FM 17-30

DEPARTMENT OF THE ARMY FIELD MANUAL

THE ARMORED DIVISION BRIGADE

HEADQUARTERS, DEPARTMENT OF THE ARMY

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THE ARMORED DIVISION BRIGADE

CHAPTER 1
GENERAL

Section I. GENERAL

1. Purpose and Scope

a. This manual is a guide for commanders and staff officers of the armored division brigade and for other commanders and staff officers concerned with employment and support of the brigade headquarters and headquarters company and its attached and supporting elements. In addition to the fundamentals of tactical employment, this manual covers those aspects of the capabilities and limitations, command, staff planning, operations and intelligence, general principles of administrative support, and training that are particularly applicable to the combat, combat support, and administrative support elements employed by the armored division brigade.

b. The material presented in this text is applicable to nuclear and nonnuclear warfare.

c. Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to United States Army Armor School, Fort Knox, Kentucky.

2. Use

This manual should be used in conjunction with FM 17–1, FM 17–15, FM 17–36, FM 54–2, and FM 61–100, and other appropriate manuals.

3. Missions of the Brigade

The mission of the brigade headquarters is to command attached combat and combat support elements for both training and operations. In the exercise of command of the combat battalions and appropriate combat support elements, the brigade may be employed in the following manner:

a. As an attacking force or reserve in offensive operations.

b. As a force to occupy a forward defensive area, as a reserve in the area defense or retrograde operation, or as the striking force in the mobile defense.

c. As a covering force in the advance to contact, offense, defense, or retrograde movements of divisions.

d. As a flank or area security force for the division or larger unit.

e. As an independent or semi-independent force, when suitably augmented, operating separately from the division.

f. As a control headquarters during training situations.

Section II. CHARACTERISTICS OF THE BRIGADE HEADQUARTERS AND HEADQUARTERS COMPANY

4. General

The brigade headquarters is a tactical headquarters. Its mission is to command attached combat and combat support elements. Combat battalions and combat support elements within the armored division are attached by type or in any combination to meet the assigned mission. This permits a high degree of organizational flexibility. The brigade headquarters and headquarters company is 100 percent mobile. It relies primarily on radio for communication. The headquarters company has organic armored vehicles for the brigade commander and his staff. Operational means include a light, fast-moving scout section and Army aircraft for command, control, liaison, and reconnaissance and security purposes.

5. Capabilities

The brigade headquarters is able to—

a. Command 2 to 5 attached elements of the division's combat and combat support elements as may be attached in offensive, defensive, and retrograde operations.

b. Accept or release attachments on short notice.

c. Conduct brigade operations on a 24-hour-a-day basis for a sustained period.

d. Supervise the movement and security of attached or supporting administrative support elements.

e. Establish liaison with higher and adjacent headquarters.

f. Supervise tactical training of attached divisional elements.

g. Act as emergency successor headquarters for the division in event of destruction of division headquarters.

Section III. ORGANIZATION FOR COMBAT

6. General

The armored division organizes for combat by attaching combat, combat support, and administrative support elements to the brigades to form combined armed forces. The brigade is a tactical headquarters reporting directly to the division commander. It has no organic troops other than those of the brigade headquarters and headquarters company. Elements of the division are attached to, or placed in support of, the brigade before or during each operation (fig. 1). Each combat battalion of the division organic combat and logistical support elements. When combat battalions and combat support elements are combined in brigade organization for combat, the resulting combined arms forces consist of tank and mechanized infantry units supported by artillery and engineers. These combined arms forces operate under the brigade commander and are called battalion task forces. Battalion task forces are considered as tank heavy, mechanized infantry heavy, or balanced depending on whether they are organized with a preponderance of tank companies, mechanized infantry companies, or with equal numbers of tank and mechanized infantry companies.

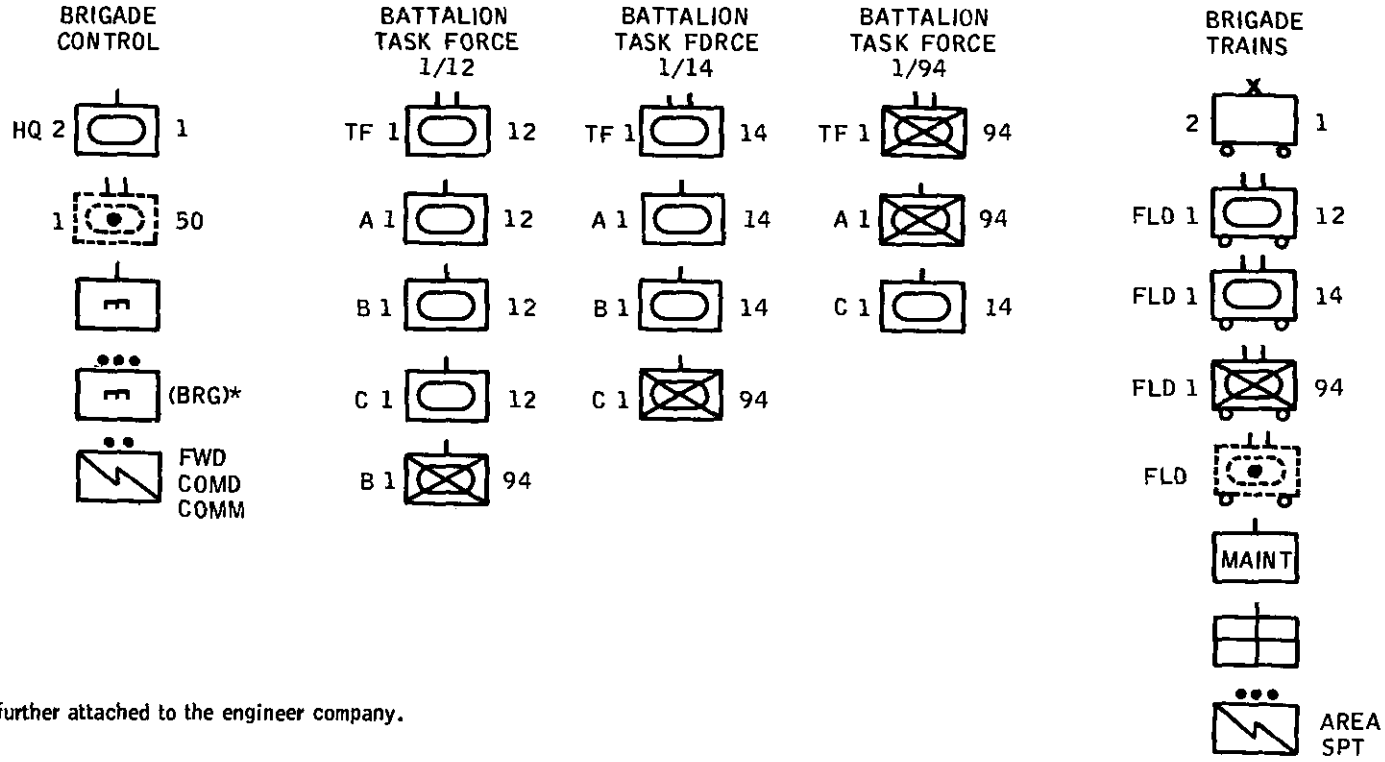
7. Brigade Organization for Combat

a. The brigade fights with combined arms forces by cross attaching tank and mechanized infantry companies to form battalion task forces. For formation of company teams by battalion commanders, see FM 17–1 and FM 17–15. The brigade commander organizes for combat after analyzing the mission in terms of the troops available, the terrain, and the enemy situation.

(1) The brigade commander first determines the requirement for tank-heavy, infantry-heavy, and balanced forces.

(2) He then determines how this requirement can best be met with the forces available. Combat effectiveness of units and personalities of commanders are important considerations.

(3) Given two tank battalions and a mechanized infantry battalion, with a mission requiring tank-heavy teams, the brigade commander might organize for combat as shown in figure 2. Or, given two tank battalions and two



*Will be further attached to the engineer company.

Figure 1. Brigade organized for combat (tank heavy).

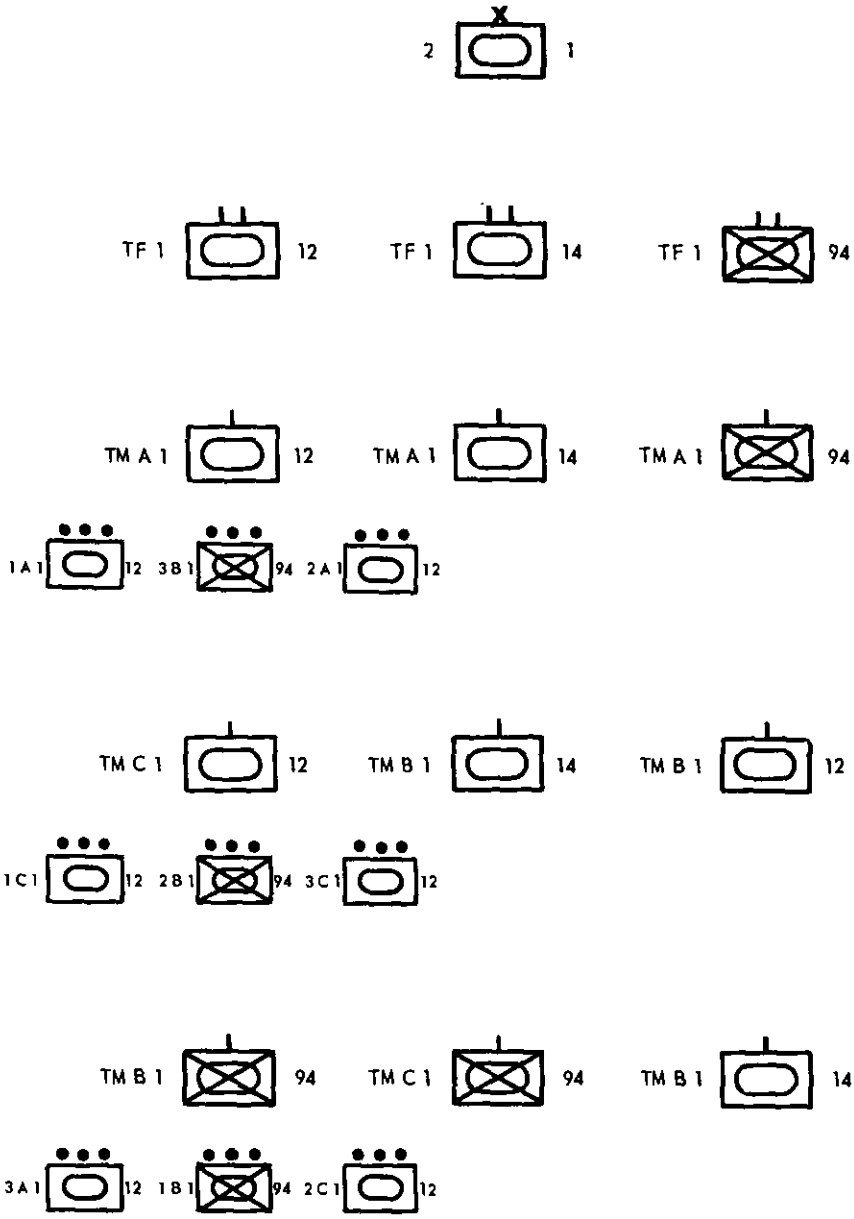


Figure 2. Type brigade organization for combat—brigade tank heavy; battalion task forces, tank heavy; company teams, tank heavy.

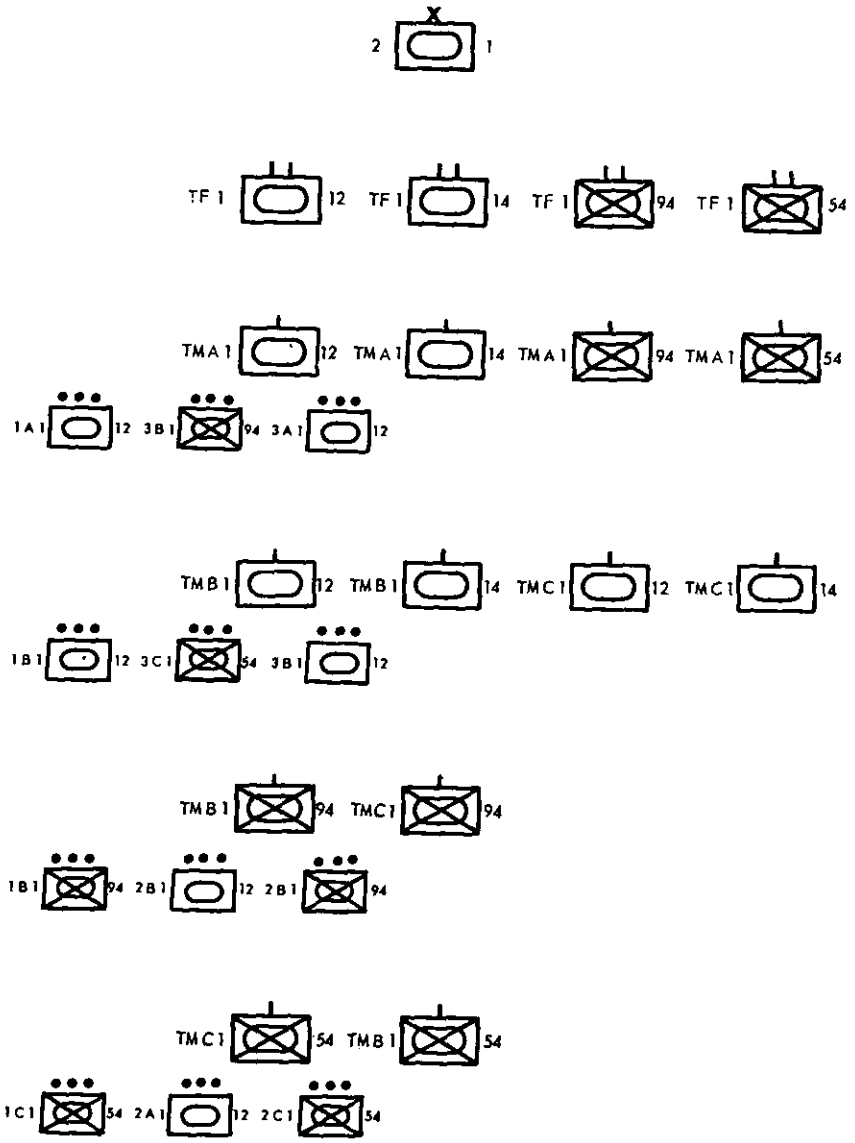


Figure 3. Type brigade organization for combat—brigade, balanced; battalion task forces, balanced; company teams, either tank or mechanized infantry heavy.

mechanized infantry battalions, he might organize for combat as shown in figure 3.

b. Artillery support for the brigade is provided by placing artillery in direct support of the brigade, or by attachment. Under nuclear conditions, attachment of artillery units to brigades may become necessary.

c. Brigade trains include the brigade S4, the field trains of all elements of the tactical battalions, tactical support units, and administrative support units, and the necessary security forces. The brigade trains are under the tactical control of the brigade S4. For details on brigade trains and the support command operations see FM 59–2.

Section IV. SIGNAL COMMUNICATIONS

8. General

a. The adaptability and extensive capabilities of the signal communications system enables the brigade to react with speed and decisiveness in fast moving situations. It is by means of this rapid and flexible system that the successful command control of armored division brigade operations is effected.

b. Commanders and staffs at all levels must integrate communication considerations into all aspects of operational planning.

c. Voice radio is the primary means of signal communication within the armored division brigade. The principal users of this means are commanders and staff officers of all echelons. It is essential that these officers and NCO's be thoroughly indoctrinated with knowledge of the signal communications systems of their own and other units; communication security measures; procedures, and the capabilities, limitations, and techniques of operation of signal equipment they habitually use.

d. For detailed information on signal communication within the armored division brigade, see FM 61–24.

9. Responsibility

a. The brigade commander is responsible for signal communication within the brigade, for its efficient operation as a part of the system of the next higher command, and for insuring that adequate means are provided for projected operations. In assisting the brigade commander in the discharge of his responsibilities, the brigade communication officer formulates signal plans, policies, and procedures for signal communication within the brigade and

to adjacent headquarters. The brigade communication officer exercises staff supervision over the entire brigade communication system.

b. Command responsibility for the establishment and enforcement of effective, continuous signal communication discipline, within the policies of the brigade commander, rests directly on the commander of each subordinate element down to and including the individual combat vehicles. The vital necessity for open channels of communication, uncluttered by nonessential traffic, must receive command emphasis at all levels. To enable the brigade and its elements to respond to the will of the commander with alacrity, the flow of essential information and intelligence, reports, and orders must be rapid and positive, both up and down the chain of command.

c. Responsibilities of certain units for the provision of signal communication within the armored division brigade are as follows:

(1) Headquarters and headquarters company, brigade, provides internal communications for the brigade headquarters and command radio communication at the brigade headquarters for operation with attached battalions. It also provides radio stations operating in higher headquarters nets.

(2) Armored division signal battalion furnishes the brigade direct entry into the division area communication system and operates a station in the division command/operation net RATT for the brigade. The signal battalion also provides a general communication support to other units operating in the brigade area.

(3) The tank and mechanized infantry battalions provide radio equipment, operators, and transportation for stations to operate in the brigade command nets and the division administrative radio teletypewriter net. Armored vehicle-mounted radios are also available for the use of forward air controllers and for entering the division air request net.

d. First and second echelon maintenance of communication equipment is performed by the units to which the equipment is organic. Third echelon maintenance, except cryptographic, is performed by the maintenance battalion, support command. Cryptographic field maintenance is performed by the division signal battalion.

e. Higher units are responsible for establishing communication with subordinate units; units supporting other units by fire are

responsible for establishing communication with supported units; and adjacent units are responsible for establishing lateral communication from left to right, or as specified by their mutually superior commander.

f. Each echelon, whether or not responsible for the initial installation, makes every effort to re-establish communications when they are interrupted.

10. Means and Employment

a. Signal communication is normally accomplished in the armored division brigade by radio (voice, teletypewriter, and continuous wave), wire, messenger, visual, and sound devices. Although radio is the primary means, complete dependence cannot be placed upon it alone. Rather, the various means are so employed that each complements the capabilities and limitations of the others to provide an integrated system obtaining maximum reliability, speed, flexibility, and security. The brigade communication system must be capable of integration with the system of the next higher command and with adjacent or supporting headquarters. Within available means, alternate signal communications systems are planned for and established. This is of particular importance in the light of the enemy's capabilities for the delivery of either nuclear fires or massed nonnuclear fires and the probability of infiltrated or bypassed enemy elements in the brigade's area of operations.

b. Radios of the armored division brigade are installed and operated from vehicles and air vehicles, with the exception of those used in dismounted operations. The span of coverage provided by these numerous radios is extensive. Properly netted and controlled, this communication system can carry a large volume of high-priority traffic. FM radio relay, both ground and air, can be used to extend normal ranges. Radio is susceptible to location and has varying degrees of sensitivity to jamming or interception by the enemy and to terrain and atmospheric conditions, according to specific types of equipment. These considerations, as well as limitations of available frequencies, place some restrictions on its use and require employment of the other means to provide continuity of communication.

CHAPTER 2
BRIGADE HEADQUARTERS AND HEADQUARTERS COMPANY

11. General

The brigade headquarters is organized to provide command and control for the training and combat employment of attached combat battalions and combat support and administrative support elements. The brigade headquarters company provides men and equipment to operate, transport, and protect brigade headquarters.

12. Headquarters and Headquarters Company

a. Organization. Organization of headquarters and headquarters company, armored division brigade is shown in figure 4.

b. Headquarters. Brigade headquarters consists of the commander and the principal brigade staff officers—executive officer, personnel staff officer (S1), intelligence officer (S2), operations

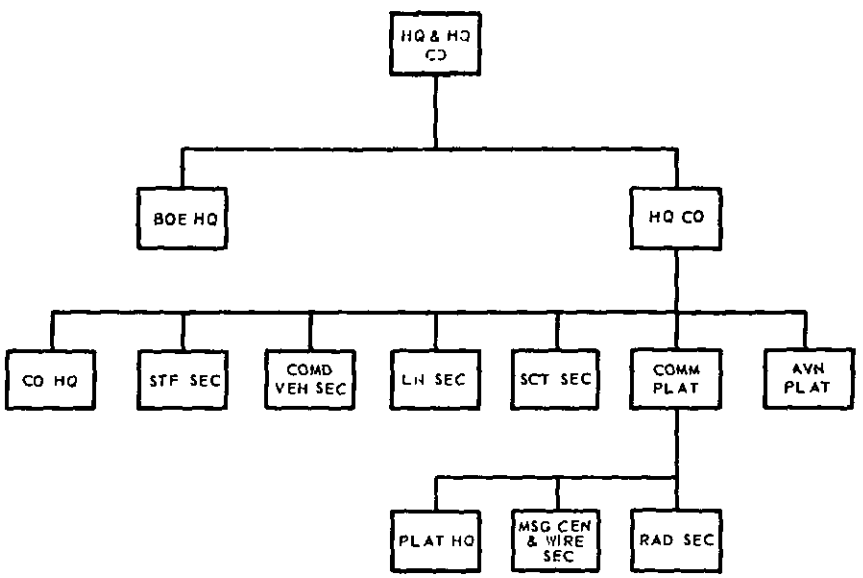


Figure 4. Headquarters and headquarters company, armored division brigade.

officer (S3), logistics staff officer (S4), communication officer, staff surgeon, chemical officer, chaplain, and the sergeant major.

(1) *Brigade commander.* The brigade commander commands the brigade and other divisional elements that may be attached. He is assisted by the brigade staff in conducting training and operations.

(2) *Executive officer.* The executive officer is the principal assistant and advisor to the brigade commander. He exercises command in the name of and during the temporary absence of the commander, and assumes command when he is the senior remaining officer in the brigade, or temporarily until another commander is designated and can take command. The executive officer coordinates and supervises the brigade staff. He assigns such duties to the members of the staff in addition to their primary duties as will meet brigade responsibilities.

(*a*) The executive officer is responsible for the overall functioning of the command post. He is assisted by the brigade headquarters company commander.

(*b*) The executive officer establishes and supervises liaison with adjacent, higher, subordinate, and supported units. For details of liaison activities, see FM 101–5.

(*c*) For additional considerations, see FM 61–100.

(3) *Personnel staff officer (S1).* The duties of the brigade personnel staff officer correspond to those of the G1 (FM 101–5). The brigade S1 enters into personnel and administrative matters only insofar as is necessary to insure the effectiveness of the brigade and to develop training and operational plans. The brigade S1, assisted by the brigade personnel staff NCO, advises the brigade commander and staff in personnel matters, maintaining normal staff channel contact with battalion S1's to do so.

(4) *Brigade intelligence officer (S2).* The duties of the brigade intelligence officer correspond to those of the G2 (FM 101–5). He has staff responsibility for matters pertaining to the enemy, weather, and terrain and for planning, coordinating, and supervising intelligence activities in the brigade. He is the brigade nuclear weapons employment officer. It is his duty to keep the commander, staff, subordinate units, and all other interested agencies fully informed of enemy capabilities and terrain and weather. He is authorized a captain as assistant S2.

(5) *Brigade operations officer (S3).* The duties of the brigade

operations officer correspond to those of the G3 (FM 101–5). The brigade S3 is charged with staff responsibility for matters pertaining to organization, training, and combat operations. He is authorized two captains as assistant S3 and assistant S3 air. In the combined operations-intelligence section, the S2–S3 work as a team, with each being qualified and prepared to take full charge of both activities during the absence of the other. The brigade S3 supervises civil affairs activities of the brigade.

(6) *Brigade logistical staff officer (S4).* The brigade logistics staff officer's duties correspond to those of the G4 (FM 101–5). He has staff responsibility for all brigade logistical functions. He plans, coordinates, and supervises supply, maintenance, and transportation. He coordinates brigade logistical matters with the division G4 and division support elements. He keeps informed of the location of logistical installations that support the brigade and those of attached subordinate units. He prepares the brigade logistical plan, and establishes, operates, and controls the brigade trains. The S4 operates in the logistical system only when necessary or requested. He is authorized a captain as assistant S4. For a detailed discussion of the S4's duties and logistical operations, see FM 54–2.

(7) *Brigade communication officer.* The brigade communication officer is a member of the brigade staff. His duties correspond to those of the signal officer (FM 101–5 and FM 61–100). His actions are based upon the policies of his commander and standing operating procedure (SOP), signal operation instructions (SOI) and standing signal instructions (SSI). The communication officer supervises operations of the headquarters company communication platoon, brigade message center, and communication activities of all other communication specialists in the brigade headquarters company. He exercises staff supervision over all communications activities in the brigade, to include attached units. He is normally a member of the brigade quartering party.

(8) *Brigade staff surgeon.* The duties of the brigade staff surgeon correspond to those of the division surgeon (FM 101–5). The brigade surgeon is a member of the commander's staff and, as such, plans, advises, supervises,

and coordinates medical matters for the brigade and attached and supporting units, and he coordinates medical matters with the division surgeon and the division medical battalion. He coordinates the medical activities of attached units in order to provide medical support for all elements within the brigade. He provides the commander with early casualty estimates to include number anticipated, probable degrees of incapacitation, and in case of radiation, the expected time of onset of symptoms within the command. He reviews requests for air medical evacuation; he forwards approved requests immediately to the closing station supporting the brigade; he coordinates air ambulance flights with the S4, the S3, and the aviation officer. He keeps the brigade commander and staff informed as to the location and capability of supporting medical treatment and evacuation facilities. He keeps the brigade commander informed concerning the health of the command as a whole. He maintains direct liaison with attached battalion surgeons.

(9) *Sergeant major.* The sergeant major is the senior noncommissioned officer assigned the armored brigade. He functions under the direction of the brigade commander. He exercises no command prerogative except in the absence of all commissioned officers assigned or attached to the brigade. However, he is expected to make on-the-spot corrections and decisions. Specifically, the sergeant major is concerned with soldierly appearance, conduct, and discipline within the brigade and its attachments with emphasis on these qualities in the noncommissioned officers. He utilizes a direct channel to all attached battalion sergeant majors. He evaluates and makes recommendations in the areas of appearance, conduct, and discipline. He actively assists in the investigation of any charges involving noncommissioned officers and functions as a member of any board pertaining to noncommissioned officers. The sergeant major monitors training in drill and ceremonies. He instructs noncommissioned officers assigned to brigade in their duties and orients all newly assigned personnel (officer, noncommissioned officer and enlisted) in the history and traditions of the brigade and division. He supervises the brigade noncommissioned officers' mess and should be a member of the fund and character guidance councils.

(10) *Brigade chaplain.*

(*a*) The brigade chaplain is a member of the brigade staff. As such he will operate in accordance with command-staff relationships and doctrine outlined in FM 101–5. He will have direct access to the commander as required.

(*b*) Chaplains assigned to the brigade chaplain's section normally will not be assigned or attached to units, but will provide religious coverage as required by operational conditions.

1. Under combat conditions, religious coverage will be provided for all assigned and attached units as the operational situation requires. The brigade chaplain section will be augmented by attachment of additional chaplains when more than five battalions are attached to the brigade.

2. Under garrison conditions, religious coverage will be provided under the area coverage concept.

(11) *The chemical officer.* The chemical officer is the advisor to the commander in all aspects of chemical, biological, and radiological (CBR) warfare. In coordination with appropriate staff officers, the chemical officer supervises the CBR operation and training of subordinate units. The chemical officer is responsible for the accomplishment of certain CBR functions in the brigade headquarters. The brigade staff coordinates, with the chemical officer, those aspects of CBR warfare operations and training which fall within its purview.

(*a*) In coordination with the S1, the chemical officer—

1. Assists with records and reports regarding CBR casualties.

2. Maintains records of radiation dosage status of units.

(*b*) In coordination with the S2, the chemical officer—

1. Prepares fallout predictions.

2. Disseminates the Fallout Prediction Message to units.

3. Disseminates the Effective Wind Message to units.

4. In coordination with the aviation officer, plans and supervises radiological and chemical surveys.

5. Consolidates radiological and chemical monitoring reports received from units, and forwards them to division.

6. Maintains contamination maps.

7. Recommends CBR reconnaissance.

8. Assists the S2 to estimate enemy CBR capabilities.

(c) In coordination with the S3, the chemical officer—

1. Prepares the brigade CBR training program.

2. Supervises, and when appropriate, conducts CBR training within the brigade.

3. Prepares the brigade CBR SOP.

4. Prepares plans for the integration of chemical and biological agents with the scheme of maneuver.

5. In coordination with FSCOORD prepares chemical target analyses, and assists in the integration of toxic chemical fires into the brigade fire support plan. Calculates troop safety requirements when toxic chemical agents are to be used.

6. Prepares recommendations for the integration of persistent chemical agents in minefield and barrier plans.

7. Assists in planning the employment of flame weapons, flame field expedients, and smoke in support of operations.

8. Advises on the employment of attached or supporting chemical units.

9. Supervises and inspects CBR training conducted by the chemical officers of attached battalions.

(d) In coordination with the S4, the chemical officer—

1. Inspects CBR equipment of subordinate units.

2. Monitors the requisition and distribution of CBR equipment and supplies.

3. Plans for and supervises the installation of collective protection facilities, when appropriate.

4. Supervises CBR decontamination activities.

c. *Headquarters Company.*

(1) *Company commander.* The brigade headquarters company commander exercises normal command authority over personnel assigned to the headquarters and headquarters company except the brigade commander and his staff officers. He is responsible for their training except those aspects concerning their duties in their staff sections. In addition to his responsibilities for company administration and training, the brigade headquarters

company commander is responsible for the security, movement, administrative support and physical arrangement of the command post in coordination with the brigade S1, S2, S3, S4, and communication officer and under the supervision of the brigade executive officer.

