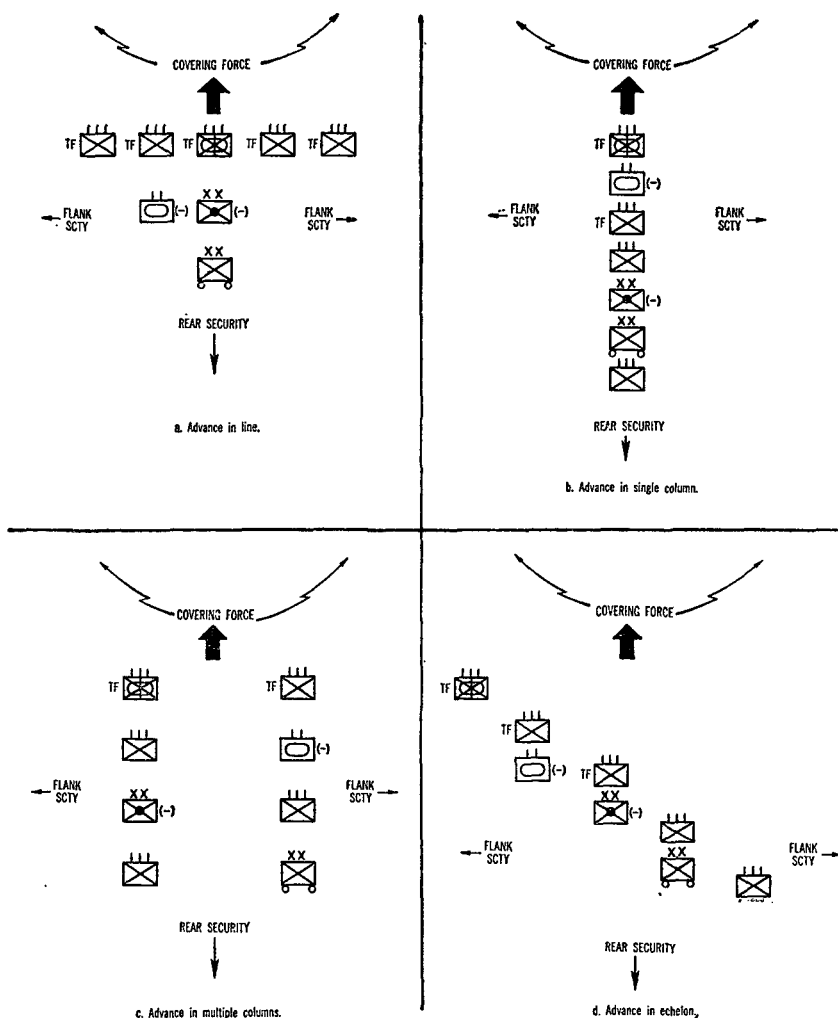


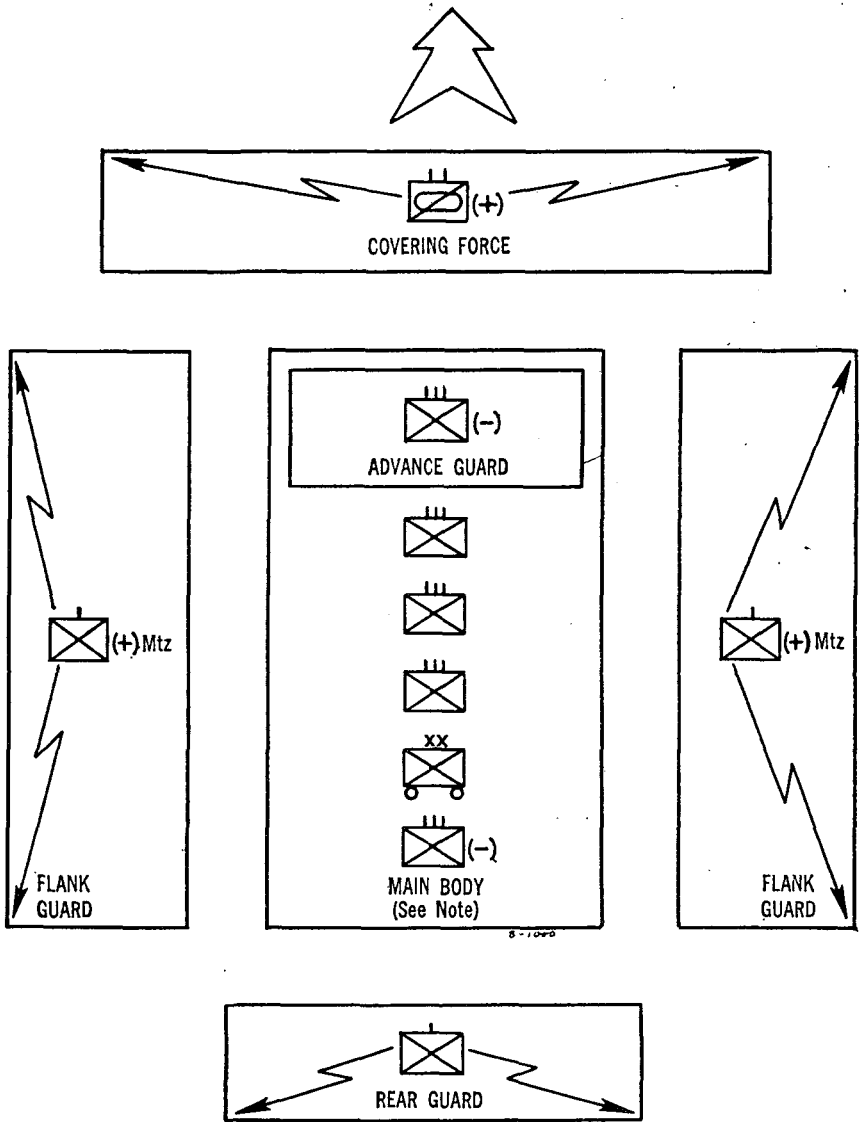
Figure 34. Formations for advance to contact.

b. The Covering Force.

- (1) Missions assigned the covering force are often broad in nature and may include developing the enemy situation, attacking to destroy enemy resistance, seizing and holding critical terrain, or containing large enemy units.
- (2) The composition and size of the covering force are extremely important because its initial engagement may determine the entire course of the battle.
- (3) The organization of the covering force is tailored to accomplish its mission, normally, at considerable distances in front

of the main body. A highly mobile force such as the cavalry squadron or a motorized battle group is suited to form the nucleus of the covering force. As appropriate, either force is reinforced with tanks, armored cavalry, infantry, artillery, engineers, and atomic fires.

- (4) The effectiveness of the covering force is increased by the use of helicopter-borne combat elements.



NOTE: Main body may advance in single or in multiple columns.

Figure 35. An organization for advance to contact.

- (5) The covering force operates under division control.
- (6) When the division is operating as part of a larger unit, the covering force is frequently furnished and controlled by higher headquarters. The leading elements of the division are then the contact forces between the division advance guard and the covering force.

c. The Advance Guard.

- (1) Each column of the main body provides and controls an advance guard. The mission of the advance guard is to insure the rapid uninterrupted advance of the main body.
- (2) Mechanized infantry, or cavalry adequately reinforced, are best suited for this role. Close cooperation with reconnaissance aviation is essential.

d. Flank and Rear Security Forces.

- (1) The mission of the flank and rear security forces is to protect the main body from ground observation and surprise attack. These forces must be sufficiently strong to defeat minor enemy resistance or to delay strong enemy attacks from the flanks or rear to permit deployment of the main body.
- (2) The flank guards travel on routes parallel to the main body, or move by bounds to occupy key observation points. The rear guard follows the main body.
- (3) The strength and composition of the flank and rear security forces are similar to the advance guard. Elements of the cavalry squadron are ideally suited for flank and rear security missions. Should a flank or the rear of the division be made secure by the proximity of adjacent or following units, these security forces can be reduced materially.
- (4) These security forces operate under division control.

e. The Main Body.

- (1) The main body comprises the bulk of the division combat power. It is immediately available to attack the main enemy force and seize the division objective.
- (2) Units of the main body are organized for combat and positioned in the advancing columns to permit maximum flexibility for employment during the advance and after contact has been made with the enemy main force.

Section VI. THE NIGHT ATTACK

159. General

a. The night attack is adopted to capitalize on the advantages of concealment afforded by darkness. Night attacks frequently offer exceptional opportunities for decisive results.

b. The night attack is characterized by a decrease in the effectiveness of aimed fire and by a corresponding increase in the importance of close combat and supporting fires planned during daylight. Troop leading, cohesion, maintenance of direction, and control are difficult. Morale of the enemy and own troops are highly sensitive to physical and psychological factors.

c. A division night attack is essentially a series of separate battle group actions, carefully planned and closely coordinated and controlled.

d. The dispersion of enemy defenses and the destructive effects of atomic fires facilitate passing between or through enemy defensive positions to seize objectives in the enemy rear.

e. Infrared devices, radar, and artificial illumination assist night observation and the collection of information.

f. Troop movements, concentration of forces prior to the attack, and the conduct of an attack which would be impossible during daylight, may often be executed in darkness with a minimum risk to our forces.

160. Basic Considerations for Night Attack

a. *Reasons for Adoption.* The night attack is adopted for one or more of the following reasons:

- (1) *To avoid heavy losses.* Restricted visibility reduces the effectiveness of enemy observed ground and air support fires. Desirable avenues of approach possessing little or no natural cover or concealment can be utilized at night.
- (2) *To achieve surprise.* Darkness serves to screen movements, thereby denying the enemy knowledge of our movements.
- (3) *To complete or exploit a success.* When insufficient daylight is available to complete the destruction of the enemy, a night attack may be launched to deprive the enemy of an opportunity to reorganize and reestablish his defense or recover his strength.
- (4) *To achieve psychological superiority.* The attacker accrues a psychological advantage over the defender at night. During darkness, effective conduct of the defense is more difficult to evaluate than that of the offense. The fear and uncertainty of the unknown do not affect the attacking soldier to the extent that it affects the waiting-defending soldier. The attacker knows his objectives, scheme of maneuver, when and where to expect opposition, and the plan to overcome this opposition. The defender does not know from where and in what force to expect an attack. This psychological advantage, vigorously exploited, reduces the combat power required to obtain decisive results.

- (5) *To compensate for inferiority in air and armored support.* Enemy control of the air may dictate a night attack. The effectiveness of air and tank employment is markedly reduced during darkness. An attack at night tends to nullify enemy air and armor superiority.

b. Essential Requirements. The degree of success attained by the night attack depends upon the following:

- (1) *Training.* Troops should be well trained and rehearsed in conducting night attacks.
- (2) *Leadership.* Small unit commanders should be trained to take independent and aggressive action in the absence of orders. Control exercised by higher commanders is difficult to retain during the conduct of attack.
- (3) *Daylight reconnaissance.* As a minimum, time should be provided for a daylight reconnaissance to identify visible objectives, lines of departure, enemy positions, and avenues of approach to objectives.
- (4) *Efficient control measures.* Adequate control of a night attack necessitates more restrictive control measures than those required for a daylight attack. Objectives should be easily identified, limited in size and depth, readily accessible by well-defined and easy routes of approach, and selected to facilitate future operations. A limit of advance (LOA) line is frequently designated to coordinate the protective fires employed after the attacking forces reach the objective. This line provides for troop safety and permits fire support agencies freedom to engage enemy forces beyond the line. Maximum use is made of easily identified terrain features such as streams, roads, and ridge lines to designate lines of departures, directions of attack, and limit of advance.

c. Employment of Atomic Fires. The consideration for employing atomic fires discussed in paragraphs 136 through 143 apply. Added emphasis is placed on the following:

- (1) *Troop safety.* Darkness increases the effects of flash blindness and retinal burns. Troop safety requirements normally necessitate firing atomic weapons prior to H-hour so that troops are dug in or otherwise sheltered.
- (2) *Scheme of maneuver.* The difficulty of traversing and controlling movement through obstacles such as tree blowdown and other debris is increased at night. This difficulty of movement is considered in the timing and phasing of the attack.
- (3) *Control.* Should the enemy employ atomic fires during the attack, flash blindness and darkness increase the difficulty of maintaining control.

d. Illumination. The attack may be nonilluminated initially to gain surprise, and illuminated after surprise is lost. Conditions favoring an illuminated attack are—

- (1) Surprise has been lost.
- (2) Cross-country and air movement is accelerated, thereby providing rapid exploitation of atomic fires.
- (3) Deep objectives can be seized without jeopardizing control and coordination.
- (4) Enemy employs illumination.
- (5) Insufficient time is available to prepare for nonilluminated attack.
- (6) When a daylight attack has continued into hours of darkness.

e. Time of Attack. The time of attack is based primarily on the purpose of the attack. When the purpose is to seize and hold terrain, the attack is launched during early darkness to provide maximum time on the objective for organization and consolidation before daylight. When the purpose is to seize terrain preliminary to further advance at daybreak, the attack is launched as late as possible to afford the enemy minimum time to react but sufficiently early to permit our seizure of the objective and reorganization during darkness.

161. Planning the Night Attack

a. Procedures for planning the night attack are the same as those discussed in paragraphs 144 through 148. Items listed below are for emphasis.

b. The decision to make a night attack should be made well in advance to provide sufficient time for detailed planning, reconnaissance, and coordination.

c. The night attack plan is characterized by simplicity. The scheme of maneuver, fire support plan, and command and control measures are made as simple as possible and are specified with the utmost precision.

d. The exercise of command control is extremely difficult during the night attack. This difficulty tends to make night attack plans less flexible than daylight attack plans. Highly restrictive control measures are often employed to obviate collisions between attacking units. Deep division objectives should be seized by a succession of limited objective attacks to permit adequate command control of the advance.

e. The night attack plan must provide for effective means of mutual identification.

162. Conduct of the Attack

a. The doctrine discussed in paragraphs 149 through 154 applies to the conduct of the night attack. Items listed below are for emphasis.

b. Whenever possible, a complete rehearsal of the attack is conducted over similar terrain and under similar lighting conditions.

c. Only the simplest formations are employed in the conduct of the night attack. Difficulty of control favors the column formation. Skirmish lines are formed at the latest possible moment prior to assault.

d. Leaders are well forward to direct and control the progress of the attack and to exploit success.

e. Dispersion within units is reduced to facilitate control. Darkness reduces the risk of detection by the enemy until the attacking force has closed on the enemy position.

163. Night Raids

a. The purpose of night raids is to collect information and to harass the enemy. Raids are not employed to hold terrain. Captured enemy troops, documents, and personal observation resulting from raids may provide vital atomic target information.

b. After accomplishment of the mission, the raiding force withdraws on a prearranged signal and when possible on routes different from those used in the advance. Supporting fires are held on call to support the raid.

CHAPTER 7

DEFENSIVE OPERATIONS

Section I. GENERAL

164. General

The introduction of atomic weapons to the battlefield has changed past concepts of defense. Defensive operations on the atomic battlefield are characterized by flexibility, dispersion, mobility of the reserves, and the necessity for additional defensive localities to be located in greater depth. Tactics employed must be capable of absorbing and containing severe initial shock of enemy attacks. Possession of atomic weapons enables the defender to use the defensive tactic to deceive and destroy the enemy. Opportunities to regain the initiative are numerous and, in the conduct of the defense, offensive action in conjunction with the use of atomic weapons is stressed. Defensive operations are conducted aggressively in order to destroy the enemy and to maintain high morale among friendly forces.

165. Scope

a. This chapter deals with the defense under conditions of atomic warfare; defense under nonatomic warfare is treated where appropriate. This chapter covers division defensive operations of two types, the mobile defense and the position defense, and includes variations of each of these types. Illustrations are provided to serve only as a point of departure from which the proper variation for existing conditions must be developed.

b. Some new definitions are included and some old ones redefined in order to develop the concepts and terminology for the defense under atomic conditions and to relate concepts of the past with those of the present.

166. Concepts

a. The defensive concepts outlined in this chapter cover the defense from a multidirectional and unidirectional (primarily from the front) standpoint. The enemy's use of atomic weapons, airborne troops, air-landed troops, infiltrators, and guerillas develops a requirement

for defending in more than one direction, for depth in the defensive area, and for specific measures to protect or provide security for the artillery and administrative installations within the defensive area.

b. Atomic warfare places emphasis on the preparation of organized defensive localities in depth. This defense in depth is designed to prevent the enemy from exploiting and gaining free access to rear areas after breaching forward positions.

c. Emphasis is placed on rapid reorganization. After an enemy atomic strike, the success of the defense will largely depend upon the rapidity with which defending forces are reorganized and disposed to destroy or contain the enemy attack.

d. The primary means of communication in the defense is radio and radio-relay. Field wire will be installed when time permits. Multiple communication means are used throughout the division. Infantry division battle groups and rifle companies lay wire within and between positions when time and dispositions permit.

e. The reconnaissance means available to the division (e. g., infantry division cavalry squadron, battle group reconnaissance platoon, and organic aircraft) permit long-range reconnaissance, good mobility for security forces, and a high degree of control of such forces.

f. Flexibility of employment of the battle groups is enhanced by the varied types of organic and attached transportation means. Armored carriers, helicopters, and trucks provide means of movement over most terrain. Troops in armored carriers employed with division tank elements enhance the speed, personnel protection, and shock action of the division striking force or reserve when employed.

g. The battle group is the basic tactical unit of the army. Battle groups must be able to operate with substantial gaps between them on a battlefield of great width and depth.

h. The brigade staff provides flexibility in command and control matters. This staff may be employed under the command of the assistant division commander for the performance of varied missions in all types of defense. Examples of these missions are the control of security forces, forces in the battle area or blocking forces, or the control of counterattacking forces, depending on the situation and importance of the action.

i. In all defensive operations, the effects of the enemy's air and atomic capability and battlefield surveillance means are a major consideration since these effects restrict movement of divisional units within the defensive area and may result in their destruction.

167. Mission

An infantry division employs the defense to deny a vital area to the enemy, to protect a flank, to contain an enemy force, to gain time, to economize forces, or to bring about maximum destruction and dis-

organization of the enemy. The division may assume the defensive upon order by higher headquarters, voluntarily or be forced to defend by the situation.

Section II. BASIC CONSIDERATIONS OF DEFENSE

168. General

Following are certain basic considerations of defense for planning and conducting defensive operations:

a. Proper Use of Terrain. Terrain analysis in the area of operations covers the following military aspects:

- (1) *Critical terrain.* Critical terrain is important in atomic warfare. The commander must consider how terrain fits into his scheme of defense and should not be rigidly bound by any set patterns of holding the high ground, or always occupying the critical terrain. The defender may occupy ground adjacent to critical terrain, taking advantage of cover and concealment. Time permitting, occupation of the critical terrain can be delayed, thus depriving the enemy of a lucrative atomic target. Terrain which is important is defended by sufficient forces to insure against defeat in detail and to require the enemy to mass to seize the position without the use of atomic fire support. This defense may be conducted forward of, rather than on the terrain feature. Reliance is placed on atomic fire support to play a major part in the defeat of a massed enemy. Strong forces may be held in reserve in dispersed areas ready to move into areas under close attack by the enemy, either to counterattack and destroy him with the assistance of atomic weapons or to assist the original forces in blocking the attack. To present consistently a lucrative atomic target by repeated occupation of key terrain features could be fatal to the success of the defensive mission. An enemy must not be allowed to solve the organization of the defense by selecting a good avenue of approach which leads toward critical terrain, where he is assured that such terrain will be normally occupied by our forces in strength. The defender's capability to employ atomic weapons permits the temporary loss of critical terrain without seriously jeopardizing the successful accomplishment of the mission.
- (2) *Cover and concealment.* Woods, vegetation, natural features of the terrain, and manmade cover reduces the effects of atomic weapons. However, the defender must consider the secondary blast effects which occur in woods or built-up areas. Concealment by artificial and natural means is of increased

importance, since it makes target acquisition more difficult for the enemy.

- (3) *Obstacles.* Natural and manmade obstacles assist in canalizing enemy troop movements causing him to mass, thereby presenting an atomic target. Obstacles covered by effective fire will cause the enemy to attempt to bypass, or to mass the necessary force to overcome the obstacle. Full advantage should be taken of all natural obstacles in the organization of the defense to enable the defender to remain as dispersed as possible and still adequately cover avenues of approach. Time and materials permitting, obstacles which cannot be completely covered by fires at all times may be developed for such delay upon the enemy as they may achieve.
- (4) *Observation and fields of fire.* Use is made of air observation, and helicopters are used for posting and shifting ground observation posts. Good observation is essential in order that lucrative atomic targets may be brought under fire. Conversely, it is necessary to deny observation to the enemy in order to reduce the atomic vulnerability of defending forces. Fields of fire emphasize destruction of the enemy in the gaps between positions, and space for the employment of small atomic weapons within and in front of the division battle area.
- (5) *Avenues of approach.* Atomic weapons facilitate the control of avenues of approach to and into the defender's position. Analysis of avenues of approach to the defender's position provides a basis for the location of potential enemy atomic targets. Such targets may be brought under atomic fire by division security forces. With great dispersion between units, attention must be given avenues of approach from all directions.

b. Security.

- (1) The enemy's atomic capability and the necessity for dispersion emphasize the need for all-around security. Aviation and reconnaissance units are habitually used for security missions.
- (2) Depending on the plan of defense, the security forces may or may not attempt to force the enemy into early deployment. It may be desirable to allow the enemy to come closer to the defensive area or into areas where defensive atomic fires are more effective.
- (3) The capability of the defender to employ atomic weapons makes possible the destruction of the attacker by security forces.

- (4) Counterreconnaissance is of vital importance to reduce to a minimum the enemy's capability of locating atomic targets among our forces.

c. Mutual Support. Extended defense requires the achievement of mutual support by the positioning or movement of units, by the location of units in relation to each other, by the ability of one unit to reinforce another by fire or movement, and by the mobility of reserves. The defender achieves a compromise between the protection afforded his unit by dispersion and the loss of solidity in the battle position. Since mutual support involves fire support and movement or reinforcement time and space factors, the mobility of units exerts strong influence on the degree of mutual support. Fires from long range organic and attached weapons of one unit should be coordinated with fires from an adjacent unit in the gap (interval) between these units.

d. All-Around Defense. The division as a whole, as well as its individual combat and administrative elements, must prepare for all-around defense. It will frequently be necessary to move forces to previously prepared positions to obtain all-around defense and thereby prevent defeat in detail. The enemy's rapid exploitation of multiple atomic attacks requires the maximum application of all-around defensive measures.

e. Defense in Depth. Maximum depth of defense is a requirement under atomic warfare conditions since the enemy may be expected to exploit his atomic attacks rapidly. Positions are organized in depth to preclude his free maneuver in rear areas. Such positions are prepared in greater depth and in greater number than in nonatomic situations so as to control avenues of approach, to protect critical terrain, to reduce overall atomic vulnerability, and to assist the maneuver of the reserve or striking force. Added depth tends to preserve the integrity of the defensive area against enemy atomic weapons.

f. Proper Use of Barriers. An effectively coordinated barrier system is of particular importance when defending on wide frontages. Careful consideration must be given the necessity for freedom of maneuver of the striking force in the mobile defense and the routes to be used by the reserve in counterattacks in the position defense. Availability of manpower, material, equipment, and time impose a limitation on the extent of barrier construction. Maximum utilization must be made of natural and CBR barriers. Use of prepositioned atomic weapons assists in creating additional obstacles and in denying areas to the enemy. Barriers may cause temporary massing of enemy forces exploiting an atomic attack.

g. Coordinated Fire Plan. When used, atomic fires dominate the defensive fire plan. Atomic fires are planned on all assumed enemy action. Nonatomic fires are planned to assist in the defense of unit

positions, to cause the enemy to mass, to augment the effects of atomic fires, and as economy of force measures in areas where atomic fires are not used. Troop safety is a major consideration in planning atomic fires, particularly when these fires are planned within the position. The fire plan brings the enemy under fire at long ranges, keeps him under increasingly heavy fires as he approaches the battle position, and assists the counterattacking force. Such an application of fire may be sound in atomic warfare.

h. Flexibility. The flexibility afforded the defender by the possession of atomic weapons is greater than in a nonatomic situation. The organizational flexibility of the infantry division is retained to the maximum degree by rapid shifting of forces, including artillery, and by retaining an adequate reserve for commitment at a decisive time. Counterattack is the decisive element in the defense and is the means by which the defender gains the initiative. Counterattacks, using mobile reserves and supported by atomic fires, facilitate gaining the initiative. Atomic weapons are best employed against massed enemy. This may result in atomic fire being withheld when the enemy first comes within range so as to permit him to mass. The defender must be prepared to fight in any direction.

i. Maximum Use of Offensive Action. The spirit of the offensive must be maintained. Troops must be psychologically conditioned to go rapidly from the defense to the offense. In fluid situations with wide frontages and great depths, there will be many opportunities to regain the initiative by offensive action. Destruction of the attacker's forces by atomic supported counterattacks will be a frequent occurrence.

j. Maximum Dispersion Against Atomic Attack Consistent With the Mission. The degree of dispersion of units required in atomic warfare is one of the more serious considerations of the defender. This dispersion applies to both administrative and tactical units and is but one method for minimizing the effects of enemy atomic attacks. It must not be so great as to jeopardize accomplishment of the mission. Dispersion of an unrealistic order of magnitude which introduces rigidity in the defense, fragmentation of combat power, and inability to maneuver, or to destroy enemy penetrations must be avoided. Standing operating procedures are designed to include all measures and actions to be taken by individuals, units, and installations to reduce atomic vulnerability and to enhance unit recoverability. Unit discipline under atomic attack is aimed at avoiding panic. This discipline is constantly stressed as a means of instilling confidence in the unit as to its ability to fight from dispersed areas and in all directions. The mission may often dictate the degree of dispersion (app. V).

Section III. PLANNING CONSIDERATIONS

169. Planning Sequence

a. Organization of the Ground.

- (1) The planning sequence for defensive operations generally follows procedures shown in FM 100-5 and in chapter 6. Organization of the defensive area normally develops as follows:
 - (a) Visualization of areas to be occupied.
 - (b) Visualization of troops required for each area.
 - (c) Tentative selection of boundaries or areas of responsibility.
 - (d) Organization of ground by units within assigned sectors.
 - (e) Report by units of areas actually being occupied.
 - (f) Adjustment of defensive sectors if necessary.
- (2) Concurrently with the initial visualization of the ground to be occupied, the commanders of all echelons consider the employment of atomic weapons in all phases of their planned defense. They also visualize the effects of the enemy employment of atomic weapons upon the defense.

b. Fire Support Planning.

- (1) All available support fire must be planned and integrated into the defense. Atomic fires, counterattack maneuvers, use of chemical and biological agents, and barriers are planned concurrently. Standing operating procedures or orders pertaining to the conduct of the defense must clearly delineate request channels for atomic fires and measures for eliminating time lag in delivery of atomic fires.
- (2) Flexibility in fire support planning is important to insure that the security forces, forces in the defensive areas, and counterattacking forces receive adequate fire support.
- (3) In planning for atomic fires, adverse wind conditions are considered with respect to troop safety. Wind speeds and directions at various altitudes as well as at ground level must be known. If wind conditions are such that a surface burst is likely to cause fallout contamination in friendly territory, employment of atomic weapons must be carefully planned. To minimize the possibility of inadvertent surface or near surface bursts, a burst height should be selected which will provide a high assurance that significant fallout contamination will not occur. Fires must be organized so that they are compatible with the type of defense selected.

c. Chemical and Biological Planning. Considerations involving the use of chemical and biological agents include—

- (1) Biological attacks in support of defensive operations are planned by corps or higher headquarters. The execution of biological operations by divisions requires augmentation with special equipment and troop units with specialized delivery capabilities.
- (2) Toxic chemicals employed to produce a persistent effect or a nonpersistent effect may be used in defense. The use of toxic chemicals increases the effectiveness of fires against known enemy weapons positions which cannot be profitably attacked with atomic weapons. Toxic chemicals employed to produce a persistent effect are also used to contaminate barriers, obstacles created by demolitions, and defiles to assist in impending enemy movements or to canalize enemy forces. Toxic chemical agents may be delivered by the artillery and mortars of the division and by manually placed toxic chemical land mines. Toxic chemicals may be employed against targets of opportunity and against concentrations of enemy troops moving in the attack.

d. Barrier Planning.

- (1) *General.* Barrier plans are developed concurrently with other plans. Shortage of labor, materials, equipment, and time will be a serious problem. Extensive barriers require engineer and logistical support from corps and army. It is necessary to take maximum advantage of natural obstacles and improve them. It may not be possible to cover all obstacles by direct fire, but every effort should be made to cover obstacles by indirect fire and observation. Lanes and gaps must receive added emphasis to permit necessary movement of reserves, striking forces, and other forces within the defensive area. The division barrier plan must provide for location of barriers, responsibility for construction, and priority of construction. The barrier plan is developed concurrently with antitank and fire plans and must be carefully coordinated with counterattack plans.
- (2) *Division barrier plan.* The division barrier plan is developed as follows:
 - (a) Division receives barrier instruction from corps to include—
 1. Applicable portions of the plans of higher headquarters, including pertinent portions of denial plans.
 2. The designation of barriers or barrier systems vital to the command.

3. The assignment of tasks in priority to subordinate units. Engineers support tactical units by technical advice, construction of specified barriers, and execution of certain demolitions.
 4. The location of minefields of major tactical importance, with gaps and lanes; and the location, extent, and type of contamination, if any.
 5. Schedule of preparation and execution of demolitions with authority, responsibility, and conditions for preparation, defense, and execution clearly stated. Routes to be kept open to accomplish tactical and administrative plans will be indicated.
 6. Allocation of engineer support, labor (both troop and indigenous), materials, equipment, and transportation.
 7. Limitations or restrictions on the employment of certain types of obstacles (such as mines or chemicals), if any.
 8. Instructions relative to the security of the plan and its execution.
 9. Reporting instructions.
- (b) Division publishes similar instructions to its units by means of a barrier annex (plan) to the division operation order (plan). The division engineer has primary special staff responsibility for barrier planning. He plans and supervises the technical aspects of barrier employment and prepares the barrier annex (plan) to the operation order (plan) under the direction of G3. This barrier annex (plan) covers the same points substantially that the corps plan does (as in (a) above), with increased detail appropriate to the echelon. G3 has general staff responsibility for the tactical employment of barriers and their integration with the scheme of maneuver and plan of fire support.
 - (c) A complete barrier annex (plan) should not go forward of division headquarters because of the danger of compromising the location of barriers, lanes, gaps, and other routes through the obstacles. Pertinent barrier instructions below division level are normally issued as fragmentary orders, overlays, or sketches.
 - (d) Subordinate tactical commanders are responsible for preparation of integrated barrier plans based on the division plan.

e. Counterattack Planning. Concurrently, the plans for the defense counterattack plans are prepared for all likely enemy penetrations within the defensive areas.

Section IV. DEFENSIVE OPERATIONS

170. General

a. Basically, there are two types of defense—the mobile defense and the position defense. The defined types lie at opposite ends of a scale with a wide range of variations between. Commanders who assume the defensive must realize that to follow rigid patterns of thinking or to adopt rigid types of organization of the ground may bring about destruction of the command and failure in the mission.

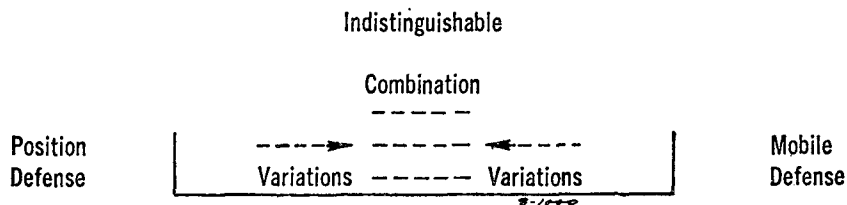


Figure 36. Types and variations of defense.

b. The primary difference between the two types is in the concept of the commander as to the manner in which the forces are disposed, and the size and intended use of the reserve.

c. Corps and higher echelons will normally conduct a mobile defense under atomic conditions since this type provides depth, resiliency, and flexibility. The infantry division can be employed in the mobile defense as part of a larger force, in a blocking role, or as part of the striking force.

171. Operations

a. The infantry division is capable of conducting all types of defensive operations on frontages of $\pm 20,000$ yards with depths of ± 15 miles. Because of its organization and ability to exploit the terrain, it is more suited to perform a position type defense than a mobile type defense. However, when provided with adequate transportation and augmented by additional combat forces, the infantry division is capable of conducting an effective mobile type defense.

b. When conducting a position type defense, the division may position its forces to provide for mutual support by battle groups. When the infantry division is conducting a position defense over an extended front, it leaves large gaps between battle groups. These gaps will be covered by supporting fires (high explosive and atomic), obstacles, mines (high explosive and chemical) patrolled by organic units or attached mechanized forces.