(2) *Company headquarters.* Company headquarters provides administration, mess, supply, and maintenance for brigade headquarters and the company. It provides the means for command of the company.

(3) *Staff section.* The staff section contains the personnel and equipment necessary for brigade command and staff operations. Operationally they are responsible to the headquarters staff sections to which they are assigned.

(*a*) *Brigade assistant S3 air.* The brigade assistant S3 air assists the S3 in Army or Air Force air support and fire support coordination. He submits requests for tactical air support and air strikes.

(*b*) *Brigade aviation officer.* The platoon commander of the brigade aviation platoon functions as the brigade aviation officer. The duties of the brigade aviation officer correspond to those of the division aviation officer (FM 101–5). The brigade aviation officer is the staff advisor to the commander on Army aviation employment. In coordination with the S3 (S3 air), he plans and coordinates the employment of organic and supporting air vehicles in the brigade's area of operation, including air traffic control and coordination with air defense agencies. He may be delegated staff responsibility for the employment of the brigade's air vehicles.

(*c*) *Brigade food advisor.* The brigade food advisor is the brigade S4's principal assistant in planning for and managing class I supplies. He exercises technical supervision over food service activities in the brigade. His primary duties include—

1. Insuring that units are issued the rations to which they are entitled and that the rations are received in proper condition.

2. Recommending to the brigade S4 location of the forward class I distributing point in the brigade trains area.

3. Inspecting kitchens for proper handling, storage, prep-

aration and serving of food, maintenance of sanitary standards, and adequacy of mess equipment.

4. Supervising the training of the mess stewards and cooks.

5. Assisting in the continuous operation of the brigade trains headquarters.

(*d*) *Assistant brigade S4.* The assistant brigade S4 assists the brigade S4 in all logistical matters. His specific duties includes—

1. Establishing a brigade logistics control point which serves as the trains headquarters and is located in the brigade trains area.

2. Keeping informed of the status of vehicles, equipment, personnel, and supplies in the brigade trains area.

3. Recommending to the S4 the internal arrangement of the brigade trains—including locations of battalion field trains and support command logistical elements.

4. Functioning as the brigade logistical representative on the brigade area damage control and assessment team.

5. Implementing the security plan for the brigade trains.

6. Keeping abreast of the tactical and logistical situation, posting the logistical situation map, and maintaining the journal.

7. Maintaining communication with, and disseminating information to, support platoon leaders and commanders of logistical activities in the brigade trains area as directed by the brigade S4.

8. Keeping the division support command informed of the location of brigade trains and supporting divisional logistical elements.

(4) *Liaison section.* The duties of the liaison officers correspond to those of the division liaison officer (FM 101–5 and FM 61–100). The liaison section consists of 2 officers and two ¼-ton trucks with drivers, and essential FM radios. It operates as a part of the brigade staff, normally under the supervision of the brigade executive officer. One liaison officer during tactical operations, habitually maintains liaison with division headquarters. The other liaison officer establishes liaison as directed. Liaison officers may be provided aircraft, if available, to accomplish their missions.

(5) *Aviation platoon.* The aviation platoon provides armed light observation air vehicles (LOA) and aviators, together with an air vehicle maintenance capability, to support the command, control, liaison, reconnaissance, and security efforts of the brigade. The air vehicles may be employed in any of these functions or they may be attached to subordinate units of the brigade. Air vehicles are equipped with suppressive fire systems and are capable of nap of the earth flying techniques.

(*a*) *Command and control.* The aviation platoon has the primary function of providing air transportation to the brigade commander and the brigade staff. Air transportation permits the commander to areas where his presence is required to influence the battle. Air vehicles decrease the commander's reaction time to the exigencies of the battlefield.

(*b*) *Liaison.* The air vehicles in the aviation platoon provide a means of rapid transportation to higher, lower, and adjacent tactical units.

(*c*) *Reconnaissance and security.* For a detailed discussion of the aviation platoon in reconnaissance and security roles, see FM 17–36.

(*d*) *Other missions.* The aviation platoon may be used to lift men and supplies and evacuate wounded on an emergency and limited basis.

(6) *Scout section.*

(*a*) The scout section is composed of 12 men and four ¼-ton trucks. The section is organized into two squads. One squad leader is designated also as section leader. Missions that may be assigned to the scout section when alone or reinforced are—

1. Performing route reconnaissance to, and area reconnaissance of, assembly areas or other CP locations.

2. Providing security for the command post.

3. Assisting in traffic control.

4. Acting as a contact party.

5. Forming a part of the quartering party.

6. Performing limited pioneer and demolition work.

7. Performing radiological monitoring and survey.

8. Assisting in damage control operations.

9. Assisting the wire section to provide wire communication to attached units.

(*b*) The section will normally be controlled by the headquarters company commander.

(*c*) The scout section will be employed according to the principles and techniques set forth in FM 17–36.

(7) *Command vehicle section.* The command vehicle section is composed of two armored personnel carriers with driver and vehicle commander. It provides armor-protected transportation for the brigade commander and members of his staff. The command vehicle may be used to provide security for the command post on the move or in assembly area. When not used by the brigade staff, the command vehicle section is controlled by the headquarters company commander.

(8) *Communication platoon.* The communication platoon is organized into a platoon headquarters, a message center, and wire section, and a radio section. It is commanded by a platoon leader and normally operates under the staff supervision of the brigade communication officer. The message center and wire section move in the six ¼-ton trucks and two ¾-ton trucks. The radio section moves in one ¼-ton truck and one armored personnel carrier. The message center normally is part of the brigade command post. The wire section provides wire communication within the headquarters and headquarters company and to attached units as required. The personnel carrier mounts radioteletype and FM voice radio equipment to provide entry into any net where necessary. The platoon installs, operates and supervises the internal brigade communications system and performs operational maintenance on communications equipment of the headquarters and headquarters company. For details of brigade communications principles and techniques, see FM 61–24.

13. Command Post

The command post is the operations and communication center of the brigade. Workable SOP's must be developed for brigade command post organization, operations, internal arrangements, displacement, and security.

a. The command post generally consists of the brigade headquarters and the bulk of the men and equipment of the headquarters company, the liaison section, scout section, communication platoon, and aviation platoon (fig. 5). As may be required by the brigade trains, elements of headquarters company may be located in the trains area to provide support.

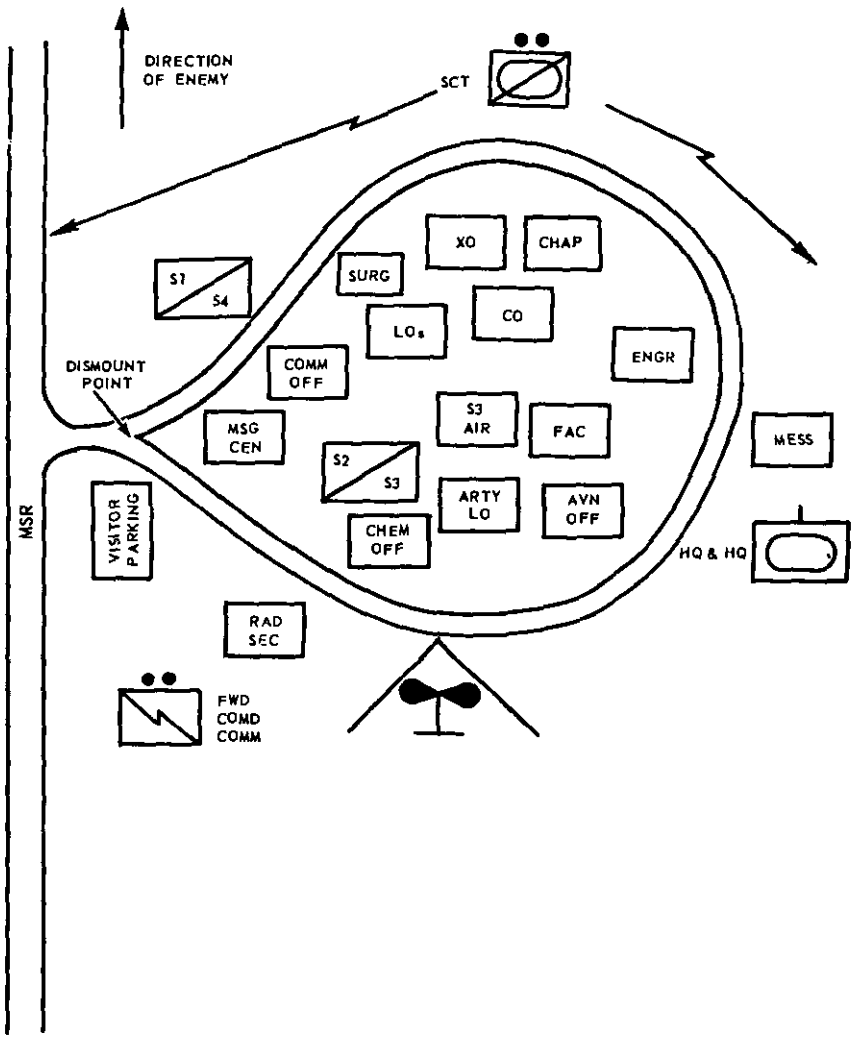


Figure 5. Organization of brigade command post.

b. The location of the brigade trains is in the general locale, but not contiguous to, the command post. Under the control of the brigade S4, the trains will consist of those elements of the brigade headquarters and headquarters company (e.g., company mess and supply sections) that are not required at the command post, the forward maintenance company, the medical company, elements of supporting or attached engineers, and field trains of subordinate units.

14. Command Group

A command group is a command and control facility, consisting of the commander and selected staff officers, signal means, and a security detachment. This group enables the commander to operate away from his command post to obtain personal knowledge of the situation, exercise leadership, and closely control the operation during critical periods.

15. Alternate Command Posts

The limited size of the brigade headquarters and headquarters company precludes organization of an alternate command post. Normally all the battalion task force command posts will be designated as alternate brigade command posts in predetermined succession.

CHAPTER 3
OFFENSIVE OPERATIONS

Section I. GENERAL

16. Purpose

a. This chapter is designed to provide brigade commanders and staffs with a guide for employing the brigade and its major elements in offensive operations. The armored division is organized, equipped, and trained for the conduct of highly mobile ground warfare, primarily offensive in nature, and characterized by a predominance of mounted combat. As the major subordinate command formations in the division, the brigades, with attached tank and mechanized infantry battalions, and necessary combat support and logistical support, assume the responsibility for executing the division's combat missions.

b. The purpose of the offense is to destroy the enemy's armed forces, to impose the commander's will on the enemy, or to seize territory to further operations against the enemy.

c. Offensive operations take full advantage of the armored division brigades' principal characteristics.

17. Concept

Once an offensive operation is begun, the brigade attempts to gain its objective in the shortest possible time. The brigade's offensive action is characterized by deliberate planning and violent execution, employing massed firepower, armor protection, shock action, flexibility of organization and employment adaptability, and mobility. The philosophy of the employment of the brigade is that bold, aggressive action that capitalizes to the maximum on the characteristics of armor gains the most effective results with the least losses to our own forces. In nonnuclear warfare, the armored division brigade seeks to attack the enemy at weak and vulnerable points. By using nuclear weapons, enemy strength can be sufficiently neutralized to permit armor attack where the enemy initially is disposed in strength. In the attack, the brigade masses its firepower and its strength against the enemy to overrun his defenses quickly and reach his rear area, where his complete disorganization and subsequent destruction may be accomplished. In

rear of the enemy positions, the brigade seeks to attain a high degree of freedom of action and to create a maximum of confusion by disrupting enemy communication; destroying command posts, nuclear delivery means, reserves and supplies, and threatening the integrity of the entire enemy defense.

18. Types of Offensive Operation

The armored division brigade, when organized for combat, may be employed in a penetration (to include infiltration) envelopment, turning movement, or exploitation (to include pursuit) or as a covering force for a larger unit. Detailed discussion of types of offensive operations are contained in FM 61–100.

Section II. ADVANCE TO CONTACT

19. General

a. An advance to contact is a ground movement conducted to place troops in position to engage the enemy. It takes place whenever a unit moves to establish or regain contact with an enemy force.

b. During an advance to contact, reconnaissance and security forces may be employed by the brigade to locate the enemy and to cover the movement of the main body. When contact becomes imminent, reconnaissance and security measures are intensified, and formations are adopted that allow a continuation of the movement and facilitate immediate deployment into combat.

c. The brigade usually conducts an advance to contact during the exploitation or when contact has been lost during other operations.

20. Conduct of Advance to Contact

a. General. The brigade commander organizes for combat and adopts a formation that provides the required degrees of security and readiness for combat. A highly mobile reconnaissance and security force is required. The main force must be organized to permit rapid deployment into attack formations from march column. The type of action anticipated will affect the grouping of elements in the column.

b. Contact Remote. When the possibility of contact with enemy forces is remote, march dispositions that expedite movement are used. The movement is normally a tactical march.

c. Contact Imminent. When contact with enemy forces is imminent, forward elements of the command are deployed in a tacti-

cal formation suitable for immediate combat. The bulk of the force may continue in column until it in turn is required to deploy.

21. Security in the Advance to Contact

a. Security during the advance to contact depends upon continuous receipt of timely and accurate information. Brigade ground and air reconnaissance means obtain this information, which is the basis for plans and actions by the advancing force. The acquisition of accurate information decreases the possibility of premature deployment.

b. The brigade commander prescribes the security measures to be taken for the protection of the force as a whole and coordinates with the measures of higher and subordinate commanders. As contact with the enemy becomes most likely he increases his security measures.

22. Meeting Engagements

a. In the advance to contact and the exploitation (pars. 54–67) the brigade will frequently participate in meeting engagements, wherein the brigade, improperly deployed for combat, must attack an enemy force concerning which it has inadequate intelligence. In such engagements rapid and aggressive action is necessary to seize and retain the initiative.

b. These attacks are characterized by—

(1) Immediate and aggressive reconnaissance and rapid estimates.

(2) Rapid issuance of fragmentary orders.

(3) Direct attack from march column as units move forward and are available for employment.

c. Speed and aggressiveness in the attack are essential to keep the enemy off balance and to retain the initiative. Immediate flanking movement by the advance guard will generally produce more decisive results than will direct frontal attacks, and will facilitate either the continued movement or the deployment of the main body.

Section III. BASIC CONSIDERATIONS

23. Basic Considerations of the Offense

For basic considerations of the offense see FM 17–1, FM 61–100, and FM 100–5.

24. Plans for Offensive Operations

a. Before any offensive operation, the brigade commander must develop a plan of attack. The plan of attack consists of the scheme of maneuver and the plan of fire support, to include nuclear fires. The proper integration of firepower and maneuver is important. The brigade commander may consider nuclear fires as additional firepower to complement other available fire support for maneuvering forces, or he may fit his maneuver plan to the nuclear fires. When the commander uses nuclear weapons, he should rapidly exploit the advantages gained.

b. In developing his plan of attack, the brigade commander considers his mission and future operations; the composition, disposition, and capabilities of the enemy forces; how he can best use the terrain on which he will operate; the direction in which the attack will be oriented; and the combat power at his disposal. The brigade commander considers the desirability of attacking over less favorable avenues of approach to achieve surprise. He must include orders to subordinates as to action to be taken upon reaching the objective.

c. Normal troop leading procedures are followed in preparing for brigade offensive operations. When orders are issued, time should be allowed for commanders of subordinate units, to the lowest level, to make estimates, reconnaissance, and plans and to issue orders. Such time should be allowed the lowest unit in the plan and not merely the next lower. Commanders go forward to issue orders instead of calling subordinates to the rear whenever such action will expedite the conduct of the attack. Additional orders or changes in the initial plan are issued in the form of fragmentary orders. Supervision and personal leadership are exercised by all commanders from the start of planning through the completion of the attack (FM 17–1). For planning techniques, see FM 101–5 and FM 61–100.

25. Characteristics of Conduct of Offensive Operations

a. Attacks by the armored division brigade are made with violence and aggressiveness, employing to full measure the firepower, mobility, and shock action that characterize armor operations. In nuclear warfare, massed fire support to the maximum is provided by both nuclear and nonnuclear weapons. Supporting elements and reserves are employed to exploit success, maintain or restore the momentum of the attack, or provide for the security of the command. The brigade commander must not hesitate to employ available reserves when such action promises favorable results.

The attack is pushed aggressively until the mission is accomplished. Rapid changes in plans may be required to maintain the advance; the momentum of the attack must not be permitted to decrease until the objective has been reached, overrun, and secured. The brigade commander locates where he can best control and influence the action.

b. Means of control normally employed by the brigade commander include personal supervision, radio, liaison, and messenger, through both ground and air transportation. Most of his orders are transmitted by radio. The use of a radio equipped air vehicle provides the commander a means of rapid transportation thereby facilitating personal supervision.

c. Control measures are employed by the brigade commander as necessary for the orderly development and conduct of tactical operations. Minimum control measures are imposed on subordinate commanders to preserve as much freedom of action and exercise of initiative by subordinate commanders as practicable. Control measures usually employed by armor units are discussed in FM 17–1 and include the use of objectives, phase lines, axes of advance, checkpoints, no-fire lines, contact points, coordinating points, lines of departure, boundaries, and others. Control measures may be imposed by the operation orders of any echelon. The principle to follow, however, is to use only those that are necessary. For example, in attack, the brigade commander may use only a line of departure, axis of advance, and an objective for each battalion task force.

26. Organization for Combat

a. The brigade commander usually organizes attached tank and mechanized infantry battalions into task forces consisting of tanks and mechanized infantry with provision for artillery and engineer support. However, certain conditions may dictate use of a pure tank or mechanized infantry battalion without attachments. Battalion task forces are tailored for specific missions, considering the enemy situation, the terrain, and forces available. For example, if the enemy is strong in armor, if there is favorable tank terrain, or if there is a possibility of rapid exploitation, leading battalion task forces should be tank heavy. On the other hand, mechanized infantry-heavy battalion task forces may be organized to execute missions in rough, heavily wooded, or thickly populated areas. Tank battalions without attachments may be employed in a situation when immediate mechanized infantry support is not required, such as a tank-versus-tank battle or a mounted attack through an area in which the radiation dose rate prohibits

dismounted action. Mechanized infantry battalions without attachments might be used dismounted in terrain impassable to tanks.

b. Artillery support is provided battalion task forces by artillery in support of or attached to the brigade.

c. Engineer support is provided for leading battalion task forces normally by placing an engineer platoon in support. An engineer platoon may be placed in support of other battalion task forces when required. The commander of the attached or supporting engineer company serves as the engineer staff officer.

d. The battalion task forces are provided Army aviation support from the brigade aviation platoon or by elements of the division aviation battalion.

e. When elements of an armored cavalry unit are attached to the brigade, they are employed in accordance with FM 17–36.

f. Maintenance, medical, and supply support are provided brigades from the support command. For details of their employment, see FM 54–2.

g. Air defense units attached to the brigade are normally retained under brigade control and are employed in an air defense role based on appropriate priorities.

27. Brigade Formations for Offensive Action

a. A study of the mission, terrain and weather, enemy situation, and friendly situation, with particular reference to troops available, will indicate the initial attack formation that offers the best chance for success. After commitment, the brigade is capable of rapidly altering its formation and organization for combat to conform to the changing situation.

b. The brigade may employ any of several basic formations in offensive operations. It may attack with battalion task forces in column or in line or in variations thereof.

28. Main and Supporting Attacks

The armored division and its brigades, whether attacking in column or line, or their variations, rarely distinguish between main and supporting attacks. Once the attack is launched, the commander is alert to exploit success in any direction. Reserves are prepared to support or take over missions from any forward unit. When a leading element of the brigade attains success, the

brigade commander is prepared to alter his plan to take full advantage of the opportunity to develop a favorable situation.

29. Brigade in Column

a. A column of battalion task forces may be adopted for the initial attack when terrain or enemy defenses force the brigade to attack on a narrow front. In certain situations, the strength, composition, and location of enemy reserves may be such as to require the brigade to adopt this formation to provide the depth necessary for sustained attack (fig. 6).

b. The column formation is usually adopted initially when the brigade must penetrate organized enemy positions. In nuclear warfare it minimizes presentation of a profitable target to the enemy. This formation provides depth to the attack. It facilitates retention of the initiative and permits flexibility because the following battalion task forces are in position to move through or around the leading elements to maintain the momentum of the attack. This formation also provides a degree of security because the following battalion task forces are in position to counter a threat from either flank and thereby support the uninterrupted advance of the leading troops. With this degree of security, leading troops are also provided freedom to react with speed to developments on their immediate front. Passage of the brigade through a given area using this formation requires more time than when other formations are used.

30. Brigade in Line With a Reserve

a. When two battalion task forces of the brigade are in line, the remaining battalion task force or forces may be designated as the brigade reserve. The brigade reserve, which follows the leading battalion task forces, provides flexibility and security. It provides also a major force that can exploit the success or assume the mission of either leading task force and counter enemy threats to the accomplishment of the brigade mission (fig. 7).

b. In nuclear warfare, a formation with two armor battalion task forces abreast and a reserve may be adopted in the attack when successful penetrations have been created by other forces or by nuclear fires, when the enemy is overextended, or when the brigade is executing an envelopment. This formation allows the brigade to attack on a broader front. It helps to insure that a dangerously vulnerable concentration of friendly forces does not exist for an unwarranted period.

c. In nonnuclear warfare this formation may be employed

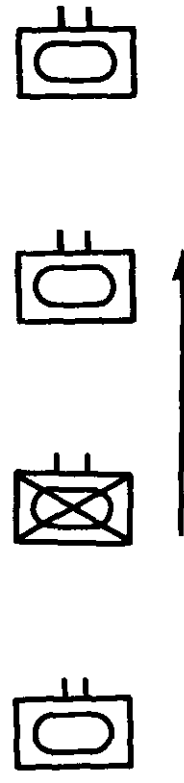


Figure 6. Brigade in column.

against defensive positions in situations when great depth in the attack is not required, such as in a limited-objective attack. It may be used also in the initial attack against an enemy position that is known to be thin and weak and that can be ruptured by an attack on a relatively wide front. In the envelopment, this formation can be used when the assailable flank is of such extent that the brigade can envelop on a broad front.

31. Brigade in Line With No Reserve

a. Normally the brigade commander will retain some degree of flexibility in his initial attack by withholding part of his force in reserve. However, in a situation when the requirement for speed outweighs that of security, a formation with two or more task forces abreast without a reserve may be used successfully (fig. 8).

b. In nuclear warfare, an initial attack employing three task forces abreast may be used to considerable advantage to exploit

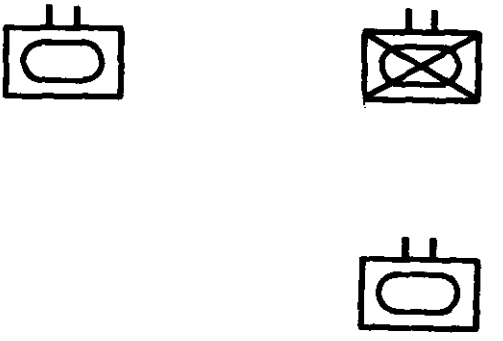


Figure 7. Brigade with 2 battalion task forces abreast and 1 in reserve.

the effects of friendly nuclear fires on an extended front. This enables the brigade, as part of a division, to follow up immediately the massive destructive effects of the nuclear fires; and by advancing on a broad front, vulnerability to enemy nuclear retaliation is reduced. Terrain, however, must permit the adoption of this formation, and the enemy situation must not necessitate a reserve initially.

c. In nonnuclear warfare, the fundamental consideration in the use of this formation is whether the mission dictates a rapid advance on a broad front. Prerequisites are adequate maneuver room and avenues of approach; sufficient gaps or weak spots in the enemy line caused by overextension or friendly offensive action; and the capability of delaying decisive action of enemy reserves through the employment of fire support, screening forces, or appropriate maneuver.

32. Assembly Areas and Attack Positions

a. An assembly area is an area in which a command is assembled preparatory to further action. Orders are issued, and maintenance and supply are accomplished according to the time available. Assembly areas close to forces in contact should be avoided. The armored division brigade must be prepared to launch its attack from

Figure 8. Brigade with three battalion task forces abreast with no reserve.

widely dispersed assembly areas well to the rear of the line of contact to reduce the vulnerability of the command to nuclear attack. When such areas are far enough to the rear to require fueling before launching the attack, forward fueling areas or points will be designated (fig. 9). Units move by direct routes to attack positions. Further details on assembly areas are given in FM 17–1 and FM 61–100.

b. Brigade attack positions are not employed. However, brigades will frequently designate the general locations for attack positions for subordinate units to facilitate deployment of assault elements. To minimize vulnerability to enemy nuclear fires, armor units using attack positions halt only as required to deploy assault elements. Where possible, they will move into the attack position, deploy into the prescribed formation, and move out, all without stopping.

33. Selection of the Objective

Brigades normally are assigned only the division objective or a part thereof. An intermediate objective may be assigned to a brigade when its capture is essential to the accomplishment of the division mission. In any case, the objective should be deep in enemy territory and its seizure should have a decisive and favorable effect on friendly operations (FM 17–1).

34. Use of Army Air Vehicles in the Attack

Aerial vehicles of the brigade aviation platoon are employed in offensive operations in varied tactical and administrative roles and assist operations by providing an additional means of mobility to facilitate command, control, liaison, reconnaissance, and security. Details concerning capabilities and employment of Army air vehicles are contained in FM 17–36.

35. Intelligence in the Attack

The principles governing collection, processing, and use of intelligence in offensive operations, which are covered in FM 61–100, apply generally to brigade level operations. Full use is made of the brigade's organic aviation, the battalion task force armored cavalry platoons, and attached reconnaissance units in this effort.

36. Tactical Air Force Support

During the attack, air support may be provided by the tactical air force by attacking enemy reinforcements and other located

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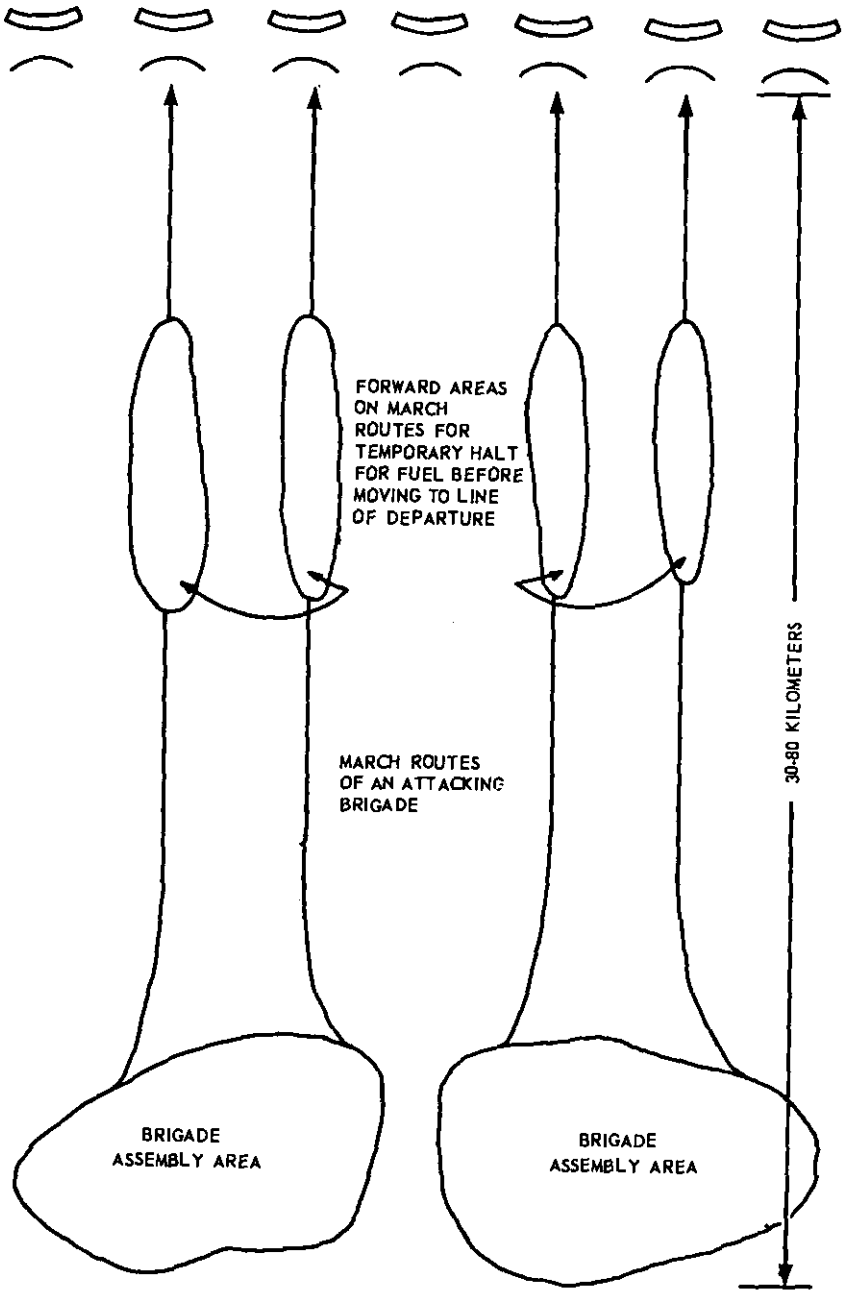

Figure 9. Movement from rear assembly area to attack.

enemy targets. Air control teams operate with brigades and battalion task forces for close-in control of air strikes. The provision of column-cover aircraft during daylight hours for attacking units of the brigades should be normal. Air support in the form of both day and night visual and photographic reconnaissance should be made available on request.