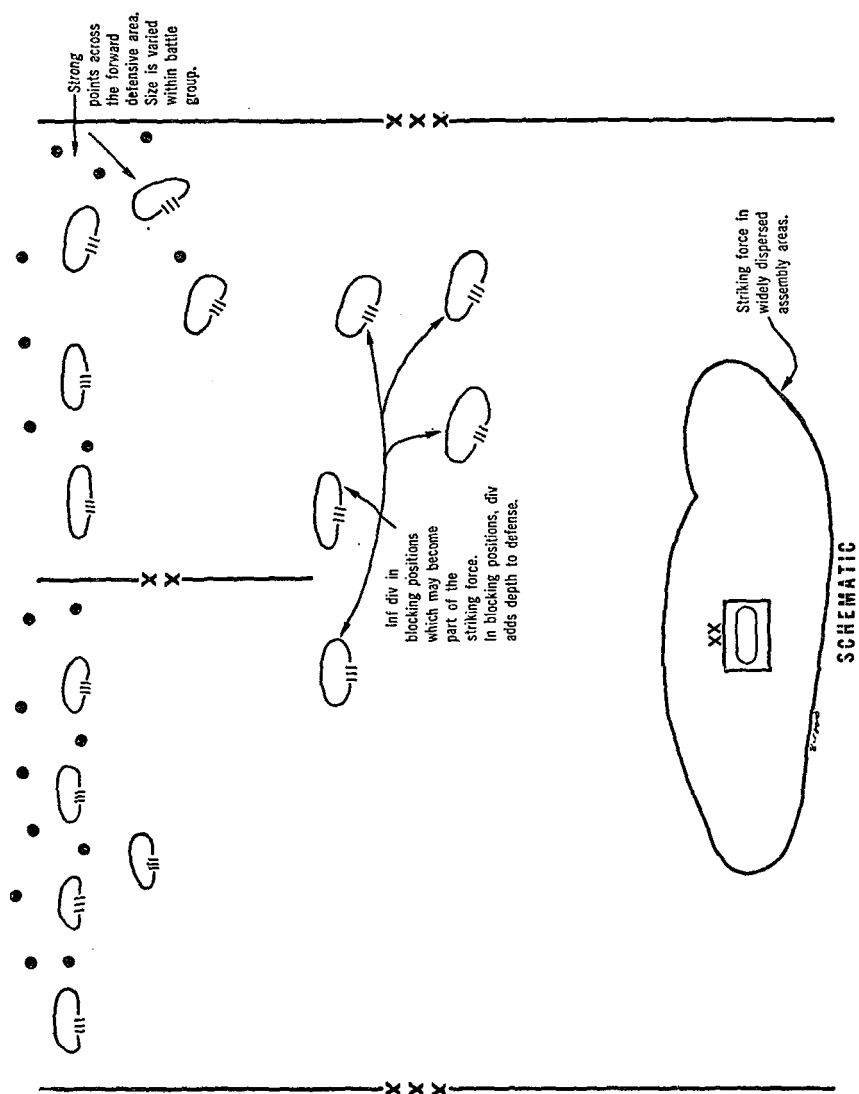


Figure 87. Infantry division as part of a corps in mobile defense.

c. The conduct of an effective mobile type defense will normally require the provision of covering forces from higher headquarters and may require the attachment of additional reconnaissance means to warn of impending attack and to canalize attacking forces into terrain favorable to the defender. Also, attached transportation and artillery units are required to provide additional mobility and firepower for the division in its mission of destroying the enemy force at a time and place of the defender's choosing.

d. The division reserve, in the conduct of a position type defense, normally will consist of one or more battle groups and may contain all or a major portion of the division tank battalion. The reserve is generally employed under centralized control in the counterattack role. It may be employed to block enemy penetrations and assist corps elements in the counterattack.

e. When operating as part of a larger force in defensive operations, the infantry division is usually assigned a sector to occupy and defend. The infantry division may conduct a position type defense although the larger force is conducting a mobile type defense. It may also be employed as an element of the corps reserve, either independently or in conjunction with armored divisions.

f. Under nonatomic conditions frontages and depths for subordinate units normally are decreased below those for an active atomic environment; however, the commander takes a calculated risk when he disposes his troops in a more compact defense even though atomic weapons have not been used. Vulnerability of units also involves that degree of dispersion which may be assumed on the battlefield without dissipating unit capability to successfully detect and counter hostile offensive action. Mass, on one hand, invites atomic destruction. Lack of it, however, may obviate the necessity for hostile use of atomic weapons and permit enemy forces to conduct successful attacks utilizing conventional means alone. The possibility of defeat in detail exists in both cases.

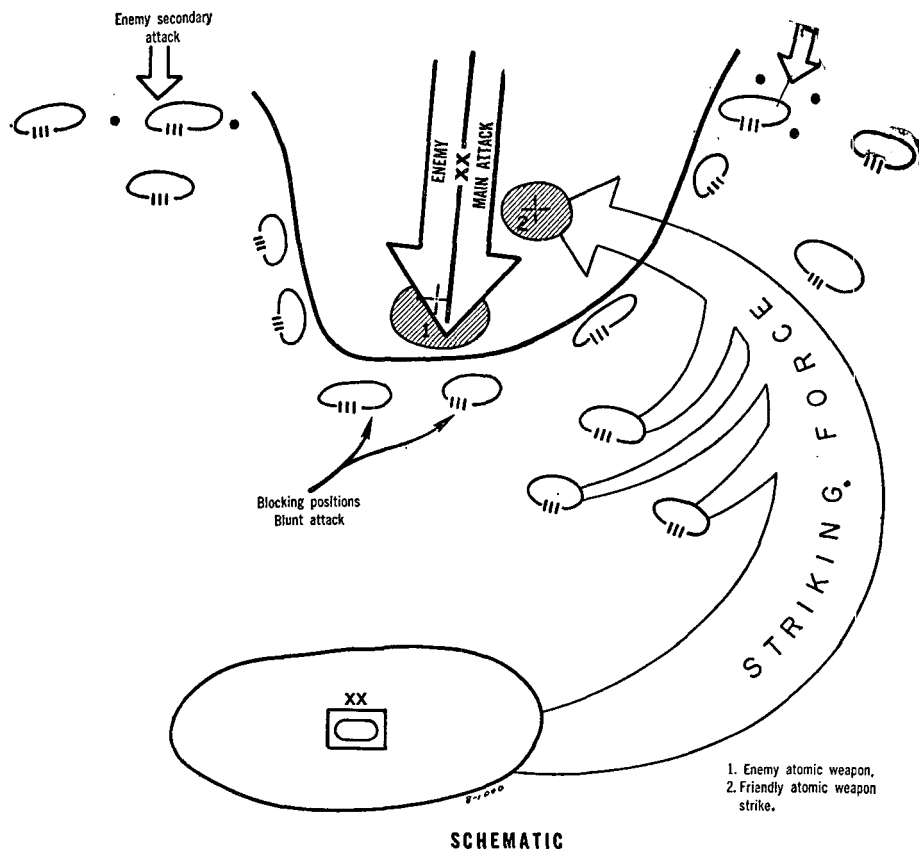


Figure 38. Infantry division blocks enemy penetrations and assists corps in counterattack.

Section V. SECURITY FORCES

172. General

Security forces are employed to provide security, add depth, deception, and flexibility to the overall defense, and, where possible, to destroy the enemy with atomic weapons forward of the position. Properly used, they disorganize the attacker and disrupt his plans. Security forces include those forces used to counter enemy activity within the position, such as guerillas, infiltrators, and airborne or air-landed troops.

173. Missions

Security forces are assigned the missions of providing early warning and intelligence information; creating delay, disruption, canalization, and deception; causing early enemy deployment; and provid-

ing defense of rear areas. In atomic warfare, these missions take on added meaning. Early warning and intelligence information are used for atomic target acquisition forward of the battle area. Deception is used to mislead the enemy into concentrating against the security force and thereby creating an atomic target. Delaying actions are used to draw the enemy into potential atomic target areas in front of or within the defensive positions. All means of deception, to include dummy positions and weapons, are used to cause him to expend atomic weapons prematurely. Surveillance is maintained over large areas outside and within the battle area, in gaps between battle areas, and in rear areas. Security forces, including intelligence personnel, may also be assigned the mission of remaining concealed and being bypassed by the enemy in order to report on his activities.

174. Decisive Engagement

Security forces normally avoid decisive engagement. However, the mission may require decisive engagement when it is desirable to mislead the enemy into concentrating against the security force to create an atomic target. If decisive engagement is required to gain time for the main force, the commander must consider reinforcing security forces or accept the overall effect upon the mission.

175. Mobility

Security forces should have greater mobility than the enemy. Mobility of force is not entirely dependent on mobility of equipment. Rather, it is also influenced by deception, use of darkness, and retention of the initiative.

176. Composition

Security forces consist of reconnaissance aviation, combat aviation, covering forces, general outposts, combat outposts, reconnaissance and security forces, local security, and rear area security elements.

177. Covering Force

A covering force is a mobile security force, normally provided by corps. Commanders cannot always expect to have a covering force in front of the division. Even when initiating the defense while not in contact, the time or availability of means may not permit the corps commander to provide a covering force. Higher commanders may support or augment security forces with combat aviation, guided missiles, and atomic weapons.

178. General Outpost

a. General. The general outpost is provided by the division. This outpost normally is used in position defense when there are friendly

forces on either flank. With augmentation of cavalry and armor units, it may be used in mobile defense and even when the division is responsible for extended frontages and exposed flanks.

b. Composition.

- (1) Factors to be considered in determining the size and composition of the general outpost are—

- (a) Mission.
- (b) Area of operations.
- (c) Relative combat power of opposing forces.
- (d) Enemy capabilities.

- (2) There is no prescribed organization for a general outpost. It is normally a balanced combined arms force with the necessary logistical and air support. It may be supported by artillery fire including atomic fires, from positions within the battle area or may have attached artillery fire support means. The general outpost is as mobile as conditions permit, using tanks, armored carriers, trucks, and army aviation to include helicopters. A general outpost may consist of the entire cavalry squadron reinforced by tank elements and artillery; or a motorized battle group, with attached division reconnaissance elements, all, or elements, of the division tank battalion, and engineers. When operating beyond the range of artillery located within the defensive area, the general outpost force may have artillery attached. When a battle group is the major component of a general outpost, it is desirable for the battle group headquarters to control that force. Large general outposts may be placed under the control of the brigade headquarters.

c. Missions. The general outpost warns of the enemy approach and provides time for units to prepare the main battle position. The outpost covers the withdrawal of the covering force and denies the enemy ground observation of the positions within the battle area. The mission emphasizes locating atomic targets and deceiving the enemy into presenting an atomic target. Small detachments may be left behind with adequate communication to provide intelligence information and to control fires.

d. Location. As a guide, the general outpost may be located 6,000 to 12,000 yards in front of the forward edge of the battle area (FEBA). When the division is part of a corps, the initial location of the general outpost may be designated by the corps commander. The location should be far enough forward to accomplish the mission but not so far forward as to unnecessarily risk destruction of the force. The position normally selected will provide good observation and take advantage of natural obstacles and concealment.

e. Conduct. The general outpost accomplishes its mission by observation and fires, including atomic fires; use of obstacles and demolitions, including atomic demolitions when authorized; aggressive patrolling and reconnaissance, including attached Army reconnaissance aviation, delaying action, and deception measures; and when necessary, by close combat. Should the enemy attack preclude withdrawal, the general outpost stays behind enemy lines as long as it can render assistance to the defense and then infiltrates back to the defensive area.

f. Communications. Multiple communications means are used to insure continuous communications with the general outpost. Battle groups monitor the division general outpost net to speed up receipt of intelligence information and early warning.

179. Combat Outposts

a. Mission.

- (1) The primary mission of the combat outpost is to provide early warning and information of the advance of the enemy, to provide a counterreconnaissance screen so as to deny the enemy close ground observation of the battle area. Within its capabilities, the combat outpost delays and disorganizes the enemy and attempts to deceive him as to the true location of the battle area. It does not engage in close combat. The combat outpost provides target information for atomic and nonatomic fires. The strength of the combat outpost will usually be not less than one reinforced rifle platoon for each frontline rifle company. When the situation permits, the combat outpost is motorized.
- (2) Small detachments may be left behind with adequate communication so as to provide information and adjust fires from in rear of the enemy as he concentrates against the battle group defensive position.

b. Location. Combat outposts are preferably located on the first high ground forward of the battle area and within supporting distances thereof. This location may normally be 1,000 to 2,500 yards in front of the battle area. Battle group commanders normally prescribe the general location, composition, and control of the combat outposts. If the division commander desires to indicate the general location of combat outpost, he selects a limiting point on the battle group boundary to indicate where adjacent battle groups will coordinate. However, there is no rigidly prescribed location or pattern for disposition.

c. Communications. The importance of the early warning mission requires reliable communication with the parent rifle company and battle group.

180. Local Security Elements

The mission of local security elements is to prevent surprise and infiltration of unit defensive positions. Local security elements consist of observation posts, listening posts, outguards, and patrols. The area in rear of the combat outposts is patrolled by the battle groups to maintain contact and to add to the security of the battle position.

181. Gap Security and Surveillance

Security of the gaps between organized defensive localities is normally provided by mobile task forces organized either by units occupying the defensive localities, by the cavalry squadron or by mobile task forces organized from the division reserve. When the cavalry squadron and elements of the division reserve are employed to cover large gaps between battle group defensive localities, they will normally be retained under division control and assigned sectors. The surveillance effort is supported by electronic detection devices located within the defensive areas or organic to the security forces.

182. Rear Area Security Elements

The trains commander is the rear area security commander (ch. 5). Rear area security is provided by observation posts, foot patrols, motorized patrols, listening posts, and road guards. Army aircraft are extensively used to economize on other surveillance means in daylight. Areas of surveillance responsibility coincide with unit boundaries. The cavalry squadron may be used for rear area security. Security elements are particularly alert for airborne or airlanded attack, guerillas, infiltration, and interference by civilians or refugees.

183. Reconnaissance and Security Forces (R and S Forces)

a. Missions. R and S forces perform the missions prescribed for the general outpost and combat outpost within their capability. This mission includes warning of enemy approach, locating atomic targets, deceiving the enemy into presenting an atomic target, providing intelligence information, and controlling fires. The latter two may be accomplished by allowing some R and S elements to remain behind the enemy lines.

b. When Used. R and S forces are used in the extended variation of position defense, in perimeter, variation, and frequently in mobile defense in place of a general outpost. They are used when the area to be secured is large and when it is desired to economize on security forces to increase the strength of the striking force or reserve. The division will use R and S forces more often than a general outpost because of the extended and multidirectional nature of the defense. Under nonatomic conditions, this employment will be less frequent.

c. Composition, Location, and Conduct.

(1) R and S forces consist of the personnel manning a series of outposts, roadblocks and observation posts, and reconnaissance detachments. These forces may be provided by the forward battle groups or other divisional units. The division commander normally prescribes the trace of the R and S line by specifying locations of importance to the division as a whole, although corps may prescribe it when the division is operating as part of a corps. The infantry division cavalry squadron or elements of this unit are well suited to perform the missions of the R and S force. The target acquisition capability of the cavalry squadron should be fully exploited. When a battle group performs the R and S mission, augmentation from divisional units of armored carriers, trucks, tanks, communication facilities, and a target acquisition element may be required. Considerations influencing the location and composition of R and S forces are—

- (a) R and S mission.
 - (b) Location of dominant terrain, obstacles, and observation forward of the FEBA.
 - (c) Troops available.
 - (d) Enemy threats and likely avenues of approach.
 - (e) Communication facilities available.
 - (f) Capabilities of fire support means.
- (2) During the conduct of the R and S mission, habitual use of Army aviation will enable R and S forces to extend the range of reconnaissance, to provide earlier warning, and to assist in calling for atomic and nonatomic fires. Small patrols and personnel manning roadblocks and observation posts may be moved by helicopter. Extensive use of aircraft and target acquisition elements from the cavalry squadron will facilitate surveillance and early warning over the large areas and frontages normally assigned reconnaissance and security forces.

d. Communications. Multiple communication means are used to insure continuous communication with the R and S forces. Because of extended frontages, special emphasis is placed on air-ground communications.

Section VI. MOBILE DEFENSE

184. General

In mobile defense, minimum necessary forces occupy forward defensive positions with the larger portion retained as a striking force. Forward defensive positions, strong points, and observation posts warn of impending attack, canalize the enemy into terrain favorable for the defender, and block or impede the attacking force. The objective of mobile defense is the defeat of the enemy by a combination of defensive and offensive actions. Principal reliance is placed on bold and vigorous offensive action to destroy the enemy in the selected tactical locality most favorable to the defender. A limited objective attack may be launched early enough to strike the enemy in his attack position. The mobile defense is a highly fluid defense which must not be conducted by rigidity in thought or tactics. Set patterns of action are avoided. To be successful, the defending commander must retain his freedom of action to commit his striking force at a time and place of his own choosing. The counterblow may be launched forward of the forward defensive area, at the forward defensive area, or in rear thereof. Counterattack plans are prepared for as many contingencies as time will permit. Thorough reconnaissance and practice by key personnel of the striking force are necessary to attain the responsiveness which is essential to success.

185. Considerations for Adoption

Conditions which may influence adoption of the mobile defense are—

- a. The mission permits the battle to be fought in sufficient depth.
- b. The mobility of the defending force is superior or equal to that of the enemy.
- c. Terrain facilitates movement by the defender.
- d. The air situation permits relatively free movement of defending force.
- e. Adequate time is not available to organize a position defense.
- f. Reserves available at higher headquarters are limited.
- g. The enemy atomic capability precludes attempting to hold terrain.

186. Forward Defensive Area

The forward defensive area is that portion of the defensive sector in which the forward defensive positions are located. Its forward edge is determined between divisions and higher units by limiting points normally established by the next higher headquarters. Its rearward limit is based on a consideration of the area required by units occupying forward defensive positions to accomplish their mis-

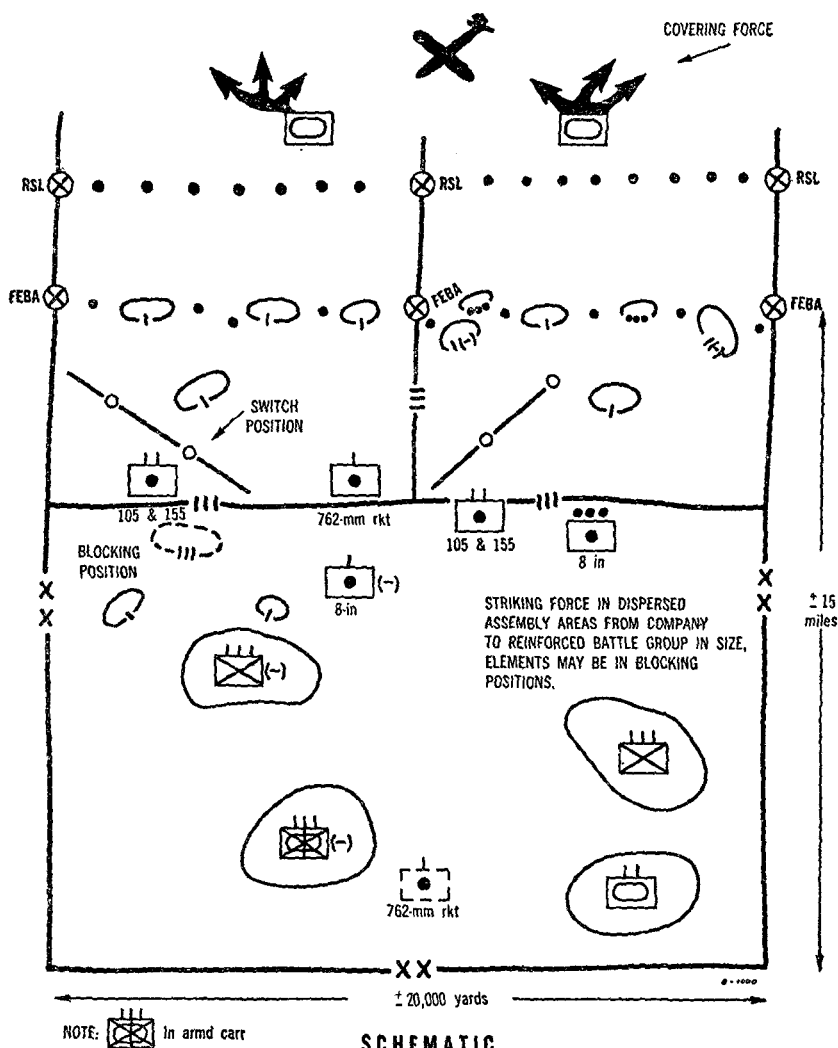


Figure 39. Mobile defense (type).

sions and on a consideration of the capability of these units to prevent infiltration and maintain surveillance over the assigned area. The forward defensive area comprises a zone of resistance which may be organized in several ways. It may vary from a series of strong points not tied to particular terrain to semi-isolated battle group strong points in which only limited movement is practical.

187 Security

Security forces may include aviation and a covering force furnished by higher headquarters. Though highly desirable, a general outpost

may not always be established by the division since this requirement may substantially reduce the division's capability for accomplishing all aspects of the mobile defense. The covering force may perform the mission of the general outpost. When covering force is not provided or is incapable of providing adequate delay, a general outpost or R and S force is used. In the absence of a general outpost or R and S forces, the units in the forward defensive area, in addition to their other missions, will perform the mission of a general outpost for the remainder of the division. In such a situation, troops are not moved forward to accomplish the general outpost mission.

188. Strong Points

A strong point is an organized area of varied size, using a variation of the position defense emphasizing all-around defense. The mission of the strong point is to slow down, divert, repel, or destroy the advancing enemy. It provides information from which the location of the enemy main effort, strength, and direction of advance can be determined. It may serve as a pivot of maneuver for offensive action or as a base for security and reconnaissance forces. In atomic warfare, a strong point may be organized by units up to battle group size. Under nonatomic conditions, strong points consisting of two battle groups may be organized.

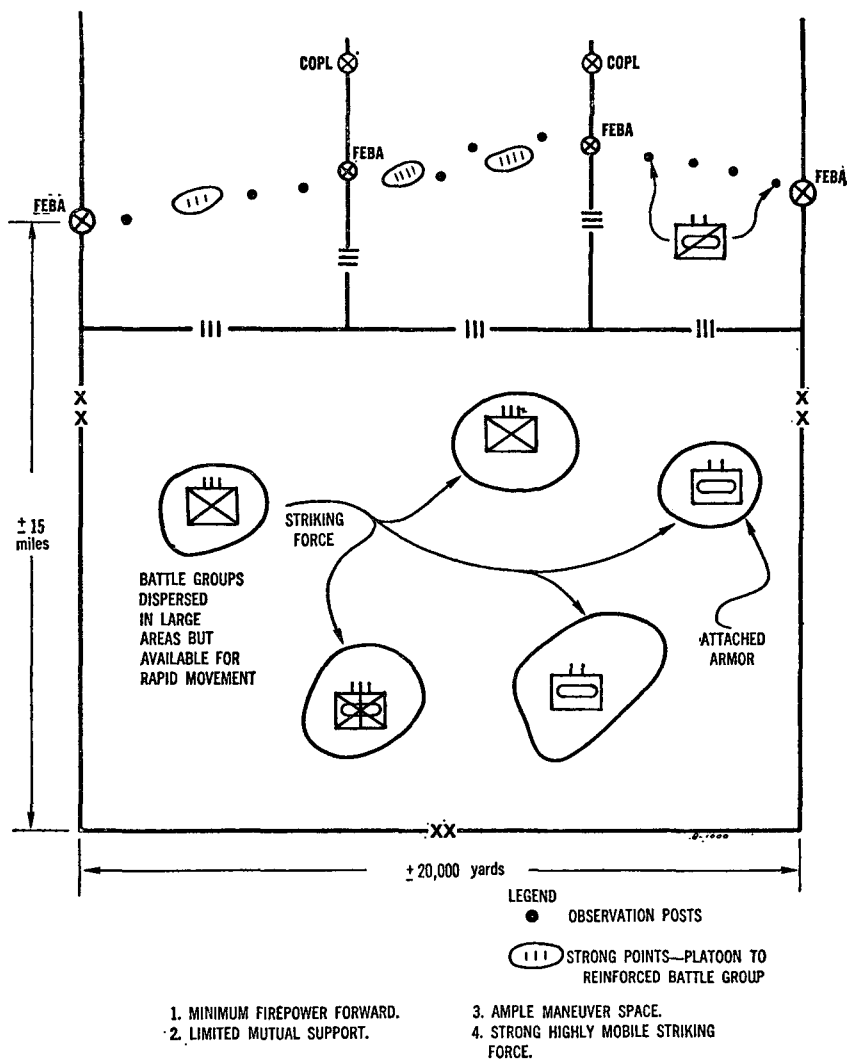
189. Observation Posts

Observation posts of varying size are located to the front of, in the intervals between, and behind strong points. Personnel manning observation posts may furnish information vital to the division commander in determining where and when to commit the striking force.

190. The Striking Force

a. The remainder of the defensive sector behind the forward defensive area is known as the striking force area. The designation of a striking force area does not imply area responsibility for the striking force commander. Consistent with his mission, the striking force commander may be called upon by the higher commander to provide small mobile and R and S forces. To operate within this area, the striking force is deployed in dispersed blocking positions in the striking force area or in dispersed assembly areas. Disposition of the striking force depends on width of sector, terrain, enemy capabilities (to include air and atomic), and planned manner of employment.

b. The larger portion of the division is organized into a mobile striking force whose mission is to destroy the enemy force at a time and place of the defender's choosing. The striking force should be



SCHEMATIC

Figure 40. Mobile defense (Type).

strong in armor. The cavalry squadron may be used in an economy of force role to release other units to the striking force.

c. The success of the entire defense depends largely on canalizing the enemy into areas favorable to the defender and the subsequent employment of the striking force to destroy him. Advance planning for employment of the striking force is essential in order to reduce to a minimum the time required to launch an attack. Those units of the forward defensive area which are not engaged and which could

contribute to the success of the attack are usually employed under the striking force commander.

191. Organization of the Ground

a. When specific terrain is not vital to the defender, the forward battle groups are located where they can maintain observation and place fire over the terrain immediately in front of the defensive area. Normally, they are considerably dispersed and must be prepared to withdraw. Delaying and switch positions are prepared throughout the area in accordance with the overall tactical plan for trapping and destroying the enemy force.

b. When specific terrain is vital to the defender, the forward battle groups must organize strong points prepared to hold though bypassed and surrounded. A strong point is an area organized for all-around defense by forces of varied size.

192. Employment of the Striking Force

a. In all situations the primary objective of the division is to destroy the enemy by bold offensive action on the part of the striking force which is dispersed in prepared blocking positions or assembly areas.

b. All of the striking force may be employed offensively or it may be necessary to employ only a portion of that force. In some situations, a part of the force may occupy blocking positions to support a counterattack under the control of higher headquarters.

c. Plans for employing the striking force must provide for the concentration of the force for a minimum of time before striking the enemy.

193. Artillery in Mobile Defense

a. The primary considerations in the selection of artillery position areas are mission and weapon capabilities. Artillery is echeloned in great depth with alternate positions in order to furnish support in any area. During the initial phase of the defense, enemy infiltrations may make it necessary to employ some combat elements from the division striking force to protect batteries positioned forward. In such cases, provision must be made for rapid return of such elements to the striking force role prior to commitment of the striking force.

b. Procedures must be established to cancel atomic fires in case the target disperses or where defending troops become closely involved in the fighting within proposed atomic target areas.

194. Conduct of Mobile Defense

a. The enemy may be brought under long-range fires particularly if lucrative atomic targets are located. As the enemy advances and

security forces withdraw to the defensive area, the division commander makes continued estimates to determine the most decisive use of the striking force. Under favorable conditions, he may use mobile striking forces for limited objective attacks to strike the enemy on an exposed flank or in his attack position.

b. The enemy may rapidly approach the forward edge of the battle area and bring defending units under fire. In such cases, the division commander may authorize certain units to withdraw immediately to occupy switch or blocking positions, while others may be ordered to hold. Should this combination of yielding and holding ground canalize the enemy into favorable terrain, the striking force will be employed with or without atomic weapons to destroy the enemy penetration.

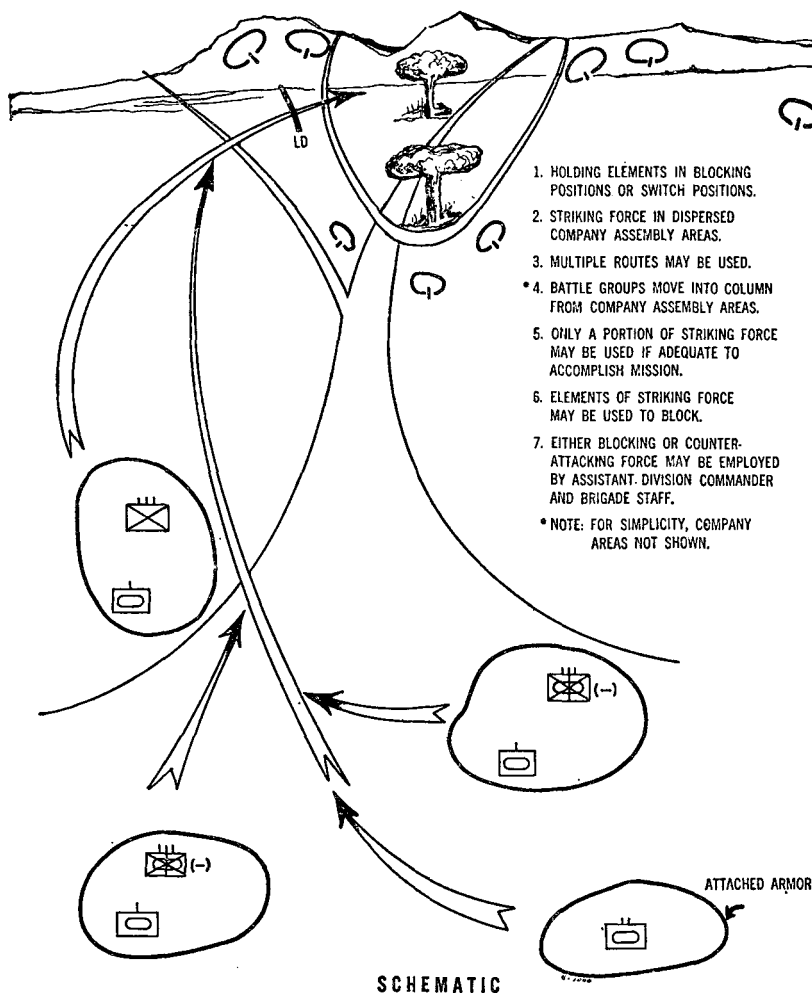


Figure 41. Employment of striking force in mobile defense.

c. If the enemy succeeds in making a penetration in such force that the division commander is convinced a counterattack will fail, he will employ the division to hold and block, and request that corps counter-attack.

d. The division commander must be prepared for multiple attacks by the enemy from either flank or from the rear. He must insure that units are prepared to block or occupy switch positions. Atomic weapons and a portion of the striking force may be employed to destroy one penetration and the remainder of the striking force, with or without atomic weapons, to destroy a second penetration. The possibility of multiple penetrations is a further reason for employing minimum necessary forces in the forward defensive area while keeping the larger portion of the division as a mobile striking force. Use of the assistant division commander and brigade staff to control all or a portion of the striking force provides unity of command and facilitates control. The striking force may use armored carriers, trucks, rapid foot movement, or a combination of such means to achieve the mobility essential for success of the mission. A portion of the force must be prepared for employment by Army aircraft, to include helicopters, as a normal means of transportation.

e. Conduct of the mobile defense is facilitated behind a major obstacle such as a river line. Under such conditions, light forces may be placed along the obstacle while the bulk of the division is dispersed in assembly areas prepared to strike the enemy as, or immediately after, he makes his crossing.