37. Use of Chemicals

Chemical munitions in the offense are used to increase the effectiveness of supporting fires. Their use should be preplanned and integrated into the overall fire plan. One of the principal uses of chemical munitions in armor offensive operations is to hinder the movement of enemy reserves. They can be used to soften up the enemy area selected for a penetration and to assist in holding the flanks of the gaps created by the armor attack. Smoke can be effectively employed to screen the deployment of attacking units. For additional information on the employment of chemical munitions in the offense, see FM 3–5.

38. Night Attack

a. Night combat frequently offers exceptional opportunities for success because of the possibility of achieving surprise and capitalizing on the psychological effects of darkness. In the exploitation or operations against strongly defended objectives that must be reduced, the armor commander may well employ a night attack as the continuation of a daylight attack to maintain the momentum of his advance, achieve success, and complete the enemy's destruction.

b. Night combat is applicable to all types of operations. The brigade undertakes it to exploit a success, to gain important terrain for further operations, to avoid heavy losses, to press a disorganized enemy, to achieve surprise and psychological superiority, to use concealment afforded by conditions of darkness, and to compensate for lack of friendly air superiority. In conducting continuous day and night operations, consideration must be given to the rotation of leading elements to provide time for rest and maintenance.

c. The fundamentals involved in night attacks are the same as those for any other attack. However, greater stress must be placed on simplicity of plan; careful preparation, including training and rehearsals, when possible; secrecy; use of feints or ruses; surprise; and daylight reconnaissance; well-defined and easily identifiable objectives; and carefully prepared fire plans. Maneu-

ver must be simple. Control must be stressed and centralized. It is imperative that the communication plan be kept simple and workable.

d. All available means of battlefield illumination, including organic searchlights and infrared devices, may be employed to provide illumination and control for the attacking units. However, sufficient time must be allowed to prepare illumination plans and to integrate them with maneuver and fire plans. Further consideration must be given to loss of surprise, secrecy and concealment.

e. With the advent of improved reconnaissance and surveillance capabilities and the possible use of nuclear weapons, night combat will increase in frequency to the point of becoming routine. Training must reflect increased emphasis and time must be devoted to night operations. Improved capabilities for night operations include the use of armor organic illumination means and infrared means organic to tank units.

f. For additional information on night combat, see FM 17–1, FM 61–100, and FM 100–5.

Section IV. PENETRATION

39. General

a. A penetration is a form of offensive operation characterized by the rupture of the enemy's positions and the creation of an opportunity for exploiting the breakthrough. Conditions that dictate a penetration are unassailable enemy flanks or insufficient time to execute an enveloping maneuver. Conditions that favor a penetration are availability of nuclear weapons, overextension of the enemy, suitable terrain conducive to the use of armor units, and weak spots in the enemy position.

b. A penetration requires the attacking force to achieve decisive superiority in combat power at the point of penetration. It requires enough combat power to carry the attack through to its objective. The attack is launched on a front that initially is wider than the contemplated rupture. This is done to secure the flanks of the penetration. As the penetration progresses, the leading elements advance, followed by units that deploy on a wider front. The followup units attack to reduce hostile elements on the flanks and to extend the flanks of the penetration, thus widening the gap created by the leading elements; and they hold the flanks or the shoulders of the penetration to prevent enemy counterattacks from closing the gap. Finally, as resistance begins to

thin, the advance elements pick up speed and begin to exploit the success of their penetration. They drive forward as rapidly as possible to the final objective. For fundamentals of the penetration, see FM 100–5.

40. Brigade Employment in the Penetration

As part of an armored division in the penetration, the brigade may be employed to—

a. Make the division penetration.

b. Pass through infantry (which has made the penetration) after the penetration has been made.

c. Expedite a penetration being made by other forces before the penetration has been completed.

41. Brigade Making the Division Penetration

When the armored division is required to make or participate in a penetration, a nuclear and nonnuclear preparation may be fired to create gaps through the enemy defensive position. Immediately after the preparation is fired, the brigade attacks through the gaps on a broad front and moves rapidly into the exploitation to seize and secure the division objective (fig. 10). The brigade may be employed to widen the rupture and secure its flanks, although assignment of this mission to other forces will better enable the brigade to concentrate combat power in more decisive actions. Normally, a mechanized division will be given the mission of following and supporting the armored division. Elements on the flanks and within the area of the penetration continue to attack, rolling back the enemy flanks and completing the rupture of the enemy defensive positions. Additional prearranged on-call artillery (nuclear or nonnuclear) may be employed to neutralize located enemy reserves or against targets of opportunity that are capable of seriously threatening the accomplishment of the brigade mission. Detailed planning and coordination must be accomplished between division and corps artillery units firing the preparations.

42. Brigade Passed Through a Penetration

When the penetration of an organized position is being made by other forces the armored brigade, as part of the armored division, should be located in a rear assembly area, prepared to move forward to enter the attack on order. The brigade should not be

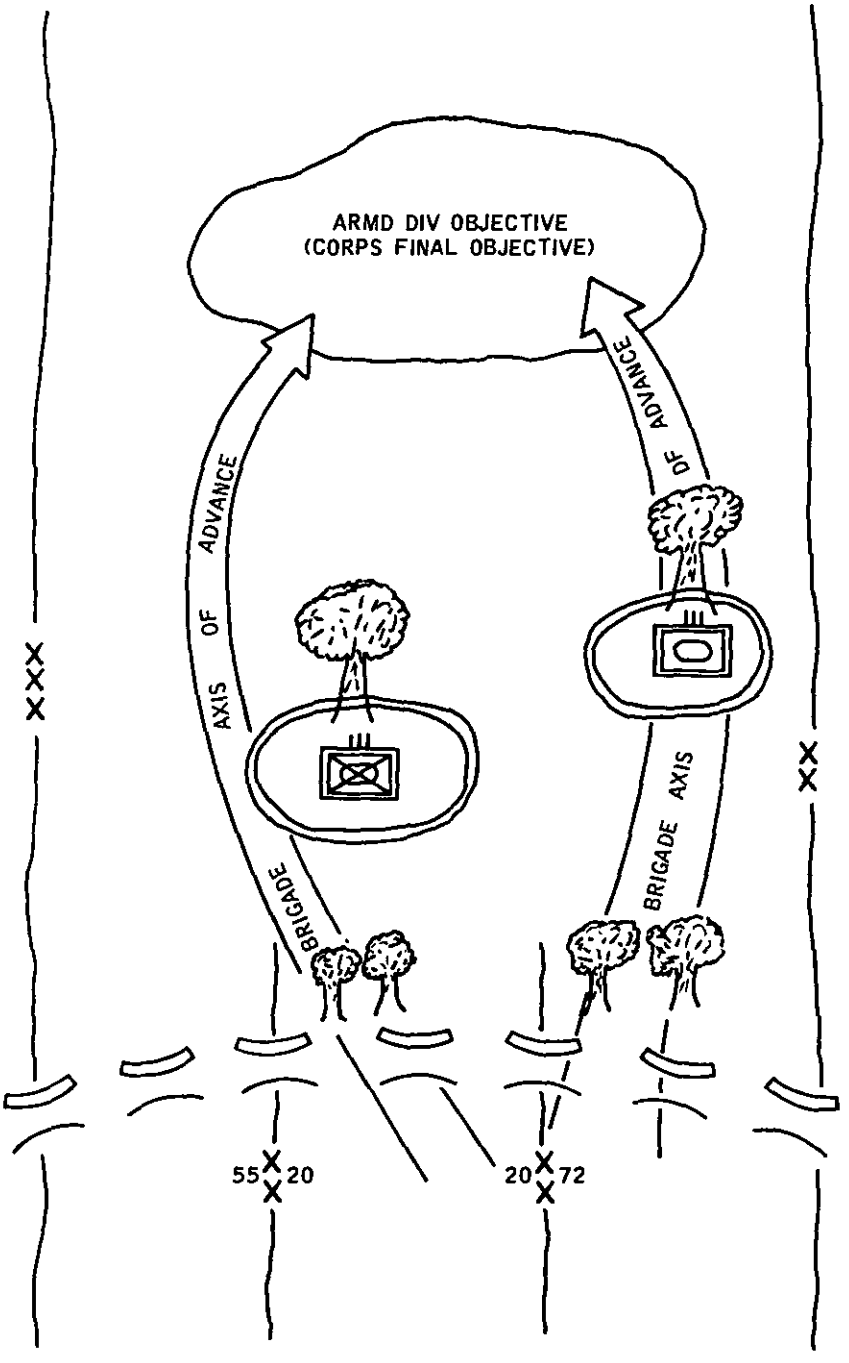

Figure 10. Brigades making a penetration using nuclear weapons.

too close to the line of contact when the enemy has a nuclear capability. If too close it may reveal to the enemy the intention of employing the brigade in a specific area. The brigade must maintain very close liaison with the units through whose lines it will pass. The brigade must keep abreast of developments of the attack, the terrain over which the brigade is most likely to be committed, and the probable time and location of its commitment. After the exact location of the attacking elements is ascertained, this location, or expected line of contact, becomes the line of departure for the brigade. The division commander, upon being informed that the attack has succeeded orders execution of the previously prepared plan for the brigade to pass through the penetrating force and exploit the breach in the enemy position. For details concerning the passage of lines, see FM 17–1, FM 61–100, and FM 100–5.

43. Brigade Committed to Hasten Penetration

When attacking units have met strong resistance or, for other reasons, has been slowed, or when rapid success has been gained, the brigades in the armored division may be committed in advance of the time originally planned in order to hasten the penetration. Brigade commanders and staffs must always have plans ready to meet such contingencies. Effective liaison is a vital factor in the success of such an operation. To effect the degree of coordination necessary, the units concerned must be familiar with each other's plans. The brigade commander must keep abreast of the location of the most advanced attacking elements, where resistance is being offered, the type of resistance, and the nature of the terrain. The brigade moves through the attacking units and begins its attack. The fires of the forces passed through should support the brigade's attack until masked. Even when nuclear weapons are employed in connection with this maneuver, because of troop safety requirements, significant enemy resistance may still remain. Therefore, the brigade should be disposed with the bulk of its combat power forward so that leading elements are capable of rapidly rupturing the enemy position and beginning the exploitation.

44. Choice of Location for Attack

a. In choosing the best location for the attack, consideration should be given to the following:

(1) *Best possible terrain for the movement of armored vehicles.* Considerations include trafficability of the soil, presence of natural and artificial obstacles, and existence

of built-up areas and woods that constitute an obstacle to the attack.

(2) *Strength of the enemy position.* Considerations include the natural strength of the terrain the enemy is occupying, his numerical strength, the character of his weapons, the degree of fortification of the position, and the morale of the enemy troops manning the position.

(3) *Fields of fire.* Fields of fire should be chosen for the weapons used by the assaulting forces and opportunities should be considered for the employment of supporting fires of artillery, nuclear weapons, and air, and the observation of these fires.

(4) *Distance to the objective.*

(5) *Maneuver room for the attacking force.*

(6) *Road net.* This is not necessarily of vital importance to the initial assault, since cross-country movement in a deployed formation generally will be the rule. In cases when cross-country movement is not practical, however, the road net must be considered.

(7) *Surprise.* If surprise is to be gained, an attack location less favored by the considerations listed in (1) through (6) above may permit more rapid and decisive results to be achieved.

b. The armored brigades will be committed on frontages as dictated by the situation. When feasible, existing boundaries will be used as initial boundaries between brigades to facilitate coordination and control during the passage of lines.

45. Selection of Penetration Objective

A penetration objective is not normally designated for the brigade; however, one may be used when the seizure of initial key terrain is vital to the overall operation. When used, the objective for the penetration should be a key terrain feature, the seizure and securing of which will insure the accomplishment of the penetration and materially assist in initiating the exploitation. Preferably, rather than secure such a key feature as an objective, the brigade will be directed to overrun it and the following infantry will secure it.

46. Formation in the Penetration

For formation in the penetration refer to paragraph 29 through 31.

47. Infiltration, General

a. Infiltration is a technique of penetration. It is not necessarily restricted to small units or to dismounted action. The brigade can attack by infiltration, or it may use infiltration to obtain intelligence and harass the enemy. In the attack, its purpose is to deploy strong forces in the enemy rear for decisive tasks while exposing only small forces to enemy defensive fires.

b. Because of the interspersed deployment of friendly and enemy units during infiltration, the nuclear vulnerability of attacking units is reduced by the enemy's inability to employ any but the smallest of weapons against these attacks.

c. Infiltration is also a way of obtaining accurate information about possible nuclear targets.

d. Attack by infiltration also permits the destruction of dispersed enemy units and installations without recourse to nuclear fires, and may curtail the use of nuclear fires by the enemy because of the absence of remunerative targets and the location of the infiltrating units in his own area.

48. Basic Considerations of Infiltration

a. An infiltration is a slow operation. Planning must be in great detail and troops must be carefully briefed. The movement by stealth among enemy positions and the assembly of infiltrating groups before decisive action are slow. Dismounted mechanized infantry units and armored cavalry elements are most suitable for this task in the armored brigade. The use of airmobile operations can speed up this action.

b. Infiltration is facilitated by the use of terrain that provides cover and concealment against the enemy's observation and surveillance of the routes to be used. Woods, swamps, and broken ground are examples of the areas suited to infiltration. Within an area of infiltration, suitable routes for the movement of small groups are selected by the infiltrating unit. In contract to other forms of maneuver, avenues of approach in the traditional sense are not used. Frequently the avoidance of identifiable and readily traversible avenues of approach increases the probability of success. Conditions of reduced visibility such as darkness, fog, and falling snow assist the undetected movement of infiltrating groups.

c. A widely dispersed enemy force with gaps existing among his defensive positions invites infiltration. Infiltration against an alert enemy equipped with means of detecting movement requires

deception and diversion, electronic countermeasures, and passive security measures. Enemy use of illumination may deter infiltration unless the light source can be neutralized.

d. In addition to separate enemy dispositions, suitable objectives for attack by infiltration are key terrain features, especially those that restrict the movement of enemy reserves or isolate his defensive positions; reserves; fire support means; command and control installations; and critical logistical installations. Each objective must contribute directly to the accomplishment of the division's mission and should not result in dissipation of strength.

e. Small infiltrating groups can be assigned reconnaissance missions, harassing missions, or missions of interdicting enemy routes. The effect of such missions on coordination of friendly fire support must be weighed.

f. Infiltration is a difficult operation to coordinate and control. Plans are made before movement, and deviation from these plans is difficult to coordinate during the operation. Coordination of the movement of the infiltrating groups with the division's fires is necessary. Plans must provide for the linkup with other attacking forces.

g. An infiltrating unit may be controlled by the brigade or control can be decentralized to a unit that is operating in the area of infiltration. When the infiltrating unit is under brigade control, linkup plans must be made at brigade level. Division must be kept fully informed of such actions. Unity of command normally dictates that, at the time of juncture, control of the infiltrators passes to the commander of the unit conducting the linkup.

h. In the area of infiltration a series of infiltration lanes is designated that are of sufficient width to permit the infiltrating groups to move by stealth. Infiltration lanes, in conjunction with the coded designation of infiltrating groups and their probable sequence of movement, checkpoints, and phase lines, provide a means of reporting progress of the operation and of coordinating fires with movement of the groups. Other control measures are attack positions, objectives, and rallying points or areas.

i. Adequate communication must be provided for use within the infiltrating unit and between that unit and the controlling headquarters.

j. Infiltrating groups moving on foot generally are limited to hand-carried weapons. Consequently, they must be provided additional fire support from brigade means. This requires good observation, reliable communication, and a responsive system of

obtaining the fires. Although groups traveling by air can carry more and larger weapons, they frequently will also require additional fire support.

k. The combat power organic to infiltrating units is relatively small; consequently they are vulnerable to defeat in detail. Measures are taken to provide early linkup or exfiltration of the force.

l. Planning for an attack by infiltration requires integration of the scheme of infiltration with the scheme of maneuver of other attacking elements of the brigade and with the plan of fire support. Of concern is the planning of control and signal communication.

m. Because of the nature of the operation and the hazards encountered during movement, it is essential that maximum dissemination of the plan be made, including the action to be taken in the area of decisive action.

n. Suitable recognition signals must be provided all units operating in the area of likely linkup to prevent fire fights between friendly elements.

49. Conduct of the Infiltration

a. The infiltrating elements in small groups pass through, over, or around enemy forward defensive positions, avoiding detection where possible, and if detected, avoiding decisive engagement. They move, normally through multiple lanes, to attack positions in the area of decisive action. The passage of the groups through the enemy position and their movement to their attack positions may be accompanied by demonstrations, including preparatory fires, in areas not included in the infiltration. Preparatory fires may be placed on the enemy positions in the area of infiltration to reduce the enemy's surveillance capability.

b. Upon arrival in their attack positions, the infiltrating groups form into their attack formations and prepare for action. At a specified time the infiltrating force executes its mission and prepares for linkup.

c. Groups that lose direction or are unable to reach the attack position proceed to rallying points or areas. Contingency plans cover their subsequent actions, including evacuation.

d. If airmobile forces are used for infiltration, air vehicles, flying individually or in small groups, pass through the enemy forward defensive area. This passage, where possible, is over unoccupied areas and may follow routes that ground patrols have found to be clear of enemy units. During and after movement to the attack position, air vehicles simulate landing at other locations

as a deceptive measure. Infiltrating groups may land at various points in the enemy's rear and proceed on foot to the designated attack position. Other aspects of the operation are similar to those of surface infiltration.

e. A widely dispersed enemy, suitable trafficability of terrain, and concealment may enable infiltrating units to use ground vehicles during the operation. Similarly, infiltrating groups may use small boats and other watercraft.

f. Infiltrating forces proceeding to great depths or remaining in the enemy's rear for extended periods may require supply by airdrop. Maximum use should be made, however, of captured enemy stocks, but the success of the operation must not be jeopardized by sole reliance on such stocks.

g. Friendly units that may have been left behind enemy lines during defensive operations can be used in a manner similar to those that have infiltrated through or over enemy positions.

Section V. ENVELOPMENT

50. General

a. An envelopment is a type of offensive operation that seeks to pass around enemy forces and to strike them in the flank or rear to destroy them in their position. It is essential that a flank of the enemy be exposed enough to present an opportunity for this type action, or an assailable flank must be created by the use of nuclear weapons. The requirement for increased dispersion among units on the nuclear battlefield offers increased opportunity for the envelopment (fig. 11).

b. Envelopments may be classified as single or double. The single envelopment is executed by two principal tactical groups, an enveloping force and a supporting attack. It may be a close or wide envelopment (*c* below) of one flank by the maneuvering force, with the supporting attack directed against the enemy forward position. The double envelopment is executed by 3 principal tactical groups: 2 enveloping forces and a supporting attack. A simultaneous envelopment of both flanks requires a great superiority of force. This superiority may be in firepower and mobility, not necessarily in numbers alone. In the double envelopment, the attacking force must be capable of deploying on a broad front against an enemy defending on a much narrower front, and it requires coordinated timing to minimize risk of defeat in detail. The operation is executed by enveloping forces striking both hostile flanks, and a supporting attack launched frontally against

the enemy position. Although plans may have been made initially for a single envelopment, the situation may change during the attack so that it favors a double envelopemnt, if sufficient forces are available.

c. Envelopments may be further classified as close or wide, based on the initial distances between attacking elements. In a close envelopment, fire support of the supporting attack, as well as other fire support elements, support the enveloping force to its objective. In a wide envelopment, the enveloping forces move at a greater distance from the supporting attack, making fire support for both forces more difficult. In this situation, fire support elements may move with the enveloping force.

51. Formation in the Envelopment

Following a successful envelopment, a formation of two or more forces abreast permits a rapid shift into the exploitation (pars. 29–31).

52. Conduct of the Envelopment

a. In an envelopment, the initial movement is around an assailable flank of the enemy, either an existing flank or one created by the use of nuclear fire support. Generally, the brigade is free to maneuver. If more control is needed, a direction of attack may be assigned. The attack is directed toward an objective the capture of which will cut enemy supply lines and avenues of escape and prevent reinforcement, thus bringing about his destruction.

b. Artillery with the enveloping force may not participate in any required preparatory fires when such employment would delay or interfere with its providing effective fire support to the enveloping force. When this condition exists, artillery supporting the supporting attack may also support the maneuvering force initially.

Section VI. TURNING MOVEMENT

53. General

The turning movement is a type of offensive operation that differs from the envelopment in that it avoids attacking the flanks or rear of the enemy main forces, and seeks to seize an objective deep in the enemy rear to force him to abandon his position or divert major forces to meet the threat. The enemy is then destroyed on ground of the attacker's choosing. At the brigade level, as this movement is normally conducted as part of a larger force,

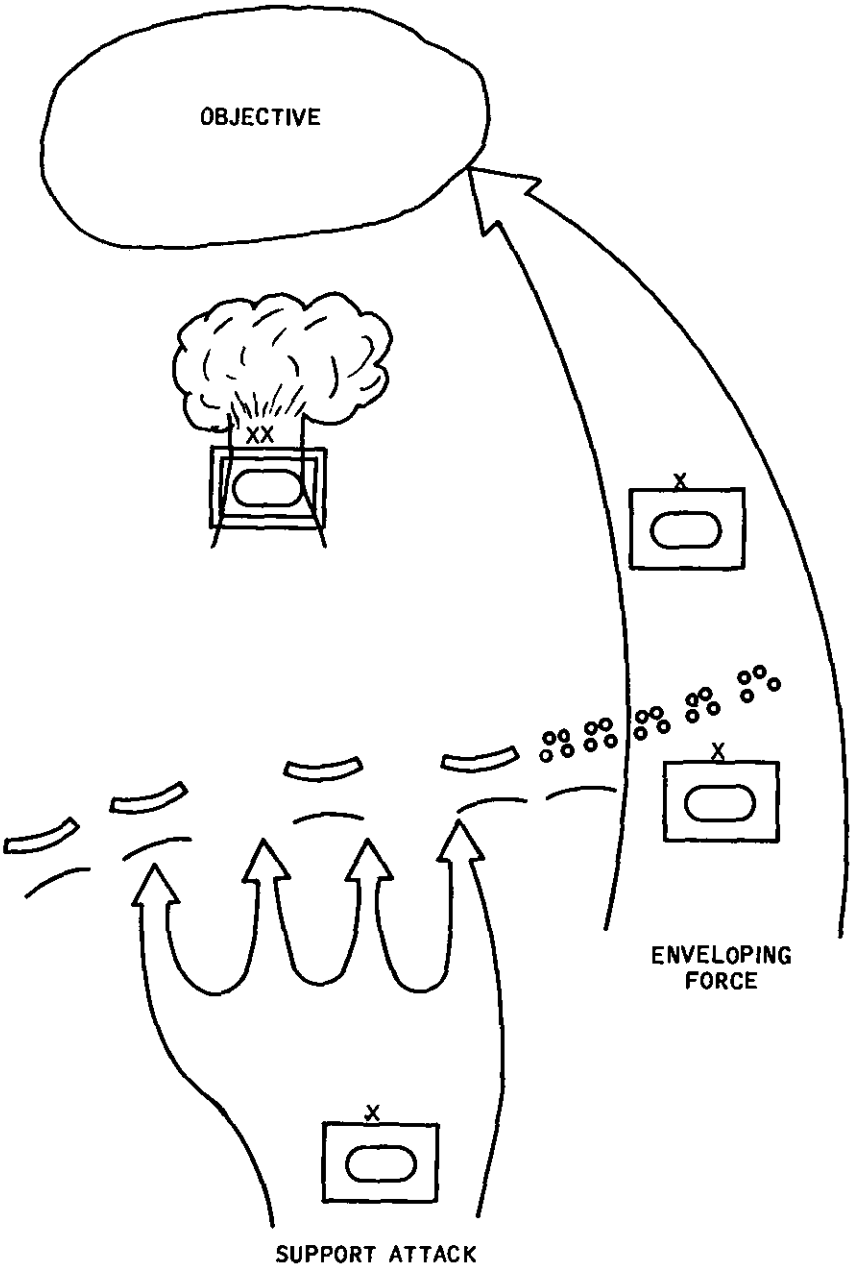

Figure 11. Brigades in an armored division envelopment.

the distinction is largely nominal and of minor importance with respect to execution, which is essentially the same as for the envelopment. However, the brigade as turning force can expect to be beyond supporting distance of any other ground attacking forces. The brigade participating in the turning movement concentrates on driving rapidly to the assigned objective. It is organized for speed and great combat power, with organizational emphasis on tanks. The supporting attack force may be another division brigade. The turning movement capitalizes on the brigade's normal operational characteristics of bypassing or avoiding the enemy when possible. Designated elements follow the force conducting the turning movement, mopping up and consolidating gains. The considerations for selection of brigade formations executing a turning movement are the same as in the exploitation (pars. 29–31).

Section VII. EXPLOITATION

54. General

a. Entrance into the exploitation type of operation can usually be anticipated well in advance by certain indications, i.e., decisive gains made by friendly forces; lessening of enemy resistance, particularly supporting fires; and increase in the number of prisoners captured and amount of equipment abandoned. The transition from the penetration or the envelopment to the exploitation may be gradual, one merging into the other as the attack progresses; or it may occur rapidly because of the employment of nuclear weapons or reserves. After entry into the exploitation, every effort is made to continue the advance without halting, bypassing enemy resistance when possible and using available fire support to the maximum when appropriate targets are presented. Following and supporting units clear the overrun area of pockets of resistance and expand the zone of exploitation.

b. It is in the exploitation that the armored brigade attains full use of its characteristics of armor-protected firepower, shock action, and mobility. The brigade alone or as part of the armored division, and with minimum controls, is able to disrupt enemy rear areas by destroying enemy command posts, communication, logistic installations, and nuclear delivery capabilities. Whenever possible, the brigade should be employed in tactical situations that will permit it to exploit previous success so as to maintain momentum and relentless pressure against crumbling resistance.

c. Army aviation support and tactical air support are highly

desirable in the conduct of the exploitation. When the brigade enters on the exploitation, both Army aviation and tactical air support in the form of column cover should be made available to speed the forward movement of the exploiting forces. Army aviation maintains contact with retreating enemy forces and locates movement of hostile reinforcements. Tactical air support inflicts maximum damage on the retreating enemy.

55. Scheme of Maneuver

The brigade in the exploitation advances on a wide front, the terrain and the road net permitting, retaining only those reserves that are necessary to insure flexibility, momentum, and essential security.

56. Column of Battalion Task Forces in the Exploitation

The column formation has the same advantages and disadvantages in exploitation that it has in the penetration and the envelopment. When forced by the terrain and the enemy situation, the brigade may advance in a column formation in the exploitation. In this formation neither the leading battalion task force nor those following are restricted to the same route within the brigade axis of advance (fig. 12). Generally, use of a column formation in the exploitation unduly emphasizes flexibly and security at the expense of the prime consideration of speed and the placement of maximum firepower forward.

57. Battalion Task Forces Abreast in the Exploitation

a. Two or More Task Forces Abreast Without a Reserve. Under suitable circumstances the formation of two or more task forces abreast without a reserve may be employed. This formation could be used when the situation demands an approach to objectives on as wide a front as possible; for example, in attempting to seize and secure river crossings over a major river. While such a formation lacks flexibility, momentum, and security, it normally is used against sporadic and weakening resistance and when the enemy capability of interfering with major reserves is lacking or can be blocked by means other than the employment of a reserve. In spite of the lack of a constituted reserve, action can be influenced by the effective employment of nuclear fires and the maneuver of combat elements.

b. Two or More Task Forces Abreast With a Reserve. A formation of two or more task forces abreast with a reserve in the exploitation allows the brigade to advance on a reasonably wide

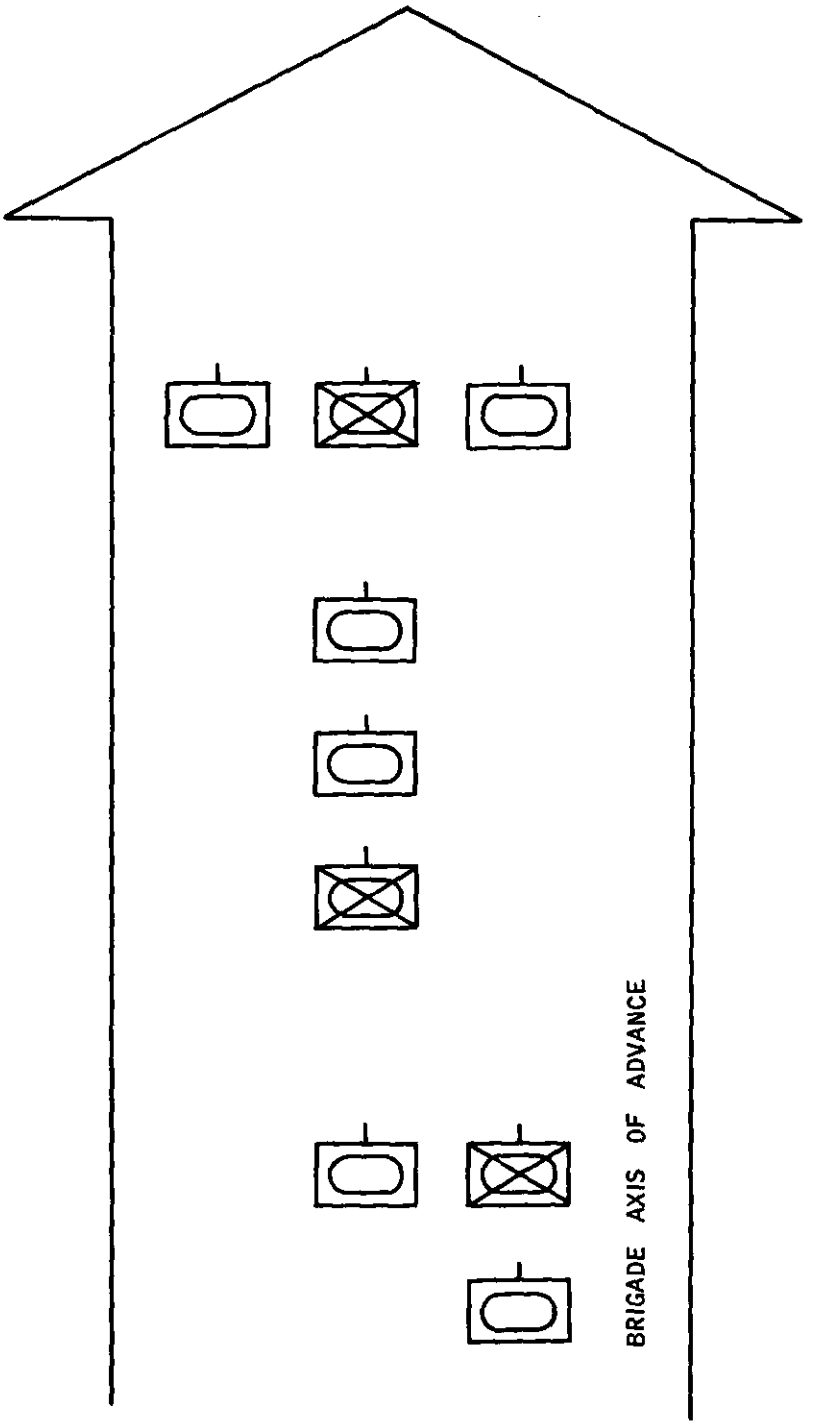

Figure 12. Brigade in column of battalion task forces, battalion task forces deployed.

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front with the bulk of the brigade's direct firepower forward. This formation facilitates the rapid development of soft spots in enemy defenses. While the bulk of the brigade is committed, a battalion task force organized appropriate to its contemplated employment is held in reserve to meet enemy threats, take over the mission, or exploit the success of the attacking elements.

58. Conduct of the Exploitation

a. In the exploitation, the attacking force seeks an objective deep in the enemy rear to cut his lines of communication and disrupt his command and control. The exploitation is pushed as vigorously as possible to arrive at the objective in the shortest time and to secure the objective against enemy efforts to retake it. Maximum use should be made of helicopterborne infantry or airborne forces, if available, to secure key terrain features. Enemy troops encountered are not engaged unless they can interfere with the brigade or cannot be bypassed. The decision to bypass or engage encountered enemy forces rests with the brigade commander, who may delegate authority to do so to the commanders of the battalion task forces. Normally great freedom of action is afforded the brigade commanders in the exploitation. Nuclear weapons may be employed against targets of opportunity and against enemy forces when such forces are in a position to threaten the accomplishment of the mission. The leading elements of the brigade habitually attack from march column to reduce roadblocks and small pockets of resistance and to perform the reconnaissance necessary to develop the situation. Actions are characterized by aggressiveness, prompt use of firepower, and rapid and unhesitating employment of uncommitted units.

b. During the exploitation, a leading brigade clears only as much of the division zone along its axis of advance as is necessary to prevent interference with the brigade advance. When resistance is bypassed, it is reported to the higher commander. When the brigade bypasses one of these centers of resistance, it may be necessary to leave a blocking or containment force to protect the flank nearest the enemy, depending on the condition of the enemy. These forces should be relieved to rejoin the brigade as quickly as possible. This procedure is necessary to preserve the fighting strength of the brigade.

c. See paragraph 22 for discussion of tactics and techniques applicable to attack from march column.

59. Following and Supporting Troops in Exploitation

The initial mission of the following and supporting troops is to

prevent the enemy from closing gaps created in a penetration or to secure key terrain won. As the exploiting brigade advances farther into the enemy rear areas, the following and supporting troops secure lines of communication and supply, support the exploiting elements of the brigade, mop up after the elements of the brigade, destroy pockets of bypassed enemy, and expand the area of exploitation from the brigade axis. The following supporting troops should be mechanized or motorized to keep up with the exploiting force. The following and supporting troops should keep the brigade as unencumbered as possible, therefore, they relieve the brigade as quickly as possible when it has been left to block or contain enemy pockets or protect areas or installations, and permit the armor elements to rejoin the brigade. Elements of the following and supporting troops may be attached to the brigade when necessary to insure unity of command.

60. Pursuit, General

a. The pursuit is the final phase of the exploitation. Its goal is to annihilate the hostile main force. As a successful exploitation develops and the enemy begins to lose his ability to influence the situation, the brigade may be ordered to execute the pursuit. The pursuit differs from the exploitation in that in the exploitation the primary objective of the attack is generally a decisive, deep, physical objective. To seize this objective, the brigade avoids, bypasses, or breaks through enemy resistance, concentrating only upon seizure of the assigned objective. In the pursuit, while the brigade may still point its advance toward a physical objective, the mission is the destruction of the enemy main force.

b. A brigade may be directed to conduct a local pursuit-type operation. It usually operates, however, in a coordinated division effort in the pursuit (fig. 13).

61. Preparation for Pursuit

During the exploitation, the attacking force must be alert to indications that the pursuit phase can be implemented successfully. It must make plans and preparations so that the pursuit can be launched at the opportune time. These plans include the issuance of warning orders, regrouping of reserves in preparation for all-out commitment, and special provisions for logistical support, particularly class III supplies. A great problem of the armored division in pursuit operations is in providing necessary supplies. To insure adequate support, it may be desirable to include additional truck loads of class III and class V in the brigade trains.

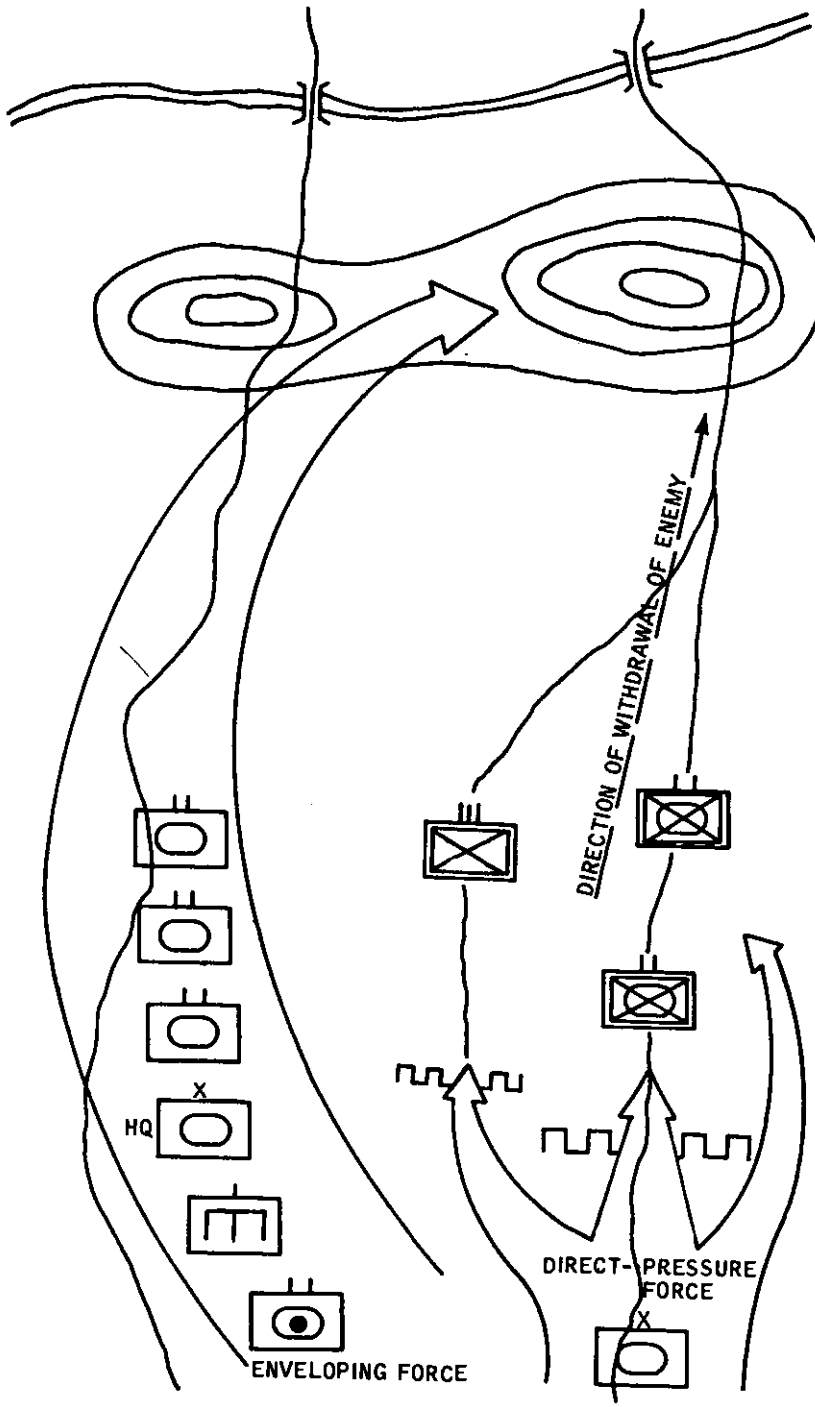

Figure 18. Brigade in pursuit.

62. Launching the Pursuit

When the enemy is having difficulty in maintaining his position, the commander maintains the continuity of the attack and exerts relentless pressure. The pursuit is ordered when the enemy is no longer able to maintain his position and endeavors to escape. At this time, the emphasis of the brigade attack shifts to the destruction of the enemy. Important indications of a weakening enemy are the continued advance in a decisive direction without strong enemy reaction; the capture of critical objectives; the increased number of captured prisoners, abandoned weapons, and unburied dead; the diminution of hostile artillery fire and other hostile countermeasures, or their cessation.

63. Air Support

a. Air support provides significant assistance in the pursuit. Reconnaissance aircraft continuously observe vital points in the enemy's zone of retreat to keep contact with retreating columns, to locate movement of hostile reinforcements, and to keep commanders informed of the hostile activities and movements in their zones of action. This is done by both organic and supporting air vehicles. The air cavalry troop of the armored cavalry squadron is especially effective for this. See FM 17–36 for details of employing the air cavalry troop.

b. Tactical air force support inflicts maximum damage on the retreating enemy. This support concentrates on critical points on the enemy line of withdrawal (especially defiles), on his retreating columns, and on hostile reserves endeavoring to reconstitute the defense.

c. Air transportation may be required to furnish air delivered supplies, particularly class III, to maintain the momentum of the pursuit and to maintain relentless pressure on the enemy.

64. Employment of Nuclear Weapons

Nuclear weapons in the pursuit are used primarily on targets of opportunity. These weapons are employed to eliminate pockets of resistance; destroy hostile reserves; and, with careful planning, to seal off enemy escape routes in critical localities, such as defiles. Conduct of the pursuit should not be slowed for the use of nuclear weapons unless markedly favorable effects will result.

65. Conduct of the Pursuit

a. The pursuit is conducted on as broad a front as possible. Direct pressure against the retreating forces is maintained re-

lentlessly while an encircling force cuts the enemy's lines of retreat. Double envelopment of the retreating main force or its separate elements is attempted whenever conditions permit and the necessary superiority of force is present.

b. The advance in the decisive direction must be maintained. Hostile rear guards or forces on flank positions are not permitted to divert the main force from advancing in the decisive direction. If an attempt to cut the enemy's retreat is unsuccessful, a new encircling force is quickly constituted.

c. When the enemy main force succeeds in establishing itself in a position from which it cannot be dislodged quickly, the commander launches an attack immediately, using forces as they become available and all other available means, including nuclear weapons.

d. The forces engaged in direct pressure and in encircling maneuvers are controlled by the assignment of deep objectives and broad missions, axes of advance, and zones of action. Maximum latitude in initiative is given subordinate commanders. Decentralization of control of fire support and administrative means may be required.

66. Direct-Pressure Force

a. The mission of the direct-pressure force is to attack continuously to prevent enemy disengagement and subsequent reconstitution of his defense and to inflict maximum casualties. The direct-pressure force is constituted to provide relentless attack, day and night.

b. No opportunity is given the enemy to reorganize his forces for defense. Under no circumstances is he allowed to break contact. The leading elements of the direct-pressure force push fast-moving columns along all available roads. They bypass small pockets of resistance. Following and supporting infantry mop up these pockets. During the night, units continue their attack to keep the enemy off balance. The direct-pressure force also attempts, by close envelopments, to cut off the retreat and destroy segments of the enemy when such actions will not jeopardize the force's primary mission of relentless pressure against the retreating enemy forces.

67. The Encircling Force

a. The mission of the encircling force is to block the retreat of the defeated enemy so that he may be destroyed between the direct-pressure and the encircling forces. When means are available,

vertical envelopment may be used with great effectiveness, in conjunction with the armor encircling force, to fix the enemy and cut his escape routes. The encircling force consists of a highly mobile force designed to cut off the retreating enemy.

b. The brigade in the encircling maneuver advances along routes paralleling the enemy's line of retreat, attempting to reach defiles, bridges, and other key points before the enemy main force. When the encircling forces cannot outdistance the enemy, they engage the enemy's main forces on the flank.

Section VIII. COVERING FORCE

68. General

a. When contact has not been made, large forces should be preceded by a covering force operating directly under to main force commander.

b. The purpose of a covering force operation is the early development of the situation, the provision of security for the command, and the prevention of unnecessary delay of the main body. The covering force's missions are broad and may include attacking, seizing and holding key terrain features, or containing large enemy units (fig. 14). See FM 100–5.

c. The brigade may participate in a covering force mission as part of the armored division that in turn is the covering force for a corps. It may be employed also as the division covering force in the conduct of the mobile defense.

69. Control

As the brigade as a covering force will be operating on a broad front, a well-prepared, coordinated operation plan is required. It must reflect centralized, coordinated planning and decentralized operation. Control measures governing the rate and direction are specified. The rate of movement is governed by successive march objectives, checkpoints, and phase lines. The direction of advance may be controlled by the establishment of boundaries between brigades and between battalion task forces. Radio communication provides the immediate means of control at all levels. Army air vehicles may be used to provide auxiliary communication and for liaison and other control purposes between commands.

70. Conduct of Covering Force Action

a. The brigade operates at an extended distance from the main body. It may have up to three task forces abreast.

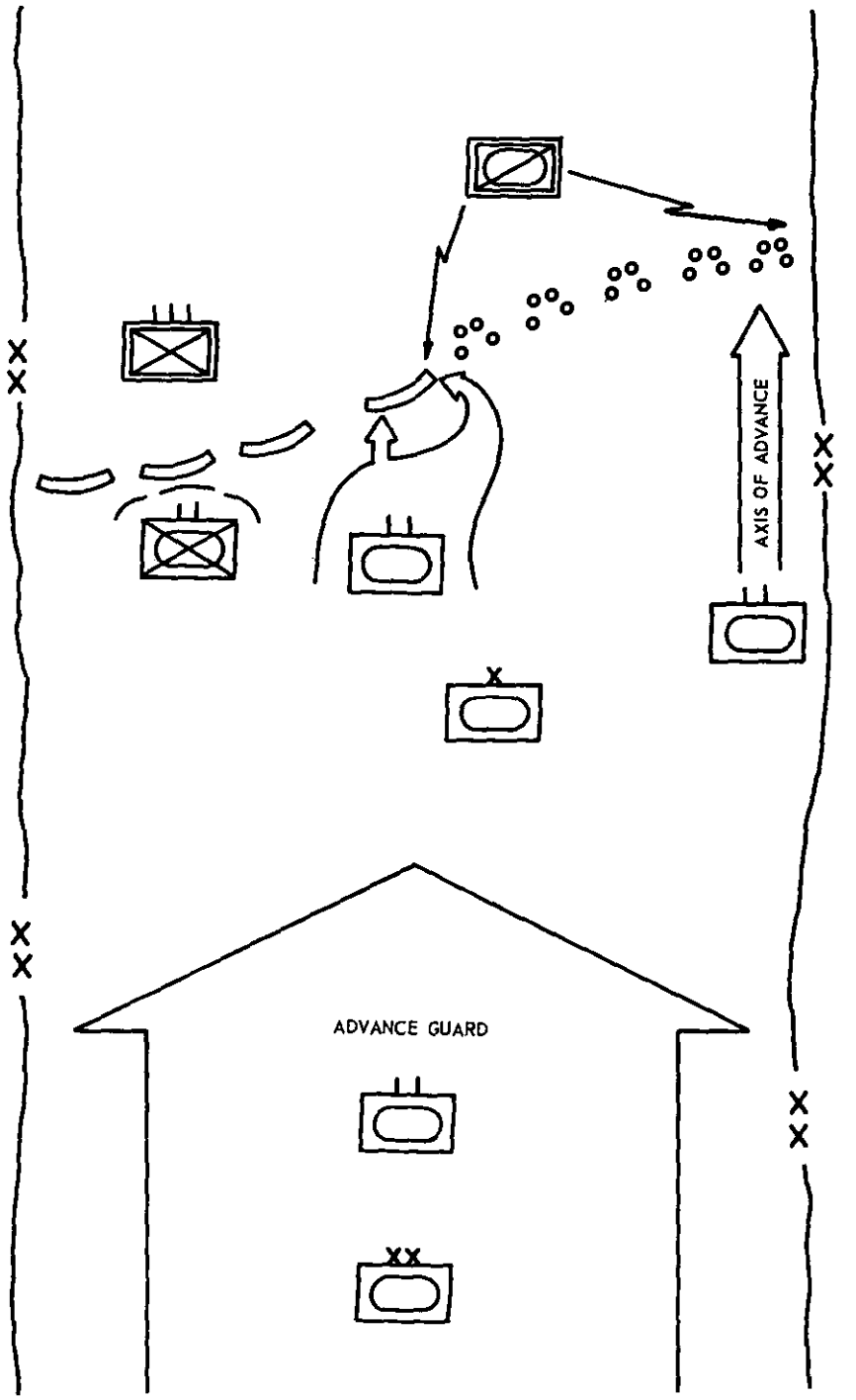

Figure 14. Brigade as armored division covering force, advance to contact.

b. Tank-heavy battalion task forces usually lead the advance. Engineers are kept well forward with the task force. Artillery, including nuclear fire support, is normally attached to the brigade.

c. Small tank-heavy reserves may be maintained both at battalion task force level and at brigade to provide for influencing local actions.

d. Nuclear weapons are used on targets of opportunity to block enemy avenues of approach and to deny him use of key terrain.

e. Covering force actions are characterized by speed and aggressiveness, especially in reconnaissance, by developing situations rapidly with strength, by unhesitating commitment of reserves, and by keeping the enemy off balance. The brigade concentrates its attention against enemy forces that are of sufficient size to threaten the main force. Minor resistance is bypassed. Every action is directed toward insuring the uninterrupted advance of the main body.

f. Covering force operations during defensive and retrograde operations are discussed in pertinent parts of this manual.

CHAPTER 4
DEFENSIVE OPERATIONS

Section I. GENERAL

71. General

a. The armored division and its brigades are designed primarily for offensive action, but they are capable of conducting an effective defense when required. The armored division as a member of the corps may be used initially as a covering force employing delaying action forward of the battle position. After performing this mission, the division, as corps striking force, adds depth to the battlefield and counterattacks as required to destroy enemy forces. The division at all times may be used to cover major likely avenues of approach for enemy armor.

b. The division and the brigades may assume the defense when, as part of a larger force, they are so ordered. See FM 61–100 for specific situations. When operating independently, the armored division or brigade may assume the defense on its own; such occasions may occur when these units are exploiting or pursuing and are attacked by a superior force, or when they have reached assigned objectives and must defend until the remainder of the corps reaches the area.

c. This chapter covers the employment of the armored brigade in defense. The principles set forth in FM 61–100 govern the employment of armored brigades in defense.

72. Doctrine of Defense

Defensive doctrine contemplates the use of security forces to detect the time, direction, and size of an enemy attack and to delay and disorganize the attack; the selection and organization of a forward defensive area to repel or canalize the attacker and force him to mass; and the use of a reserve to eject or a striking force to destroy the attacker by offensive action.

a. Defense on the nuclear battlefield must be predicated on the principle that a defense on a wide front or in great depth will normally require highly mobile forces conducting defense, with a tank-heavy striking force in the counterattack mission. In nuclear war-

fare, these striking forces are positioned and prepared to strike the enemy's flanks and exploit friendly nuclear fires without delay. In nonnuclear warfare, the same principles apply. The application may be less depending on the threat and mobility of the enemy, but constant vigilance must be maintained so that units do not become immobilized, overrun, and defeated in detail. This doctrine envisions capitalizing on mobility, firepower, and offensive action to establish a resilient defense aimed at retaining the defender's initiative; denying the enemy his decisive objectives without the defender himself becoming fixed and destroyed; and ultimately destroying the attacking enemy by fire and maneuver.

b. This doctrine of offensive action to conduct a defense is designed to defend successfully against a well-equipped, mechanized, and numerically superior enemy. The nature of the operation demands adequate maneuver room and mobility. Against a numerically superior enemy, penetrations must be expected. To counter these penetrations, a resilient defense in depth is essential..

c. The prerequisites to successful application of this doctrine are—

(1) Initial retention of a major part of the force as a mobile, tank-heavy striking force.
(2) Adequate and timely intelligence.
(3) Reliable and rapid means of control.
(4) Close timing and careful selection of goals in planning the offensive parts of the operation.
(5) Mobility equal to, or greater than, the enemy's.
(6) Adequate fire support.
(7) Aggressive and able leadership coupled with individual initiative.

73. Types of Defense

The fundamental types of defense are the mobile defense and the area defense. The brigade is capable of conducting the area defense either independently or as part of a larger force. The brigade normally participates in the mobile defense as part of a larger force.

a. In the mobile defense, minimum forces are deployed in the forward defensive area while a strong, mobile striking force is retained to destroy the enemy.

b. In the area defense, emphasis is placed on the retention of specific terrain with sufficient forces disposed in the forward defensive areas to dominate the terrain being defended.

c. For further details on the types of defense, see FM 61–100 and FM 17–1.

74. Defensive Echelons

Defensive echelons are the security area, forward defense area and the reserve or striking force area. The forces employed in these echelons vary in composition and vary their conduct of the defense according to the type of defense in which they are participating. Defensive echelons are discussed in detail in FM 61–100.

75. Basic Considerations of Defense

The following are basic considerations in the planning and conduct of defense. The availability of nuclear weapons to the defender has a significant effect on the emphasis given these considerations.

a. Proper Use of Terrain. The defense uses the terrain to maximum advantage. Military aspects of the terrain must be considered by the defender, so that the enemy is forced to attack on unfavorable terrain or make time-consuming maneuvers to avoid the defending force. The natural defensive strength of the terrain has a direct bearing on the distribution of forces in width and depth. Natural and artificial obstacles are used to increase the defensive strength of the position and to canalize enemy movement. In an analysis of terrain, the following considerations are applied:

(1) Observation and fields of fire.

(2) Concealment and cover.

(3) Obstacles.

(4) Key terrain features.

(5) Avenues of approach.

b. Security. Security is especially important in the defense as the attacker has the initiative as to the time, place, direction, and strength of his attack. The attacker's ability to employ nuclear weapons and the increased dispersion of units on the battlefield require that the defender use all available means for all-round security.

c. Mutual Support. The greater dispersion of units in the defense under nuclear conditions demands that mutual support be considered more in terms of time and space required for the movement of units to assist others under attack than in terms of mutual nonnuclear fires. Tactical localities are selected so that maxi-

mum mutual support can be achieved commensurate with the requirement for adequate dispersion.

d. All-Round Defense. It is essential that units organize for all-round defense to meet an enemy attack from any direction and to prevent the enemy from seizing any position by surprise. The threat of vertical envelopment, air reconnaissance and surveillance, and enemy close support aircraft indicates a requirement for air defense.

e. Defense in Depth. Under nuclear conditions, defense in great depth is essential to prevent enemy exploitation of a successful penetration. Situations will exist when the area being defended is of such width that initial organization in great depth is not possible. In such situations, armor units obtain depth by rapid movement to supplementary positions or areas.

f. Coordinated Fire Plan. Coordinated fires, nuclear and nonnuclear, are the principal means used to defeat an enemy assault in front of the defensive position. Fire plans provide for bringing the enemy under fire as early as practicable, subjecting him to increasingly heavier fires as he approaches the defensive position, supporting spoiling attacks, and supporting the counterattack to destroy him.

g. Coordinated Barrier Plan. Care must be exercised in planning the barrier systems to avoid interfering with the rapid shifting of units, particularly reserves or the striking force. The natural features of the terrain are supplemented by the effective use of planned barrier systems, including minefields, atomic demolition munitions, and other artificial obstacles, and, when authorized, chemical agents.

h. Flexibility. The possession of nuclear weapons, the use of armored vehicles, and extensive communications afford the brigade a great degree of flexibility in the conduct of the defense. Plans for the defense must provide for the rapid shifting of units and fire support as the action develops and the rapid movement of reserves or the striking force to any part of the area. The flexibility of the brigade defense depends on the mental mobility of the commander, rapid staff action, and responsiveness to orders throughout the command.

i. Dispersion. Dispersion between units is one method of minimizing the effects of enemy nuclear attacks. The commander must carefully weigh the requirement of dispersion against the degree of concentration required for a successful defense. Undue dispersion can result in the unit being unable to conduct an effective defense. The brigade, especially in the mobile defense, may use

assembly areas while prepared to occupy positions in the forward defensive area.

j. Maximum Use of Offensive Action. The fluid situations to be expected under nuclear conditions will afford the defender many opportunities to regain the initiative by offensive action. Defending forces must be prepared for rapid transition from the defense to the offense or to destroy attacking forces with nuclear supported counterattacks.

Section II. MOBILE DEFENSE

76. General

(fig. 15)

a. Mobile defense is defense in an area or on a series of positions disposed in width and depth in which maneuver coordinated with the organization of fire and the use of terrain is used *to destroy the enemy.* The mobile defense does not seek to defend terrain as such but is conducted to maintain the integrity of the defending force and to deny to the enemy his decisive attack objectives. The mobile defense makes maximum use of the mobile combat power of armor units; it is an active defense that employs offensive and delaying action, as well as defensive measures, to maintain the offensive capability.

b. In general, the division is the smallest unit capable of providing a sufficiently powerful striking force to permit conduct of a mobile defense. In this connection, the armored division, by virtue of its relatively large tank strength, is better equipped to perform this mission. The counterattack by the striking force is the key to the success of the mobile defense. In the armored division in the mobile defense, the brigade may be employed as the security force, the fixing force (forces in the forward defense area), or the striking force (FM 17–1).

77. Security Forces

Security forces employed by the armored brigade in the mobile defense consist of the covering force, observation posts, listening posts, patrols, and rear area security forces.

a. Brigade as Division Covering Force.

(1) The mission of the covering force is to develop the situation, defeat the enemy if possible, delay and disorganize his advance, and deceive him as to the location of the friendly main force.

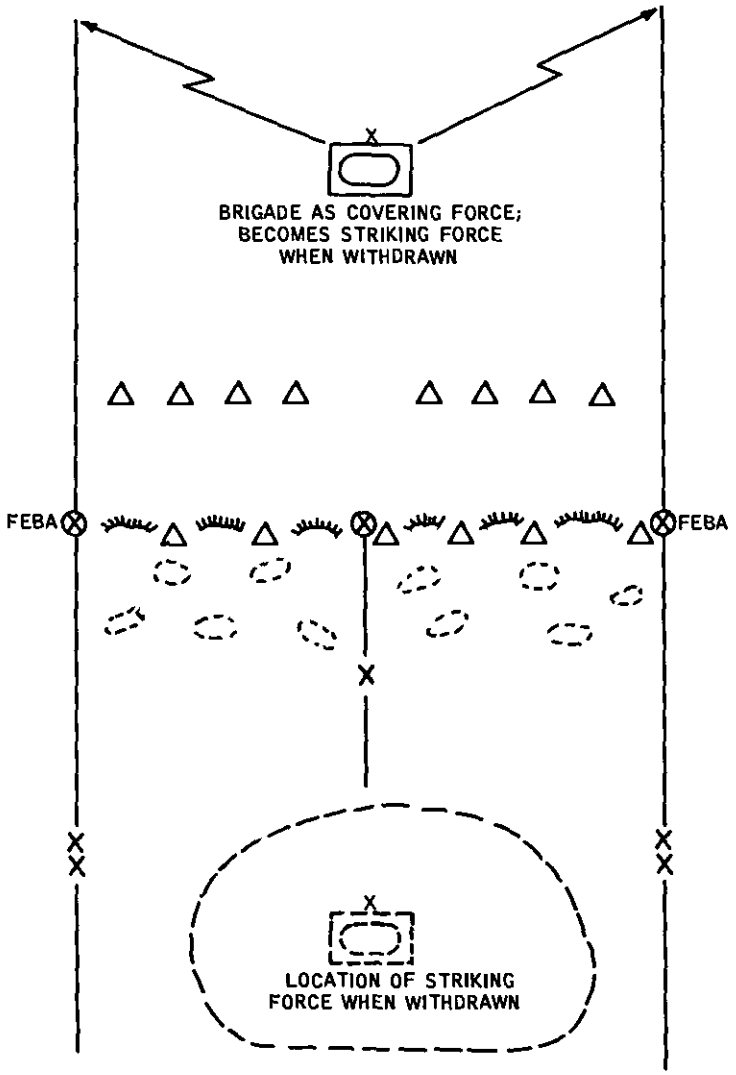

Figure 15. Deployment of brigades in mobile defense.