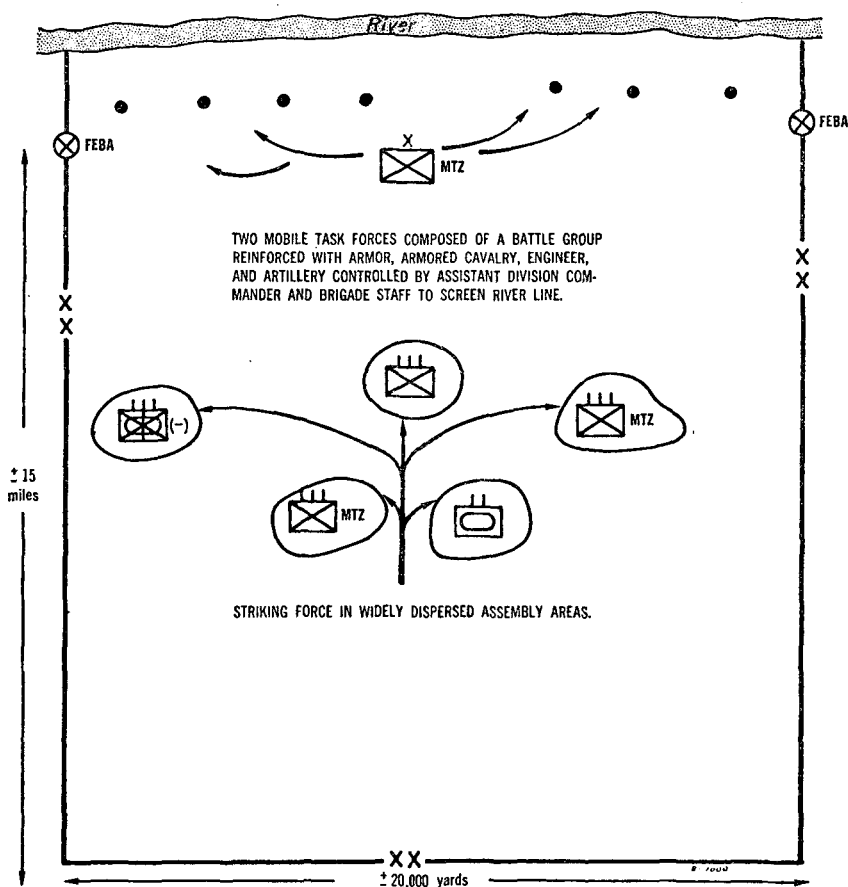
f. It is essential that the striking force disperse rapidly after accomplishing its mission. The striking force goes to designated dispersed assembly areas to reorganize and prepare for further employment. Under some conditions, the striking force may be ordered to predesignated blocking or switch positions.

195. Variations of Mobile Defense

There are many methods and variations by which a commander may conduct a mobile defense depending primarily upon the mission, area of operations, relative combat power of opposing forces, and enemy capabilities. Several such variations are discussed in the following:

a. *Layer Variation.* When sufficient armored carriers, trucks, armor, artillery, and reconnaissance troops are available, a variation such as that shown in figure 43 may be adopted. In this variation, units are not concentrated into battle group sized units. The defense comprises a series of layers or linear positions established in depth, each of which is prepared to canalize the enemy and inflict casualties preparatory to the employment of the striking force.

- (1) Each layer consists of a number of varying sized positions organized generally along a line. The division commander



SCHEMATIC

Figure 42. Mobile defense (Type).

assigns two or more battle groups along the forward edge of the battle area. To provide for defense in depth, the division commander also prescribes additional positions prepared for occupation deeper within the area. These two positions are separated by considerable distance to reduce vulnerability to atomic fires. Switch positions connect the two layers. These positions assist in containing the enemy to facilitate counter-attack by the striking force and to preclude the withdrawing of the entire force when one element is forced to withdraw.

- (2) Two or more battle groups are assigned the next area deeper within the defensive zone. Blocking or switch positions are constructed and may be occupied or the battle group elements may remain in dispersed assembly areas. These battle groups are a part of the striking force and their primary mission

is to take part in the division counterattack. Any remaining battle groups are organized in a manner similar to the second group of battle groups with the same mission. The division tank battalion, less elements attached to the forward battle groups, is well to the rear and is prepared to act as part of the striking force.

- (3) As the enemy nears the battle area, the combat outpost and forward battle groups engage him with all types of fires to include atomic fires. When engaged by the enemy, forward battle groups may be employed to hold or they may be withdrawn to switch or blocking positions in depth. The division commander specifies which areas must be held to facilitate the employment of his striking force, and forward battle group commanders will be authorized to withdraw other elements into any position of the assigned battle group area. The division commander specifies those blocking or switch positions which are essential to the division plan.
- (4) If the enemy is slowed, or if conditions appear to be favorable, the division commander employs the striking force. If the division commander decides that the striking force does not have the capability of destroying the penetration, he may order the occupation of a system of switch or blocking position held and inform the corps commander that the division has assumed a blocking role. The division commander may withdraw forward battle groups to a reserve position and employ the striking force as the blocking or canalizing force in accordance with his plans or those of the next higher commander.

b. Strong Point Variation. The variation shown in figure 44 based on the strong point may be adopted when the division lacks the degree of mobility essential to the layer variation, when the situation requires retention of specific terrain, or when there are no adjacent units or obstacles to which the flanks of the defense can be tied.

- (1) In this variation, the division commander assigns an area to his forward battle groups by means of boundaries and limiting points. The battle group commander analyzes his portion of the area to determine the optimum organization consistent with the assigned mission, the capabilities of the battle group, and the effects of atomic weapons.
- (2) Strong points may vary from company to battle group in strength.
- (3) Battle group strong points may be organized in the form of a perimeter when the unit has little or no support from adjacent units, has little or no protection on flanks and rear,

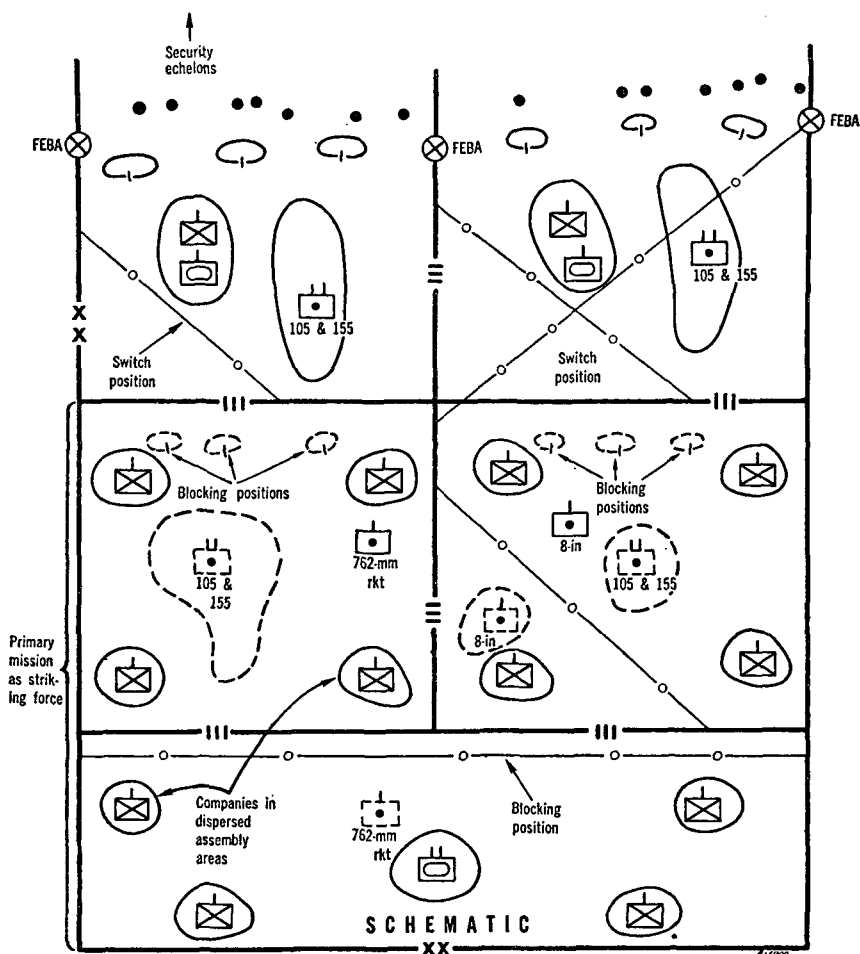


Figure 43. Mobile defense (layer variation).

or when vital terrain must be held to facilitate employment of the striking force. In such situations, the battle group may prepare the perimeter but occupy it only when close combat is imminent. Limited adjustment of positions within assigned areas is possible, and isolated battle groups may, under pressure, withdraw into perimeters; however, the forward battle group basically ties to and fights from its strong point. The organization and employment of the division striking force are as in other variations of the mobile defense.

c. Combination Layer and Strong Point. In this variation, the division is initially disposed as in the layer variation. However, battle groups in the forward portion of the battle area prepare strong points

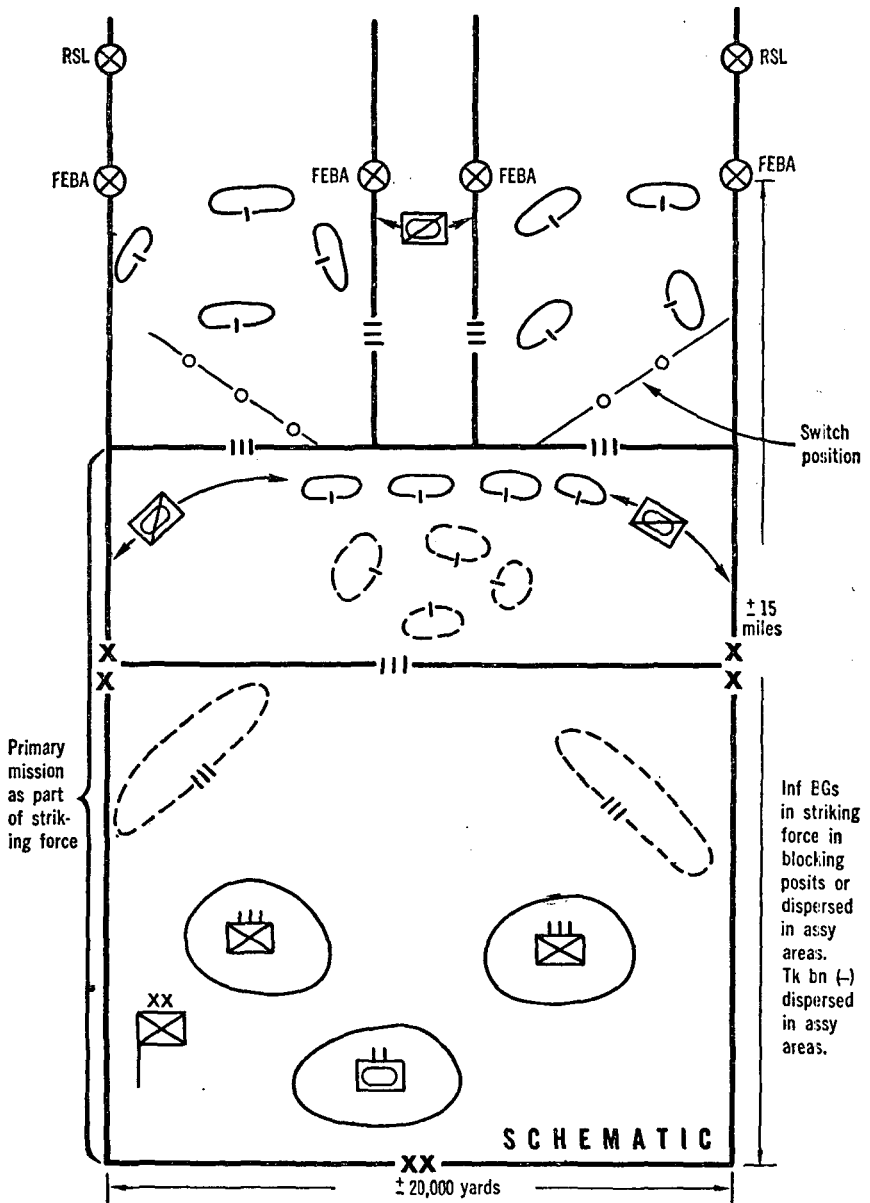


Figure 44. Mobile defense (strong point variation).

which they may be required to occupy and defend as the hostile attack develops. Such redistribution may be undertaken to hold critical terrain or to assist a counterattack executed by a higher echelon (fig. 45).

196. Counterattack Planning

The principles pertaining to counterattack planning, boundaries, and limiting points are discussed in paragraph 207.

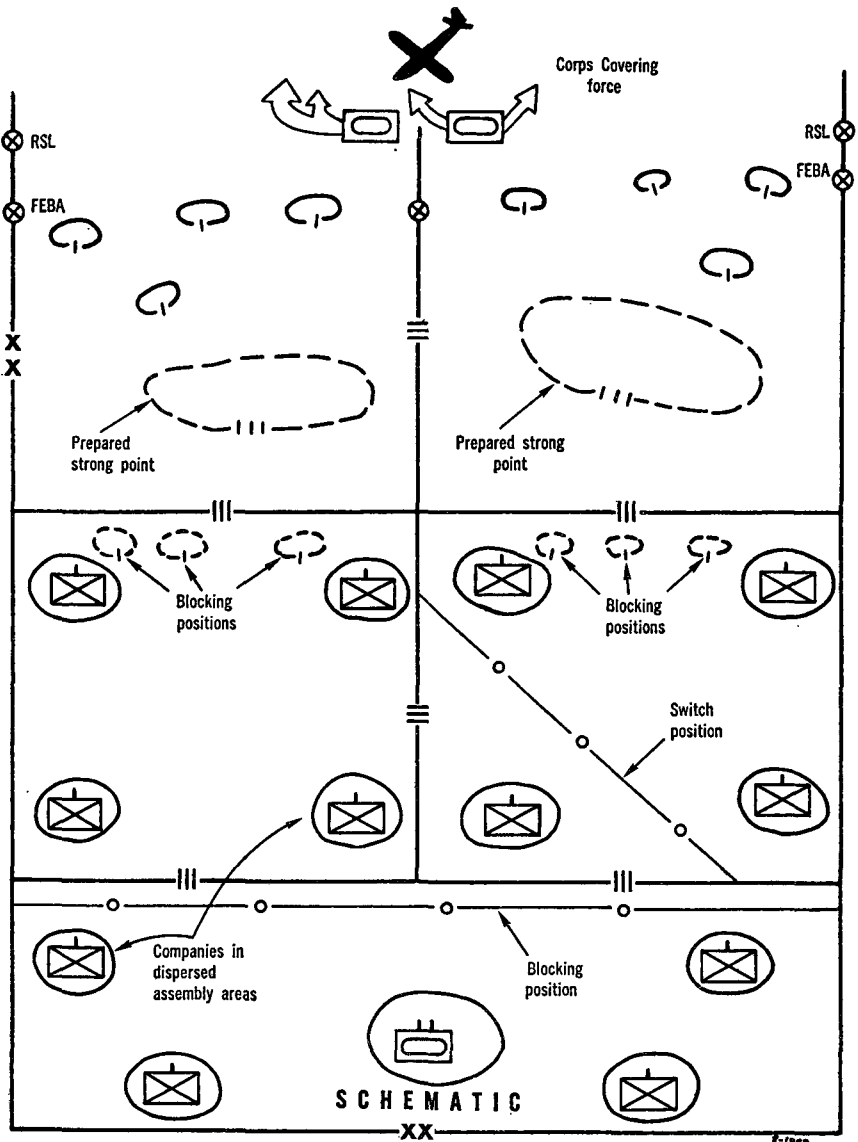


Figure 45. Mobile defense (combination-layer and strong points).

Section VII. POSITION DEFENSE

197. General

The position defense is characterized by a strongly held battle area. The battle area consists of forward battle groups and their reserves. Reliance is placed on force in organized localities to maintain positions and control terrain between positions. Terrain may be controlled from more than one position and by the use of atomic fires. Units may be in dispersed assembly areas adjacent to critical terrain, prepared to occupy it, or to call for atomic fire on it, if seized by the enemy. The division reserve may be used to counterattack to restore the position, or to block a penetration while forces from higher headquarters make the counterattack.

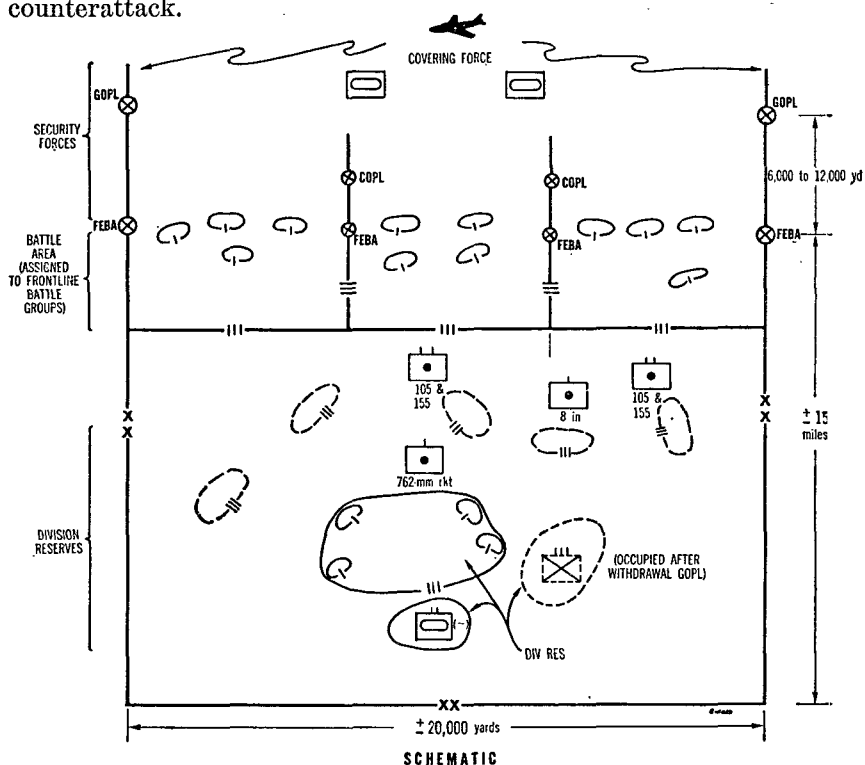


Figure 46. Position defense.

198. Considerations for Adoption

The following conditions may influence adoption of a position defense:

- The mission requires that certain terrain be held or that the enemy be denied entry into a specified area.
- The terrain restricts enemy maneuver and movement of our reserves, and affords strong natural lines or areas of resistance.

d. Enemy air restricts freedom of movement within the defensive area.

f. Adequate reserves are available at higher echelons.

g. Enemy atomic capability.

Some of the variations of the position defense which may be adopted are—

a. Compact Variation (fig. 47). In this variation, there is full mutual support between battle groups. The battle position is strongly held; there is ample depth and strong reserves. Under atomic conditions this variation will seldom be adopted by the division commander

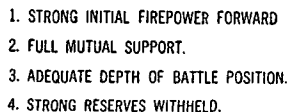


Figure 47. Compact variation position defense (nonatomic).

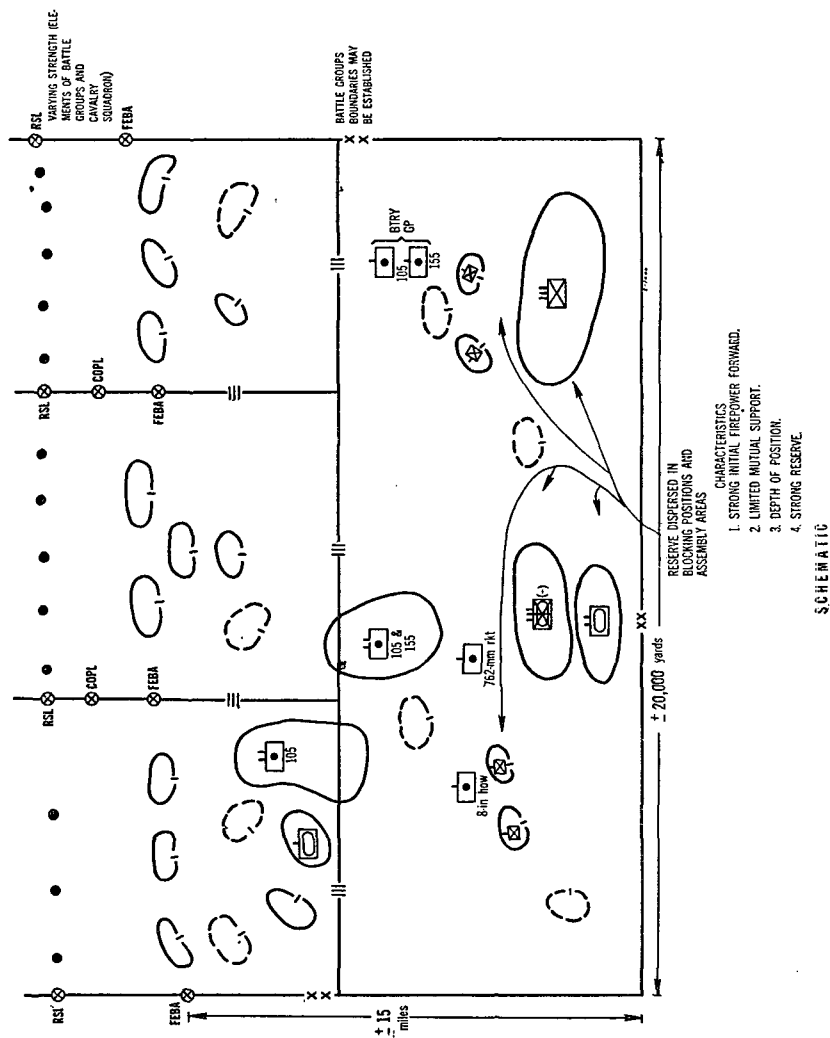


Figure 48. Extended variation of position defense.

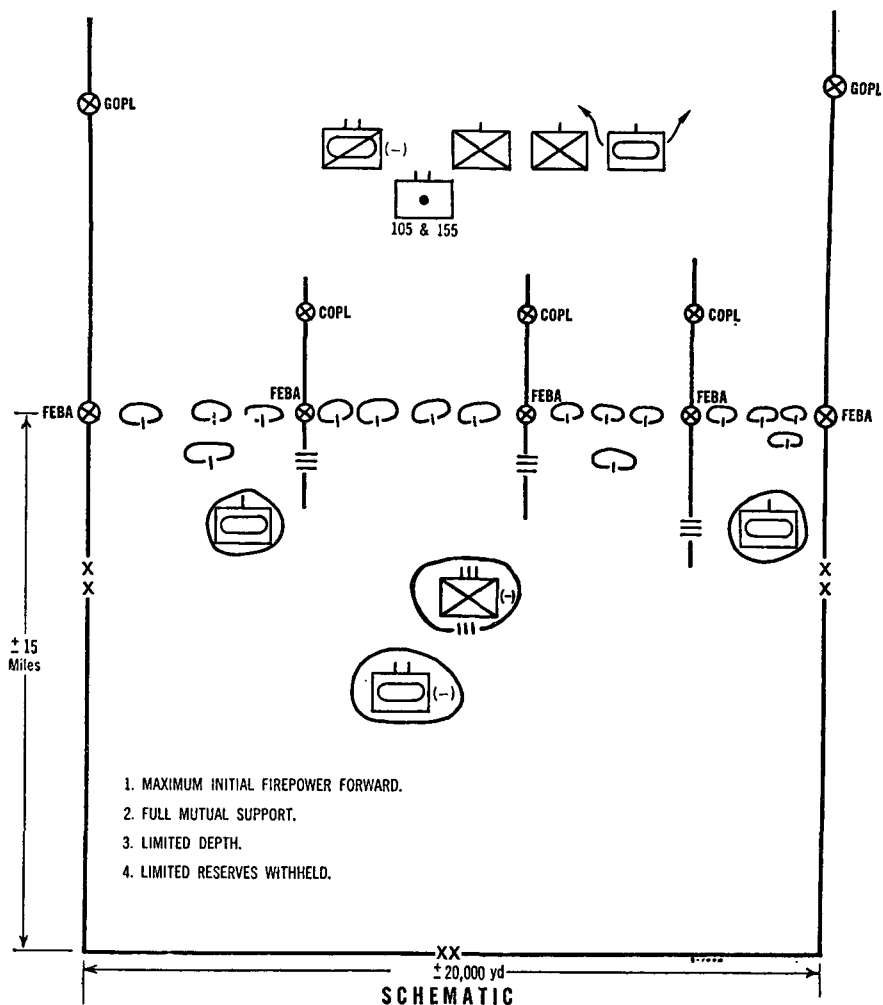


Figure 49. Infantry division in linear variation of position defense.

because of the excessive vulnerability to enemy atomic weapons brought about by limited dispersion.

b. Extended Variation (fig. 48). With wide frontages to defend, the division commander may frequently adopt this variation under atomic or nonatomic conditions. Gaps between battle groups require increased surveillance means. This variation is characterized by depth in position, a strong reserve, and strong firepower forward. Aggressive and thorough reconnaissance, together with carefully planned fires to control gaps, is essential to maintain the position. When the division takes part in an airborne operation as an air transported force, it frequently will adopt an extended variation of position defense.

c. Linear Variation (fig. 49). In this variation, the division commander places the maximum firepower forward. Mutual support is

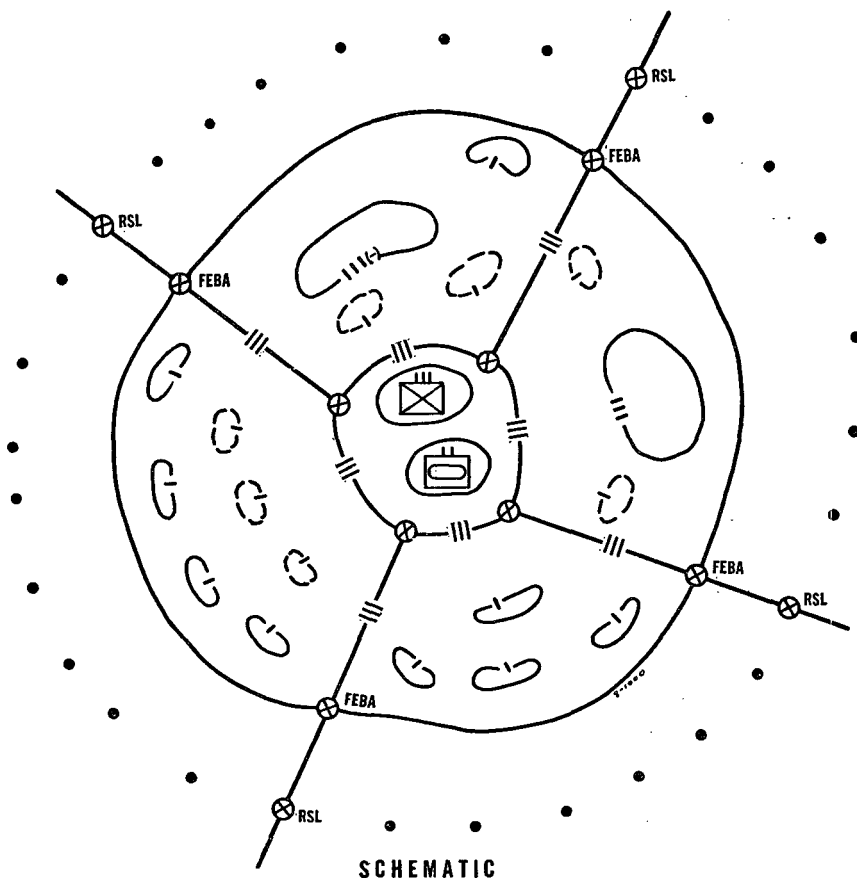


Figure 50. Perimeter variation.

emphasized laterally between battle groups, with little depth to the position, and reserves are small. This variation may be employed when the enemy combat power is limited, or when the division is operating as a part of a larger force conducting a mobile defense, or during retrograde operations.

d. Perimeter Variation (fig. 50). The division can utilize a perimeter defense. This type of defense is avoided where possible; however, it may be voluntarily adopted when it is operating as an independent force within enemy territory, as during an air landed operation. The area must be sufficiently large to reduce to acceptable proportions vulnerability to enemy atomic weapons.

200. Organization of the Ground

a. The area is strongly organized in a series of defensive localities. The enemy's atomic capability must be kept in mind in determining the

desired degree of mutual support between these localities. Dispositions are made laterally and in depth, are located to control avenues of approach, retain critical terrain, and are organized for all-around defense.

b. Adequate dispersion of units consistent with the performance of the mission is desirable. Careful consideration must be given to the following factors:

- (1) Mission.
- (2) Composition and effectiveness of enemy forces, to include air and atomic capability.
- (3) Atomic weapons available to defender.
- (4) Terrain.
- (5) Defender's communications.
- (6) Nonatomic fire support available to defender.
- (7) Air defense capability.
- (8) Weather.
- (9) Protection of troops and equipment against effects of atomic weapons.

201. Defense in Depth

Defense in depth is obtained by organizing additional defensive positions within and in rear of the areas occupied by forward battle groups. Positions are located to control favorable enemy avenues of approach and to protect critical terrain. Dummy positions must receive increased emphasis to deceive the enemy and to draw his atomic weapons fire. Responsibility for preparation of all positions must be clearly stated in the appropriate operation order. To increase the depth of antitank defense, elements of the division tank battalion may be attached or placed in support of forward battle groups.

202. Boundaries

a. Divisional boundaries are extended through the general outpost line to the range of weapons supporting all division units, including that of artillery in the general outpost force or to the atomic no-fire line, whichever is farther out.

b. Battle group boundaries are extended forward to the limit of effective ground observation forward of the combat outposts; normally to the distance required to coordinate fires of artillery supporting frontline battle groups. This extension enables commanders to coordinate fires and to delineate responsibility for patrolling and garrisoning the combat outposts.

c. Defensive boundaries do not divide responsibility for the defense of avenues of approach into the battle area except when the defense of the avenue exceeds the capability of a single tactical unit.

b. Boundaries are extended sufficiently to the rear to fix responsibility for defense against infiltration and airborne attack, and to provide sufficient space for the location of reserves, command, and administrative installations. Rearward extension of boundaries is influenced by the road net, routes for movement within the position, and the necessary depth to accomplish the defensive mission. Further delineation of area responsibility may be graphically shown in orders by including battle group rear boundaries when guerillas are active or a threat of infiltration and airborne attack exists. Under conditions of atomic warfare with extended frontages and increased danger of infiltration, battle group rear boundaries may be shown more frequently than under nonatomic warfare conditions. Rear boundaries are habitually designated for division and higher units.

203. Limiting Points

a. Limiting points are used to fix the exact localities at which higher commanders desire coordination by adjacent subordinate commanders.

b. The corps commander designates limiting points on division boundaries at the forward edge of the battle area and along the general outpost line, normally on division's recommendation.

c. The division commander designates limiting points on the battle group boundaries at the forward edge of the battle area and may designate limiting points for the combat outpost.

d. Limiting points must be located at a terrain feature easily recognizable both on the ground and on a map and should be accessible.

e. Commanders (or their representatives) coordinate at the limiting point and decide whether the limiting point should be covered with direct or indirect fire, garrisoned with troops, or covered by fire or barriers.

204. Division Reserve

a. *Employment of Division Reserve.* The division commander has flexibility in the composition and employment of the division reserve. The reserve may consist of one or more battle groups with elements or all of the tank battalion of the cavalry squadron. Provision is made for necessary artillery and engineer support. The division commander may employ reserves under his personal control or under the control of the assistant division commander and the brigade staff. The division organization lends itself to the formation of mobile task force type reserves. The following missions may be assigned:

- (1) Participate in counterattacks.
- (2) Extend the flanks of the battle position.
- (3) Prepare defensive positions to include blocking and switch positions.

- (4) Occupy prepared positions to block enemy penetrations and to facilitate the counterattacks performed by higher headquarters.
- (5) Relieve units in the battle position.
- (6) Replace units destroyed by enemy atomic fires.
- (7) Provide a general outpost line (GOPL).

b. Transportation. If terrain conditions and the situation permit, it is desirable that transportation, particularly armored carriers be readily available to motorize the reserve for employment in counterattacks or for movement to areas in which it will be otherwise employed.

c. Location. The division commander will initially locate the reserve after considering the following:

- (1) Probable direction of enemy attacks.
- (2) Enemy's capability to interfere with movement with particular reference to air and atomic weapons.
- (3) Mobility of the reserve.
- (4) Cover and concealment.
- (5) Road net.
- (6) Necessity for protection of rear areas against airborne and guerilla attack.