(2) *Organization.* When the brigade provides the covering force for the division in mobile defense, it is tailored by the attachment of division elements according to mission, enemy situation, terrain and weather, and troops available. The covering force is normally reinforced with artillery, engineers, and Army aviation.

(3) *Deployment.* The covering force is deployed on a broad front with little depth. The armored cavalry squadron or its troops, if attached, may be reinforced with tanks and mechanized infantry, or the tanks and mechanized infantry may be employed as a covering force reserve. Artillery is disposed to provide fire support across the sector at maximum ranges. Engineers assist in preparing delaying positions and maintaining routes of withdrawal.

(4) *Conduct of the covering force.* The armored brigade as a covering force for the armored division, or acting as part of a division covering force, is given the mission of detecting the approach of the enemy, delaying and disorganizing his advance, and deceiving him as to the location of the covered main force. The brigade within its capability will destroy the enemy.

(*a*) As the enemy nears the covering force dispositions he is engaged at long range by nuclear and conventional fires, according to the nature of the targets offered. Fires increase in volume and lethality as the action assumes the character of the delaying action required by the mission.

(*b*) As the covering force action develops, the covering force uses fire and maneuver in a delaying action to slow or halt the enemy, force him to deploy and adopt time-consuming measures to continue the attack, and disorganize his formations as much as possible. Small enemy forces are destroyed within the capabilities of the covering force.

(*c*) The covering force adopts the techniques of delay. It avoids becoming decisively engaged and subjected to defeat in detail. On order from the covering force commander and in accordance with the amount of delay required by the mission, the covering force withdraws by previously reconnoitered routes to successive delaying positions. In the conduct of the delaying action and withdrawal by covered and concealed routes,

the covering force endeavors to deceive the enemy as to the location of the main body and draws the enemy into unfavorable positions where he may be subjected to destruction by the fixing force or the striking force.

(*d*) As the brigade covering force is forced from its final delaying position, it withdraws over predetermined and coordinated routes into the forward defense area, where it may be assigned to the fixing or striking force. On crossing the FEBA, in the absence of other missions, artillery comes under control of division artillery; engineers revert to battalion control and the armored cavalry squadron may be given an economy of force mission or a security mission.

(*e*) As the covering force elements withdraw through the FEBA, the battle is taken up by the fixing force.

(5) *Reporting.* The usefulness of the brigade in its covering force mission is wholly dependent upon keeping the commander of the covered force fully informed. All echelons in the brigade covering force must report all information of the enemy, positive and negative, promptly and accurately to the brigade. Brigade must be equally prompt and accurate in keeping the division commander informed of the progress of the covering force action. All means of communication are used, primarily radio.

b. Forces in the Forward Defensive Area. These forces employ local security (FM 17–1).

78. Fixing Forces

a. General.

(1) Fixing forces are those parts of a command that are located in the forward defensive area of a mobile defense whose mission is to warn of impending attack; delay, disorganize, and inflict maximum destruction upon the enemy; force the enemy to mass by either or both offensive and defensive action; and canalize him into a suitable area for attack by the striking force or nuclear weapons.

(2) Fixing forces accomplish their mission by the establishing of observation and listening posts, occupying and defending blocking positions, limited offensive action, and delaying action. Blocking positions are areas organized for all-round defense by elements varying in size from a company to a battalion task force. They are located

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along the FEBA and in depth, covering enemy avenues of approach into the area. Forces occupying a blocking position do not necessarily hold their initial position, but fight offensive and delaying actions to force the enemy to mass and present a lucrative nuclear target and to afford sufficient time for the employment of the striking force. Forces from blocking positions not engaged may be used to reinforce the efforts of other positions.

b. Planning Considerations. When the brigade is given a fixing force mission in the mobile defense, its commander makes plans and organizes to take full advantage of the terrain. Consequently a thorough reconnaissance is made of the assigned sectors by all commanders. This reconnaissance includes the selection of key terrain features, controlling possible enemy avenues of approach and routes for movement of defending forces between blocking positions and between the striking force area and the forward defensive area. This reconnaissance must be made from the viewpoint of meeting an attack by enemy armor. The brigade commander therefore must visualize the organization of the battle area including the areas to be occupied and the troops required. Concurrently the commander considers the employment of nuclear weapons during the defense and the effect of enemy nuclear weapons on his defense. All available fire support must be planned and integrated into the defense. Nuclear fires, counterattacks, and use of chemical and biological agents and barriers are planned concurrently. Flexibility in fire support planning is important so that all elements of the defending force receive adequate fire support. For further details on defense planning, see FM 17–1, FM 17–15, and FM 61–100.

c. Disposition of Forces. The dispositions employed by the armored brigade in the fixing force will depend on many factors. Among these are the mission, enemy capabilities, nature of the terrain, size of the area to be defended, and troops available. One of several dispositions may be used.

(1) The brigade area may be divided into two battalion task force sectors. In such a case, cross attachments between tank and mechanized infantry units are so made that each contains the forces necessary to conduct the most efficient defense. This will not necessarily result in balanced forces in each battalion task force. For example, the terrain in one task force sector may be defended more effectively with additional tanks. Generally all such battalion task forces will be infantry heavy but

one may have more tanks than another. Because of the requirement for maximum strength in the striking force, the fixing force commander will normally be allocated only minimum forces, and only through judicious distribution of his forces will be able to hold a small reserve. Such a reserve may be required to add depth to the defense of a particularly key terrain feature. This reserve may be employed also to strengthen blocking positions under attack and threatened with capture or destruction, to restore a lost position, or to block while the striking force counterattacks (fig. 16).

(2) Terrain considerations, such as a barrier through the area to be defended, which precludes the rapid employment of the striking force on the far side of the barrier, may dictate the establishment of a larger reserve in the brigade sector. In this case the brigade commander must be allocated sufficient forces to establish a reserve of adequate strength to permit counterattacks or blocking of penetrations.

d. Organization for Combat.

(1) The division commander assigns tank and mechanized infantry elements to the brigade in the proportion best suited for the mission. Generally, the brigade will be infantry heavy in the forward defensive area. The brigade reserve (if any) is as tank heavy as possible. Battalion task forces will be organized to defend blocking positions in designated sectors. See FM 17–1.

(2) Engineer elements may be attached to the brigade when centralized control is difficult because of the size of the area involved. Engineer elements attached to the brigade usually are kept under brigade control, not attached to the battalion task forces.

(3) Centralized control of artillery is desirable to provide flexibility in shifting and massing fires to meet a threat from any direction. If the area is too large to permit the massing of fires, artillery battalions may be attached to the brigade occupying the forward defensive area.

e. Preparation of the Ground. The effectiveness of the armored brigade in the mobile defense depends upon its ability to maneuver subordinate elements rapidly and to bring its massed firepower to bear against the enemy. The preparation of counterattack routes within and forward of the defensive area and routes between successive positions, together with the improvement of fields of

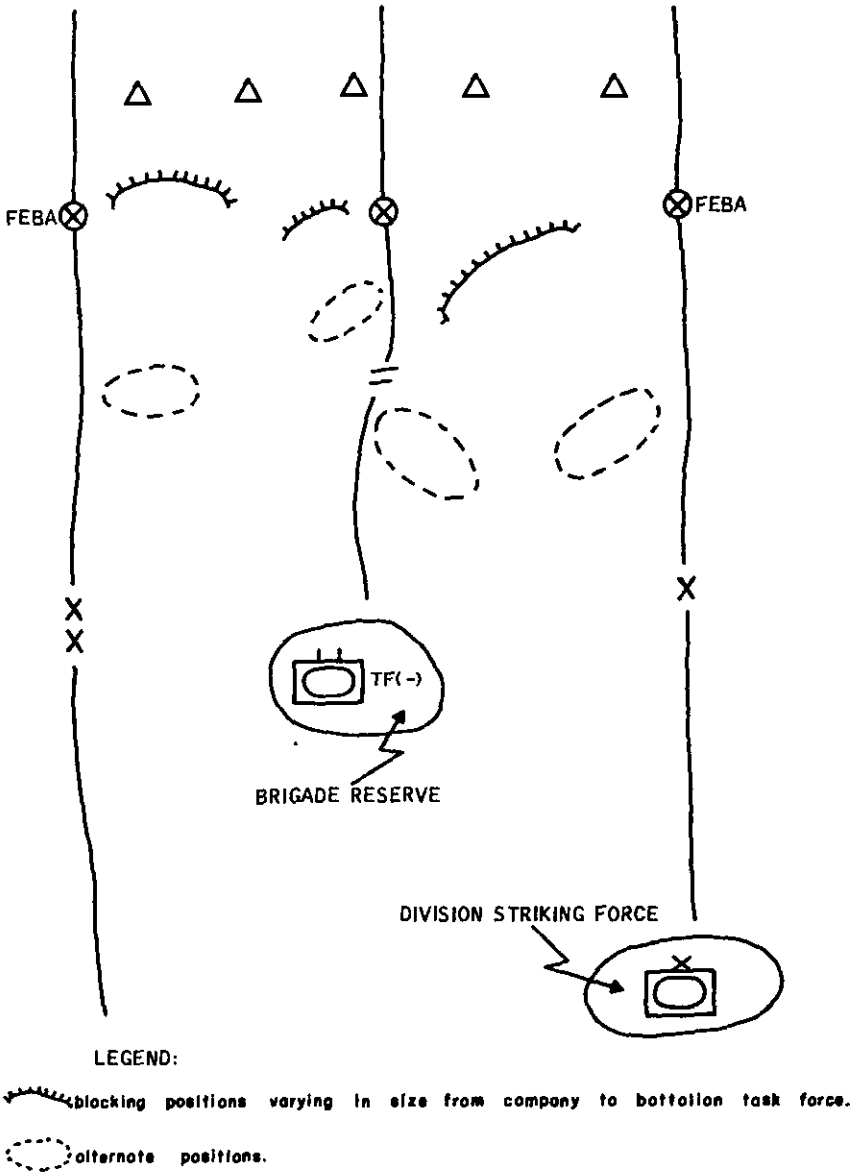

Figure 16. Brigade in the fixing force with a small reserve.

fire, assume high priority. Defensive positions are strengthened by the construction of obstacles and minefields, however, care must be taken that no obstacles or minefields are constructed that will interfere with the free movement of the striking force or fixing

forces. When authorized, chemical agents may be used to protect flanks or deny critical areas to the enemy.

f. Combat Support. The employment of combat support units and provisions of administrative support are discussed in FM 61–100.

g. Conduct of the Fixing Force.

(1) Depending on the specific mission assigned by the commander, the fixing force, when warned by the security forces, prepares to stop or slow the enemy attack. The mass of fires available to these forces is concentrated on the enemy to disorganize and stop his attack, and to force him to mass.

(2) The brigade commander may move troops from blocking positions not affected by the attack to strengthen those under attack. The division commander must be informed promptly of such action. The defense plan may contain the provision that forces occupying certain blocking positions, when attacked be permitted to withdraw to alternate positions to permit more efficient application of a planned counterattack. Forces occupying blocking positions under attack must give the striking force sufficient time to launch its counterattack (par. 79). Forces occupying blocking positions may be directed to hold a position to force the enemy to mass and provide a lucrative nuclear target.

(3) Reserves held locally at the brigade level may be employed to reinforce blocking positions, occupy other positions, or conduct limited-objective counterattacks.

79. Striking Force

a. General.

(1) The striking force is the tank-heavy part of a command conducting a mobile defense that is organized to destroy the enemy by offensive action in front of, within, or behind the forward defensive area. The striking force must be prepared to conduct a counterattack whenever the enemy presents a target. Ideally, the striking force is employed after a nuclear strike against a massed, enemy force forward of the FEBA.

(2) The striking force is located for rapid movement to any part of the defensive area. Elements of the striking force, such as battalion task forces, are located in dis-

persed positions to minimize the effects of enemy nuclear weapons, but must be capable of assemblying rapidly for the counterattack (fig. 17). Elements of the striking force may be required to occupy blocking positions to assist in establishing conditions favorable to the decisive attack of the bulk of the striking force.

(3) The striking force commander prepares detailed counterattack plans based on division guidance and in accordance with priorities established by the division commander. Depending on the time available, detailed reconnaissance of routes and areas of the counterattack will be made by subordinate commanders, and rehearsals will be conducted by at least the key personnel of the striking force. Fire plans are prepared to support each counterattack plan.

b. Planning Considerations.

(1) The counterattack by the striking force is the key to the success of the mobile defense. A separate plan is made to destroy a major penetration by the enemy along each principal avenue of approach into the defended area. Planning guidance for the striking force is provided by division as soon as the requirement for the mobile defense is known. This guidance will generally consist of at least an indication of the area of anticipated enemy penetration and the priority of preparation of plans for each anticipated need. Detailed plans, including as a minimum the line of departure, objective, and axis of advance or direction of attack as appropriate, are developed by the brigade headquarters designated to command the striking force.

(2) Priority is established for the preparation of these plans depending on the effect each penetration will have on the division mission, considering the terrain, enemy capabilities, and disposition and strength of friendly forces. Each plan will include preparatory orders to the striking force to cover the eventuality of minor penetrations in other logical avenues of approach that may occur simultaneously with a major penetration. This planning is required so that minimum time will elapse between the decision to launch the counterattack and the actual execution by the striking force. Detailed fire support plans are prepared for each counterattack plan. Nuclear fires are planned for each likely area of enemy attack in front

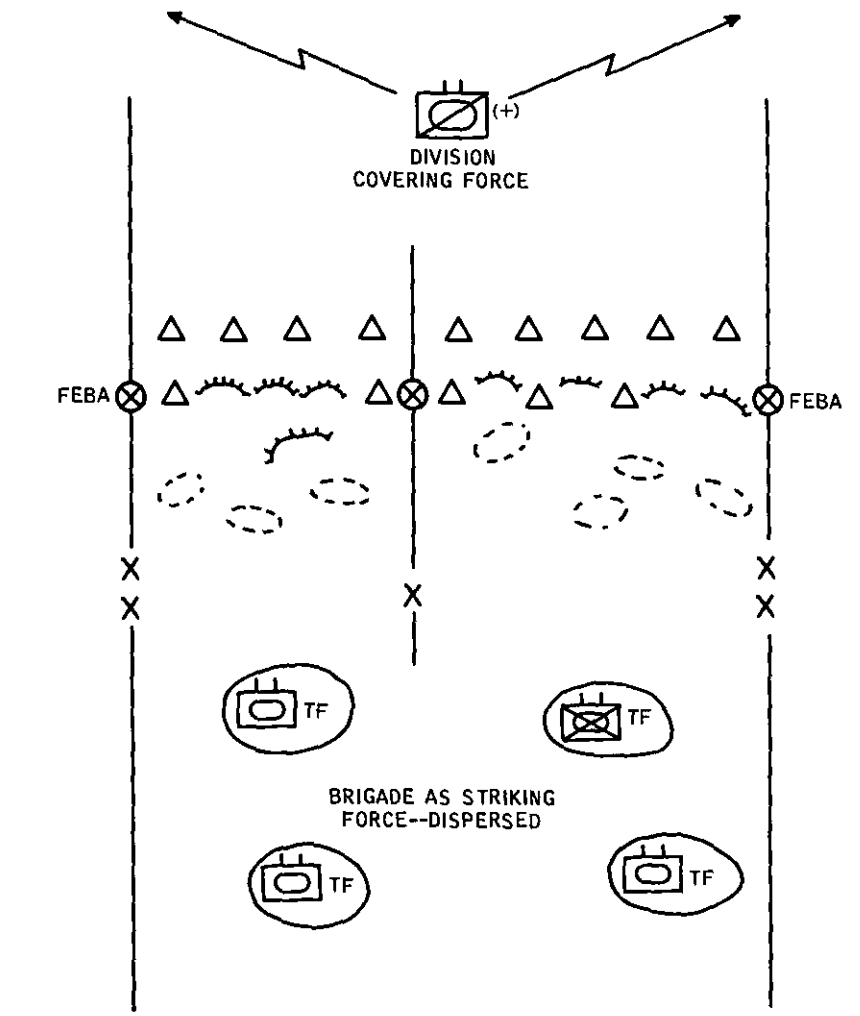

Figure 17. Brigade in mobile defense as the striking force, with task forces in dispersed assembly areas.

of or in the battle area. Such fires are closely coordinated with the scheme of maneuver. Counterattack plans must be disseminated to all lower echelons in sufficient time to permit a thorough study and detailed reconnaissance by subordinate commanders. Plans must include furnishing the striking force with all enemy information as it becomes available.

c. Organization.

(1) Priority of combat power is given to the striking force when the division is organizing for combat. This means that the brigade organization for the striking force will be developed at the expense of the fixing force, if necessary. The brigade as a striking force will be organized with a major share of the division's tank elements, depending on the mission, enemy situation, terrain, and troops available. Mechanized infantry elements are provided as required. Initially, not all striking force elements may be physically present in the striking force assembly area. Some may be employed initially in the security force or in the forward defensive area. Artillery support will normally be retained under division control. When the striking force is committed designated artillery is attached to or placed in direct support of the brigade. Engineer support is attached or may be designated, but retained under engineer battalion control until the striking force is committed, at which time it is attached to the brigade.

(2) In any case, the striking force when committed is a powerful tank-heavy formation supported by mechanized infantry, artillery, engineers, other tactical support elements as needed, and necessary administrative elements. The striking force is organized to provide decisive combat power which, with the employment of nuclear weapons, is capable of successfully reducing a superior enemy.

d. Formations. Considerations lending to a determination of the formations to be employed include the mission, terrain, amount of maneuver room, disposition of friendly and enemy forces at the time the counterattack is launched, size and composition of the striking force, and the restrictions imposed by control measures. Ordinarily, the striking force will attack on a narrow front with maximum depth to the formation to maintain the momentum of the attack. The same considerations governing the formations for the offense apply to the striking force (pars. 29–31).

e. Conduct of the Striking Force.

(1) When the division commander is reasonably assured that the fixing force conducting the defense of the blocking positions from primary, alternate, or supplementary (or switch) positions is capable of accomplishing its mission without further reinforcement, he commits his striking force in a major counterattack. The goal is destruction of the enemy, not restoration of the position. The striking force concentrates on destroying the enemy, his command echelons, major fire support units, and administrative support. Surprise, boldness, rapidity, and violence are the principal characteristics of the successful counterattack. Counterattacks are supported by the maximum fires, nuclear and nonnuclear, within the respective ranges of all available weapons.

(2) The counterattack normally is launched against a limited objective and is not limited to the area being defended. Ideally, the attack strikes the enemy forward of the FEBA after the fixing forces have forced him to mass. The objectives selected for the counterattack are oriented on identifiable key terrain features. Seizure of these designated objectives should achieve the goal stated above. The terrain features identified as objectives will indicate the nature of the counterattack (fig. 18). The objectives, as discussed, are only coincidentally related to the positions previously occupied as strong points on the FEBA. The seizure of terrain designed to restore the FEBA is not valid as an objective except so far as retaking such positions will contribute to the destruction of the enemy. As a rule, the counterattack stays within range of supporting artillery. If the situation and time permit, however, the artillery may move to alternate or supplementary positions according to previously prepared plans, which may be altered to meet the specific situation. If possible, the counterattack is launched before the enemy has had a chance to gain the momentum of attack. Thus, if information indicates that the enemy is assemblying for attack, and if the conditions are favorable, the counterattack may be launched against his attack position. The limitations on the depth of the counterattack do not prevent the counterattacking force from seeking opportunities to destroy enemy reserves and supporting weapons. Counterattacks supported by

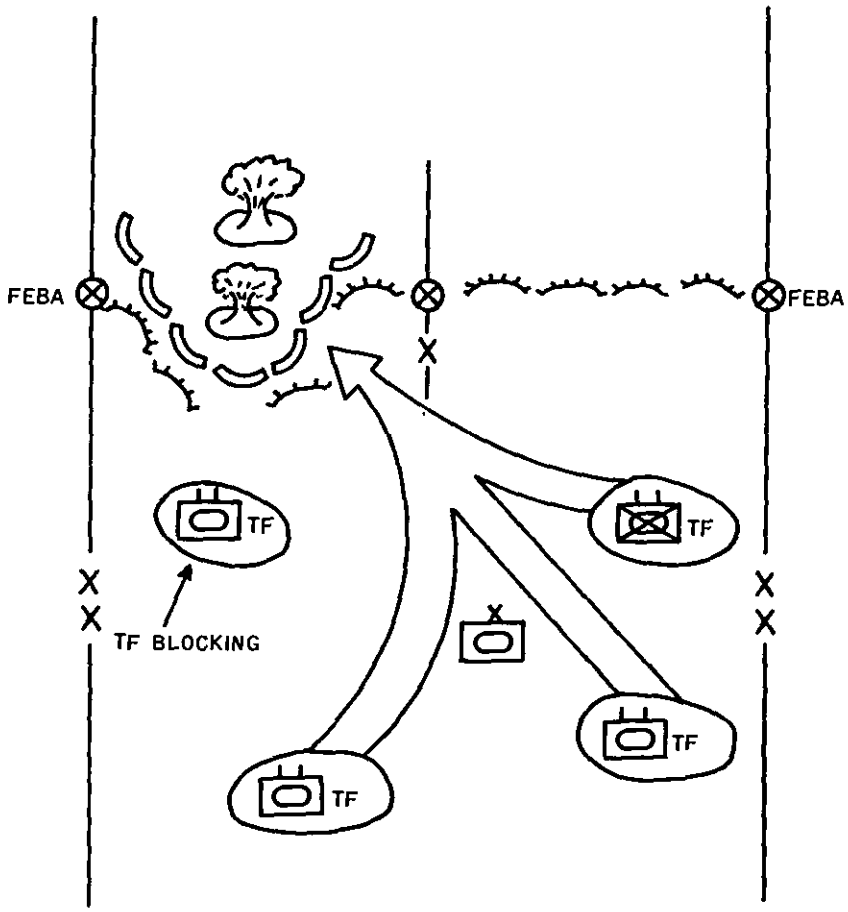

Figure 18. Counterattack by brigade striking force.

nuclear weapons against enemy penetrations in the battle area must be carefully coordinated to avoid friendly troop casualties from nuclear weapons.

(3) The striking force is normally committed as a whole to strike a decisive blow. Piecemeal commitment of this

force is avoided. When the situation favors the commitment of the striking force to destroy a threat against the defensive position, the striking force commander is given the appropriate mission and the necessary means with which to accomplish it.

(4) In the event the enemy succeeds in effecting multiple penetrations into the division area it may be necessary to deal with these penetrations simultaneously. In such cases, the major threat should be determined and the striking force committed to destroy this threat. To contain secondary threats, it may be necessary to detach a portion of the striking force and attach it to another element of the command, or to allocate nuclear weapons, or a combination of both, to assist in containing secondary threats. This reapportionment of the forces to deal with multiple penetrations is not considered piecemeal commitment.

Section III. AREA DEFENSE

80. General

The armored division brigade will establish an area defense when specifically ordered to do so or when conditions of terrain or mission require this type of defense.

81. Security Forces

The security forces employed in the area defense are the same as those used for the mobile defense (par. 77). However, if the armored division is employed in the corps forward defensive area, the brigade acting as the division security force will coordinate actions with the flanking divisions.

82. Forces in the Forward Defensive Area

a. General. The forces in the battle area are charged with the immediate defense of the forward defensive area. They organize a series of defensive areas; these areas should provide good observation and natural defensive strength. Each defensive area is organized into a number of strong points; forces in these strong points should be mutually supporting by fire, disposed irregularly in width and depth, and organized for their own all-round defense. Defensive areas are distributed in depth so as to provide mutual support, to limit enemy penetrations of forward areas, to diminish

the effect of hostile fire, to provide continuity to the defense, and to establish bases from which counterattacks can be launched.

b. Planning Considerations. Planning considerations are the same as for the mobile defense.

c. Distribution of Forces. The brigade commander makes a reconnaissance of the terrain to determine the likely avenues of enemy approach, and selects critical terrain that must be held. The commander then designates defensive areas. Boundaries are established between major subordinate units; these boundaries are extended to the front to the limit of supporting weapons, and to the rear to include the subordinate reserve location. The intervals between defensive areas are covered by fire and obstacles. Fires are coordinated between adjacent units by establishing coordinating points along the boundaries.

d. Organization for Combat. In the area defense, the brigade commander weighs the factors of mission, terrain, and enemy and own situation and assigns tank and mechanized infantry elements in the proportion needed. Generally, the bulk of the mechanized infantry occupies strong points; while the majority of the tanks are held in brigade reserve. Cross attachment should be such that battalion task forces may, terrain permitting, employ a tank-heavy team to cover an avenue of approach which is open and which provides long-range fields of fire, or to hold a tank-heavy team as the reserve. Forces on the FEBA are given priority in the brigade organization, but the brigade reserve is strong in tanks. Engineer and artillery units, if attached, are employed as in the mobile defense.

e. Preparation of the Ground. Sectors of responsibility are assigned to subordinate elements, so that an enemy avenue of approach and the key terrain features which control it are assigned to a single element. This results in unity of command for the defense of such critical localities. Boundaries which designate these sectors are located so that there is no question of responsibility. The defensive qualities of the terrain are improved to the fullest extent possible with the men, weapons, materials, and time available. This may include the laying of mines and tactical wire; erection of artificial obstacles; setting up command and observation posts and shelters for troops; designation of alternate positions for weapons; construction of dummy emplacements; improvement of camouflage, fields of fire, and observation; and protection of supply installations.

f. Conduct of Defense. The area defense envisions maintaining the integrity of the FEBA by the integrated organization of the

ground and by holding it. After security forces are driven in by the enemy, they are assigned other missions in the overall defense. The mission of units on the FEBA is to stop the enemy at that point and allow no penetration. This is accomplished by utilizing the fire of all units and supporting fires from all available artillery. Prearranged fires include nuclear as well as nonnuclear artillery concentrations. If the enemy succeeds in making a penetration of the FEBA by overrunning, destroying by nuclear fires, or bypassing an organized locality, his progress is blocked by other localities organized in depth or by the employment of local reserves. When the penetration has been stopped, slowed, or disorganized, it is reduced by the counterattack of the brigade reserve, which seeks to cut off the enemy troops and restore the FEBA. Forward positions are vacated only on approval of higher headquarters. Since the FEBA is strongly held in the area defense, counterattack plans must include detailed instructions to cover the containment of an enemy penetration prior to launching the counterattack. These plans must visualize the action of reserves at lower echelons, such as reserve platoons of company teams and battalion task forces. These units have the initial mission of containing an enemy penetration before any one of them is committed to a local counterattack. As a result, these units usually act as containing forces and a base of fire while the division reserve executes the counterattack. In the area defense, the counterattack is planned and executed according to the principles employed in the counterattack in the mobile defense. The purpose of the counterattack is to destroy the enemy and restore the position. The conduct of the defense must be aggressive; therefore, the counterattack is a decisive element of defensive combat. The conduct of the counterattack follows the same principles and procedures as in the mobile defense. However, in the area defense, the counterattack will usually be executed within the forward defensive area to reduce an enemy penetration.

83. Brigade as Division Reserve, Area Defense

a. General. While forces in the forward defensive area will receive priority of combat power, the reserve brigade of the armored division in the area defense will be strong in tanks.

b. Location. The reserve is positioned so that it can execute counterattack plans and contain penetrations from the front or flanks. The reserve insures the continuity of the defense by counterattacking enemy penetrations, by reinforcing forward elements, or by executing blocking missions.

c. Conduct of Reserve, Area Defense. Considerations involved in selecting the exact time and place for the counterattack are similar to those which apply to the mobile defense. The counterattack is launched preferably when the enemy has been stopped, slowed, or disorganized and before he is able to consolidate gains and reorganize his forces; however, these must not be considered essential criteria. Once launched, the counterattack is provided all possible support to insure success.

Section IV. OTHER CONSIDERATIONS IN DEFENSE

84. General

There will be a constant threat of enemy armor, airborne, guerrilla, or infiltration actions within the brigade area on the future battlefield, and plans must be prepared to counter such threat regardless of the brigade's mission or status. Effective security in the brigade area requires planning. Enemy action may be designed primarily to harass the brigade forces and reduce their combat capability. If the threat is of sufficient size, it may endanger the brigade's mission to the point where the bulk of the brigade's forces must be employed to counter the threat.