205. Use of Tanks

a. The division tank battalion or its elements may be used in any of the following ways in the position defense:

- (1) As part of the division reserve.
- (2) As part of the combat outpost.
- (3) As part of the general outpost or R and S forces.
- (4) To be attached to battle groups.
- (5) To deepen division antitank defense.
- (6) As an element of the mobile task forces.

b. When the situation dictates, it is normal to attach a company of tanks to forward battle groups. However, the method of employment will depend upon the division mission, information of the enemy, obstacles, weather, terrain, and the number of tanks available to the division commander.

206. Conduct of the Position Defense

a. In the first stage of the defense, division and other intelligence agencies gather information to determine the probable strength, composition, time, and direction of the enemy attack. Bold, aggressive reconnaissance by air and ground elements is essential to avoid surprise and to enable the defender to gain the initiative.

b. The number of atomic weapons available frequently dictates the pattern of defensive operations. With many weapons, the object may

be to destroy the enemy forward of the position. With few weapons, the defense may be planned to force the enemy to present lucrative targets within our defensive area.

c. Unless the plan is to develop lucrative atomic targets closer to the battle position, enemy troops, enemy headquarters, artillery, and supplies are taken under long-range fires by all available means. Friendly artillery and tank elements may be well forward during this phase.

d. As the direction of the enemy's main attack or attacks is determined, troops including artillery are shifted to meet the threat. When the situation permits, limited objective attacks may be launched to disrupt enemy preparations. Enemy assembly areas are brought under fire. When the enemy begins his assault, all available defensive fires are brought to bear on him.

e. Because of the gaps and limited mutual support in an extended variation of the position defense, an aggressive enemy may be able to penetrate the battle area more easily. Artillery fires, patrols, and barriers may not stop the enemy in all situations. The counterattack supported by atomic fires, when feasible, is employed to reduce or destroy the penetration. Because of the wide frontages, it may be impracticable for all the division reserve to be committed and only as much of the reserve as is necessary to insure success of the counterattack should be used. Should the enemy make multiple penetrations, the division commander may—

- (1) Reduce one penetration with atomic weapons and counterattack while containing the others with atomic and nonatomic fires and by occupation of blocking positions.
- (2) Contain all penetrations with atomic and nonatomic fires and occupy blocking positions until counterattacks are launched by higher headquarters.

f. It may be necessary to conduct the extended variation of the position defense in place; for example, enemy air superiority and ground contamination may restrict movement within the battle area. In this case, battle groups will hold ground, and the division may be reduced primarily to a blocking role. Such action may cause the enemy attack to be slowed and weakened and thus enable the division reserve or reserves from higher headquarters to counterattack. Elements of the battle groups may be disposed more compactly with greater dispersion between battle groups. It may be desirable to have more dispersion between companies within the battle groups depending on the size, composition, and effectiveness of the enemy force. Organic control of 81-mm mortars and other increased fire support permit dispersion between companies of approximately 1,000 yards in favorable terrain in extended position defense.

g. Battle groups shift within the division defensive area, either by reinforcing each other or moving to alternate positions, depending on the direction and intensity of the enemy attack. Under such conditions, certain terrain features may be defended by any number of companies within the battle group or by the entire battle group.

h. The division has a strong reserve initially and may later use that reserve either in blocking or counterattacking role. If used in a blocking role, higher headquarters must make the counterattack to restore the battle area.

i. In the extended variation of the position defense, the commander may make the following provisions for trapping and destroying an enemy penetration:

- (1) Canalizing enemy movement.
- (2) Planning withdrawal of elements between organized positions to lead the enemy into areas of intense fires.
- (3) Establishing strong blocking positions to halt enemy advance.
- (4) Concealing troops and weapons on flanks of trapping area.
- (5) Providing a counterattack force strong in armor.
- (6) Insuring good communications and prearranged signals.
- (7) Blocking enemy withdrawal by fire and obstacles.
- (8) Preventing reinforcement of trapped force by employment of atomic weapons, artillery, air, chemical agents, and local reserves.

j. Security of division artillery batteries against infiltration becomes more critical as a result of gaps caused by dispersion between infantry units. Each unit of the division artillery is responsible for its own local security. Coordination is effected with adjacent units. Artillery must be located tactically to best accomplish its mission. When possible, artillery may receive incidental protection from nearby combat units, such as the division reserve. Artillery may support one defensive area from positions located near an adjacent position. Artillery must maintain fire support and depend on its mobility and use of alternate positions to avoid destruction by large enemy penetrations.

Section VIII. COUNTERATTACK

207. Counterattack Planning

a. Counterattack maneuvers and atomic fires are planned, based upon all probable enemy penetrations. These plans are rehearsed by at least the key personnel of the counterattacking force. Although destruction of the enemy force is always important in the defense, counterattack plans may be designed either to restore the battle area or to trap and destroy the penetrating force.

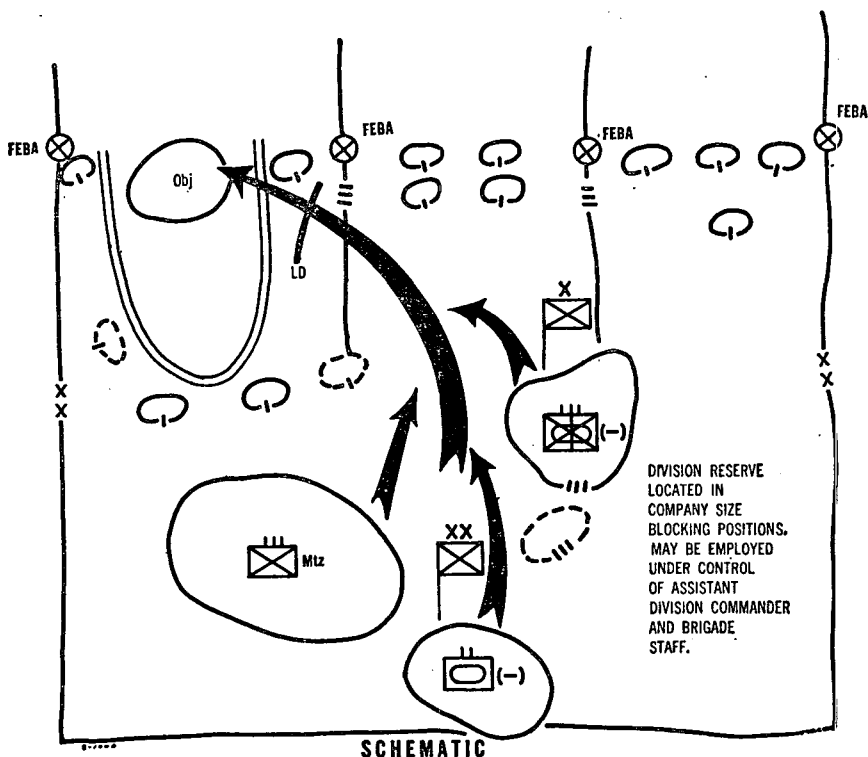


Figure 51. Employment of division reserve to recapture critical terrain in extended variation of position defense.

b. The following must be considered in the preparation of the counterattack plan:

- (1) *Assumed penetration.* The assumed penetration is the extreme limit to which the enemy will be permitted to go. The time of execution of the plan will be before or when this depth has been reached.
- (2) *Objectives.* Seizure of the selected objective will insure accomplishment of the mission.
- (3) *Direction of attack.* The direction of attack strikes the enemy at the point most favorable for the counterattacking force after a consideration of atomic weapons' effects, terrain, and observation. The counterattack may strike the penetration on the nose or on the flank since the use of atomic weapons gives the commander more flexibility in the choice of direction. Under nonatomic conditions, it is normally preferable to strike the enemy at the base of the penetration.
- (4) *Neutron induced radiation.* When atomic fires are used, the induced gamma radiation should not adversely affect the plan.

- (5) *Time of attack.* Timing of atomic weapon attack is established after considering—
- (a) Time our troops can cross line of departure after the burst.
 - (b) Time it is estimated enemy will resume the attack.
 - (c) Time enemy troops will be most exposed.
 - (d) Desirability for poststrike analysis.
- (6) *Target information.* Detailed information of the atomic target may not be available. The selection of a desired ground zero is based on those facts which are known, logical assumptions, and careful considerations of our own troop safety.
- (7) *Line of departure.* The line of departure should be recognizable on the terrain, approximately perpendicular to the direction of attack, and if atomic weapons are not being used by the counterattacking force, close enough to the enemy to reduce the possibility of being disorganized before striking. The area selected for the line of departure should afford protection from small-arms and other flat-trajectory weapons.
- (8) *Concentration.* The maneuver element of the counterattack force must be moved to and across the line of departure as rapidly as possible and in such formation as to reduce to a minimum the length of time the force is concentrated. The force strikes in such a manner as to exploit and sustain the shock of the atomic and nonatomic fires.
- (9) *Conduct.* Concepts of the attack apply as indicated in appropriate parts of chapter 6.

c. Unity of command in the area of the counterattack is accomplished by one or more of the following:

- (1) Physical presence and supervision by the division commander.
- (2) Use of the assistant division commander and brigade staff.
- (3) Attachment of units in the area to the counterattacking force.
- (4) Execution of a passage of lines.
- (5) Adjustment of boundaries.
- (6) Organization of a mobile task force.

d. The commander maintains an appropriate reserve, and certain units may be employed to block enemy penetrations to support the maneuver element of the counterattacking force.

e. A division reserve is reconstituted as units become available. Service units, except for the medical battalion, may be alerted in certain critical situations to assemble for possible employment as the division reserve.

f. Effects of the enemy employment of atomic weapons on the counterattack must be considered by the commander. Alternate plans for accomplishing the mission in the face of such contingencies must be made.

Section IX. CONCURRENT CONSIDERATIONS

208. General

Any one or all of the following considerations may apply to a defensive situation. These considerations must be thought of as normal and not relegated to an exceptional or special category. Effective measures to counter their effects must be integrated into every defense plan. In addition, individuals must receive thorough training in all aspects of these considerations. These considerations include—

- a.* Defense at night.
- b.* Defense against armor.
- c.* Defense against airborne or helicopterborne attack.
- d.* Defense against air attack.
- e.* Defense against guerilla action and infiltration.

209. Defense at Night

a. All individuals must be prepared to fight enemy soldiers who are well adapted to night fighting under conditions of atomic and nonatomic warfare. Enemy troops can be expected to conduct many attacks at night for deep objectives.

b. Troops must be trained and conditioned to defend at night with great efficiency. It is imperative that all leaders share danger with their men and inspire them by their courage and determination. Particular emphasis must be placed on minimizing the potential psychological effects of darkness and premature firing. All individuals must have complete confidence in their ability to fight effectively at night and understand that darkness, properly used, is an asset to the defender.

c. Wide frontages and gaps between units increase the requirement for security to prevent infiltration by large and small units. Counterreconnaissance patrols, listening posts, and other local security measures assume greater importance.

d. Electronic surveillance devices screen forward of the battle area and cover the gaps between occupied localities of the battle area.

e. Illuminating devices such as searchlights, aircraft flares, flame illuminating expedients, trip flares, illuminating shells, and ground flares are closely integrated into the defense. Searchlight beams must be constantly moved in order not to provide fixed shadows for the enemy. Illumination must not be relied upon by the troops as a psychological crutch.

f. Rehearsals are essential for the success of night counterattacks and night movements to reinforce. Such rehearsals reduce the problem of maintaining control and direction.

g. Use of atomic weapons at night can blind the attacker, cause heavy casualties, and disrupt his attack. Their use must be carefully preplanned to avoid blinding or injuring the defending troops. The planning and conduct of night counterattacks follows the principles and procedures laid down in paragraphs 159 through 163.

210. Defense Against Armor

The infantry division is well suited for defense against an armor-infantry attack and, when dug in, against a massed armored attack. The tremendous advance in the infantry antitank weapons system since World War II has greatly increased the infantry division's antitank capability. All light, medium, and heavy antitank weapons, mines, tanks, artillery and improvised means are integrated in the defense. It is essential that tank units be trained to conduct effective night counterattacks. Artillery is used to separate infantry from tanks as well as to destroy tanks. Maximum use is made of terrain obstacles and barriers, including minefields. Tactical air support is an extremely effective antitank weapon. Atomic weapons are particularly effective against concentrations of armor. However, it is the individual infantryman who determines the success of the antitank defense. He must have confidence in his weapons, know the weaknesses of armor, and aggressively seek to destroy the tank.

211. Defense Against Small Airborne Attack

The infantry division in defensive operations must be prepared for defense against small airborne attack (company to battle group size) to include helicopterborne attack. These attacks are characterized by smaller forces which are employed in conjunction with ground attack. The parachute force will normally be dropped directly on small but critical objectives such as bridges, defiles, or defensive positions. Helicopterborne forces normally will be landed near, but not on, occupied objectives or on unoccupied objectives. Maximum effort must be made to destroy the helicopters in the air and while hovering or landing. Critical areas will be occupied with small forces, and observation posts must be sited to cover likely areas and air routes of approach. Small infantry-tank teams are highly effective in countering small airborne penetrations in the division area. The inherent mobility of these highly mobile teams will prevent or reduce consolidation and reinforcement of enemy airborne forces by striking them during the early phase of their initial landings. Special precautions must be taken against night landings by such parachute and helicopterborne forces. Standing operating procedures must be developed for defense against enemy airborne forces. For defense against large-scale airborne attack, see FM 31-15.

212. Air Defense

a. Protection against enemy air attack will be provided by echelons above division. All units must have standing operating procedures for air defense to include emphasis on camouflage and concealment, deception, and air raid warning.

b. The battle groups in the forward division area require air defense against attack by low-flying high performance aircraft, and against airborne attack by either helicopter or parachute forces. The combat zone air defense furnished by the corps antiaircraft units is effective against high-flying aircraft, but is ineffectual against low-flying hostile aviation that operate below the radar horizon of the antiaircraft artillery weapons, particularly in air corridors created by terrain features in the forward areas. To provide defense against these types of low altitude attack, corps will normally attach one antiaircraft artillery automatic weapons battalion to each division in the forward area. This battalion should be further attached to division artillery. Based on air defense priorities and the type of air attack that poses the most serious threat, the division commander may employ the attached antiaircraft artillery automatic weapons battalion in one of three ways:

- (1) Point air defense of designated vital areas against fighter aircraft making low altitude or dive attacks. The antiaircraft artillery automatic weapons battalion exercises centralized control over its fire units.
- (2) Point air defense of the battle group areas against fighter low altitude and dive attack. One antiaircraft artillery platoon is attached to each battle group, with the three remaining platoons in defense of vital installations such as the atomic delivery artillery units. Each of these platoons, while deployed independently in point defense against attack by tactical aircraft, also provides across the division zone a degree of area type defense against helicopterborne forces and light observation aircraft. Although in this situation, the antiaircraft artillery platoon air defenses are the responsibility of the battle group commanders, centralized coordination of this area type air defense will minimize undefended gaps and is accomplished by the antiaircraft artillery battalion commander through normal fire support coordination channels under the direction of the division artillery commander.
- (3) Area defense against helicopter and other airborne forces by checkerboard deployment of the antiaircraft artillery automatic weapons fire units across the division front. Antiaircraft artillery platoons are attached to the battle groups

in the numbers necessary to insure adequate distribution of coverage. To insure an integrated defense, coordination of the antiaircraft artillery fire units deployment is accomplished by the antiaircraft artillery battalion commander through normal fire support coordination channels under the direction of the division artillery commander.

213. Defense Against Guerilla Action and Infiltration

a. All troops must be prepared to combat infiltrators and guerillas in rear areas and in forward battle areas. Normally, it will not be possible to divert combat troops to protect rear areas. Security forces may provide surveillance when the situation requires such action. The establishment of effective communication and warning systems is vital to enable defending troops to determine the size and location of the enemy forces.

b. When guerilla or infiltrating groups are large, mobile task forces or combat units must assume the task of localizing and destroying the groups.

c. For details, see paragraphs 172 through 183 and FM 31-15.

CHAPTER 8

RETROGRADE OPERATIONS

Section I. GENERAL

214. Definition

a. A retrograde movement is any movement of a command to the rear or away from the enemy.

b. Retrograde operations are classified into three basic types.

- (1) Withdrawal from action is an operation in which all or a part of a deployed force disengages from the enemy to initiate some other action.
- (2) Delaying action is an operation which trades space for time while inflicting maximum punishment on the enemy without becoming decisively engaged in combat.
- (3) Retirement is an operation in which a force moves away from the enemy without direct pressure to avoid an engagement under existing conditions.

c. In any one retrograde operation, elements of the division may execute two or more of these types, either concurrently or in sequence.

215. Purpose

a. Forced or voluntary retrograde movements are conducted to accomplish one or more of the following:

- (1) To harass, exhaust, and inflict punishment on the enemy.
- (2) To draw the enemy into an unfavorable situation.
- (3) To maneuver the enemy into areas for destruction by atomic fires.
- (4) To permit employment of a portion of the command elsewhere.
- (5) To avoid combat under undesirable conditions.
- (6) To gain time without fighting a decisive engagement.
- (7) To disengage from battle.
- (8) To conform to movements of friendly troops.

b. Skillful use of retrograde operations to deceive enemy maneuvering forces into salients and destroy large numbers of his forces in-

creases the importance of this type of operations in atomic warfare. Skillful use of terrain to slow down and confuse and deceive the enemy is exploited by firepower, demolitions, and raids to make the enemy pay a high price in casualties for the ground gained.

c. The underlying reason for all retrograde actions is to gain, by the sacrifice of terrain, time to bring up additional forces, to allow for a buildup elsewhere for an attack, to prepare stronger defensive positions to the rear, or to maneuver the enemy into areas for destruction by atomic fires. Obstacles, firepower, and maneuver are used to make the enemy pay a high price in casualties for the ground gained.

216. Fundamentals of Retrograde Operations

a. Cause Maximum Attrition of Enemy Forces. Within the dictates of the mission, retrograde operations are planned and executed to inflict maximum casualties on the enemy. Atomic weapons materially assist the accomplishment of this task.

b. Proper Utilization of Terrain. Terrain has a decided influence on all retrograde movements. Good observation and fields of fire are desirable to permit engagement of the enemy at long ranges. Obstacles, both natural and artificial, to include barrier systems, denial areas, minefields, and demolitions in combination with the effective use of CBR and atomic munitions, are exploited to strengthen defenses, to protect exposed flanks, and to impede the enemy advance. Cover and concealment are sought for assembly areas and routes of movement. Road nets are exploited by friendly forces, especially by armor and motorized forces, to expedite their movement and to facilitate control of their operation; they are denied to the enemy for these reasons.

c. Trade Space for More Favorable Combat Conditions. The underlying reason for all retrograde actions is to gain, by the sacrifice of terrain, more favorable conditions to engage the enemy. Time may be required to bring up additional forces or to allow for a buildup elsewhere. It may be desired to maneuver the enemy into areas for destruction by atomic fires or to preserve the integrity of a smaller force.

d. Maintain Freedom of Action. Close combat is avoided unless required to accomplish the mission. Freedom of maneuver is essential to exploit rapidly any situation unfavorable to the enemy, to shift forces to meet enemy attacks, to avoid decisive engagement, to secure flanks and rear, and to take maximum advantage of terrain.

e. Detailed Centralized Plans—Decentralized Execution. Communications and control become increasingly difficult in retrograde operations. Plans and orders must be prepared in much greater detail than those for offensive and defensive operations. However,

once the operation is initiated, subordinate commanders must have the authority to make on-the-spot decisions. Sudden strong enemy attacks may deny the time for adequate prior planning; therefore, standing operating procedures must be developed to permit the division to reorganize rapidly and to conduct initial operations in the absence of detailed orders. Subordinate commanders should be habitually prepared to take independent actions until centralized control is regained. This fundamental must receive added emphasis under atomic warfare conditions.

Section II. BASIC CONSIDERATIONS

217. General

In planning for and executing retrograde operations, the division commander considers the effects of weather and terrain, atomic weapons, mobility, coordination and control, security and deception, use of demolitions, air support, administrative support, and leadership on the accomplishment of the mission.

218. Weather and Terrain

a. Terrain and weather have a decided influence on the conduct of all retrograde movements. A small force, by properly utilizing terrain, can frequently cause considerable delay and inflict serious punishment on a much larger force. Terrain may seriously restrict the use of track and wheel vehicles. Under such conditions, the foot mobility of the infantry soldier may decide the success or failure of the operation.

b. Normally, long-range observation and fields of fire are fully utilized to engage the enemy at maximum distances from friendly positions, to disorganize and slow his approach, and to inflict maximum punishment before opposing forces become decisively engaged. In some cases, it may be desirable to wait until the enemy has massed in order to employ, profitably, atomic weapons.

c. Barrier plans provide for full use of natural and artificial obstacles utilizing rivers, swamps, mines, atomic and conventional demolitions, CBR agents, and atomic weapons.

d. Maximum use of cover and concealment is required to reduce the enemy's ability to detect the movements and assembly areas of combat units.

e. Good road nets are desirable for rapid movement of armor and motorized forces; however, road bound forces are vulnerable to enemy air attack. Cross-country movements are made when practicable to strike the enemy from unexpected directions as well as to obtain dispersion and reduce vulnerability to enemy attack.

f. Weather affects trafficability, observation, control, morale and efficiency of personnel, functioning of materiel, and employment of atomic fires. Weather conditions are carefully considered in planning and executing retrograde movements.

219. Atomic Weapons

a. Skillful use of atomic fires during the execution of retrograde operations permits the force to inflict heavy losses on the enemy or so to deplete his forces as to destroy his attack capability.

b. Atomic fires may be employed to assist disengagement of heavily engaged forces by creating disorder and confusion in the attacking forces and by disrupting or delaying the attack. Possession of atomic weapons may permit a defensive force covering a withdrawal to become more heavily engaged with the enemy than under nonatomic conditions.

c. Atomic fires may be employed to restore a portion of the delaying position or to provide the firepower necessary to retain the position pending conditions favorable for withdrawal.

d. The range of atomic delivery means (762-mm rocket) permits striking enemy forces decisively at considerable distances from the delaying positions.

e. Atomic fires contribute considerable combat power to delaying forces and increase the casualty causing capabilities of these forces. In retrograde operations the commander selects targets whose destruction will have an immediate effect on the mission.

f. Atomic targets are anticipated and integrated into the retrograde plans. Since most anticipated target areas are in friendly hands, the desired ground zeroes can be carefully analyzed for peak effects. The conduct of the retrograde operation is planned to capitalize on anticipated targets by canalizing the enemy into these selected areas.

g. Vulnerability to enemy atomic fires is reduced by—

- (1) Withdrawing units through widely dispersed company size assembly areas. Normally companies will move rapidly through assembly areas rather than halting for any extended period. Control measures should provide that not more than one company occupies the same assembly area at one time.
- (2) Dispersing artillery laterally and in depth.
- (3) Dispersing reserves with the means to assemble rapidly when required.
- (4) Dumping small quantities of supplies and establishing mobile distributing points at varied locations along routes of withdrawal.

- (5) Establishing alternate command posts to maintain constant control.
- (6) Concealing the location and organization of the rearward delaying positions.

220. Mobility

a. Every means available is employed to gain superior mobility over the enemy. Maximum use is made of all available transportation to expedite movement of units to rearward positions, to conserve the fighting strength of the troops, and to gain time for the preparation and occupation of new positions.

b. Army aircraft provide valuable assistance in rearward movement of foot troops, supplies, equipment, and casualties.

c. Skillful use of foot marches increases the overall mobility of the retrograding force. These marches require excellent physical conditioning since the troops are frequently under fire, without proper food, and are being continuously pressed by the enemy.

d. For details on mobility, see chapter 3.

221. Coordination and Control

a. The coordination and control of widely dispersed movements to the rear is difficult and requires decentralization of control to subordinate units. Subordinate commanders must be aware of the overall concept of operations and must have the necessary authority in order to permit intelligent effective action in the event of loss of communication. The commander regains centralized control at the earliest practicable moment.

b. Zones of action and time of withdrawal are designated for units in contact. Routes or road priorities and time of movement may be designated for units not in contact.

c. Phase lines and check points are designated to coordinate and control movements.

d. Successive division rear boundaries are designated to insure evacuation or destruction of supplies and facilities by the division. These boundaries are approved by the corps commander. Division coordinates with higher headquarters for evacuation or destruction beyond its capabilities.

e. The brigade headquarters may be assigned any of the following missions:

- (1) Control of division counterattacking force.
- (2) Reconnaissance for and establishment of rearward delaying positions.
- (3) Control of covering and security force for withdrawal of main body.
- (4) Command of a task force.

f. Positive traffic control measures are required to permit speed in tactical movements and to reduce congestion. Forceful action must be taken by commanders at all echelons to prevent or reduce bottlenecks which may cause canalizing or massing of units and equipment. Straggler points are established to direct or return personnel to their units. Army aircraft can be employed to supervise and expedite traffic control.

g. Commanders must realize that in modern warfare there is no such thing as a purely military retrograde movement. Proper control of civilians must be considered in plans for retrograde movements to avoid disorder and congestion which may contribute to the failure of the entire operation. Priority of routes is required for tactical units and for the control of civilian movement. Movement of civilians must not interfere with tactical operations.

h. The G5 is the staff planner for all CAMG operations affecting the division. Within security restrictions, planning for civilian control should include provisions for—

- (1) Instructing civilian police to post roadblocks on routes leading into adjacent division areas. In addition, control posts will be established at other locations to prevent civilians from using priority military routes.
- (2) Posting instructions in communities concerning authorized civilian movement to include—
 - (a) Hours of travel.
 - (b) Routes to be used.
- (3) Establishing collecting points for civilians who violate instructions.
- (4) Insuring that military police are familiar with the plan and with instructions relative to civilians who violate instructions.
- (5) Coordinating with adjacent divisions to prevent civilians from moving on unauthorized routes into the division sector.
- (6) Evacuating selected persons.

222. Security and Deception

a. It is essential that the intention to withdraw be kept secret and that knowledge of the actual withdrawal be denied to enemy as long as possible. Deceptive measures are used to deceive the enemy as to the strength and disposition of forces and to conceal the time and place of troop movement.

b. Mobile task forces supported by army and tactical aviation are used to provide security and to protect the movement of the division. The size of the force is determined by units available, the situation, and terrain. The mission of the force is to stop, restrict, or divert the enemy advance to permit the main force to disengage and move to the

rear. When security and terrain permit, the bulk of the division may withdraw simultaneously. Reconnaissance and security forces may be used in place of a general outpost (ch. 7).

c. Aviation provides valuable target information and early warning of enemy actions.

d. Additional security detachments must be provided to protect units as they move to assembly areas.

e. Times of withdrawal from different delaying positions will be varied so as not to establish rigid patterns. It normally will be necessary to allow for maximum time of movement at night, particularly when the enemy has air superiority.

223. Demolitions

a. Well-planned use of demolitions to include atomic and CBR munitions can be of great assistance to the retrograding force. Proposed demolitions should be carefully planned and executed in a manner which least interferes with the planned tactical or future contemplated actions evaluated in light of present and future plans. Elements of the demolition plan must be disseminated to all tactical commanders concerned.

b. Nuisance mining can be employed effectively along routes of withdrawal. Since nuisance mines are not plotted or recorded, only army and higher commanders are authorized to employ such minefields; however, this authority may be delegated to division commanders.

c. Under most favorable conditions, subsurface or surface atomic detonations may be employed to create craters and contaminated areas which will slow or impede the enemy's advance. The employment of such weapons will be controlled by the army commander.

d. Demolition of routes, bridges, tunnels, and defiles is of paramount concern to the retrograding force commander. Detailed plans are prepared to include—

- (1) Provisions for placing and firing the necessary demolitions.
- (2) Adequate guards to prevent premature firing of charges or seizure by enemy infiltrators.
- (3) Fixed responsibility for the execution of demolitions.
- (4) Schedule for destroying bridges no longer needed by our forces.

e. Normally, the responsibility for blowing bridges within his zone is delegated to the tactical commander. At each bridge there should be a demolitions firing party and a demolition guard. The guard commander has the authority to destroy the bridge. He is provided a list of all units that are to use the bridge. All unit commanders notify him when their units have cleared. When the main body has crossed,

the majority of the bridges in the zone are destroyed according to the schedule. Certain predesignated bridges are left for use by the general outpost or security forces.

224. Air Support

In air reconnaissance planning, provision is made for the utilization of organic and tactical air support visual observation missions to report the location and disposition of enemy forces. Reconnaissance aircraft report the location and disposition of enemy forces. Aircraft observers report conditions of roads and bridges to the rear as well as bypasses and alternate routes in case bridges are destroyed. Aircraft may be used to assist in withdrawing troops, to transport military police to critical road junctions, to move supplies and equipment, to evacuate wounded, and to place small forces with strong firepower at points where the enemy may be easily delayed. Close air support (TAC Air) is effective in delaying, harassing, and interdicting enemy ground forces, particularly armor, at critical localities such as bridges and defiles.

225. Administrative Support

a. In retrograde, emphasis must be placed on evacuation of supplies. Those supplies which cannot be evacuated are destroyed. Commanders enforce strict supply discipline. Provisions are made during the planning and execution of retrograde operations for the following:

- (1) Establishing small supply dumps or mobile distributing points along the routes of withdrawal to meet the needs of withdrawing troops.
- (2) Early dumping of mines and engineer supplies on the positions.
- (3) Establishing minimum essential supply levels on forward positions.
- (4) Initiating early evacuation of supplies in excess of immediate needs.
- (5) Locating installations farther to the rear than normal to insure uninterrupted service, maximum protection, and minimum displacement.

b. Normally, in a delaying action the division rear boundary initially includes the first two delaying positions. The boundary should be drawn to provide area for dispersed service installations and should be easily recognized on the ground.

c. Maximum effort is made to evacuate patients to prevent their capture. If unit frontages and limited road nets restrict evacuation, the evacuation means of tactical units may be augmented. Army aircraft will be employed to evacuate critically wounded patients to field

army surgical facilities. Medical installations will displace by echelon (leapfrogging) and will hold patients for a minimum period of time. When necessary, ambulances may be attached to combat units to facilitate rapid evacuation.

d. The commander who directs the retrograde operation authorizes destruction of supplies which cannot be evacuated and delegates responsibility for such destruction.

226. Leadership

a. Commanders must demonstrate personal, aggressive leadership to maintain the offensive attitude within all units. The fact that a retrograde movement is a planned military operation with a positive purpose must be conveyed to the troops. Rumors are suppressed to minimize the psychological effects of a retrograde movement and maintain morale. Forceful leadership, strict discipline, control, and prior planning are necessary to prevent a retrograde from becoming a rout.

b. Subordinate leaders must fully understand the purpose and the concept of the retrograde operation in order to execute orders independently in a positive and aggressive manner.

c. The importance of psychologically conditioning all troops to exact a heavy toll from the enemy under the most unfavorable circumstances cannot be overemphasized. Commanders and troops must be prepared to accomplish their missions while receiving heavy casualties and while subjected to shortages of food, equipment, ammunition, and personnel.

Section III. WITHDRAWAL FROM ACTION

227. General

a. Withdrawals from action may be executed during daylight or night. Either withdrawal may be forced or voluntary.

b. Night withdrawals are favored over daylight withdrawals since normally they preserve freedom of action, obtain secrecy and surprise, and reduce casualties.

c. Daylight withdrawals from action, under pressure, are normally avoided. Movements usually are under enemy observed fires which result in heavy casualties and restricted freedom of action.

d. Plans for withdrawal should be made far enough in advance to permit subordinate units to conduct daylight reconnaissance. Since this is not always possible, units must develop standing operating procedures to accomplish daylight or night withdrawals on short notice.

e. Delaying positions are designated at sufficient distance to the rear to require regrouping of enemy forces prior to renewal of the attack

and close enough together to permit movement under cover of darkness.

f. Blocking enemy avenues of approach controlling lines of communication to the rear is essential in delaying the enemy attack.

g. Enemy airborne or guerilla activities in the rear delaying positions may seriously disrupt the operation. The commander must insure that the move to the rear is continued on alternate routes. Likely enemy objectives are bridges, critical defiles, communication centers along main routes of withdrawal, and atomic delivery means. Plans to counter these possible enemy actions include—

- (1) Establishing priorities for guarding critical points.
- (2) Allocating forces to guard critical points and to attack located enemy forces.
- (3) Early and accurate detection and location of enemy air-landed or guerilla forces.
- (4) Rapid means of designating and controlling alternate routes for units to bypass enemy roadblocks.
- (5) Early reopening of main routes of withdrawal.

h. Prior and timely reconnaissance must be made for alternate routes. Plans provide for standing operating procedures for administrative and combat units to permit detours as a result of strong enemy roadblocks or enemy seizures of bridges and defiles. Standing operating procedures should cover immediate notification of higher headquarters when a route is blocked, provision for halting of traffic in the rear of the column to insure that vehicles are not jammed bumper to bumper, rapid reconnaissance to determine if the roadblock can be cleared, immediate reconnaissance for detours on alternate routes, and marking of the new route in case a detour is made. Organic aircraft are frequently used to assist in accomplishing these measures.

i. Mobile task forces or reserves must reconnoiter and insure retention of critical points essential to the success of the withdrawal. The commander must consider carefully the employment of his mobile reserve. Widely scattered airborne forces, exaggerated reports, and faulty intelligence will create confusion. The commander determines the enemy landings and actions which most seriously jeopardize his withdrawal mission and rapidly commits forces at the proper time and place.

j. Adequate plans are based on—

- (1) The desirability of withdrawing from, through, and to strong delaying areas or lines.
- (2) Most favorable time or conditions to initiate the withdrawal and location of subsequent delaying positions.
- (3) Simple, flexible, clear orders to include overall concept of operations.
- (4) Secrecy to avoid heavy enemy pressure during critical stages.