85. Defense Against Armor

a. The brigade must plan to cover these enemy avenues of armor approach regardless of the brigade's tactical situation. Normally the brigade will have a significant enemy armor-defeating capability. Dispositions of forces must be in depth to be useful against an enemy force attacking with significant tank power.

b. When practicable, enemy armor attacks are broken up before they begin. Armor units are most vulnerable in attack positions and assembly areas.

c. Maximum use is made of obstacles in defense against armor. In the brigade, construction of obstacles such as minefields is generally avoided as they tend to impede the offensive capabilities of the friendly armor units. However, when minefields are laid and other obstacles are installed, careful coordination of their nature and location is made with the planned employment of the brigade to be sure the obstacles hinder the enemy without denying freedom of movement of friendly armor units. Atomic demolition munitions (ADM) provide an area obstacle when executed; however, they will not restrict friendly movement before execution.

86. Air Defense

a. In the brigade, active and passive air defense measures are employed against enemy air attack. Principal passive defensive measures include camouflage, cover, and concealment. Active defensive measures are normally used when attacking aircraft are positively identified or the brigade itself is under enemy air attack.

b. Organic air defense means in the brigade are limited to crew-served or man-transportable weapons. The brigade will control the operation and employment of attached air defense elements. Additional field army, corps, or division air defense elements may be located in the brigade area.

87. Defense Against Infiltration

a. In the concept of widely dispersed forces on the nuclear battlefield, defense against infiltration becomes a major problem. Infiltration will be used by the enemy to move behind forward area forces to harass and destroy small units and interrupt and disorganize communication and administrative support. While the enemy may attempt to develop large-scale infiltrations into major attacks, the principal threat to the brigade is the disruption of administrative support by small forces that will diminish delay, or negate the brigade's combat capability.

b. Defense against the enemy's infiltration must rely upon aggressive use of patrols, air and ground reconnaissance, surveillance devices, and a warning system. Observation posts and listening posts must be disposed and connected by patrols to cover gaps between units and promptly alert designated units to cope with the threat.

c. When the danger of large-scale infiltration exists, the brigade must plan for and provide a mobile force of company team size or larger to eliminate the threat.

88. Defense Against Guerrillas

a. Guerrilla activities are generally carried out by small lightly armed irregular or partisan forces. Such forces normally operate by stealth using hit and run tactics designed to destroy soft targets in the tactical forces rear areas, disrupt communication and administrative support and harass and annoy. While they rarely attack to destroy heavily armored units, guerrilla attack directed at the vulnerable parts of the armor brigade must be guarded against. Defensive measures include the establishment of observa-

tion posts and listening posts connected by communication and patrols, thorough initial reconnaissance of the brigade area, protection or administrative support echelons and all-round security of the brigade area.

b. On occasion when a guerrilla force of significant size is known to exist in the armored division area, a brigade may be assigned the mission to locate and destroy it. When assigned such a misson, the brigade will be usually a lightweight organization predominantly organized around mechanized infantry with a substantial amount of armored cavalry elements, light artillery, engineer, and Army aviation.

c. Every effort is made to determine from native sources all the information possible of the guerrilla force pertaining to leadership, personalities, size and condition of force, locations of the guerrilla forces, its equipment and morale.

d. Army aviation is of particular use in locating guerrilla hideaways in areas not readily accessible by ground vehicles. When discovered, ground attack elements must be employed rapidly making full use of mobility, so far as the terrain permits, to prevent the guerrillas from getting away. Army aviation is particularly useful in difficult terrain in adjusting artillery fires when ground assault elements cannot be employed in time.

e. Systematic search of large areas for guerrilla forces is not usually feasible since the systematic nature of the effort will betray itself to the hunted force. The guerrillas then will probably have time to evade the search. For this reason, counterguerrilla offense must rely heavily on information for specific location of guerrillas, stealth in the approach to the guerrilla force and speed and complete surprise in the attack.

f. Offensive actions against guerrillas are discussed in paragraphs 68 through 70.

g. See FM 31–15 and FM 31–21.

Section V. REAR AREA SECURITY

89. General

Implementation of the rear area security plan in the armored division rests with the support command commander, hence the brigade, except for its own area security, will not normally be given a rear area security mission. When the armored division is in corps or army reserve, however, the division may appropriately be assigned the whole or part of a rear area security mission. As

a major subordinate command, the brigade will normally be assigned a sector in the division's area of responsibility or it may be held in reserve.

90. Planning

a. The rear area security mission for the brigade as part of the division, when the division is assigned an area security mission for a corps or field army, will be assigned according to a geographical area of responsibility. Depending on the troops available, the brigade may suballocate sectors to subordinate commands. The brigade commander and key members of his staff and subordinate commanders and their staffs reconnoiter assigned areas of responsibility to determine—

(1) Key terrain.
(2) Critical rear area installations.
(3) Extent and condition of the road net.
(4) Airborne assault drop and landing zones.
(5) Assembly areas for brigade forces.

The brigade and subordinate commanders and staffs familiarize themselves with guerrilla capabilities and enemy airborne assault capabilities. Brigade forces are disposed and oriented to these two types of major threat to rear area security.

b. Based on his reconnaissance and study of the enemy and guerrilla capabilities together with a consideration of troops available and the mission, the brigade commander develops his plan.

91. Organization for Combat

a. The brigade normally will be given units for rear area security mission that will provide a light, fast-moving force with adequate firepower. The brigade will be organized into a combined arms team of balanced or mechanized infantry-heavy task forces. To these may be added an armored cavalry troop, an engineer company, a light artillery battalion, an augmentation to the brigade aviation platoon of observation aircraft, and necessary administrative support elements. When the brigade suballocates its area of responsibility, the subareas will be secured on a battalion task force basis.

b. Usually division will retain a reserve organized around a tank-heavy battalion task force. When division does not hold a reserve, brigade presumably will have sufficient forces attached to retain at least a company-size team, predominantly of tanks,

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for use in areas where additional forces are required to meet the threat. Sufficient forces will not normally be available in the battalion task force to form reserves.

c. Army aviation will normally be retained under brigade control.

d. Engineer support will normally be employed by brigade to assist task forces according to priorities of effort established by brigade. Concentration of engineer effort will normally be on road and bridge maintenance and construction of obstacles.

92. Deployment

Deployment of forces will be oriented toward areas vulnerable to enemy airborne assault and guerrilla attack. Normally the major elements of the brigade will be sited to protect critical rear installations. A system of observation posts will be established throughout the area to maintain observation over usable airborne drop and landing zones identified in the initial reconnaissance. Reserves are centrally located with respect to the vulnerable areas that are subject to airborne or guerrilla attack, and are prepared for rapid employment in any direction. Army aviation elements maintain air patrols between ground dispositions, and systematically, although not regularly scheduled, conduct aerial reconnaissance missions over the brigade areas of responsibility. Ground elements establish a similar patrol system between OP's, LP's, and major concentrations of forces. Ground elements also secure communication centers in the area to deny their use to guerrilla forces.

93. Conduct of the Defense

a. Successful defense of the rear area is contingent upon the early warning furnished by observation and listening posts, and other security dispositions throughout the area. The security elements, after promptly reporting the existence of an enemy threat, engage the enemy. Successful defense against an airborne assault is based upon prompt reinforcement of the security elements in contact by all available means. Every effort is made to attack and reduce the airborne assault in the earliest stages of the drop and landing operations, when the airborne forces are most vulnerable. Reinforcements are briefed en route by radio or immediately on arriving on the scene. As soon as each force is familiarized with the situation, it is committed promptly in a decisive direction to eliminate the threat. Coordinated plans are developed when reinforcements have arrived in such numbers as to require a preplanned attack against the threat.

b. In the case of guerrilla attack, initial protection of the installation relies upon local security. On receipt of information of the guerrilla attack, the commander in whose area the attack occurs moves reserves or requests assistance from higher headquarters to cope with the threat. Attacks must frequently be executed from march column to preclude guerrilla escape (par. 83).

94. Communication

An effective and reliable network of communication is essential to the success of the rear area security mission. Primary reliance is placed on radio. Tactical wire or indigenous systems may be used as necessary. The communication system used must be such that it meets the requirements for rapid, reliable, and secure transmission of early warning of a hostile threat. Alternate means are provided.

95. Routes of Communication

The brigade protects routes of communication throughout its area of responsibility as described in FM 17–36. The brigade may also be called upon to provide a tactical escort through those portions of its area where recurring hostile action threatens. Armed escorts should be only of that size and composition essential to the mission and will not usually include medium tanks. Armored cavalry elements and mechanized infantry are usually adequate. Additional protection during periods of reasonable visibility may be gained from using Army aviation to reconnoiter unprotected routes of communication.

96. Area Damage Control

When it is employed on a rear area security mission, the brigade must be prepared to participate in the area damage control function. For a discussion of area damage control, see FM 61–100.

CHAPTER 5
RETROGRADE OPERATIONS

Section I. GENERAL

97. General

a. A retrograde operation is any movement of a command to the rear or away from the enemy. Retrograde operations may be voluntary or be forced by enemy action. An aggressively executed retrograde operation provides opportunities for inflicting heavy damage to enemy troops and materiel. The force conducting the retrograde operation employs a combination of nonnuclear and nuclear weapons and violently executed counterattacks to achieve these results. Such a force must be prepared to resume the offensive should nuclear or other attacks create a favorable balance of combat power.

b. The armored brigade, because of its characteristics, is capable of inflicting substantial delay and damage to the enemy while conducting a retrograde operation.

c. The armored brigade may be required to conduct retrograde operations as an independent force or as part of a division.

98. Types of Retrograde Operations

Retrograde operations are classified, by type, as withdrawal, retirement, and delaying action.

99. Purpose and Basic Considerations

For discussion of the purpose and basic considerations pertaining to retrograde operations, see FM 61–100.

Section II. WITHDRAWAL

100. General

a. A withdrawal is an operation in which all or part of a deployed force disengages from the enemy by a planned, orderly movement to the rear. The purpose of a withdrawal is to preserve or regain freedom of action or to draw the enemy into an unfavorable situation.

b. A withdrawal is classified as either a daylight or a night withdrawal and it may be either forced or voluntary. In either case, contact is maintained with enemy forces to provide for security and deception and to prevent a rapid enemy advance. When the armored division is conducting a withdrawal, the brigade may be employed as a covering force to provide security for the remainder of the division.

c. Orders for a withdrawal are prepared in detail and include—

(1) New location to be occupied and the disposition of units within that location.

(2) Zones or routes of withdrawal to be used by subordinate elements.

(3) Provision for security forces and other security measures.

(4) Combat deception measures.

(5) Time and priority of withdrawal by units.

(6) Traffic control measures.

(7) Provision for evacuation or destruction of excess supplies.

(8) Evacuation of casualties.

d. Plans for the withdrawal should be formulated and disseminated enough in advance to permit subordinate units to conduct a daylight reconnaissance of routes and assembly areas.

e. The withdrawal may be facilitated by the conduct of aggressive, limited-objective attacks or tank sweep attacks. Such attacks force the enemy to assume the defensive and permit the withdrawal to be conducted with least interference (fig. 19).

f. Nuclear weapons are employed where possible against enemy front line units and reserves to eliminate interference with the withdrawal.

g. See FM 61–100 and FM 100–5.

101. Night Withdrawal

a. Because of the advantages gained under cover of darkness, night withdrawals are preferred over daylight withdrawals. The night withdrawal depends greatly on deception and secrecy. When these security measures are unsuccessful, nuclear attacks against enemy front line units can be used to facilitate the withdrawal. The withdrawal normally will begin shortly after dark.

b. Battalion task forces and other units in contact with the enemy designate parts of their forces (approx. $\frac{1}{3}$) to remain in

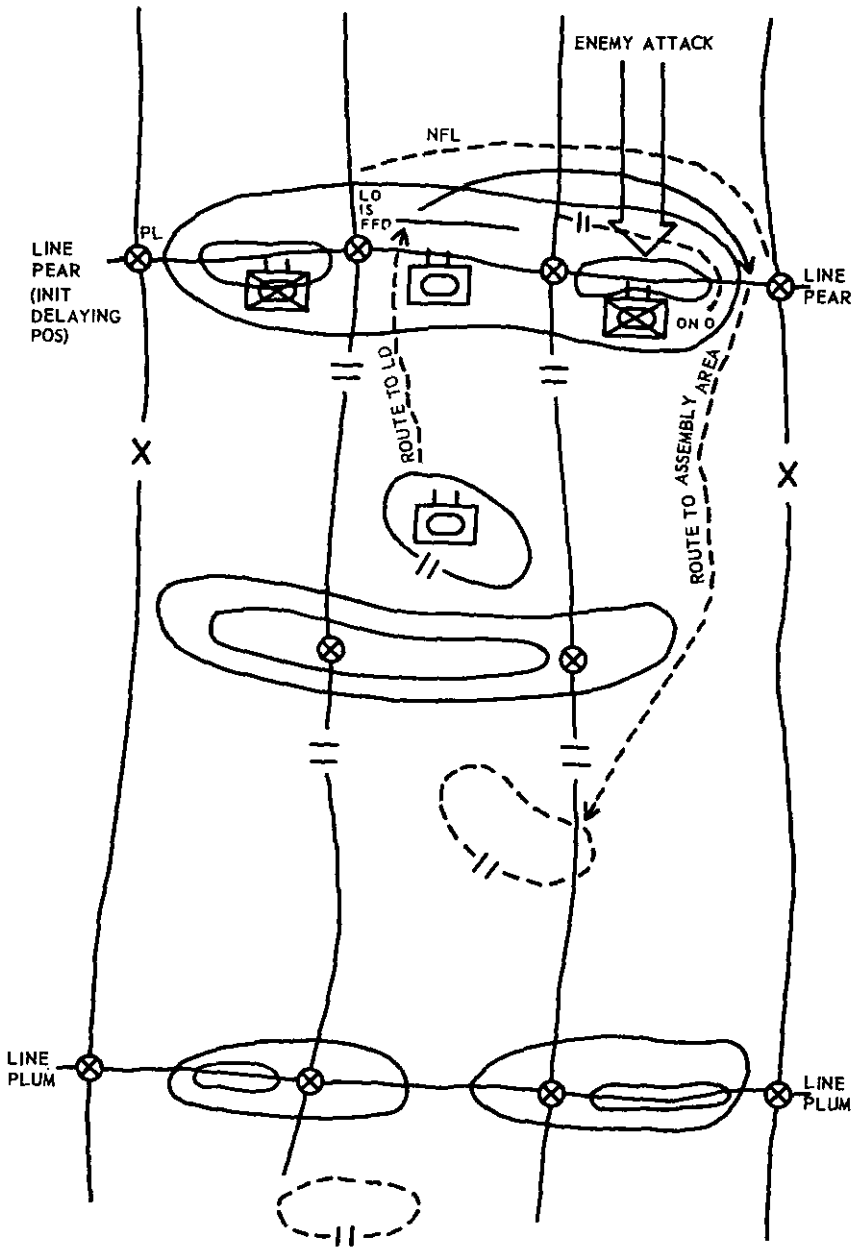


Figure 19. Elements of the brigade executing a tank sweep attack during delaying action to assist in withdrawing a battalion task force.

position and cover the withdrawal of the major elements of the unit. These security forces left in position seek to prevent the enemy from learning of the withdrawal. Plans are made to screen the noise of withdrawing vehicles with artillery fires or movement of vehicles remaining with forces left in contact. They delay and deceive the enemy and prevent interference with the withdrawal of the major elements of the command. These small-unit security forces may remain in contact until the withdrawal is completed, or they may withdraw through a larger security force established by brigade on or in front of the next delaying position. This larger security force, when used, normally consists of a single unit and covers the retrograde action of the entire brigade. In either case, security forces employ delaying action tactics as described in the following paragraphs.

c. The withdrawal of front line units is executed on a broad front. Units move directly to the rear, form march columns, and proceed to the designated location. During night withdrawals tanks normally withdraw first. To facilitate the reorganization and assembly of units, brigades may designate assembly areas for subordinate units. Such areas, when used, are widely dispersed and are occupied for the minimum time.

d. When all elements of the brigade except security elements have disengaged from the enemy and formed march columns, the withdrawal from action is considered completed. Further movement to the rear or away from the enemy is classified as a retirement. Retirements are conducted as described in paragraphs 109 and 110 and FM 17–1, FM 61–100, and FM 100–5.

102. Daylight Withdrawal

a. The high degree of mobility and long-range firepower of the armored brigade enables it to conduct successful daylight withdrawals. As daylight withdrawals normally are subject to enemy observation, success depends on speed, control, and effective employment of security forces.

b. The procedure followed in a daylight withdrawal is similar to that of a night withdrawal except that assembly areas are not required and tanks are withdrawn last. Each unit in contact with the enemy normally provides and controls its own security forces. These forces should be composed primarily of tanks to permit infliction of maximum delay and casualties on the enemy and to minimize friendly losses. Close coordination and control of and between unit security forces is necessary. These elements cause continuous delay of the enemy by employing delaying action tactics.

c. Maximum use is made of all supporting fires, including nuclear weapons, to assist the main body in breaking contact with the enemy and in supporting the security forces. Smoke is used to screen movement and to reduce the accuracy of enemy fire.

d. The movement of the main body is expedited. Assembly areas are not used; instead, units move directly to the rear, form march columns, and continue without halting.

Section III. DELAYING ACTION

103. General

a. A delaying action is an operation in which maximum delay and damage are inflicted on an advancing enemy without the delaying force becoming decisively engaged in combat. In executing a delaying action, minimum space is exchanged for maximum delay.

b. The characteristics of the armored brigade enable it to inflict continuous delay on the advancing enemy. The long range armor-protected firepower available to the brigade is used to force the enemy to deploy, reconnoiter, maneuver, and take other time-consuming measures. The enemy is subjected to continuous fire to slow his advance and to inflict maximum casualties.

c. Occasionally the mission assigned the brigade may require that delay of the advancing enemy be made from one position. But normally, delay will be made on and between a series of positions. Delaying forces maintain contact with the enemy at all times and causes him continuous delay. Aggressive offensive action is taken when opportunities arise for them. Similar action may be required as a means of deception, to seize dominating terrain, or to disengage a decisively engaged force.

d. Planning for the overall operation is centralized and execution decentralized. Within the overall plans announced by the brigade commander, subordinate unit commanders are given maximum freedom of action. This freedom permits the exploitation of advantages that may accrue at the small-unit level.

e. Nuclear weapons enable the brigade, while conducting a delaying action, to inflict severe casualties on the enemy. Withdrawals may be planned to lure the enemy into areas that favor nuclear attack. With the approval of higher headquarters, prepositioned atomic demolition munitions may be left in areas where the enemy can be expected to mass. Such areas are kept under observation and the nuclear weapon is detonated at the appropriate time.

104. Selection of Deloying Position

a. Delaying positions are selected that will afford the greatest opportunity to destroy the advancing enemy as well as inflict delay. Positions are selected where minimum forces can force the enemy to mass and thus present a profitable nuclear target. Delaying positions are sought that incorporate the following:

(1) A series of parallel ridges across the lines of hostile advance.

(2) Unfordable streams, swamps, lakes, and other obstacles on the front and flanks.

(3) Good observation and long range fields of fire.

(4) Concealed or covered routes of withdrawal.

(5) A road net or areas providing good cross-country trafficability.

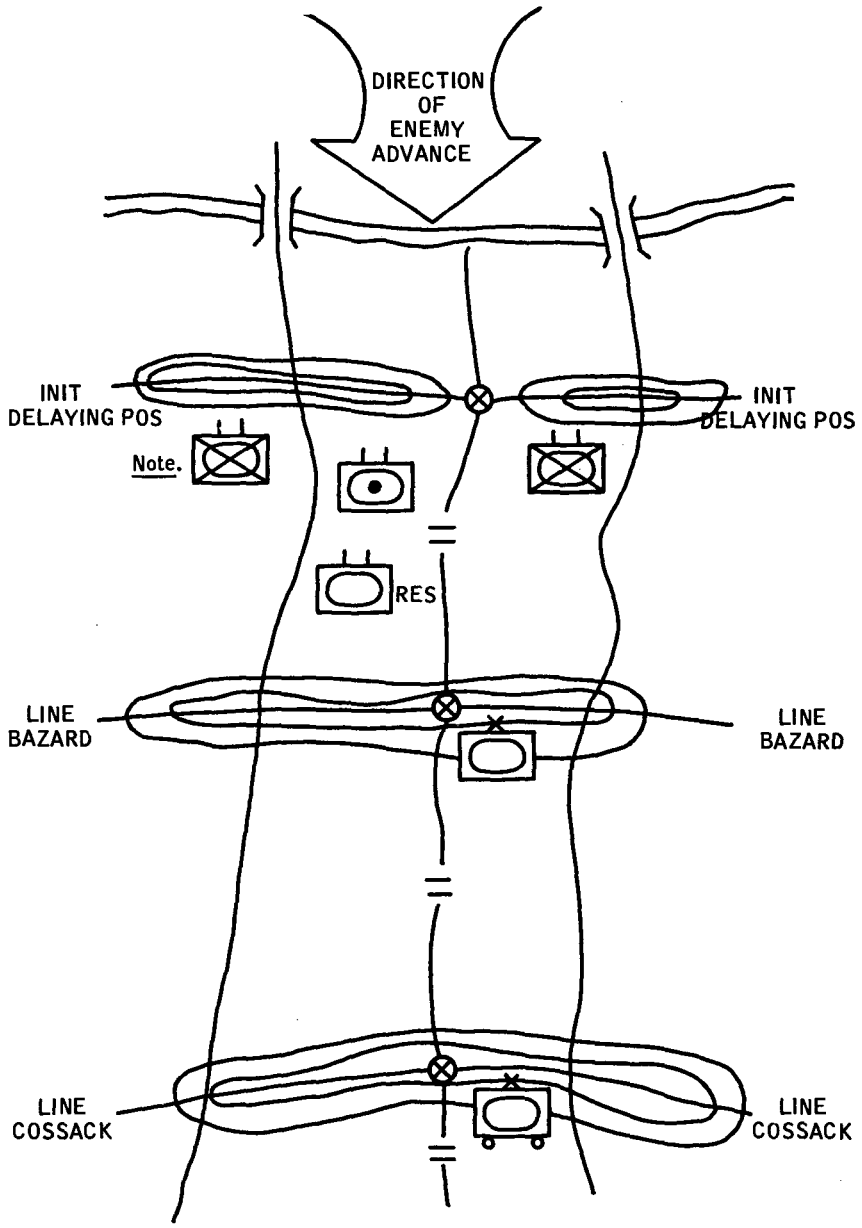
b. Delaying positions may be selected and designated by division or left to the discretion of the brigade commander. When a good natural obstacle exceeds across the entire division front, it normally will be designated a delaying position by the division commander. In the absence of good natural obstacles, the division commander may designate phase lines instead. Concurrently, he announces how long the enemy is to be held forward of each delaying position or phase line. In executing the operation, the brigade holds the enemy as far forward as possible, for as long as possible, without becoming decisively engaged. Based on the phase lines and the time-planning schedule announced by the division commander, the brigade selects delaying positions to be occupied by their major elements. It is on and between these positions that the required continuous delay is inflicted. Delaying positions selected by brigade are coordinated with adjacent units (figs. 20 and 21).

105. Orgonizotion of the Ground for Delaying Action

a. In planning for a delaying action, definite zones of responsibility are assigned to each committed brigade. The limits of each zone are delineated by boundaries. These boundaries may extend to the rear through the depth of the division zone and, as a minimum, must extend through the next rearward delaying position or phase line, and forward to the limits of the effective range of supporting weapons.

b. When zones are assigned to subordinate units, each enemy avenue of approach is given in its entirety to a unit when possible. Boundaries are assigned so that terrain features that control fire

and observation into a sector are assigned to the unit having responsibility for that sector. Coordinating points are designated for coordination and for continuity of the position.



Note. Enemy to be held forward of initial delaying position for 72 hours. Hold LINE COSSACK until _____.

Figure 20. Brigade in delaying action—selection of brigade delaying positions.

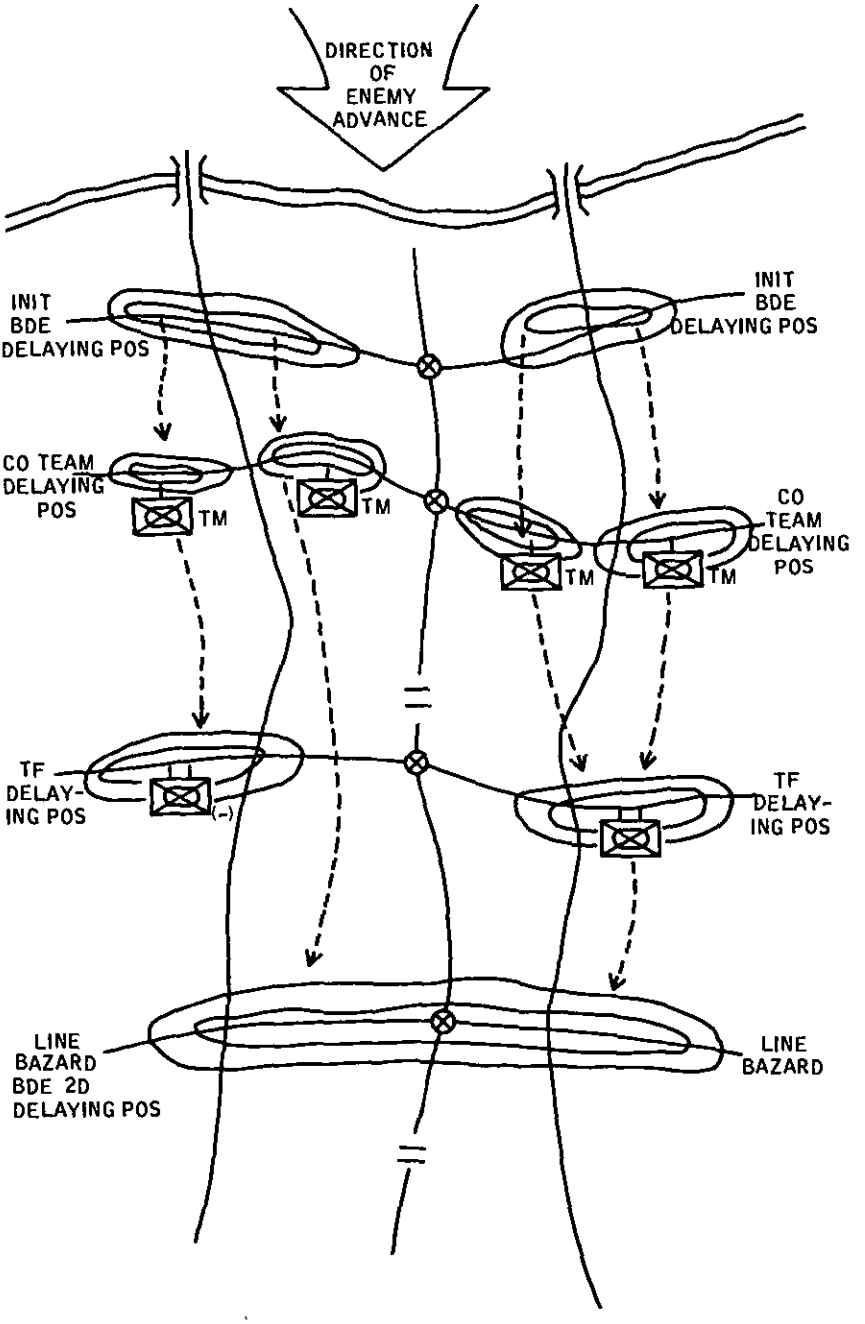


Figure 21. Conduct of continuous delay—selection of intermediate positions.

c. Natural obstacles are exploited in organizing delaying positions. Artificial obstacles are also used to improve the position with the materials, time, and manpower available. Although important, obstacles alone must not be relied on to halt the enemy's progress. No terrain is impassable to a determined, resourceful, well-trained, and aggressive enemy. He will attempt to gain surprise by attacking over ground considered impassable. All obstacles, both natural and artificial, must be covered by fire to cause him maximum delay. In massing to overcome such defended obstacles, the enemy may present a profitable nuclear target. In any event, greater delay is inflicted on the enemy when obstacles are covered by fire than when they are not.

106. Organization for Combat for Delaying Action

a. Organization for combat is based on a study of the mission, terrain, enemy situation, and troops available. This study will normally dictate the cross attachment of the available tank and mechanized infantry battalions. Such attachment enables the front line units to organize and man positions as required, to cover wide frontages, and to take the enemy under fire at long ranges. It provides the brigade with highly mobile units that are capable of inflicting delay both on and between delaying positions. The brigade commander will normally retain a small reserve composed primarily of tanks.

b. Engineer support is provided to each committed brigade by the attachment of elements of the engineer battalion.

c. Organization for combat of the division artillery and the division trains is discussed in FM 61–100.

107. Delay on Successive Positions

a. Delaying on successive positions is the type of delaying action most frequently conducted by the brigade. When this type delaying action is used the major part of the brigade is committed in the forward part of the brigade zone.

b. Delay on successive positions envisages improvement and occupation of each natural delaying position. However, delay is inflicted not only on these successive positions but also between the positions. Terrain is never given up unnecessarily; instead, every opportunity to cause delay to the enemy is exploited, and minimum terrain is traded for maximum delay. See FM 17–1 and FM 17–15.

c. The initial delaying position is organized and occupied by the major elements of the brigade. In some cases, the initial delaying

position is occupied before contact is made with the advancing enemy. In such cases, elements of each front line unit are sent forward to establish contact and delay the enemy advance toward the initial position. Long range artillery and units in the initial delaying position take the enemy under fire at maximum range. This fire inflicts casualties on the enemy, causes his early deployment, and requires him to take other time-consuming measures to close with the position.

d. Each position occupied by a front line unit is defended by that unit until the enemy threatens decisive engagement or envelopment. When maximum delay has been achieved and it becomes apparent that further occupation of the position will result in decisive engagement, withdrawal is begun. When the enemy attack approaches that point at which fires from individual weapons become effective, or when the commander at each echelon considers that he is in danger of losing freedom of maneuver, it may be considered that that element is in danger of being decisively engaged. Withdrawals may be initiated in accordance with prearranged plans, on order of the higher commander, or to prevent decisive engagement. Each withdrawal is coordinated with adjacent units.

e. When the order to withdraw is received, a part of the affected unit displaces directly to the rear and occupies the next designated delaying position (fig. 21). The remainder of the unit maintains contact with the enemy and continues to inflict delay between the first position and the next rearward delaying position employing all favorable terrain. Forces remaining in contact should be composed primarily of tanks. The armor-protected firepower and high degree of mobility of such tank-heavy forces enable them to cause considerable delay. These units, when threatened with decisive engagement, slowly withdraw toward the next position, using fire and movement. When the enemy is within range of the rear delaying positions, he is subjected to fire by the elements occupying these positions. These units provide overwatching fire to the delaying elements that have remained in contact. When forced back by the enemy, the forces that have remained in contact rejoin that part of the command that is occupying the second prepared position. The commander then employs all available firepower to hold the position as long as possible. When he is no longer able to hold the position without becoming decisively engaged, the withdrawal procedure is repeated.

f. The mission assigned the brigade may require that the enemy be delayed for an extended period in an area of little depth. Under these conditions, the brigade may be required to risk decisive engagement. Maximum use is made of nuclear weapons. Carefully

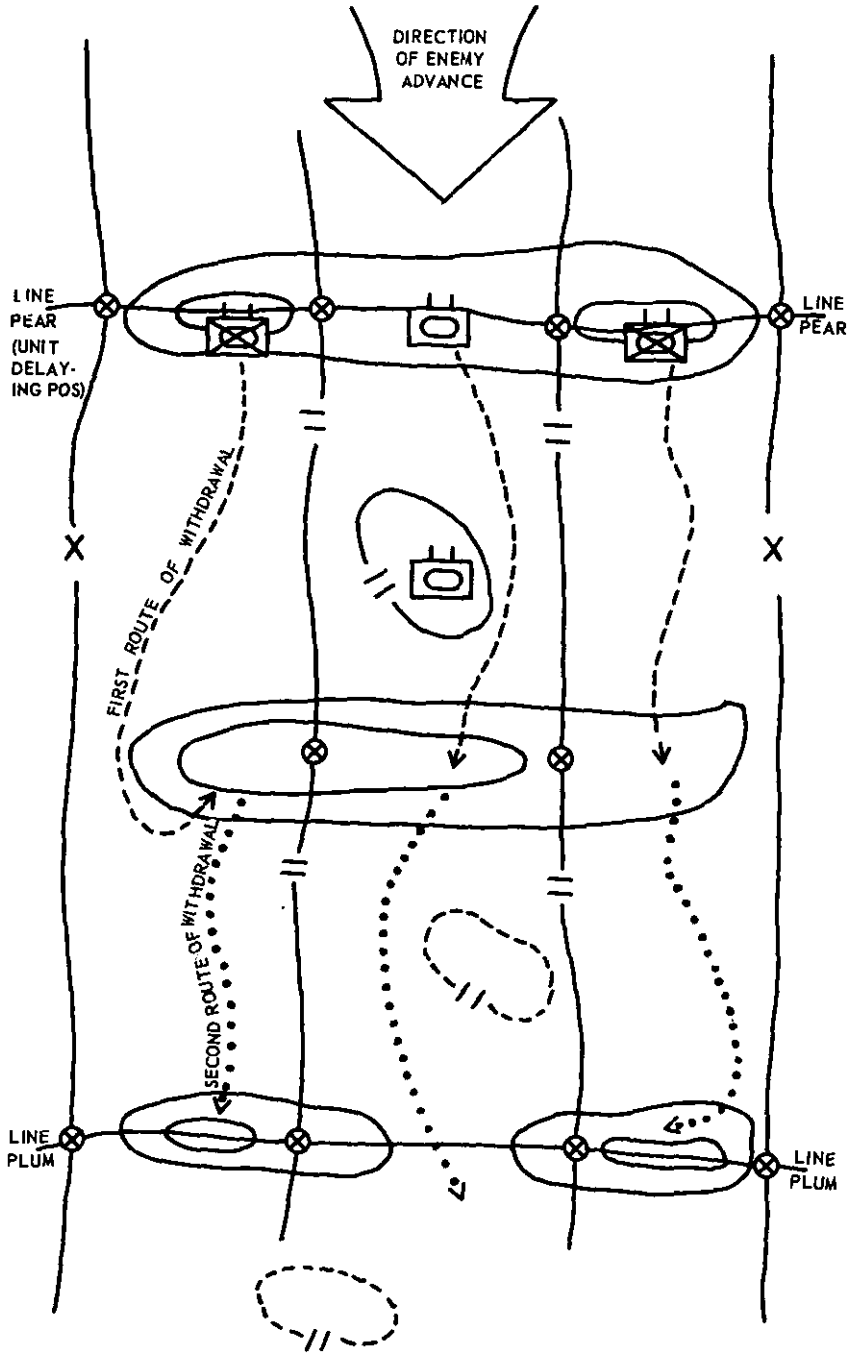


Figure 22. Brigade in delaying action, successivc positions.

planned and violently executed counterattacks are used to disrupt the enemy attack, inflict casualties, and cause additional delay.

g. The brigade may retain a reserve when conducting a delay on successive positions, particularly if none is held at division level. This reserve frequently will be small and composed primarily of tanks. The reserve may be employed as a counterattack force, to protect a threatened flank, to secure vital rear areas, or to provide overwatching fire to a withdrawing unit. The reserve will frequently be employed to assist a closely engaged unit disengage by executing a counterattack. Such counterattacks may take the form of a tank sweep. In this action, the counterattack force strikes the enemy flank immediately in rear of the area of contact (fig. 19). The counterattack force usually does not attempt to seize and hold terrain; instead, the momentum of the attack is maintained to carry the unit through the enemy columns and back into friendly terrain. The violence and shock action employed in such attacks result in considerable damage and delay being inflicted on the enemy. Counterattacks designed to strike the enemy flank and to place direct tank fire on the advancing enemy columns may also be used to cause the damage and delay required.

108. Delay on Alternate Positions

a. When operating on a narrow front, or when delaying positions are reasonably close together; e.g., within maximum effective range of tank main armament, the brigade may elect to delay on alternate positions. Employing this technique, the brigade is divided into two elements. The first element occupies the initial delaying position and engages the enemy. The second element occupies and improves the second delaying position.

b. Units occupying the initial delaying position delay the enemy by employing continuous delay techniques. They delay on the initial delaying position and between it and the second delaying position. When the units arrive at the second delaying position, they withdraw through the units that prepared and are occupying that position. After withdrawing through or around the second delaying position, the units proceed to the third delaying position and begin preparing and occupying that position. Responsibility for delay of the enemy is assumed by the units on the second delaying position when the first element has withdrawn through their position. The delay procedure is then repeated, with each element being alternately in contact and responsible for obtaining the required delay. When not in contact, each element is responsible for improving and occupying rearward positions and for

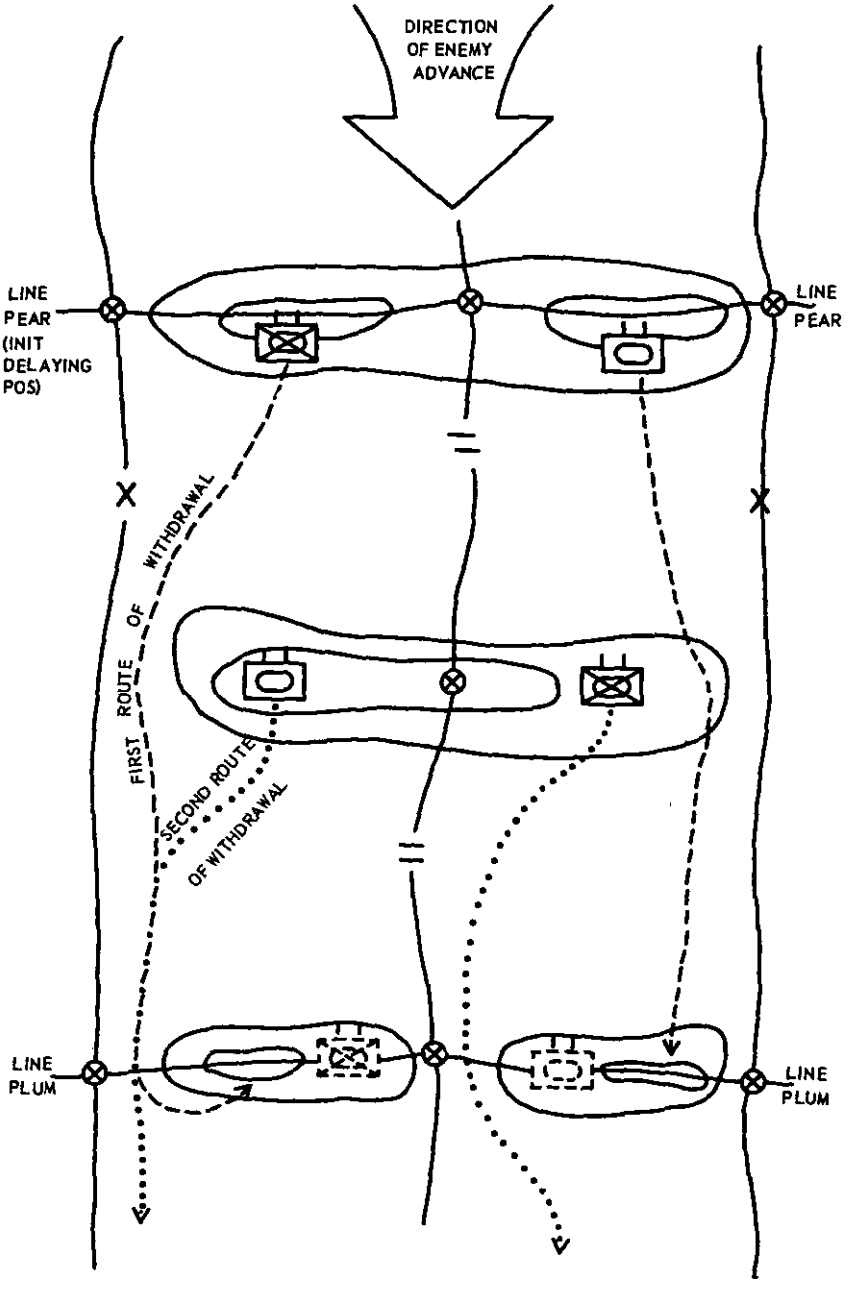


Figure 23. Brigade in delaying action, alternate positions.

providing overwatching fire for the withdrawal of the element that is in contact (fig. 23).

c. The brigade reserve, if organized, may be employed on the same type missions and in the same manner when delaying on alternate positions as when delaying on successive positions. It may also be used to assist in preparation of positions.

d. Delay on alternate positions has the advantage of providing more time for the improvement of delaying positions and the performance of maintenance on materiel. It also provides troops with periods of relief from combat. However, this technique renders the brigade more vulnerable to nuclear attack because of troop density during the rearward passage of lines.

Section IV. RETIREMENT

109. General

a. A retirement is a retrograde operation in which a force marches away from the enemy to avoid combat under the existing conditions.

b. A retirement may be made following a withdrawal or when there is no actual contact with the enemy. When a withdrawal precedes the retirement, the retirement begins after the main forces have broken contact with the enemy and march columns have been formed (FM 61–100 and FM 100–5).

110. Conduct of the Retirement

a. In a retirement, the brigade is organized in a manner inverse to that employed in an advance to contact (pars. 19–22).

b. The brigade assigns definite routes and march objectives or rearward positions to each of the major commands moving with the main body. During the initial stage of the retirement, control may be decentralized to subordinate commanders. However, as the brigade increases the distance between itself and the enemy, the brigade commander resumes centralized control.

c. Security for the main body is provided by advance, flank, and rear guards. When the retirement is preceded by a withdrawal from action, a tank-heavy rear guard will normally be required. The rear guard uses delaying action techniques to slow the advance of the enemy and prevent interference with the movement of the main body. The brigade commander must be alert for attempts by the enemy to envelop his force. He employs tactical air force reconnaissance and Army aviation over the enemy force to obtain early information of such enemy attempts.

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CHAPTER 6
OTHER TACTICAL OPERATIONS

Section I. GENERAL

111. General

a. Other tactical operations are those in which the nature of the operation, the characteristics of the area of operation, peculiar conditions under which the operation may be conducted, or a combination of these factors require special consideration of training, techniques, tactics, or materiel, or particular emphasis on certain other considerations. The fundamentals of the offense and defense are discussed elsewhere in this text and are generally applicable to these other tactical operations. Their application, however, is modified to meet the peculiarities of the situations discussed herein.

b. To accomplish the variety of missions of which the armored brigade is capable, its subordinate elements must be trained in all extremes of climate and terrain. This chapter covers also other tactical operations in which the brigade may reasonably be expected to be employed. It does not cover mountain or jungle operations; however, this does not preclude the employment of armor units in such operations (FM 17–1).

112. Intelligence

In the operations discussed in this chapter, the intelligence collection effort is directed toward production of particular, detailed intelligence required to facilitate the employment of the armored brigade under conditions peculiar to the specific operation. In amphibious operations or early linkup with airborne forces, in addition to the normal intelligence requirements for the conduct of operations, other factors affecting the employment of the brigade, including peculiarities of the climate and terrain and the tactical situation, must receive special consideration. Full use of available terrain studies becomes mandatory.

Section II. AMPHIBIOUS OPERATIONS

113. General

a. The armored brigade is capable of participating in an amphibious operation, normally as part of a larger force. It may be

employed as part of an amphibious operation launched for any of the following purposes:

(1) As assault to obtain lodgment areas from which to carry out further combat operations ashore, or operations to obtain advanced air, naval, or logistical base areas, or to deny certain areas to the enemy.

(2) Feints to mislead the enemy as to the intent of other forces.

(3) Raids to destroy enemy installations, test enemy dispositions, obtain intelligence information, or capture and evacuate individuals or materiel.

(4) Attack of enemy forces to exploit a vulnerable sea flank.

b. Amphibious operations are complex and require extensive and detailed planning, preparations, and interservice coordination. Adequate amphibious lift of suitable types of vessels are required for the brigade to participate. Armor units require also suitable beaches to permit landing on a wide front and capable of accommodating administrative support operations that will support rapid inshore movement of tanks, armored personnel carriers, and wheeled vehicles.

114. Tactical Considerations

a. In amphibious operations against a defended shoreline, the armored division brigade, as the assault echelon of a larger force, should land on a wide front, and nuclear and nonnuclear fires and armored amphibians should be used to achieve rapid attack momentum at the shoreline and to support the sustained drive of widely dispersed battalion task forces toward assigned objectives. Early removal of obstacles from the beaches and the rapid development of additional routes inland of the beaches are essential.

b. During the initial stages of the assault landing, the brigade will be dependent upon naval and air forces for both nuclear and nonnuclear fire delivery and air defense. Organic and attached artillery, including nuclear delivery means, should be put ashore as rapidly as assault elements can secure adequate firing positions inland. Dispersion in both assault landings and subsequent operations, including such minimum beach support activities as may be required, is essential in the face of an enemy nuclear capability. Amphibious operations require highly centralized planning, with concurrent coordinated planning at all levels. Execution of the assault phase is decentralized. The brigade commander can rarely anticipate re-establishment of centralized control until the objec-

tives assigned by the division or other headquarters have been secured.

c. As rapid movement inland is necessary to prevent undue congestion in landing areas, the landing of armor elements may be preceded by helicopter-landed elements immediately after the naval gunfire preparations. This will facilitate the landing of the heavier units and achieve dispersion in depth. These air-landed elements may be from the armored cavalry units or mechanized infantry battalions, less vehicles, or from units attached to the brigade for this purpose.

d. Detailed plans must be prepared and means made available for the continuous logistical support of the brigade ashore, particularly as it moves deeper inland. When establishment of onshore logistical support facilities may not be desirable or feasible, as in a raid, supply and casualty evacuation of the brigade may have to be made entirely by air. When establishment of beach support operations is planned, multiple beach support activities must be provided for, as well as use of amphibian and air transportation for distribution direct to assault units from ships. The latter is necessary to eliminate dependence on any one beach; this contingency also requires alternate plans in the event of loss of any beach.

e. For details on the training and employment of small armor units in amphibious operations, see FM 17–1. For planning and execution of amphibious operations, see FM 31–12 and other manuals of the 31-series, and FM's 60–5 and 60–30.

115. Organization for Combat

a. As in other operations, the brigade is organized for the amphibious operation in accordance with the requirements for the land mission. When the brigade is part of the assault echelon, organization will provide for cross attachment to form company landing teams and battalion landing teams before embarkation. Battalion landing teams of the brigade to be landed first will normally be mechanized infantry-heavy. As part of the assault echelon, the brigade is combat loaded on assigned shipping, and unit integrity is maintained.

b. When the brigade is organized for an amphibious operation as part of a larger force to be landed other than in the assault echelon, organization for combat may not occur until the brigade occupies its assembly areas in the beachhead. In this situation, considerations are the same as for other offensive operations and

the brigade is embarked to economize on available shipping space. Unit integrity may be sacrificed.

c. Artillery, engineers, signal, and administrative support elements are frequently attached at battalion landing team level for early use of their facilities ashore and to disperse those facilities throughout the amphibious lift. For the waterborne phase of the movement, the brigade headquarters and headquarters company is echeloned for dual command capabilities. Such echelonment ceases as soon as both elements are ashore.

d. For raids and feints, the brigade will normally be given combat power and administrative support well in excess of that considered normal for other operations. The brigade staff may require considerable augmentation, particularly the S1 and S4 sections. Other forces assigned the brigade, in accordance with the mission, will include an appropriate number of mechanized infantry and tank battalions, sufficient artillery, augmented by a nuclear capability, engineer support. Other attachments may be a stripped down maintenance battalion support company, a medical company, and minimum essential class I, III, and V mobile support.

116. Embarkation

a. Before embarkation, planning will include formation of battalion landing teams and company landing teams by cross-attachment. Battalion landing teams may have an engineer platoon in support. Planning will include combat loading of vessels to maintain battalion landing team and company landing team integrity. Loading will provide for discharge directly over the beach in the lodgment area in the sequence required. Planning will also include early unloading of artillery.

b. Brigade headquarters and headquarters company will be echeloned in at least two elements, each loaded on a different vessel. Both should be combat loaded for discharge immediately behind the task forces. Each echelon should be composed to exercise command and control if the other echelon is lost.

117. Debarkation

The commander of units to be debarked furnishes the appropriate transport commander with data concerning landing teams, sequence of landing of units, and other requirements he may have to execute the ship-to-shore movement. The commander of units to be embarked and the transport commander jointly prepare debarkation schedules. For further details, see FM 31–12.

118. Conduct of the Land Operations

Once the brigade is ashore, conduct of operations is the same as for operations discussed elsewhere in this manual.

119. Brigade as Part of a Division

When the brigade is part of a division combat loading will be accomplished in accordance with the mission assigned the brigade. If there is no requirement for combat loading, the brigade will operate in a beachhead debarking plan and move to predesignated assembly areas, where it will organize for combat.

Section III. AIRMOBILE OPERATIONS

120. General

a. The armored brigade has the capability, and may be given or develop the requirement, to employ an airmobile force. Sources for such a force will depend on the organization of the brigade at the time of the requirement. When a requirement exists for a very small force for a short observation mission (24 hours or less), the brigade may remount its scout section in helicopters, deliver them aerially into the target area and recover at a predetermined time and by predesignated means.

b. For reconnaissance or combat missions requiring a larger force, the brigade may mount a mechanized infantry platoon or company in air vehicles provided by division. Larger elements of air vehicles to meet operational requirements for airmobile operations will be furnished by division from army sources. For a discussion of planning factors and execution of airmobile operations, see FM 57–35.

Section IV. ARMOR-AIRBORNE LINKUP

121. General

a. A linkup operation entails the juncture of two ground units. Linkups may be required in connection with airborne operations, for relief of a cutoff force, in the breakout of an encircled force, or in the convergence of separate forces.

b. The initial phase of a linkup will generally correspond with normal offensive operations. The actual linkup requires careful planning, coordination, and control; providing for carefully defined communication capabilities; and restrictions on fire and maneuver by the linkup force.

c. Normally, armor units are employed as a linkup force especially where there is a requirement for mobility, speed, and firepower to break through enemy forces to capitalize on the airborne force gains or to relieve a surrounded force.

d. Linkup missions, depending largely upon the tactical situation, are normaly given to the armored division, but the armored brigade alone may be given the mission.

122. Planning Considerations

When the brigade is employed as the linkup force it employs the same planning considerations as the division. For a detailed discussion of command relationships, coordination measures, and planning considerations, see FM 61–100.

123. Organization for Combat

a. As a linkup force, the brigade is organized as for an exploitation. It is normally tank heavy with approximately a 2 to 1 ratio of tanks to mechanized infantry. Engineer support is attached, with particular attention to anticipated requirements for bridging and for rapid movement of the brigade. Armored vehicle launched bridges may be required in addition to those organic to the tank battalions.

b. A communication plan is prepared for use between the linkup force and the force to be met or relieved. The plan should provide for radios with long range capability and for assignment of frequencies and codes.

c. Administrative support is attached to the brigade according to the estimated duration of the operation, distance involved, and the capability to support the operation by ground or aerial supply means. Elements of the airborne force following up the operation by ground may be attached to the brigade.

124. Conduct of the Linkup

In the initial phase, the conduct of the linkup operation is the same as for any offensive operation. Linkup operations frequently will require a passage of lines. Once through the friendly lines, the brigade moves out as in an exploitation to effect the linkup. The action is characterized by speed, aggressiveness, and boldness. Enemy forces that threaten the successful accomplishment of the mission are destroyed. Others are bypassed and reported. Depending on the tactical situation, nuclear or nonnuclear weapons may be fired. So far as possible, the linkup force avoids inter-

ferences with its mission and concentrates its effort on completing the linkup. For details of establishing contact with, joining forces, and actions after linkup, see FM 61–100 and FM 17–1.

Section V. RAIDS, FEINTS, DEMONSTRATIONS, AND RUSES

125. Raids

A raid is an attack to accomplish a specific purpose within the enemy position with no intention of holding the invaded territory. Purposes of raids may be to—

a. Capture prisoners or specific materiel.

b. Obtain or free key civilians such as scientists or political leaders.

c. Destroy specific enemy materiel or installations, including nuclear delivery means.

d. Obtain information of enemy forces.

e. Deceive or harass the enemy.

126. Organization

The raid operation is appropriate to the armored brigade because of its capabilities for shock, speed, mobility, and firepower. When available forces permit, the brigade is organized with tank-heavy battalion task forces and such additional combat and administrative support as the time and distance of the raid require. Normally, raids are so short in both time and distance that administrative support is limited to what can be carried on the combat vehicles. Maintenance support is confined to the ability to make minor repairs. Medical evacuation is by combat vehicles or air. Every effort is made organizationally to provide a stripped down fighting force with absolute minimum support to make the raid objective. Careful coordination with friendly fire support means is necessary to avoid bringing friendly fires down on the raiding force.

127. Conduct of the Raid

a. The raid operation corresponds to the armored brigade linkup, frequently requiring a passage of lines in a carefully coordinated effort. The raiding armored brigade moves into the exploitation quickly and concentrates on its assigned objective. It seeks to achieve the greatest possible degree of surprise and, capitalizing on surprise, advancing rapidly, avoiding all possible enemy interference with its mission. The brigade should not be

diverted from its primary mission by becoming otherwise decisively engaged.

b. Once having reached its objective and accomplished its mission, the raid force can anticipate vigorous enemy reaction in the area through which the raid force has passed. For this reason, the withdrawal of the raid force will usually be over alternate routes when available. Brigade forces should avoid principal routes of communication and should consider using routes for attack and withdrawal not usually considered feasible for armor movement.

c. Once the brigade raid objective has been achieved, no time is wasted in returning to friendly territory. The longer the withdrawal is delayed the greater the chance of the enemy defeating the raiding force.

d. Withdrawal over alternate routes is also preplanned. Careful planning and prior coordination will facilitate passage through friendly lines. In this phase of the raid, the operation corresponds to techniques used during linkup.

128. Other Raid Considerations

For additional discussion of armor raids see FM 17–1.

129. Feints, Demonstrations, and Ruses

a. Feints. A feint is a shallow, limited-objective attack to mislead the enemy by drawing his combat power away from a main attack. It may vary in size from a small raid to a sizable supporting attack. The feint is most effective when it appears as a definite threat to the enemy, when the enemy has a large reserve that he has been committing early, when there are several feasible courses of action open to the attacker, and when the feint is of adequate strength and composition to cause the desired enemy reaction. Some of the desired reactions are to force the enemy into improper employment of his reserves, attract supporting fires away from his main attack, to force him to reveal defensive fires, or to make him become accustomed to shallow attacks in order to gain surprise with a deep, main attack. For timing and location of feints, see FM 61–100.

b. Demonstrations. A demonstration is a show of force in an area where a decision is not being sought. There is no advance against the enemy by maneuver forces. Demonstration forces use fires, smoke, sonic devices, and decoy equipment. See FM 61–100.

c. Ruses. Ruses are tricks used at all levels to achieve deception.

False movements of a few vehicles towing chains or brush to simulate the dust of a larger force is an example. The intention is to divert enemy attention from critical operations.

Section VI. COMBAT AT RIVER LINES

130. General

a. Attack. When unfordable rivers are encountered during exploitation operations by the armored brigade, every effort must be made to continue the advance without pause or significant concentration on either bank. Subordinate units are directed to seize crossings in zone. The river should be approached with maximum speed and on a broad front. When bridges cannot be seized intact, hasty crossings on a wide front, capitalizing on the amphibian characteristics of armored personnel carriers, deep-water fording kits for tanks, organic and attached helicopters, nuclear and nonnuclear fires, and other means, should be made. The hasty crossing is characterized by speed and surprise. Planning and traffic control for river crossings will be executed in the same manner as passage of defiles.

(1) A deliberate crossing is characterized by some delay in execution and by use of extensive crossing means. Deliberate river crossings in nuclear warfare will require higher headquarters action and concurrence, detailed planning at all levels so that multiple crossings and deception operations can be carried out. A bridgehead supported by only a single crossing site is extremely vulnerable.

(2) In any river crossing operation, it is important that multiple means of transporting tanks across the river and multiple crossing sites be placed in operation as soon as possible. The bridgehead should be rapidly expanded to prevent undue congestion. Nuclear fires should be carefully planned and used to neutralize critical enemy defenses and to develop rapidly a superiority of combat power on the far shore while employing widely dispersed assault units. For details on river crossings, see FM 5–135 and FM 31–60.

b. Defense. The fundamentals of the defense of a river line by an armored division brigade are the same as for other types of defense applied to a particular condition of terrain. The defense of a river line may be conducted from either the near or the far side, depending on the capabilities of the troops and the plans of

the higher commander. When the armored division is operating as part of a larger force in the defense of a river line, it normally is employed as a mobile reserve, ready to move to any threatened point. It is used for counterattack and seeks to strike the enemy while he is astride the river and before he obtains a secure bridgehead. In this mission, the brigade is employed offensively as a unit. Also, when functioning in this mission, the brigade should be prepared for commitment against major enemy airborne forces attempting to seize key terrain in rear of friendly forces defending the river line. It should be anticipated that enemy vertical envelopments of this sort may be accompanied by nuclear fires and efforts to force a crossing on a wide front.

131. Employment of Nuclear Weapons

For employment of nuclear weapons in operations at river lines, see FM 101–31.

132. Hasty River Crossings

a. Planning for a hasty river crossing should begin in advance of the time the river will be reached. The ideal hasty crossing should result in the rapid seizure of sufficient terrain on the far side of the river in adequate width and depth to insure that all existing crossing sites are relatively secure from enemy ground action. The bulk of the brigade crosses the river on a wide front and passes immediately through the bridgehead and may leave minimum forces to secure the crossing sites. (Each brigade requires multiple crossing sites.) These forces should be relieved as soon as possible.

b. The armored division brigade has a considerable organic capability to effect hasty river crossings. The inherent swimming characteristics of its armored personnel carriers allow the mechanized infantry and close fire support elements to swim most rivers. By shuttling with its organic aircraft and aircraft attached from division, dismounted troops and man-transportable weapons can cross any river in a brief period. Armored cavalry elements are well suited for assault crossing and for seizing bridges and crossing sites intact.

c. A captured bridge is checked for the presence of demolitions, especially prepositioned nuclear weapons, immediately after the leading elements of the command have crossed it.

d. The following characteristics are desirable in the crossing front that is selected for a river crossing:

(1) Sufficient breadth to permit crossing on a broad front.

(2) Salients in the river line toward the attacker.

(3) Suitable avenues of approach for armor on the far side.

(4) Concealment in depth for assembly areas, storage areas when required, and routes of approach for armor on the near side.

(5) Suitable sites for the erection of tactical bridges and the operation of ferries.