- (5) Phasing the withdrawal of major elements to avoid close combat and to maintain continuity of plan.
 - (6) Atomic weapons employment.
 - (7) Time at which positions are abandoned in order to permit friendly air and artillery fire support.
 - (8) Avoiding concentration of forces into lucrative atomic targets.
- k. The withdrawal order must be prepared in detail to include--
- (1) Location and disposition of units.
 - (2) Zones and/or routes of withdrawal.
 - (3) Strength and mission of security forces and other security measures.
 - (4) Time and priority of withdrawal by units.
 - (5) Evacuation of casualties.
 - (6) Provisions for evacuation of supplies and materiel or their destruction.
 - (7) Traffic control measures.
 - (8) Times, routes of withdrawal, and locations for administrative units.
- l. Elements of the main force initiate movement to the rear usually from rear to front in the following order:
- (1) Elements moved in advance to prepared rearward areas for occupation.
 - (2) Administrative and service units, which move early to insure their own safety and to clear the rear areas for the movement of combat elements.
 - (3) Units in contact which move at prescribed times directly to the rear to designated assembly areas.
 - (4) Artillery unit moves are phased with the supported unit moves to provide continuous fire support.
 - (5) The security force moves as required by its mission, which may include maintaining contact with the enemy, withdrawal at a designated time, or waiting until forced back by enemy action.
 - (6) Division reserves moved as prescribed by their mission.
- m. A withdrawal is complete when the infantry battle groups have moved into rear positions or assembly areas in rear of these positions.

228. Night Withdrawal From Action

(app. II)

a. General.

- (1) Plans for a night withdrawal from action emphasize control. The success of the operation depends on deception and secrecy.

- (2) When the division commander decides to withdraw and announce the location of rearward positions, reconnaissance of the next rear position, general outpost line, assembly areas, positions for additional security detachments, and routes of withdrawal are immediately initiated. The assistant division commander and brigade staff may be used in the reconnaissance to the rear.
- (3) Detachments left in contact.
 - (a) When not under pressure from the enemy, detachments left in contact may be left by forward battle groups. Such detachments will normally not exceed one-third of the infantry strength of the battle group augmented by supporting weapons such as infantry mortars, machineguns, artillery, and antitank weapons. These detachments simulate the normal activity of a fully garrisoned position by firing from different positions, by patrolling, and by normal use of radio and pyrotechnics. Detachments left in contact may be directed to withdraw at a prescribed hour, after a prescribed hour, or upon order. For adequate control and coordination, the battle group executive officer is frequently designated as the commander of the detachments left in contact. When necessary, the brigade staff may be given the mission of coordinating all detachments left in contact.
 - (b) It is desirable to motorize the detachments left in contact. The time of withdrawal should allow such detachments to come under cover of the rear security force by daylight.
- (4) Deception and secrecy are obtained by noise suppression within withdrawing units, simulating normal supporting fires, maintaining radio listening silence by withdrawing units, use of camouflage, conducting movements in such a manner as to simulate reinforcement, and use of dummy positions.
- (5) Division liaison officers or members of the brigade staff may remain with detachments left in contact or with the battle groups to insure coordination, specifically on destruction of bridges and execution of other critical demolitions.
- (6) At the hour prescribed for the withdrawal, units scheduled to move proceed straight to the rear. Units normally assemble in no larger than company assembly areas. A battle group assembly area or a system of check points may be employed for control purposes. Under atomic conditions, normally not more than one company will assemble in a battle group assembly area at one time. Assembly areas should be

used for the briefest possible period since this is the time when the withdrawing units are the most vulnerable. Each commander is responsible for covering routes and approaches into his unit's assembly area.

- (7) Additional security detachments of infantry and antitank means protect the withdrawal to and through assembly areas. When practicable, these detachments take up positions prior to dark and cover all likely avenues of approach, particularly those which may be used by enemy armor.
- (8) Security of the rear positions is normally provided by a general outpost furnished by division. This force provides warning and protection for the occupation of the rear position or assembly area and covers the withdrawal of the detachment left in contact. The general outpost force normally reverts to division reserve after accomplishing its mission.
- (9) Should atomic weapons be used to assist in disengaging, the atomic safety line must be clearly recognizable. Troops must be warned to prevent flash blindness. Counterattacks by the division reserve must emphasize simplicity since coordination and control at night will be difficult.
- (10) Battlefield illumination may assist the withdrawing forces to proceed more directly to the rear, and to minimize confusion and loss of direction.
- (11) Use of helicopters will frequently permit commanders to land at specified control points to achieve better control and to obtain clearer information of the progress of the withdrawal. Use of small helicopter-borne forces to block defiles and other critical points will assist in slowing and stopping the advance of the enemy.

b. Conduct of Night Withdrawal Not Under Enemy Pressure.

- (1) At the initiation of the night withdrawal from action, detachments left in contact are prepared to execute their mission; the additional security detachments are in position, and the general outpost force moves to the rear early to outpost the rear position.
- (2) Depending on the tactical plan, the units withdrawing to the next rearward position may move to intermediate positions or leapfrog to the rear. If possible, frontline battle groups withdraw simultaneously on a broad front. Formations are normally no larger than company size and operations are conducted with great emphasis on secrecy and deception. Routes of withdrawal are normally designated for artillery, trains, and division reserve. Zones and/or routes are specified for battle groups.

- (3) Supporting 105-mm howitzer artillery batteries leave platoons with the detachments in contact to simulate normal artillery activity.
- (4) Other artillery is in position to support frontline units and, if possible, far enough to the rear for security from enemy ground action during the execution of the withdrawal. Atomic delivery units normally controlled by division artillery are echeloned in depth to insure that constant fire coverage is provided forward units. Special security measures are taken to insure the safety of this vital firepower. This security may be furnished by coordinating movement and positioning them with elements of the division reserve or other combat units which are moved to the rear in the early stages of the withdrawal.
- (5) The general outpost force is normally provided from the division reserve. This force covers the withdrawal of detachments left in contact in zone after establishing liaison with such detachments, and executes maximum delay along routes between the general outpost line (GOPL) and the rear position.
- (6) The detachments left in contact are withdrawn at a prescribed time, after a prescribed time, or upon order. The rearward movement of artillery supporting the detachments normally is just prior to the movement of the detachments.

c. *Conduct of Night Withdrawal Under Enemy Pressure.* The significant differences between a night withdrawal under pressure and that not under enemy pressure are—

- (1) A specific time of withdrawal may not be given and orders will normally indicate to withdraw without delay.
- (2) No detachments are left in contact since such detachments would serve no deceptive purpose and would be quickly overrun.
- (3) Forward units frequently back up fighting.
- (4) The division reserve normally is used to block along routes or roads in the zones of the withdrawing battle groups to provide security for the withdrawing forces, to prevent a breakthrough, and to assist the withdrawing forces to break contact with the enemy. The division reserve may be used to counter-attack in an extreme emergency to prevent the loss of a major unit or to occupy a predesignated GOPL if the enemy situation permits.
- (5) There is more frequent assignment of zones as well as routes of withdrawal since units may have to fight their way back.
- (6) Artillery prepares to deliver unobserved fires throughout the zone. The supporting 105-mm howitzer batteries may either

move before the withdrawal begins or shortly after the forward units break contact. Movement is usually conducted by battery. General support artillery is employed to provide maximum firepower at the time the forward units break contact. General support artillery normally moves to the rear by echelon after contact is broken.

229. Daylight Withdrawal

a. General.

- (1) A daylight withdrawal from action under enemy pressure is avoided whenever possible. Successful daylight withdrawals from action depend on speed, control, strong fire support, local air control, and effective employment of a security force.
- (2) At the start of the daylight withdrawal planned, heavy atomic or nonatomic fires may be dropped on the enemy to permit friendly forces to break contact.
- (3) Infantry units may disengage when unobserved or unopposed or as a result of action taken by security forces. The units move to assembly areas, or entrucking points if transportation is available, and subsequently to new rear position or intermediate positions. Security forces conduct delaying action between positions. Reconnaissance units protect flanks and assist in freeing closely engaged units. If the division covering force is not positioned to cover the withdrawal of the battle group covering forces, battle group commander must plan to have forward companies and covering forces leapfrog from one intermediate covering position to another until the battle groups reach an area from which the division covering force can cover the withdrawal. If the enemy follows withdrawing units closely, intermediate positions may be occupied. If the enemy does not, the battle group covering forces may remain in place while the remainder of the battle groups moves behind the division covering force to the new battle area.
- (4) No detachments are left in contact. The least heavily engaged units are withdrawn first. Then all fires and support to include counterattacks are employed to disengage units. Strong fire support is required for successful daylight withdrawals. Daylight withdrawals may be conducted by leapfrogging battle groups. Withdrawal of units in contact is covered by rearward units.
- (5) Smoke should be used when weather conditions permit to provide concealment for movement and assembly of exposed units. However, care must be exercised that smoke does not provide a screen for the advance of enemy units.

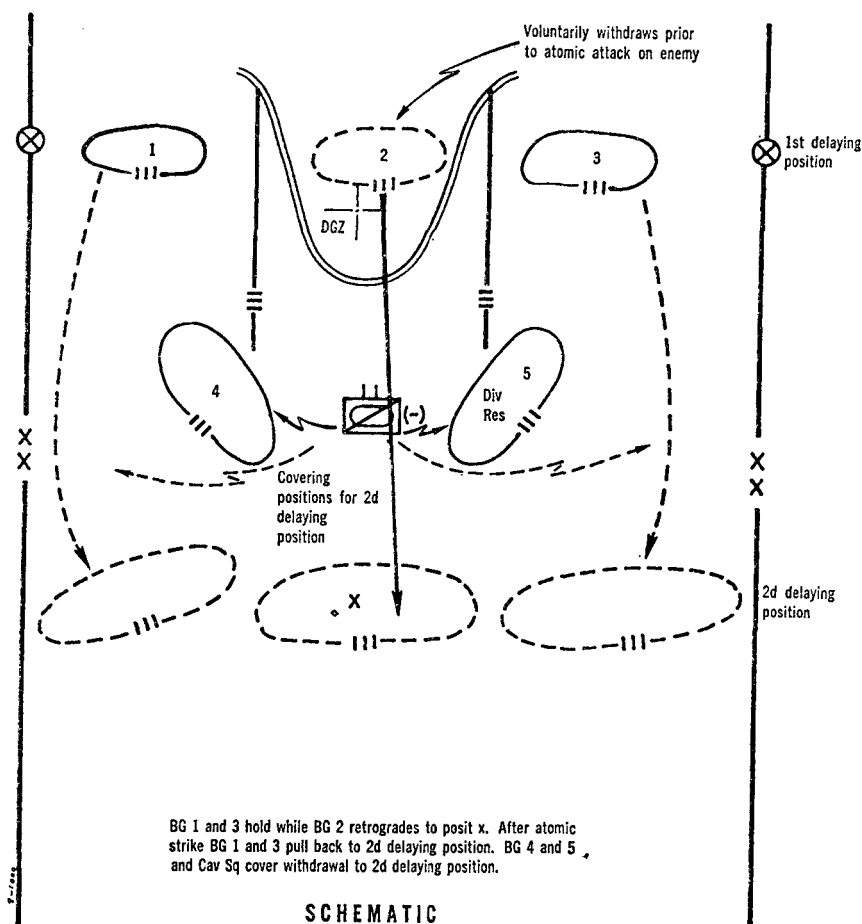


Figure 52. Withdrawal supported by atomic weapons.

b. The doctrine for daylight withdrawal is similar to night withdrawal under enemy pressure. Significant differences are—

- (1) Disengagement of major units is more difficult under enemy observation and fires.
- (2) Close terrain assists daylight withdrawals by limiting enemy observation and affording cover and concealment for the assembly and movement of troops. Open terrain favors covering action by highly mobile forces but exposes friendly troops to enemy observation, permits minimum secrecy or surprise counterattacks, and facilitates enemy use of large armored units. Use of smoke may assist withdrawing forces particularly at critical terrain bottlenecks.
- (3) Control is facilitated by visual contact but the necessity to disperse and to move more rapidly under enemy observation

and fire complicates control. Routes of withdrawal, circulation control, zones of action, phase lines, and priority of movements must be specified in orders. Assembly areas must be widely dispersed, farther to the rear, and occupied by small units normally no larger than a company.

- (4) Security forces are needed to cover the withdrawal and to protect assembly areas. These forces are normally provided from the division reserve. Every effort is made to select positions from which flanking fire can be placed on the enemy to force him to execute time-consuming deployments.
- (5) In daylight withdrawals, artillery must frequently infiltrate to rearward positions in small echelons. This is particularly true when the enemy has air superiority. Displacement of the 8-inch howitzer battery by platoon will be more frequent. The artillery, including atomic delivery means, will be used when necessary to disengage heavily engaged units and to support counterattacks. Artillery supports the disengagement by placing heavy fire on leading enemy units. Continuous fire support is provided by maintaining echelonment of artillery units to the rear. Artillery supporting the general outpost of a rearward position may provide assistance in the latter stages of the withdrawal.
- (6) In a daylight withdrawal, the division reserve or portions of the reserve may be used to block avenues of approach, to cover withdrawing battle groups, or to counterattack. Since retrograde movements normally involve confusion and periodic loss of control, the use of atomic weapons must be carefully coordinated. Easily recognizable atomic safety lines must be designated. Use of organic aircraft as well as Air Force planes, when available, must be normal for control, coordination, and direction of atomic and nonatomic fires. The reserve may be a motorized reinforced battle group or task force to conduct rapid counterattacks. It should be supported by field artillery, engineers, and antiaircraft artillery (when attached) as necessary to accomplish the mission. The infantry element may consist of one or more battle groups. Seizure of terrain is not normally the mission of the counterattacking force.

Section IV. DELAYING ACTION

230. General

a. Delaying action is usually employed by covering forces and other security detachments. It is executed most effectively by highly

mobile troops used in conjunction with aviation and atomic fires. Efficient use of obstacles covered by fire strongly reinforces the delaying capability. Delaying forces must offer a continued threat of strong opposition to force the enemy to deploy and maneuver.

b. The infantry division is capable of conducting an effective delaying action. Maximum advantage is taken of the terrain, the division atomic capability, organic transportation, the armor battalion, and the cavalry squadron. When augmented with additional armor, artillery, reconnaissance, and transportation means the division can be employed most effectively on successive positions.

c. Demolitions are of great importance. Organic aircraft may be used by demolition parties to move to and withdraw from demolition sites.

d. Natural obstacles such as rivers and swamps delay the enemy when properly covered by fire. When the retrograding force is small and on a broad front, such obstacles may provide only short delay.

e. Air reconnaissance is of vital importance in providing information of enemy forces to the front, flanks, and rear. Contact with the enemy must be maintained as far forward as possible. Ground security forces operate with air reconnaissance elements to avoid being cut off. Armor units reinforced or cavalry units are ideally suited for this mission. A mechanized or motorized battle group reinforced may be employed as a security force. When tanks are attached, a maintenance capability should be provided to avoid loss of vehicles because of mechanical failure or minor damage by enemy fire. In some situations a battle group mechanized or motorized may be the controlling headquarters with the above forces attached.

f. To facilitate coordination, the zone of action is divided into sectors with boundaries extended to the rear through rearward positions. The division may be employed on frontages of such great width as to frequently necessitate decentralization of control.

g. Delaying actions may be accomplished by—

- (1) Delay on a single position.
- (2) Delay on successive positions.
- (3) Delay on alternating positions.
- (4) Limited offensive action or spoiling attacks to throw the enemy off balance.
- (5) Combination of any of above, using atomic and nonatomic fires. The detonation of subsurface or surface atomic demolitions under most favorable weather conditions may be employed to create craters and contaminated areas which will impede or slow the enemy forces.

The adoption of any one of these forms depends upon the relative combat power, mission, and strength of the delaying position.

h. Continuous liaison between adjacent battle groups is maintained whenever possible. Army aircraft and reconnaissance units facilitate this liaison.

i. To control movements, times of withdrawal are prescribed and phase lines or successive positions are designated.

231. Organization of Delaying Position

a. Delaying action consists of delay on a single position or on a series of successive positions. Vulnerability to enemy atomic weapons, massed armor, and mechanized forces favor delaying positions in depth.

b. The difference between operations on a delaying position and a position defense are as follows:

- (1) The commander does not intend to become decisively engaged or to hold ground for any extensive period of time.
- (2) Counterattacks normally attempt to disengage friendly units and will seldom seize terrain objectives.
- (3) More effort to develop maximum firepower forward.
- (4) Lack of time frequently permits construction of only hastily prepared positions.
- (5) The distance between forward defensive units is increased and reserves may be decreased which permits broader frontages.

c. The infantry tactics employed are similar to those of the forward battle groups in the mobile defense. Great reliance is placed on the use of atomic weapons to inflict casualties on the enemy if he attempts to mass to overcome the delaying forces. However, maximum efforts are made to avoid decisive engagements and to keep the enemy from closing with the delaying position. A mobile reserve is prepared for rapid movement to meet enemy threats to forward elements of the delaying position. Positions in depth and antitank defenses are employed to protect the command from rapid enemy penetrations and encircling maneuvers.

232. Delay on Successive Positions

a. Delay on successive positions provides for limited resistance on initial positions and renewal of resistance on successive positions. Delay on successive positions is adopted when the enemy must be delayed for maximum periods of time. This type of action is more successful when space permits action over an extended distance to the rear, and terrain affords suitable successive delaying positions.

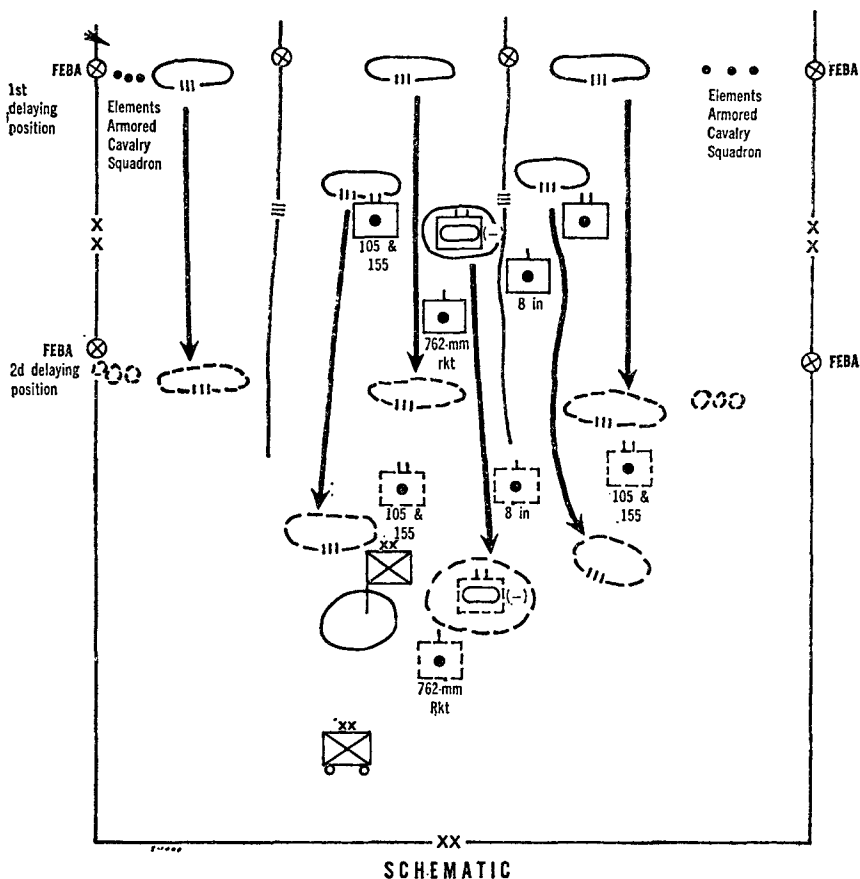


Figure 53. Delay on successive positions.

b. Delaying positions should have the following characteristics:

- (1) Long-range observation.
- (2) Long-range fields of fire.
- (3) Be separated sufficiently to force enemy to displace his artillery and regroup his forces before engaging the next position.
- (4) Natural obstacles to front and flanks.
- (5) Have covered routes of withdrawal.
- (6) Be close enough together to permit delaying force to move from one position to next rearward position under cover of darkness.

c. The amount of delay which can be accomplished on each position depends on the mission, comparative strength of opposing forces, nat-

ural strength of the position, and tactics of enemy to include use of atomic weapons.

d. The loss of a defended locality may not require an early withdrawal across the whole zone. Adjacent units, reserves, and atomic fires may be used to restore the integrity of the position or to neutralize the area.

e. Prior preparation of the next rearward position is of primary importance. When these positions are not prepared by higher headquarters, the division prepares its own position. Immediately prior to withdrawal from forward position, elements are disposed on rearward or intermediate positions to cover the withdrawal of forward elements.

f. Toxic chemicals may be effectively used to create barriers, to reinforce natural obstacles and demolitions, and to deny critical areas to the enemy.

233. Delay on Single Position

Delay on a single position is executed by occupying one position for the period of necessary delay. It is adopted when space available for delay is limited; the time the enemy must be delayed is short; and terrain does not provide suitable successive delaying positions. Organization of the position is similar either to position or mobile defense depending on the delay required by the mission, terrain, forces available, and frontage. Disengagement and movement to the rear are executed as in delay on successive positions. Heavy reliance is placed upon the effective employment of all atomic and nonatomic artillery fires to assist in gaining the necessary delay.

234. Delay on Alternating Positions

a. This method of delay may be effective when the infantry division is augmented with combat and transportation means from higher headquarters. The division organization facilitates dividing the command into two combat groups. The first group occupies the first delaying position and delays the enemy while the second group organizes and occupies the next relaying positions. The first delaying group withdraws through the second group to a rearward position behind the second group.

b. This method may be adopted when frontages are narrow and when sufficient strength permits organizing into the two groups. The assistant division commander and brigade staff may control either group. Infantry battle groups, in varying numbers, normally form the nucleus of each combat group.

c. Strong atomic and nonatomic fires are planned and executed to support each delaying position.

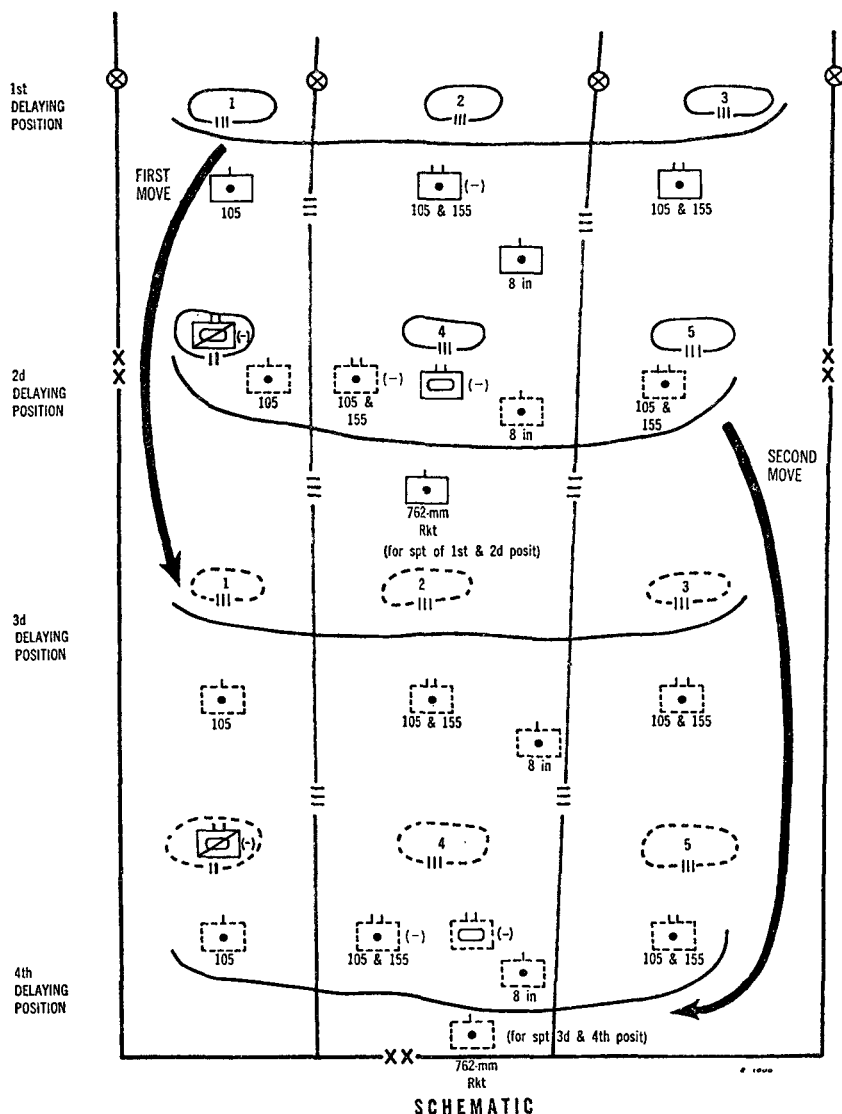


Figure 54. Delay on alternating positions.

235. Delay by Limited Offensive Action

This method of delay is employed to throw the enemy off balance by limited objective attacks. Atomic weapons enhance the success of such attacks. Atomic and nonatomic fires must be carefully planned to stun and disorganize the enemy at the beginning of the attack as well as to enable the friendly forces to accomplish the mission rapidly and effectively. Surprise is vital to success; and relative strength at the point of attack should be favorable.

Section V. RETIREMENT

236. General

a. A retirement may be made to put extended distance between the defender and the enemy, to reduce friendly supporting distance, to occupy more favorable terrain, to conform to dispositions of a larger command, or to permit employment in another sector. A withdrawal from action may precede a retirement.

b. The rear position or march objective should favor future employment of the division. When the purpose is to escape an unfavorable situation, the rear position should place the maximum distance and obstacles between the retiring force and the enemy.

237. Control and Coordination

a. The formation and number of columns employed depend upon the number of available routes and the amount of enemy interference. It is desirable to move major elements to the rear simultaneously. Restricted road nets, enemy air action, or enemy ground threat to a flank may require echelonment of the move.

b. During the initial phase, the division commander designates specific routes to administrative and support elements with instructions concerning clearance of routes for combat elements. Zones of action and routes may be assigned to combat elements for their initial movement. Initially, control is decentralized. As the retirement develops, the division commander normally regains centralized control.

238. Security

a. Strong advance, rear, and flank guards are required in a retirement.

b. Mobile forces provide advance guards to meet the threat of enemy forces, to prevent surprise, and to clear march routes. Flank security is provided by mobile forces.

c. The rear guard is the principal security of each column. Its composition is similar to the flank guards and its size depends on the composition and imminence of enemy attack. Should the enemy make contact, the rear guard employs delaying action tactics.

d. The main body is normally organized in a manner inverse to that of an advance to contact (pars. 155–158).

e. Air reconnaissance maintains surveillance of leading hostile elements and combat aviation aids in delaying the pursuing enemy. Air and ground reconnaissance elements closely coordinate their activities. Artillery and air observers are prepared to place long-range fires to include atomic fires on enemy forces. Use of Army aircraft facilitates column control.

f. Radio discipline is strictly enforced, particularly during the initial stages to preserve secrecy.

239. Conduct

a. Administrative units and division trains initially move to dispersed rearward assembly area.

b. Dumps or mobile distributing points of ammunition, fuel, and rations are established for the remainder of the division.

c. At the designated time, combat units move into dispersed assembly areas and form rapidly into march columns to begin the retirement.

d. Initially the division uses multiple small columns. Long marches at night are normal. Forced marches are often employed to place maximum distance between the enemy and the retiring force.

240. Denial Operations

Higher headquarters will normally specify the extent of denial operations. For details, see FM 31-10.

CHAPTER 9

SITUATIONS SHORT OF WAR

Section I. GENERAL

241. Scope

This chapter is primarily for the infantry division commander and his staff for short-of-war operations in which the division is an independent force or the senior army element of such a force.

242. Definition

Situations short of war as used in this manual apply to those military operations which lie in the area between normal peaceful relations and open hostilities between nations. Aggression by hostile powers under situations short of war may take the form of a *coup d'etat*, illegal occupation, warlike demonstration, or unilateral police action. Objectives of such aggression include seizure of governmental control, occupation or intimidation of a weaker country, or crushing of dissident elements.

243. Purposes

United States participation in situations short of war results largely from commitments to assist and defend small, free nations and support the United Nations. United States forces participate in such actions only by specific order of responsible civilian governmental authority. Within the broad scope of situations short of war, United States operations may be designed to achieve the following:

- a. Encourage a weak and faltering government.
- b. Stabilize a restless area.
- c. Deter or thwart aggression.
- d. Reinforce a threatened area.
- e. Check or counter aggressive moves by opposing powers.
- f. Help maintain, or restore, order.

244. Suitability of Division

The infantry division may be employed either independently or as a part of a larger force in situations short of war. Its strategic mobil-

ity, self-sufficiency, and ability to apply measured force make it well suited for the varied missions involved.

245. Missions

a. Missions assigned the infantry division in situations short of war include the following:

- (1) Show of force.
- (2) Truce enforcement.
- (3) International police action.
- (4) Legal occupation.

b. Specific operations of the infantry division within these missions may include parades, maneuvers, demonstrations, police and patrol duty, or limited combat against regular or partisan forces.

Section II. CONSIDERATIONS

246. Aspects of Mission

a. Situations short of war normally entail mission-type orders. While the limits of the commander's authority will be carefully prescribed, particularly in relation to State Department responsibility and that of its representatives, he will usually be given considerable latitude in determining how to accomplish his assigned mission.

b. Division missions in situations short of war are inherently delicate and are likely to have impact on national policy. The division commander and his staff and in some cases his subordinate commanders on the ground, either by the orders of responsible authority or by chance, may temporarily become instruments of national policy. As such, they must understand national policy and its implications in the area of their employment. Commanders of all divisions in peacetime must be capable of carrying out this type of mission with facility.

247. Cooperation

a. Short-of-war operations usually involve cooperation and coordination with other services. As a minimum, the division will require the support of other Services (Navy or Air Force or both) for transportation to the area and frequently for the establishment of its supply base, and at times for combat and service support. The division may be subordinated to another Service which may have overall responsibility for the operation, as in a naval show of force in which an infantry division is the landing element. The commander often will find himself cooperating with allies or subordinated to an allied commander. The commander and his staff should, therefore, understand joint and allied command and staff relationships, and procedures.

b. Department of State officials handle transactions with the seat of the foreign government where such officials are present and the civil government exists. In those cases where permanent Department of State officials are not present, the commander may be provided with a political advisor. In most instances, political considerations are overriding. The commander's authority in the political area would normally be specifically prescribed. However, sound and cooperative working relationships must be established and maintained with the responsible United States political authorities, as appropriate.

c. Whatever the arrangement, it is likely that the commander will have to deal with foreign governmental officials and military and civil leaders. It is, therefore, vital that he understand the responsibilities of the head of the local government in relation to his own responsibilities. He must know the problems of the military and civil officials, and obtain all possible cooperation through his own understanding cooperation. If civil government breaks down, the commander may be required to play a major role in reestablishing it. Publishing of guidelines to subordinate commanders for their relationship with military and civil officials can avoid misunderstanding and foster cooperation.

d. The division G5 is directly concerned with planning leading to the attainment of political and economic objectives, as well as matters of coordination and liaison between civil and military agencies. He may furnish political guidance in accordance with established policies. Additional CAMG platoons or functional teams may be attached to the division for assistance in the implementation of policies or such matters as governmental affairs and relations with civil agencies.

248. Intelligence

a. Intelligence is especially significant in situations short of war and is wider in scope than the combat intelligence with which the infantry division normally deals.

b. The division commander must maintain a general knowledge of conditions in areas of the world in which he is likely to be employed. To do this, he must routinely receive in his headquarters selected intelligence summaries of these areas.

c. At the time his mission is assigned, the division commander must be given strategic intelligence—geographical, military, political, social, economic—of the specific area of operations. In addition, he must be informed of the United States and Allied intelligence agencies located in the operational area which would be available to support him in his mission.

d. After arriving in the area of employment, the division commander must carefully evaluate and exploit the intelligence agencies

at his disposal and insure that his own intelligence collection efforts satisfy the broad requirements of the interested United States agencies. Intelligence specialist augmentation may be required to fulfill these requirements.

e. If the division mission is to maintain or restore order, the development of an efficient and secure operational intelligence system is essential. This system must be able to develop the background of the unrest, pinpoint the dissident elements, and provide the detailed information and topographical knowledge on which military action can be based. The closest cooperation with the local police system normally is required. Where the local police cannot be used, the division commander may have to develop his own indigenous service. In this event, he must insure that he has the authority to develop this service and that his actions do not conflict with the assigned responsibility of established agencies.

249. Security

a. Good security is essential. Security precautions are required at the time the division mission is received and during movement to the objective area. Short-of-war objectives can be easily defeated by appropriate countermeasures if the objectives become known in advance.

b. In the objective area, security of planning and operations is complicated by transactions with local civilian officials and allies and by the absence of the protection normally afforded by the military censorship of a wartime theater of operations. Special attention must be given to the security-mindedness and alertness of the individual soldier because of his contact with the local populace, his tendency to feel that he can relax, protective measures when he is not on actual operations, and the fact that the enemy knows that he is the best target. The security of supplies, equipment, and installations must not be neglected. Such neglect leads to pilferage, black-marketing activity, and raids, and provides a source of supplies and arms for dissidents. Of particular importance is the provision of adequate security measures to defeat enemy guerilla actions.

250. Training of Troops

a. The sound troop discipline of the combat division is the best possible basis for the special troop training required for situations short of war. Intelligent good behavior of the troops is a prerequisite in these operations where the serious misbehavior of one man may jeopardize the entire mission.

b. During normal training, the commander must insure that the troops are broadly oriented on conditions in wide areas of the world

and on their roles in situations short of war. This orientation can be accomplished, in part, through a sound, continuing troop information program.

c. At the time the mission is received, the commander must insure that the troops are specifically oriented to include the mission and the local customs and conditions in the area of operations. Such orientation must also include security, relationships with the civilian populace, injunctions against black marketing, treatment of women, and similar matters. When the mission is especially delicate, the commander will screen out undesirable personnel.

d. Either before or after arrival in the area of employment, the troops must receive any special combat training that may be required by the mission, such as specialized training in counterguerilla warfare, riot control, or allied special-type operations.

e. Duties in short-of-war operations call for the highest standards of discipline among officers and men in which the officers must set the example. The smart appearance of well-turned-out and well-disciplined troops impresses the civil population, while courtesy combined with dignified bearing gives confidence in the forces of law and order. It must be recognized that the patience of soldiers when employed over long periods may become strained; casualties to fellow soldiers and acts of terrorists try their patience and can embitter their outlook. Troop and civilian curfews can assist discipline.

251. Training of Indigenous Forces

A situation short of war may require the raising or training of indigenous military forces by the infantry division as a collateral mission. The local military leaders selected for key positions in the indigenous force *must be reliable*. As in all relations with local government, the relations with these military leaders must be harmonious. Mutual trust and confidence are a prerequisite. The professional competence and attitudes of the enlisted men and junior officers of the training cadres provided by the division will have much to do with this. National traits and local resources must be exploited to the maximum in building the indigenous force.

252. Legality of Actions

In carrying out his mission, the division commander may have to make decisions that involve life and property and civil matters in a sovereign country. These are matters for which he may be later held responsible by his government, by civil suits, or by foreign or international public opinion. It is essential, therefore, that the actions of the division commander be based on a thorough knowledge of local law and custom and the advice of a competent staff. Where

the legality cannot be determined, his actions must not exceed those which can be justified by *necessity*, tempered by a rectitude that can be universally recognized. The fact that he may be required to take action that is contrary to his personal interest must not deter the commander from prompt and resolute accomplishment of his mission.

253. Minimum Force

The commander must use the minimum amount of force required to accomplish his objective and discontinue the use of force the moment it is no longer necessary. The commander on the spot alone is in a position to estimate the degree of force that must be used. The excessive use of force can never be justified; it can only lead to the need to apply ever-increasing force to maintain the same degree of order, and to the loss of the sympathy and support of the local populace. If efforts to win over the local populace are not to be defeated, the enemy dead and wounded must be treated with respect and humanity, no matter how despicable their acts.

254. Records

In any operation that deals with civil government, it is important that the commander keep, or cause to be kept, an official record of all important transactions as well as his own decisions and the reasons therefor. Operations of this kind may be subject to review or court proceedings; therefore, it is advisable to be able to establish the facts.

255. Interpreters

Transactions with civil officials and the local populace will create a demand for interpreters. Arrangements must be made for securing and *clearing* interpreters locally. In addition, lists should be maintained of the language fluency of the men in the division.

256. Press

The presence of correspondents from foreign countries presents a difficult security problem. All correspondents must be handled circumspectly, and accredited correspondents must be provided with the facilities necessary to carry out their work. Within sensible security limitations, a cordial and straightforward treatment of correspondents will go far toward public understanding of the issues and it will facilitate accomplishment of the mission.

257. Expansion Into War

Most short-of-war operations are conducted in politically unstable areas in which actual war is an ever-present threat. Under these circumstances, the commander may have to condition his actions so as

to maintain a fighting posture for his unit even though his immediate mission may not require it; or he may have to conduct his mission with the knowledge that his unit may be overrun if the situation erupts into war. In either event, the commander must ensure that his actions do not inadvertantly convert a situation short of war into an actual war.

Section III. EMPLOYMENT OF DIVISION UNITS

258. General

The infantry division operating in situations short of war is confronted with a wide range of unpredictable factors to include political considerations, attitudes of local populace, native armed forces, enemy covert and overt capabilities, environmental conditions, and command arrangements. Thus, no normal employment of the division can be prescribed. This condition or situation demands flexibility and imaginativeness in leadership, command, and planning on the part of the division commander, staff, and all subordinate commanders. Some possible employments of the division units are suggested in the following paragraphs.

259. Battle Group

a. The battle groups provide the bulk of the troops necessary for patrol operations (foot and mounted), area search and security, outposts, strong points, and control posts, and for action in mountainous terrain, jungle, or swamp.

b. The battle group is well suited for the control of mobs and for suppression of riots and civil disorder.

c. One or more battle groups can make an impressive local show of force on parade, particularly when accompanied by armor and artillery units. The timing and route of march should be carefully selected for maximum effect.

d. Mobile task groups formed by units organic to the battle group and provided with helicopter, armored carrier, and/or amphibious transport can provide the basis for counterguerilla action.

260. Armor Units

The division cavalry squadron can provide reconnaissance, security, and constabulary type forces over wide areas. Both this unit and the armor battalion can provide radio communication for other dispersed forces; and, when reinforced with infantry mounted in armored carriers, can provide powerful mobile forces. When employed in conjunction with dismounted infantry, tanks are effective in quelling riots and civil disturbances. They also are useful for providing fire support for isolated outposts and for convoy escorts.

261. Armored Carriers

Armored carriers can be used for mounted infantry patrols designed to impress the population. Their limited amphibious capability is useful in patrolling across streams. They may be used to form self-sufficient infantry-armor detachments. These carriers are invaluable for supply, evacuation, and troop movements over unsecured roads that are subject to sniper fire and partisan action.

262. Division Aviation

The organic division aircraft can conduct surveillance over wide areas, provide liaison and courier service between scattered outposts, and can operate from hastily prepared airstrips from within protected areas. The organic helicopters can supply small outposts and detachments scattered throughout the country, and can evacuate casualties from these outlying areas. A "fly by" by organic division aircraft enhances the impressiveness of the division on parade.

263. Engineer Battalion

The engineer battalion may be used for constructing extensive outpost fortifications, bridge building, keeping roads swept free of mines, construction of permanent installations, and civil works.

264. Signal Battalion

The signal battalion can provide a network of communications over wide areas in an underdeveloped country. The radio basis of this network avoids problems of maintenance and repair of wire lines in partisan infested territory.

265. Logistics

The logistical and administrative elements of the division are well suited to provide humane and civil relief services, such as restoration of civil works, and food, clothing, shelter, and medical treatment for the local populace when this enhances the mission and the required supplies and material can be made available.

266. Air Transportability

The air transportability of the essential elements of the division facilitates their flexible employment and redeployment over wide areas when sufficient aircraft are made available. Helicopterborne infantry forces are particularly valuable in widely separated actions against dissident elements in an underdeveloped country.

267. Atomic and Conventional Artillery

The flexible organization of the division artillery facilitates placing artillery in the support of outposts and outlying detachments. The

organic atomic delivery means is particularly effective in a show of force or as a deterrent to outside intervention by a major power in a situation short of war.

268. Field Manual References

The following manuals are useful references for the commander and staff in situations short of war: FM 27-10, FM 31-21, FM 41-10, and FM 19-15.

APPENDIX I

REFERENCES

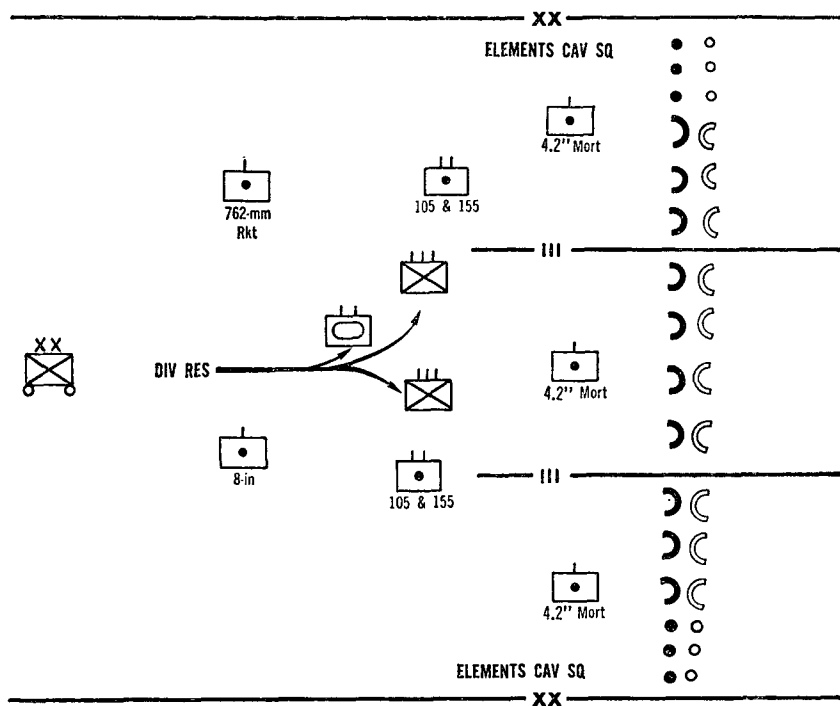
FM 3-5-----	Tactics and Technique of Chemical, Biological and Radiological Warfare.
FM 5-132-----	Infantry Division, Engineer Battalion.
FM 6-18-----	Mortar Battery, Infantry Division Battle Group.
FM 6-20-----	Artillery Tactics and Technique.
FM 6-21-----	Division Artillery, Infantry Division.
FM 7-10-----	Rifle Company, Infantry Regiment.
FM 7-21-----	Headquarters and Headquarters Company, Infantry Division Battle Group.
FM 7-40-----	Infantry Regiment.
FM 11-10-----	The Signal Battalion, Infantry Division.
FM 17-20-----	Armored Infantry Units, Platoon, Company, and Battalion.
FM 17-33-----	Tank Units, Platoon, Company and Battalion.
FM 17-35-----	Armored Cavalry Units, Armored and Infantry Divisions.
FM 19-10-----	Military Police Operations.
FM 19-15-----	Civil Disturbances.
FM 19-20-----	Criminal Investigation.
FM 19-25-----	Military Police Traffic Control.
FM 19-30-----	Physical Security of Military and Industrial Installations.
FM 19-40-----	Handling Prisoners of War.
FM 19-90-----	The Provost Marshal.
FM 20-32-----	Employment of Land Mines.
FM 21-5-----	Military Training.
FM 21-6-----	Techniques of Military Instruction.
FM 21-18-----	Foot Marches.
FM 21-30-----	Military Symbols.
FM 25-10-----	Motor Transportation Operations.
FM 27-10-----	The Law of Land Warfare.
FM 30-5-----	Combat Intelligence.

APPENDIX II

VOLUNTARY NIGHT WITHDRAWAL

The following is a description of the voluntary night withdrawal.

Figure 1—is a schematic diagram of an infantry division, with the cavalry squadron protecting both flanks, occupying a delaying position.



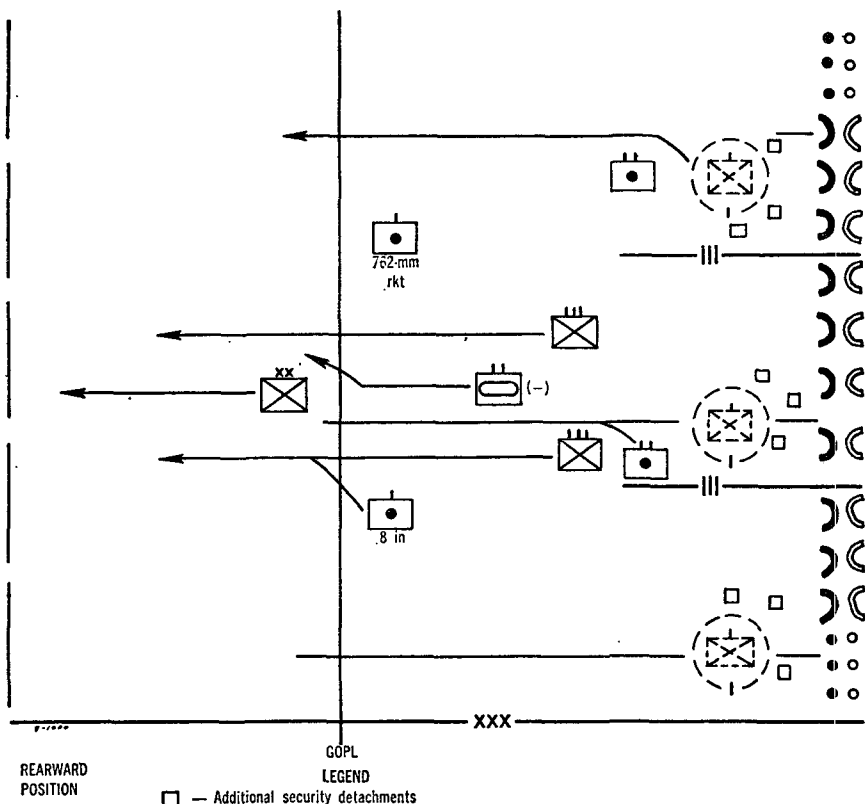
When the commander announces the location of the rearward delaying position and the decision to withdraw to it, extensive reconnaissance is initiated of—

1. Rearward position.
2. Position of general outpost.
3. Positions for additional security detachments.
4. Assembly areas.
5. Routes to these positions.

This reconnaissance is indicated on figure 56

SCHEMATIC

Figure 55. Infantry division—position prior to withdrawal.

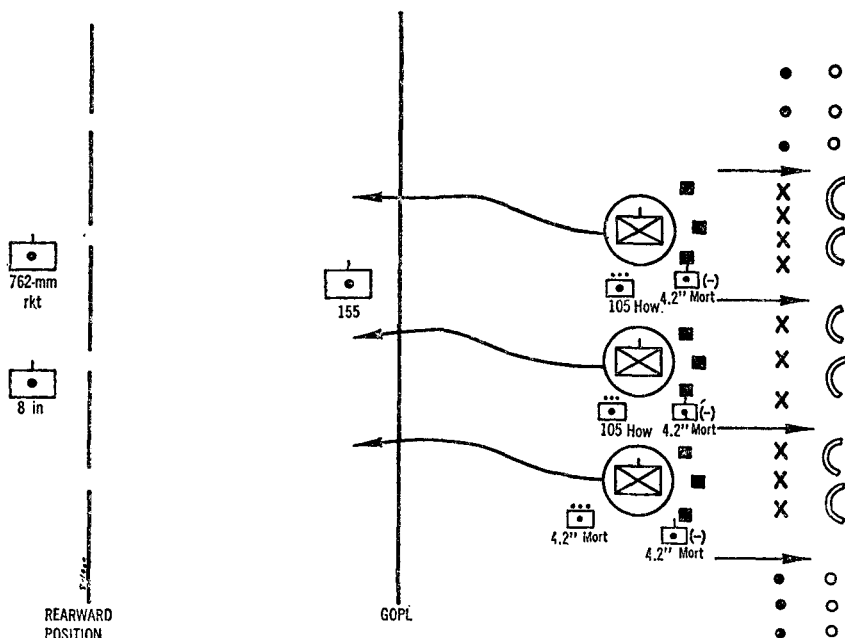


NOTE — Assembly areas are company size—all 4 companies are not shown to avoid complicating the schematic.

All of the reconnaissance takes place prior to darkness. If movement to their assigned positions will not disclose the withdrawal to the enemy, the additional security detachments may occupy their positions prior to darkness.

Figure 56. Reconnaissance (before darkness).

Concurrent with the above, elements of the general outpost move forward to maintain contact with the enemy after withdrawal from action of the detachments left in contact. The withdrawal from action has now reached the stage indicated in figure 58.



LEGEND

X Detachments left in contact.

→ Elements from division reserve (normally elements are from cavalry squadron).

SCHEMATIC

Figure 57. Trains, reserve, and heavy artillery moving plus infantry assembling (shortly after darkness).

The trains, reserve, and general support artillery having cleared the immediate area, the assembled infantry units march to the rearward position, with the additional security detachments providing flank and rear security. The bulk of the artillery is withdrawn with the supported units.

The appearance of normal artillery fire is maintained by some light and medium units in position to be withdrawn with the detachments left in contact. These units are well stocked with ammunition. Mortar batteries are reinforced by 105-mm howitzer platoons.

As the units begin to arrive at the staked-out positions, preparation of the positions for the defense or delay is initiated.

Figure 58 represents this stage of the operation.

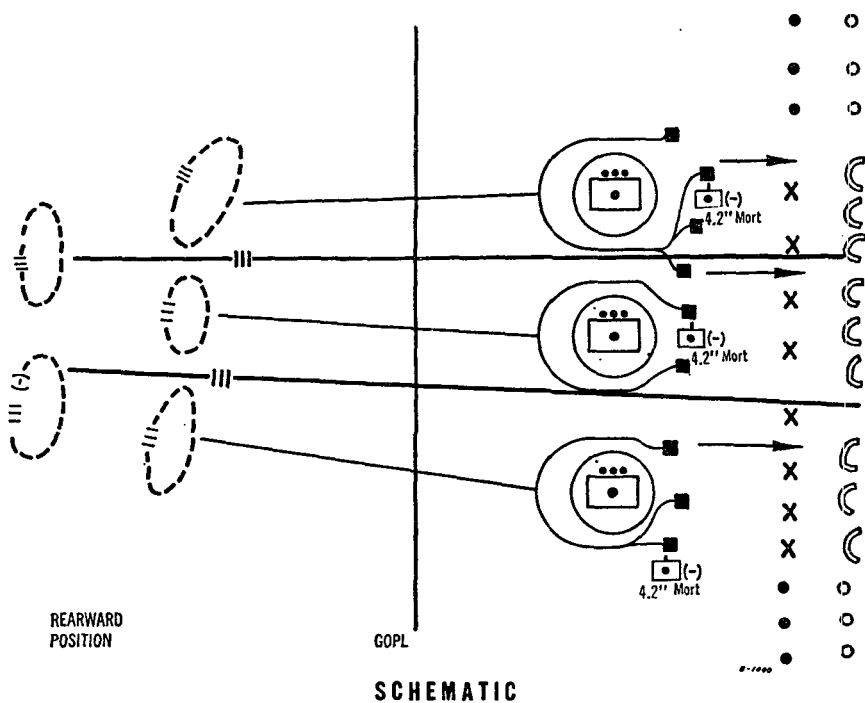


Figure 58. Trains, reserve, and general support artillery move complete—infantry moving into staked-out positions (during night).

With the bulk of the command withdrawn, the next movement to the rear is by the detachments left in contact and supporting artillery. This may be at a prescribed time, on order, or after a prescribed time. Initially, they move straight to the rear, then consolidate into no larger than company size groups for further movement to rejoin their parent units. Armored cavalry squadron units protecting the flanks withdraw, using the same techniques as other units of the division.

When possible, foot elements of the detachments left in contact are furnished motor transport, particularly when the distance to rejoin their units is great. This situation is indicated by figure 59.

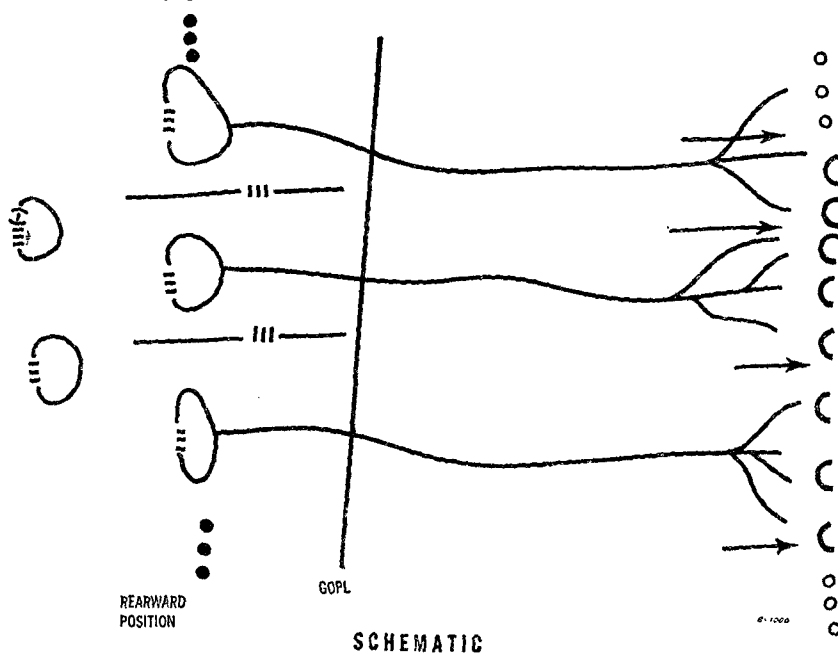
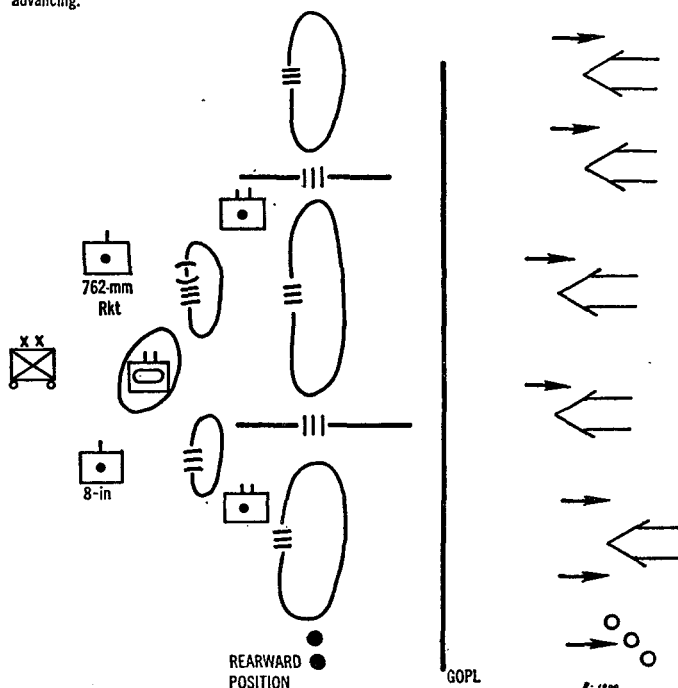


Figure 59. Detachments left in contact withdrawing—elements from the division reserve maintain contact (before dawn).

After the detachments left in contact withdraw, the only personnel remaining forward of the general outpost line are the elements from the general outpost (see statement just above fig (57).) As the enemy begins (or resumes) his advance, these elements fall back. Their primary mission is to maintain contact, not to cause delay. Figure 60 indicates the enemy advancing.



Eventually, these elements fall back to the GOPL and rejoin their units.

SCHEMATIC

Figure 60. Enemy advancing on new position—contact being maintained by elements from the general outpost.

APPENDIX III

MOBILE TASK FORCES

1. Brigade Task Force

- a.* For a brigade task force organization, see figure 61.
- b.* Missions which may be assigned include—
 - (1) Division covering force in advance to contact or retrograde.
 - (2) Assault echelon of an attacking force.
 - (3) Division reserve or part thereof.
 - (4) Exploitation force.
 - (5) Follow and support force for armored unit exploitation.
 - (6) Reconnaissance in force.
 - (7) Occupation and defense of localities.
 - (8) Division security force in defense.
 - (9) Mobile striking force.
 - (10) Economy of force unit.

2. Battle Group Task Force

- a.* For a battle group task force organization, see figure 62.
- b.* Missions which may be assigned include—
 - (1) Division covering force in advance to contact or retrograde.
 - (2) Advance guard.
 - (3) Flank or rear guard.
 - (4) Exploitation force.
 - (5) Assault echelon of an attacking force.
 - (6) Follow and support force for armored unit exploitation.
 - (7) Limited reconnaissance in force.
 - (8) Occupation and defense of localities.
 - (9) Division security force in defense.
 - (10) Mobile striking force or part thereof.
 - (11) Economy of force unit.
 - (12) Antiairborne defense.

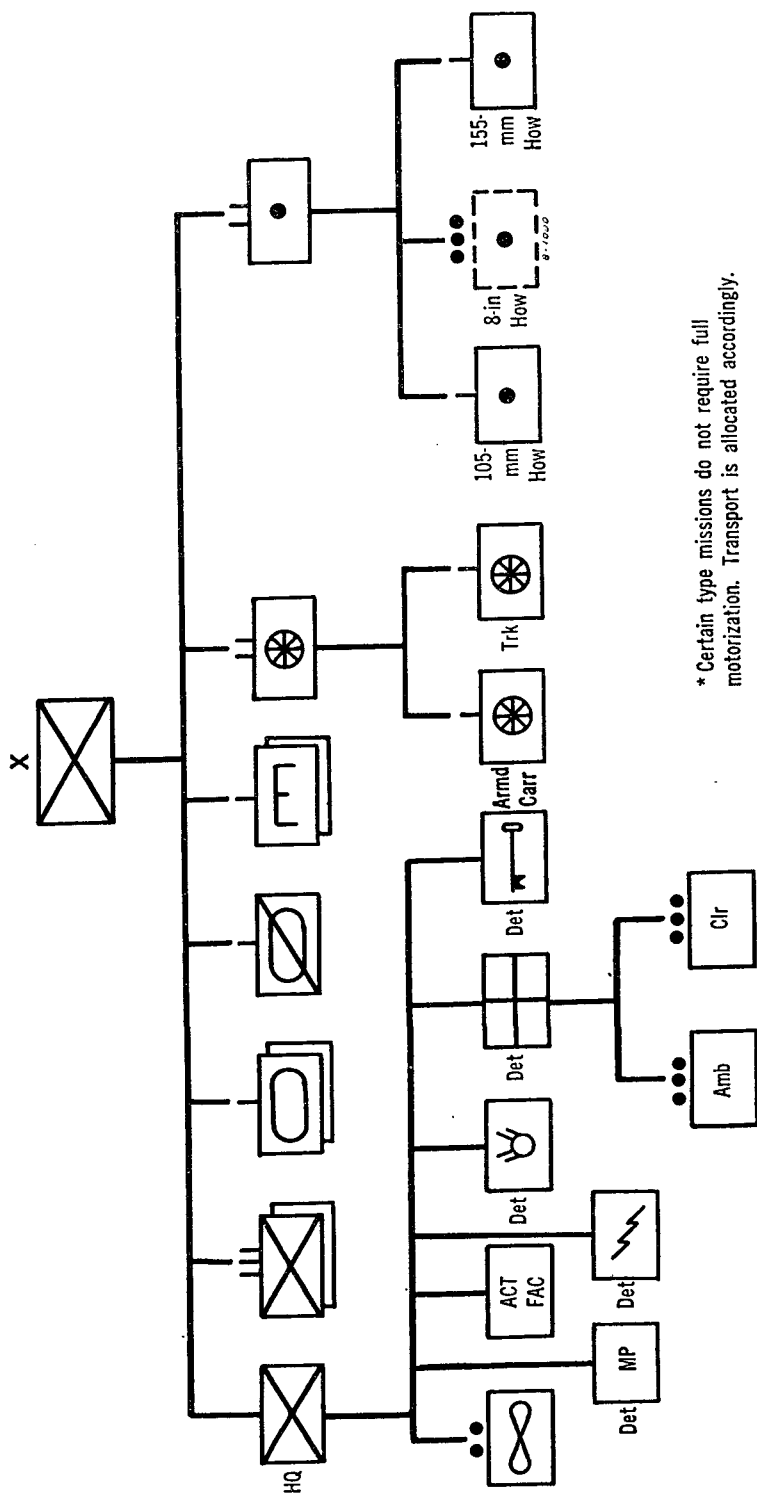
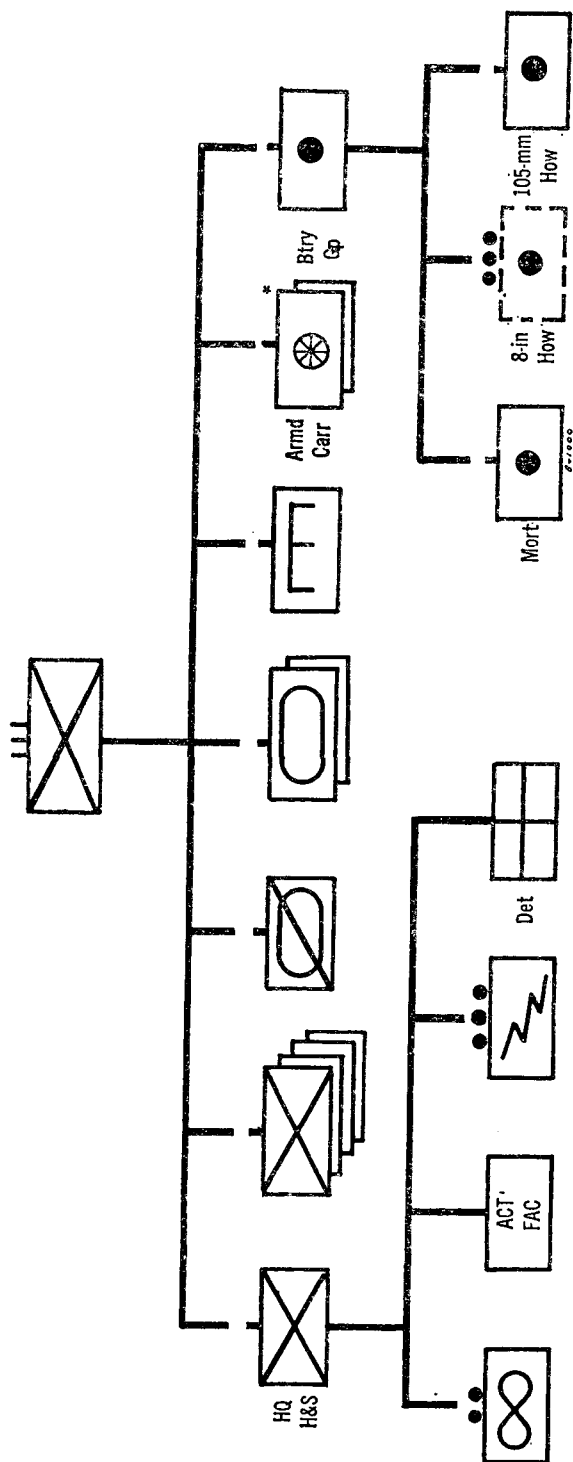


Figure 61. A brigade task force.



* Certain type missions do not require full motorization. Transport is allocated accordingly.

Figure 62. A battle group task force.