(6) Favorable river characteristics to include negotiable near and far banks, slow current, and an unobstructed water area.

e. Elements of the supporting tactical air force, higher headquarters, Army aviation, and the armored cavalry squadron, with suitable engineer attachments, are among the sources which may furnish information concerning the crossing front.

f. Mechanized infantry and armored cavalry cross in personnel carriers, assault craft, or aircraft. All the combat power that the brigade can muster is employed to support these crossings. As soon as initial crossings have been made, additional units, both combat and combat support, are crossed to strengthen and enlarge the bridgehead. When tanks cannot be forded, they are crossed as soon as possible, either by deepwater fording, ferry, or when a bridge is constructed, or a combination.

g. Continuous aggressive ground and aerial reconnaissance and target acquisition should be pushed to the greatest depth possible on the far bank. This action will ascertain the major enemy ground reaction early. Detection is followed by engagement with either nuclear or nonnuclear fires, as appropriate, to minimize interference with the crossing operation.

h. For employment of armored personnel carriers in hasty crossings, see FM 17–1.

133. Deliberate River Crossing

a. If a deliberate river crossing is required, it should preferably be undertaken in conjunction with the operation of a large force conducting numerous crossings on a very broad front, with detailed deception operations, extensive air defense, and airborne or air-landed seizures of critical terrain deep in the planned bridgehead area of the higher command. An extensive nuclear preparation may reduce the requirements for other operations, but the presentation of a single, identifiable, concentrated bridgehead target for possible enemy nuclear attack must be avoided.

b. A deliberate crossing is considered complete when the bridgehead is of sufficient size that it does not in itself present a suitable

target for nuclear attack, when the majority of the combat units with full basic loads are on the far shore, when multiple bridges and ferries are established, and when higher headquarters has assumed responsibility for their security. Bridging and ferries required for deliberate river crossings are normally provided and constructed by corps or army engineer units. The division engineer battalion, including its bridging element, is normally not used for ferry and bridge erection and operation during the assault crossing, but is retained for divisional requirements and operations on the far shore.

c. For further details of the deliberate crossing, see FM 31–60.

134. Defense of a River Line

a. The armored brigade is capable of defending a river line on a wide front and in depth because of its armor-protected, mobile firepower. Reconnaissance and surveillance means maintain contact with the enemy on the far side of the river. Security forces on the far shore may be armored cavalry elements, including the air cavalry troop supported by mechanized infantry. When these security forces must withdraw across the river, they maintain close liaison with the units or individuals on the near bank charged with the destruction of bridges. This close liaison is essential to insure that bridges are not left intact and susceptible to capture any longer than necessary and that security forces on the far side are not isolated by premature demolition of a bridge. At this stage of the defense, extensive ground and aerial reconnaissance is essential.

b. The greatest part of the tanks and mechanized infantry is held in reserve at the highest possible level commensurate with the width of the sector. The near side of the river is held by light detachments. Stronger detachments may be posted at the most probable crossing areas.

c. The counterattack plan is similar to that of the mobile defense. It must be made so that the near side of the river will be held. The counterattack must be launched before the enemy has established a strong bridgehead; it is made as soon as the hostile main crossing is recognized. Parachute, helicopter, or other air-delivered attempts by the enemy to seize key terrain in the division sector must be anticipated in the preparation of counterattack plans. In some tactical situations, the enemy may be forced to canalize or concentrate major elements of his forces on the far bank as they approach the river. In these circumstances, when identifiable nuclear targets are presented, it may be desirable to hit them with nuclear fires. If an adequate maneuver

force is on the far side of the river or if adequate crossing means exist to permit a rapid crossing of a mobile reserve from the near bank, a sweep through the nuclear strike area may be conducted.

Section VII. COMBAT AT FORTIFIED AREAS

135. General

The armored division brigade is not normally assigned to attack a fortified area. But when so required, it is tailored heavy in infantry, engineers, and large amounts of artillery. Principles and techniques discussed in FM 17–1, FM 31–50, FM 61–100, and FM 100–5 will apply for combat at fortified positions.

Section VIII. COMBAT IN BUILTUP AREAS

136. General

Combat in cities and towns is normally considered a mission for dismounted infantry because of the necessity for house-to-house fighting, limited fields of fire for tanks, and lack of tank maneuver space. But the armored brigade may be required to perform this type of combat to clear a defended town and continue its advance or to keep critical land lines of communication open, or because of the nonavailability of dismounted infantry. For details see FM 17–1 and FM 31–50.

137. Attack

a. The brigade attacks cities and towns with an enveloping force and a direct-assault force. The enveloping force maneuvers to surround the town, seizes dominating terrain on the flanks and rear, and seals off entrance and exit routes to destroy enemy troops trying to enter or escape. The enveloping force usually contains a preponderance of tanks; the direct-assault force a preponderance of mechanized infantry, supported by tanks.

b. The maneuver of the enveloping force may be accompanied by both nuclear and nonnuclear artillery fires on the town in preparation for attack. In planning for the employment of such fires, however, careful consideration must be given to the probabilities of creating conditions that may adversely affect the direct-assault force. Such conditions may include the blocking of routes through the town with rubble resulting from blowdown or intense high-explosive shelling and the creation of high-intensity radiological hazards.

138. Defense

a. Built-up areas are obstacles to the movement of friendly counterattack forces as well as the attacking enemy. Consideration should be given to defending outside the builtup area. Under some conditions, elements of the brigade may hold towns while the remainder counterattacks in the open.

b. The defense of a builtup area is organized around key terrain features that preserve the integrity of the defense and provide ease of movement to the defender. Subterranean systems may facilitate the movement of dismounted forces and provide shelter against nuclear attack. Maximum use is made of rubble and other obstacles. Defenses are prepared in depth.

c. For further details, see FM 17–1.

Section IX. COMBAT IN DIFFICULT TERRAIN

139. General

a. Although it is sometimes required because of a shortage of infantry or time, commitment of the armored division brigade to combat in difficult terrain is undesirable. It serves to minimize the mobility of the combat battalions. Besides slowing armor momentum, very difficult terrain may act to canalize the brigade excessively, with a resulting increase in susceptibility to nuclear attack. In some instances, however, obvious disadvantages may be offset by surprise, and difficult terrain may provide natural concealment and cover from nuclear effects.

b. Increased requirements for engineer support, use of field expedients to assist in the movement of armored vehicles, and increased maintenance and logistical requirements generally typify armor operations in difficult terrain. These requirements must be taken into account in planning.

140. Combat in Woods, Swamps, and Lake Areas

a. Armor operations in woods, swamps, and lake areas are, in some respects, similar to those in towns and fortified areas. Extended areas of this nature are an obstacle to the armored brigade, affording the enemy concealment and camouflage but limiting visibility and fields of fire. These areas favor enemy raids and guerrilla operations, and require adequate close support of tanks by dismounted infantry. Some woods, swamps, or lake areas are naturally strong defensive areas; however, small wooded areas in open terrain are easily neutralized by fire, smoke, or automatic weapons. Whenever possible, heavily wooded areas, swamps,

and lake areas are bypassed. In such instances, these areas may be neutralized by nuclear fires. If such an area is ordered cleared, it should be surrounded by tank elements and cleared by mechanized infantry supported by tanks and nuclear and nonnuclear fires if required.

b. For additional details see FM 17–1, FM 100–5, and FM 101–31.

141. Combat at Defiles

a. A defile is any terrain feature, natural or artificial, which tends to constrict the passage of troops. Therefore a mountain pass, a gap through a minefield, a river crossing site, a bridge, or an area between two radiated areas are all defiles. The reconnaissance must include consideration of all possible routes. Planning for alternate routes are essential. Preparation of a defile for passage must be done during periods of low visibility or at night. Traffic control must insure that the flow of vehicles are constant without halts or grouping in the defile target area. Units may be moved to a holding area prior to entering the defile target area and directed through the defile target area by the target area coordinator. The target area coordinator must have absolute control. After clearance of the defile target area units must move into an attack position.

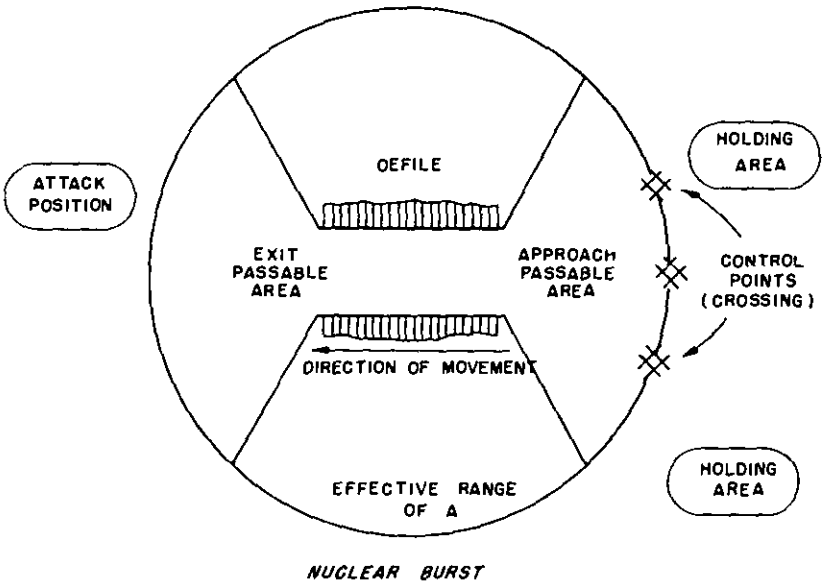

Figure 24. Defile target area.

Every effort must be made to secure the flanks of a defile on the broadest possible front before attempting to pass the main body of the brigade. Organic and attached Army aircraft may be employed to advantage, both to facilitate reconnaissance and surveillance of critical areas and to transport light elements in the air landed seizure of such areas.

b. For further details, see FM 5–29.

c. Tactical Considerations.

(1) *Offense.* When the brigade must pass through a defile, armored cavalry elements precede the main body and reconnoiter the entire surrounding area. If the immediate area is clear, tanks and mechanized infantry are dispatched rapidly through the defile and establish a defense, securing enough maneuver room to permit the main body to emerge from the defile unhampered. If the area is defended, enough space must be seized for maneuver space for the main body. The employment of nuclear fires during this phase may speed operations. Movement of the brigade through the defile should be planned so that vulnerability to nuclear attack is minimized.

(2) *Defense.* The defense of a defile by the brigade may be conducted using several methods: (1) in a single position with flanks refused and protected by the obstacles forming the defile, the main body may be held in reserve behind the defile; (2) by delaying action, with leading elements well forward of the defile to gain time and space for the main body to pass the defile and develop for any action required; or (3) by a mobile defense, with all major elements of the division forward of the defile. Nuclear weapons may be employed in conjunction with any of these methods, or they may be used to deny access to or use of the defile by enemy ground forces.

d. Ground and Aerial Reconnaissance and Surveillance. In operations at a defile, reconnaissance and area surveillance are of utmost importance. It is imperative that the command be warned of the presence or approach of the enemy at the earliest possible moment and the longest ranges possible.

Section X. COMBAT IN SNOW AND EXTREME COLD

142. General

Operations are influenced by snow, ice, extreme cold, sharp variations in weather, long periods of daylight or darkness, and seasonal transitions. Peculiarities of the subarctic and arctic are

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sparse settlement, lack of roads and railroads, numerous lakes, waterways, swamps, bogs, lack of maps, difficulty of navigation, difficulty of radio transmission, arctic whiteout, and forests. During periods of extreme cold and calm, the firing of weapons produces ice fog, which renders observation for direct firing difficult and reveals locations of weapons. During thaws, streams and other bodies of water present serious obstacles. Under summer conditions, certain streams and lakes are arteries for water transportation. Rivers and lakes adequately frozen over in winter may offer excellent arteries for movement. Deep snow and ice impede cross-country movement. Under certain conditions, snow may provide cover and deception. In open terrain, snow may make camouflage and deception difficult. Hasty field fortifications are difficult to construct in frozen ground. Brush, heavily wooded areas, or "rotten" snow favor use of snowshoes. In the arctic and subarctic, permanently frozen subsurface soil (perma-frost) frequently exists and prevents surface water from draining into the subsoil in summer. In relatively flat areas, where drainage is limited, this condition results in a soft, spongy surface interspersed with numerous lakes and ponds, which make movement extremely difficult and often impossible. In such areas, water and air transportation means may be used, but land transportation means have not yet been satisfactorily developed to traverse the muskegs and tundras. In extreme cold, more time must be allowed for all types of operations. Armor operations under the foregoing conditions may be generally typified by—

a. Increased requirements for vehicle and equipment maintenance and special maintenance equipment.

b. Trafficability problems caused by snow and ice in winter and mud and water in summer.

c. Increased fuel consumption and special lubricant requirements for all vehicles.

d. Additional engineer support.

e. Substitution of special arctic vehicles and equipment for standard vehicles and equipment.

f. Special training in arctic survival, health practices, and arctic field expedients.

143. Tactical Considerations

a. The fundamentals of offensive and defensive operations set forth in chapters 3 and 4 apply to armored division brigade operations in extreme cold and deep snow, subject to the limitations

imposed by weather and terrain. For further details, see FM 17–1, FM 31–70, FM 31–71, and FM 61–100.

b. For employment of nuclear weapons under these conditions, see FM 101–31.

c. Tactical operations in snow and extreme cold depend more on effective administrative support than do operations in normal temperate zone conditions. Exposure to extreme cold and deep snow results in lowered combat efficiency. Under such conditions, both individual and unit rotation during combat and readily available heated shelter for all will be required.

Section XI. COMBAT IN DESERT REGIONS

144. General

Desert areas may be characterized by a wide variety of terrain, including areas of loose sand and dunes, boulder-strewn areas, mountains, broken terrain, salt marshes, and rolling or relatively flat hard-surface areas. Well defined roads are generally scarce, but trails or desert tracks generally exist between water sources. Desert areas comprised mainly of loose sand and sand dunes or boulders can seriously impede armor movements. However, in rolling or flat hard-surface desert, a greater freedom of movement is afforded than in normal terrain, and roads are of decreased significance. Most desert areas are also characterized by sparse vegetation and few prominent landmarks, as well as extremes of temperature or climatic conditions. These conditions can result in difficulty in concealment and maintenance of direction, and impose difficult physical conditions on the troops. All of these factors should be considered in planning.

145. Tactical Considerations

a. Basic tactical doctrine and fundamentals for desert operations are essentially the same as those set forth in previous chapters and in FM 100–5. Armored brigade operations in desert areas are influenced by the following factors:

(1) Greater fields of fire.

(2) Less restriction on maneuver, but greater restrictions on location and use of ground lines of communication.

(3) Increased need for security and combat deception measures due to difficulty of concealment.

(4) Increased emphasis on attaining surprise by rapid movement.

(5) Increased problems of administrative support.

(6) Increased vehicular and equipment maintenance requirements due to sand, gritty dust, rocks, and temperature variations.

b. For additional details on combat in desert regions, see FM 17–1 and FM 31–25.

Section XII. SITUATIONS SHORT OF WAR

146. General

a. Definition. Situations short of war, as used in this manual, apply to those military operations that lie in the area between normal peaceful relations and open hostilities between national states. Aggression by foreign powers in situations short of war may take the form of a coup d'état, illegal occupation, warlike demonstration, unilateral police action, and support of guerrilla and other paramilitary harassing activities. Objectives of such aggression may include seizure of governmental control, occupation or intimidation of a weaker nation, or crushing of dissident political elements.

b. Purposes. United States participation in situations short of war results largely from commitments to assist and defend other free nations and support the United Nations. US Forces participate in such actions only by specific order of responsible US Governmental authority.

c. Role of the Armored Division Brigade. The armored division brigade may be employed either independently or as part of an armored division or larger US, Allied, or UN force in situations short of war. Its ground mobility, ability to cover large areas, and wide range of available combat power allow the brigade to adapt itself to the variety of conditions. The mission of the brigade may include show of force, truce enforcement, international police action, legal occupation, suppression of civil strife, destruction of guerrilla or other paramilitary forces, or operational reserve of a higher command when overt hostilities are imminent.

147. Planning Considerations

a. Planning. The brigade operating in situations short of war will be confronted with a wide range of unpredictable factors, including local political conditions in relations to indigenous and United States national policies; attitudes of local populations, law enforcement agencies, and native armed forces; potential enemy

covert and overt capabilities; terrain and other environmental conditions; and command arrangements. Thus, no normal employment can be prescribed. This demands the utmost flexibility and imagination in planning by the commander and staff and those of all subordinate commands. All must fully comprehend and exploit the organizational capabilities of subordinate units and be willing to adapt and improvise to meet the unusual conditions posed by a specific situation short of war.

b. Reference. For detailed aspects of brigade operations in situations short of war dealing with cooperation, intelligence, security, training of own and indigenous troops, and legality of actions, see FM 61–100.

Section XIII. GUERRILLA OPERATIONS

148. General

a. Guerrilla operations are normally conducted in enemy-controlled territory by relatively small groups of indigenous persons organized on a paramilitary or military basis. These groups employ offensive action to reduce enemy combat effectiveness, industrial capacity, and morale. Enemy lines of communication are the primary target of guerrillas. Actions of either friendly or enemy guerrillas in this role are of considerable tactical significance at the brigade level.

b. The brigade may conduct operations in conjunction with friendly guerrilla forces. The brigade must be prepared at all times to defend against enemy guerrilla actions and may be employed in operations designed to destroy significant guerrilla forces located in its operational area.

c. This section is designed to furnish guidelines for the employment of the brigade in conjunction with friendly guerrilla forces and in counterguerrilla operations.

149. Operations in Coordination with Friendly Guerrillas

a. General. If the brigade is employed in an area that coincides with a friendly guerrilla operational area, the employment of these forces must be considered in conjunction with all brigade operations. As linkup with the guerrilla units becomes imminent, the division may assume operational control of these units from the controlling army agency. Responsibility for logistical support of the guerrillas will normally be retained at army level.

b. Operational Control. Upon assuming operation control of guerrilla units as linkup becomes imminent, the armored division

and the guerrilla area command exchange liaison parties provided with appropriate communication equipment. Under normal circumstances the party from the guerrilla area command is made up of personnel from the special forces operational detachment. Operational control of guerrilla units will not usually be delegated below division level. Therefore, the brigade will coordinate operations in conjunction with guerrillas through division.

c. Guidance for Commanders and Staff Officers. Commanders must appreciate the problems involving the organization, methods of operations, capabilities and limitations of the guerrilla force, including the following factors:

(1) Missions assigned must be within the capabilities of the guerrilla units.

(2) Units should be kept active during period of usefulness.

(3) Guerrilla forces should be used as complete units.

(4) Existing guerrilla operating procedures, including organization, ranks, and grades must be respected.

(5) Recognition should be granted by awarding decorations and by other expressions of appreciation.

(6) Problems of supply and operational support must be anticipated.

(7) Commanders must not make political commitments unless authorized by higher headquarters.

d. Missions for Guerrilla Forces. Guerrilla forces are capable of accomplishing important military missions while operating deep in the enemy's rear. The brigade is primarily interested in the employment of such forces during the period of linkup and during the period following linkup.

(1) Missions during linkup include—

(*a*) Interdiction of lines of communication to prevent or delay reinforcement or supply.

(*b*) Seizing of key terrain to facilitate operations and preventing enemy destruction of key installations.

(*c*) Gathering of information, including target location and damage assessment.

(2) Missions after linkup include—

(*a*) Performing reconnaissance missions within their former operational areas.

(*b*) Screening movement of friendly units.

(*c*) Mopping up of bypassed areas.

(*d*) Providing rear area security.

(*e*) Assisting civil affairs teams.

(*f*) Fighting as combat units if furnished additional combat and logistical support.

e. Conduct of Operations. Guerrilla forces are combat forces and must be employed as such. During the period of linkup these forces should be assigned specific missions and held responsible through the special forces operational detachment, for their accomplishment. The conventional force should consider making artillery, antitank, and air support available to the guerrilla force during such operations. Guerrilla action during this period must be in direct coordination with the division or brigade operations. However, in the interest of security, the guerrilla units should know only as much of the conventional force plan as is necessary for proper coordination.

f. Linkup. Linkup between guerrilla forces and conventional forces requires the same detailed planning and coordination and employs many of the same procedures used for linkup between ground forces and airborne units in a joint airborne operation. A special forces liaison party at division will usually be the contact for such coordination, which should be initiated as far in advance of juncture as possible. Linkup points, fire coordination measures, exchange of communication plans, liaison, command relationship and clearly defined responsibilities are of particular significance in the plan for juncture.

150. Operations Against Irregular Forces

a. General. The armored division brigade may be required to conduct either passive or active operations against irregular forces. The passive operation is primarily defensive in nature and is designed to protect the unit's personnel and installations from enemy action during periods in which the bulk of the brigade is involved in conventional operations. In an active operation against irregular forces the brigade, acting independently or as a part of the armored division, locates and attacks irregular units in actions designed to destroy the force. The objectives of counterguerrilla operations against irregulars are to prevent interference with friendly operations or to destroy the enemy irregular force.

b. Principles.

(1) Every effort must be made to prevent the formation of an enemy irregular force. Existing forces must be eliminated as soon as possible.

(2) All practical steps must be taken to deny the enemy irregulars the support of the civilian population. At the

brigade level these steps will consist primarily of maintaining strict troop discipline to minimize incidents between troops and the population.

(3) An alert and aggressive attitude must be maintained in all rear area units and installations.

(4) The greatest threat to the brigade from irregular action is against the administrative support elements located in the brigade trains area.

(5) Offensive action against irregular forces in the brigade zone of responsibility must be continuous.

(6) Security in the irregular force is apt to be less effective at night and during periods of inclement weather and attacks against such forces during these periods should be considered normal.

(7) Secrecy of movement and surprise are essential in operations against irregular forces.

c. Passive Defense. When the brigade is operating in an area containing enemy irregular units all practical passive defensive measures must be observed to protect troops and equipment. While irregulars rarely attack to destroy heavily armored units, attacks directed at the vulnerable parts of the brigade must be guarded against.

(1) All installations in the brigade rear must be secured from attack. Food supplies, arms, and ammunition are especially valuable to irregular forces and must be given special attention. Sites must be selected for all installations to increase their defensibility even at the cost of increasing the difficulty of accomplishing the installation's primary mission. A defense SOP must be developed for all installations that will place the responsibility for defense on troops who work in the installation. All positions are organized for all-round defense, taking full advantage of all natural and artificial obstacles.

(2) All lines of communication in the brigade area must be secured against irregular forces. The roadway and an area extending to the limit of effective small arms fire on either side should be cleared of all inhabitants and posted as a restricted zone. This zone must then be kept clear by frequent patrols along the roadway and to the flanks. Lone vehicles and convoys not capable of providing their own security are grouped and escorted through danger areas by armored security detachments. All traffic must be controlled by traffic control stations.

d. Offensive Action. When an irregular force of significant size is known to exist in the brigade area, the brigade may be assigned the mission to locate and destroy it. When assigned such a mission, the brigade will usually be a lightweight organization tailored around mechanized infantry with a substantial amount of armored cavalry, light artillery, engineer, and Army aviation. Every effort will be made to surprise the enemy. Attacks at night, in bad weather, or through difficult terrain assist in gaining surprise. Forms of maneuver are classified as encirclement, attack, and pursuit.

(1) *Encirclement.* Usually the best way to destroy irregular forces is by encirclement. The brigade may take part in an encirclement as part of a division operation or conduct a similar operation with resources within the brigade. This operation is aimed at a sudden, complete encirclement that will block all avenues of escape and then, by tightening the lines of encirclement, force the irregulars to the center where they are destroyed completely. The area of encirclement should be divided into sectors for assignment to the infantry battalions available to the brigade. If the terrain will allow their employment, the infantry should be reinforced with tanks. Reserves and support units should be positioned so as to facilitate their use in blocking likely avenues of escape available to the enemy. Automatic weapons should be employed well forward. The final phase of this operation must be conducted so that irregular forces are destroyed methodically and thoroughly so that all personnel, supplies, and equipment come under our control.

(2) *Attack.* If circumstances are such that encirclement is not possible the brigade may employ surprise attacks followed by aggressive pursuit. The success of such an operation depends heavily on surprise and, as a result, consideration should always be given to the use of helicopters for the movement of the attacking element. Consideration should be given to establishing a blocking force across the most likely avenue of escape available to the irregular. If this is practical, destruction can be increased by driving the enemy against such a force with the attacking element. Much of the effect of such an operation is gained by aggressive hunts to destroy small groups as they attempt to escape.

(3) *Pursuit and mopping up.* In any type of offensive action against irregular forces, small, mobile (ground or air)

groups should be organized to pursue and destroy withdrawing enemy. Air cavalry units are well suited for this action. The thorough search of the area required in mopping up after an attack may disclose such withdrawing forces. When discovered, they must be pursued and destroyed.

APPENDIX
REFERENCES

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FM 1–15	Aviation Battalion, Infantry, Airborne, Mechanized, and Armored Divisions.
FM 1–100	Army Aviation.
FM 11–50	Signal Battalion, Infantry, Mechanized, and Armored Divisions.
FM 3–5	Tactics and Techniques of Chemical, Biological, and Radiological Warfare.
FM 5–20	Camouflage, Basic Principles and Field Camouflage.
FM 5–25	Explosives and Demolitions.
FM 5–26	Employment of Atomic Demolition Munitions (U).
FM 5–36	Route Reconnaissance and Classification.
FM 5–135	Engineer Battalion, Armored, Mechanized, Infantry, and Airborne Divisions.
FM 6–20–1	Field Artillery Tactics.
FM 6–20–2	Field Artillery Techniques.
FM 7–11	Rifle Company, Infantry, Airborne Infantry, and Mechanized Infantry Battalion.
FM 7–21	Headquarters and Headquarters Company, Infantry Division Battle Group.
FM 7–40	Infantry and Airborne Division Battle Groups.
FM 8–15	Division Medical Service, Infantry, Airborne, Mechanized, and Armored Divisions.
FM 9–30	Maintenance Battalion, Infantry, Airborne, Mechanized, and Armored Divisions.
FM 10–50	Supply and Transportation Battalion, Infantry, Airborne, Mechanized, and Armored Divisions.
FM 11–16	Signal Orders, Records, and Reports.
FM 17–1	Armor Operations: Small Units.
FM 17–15	Tank Units, Platoon, Company, and Battalion.
FM 17–36	Armored Cavalry Units, Platoon, Troop, and Squadron.
FM 17–70	Communication for Armor Units.

FM 19–10	Military Police Operations.
FM 19–15	Civil Disturbances and Disasters.
FM 19–25	Military Police Traffic Control.
FM 19–40	Handling Prisoners of War.
FM 19–90	The Provost Marshal.
FM 20–32	Land Mine Warfare.
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FM 21–30	Military Symbols.
FM 21–40	Small Unit Procedures in Nuclear, Biological, and Chemical Warfare.
FM 21–41	Soldier's Handbook for Nuclear, Biological, and Chemical Warfare.
FM 22–100	Military Leadership.
FM 25–10	Motor Transportation, Operations.
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FM 30–5	Combat Intelligence.
FM 30–101	Aggressor, the Maneuver Enemy.
FM 30–102	Handbook on Aggressor Military Forces.
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FM 31–10	Barriers and Denial Operations.
FM 31–15	Operations Against Irregular Forces.
FM 31–21	Guerrilla Warfare and Special Forces Operations.
FM 31–25	Desert Operations.
FM 31–50	Combat in Fortified Areas and Towns.
FM 31–60	River-Crossing Operations.
FM 31–70	Basic Cold Weather Manual.
FM 31–71	Northern Operations.
FM 41–5	Joint Manual of Civil Affairs/Military Government.
FM 41–10	Civil Affairs/Military Government Operations.
FM 41–15	Civil Affairs/Military Government Units.
FM 44–1	Air Defense Artillery Employment.
FM 44–1A	Air Defense Artillery Employment (U).
FM 52–10	Corps and Army Support of Divisions.
FM 54–2	Division Logistics and the Support Command.
FM 55–6	Transportation Services in Theaters of Operation.
FM 57–10	Army Forces in Joint Airborne Operations.
FM 57–35	Airmobile Operations.
FM 61–10	Command and Control Techniques.
FM 61–24	Division Communications.
FM 61–100	The Division.

FM 100–5	Field Service Regulations—Operations.
FM 101–1	The GI Manual.
FM 101–5	Staff Officers Field Manual: Staff Organization and Procedure.
FM 101–10	Staff Officers Field Manual: Organization, Technical and Logistical Data.
FM 101–31	Staff Officers Field Manual: Nuclear Weapons Employment.
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FM 105–5	Maneuver Control.

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AR 320–50	Authorized Abbreviations and Brevity Codes.
AR 380–5	Safeguarding Defense Information.
AR 381–100	Counter Intelligence Corps: Mission and Employment (U).

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DA Pam 39–3	The Effects of Nuclear Weapons.
DA Pam 108–1	Index of Army Motion Pictures, Film Strips, Slides, and Phono-Recordings.
DA Pam 310 series	Military Publications Indexes (as applicable).
DA Pam 320–5 (When published)	Glossary of Terms Employed Consistently Throughout ROAD Training Literature.

4. Miscellaneous

TM 23–200	Capabilities of Atomic Weapons.
TC 5–2	Employment of Mobile Assault Bridging.
TC 101–1	Prediction of Fallout and Radiological Monitoring and Survey.
DA Bul 8–III–50	Article 15: Uniform Code of Military Justice.

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BY ORDER OF THE SECRETARY OF THE ARMY:

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Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

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

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