3. A Cavalry Squadron Task Force

- a. For a cavalry squadron task force organization, see figure 63.
- b. Missions which may be assigned include—
 - (1) Division covering force in advance to contact or retrograde.
 - (2) Advance guard.
 - (3) Flank or rear guard.
 - (4) Exploitation force.
 - (5) Contact force between larger units.
 - (6) Light combat force.
 - (7) Reconnaissance and counterreconnaissance screen.
 - (8) Division security force in defense.
 - (9) Economy of force unit.
 - (10) Antiairborne defense.

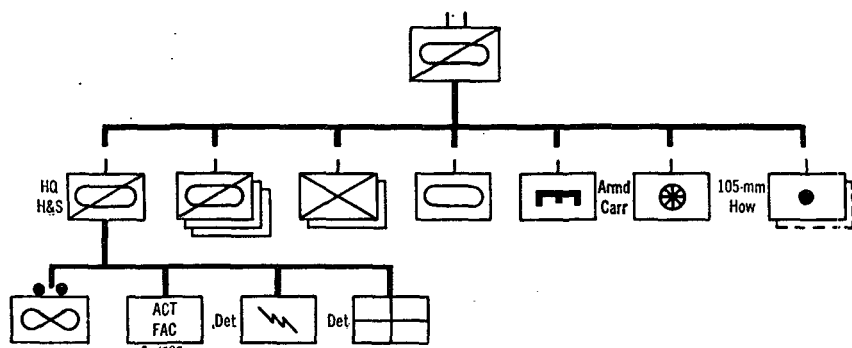


Figure 63. A cavalry squadron task force.

APPENDIX IV

AIRCRAFT REQUIREMENT TABLES

1. This appendix shows aircraft requirements for air-landed operations of the infantry division. These tables are prepared for general planning purposes only and do not necessarily reflect either the final echelonment of units or the exact number of aircraft required.

2. The data contained in these tables are based upon the latest approved tables of organization and equipment and the following assumptions:

a. Allowable cargo load of aircraft:

C-119-----	12,000 lb.
C-123-----	10,500 lb.
C-124-----	42,000 lb.
C-130-----	25,000 lb.

b. Weight of personnel: 240 lb.

c. Vehicles carry sufficient gasoline for 300 miles operation. If the fuel tank capacity of the vehicles does not provide this, 5-gallon gasoline cans are provided.

d. The followup echelon arrives within 72 hours.

e. All units carry a full basic load of ammunition and 3 days of class I supply.

3. All Army aircraft are transported to the objective area in transport aircraft with sufficient aviation gas and lubricants to permit 24 hours of operation for each aircraft after arrival in the objective area. This is an inefficient method of delivering the Army aircraft and should be employed only when extra fuel tanks, refueling stops, or in-flight refueling facilities are not available or are infeasible.

4. The rear echelon consists of those items of heavy equipment that are not transportable in heavy aircraft and those units and individuals whose normal functions are not required during the early stages of the operation. A minimum of two personnel per unit remain in the rear area to guard unit and personal equipment.

5. The preparation of these tables was based upon the ROCID TOE, dated 20 December 1956.

6. The aircraft requirements are computed by the type-load method using the principle of maintaining tactical integrity of company-size units for the initial echelon.

7. The 3 days of class I supplies are carried in the initial echelon as follows:

1 day—carried by individuals.

1 day—carried by unit.

1 day—carried by the quartermaster company.

8. In table I, maximum use is made of medium aircraft. Where heavy aircraft are required to move large items, such as the 5-ton wrecker, the heavy aircraft loads are filled out using equipment that might otherwise be moved in medium aircraft.

9. The additional cargo space available represents the difference between the total weight of the type loads (the bulk cargo tonnage in each type load, which can be varied within the limits of the aircraft lift capability) for a given unit and the total cargo capability of the type aircraft utilized under the specified range condition. Columns in table I should be grouped together for use as follows: 15, 16, 17; 18, 19, 20; 33, 34, 35; and 36, 37, 38.

Table I. Aircraft Requirements—Infantry Division—Air-

	INITIAL ECHELON									
1	2	3	4	5	6	7	8	9	10	11
Unit	Pers	Trucks & powered vehicles					Trailers			
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tr ¼ ton	Tr ¾ ton	Tr 1½ ton	Tr wtr 1½ ton
Div and atch, total	10,769	482	312	111	13		312	268	66	3
HQ & HQ co, inf div	230	31	4			2 amb, ¼ T	21	4		
Avn co	156	8	14			2 shop vans, 2½ T 13 hel, H-13 4 hel, H-19 7 acft, L-19 4 acft, L-20	8	14	1	
5 battle gp (ea)	1,352	49	23	4		4 gun, 90-mm (SP) 4 amb, ¼ T	35	21	3	
HQ & HQ co	265	26	7	4		4 gun, 90-mm (SP) 4 amb, ¼ T	21	7	3	
4 rifle co (ea)	238	4	1				2	1		
Mort btry	135	7	12				6	10		
Arm or bn, 90-mm	3	1					1			
HQ & HQ co	3	1					1			
5 med tk co (ea)										
Cav sq	471	63	12	2		4 amb, ¼ T	8	8	1	
HQ & HQ trp	144	9	9	2		4 amb, ¼ T	2	5	1	
3 recon trp (ea)	109	18	1				2	1		
Engr bn	634	20	8	4		24 trk, dump, 2½ T 2 graders 3 loaders, bucket 1 trk, tdwy, 6 T 1 shop, eqp, C&M, trk mtd 1 amb, ¾ T 5 trk, trac, 5 T 5 compr, trk mtd 5 trac, D7	20	6	7	
HQ & HQ co	154	5	3	4		4 trk, dump, 2½ T 2 grades 3 loaders, bucket 1 trk, tdwy, 6 T 1 shop, eqp, C&M, trk mtd 1 amb, ¾ T	5	1	7	

See footnotes at end of table.

Landed—1,000 NM Range—Medium and Heavy Aircraft

INITIAL ECHELON								
12	13	14	15	16	17	18	19	20
& towed loads	Principal wpn	Wt	Tons	Acft rqmt		Tons	Acft rqmt	
Miscellaneous		Pers eqp sup	Add cargo space avail	O-119 & O-123°	O-124	Add cargo space avail	O-130	O-124
		6,997	128	679	151	513	520	48
		138		23		12	12	
		216	51	41	1	93	18	4
1 tlr, ammo, 2 T	12 mort, 81-mm 8 mort, 4.2-in	480	6	° 71	4	145	42	
1 tlr, ammo, 2 T		210	° 2	22	4	19	18	
	3 mort, 81-mm	41	1	° 8		9	4	
	8 mort, 4.2-in	4106		17		(1)	8	
		Loaded w/HQ & HQ co, div						
		Loaded w/HQ & HQ co, div						
		242	1	37	1	20.5	21	
		98	1	13	1	14.5	9	
		48		8		2	4	
22 tlr, pole, 2½ T 1 weld set #1, tlr mtd 5 stlr, 25 T		737	10	9	33	44	44	11
2 tlr, pole, 2½ T 1 weld set #1, tlr mtd		192		4	8	4	14	1

Table I. Aircraft Requirements—Infantry Division—Air-Landed.

1	INITIAL ECHELON									
	2	3	4	5	6	7	8	9	10	11
Unit	Pers	Trucks & powered vehicles					Trailers			
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tr ¼ ton	Tr ¾ ton	Tr 1½ ton	Tr wtr 1½ ton
5 engr co (ea)	96	3	1			1 trk, trac, 5 T 1 compr, trk mtd 1 trac, 07 4 trk, dump, 2½ T	3	1		
Div arty	1,533	66	80	37	13	7 shop, van, 2½ T 3 amb, ¾ T 2 wrk, 5 T	33	70	10	1
HQ & HQ btry, div arty	140	8	13	2		3 shop van, 2½ T 1 amb, ¾ T	1	9	4	1
FA how bn, 105-mm	803	35	40	33		1 shop van, 2½ T 1 amb, ¾ T	21	38	2	
HQ & HQ btry	102	8	10			1 shop van, 2½ T 1 amb, ¾ T	1	8	1	
5 FA how btry, 105-mm (ea)	131	5	6	6			4	6		
Svc btry	46	2		3					1	
FA comp bn	590	23	27	2	13	3 shop van, 2½ T 1 amb, ¾ T 2 wrk, 5 T	11	23	4	
HQ & HQ btry	102	8	10			1 shop van, 2½ T 1 amb, ¾ T	1	8	1	
2 FA how btry, 155-mm (ea)*	112	3	4		1		2	4		
FA how btry, 8-in	125	3	4		4	1 shop van, 2½ T	2	4	1	
FA msl btry, 762-mm	83	4	5	1	4	1 shop van, 2½ T 2 wrk, 5 T	3	3	1	
Svc btry	56	2		1	3		1		1	
Sig bn	286	10	50	6		1 trk, 2½ T, w/AN/TPQ-7 10 trk, 2½ T, w/AN/MRC-52A 2 trk, 2½ T, w/AN/GRC-26	10	32	4	

See footnotes at end of table.

—1,000 NM Range—Medium and Heavy Aircraft—Continued

INITIAL ECHELON								
12	13	14	15	16	17	18	19	20
& towed loads		Wt	Tons	Acft	rqmt	Tons	Acft	rqmt
Miscellaneous	Principal wpn	Pers eqp sup	Add cargo space avl	C-119 & C-123c	C-124	Add cargo space avl	C-130	C-124
1 str, 25 T 4 tlr, pole, 2½ T		109	2	1	5	8	6	2
7 tlr, 2 T 2 AN/MMQ-1, tlr mtd 4 tlr, 762-mm rkt 1 btry chg-genr, tlr mtd	30 how, 105-mm 12 how, 155-mm 4 how, 8-in w/limber 2 launcher, 762-mm, trk mtd	• 1,896	• 3	103	59	39.5	97	31
		141		13	3	1	8	2
2 tlr, 2 T	30 how, 105-mm	807		61	19	11.5	59	1
		87		11	1	9	6	1
	6 how, 105-mm	• 137		10	3	(b)	10	
2 tlr, 2 T		35	(c)		3	2.5	3	
5 tlr, 2 T 2 AN/MMQ-1, tlr mtd 4 tlr, 762-mm rkt 1 btry, chg-genr, tlr mtd	12 how, 155-mm 4 how, 8-in w/limber 2 launcher, 762-mm, trk mtd	948	3	29	37	• 27	30	28
		87		11	1	9	6	1
1 tlr, 2 T	6 how, 155-mm	177		• 5	• 7	(a, b)	• 12	1
	4 how, 8-in w/limber	• 201		1	9	9		10
2 AN/MMQ-1, tlr mtd 4 tlr, 762-mm rkt 1 btry chg-genr, tlr mtd	2 launcher, 762-mm, trk mtd	• 251		7	9	1		12
3 tlr, 2 T		55	• 3		4	8		3
3 genr PE-95 1 genr PU-294 10 genr PU-378 18 genr PU-322/G		534	• 17	41	15	43	46	

Table I. Aircraft Requirements—Infantry Division—Air-Landed

1	INITIAL ECHELON									
	2	3	4	5	6	7	8	9	10	11
Unit	Pers	Trucks & powered vehicles					Trailers			
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Trl ¼ ton	Trl ¾ ton	Trl 1½ ton	Trl wtr 1½ ton
HQ & HQ co	67	4	5	3		1 trk, 2½ T w/AN/TPQ-7	4	5	2	
Comd op co	138	6	21	3		7 trk, 2½ T w/AN/MRC-52A 2 trk, 2½ T w/AN/GRC-26.	6	14	2	
Fwd comm co	81		24			3 trk, 2½ T w/AN/MRC-52.		13		
Div tn (minus)	160	5	15			10 trk, gas, 2½ T	5	15		
HQ & HQ det & band	40	3	1				3	1		
QM co	120	2	14			10 trk, gas, 2½ T	2	14		
Admin co										
Med bn	250	10	4	2		36 amb, ¾ T	10	4		2
HQ & HQ det	47	5	2				5	2		
Amb	91	4				36 amb, ¾ T	4			
Clr co	112	1	2	2			1	2		2
Ord bn	168	14	9	8		2 wkr, 5 T	14	9	8	
HQ & maint spt co	31	5					5			
Fwd spt co	137	9	9	8		2 wkr, 5 T	9	9	8	
Trans bn	55	3		32			3		20	
HQ & HQ co	4	1					1			
Trk trans co	a 51	2		a 32			2		20	
2 armd carr co (ea)										
Total attachments	63	6	1				4	1		
Mil intel plat	51	5	1				3	1		
FAC b	6									
Air ln team	6	1					1			

See footnotes at end of table.

—1,000 NM Range—Medium and Heavy Aircraft—Continued

INITIAL ECHELON								
12	13	14	15	16	17	18	19	20
& towed loads	Principal wpn	Wt	Tons	Acft rqmt		Tons	Acft rqmt	
Miscellaneous		Pers eqp sup	Add cargo space avail	C-119 & C-123c	C-124	Add cargo space avail	C-130	C-124
1 genr PE-95		84		7	2	3.5	7	
1 genr PU-294 2 genr PE-95 7 genr PU-378 7 genr PU-322/G		282	6	13	10	18	24	
3 genr PU-378 11 genr PU-322/G		168	e 11	21	3	21.5	15	
		b 225		14	5	(1)	14	
		Loaded w/QM co						
		b 225		14	5	(1)	14	
		225	b 13	38	1	d 25	22	
		225	b 13	38	1	d 25	22	
		Loaded w/HQ & HQ det						
		Loaded w/HQ & HQ det						
		219	3	16	6	10.5	15	2
		Loaded w/lwd spt co						
		219	3	16	6	10.5	15	2
		165	(a, b)	2	10	b, c, d 0.5	21	
		Loaded with trk trans co						
		165	(a, b)	a 2	a 10	b, c, d 0.5	21	
		Loaded w/HQ & HQ co, div						
		Loaded w/HQ & HQ co, div						
		Loaded w/HQ & HQ co, div						
		Loaded w/HQ & HQ co, div						

Table I. Aircraft Requirements—Infantry Division—Air-Landed

1	FOLLOW-UP ECHELON										
	21	22	23	24	25	26	27	28	29	30	31
Unit	Pers	Trucks and powered vehicles					Trailer & towed loads				
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tr ¼ ton	Tr ¾ ton	Tr 1½ ton	Tr wtr 1½ ton	Miscellaneous
Div and atch, total	1,752	96	202	224	36		88	169	182	70	
HQ & HQ co, inf div	60	12	2	2			10	2		2	
Avn co	65		8	1		1 trk, trac, wkr, 5 T 1 shop van, 2½ T 1 crash trk 7 hel, H-13 4 hel, H-19 9 acft, L-19 2 acft, L-20		8	1	1	1 stlr, 6 T
5 battle gp (ea)	45	3	21	12	4	1 shop van, 2½ T 1 wkr, 2½ T 2 AC	3	20	9	6	1 tlr, ammo, 2 T
HQ & HQ co	25	3	2	11	4	1 shop van, 2½ T 1 wkr, 2½ T 2 AC	3	2	9	6	1 tlr, ammo, 2 T
4 rifle co (ea)	3		3					3			
Mort btry-----	8		7	1				6			
Armor bn, 90-mm											
HQ & HQ co											
5 med tk co (ea)											
Cav sq	84		1	9	8	32 AC 2 wkr, 5 T		1	18	4	
HQ & HQ trp	51		1	9	8	8 AC 2 wkr, 5 T		1	15	4	
3 recom trp (ea)	11					8 AC			1		

See footnotes at end of table.

—1,000 NM Range—Medium and Heavy Aircraft—Continued

FOLLOW-UP ECHELON							REAR ECHELON											
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	
Wt	Tons	Acft rqmt		Tons	Acft rqmt		Trucks & powered vehicles							Trailers & towed loads				
Pers eqp sup	Add cargo space avail	C-119 & C-123 ^a	C-124	Add cargo space avail	C-130	C-124	Pers	Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tlr ¼ ton	Tlr ¾ ton	Tlr 1½ ton	Trl wtr 1½ ton	Miscel- laneous	
9,565	756.5	208	436	716	305	308	1,303	39	9	16	19		17	4	22	8		
116	13	11	3	9	10		2											
177	36	25	3	99	12	6	2											
326	20.5	22 ^m	11	21	16	7	30					2 tk, 76-mm						
326	20.5	22 ^m	11	21	16	7	20					2 tk, 76-mm						
Loaded w/HQ & HQ co							2											
Loaded w/HQ & HQ co							2											
							760	33	5	12	19	89 tk, 90-mm 18 AC 3 wrk, 5 T 7 recov, veh, med 6 amb, ¼ T	11	1	20	6		
							245	23	5	12	19	4 tk, 90-mm 8 AC 3 wrk, 5 T 2 recov, veh, med 6 amb, ¼ T	6	1	15	6		
							103	2				17 tk, 90-mm 2 AC 1 recov, veh, med	1		1			
862	41		43	130	9	42	114					23 tk, 76-mm 4 recov, veh, med						
862	41		43	130	9	42	21					2 tk, 76-mm 1 recov, veh, med						
Loaded w/HQ & HQ trp							31					7 tk, 76-mm 1 recov, veh, med						

Table I. Aircraft Requirements—Infantry Division—Air-Landed

1	FOLLOW-UP ECHELON										
	21	22	23	24	25	26	27	28	29	30	31
Unit	Pers	Trucks and powered vehicles					Trailers & towed loads				
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tlr ¼ ton	Tlr ¾ ton	Tlr 1½ ton	Tlr wtr 1½ ton	Miscellaneous
Engr bn	116	3	1	20		23 trk, dump, 2½ T 9 trk, trac, 5 T 2 graders 9 trac, D7 6 compr, trk mtd 2 trk tdwy, 6 T 1 wkr, 5 T 1 T&B shop, trk mtd 1 trk, trac, 2½ T	2	1	20	6	14 tlr, pole, 2½ T 1 shop eqp, elec rep, stlr mtd 1 lubr & sve unit, tlr mtd 9 stlr, 25 T 1 weld set #1, tlr mtd
HQ & HQ co	66	3	1	15		3 trk, dump, 2½ T 4 trk, trac, 5 T 2 graders 4 trac, D7 1 compr, trk mtd 2 trk, tdwy, 6 T 1 wkr, 5 T 1 T&B shop, trk mtd 1 trk trac, 2½ T	2	1	10	6	4 tlr, pole, 2½ T 1 shop eqp, elec rep, stlr mtd 1 lubr & sve unit, tlr mtd 4 stlr, 25 T 1 weld set #1, tlr mtd
5 engr co (ea)	10			1		1 trk, trac, 5 T 1 compr, trk mtd 1 trac, D7 4 trk, dump, 2½ T			2		1 stlr, 25 T 2 tlr, pole, 2½ T
Div arty	186	26	45	35	24	5 shop van, 2½ T 2 wkr, 5 T 12 trac, cargo, lt 5 trac, cargo, med	21	23	6	14	2 radar set, AN/MPQ-10 22 tlr, 2 T
HQ & HQ btry, div arty	48	8	3	7		4 shop van, 2½ T	5	3	2	1	2 radar set, AN/MPQ-10
FA how bn, 105-mm	72	16	26	13	15	1 wkr, 5 T	15	13	1	7	13 tlr, 2 T
HQ & HQ btry	7	1	4	2				2	1		
5 FA how btry, 105-mm (ea)	10	3	4	1	2		3	2			2 tlr, 2 T

See footnotes at end of table.

—1,000 NM Range—Medium and Heavy Aircraft—Continued

FOLLOW-UP ECHELON							REAR ECHELON											
32	33	34	35	36	37	38	39	40	41	42	43	44		45	46	47	48	49
Wt	Tons	Acft rqmt		Tons	Acft rqmt		Pers	Trucks & powered vehicles					Trailers & towed loads					
Pers eqp sup	Add cargo space avail	C-119 & C-123 ^a	C-124	Add cargo space avail	C-130	C-124		Trk ¼ ton	Trk ½ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tlr ¼ ton	Tlr ½ ton	Tlr 1½ ton	Tlr wtr 1½ ton	Miscel- laneous	
1,071	63		54	(m)	39	23	41	1				3 tk, 90-mm w/ dozer 4 crane, 20 T	1				4 tlr, 10 T	
1,071	63		54	(m)	39	23	31	1				3 tk, 90-mm w/ dozer 4 crane, 20 T	1				4 tlr, 10 T	
Loaded w/HQ & HQ co							2											
1,109	199	29	54	171	37	39	44					1 recov, veh, med						
152	7	2	7	2.5	9	2	2											
400	77	27	15	75	23	9	22											
400	77	27	15	75	23	9	2											
Loaded w/HQ & HQ btry							2											

Table I. Aircraft Requirements—Infantry Division—Air-Landed

FOLLOW-UP ECHELON											
1	21	22	23	24	25	26	27	28	29	30	31
Unit	Pers	Trucks and powered vehicles				Miscellaneous	Trailers & towed loads				
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton		Tlr ¼ ton	Tlr ¾ ton	Tlr 1½ ton	Tlr wtr 1½ ton	Miscellaneous
Svc btry	15		2	6	5	1 wkr, 5 T		1		7	3 tlr, 2 T
FA comp bn	66	2	16	15	9	12 trac, cargo, lt 1 shop van, 2½ T 5 trac, cargo, med 1 wkr, 5 T	1	7	3	6	9 tlr, 2 T
HQ & HQ btry	7	1	4	2				2	1		
2 FA how btry, 155-mm (ea)*	11		2	1	2	6 trac, cargo, lt		1			2 tlr, 2 T
FA how btry, 8-in	12		2	1		1 shop van, 2½ T 4 trac, cargo, med		1	1		
FA msl btry, 762- mm	8	1	4	3			1	1			
Svc brty	17		2	7	5	1 wkr, 5 T 1 trac, cargo, med		1	1	6	5 tlr, 2 T
Sig bn	215	5	23	13		1 wkr, 5 T 8 trk, 2½ T w/ AN/MRC-52A 1 trk, 2½ T w/ AN/TPQ-7 9 Sig Corps rep trk, 2½ T 2 trk, 2½ T w/AN/ GRC-26	5	19	4	3	5 genr PU-294 8 genr PU-378 3 genr PE-95 9 genr PU-290 4 genr PU- 322/G
HQ & HQ co	66	3	3	10		1 wkr, 5 T 2 trk, 2½ T w/ AN/MRC-52A 1 trk, 2½ T w/ AN/TPQ-7 4 Sig Corps rep trk, 2½ T	3	3	2	3	4 genr PU-294 2 genr PU-378 1 genr PE-95 4 genr PU-290
Comd op co	62	2	3	3		2 trk, 2½ T w/AN/ GRC-26 4 trk, 2½ T w/AN/ MRC-52A	2	3	2		1 genr PU- 294 2 genr PE-95 4 genr PU-378

See footnotes at end of table.

—1,000 NM Range—Medium and Heavy Aircraft—Continued

								REAR ECHELON											
32	33	34	35	36	37	38	39	40	41	42	43	44		45	46	47	48	49	
Wt	Tons	Acft rqmt		Tons	Acft rqmt		Pers	Trucks & powered vehicles					Trailers & towed loads						
Pers eqp sup	Add cargo space aval	C-119 & C-123 ^a	C-124	Add cargo space aval	C-130	C-124		Trk ¼ ton	Trk ½ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous		Tlr ¼ ton	Tlr ½ ton	Tlr 1½ ton	Tlr wtr 1½ ton	Miscel- laneous	
Loaded w/HQ & HQ btry								10											
557	115		32	93.5	5	28	20					1 recov, veh, med							
557	115		32	93.5	5	28	2												
Loaded w/HQ & HQ btry								2											
Loaded w/HQ & HQ btry								2											
Loaded w/HQ & HQ btry								2											
Loaded w/HQ & HQ btry								10				1 recov, veh, med							
536	10	14	22		26	10	24	1	2			1 trk, 2½ T w/AN/GRC 26		1	1			1 genr, PE-95 1 genr, PU- 322/G	
536	10	14	22		26	10	6												
Loaded w/HQ & HQ co								16	1	2		1 trk, 2½ T w/ AN/GRC 26		1	1	1 genr, PE-95 1 genr, PU- 322/G			

Table I. Aircraft Requirements—Infantry Division—Air-Landed

1	FOLLOW-UP ECHELON										
	21	22	23	24	25	26	27	28	29	30	31
Unit	Pers	Trucks and powered vehicles					Trailers & towed loads				
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tr ¼ ton	Tr ¾ ton	Tr 1½ ton	Tr wtr 1½ ton	Miscellaneous
Fwd comm co	87		17			2 trk, 2½ T w/AN/ MRC-52A 5 Sig Corps rep trk, 2½ T		13			4 gen PU-322/ G 5 gen PU-290 2 gen PU-378
Div tn (minus)	124	4	3	12		1 wkr, 5 T 18 trk, gas, 2½ T 5 trk, trac, 5 T	4	3	4	2	5 stlr, gas, 12 T 6 bath unit, tlr mtd
HQ & HQ det & band	28	2	2	2			2	2	1	1	
QM co	72	1	1	9		1 wkr, 5 T 18 trk, gas, 2½ T 5 trk, trac, 5 T	1	1	2	1	5 stlr, gas, 12 T 6 bath unit, tlr mtd
Admin co	24	1		1			1		1		
Med bn	46	1	2	2			1	2		2	
HQ & HQ det	6	1	1	1			1	1		1	
Amb											
Clr co	40		1	1				1		1	
Ord bn	151	7	9	12		8 shop van, 2½ T 11 wkr, 5 T 1 crane, 10 T 8 trk, trac, 2½ T 6 AC	7	9	18	2	8 stlr, 6 T 1 compr, tlr mtd
HQ & maint spt co	123	6	2	10		7 shop van, 2½ T 3 wkr, 5 T 1 crane, 10 T 8 trk, trac, 2½ T	6	2	15	2	8 stlr, 6 T 1 compr, tlr mtd

See footnotes at end of table.

—1,000 NM Range—Medium and Heavy Aircraft—Continued

FOLLOW-UP ECHELON							REAR ECHELON											
32	33	34	35	36	37	38	39	40	41	42	43	44		45	46	47	48	49
Wt	Tons	Aft rqmt		Tons	Aft rqmt		Pers	Trucks & powered vehicles					Trailers & towed loads					
Pers eqp sup	Add cargo space aval	C-119 & C-123s	C-124	Add cargo space aval	C-130	C-124		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous		Tlr ¼ ton	Tlr ¾ ton	Tlr 1½ ton	Tlr wtr 1½ ton	Miscel- laneous
Loaded w/HQ & HQ co							2											
434	7		21	32	19	11	142	4	2	4				4	2	2	2	
Loaded w/QM co							2											
434	7		21	32	19	11	2											
Loaded w/QM co							138	4	2	4				4	2	2	2	
39		3	1		3		6											
39		3	1		3		2											
							2											
Loaded w/HQ & HQ det							2											
800	10	9	36		20	26	8					2 trk, trac, 12 T 1 recov, veh, med						2 stlr, 45 T
800	10	9	36		20	26	6					2 trk, trac, 12 T						2 stlr, 45 T

Table I. Aircraft Requirements—Infantry Division—Air-Landed

1	FOLLOW-UP ECHELON										
	21	22	23	24	25	26	27	28	29	30	31
Unit	Pers	Trucks and powered vehicles					Trailers & towed loads				
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tr ¼ ton	Tr ¾ ton	Tr 1½ ton	Tr wtr 1½ ton	Miscellaneous
Fwd spt co	28	1	7	2		8 wkr, 5 T 1 shop van, 2½ T 6 AC	1	7	3		
Trans bn	467	13	3	55		115 AC 1 wkr, 5 T	13	1	63	4	
HQ & HQ co	115	8	3	7		1 AC 1 wkr, 5 T	8	1	3	4	
Trk trans co	104	3		48			3		60		
2 armd carr co (ea)	124	1				57 AC	1				
Total attachments	13	10		3			10		3		
Mil intel plat	13	10		3			10		3		
FAC ^b											
Air ln team											

NOTES:

a 12 trk, 2½-ton, w/drivers, atch 155-mm how btry as prime movers in the assault. (Incl in acft rqmt for 155-mm how btry.)

b F ACs load with arty or inf.

c In itial echelon—rifle co only loaded in C-123 acft; all other units loaded in C-119 acft.

d 4 tons of basic load for 4.2-in mort loaded with HQ and HQ co.

e 70 tons of basic load for 105-mm how (14 tons per btry) loaded: 28 tons w/svc btry, 105-mm how bn; 10 tons w/fwd comm co, sig bn; 32 tons w/trk trans co, trans bn.

f 6 tons of basic load for 8-in how loaded with svc btry, comp bn.

g 20 tons (6 rkt) of basic load for 762-mm rkt loaded w/svc btry, comp bn.

h 11 tons of cl I sup loaded with HQ and HQ det, med bn; 25 tons cl III sup (1,200 5-gal cans) loaded with trk trans co, trans bn.

i 6 tons of basic load for 4.2-in mort loaded with HQ and HQ co, battle gp.

j 60 tons of basic load for 105-mm how (12 tons per btry) loaded w/trans trk co, trans bn.

k 12 tons of basic load for 155-mm how (6 tons per btry) loaded with trans trk co, trans bn.

l 25 tons of cl I sup loaded with HQ and HQ det, med bn; 25 tons of cl III sup loaded with trans trk co, trans bn.

m Follow-up echelon of battle gp only loaded in C-123 aircraft, all others loaded in C-119 aircraft.

n 99 tons of engr sup loaded with trans trk co, trans bn.

—1,000 NM Range—Medium and Heavy Aircraft—Continued

FOLLOW-UP ECHELON							REAR ECHELON											
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	
Wt	Tons	Acft rqmt		Tons	Acft rqmt		Pers	Trucks & powered vehicles					Trailers & towed loads					
Pers eqp sup	Add cargo space avai	C-119 & C-123p	C-124	Add cargo space avai	C-130	C-124		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Trl ¼ ton	Trl ¾ ton	Trl 1½ ton	Trl wtr 1½ ton	Miscel- laneous	
Loaded w/HQ & maint spt co							2					1 recov, veh, med						
2,791	275	7	144	171	50	116	10					2 recov, veh, med						
156		5	6	11	10	2	4					2 recov, veh, med						
401	115	2	24	(m)	40		2											
1,117	80		57	80		57	2											
Loaded w/HQ & HQ co, div																		
Loaded w/HQ & HQ co, div																		

Table based upon ROCID TOE dtd Dec 56

Allowable cargo load:

C-119 acft—12,000 lb

C-123 acft—10,500 lb

C-124 acft—42,000 lb

C-130 acft—25,000 lb

Table II. Aircraft Requirements—Infantry Division—

1	INITIAL ECHELON									
	2	3	4	5	6	7	8	9	10	11
Unit	Pers	Trucks & powered vehicles				Miscellaneous	Trailers			
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton		Tlr ¼ ton	Tlr ¾ ton	Tlr 1½ ton	Tlr wtr 1½ T
Div and atch, total	10,769	482	312	111	13		312	268	66	3
HQ & HQ co, inf div	230	31	4			2 amb, ¼ T	21	4		
Avn co	156	8	14			2 shop vans, 2½ T 13 hel, H-13 4 hel, H-19 7 acft, L-19 4 acft, L-20	8	14	1	
5 battle gp (ea)	1,352	49	23	4		4 gun, 90-mm (SP) 4 amb, ¼ T	35	21	3	
HQ & HQ co	265	26	7	4		4 gun, 90-mm (SP) 4 amb, ¼ T	21	7	3	
4 rifle co (ea)	238	4	1				2	1		
Mort btry	135	7	12				6	10		
Armor bn, 90-mm	3	1					1			
HQ & HQ co	3	1					1			
5 med tk co (ea)										
Cav sqd	471	63	12	2		4 amb, ¼ T	8	8	1	
HQ & HQ trp	144	9	9	2		4 amb, ¼ T	2	5	1	
3 recon trp (ea)	109	18	1				2	1		
Engr bn	634	20	8	4		24 trk, dump, 2½ T 2 graders 3 loaders, bucket 1 trk, tdwy, 6 T 1 shop, eqp, C&M, trk mtd 1 amb, ¾ T 5 trk, trac, 5 T 5 compr, trk mtd 5 trac, D7	20	6	7	
HQ & HQ co	154	5	3	4		4 trk, dump, 2½ T 2 graders 3 loaders, bucket 1 trk, tdwy, 6 T 1 shop eqp, C&M, trk mtd 1 amb, ¾ T	5	1	7	
5 engr co (ea)	96	3	1			1 trk, trac, 5 T 1 compr, trk mtd 1 trac, D7 4 trk, dump, 2½ T	3	1		

See footnotes at end of table.

Air-Landed—1,000 NM Range—Heavy Aircraft

INITIAL ECHELON				
12	13	14		15
& towed loads	Principal wpn	Wt (tons)		Acft rqmt
Miscellaneous		Pers eqp sup	Add cargo space avail	C-124
		6,997	437	354
		138	9	7
		216	78	14
1 tlr, ammo, 2 T	12 mort, 81-mm 8 mort, 4.2-in	480	3	23
1 tlr, ammo, 2 T		210		10
	3 mort, 81-mm	41	b 1	2
	8 mort, 4.2-in	b 106		5
		Loaded w/HQ & HQ co, div		
		Loaded w/HQ & HQ co, div		
		242	31	13
		98	c 31	7
		c 48		2
22 tlr, pole, 2½ T 1 weld set #1, tlr mtd 5 stlr, 25 T		737	82	39
2 tlr, pole, 2½ T 1 weld set #1, tlr mtd		d 192		9
1 stlr, 25 T 2 tlr, pole, 2½ T		109	d 16.4	6

Table II. Aircraft Requirements—Infantry Division—Air-

1	2	INITIAL ECHELON								
		3	4	5	6	7	8	9	10	11
Unit	Pers	Trucks & powered vehicles					Trailers			
		Trk ¾ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tlr ¾ ton	Tlr ¾ ton	Tlr 1½ ton	Tlr wtr 1½ T
Div arty	1,533	66	80	37	13	7 shop, van, 2½ T 3 amb, ¾ T 2 wrk, 5 T	33	70	10	1
HQ & HQ btry, div arty	140	8	13	2		3 shop van, 2½ T 1 amb, ¾ T	1	9	4	1
FA how bn, 105-mm	803	35	40	33		1 shop van, 2½ T 1 amb, ¾ T	21	38	2	
HQ & HQ btry	102	8	10			1 shop van, 2½ T 1 amb, ¾ T	1	8	1	
5 FA how btry, 105-mm (ea)	131	5	6	6			4	6		
Svc btry	46	2		3					1	
FA comp bn	590	23	27	2	13	3 shop van, 2½ T 1 amb, ¾ T 2 wrk, 5 T	11	23	4	
HQ & HQ btry	102	8	10			1 shop van, 2½ T 1 amb, ¾ T	1	8	1	
2 FA how btry, 155- mm (ea) *	112	3	4		1		2	4		
FA how btry, 8-in	125	3	4		4	1 shop van, 2½ T	2	4	1	
FA msl btry, 762- mm	83	4	5	1	4	1 shop van, 2½ T 2 wrk, 5 T	3	3	1	
Svc btry	56	2		1	3		1		1	
Sig bn	286	10	50	6		1 trk, 2½ T, w/AN/TPQ-7 10 trk, 2½ T, w/AN/MRC- 52A 2 trk, 2½ T, w/AN/GRC- 26	10	32	4	
HQ & HQ co	67	4	5	3		1 trk, 2½ T w/AN/TPQ-7	4	5	2	
Comd op co	138	6	21	3		7 trk, 2½ T w/AN/MRC- 52A 2 trk, 2½ T w/AN/GRC- 26	6	14	2	

See footnotes at end of table.

Landed—1,000 NM Range—Heavy Aircraft—Continued

INITIAL ECHELON				
12	13	14		15
& towed loads—Continued	Principal wpn	Wt (tons)		Acft rqmt
Miscellaneous		Pers eqp sup	Add cargo space avai	C-124
7 tlr, 2 T 2 AN/MMQ-1, tlr mtd 4 tlr, 762-mm rkt 1 btry chg-genr, tlr mtd	30 how, 105-mm 12 how, 155-mm 4 how, 8-in w/limber 2 launcher, 762-mm, trk mtd	1,896	57	93
		141	18	
2 tlr, 2 T	30 how, 105-mm	807		38
		87	(e)	5
	6 how, 105-mm	137		6
2 tlr, 2 T		35	(e)	3
5 tlr, 2 T 2 AN/MMQ-1, tlr mtd 4 tlr, 762-mm rkt 1 btry chg-genr, tlr mtd	12 how, 155-mm 4 how, 8-in w/limber 2 launcher, 762-mm, trk mtd	948	39	47
		87	f 15	5
1 tlr, 2 T	6 how, 155-mm	177	12	9
	4 how, 8-in w/limber	f 201		9
2 AN/MMQ-1, tlr mtd 4 tlr, 762-mm rkt 1 btry chg-genr, tlr mtd	2 launcher, 762-mm, trk mtd	f 251		11
3 tlr, 2 T		55	(f e)	4
3 genr PE-95 1 genr PU-294 10 genr PU-378 18 genr PU-322/G		534	75	29
1 genr PE-95		84		4
1 genr PU-294 2 genr PE-95 7 genr PU-378 7 genr PU-322/G		282	33	15

Table II. Aircraft Requirements—Infantry Division—Air-

	INITIAL ECHELON									
1	2	3	4	5	6	7	8	9	10	11
Unit	Pers	Trucks & powered vehicles					Trailers			
		Trk ¾ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tlr ¾ ton	Tlr ¾ ton	Tlr 1½ ton	Tlr wtr 1½T
Fwd comm co	81		24			3 trk, 2½ T w/AN/MRC-52		13		
Div tn (minus)	160	5	15			10 trk, gas, 2½ T	5	15		
HQ & HQ det & band	40	3	1				3	1		
QM co	120	2	14			10 trk, gas, 2½ T	2	14		
Admin co										
Med bn	250	10	4	2		36 amb, ¾ T	10	4		2
HQ & HQ det	47	5	2				5	2		
Amb	91	4				36 amb, ¾ T	4			
Clr co	112	1	2	2			1	2		2
Ord bn	168	14	9	8		2 wkr, 5 T	14	9	8	
HQ & maint spt co	31	5					5			
Fwd spt co	137	9	9	8		2 wkr, 5 T	9	9	8	
Trans bn	55	3		32			3		20	
HQ & HQ co	4	1					1			
Trk trans co	* 51	2		* 32			2		20	
2 armd carr co (ea)										
Total attachments	63	6	1				4	1		
Mil intel plat	51	5	1				3	1		
FAC	6									
Air ln team	6	1					1			

See footnotes at end of table.

Landed—1,000 NM Range—Heavy Aircraft—Continued

INITIAL ECHELON				
12	13	14		15
& towed loads	Principal wpn	Wt (tons)		Acft rqmt
Miscellaneous		Pers eqp sup	Add cargo space aval	C-124
3 genr PU-378 11 genr PU-322/G		168	42	10
		b 225		10
		Loaded w/QM co		
		b 225		10
		225	48	13
		225	48	13
		Loaded w/HQ & HQ det		
		Loaded w/HQ & HQ det		
		219	12	11
		219	12	11
		Loaded w/HQ & maint spt co		
		165	30	10
		Loaded w/trk trans co		
		165	a b 30	b 10
		Loaded w/HQ & HQ co, div		
		Loaded w/HQ & HQ co, div		
		Loaded w/HQ & HQ co, div		
		Loaded w/HQ & HQ co, div		

Table II. Aircraft Requirements—Infantry Division—Air-

	FOLLOW-UP ECHELON										
1	16	17	18	19	20	21	22	23	24	25	26
Unit	Pers	Trucks and powered vehicles					Trailers & towed loads				
		Trk ¼ ton	Trk ½ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tlr ¼ ton	Tlr ½ ton	Tlr 1½ ton	Tlr wtr 1½ T	Miscellaneous
Div and atch total	1,752	96	202	224	36		88	169	182	70	
HQ & HQ co. inf div	60	12	2	2			10	2		2	
Avn co	65		8	1		1 trk, trac, wkr, 5 T 1 shop van, 2½ T 1 crash trk 7 hel, H-13 4 hel, H-19 9 acft, L-19 2 acft, L-20		8	1	1	1 stlr, 6 T
5 battle gp (ea)	45	3	21	12	4	1 shop van, 2½ T 1 wkr, 2½ T 2 AC	3	20	9	6	1 tlr, ammo, 2 T
HQ & HQ co	25	3	2	11	4	1 shop van, 2½ T 1 wkr, 2½ T 2 AC	3	2	9	6	1 tlr, ammo, 2 T
4 rifle co (ea)	3		3					3			
Mort btry	8		7	1				6			
Armor bn, 90-mm											
HQ & HQ co											
5 med tk co (ea)											
Cav sqd	84		1	9	8	32 AC 2 wkr, 5 T		1	18	4	
HQ & HQ trp	51		1	9	8	8 AC 2 wkr, 5 T		1	15	4	

Landed—1,000 NM Range—Heavy Aircraft—Continued

FOLLOW-UP ECHELON			REAR ECHELON										
27	28		29	30	31	32	33	34	35	36	37	38	39
Wt (tons)		Aeft rqmt	Trucks & powered vehicles					Trailers & towed loads					
Pers eqp sup	Add cargo space avail	C-124	Pers	Trk ¼ ton	Trk ¾ ton	Trk 2¼ ton	Trk 5 ton	Miscellaneous	Tlr ¼ ton	Tlr ¾ ton	Tlr 1½ ton	Tlr wtr 1½ T	Miscellaneous
9,565	1,145	510	1,303	39	9	16	19		17	4	22	8	
116	10	6	2										
177	75	12	2										
326	73	19	30					2 tk, 76-mm					
326	73	19	20					2 tk, 76-mm					
Loaded w/HQ & HQ co			2										
Loaded w/HQ & HQ co			2										
			760	33	5	12	19	89 tk, 90-mm 18 AC 3 wkr, 5 T 7 recov, veh, med 6 amb, ¼ T	11	1	20	6	
			245	23	5	12	19	4 tk, 90-mm 8 AC 3 wkr, 5 T 2 recov, veh, med 6 amb, ¼ T	6	1	15	6	
			103	2				17 tk, 90-mm 2 AC 1 recov, veh, md	1		1		
862	41	43	114					23 tk, 76-mm 4 recov, veh, med					
862	41	43	21					2 tk, 76-mm 1 recov, veh, med					

Table II. Aircraft Requirements—Infantry Division—Air

	FOLLOW-UP ECHELON											
1	16	17	18	19	20	21	22	23	24	25	26	
Unit	Pers	Trucks and powered vehicles.				Trailers & towed loads						
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tlr ¼ ton	Tlr ¾ ton	Tlr 1½ ton	Tlr wtr 1½ T	Miscellaneous	
3 recon trp (ea)	11					8 AC				1		
Engr bn	116	3	1	20		23 trk, dump, 2½ T 9 trk, trac, 5 T 2 graders 9 trac, D7 6 compr, trk mtd 2 trk tdwy, 6T 1 wkr, 5 T 1 T&B shop, trk mtd. 1 trk, trac, 2½ T	2	1	20	6	14 tlr, pole, 2½ T 1 shop eqp, elec rep, stlr mtd. 1 lubr & svc unit, tlr mtd. 9 stlr, 25 T 1 weld set #1, tlr mtd.	
HQ & HQ co	66	3	1	15		3 trk, dump, 2½ T 4 trk, trac, 5 T 2 graders 4 trac, D7 1 compr, trk mtd 2 trk, tdwy, 6 T 1 wkr, 5 T 1 T&B shop, trk mtd 1 trk trac, 2½ T	2	1	10	6	4 tlr, pole, 2½ T 1 shop eqp, elec rep, stlr mtd 1 lubr & svc unit, tlr mtd 4 stlr, 25 T 1 weld set #1, tlr mtd	
5 Engr co (ea)	10			1		1 trk, trac, 5 T 1 compr, trk mtd 1 trac, D7 4 trk, dump, 2½ T			2		1 stlr, 25 T 2 tlr, pole, 2½ T	
Div arty	186	26	45	35	24	5 shop van, 2½ T 2 wkr, 5 T 12 trac, cargo, lt 5 trac, cargo, med	21	23	6	14	2 radar set, AN/MPQ-10 22 tlr, 2 T	
HQ & HQ btry, div arty	48	8	3	7		4 Shop van, 2½ T	5	3	2	1	2 radar set, AN/MPQ-10	
FA how bn, 105-mm	72	16	26	13	15	1 wkr, 5 T	15	13	1	7	13 tlr, 2 T	
HQ & HQ btry	7	1	4	2				2	1			
5 FA how btry, 105-mm (ea)	10	3	4	1	2		3	2			2 tlr, 2 T	

Landed—1,000 NM Range—Heavy Aircraft—Continued

FOLLOW-UP ECHELON			REAR ECHELON										
27		28	29	30	31	32	33	34	35	36	37	38	39
Wt (tons)		Acft rqmt	Trucks & powered vehicles					Trailers & towed loads					
Pers eqp sup	Add cargo space avail	C-124	Pers	Trk 1½ ton	Trk 3¼ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tlr 1¼ ton	Tlr 3¼ ton	Tlr 1½ ton	Tlr wtr 1½ T	Miscellaneous
Loaded w/HQ & HQ trp			31					7 tk, 76-mm 1 recov, veh, med					
1,071	63	54	41	1				3 tk, 90-mm w/dozer 4 crane, 20 T	1				4 tlr, 10 T
1,071	63	54	31	1				3 tk, 90-mm w/ dozer 4 crane, 20 T	1				4 tlr, 10 T
Loaded w/HQ & HQ co			2										
1,109	256	65	44					1 recov, veh, med					
152	16	8	2										
400	125	25	22										
400	125	25	2										
Loaded w/HQ & HQ btry			2										

Table II. Aircraft Requirements—Infantry Division—Air-

	FOLLOW-UP ECHELON														
1	16	17	18	19	20	21	22	23	24	25	26				
Unit	Pers	Trucks and powered vehicles					Trailers & towed loads								
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tr ¼ ton	Tr ¾ ton	Tr 1½ ton	Tr wtr 1½ T	Miscellaneous				
Svc btry	15		2	6	5	1 wkr, 5 T		1		7	3 tlr, 2 T				
FA comp bn	66	2	16	15	9	12 trac, cargo, lt 1 shop van, 2½ T 5 trac, cargo, med 1 wkr, 5 T	1	7	3	6	9 tlr, 2 T				
HQ & HQ btry	7	1	4	2				2	1						
2 FA how btry, 155-mm (ea)*	11		2	1	2	6 trac, cargo, lt		1			2 tlr, 2 T				
FA how btry, 8-in	12		2	1		1 shop van, 2½ T 4 trac, cargo, med		1	1						
FA msl btry, 762-mm	8	1	4	3			1	1							
Svc btry	17		2	7	5	1 wkr, 5 T 1 trac, cargo, med		1	1	6	5 tlr, 2 T				
Sig bn	215	5	23	13		1 wkr, 5 T 8 trk, 2½ T w/AN/ MRC-52A 1 trk, 2½ T w/AN/ TPQ-7 9 Sig Corps rep trk, 2½ T 2 trk, 2½ T w/ AN/ GRC-26	5	19	4	3	5 genr PU-294 8 genr PU-378 3 genr PE-95 9 genr PU-290 4 genr PU-322/G				
HQ & HQ co	66	3	3	10		1 wkr, 5 T 2 trk, 2½ T w/AN/ MRC-52A 1 trk, 2½ T w/AN/ TPQ-7 4 Sig Corps rep trk, 2½ T	3	3	2	3	4 genr PU-294 2 genr PU-378 1 genr PE-95 4 genr PU-290				
Comd op co	62	2	3	3		2 trk, 2½ T w/AN/ GRC-26 4 trk, 2½ T w/AN/ MRC-52A	2	3	2		1 genr PU-294 2 genr PE-95 4 genr PU-378				

Landed—1,000 NM Range—Heavy Aircraft—Continued

FOLLOW-UP ECHELON			REAR ECHELON										
27	28		29	30	31	32	33	34	35	36	37	38	39
Wt (tons)		Acft rqmt	Trucks & powered vehicles					Trailers & towed loads					
Pers exp sup	Add cargo space avail	C-124	Pers	Trk 1¼ ton	Trk 3¼ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Trl 1¼ ton	Trl 3¼ ton	Trl 1½ ton	Trl wtr 1½ T	Miscellaneous
Loaded w/HQ & HQ btry			10										
557	115	32	20					1 recov, veh, med					
557	115	32	2										
Loaded w/HQ & HQ btry			2										
Loaded w/HQ & HQ btry			2										
Loaded w/HQ & HQ btry			2										
Loaded w/HQ & HQ btry			10					1 recov, veh, med					
536	31	27	24	1	2			1 trk, 2½ T w/AN/GRC-26	1	1			1 genr, PE-95 1 genr, PU- 322/G
536	31	27	6										
Loaded w/HQ & HQ co			16	1	2			1 trk, 2½ T w/AN/GRC-26	1	1			1 genr, PE-95 1 genr, PU- 322/G

Table II. Aircraft Requirements—Infantry Division—Air-

	FOLLOW-UP ECHELON													
1	16	17	18	19	20	21	22	23	24	25	26			
Unit	Pers	Trucks and powered vehicles					Trailers & towed loads							
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Tr ¼ ton	Tr ¾ ton	Tr 1½ ton	Tr wtr 1½ T	Miscellaneous			
Fwd comm co	87		17			2 trk, 2½ T w/AN/ MRC-52A 5 Sig Corps rep trk, 2½ T		13			4 gen PU-322/G 5 gen PU-290 2 gen PU-378			
Div tn (minus)	124	4	3	12		1 wkr, 5 T 18 trk, gas, 2½ T 5 trk, trac, 5 T	4	3	4	2	5 stlr, gas, 12 T 6 bath unit, tlr mtd			
HQ & HQ det & band	28	2	2	2			2	2	1	1				
QM co	72	1	1	9		1 wkr, 5 T 18 trk, gas, 2½ T 5 trk, trac, 5 T	1	1	2	1	5 stlr, gas, 12 T 6 bath unit, tlr mtd			
Admin co	24	1		1			1		1					
Med bn	46	1	2	2			1	2		2				
HQ & HQ det	6	1	1	1			1	1		1				
Amb														
Clr co	40		1	1				1		1				
Ord bn	151	7	9	12		8 shop van, 2½ T 11 wkr, 5 T 1 crane, 10 T 8 trk, trac, 2½ T 6 AC	7	9	18	2	8 stlr, 6 T 1 compr, tlr mtd			
HQ & maint spt co	123	6	2	10		7 shop van, 2½ T 3 wkr, 5 T 1 crane, 10 T 8 trk, trac, 2½ T	6	2	15	2	8 stlr, 6 T 1 compr, tlr mtd			

Landed—1,000 NM Range—Heavy Aircraft—Continued

FOLLOW-UP ECHELON				REAR ECHELON												
27		28		29	30	31	32	33	34		35	36	37	38	39	
Wt (tons)		Acft rqmt			Trucks & powered vehicles						Trailers & towed loads					
Pers eqp sup	Add cargo space aval	C-124			Pers	Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Trlr ¼ ton	Trlr ¾ ton	Trlr 1½ ton	Trlr wtr 1½ T	Miscellaneous	
Loaded w/HQ & HQ co				2												
434	7	21		142	4	2	4				4	2	2	2		
Loaded w/QM co				2												
434	7	21		2												
Loaded w/QM co				133	4	2	4				4	2	2	2		
39	3	2		6												
39	3	2		2												
				2												
Loaded w/HQ & HQ det				2												
800	19	39		8					2 trk, trac, 12 T 1 recov, veh, med							2 stlr, 45 T
800	19	39		6					2 trk, trac, 12 T							2 stlr, 45 T

Table II. Aircraft Requirements—Infantry Division—Air-

	FOLLOW-UP ECHELON														
1	16	17	18	19	20	21	22	23	24	25	26				
Unit	Pers	Trucks and powered vehicles					Trailers & towed loads								
		Trk ¼ ton	Trk ¾ ton	Trk 2½ ton	Trk 5 ton	Miscellaneous	Trl ¼ ton	Trl ¾ ton	Trl 1½ ton	Trl wtr 1½ T	Miscellaneous				
Fwd spt co	28	1	7	2		8 wkr, 5 T 1 shop van, 2½ T 6 AC	1	7	3						
Trans bn	467	13	3	55		115 AC 1 wkr, 5 T	13	1	63	4					
HQ & HQ co	115	8	3	7		1 AC 1 wkr, 5 T	8	1	3	4					
Trk trans co	104	3		48			3		60						
2 armd carr co (ea)	124	1				57 AC	1								
Total attachments	13	10		3			10		3						
Mil intel plat	13	10		3			10		3						
FAC															
Air ln team															

NOTES:

a 12 trk, 2½-ton, and drivers, atch 155-mm how btry as prime movers in initial ech. (Incl in acft rqmt for 155-mm how btry.)

b 1 ton of basic load for 4.2-in. mort loaded with 1 of the rifle co.

c 18 tons of eqp (6 tons per recon trp) loaded with HQ and HQ trp, cav sq.

d 3 tons of eqp from HQ and HQ co, engr bn, loaded with 1 of the engr co.

e 55 tons of basic load for 105-mm how btry (11 tons per btry) loaded: 28 tons w/sve btry, 105-mm how bn; 18 tons w/HQ and HQ btry, 105-mm how bn; 9 tons w/HQ and HQ btry, div arty.

f 12 tons of basic load for 8-in. how loaded: 9 tons w/sve btry, comp bn; 3 tons w/HQ and HQ btry, comp bn.

g 3 tons of eqp from 762-mm rkt btry loaded with HQ and HQ btry, comp bn; 20 tons (6 rkt) loaded w/sve btry, comp bn.

h 15 tons of sup (cl III, 750 5-gal cans) loaded with trans trk co, trans bn.

Landed—1,000 NM Range—Heavy Aircraft—Continued

FOLLOW-UP ECHELON			REAR ECHELON											
27		28	29	30	31	32	33	34		35	36	37	38	39
Wt (tons)		Acft rqmt		Trucks & powered vehicles					Trailers & towed loads					
Pers eqp sup	Add cargo space avail	C-124		Pers	Trk ¼ ton	Trk ½ ton	Trk 2¼ ton	Trk 5 ton	Miscellaneous	Tlr ¼ ton	Tlr ½ ton	Tlr 1½ ton	Tlr wtr 1½ T	Miscellaneous
Loaded w/HQ & maint spt co			2					1 recov, veh, med						
2,791	275	146	10					2 recov, veh, med						
156	12	8	4					2 recov, veh, med						
401	103	24	2											
1,117	80	57	2											
Loaded w/HQ & HQ co, div														
Loaded w/HQ & HQ co, div														

APPENDIX V

SAMPLE STANDING OPERATING PROCEDURE FOR ATOMIC ATTACK

(Classification)

-----Inf. Div
FT LEAVENWORTH, KANS

1 Sept 19----

Annex----- (Actions to Minimize Effects of Enemy Atomic Attack)
to SOP

1. GENERAL

- a. Purpose. This anx prescribes normal procedures for defense against and actions following en atomic atk.
- b. Unit procedure. Subordinate unit SOP conform.

2. PRIOR PLANNING

- a. Organize and designate pers for control and assessment team (CAT) (appl). Rosters to div.
- b. Orders.
 - (1) Comdr concept habitually in sufficient detail to permit continuation and, when necessary, independent action by subordinate units.
 - (2) Defense.
Div designates emergency assy areas and/or alternate positions within sector. Subordinate HQ designate rallying pt. Use only on div order.
- c. Offense.
 - (1) Predict own disposition at critical stages of offense.
 - (2) Assume en atomic atk against predicted disposition at periods of max vulnerability.
 - (3) Evaluate effect on own trp.
 - (4) Determine actions to offset effect of en atk and to continue msn. Prep contingency plans to incl essential draft operation order and checklist of actions to be taken in chronological order.

(Classification)

(Classification)

(Anx ----- to SOP— ----- Inf Div)

d. Defense.

- (1) Determine max vulnerability of own disposition.
 - (2) Assume en atomic atk in areas of max vulnerability.
 - (3) Est damage to own trp and effect on defense plan.
 - (4) Determine actions necessary to offset effect on en atomic atk, and incorporate as appropriate in catk plans.
- e. Plans for fallout (concurrently w/b, c, d, above).
- (1) Assume en surface bursts against own predicted disposition at various periods in operation.
 - (2) Fallout pattern data for various yields aval from this HQ.
 - (3) Evaluate effect on trp and operation plan.
 - (4) Determine action necessary to offset effect of en atomic atk to incl:
 - (a) Warning order.
 1. Loc of GZ, time of burst.
 2. Scaling wind direction and velocity.
 3. Predicted fallout pattern arrival time and radiation intensity.
 4. Immediate action to be taken.
 - (b) Decon Plan.
 - (c) Displacement Plan.
 - (d) Fallout Survey Plan.

3. OPERATIONS

a. Gen.

- (1) Priority of tasks. Subsequent to en atomic atk primary tasks are:
 - (a) Continue msn.
 - (b) Reestablish comd and comm.
 - (c) Determine and rept remaining cmbt effectiveness of damaged unit(s), comd, and comm.
 - (d) Reorganize damaged units.
- (2) Alternate plans. Bn size or larger units prep and keep current alternate tac plans incl displacement and decon plans. Coord these plans with higher, lower, and adjacent HQ.
- (3) Passive protective measures.
 - (a) Units habitually disperse, camouflage, and dig in all pers to incl overhead cover.
 - (b) Construct protective shelters for pers and comd instl in stabilized defensive positions.
 - (c) Following atomic burst, max protection, await further orders.

(Classification)

(Classification)

(Anx ----- to SOP— ----- Inf Div)

- (4) Movement. Units make max use of night movement, multiple routes of march and dispersion.
- (5) Dispersion.
 - (a) Within assigned areas BG control disposition to prevent unnecessary concentration of adjacent co.
 - (b) This HQ control dispersion div rear area.
- (6) Camouflage and deception measures.
 - (a) Enforce camouflage, discipline at all ech.
 - (b) Deceptive measures, incl dummy instl, coord w/div plans.
- (7) CAT (app. 1.)
- b. Actions immediately following atomic atk. (Automatically w/o orders.)
 - (1) Individ. Establish contact with superior.
 - (2) Units.
 - (a) Rept to next higher HQ elm out of contact.
 - (b) Reestablish comm with subordinate elm.
 - (c) Protective measures.
 - 1. Immediate max protection.
 - 2. Prep for early movement.
 - 3. Displace only on order of this HQ.
 - (d) Avoid dismounted entry areas 50 r/hr or greater at time of entry. Prevent cumulative dose over — r/day or — r/week. (Figures to be developed from guidance provided by higher headquarters).
 - (e) Flash rept info relative to atomic blast to incl—
 - 1. Dir time of burst, est GZ, loc of observer.
 - 2. Est height of burst (air, surface), est yield (small, med, large.)
 - (f) All units rept intial time of arrival and intensity of fallout in area. Thereafter hourly on hour.
 - (3) Div arty, BG, bn, sq.
 - (a) When required, dispatch CAT and rept action.
 - (b) Prep to release atch elm of----Tk Bn, cav sq, and un-committed co.
 - (c) Rept atch acft immediately aval for recon.
 - (4) Div res. Prep for immediate movement.
 - (5) Cav sq. If not committed, provide one plat w/monitoring equipment aval for immediate movement.

(Classification)

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(Anx ----- to SOP— ----- Inf Div)

(6) Div avn co.

(a) Dispatch acft to survey and monitor blast area, and to observe en.

(b) Flash rept.

(c) Hold one helicopter aval at div airstrip.

4. LOGISTICS

a. Sup. units operating in damaged areas obtain required sup from nearest aval source.

b. Evac and hosp.

(1) Nonmedical pers will not be directed to assist in med care and evac except on div order.

(2) Affected units accomplish max self-aid.

(3) Cas, evac from BG on div order only.

c. Trans.

(1) Incl alternate means of trans, unit, and route priorities in all pertinent plans.

(2) Only veh engaged in, or spt, damage control activities, or engaged in tac operations enter damaged area.

(3) Div MP det prep to reinf present TCP and establish additional TCP utilizing organic MP or other units as directed.

d. Svc.

(1) Decon limited to that essential to operation.

(2) Priorities for rep and/or reconstruction.

(a) Sig comm and trans facilities.

(b) Med facilities.

(c) Sup facilities.

(d) Fld fortifications.

(3) Priority for engr decon employment.

(a) Routes.

(b) Comd and comm instl.

(c) Log instl.

(d) Tac areas.

e. Misc. Comdr responsible for damage control operation in own area.

5. PERSONNEL

a. Str. As soon as practicable unit or CAT comdr fwd following:

(1) Nr and type of cas.

(2) Eff str of affected units.

(3) Loss of comdr, if applicable.

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(Anx ----- to SOP— ----- Inf Div)

- b. Repl. Repl sec insure that all incoming pers are familiar with current doctrine and procedures for survival under conditions of atomic warfare.
 - c. Discipline, law and order. Div MP det:
 - (1) Prep to reinf stragL or establish new stragL in rear of affected units utilizing organic MP or other units as directed.
 - (2) Prep to assist in establishment of emergency refugee coll pt on order.
 - d. Graves registration service. Mass burial only on order this HQ.
6. CIVIL AFFAIRS/MILITARY GOVERNMENT
- a. Prep to implement current plans for control of civilian population in the event of an atomic attack.
 - b. Prep to establish emergency refugee coll pts. Execute only on order this HQ.
7. COMMAND
- a. Damage control. All units within the div area may be assigned to damage control msn.
 - b. Allowable doses. As announced by this HQ.

SMITH
Maj Gen

App: CAT
Distribution: A
OFFICIAL:

/s/ Jones
JONES
G3

(Classification)

(Classification)

-----Inf Div
FT LEAVENWORTH, KANSAS
1 Sep 19----

(App 1 to Anx ----- (CAT))

1. MISSION

Reestablish mil control over elm hit by en atomic atk. This is accomplished by—

- a. Reestablishing comd and comm.
- b. Assessment of damage to unit.
- c. Rehabilitation of unit to continue tac msn.

2. ORGANIZATION

Div HQ, div arty, BG, sq, and bn form at least one CAT as follows:

- a. Senior line off—comdr.
- b. Med or MSC off—coord med aid and evac.
- c. Sup representative—determines extent of resupply required.
- d. Engr representative—determines engr effort required.
- e. Atomic wpn stf off or monitoring team—initial determination of extent of residual contamination.
- f. Comm det—capable of repl min comm at next lower ech.
- g. Scty elm—capable of securing CAT.
- h. Trans (incl aval air)—capable of lifting CAT.

3. DUTIES

In priority:

- a. Move to damage area w/o delay.
- b. Determine and rept remaining combt effectiveness of damage unit.
- c. If necessary, assume control of damaged units to restore comd and comm.
- d. Take action to resume unit's msn as soon as possible.
- e. Resquisition med, engr, and YM recovery and disposition assistance required.
- f. As soon as practicable rept following:
 - (1) Nr and type of cas.
 - (2) Eff str of damaged units.
 - (3) Loss of comdr (or leader) if applicable.

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(App 1 to Anx ----- (CAT))

g. Mark and rept (loc, intensity, time of reading) all radiation areas over 5 r/hr discovered in course of operation.

SMITH
Maj Gen

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JONES

G3

(Classification)

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By Order of *Wilber M. Brucker*, Secretary of the Army:

MAXWELL D. TAYLOR,
General, United States Army,
Chief of Staff.

Official:

HERBERT M. JONES,
Major General, United States Army,
The Adjutant General.

Distribution:

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CofSA (2)	Regt/Gp/bg (5)
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Technical Stf, DA (5)	USAAVNS (500)
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USA Arty Bd (2)	USACAMGSCH (5)
USA Armor Bd (2)	CGSC (3800)
USA Inf Bd (2)	AFSC (25)
USA Air Def Bd (2)	Joint Sch (5)
USA Abn & Elct Bd (2)	PMST Sr Div Unit (2)
USA Avn Bd (2)	PMST Jr Div Unit (2)
USA Arctic Test Bd (2)	PMST Mil Sch Div Unit (2)
USARADCOM (Incl ea Rgn	Gen Depot (2)
Comd) (5)	Sup Sec, Gen Depot (2)
OS Maj Comd (10)	Depot (2)
OS Base Comd (5)	AH (2)
Log Comd (5)	USATC (5)
MDW (5)	Mil Dist (2)
Armies (10)	USA Corps (Res) (2)
Corps (10)	Sectors Comd (Res) (2)
Div (20) (Ea CC Comd) (2)	Mil Msn (2)
Brig (5)	ARMA (2)

NG: State AG (6); units—same as Active Army except allowance is $\frac{1}{2}$ requirements to each unit.

USAR: Units—same as Active Army except allowance is $\frac{1}{2}$ requirements to each unit (incl USATC).

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